US Army Corps
of Engineers®
New York District

FINAL

Integrated Hurricane Sandy General Reevaluation Report and Environmental Impact Statement

Atlantic Coast of New York

East Rockaway Inlet to Rockaway Inlet and Jamaica Bay

Appendix I

Pertinent Correspondence

December 2018, amended as of May 2019

to include USFWS transmittal letter of Biological Opinion and USACE response

CORRESPONDENCE FROM:

Hon. Charles E. Schumer
United States Senate
dated 23 May 2018
and 25 May 2018

RESPONSE BY:

Thomas D. Asbery
Colonel, U.S. Army
dated 22 June 2018

CHARLES E. SCHUMER
NEW YORK

WASHINGTON, DC 20510-3203

United States Senate

May 23, 2018

Dear Colonel Asbery,

In light of the recent announcement by the NYC Parks Department that Beaches 91 to 102 in Rockaway will be closed to the public this summer, I write to urge the Army Corps of Engineers New York District to schedule public meetings as soon as possible to discuss with the community a detailed timeline with hard deadlines for the construction of permanent beach protections.

After Hurricane Sandy devastated Rockaway and the communities surrounding Jamaica Bay, I worked very hard to lead a bipartisan push to pass a $63 billion relief package. Following that, we worked together to remove debris, make homeowners whole, build a new state-of-the-art boardwalk, repair playgrounds and schools and roads, and place 3.5 million cubic yards of sand to replenish beaches and protect the area from future storm surge, but the pace of erosion in Rockaway is now threatening the public's safe access to the beach and the livelihood of local business owners, while leaving homeowners too vulnerable to the next storm.

With each day that passes, Rockaway stands to lose even more. More aggressive action is needed to begin building more permanent and effective protections against beach erosion and storm surges.

I appreciate that your District is grappling with extremely complex engineering and environmental questions as you make progress on the Jamaica Bay-Rockaway Reformulation Project, but the community is in need of more immediate answers. Therefore, I urge you to schedule meetings with the public so that you can update residents specifically on when construction will begin on hard protective features – such as a sea wall, jetties, and groins – to protect their fragile beachfront.

Earlier this year, I was proud to secure $730 million in additional federal funding to support critical resiliency and mitigation work by the Corps in New York, as we worked together to expedite the timeline of the Jamaica Bay-Rockaway Reformulation Project.

Thanks to these efforts, we have the resources, know-how, and forward momentum we need to protect this precious natural resource. I urge your District to now update local stakeholders on when these advantages will lead to shovels in the ground.

Thank you for your attention to this pressing matter. Should you have any questions, please do not hesitate to contact my office.

Sincerely,

Charles Schumer

Charles E. Schumer
United States Senator

CHARLES E. SCHUMER
NEW YORK

WASHINGTON, DC 20510-3203

United States Senate

May 25, 2018

Dear Colonel Asbery,

In the wake of the NYC Parks Department's closure of Beaches 91 to 102 in Rockaway, I write again to request a comprehensive list of emergency options that the Army Corps New York District could undertake to renourish the affected areas with sand as soon as possible.

I am thankful that we have been able to expedite progress of the Jamaica Bay-Rockaway Reformulation Project, which will provide long-term, permanent beach protections for the community against future storms, but there is an urgent need to address the erosion that is endangering Rockaway's residents and visitors right now.

In the spirit of our ongoing effort to cut through the red tape of the Army Corps' internal processes and bureaucracy, I encourage your engineers to think as creatively as possible as you consider what can be done to replenish sand in Beaches 91 to 102.

Earlier this year, I worked hard to secure $730 million in additional federal funding to equip the New York District with the resources you need to protect this vulnerable part of Queens. I am hopeful that we can now employ those resources to rapidly respond to the dire situation in Rockaway.

Thank you for your attention to this issue. Should you have any questions, please do not hesitate to contact my office.

Sincerely,

Charles Schumer

Charles E. Schumer
United States Senator

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

JUN 22 2018

The Honorable Charles E. Schumer
Minority Leader
United States Senate
322 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Schumer:

Thank you for your recent letters dated May 23 and 25, 2018 regarding beach erosion and long-term coastal storm risk reduction in Rockaway and Jamaica Bay. As the issues you have raised in the letters are closely linked, I am replying to both letters on short and long-term strategies with regard to the current concerns.

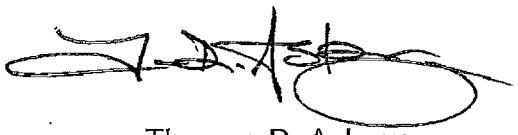
I am pleased to report to you that we are moving forward with good momentum on the long-term comprehensive resiliency features for the Rockaway oceanfront and Jamaica Bay high risk back-bay areas. We are in senior leader level coordination with New York State and New York City on the remaining technical issues, and we hope to resolve them before the scheduled public release of the Draft Final Report by the end of this summer. Between the release of the Draft Report and the release of the Final Report before the end 2018, we will conduct a series of public meetings and outreach sessions with local constituencies to describe the proposed features and timelines for construction. Concurrently, we will strive to acquire the necessary approvals to be able to initiate construction as early as possible in late 2019 using 100% federal funding under Public Law 113-2.

We are also directly engaged in discussions on possible options for short-term measures to address erosion impacts along Rockaway Beach between Beach 91st Street to Beach 102nd Street. Four significant coastal storms this past March eroded the beach to near the base of a dune constructed after Superstorm Sandy, leading New York City Parks to close this section of beach. After participating in two recent meetings with city, state and Federal elected officials, it has become apparent that a viable funding source, regulatory permitting, and lack of a contractual process to execute work in a timely manner are limiting factors in executing a project on the aggressive timeline envisioned. Nonetheless, our New York District team recently held a planning session to develop options that might address the immediate concerns. These ranged from a 100% city solution, a 50/50 solution (Federal/city), and 100% Federal solution. We further explored our authorities, possible sources of funding (Federal and private), and possible procurement methods. Possible procurement methods included sole source, letter contract, urgent and compelling need, and also traditional procurement methods.

Unfortunately, no funding source has been identified to date, and thus there is no viable option available for the New York District to provide assistance at this time. Even if a source of funding did come available in the near future, our most aggressive estimate would be approximately 8 to 10 weeks to complete sand placement on the beach. Under that assumption, sand could not be delivered to the beach for this summer season. Given these constraints, we are aware that New York City is exploring a number of measures to reduce the impacts to the local community and businesses this summer while we gear up to construct the long-term resiliency solutions on the oceanfront and back bay. I do want to highlight the fact that although the beach is closed for recreation, the remaining dune in place is wider and more elevated than prior conditions, and is still providing risk reduction to the Rockaway communities.

The Corps of Engineers is committed to working collaboratively with all parties and to maintaining transparent and open communication as we move forward with our partners in the city and state to deliver robust and long-term resiliency to the shorelines on the oceanfront and back-bay of Rockaway and Jamaica Bay. If you have any questions please do not hesitate to contact me, or Mr. Daniel Falt at 917-790-8614.

Sincerely,



Thomas D. Asbery
Colonel, U.S. Army
Commander and District Engineer

CORRESPONDENCE FROM:

Hon. Mitchell J. Silver
Commissioner, City of New York Parks & Recreation
dated 08 November 2017

RESPONSE BY:

Thomas D. Asbery
Colonel, U.S. Army
dated 02 January 2018

Suspense #0119

NYC Parks

Mitchell J. Silver, FAICP
Commissioner

City of New York
Parks & Recreation

The Arsenal
Central Park
New York, NY 10065
www.nyc.gov/parks

Wednesday, Nov 1, 2017

NOV 0 8 2017

Dan Falt
Frank

Colonel Thomas D. Asbery
Commander and District Engineer
U.S. Army Corps of Engineers
New York District
26 Federal Plaza
New York, NY 10278

Re: U.S. Army Corps of Engineers & NYC Parks Coordination on Coastal Protection Projects

Dear Colonel Asbery,

I want to send a sincere thank you to yourself and your staff at the New York District for visiting with NYC Parks and the Mayor's Office of Recovery and Resiliency on October 12th here at the Arsenal. Our conversation made clear many of the complex aspects of the Corps of Engineers' process and how we can work together in advancing projects.

As discussed at our meeting, advancing the Rockaway Shorefront component of the Rockaway Reformulation Study is a top priority for the City. You mentioned that it was one of your top priorities as well, so I do feel confident that the City, State, and Corps will continue working diligently on the remaining tasks. However, we remain concerned about the schedule and urge you to continue exploring ways to deliver the Rockaway Shorefront project as quickly as possible. For example, my staff indicated the continuing analysis and design of the High Frequency Flood Risk Reduction Features (HFFRRF) as a component that may be adding schedule delay risk. Perhaps the Corps can examine how the HFFRRF component might adversely impact the Rockaway Shorefront schedule and develop contingency plans to keep the Rockaway component on track.

Additionally, thank you for the agreement that your staff will meet again with NYC Parks to discuss, in detail, the parks facilities that will be replaced as part of the Staten Island South Shore Coastal Storm Risk Management Project's scope and costs. Our teams met this week and had a productive conversation; we are now able to take next steps in clarifying these relocation and replacement scenarios as the design progresses.

Thank you again for your time and collaborative spirit as we move through these complex, yet critical, coastal protection projects.

Sincerely,

Mitchell J. Silver, FAICP
Commissioner
City of New York
Parks & Recreation

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

District Engineer

Honorable Mitchell J. Silver, FAICP
Commissioner, City of New York Parks and Recreation
The Arsenal, Central Park
New York, NY 11790-3409

JAN 0 2 2018

Dear Commissioner Silver:

Thank you for your letter dated November 8, 2017 which expands on key programmatic issues that were discussed during our recent visit to the Arsenal. The meeting was very productive, and your continued partnership is highly valued.

I understand the importance of the Rockaway Reformulation Study to the City of New York, and its completion will remain a top priority under our Sandy Recovery Program. We will continue to explore ways to potentially accelerate this project to construction, and will soon be providing detailed information concerning the proposed High Frequency Flood Risk Reduction Features for Jamaica Bay. We intend to have many of these storm risk reduction features complement the City's initiatives that are aimed at resiliency.

We will also work closely with your team while we continue the design work for the South Shore of Staten Island Project. I'm pleased that my staff has been meeting regularly with yours. If you have any additional questions, please do not hesitate to contact the Project Manager, Mr. Daniel Falt, telephone 917-790-8614, or Daniel.T.Falt@usace.army.mil.

Sincerely,

Thomas D. Asbery
Colonel, U.S. Army
District Engineer

CORRESPONDENCE FROM:

Hon. Stacey Pheffer Amato
New York State Assembly
dated 07 June 2017

RESPONSE BY:

Thomas D. Asbery
Colonel, U.S. Army
dated 05 July 2017

THE ASSEMBLY
STATE OF NEW YORK
ALBANY

COMMITTEES
Consumer Affairs & Protection
Corporations, Authorities & Commissions
Governmental Employees
Racing & Wagering
Veterans' Affairs

MEMBER
Legislative Women's Caucus

STACEY PHEFFER AMATO
Assemblywoman 23rd District
Queens County

June 7, 2017

Colonel David A. Caldwell
New York District of the U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278

Dear Colonel Caldwell:

I am writing to urge the Army Corps of Engineers New York District, in coordination with their local partners, to do an emergency sand replacement and installation of groins in Rockaway Beach, specifically between Beach 90th and Beach 95th streets and between Beach 126th and Beach 149th streets, as the lack of sand (and the absence of groins to retain that sand) leaves entire community vulnerable to a major storm which has created an emergency situation.

Hurricane Sandy devastated the Rockaway Peninsula and the communities surrounding Jamaica Bay, all of which are represented in the Rockaway Reformulation study. Immediately after the storm, the Corps allowed emergency sand replacement to protect Rockaway from future storm surges. The Corps quickly completed that work, placing 3.5 million cubic yards of sand on the Peninsula, and we applaud those efforts. However, it has been two years since that sand placement, and already the Peninsula has experienced significant erosion which has drastically affected our beaches and weakened resiliency measures protecting us throughout Hurricane Season.

For many years, both before and after Superstorm Sandy, residents of southern Queens and many experts have been advocating for more permanent measures to protect our homes and communities. The long-term comprehensive coastal storm risk reduction plan for Rockaway and Jamaica Bay requires the completion of hard protective features including a sea wall, jetties and groins. Long Island, Staten Island, the Jersey Shore, and Coney Island have all received protective measures, while the Rockaway Peninsula is left exposed.

Families in southern Queens and Rockaway deserve – and absolutely need – to have basic safety measures in place for this upcoming hurricane season, which is projected by NOAA to be the worst in several years. For these reasons, I am requesting emergency sand replacement and groin installation as soon as is logistically possible.

Thank you for your immediate attention to this matter. Should you have any questions, please do not hesitate to contact my office at 718-945-9550.

Sincerely,

Stacey Pheffer Amato

Stacey Pheffer Amato
Member of Assembly, 23rd District

ALBANY OFFICE: Room 827, Legislative Office Building, Albany, New York 12248 • 518-455-4292, FAX: 518-455-4723
DISTRICT OFFICE: 95-16 Rockaway Beach Blvd., Rockaway Beach, New York 11693 • 718-945-9550, FAX: 718-945-9549
EMAIL: amatos@nyassembly.gov

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278-0090

District Engineer

JUL 0 5 2017

Honorable Stacy Pheffer Amato
New York State Assembly
Legislative Office Building Room 827
Albany, New York 12248

Dear Ms. Pheffer Amato:

Thank you for your letter dated June 7, 2017 which urges the United States Army Corps of Engineers to initiate beach renourishment and groin construction in Rockaway Beach, New York as quickly as possible.

As you know, Rockaway Beach received 3.5 million cubic yards of sand in 2014 to repair damages caused by Hurricane Sandy and to rebuild the beaches to the original Federal Project design template. In addition, a betterment paid for by the City of New York Department of Parks and Recreation allowed for the construction of sand dunes, providing a higher level of protection than the original Federal project constructed in 1975.

The New York District is currently working to complete a Final General Reevaluation Report. The draft version of this report, which was previously released to the public, documents proposed alternatives intended to address storm risk reduction and beach erosion in the Rockaway Beach area. New shorefront measures proposed in the report include stone groins, beachfill, and reinforced sand dunes. The proposed stone groins would be intended to reduce the amount of sand replenishment required in well documented areas of high erosion. The final report will address the extensive comments received from the public and other agencies, and will be ready for release in the spring of 2018. Engineering design and construction phases of work will begin as soon as this report is approved.

Until this report is completed and fully approved, there is no authority or funding available to the USACE to implement sand placement or groin construction. Despite this, we intend to work closely with our State and City partners to identify other opportunities for sand placement, should any interim flood risk reduction projects be considered necessary. My staff is ready to meet with your office at any time to discuss this issue in greater detail. If you have any additional questions, please contact Mr. Daniel T. Falt, Project Manager, at (917) 790-8614.

Sincerely,

Thomas D. Asbery
Colonel, U.S. Army
District Engineer

CORRESPONDENCE FROM:

Hon. Charles E. Schumer
United States Senate
dated 20 June 2017

RESPONSE BY:

Thomas D. Asbery
Colonel, U.S. Army
dated 13 July 2017

CHARLES E. SCHUMER
NEW YORK

DEMOCRATIC LEADER

United States Senate

WASHINGTON, DC 20510

June 20, 2017

Colonel Thomas D. Asbery
Commander of the Army Corps' New York District
26 Federal Plaza
New York, NY 10278

Dear Colonel Asbery:

I write to urge the Army Corps of Engineers ("Corps") to take action to address the severe and constant beach erosion along the Rockaway Peninsula that threatens the coastal protection of this vulnerable area. In 2012 Superstorm Sandy devastated the Rockaway Peninsula and we simply cannot fail to ensure it is protected from the next storm.

The Hurricane Sandy Relief Act of 2013, which I fought so hard to pass in Congress, provided the Army Corps with over $5 billion in funding to protect the region's most vulnerable areas, including fully funding the study ("Rockaway Reformulation Study") and construction of the Rockaway Beach coastal protection project ("East Rockaway Inlet to Rockaway Inlet"). However, more than four years later the study is not complete and construction has not started. It is simply unacceptable that a fully-funded project languish for so long, leaving Rockaway susceptible to erosion, storm surge and flooding. The Corps must provide a firm timetable for completion of the study and a construction schedule, including spelling out a specific timetable for construction of jetties, groins and a sea wall. Given the importance of this project, the Corps must expedite this schedule.

It is my understanding that the delay has been caused, in part, by the Corps integrating the Rockaway Reformation Study to combine the Atlantic Shorefront and Jamaica Bay CSRM studies. As I previously expressed in a letter to the Corps dated April 25, 2014, a comprehensive plan for Rockaway and Jamaica Bay is certainly necessary, but there should be no reason to delay the ocean-side and standalone bay-side features that have already been studied for years. In other words, build now what can and should be built while the Corps completes the study on the bay side and maps out other technicalities and designs. In order to expedite construction the Corps should focus on these discrete pieces such as sand replenishment, groins and jetties to retain this sand, an ocean-side sea wall structure and standalone natural and hard bay-side features. In particular I have heard from every community in Rockaway that there is a specific need for groins and jetties the entire length of the peninsula. I urge the Corps to deliver on this need; these projects should not be held up any longer by bureaucratic approvals.

Finally, I also urge the Corps to examine any and all interim resiliency measures such as emergency sand placement. In the past the Corps has placed sand dredged from nearby navigable channels such as Rockaway Inlet and Jamaica Bay Channel on erosion hot spots along the Rockaway peninsula. The Corps must identify any nearby dredging projects that would allow emergency sand placement in Rockaway.

Sincerely,

Charles E. Schumer
United States Senator

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

District Engineer

JUL 13 2017

Honorable Charles E. Schumer
United States Senate
322 Senate Hart Building
Washington, District of Columbia 20510

Dear Senator Schumer:

Thank you for your letter dated June 20, 2017 which urges the United States Army Corps of Engineers to address beach erosion and issues of coastal protection along the Rockaway Peninsula as quickly as possible.

As you know, Rockaway Beach received 3.5 million cubic yards of sand in 2014 to repair damages caused by Hurricane Sandy and to rebuild the beaches to the original Federal Project design template. In addition, a betterment paid for by the City of New York Department of Parks and Recreation allowed for the construction of sand dunes, providing a higher level of protection than the original Federal project constructed in 1975.

The New York District is currently working to complete a Final General Reevaluation Report. The draft version of this report, which was previously released to the public, documents proposed alternatives intended to address storm risk reduction and beach erosion in the Rockaway Beach area. New shorefront measures proposed in the report include stone groins, beachfill, and reinforced sand dunes. The proposed stone groins would be intended to reduce the amount of sand replenishment required in well documented areas of high erosion. The final report will address the extensive comments received from the public and other agencies, and will be ready for release in the spring of 2018. Engineering design and construction phases of work will begin as soon as this report is approved.

Until this report is completed and fully approved, there is no authority or funding available to the USACE to implement sand placement or groin construction. Despite this, we intend to work closely with our State and City partners to identify other opportunities for sand placement, should any interim flood risk reduction projects be considered necessary. My staff is ready to meet with your office at any time to discuss this issue in greater detail. If you have any additional questions, please contact Mr. Daniel T. Falt, Project Manager, at (917) 790-8614.

Sincerely,

Thomas D. Asbery
Colonel, U.S. Army
District Engineer

CORRESPONDENCE FROM:

Hon. Hakeem S. Jeffries
United States House of Representatives
dated 16 November 2016

Additional Signatures:

Hon. Jerrold Nader
United States House of Representatives

Hon. Nydia M. Velazquez
United States House of Representatives

Hon. Gregory Meeks
United States House of Representatives

Hon. Yvette Clarke
United States House of Representatives

RESPONSE BY:

Thomas D. Asbery
Colonel, U.S. Army
dated 20 December 2016

HAKEEM S. JEFFRIES
8TH DISTRICT, NEW YORK
COMMITTEE ON THE JUDICIARY
COMMITTEE ON EDUCATION AND THE WORKFORCE
WHIP, CONGRESSIONAL BLACK CAUCUS

Congress of the United States
House of Representatives
Washington, DC 20515

WASHINGTON OFFICE:
1607 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5936

DISTRICT OFFICES:
CENTRAL BROOKLYN OFFICE:
55 HANSON PLACE, SUITE 603
BROOKLYN, NY 11217
(718) 237-2211

SOUTH BROOKLYN OFFICE:
445 NEPTUNE AVENUE, FIRST FLOOR
COMMUNITY ROOM 2C
BROOKLYN, NY 11224
(718) 373-0033

JEFFRIES.HOUSE.GOV

November 16, 2016

Colonel David A. Caldwell
Commander, New York District, U.S. Army Corps of Engineers
Jacob K. Javits Federal Office Building
26 Federal Plaza, Room 2113
New York, N.Y. 10278

Colonel Caldwell:

We write with regard to the impending deadline for comment on the Draft Integrated Hurricane Sandy General Re-evaluation Report/Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet, and Jamaica Bay Reformulation Study (Draft Reformulation Plan). SuperStorm Sandy made abundantly clear the existing deficiencies in coastal storm risk management, which this plan is designed to address.

The decisions made by the U.S. Army Corps of Engineers through this process will have a permanent and profound impact on the communities we represent. Accordingly, there should be thorough engagement with our constituents, so that all affected can express their input prior to moving forward. In this regard, more time is needed. Despite requests made for further engagement in our communities, additional forums for discussion have failed to materialize.

Consequently, we request that the comment period on the Draft Reformulation Plan be extended by no less than 60 days. Thank you for your prompt attention to this matter and we look forward to your response.

Sincerely,

Hakeem Jeffries
Member of Congress

Jerrold Nadler
Member of Congress

Nydia Velázquez
Member of Congress

Gregory Meeks
Member of Congress

Yvette Clarke
Member of Congress

Cc: Lt. General Todd T. Semonite, Commanding General and Chief of Engineers
Colonel Paul E. Owen, Chief of Staff, U.S. Army Corps of Engineers

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

Honorable Jerrold Nadler
House of Representatives
2109 Rayburn HOB
Washington, DC 20515

Dear Mr. Nadler:

Thank you for your letter dated November 16, 2016 requesting an extension of the public comment period for the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. This report was released for public review on August 18, 2016. In response to requests by the public, the comment period was extended twice. The extended public review period ended on December 2, 2016, which gave the public more than 90 days for comment. It is vital for the study process to continue as quickly as possible to facilitate the approval of the project in a timely manner.

While we have already held five public meetings in the study area to solicit public input, the District remains available to participate in additional informational meetings, as schedules permit. While any comments received will not be part of the formal process, any topical issues identified can be useful as we continue to develop the final version of the report. We look forward to continued cooperation as we complete this significant effort. If you have any additional questions please contact me, or Mr. Anthony Ciorra at (917) 790-8208.

Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

Honorable Gregory W. Meeks
House of Representatives
2234 Rayburn HOB
Washington, DC 20515

Dear Mr. Meeks:

Thank you for your letter dated November 16, 2016 requesting an extension of the public comment period for the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. This report was released for public review on August 18, 2016. In response to requests by the public, the comment period was extended twice. The extended public review period ended on December 2, 2016, which gave the public more than 90 days for comment. It is vital for the study process to continue as quickly as possible to facilitate the approval of the project in a timely manner.

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Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

Honorable Nydia M. Velazquez
House of Representatives
2109 Rayburn HOB
Washington, DC 20515

Dear Ms. Velazquez:

Thank you for your letter dated November 16, 2016 requesting an extension of the public comment period for the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. This report was released for public review on August 18, 2016. In response to requests by the public, the comment period was extended twice. The extended public review period ended on December 2, 2016, which gave the public more than 90 days for comment. It is vital for the study process to continue as quickly as possible to facilitate the approval of the project in a timely manner.

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Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

Honorable Hakeem S. Jeffries
House of Representatives
1607 Longworth House Office Building
Washington, DC 20515

Dear Mr. Jeffries:

Thank you for your letter dated November 16, 2016 requesting an extension of the public comment period for the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. I was pleased to meet with you on December 1st, 2016 where we agreed on a path forward.

This report was released for public review on August 18, 2016. In response to requests by the public, the comment period was extended twice. The extended public review period ended on December 2, 2016, which gave the public more than 90 days for comment. It is vital for the study process to continue as quickly as possible to facilitate the approval of the project in a timely manner.

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Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

Honorable Yvette D. Clarke
House of Representatives
2058 Rayburn HOB
Washington, DC 20515

Dear Ms. Clarke:

Thank you for your letter dated November 16, 2016 requesting an extension of the public comment period for the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. This report was released for public review on August 18, 2016. In response to requests by the public, the comment period was extended twice. The extended public review period ended on December 2, 2016, which gave the public more than 90 days for comment. It is vital for the study process to continue as quickly as possible to facilitate the approval of the project in a timely manner.

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Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

CORRESPONDENCE FROM:

Hon. Steven H. Cymbrowitz
The Assembly of the State of New York
dated 1 November 2016

RESPONSE BY:

Thomas D. Asbery
Colonel, U.S. Army
dated 20 December 2016

THE ASSEMBLY
STATE OF NEW YORK
ALBANY

STEVEN H. CYMBROWITZ
Assemblyman 45th District
Kings County

CHAIRMAN
Committee on Aging

COMMITTEES
Codes
Environmental Conservation
Health
Insurance

November 1, 2016

Colonel David A. Caldwell
Commander, New York District
U.S. Army Corps of Engineers
Jacob K. Javits Federal Office Building
26 Federal Plaza, Room 2113
New York, NY 10278

Dear Colonel Caldwell,

As the elected officials for the southern Brooklyn area, we were recently made aware of the Jamaica Bay/Rockaway Draft Reformulation Plan which seeks to bring storm risk management measures into our respective communities.

The scale and scope of such a project necessitates public input and we feel that the current November 17, 2016 deadline for commentary does not provide enough time for adequate review by civic groups, community stakeholders and residents.

We are requesting that the deadline be extended to no earlier than December 31, 2016 so that our constituents can voice their support or concern for a project that will permanently change our communities.

Thank you for your attention to this matter, and we look forward to your prompt response.

Sincerely,

Steven H. Cymbrowitz
Member of Assembly

Pamela Harris Member of Assembly	Alan Maisel NYC Councilman	Roxanne J. Persaud Member of Senate
Diane J. Savino Member of Senate	Helene E. Weinstein Member of Assembly	Jaime R. Williams Member of Assembly

cc: Basil Seggos, Commissioner, NYS DEC

DISTRICT OFFICE: 1800 Sheepshead Bay Road, Brooklyn, New York, 11235, (718) 743-4078, FAX (718) 368-4391
ALBANY OFFICE: Room 824, Legislative Office Building, Albany, New York 12248, (518) 455-5214, FAX (518) 455-5738
E-MAIL: cymbros@nyassembly.gov

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

DEC 2 0 2016

Commander

Honorable Steven H. Cymbrowitz
The Assembly of the State of New York
Room 824 Legislative Office Building
Albany, NY 12248

Dear Mr. Cymbrowitz:

Thank you for your letter dated November 1, 2016 requesting an extension of the public comment period for the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. This report was released for public review on August 18, 2016. In response to requests by the public, the comment period was extended twice. The extended public review period ended on December 2, 2016, which gave the public more than 90 days for comment. It is vital for the study process to continue as quickly as possible to facilitate the approval of the project in a timely manner.

While we have already held five public meetings in the study area to solicit public input, the District remains available to participate in additional informational meetings, as schedules permit. While any comments received will not be part of the formal process, any topical issues identified can be useful as we continue to develop the final version of the report. We look forward to continued cooperation as we complete this significant effort. If you have any additional questions please contact me, or Mr. Anthony Ciorra at (917) 790-8208.

Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

ADDITIONAL CORRESPONDENCE

(Prior to the release of the Draft HSGRR in August of 2016)

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

AUG 0 1 2016

The Honorable Charles E. Schumer
United States Senate
322 Hart Senate Office Building
Washington, DC 20510

Dear Senator Schumer:

Thank you for your letter dated June 24th, 2016 regarding the public release of the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. I appreciate your direct engagement and involvement in this issue, and agree that the timeliness of this report is of extreme importance.

The U.S. Army Corps of Engineers (Corps) has been coordinating with the State of New York, the City of New York and the U.S. Department of Interior in anticipation of the release of this report. Our path forward includes revisions to certain sections of the report that address comments from those agencies. Our report will now also include the results of a City of New York water quality study that will provide valuable information to reviewers on complex environmental and water quality issues. This should afford additional confidence for decision making in the future.

We expect the official public release of the Draft GRR and EIS during the week of August 15th, 2016, followed by a formal 60 day public review period to ensure ample opportunity for public comment. During this period, several public information sessions will be held, and local leaders will be engaged to ensure feedback is received on this proposed project.

We look forward to continued cooperation as we complete this significant effort. If you have any additional questions please call me, or Mr. Anthony Ciorra at (917) 790-8000.

Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

Commander

The Honorable Phillip Goldfeder
New York State Assembly
9516 Rockaway Beach Boulevard
Rockaway Beach, NY 11693

AUG 0 1 2016

Dear Mr. Goldfeder:

Thank you for your letter dated June 24th, 2016 regarding the public release of the Draft General Reevaluation Report (GRR) and Environmental Impact Statement (EIS) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY Reformulation Study. I appreciate your direct engagement and involvement in this issue, and agree that the timeliness of this report is of extreme importance.

The U.S. Army Corps of Engineers (Corps) has been coordinating with the State of New York, the City of New York and the U.S. Department of Interior in anticipation of the release of this report. Our path forward includes revisions to certain sections of the report that address comments from those agencies. Our report will now also include the results of a City of New York water quality study that will provide valuable information to reviewers on complex environmental and water quality issues. This should afford additional confidence for decision making in the future.

We expect the official public release of the Draft GRR and EIS during the week of August 15th, 2016, followed by a formal 60 day public review period to ensure ample opportunity for public comment. During this period, several public information sessions will be held, and local leaders will be engaged to ensure feedback is received on this proposed project.

We look forward to continued cooperation as we complete this significant effort. If you have any additional questions please call me, or Mr. Anthony Ciorra at (917) 790-8000

Sincerely,

David A. Caldwell
Colonel, U.S. Army
Commander

United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
United States Custom House
200 Chestnut Street
Philadelphia, PA 19106

IN REPLY REFER TO:
A.1.2.(NER-RSS)

JUL 21 2016

Mr. Clifford S. Jones
Chief, Planning Division
Department of the Army
U.S. Corps of Engineers, New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, NY 10278-0090

Dear Mr. Jones:

Thank you for your letter dated June 29, 2016, requesting that the National Park Service (NPS) be a cooperating agency in the National Environmental Policy Act (NEPA) process for the integrated Hurricane Sandy General Reevaluation Report/Environmental Impact Statement (HSGRR/EIS) to examine coastal storm management problems and opportunities for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay area.

The NPS is pleased to accept the role of cooperating agency in the HSGRR/EIS being prepared by the United States Army Corps of Engineers, New York District (USACE).
In addition, the NPS also requests to participate as a consulting party in the USACE's consultation process under Section 106 of the National Historic Preservation Act for the HSGRR/EIS.

We believe it is to our mutual benefit for the NPS to cooperate in the preparation of this plan. The NPS mission is to manage our lands for the preservation of and access to natural, cultural and recreational resources in perpetuity. In addition, by working collaboratively we can ensure that the HSGRR/EIS is mutually acceptable to the Secretary of the Interior and the Secretary of the Army and consistent with Gateway National Recreation Area (GATE) enabling legislation (16 U.S. Code Subchapter LXXXVII). Understanding that the HSGRR/EIS is necessary for the protection of the adjacent communities, NPS is committed to working with USACE to avoid and minimize adverse impacts on NPS resources while advancing the goals of this project. By working closely with USACE throughout the NEPA and Section 106 processes, the NPS can assist in identifying park resources of concern as well as potential issues and impacts to park resources and park visitors that need to be addressed in the NEPA and 106 review. The NPS can

also assist in identifying appropriate mitigation measures to avoid and minimize impacts to NPS resources.

We look forward to continuing to work with you as a cooperating agency and consulting party as you move forward with this project. If you have any questions, please contact Jen Nersesian, Superintendent, Gateway National Recreation Area (jen_nersesian@nps.gov , 718-354-4665).

Sincerely,

Michael A. Caldwell
Regional Director
National Park Service

cc:
Colonel David A. Caldwell, Commander and District Engineer, USACE New York District
Peter Weppler, Chief, Environmental Analysis Branch, USACE New York District
Robert Smith, Environmental Analysis Branch, USACE New York District
Dan Falt, Project Manager, USACE New York District
Andrew Raddant, Regional Environmental Officer, DOI
Frank Hays, Associate Regional Director, Resource Stewardship, NERO, NPS
Acting Chief, Division of Resource Planning and Compliance, NERO, NPS
Jacki Katzmire, Regional Environmental Coordinator, Division of Resource Planning & Compliance, NERO, NPS
Joshua Laird, Commissioner, National Parks of New York Harbor
Jennifer Nersesien, Superintendent, GATE
Minka Sendich, Deputy Superintendent, GATE
Patti Rafferty, Resource Stewardship, GATE
Dave Taft, Coordinator, JBU-GATE
Marilou Erhler, Cultural Resource Stewardship Division, GATE
Doug Adamo, Natural Resource Management Division, GATE

United States Department of the Interior

NATIONAL PARK SERVICE
Gateway National Recreation Area
210 New York Ave., Staten Island, N.Y. 10305

IN REPLY REFER TO:

July 20, 2016

Colonel David A. Caldwell
Commander and District Engineer
United States Army Corps of Engineers, New York District
26 Federal Plaza
New York, NY 10278-0090

RE: Hurricane Sandy General Reevaluation Report/Environmental Impact Statement

Dear Colonel Caldwell:

I am writing in response to Peter Weppler's June 22, 2016 request that the National Park Service (NPS) provide a fatal flaw review of the pre-public draft Hurricane Sandy General Reevaluation Report/Environmental Impact Statement (HSGRR/EIS). I appreciate that your staff have provided Gateway National Recreation Area (GATE) with an opportunity to review the pre-public document. I also want to acknowledge the collaboration and dialogue that has been offered by your staff in its development, which has been excellent and will undoubtedly result in a stronger, more comprehensive plan.

NPS is committed to working with USACE to reduce storm damage risks to communities within the project area, while also minimizing adverse impacts to National Park Service (NPS) resources. We realize this is a difficult balance with competing and often conflicting interests and priorities, and that the safety of the people in harm's way is of paramount consideration. It is our goal to work with you, the other involved agencies, and the public to ensure that the proper level of protection is achieved, and to do so in an expeditious manner.

It is also our goal to ensure that within that framework of protection we are maximizing every opportunity to preserve the natural, cultural and recreational resource values for which the NPS lands and waters within the project area were preserved. We are confident that by working together we can refine the proposal to better reflect both of our federally mandated missions—protection and stewardship—as they intersect in the Jamaica Bay and the Rockaway shoreline environments. In some cases we are hopeful that potential impacts to these resources can be reduced; and where impacts are unavoidable to safeguard the well-being of the surrounding communities, we will work with you to identify mitigation measures at the appropriate scale to compensate for the loss of an irreplaceable, publicly held good. With that in mind we offer the following initial observations and comments:

The HSGRR/EIS does not acknowledge that any plan must be mutually acceptable to the Department of the Interior as well as the Army Corps of Engineers (USACE). GATE enabling legislation (16 U.S. Code Subchapter LXXXVII) states that "The authority of the Secretary of the Army to undertake or contribute to water resource developments, including shore erosion control, beach protection, and navigation improvements (including the deepening of the shipping channel from the Atlantic Ocean to the New York harbor) on land and/or waters within the recreation area shall be exercised in accordance with plans which are mutually acceptable to the Secretary of the Interior and the Secretary of the Army and which are consistent with both the purpose of this subchapter and the purpose of existing statutes dealing with water and related land resource development."

The Tentatively Selected Plan (TSP) will have significant, persistent and irreversible impacts to GATE natural, cultural and recreational resources. The TSP will result in the loss of coastal natural resources, alteration of natural coastal function, alteration of the setting, feeling and association of six Historic Districts within GATE, and alteration of visitor experiences and opportunities. The NPS's authority to conserve and manage park resource is derived from the Organic Act of 1916, which states that "the fundamental purpose of the said parks...is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Given the magnitude and permanence of the preferred alternative, following full NEPA analysis, the NPS will likely have to conclude that the project will result in impairment of park resources.

The TSP requires extensive construction on NPS property. NPS has not yet identified a legal means to authorize construction and confer long-term liability and maintenance responsibility in perpetuity to an outside entity. As we work towards resolution on this issue for the South Shore of Staten Island Coastal Storm Risk Management Study we hope to identify a pathway forward that will be applicable to this project as well.

USACE has invited and NPS has accepted cooperating agency status under the National Environmental Policy Act (NEPA) on the HSGRR/EIS. Cooperating agency status will facilitate NPS adoption of the HSGRR/EIS in order to issue a NPS Record of Decision. The impact analysis of the HSGRR/EIS is insufficient to meet NPS NEPA requirements. In addition, conclusions of the impact analysis for no impact or long-term beneficial impact are often inconsistent with how NPS would evaluate some of the impacts identified in the HSGRR/EIS. The policies and procedures by which NPS meets NEPA requirements are provided on-line (https://www.nps.gov/subjects/nepa/policy.htm).

The plan does not adequately support the need for a tie-in that spans nearly all GATE property on the Rockaway Peninsula. The HSGRR/EIS does not evaluate tie-in alternatives that minimize impacts to GATE resources. NPS has previously discussed with USACE tie-in alternatives that would minimize impacts to NPS natural, cultural and visitor resources. These alternatives included elevation of Rockaway Point Boulevard to provide Roxbury with protection from ocean derived storm surge and tie-in along existing bayside floodwall and east end of Jacob Riis Park.

The plan does not offer a mitigation plan to compensate for the impacts to nationally significant natural, cultural, and recreational resources. We understand that additional work will be

conducted to fully identify mitigation requirements for the bay components of the project; however, mitigation for impacts to sediment transport west of the Rockaway Beach Shorefront Coastal Management Units is not identified in the plan. The existing Rockaway groin field has resulted in interruption of sediment transport processes and increased vulnerability of park resources to storm damage at Jacob Riis Park and Fort Tilden. Additional groins will be constructed as part of this project. NPS has previously requested notching or shortening of the terminal groin and/or nourishment of NPS beaches concurrent with nourishment cycles for the Rockaway Beach Shorefront to mitigate for the impact to the sediment transport.

Tribal consultation should include the Stockbridge Munsee Tribe as well as the tribes currently identified in the report (Shinecock Indian Nation, Delaware Tribe of Indians, and Delaware Nation).

The report fails to identify NPS projects as cumulative impacts. These include Sandy resilience projects at Fort Tilden, Jacob Riis Park, West Pond and Floyd Bennett Field.

Again, we are committed to seeing this plan move forward in an expeditious manner to better protect the communities in and around Jamaica Bay and the Rockaway Peninsula, and are standing by to work with you on solutions that will address the concerns conveyed in this letter. If you have any questions regarding our fatal flaw review or wish to discuss next steps, please contact me (jen_nersesian@nps.gov, 718-354-4665) or Patti Rafferty (patricia_rafferty@nps.gov, 718-354-4625), our Chief of Resource Stewardship for the park. We appreciate your ongoing collaboration in this effort.

Sincerely,

Jennifer T. Nersesian
Superintendent, Gateway National Recreation Area

cc:
Peter Weppler, Chief, Environmental Analysis Branch, USACE New York District
Dan Falt, Project Manager, USACE New York District
Frank Hays, Associate Regional Director, Resource Stewardship, NERO, NPS
Joshua Laird, Commissioner, National Parks of New York Harbor
Minka Sendich, Deputy Superintendent, GATE
Patti Rafferty, Resource Stewardship, GATE
Dave Taft, Coordinator, Jamaica Bay Unit, GATE
Pam McLay, Business Services, GATE
Marilou Erhler, Cultural Resource Stewardship, GATE
Doug Adamo, Natural Resource Stewardship, GATE

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NY 10278-0090

June 29, 2016

Planning Division

Jennifer T. Nersesian, Superintendent
National Park Service
Gateway National Recreation Area
210 New York Avenue
Staten Island, NY 10305

Dear Ms. Nersesian:

With the passage of the Hurricane Sandy Disaster Relief Appropriations Act of 2013 (Public Law 113-2), the U.S. Army Corps of Engineers has been given the authority and funding to complete ongoing coastal storm damage risk reduction projects and studies in the Northeast. As part of the planning process, the New York District is preparing an integrated Draft Hurricane Sandy General Reevaluation Report/Environmental Impact Statement (HSGRR/EIS) examining coastal storm management (CSRM) problems and opportunities for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay area which was devastated by the impacts of Hurricane Sandy in 2012. The goal of the Draft HSGRR/EIS is to identify solutions that will reduce Atlantic shoreline and Jamaica Bay vulnerability to storm damage.

As a federal agency, the U.S. Army Corps of Engineers, New York District is required to evaluate the potential environmental impacts of its Proposed Actions and alternatives to Proposed Actions, in order to make an informed decision in defining a proposed project for implementation. The New York District must consider and incorporate, to the extent practicable, measures to avoid, minimize or mitigate adverse impacts to the human environment. The environmental analysis is conducted in compliance with NEPA, the President's Council on Environmental Quality (CEQ) regulations implementing NEPA at 40 Code of Federal Regulation (CFR) Parts 1500-1508, FEMA's regulations at 44 CFR Part 10, and the State Environmental Quality Review Act ("SEQRA") and City Environmental Quality Review.

For the purposes of this NEPA environmental review, the New York District is serving as the Lead Agency. In accordance with 40 CFR 1501.6 of the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, the New York District is requesting that the National Park Service, Gateway National Recreation Area (GATE) to be a cooperating agency. This request is based on the following: 1) GATE's jurisdiction over the lands within the Jamaica Bay Unit of GATE and 2) in order for the Secretary of the Army to undertake or contribute to water resource developments, including shore erosion control, beach protection, and navigation improvements on land and/or waters within the recreation area shall be exercised in accordance with plans which are mutually acceptable to the Secretary of the Interior and the Secretary of the Army and which are consistent with both the purpose of existing statutes dealing with water and related land

resource development. Note that designation as a cooperating agency does not imply that your agency supports the proposed project.

As a cooperating agency, you have the right to expect that the NEPA document will enable you to discharge your jurisdictional responsibilities. Likewise, you have the obligation to tell us if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the NEPA process, the final HSGRR/EIS will satisfy your NEPA requirements including those related to project alternatives, environmental consequences and if needed, mitigation. Further, we intend to utilize the HSGRR/EIS and subsequent Record of Decision (ROD) as our decision-making documents and as the basis for any required GATE permits. We expect the permit application to proceed concurrently with the HSGRR/EIS approval process.

If your agency will participate in the review as a cooperating agency, please contact Robert Smith at the New York District, Coastal Section, at 917-790-8729, or by email at Robert.J.Smith@usace.army.mil. If a response from you within 30 days from this letter, your consent will be assumed.

Thank you for your cooperation and interest in this project.

Sincerely,

Clifford S. Jones
Chief, Planning Division

cc:
Raddant - Regional Environmental Officer-DOI

BREEZY POINT COOPERATIVE, INC.

202-30 ROCKAWAY POINT BLVD.
ROCKAWAY POINT
NEW YORK 11697
Tel. 718-945-2300
Fax: 718-634-0261

Tuesday, May 03, 2016

Daniel Falt
U.S. Army Corps of Engineers, New York District
Programs and Project Management Division, Civil Works Programs Branch
26 Federal Plaza, Room 2127
New York, NY 10279-0090

RE: Atlantic Coast of New York
East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Project

Dear Mr. Falt:

Initially allow me to thank you for including the Breezy Point Cooperative, Inc. in the meeting on April 19, 2016 to discuss the above referenced project. Your invitation was greatly appreciated as the Cooperative is very interested in gaining information as well as an understanding of how the project may impact our community in the future.

That being said, there are several components of the project that the Cooperative respectfully requests additional clarification on in order to gain a more complete understanding of the potential effects on the community. These items include:

1. The proposed alignment of the project components, particularly the location and design of the tidal barrier are important. Do you have a rendering of what the tidal barrier would look like?
2. The proposed uniform composite dune across the entire oceanfront appears to be the most reasonable alternative, and is initially supported by the Cooperative.
3. The proposed effect that the hurricane barrier might have on backwater flooding in the Cooperative is of the utmost importance. Please provide the Corp's engineering analysis of the potential backwater effect of a tidal barrier.
4. The Cooperative desires to fully integrate the ongoing FEMA HMGP project with USACE Rockaway Resiliency Project. Please provide us with any relevant information on how this is being accomplished.
5. What was the outcome of the USACE meeting with MTA on the Gil Hodges Bridge?
6. The Cooperative requests use of Jamaica Bay Federal Navigation Channel dredge materials for nature based projects to increase resiliency and habitat within the Cooperative and surrounding area. We understand this may also involve the Corp's Operation Division and as such, who might be the project manager that we should contact?

Any information, documentation or assistance you may provide in addressing the above items would be greatly appreciated. We also look forward to receiving the final draft report and participating in community engagement sessions.

Sincerely,
Breezy Point Cooperative, Inc.

Arthur Lighthall
General Manager

Cc: Board of Directors, Denise Neibel, Aram Terchunian

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, NORTH ATLANTIC DIVISION
FOR HAMILTON MILITARY COMMUNITY
302 GENERAL LEE AVENUE
BROOKLYN, NEW YORK 11252-6700

CENAD-PD

20 August 2014

MEMORANDUM FOR Deputy Chief for Civil Works, Headquarters, U.S. Army Corps of Engineers, (CECW-NAD/Ms. Cathy Shuman), 441 G Street, NW, Washington DC 20314-1000

SUBJECT: Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York (Rockaway Project) - Completion Strategy

1. The New York District developed the enclosed completion strategy titled "Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens (Rockaway), New York - Coastal Storm Risk Management" (20 Aug 2014). The North Atlantic Division has reviewed this proposed strategy and supports this approach to evaluate coastal and storm damage risk reduction and resiliency for this area.

2. The North Atlantic Division requests approval of the enclosed completion strategy for the 100% federally-funded Rockaway project. The completion strategy outlines the proposed approach to examine various factors and project elements of the Jamaica Bay (back-bay) and the Atlantic Ocean shorefront. This comprehensive system approach will assist in expediting the overall project, as well as address community concerns about Rockaway.

3. The comprehensive system reformulation will be presented in a single report (Hurricane Sandy General Reevaluation Report and Environmental Impact Statement (HSGRR/EIS)). The reformulation will evaluate various methods to provide risk reduction including different dimensions of beach-fill and hard structures, both as protective measures and to reduce costs for an additional 50 years of re-nourishment. Consistent with the implementation guidance received under PL 113-2, the project will be formulated with the primary purpose of Coastal Storm Risk Management (CSRM) and is treating the area as a complete system that considers the influence of the Atlantic Ocean shorefront conditions on the back-bay system.

4. I have reviewed and concur with the recommendations outlined in the enclosed completion strategy.

5. My point of contact is Mr. Joseph Forcina, Chief, Hurricane Sandy Coastal Management Division, at 347-370-4584, or Joseph.Forcina2@usace.army.mil.

Encl

DAVID J. LEACH, P.E., SES
Director of Programs

ATLANTIC COAST OF NEW YORK, EAST ROCKAWAY INLET TO ROCKAWAY INLET, AND JAMAICA BAY, QUEENS, NY - Coastal Storm Risk Management
20 AUG 2014

Overview: The Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens, New York Project is a previously authorized project that was undergoing a reformulation at the time Hurricane Sandy impacted the area. The reformulation effort was considering changes to the original project in the interest of coastal storm risk reduction, to address vulnerability to erosion, waves and surge, address measures to reduce long-term renourishment costs, and to address extending federal participation in the project for up to 50 years. A Design Agreement was executed in May 2003, with an initial study cost of $3,000,000. The Project Management Plan (PMP) identified two areas of focus: Area 1 to address the Atlantic Ocean shorefront problems, and Area 2 to address the back-bay problems in Jamaica Bay. The original PMP scope and budget prioritized Area 1, the Atlantic coastline efforts, based upon funds availability, the immediate need, and local sponsor preference.

Authorization: The 1965 authorized plan calls for a beach at elevation +10 ft NAVD and a width of 100 ft for the area from Beach 19th Street to Beach 149th Street. The authorized project also included measures to provide hurricane protection, including a seawall and an inlet closure structure. The project authorization was modified to allow the beach-fill component of the plan to be constructed separately from the hurricane protection features, and these hurricane protection features were subsequently de-authorized in WRDA 1986.

Overall Approach: The Rockaway Reformulation will be conducted in a comprehensive, systematic and holistic manner and presented in a single report (Hurricane Sandy General Reevaluation Report and Environmental Impact Statement [HSGRR/EIS]). Consistent with the implementation guidance received under PL 113-2, the project will be formulated with the primary purpose of Coastal Storm Risk Management (CSRM). A HSGRR is being prepared to reevaluate methods to provide risk management along the Atlantic Ocean, including different dimensions of beach-fill, hard structures both as protective measures, and to reduce renourishment needs, and an additional 50 years of renourishment. The reformulation effort is also evaluating methods to address coastal storm risk management in Jamaica Bay, and is treating the area as a complete system, considering the influence of the Atlantic Ocean shorefront conditions on the back-bay system.

Prior to Hurricane Sandy, the reformulation focused on shorefront measures, since there was a clear need and local sponsor support for a project in this area. The shorefront features of the Atlantic Coastline have been developed as alternatives for addressing shorefront damages and local sponsor concurrence with features and alternatives is underway. Refinements to the proposed features and the storm history used in the economic and engineering analysis are being refined to reflect Sandy impacts. Alternatives include various combinations of beach-fill with and without coastal structures to reduce long-term renourishment needs, or for increased inundation protection (consideration for a Sandy-scale event).

The formulation for the back-bay communities (Area 2) had not been significantly advanced, prior to Hurricane Sandy, due to funding constraints and prioritization of reformulation efforts. Following Hurricane Sandy, the team is reinvigorating this portion of the reformulation effort, utilizing information that has been generated in several local study efforts following Hurricane Sandy. The team is proposing a schedule that would meet the Alternatives milestone in six months, followed by identification of a Tentative Selected Plan in 9 months that would be integrated into the shorefront plans, and feed into a draft GRR and EIS.

Cost-sharing: All recommendations for initial construction of CSRM features resulting from this reformulation will be considered as updates to the previously authorized plan to account for current science and engineering. Since this project is classified as "ongoing construction" (i.e. received construction funding within last three years), all initial construction features along the shorefront and back-bay identified in this HSGRR/EIS will be recommended for 100% Federal cost-sharing. Any future renourishment efforts will be subject to additional funding appropriations and cost-sharing.

Reformulation Rationale: The following information supports the rationale for the overall approach.

1. During Hurricane Sandy, Rockaway and Jamaica Bay were severely impacted. Hurricane Sandy was estimated as a 350-yr event along the Rockaway coast, and an 800-yr event in Jamaica Bay, based upon the pre-Sandy stage frequency curves. The area was subjected to extreme erosion, surge and wave damage along the Atlantic Ocean shoreline, and extreme flooding in Jamaica Bay. The Atlantic Ocean surge and wave effects exceeded the island height, resulted in flow of water across the island, and contributed to the flooding along the Jamaica Bay shoreline. Hurricane Sandy illustrated the need to address the entire peninsula and back-bay area as a system, when considering risk-management measures.

2. Following Hurricane Sandy, New York City has stated a preference to provide a very high level of risk reduction. New York City conducted an alternatives analysis and recommended a storm surge barrier across Rockaway Inlet as the solution to protect Jamaica Bay from a Sandy-type event. A storm surge barrier plan, or other plans that provide a high level of risk reduction for the bay, require consideration for an equally high level of protection along the shorefront (which would likely require integration of a hard structure as the line of defense, and continuous line of protection that would not be needed for a plan that solely addresses shorefront development).

3. The area of Rockaway and Jamaica Bay has garnered significant attention following Hurricane Sandy, and has been the focus of many initiatives, including the North Atlantic Coast Comprehensive Study (NACCS), which emphasizes a systems approach considering the full array of measures including non-structural approaches and natural and nature based features. Rockaway needs to be addressed as a system in order to be consistent with this new approach.

4. Since the originally authorized Rockaway Project is a constructed project, it has qualified for repair and restoration to design conditions under the FCCE efforts funded under PL 113-2. Construction is presently underway which, in combination with locally-funded betterments, will restore the shoreline to a condition that contains a dune at +16 ft NAVD, and a beach berm fronting it, consistent with the previously authorized design. These construction efforts will provide a short-term level of risk reduction significantly greater than has previously existed for Rockaway. While there is an urgency to move forward, the immediate need for risk reduction has been met, and based upon historic trends, there is approximately a 4 year window before erosion rates will trigger the need for renourishment of the beach.

Challenges: The following Plan Formulation Challenges have been identified for this Project:

1. <u>Integrating the advanced plan formulation effort for the shorefront with the relatively recent planning effort for the back-bay.</u> The shorefront portion of the project has been progressing for some time while the back-bay formulation is in its earlier stages. An effort is being made to advance the analysis of alternatives in the back-bay on an aggressive schedule that fast-

tracks the overall schedule. The intent is to engage the vertical team on all aspects of the project, following the Planning Modernization principles.

2. Integration of nature-based features and non-structural measures with the overall planning effort. The Reformulation will be undertaken as a single-purpose CSRM project considering the applicability of the full array of measures including non-structural measures and nature-based features. There is a strong interest by all levels of government and stakeholder groups in the evaluation of natural and nature-based features (NNBF) and the physical setting of Jamaica Bay may be conducive to these alternatives as well as non-structural approaches. As project is to be advanced under the provisions of PL 113-2, all alternatives will be justified based upon CSRM benefits. Other benefits that NNBF may provide to habitat and species of concern will be discussed qualitatively. Alternatives milestone meetings will be utilized to confirm vertical team support for this approach.

3. Schedule Concerns in identifying a recommended plan for Jamaica Bay. In order to address schedule concerns that may arise, the Corps will engage the vertical team to address issues regarding complexity of the issue, competing needs within the bay, and the potential scope, and costs associated with the alternatives under consideration. The Corps recognizes that there will be differences of opinion on plans, but expects that the discussion of alternatives and agreement on alternatives can be facilitated utilizing the vertical team and agency representatives of the policy group, Jamaica Bay Resiliency Institute.

Major Milestones:

Atlantic Shorefront Optimized Alternatives	October 2014
Back Bay Alternatives Milestone	October 2014
Tentatively Selected Plan	June 2015
DRAFT GRR & Programmatic EIS	August 2015
Final DRAFT GRR & Programmatic EIS	August 2016
Approval of final GRR and Programmatic EIS	December 2016

Completion Strategy:

A diagram illustrating the completion strategy is attached. This diagram has been assembled to capture the following points:

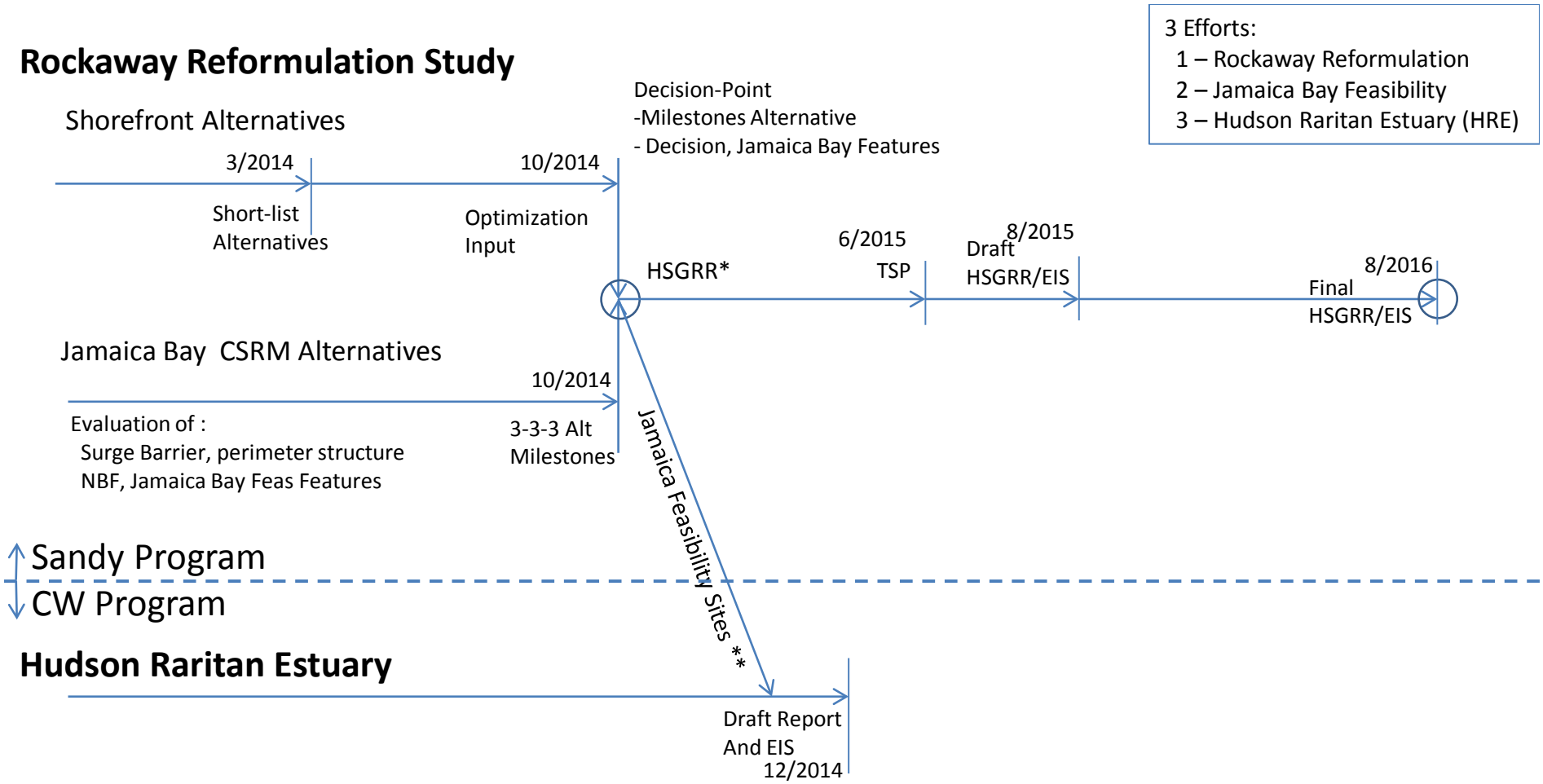
- The integration of shorefront and back-bay alternatives
- The integration of alternatives previously evaluated under the Jamaica Bay Study, and the relationship to the Hudson Raritan Estuary (HRE) effort

The figure illustrates that presently the alternative analyses are proceeding on separate parallel paths for the shorefront and back-bay. The shorefront alternatives have had a greater amount of effort in their development and have progressed further, both in the development of the alternatives and in the necessary analytical tools to evaluate the alternatives. The schedule shows that in October 2014, the District expects to have the shorefront alternatives developed to a point to have identified the optimized plan, when considering the need to address shorefront risk management. At the same time, the District is scheduled to have developed back-bay alternatives to a level of detail to satisfy the alternatives milestone, including definition of the problem, identification of the full range of alternatives, and the evaluation of alternatives sufficient to focus the planning to a short-list of alternatives. It is expected that at this point, the bayside analysis could provide input on how the shorefront alternatives would mesh with the

range of back-bay alternatives under consideration, and if refinements to the shorefront alternatives need to be considered in a systems approach.

This October 2014 milestone will satisfy the Corp's "Alternatives Milestone", and is intended to achieve Corps vertical team, and sponsor alignment of the Alternatives, and the effort involved for further alternative analysis. This will include a decision on the potential for inclusion of the features previously evaluated under the Jamaica Bay feasibility study.

The next milestone is the June 2015 Identification of a Tentatively Selected Plan (TSP). This milestone is expected to identify the recommended plan for Rockaway and Jamaica Bay that integrates both shorefront and back-bay measures. This plan will identify the fully-optimized and integrated plan of protection along the shorefront and back-bay. After vertical team agreement on the TSP, the information described in the TSP milestone would be assembled into a Draft GRR, and EIS that would be circulated for all of the necessary reviews.



* The Alternatives milestone will be used to document the decision on alternatives, and obtain concurrence on Path Forward
- Will present shorefront alternatives to a greater level of detail than backbay (identify scaled alternatives for shorefront)
- Expect to obtain agreement on integration of shorefront & backbay, approach for evaluating NNBF
- Identify to the extent the Jamaica Bay Feasibility sites will be included as a component of the CSRM measures in Rockaway

** Based upon the alternatives milestone, Jamaica Bay sites not included in Rockaway would be recommended under HRE

United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
United States Custom House
200 Chestnut Street
Philadelphia, PA 19106

IN REPLY REFER TO:
A.1.2.(NER-RSS)

JUL 2 1 2016

Mr. Clifford S. Jones
Chief, Planning Division
Department of the Army
U.S. Corps of Engineers, New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, NY 10278-0090

Dear Mr. Jones:

Thank you for your letter dated June 29, 2016, requesting that the National Park Service (NPS) be a cooperating agency in the National Environmental Policy Act (NEPA) process for the integrated Hurricane Sandy General Reevaluation Report/Environmental Impact Statement (HSGRR/EIS) to examine coastal storm management problems and opportunities for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay area.

The NPS is pleased to accept the role of cooperatmg agency in the HSGRR/EIS being prepared by the United States Army Corps of Engineers, New York District (USACE).
In addition, the NPS also requests to participate as a consulting party in the USACE's consultation process under Section 106 of the National Historic Preservation Act for the HSGRR/EIS.

We believe it is to our mutual benefit for the NPS to cooperate in the preparation of this plan. The NPS mission is to manage our lands for the preservation of and access to natural, cultural and recreational resources in perpetuity. In addition, by working collaboratively we can ensure that the HSGRR/EIS is mutually acceptable to the Secretary of the Interior and the Secretary of the Army and consistent with Gateway National Recreation Area (GATE) enabling legislation (16 U.S. Code Subchapter LXXXVII). Understanding that the HSGRR/EIS is necessary for the protection of the adjacent communities, NPS is committed to working with USACE to avoid and minimize adverse impacts on NPS resources while advancing the goals of this project. By working closely with USACE throughout the NEPA and Section 106 processes, the NPS can assist in identifying park resources of concern as well as potential issues and impacts to park resources and park visitors that need to be addressed in the NEPA and 106 review. The NPS can

also assist in identifying appropriate mitigation measures to avoid and minimize impacts to NPS resources.

We look forward to continuing to work with you as a cooperating agency and consulting party as you move forward with this project. If you have any questions, please contact Jen Nersesian, Superintendent, Gateway National Recreation Area (jen_nersesian@nps.gov , 718-354-4665).

Sincerely,

Michael A. Caldwell
Regional Director
National Park Service

cc:
Colonel David A. Caldwell, Commander and District Engineer, USACE New York District
Peter Weppler, Chief, Environmental Analysis Branch, USACE New York District
Robert Smith, Environmental Analysis Branch, USACE New York District
Dan Falt, Project Manager, USACE New York District
Andrew Raddant, Regional Environmental Officer, DOI
Frank Hays, Associate Regional Director, Resource Stewardship, NERO, NPS
Acting Chief, Division of Resource Planning and Compliance, NERO, NPS
Jacki Katzmire, Regional Environmental Coordinator, Division of Resource Planning & Compliance, NERO, NPS
Joshua Laird, Commissioner, National Parks of New York Harbor
Jennifer Nersesien, Superintendent, GATE
Minka Sendich, Deputy Superintendent, GATE
Patti Rafferty, Resource Stewardship, GATE
Dave Taft, Coordinator, JBU-GATE
Marilou Erhler, Cultural Resource Stewardship Division, GATE
Doug Adamo, Natural Resource Management Division, GATE

ADDITIONAL CORRESPONDENCE

With resource agencies subsequent to release of the Revised Draft GRR/EIS.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

Environmental Analysis Branch

September 27, 2018

Mr. David Stilwell
Field Supervisor
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045

Dear Mr. Stilwell:

The U.S. Army Corps of Engineers, New York District in cooperation with the non-federal and local sponsors, the New York State Department of Environmental Conservation and the City of New York released for agency and public review the Revised Draft Hurricane Sandy General Reevaluation Report (HSGRR)/Draft Environmental Impact Statement (DEIS) on August 31, 2018. The Draft HSGRR/EIS, including the BA, was posted in the Federal Register e-NEPA system on September 7, 2018, which started the 45 day public review period. The report is posted on the New York District's http://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/East-Rockaway-Inlet-to-Rockaway-inlet-Rockaway-Beach/. The Revised Draft HSGRR incorporates comments received on the 2016 Draft HSGRR and is updated to reflect the subsequent changes to the Recommend Plan for addressing coastal storm risk for the communities surrounding Jamaica Bay and along the Atlantic Shorefront of the Rockaway peninsula.

The District has determined that the following Federally-listed species are likely to occur in the study area: 1) Piping plover (*Charadrius melodus*), Federally threatened; 2) Seabeach amaranth (*Amaranthus pumilus*), Federally threatened; and 3) rufa red knot (*Calidris canutus*), Federally threatened. After evaluating the potential effects, the District determined that the proposed action may affect, likely to adversely affect the the piping plover and seabeach amaranth and not like to adversely affect, the rufa red knot. The attached Biological Assessment (BA) (also contained within Appendix D of the Draft HSGRR/EIS) has been prepared to identify and discuss potential impacts to the listed species. The BA has been pre-coordinated with your Long Island Field Office staff. The BA provides the following information required for formal consultation:

- Description of proposed action;
- Description of the area that may be affected by the proposed action;
- Current list of threatened and endangered species and designated critical habitat that may be affected by the proposed action;
- Description of the manner in which the proposed action may affect any listed species or critical habitat, and an analysis of any cumulative effects;
- Conservation measures to be implemented as part of the proposed action; and
- Other relevant available information on the proposed action

With this letter, the District requests initiation of formal consultation with the United States Fish and Wildlife Service (FWS) under Section 7(a) (2) of the Endangered Species Act (ESA).

I look forward to working with you and your staff on this effort. If you should have any questions, please contact Ms. Daria Mazey of my staff at 917-790-8726.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures
cc: USFWS-LIFO

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

October 15, 2018

Colonel Thomas D. Asbery
U.S. Army Corps of Engineers
Commander and District Engineer
New York District
26 Federal Plaza
New York, NY 10278

Attn: Mr. Peter Weppler

Dear Colonel Asbery:

Re: Response to request for initiation of formal consultation for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study

This letter acknowledges the U.S. Fish and Wildlife Service's (Service) receipt of your correspondence dated September 27, 2018, requesting initiation of formal consultation, pursuant to section 7 of the federal Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*), for the above-referenced project. The U.S. Army Corps of Engineers (Corps) has requested consultation for project impacts that may affect the piping plover (*Charadrius melodus*; threatened), seabeach amaranth (*Amaranthus pumilis*; threatened) and rufa red knot (*Calidris canutus rufa*; threatened).

All substantial information required to initiate formal consultation was either included with the biological assessment and associated documents, or sent to us via electronic correspondence. As we noted in our emails dated July 16 and September 25, 2018, there may be some additional information or clarification needed regarding the project description, but we feel these should not delay initiating consultation. As is customary, we will remain in close coordination with the Corps throughout the consultation.

As a reminder, section 7(d) of the ESA requires that, after initiation of formal consultation, the federal action agency may not make any irreversible or irretrievable commitment of resources which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternatives that avoid jeopardizing the continued existence of endangered or threatened species or destroying or modifying their critical habitats until formal consultation has been concluded.

If you have any questions, please have your staff contact Steve Sinkevich of the Long Island Field Office at (631) 286-0485, extension 2121.

Sincerely,

David A. Stilwell
Field Supervisor

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

Environmental Analysis Branch

November 16, 2018

Mr. David Stilwell
Field Supervisor
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045

Dear Mr. Stilwell:

The U.S. Army Corps of Engineers (USACE), New York District (District) is in receipt of your draft FWCAR, dated October 2018 submitting recommendations on the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Draft Integrated Hurricane Study.

Please find attached our responses to your Planning and Mitigation Recommendations. The District looks forward to working with your office throughout the Pre-Engineering and Design and Construction phases of this study and thank you for your continued assistance and input to this process which helps to advance the execution of this regionally-significant project.

If you require any additional information, please feel free to contact Ms. Daria Mazey Project Biologist/Planner at 917-790-8726.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

Enclosure
cc: LIFO

Responses to Draft FWCAR

USACE concurs with the Service's overall Planning and Mitigation Recommendations. We are committed to coordination and collaborating with FWS to advance our joint goals and obligations to ensure environmental protection and sustainability, and we offer responses to specific Recommendations, as follows:

XII. Service Planning and Mitigation Recommendations

B. Planning Recommendations

1. Habitat Loss, Degradation, and Fragmentation

FWS Recommendation: "*An adaptive management plan for mitigation measures should be developed to ensure implementation and success. Further coordination with the Service under a separate scope of work will be necessary to achieve this goal.*"

Response: Habitat mitigation is not associated with the proposed project. As part of the integrated approach for the Rockaway/Jamaica Bay study, the District considered human and ecosystem community resilience as part of the overall solution to manage risk associated with the high frequency flood areas. To minimize erosion, maximize stability and longevity, and attenuate wave energy that could cause scour within the locations of the HFFRRFs, the NED Plan has been designed to minimize and in some areas preserve the functional effectiveness of the bayside habitat.

In the Pre-Construction and engineering/design (PED) phase, further evaluation will be undertaken to minimize impacts associated with the project. If it is determined that there will be mitigation, the District will working with the resource agencies for the appropriate mitigation measure(s) per ER 1105-2-100, Planning Guidance Notebook.

3. Wildlife Management

FWS Recommendation: "*In accordance with the 2003 MOA entitled, "Aircraft-Wildlife Strikes," and the subsequent 2007 circular entitled, "Hazardous Wildlife Attractants on or Near Airports," the Corps should commence coordination with the Service and the FAA for activities in close proximity to JFK Airport so that the NNBFs can be sited and designed without creating hazardous conditions for aircraft."*

Response: In accordance with the FAA Advisory Circular 150/5200-33B and the Memorandum of Agreement with FAA to address aircraft-wildlife strikes, when considering proposed flood risk management measures and mitigation areas, USACE must take into account whether the proposed action could increase wildlife hazards. The FAA recommends minimum separation criteria for land-use practices that attract hazardous wildlife to the vicinity of airports. These criteria include land uses that cause movement of hazardous wildlife onto, into, or across the airport's approach or departure

airspace or air operations area (AOA).

These separation criteria include:

- Perimeter A: For airports serving piston-powered aircraft, hazardous wildlife attractants must be 5,000 feet from the nearest AOA;
- Perimeter B: For airports serving turbine-powered aircraft, hazardous wildlife attractants must be 10,000 feet from the nearest AOA; and
- Perimeter C: Five-mile range to protect approach, departure, and circling airspace.

As stated, the closest airport to the study area that must comply with these standards is the John F. Kennedy International Airport, Queens County, New York. The natural features in the recommended alternative are within the limits of the 5-mile perimeter of the airport, and as designed are note expected to introduce hazardous wildlife attractants. Also, the habitat acreage created is not large enough provide nesting habitat for the potential species that cause hazards. The District will confirm these designs with the FAA and PANYNJ.

4. Environmental Contaminants

FWS Recommendation: "*We recommend pre-construction monitoring for sediment contaminants at the locations of the NNBFs. Construction should not proceed without prior screening for contaminants. If concentrations of contaminants in sediment exceed acceptable thresholds, biological testing and/or remediation may be necessary."*

Response**:** Hazardous, Toxic and Radioactive Waste (HTRW) can occur within the urban environment such as NYC. In the PED phase, a scope of work will be prepared to conduct specific testing for HTRW in the HFFRRF areas. If it is determined, during sampling that HTRW contamination exists, the District will assess if the project can be realigned to avoid the contaminated site. In accordance with ER 1165-2-132, if the project alignment cannot be revised, the project's non-Federal sponsor would be responsible for the removal of any contaminants to allow the construction of the alignment. The non-federal sponsor will conduct, at 100% their expense, those remedial activities necessary to remove contaminated materials in accordance with ER 1165-2-132. USACE will continue to coordinate with all parties, including the State of New York, City of New York, and NPS.

C. Mitigation Recommendations

1. Habitat Loss and Modification

b. Composite Seawall

FWS Recommendation: "*As it is designed, the landward side of the composite seawall is exposed at the crest of the dune. Based on the current project description, it appears this would result in the loss of approximately 9 ac of sandy maritime dune habitat that may serve as has habitat for beach-nesting birds. The Corps should mitigate for this loss of habitat".*

Response. During PED, the District will evaluate potential options of covering the exposed portion of the composite seawall.

e. HFFRRFs: Shoreline Armoring

FWS Recommendation: "*The Service requests that further consideration is given to the proposed construction of bulkhead along the shoreline of Thursby Basin Park on the western shore of Sommerville Basin. We recommend evaluating the feasibility of a structure further landward around the perimeter of the undeveloped lot, instead of hardening the shoreline at this location."*

Response: During PED, the alignment of hard structures will be located to minimize impacts to sensitive areas.

f. HFFRRFs: Natural and Nature Based Features

FWS Recommendation: "*Recognizing the impacts of nourishment on beach invertebrates and shorebird foraging, and that renourishment is scheduled to occur every four years for the life of the project, we recommend that Corps mitigate by creating potential shorebird foraging habitat elsewhere within the Study Area."*

Response: It is acknowledged that beach nourishment results in short-term declines in abundance, biomass, and taxa richness. However, studies within the NY/NJ Bight have shown recovery of intertidal assemblages are complete within 2-6.5 months of the conclusion of filling. Differences in the rate of recovery were most likely due to differences in when nourishment was complete. Recovery was the quickest when filling was completed before the low point in the seasonal cycle of infaunal abundance. It is important that the grain size of the fill material matched that of the beaches to be nourished.

D. Enhancement Opportunities

FWS Recommendation: "*A number of areas of saltmarsh habitat along the north shore*

of the Rockaway Peninsula were identified as potential restoration areas in the Corps' Jamaica Bay Navigational Channels and Shoreline Environmental Surveys Final Report (U.S Army Corps of Engineers 1997). Some of these areas are within or adjacent to the proposed HFFRRFs. The Corps may consider restoring saltmarsh and other coastal communities in these areas in order to provide added habitat for fish and wildlife."

Response: The purpose of this study was to provide coastal storm risk management measures to the study area. The Hudson Raritan Estuary Ecosystem Restoration Study will be focusing and recommending restoration opportunities within the Jamaica Bay Planning Region.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Office of Natural Resources, Region 2
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-6464 | F: (718) 482-4502
www.dec.ny.gov

December 5, 2018

Kerri Dikun
Fish and Wildlife Biologist
USFWS - Long Island Field Office
340 Smith Road
Shirley, NY 11967

Dear Ms. Dikun:

Thank you for providing the New York State Department of Environmental Conservation (the Department) the opportunity to review the U.S. Fish and Wildlife Services' (Service) Draft Fish and Wildlife Coordination Report for the *Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study*.

The Department shares the Services' endorsement of the proposed project, provided that the Services' recommendations regarding additional surveys to further delineate and quantify potential impacts to the aquatic and shoreline environment, as well as its recommendations to minimize impacts to sensitive natural resources and to compensate to the fullest practicable extent for any unavoidable impacts to these resources are followed.

We look forward to working with the Service and the U.S. Army Corps of Engineers to achieving the project objectives while preserving and perhaps enhancing the State's valuable natural resources.

Sincerely,

Ken Scarlatelli
Regional Natural Resources Supervisor

Cc: Daria Mazey, USACE
Pete Weppler, USACE
Matt Cheblus, NYSDEC

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

December 11, 2018

Peter Weppler, Chief
Environmental Analysis Branch, New York District
U.S. Army Corps of Engineers
Jacob K. Javits Federal Building
New York, NY 10278-0090

Attention: Daria Mazey

Subject: Final Fish and Wildlife Coordination Act Section 2(B) Report for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study, Kings, Queens, and Nassau County, New York

Dear Mr. Weppler:

The U.S. Fish and Wildlife Service (Service) submits the enclosed document entitled, "Final Fish and Wildlife Coordination Act Section 2(B) Report for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study, Kings, Queens, and Nassau County, New York" for the U.S. Army Corps of Engineers' review.

If you have any questions or require additional information, please contact Kerri Dikun of the Long Island Field Office at (631) 286-0485.

Sincerely,

David A. Stilwell
Field Supervisor

cc: NPS, Staten Island, NY (P. Rafferty)
NOAA Fisheries, Highlands, NJ (K. Greene)
NYSDEC, Region 2, Long Island City, NY (K. Scarlatelli)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

April 4, 2019

Colonel Thomas D. Asbery
District Engineer, New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278

Attention: Mr. Peter M. Weppler

Dear Colonel Asbery:

Please find enclosed the U.S. Fish and Wildlife Service's (Service) Biological Opinion for the U.S. Army Corps of Engineers' (Corps) proposed project entitled, "East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study" and its effects on the federally listed Atlantic Coast piping plover (*Charadrius melodus*; threatened), seabeach amaranth (*Amaranthus pumilus*; threatened), and red knot (*Calidris canutus rufa*; threatened).

We appreciate the assistance of your staff in working with us to complete consultation on this significant project. We acknowledge that the project is only at a 15 to 30 percent design phase and, therefore, the biological opinion may not cover all the potential impacts of the finalized proposed project. As a result, please have your staff continue to coordinate with us staff to determine if reinitiation of consultation is necessary.

If you have any questions or require further assistance, please have your staff contact the staff at the Long Island Field Office at (631) 286-0485.

Sincerely,

David A. Stilwell

David A. Stilwell
Field Supervisor

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

APR 26 2019

Mr. David Stilwell
Field Supervisor
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045

Dear Mr. Stilwell:

The U.S. Army Corps of Engineers, New York District (District) has reviewed the U.S. Fish and Wildlife Service's (Service) Biological Opinion (BO) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study and its effects on the federally listed Atlantic Coast piping plover (*Charadrius melodus*; threatened), seabeach amaranth (*Amaranthus pumilus*; threatened), and red knot (*Calidris canutus rufa*; threatened). The District seeks to reach agreement concerning several issues identified during the review of the document, and from subsequent discussions.

During the Study's consultation, the District raised concern over the distinction between annual monitoring, protection measures, and construction monitoring during future renourishment activities. Currently, Reasonable and Prudent Measures (RPMs) 1.7, 2.1 and 2.6 include language that the vegetation and wrack monitoring plans would be approved by, and in some cases, be implemented by the Service. Please note that the District intends to implement the monitoring via District personnel or District approved ecological contractors, after coordinating the planting and monitoring plans with the Service. For all the RPMs, the District and the project's local sponsors will implement these plans to the extent practicable.

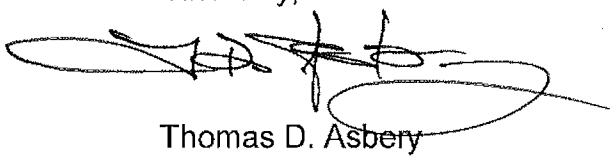
After our analysis of the BO, the District concurs with most of the recommendations. Additionally, for RPM 2.7, the behavioral monitoring program should focus on potential impacts related to the reinforced dune. Impacts which are currently evaluated under the Fire Island Inlet to Moriches Inlet Emergency Stabilization and Westhampton Interim Projects' Biological Monitoring Programs should not be unduly repeated. Monitoring efforts for research purposes cannot be undertaken using P L 113-2 funding. The District must only monitor directly related to impacts associated with the project. To ensure the appropriateness of RPM 2.7, edits are respectfully requested (see enclosure).

The District has pursued the highest degree of collaboration and agreement between the Federal, State and local agencies in this important effort. During implementation, the District cannot dictate how the state and local agencies conduct local land management practices subject to their jurisdiction. To facilitate

implementation success, the District has shared the BO with the National Parks Service (NPS) and the New York City Department of Parks and Recreation (NYCDPR) who have shared input on the ability to execute the RPMs which pertain to their lands. The District, with our partners, also request clarification on a number of items within the BO. NYCDPR and NPS will be following up shortly with their own letters regarding the feasibility of implementing the BO. The attached enclosure specifically discusses the points of clarification by RPM, Avoidance and Minimization Measures, and Conservation Measures, and where applicable, provided the recommended changes. These changes include erroneous or outdated information which the District requests correction or clarification. In particular, the District does not expect an increase in recreation to result from this project when compared to existing conditions, but only when compared to future without project conditions.

I look forward to working with you and your staff on resolving the above referenced and enclosed concerns and revising the Biological Opinion to reflect the District's comments. Thank you for continued cooperation in advancing this effort. If you have any questions, please contact me directly or Mr. Peter Weppler, Chief of the Environmental Analysis Branch at 917-790-8634.

Sincerely,



Thomas D. Asbery
Colonel, U.S. Army
Commander and District Engineer
New York District

cc.
USFWS-LIFO
NPS
NYCDPR
NYSDEC

Enclosure

Enclosure: Rockaway Biological Opinion (BO), USACE Requested Corrections
April 25, 2019

The following errors in the BO have been previously identified to the Service with a request to correct within the BO:

1. Figure 9 on page 7 is in Virginia, not NJ. Source: Figure 7-12 in Engineering Shorefront Appendix.

2. USACE has screened Mott's Basin out of the Recommended Plan. Please delete from the project description on pages 2, top of 9, and 10 (incl. Figure 12).

3. There are several instances where "increased recreation" resulting from the project are cited. As discussed, the USACE project is not projected to increase recreation beyond the current levels, but rather maintain those levels by avoiding the erosion, lost beaches, and diminished recreation that would otherwise occur without construction of the project. Please add clarifying language to reflect this such as "increased recreation compared to the future without project condition". In the District's coordination with NPS, NPS also noted that the project will not increase recreation on NPS property from existing conditions and concurred with the Corps' analysis on this issue.

   Please address this on pages 36, 47, 49 (in two places), 50 (in three places), 51 (in two places), 53, 56, 58, 62 (RPM 1.10), and 64 (RPM 2.10). If it reduces the burden on the Service, the District can respectfully make the suggested edits in track changes for your consideration if provided with a Word version of the B.O.

The District, in coordination with NYCDPR and NPS, also requests the following clarifications and/or changes (a through q):

a. RPM 1.2: "The Corps shall remove any construction material or equipment staged or stored within delineated breeding areas between Beach 19th Street and Beach 67th Street…by April 1 of any given year over the life of the project and pre-migration staging areas."

   Requested change/clarification: Please delete pre-migration staging areas, or alternatively define this term and its applicability.

b. RPM 1.3: "During construction, the Corps shall work with the NYCDPR and the NPS to ensure that plover breeding habitat from Beach 19th Street to Beach 67th Street, and 500 m from breeding areas in Jacob Riis and Fort Tilden Parks is protected during construction activities from April 1 to September 1 with symbolic fencing, signs, etc."

   Requested change/clarification: As RPM 1.3 reads, it appears to say that each nest would require fencing 500 meters around it which NPS and NYCDPR

expressed concerns to USACE about as it would impede the ability to also manage the recreational needs within their properties. Common practice for both land managers is to fence approximately 50 meters around a nest. NYCDPR current practice is to leave fencing for protected species at RBESNA from April 1 through November 30.

c. RPM 1.7: "A vegetation planting plan for the artificial dune shall be coordinated with and approved by the Service. At a minimum, it shall incorporate a mix of native dune plant species (no woody vegetation) and not be limited to a single grass species. Plantings should be made in a random manner and not rows with uniform spacing. The plantings should mimic natural dune vegetation in the region in species diversity, density, and spacing. The dune planting plan shall be completed and approved 3 months prior to initial construction."

   Requested change/clarification: Please revise the first sentence to: "A vegetation planting plan for artificial dune shall be approved by a Corps Biologist and coordinated with the New York State Department of Environmental Conservation (NYSDEC), the project's non-federal sponsor, NYCDPR and the Service. At a minimum, it shall incorporate a mix of native dune plant species and not be limited to a single grass species. … The dune planting plan shall be completed and approved 3 months prior to initial construction of the dune." Please note in general throughout the BO, District staff will approve all construction contract-related documents and will coordinate and provide to the Service. This concept also applies to RPMs 2.1 and 2.6 below.

   RPM 2.1: "The Corps shall develop and implement pre-, concurrent, and post-construction monitoring plans for piping plover and red knot and their habitats with guidance ~~and approval~~ from the Service. This shall be completed and ~~submitted to~~ **coordinated with** the Service 3 months before initial construction ~~for approval~~. The basic elements of the monitoring plan shall include transect locations, frequency of monitoring, habitat type, construction activities that are present less than and greater than 500 m, time of day, tidal phase, etc."

   RPM 2.6: "The Corps shall undertake monitoring of wrack and wrack invertebrates in the intertidal zone, and berm based on a sampling program that has been devised in consultation with~~, and agreed to, by~~ the Service prior to its implementation. The information collected during this monitoring program shall be used to adaptively manage the operation and maintenance phases of the project to further avoid and minimize take. The monitoring plan should include, but not be limited to, the response of the wrack and wrack invertebrates during and after sand placement within breeding and pre-migration staging, and foraging areas, including such information as total recovery time, recovery rates, abundance, biomass, diversity, and composition of prey items, and spatial coverage of wrack. The plan shall be finalized 3 months prior to initial construction of the project."

d. RPM 1.10: "The Corps shall work with the NYCDPR and the NPS to ensure that all suitable piping plover breeding habitat with a recent history (last five years) of plover breeding is protected by April 1 of each year to address the adverse effects associated with the expected increase in recreation" **when compared to the future without project condition.**

   Requested change/clarification: NYCDPR does not fence the entirety of the protected area. NYCDPR has a monitoring team in place starting in April and monitors regularly and will fence areas where plovers are being territorial and displaying breeding behaviors, according to the USFWS guidelines. Beach 38th to Beach 57th Streets are pre-fenced annually. NYCDPR intends to continue monitoring and protecting piping plovers per above accepted practices. Also, please clarify as noted above that the expected increase in recreation is when compared to the future without project condition.

e. RPM 2.4: "The Corps shall devise an early successional beach habitat restoration plan for the berm habitat between Beach 9th and Beach 82nd in coordination with the Service. The plan shall be finalized 3 months prior to initial construction of the project. Ten percent vegetation coverage shall be the target vegetation density with a threshold action of 17 percent coverage for planning purposes between Beach 9th Street and Beach 82nd Street, so as to keep this in an early successional habitat stage, as this is within the zone of potential chick movement."

   Requested change/clarification: In the second sentence, please clarify "prior to initial construction of the Atlantic Shorefront reach of the project." Please edit the last sentence to read: "In order to avoid dense vegetation which would impede piping plover chick movement, ten percent vegetation coverage…between Beach 9th Street and Beach 82nd Street. This is to keep the berm in an early successional habitat stage,…"

f. RPM 2.5: "The Corps shall assess the potential for, or actual, erosion associated with hard structures (e.g., groins and rock sills) between Beach 49th Street to 82nd Street, and at Jacob Riis and Fort Tilden Parks that may impact plover habitat, and throughout the ocean and bayside shoreline for red knots as the final designs are developed.

   Concurrently, develop a remedial action plan through further coordination with the Service for erosion that causes a loss of breeding, foraging, or roosting habitat. The plan shall be completed 3 months prior to initial construction."

   Requested change/clarification: The U.S. Army Corps of Engineers will not develop a remedial action plan unless erosion beyond what is reasonably expected actually occurs. For remedial action to be successful, it must address actual conditions which cannot be presupposed. Also, as discussed previously with the Service, some seasonal/annual variation as storms and currents move

sand within the system is expected and not necessarily an indication that the project is not performing as intended. Please edit the first sentence of the second paragraph to read: "In the event of unintended severe downdrift erosion resulting from the project, the Corps will develop…"

g. RPM 2.7: "The Corps shall develop a biological monitoring program for the action area, to be approved by the Service, in coordination with the NYCDPR and the NPS, and implemented by the Service or Service-approved entity to address the impacts of the dune, berm, composite seawall, and groin construction on plover and red knot biology and ecology. The monitoring program shall span the pre-initial construction, initial construction, and a determined period of the renourishment phases of the project. The monitoring program shall evaluate red knot and plover population and behavioral responses to habitat changes in the action area, such as avoiding existing foraging, roosting, or breeding areas, as a whole, or as in the case of plovers, any shifts in the species distribution relative to the hard and soft shoreline protection structures. The plan shall be finalized 3 months prior to the initiation of the biological monitoring plan."

   Requested change/clarification: Please revise first sentence to: "The Corps shall develop and implement a Biological Monitoring Program in coordination with NYCDPR, NPS, and the Service to address the impacts of the dune. The development of the Biological Monitoring Program will also be coordinated with NYSDEC..." It is the New York District's responsibility to implement all facets of our project, including Biological Monitoring Programs, and the District has the required specialized expertise. Additionally, as previously discussed, please omit sentence that begins "The Monitoring Program shall evaluate red knot and plover population and behavioral responses…" The behavioral monitoring program should focus on potential impacts related to the composite seawall as other impacts named have already been or are presently being evaluated under FIMI and Westhampton Biological Monitoring Programs associated with Corps projects. Also, any monitoring should be integrated into what is already being performed so as to avoid duplicative efforts.

h. RPMs 2.10 and 2.11: "To reduce the anticipated level of take due to increases in disturbances from recreational activities [please add: **when compared to future without project conditions]**, the Corps shall, in coordination with the NYCDPR and NPS, ensure the full implementation of the Service's "Guidelines for Managing Piping Plovers on Recreational Beach in Order to Avoid Take Under the Endangered Species Act"… in the project area, including working with the NYCDPR and the NPS to ensure implementation and enforcement of plover management activities over the life of the project."

   Requested change/clarification: "The Corps will also coordinate these with our non-federal sponsor, NYSDEC."

i. RPM 2.11: "The Corps shall work with the NYCDPR and the NPS, in coordination with Service, in developing a predator management plan for the action area where predators of piping plovers are identified, management objectives designed and implemented, and results are documented."

   Requested change/clarification: The District would like to clarify that the Corps' responsibility is limited to the development of the plan and not implementation which is outside of our authority. Please edit to read: "developing a predator management plan for the action area to identify the predators of piping plovers, how predators will be managed, and how results will be documented."

j. Additional for RPM 2.11, requested change/clarification: NPS to provide input as they noted that they do not currently practice predator control. NPS has requested, in coordination with the District, a follow-up discussion with the Service to ensure alignment on the Rockaway BO. The District will facilitate where appropriate, and coordinate on matters of joint interest. Please note, that the District does not control land management decisions on lands under NPS jurisdiction.

k. RPM 2.12: "As the project involves nighttime construction activities and no night time monitoring is proposed, all construction personnel and the Service shall be provided a daily report at the end of each day providing the location of all breeding activities, including territories, courtship areas, nest building areas, nest sites and chick rearing areas. All lights shall be directed away from these areas."

   Requested change/clarification: Please edit this RPM so the last sentence reads: "All lights shall be directed away from the areas noted as practicable to allow for safe construction."

l. RPM 3.1 (third paragraph): "All on site personnel shall be required to participate in a mandatory piping plover and seabeach amaranth training session prior to April 1 (provided and conducted by the Service or an approved Service representative). Any individuals without this training shall not be permitted on site. All costs of this training will be the responsibility of the Corps or the contractor."

   Requested change/clarification: Not practicable for entire construction crew to attend in-person off-site training. Please edit to read: "the Service will provide a Service CD or digital video to show the workers on-site which can be administered by the District."

m. Also for RPM 3.1 (first paragraph, first sentence): "A construction field meeting will be held on or before March 1 and should include the local cost sharing sponsors…"

Requested change/clarification: Please change "local cost sharing sponsors" to "non-federal sponsors" as the initial construction of this project is 100% federally funded.

n. Piping Plover Conservation Recommendation 1: "The Corps should identify areas on Long Island within their Civil Works program where natural process can form bay to overwash habitat and promote optimal plover habitat formation. The focus should be on areas outside of sites that already provide opportunities for these types of habitat development."

   Piping Plover Conservation Recommendation 2: "The Corps should identify mechanisms to contribute to plover protection measures, either by providing equipment, personnel, or funds, to local land managers within areas affected by their Civil Works projects."

   For Conservation Recommendations 1 and 2 pertaining to piping lovers, please note that this BO is specific to the East Rockaway Inlet to Rockaway Inlet Reformulation Study. While the District is not able to perform these Conservation Recommendations under the Rockaway Reformulation, this work falls within our Ecosystem Restoration mission and could be pursued where the authority exists and there is a willing and eligible non-federal sponsor identified.

o. Piping Plover Avoidance and Minimization Measure 1.4 (third paragraph): "Productivity and population surveys will be conducted each year for the life of the project."

   Please note that the Corps is not able to perform surveys over the life of the project each year as our funding is tied to construction and renourishment cycles. The surveys would be accomplished by the local sponsor and/or NPS staff who already perform this work annually. No duplicative survey work will be added.

p. Red Knot Avoidance and Minimization Measure 2.2: "The Corps will support the NYCDPR's pre- and post-construction surveys of the Project area to determine the presence of red knot."

   Requested change/clarification: Please edit to read: "NYCDPR will support the District's pre and post construction surveys related to initial construction and each renourishment cycle by conducting their regular shorebird monitoring program from April to August on an annual basis. The District will monitor for presence and absence of piping plovers and red knots prior to and during each construction/renourishment cycle."

q. The District would like to note regarding the assumption of 100 percent burial of the amaranth seed bank (page 40 of the BO), that this ignores the experience of multiple beach nourishment sites in New Jersey where seabeach amaranth populations have rebounded significantly post nourishment due to the significant

seed banks which were abundant in the sand sources. There is a potential for the Rockaway Reformulation project to improve the seabeach amaranth presence.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

June 25, 2019

Colonel Thomas D. Asbery
District Engineers
New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278-0900

Dear Colonel Asbery:

This is in response to your correspondence dated April 26, 2019, providing comments on the East Rockaway Inlet to Rockaway Inlet Coastal Storm Risk Management Project biological opinion (Opinion) dated April 3, 2019.

Our responses are provided below and follow as closely as possible the numbering format provided in your April correspondence. The amended Opinion is enclosed.

Corps' Comment 1: Figure 9 on page 7 is in Virginia, not NJ. Source: Figure 7-12 in Engineering Shorefront Appendix.

FWS Response: Revised as noted.

Corps' Comment 2: USACE has screened Mott's Basin out of the Recommended Plan. Please delete from the project description on pages 2, top of 9, and 10 (incl. Figure 12).

FWS Response: We have noted that it has been screened out of the Recommended Plan.

Corps' Comment 3: There are several instances where "increased recreation" resulting from the project are cited.

As discussed, the USACE project is not projected to increase recreation beyond the current levels, but rather maintain those levels by avoiding the erosion, lost beaches, and diminished recreation that would otherwise occur without construction of the project. Please add clarifying language to reflect this such as "increased recreation compared to the future without project condition". In the District's coordination with NPS, NPS also noted that the project will not increase recreation on NPS property from existing conditions and concurred with the Corps' analysis on this issue.

Please address this on pages 36, 47, 49 (in two places), 50 (in three places), 51 (in two places), 53, 56, 58, 62 (RPM 1.10), and 64 (RPM 2.10). If it reduces the burden on the Service, the District can respectfully make the suggested edits in track changes for your consideration if provided with a Word version of the B.O.

FWS Response: Recreation is an identified effect which will likely lead to incidental take, for which we have identified reasonable and prudent measures. We have amended the Opinion to reflect that it does not have to be an increase in recreation, but an effect that is reasonably certain to occur due to creation and maintenance of wide beaches over the next 50 years.

Our evaluation is based on the application of the ESA regulations, supported by science, and is consistent with past and recent biological opinions issued for Corps' beach nourishment projects on Long Island. The ESA requires that the Service evaluate the effects of the action. An effect or activity is caused by the proposed action when two tests are satisfied: First, the effect or activity would not occur but for the proposed action, and second, the effect or activity is reasonably certain to occur. In this instance, the Rockaway Opinion was based on a project that will, in part, result in impacts related to recreational activity through construction and then maintenance of the design beach profile over 50 years.

Recreational impacts are a known source of adverse effects to shorebirds, including piping plover and red knot (Burger et al. 2004; Burger and Gochfeld 1991) and often are associated with beach restoration. Anthropomorphic disturbance can lead to lower plover survival (Gibson et al. 2019; DeRose-Wilson et al. 2018) or nest abandonment or loss (Jorgensen et al. 2016). Piping plover body mass was shown to be substantially lower for individuals in areas with greater anthropogenic disturbance than for individuals associated with less disturbed habitats. Similarly, survival rates of individuals in disturbed sites were lower than those of plovers in nearby less disturbed sites and piping plovers associated with areas that have greater disturbance experience physiological and demographic consequences during the nonbreeding season and beyond (Gibson et al. 2019). DeRose-Wilson et al. (2018), based on monitoring for the Corps' Fire Island Inlet to Moriches Inlet (FIMI) project, noted, "Recreational activity on beaches can be responsible for plover chick displacement into habitats with lower food availability, resulting in lower feeding rates, slower growth, and decreased survival." And, "The effects of foot traffic to breeding plovers can range from relatively minor disturbance that temporarily interferes with normal breeding, feeding, and sheltering behavior to injury or death of chicks, destruction of an entire nest, or sustained disturbance resulting in nest abandonment. After hatching, young plovers are likely to move away from nesting areas, making them vulnerable to these effects throughout a much larger area." Recreational use of coastal habitats can limit the functional availability of shorebird foraging habitat, particularly intertidal foraging habitat, resulting in demographic consequences (DeRose-Wilson et al. 2018). Plover chicks in areas with high recreational use can experience lower survival and longer times to fledging than chicks in areas with lower recreational use, as they are forced to move to areas with lower prey densities (DeRose-Wilson et al. 2018).

Recreational effects of beach nourishment projects have been addressed in consultations for Corps' authorized, funded, or constructed projects on Long Island including: Westhampton Interim Storm Damage Protection Project (1994), West of Shinnecock Inlet Interim Storm Damage Protection Project (2001), Smith Point County Park Beach Nourishment Project (2007),

Beach Nourishment and Maintenance Dredging Smith Point and Cupsogue County Parks (2008), Sagaponack Erosion Control District and Village of Quogue beach nourishment projects (2014), Fire Island Inlet to Moriches Inlet Stabilization Project (2014), and Jones Inlet to East Rockaway Inlet, Long Beach Island, New York, Coastal Storm Risk Management Project (2014).

Taking into consideration the ESA regulations, science, and past and recent consultations, recreational activities are reasonably certain to occur and likely result in incidental take. Accordingly, the Service specified reasonable and prudent measures that are deemed necessary and appropriate to address the anticipated level of incidental take.

Corps' Comment 4. The District, in coordination with NYCDPR and NPS, also requests the following clarifications and/or changes (a through q):

4a. RPM 1.2: "The Corps shall remove any construction material or equipment staged or stored within delineated breeding areas between Beach 19th Street and Beach 67th Street…by April 1 of any given year over the life of the project and pre-migration staging areas."

Requested change/clarification: Please delete pre-migration staging areas, or alternatively define this term and its applicability.

FWS Response: A definition for plover pre-migration areas was previously provided in our March 9, 2019, response to this same question posed by the Corps during the consultation process: "Pre-migration piping plover - individual or congregating post fledges and postseason adult birds seen on the breeding grounds or adjacent beaches."

As a listed species, all stages of its life history, are considered when specifying measures that are necessary or appropriate to minimize incidental take. Gibson et al. (2019) reported on the decreased survival rates of individuals subject to anthropomorphic disturbance. Ensuring that take is minimized will increase the individual's chances of survival.

4b. RPM 1.3: "During construction, the Corps shall work with the NYCDPR and the NPS to ensure that plover breeding habitat from Beach 19th Street to Beach 67th Street, and 500 m from breeding areas in Jacob Riis and Fort Tilden Parks is protected during construction activities from April 1 to September 1 with symbolic fencing, signs, etc."

Requested change/clarification: As RPM 1.3 reads, it appears to say that each nest would require fencing 500 meters around it which NPS and NYCDPR expressed concerns to USACE about as it would impede the ability to also manage the recreational needs within their properties. Common practice for both land managers is to fence approximately 50 meters around a nest. NYCDPR current practice is to leave fencing for protected species at RBESA from April 1 through November 30.

FWS Response: We have clarified the fencing requirements in the amended Rockaway Opinion.

Amended RPM/TAC 1.3: "For the construction phase and each renourishment or other activity involving construction, maintenance, or surveying in the project and action areas (Far Rockaway Beach, Rockaway Beach, Jacob Riis and Fort Tilden Parks) piping plover breeding areas (not nests) will be fenced from April 1 to September of each year. The 500 m buffer for breeding adults and 1,000 m from chick rearing areas will be maintained between these areas and Corps' construction and renourishment activities to ensure no project related activities occur in the buffer zone. How these buffers are marked is at the discretion of the Corps for purposes of carrying out the construction, renourishment, and maintenance activities."

Note: We appreciate your comments about the use of 50-m buffers, but this is recommended for non-motorized recreational activities (pedestrians, sun bathers, jogging, picnickers, etc.) and not for a large beach nourishment and seawall construction project involving trucks, front loaders, and other related mechanized construction equipment.

For the purposes of the Rockaway Opinion, a piping plover "breeding area" is defined by the Service as an area currently occupied by courting, territorial, incubating, or brood-rearing piping plovers, nests with eggs, unfledged chicks, or fledged chicks that have not yet left their natal area, or any site so occupied during any of the five most recent nesting seasons. As noted in your comments, the Corps is interested in building off of recent and past research and monitoring efforts funded by the Corps at Westhampton (1993-2004) and Fire Island (2013-current). We completely support that approach. To that end, we have reviewed the information contained in these reports, including Hermanns et al. (2018; "Piping Plover and Red Fox Monitoring on Fire Island, NY") to provide a conservative estimate for adult plover range/buffer of 500 m. This report was provided to both the Service and the Corps as part of the required monitoring for the Corps' Fire Island Inlet to Moriches Inlet Stabilization Project.

4c. RPM 1.7: "A vegetation planting plan for the artificial dune shall be coordinated with and approved by the Service. At a minimum, it shall incorporate a mix of native dune plant species (no woody vegetation) and not be limited to a single grass species. Plantings should be made in a random manner and not rows with uniform spacing. The plantings should mimic natural dune vegetation in the region in species diversity, density, and spacing. The dune planting plan shall be completed and approved 3 months prior to initial construction."

Requested change/clarification: Please revise the first sentence to: "A vegetation planting plan for artificial dune shall be approved by a Corps Biologist and coordinated with the New York State Department of Environmental Conservation (NYSDEC), the project's non-federal sponsor, the NYCDPR, and the Service. At a minimum, it shall incorporate a mix of native dune plant species and not be limited to a single grass species… The dune planting plan shall be completed and approved 3 months prior to initial construction of the dune."

Please note in general throughout the BO, District staff will approve all construction contract related documents and will coordinate and provide to the Service. This concept also applies to RPMs 2.1 and 2.6 below.

FWS Response: The RPM/TAC was amended as given below.

Amended RPM/TAC 1.7: "No woody vegetation will be planted on the dune, only herbaceous native plants will be used. The vegetation planting density will be maintained at 24 inches on-center over the life of the project. Plantings will be made in a random manner and not rows with uniform spacing. Planting will not occur from April 1 to September 1 in order to protect breeding plovers whose breeding areas may encompass the dune area. Planting may occur after the last day of chick fledging.

Note: Under 50 CFR Part 402.14, the Service is required to specify measures that are necessary or appropriate to minimize incidental take in the biological opinion. We do not believe that these measures or this process interferes with the Corps' contracting process. As noted in section XII of the Opinion, these measures are non-discretionary, and must be undertaken by the Corps and become binding conditions of any grant or permit issued to the (applicant), as appropriate, for the exemption in section 7(o)(2) to apply. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse.

As to this specific measure, woody vegetation is not typical of dunal systems or suitable for plover habitat, as it can provide predator perches. This was a factor that was also included in the FIMP design criteria for the Coastal Process Features (see Table 4 in the FIMP Opinion). Dense vegetation also degrades plover habitat.

RPM 2.1: "The Corps shall develop and implement pre-, concurrent, and post-construction monitoring plans for piping plover and red knot and their habitats with guidance and approval from the Service. This shall be completed and submitted to **coordinated with** (Corps' suggested change in bold) the Service 3 months before initial construction for approval. The basic elements of the monitoring plan shall include transect locations, frequency of monitoring, habitat type, construction activities that are present less than and greater than 500 m, time of day, tidal phase, etc."

FWS Response: Note we have amended this RPM/TAC, as given below.

Amended RPM/TAC 2.1: "As take is expected each year of the 50-year project, pre-, concurrent, and post-construction monitoring plan will be undertaken. The following measures will be incorporated into the Piping Plover Avoidance and Minimization Measures" contained in section II(C)(1) of the Rockaway Opinion. These will be undertaken by a qualified biologist who is selected by the Corps and meets the qualifications provided below.

Estimates of piping plover annual pair counts will be made using the males within pairs. Males for pair counts and productivity estimates are used because when pairs separate, the males often keep their territory when they partner with a new female. Additionally, males are the primary territory holders and defenders (Hermanns et al. 2018).

The monitoring surveys outlined in section II(C)(1) for piping plover will be undertaken during the pre-construction phase of the project for one season prior to construction, implemented during the construction phase of the project and then for two years post construction. This cycle of monitoring will be applied to each renourishment phase as follows: one year prior to renourishment, during renourishment, and two seasons post renourishment for the life of the project.

For red knots one count will be made, at roughly ten-day intervals, on or within 3 days of the dates below:

Spring: April 5, April 15, April 25, May 5, May 15, May 25, June 5, June 15.

Fall: July 15, July 25, August 5, August 15, August 25, September 5, September 15, September 25, October 5, October 15, October 25.

Winter: November 5, November 15, November 25.

The person(s) conducting the survey must demonstrate the qualifications given below.

Qualifications:

1) A minimum Bachelor of Science degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences;
2) Skilled in identification of North Atlantic shorebird species, specifically piping plover. At least one year of full-time, or equivalent part-time, technical experience in observing piping plover and red knot.

RPM 2.6: "The Corps shall undertake monitoring of wrack and wrack invertebrates in the intertidal zone, and berm based on a sampling program that has been devised in consultation with, and agreed to, by the Service prior to its implementation. The information collected during this monitoring program shall be used to adaptively manage the operation and maintenance phases of the project to further avoid and minimize take. The monitoring plan should include, but not be limited to, the response of the wrack and wrack invertebrates during and after sand placement within breeding and pre-migration staging, and foraging areas, including such information as total recovery time, recovery rates, abundance, biomass, diversity, and composition of prey items, and spatial coverage of wrack. The plan shall be finalized 3 months prior to initial construction of the project."

FWS Response: Note, we have amended this RPM/TAC, as given below.

Amended RPM/TAC 2.6: "Monitoring of wrack and wrack invertebrates in the intertidal zone, and berm will be undertaken by a qualified biologist (biologist must have a 4-year biological sciences degree, with experience in invertebrate biology and ecology, study design). The information collected during this monitoring program will be used to

adaptively manage the operation and maintenance phases of the project to further avoid and minimize take.

The following provides the basis for a wrack monitoring plan:

The sampling methodology modified from Ruiz-Delgado (2015), Kluft and Ginsberg (2009), and Dugan et al. (2003) includes:

1) Select specific monitoring sites - Establish a monitoring area within plover breeding areas to include zones between the primary dune and low tide line between Beach 9th Street and Beach 82nd Street; and within the Jacob Riis and Fort Tilden Units of the GNRA. Reference sites along the Rockaway Peninsula will be identified by the Corps. Reference sites will serve as controls, so they should not experience anthropomorphic activities that affect wrack deposition and persistence on the beach nor be affected by the beach nourishment of hard shoreline stabilization structures (i.e., beach raking, groins, etc.).

2) Establish sample areas - Areas should be 100 m in length (alongshore).

3) Establish transects - Within each sample area, select five random points to establish transects (transects will run perpendicular to the shore).

4) Each spring (approximately Mar 21 - June 20) and summer (approximately June 21 - September 21), season three replicates will be collected. Samples will be collected at two tidal levels: the level at which wrack is stranded during the highest spring tide and located above the current high tide line and another one at which wrack is deposited during the last high tide and located at the current driftline (hereafter upper and lower level, respectively).

   The sampling points are to be randomly designated along each tidal level in covered and uncovered wrack areas during low spring tides. The along-shore distance of the sampling area will be 100 m, while the across-shore distance will be at 1 m above and below wrack bands (defined as the wrack-covered line parallel to the tide line). For each tidal level and sampling date, six random samples will be collected in each microhabitat (i.e., wrack patches and bare sand) for a total of 72 samples per habitat and tidal level. Wrack-associated fauna and burrowing fauna underneath the wrack patches will be collected in wrack-covered areas: algal wrack at the surface and 20 cm of sediment will be sampled with a 15- to 20-cm diameter core. Samples will also be taken in the nearby bare sand, with the same core to a depth of 20 cm, to measure the abundance of invertebrates in areas not covered by wrack. Samples will be sieved (at 1 mm) and preserved for species identification.

5) To quantify the overall amount of wrack within each sampling area, any wrack debris along a profile will be recorded for dimensions (length*width*depth), percent species composition, and an ordinal rating of wrack consistency (1-5), and the mean density/meter (l*w*d)/m2 of beach) will be estimated. Since the clump

will be measured at its largest length and width, and will overestimate clump cover, an elliptical surface area, estimated using the standard formula (length/2*width/2*PI), will be calculated for more accurate analysis. These surface area estimates (m2 wrack/meter of beach) for each transect will be used to generate the overall percentage cover for each area (after Dugan et al. 2003).

6) Additional environmental variables will be measured within wrack samples including: transect percent cover, relative wrack age (categorized qualitatively as fresh, decaying, or old) and percent composition of vegetation observed, temperature and humidity at the wrack/sand interface, and sand temperature at 10-cm depth beneath wrack."

4d. RPM 1.10: "The Corps shall work with the NYCDPR and the NPS to ensure that all suitable piping plover breeding habitat with a recent history (last five years) of plover breeding is protected by April 1 of each year to address the adverse effects associated with the expected increase in recreation" **when compared to the future without project condition** (Corps' suggested amendment in bold).

Requested change/clarification: The NYCDPR does not fence the entirety of the protected area. The NYCDPR has a monitoring team in place starting in April and monitors regularly and will fence areas where plovers are being territorial and displaying breeding behaviors, according to the Service guidelines. Beach 38th to Beach 57th Streets are pre-fenced annually. The NYCDPR intends to continue monitoring and protecting piping plovers per above accepted practices. Also, please clarify as noted above that the expected increase in recreation is when compared to the future without project condition.

FWS Response: This RPM/TAC complies with the regulatory language of necessary and appropriate to reduce the anticipated level of incidental take. As noted in our guidelines, "All suitable piping plover nesting habitat should be identified by a qualified biologist and delineated with posts and warning signs or symbolic fencing on or before April 1 each year." This would apply in areas where beach raking and/or project maintenance activities are taking place.

4e. RPM 2.4: "The Corps shall devise an early successional beach habitat restoration plan for the berm habitat between Beach 9th Street and Beach 82nd Street in coordination with the Service. The plan shall be finalized 3 months prior to initial construction of the project. Ten percent vegetation coverage shall be the target vegetation density with a threshold action of 17 percent coverage for planning purposes between Beach 9th Street and Beach 82nd Street, so as to keep this in an early successional habitat stage, as this is within the zone of potential chick movement."

Requested change/clarification: In the second sentence, please clarify "prior to initial construction of the Atlantic Shorefront reach of the project." Please edit the last sentence to read: "In order to avoid dense vegetation which would impede piping plover chick movement, ten percent vegetation coverage…between Beach 9th Street and Beach 82nd Street. This is to keep the berm in an early successional habitat stage…"

FWS Response: Revised as given below.

Amended RPM/TAC 2.4: "The Corps will implement the following early successional beach habitat restoration plan for the berm habitat between Beach 9th Street and Beach 82nd Street. In order to avoid dense vegetation which would impede piping plover chick movement and degrade nesting habitat, 10 percent vegetation coverage will be the target vegetation density with a threshold action of 17 percent coverage for planning purposes between Beach 9th Street and Beach 82nd Street, so as to keep this in an early successional habitat stage.

All clearing and other site preparation activities will take place outside the breeding season (April 1 to September 1)."

4f. RPM 2.5: The Corps shall assess the potential for, or actual, erosion associated with hard structures (e.g., groins and rock sills) between Beach 49th Street to 82nd Street, and at Jacob Riis and Fort Tilden Parks that may impact plover habitat, and throughout the ocean and bayside shoreline for red knots as the final designs are developed.

Concurrently, develop a remedial action plan through further coordination with the Service for erosion that causes a loss of breeding, foraging, or roosting habitat. The plan shall be completed 3 months prior to initial construction.

Requested change/clarification: The U.S. Army Corps of Engineers will not develop a remedial action plan unless erosion beyond what is reasonably expected actually occurs. For remedial action to be successful, it must address actual conditions which cannot be presupposed. Also, as discussed previously with the Service, some seasonal/annual variation as storms and currents move sand within the system is expected and not necessarily an indication that the project is not performing as intended. Please edit the first sentence of the second paragraph to read: "In the event of unintended severe downdrift erosion resulting from the project, the Corps will develop..."

FWS Response: The RPM/TAC has been revised, as given below.

Amended RPM/TAC 2.5: "The Corps will develop a remedial action plan if erosion associated with hard structures (e.g., groins and rock sills) occurs between Beach 49th Street to 82nd Street, and at Jacob Riis and Fort Tilden Parks that may impact plover habitat, and throughout the ocean and bayside shoreline for red knots. Project induced erosion will be addressed at the earliest possible time but no later than the next scheduled renourishment cycle."

Note: This RPM/TAC was modified to address the Corps' concern about the timing of the remedial action plan development. It has been revised to be required if erosion is observed in plover or red knot habitat and specifies that remediation will occur within or before the next scheduled renourishment cycle. Overall, the RPM is needed to address uncertainties identified by the Corps regarding the functioning of rehabilitated or newly constructed groins and their effects on downdrift beaches and habitat. It is necessary to identify how these uncertainties will be addressed, monitored and evaluated with respect

to their impacts on the species and their habitats. Failure to address this at this time could lead to the necessity to reinitiate consultation in the future as per the relevant triggers in 50 CFR Part 402.16: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; and (3) the action is modified in a manner causing effects to listed species or critical habitat not previously considered.

4g. RPM 2.7: "The Corps shall develop a biological monitoring program for the action area, to be approved by the Service, in coordination with the NYCDPR and the NPS, and implemented by the Service or Service-approved entity to address the impacts of the dune, berm, composite seawall, and groin construction on plover and red knot biology and ecology. The monitoring program shall span the pre-initial construction, initial construction, and a determined period of the renourishment phases of the project. The monitoring program shall evaluate red knot and plover population and behavioral responses to habitat changes in the action area, such as avoiding existing foraging, roosting, or breeding areas, as a whole, or, as in the case of plovers, any shifts in the species distribution relative to the hard and soft shoreline protection structures. The plan shall be finalized 3 months prior to the initiation of the biological monitoring plan."

Requested change/clarification: Please revise the first sentence to: "The Corps shall develop and implement a Biological Monitoring Program in coordination with the NYCDPR, the NPS, and the Service to address the impacts of the dune. The development of the Biological Monitoring Program will also be coordinated with NYSDEC..." It is the New York District's responsibility to implement all facets of our project, including Biological Monitoring Programs, and the District has the required specialized expertise. Additionally, as previously discussed, please omit the sentence that begins "The Monitoring Program shall evaluate red knot and plover population and behavioral responses..." The behavioral monitoring program should focus on potential impacts related to the composite seawall as other impacts named have already been or are presently being evaluated under FIMI and Westhampton Biological Monitoring Programs associated with Corps' projects. Also, any monitoring should be integrated into what is already being performed so as to avoid duplicative efforts.

FWS Response: Note, we have amended this RPM/TAC, as given below.

Amended RPM/TAC: "The following monitoring plan will be implemented by a qualified monitor(s) that is selected by the Corps, meeting the qualifications provided in RPM/TAC 2.10 to address the impacts of the dune, berm, composite seawall, and groin construction on plover and red knot biology and ecology. The monitoring program will evaluate red knot and plover population and behavioral responses to habitat changes in the action area, such as avoiding existing foraging, roosting, or breeding areas, as a whole, and any shifts in the species' distribution relative to these project features.

- Measure piping plover habitat use in the project area. To evaluate habitat use within the project area, the Corps will delineate the following habitats within the Project Area from Beach 17th Street to Beach 82nd Street: composite dune

crest, composite dune slope, constructed berm, and unaltered sand dune complex between Beach 17th Street and Beach 19th Street. The Corps will record and compare the number of pairs that use these identified habitats for breeding activities (including nest site selection and brood-rearing).

Nest site locations will be collected using a GPS device. To obtain information on changes in brood-rearing areas, the following will be undertaken: To monitor brood movements, broods will be searched for every 1-3 days during adult surveys or nest searching. When located, their locations will be obtained by offsetting an observer location with a distance from a rangefinder and a bearing from a compass. When the broods are located behavior data will also be collected. For five minutes, record forage rate (peck, pull, probe) continuously, and behavioral state (forage, sit, run, walk, chase, flee, preen, encounter with another individual) and habitat (moist sand, moist vegetation, dry sand, dry vegetation, and wrack) every ten seconds (Altmann 1974)."

Note: Under the ESA, the Service is required to provide measures that are necessary and appropriate to minimize incidental take. We have amended the RPM/TAC to provide specific components of monitoring to be, in some cases, incorporated into the monitoring described in section II(C)(1) of the Opinion. This amended RPM/TAC is specific to the take resulting from construction of the composite dune and shoreline hardening structures and was conceptually agreed to by the Corps during the consultation phase of the project.

4h. RPM 2.10: "To reduce the anticipated level of take due to increases in disturbances from recreational activities [please add: **when compared to future without project conditions** (Corps' suggested change in bold), the Corps shall, in coordination with the NYCDPR and the NPS, ensure the full implementation of the Service's "Guidelines for Managing Piping Plovers on Recreational Beach in Order to Avoid Take under the Endangered Species Act" in the project area, including working with the NYCDPR and the NPS to ensure implementation and enforcement of plover management activities over the life of the project."

Requested change/clarification: "The Corps will also coordinate these with our non-federal sponsor, the NYSDEC."

FWS Response: The NYSDEC, the non-federal sponsor, is incorporated in the amended RPM/TAC below. We did not amend the RPM/TAC to include the phrase "future without project conditions" for the reasons explained above.

Amended RPM/TAC 2.10: "To reduce the anticipated level of take due to increases in disturbances from recreational activities, the Corps will, in coordination with the NYCDPR and the NPS, ensure the full implementation of the Service's "Guidelines for Managing Piping Plovers on Recreational Beach in Order to Avoid Take under the Endangered Species Act" in the project area, including working with the NYCDPR and the NPS to ensure implementation and enforcement of plover management activities over

the life of the project. The Corps will also coordinate these with the non-federal sponsor, the NYSDEC."

4i. RPM 2.11: "The Corps will work with the NYCDPR and the NPS, in coordination with Service, in developing a predator management plan for the action area where predators of piping plovers are identified, management objectives designed and implemented, and results are documented."

Requested change/clarification: The District would like to clarify that the Corps' responsibility is limited to the development of the plan and not implementation which is outside of our authority. Please edit to read: "developing a predator management plan for the action area to identify the predators of piping plovers, how predators will be managed, and how results will be documented."

FWS Response: This RPM/TAC has been revised, as follows:

Amended RPM/TAC 2.11: "The Corps will work with the NYCDPR and the NPS, in coordination with Service, in developing a predator management plan for the action area where predators of piping plovers are identified, management objectives designed and ensure implementation, and ensure results are documented. The Corps will also coordinate these with the non-federal sponsor, the NYSDEC."

The predator management plan will incorporate results of monitoring described in section II(C)(1) of the Opinion and include biological triggers (specific reduction in adult, nest or chick abundance, frequency of predator visitation to plover nests or the breeding area, etc.). Additional information to assist in making informed decisions and to maintain a decision making framework about predator management will include the following:

1. Predator species abundance, to be determined through transect surveys established from Beach 9th Street to Beach 82nd Street;
2) Duration of presence at the breeding site;
3) Record of frequency of visits for that observation period (i.e., first, second, etc. occurrence);
4) Record of location; and
5) Record of predator behavior (resting, stooping, vocalizations, prey catch [species -adult, juvenile, chick,] etc.) and piping plover/red knot response (i.e., flight [noting direction], no reaction, vocalization, combination of responses, time to return to nest [when possible]).

Local landowners will be consulted and may participate with the Corps in these activities, but it is the Corps' responsibility to ensure their implementation and reporting requirements as given in the Incidental Take Statement."

Note: The project induced effects and resultant incidental take related to predation are discussed in sections VIII(D) - Effects of the Action and XIII(A)(4) - Amount and Extent of Take Anticipated, of the Opinion, respectively. Due to vandalism predator exclosures

are not widely used in the Rockaways, and, therefore, additional management options are needed. Limiting the Corps' role to identifying predators will not minimize take. Active management is necessary to minimize the anticipated level of take, and for that reason, other measures such as trapping or hazing, along with possibly increased law enforcement presence and public education needs to be incorporated into a comprehensive management plan for the project area and implemented in the project area.

We also note that over the course of the consultation, during meetings between our agencies, the Corps indicated that it could fund the USDA to undertake predator management activities in the action area. (This is consistent with the Corps' predator management approach for the Fire Island Inlet to Moriches Inlet Stabilization Project.).

4j. Additional Corps' Comments for RPM 2.11, requested change/clarification: NPS to provide input as they noted that they do not currently practice predator control. NPS has requested, in coordination with the District, a follow-up discussion with the Service to ensure alignment on the Rockaway BO. The District will facilitate where appropriate, and coordinate on matters of joint interest. Please note, that the District does not control land management decisions on lands under NPS jurisdiction.

FWS Response: The RPMs/TACs are developed to minimize anticipated incidental take due to the project. As noted in section XII of the Opinion, the Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. Accordingly, the Corps will need to coordinate with the NPS and the NYCDPR to ensure the RPMs/TACs are implemented.

We note that previously this overall issue has been dealt with by the Corps either through the Project Partnership Agreement or through close coordination with the landowners. For example, the Corps' 2016 Project Partnership Agreement with the non-federal sponsor for the Jones Inlet to East Rockaway Inlet, Long Beach Island Project, identified limitations on the use of sand fencing and beachgrass planting in certain areas as a requirement of the project in satisfaction of endangered species terms and conditions in the Long Beach BO, and have worked with the NPS on Fire Island to arrive at beach nourishment designs on federal properties to meet the FIMI project's objectives. Further, the Corps and the NPS worked together to agree on predator management within the FIMI Project Area, including the trapping of mammalian predators in the eastern portion of the Fire Island Wilderness Area as part of the FIMI predator management plan collaboration. Similarly, we believe this is achievable at Gateway National Recreation Area, where predator trapping has been undertaken in the past to promote listed species recovery.

4k. RPM 2.12: "As the project involves nighttime construction activities and no night time monitoring is proposed, all construction personnel and the Service shall be provided a daily report at the end of each day providing the location of all breeding activities,

including territories, courtship areas, nest-building areas, nest sites, and chick-rearing areas. All lights shall be directed away from these areas."

Requested change/clarification: Please edit this RPM so the last sentence reads: "All lights shall be directed away from the areas noted as practicable to allow for safe construction."

FWS Response to 4k: Revised as noted.

Amended RPM/TAC 2.12: "As the project involves nighttime construction activities and no night time monitoring is proposed, all construction personnel and the Service will be provided a daily report at the end of each day providing the location of all breeding activities, including territories, courtship areas, nest-building areas, nest sites and chick-rearing areas. All lights will be directed away from these areas as practicable to allow for safe construction."

4l. RPM 3.1 (third paragraph): "All on site personnel including the shorebird monitor(s) shall be required to participate in a mandatory piping plover and seabeach amaranth training session prior to April 1 (provided and conducted by the Service or an approved Service representative). Any individuals without this training shall not be permitted on site. All costs of this training will be the responsibility of the Corps or the contractor."

Requested change/clarification: Not practicable for entire construction crew to attend in-person off-site training. Please edit to read: "the Service will provide a Service CD or digital video to show the workers on-site which can be administered by the District."

FWS Response: Revised as noted in regard to construction personnel. However, shorebird monitors will be required to attend the training session.

Amended RPM/TAC 3.1: "All onsite personnel are required to watch a Service-provided CD or digital video regarding plover biology and protection. This will be administered by the District.

All qualified shorebird monitors will be required to participate in a mandatory piping plover and seabeach amaranth training session provided by the Service prior to April 1 (provided and conducted by the Service or an approved Service representative). Any individuals without this training will not be permitted on site. All costs of this training will be the responsibility of the Corps or the contractor."

4m. Also for RPM 3.1 (first paragraph, first sentence): "A construction field meeting will be held on or before March 1 and should include the local cost sharing sponsors..."

Requested change/clarification: Please change "local cost sharing sponsors" to "non-federal sponsors" as the initial construction of this project is 100 percent federally funded.

FWS Response: See response to 4l, above.

4n. Piping Plover Conservation Recommendation 1: "The Corps should identify areas on Long Island within their Civil Works program where natural process can form bay to overwash habitat and promote optimal plover habitat formation. The focus should be on areas outside of sites that already provide opportunities for these types of habitat development."

Piping Plover Conservation Recommendation 2: "The Corps should identify mechanisms to contribute to plover protection measures, either by providing equipment, personnel, or funds, to local land managers within areas affected by their Civil Works projects."

For Conservation Recommendations 1 and 2 pertaining to piping plovers, please note that this BO is specific to the East Rockaway Inlet to Rockaway Inlet Reformulation Study. While the District is not able to perform these Conservation Recommendations under the Rockaway Reformulation, this work falls within our Ecosystem Restoration mission and could be pursued where the authority exists and there is a willing and eligible non-federal sponsor identified.

FWS Response: As noted in section XVII of the Opinion, "Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information." These are discretionary recommendations, with the Corps making the determination which program or project activities are undertaken.

4o. Piping Plover Avoidance and Minimization Measure 1.4 (third paragraph): "Productivity and population surveys will be conducted each year for the life of the project."

Please note that the Corps is not able to perform surveys over the life of the project each year as our funding is tied to construction and renourishment cycles. The surveys would be accomplished by the local sponsor and/or NPS staff who already perform this work annually. No duplicative survey work will be added.

FWS Response: We believe this conservation measure was agreed to during the consultation. Overall, we note that monitoring over the life of the project has been included for other Corps' projects. For instance, the Corps' Draft Fire Island Inlet to Montauk Point (FIMP) Adaptive Management Plan includes endangered species monitoring over the life of that project, and includes, in part, providing the Service with annual nest site locations (see page 45 of the Corps' FIMP Monitoring and Adaptive Monitoring Plan found in Appendix J of the FIMP Draft Final General Reevaluation Report dated January 10, 2019). The Corps' FIMI project also includes monitoring for the 10-year FIMI project life, which is on-going. The Corps is responsible for ensuring the implementation of this conservation measure through coordination with all landowners.

4p. Red Knot Avoidance and Minimization Measure 2.2: "The Corps will support the NYCDPR's pre- and post-construction surveys of the Project area to determine the presence of red knot."

Requested change/clarification: Please edit to read: "The NYCDPR will support the District's pre- and post-construction surveys related to initial construction and each renourishment cycle by conducting their regular shorebird monitoring program from April to August on an annual basis. The District will monitor for presence and absence of piping plovers and red knots prior to and during each construction/renourishment cycle."

FWS Response: Revised as noted.

4q. The District would like to note regarding the assumption of 100 percent burial of the amaranth seed bank (page 40 of the BO), that this ignores the experience of multiple beach nourishment sites in New Jersey where seabeach amaranth populations have rebounded significantly post nourishment due to the significant seed banks which were abundant in the sand sources. There is a potential for the Rockaway Reformulation project to improve the seabeach amaranth presence.

FWS Response: We request further information on the sampling the Corps undertook of the seed banks that enabled them to correlate beach nourishment with amaranth abundance.

The Opinion was also amended to include the following Reporting Requirement for all Terms and Conditions:

The Corps will submit a post-construction compliance report prepared by a qualified biologist selected by the Corps (see required qualifications provided above) to the Long Island Field Office by December 1 of each year for the life of the project. This report will detail (i) dates that construction occurred; (ii) pertinent information concerning the success of the project in meeting conservation measures and reasonable and prudent measures/terms and conditions; (iii) an explanation of failure to meet such measures, if any; (iv) known project effects on listed species, if any; (v) occurrences of incidental take of listed species, if any; (vi) documentation of employee environmental education; and (vii) other pertinent information such as the development of adaptive management alternatives to address modification that may be necessary based on the monitoring efforts that are part of the project description and reasonable and prudent measures/terms and conditions.

All data collected will be provided in an Excel spreadsheet. Monitoring results will be submitted (datasheets, maps, database) on standard electronic media (e.g., CD, DVD) to the Long Island Field Office by November 1 of each year in which monitoring is completed.

Supporting credentials of all monitors (resume, references from supervisors of field work, transcripts of course work, reprints of published papers, etc.) will accompany the annual reports submitted to the Service.

Thank you for the opportunity to provide the amended Opinion to you. If you have any questions or require further assistance, please have your staff contact Steve Papa, Kerri Dikun, or Steve Sinkevich at the Long Island Field Office at (631) 286-0485.

Sincerely,

David A. Stilwell
Field Supervisor

Enclosure

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DEPARTMENT OF THE ARMY
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District Engineer

JUL 11 2019

Mr. David Stilwell
Field Supervisor
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045

Dear Mr. Stilwell:

Thank you for your response to the U.S. Army Corps of Engineers, New York District (District) comments resulting in the Revised Biological Opinion (BO) for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study, dated 25 June 2019. As discussed, the District looks forward to continue working with the U.S. Fish and Wildlife Service (Service) during the Preconstruction, Engineering, and Design and Construction Phase. As appropriate, the District and the Service will discuss/confirm and/or refine the implementation requirements that are needed to meet the intent of the Reasonable and Prudent Measures (RPMs) necessary to address the effects on the federally listed Atlantic Coast piping plover (*Charadrius melodus*; threatened), seabeach amaranth (*Amaranthus pumilus*; threatened), and red knot (*Calidris canutus rufa*; threatened) in a manner which is feasible within the District's funding and authority constraints.

Thank you for continued cooperation in advancing this effort. If you any questions, please contact Mr. Peter Weppler, Chief of the Environmental Analysis Branch at 917-790-8634.

Sincerely,

Thomas D. Asbery
Colonel, U.S. Army
Commander

cc.
USFWS-LIFO
NPS
NYCDPR
NYSDEC

Enclosure

UNITED STATES DEPARTMENT OF COMMERCE
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NATIONAL MARINE FISHERIES SERVICE
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OCT 3 1 2018

Peter Weppler, Chief
Environmental Analysis Branch
Planning Division
New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278-0900

RE: Draft Final Integrated Hurricane Sandy General Reevaluation Report and Environmental Impact Statement, Essential Fish Habitat Assessment
Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay

Dear Mr. Weppler:

We have reviewed the Draft Final Integrated Hurricane Sandy General Reevaluation Report and Environmental Impact Statement (DEIS) and essential fish habitat (EFH) assessment for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study. The project area includes the Atlantic coast of New York City between East Rockaway Inlet and Rockaway Inlet, areas within Jamaica Bay, and an offshore borrow area.

The report addresses the reevaluation of solutions to flooding attributed to storm surges in Jamaica Bay that inundate the bay shorelines of Rockaway (back bay flooding) and that overtop the Rockaway beachfront and flow across the peninsula to meet the surge into Jamaica Bay (cross shore flooding). The Recommended Plan (RP) has been formulated with two planning reaches, including 1) a reinforced dune and berm construction on the Atlantic shorefront and 2) high frequency flood risk reduction features (HFFRRF) in locations surrounding Jamaica Bay.

The Atlantic shorefront planning reach includes Rockaway Beach between Beach 9th Street and Beach 169th Street and an offshore borrow area in the Atlantic Ocean. The RP includes beach renourishment and construction of a 60 ft. wide beach berm for the length of the reach resulting in approximately 259 acres of dune and beach fill, as well as beach renourishment on a four year cycle for the 50-year life of the project. An approximately 33,000 lf composite seawall, extension of five existing groins and construction of 13 new groins are also proposed. The sand material for beach fill and berm construction will be dredged from an existing, 1830-acre offshore borrow area, two miles south of East Rockaway in waters depths of 35 – 60 ft.

The HFFRRF planning reach consists of flood control subreaches in Cedarhurst-Lawrence, Motts Basin North, Mid-Rockaway – Edgemere, Mid-Rockaway – Arverne, and Mid-Rockaway – Hammels. The RP for all of these subreaches includes construction of 11 acres of rock sills and 5,250 lf of bulkhead, modification of existing and construction of new stormwater outfalls and

culverts, and installation of pump stations. The rock sills are components of natural and nature-based features (NNBFs) proposed for the Mid-Rockaway – Edgemere and Mid-Rockaway – Arverne subreaches, Tidal marsh habitats with upland buffers will be created, restored or enhanced shoreward of the sills and will be designed to allow their shoreward migration with rising sea levels.

Magnuson Stevens Fisheries Management and Conservation Act (MSA)
The project area has been designated as EFH for a number of federally managed species including Atlantic butterfish (*Peprilus triacanthus*), Atlantic mackerel (*Scomber scombrus*), Atlantic sea herring (*Clupea harengus*), black sea bass (*Centropristis striata*), bluefish (*Pomatomus saltatrix*), clearnose skate (*Raja eglanteria*), cobia (*Rachycentron canadum*), king mackerel (*Scomberomorus cavalla*), little skate (*Leucoraja erinacea*), long-finned inshore squid (*Loligo pealei*), monkfish (*Lophius americanus*), red hake (*Urophycis chuss*), scup (*Stenotomus chrysops*), Spanish mackerel (*Scomberomorus maculates*), summer flounder (*Paralichthys dentatus*), whiting (*Merluccius bilinearis*), windowpane flounder (*Scophthalmus aquosus*), winter flounder (*Pseudopleuronectes americanus*), winter skate (*Leucoraja ocellata*) and others.

The project area is also EFH for several highly migratory species including blue shark (*Prionace glauca*), dusky shark (*Carcharhinus obscurus*), sandbar shark (*Carcharhinus plumbeus*), and sand tiger shark (*Odontaspis taurus*). Sand tiger and dusky sharks have also been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). The goal of designating a species as a Species of Concern is to promote proactive conservation efforts for these species in order to preclude the need to list them in the future.

The MSA requires federal agencies to consult with us on projects such as this that may affect EFH adversely. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments, lists the required contents of EFH assessments, and generally outlines each agency's obligations in this consultation procedure.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as "any impact which reduces the quality and/or quantity of EFH" and further states that:

> An adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

We have reviewed the EFH assessment for this project. The assessment adequately evaluates many of the impacts of the project on EFH in the Atlantic shorefront and Jamaica Bay project reaches, and we agree with your conclusions on those impacts. However, some information, such as a full evaluation of impacts of dredging on the borrow area, was not provided. We understand that at this stage of the planning process, site specific information and design details are not yet

available; as a result additional coordination and consultation will take place during the Preconstruction, Engineering and Design Phase of the project so our EFH conservation recommendations provided in this letter can be refined.

The Atlantic shorefront project plan includes seawall and groin construction, dredging and beach renourishment that will result in 259 acres of dune and beach fill with subsequent renourishment efforts every four years. The NNBF rock sills constructed as part of the Jamaica Bay HFFRRF project have been designed to control erosion, help manage coastal storm risk, and provide opportunities for habitat restoration and enhancement. Construction of the sills will result in a habitat conversion of 11 acres of unconsolidated bottom to hard structure in two sub-reaches. Tidal marshes will be created, restored, or enhanced shoreward of the sills in eroded and/or degraded subtidal and intertidal habitats, and will be designed to allow their shoreward migration with rising sea levels. Construction of the NNBFs will create a mix of low and high marsh habitat and upland buffers that will have a positive effect on EFH, federally managed species and NOAA trust resources.

In the DEIS it states that as HFFRRF features are further developed, additional NEPA documentation and resource agency coordination would be provided, as necessary. We agree with this process. Also, impacts to EFH for longfin inshore squid in the borrow area were not fully evaluated because you were not aware of new research examining squid spawning in the area offshore of Long Island. We will continue to coordinate with your office to further evaluate impacts to EFH of longfin inshore squid in the borrow area, including providing additional EFH conservation recommendations as necessary.

Aquatic Resources

Longfin Inshore Squid

Longfin inshore squid spawn throughout the New York Bight; early life stages are found in coastal waters and throughout Jamaica Bay. Egg masses are demersal and are typically attached to low-relief structure (e.g. rocks, small boulders) on sandy or muddy substrate in water depths less than 50 feet (Jacobson 2005). Recent research indicates that spawning may be concentrated in coastal waters off of the Rockaway peninsula (D. Stevenson, personal communication, 2018), which could result in increased vulnerability to EFH of longfin inshore squid to dredging operations. Our office is currently investigating the locations of highest egg mass concentration, seasonal occurrence, and egg mass residence time to better define EFH, in order to evaluate dredging impacts to the species in the Atlantic shorefront borrow area.

Shellfish

Surf clam (*Spisula solidissima*), razor clam (*Ensis directus*), and tellin (*Tellina agillis*) occur in the vicinity of the offshore borrow area. Shellfish also occur in the Jamaica Bay portion of the project area, including hard clam (*Mercenaria mercenaria*), soft shell clam (*Mya arenaria*), blue mussel (*Mytilus edulis*), oyster (*Crassostrea virginica*), blue crab (*Callinectes sapidus*), and horseshoe crab (*Limulus polyphemus*).

Coen and Grizzle (2007) discuss the ecological value of shellfish habitat to a variety of managed species (e.g. American lobster, American eel, and winter flounder) and have suggested its designation as EFH for federally managed species. Clams are a prey species for a number of

federally managed fish including skates, bluefish, summer flounder and windowpane; siphons of hard clams provide a food source for winter flounder and scup (Steimle et al. 2000). Infaunal species such as clams filter significant volumes of water, effectively retaining organic nutrients from the water column (Nakamura and Kerciku 2000; Forster and Zettler 2004).

Horseshoe crabs may use multiple habitats along the shoreline of the Jamaica Bay reach, including subtidal bottoms, intertidal mudflats, and sandy beaches (Botton et al. 2006). Their eggs are a key seasonal food resource for a number of fish species including summer flounder and winter flounder (Botton and Shuster 2003); as a prey species, horseshoe crabs are considered EFH for those fishes.

Winter flounder

Winter flounder transit inlets such as East Rockaway Inlet to reach spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in the fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998), however movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). These life stages are less mobile and thus more likely to be affected adversely by any impact to benthic habitat. As adults often spawn in shallow water within estuaries such as Jamaica Bay, they are especially vulnerable to benthic impacts associated with construction of the NNBFs in the Jamaica Bay HFFRRF reach.

Anadromous Fishes

Anadromous fishes such as river herring (alewife *Alosa pseudoharengus* and blueback herring *Alosa aestivalis*) use inlets such as East Rockaway Inlet as a migratory pathway to nursery and forage habitat within the estuary beyond the inlet. Alewife and blueback herring spend most of their adult life at sea, but return to freshwater areas to spawn in the spring. Both species are believed to be repeat spawners, generally returning to their natal rivers (Collette and Klein-MacPhee 2002). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout the mid-Atlantic since the mid-1960's (ASMFC 2007), they have been designated as Species of Concern by NOAA.

Increases in turbidity due to the resuspension of sediments into the water column during renourishment can degrade water quality, lower dissolved oxygen levels, and potentially release chemical contaminants bound to the fine-grained estuarine/marine sediments, and can impede river herring migration (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Noise from beach renourishment activities may also result in adverse effects. Our concerns about noise effects come from an increased awareness that high-intensity sounds have the potential to harm both terrestrial and aquatic vertebrates (Fletcher and Busnel 1978; Kryter 1984; Popper 2003; Popper et al. 2004).

Buckel and Conover (1997) in Fahay et al. (1999) reported that diet items of juvenile bluefish include *Alosa* species such alewife and blueback herring. Juvenile *Alosa* species have also been identified as prey species for windowpane flounder and summer flounder in Steimle et al. (2000). As a result, activities that adversely affect the spawning success and the quality for the nursery habitat of these anadromous fish can adversely affect the EFH for juvenile bluefish, windowpane and summer flounder by reducing the availability of prey items.

Wetlands

Jamaica Bay is regionally significant for shellfish and marine, estuarine, and anadromous fishes, as well as for its significant migratory and wintering waterfowl concentrations. The wetlands and uplands in the bay are important as fish nursery areas and foraging areas for shorebirds and waterbirds. Wetlands in the project area perform many important ecological functions including water storage, nutrient cycling and primary production, sediment retention, water filtration or purification, and groundwater recharge. The estuary is subject to severe anthropogenic impacts, and has incurred a loss of 63% of wetlands between 1951 and 2003. During this time period, the rate of marsh loss increased from 17 acres lost per year during 1951 – 1974 to 33 acres lost per year during 1989 – 2003 (NPS 2007). Vegetated wetlands are also considered to be special aquatic sites under the Clean Water Act. Because of their ecological value, impacts on these special aquatic sites should be avoided and minimized; wetlands should be created, restored, or enhanced where feasible.

Tidal wetlands provide nursery habitat for many species of fish, including winter flounder and summer flounder. Summer flounder larvae migrate inshore into estuarine nursery areas, settling to the bottom of tidal marsh creeks to transform to their juvenile stage. These juveniles will then make extensive use of the creeks, preying on creek fauna such as Atlantic silversides and mummichogs. Juvenile summer flounder may also be found in salt marsh cord grass habitat during flood tides. Juveniles utilize the marsh edges for shelter, burying themselves in the muddy substrates. Keefe and Able (1992) in Packer et al. (1999) found that summer flounder juveniles that inhabit tidal marsh creeks exhibit the fastest growth. Larval and juvenile black sea bass also concentrate and feed extensively and shelter within these habitats. As a consequence, growth rates are high and predation rates are low, which makes these habitats effective nursery areas. Juvenile black sea bass are also known to inhabit the mouths of tidal marsh creeks as well as shallow shoals and tidal marsh edge habitat. Within these habitats, young-of-year black sea bass display high site fidelity; they may be territorial and move very little (Musick and Mercer 1977; Werme 1981; Able and Hales 1997). Black sea bass have been observed defending small areas of nursery habitat rather than fleeing to other suitable areas (Able and Fahay 1998).

An unimpeded marsh edge is important to estuarine and tidal marsh community dynamics, both to allow tidal flushing and concomitant transport of plankton, nekton, nutrients and sediment as well as to enable access to edge habitat by estuarine biota, including federally managed species, diadromous fishes, and other important prey for federally managed species. Marshes and marsh edge habitat can therefore be considered EFH for summer flounder, black sea bass, and other species.

Atlantic Shorefront

Beach Nourishment and Dredging

The dredging of sand for beach nourishment has the potential to impact both the EFH of a particular species as well as the organisms themselves in a variety of ways. Dredging can result in the impingement of eggs and larvae in the dredge plant and create undesirable suspended sediment levels in the water column. As stated above, increased suspended sediment levels can reduce dissolved oxygen, mask pheromones used by migratory fishes, and smother immobile benthic organisms and newly-settled juvenile demersal fish (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Sustained water column turbulence can reduce the feeding success of sight-feeding fish such as winter flounder and summer flounder.

Dredging can remove the substrate used by federally managed species as spawning, refuge and forage habitat. Benthic organisms that are food sources for federally managed species may also be removed during dredging. These impacts may be temporary if the substrate returns to preconstruction condition and the benthic community recovers with the same or similar organisms. The impacts may be permanent if the substrate is altered in a way that reduces its suitability as habitat, and if the benthic community is altered in a way that reduces its suitability as forage.

Overall, the dredging and placement of sand along the coastline will have some adverse effects on EFH and federally managed species due to the entrainment of early life stages in the dredge, alteration or loss of benthic habitat and forage species, and altered forage patterns and success due to increased, noise, turbidity and sedimentation. We agree that some effects will be temporary and others can be minimized using some of the management practices mentioned in the EFH assessment, such as dredging in the fall to avoid sensitive life stages of certain species, not dredging deep holes and leaving similar substrate in place to allow for recruitment.

Dredging in the borrow area can also affect EFH adversely through impacts to prey species. The EFH final rule states that the loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat; the definition of EFH includes waters and substrate necessary to fish for feeding. Steimle et al. (2000) reported that winter flounder diets include the siphons of surf clams (*Spisula solidissima*). As a result, activities that adversely affect surf clams can adversely affect the EFH for winter flounder by reducing the availability of prey items

According to the DEIS, the offshore borrow area provides habitat for Atlantic surf clams; however surveys conducted by the USACE in 2003 and by the NYSDEC in 2012 indicate that the borrow area itself contains very low to no localized populations of surf clams. To ensure that impacts to surf clams are minimized, the borrow areas should be surveyed prior to each dredging cycle and areas of high densities should be avoided. Copies of the shellfish survey results should also be provided to us prior to any dredging in the borrow area.

The Mid-Atlantic Fisheries Management Council (MAFMC) has developed a policy statement on sand mining and beach nourishment activities that may affect federally managed species under their purview including summer flounder, scup, black sea bass, monkfish and butterfish.

These policies are intended to articulate the MAFMC's position on various development activities and facilitate the protection and restoration of fisheries habitat and ecosystem function. The MAFMC's policies on beach nourishment are:

1. Avoid sand mining in areas containing sensitive fish habitats (e.g., spawning and feeding sites, hard bottom, cobble/gravel substrate, shellfish beds).

2. Avoid mining sand from sandy ridges, lumps, shoals, and rises that are named on maps. The naming of these is often the result of the area being an important fishing ground.

3. Existing sand borrow sites should be used to the extent possible. Mining sand from new areas introduces additional impacts.

4. Conduct beach nourishment during the winter and early spring, when productivity for benthic infauna is at a minimum.

5. Seasonal restrictions and spatial buffers on sand mining should be used to limit negative impacts during fish spawning, egg development, young-of-year development, and migration periods, and to avoid secondary impacts to sensitive habitat areas such as SAV.

6. Preserve, enhance, or create beach dune and native dune vegetation in order to provide natural beach habitat and reduce the need for nourishment.

7. Each beach nourishment activity should be treated as a new activity (i.e., subject to review and comment), including those identified under a programmatic environmental assessment or environmental impact statement.

8. Bathymetric and biological monitoring should be conducted before and after beach nourishment to assess recovery in beach borrow and nourishment areas.

9. The effect of noise from mining operations on the feeding, reproduction, and migratory behavior of marine mammals and finfish should be assessed.

10. The cost effectiveness and efficacy of investments in traditional beach nourishment projects should be evaluated and consider alternative investments such as non-structural response and relocation of vulnerable infrastructure given projections of sea level rise and extreme weather events.

Sand Placement Effects on Fishes

Beach renourishment activities produce turbidity and sound impacts; fish may move away from those impacts in open water but cannot avoid them in inlets and channels. Fish that transit through inlets and channels on spawning migrations are therefore vulnerable to these impacts. As discussed earlier, winter flounder and river herring ingress through inlets to access estuarine spawning habitats. Winter flounder migrate into mid-Atlantic estuaries from mid-November through December. River herring enter these same estuaries on their spawning migrations from early March through May. Because project plans include beach renourishment along Rockaway

Beach at East Rockaway Inlet, sequencing of beach nourishment activities may be necessary in order to avoid impacts to ingressing winter flounder and river herring. This may include seasonal in-water work restrictions for winter flounder from November 15 through December 31 and from March 1 to May 31 for river herring. Any in-water work undertaken at the inlet at other times of the year should be designed with 50% of the inlet unobstructed to allow ingress and egress of fish past the work site.

Jamaica Bay HFFRRF

Impacts of NNBF Construction on EFH

The Jamaica Bay HFFRRF project plan proposing construction of NNBFs in the Edgemere and Arverne subreaches will result in permanent impacts to shallow water and tidal wetland habitat, including EFH for winter flounder. Rock sills are proposed for two subreaches of the Jamaica Bay HFFRRF, including four sections in Edgemere totaling approximately 3100 lf and three sections in Arverne totaling approximately 4800 lf, with a combined footprint of 11 acres. Tidal marshes will be created, restored, or enhanced shoreward of the proposed rock sills and will be designed to allow their shoreward migration with rising sea levels. We appreciate the Corps' use of NNBFs in this project and encourage their use in future projects when practicable.

The construction of the NNBFs, including rock sills and tidal wetlands, will result in a permanent loss of winter flounder EFH associated within the footprints of the sills and in areas shoreward of the sills due to natural sediment accretion and tidal wetlands creation. Seasonal in-water work restrictions from January 1 to May 31 will minimize impacts to winter flounder early life stages and their EFH during the construction activities and the NNBF features will provide habitat for other aquatic resources.

Impacts to Prey Species

Construction of the NNBFs may impede access by horseshoe crabs to spawning beaches. Horseshoe crab eggs are an important seasonal food source for summer flounder and winter flounder. Seasonal in-water work restrictions in areas suitable for horseshoe crab spawning from April 15 to July 15 minimize adverse effects to this prey species. Shellfish are also prey species for a number of federally managed fish including bluefish, scup, skates, summer flounder, windowpane and winter flounder. Site design and placement of the NNBFs should include an evaluation of shellfish resources in the project area; NNBFs should not be placed in areas of moderate to high densities of shellfish.

Tidal flushing and access to tidal marsh fringe habitat are important to maintain estuarine and marsh community dynamics; impediments to marsh edge habitat may therefore impact EFH for federally managed species, including winter flounder and summer flounder. Seven rock sills, approximately 350 lf to 2000 lf, are proposed in the Edgemere and Arverne subreaches. The individual sills as proposed appear to be of solid construction, with gaps between each sill but no gaps (vents/windows) within the sills. Vents/windows provide a number of benefits, including facilitating transport of plankton, nekton, sediment and nutrients into aquatic food webs that include federally managed species, diadromous fishes, and other important prey for federally managed species. These openings should generally be 10-15 feet in width, as measured from the bottom, and spaced evenly across the sill (e.g., one every 100 feet). Rock sills without

vents/windows placed at regular intervals can severely restrict biological functions and impact the marsh community. Additionally, though rare, displacement of sills either as a whole or as individual elements is a concern in highly dynamic environments.

All living shorelines must be properly maintained, which may require periodic repair of sills/reefs. A long-term maintenance plan should be developed for the proposed NNBFs, including plans to address the potential migration of hardened materials/structures. As we continue to coordinate on this project and plans are developed, information on incorporation of vents/windows and dropdowns into the sill design, overall wetland design, invasive species management, and monitoring, maintenance, and long-term stewardship of the NNBFs should be provided to us.

Essential Fish Habitat Conservation Recommendations

Pursuant to Section 305 (b) (4) (A) of the MSA, we offer the following EFH conservation recommendations to minimize adverse effects to EFH for summer flounder, bluefish, windowpane, little skate and other federally managed species:

Atlantic Shorefront

1. Coordinate with our office to determine impacts of dredging in the borrow area to longfin inshore squid EFH. If warranted, we will provide you with additional EFH conservation recommendations to address impacts to longfin inshore squid as information becomes available. We will work with you to incorporate conservation recommendations into the initial construction or subsequent maintenance dredging events.

2. Reinitiate consultation prior to each dredging event. Notification should be provided to our office prior to commencement of each dredging event and should include the location of the segment to be nourished, volume of sand to be dredged, depth of sand to be removed and the boundaries of the dredging within the borrow area.

3. Design and undertake dredging within the borrow areas in a manner that maintains geomorphic characteristics of the borrow area. Employ best management practices such as not dredging too deeply and leaving similar substrate in place to allow for benthic community recovery.

4. Incorporate MAFMC policies on sand mining and beach nourishment into the final design of this project and its long-term management plan as practicable.

5. Avoid areas of high surf clam densities within the borrow area. To ensure that impacts to surf clams are minimized, the borrow areas should be surveyed prior to each dredging cycle and areas of high densities should be avoided. Copies of the shellfish survey results should also be provided to us prior to any dredging in the borrow area.

6. Avoid turning on the intakes on the dredge plant until the dredge head is in the sediment and turn off before lifting out of the sediment to minimize larval entrainment in the dredge.

7. Provide annual reports to us on the acres of borrow area disturbed, dredging location, cubic yardage removed, depth of removal and post-dredging bathymetry of the borrow area.

8. Avoid beach renourishment activities in East Rockaway Inlet from November 15 to December 31 (winter flounder) and March 1 to May 31 (river herring) of each year to maintain access to estuarine and freshwater spawning habitats. At other times of the year, at least 50 % of the channel should remain unobstructed to allow ingress and egress of these species.

9. Use best management practices to minimize the release of suspended sediments during beach nourishment activities, including placing the material above the spring high tide line at low tide where possible and using turbidity barriers where feasible.

Jamaica Bay HFFRRF

10. Avoid construction of NNBFs below mean low water (MLW) from January 1 to May 31 of each year to minimize impacts to EFH for winter flounder. Work is permissible above MLW when the work area is exposed during low tide cycles.

11. Avoid construction of NNBFs from April 15 to July 15 of each year to protect horseshoe crab spawning habitat.

12. NNBFs should not be placed in areas of moderate to high shellfish density as practicable.

13. Incorporate vents/windows and dropdowns into rock sill design according to best management practices. Sills should be designed to optimize tidal flow and to ensure that horseshoe crabs do not get trapped behind them.

14. Provide design plans for tidal wetland creation/restoration and enhancement as well as monitoring, maintenance, adaptive management and long-term stewardship plans to us for review prior to construction.

15. Continue to coordinate with us during the Preconstruction, Engineering and Design Phase of the project.

Please note that Section 305 (b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including the measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305 (b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate or offset such effect pursuant to 50 CFR 600.920 (k). Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Endangered Species Act

Atlantic Large Whales

Federally endangered North Atlantic right and fin whales occur year round off the New York coast in the Atlantic Ocean. Right whales are most likely to occur in the offshore borrow areas between November and April and fin whales are most likely to occur between October and January. Right whales feed on copepods and could be foraging in the action area if suitable forage is present; right whales are also likely to occur in the action area while migrating along the Atlantic coast. Fin whale sightings off the eastern United States are centered along the 100m isobath, but fin whales are well spread out over shallower and deeper water, including submarine canyons along the shelf break (Kenney and Winn 1987; Hain et al. 1992). Fin whales feed on small schooling fish, squid, and crustaceans, including krill. Sperm and sei whales are limited to the offshore area beyond the continental shelf.

Sea Turtles

Four species of ESA listed threatened or endangered sea turtles under our jurisdiction are seasonally present off the New York coast in the Atlantic Ocean and could occur in the Rockaway Inlets and Jamaica Bay: the threatened Northwest Atlantic Ocean distinct population segment (DPS) of loggerhead, the threatened North Atlantic DPS of green, and the endangered Kemp's ridley and leatherback sea turtles. Sea turtles typically occur along the Long Island coast from May to mid-November, with the highest concentration of sea turtles present from June through October.

Atlantic Sturgeon

Atlantic sturgeon are present off the New York coast in the Atlantic Ocean and could occur in the Rockaway Inlets and Jamaica Bay. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPS of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area. As young remain in their natal river/estuary until approximately age 2, and early life stages are not tolerant of saline waters, no eggs, larvae, or juvenile Atlantic sturgeon will occur within the waters off the New York coast in the Atlantic Ocean or in the Rockaway Inlets and Jamaica Bay.

Shortnose Sturgeon

Shortnose sturgeon are not expected to be present in waters south of Long Island.

As project details develop, we recommend you consider the following effects of the project on whales, sea turtles, and sturgeon:

- For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in water work.
- For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
- Consider the related effects to water quality after an outfall is built (i.e. , will the standards still be met, will the effluent volume change, and will there be any effects to the species).

- For pile driving or other activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sea turtles, and sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon or sea turtles.

Organism	**Injury**	**Behavioral Modification**
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS
Sea Turtles	180 dB re 1 µPaRMS	166 dB re 1 µPaRMS

Depending on the amount and duration of work that takes place in the water, listed species of whales, sea turtles, and sturgeon may occur within the vicinity of your proposed project. The Corps will be responsible for determining whether the proposed action may affect listed species. If you determine that the proposed action may affect a listed species, you should submit your determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, NMFS, Greater Atlantic Regional Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 or nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See - http://www.greateratlantic.fisheries.noaa.gov/section7. After receiving a complete, accurate comprehensive request for consultation, in accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact Edith Carson-Supino (978-282-8490; Edith.Carson-Supino@noaa.gov).

We look forward to our continued coordination with your office on this project as it moves forward. We can work with your staff to complete a programmatic consultation for the beach replenishment portion of the project to reduce the need for individual consultations. If you have any questions or need additional information, please do not hesitate to contact Ursula Howson at ursula.howson@noaa.gov or (732) 872-3116.

Sincerely,

Louis A. Chiarella,
Assistant Regional Administrator
for Habitat Conservation

cc:
ACOE – C. Alcoba, D. Mezey
PRD – D. Marrone, E. Carson-Supino
FWS – S. Sinkevich
EPA – D. Montella
NYSDEC – D. McReynolds
NEFMC – T. Nies
MAFMC – C. Moore
ASMFC – L. Havel

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

Environmental Analysis Branch

November 16, 2018

Mr. Lou Chiarella,
Assistant Regional Administrator for Habitat Conservation
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, Mass. 01930-2276

Attention: Karen Green, Field Supervisor, Sandy Hook Field Office, NJ
Ursula Howson, Biologist, Sandy Hook Field Office, NJ

Dear Mr. Chiarella:

The U.S. Army Corps of Engineers (USACE), New York District (District) is in receipt of National Marine Fisheries Service (NMFS) EFH Conservation Recommendations, dated October 31 2018 submitting recommendations on the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Draft Integrated Hurricane Study.

Please find attached find our responses to your Conservation Recommendations. The District looks forward to working with your office throughout the Pre-Engineering and Design and Construction phases of this study and thank you for your continued assistance and input to this process which helps to advance the execution of this regionally-significant project.

If you require any additional information, please feel free to contact Ms. Daria Mazey Project Biologist/Planner at 917-790-8726.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

Enclosure
cc: NMFS, Green

Please be assured that a full evaluation of impacts within the borrow area was completed as part of this study. USACE has been working for many years to consolidate information to support consultation for this project. Two factors associated with the latest revisions to the HSGRR/EIS and attached EFH Assessment appear to have led to concerns regarding scope of the evaluation of the borrow area:

- In effort to consolidate the HSGRR/EIS, the previously provided *Borrow Area Study for the Atlantic Coast of Long Island, East Rockaway New York, Storm Damage Reduction Project* (Tetra Tech 2015) which was Appendix B2 in the 2016 Draft Report that NMFS previously reviewed was not provided as a separate appendix for the Revised Draft, but rather incorporated throughout the EIS and EFH Assessment. USACE has attached this information to NMFS as part of our response, and will include it on the public website for the project as supplementary information.
- To address a comment about addressing all portions of the study area equally, sections previously focused primarily on the borrow area, were subsumed within the discussion pertaining to Atlantic Shorefront Planning Reach. A discussion of the potential direct and indirect impacts within the borrow area are discussed as they pertain to four distinct impact categories (i.e., Sections 4.1 -4.4, and Sections 5.1-5.3). As such, a consolidated section pertaining specific to effects within the borrow area was not included, but this information is still captured in the analysis and the EIS.

As previously discussed, additional coordination is warranted during the Preconstruction, Engineering and Design Phase of the project. Based upon this additional coordination and potential data analysis specific to refined design details, USACE expects to continue to work with NMFS and include the appropriate references to existing and previous data collection as well as refine conservation recommendations as necessary.

From:	Ursula Howson - NOAA Federal
To:	Mazey, Daria S CIV USARMY CENAN (USA)
Cc:	Gallo, Jenine CIV CENAN CENAD (US); Alcoba, Catherine J CIV USARMY CENAN (US); Karen Greene - NOAA Federal
Subject:	[Non-DoD Source] EFH concurrence - East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Draft Integrated Hurricane Study.
Date:	Tuesday, December 4, 2018 1:19:41 PM

Hello Daria,

Thank you for providing the requested information on the Rockaway borrow area as per our letter dated October 31, 2018. Regarding your letter dated November 16, 2018 responding to our EFH conservation recommendations (CRs), we concur with your comments and understand that additional coordination on those CRs will occur with us during the preconstruction, engineering and design phase of the project. We look forward to our continuing coordination with your office.

Thank you,
Ursula

--

Ursula Howson, PhD
NOAA/National Marine Fisheries Service
Greater Atlantic Regional Fisheries Office
Habitat Conservation Division
James J. Howard Marine Sciences Laboratory
74 Magruder Rd.
Highlands, NJ 07732
732 872-3116 <tel:732%20872-3116> (office)
ursula.howson@noaa.gov <mailto:ursula.howson@noaa.gov>

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

Environmental Analysis Branch

October 15, 2018

Mr. Matthew Maraglio
Consistency Review Unit
Office of Communities & Waterfronts
New York Department of State
Suite 1010
One Commerce Place,
99 Washington Avenue
Albany, New York 12231-0001

Dear Mr. Maraglio:

The purpose of this letter is to request your office's concurrence with the Coastal Zone Management (CZM) Consistency Determination for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Hurricane Sandy Reformulation Study. The study area consists of the Atlantic Coast of New York City (NYC) between East Rockaway Inlet and Rockaway Inlet, and the water and lands within and surrounding Jamaica Bay, New York. The Atlantic Ocean shoreline, which is a peninsula approximately 10 miles in length, generally referred to as the Rockaways, separates the Atlantic Ocean from Jamaica Bay immediately to the north. The greater portion of Jamaica Bay lies in the Boroughs of Brooklyn and Queens, NYC, and a section at the eastern end, known as Head-of-Bay, lies in Nassau County.

More than 850,000 residents, over 46,000 residential and non-residential structures (which includes scores of critical infrastructure features such as schools, hospitals, and nursing homes), and additional wastewater treatment, subway, and railroad infrastructure are located within the study area. The study area was one of the areas most devastated by Hurricane Sandy – there were 10 fatalities, and more than 1,000 structures were either substantially damaged to restrict re-entry or were destroyed by Hurricane Sandy. The NYC Department of Buildings post-Hurricane Sandy damage assessment indicates the disproportionate vulnerability of the study area to storm surge damage. Of all buildings city-wide identified as unsafe or structurally damaged, 37 percent were located in the southern Queens portion of the study area. In addition to the structural impacts caused by waves and inundation, fires ignited by the storm surge inundation of electrical systems destroyed 175 homes along the Rockaway Peninsula portion of the study area.

Hurricane Sandy hit the study area at nearly high tide. Waves eroded beaches, breached boardwalks and seawalls, and broke against buildings in the oceanfront communities. Storm surge inundation reached as much as 10 feet above ground in some portions of the study area. In addition, more than 1.5 million cubic yards of sand

was removed from Rockaway Beach and deposited on oceanfront communities or washed out to sea. Floodwaters funneled through Rockaway Inlet amassing a storm surge that inundated all of the neighborhoods surrounding Jamaica Bay. The low-lying neighborhoods in the central and northern portions of Jamaica Bay, where the narrow creeks and basins provide the marine aesthetic of the neighborhood, were especially devastated by flood waters. Damage to the elevated portion of the subway system in Jamaica Bay and Rockaway (the A-line) disrupted service for over six months, affecting about 35,000 riders daily. In the southern Queens portion of the study area 37 schools were closed for up to two months. Habitats important to waterfowl and coastal water birds, including shorebirds, wading birds, and seabirds, were also impacted by Hurricane Sandy. High winds and storm-driven water moved masses of coastal sediments, changed barrier landscapes, and breached dikes on impoundments managed specifically for migratory birds.

Plan formulation involved the analysis of potential structural and non-structural alternatives. The recommended plan is comprised of a shorefront component and three separate *high frequency flooding risk reduction features* (HFFRRF) projects around Jamaica Bay: 1) Mid-Rockaway, 2) Cedarhurst-Lawrence, and 3) Motts Basin North. The Mid-Rockaway HFFRRF is the largest and stretches across three neighborhoods/subreaches - Hammels, Edgemere, and Arverne. The shorefront component includes a reinforced vegetated dune with a composite seawall core and associated beach restoration with increased renourishment at the Atlantic Ocean shorefront. The structure crest elevation is +17 feet NAVD88, the dune elevation is +18 feet NAVD88, and the design berm width is 60 feet at an elevation of +8 feet NAVD88. In order to reduce beach erosion and renourishment requirements, the project also includes an extension of 5 existing groins and new construction of 13 new groins. For the Jamaica Bay component, features to reduce the risk of frequent flooding are recommended and include natural and nature-based features (wetlands with rock sills), floodwalls, revetments, and bulkheads. Feature types are based on what is feasible and appropriate at given locations when considering existing conditions and uses.

The U.S. Army Corps of Engineers, New York District (District) has determined that the Rockaway Reformulation complies with both New York State and New York City Waterfront Revitalization Program (WRP) Coastal Zone Management (CZM) policies and project implementation will be conducted in a manner consistent with these polices. This letter provides the New York State Coastal Management Program Consistency Review Unit with information to support the District's consistency determination under the Coastal Zone Management Act, Section 307(c) (1) and (2), and 15 CFR 930.35(d). A Determination of Federal Consistency with both sets of coastal management policies is enclosed. The Policy 6.2 worksheet is also enclosed, along with a signed New York City Waterfront Revitalization Program Consistency Assessment Form

The District requests that your office review the proposed project for consistency to the maximum extent practicable with State's CZM Policies. For further information (including the Revised General Reevaluation Report and Environmental Impact Statement and associated Plan Sheets for the Recommended Plan), please refer to:

http://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/East-Rockaway-Inlet-to-Rockaway-inlet-Rockaway-Beach/.

Should you require any additional information, please contact the Project Biologist, Ms. Daria Mazey of my staff at (917) 790-8726 or by email at daria.s.mazey@usace.army.mil.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

cc: NYC-LWRP

FOR INTERNAL USE ONLY	WRP No. _____
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: New York District, US Army Corps of Engineers

Name of Applicant Representative: Peter Weppler (POC Daria Mazey)

Address: 26 Federal Plaza, New York, NY 10278

Telephone: 917-790-8726 Email: daria.s.mazey@usace.army.mil

Project site owner (if different than above): variable/multiple owners

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The objective of the Recommended Plan is to manage the risk of coastal flooding from the Atlantic shorefront as well as the frequent flooding from smaller events in Jamaica Bay. The Recommended Plan has the following features:
• A composite seawall with a structure crest elevation of +17 feet (NAVD88), the dune elevation is +18 feet (NAVD88), and the design berm width is 60 feet;
• A beach berm elevation of +8 ft NAVD and a depth of closure of -25 ft NAVD;
• A total beach fill quantity of 1.6 million cy for the initial placement, including tolerance, overfill and advanced nourishment with a 4-year renourishment cycle of 1,021,00 cy, resulting in a minimum berm width of 60 feet;
• Extension of 5 existing groins; and
• Construction of 13 new groins.
The east beachfill taper is approximately 3,000 ft in shorefront length from Beach 19th Street east to Beach 9th Street. The taper comprises of approximately 1,000 ft of dune and beach taper including reinforced dune feature and approximately 2,000 ft of dune and beach fill without reinforced dune feature. In addition to the tapering of berm width, the dune elevation also tapers from an elevation of +18 ft NAVD at 19th Street down to approximately +12 ft NAVD at Beach 9th Street which will be tied into the existing grade. The west beachfill taper is approximately 5,000 ft in shorefront length from Beach 149th Street west to Beach 169th street fronting Riis Park. The beachfill taper will be beach fill only with a berm width tapered from the design width at 149th Street to the existing width and height at 169th Street. In addition to the beachfill taper, a tapered groin system comprised of three (3) rock groins is included for this section.
The Mid-Rockaway High Frequency Flooding Risk Reduction Feature is also located in New York City and recommends a combination of floodwalls, revetments, berms, bulkheads, and nature-based features (tidal wetlands, maritime forest and rock sills) to reduce the risk of flooding from 10% AEP in 2018 storms or less in the neighborhoods of Edgemere, Arverne, and Hammels. The plan also includes upgrades to the existing interior drainage in the form of retrofitted and/or extended outfalls with backflow prevention and the construction of pump stations to drain the neighborhoods when these features are overtopped. (For more information see Attachment A: Project Description)

2. Purpose of activity

The purpose of the project is to mitigate the risk of flooding related to coastal and tropical storms, hurricanes, future sea level rise and frequent flooding caused by high tides and smaller rainfalls along the Rockaway peninsula, both on the ocean and bay sides, where feasible. The project is needed because these communities experienced catastrophic loss of life and damage to property and infrastructure, including during Hurricane Sandy. The area is prone to erosion and shoreline destabilization, and erosion control measures such as groins on the Atlantic shorefront and nature-based features on the bayside have been proposed to manage this problem.

C. PROJECT LOCATION

Borough: Queens Tax Block/Lot(s): _____

Street Address: _____

Name of water body (if located on the waterfront): Jamaica Bay and Atlantic Ocean

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☐ Yes ☑ No

- ☐ City Map Amendment
- ☐ Zoning Map Amendment
- ☐ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☐ Other, explain: _____
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☑ State permit or license, specify Agency: NYSDEC Permit type and number: _____
- ☑ Funding for Construction, specify: Disaster Relief Appropriations Bill of 2013 (Hurricane Sandy bill)
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☑ Yes ☐ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☑ Yes ☐ No
3. Is the project located on publicly owned land or receiving public assistance? ☑ Yes ☐ No
4. Is the project located within a FEMA 1% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
6. Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).* ☑ Yes ☐ No

   ☐ Significant Maritime and Industrial Area (SMIA) (*2.1*)
   ☑ Special Natural Waterfront Area (SNWA) (*4.1*)
   ☑ Priority Maritime Activity Zone (PMAZ) (*3.5*)
   ☐ Recognized Ecological Complex (REC) (*4.4*)
   ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (*2.2, 4.2*)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☐	☐	☑
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☐	☐	☑
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☑	☐	☐
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☐	☐	☑
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☐	☐	☑

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☐	☐	☑
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☐	☐	☑
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☑	☐	☐
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☑
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☑
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☑	☐	☐
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☐	☐	☑
3.1.	Support and encourage in-water recreational activities in suitable locations.	☑	☐	☐
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☑
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☑
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☑
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☐	☐	☑
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☑	☐	☐
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☑	☐	☐
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☑	☐	☐
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☑	☐	☐
4.5	Protect and restore tidal and freshwater wetlands.	☑	☐	☐
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☑	☐	☐
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☑	☐	☐
4.8	Maintain and protect living aquatic resources.	☑	☐	☐

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☑	☐	☐
5.1	Manage direct or indirect discharges to waterbodies.	☑	☐	☐
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☑	☐	☐
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☑	☐	☐
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☑	☐	☐
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☑	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☑	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☑	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☑	☐	☐
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☐	☐	☑
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☐	☐	☑
7.2	Prevent and remediate discharge of petroleum products.	☐	☐	☑
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☑
8	**Provide public access to, from, and along New York City's coastal waters.**	☑	☐	☐
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☑	☐	☐
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☑	☐	☐
8.3	Provide visual access to the waterfront where physically practical.	☑	☐	☐
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☑	☐	☐

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☑	☐	☐
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☐	☐	☑
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☑	☐	☐
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☑	☐	☐
9.2	Protect and enhance scenic values associated with natural resources.	☑	☐	☐
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☑	☐	☐
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☑	☐	☐
10.2	Protect and preserve archaeological resources and artifacts.	☑	☐	☐

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: New York District, US Army Corps of Engineers

Address: 26 Federal Plaza, New York, NY 10278

Telephone: 917-790-8726 Email: daria.s.mazey@usace.army.mil

Applicant/Agent's Signature: _____

Date: _____

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
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New York, New York 10271
212-720-3696
wrp@planning.nyc.gov
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Albany, New York 12231-0001
518-474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☑ Copy of original signed NYC Consistency Assessment Form
- ☑ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☑ Environmental Review documents
- ☑ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☑ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

Environmental Analysis Branch

October 15, 2018

Mr. Michael Marrella
Director of Waterfront and Open Space
New York City Department of City Planning
120 Broadway, 31st Floor
New York, New York 10271

Dear Mr. Marella:

The purpose of this letter is to request your office's concurrence with the Coastal Zone Management (CZM) Consistency Determination for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Hurricane Sandy Reformulation Study. The study area consists of the Atlantic Coast of New York City (NYC) between East Rockaway Inlet and Rockaway Inlet, and the water and lands within and surrounding Jamaica Bay, New York. The Atlantic Ocean shoreline, which is a peninsula approximately 10 miles in length, generally referred to as the Rockaways, separates the Atlantic Ocean from Jamaica Bay immediately to the north. The greater portion of Jamaica Bay lies in the Boroughs of Brooklyn and Queens, NYC, and a section at the eastern end, known as Head-of-Bay, lies in Nassau County.

More than 850,000 residents, over 46,000 residential and non-residential structures (which includes scores of critical infrastructure features such as schools, hospitals, and nursing homes), and additional wastewater treatment, subway, and railroad infrastructure are located within the study area. The study area was one of the areas most devastated by Hurricane Sandy – there were 10 fatalities, and more than 1,000 structures were either substantially damaged to restrict re-entry or were destroyed by Hurricane Sandy. The NYC Department of Buildings post-Hurricane Sandy damage assessment indicates the disproportionate vulnerability of the study area to storm surge damage. Of all buildings city-wide identified as unsafe or structurally damaged, 37 percent were located in the southern Queens portion of the study area. In addition to the structural impacts caused by waves and inundation, fires ignited by the storm surge inundation of electrical systems destroyed 175 homes along the Rockaway Peninsula portion of the study area.

Hurricane Sandy hit the study area at nearly high tide. Waves eroded beaches, breached boardwalks and seawalls, and broke against buildings in the oceanfront communities. Storm surge inundation reached as much as 10 feet above ground in some portions of the study area. In addition, more than 1.5 million cubic yards of sand was removed from Rockaway Beach and deposited on oceanfront communities or washed out to sea. Floodwaters funneled through Rockaway Inlet amassing a storm surge that inundated all of the neighborhoods surrounding Jamaica Bay. The low-lying

neighborhoods in the central and northern portions of Jamaica Bay, where the narrow creeks and basins provide the marine aesthetic of the neighborhood, were especially devastated by flood waters. Damage to the elevated portion of the subway system in Jamaica Bay and Rockaway (the A-line) disrupted service for over six months, affecting about 35,000 riders daily. In the southern Queens portion of the study area 37 schools were closed for up to two months. Habitats important to waterfowl and coastal water birds, including shorebirds, wading birds, and seabirds, were also impacted by Hurricane Sandy. High winds and storm-driven water moved masses of coastal sediments, changed barrier landscapes, and breached dikes on impoundments managed specifically for migratory birds.

Plan formulation involved the analysis of potential structural and non-structural alternatives. The recommended plan is comprised of a shorefront component and three separate *high frequency flooding risk reduction features* (HFFRRF) projects around Jamaica Bay: 1) Mid-Rockaway, 2) Cedarhurst-Lawrence, and 3) Motts Basin North. The Mid-Rockaway HFFRRF is the largest and stretches across three neighborhoods/subreaches - Hammels, Edgemere, and Arverne. The shorefront component includes a reinforced vegetated dune with a composite seawall core and associated beach restoration with increased renourishment at the Atlantic Ocean shorefront. The structure crest elevation is +17 feet NAVD88, the dune elevation is +18 feet NAVD88, and the design berm width is 60 feet at an elevation of +8 feet NAVD88. In order to reduce beach erosion and renourishment requirements, the project also includes an extension of 5 existing groins and new construction of 13 new groins. For the Jamaica Bay component, features to reduce the risk of frequent flooding are recommended and include natural and nature-based features (wetlands with rock sills), floodwalls, revetments, and bulkheads. Feature types are based on what is feasible and appropriate at given locations when considering existing conditions and uses.

The U.S. Army Corps of Engineers, New York District (District) has determined that the Rockaway Reformulation complies with both New York State and New York City Waterfront Revitalization Program (WRP) Coastal Zone Management (CZM) policies and project implementation will be conducted in a manner consistent with these polices. This letter provides the New York State Coastal Management Program Consistency Review Unit with information to support the District's consistency determination under the Coastal Zone Management Act, Section 307(c) (1) and (2), and 15 CFR 930.35(d). A Determination of Federal Consistency with both sets of coastal management policies is enclosed. The Policy 6.2 worksheet is also enclosed, along with a signed New York City Waterfront Revitalization Program Consistency Assessment Form

The District requests that your office review the proposed project for consistency to the maximum extent practicable with State's CZM Policies. For further information (including the Revised General Reevaluation Report and Environmental Impact Statement and associated Plan Sheets for the Recommended Plan), please refer to: http://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/East-Rockaway-Inlet-to-Rockaway-inlet-Rockaway-Beach/.

Should you require any additional information, please contact the Project Biologist, Ms. Daria Mazey of my staff at (917) 790-8726 or by email at daria.s.mazey@usace.army.mil.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

cc: NYSDOS-CZM

STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
WWW.DOS.NY.GOV

ANDREW M. CUOMO
GOVERNOR

ROSSANA ROSADO
SECRETARY OF STATE

December 6, 2018

Mr. Peter Weppler, Chief
Environmental Analysis Branch
U.S. Army Corps of Engineers/New York District
26 Federal Plaza
New York, NY 10278-0090

Re: **F-2018-1055 (DA)** - U.S. Army Corps of Engineers/New York District submission of a consistency determination for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Hurricane Sandy Reformulation Study. Jamaica Bay and Atlantic Ocean, Boroughs of Brooklyn and Queens, NYC, and Head-of-Bay, Nassau County.
Concurrence with Consistency Certification, with Recommendations

Dear Mr. Weppler:

The Department of State (Department) has completed its review of your consistency certification regarding the consistency of the above-referenced activity with the New York Coastal Management Program.

Pursuant to 15 CFR Part 930.62, and based upon the project information submitted, the Department of State concurs with your consistency certification for this activity. This concurrence is without prejudice to and does not obviate the need to obtain all other applicable licenses, permits, or other forms of authorization or approval that may be required pursuant to existing State statutes.

The Department would also like to offer the following recommendation regarding the consistency of this proposal:

- Considering that the Reformulation Study has yet to be finalized and individual project components are still under development, it is strongly recommended that coordination with the Department of State and the New York City Department of City Planning continue as the details of this project are developed and finalized to ensure continued consistency with the New York State Coastal Management Program and New York City Waterfront Revitalization Program.

Please contact Matthew Maraglio at: Matthew.Maraglio@dos.ny.gov or 518-474-6000 if you have any questions, and please reference file no. F-2018-1055 (DA).

Sincerely,

Gregory L. Capobianco
Office of Planning, Development and
Community Infrastructure

GLC/jls

ecc: COE/NY District – Daria Mazey, Steve Ryba
DEC Central Office – Sue McCormick, Matthew Chlebus
DEC Region 2 – Steve Watts
DEC Region 1 – Roger Evans, George Hammarth
NYC DCP/WRP – Michael Marrella, Christopher Wassif

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

Environmental Analysis Branch

March 12, 2019

Mr. Frank Loprano
Airport Certification Safety Inspector
Safety & Standards Branch, Airport Division
Federal Aviation Administration
159-30 Rockaway Boulevard
Jamaica, NY 11434

Dear Mr. Loprano,

Thank you to you and your colleagues for the opportunity for the U.S. Army Corps of Engineers, New York District (District) to brief the JFK-LGA Wildlife Hazard Task Force in November 2018 and again on March 13, 2019 on the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Reformulation Study. Enclosed please find a summary of the Recommended Plan, which includes natural and nature-based features to manage coastal erosion and flood risk along the bayside of Arverne and Edgemere on the Rockaway peninsula. Per the FAA recommendations and previous coordination that the New York District has undertaken with you, the District is proposing foraging habitat only, and not nesting or brooding habitat, in the Final Integrated General Reevaluation Report and Environmental Impact Statement (Final FR/EA) for the study due to the proximity to JFK Airport. As part of our coordination for this study, the District is providing a synopsis of project level recommendation and site level features.

As part of the project's Pre-Construction Engineering and Design (PED) Phase, detailed draft site level plans for the natural and nature-based features within the vicinity of John F. Kennedy (JFK) International Airport will be made available with your staff for your review and feedback.

In order to satisfy our agency requirements, the District respectfully requests formal concurrence from your agency upon completion of the study's coordination. The District appreciates your willingness to oversee this project for the JFK Airport. The study team looks forward to working with the FAA as detailed plans are developed in PED. If you require any additional information, please contact Daria Mazey, the lead Biologist on the study at 917-790-8031.

Sincerely,

Peter Weppler
Chief, Environmental Analysis Branch

ENCL 1: Rockaway site level NNBF features summary
CF: Francoeur, Laura, PANYNJ

U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Region, Airports Division

1 Aviation Plaza, Room 516
Jamaica, NY 11434-4809

T: (718) 553-3330
F: (718) 995-5615

May 20, 2019

Mr. Peter Weppler
Department of the Army
U.S. Army Corps of Engineers, New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, NY 10278-0090

Re: Jamaica Bay Reformulation Study Revised Draft

Dear Mr. Weppler:

Again, thank you for bringing the FAA onboard this project in reference to the Integrated Hurricane Sandy General Reevaluation Report and Environmental Impact Statement for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay.

The staff at the Eastern Region and the FAA's Wildlife Biologist in Washington D.C. have reviewed the documents you sent and have no reservations, or objections to the information provided. The project seems to focus to minimize nesting / roosting / loafing habitats for hazardous species, which is good.

Please continue to keep us up to date on the progress of the project. You can contact me anytime via email at frank.loprano@faa.gov or call 718-553-2543.

Sincerely,

Frank J. Loprano
Airport Certification Safety Inspector
Safety and Standards Branch
Airports Division

NATIONAL PARKS SERVICE LETTER OF SUPPORT

United States Department of the Interior
NATIONAL PARK SERVICE
Gateway National Recreation Area
210 New York Avenue
Staten Island, New York 10305

November 16, 2018

Colonel Thomas D. Asbery
Commander and District Engineer
Department of the Army
U.S. Army Corps of Engineers
New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, NY 10279-0090

Dear Colonel Asbery:

The purpose of this letter is to confirm the National Park Service's (NPS) interest in participating with the United States Army Corps of Engineers (USACE), New York State Department of Environmental Conservation, and The City of New York for the successful implementation of the Integrated Hurricane Sandy General Reevaluation Report and Environmental Impact Statement for the East Rockaway Inlet to Jamaica Bay (HSGRR/EIS) Coastal Risk Management Project. The NPS mission is to manage our lands for the preservation of and access to natural, cultural and recreational resources in perpetuity. Understanding that this Project is necessary for the protection of the adjacent communities, and that construction of the risk reduction features will not occur on NPS property, NPS is committed to working to avoid and minimize adverse impacts on our resources while advancing the goals of the Project.

This letter is not a commitment for construction of any portion of the Project on NPS lands. Construction of the project on Gateway National Recreation Area's (GATE) land is contingent upon: an appropriate legal authority or instrumentation to authorize construction on NPS property; commitment of a non-federal sponsor for long-term maintenance obligations and liability and risk considerations for the project on NPS lands; and, appropriate off-sets for unavoidable Project impacts to GATE natural, cultural and recreational resources. In addition, any portion of the project that may be constructed on or impact NPS resources must be mutually acceptable to the Secretary of the Interior and the Secretary of the Army and consistent with GATE enabling legislation (16 U.S. Code Subchapter LXXXVII).

NPS will continue to work with USACE and other partners to implement this project. If you have any questions, please contact me by email at jennifer_nersesian@nps.gov or by telephone (718-354-4665).

Sincerely,

Jennifer T. Nersesian
Superintendent

Cc: Cliff Jones, USACE
Dan Falt, USACE
Daria Mazey, USACE
Joshua Laird, NPS
Patti Rafferty, NPS

SECTION 106 COORDINATION CORRESPONDENCE

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: USACE / 106-Q
Project: ATLANTIC COAST OF NY, EAST ROCKAWAY INLET TO ROCKAWAY INLET AND JAMAICA BAY
Date Received: 6/7/2019

Comments: The LPC is in receipt of the draft Programmatic Agreement and it appears acceptable for historic and cultural resources. The signatory page should be revised to state that Sarah Carroll, Chair of the Landmarks Preservation Commission would be the signatory for LPC.

LPC concurs with the 5/29/19 SHPO comments.

Cc: SHPO 19PR03392

Gina Santucci 6/28/19

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 34240_FSO_ALS_06072019.docx

Preserving America's Heritage

June 7, 2019

Ms. Carissa Scarpa
Archeologist
New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278

Ref: *Proposed Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Construction Project*
Queens and Nassau Counties, New York

Dear Ms. Scarpa:

The Advisory Council on Historic Preservation (ACHP) has received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information you provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and you determine that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Programmatic Agreement (PA), developed in consultation with the New York State Historic Preservation Office (SHPO) and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the PA and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions or require further assistance, please contact Christopher Daniel at 202 517-0223 or via e-mail at cdaniel@achp.gov.

Sincerely,

Artisha Thompson
Historic Preservation Technician
Office of Federal Agency Programs

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

May 10, 2019

Planning Division

Harry B. Wallace
Chief
Unkechaug Nation
207 Poospansk Lane
Mastic, New York 11950

Dear Chief Wallace;

The U.S. Army Corps of Engineers, New York District (Corps) has prepared the General Reevaluation Report and Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York. The proposed project will reduce the risk of damage from storms and cross shore flooding in addition to reducing the risk of flooding in areas along portions of the Jamaica Bay shoreline along the Rockaway peninsula.

The cultural resources investigation completed for this study consisted of the review of the previous surveys and a review of the New York State Historic Preservation Office Cultural Resources Information System. Much of the proposed project area had been included in previous surveys.

Undertaking

The measures proposed include the construction of a composite seawall buried along the beach, the construction of new and/or the extension of existing groins and sand fill along the Atlantic shoreline as well as four high-frequency flood risk reduction measures on Jamaica Bay in Cedarhurst-Lawrence, Hammels, Edgemere and Arverne, Queens and Nassau Counties, New York, as described in Enclosure 1. The APE would also include borrow areas identified as sand sources for the beach fill.

Areas of Potential Effect (APE)

The APE is the alignment of each of the measures included in the undertaking listed above and described in Enclosure 1. At this time no staging areas or access roads have been identified, however, given the nature of the surrounding area it is anticipated that staging areas will be within existing parking lots or the footprint of the alignment itself. If additional staging areas, access roads or other features are required they will be considered in this analysis once they are defined. The APE for archaeology, historic structures and historic landscapes has been defined as those areas along the proposed line of protection that would likely be directly impacted by project construction. The APE for historic structures and landscapes also includes those locations that would be anticipated to have visual impacts from the completed project.

Identification and Evaluation of Historic Properties

A number of prehistoric archaeological or Native American sites identified in and around Jamaica Bay and portions of the Rockaway Peninsula in the early twentieth century have been recorded in the New York State Museum files, although the exact locations or other information is unknown. Few sites have been identified on the main portion of the peninsula.

Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club, Jacob Riis and the Far Rockaway Beach Bungalow Historic District (Beach 24th, 25th and 26th Streets) are historic districts on the Rockaway Peninsula that are listed on the New York State and the National Registers of Historic Places. The Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club and Jacob Riis Historic Districts are all located within Gateway and are managed by the NPS. Other National Register listed or eligible properties include 2 Beach 85th Street, Hammels Pier, the New York City Transit System Building, the Rockaway Courthouse, the Temple of Israel Synagogue, the US Post Office at Far Rockaway, Trinity Chapel, the Russell Sage Memorial Church, the Trans World Airlines Flight Center at JFK International Airport, and The Marine Parkway - Gil Hodges Memorial Bridge.

The beach portion of the Jacob Riis Historic District is located within the western end of the Atlantic Shoreline APE. The Far Rockaway Beach Bungalow Historic District is located adjacent to the eastern end of the Atlantic shoreline APE. None of these historic districts are located within or near the APEs for the high-frequency flood risk reduction segments. Two Beach 85th Street, Hammels Pier and the New York City Transit System Building are located adjacent and potentially within the APE for two segments the Hammels high-frequency flood risk reduction measure (see Enclosure 1)

Assessment of Effect

Although no prehistoric or Native American archaeological sites have been identified along the Rockaway peninsula, the early discoveries at the eastern end of the peninsula do indicate a potential for utilization of the area. Sites on the peninsula, if present, may be more likely to be deeply buried as a result of the active forces of the ocean and storm surge. As part of the investigations for and construction of the reinforced dune/composite seawall, conduct geomorphological investigations to identify locations of prehistoric land surfaces that may require monitoring during excavation.

As determined for previous sand placement efforts, the placement of beach fill will not have an adverse effect on the known historic districts and properties located along the shoreline. The source of the sand will be from borrow areas for which a remote sensing survey and, in some cases, an underwater inspection of targets, has been completed. If a borrow area is selected for which an investigation has not been completed or

additional work is warranted, those investigations will be conducted prior to the use of the borrow area.

The proposed plan also intends to build new groins as well as rehabilitate and/or extend existing groins. Neither the original nomination for the Jacob Riis Park Historic District, nor the 2014 Final General Management Plan and Environmental Impact Statement mention the groins, although there are three within the current bounds of the historic district. A survey of the groins with in the shoreline APE will be conducted determine when they were built and if they are eligible for the National Register on their own or as part of the existing historic district.

Only a portion of the Arverne high-frequency flood risk reduction measure have been subject to a prior survey (Dubos Point (8) and Brant Point (9) in Panamerican 2003). Additional investigations would include expanding a Phase I survey to the other portions of this high-frequency flood risk reduction measure as well as to the other three measures. In addition, the completed survey recommends for portions of the Arverne measure recommends additional investigations prior to or as part of construction activities in these areas. These include additional research on the bulkhead, limited subsurface testing, monitoring of deeper excavation, if conducted, for prehistoric land surfaces and potential remote sensing investigations on the water side of the area.

Two eligible properties, the NYC Transit System building and 2 Beach 85th are immediately adjacent to elements associated with the Hammels high-frequency flood risk reduction measure. They will not be adversely effected by the construction of the measures, however, information related to these structures may be identified during the proposed Phase I survey or that determination could change should the alignment of each floodwall or pump station changes.

The Corps has prepared a Programmatic Agreement which stipulates the activities the Corps will undertake to address the potential for adverse effects identified above (Enclosure 2). The preliminary draft Programmatic Agreement was included in the draft general reevaluation report and environmental impact statement as part of its public review and the identification of historic properties and determination of adverse effects was included in the public meetings held during the review period.

At this time, based on further analysis, it is likely that the groins within the Jacob Riis Park Historic District will not require rehabilitation. Since this determination has not been made, the analysis of all groins, including those in the historic district, will still be conducted, and the National Park Service will be a signatory to the Programmatic Agreement.

Please review the enclosed document and provide comments in accordance with 36 CFR Part 800.6. Any comments received will be incorporated into the agreement before it is executed. If you have any questions or need additional information, please contact Nancy J. Brighton at Nancy.J.Brighton@usace.army.mil or 202-761-4618.

Thank you for your assistance with this project.

Sincerely,

WEPPLER.PETER.M.1228647353

Digitally signed by WEPPLER.PETER.M.1228647353
Date: 2019.05.10 11:13:24 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

May 10, 2019

Planning Division

Ms. Bonney Hartley
Tribal Historic Preservation Officer
Stockbridge-Munsee Community
New York Office
65 1st Street
Troy, New York 12180

Dear Ms. Hartley;

The U.S. Army Corps of Engineers, New York District (Corps) has prepared the General Reevaluation Report and Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York. The proposed project will reduce the risk of damage from storms and cross shore flooding in addition to reducing the risk of flooding in areas along portions of the Jamaica Bay shoreline along the Rockaway peninsula.

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Please review the enclosed document and provide comments in accordance with 36 CFR Part 800.6. Any comments received will be incorporated into the agreement before it is executed. If you have any questions or need additional information, please contact Nancy J. Brighton at Nancy.J.Brighton@usace.army.mil or 202-761-4618.

Thank you for your assistance with this project.

Sincerely,

WEPPLER.PETER.M.1228647353

Digitally signed by WEPPLER.PETER.M.1228647353
Date: 2019.05.10 11:02:22 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

May 10, 2019

Planning Division

Mr. David Martine
Shinnecock Nation
P.O. Box 5006
Southampton, New York 11968

Dear Mr. Martine;

The U.S. Army Corps of Engineers, New York District (Corps) has prepared the General Reevaluation Report and Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York. The proposed project will reduce the risk of damage from storms and cross shore flooding in addition to reducing the risk of flooding in areas along portions of the Jamaica Bay shoreline along the Rockaway peninsula.

The cultural resources investigation completed for this study consisted of the review of the previous surveys and a review of the New York State Historic Preservation Office Cultural Resources Information System. Much of the proposed project area had been included in previous surveys.

Undertaking

The measures proposed include the construction of a composite seawall buried along the beach, the construction of new and/or the extension of existing groins and sand fill along the Atlantic shoreline as well as four high-frequency flood risk reduction measures on Jamaica Bay in Cedarhurst-Lawrence, Hammels, Edgemere and Arverne, Queens and Nassau Counties, New York, as described in Enclosure 1. The APE would also include borrow areas identified as sand sources for the beach fill.

Areas of Potential Effect (APE)

The APE is the alignment of each of the measures included in the undertaking listed above and described in Enclosure 1. At this time no staging areas or access roads have been identified, however, given the nature of the surrounding area it is anticipated that staging areas will be within existing parking lots or the footprint of the alignment itself. If additional staging areas, access roads or other features are required they will be considered in this analysis once they are defined. The APE for archaeology, historic structures and historic landscapes has been defined as those areas along the proposed line of protection that would likely be directly impacted by project construction. The APE for historic structures and landscapes also includes those locations that would be anticipated to have visual impacts from the completed project.

Identification and Evaluation of Historic Properties

A number of prehistoric archaeological or Native American sites identified in and around Jamaica Bay and portions of the Rockaway Peninsula in the early twentieth century have been recorded in the New York State Museum files, although the exact locations or other information is unknown. Few sites have been identified on the main portion of the peninsula.

Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club, Jacob Riis and the Far Rockaway Beach Bungalow Historic District (Beach 24th, 25th and 26th Streets) are historic districts on the Rockaway Peninsula that are listed on the New York State and the National Registers of Historic Places. The Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club and Jacob Riis Historic Districts are all located within Gateway and are managed by the NPS. Other National Register listed or eligible properties include 2 Beach 85th Street, Hammels Pier, the New York City Transit System Building, the Rockaway Courthouse, the Temple of Israel Synagogue, the US Post Office at Far Rockaway, Trinity Chapel, the Russell Sage Memorial Church, the Trans World Airlines Flight Center at JFK International Airport, and The Marine Parkway - Gil Hodges Memorial Bridge.

The beach portion of the Jacob Riis Historic District is located within the western end of the Atlantic Shoreline APE. The Far Rockaway Beach Bungalow Historic District is located adjacent to the eastern end of the Atlantic shoreline APE. None of these historic districts are located within or near the APEs for the high-frequency flood risk reduction segments. Two Beach 85th Street, Hammels Pier and the New York City Transit System Building are located adjacent and potentially within the APE for two segments the Hammels high-frequency flood risk reduction measure (see Enclosure 1)

Assessment of Effect

Although no prehistoric or Native American archaeological sites have been identified along the Rockaway peninsula, the early discoveries at the eastern end of the peninsula do indicate a potential for utilization of the area. Sites on the peninsula, if present, may be more likely to be deeply buried as a result of the active forces of the ocean and storm surge. As part of the investigations for and construction of the reinforced dune/composite seawall, conduct geomorphological investigations to identify locations of prehistoric land surfaces that may require monitoring during excavation.

As determined for previous sand placement efforts, the placement of beach fill will not have an adverse effect on the known historic districts and properties located along the shoreline. The source of the sand will be from borrow areas for which a remote sensing survey and, in some cases, an underwater inspection of targets, has been completed. If a borrow area is selected for which an investigation has not been completed or additional work is warranted, those investigations will be conducted prior to the use of the borrow area.

The proposed plan also intends to build new groins as well as rehabilitate and/or extend existing groins. Neither the original nomination for the Jacob Riis Park Historic District, nor the 2014 Final General Management Plan and Environmental Impact Statement mention the groins, although there are three within the current bounds of the historic district. A survey of the groins with in the shoreline APE will be conducted determine when they were built and if they are eligible for the National Register on their own or as part of the existing historic district.

Only a portion of the Arverne high-frequency flood risk reduction measure have been subject to a prior survey (Dubos Point (8) and Brant Point (9) in Panamerican 2003). Additional investigations would include expanding a Phase I survey to the other portions of this high-frequency flood risk reduction measure as well as to the other three measures. In addition, the completed survey recommends for portions of the Arverne measure recommends additional investigations prior to or as part of construction activities in these areas. These include additional research on the bulkhead, limited subsurface testing, monitoring of deeper excavation, if conducted, for prehistoric land surfaces and potential remote sensing investigations on the water side of the area.

Two eligible properties, the NYC Transit System building and 2 Beach 85th are immediately adjacent to elements associated with the Hammels high-frequency flood risk reduction measure. They will not be adversely effected by the construction of the measures, however, information related to these structures may be identified during the proposed Phase I survey or that determination could change should the alignment of each floodwall or pump station changes.

The Corps has prepared a Programmatic Agreement which stipulates the activities the Corps will undertake to address the potential for adverse effects identified above (Enclosure 2). The preliminary draft Programmatic Agreement was included in the draft general reevaluation report and environmental impact statement as part of its public review and the identification of historic properties and determination of adverse effects was included in the public meetings held during the review period.

At this time, based on further analysis, it is likely that the groins within the Jacob Riis Park Historic District will not require rehabilitation. Since this determination has not been made, the analysis of all groins, including those in the historic district, will still be conducted, and the National Park Service will be a signatory to the Programmatic Agreement.

Please review the enclosed document and provide comments in accordance with 36 CFR Part 800.6. Any comments received will be incorporated into the agreement before it is executed. If you have any questions or need additional information, please contact Ms. Nancy J. Brighton at Nancy.J.Brighton@usace.army.mil or 202-761-4618.

Thank you for your assistance with this project.

Sincerely,

WEPPLER.PETER.M.1228647353

Digitally signed by WEPPLER.PETER.M.1228647353
Date: 2019.05.10 11:16:42 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

May 10, 2019

Planning Division

Mr. John Bonafide
Director
Technical Preservation Bureau and
Agency Preservation Officer
New York State Division for Historic Preservation
P.O. Box 189
Waterford, New York 12188-0189

Dear Mr. Bonafide;

The U.S. Army Corps of Engineers, New York District (Corps) has prepared the General Reevaluation Report and Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York. The proposed project will reduce the risk of damage from storms and cross shore flooding in addition to reducing the risk of flooding in areas along portions of the Jamaica Bay shoreline along the Rockaway peninsula.

The cultural resources investigation completed for this study consisted of the review of the previous surveys and a review of the New York State Historic Preservation Office Cultural Resources Information System. Much of the proposed project area had been included in previous surveys.

Undertaking

The measures proposed include the construction of a composite seawall buried along the beach, the construction of new and/or the extension of existing groins and sand fill along the Atlantic shoreline as well as four high-frequency flood risk reduction measures on Jamaica Bay in Cedarhurst-Lawrence, Hammels, Edgemere and Arverne, Queens and Nassau Counties, New York, as described in Enclosure 1. The APE would also include borrow areas identified as sand sources for the beach fill.

Areas of Potential Effect (APE)

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those locations that would be anticipated to have visual impacts from the completed project.

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Assessment of Effect

Although no prehistoric or Native American archaeological sites have been identified along the Rockaway peninsula, the early discoveries at the eastern end of the peninsula do indicate a potential for utilization of the area. Sites on the peninsula, if present, may be more likely to be deeply buried as a result of the active forces of the ocean and storm surge. As part of the investigations for and construction of the reinforced dune/composite seawall, conduct geomorphological investigations to identify locations of prehistoric land surfaces that may require monitoring during excavation.

As determined for previous sand placement efforts, the placement of beach fill will not have an adverse effect on the known historic districts and properties located along the shoreline. The source of the sand will be from borrow areas for which a remote sensing survey and, in some cases, an underwater inspection of targets, has been completed. If a borrow area is selected for which an investigation has not been

completed or additional work is warranted, those investigations will be conducted prior to the use of the borrow area.

The proposed plan also intends to build new groins as well as rehabilitate and/or extend existing groins. Neither the original nomination for the Jacob Riis Park Historic District, nor the 2014 Final General Management Plan and Environmental Impact Statement mention the groins, although there are three within the current bounds of the historic district. A survey of the groins with in the shoreline APE will be conducted determine when they were built and if they are eligible for the National Register on their own or as part of the existing historic district.

Only a portion of the Arverne high-frequency flood risk reduction measure have been subject to a prior survey (Dubos Point (8) and Brant Point (9) in Panamerican 2003). Additional investigations would include expanding a Phase I survey to the other portions of this high-frequency flood risk reduction measure as well as to the other three measures. In addition, the completed survey recommends for portions of the Arverne measure recommends additional investigations prior to or as part of construction activities in these areas. These include additional research on the bulkhead, limited subsurface testing, monitoring of deeper excavation, if conducted, for prehistoric land surfaces and potential remote sensing investigations on the water side of the area.

Two eligible properties, the NYC Transit System building and 2 Beach 85th are immediately adjacent to elements associated with the Hammels high-frequency flood risk reduction measure. They will not be adversely effected by the construction of the measures, however, information related to these structures may be identified during the proposed Phase I survey or that determination could change should the alignment of each floodwall or pump station changes.

The Corps has prepared a Programmatic Agreement which stipulates the activities the Corps will undertake to address the potential for adverse effects identified above (Enclosure 2). The preliminary draft Programmatic Agreement was included in the draft general reevaluation report and environmental impact statement as part of its public review and the identification of historic properties and determination of adverse effects was included in the public meetings held during the review period. Comments were received by the National Park Service and the New York City Landmarks Preservation Commission regarding the groins and the location of historic properties and city landmarks in relation to project features.

At this time, based on further analysis, it is likely that the groins within the Jacob Riis Park Historic District will not require rehabilitation. Since this determination has not been made, the analysis of all groins, including those in the historic district, will still be conducted, and the National Park Service will be a signatory to the Programmatic Agreement. Because the City of New York is a partner in this project, the New York City Landmarks Preservation Commission will also be requested to be a signatory to the

agreement. The Delaware Nation, Delaware Tribe, Stockbridge-Munsee Community, the Shinnecock Nation and the Unkechaug Nation are also being sent this information for any final comments. The programmatic agreement include continued consultation and coordination of information with them during the implementation of the agreement.

Please review the enclosed document and provide comments in accordance with 36 CFR Part 800.6. Any comments received will be incorporated into the agreement, which will then be circulated for execution. If you have any questions or need additional information, please contact Ms. Nancy J. Brighton at Nancy.J.Brighton@usace.army.mil or 202-761-4618.

Thank you for your assistance with this project.

Sincerely,

WEPPLER.PETER.M.1228647353
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Date: 2019.05.10 10:57:32 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosure

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

May 10, 2019

Planning Division

Ms. Susan Bachor
Historic Preservation Representative
Delaware Tribe of Indians
Special Assistant Eastern Office
P.O. Box 64
Pocono Lake, Pennsylvania 18347

Dear Ms. Bachor;

The U.S. Army Corps of Engineers, New York District (Corps) has prepared the General Reevaluation Report and Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York. The proposed project will reduce the risk of damage from storms and cross shore flooding in addition to reducing the risk of flooding in areas along portions of the Jamaica Bay shoreline along the Rockaway peninsula.

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Thank you for your assistance with this project.

Sincerely,

WEPPLER.PETER.M.1228647353

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Date: 2019.05.10 11:00:31 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

May 10, 2019

Planning Division

Ms. Kim Penrod
Director
Delaware Nation
Cultural Resources
P.O. Box 825
Anadarko, OK 73005

Dear Ms. Penrod;

The U.S. Army Corps of Engineers, New York District (Corps) has prepared the General Reevaluation Report and Environmental Impact Statement for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York. The proposed project will reduce the risk of damage from storms and cross shore flooding in addition to reducing the risk of flooding in areas along portions of the Jamaica Bay shoreline along the Rockaway peninsula.

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Thank you for your assistance with this project.

Sincerely,

WEPPLER.PETER.M.1228647353
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Date: 2019.05.10 11:11:19 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosures

Historic Properties Case Report
Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York

U.S. Army Corps of Engineers, New York District

Introduction

The Rockaway peninsula and southern Queens was one of the areas most devastated by Hurricane Sandy in 2012. There were 10 fatalities and more than 1,000 structures either substantially damaged or destroyed. In addition to the structural impacts caused by waves and inundation, fires ignited by the storm surge inundation of electrical systems destroyed 175 homes along the Peninsula. Prior to Hurricane Sandy, the U.S. Army Corps of Engineers, New York District (District), was undertaking an effort to identify a long-term solution for the study area, which focused on the Atlantic Ocean shoreline. Prior to this reformulation, an existing, authorized project for the area was constructed in 1977 and renourished periodically through 2004, based upon a 1965 construction authorization. The current study was authorized by Public Law 113-2, The Disaster Relief Appropriations Act of 2013.

As a federal agency, the District has certain responsibilities to take into account the effects of their undertakings on historic properties that may be located within the Area of Potential Effect (APE) associated with the proposed undertaking. Present statutes and regulations governing these responsibilities include the National Historic Preservation Act of 1966 as amended (NHPA; 54 U.S.C 3001), the Advisory Council on Historic Preservation (ACHP) regulations implementing Section 106 of the NHPA (36 C.F.R. Part 800 *Protection of Historic Properties* August 2004) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and Executive Order 11593. Significant cultural resources include any material remains of human activity potentially eligible for inclusion on the National Register of Historic Places (National Register) and historic properties are those resources that are listed or been determined eligible for the National Register.

Description of the Undertaking

The East Rockaway Inlet to Rockaway Inlet and Jamaica Bay coastal storm risk management project is proposing to reduce the study area's vulnerability to coastal storms and improve community and coastal resiliency to the Rockaway Peninsula and southern Queens. The measures proposed by this study include the construction of a composite seawall buried along the beach, the construction of new and/or the extension of existing groins and sand fill along the Atlantic shoreline as well as four high-frequency flood risk reduction measures on Jamaica Bay in Cedarhurst-Lawrence, Hammels, Edgemere and Arverne, Queens and Nassau Counties, New York (Figure 1).

Figure 1: Recommended plan overview with Atlantic shoreline features and high-frequency flood risk reduction measures.

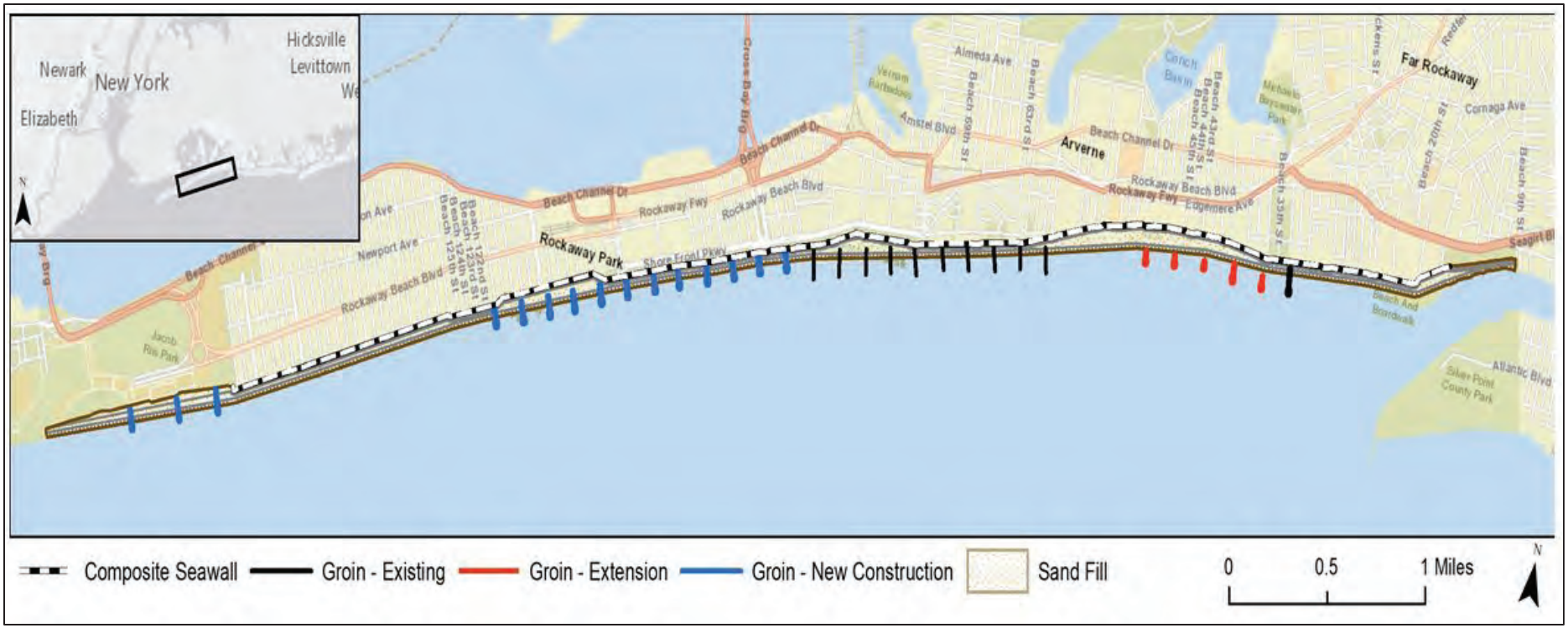

Figure 2: Atlantic Shorefront Component of the Recommended Plan

Figure 3: Groin rehabilitation and beach fill in Jacob Riis Park with the composite seawall just outside the park extending east along the Atlantic shoreline.

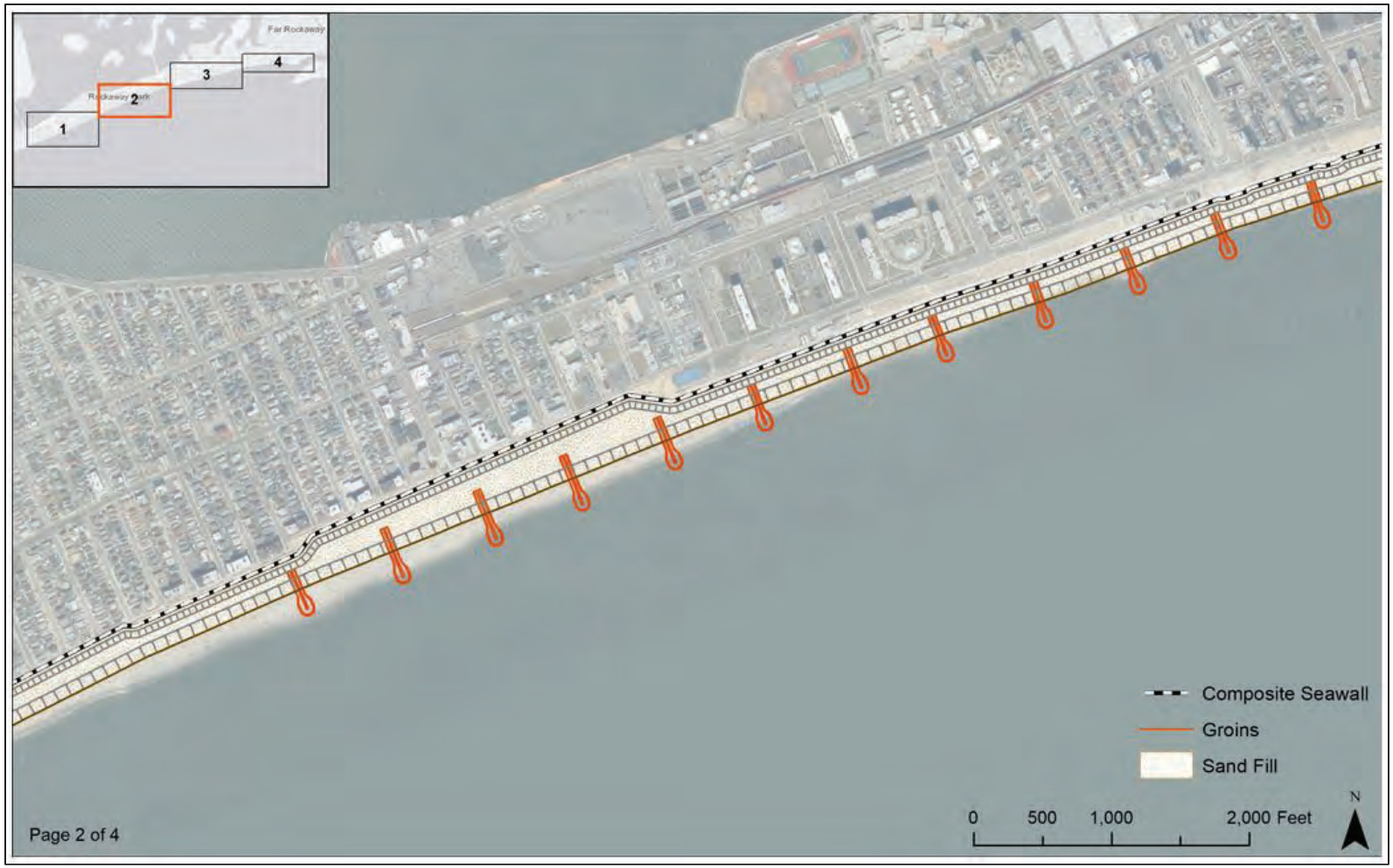

Figure 4: Groin Rehabilitation, beach fill and composite seawall along the Atlantic shoreline.

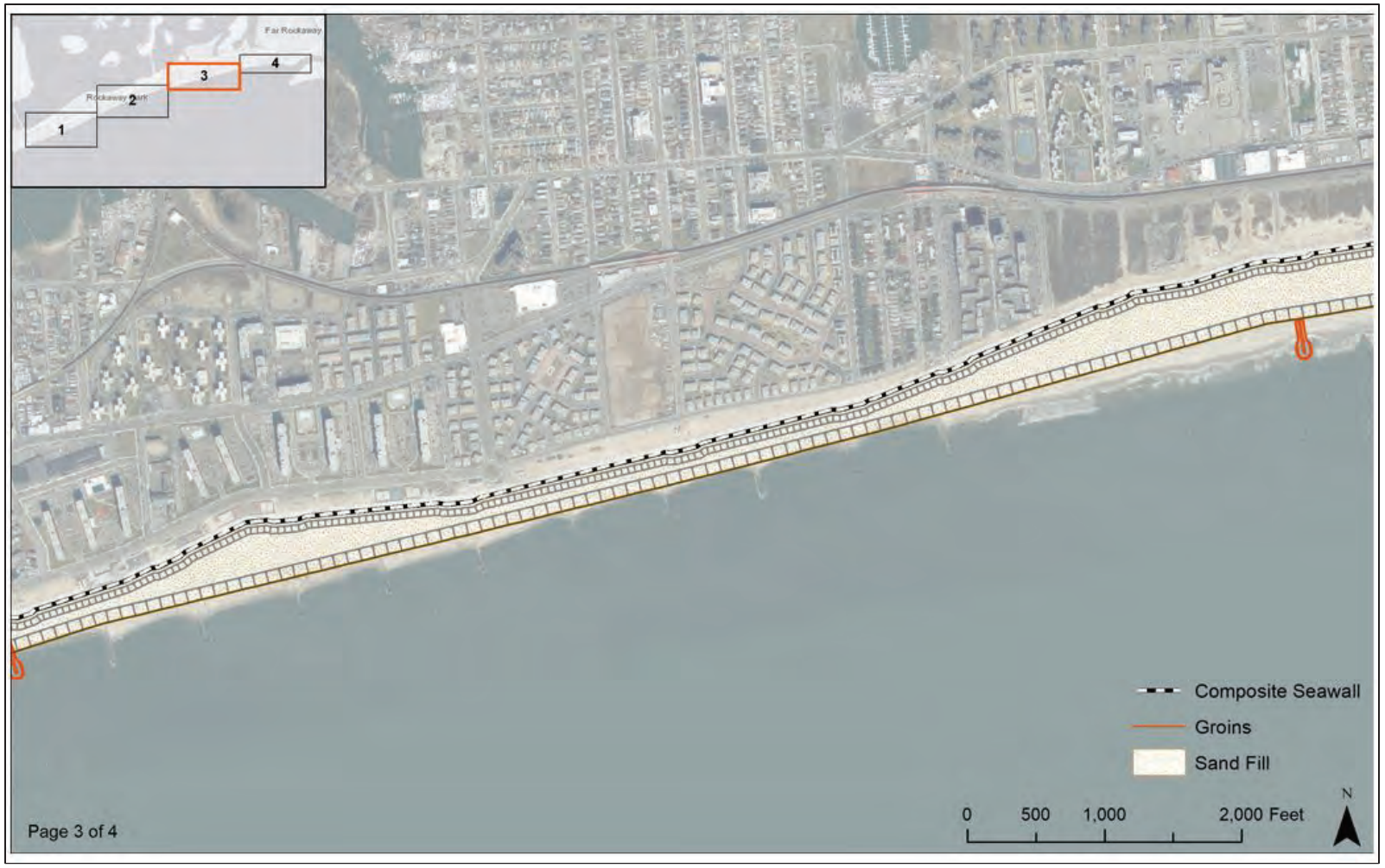

Figure 5: Composite seawall, beach fill and new groin construction (east) along the Atlantic shoreline.

Figure 6: New groin construction, beach fill and composite seawall along the Atlantic shoreline.

- Atlantic Shoreline Measures

These measures consist of a reinforced dune, also referred to as a composite seawall, approximately 60 feet wide and extending approximately 35,000 linear feet from Beach 9th to Beach 149th Street (Figures 2-6). The structure crest elevation of the seawall structure will be approximately +17 feet above NAVD 88. The dune height will be approximately +18 feet NAVD 88. The bottom of the reinforced dune will be approximately 15 feet below the dune crest. Beach fill will be placed along the reinforced dune and will be obtained from an offshore borrow area (see Figures 2-6). In addition, five existing groins will be extended and 13 new groins will be constructed (see Figures 4-6). Currently, three additional groin rehabilitations are proposed for Jacob Riis Park as well as the placement of sand fill (see Figure 3). Engineering analysis is being completed to determine if the rehabilitation of the Jacob Riis Park groins is necessary. The reinforced dune will not extend into Jacob Riis Park (see Figure 3).

- High-Frequency Flood Risk Reduction Measures

o Cedarhurst-Lawrence: Located in the channel adjacent to the Lawrence High School, this measure consists of 1,000 feet of bulkhead along the east, south and west sides where it will connect to high ground. A small extent of floodwall will be used to connect the bulkhead to the higher ground upland. The proposed elevation will be approximately 10 feet NAVD 88. The existing outfalls will be raised and a pump station will be constructed to receive stormwater when the outlets are blocked by storm surge or tide (Figure 7).

o Mid-Rockaway-Edgemere: This measure extends from Beach 35th to just beyond Beach 49th Street and will include a combination of a berm, hybrid berm, floodwall and bulkhead. Portions of the berm and hybrid berm will be fronted by scrub-shrub, salt meadow hay and smooth cordgrass natural features stabilized by a rock sill. It is anticipated that three pump stations and one road ramp will be needed. Proposed project elevations range from +8 to +9.5 feet NAVD 88 (Figure 8).

o Mid-Rockaway-Arverne: This measure extends from Almeda Avenue and Beach 58th Street all the way around Arvene's Jamaica Bay shoreline to Amstel Avenue just past Beach 74th Street. This alignment includes a berm, floodwall, revetment a bulkhead and hybrid berm. Natural features, including canopy tree, salt meadow hay, scrub-shrub, and smooth cordgrass, will be constructed in front of the floodwall, hybrid berm, and bulkhead, and protected by rock sill. Three pump stations, one flood gate and three road ramps will also be constructed (Figure 9).

o Mid-Rockaway – Hammels: This measure consists of two individual segments: an east segment of 1,400 linear feet of floodwall along Beach Channel Drive and a west segment of 1,400 linear feet from the Beach 84th Street to Beach Channel Drive. It

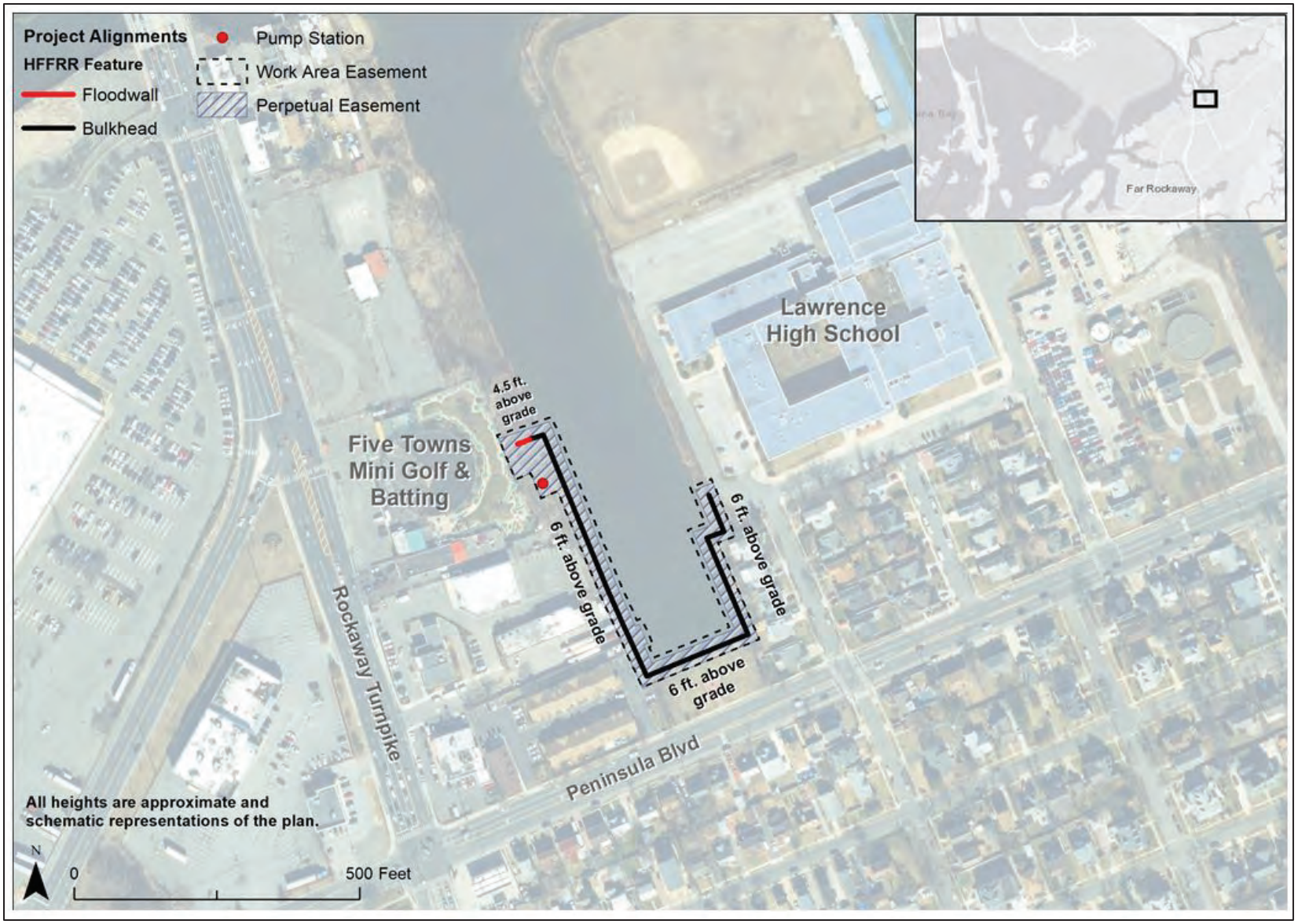

Figure 7: Cedarhurst-Lawrence High-Frequency Flood Risk Reduction Measures

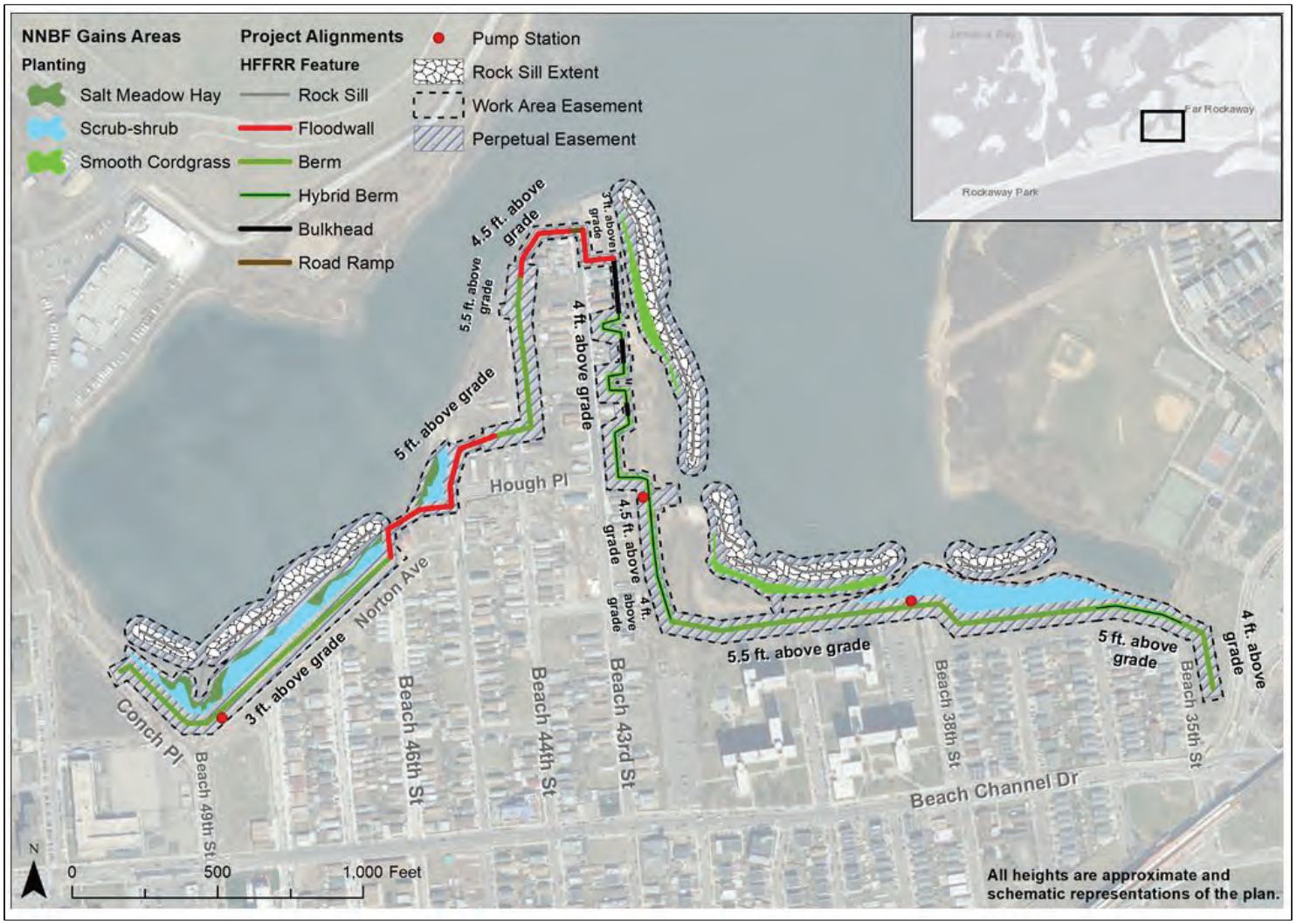

Figure 8: Edgemere High-Frequency Flood Risk Reductions Measures.

Figure 9: Arverne High-Frequency Flood Risk Reduction Measures

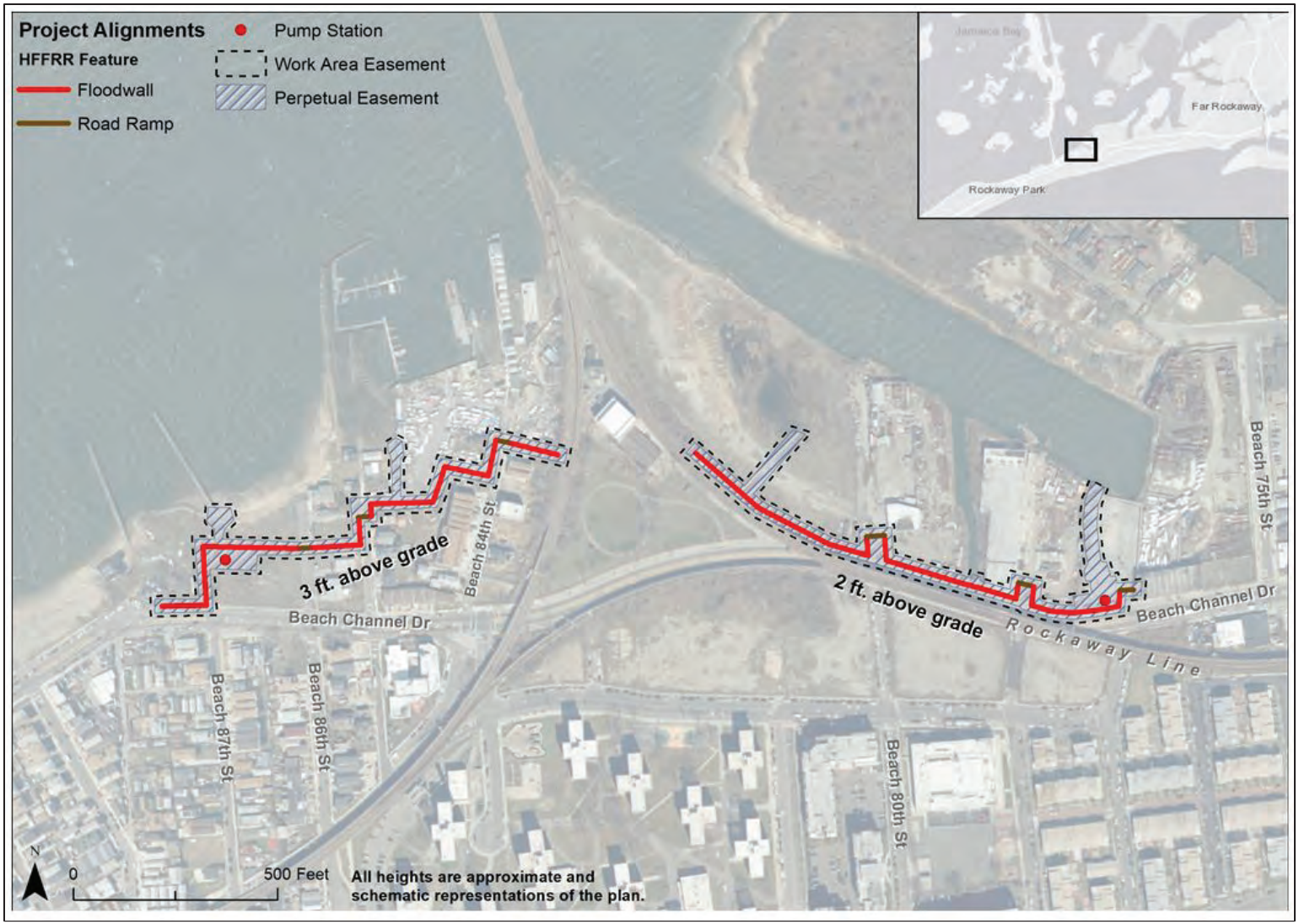

Figure 10: Hammels High-Frequency Flood Risk Reduction Measures

is anticipated that each segment will require one pump station. The segments will also require four road ramps; three on the east and one on the west (Figure 10).

Study Method and APE

The cultural resources investigation for this study has been limited to documentary research and a pedestrian survey. Documentary research consisted of gathering data from previous cultural resource studies and an examination of the New York State Historic Preservation Office (NYSHPO) Cultural Resources Information System (CRIS).

The APE is considered be located along the alignment of each of the measures described above as the undertaking to include the offshore borrow areas. At this time no staging areas or access roads have been identified, however, given the nature of the surrounding area it is anticipated that staging areas will be within existing parking lots or the footprint of the alignment itself. If additional staging areas, access roads or other features are required they will be considered in this analysis once they are defined. The APE for archaeology, historic structures and historic landscapes has been defined as those areas along the proposed line of protection that would likely be directly impacted by project construction. The APE for historic structures and landscapes also includes those locations that would be anticipated to have visual impacts from the completed project.

Previous Work

Reports utilized for this research included the cultural resources surveys conducted within and around the study's APEs. These include Gateway National Recreation Area (Gateway) Final General Management Plan Environmental Impact Statement (National Park Service [NPS] 2014) and the Jamaica Bay Cultural Resources Baseline Study and (Panamerican Consultants 2000, 2003, 2006), and remote sensing and inspection of targets (Panamerican Consultants 2003, 2005 and 2006 and Reiss 1994). This research included a review of the APEs on the NYSHPO CRIS database.

A western section of the Atlantic shoreline component is within the NPS' Gateway – Jamaica Bay Unit and both the eastern shoreline and high-frequency flood risk reduction components are located in the vicinity of the other elements of Gateway. In its cultural resources management plans for the area, the NPS has reported that there have been no Paleo-Indian or Archaic Period sites identified within its property. Woodland sites, characterized by the recovery of ceramic sherds, lithic artifacts and shell middens, have been identified within Gateway as have Contact period settlement sites, which included a mix of European and indigenous cultural items.

- Known Prehistoric Archaeological Sites

The New York State Museum files have a number of sites listed that were identified by Arthur C. Parker in the 1920s in and around Jamaica Bay and the Rockaway Peninsula and possibly within the vicinity of the study's APEs, although the exact locations and other information are unknown. These sites include:

Table 1: Arthur C. Parker sites recorded at the New York State Museum[1]

NYSM No.	Site Name	Period	Comments
4033	ACP NSAU 12A	Prehistoric or historic	Native American cemetery noted on the White Property near Cedarhurst
4034	ACP NSAU 13A	Prehistoric or historic	Possible Native American Village on Hicks Neck near Bannister Creek and Sage Pond
4050	ACP NSAU	Prehistoric	Camp site in general vicinity of Inwood, just southwest of the project area
4538	ACP QUNS	Prehistoric	Possible Native American village near Head of Bay
4547	ACP QUNS	Prehistoric	Traces of occupation near Head of Bay and Hook Creek
7772	ACP NSAU	Prehistoric or historic	Possible Native American village and shell midden site east of Woodmere Creek
7775	ACP NSAU	Prehistoric	Campsite near Sage Pond and Crooked Creek

[1]As reported in Panamerican Consultants 2003 and Merwin 2009.

In addition to Parker, other known prehistoric sites around Jamaica Bay were identified by Bolton (1920, 1922, and 1934) and Harrington (1909) (Panamerican 2003). Few sites have been identified on the Rockaway Peninsula and include NYSM-4050 above. A cemetery with associated artifacts was reported in Bayswater in 1901 as well as large shell deposits. As late as 1988, it was noted that located along the eastern shore of Jamaica Bay, in the vicinity of Bayswater, was a Woodland period site consisting of ceramics, projectile points, and a possible burial (Panamerican 2003).

These identified sites would be located outside the APEs for both the Atlantic shoreline and high-frequency flood risk reduction components but could be located nearby the Cedarhurst and Edgemere segments of the latter. It may be that on the Rockaway Peninsula, similar sites that have not been destroyed by development or storms may be more deeply buried.

- Known Historic Properties

Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club, Jacob Riis and the Far Rockaway Beach Bungalow Historic District (Beach 24th, 25th and 26th Streets) are historic districts on the Rockaway Peninsula that

are listed on the New York State and the National Registers of Historic Places. The Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club and Jacob Riis Historic Districts are all located within Gateway and are managed by the NPS. Other National Register listed or eligible properties include 2 Beach 85th Street, Hammels Pier, the New York City Transit System Building, the Rockaway Courthouse, the Temple of Israel Synagogue, the US Post Office at Far Rockaway, Trinity Chapel, the Russell Sage Memorial Church, the Trans World Airlines Flight Center at JFK International Airport, and The Marine Parkway - Gil Hodges Memorial Bridge.

One New York City designated landmark, the Richard Cornell Burial Ground, is located in Far Rockaway. Locally significant landmarks that have not been formally listed include the Waterfront Tribute Park, 9/11 Memorial and the American Airline Flight 587 Memorial.

The beach portion of the Jacob Riis Historic District is located within the western end of the Atlantic Shoreline APE (Figures 11 and 12). The Far Rockaway Beach Bungalow Historic District is located adjacent to the eastern end of the Atlantic shoreline APE (Figure 13). None of these historic districts are located within or near the APEs for the high-frequency flood risk reduction segments. Two Beach 85th Street, Hammels Pier and the New York City Transit System Building are located adjacent and potentially within the APE for two segments the Hammels high-frequency flood risk reduction measure (Figures 14 and 15).

No other historic properties or New York City landmarks are located in either component's APEs. The American Airline Flight 587 Memorial is located at the end of Beach 116th Street and is adjacent to the Atlantic shoreline APE (Figure 16).

Assessment of Effects and Recommendations

Based on the review of the existing data along the ocean and bayside of the Rockaway peninsula and along Jamaica Bay, there are National Register listed or eligible properties within or just adjacent to the APE that may be directly or indirectly effected by the project elements. Potential impacts to specific properties or category of properties is outline below and summarized in Table 2. The activities required to continue further study or to mitigate for adverse effects is included in the project Programmatic Agreement (Appendix A).

Although no prehistoric or Native American archaeological sites have been identified along the Rockaway peninsula, the early discoveries at the eastern end of the peninsula do indicate a potential for utilization of the area. Sites on the peninsula, if present, may be more likely to be deeply buried as a result of the active forces of the ocean and storm surge. As part of the investigations for and construction of the reinforced dune/composite seawall, conduct geomorphological investigations to identify locations of prehistoric land surfaces that may require monitoring during excavation.

As determined for previous sand placement efforts, the placement of beach fill will not have an adverse effect on the known historic districts and properties located along the shoreline. The source of the sand will be from borrow areas for which a remote sensing survey and, in some cases, an underwater inspection of targets, has been completed. If a borrow area is selected for which an investigation has not been completed or additional work is warranted, those investigations will be conducted prior to the use of the borrow area.

The proposed plan also intends to build new groins as well as rehabilitate and/or extend existing groins. Neither the original nomination for the Jacob Riis Park Historic District, nor the 2014 Final General Management Plan and Environmental Impact Statement mention the groins, although there are three within the current bounds of the historic district. A survey of the groins with in the shoreline APE will be conducted determine when they were built and if they are eligible for the National Register on their own or as part of the existing historic district.

Only a portion of the Arverne high-frequency flood risk reduction measures have been subject to a prior survey (Dubos Point (8) and Brant Point (9) in Panamerican 2003). Additional investigations would include expanding this survey to the other portions of this high-frequency flood risk reduction measure as well as to the other three similar measures. In addition, the completed survey recommends additional investigations prior to or as part of construction activities in these areas. These include additional research on the bulkhead, limited subsurface testing, monitoring of deeper excavation, if conducted, for prehistoric land surfaces and potential remote sensing investigations on the water side of the area.

Two eligible properties, the NYC Transit System building and 2 Beach 85th are immediately adjacent to elements associated with the Hammels high-frequency flood risk reduction measure. They will not be adversely effected by the construction of the measures, however, information related to these structures may be identified during the proposed Phase I survey or that determination could change should the alignment of each floodwall or pump station changes.

Figure 11: Location of Jacob Riis Park Historic District in relation to the project alignment APE.

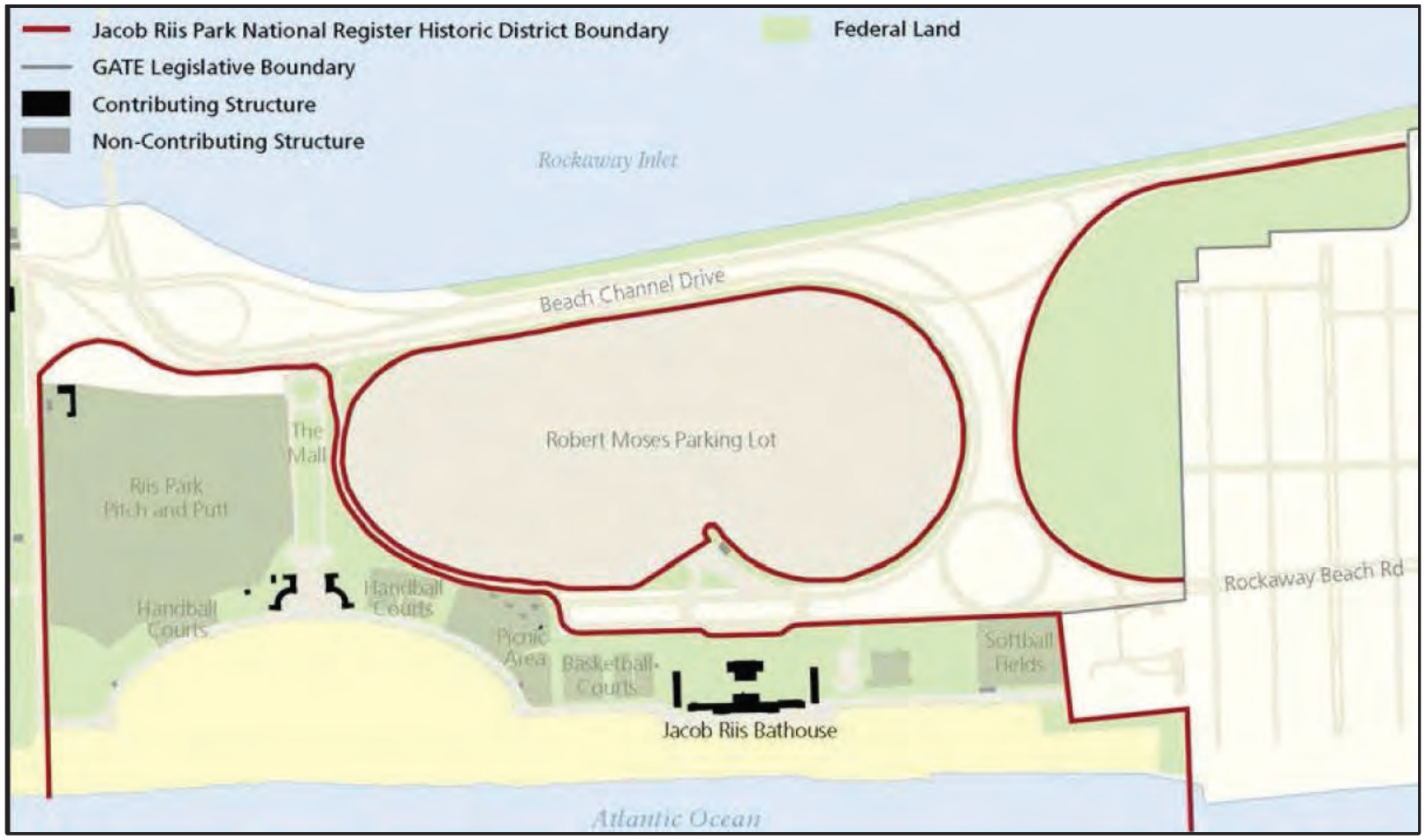

Figure 12: Jacob Riis Park Historic District elements.

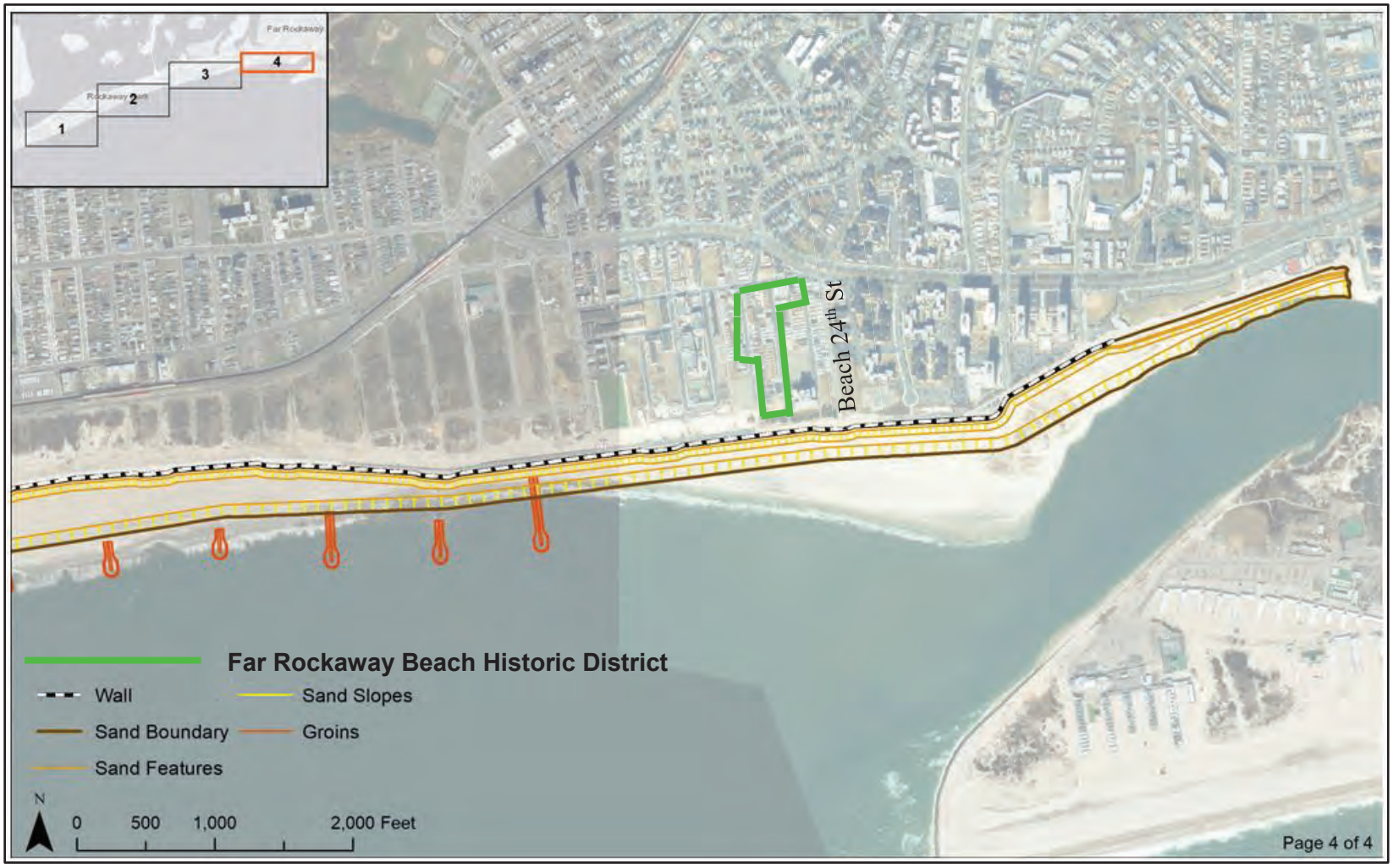

Figure 13: Location of the Far Rockaway Historic District and the project alignment APE.

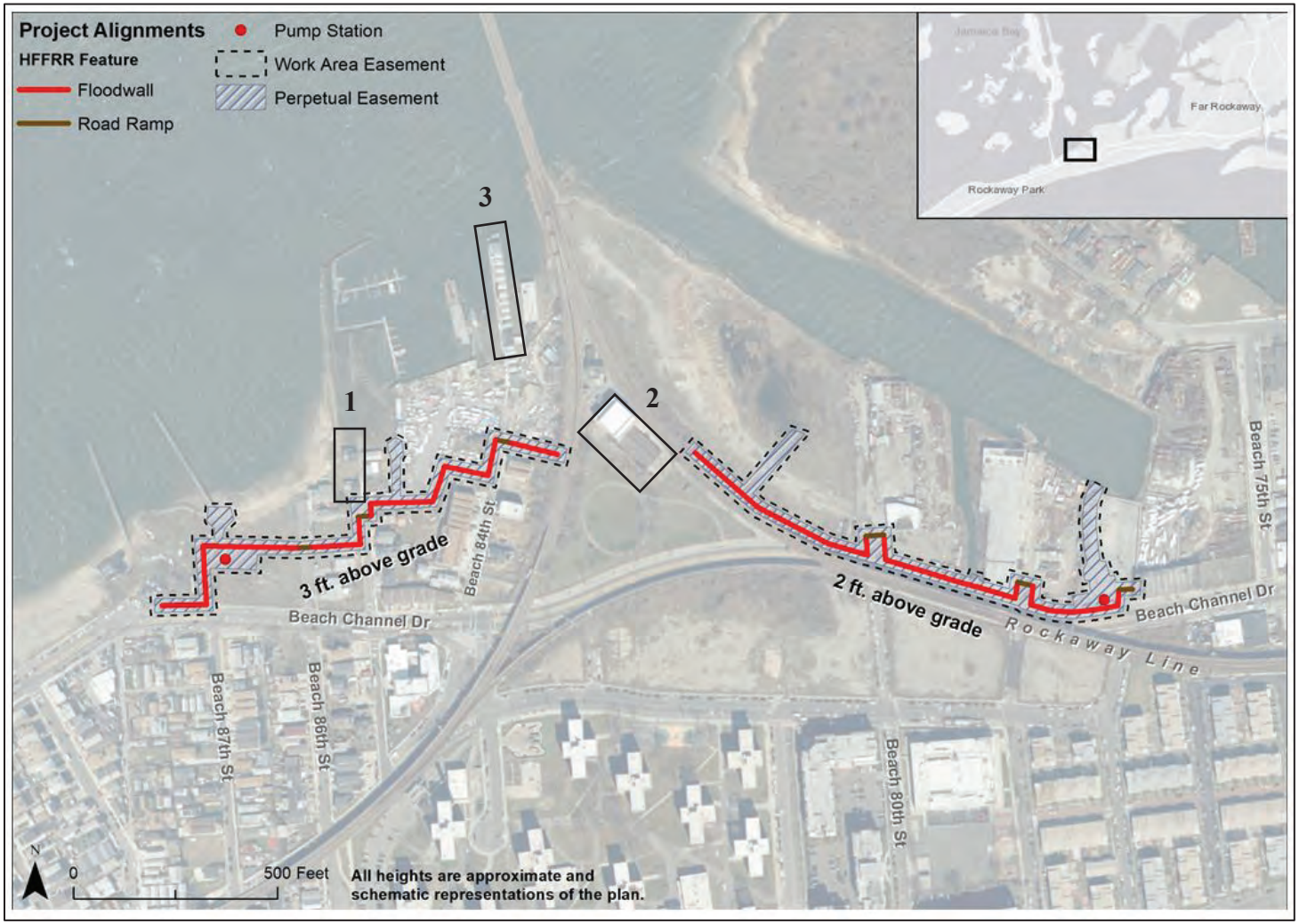

Figure 14: Location of 1) 2 Beach 85th Street; 2) New York City Transit System Building; and 3) Hammel Beach Pier and the Hammels high-frequency flood risk reduction measure alignments APE.

Figure 15: Photographs of the eligible properties near the Hammels high-frequency flood risk reduction: New York City Transit System building (top), 2 Beach 85th Street (middle) and the Hammels Pier (bottom) (NYSHPO CRIS 2019).

Figure 16: Location of Flight 587 Memorial Park.

Table 2: Assessment of Effects and Recommendations for Additional Work

Project Element	Resource	Recommendation
Reinforced dune/composite seawall	Potential prehistoric sites	Geomorphology with potential for monitoring during construction
Beach Fill	No historic properties affected	No additional work
Existing Borrow Areas	No historic properties affected	No additional work
New Borrow Areas	Potential prehistoric/historic resources	Remote sensing survey with potential underwater investigations
Groin Rehabilitation	Groins	Determine eligibility of groins as individual or historic district
Cedarhurst	Potential prehistoric/historic sites	Phase I survey; potential for subsurface investigations and remote sensing
Edgemere	Potential historic sites	Phase I survey
Arverne	Potential prehistoric/historic sites	Phase I survey; potential for subsurface investigations and remote sensing
Hammels	Potential prehistoric/historic sites	Phase I survey; potential for subsurface investigations and remote sensing; monitor alignment and proximity to eligible historic structures.

A Programmatic Agreement has been prepared to complete additional surveys on 1) the National Register eligibility of the groins along the Atlantic shoreline; 2) the potential for land surfaces and archaeological sites buried within the Rockaway peninsula; and 3) the potential for archaeological sites that might be affected by the high-frequency flood risk reduction measures. The public review of the draft General Reevaluation Report and Environmental Impact Statement included the discussion of affected historic properties as well as a preliminary draft of the programmatic agreement. The New York State Historic Preservation Office, the National Park Service, the New York City Landmarks Preservation Commission, the Delaware Nation, the Delaware Tribe, the Stockbridge-Munsee Community, the Shinnecock Nation and the Unkechaug Nation

were also provided a final draft to review and comment prior to execution of the agreement.

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National Park Service

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2003 *Cultural Resources Baseline Study, Jamaica Bay Ecosystem Restoration Project, Kings, Queens and Nassau Counties, New York.* Prepared for the U.S. Army Corps of Engineers, New York District.

2005 *Remote Sensing Survey of the Proposed Borrow Area for the East Rockaway Reformulation Project, Queens County, New York.* Prepared for the U.S. Army Corps of Engineers, New York District.

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Riess, Warren C.

1994 *East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York, Section 934 Study, Remote Sensing of Borrow Area 2.* Prepared by WCH Industries in association with Boston Affiliates. Submitted to the U.S. Army Corps of Engineers, New York District.

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES ARMY CORPS OF ENGINEERS,
THE NEW YORK STATE HISTORIC PRESERVATION OFFICE,
THE NATIONAL PARK SERVICE,
AND
THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION
REGARDING
ATLANTIC COAST OF NEW YORK
EAST ROCKAWAY INLET TO ROCKAWAY INLET
AND JAMAICA BAY, NEW YORK
GENERAL RE-EVALUTION STUDY

WHEREAS, the US Army Corps of Engineers, New York District (District) is proposing to undertake measures to reduce coastal storm damages and minimize impact on the Rockaway Peninsula from East Rockaway Inlet to Rockaway Inlet along the Atlantic Ocean and the Jamaica Bay shorelines as well as locations within Jamaica Bay (Undertaking); and

WHEREAS, the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York Hurricane Sandy General Re-Evaluation Study was authorized by the House of Representatives dated 27 September 1997 and Public Law 113-2 (29 Jan 13), the Disaster Relief Appropriations Act of 2013 authorized Corps projects for reducing flood and storm risks in the Hurricane Sandy affected area that have been or are under construction, which includes the Project; and

WHEREAS, the New York State Department of Environmental Conservation is the non-federal sponsor and New York City, through the New York City Mayor's Office Recovery and Resiliency is the local sponsor to New York State; and

WHEREAS, the Undertaking consists of levee, buried seawall, new groin construction, extension and rehabilitation of existing groins, and beach renourishment along the Atlantic Ocean shoreline of the Rockaway Peninsula, as well as residual high frequency flood risk reduction features consisting of berms, floodwalls, and bulkheads along the southeast side of Jamaica Bay (Attachments A and B); and

WHEREAS, the Area(s) of Potential Effect include the offshore borrow sites, near shore sand placement, the alignments for all of the Project features, the viewsheds associated with affected historic properties, including those from the shore to the Atlantic Ocean (Attachments A and B); and

WHEREAS, the Jacob Riis Park Historic District, and the Far Rockaway Bungalow Historic District are located within the APE along the Rockaway Peninsula (Attachments A and B); and

WHEREAS, the high frequency flood risk reduction features and other Project alignments have the potential to be sensitive for archaeological resources (Attachments A and B); and

WHEREAS, pursuant to 36 CFR Part 800, the regulations implementing

Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C 306108), the District has determined that implementation of the Project will have the potential to have an adverse effect on the Jacob Riis Park Historic District and archaeological resources potentially located within the alignment and the high frequency flood risk reduction measures; and

WHEREAS, the National Park Service (NPS) manages and administers the Jacob Riis Historic District, which is located within the Gateway National Recreation Area; and

WHEREAS, the District is consulting with and will continue to consult with the NPS, Gateway National Recreation Area, New York State Historic Preservation Office (NYSHPO), the Shinnecock Indian Nation, the Stockbridge-Munsee Community, the Delaware Tribe of Indians, the Delaware Nation (all federally-recognized Tribes), the New York state-recognized Unkecheug Indian Nation, and the New York City Landmarks Preservation Commission (NYCLPC), to define efficient and cost effective processes for taking into consideration the effects of the Project on historic properties; and

WHEREAS, the District will invite the NPS, NYSHPO, and the NYCLPC, to be signatories to this agreement; and

WHEREAS, the District has notified the Advisory Council on Historic Preservation (ACHP) of the potential for the Project to affect historic properties and that a programmatic agreement will be prepared; and

WHEREAS, the District has involved the general public through the National Environmental Policy Act (NEPA) process, which affords all persons, organizations, and government agencies the right to review and comment on proposed major federal actions that are evaluated by a NEPA document and participate in public meetings during the review of the feasibility report; and

NOW, THEREFORE, the District, NPS, NYCLPC and the NYSHPO agree that the Undertakings shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertakings on historic properties.

STIPULATIONS

I. BEACH FILL - BORROW AREA INVESTIGATIONS

A. A remote sensing (magnetometer and side scan sonar survey) of any borrow areas not previously surveyed will be conducted to identify any potential cultural resources. In addition, cores for any borrow areas not previously surveyed will be examined, if available, to determine the potential for the recovery of buried landsurfaces.

B. If a cultural resource(s), target(s), and/or anomaly(ies) are identified, the District will designate a buffer zone around each potential resource, as determined by the nature of the anomaly/return. Buffer zone(s) shall be clearly delineated on construction plans. No construction activities, including the removal of sand, anchoring, etc., that could potentially impact the wrecks will occur within the designated buffer zones.

C. If any targets and/or anomalies cannot be avoided, the District will consult with the NYSHPO to consider alternatives and determine the level of additional investigations (diving, documentation, additional reconnaissance diving, Phase II survey, etc.) are required.

D. The results of any investigations will be coordinated with the NYSHPO and other signatories and consulting parties.

E. If the anomalies/targets are determined to represent a historic property, the District in coordination with the NYSHPO will determine alternatives including avoidance, data recovery through underwater archaeological investigations, and documentation. The District will resolve adverse effects to historic properties in accordance with Stipulation IV below.

II. HIGH FREQUENCY FLOOD RISK REDUCTION FEATURES

A. The District will determine, in coordination and consultation with the NYSHPO, and the NYCLPC, what investigations are necessary to determine if the construction of any high frequency flood risk reduction features will have an adverse effect on historic properties. The District would carry out investigations, as necessary, to identify historic properties and determine the effect of the proposed features on identified features.

B. The District will document the results of any investigations and provide them for review to the NYSHPO, the federally-recognized Tribes, and the NYCLPC.

C. If a property is determined to be eligible for the National Register, the District will consult with the NYSHPO, federally-recognized Tribes and the NYCLPC to resolve the adverse effects in accordance with Stipulation IV below.

III. BURIED SEAWALL AND FLOODWALLS

A. The District will determine, in coordination and consultation with the NYSHPO, the NPS, and the NYCLPC what investigations are necessary to determine if the construction of buried seawalls, floodwalls, and other features that include subsurface disturbance will have an adverse effect on the built environment, including the beach, bulkhead, and/or groins that are contributing elements of the various historic districts, as well as on potentially sensitive areas for archaeological resources. These investigations may include, but not be limited to, construction monitoring and recordation and/or research, field investigations and analysis on the Rockaway Peninsula development to include the potential for deeply buried archaeological sites.

B. The District will document results of any investigations and provide them for review to the NYSHPO, NPS, the federally-recognized Tribes, and the NYCLPC.

C. If a property is determined to be eligible for the National Register, the District will consult with the NYSHPO, NPS, federally-recognized Tribes and the NYCLPC to resolve the adverse effects in accordance with Stipulation IV below.

IV. RESOLUTION OF ADVERSE EFFECTS

A. The District shall continue consultation with the NYSHPO, NPS, the federally-recognized Tribes, and the NYCLPC, and other consulting parties if identified, pursuant to 36 CFR Part 800.6 to avoid, minimize or mitigate adverse effects to historic properties.

B. The District shall notify the NYSHPO, NPS, the federally-recognized Tribes, and the NYCLPC, property owners and other consulting parties, if identified and provide documentation regarding the identification and evaluation of the historic properties. The District will work with the NYSHPO, other relevant signatories, etc. to determine how best to resolve any adverse effects and document the proposed resolution.

C. Once there is agreement on how the adverse effects will be resolved, the District shall prepare treatment plan that will identify the activities to be implemented that will resolve the adverse effects. The treatment plan will be provided for review and comment prior to implementation.

D. Should the District, NYSHPO, and the relevant signatories disagree on how the adverse effects will be resolved, the District shall seek to resolve such objection through consultation in accordance with procedures outlined in Stipulation X.C.

V. PUBLIC INVOLVEMENT AND OUTREACH

A. The District shall inform the public of the existence of this PA and the District's plan for meeting the stipulations of the PA. Copies of this agreement and relevant documentation prepared pursuant to the terms of this PA shall be made available for public inspection. Information regarding the specific locations of terrestrial and submerged archaeological sites, including potential wreck areas, will be withheld in accordance with the Freedom of Information Act and National Register Bulletin No. 29, if it appears that this information could jeopardize archaeological sites. Any comments received from the public related to the activities identified by this PA shall be taken into account by the District.

B. The District shall develop, in coordination with the NYSHPO, NPS, the federally-recognized Tribes, and the NYCLPC publically accessible information about the cultural resources and historic properties investigations for the Undertaking in the form of brief publication(s), exhibit(s), or website.

VI. CURATION

A. The District shall ensure that all collections resulting from the identification and evaluation of surveys, data recovery operations, or other investigations pursuant to this PA are maintained in accordance with 36 CFR Part 79 until the collection is turned over to the NPS, New York City, or other landowner/entity. Minimally, the District will ensure that analysis is complete and the final report(s) are produced and accepted by the NYSHPO prior to the turnover of collections to the appropriate entity.

B. The District shall be responsible for consulting with the NPS, New York City and other landowners regarding the curation of collections resulting from archaeological surveys,

data recovery operations, or other studies and activities pursuant to this agreement. The District shall coordinate the return of collections to non-federal landowners. If non-federal landowners wish to donate the collection, the District, in coordination with the NYSHPO, the NPS, the federally-recognized Tribes, and the NYCLPC to determine an appropriate entity to take control of the collection.

C. The District shall be responsible for the preparation of federally-owned collections and the associated records and non-federal collections donated for curation in accordance with the standards of the curation facility.

VII. UNANTICIPATED DISCOVERY

A. The following language shall be included in construction plans and specifications:

"When a previously identified cultural resource, including but not limited to archaeological sites, shipwrecks and the remains of ships and/or boats, standing structures, and properties of traditional religious and cultural significance to the federally-recognized Tribes are discovered during the execution of the Project, the individual(s) who made the discovery shall immediately secure the vicinity and make a reasonable effort to avoid or minimize harm to the resource, and notify the Project's Contracting Officer's Representative (COR) and the District. All activities shall cease within a minimum of 50 feet from the inadvertent discovery (50-foot radius 'no work' buffer) until authorized by the District and the Project COR.

B. If previously unidentified and unanticipated properties are discovered during Project activities, the District shall cease all work in the vicinity of the discovery until it can be evaluated in accordance with 36 CFR Part 800.13 "Post Review Discoveries". Upon notification of an unanticipated discovery, the District shall implement any additional reasonable measures to avoid or minimize effects to the resource. Any previously unidentified cultural resource will be treated as though it is eligible for the NRHP until such other determination may be made.

C. The District shall immediately notify the NYSHPO, the NPS, the federally-recognized Tribes, and the NYCLPC within 48 hours of the finding and request consultation to resolve potential adverse effects.

1. If the District, NYSHPO, the NPS, the federally-recognized Tribes, and the NYCLPC agree that the cultural resource is not eligible for the NRHP, then the suspension of work in the area of the discovery will end.

2. If the District, NYSHPO, the NPS, the federally-recognized Tribes, and the NYCLPC agree that the cultural resource is eligible for the NRHP, then the suspension of work will continue, and the District, in consultation with the NYSHPO, NPS, the federally-recognized Tribes and the NYCLPC, will determine the actions to avoid, minimize, or mitigate adverse effects to the historic property and will ensure that the appropriate actions are carried out.

3. If the District, the NYSHPO, the NPS, and the NYCLPC cannot agree on the appropriate course of action to address an unanticipated discovery or effects situation, then the District shall initiate the dispute resolution process set forth in Stipulation X.C below.

VIII. DISCOVERY OF HUMAN REMAINS

1. If any human remains and/or grave-associated artifacts are encountered during any of the investigations, including data recovery, the District will follow the NYSHPO Human Remains Discovery Protocol (2008; Attachment C) and, as appropriate, develop a treatment plan for human remains that is responsive to the ACHP's Policy Statement on Human Remains" (September 27, 1988), the Native American Graves Protection and Repatriation Act (PL 101-601) and , US Army Corps of Engineers, Policy Guidance Letter No. 57 (1998) Indian Sovereignty and Government-to-Government Relations with Indian Tribes.

2. The following language shall be included in the construction plans and specifications:

"When human remains, suspected human remains, or indications of a burial are discovered during the execution of a Project, the individual(s) who made the discovery shall immediately notify the local law enforcement, coroner/medical examiner, and the Project COR and the District, and make a reasonable effort to protect the remains from any harm. The human remains shall not be touched, moved or further disturbed. All activities shall cease within a minimum of 50 feet from the area of the find (50-foot radius 'no work' buffer) until authorized by the District."

IX. PROFESSIONAL QUALIFICATIONS AND STANDARDS

A. The District shall ensure that qualified professionals meeting the National Park Service professional qualifications for the appropriate discipline [National Park Service Professional Qualification Standards, Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44738-39)] are used to complete all identification and evaluation plans related to this undertaking, to include remote sensing surveys, underwater investigations, historic structure inventory and documentation.

B. All archaeological investigations carried out pursuant to this PA will be undertaken in accordance with the New York State Archaeological Council's Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State (1994) and Cultural Resources Standards Handbook (2000), the NYSHPO Archaeological Report Format Requirements (2005), and the Secretary of the Interior's *Standards for the Treatment of Historic Properties* (36 CFR Part 68).

X. ADMINISTRATIVE TERMS

A. REPORTING

1. Each year following the execution of this PA until it expires or is terminated, the District shall provide the NYSHPO, NPS, the federally-recognized Tribes, all signatories, and interested parties a summary report detailing work undertaken pursuant to this PA. This report will include any scheduling changes, problems encountered, project work completed, PA activities completed, and any objections

and/or disputes received by the District in its efforts to carry out the terms of this PA.

2. Following authorization and appropriation, the District shall coordinate a meeting or equivalent with the signatories to be held annually on a mutually agreed upon date to evaluate the effectiveness of this PA and discuss activities carried out pursuant to this PA during the preceding year and activities scheduled for the upcoming year.

B. REVIEW PERIODS

1. The District shall ensure that all draft and final reports resulting from action pursuant to this PA will be provided to the NYSHPO, NPS, the federally-recognized Tribes, the NYCLPC, the Unkechaug Indian Nation, and to other interested parties, if identified.

2. The NYSHPO, ACHP, NPS, the federally-recognized Tribes, the NYCLPC, the Unkechaug Indian Nation, and any other interested party shall have 30 calendar days to review and/or object to determinations, evaluations, plans, reports and other documents submitted to them by the District.

3. Any comments and/or objections resulting from a review of any District determination, evaluations, plans, reports and other documents must be provided in writing to the District.

4. If comments, objections, etc., are not received within 30 calendar days, the District will assume concurrence with the subject determination, evaluation, plan, report or other document submitted.

C. DISPUTE RESOLUTION

1. Should any signatory object in writing to the District at any time to any actions proposed or the manner in which the terms of this PA are implemented, the District and the signatories shall attempt to resolve any disagreement arising from implementation of this PA.

2. If there is a determination that the disagreement cannot be resolved, the District shall forward all documentation relevant to the dispute to the ACHP and request the ACHP's recommendations or request the comments of the Council in accordance with 36 CFR Part 800.7(c).

3. The ACHP shall provide the District with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Any ACHP recommendations or comments provided in response will be considered in accordance with 36 CFR Part 800.7(c), with reference only to the subject of the dispute. The District shall respond to ACHP recommendations or comments indicating how the District has taken the ACHP recommendations or comments into account and complied with the ACHP recommendations or comments prior to proceeding with the Undertaking activities that are the subject to dispute. Responsibility to carry out all other actions under this PA that are not the subject of the dispute will remain unchanged.

4. If the ACHP does not provide its advice regarding the dispute within the thirty (30) calendar day time period, the District may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the District shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories to the PA, and provide them and the ACHP with a copy of such written response.

D. WITHDRAWAL AND TERMINATION

1. Any signatory may withdraw its participation in this PA by providing thirty (30) days advance written notification to all other signatories. In the event of withdrawal, any signatory to this PA may terminate it by providing 30 calendar days, written notice to the signatories. In the event of withdrawal, this PA will remain in effect for the remaining signatories.

2. This agreement may be terminated in accordance with 36 CFR Part 800, provided that the signatories consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. Any signatory requesting termination of this PA will provide thirty (30) days advance written notification to all other signatories.

3. In the event of termination, the District will comply with 36 CFR 800.4 through 800.6 with regard to individual undertakings covered by this Agreement.

E. DURATION AND SUNSET CLAUSE

1. This PA shall take effect upon execution by the District, the NYSHPO, and the signatories with the date of the final signature.

2. This PA will continue in full force and effect until the construction of the Project is complete and all terms of this PA are met, unless the Project is terminated or authorization is rescinded or a period of five years from execution of the PA has passed, at which time the agreement may be extended as written provided all signatories concur.

F.AMENDMENT

1. This PA may be amended upon agreement in writing by all signatories. Within thirty (30) days of a written request to the District, the District will facilitate consultation between the signatories regarding the proposed amendment.

2. Any amendments will be in writing and will be in effect on the date the amended PA is filed with the Council.

G. ANTI-DEFICIENCY ACT

All requirements set forth in this PA requiring expenditure of funds by the District are expressly subject to the availability of appropriations and the requirements of the Anti-Deficiency Act (31 U.S.C. 1341). No obligation undertaken by the District under the terms of this PA shall require or be interpreted to require a commitment to extend funds not appropriated for a particular purpose. If the District cannot perform any

obligation set forth in this PA because of unavailability of funds that obligation must be renegotiated among the District and the signatories as necessary.

Execution and implementation of this PA evidences that the District has satisfied its Section 106 responsibilities for all individual undertakings of the Project, and has afforded the NYSHPO and the ACHP an opportunity to comment on the undertaking and its effects on historic properties.

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES ARMY CORPS OF ENGINEERS,
THE NEW YORK STATE HISTORIC PRESERVATION OFFICE,
THE NATIONAL PARK SERVICE,
AND
THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION
REGARDING
ATLANTIC COAST OF NEW YORK
EAST ROCKAWAY INLET TO ROCKAWAY INLET
AND JAMAICA BAY, NEW YORK
GENERAL RE-EVALUTION STUDY

Execution and implementation of this PA evidences that the District has satisfied its Section 106 responsibilities for all individual undertakings of the Project, and has afforded the NYSHPO and the ACHP an opportunity to comment on the undertaking and its effects on historic properties.

By:_____ Date:_____
Thomas D. Asbery
Colonel, U.S. Army
District Engineer

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES ARMY CORPS OF ENGINEERS,
THE NEW YORK STATE HISTORIC PRESERVATION OFFICE,
THE NATIONAL PARK SERVICE,
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By:_____ Date:_____
National Park Service

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES ARMY CORPS OF ENGINEERS,
THE NEW YORK STATE HISTORIC PRESERVATION OFFICE,
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By:_____ Date:_____
Gina Santucci
Director of Environmental Review
New York City Landmarks Preservation Commission

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES ARMY CORPS OF ENGINEERS,
THE NEW YORK STATE HISTORIC PRESERVATION OFFICE,
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Execution and implementation of this PA evidences that the District has satisfied its Section 106 responsibilities for all individual undertakings of the Project, and has afforded the NYSHPO and the ACHP an opportunity to comment on the undertaking and its effects on historic properties.

By:_____ Date:_____
Daniel Mackay
Deputy Commissioner
Division for Historic Preservation
New York Office of Parks, Recreation and Historic Preservation

APPENDIX A: CULTURAL RESOURCES

Historic Properties Case Report
Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens and Nassau Counties, New York

U.S. Army Corps of Engineers, New York District

Introduction

The Rockaway peninsula and southern Queens was one of the areas most devastated by Hurricane Sandy in 2012. There were 10 fatalities and more than 1,000 structures either substantially damaged or destroyed. In addition to the structural impacts caused by waves and inundation, fires ignited by the storm surge inundation of electrical systems destroyed 175 homes along the Peninsula. Prior to Hurricane Sandy, the U.S. Army Corps of Engineers, New York District (District), was undertaking an effort to identify a long-term solution for the study area, which focused on the Atlantic Ocean shoreline. Prior to this reformulation, an existing, authorized project for the area was constructed in 1977 and renourished periodically through 2004, based upon a 1965 construction authorization. The current study was authorized by Public Law 113-2, The Disaster Relief Appropriations Act of 2013.

As a federal agency, the District has certain responsibilities to take into account the effects of their undertakings on historic properties that may be located within the Area of Potential Effect (APE) associated with the proposed undertaking. Present statutes and regulations governing these responsibilities include the National Historic Preservation Act of 1966 as amended (NHPA; 54 U.S.C 3001), the Advisory Council on Historic Preservation (ACHP) regulations implementing Section 106 of the NHPA (36 C.F.R. Part 800 *Protection of Historic Properties* August 2004) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and Executive Order 11593. Significant cultural resources include any material remains of human activity potentially eligible for inclusion on the National Register of Historic Places (National Register) and historic properties are those resources that are listed or been determined eligible for the National Register.

Description of the Undertaking

The East Rockaway Inlet to Rockaway Inlet and Jamaica Bay coastal storm risk management project is proposing to reduce the study area's vulnerability to coastal storms and improve community and coastal resiliency to the Rockaway Peninsula and southern Queens. The measures proposed by this study include the construction of a composite seawall buried along the beach, the construction of new and/or the extension of existing groins and sand fill along the Atlantic shoreline as well as four high-frequency flood risk reduction measures on Jamaica Bay in Cedarhurst-Lawrence, Hammels, Edgemere and Arverne, Queens and Nassau Counties, New York (Figure 1).

Figure 1: Recommended plan overview with Atlantic shoreline features and high-frequency flood risk reduction measures.

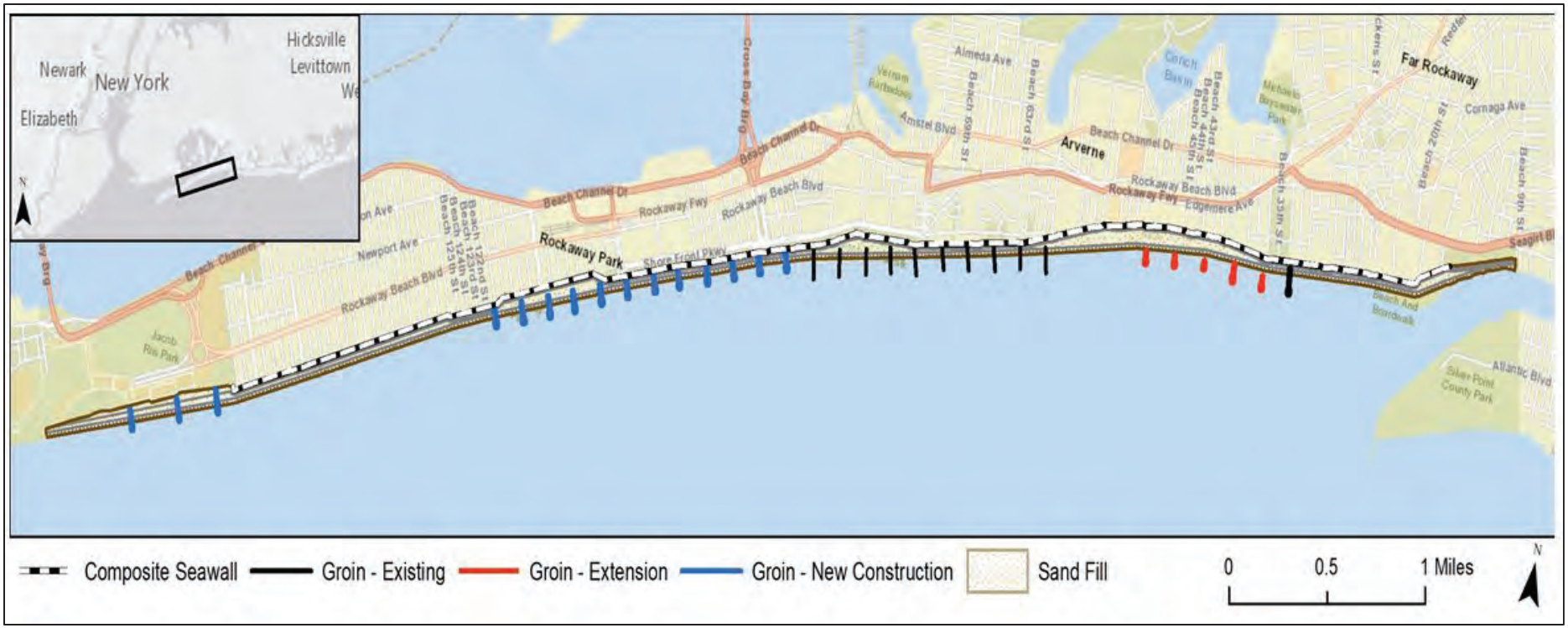


Figure 2: Atlantic Shorefront Component of the Recommended Plan

Figure 3: Groin rehabilitation and beach fill in Jacob Riis Park with the composite seawall just outside the park extending east along the Atlantic shoreline.

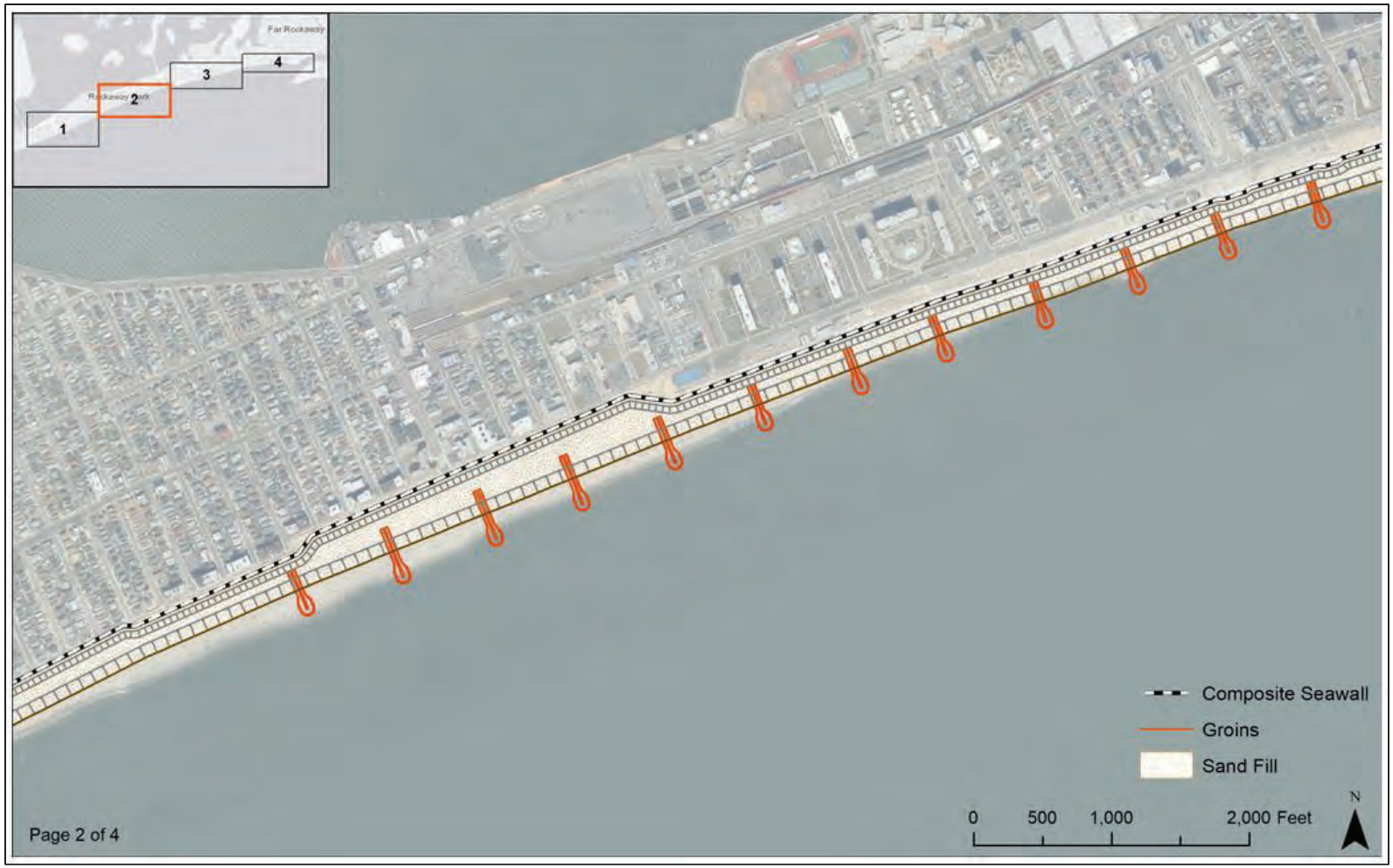


Figure 4: Groin Rehabilitation, beach fill and composite seawall along the Atlantic shoreline.

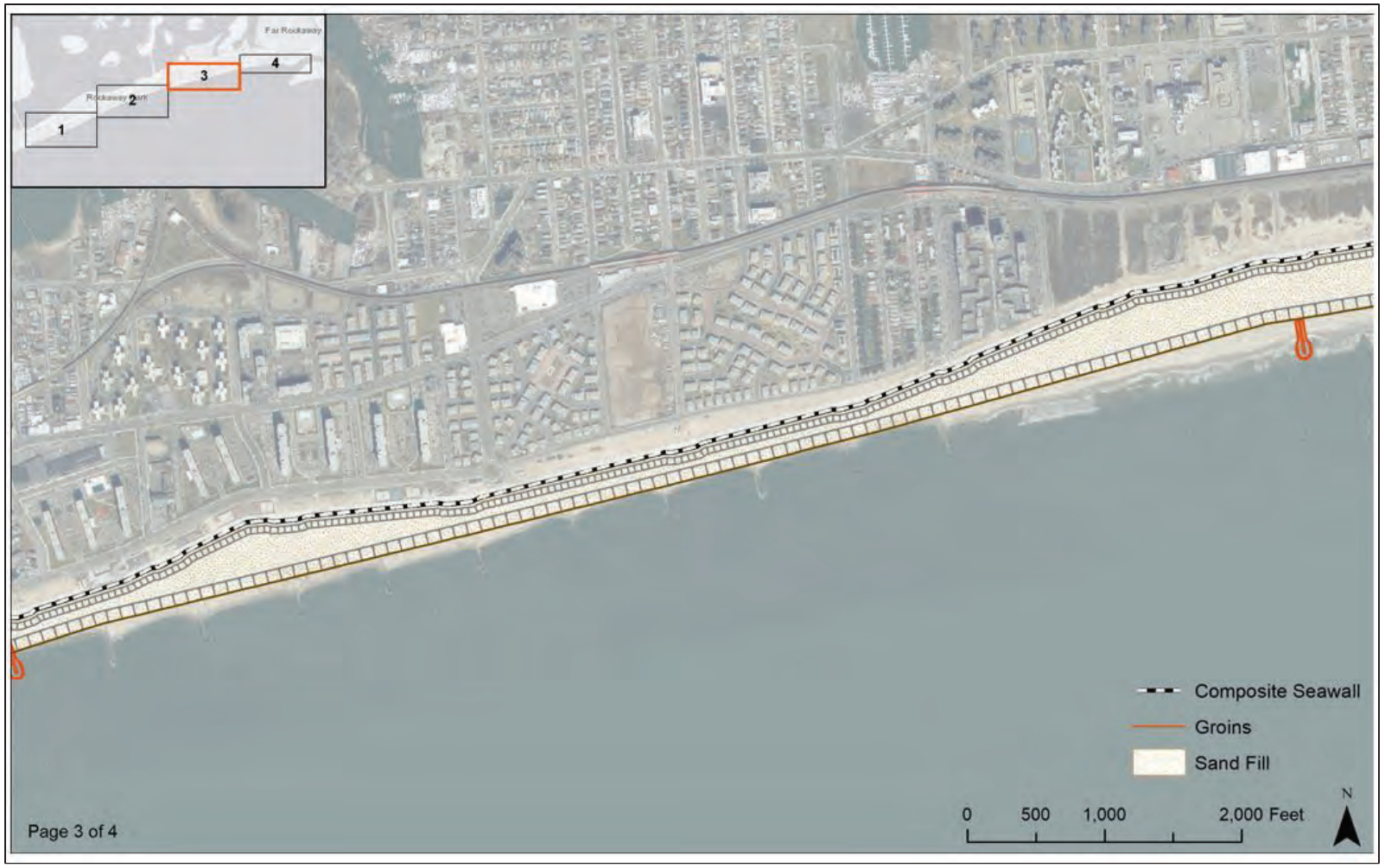


Figure 5: Composite seawall, beach fill and new groin construction (east) along the Atlantic shoreline.

Figure 6: New groin construction, beach fill and composite seawall along the Atlantic shoreline.

- Atlantic Shoreline Measures

These measures consist of a reinforced dune, also referred to as a composite seawall, approximately 60 feet wide and extending approximately 35,000 linear feet from Beach 9th to Beach 149th Street (Figures 2-6). The structure crest elevation of the seawall structure will be approximately +17 feet above NAVD 88. The dune height will be approximately +18 feet NAVD 88. The bottom of the reinforced dune will be approximately 15 feet below the dune crest. Beach fill will be placed along the reinforced dune and will be obtained from an offshore borrow area (see Figures 2-6). In addition, five existing groins will be extended and 13 new groins will be constructed (see Figures 4-6). Currently, three additional groin rehabilitations are proposed for Jacob Riis Park as well as the placement of sand fill (see Figure 3). Engineering analysis is being completed to determine if the rehabilitation of the Jacob Riis Park groins is necessary. The reinforced dune will not extend into Jacob Riis Park (see Figure 3).

- High-Frequency Flood Risk Reduction Measures

o Cedarhurst-Lawrence: Located in the channel adjacent to the Lawrence High School, this measure consists of 1,000 feet of bulkhead along the east, south and west sides where it will connect to high ground. A small extent of floodwall will be used to connect the bulkhead to the higher ground upland. The proposed elevation will be approximately 10 feet NAVD 88. The existing outfalls will be raised and a pump station will be constructed to receive stormwater when the outlets are blocked by storm surge or tide (Figure 7).

o Mid-Rockaway-Edgemere: This measure extends from Beach 35th to just beyond Beach 49th Street and will include a combination of a berm, hybrid berm, floodwall and bulkhead. Portions of the berm and hybrid berm will be fronted by scrub-shrub, salt meadow hay and smooth cordgrass natural features stabilized by a rock sill. It is anticipated that three pump stations and one road ramp will be needed. Proposed project elevations range from +8 to +9.5 feet NAVD 88 (Figure 8).

o Mid-Rockaway-Arverne: This measure extends from Almeda Avenue and Beach 58th Street all the way around Arvene's Jamaica Bay shoreline to Amstel Avenue just past Beach 74th Street. This alignment includes a berm, floodwall, revetment a bulkhead and hybrid berm. Natural features, including canopy tree, salt meadow hay, scrub-shrub, and smooth cordgrass, will be constructed in front of the floodwall, hybrid berm, and bulkhead, and protected by rock sill. Three pump stations, one flood gate and three road ramps will also be constructed (Figure 9).

o Mid-Rockaway – Hammels: This measure consists of two individual segments: an east segment of 1,400 linear feet of floodwall along Beach Channel Drive and a west segment of 1,400 linear feet from the Beach 84th Street to Beach Channel Drive. It

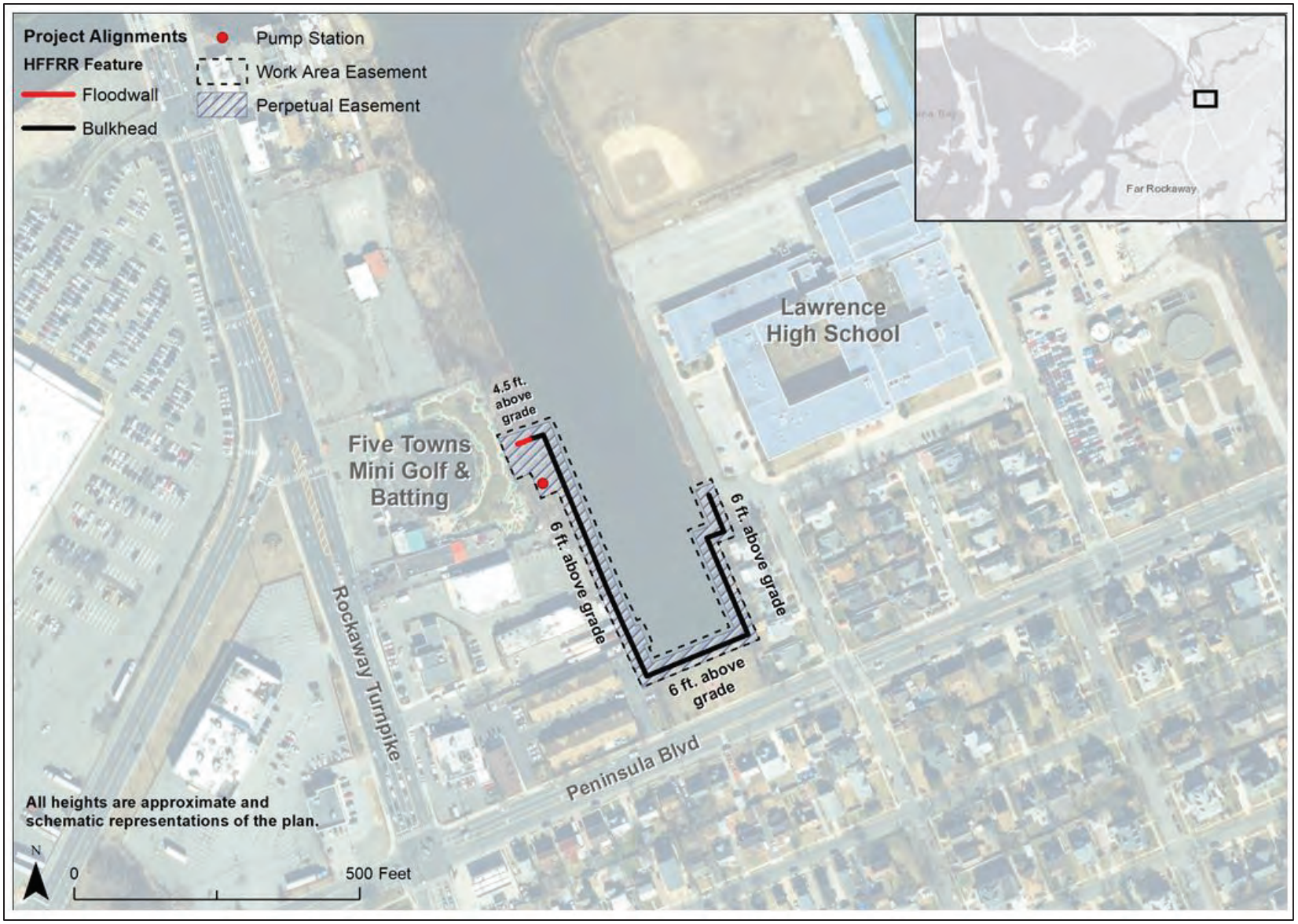


Figure 7: Cedarhurst-Lawrence High-Frequency Flood Risk Reduction Measures

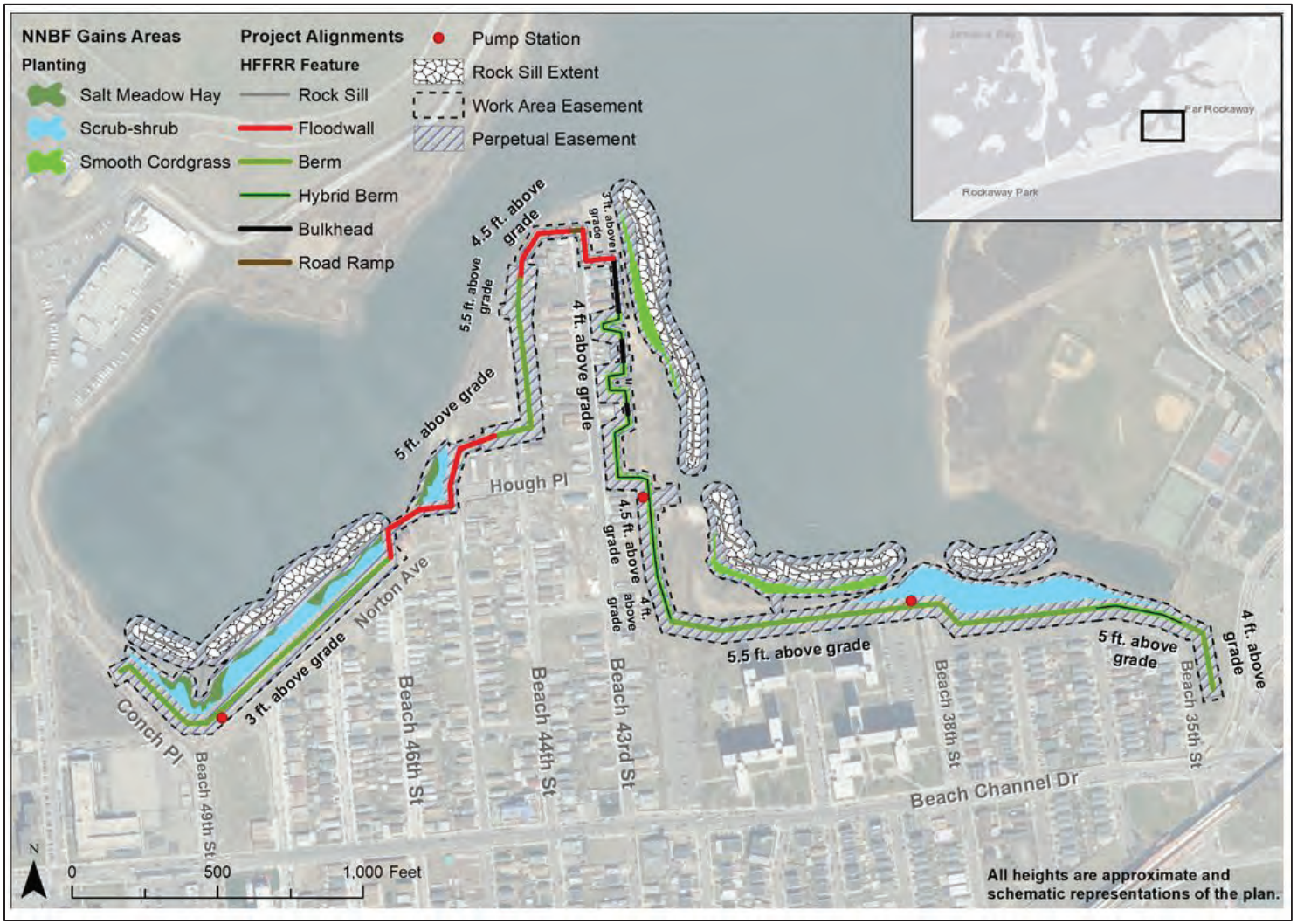


Figure 8: Edgemere High-Frequency Flood Risk Reductions Measures.

Figure 9: Arverne High-Frequency Flood Risk Reduction Measures

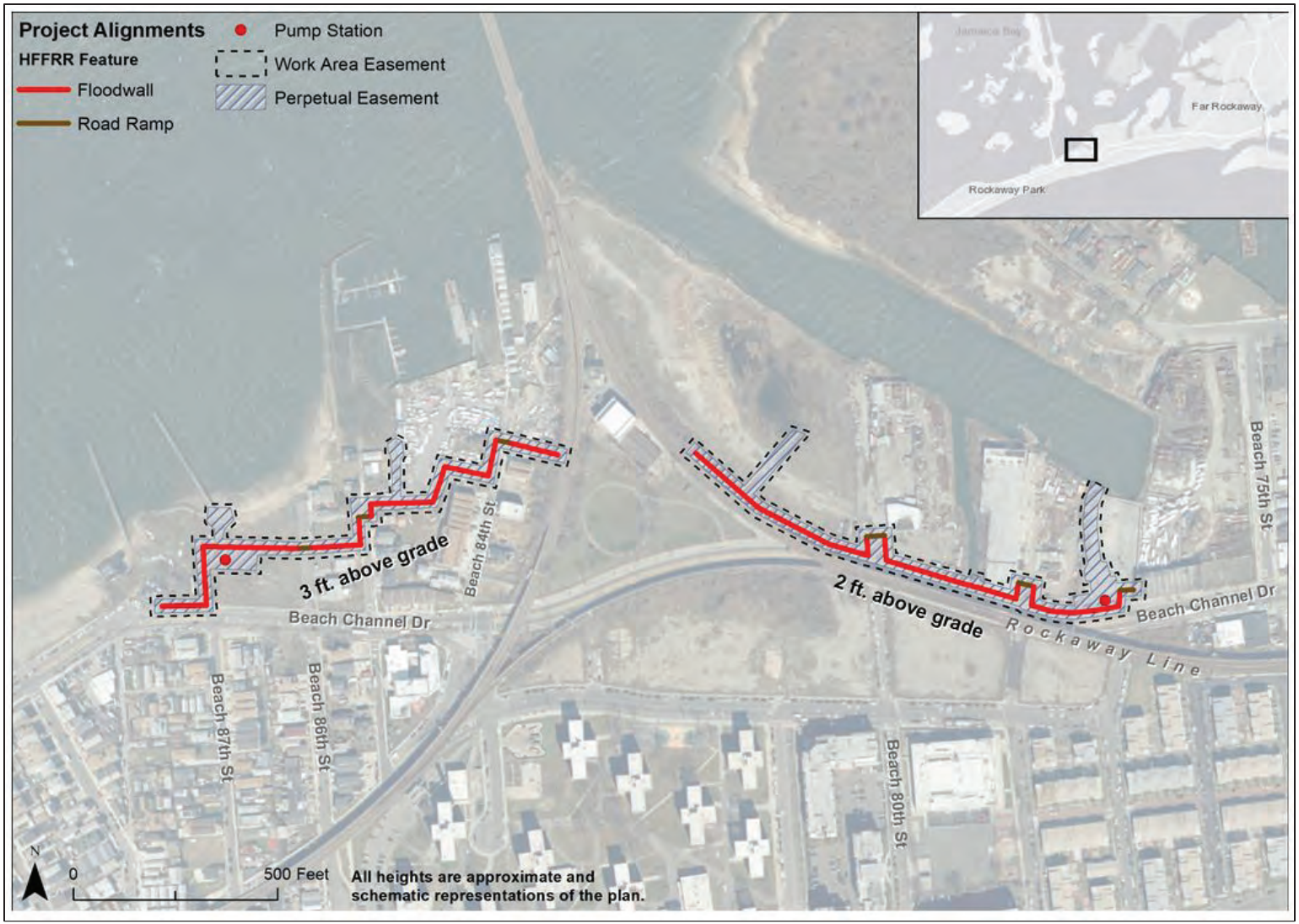


Figure 10: Hammels High-Frequency Flood Risk Reduction Measures

is anticipated that each segment will require one pump station. The segments will also require four road ramps; three on the east and one on the west (Figure 10).

Study Method and APE

The cultural resources investigation for this study has been limited to documentary research and a pedestrian survey. Documentary research consisted of gathering data from previous cultural resource studies and an examination of the New York State Historic Preservation Office (NYSHPO) Cultural Resources Information System (CRIS).

The APE is considered be located along the alignment of each of the measures described above as the undertaking to include the offshore borrow areas. At this time no staging areas or access roads have been identified, however, given the nature of the surrounding area it is anticipated that staging areas will be within existing parking lots or the footprint of the alignment itself. If additional staging areas, access roads or other features are required they will be considered in this analysis once they are defined. The APE for archaeology, historic structures and historic landscapes has been defined as those areas along the proposed line of protection that would likely be directly impacted by project construction. The APE for historic structures and landscapes also includes those locations that would be anticipated to have visual impacts from the completed project.

Previous Work

Reports utilized for this research included the cultural resources surveys conducted within and around the study's APEs. These include Gateway National Recreation Area (Gateway) Final General Management Plan Environmental Impact Statement (National Park Service [NPS] 2014) and the Jamaica Bay Cultural Resources Baseline Study and (Panamerican Consultants 2000, 2003, 2006), and remote sensing and inspection of targets (Panamerican Consultants 2003, 2005 and 2006 and Reiss 1994). This research included a review of the APEs on the NYSHPO CRIS database.

A western section of the Atlantic shoreline component is within the NPS' Gateway – Jamaica Bay Unit and both the eastern shoreline and high-frequency flood risk reduction components are located in the vicinity of the other elements of Gateway. In its cultural resources management plans for the area, the NPS has reported that there have been no Paleo-Indian or Archaic Period sites identified within its property. Woodland sites, characterized by the recovery of ceramic sherds, lithic artifacts and shell middens, have been identified within Gateway as have Contact period settlement sites, which included a mix of European and indigenous cultural items.

- Known Prehistoric Archaeological Sites

The New York State Museum files have a number of sites listed that were identified by Arthur C. Parker in the 1920s in and around Jamaica Bay and the Rockaway Peninsula and possibly within the vicinity of the study's APEs, although the exact locations and other information are unknown. These sites include:

Table 1: Arthur C. Parker sites recorded at the New York State Museum[1]

NYSM No.	Site Name	Period	Comments
4033	ACP NSAU 12A	Prehistoric or historic	Native American cemetery noted on the White Property near Cedarhurst
4034	ACP NSAU 13A	Prehistoric or historic	Possible Native American Village on Hicks Neck near Bannister Creek and Sage Pond
4050	ACP NSAU	Prehistoric	Camp site in general vicinity of Inwood, just southwest of the project area
4538	ACP QUNS	Prehistoric	Possible Native American village near Head of Bay
4547	ACP QUNS	Prehistoric	Traces of occupation near Head of Bay and Hook Creek
7772	ACP NSAU	Prehistoric or historic	Possible Native American village and shell midden site east of Woodmere Creek
7775	ACP NSAU	Prehistoric	Campsite near Sage Pond and Crooked Creek

[1]As reported in Panamerican Consultants 2003 and Merwin 2009.

In addition to Parker, other known prehistoric sites around Jamaica Bay were identified by Bolton (1920, 1922, and 1934) and Harrington (1909) (Panamerican 2003). Few sites have been identified on the Rockaway Peninsula and include NYSM-4050 above. A cemetery with associated artifacts was reported in Bayswater in 1901 as well as large shell deposits. As late as 1988, it was noted that located along the eastern shore of Jamaica Bay, in the vicinity of Bayswater, was a Woodland period site consisting of ceramics, projectile points, and a possible burial (Panamerican 2003).

These identified sites would be located outside the APEs for both the Atlantic shoreline and high-frequency flood risk reduction components but could be located nearby the Cedarhurst and Edgemere segments of the latter. It may be that on the Rockaway Peninsula, similar sites that have not been destroyed by development or storms may be more deeply buried.

- Known Historic Properties

Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club, Jacob Riis and the Far Rockaway Beach Bungalow Historic District (Beach 24th, 25th and 26th Streets) are historic districts on the Rockaway Peninsula that

are listed on the New York State and the National Registers of Historic Places. The Fort Tilden, the U.S. Coast Guard Far Rockaway, the Breezy Point Surf Club, the Silver Gull Beach Club and Jacob Riis Historic Districts are all located within Gateway and are managed by the NPS. Other National Register listed or eligible properties include 2 Beach 85th Street, Hammels Pier, the New York City Transit System Building, the Rockaway Courthouse, the Temple of Israel Synagogue, the US Post Office at Far Rockaway, Trinity Chapel, the Russell Sage Memorial Church, the Trans World Airlines Flight Center at JFK International Airport, and The Marine Parkway - Gil Hodges Memorial Bridge.

One New York City designated landmark, the Richard Cornell Burial Ground, is located in Far Rockaway. Locally significant landmarks that have not been formally listed include the Waterfront Tribute Park, 9/11 Memorial and the American Airline Flight 587 Memorial.

The beach portion of the Jacob Riis Historic District is located within the western end of the Atlantic Shoreline APE (Figures 11 and 12). The Far Rockaway Beach Bungalow Historic District is located adjacent to the eastern end of the Atlantic shoreline APE (Figure 13). None of these historic districts are located within or near the APEs for the high-frequency flood risk reduction segments. Two Beach 85th Street, Hammels Pier and the New York City Transit System Building are located adjacent and potentially within the APE for two segments the Hammels high-frequency flood risk reduction measure (Figures 14 and 15).

No other historic properties or New York City landmarks are located in either component's APEs. The American Airline Flight 587 Memorial is located at the end of Beach 116th Street and is adjacent to the Atlantic shoreline APE (Figure 16).

Assessment of Effects and Recommendations

Based on the review of the existing data along the ocean and bayside of the Rockaway peninsula and along Jamaica Bay, there are National Register listed or eligible properties within or just adjacent to the APE that may be directly or indirectly effected by the project elements. Potential impacts to specific properties or category of properties is outline below and summarized in Table 2. The activities required to continue further study or to mitigate for adverse effects is included in the project Programmatic Agreement (Appendix A).

Although no prehistoric or Native American archaeological sites have been identified along the Rockaway peninsula, the early discoveries at the eastern end of the peninsula do indicate a potential for utilization of the area. Sites on the peninsula, if present, may be more likely to be deeply buried as a result of the active forces of the ocean and storm surge. As part of the investigations for and construction of the reinforced dune/composite seawall, conduct geomorphological investigations to identify locations of prehistoric land surfaces that may require monitoring during excavation.

As determined for previous sand placement efforts, the placement of beach fill will not have an adverse effect on the known historic districts and properties located along the shoreline. The source of the sand will be from borrow areas for which a remote sensing survey and, in some cases, an underwater inspection of targets, has been completed. If a borrow area is selected for which an investigation has not been completed or additional work is warranted, those investigations will be conducted prior to the use of the borrow area.

The proposed plan also intends to build new groins as well as rehabilitate and/or extend existing groins. Neither the original nomination for the Jacob Riis Park Historic District, nor the 2014 Final General Management Plan and Environmental Impact Statement mention the groins, although there are three within the current bounds of the historic district. A survey of the groins with in the shoreline APE will be conducted determine when they were built and if they are eligible for the National Register on their own or as part of the existing historic district.

Only a portion of the Arverne high-frequency flood risk reduction measures have been subject to a prior survey (Dubos Point (8) and Brant Point (9) in Panamerican 2003). Additional investigations would include expanding this survey to the other portions of this high-frequency flood risk reduction measure as well as to the other three similar measures. In addition, the completed survey recommends additional investigations prior to or as part of construction activities in these areas. These include additional research on the bulkhead, limited subsurface testing, monitoring of deeper excavation, if conducted, for prehistoric land surfaces and potential remote sensing investigations on the water side of the area.

Two eligible properties, the NYC Transit System building and 2 Beach 85th are immediately adjacent to elements associated with the Hammels high-frequency flood risk reduction measure. They will not be adversely effected by the construction of the measures, however, information related to these structures may be identified during the proposed Phase I survey or that determination could change should the alignment of each floodwall or pump station changes.

Figure 11: Location of Jacob Riis Park Historic District in relation to the project alignment APE.

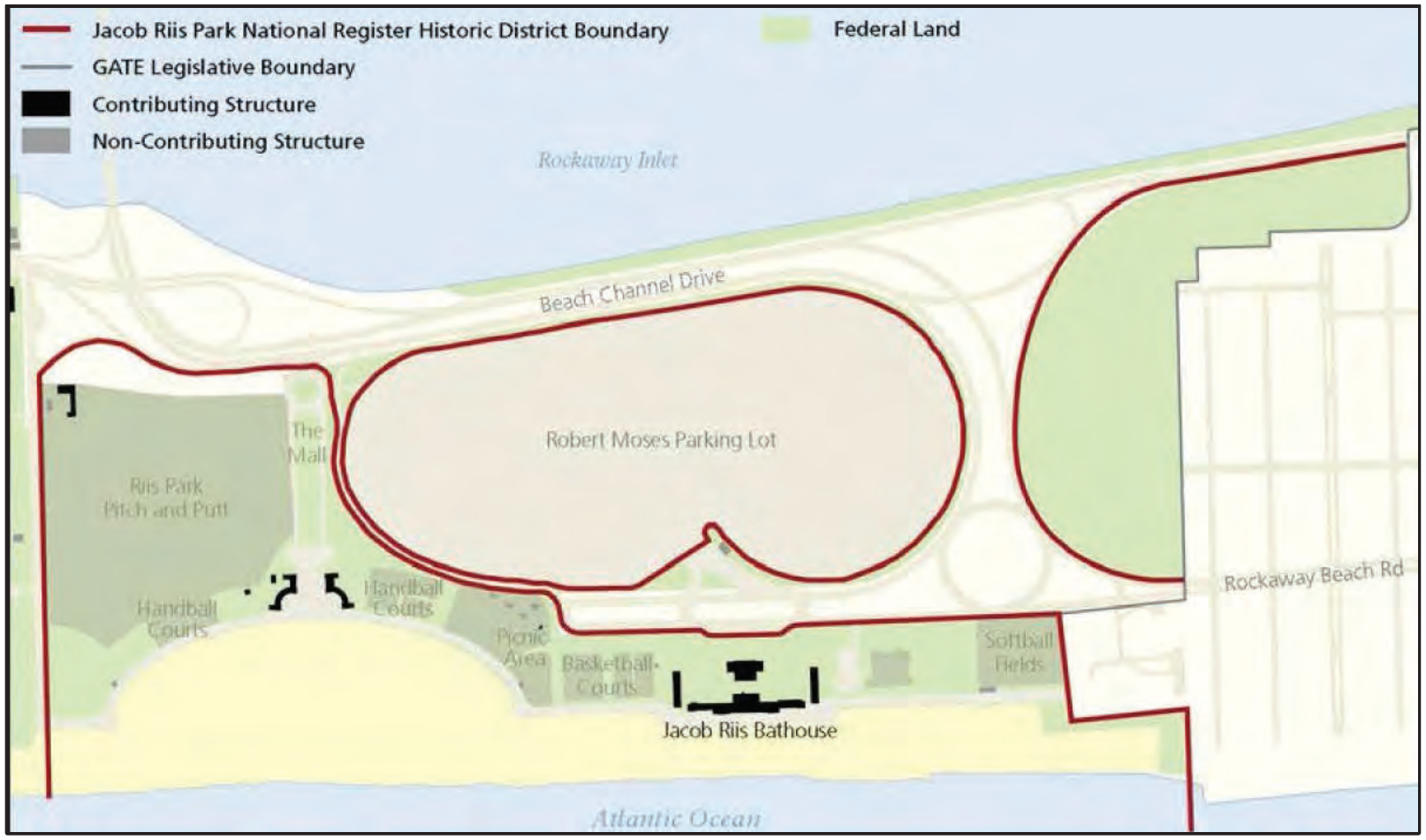


Figure 12: Jacob Riis Park Historic District elements.

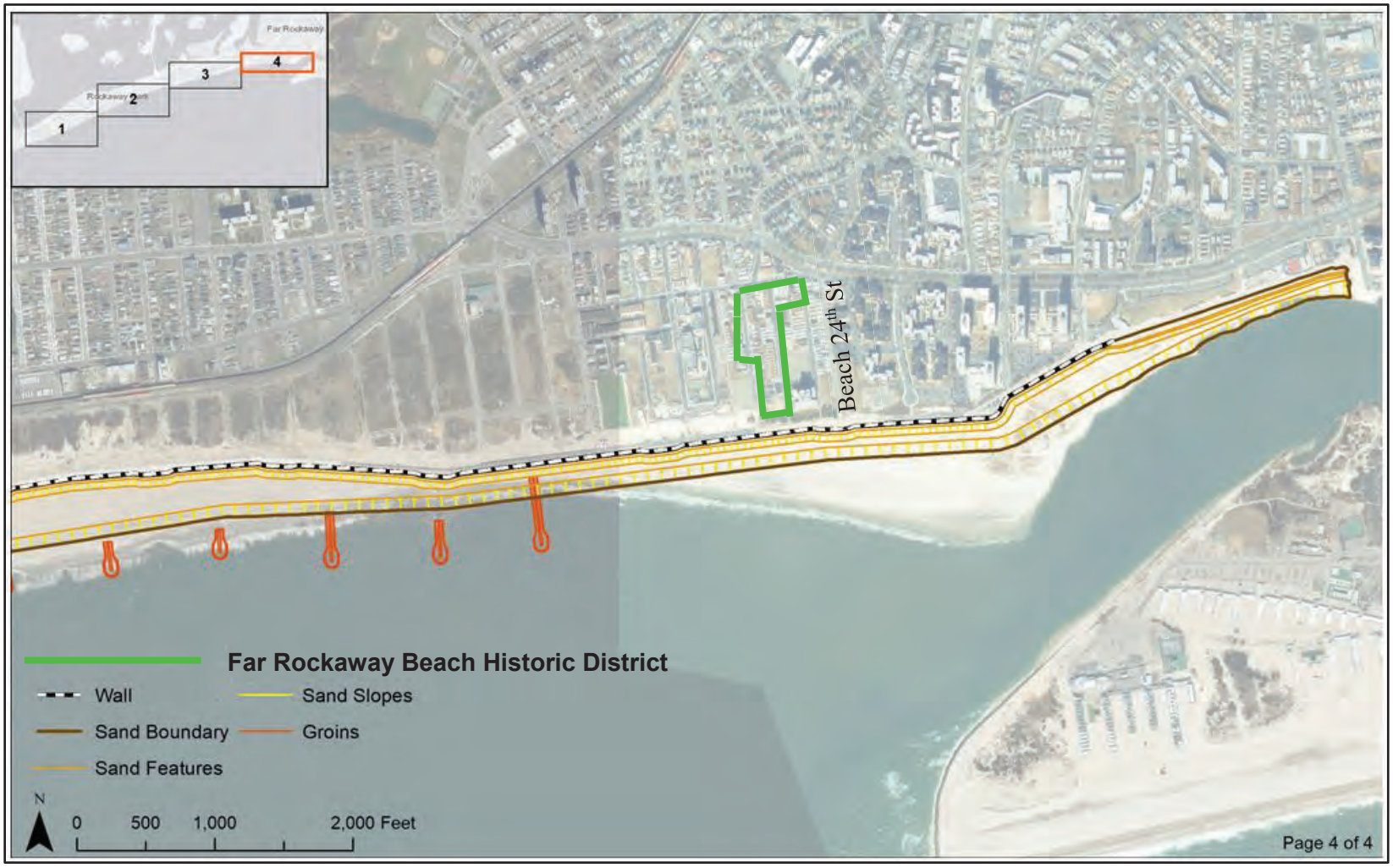


Figure 13: Location of the Far Rockaway Historic District and the project alignment APE.

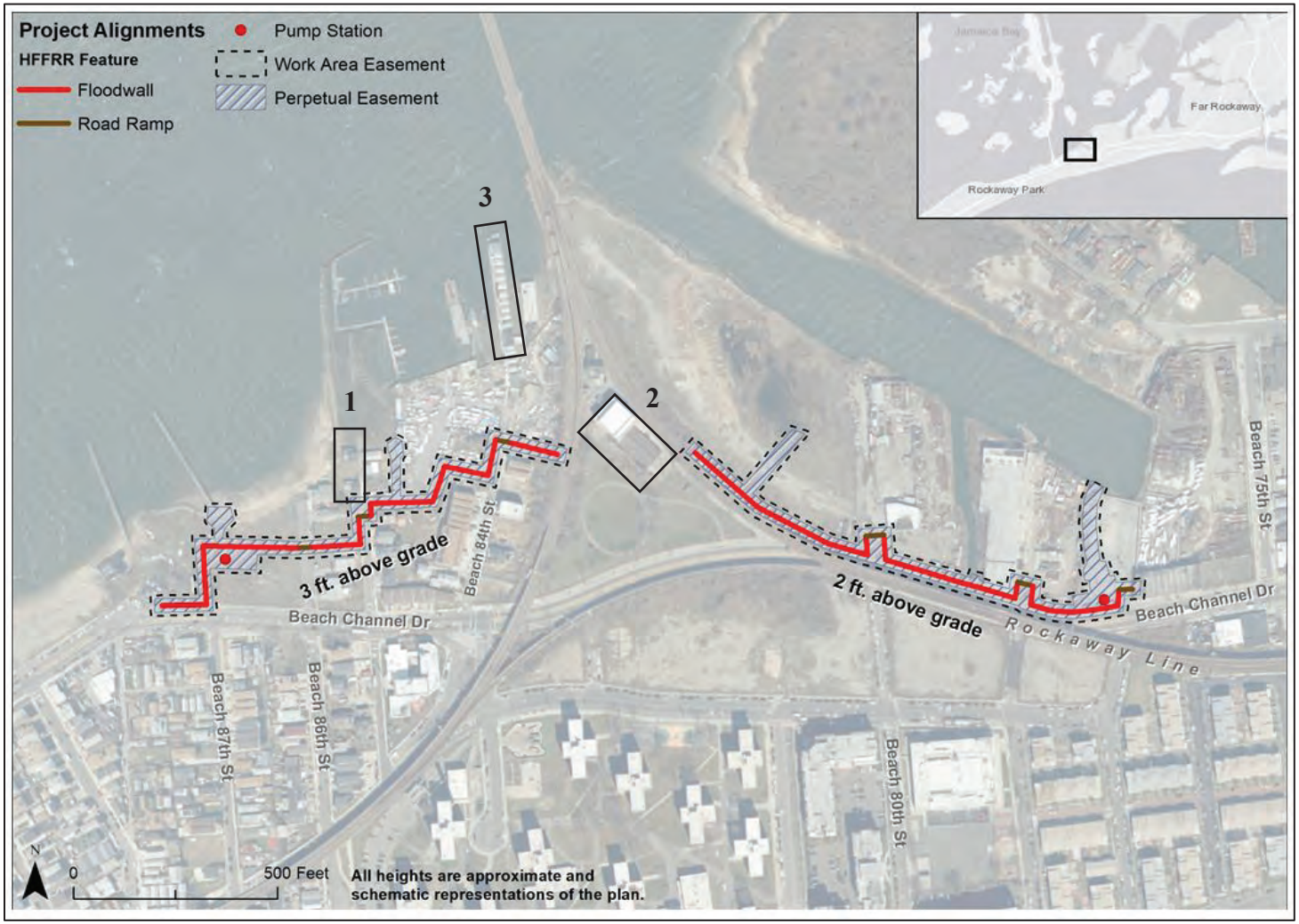


Figure 14: Location of 1) 2 Beach 85th Street; 2) New York City Transit System Building; and 3) Hammel Beach Pier and the Hammels high-frequency flood risk reduction measure alignments APE.

Figure 15: Photographs of the eligible properties near the Hammels high-frequency flood risk reduction: New York City Transit System building (top), 2 Beach 85th Street (middle) and the Hammels Pier (bottom) (NYSHPO CRIS 2019).

Figure 16: Location of Flight 587 Memorial Park.

Table 2: Assessment of Effects and Recommendations for Additional Work

Project Element	Resource	Recommendation
Reinforced dune/composite seawall	Potential prehistoric sites	Geomorphology with potential for monitoring during construction
Beach Fill	No historic properties affected	No additional work
Existing Borrow Areas	No historic properties affected	No additional work
New Borrow Areas	Potential prehistoric/historic resources	Remote sensing survey with potential underwater investigations
Groin Rehabilitation	Groins	Determine eligibility of groins as individual or historic district
Cedarhurst	Potential prehistoric/historic sites	Phase I survey; potential for subsurface investigations and remote sensing
Edgemere	Potential historic sites	Phase I survey
Arverne	Potential prehistoric/historic sites	Phase I survey; potential for subsurface investigations and remote sensing
Hammels	Potential prehistoric/historic sites	Phase I survey; potential for subsurface investigations and remote sensing; monitor alignment and proximity to eligible historic structures.

A Programmatic Agreement has been prepared to complete additional surveys on 1) the National Register eligibility of the groins along the Atlantic shoreline; 2) the potential for land surfaces and archaeological sites buried within the Rockaway peninsula; and 3) the potential for archaeological sites that might be affected by the high-frequency flood risk reduction measures. The public review of the draft General Reevaluation Report and Environmental Impact Statement included the discussion of affected historic properties as well as a preliminary draft of the programmatic agreement. The New York State Historic Preservation Office, the National Park Service, the New York City Landmarks Preservation Commission, the Delaware Nation, the Delaware Tribe, the Stockbridge-Munsee Community, the Shinnecock Nation and the Unkechaug Nation

were also provided a final draft to review and comment prior to execution of the agreement.

References

Merwin, Daria E.

2009 *A Cultural Resources Survey Report 2008-2009 Program Year, PIN 0072.14.101, New York State Route 878 (Nassau Expressway) Operational Improvement, Rockaway Turnpike to Burnside Avenue, Inwood, Town of Hempstead, Nassau County (Minor Civil Division 05930).* Institute for Long Island Archaeology, State University of New York at Stony Brook, Stony Brook, New York. Prepared for the New York State Museum, State Education Department. Sponsored by the New York State Department of Transportation and the Federal Highway Administration.

National Park Service

2014 *A New Vision for a Great Urban National Park: Gateway National Recreation Area, Final General Management Plan, Environmental Impact Statement.* U.S. Department of the Interior.

Panamerican Consultants

2000 *Cultural Resources Assessment of T-Groin Placement, Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens County, New York, Section 934.* Prepared for the U.S. Army Corps of Engineers, New York District.

2003 *Cultural Resources Baseline Study, Jamaica Bay Ecosystem Restoration Project, Kings, Queens and Nassau Counties, New York.* Prepared for the U.S. Army Corps of Engineers, New York District.

2005 *Remote Sensing Survey of the Proposed Borrow Area for the East Rockaway Reformulation Project, Queens County, New York.* Prepared for the U.S. Army Corps of Engineers, New York District.

2006 *Phase IB Investigations of Bayswater State Park and Paerdegat Basin, Jamaica Bay Ecosystem Restoration Project, Kings, Queens and Nassau Counties, New York*. Prepared for the U.S. Army Corps of Engineers, New York District.

Riess, Warren C.

1994 *East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York, Section 934 Study, Remote Sensing of Borrow Area 2.* Prepared by WCH Industries in association with Boston Affiliates. Submitted to the U.S. Army Corps of Engineers, New York District.

ATTACHMENT B: AREA OF POTENTIAL EFFECTS
FIGURES

Figure 1: Recommended plan overview with Atlantic shoreline features and high-frequency flood risk reduction measures.

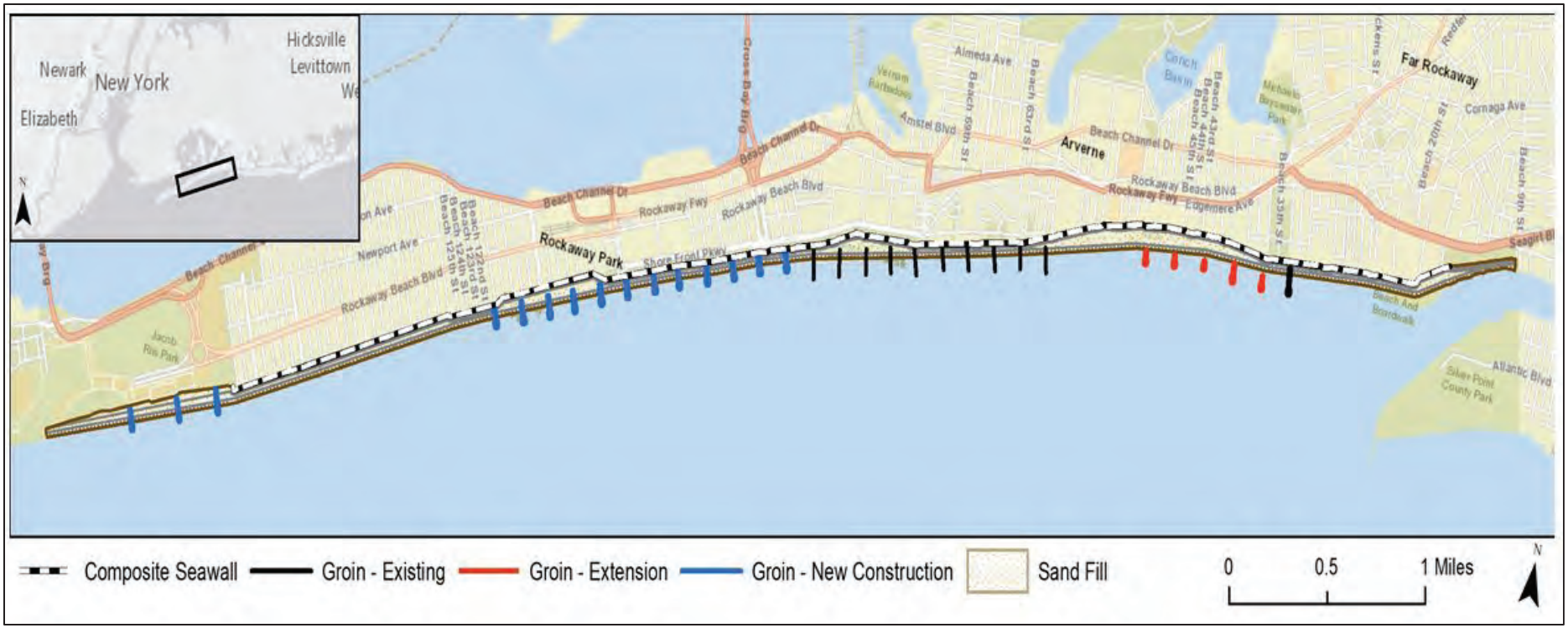


Figure 2: Atlantic Shorefront Component of the Recommended Plan

Figure 3: Groin rehabilitation and beach fill in Jacob Riis Park with the composite seawall just outside the park extending east along the Atlantic shoreline.

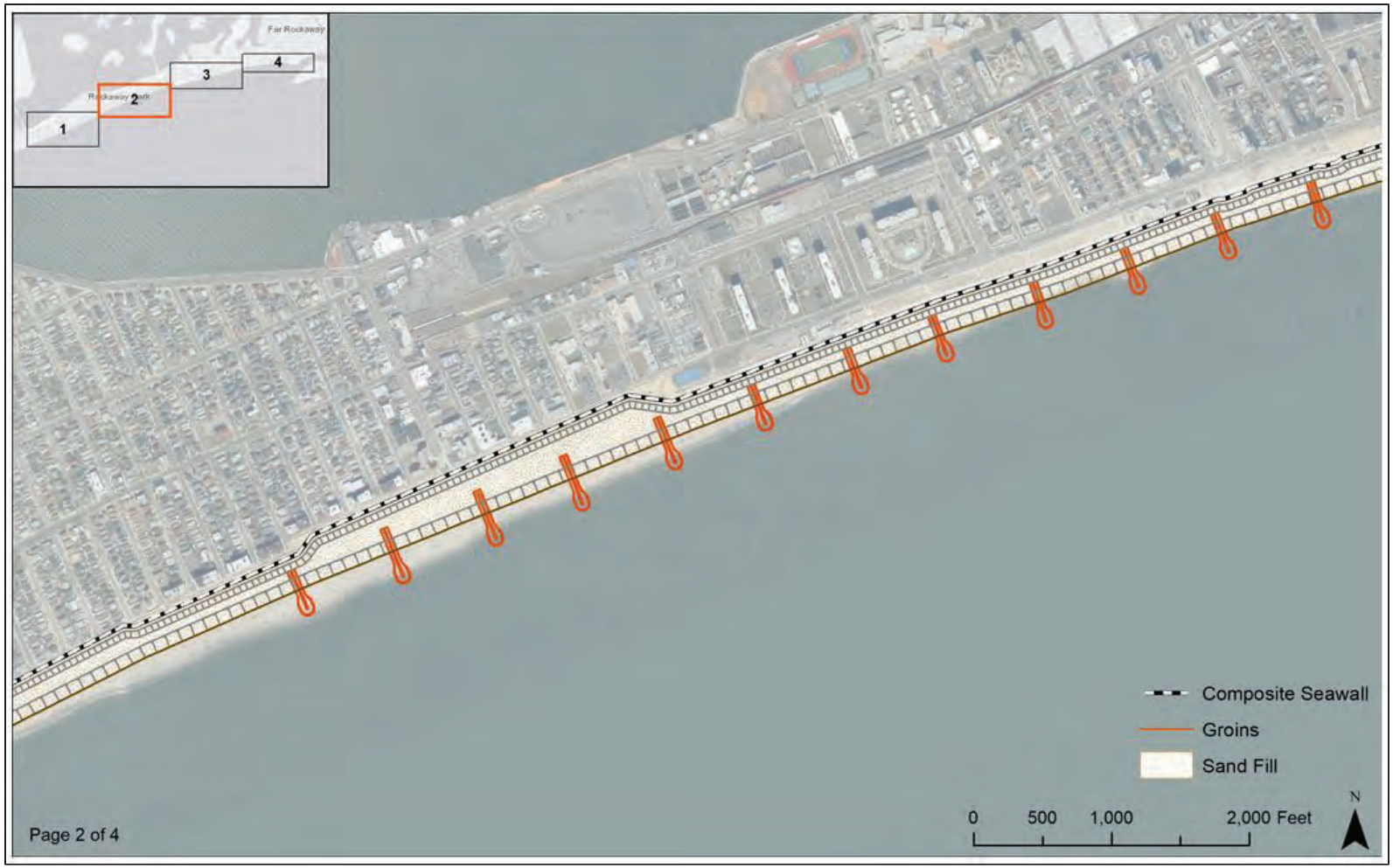


Figure 4: Groin Rehabilitation, beach fill and composite seawall along the Atlantic shoreline.

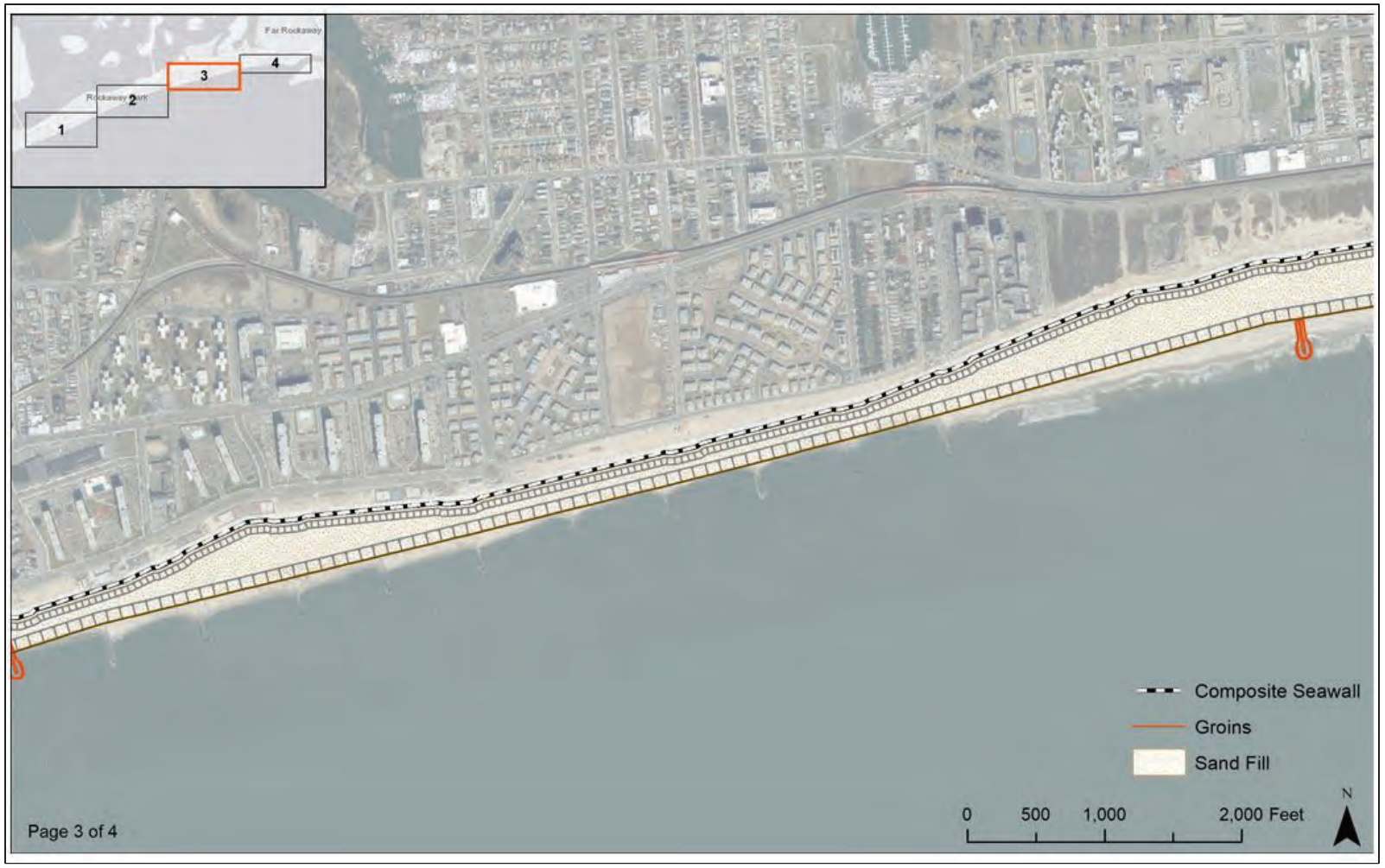


Figure 5: Composite seawall, beach fill and new groin construction (east) along the Atlantic shoreline.

Figure 6: New groin construction, beach fill and composite seawall along the Atlantic shoreline.

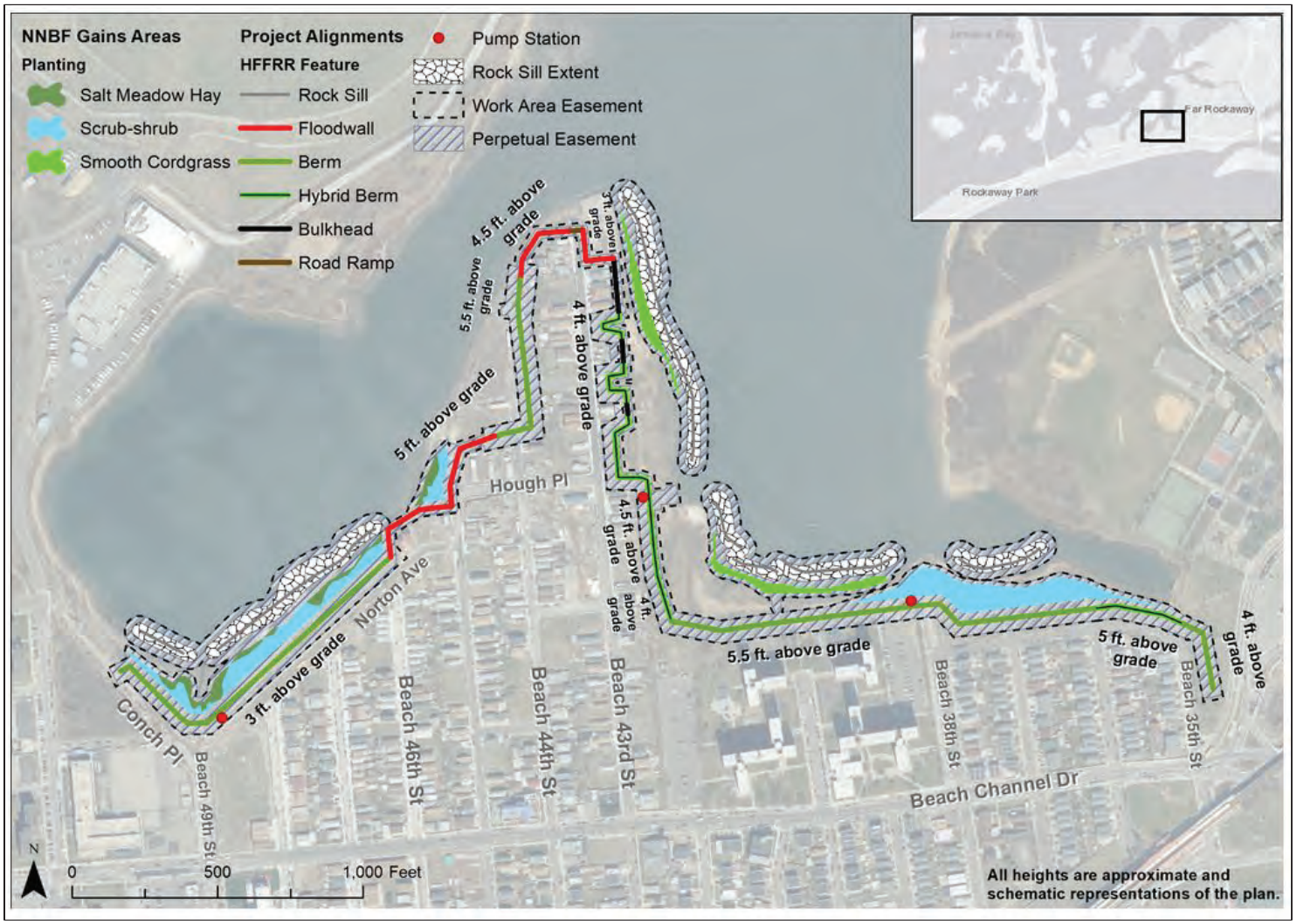


Figure 8: Edgemere High-Frequency Flood Risk Reductions Measures.

Figure 9: Arverne High-Frequency Flood Risk Reduction Measures

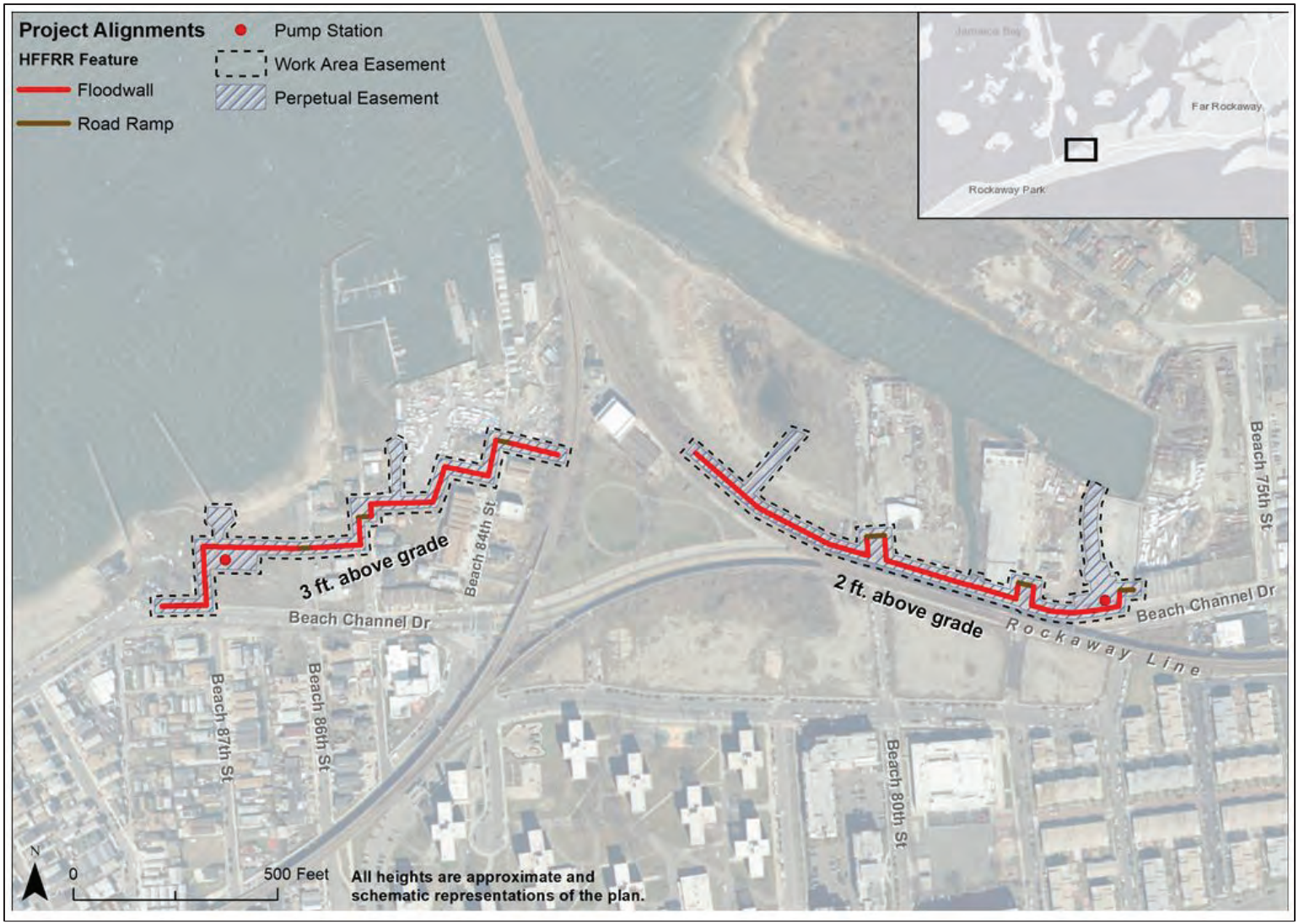


Figure 10: Hammels High-Frequency Flood Risk Reduction Measures

Figure 11: Location of Jacob Riis Park Historic District in relation to the project alignment APE.

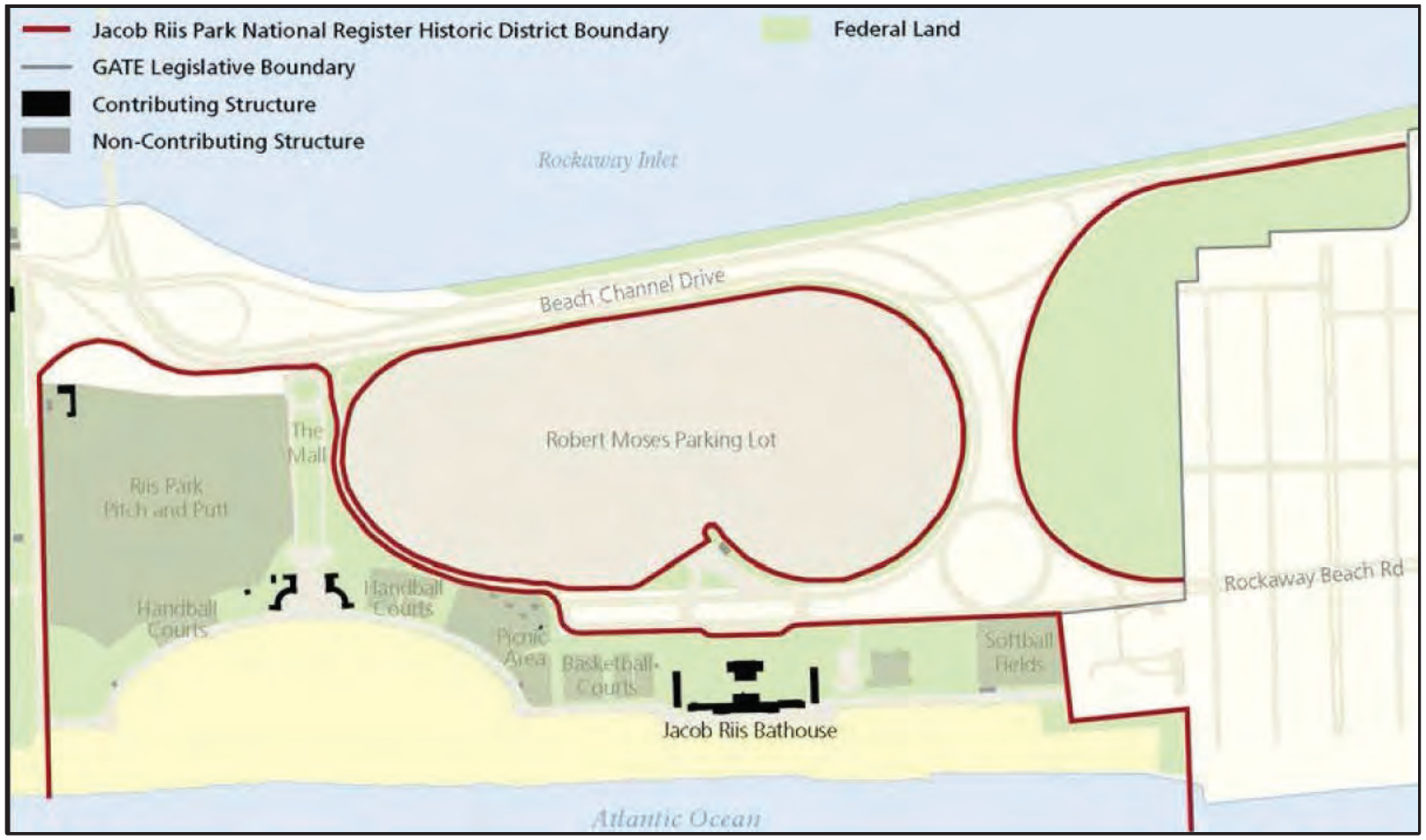


Figure 12: Jacob Riis Park Historic District elements.

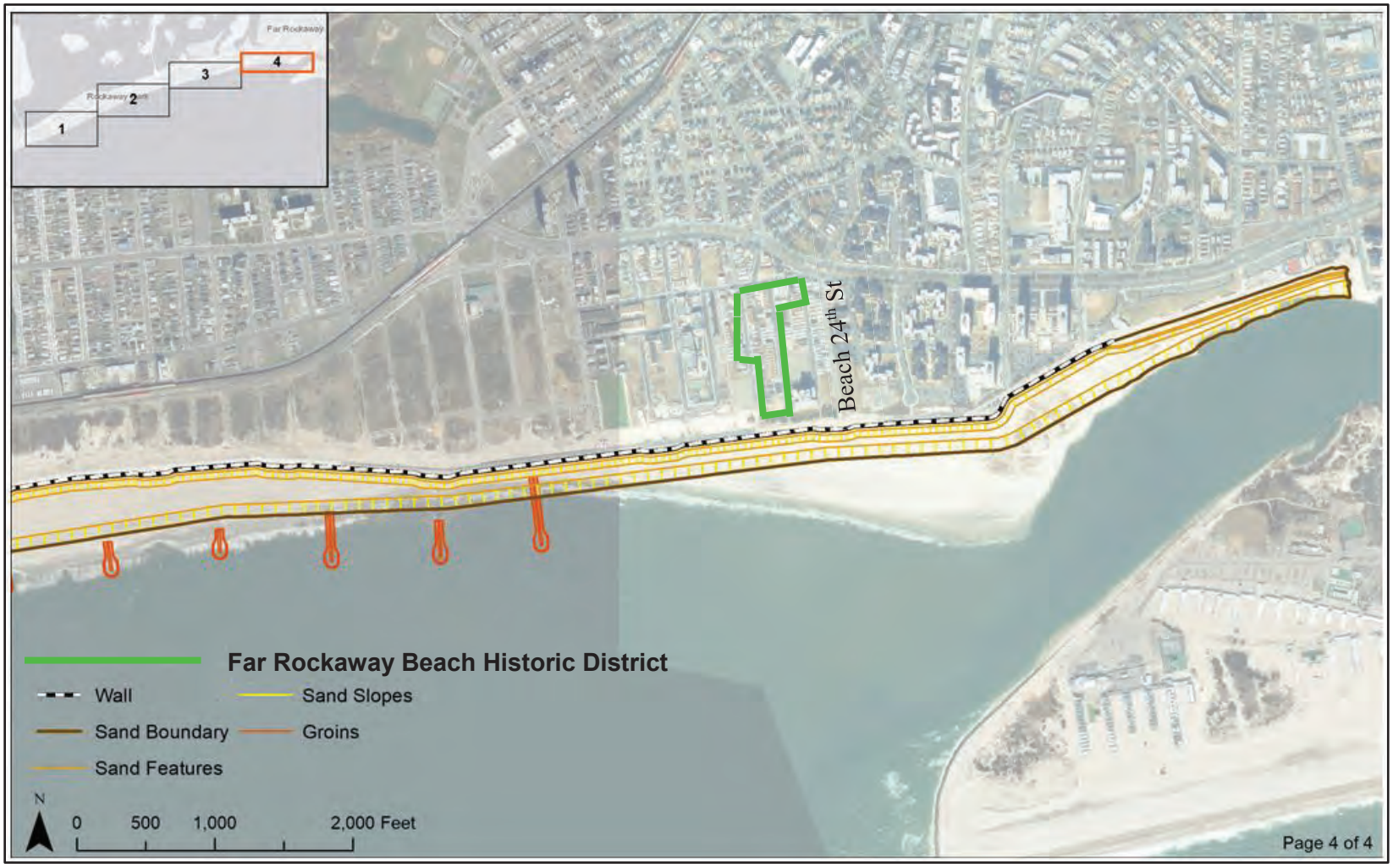


Figure 13: Location of the Far Rockaway Historic District and the project alignment APE.

APPENDIX C: HUMAN REMAINS DISCOVERY PROTOCOL

State Historic Preservation Office/
New York State Office of Parks, Recreation and Historic Preservation
Human Remains Discovery Protocol
(November 28, 2008)

In the event that human remains are encountered during construction or archaeological investigations, the New York State Historic Preservation Office (SHPO) recommends that the following protocol is implemented:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains be encountered work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.

- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.

- The county coroner/medical examiner, local law enforcement, the SHPO, the appropriate Indian Nations, and the involved agency will be notified immediately. The coroner and local law enforcement will make the official ruling on the nature of the remains, being either forensic or archaeological.

- If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred choice of the SHPO and the Indian Nations. The involved agency will consult SHPO and appropriate Indian Nations to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance.

- If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred choice of the SHPO. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

Division for Historic Preservation
P.O. Box 189, Waterford, New York 12188-0189
518-237-8643

May 15, 2013

Leonard Houston
U.S. Army Corps of Engineers, New York District,
Jacob K. Javits Federal Building
26 Federal Plaza
New York, New York 10278-0090

Re: CORPS
East Rockaway Beach Nourishment Project
East Rockaway Inlet
QUEENS, Queens County
13PR02248

Dear Mr. Houston:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Deputy Commissioner for Historic Preservation

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK, N.Y. 10278-0090

Reply to
Environmental Analysis Branch

May 3, 2013

Ms. Ruth L. Pierpont, Director
Historic Preservation Field Services Bureau Office
New York State Offices of Parks, Recreation and Historic Preservation
Pebbles Island – P.O. Box 189
Waterford, NY 12188-0189

RE: USACE East Rockaway Beach Nourishment Project
Dredging of East Rockaway Inlet

Dear Ms. Pierpont:

The U.S. Army Corps of Engineers, New York District (NY District) under the emergency provisions under Public Law (PL) 84-99, Flood and Coastal Storm Emergencies and PL 113-2 (Repair) and The Disaster Relief Appropriations Act – 2013 (Restore), at the request of New York State, is in the process of restoring damages to Rockaway Beach caused by Hurricane Sandy so as to restore protection to the community before the next storm season. The Atlantic Coast of Long Island New York project sustained considerable damages from Hurricane Sandy between October 28 and 30, 2012. It is critical that the rehabilitation is carried out rapidly to return protection to the affected communities and infrastructure.

For the repair and restoration activities at Rockaway Beach, the District anticipates placing approximately 3.5 Million cy/yds of sand along 6.2 miles of shoreline between Beach 19th street and Beach 149th street, all areas where we have historically placed sand in the past. The existing project constructed under the prior Section 934 effort consisted of building a 100-foot wide berm to an elevation of +10 feet National Geodetic Vertical Datum of 1929 (NGVD) (Enclosure 2-3: Proposed project scope, location and borrow area location).

The District's dredging procurement strategy is as follows:

CONTRACT 1A: The specifications will include utilization of a cutter head dredge to obtain 800,000 c/yds of East Rockaway Inlet sand. The District anticipates award of this contract can be made in Mid-May. Sand placement would be for Rockaway Beach and start early June in the vicinity of the end groin around Beach 89th, and move west to Beach 149th. This is primarily to address the most critical sand losses, and to avoid potential piping plover nesting areas in the eastern half of the project.

CONTRACT 1B: This action would be for 2.8 Million c/yds of additional sand to complete Rockaway Beach using sand from the previously used offshore borrow area via a hopper dredge,

to complete the full Restoration of Rockaway Beach to design conditions. Contract award would likely not be until the June timeframe, because of additional Federal procedural reviews required when contracts near $50 Million in scope.

Federal undertakings will comply with the Archaeological and Historical Preservation Act of 1974 (16 USC 469-469c), the Abandoned Shipwreck Act of 1987 (PL 100-298; 43 USC 2101-2106), The National Historic Preservation Act of 1966, as amended (16 USC 470) and the Advisory Council on Historic Preservation's implementing regulations 36CFR800 (protection of Historic Properties). Section 106 of the National Historic Preservation Act requires Federal agencies to provide the State Historic Preservation Officer (SHPO), as agent to the Advisory Council on Historic Preservation, reasonable opportunity to evaluate and comment on any Federal undertaking.

In a letter dated August 9, 2000, the New York State Office of Parks, Recreation and Historic Preservation Office stated that it reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966 and determined that the Corps' project will have no effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places (Enclosure 1).

Extensive archaeological recordation, archival documentation and investigations have been performed in the past for this project area in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations pursuant to 36 CFR 800.5. It is the NY District's opinion that the work as proposed will have no impacts to cultural resources and no further cultural resources studies will be undertaken if the plan remains as proposed.

Please review the enclosed documents that explain in further detail the scope of the emergency shoreline rehabilitation project and provide your comments in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations pursuant to 36 CFR. If you or your staff require additional information or have any questions, please contact Heather Morgan, Project Archaeologist at (917) 790-8730.

Sincerely,

L. Houston

Leonard Houston
Chief, Environmental Analysis Branch

Enclosures:
1: USACE and NYSHPO coordination letter, August 2000
2: PL84-99 Project Information Report (PIR), Record of the Environment (REC) for Hurricane Sandy Response
3: FCCE Hurricane Sandy Rehab, Atlantic Coast of NYC, Rockaway and Coney Island Drawing

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

February 17, 2006

Christopher Ricciardi
Project Archaeologist
Environmental Analyst Branch
New York District
US Army Corps of Engineers
Jacobe K. Javits Federal Building
New York, NY 10278-0090

Dear Mr. Ricciardi,

Re: CORPS
Rockaway Beach Nourishment Project
Dredging of East Rockaway Inlet
Queens County, NY
05PR05274 formerly 00PR2949

Thank your for requesting the comments of the New York State Historic Preservation Office (SHPO) with regard to the potential for this project to affect significant historical/cultural resources. SHPO had previously reviewed the report *Remote Sensing Survey of the Proposed Borrow Area for the East Rockaway Reformulation Project, Queens County, New York* prepared by Panamerican Consultants, Inc. in September 2005. Based on that review, SHPO had asked for additional information to addresses the potential for submerged prehistoric sites. In response you have provided SHPO with extensive coring information that had been collected for proposed borrow Area A. Based on those logs, SHPO has no further concerns regarding this issue.

Please contact me at extension 3291, or by e-mail at douglas.mackey@oprhp.state.ny.us, if you have any questions regarding these comments.

Sincerely

Douglas P. Mackey
Historic Preservation Program Analyst
Archaeology

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK, NY 10278-0090

REPLY TO
ATTENTION OF

February 15, 2006

Environmental Analysis Branch

Ms. Ruth L. Pierpont, Director
Historic Preservation Field Services Bureau
New York State Office of Parks, Recreation and Historic Preservation
Peebles Island - P.O. Box 189
Waterford, New York 12188-0189

RE: CORPS
Rockaway Beach Nourishment Project
Dredging of East Rockaway Inlet
Queens, Queens County
00PR2949

Dear Ms. Pierpont:

The U.S. Army Corps of Engineers, New York District (Corps), is pleased to furnish you with the copy of portions of the Engineering Report, *Preliminary Investigation – Borrow Area Identification and Investigation for the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York Reformulation Study*. This report details the coring samples taken within the proposed Borrow Area A for the East Rockaway Project.

As per your request for information with regard to the undertaking studies for previously buried land surfaces, according to the study report sand cores taken to a depth of twenty feet did not reveal indications of stratified levels. The samples were fairly uniform in their composition. No discernable intrusions and/or inclusions were uncovered. The lack of stratigraphy in the samples supports the notion that the removal of sand to the recommended depth of twenty feet will not disturb potentially buried stratified surfaces. The uniformity of the samples helped to make Borrow Area A the choice for sand mining for the proposed project. Based on this information, additional studies for the potential to uncover buried land surfaces were not required in our Scope of Work.

If you have further questions, please contact the Project Archaeologist, Dr. Christopher Ricciardi at (917) 790-8630 or christopher.g.ricciardi@usace.army.mil.

Sincerely,

L. Houston

Leonard Houston
Chief, Environmental Analysis Branch

Enclosure

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK, NY 10278-0090

REPLY TO
ATTENTION OF

November 22, 2005

Environmental Analysis Branch

Ms. Ruth L. Pierpont, Director
Historic Preservation Field Services Bureau
New York State Office of Parks, Recreation and Historic Preservation
Peebles Island - P.O. Box 189
Waterford, New York 12188-0189

RE: CORPS
Rockaway Beach Nourishment Project
Dredging of East Rockaway Inlet
Queens, Queens County
00PR2949

Dear Ms. Pierpont:

The U.S. Army Corps of Engineers, New York District (Corps), is pleased to furnish you with the final copy of, *Remote Sensing Survey Of the Proposed Borrow Area for the East Rockaway Reformulation Project, Queens County, New York Project.*

As per your letter dated October 24, 2005, the Corps thanks you for your comments and agreement with the assessment of the report with regard to the East Rockaway Borrow Area Project. The Corps is currently preparing the supplemental data that your office requested with regard to Coring Sample Information and will provide that information shortly.

Once again, thank you for your participation in the Section 106 process with regard to the East Rockaway Reformulation Project.

Sincerely,

L. Houston

Leonard Houston
Chief, Environmental Analysis Branch

Enclosure

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

October 24, 2005

Christopher Ricciardi
Project Archaeologist
Environmental Analyst Branch
New York District
US Army Corps of Engineers
Jacobe K. Javits Federal Building
New York, NY 10278-0090

Dear Mr. Ricciardi,

Re: CORPS
Rockaway Beach Nourishment Project
Dredging of East Rockaway Inlet
Queens County, NY
00PR2949

Thank your for requesting the comments of the New York State Historic Preservation Office (SHPO) with regard to the potential for this project to affect significant historical/cultural resources. SHPO has reviewed the report *Remote Sensing Survey of the Proposed Borrow Area for the East Rockaway Reformulation Project, Queens County, New York* prepared by Panamerican Consultants, Inc. in September 2005. Based on this review, SHPO offers the following comments.

1. SHPO concurs with the recommendations concerning the three identified potential shipwrecks.

2. Although the report addresses the potential for submerged prehistoric sites, and discusses potential ways to identify landforms that may contain such sites, there appears to be no actual attempt to identify such landforms, or detailed discussion of why this may not be appropriate for this project. Please provide further details on this potential and why the identified survey or analysis was not completed

Please contact me at extension 3291, or by e-mail at douglas.mackey@oprhp.state.ny.us, if you have any questions regarding these comments.

Sincerely

Douglas P. Mackey

Douglas P. Mackey
Historic Preservation Program Analyst
Archaeology

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

August 11, 2003

Nancy Brighton
US Army Corps of Engineers
Jacob Javits Federal Building
New York, NY 10278-0090

Dear Ms. Brighton:

Re: CORPS
Rockaway Beach Project
T-Groing Placements
Brooklyn, Kings County, New York
03PR03715

Thank you for requesting the comments of the State Historic Preservation Office (SHPO) with regard to the potential for this project to affect significant cultural/historical resources. SHPO has reviewed the report "Draft Report - Cultural Resources Assessment of T-Groin Placement, Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet, and Jamaica Bay, Queens County, New York, Section 934" prepared by Panamerican Consultants, Inc. in June 2000. Based on this review, SHPO concurs with the recommendations of the report for limited Phase 1B underwater investigation .

Please contact me at extension 3291 if you have any questions regarding these comments.

Sincerely

Douglas P. Mackey

Douglas P. Mackey
Historic Preservation Program Analyst
Archaeology

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

October 29, 2002

Leonard Houston
Corps of Engineers
New York District
Jacob Javits Federal Building
New York, New York 10278-0090

Re: CORPS
Rockaway Beach Shoreline – Beach Renourishment Projects/Rockaway Beach, East Rockaway Inlet
Brooklyn/Queens, Kings/Queens County
02PR04702

Dear Mr. Houston:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966.

Based upon this review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

RLP:cmp

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

September 20, 2002

Environmental Analysis Branch

Ms. Ruth L. Pierpont, Director
Historic Preservation Field Services Bureau
New York State Office of Parks, Recreation and Historic Preservation
Peebles Island - P.O. Box 189
Waterford, New York 12188-0189

RE: CORPS
Rockaway Beach Project
Brooklyn, Kings County
89PR1188

CORPS
East Rockaway Inlet Channel Dredging
Queens County
92PR1171

Public Notice No. 00-ERIMDSN

CORPS
Beach Nourishment Rockaway Beach/Channel
Dredge East Rockaway Inlet
Queens, Queens County
00PR2949

Dear Ms. Pierpont:

The U.S. Army Corps of Engineers, New York District (Corps), in its continuing effort to nourish the beaches along the Rockaway Beach shoreline as part of the above referenced Beach Erosion Control and Hurricane Protection Project for the East Rockaway Inlet, Queens County, New York (89PR1188), proposes to place material dredged from Borrow Area #2 along the shoreline between Beach 19th Street and Beach 148th Street (92PR1171; Enclosure 1). This renourishment will be the final sand placement as part of the 89PR1188 Project. These proposed actions are also described in the above referenced Public Notice issued June 16, 2000, by the Corps (Enclosure 2).

As part of previous coordination efforts for the Beach Erosion Control and Hurricane Protection project, the placement of sand on the beach from Beach 19th Street to Beach 148th Street has been determined to have no effect on historic properties (Enclosures 3 and 6). In addition, the use of material from Borrow Area 2 was also determined to have no effect on historic properties (Enclosures 3, 4 and 5). The proposed sand placement will occur from October 2003 through February 2004.

Please review the enclosed materials and provide your comments in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36 CFR 800, by November 1, 2002. If you have any questions or require additional information, please contact Mr. Chris Ricciardi, Project Archaeologist, at 212-264-0204. Thank you for your assistance.

Sincerely,

for Leonard Houston
Chief, Environmental Analysis Branch

Enclosures

US Army Corps
of Engineers
New York District
26 Federal Plaza
New York, N.Y. 10278
ATTN: CENAN-OP-ST

Public No Enclosure 2

In replying refer to:
Public Notice No. 00 ERIMDSN
Published: 6/16/00 Expires: 7/17/00

EAST ROCKAWAY INLET, NEW YORK FEDERAL NAVIGATION PROJECT
MAINTENANCE DREDGING
and
SUPPLEMENTAL NOURISHMENT FOR THE FEDERAL BEACH EROSION CONTROL AND HURRICANE PROTECTION PROJECT FOR EAST ROCKAWAY INLET TO ROCKAWAY INLET AND JAMAICA BAY, NEW YORK

TO WHOM IT MAY CONCERN:

Pursuant to Section 404 (33 U.S.C. 1344) of the Federal Water Pollution Control Act (amended in 1977 and commonly referred to as the Clean Water Act) and Section 10 of the Rivers and Harbors Act, notice is hereby given that the U.S. Army Engineer District, New York proposes to perform maintenance dredging of the Federal Navigation Channel in East Rockaway Inlet (Attachment 1) with placement of dredged material along Rockaway beach. In addition, New York District is planning to perform a supplemental nourishment cycle for the Beach Erosion Control and Hurricane Protection Project for East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York. This would require dredging of the borrow area 2 (Attachment 2) and an intermediate area (East Rockaway Inlet Borrow area) adjacent to the western boundary of the scheduled maintenance dredging limits. The dredged material will be placed along Rockaway Beach.

FEDERAL PROJECT AUTHORIZED:

The Federal maintenance dredging project for East Rockaway Inlet Navigational channel was authorized by the Rivers and Harbors Act of 1930.

The Federal Beach Erosion Control and Hurricane Protection Project for East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York was authorized by the Flood Control Act of 1965 and subsequently modified in 1974 by the Water Resources Development Act (WRDA) and in 1986 in accordance with the authority provided by Section 934 of the WRDA.

FEDERAL PROJECT DESCRIPTION:

The existing Federal navigation project provides for a channel, 12 feet deep at mean low water, 250 feet wide from a 12 foot depth contour in the Atlantic ocean to a 12 foot depth contour in East Rockaway Inlet, and a 4,250 foot long jetty on the eastern side of the inlet. The channel is about 1.4 miles long.

It should be noted that due to the rapid shoaling nature of the East Rockaway inlet, advance maintenance measures are being considered, including: 1) maintaining a previously constructed deposition basin with a variable width of 150 - 270 feet which is directly parallel to the entire western boundary of the channel; and 2) maintaining a second deposition basin with a maximum width of 200 feet and length of about 0.4 miles directly parallel to the eastern boundary of the outer portion of the channel. Advance maintenance dredging of 14 feet plus 2 feet allowable overdepth has been performed for the entire channel during past maintenance operations and is planned for the proposed maintenance dredging.

In order to maximize the amount of sand available for beachfill, supplemental dredging and nourishment for the Beach Erosion Control and Hurricane Protection Project for East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York will be performed. The sand for the supplemental nourishment will be dredged from an intermediate area west of the western deposition basin described above, and placed on the beaches between B27th and B40th Streets. The dimensions of this area would be 300 feet by 0.4 miles long.

Additionally, to provide beachfill in the vicinity of Beach 90th Street, the Beach Erosion Control and Hurricane Protection Project authority would be utilized to dredge a 0.22 square mile portion of a borrow area approximately 1 mile offshore (identified as borrow area number 2) to a depth of no greater than 20 feet below existing grade. This material would be placed onto the beaches between B96th and B110th Streets.

DESCRIPTION OF PROPOSED FEDERAL ACTION:

The first proposed action by the U. S. Army Engineer District, New York is the future maintenance dredging of the Federal Navigation Channel and deposition basins in East Rockaway Inlet. Approximately 210,000 cubic yards of sand will be dredged from the inlet and used in a beneficial manner as beachfill, placed along severely eroded areas of the Rockaway beach shoreline. Maintenance dredging of the channel is generally accomplished by hydraulic or similar plant. The entire channel will generally not require maintenance dredging; only areas where shoaling has reduced the depth of the channel will require dredging. The

project was last dredged in 1998, with the removal of about 218,000 cubic yards with placement along the shoreline (Rockaway Beach) west of the inlet. The currently proposed action is intended to provide a safe navigation route through the inlet and to utilize the sand dredged from the inlet in a beneficial manner as replenishment for the nearby shoreline.

The second proposed action by the New York District is the supplemental nourishment which requires dredging an intermediate area west of the western deposition basin and the borrow area 2 and placing the material as beach erosion control and hurricane protection along severely eroded areas of the Rockaway Beach shoreline. This action was last performed in 1996 when a total of about 2,700,000 cubic yards were dredged from an offshore borrow site and placed along Rockaway beach shoreline. For the currently proposed action a combined total of approximately 700,000 cubic yards of sand is expected to be dredged with about 300,000 cubic yards being removed from the intermediate area adjacent to the navigation channel and deposition basins, and the remaining quantity coming from the borrow area 2.

PLACEMENT SITE:

The dredged material from the proposed actions shall be placed along the beaches west of the inlet. Specifically, material dredged from East Rockaway Inlet, including the intermediate area, shall be placed on the beaches between B27th and B40th Streets; material dredged from the offshore borrow area shall be placed between B96th and B110th Streets. Between maintenance operations the bypassed sand placed at the feeder beach would be carried by littoral drift to feed down-drift beaches. The maintenance dredging operation would thus serve to place sand trapped in the channel back into the normal littoral movement that naturally replenishes the western beaches, while maintaining a safe channel for navigation. The beach nourishment operation would serve as replenishment to severely eroded areas of the Rockaway Beach shoreline.

ENVIRONMENTAL IMPACT ASSESSMENT:

The New York District has done a review of the Environmental Assessment (EA) for the maintenance dredging of East Rockaway Inlet project, dated October 1998, which updated an EA prepared in 1993. The EA prepared in 1993 had updated an Environmental Impact Statement that was prepared in September 1973 for maintenance dredging of East Rockaway Inlet Federal Navigation channel. It was determined that maintenance dredging of East Rockaway Inlet with placement of the sand as nourishment along the nearby shoreline of the designated beach would have no significant adverse environmental impact on water quality, marine

resources, wildlife, endangered species, recreation, aesthetics and flood protection of the area.

An update of the 1998 EA and an update of Section 404(b)(1) of the Clean Water Act 40 CFR 230 will be prepared.

In addition, New York District has also done a review of the Environmental Assessment for borrow area dredging and beach nourishment, dated 1993, which updated an EA prepared in 1973. It was determined that borrow area dredging with placement of sand as nourishment along the nearby shoreline of the designated beach would have no significant adverse environmental impact on water quality, marine resources, wildlife, endangered species, recreation, aesthetics and flood protection of the area.

An update of the 1993 EA and an update of Section 404(b)(1) of the Clean Water Act 40 CFR 230 will be prepared.

ALTERNATIVES TO THE PROPOSED ACTION:

a. No Dredging - The no dredge alternative would result in the continued shoaling of the inlet, which will eventually lead to the loss of accessibility for those activities that depend upon the inlet for water transportation.

b. USEPA designated East Rockaway Inlet Placement Site - The inlet placement site is located within a short distance from the inlet. The Corps has used this inlet placement site in the past for placement of sand dredged from the East Rockaway Inlet Federal Channel. While this alternative will potentially provide littoral drift to feed the local beaches, its action would not provide the direct benefit of placing the material on the nearby shoreline of a designated beach.

c. No Beach Nourishment - The no nourishment alternative would result in continued erosion of the Rockaway Beach shoreline, which will eventually undermine the structures of the State property and increase the potential for storm damage due to wave action and flooding.

d. Alternative to Borrow Area 2 - Utilization of the Borrow Areas 1A or 1B, which are described in the May 1993, "East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York, Final Reevaluation Report (Section 934 of WRDA 1986)," is not economically feasible for this supplemental nourishment action due to the lack of access to Borrow Area 1A (dredging would be required to provide access) and availability of an adequate quantity of material at Borrow Area 1B. In addition, the location of both sites would establish a higher unit price per cubic yard due to the greater pumping distance.

GRAIN SIZE ANALYSES:

Results of grain size analyses performed on samples collected within the project area have indicated that the material to be deposited is predominantly sand (greater than 90% sand). Therefore, the proposed dredged material would be physically compatible for beach placement, and placement on the beach would be consistent with existing laws and regulations.

MISCELLANEOUS INFORMATION:

Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. (531)) and based upon a review of the latest published version of the threatened and endangered species listing, a preliminary determination is that the activity under consideration will not affect those species listed (piping plover), or proposed for listing (roseate tern) or their critical habitat, if the work is performed after 15 September and before 1 April. This will avoid the critical time frame for piping plover nesting, as determined by the U.S. Fish and Wildlife Service.

There are no known sites within the surrounding area that are eligible for or included in the National Register of Historic Places. Presently no known archaeological, scientific, prehistorical or historical data are expected to be lost by work accomplished under the required dredging.

Water Quality Certifications (WQC) have been obtained from the New York State Department of Environmental Conservation in accordance with Section 401 of the Clean Water Act, for maintenance dredging of East Rockaway Inlet and beach nourishment involving dredging of borrow area 2, with material from both operations being placed at Rockaway Beach. An amendment to the beach nourishment WQC will be obtained prior to dredging of the intermediate area (East Rockaway Inlet borrow area) with placement of dredged material at Rockaway Beach.

Pursuant to Section 307 of the Coastal Zone Management Act of 1972 as amended [16 USC 1456(C)], for activities conducted or supported by a federal agency in a state which has a federally approved coastal Zone Management (CZM) program, the Corps will submit a determination that the proposed project is consistent with the State CZM program to the maximum extent practicable. The Corps will request the State's concurrence with that determination. For activities within the coastal zone of the State of New York, project information is available from the Consistency Coordinator, New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, Coastal Zone Management Program, 41 State Street, Albany, New York 12231, Telephone (518) 474-3642.

In compliance with Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (1996 amendments), an Essential Habitat Assessment will be prepared and submitted to the National Marine Fisheries Service for review and comments.

The proposed work is being coordinated with the following Federal, State and Local Agencies:

U. S. Environmental Protection Agency

U. S. Department of Commerce, National Marine Fisheries Service

U. S. Department of the Interior, Fish and Wildlife Service

U. S. Coast Guard, Third Coast Guard District

New York State Department of Environmental Conservation

New York State Department of State

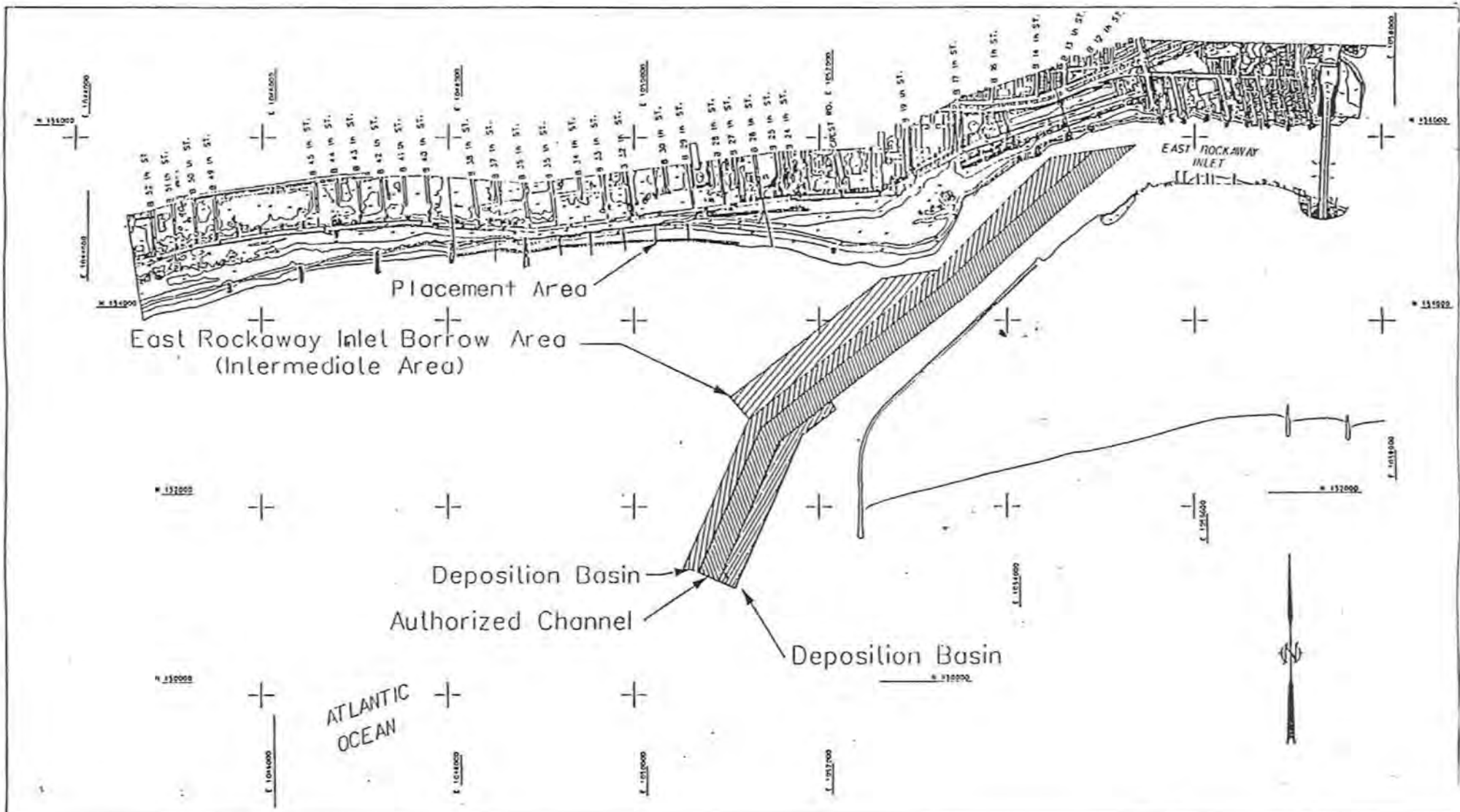
ALL COMMENTS REGARDING THIS ACTIVITY MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE AT THE ADDRESS ON THE FRONT PAGE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

Any person who has an interest which may be affected by the placement of this dredged material may request a public hearing. The request must be submitted in writing to the District Engineer within the comment period of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by the activity. It should be noted that information submitted by mail is considered just as carefully in the process and bears the same weight as that furnished at a public hearing.

It is requested that you communicate the foregoing information concerning the proposed work to any persons known by you to be interested and who have not received a copy of this notice. If you have any questions, please do not hesitate to contact Mr. William Vanterpool of this office at (212) 264-9032.

JOHN R. HARTMANN
Chief, Operations Division

Enclosure
1. East Rockaway Inlet
2. Borrow Area 2



ATTACHMENT 1

SURVEY OF: EAST ROCKAWAY INLET

EAR ROCKAWAY NEW YORK

SCALE

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Bernadette Castro
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

August 9, 2000

Leonard Houston
Acting Chief, Environmental Analyst Branch
U.S. Army Corps of Engineers
New York District
Jacob K. Javits Federal Building
New York, New York 10278-0090

Dear Mr. Houston:

Re: CORPS
Beach Nourishment Rockaway Beach/Channel
Dredge East Rockaway Inlet
Queens, Queens County
00PR2949

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966.

Based upon our review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

RLP:bsd

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

July 17, 2000

Environmental Analysis Branch
Environmental Assessment Section

Ms. Ruth L. Pierpont
Director
Historic Preservation Field Services Bureau
New York State Office of Parks, Recreation and
Historic Preservation
Peebles Island
P.O. Box 189
Waterford, New York 12188-0189

RE: CORPS
Rockaway Beach Project
Brooklyn, Kings County
89PR1188

CORPS
East Rockaway Inlet Channel Dredging
Queens County
92PR1171

Public Notice No. 00-ERIMDSN

Dear Ms. Pierpont;

The U.S. Army Corps of Engineers, New York District (New York District), in its continuing effort to nourish the beaches along the Rockaway Beach shoreline as part of the above referenced Beach Erosion Control and Hurricane Protection Project for East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Queens County, New York (89PR1188), proposes to place material dredged from the nearby East Rockaway Inlet Federal channel and a borrow area adjacent to the Federal channel along the shoreline between Beach 27th Street and Beach 40th Street (92PR1171; Enclosure 1). These proposed actions are also described in the above referenced Public Notice issued June 16, 2000, by the New York District (Enclosure 2).

As part of previous coordination efforts for the Beach Erosion Control and Hurricane Protection project, the placement of sand on the beach from Beach 19th Street to Beach 149th Street has been determined to have no effect on historic properties (Enclosure 3). In addition, the use of material from the Federal channel, Borrow Area 2 and portions of Borrow Area 1A and 1B were also determined to have no effect on historic properties (Enclosures 4, 5 and see Enclosure 3). As part of the current renourishment effort, an additional source of sand, the East Rockaway Inlet Borrow Area, located along the west side of the Federal channel will be utilized, in association with sand from the Federal channel and Borrow Area 2.

The East Rockaway Inlet Borrow Area is located in a very active inlet with continuous scouring and shoaling of sand on the inlet bottom. The inlet borrow area is about 300 feet wide and approximately 2120 feet long (Enclosure 6). The New York District proposes to remove approximately 300,000 cubic yards from the inlet borrow area for placement on the shoreline between Beach 27th Street and Beach 40th Street. The inlet borrow area and the adjacent channel would be dredged to about 14 feet below mean low water plus 2 feet allowable over-dredge. According to a sample of soundings taken since 1985, the East Rockaway Inlet Borrow Area has varied in depths from 12.5 –19 feet below MLW in 1985 to 8 – 15 feet MLW in 1996 to between 1 – 14 feet MLW in May 2000 (Enclosures 7 and 8; see also Enclosure 6).

According to the Cultural Resources Reconnaissance Report prepared for the Atlantic Coast of Long Island from East Rockaway Inlet to Jones Inlet (Pickman 1993), East Rockaway Inlet and the west end of Long Beach Island were situated in their current locations by the beginning of the 20th century (Enclosure 9). According to maps from the 19th century, the present location of East Rockaway Inlet was once the location of the western end of the former "Far Rockaway Beach", which had extended east toward Long Beach Island (Pickman 1993:23-24). By 1931, the inlet's position became fixed with the construction of seven timber groins and a timber bulkhead built on the east side of the inlet. Two years later, the East Rockaway Inlet jetty was built by the U.S. Army Corps of Engineers and the sand captured by the new jetty buried the earlier structures. A stone seawall that extended along the east shore of the inlet and connected to the landward end of the jetty was built in 1952 (Pickman 1993:32).

Although the area of the inlet was once a part of Rockaway Beach, the subsequent erosion of the area to a depth several feet below mean low water and continued scouring of the inlet would indicate there is no potential for the identification of significant cultural resources that are eligible for the National Register. It is also likely that the initial dredging and periodic maintenance of the Federal channel may have impacted sections of the borrow area adjacent to the channel. The New York District has determined that the dredging of the East Rockaway Inlet Borrow Area will have no effect on historic properties.

Please review the enclosed materials and provide your comments in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36 CFR 800, by August 7, 2000. If you have any questions or require additional information, please contact Ms. Nancy Brighton, Project Archaeologist, at 212-264-2198. Thank you for your assistance.

Sincerely,

L. Houston

Leonard Houston
Acting Chief, Environmental Analysis Branch

Enclosures

Nancy

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

Bernadette Castro
Commissioner

May 10, 2000

Frank Santomauro, P.E.
Chief, Planning Division
U.S. Army Corps of Engineers
New York District
Jacob K. Javits Federal Building
New York, New York 10278-0090

Dear Mr. Santomauro:

Re: CORPS
Rockaway Inlet to Norton's Point Reconaissance
Brooklyn, Kings County
89PR1188

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966.

Based upon our review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

RLP:bsd

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

April 27, 2000

Environmental Analysis Branch
Environmental Assessment Section

J. Winthrop Aldrich
New York State Office of Parks, Recreation
and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island
P.O. Box 189
Waterford, New York 12188-0189

RE: CORPS
Rockaway Beach Project
Brooklyn, Kings County
89PR1188

Dear Mr. Aldrich;

Reference is made to the remote sensing survey conducted in 1993 by WCH Industries, Inc., in association with the Darling Marine Center, for the U.S. Army Corps of Engineers, New York District (New York District), within Borrow Area 2 as part of the above referenced project (Enclosure 1). The survey identified 34 side scan sonar targets and magnetometer anomalies throughout the borrow site. At the time of the survey, the New York District determined that the anomalies and targets would be avoided during sand removal and no further work was undertaken. Borrow Area 2 was not used as part of the initial beach fill activities for the project.

In an effort to identify enough suitable material for subsequent renourishment of the beach, the New York District has re-evaluated Borrow Area 2 and has determined that all of the borrow site must be used to provide the amount of material needed for beach placement. The New York District instructed Panamerican Consultants, Inc. (PCI), to relocate and investigate each of the targets and anomalies identified in the 1993 survey. Enclosed is the report entitled "Underwater Inspection of Targets, Borrow Area 2, Atlantic Coast of Long Island, East Rockaway Inlet to Rockaway Inlet, Queens County, New York, Storm Damage Reduction Project" that provides a description and the results of this investigation (Enclosure 2).

PCI was able to relocate 18 of the 34 targets originally recorded in 1993. All of the 18 relocated targets were identified as modern debris, specifically wire cable and concrete/rebar "bridge spans", that may have been intended for placement in the Rockaway Beach Artificial Reef located to the southwest of the borrow site. None of the targets are considered to be potentially significant submerged cultural resources. The 16 targets that are no longer present at their recorded locations were likely redeposited to other locations by either trawling activities, surf clam dredging, surge and/or current activity, or their identification was erroneous due to the

lack of contouring in the original survey. It has been determined that activities related to the dredging of Borrow Area 2 will not have an impact on any historically significant watercraft.

Please review the enclosed report and provide comments on this project to the New York District by May 31, 2000, in accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation, 36 CFR 800. If you have any questions or require additional information, please contact Nancy Brighton at 212-264-2198. Thank you for your assistance.

Sincerely,

Frank Santomauro

Frank Santomauro, P.E.
Chief, Planning Division

Enclosures

GAHAGAN & BRYANT ASSOCIATES, INC.
5803 KENNETT PIKE, SUITE D
CENTREVILLE SQUARE
WILMINGTON, DELAWARE 19807-1195
TEL. (302)652-4948 FAX. (302)655-9218
GBAWILMINGTON@GBA-INC.COM

GBA
ENGINEERS ★ SURVEYORS

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
NEW YORK, N.Y. 10278-0090

SURVEY OF:

EAST ROCKAWAY, NY
CONDITION SURVEY
ECHO SOUNDINGS

100 0 50 100 200 400

SCALE: 1 INCH = 100 FEET

PLOTTED BY: *J. DRAKE*

DATE OF SURVEY: *27 - 30 APRIL 2000*

SUBMITTED BY: *R. ROMAN*

FIELD BOOKS: *NY-08-2000*

APPROVED:

DATE: *17 MAY 2000*

SHEET 3 OF 4

N 153000

REQ. NO. 2044

Enclosure 6

N 131000

System.

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
NEW YORK, N. Y. 10007

SURVEY OF: EAST ROCKAWAY INLET, N.Y.

FINAL AFTER DREDGING
ECHO SOUNDINGS

SCALE ONE INCH = 100 FEET

BAR SCALE

PLOTTED BY: P.P., WAM II

DATE OF SURVEY: AS SHOWN

SUBMITTED BY: [signature]
CHIEF OF PARTY

FIELD BOOKS: 13829, 13830, 13843, 13844

APPROVED: [signature]
CHIEF, SURVEY BRANCH

DATE 23 October 85

SHEET 1 OF 1

FILI

Enclosure 7

E 2068500

IMPROVEMENTS

PROJECT CODE

PROJECT

MAINTENANCE DREDGING
EAST ROCKAWAY INLET

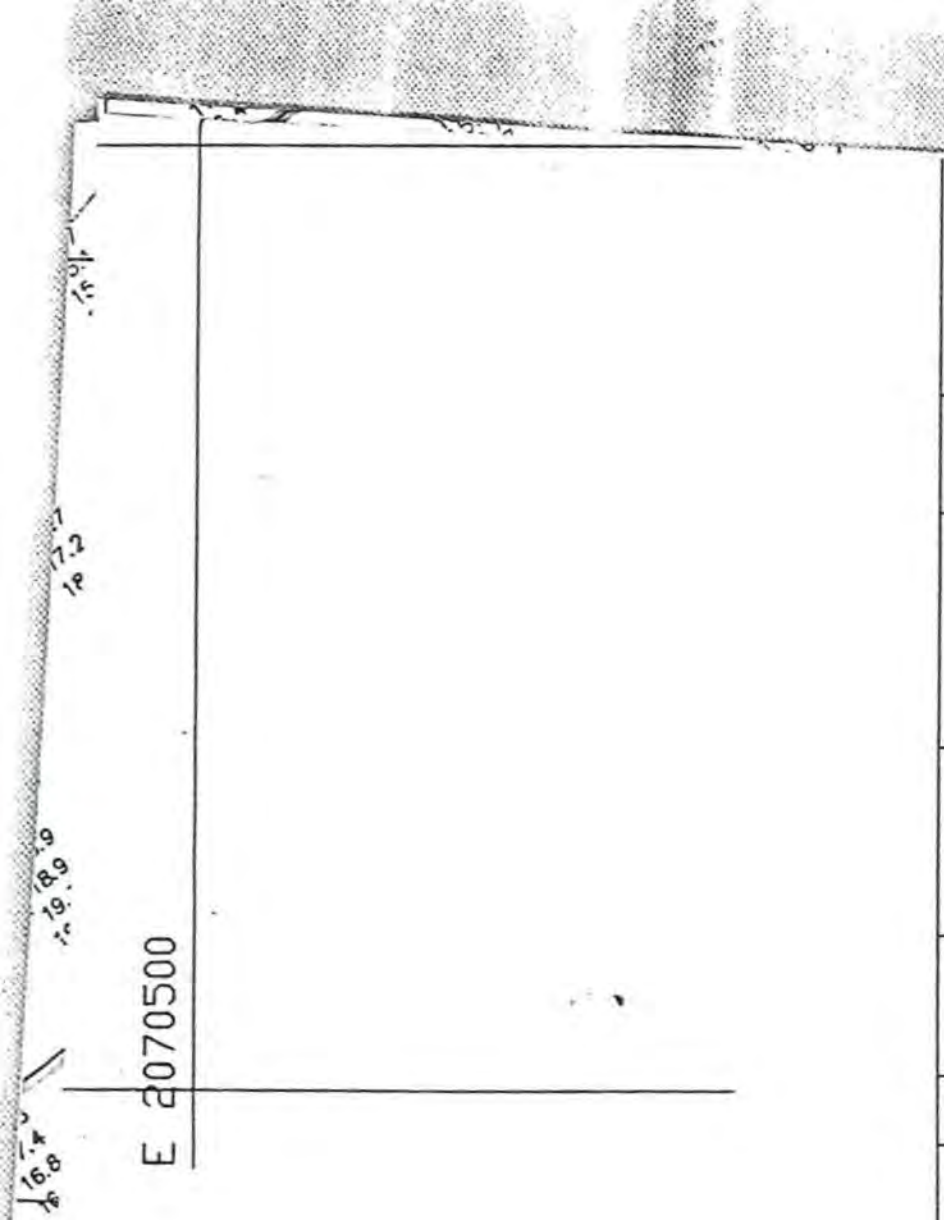
DRAWING TITLE

CONDITIONAL SURVEY

DRAWING NUMBER

GLDD / RZF1

PHASE		SHEET
SCALE 1in.= 100ft.	DRAWN J.L.H.	DESIGNED
DATE 27-OCT-1996	CHECKED	APPROVED



GREAT LAKES DREDGE & DOCK COMPANY

PROJECT CODE

PROJECT

MAINTENANCE DREDGING
EAST ROCKAWAY INLET

DRAWING TITLE

CONDITIONAL SURVEY

DRAWING NUMBER

GLDD / RZF1

PHASE date 27 Oct 96		SHEET
SCALE 1in.= 100ft.	DRAWN J.L.H	DESIGNED
DATE	CHECKED	APPROVED

CULTURAL RESOURCES RECONNAISSANCE
ATLANTIC COAST OF LONG ISLAND
JONES INLET TO EAST ROCKAWAY INLET
CITY OF LONG BEACH, VILLAGE OF ATLANTIC BEACH, LIDO BEACH AND POINT LOOKOUT AREAS, TOWN OF HEMPSTEAD
LONG BEACH ISLAND
NASSAU COUNTY, NEW YORK

92PR2416

by
Arnold Pickman

Submitted to:
U.S. Army Corps of Engineers
New York District

June 1993

Work Performed Under Contract No. DACW51-92-M-0636

Arnold Pickman

Arnold Pickman
Principal Investigator

years of the twentieth, the buildings associated with the U.S. Life Saving Stations and the Long Beach and Point Lookout Hotels and cottages continued to be the only structures on Long Beach Island. A second life saving station, not shown on the 1873 map was opened in the Point Lookout section of Long Beach Island. It is shown on maps dating to 1878 (Figure 20) and 1886 (Figure 25a) located near the shoreline in what is now the Lido Beach area.

By the 1890's both the Long Beach and Point Lookout lifesaving stations had been moved from their original locations. The Point Lookout station was apparently moved from its original location on or near the beach to a site on the northern portion of the island (see Figures 27a and 27c) approximately opposite the western portion of Alder Island.

The Long Beach life saving station was apparently moved twice from its location as shown in 1873 (Figures 18b and 18d). The 1896 Hyde map (Figure 31a and 31b) shows both an "old" and relocated position of this station. However, the "old" location shown on the map apparently refers to a ca. 1880's site. As noted above, in 1873 the station was located in the Edwards/Riverside Boulevard area. It was probably relocated when the Long Beach Hotel was constructed on the original site in 1880. This ca. 1880 site was located in the vicinity of the present Neptune Avenue, which at that time would have been near the west side of Luce's inlet. The station was subsequently moved again to the "new" location as shown on the 1896 map (Figures 27a and 27b), which was on the west end of Long Beach, near the present location of New York Avenue. It should be noted that an 1898 coastal survey chart (Figures 28a and 28b) continues to show the life saving station west of Luces' Inlet. However, this location is most likely uncorrected from an earlier edition of this chart. The location of the site as shown on subsequent maps (e.g. Figures 29 and 30) is the same as the "new" site as shown on the 1896 map.

4. Long Beach Island Morphology - Late Nineteenth/Early Twentieth Century Changes

Prior to 1886 Luce's Inlet had been partially closed by a strip of beach, but still existed as a shallow cove extending southward from Hempstead Bay (see Figure 25a). As noted above, through the third quarter of the 19th century, Rockaway Beach extended eastward to Hog Island Inlet. A body of water known as the "Bay of Far Rockaway" separated Far Rockaway beach from the mainland. This configuration is shown on maps as late as 1886 (see Figure 25b).

It would appear that after 1886 a new inlet had formed near the present location of East Rockaway inlet, creating a new island between this inlet and Hog Island Inlet (see Figure 26a). An 1898 map (see Figure 28a) indicates this new inlet as "Little Inlet and the new island as "Shelter Island", with Far Rockaway beach extending westward from "Little Inlet." After 1898 Hog Island Inlet closed, effectively extending Long Beach Island westward to East Rockaway Inlet. Thus by the first decade of the 20th century

(see Figures 29 - 31) the configuration of the western portion of Long Beach Island was close to that which now exists.

One source (Chief of Engineers 1929) states that the present East Rockaway inlet "is located at approximately the middle of the former long and narrow Bay of Far Rockaway", with the eastern end of the former Far Rockaway Beach now being incorporated into the present Long Beach Island. However, examination of the late 19th and early 20th century maps indicates that the present East Rockaway inlet is actually at the western end of the former "Far Rockaway Beach", with the present Reynolds Channel at the location of the former "Bay of Far Rockaway." Thus all of the late 19th century "Far Rockaway Beach", with the exception of its extreme western end, which was at the present location of the inlet, has apparently been incorporated into the present Long Beach Island.

On the eastern end of Long Beach Island, the 1851 Coastal Survey and 1859 Walling Maps (Figures 16 and 17a) had shown the west side of Jones Inlet aligned approximately with the east side of Alder Island. The 1873 Beers map (Figure 18a), reflects an apparent eastward shift of the eastern end of Long Beach Island and shows the western side of Jones Inlet aligned with the western portion of Meadow Island. However, a Coastal Survey map (Figure 20) indicates that by 1878 the Island's eastern end had once more retreated westward. This map also includes dashed lines which reflect shoreline changes occurring between 1878 and 1886. The northern portion of the eastern tip of Long Beach Island had evidently been eroded during this period with a narrow strip of land remaining on the southern shoreline. This strip extended eastward to once again approximately align with the western side of Meadow Island. This approximate configuration is also shown on the 1886 Beers map (Figure 25a).

Maps dating to to the 1890's and the first decade of the 20th century (Figures 26-31) show a similar configuration of the Point Lookout area to that shown on the ca. 1880's maps, with some minor changes, including an increase in the width of the Island.

At present the eastern end of Point Lookout is located some 2000-2500 feet further to the west than at the beginning of the twentieth century and is now aligned with the eastern portion of Alder Island (see Figure 71).

G. Early Twentieth Century Development

In 1898 a suit was brought by several individuals claiming ownership of Long Beach Island by virtue of a chain of purchases originating with John Hicks, who had purchased the land from a group of Hempstead freeholders in 1725. As noted above, a similar suit had been brought at the end of the 18th century. In 1902 the court again ruled that the ocean beach property was owned by the Town of Hempstead. This ruling cleared the way for the sale of Long Beach to private developers (Hazelton 1925:II:880).

steamboat dock. The dock on the north side of Point Lookout which was noted above also is not shown on any of the 20th century maps.

In 1939 a fishing pier was built at the foot of Magnolia Boulevard in Long Beach. This pier was destroyed during a hurricane in 1960 (Graf 1972:50). Graf (1972) notes that a new pier was built at this location. However, this pier has since been removed and no traces of either pier were noted during the reconnaissance.

J. Shore Protection Structures

The first shore protection structures on Long Beach were 51 wooden groins constructed in 1926 (Tolins 1956:110). These were extensively damaged by a severe storm in 1927, and extensive repairs were required (Tolins 1956:27). The ca. 1920's groins apparently were located only in the central portion of Long Beach. Graf (1972:25) indicates that the west end of Long Beach was not fully protected by groins until the 1940's.

Taney (1961:Table 4) indicates the dates of construction of shore protection structures in and near the study area as follows:

Long Beach	Groins and Bulkheads	1927
Long Beach	Groins	1937
Long Beach	Groins	1947
Lido Beach	Groins and Bulkheads	1930
Point Lookout	Groins and Bulkheads	1940
Atlantic Beach	Groins and Bulkheads	Before 1928
East Rockaway Inlet	Jetty	1934

Additional data as to shore protection structures in the project area were presented by the U.S. Army Corps of Engineers (1965) and summarized as follows:

Point Lookout - Four timber groins were constructed by the Town of Hempstead in 1949. They were subsequently destroyed and replaced by three stone groins in 1953.

Lido Beach - A total of four stone groins were build by Long Beach on the Ocean Inc. This construction took place in 1930 (as indicated above) and also in 1933.

Long Beach - In addition to the construction noted above four timber groins were constructed in 1944. These were subsequently destroyed.

Atlantic Beach - 28 timber and 5 stone filled timber groins were constructed between 1928 and 1933. It is uncertain if these include the groins listed above as constructed pre-1928. Two additional stone-filled timber groins were constructed in 1947. All of these groins have either been replaced, removed, destroyed or buried.

The existing groins within the study area were constructed beginning in 1945 (U.S. Army Corps of Engineers 1989). Nyman (1985) noted that remains of at least some of the earlier wooden groins are apparently still present in the Long Beach area and are periodically uncovered as a result of wave action. Remains of a number of these groins were noted in the City of Long Beach portion of the study area during the reconnaissance (see Figures 53a and 53b).

The remains of a timber groin were also noted in the eastern portion of the Silver Point Park section of Atlantic Beach (Figure 53c). Two other timber groins and a timber bulkhead were noted a short distance to the east (Figure 53d). The latter are apparently associated with one of the beach clubs located immediately east of the Silver Point Park section (see Figure 56).

The first shore protection structures on the west shore of Jones Inlet were constructed in 1939. During the 1940's the Town of Hempstead constructed a stone seawall and 12 stone groins in the area.

Seven timber groins and a timber bulkhead were constructed on the east side of East Rockaway Inlet in 1931. In 1933-1934 The East Rockaway Inlet jetty was constructed by the U.S. Army Corps of Engineers. The earlier structures were buried beneath the sand trapped to the east of this jetty. A stone seawall built in 1952 extends along the east shore of the Inlet, connected to the landward end of the jetty.

K. Significant Standing Structures

Two existing Long Beach structures, the Granada Towers and the U.S. Post Office, are listed on the National Register of Historic Places (U.S. Army Corps of Engineers 1992). An additional structure is listed in the historic structures inventory maintained by the New York State Division of Parks, Recreation, and Historic Preservation. This is a private residence at 116 Washington Boulevard which supposedly dates to the late 19th century and is considered to be one of the first private homes built in Long Beach (Mintz 1979, included in Bouchard and Hartgen 1985). None of these structures will be affected by the proposed project.

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189 518-237-8643

March 18, 1993

Mr. Bruce A. Bergmann
Chief, Planning Division
Department of the Army
Corps of Engineers
New York District Office
Jacob K. Javits Federal Building
New York, New York 10278-0090

Dear Mr. Bergmann:

Re: CORPS
Rockaway Beach Project
Brooklyn, Kings County
89PR1188

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, Section 934 Project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations.

Based upon this review, it is the SHPO's opinion that this project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places. This determination is based on the condition that all potential cultural resources in Borrow Area 1A and 1B are avoided according to the recommendations of the Remote Sensing Survey report. This No Effect determination does not extend to the use of Borrow Area 2, which has not been surveyed.

We look forward to receiving and commenting on the results of the Remote Sensing Survey for Borrow Area 2 when that study has been completed.

If you have any questions, please call Robert Kuhn of our Project Review Unit at (518) 237-8643 Ext. 281.

Sincerely,

Julia S. Stokes
Deputy Commissioner for
Historic Preservation

JSS/RDK/JPW:gc

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

March 1, 1993

Environmental Analysis Branch
Environmental Assessment Section

Ms. Julia S. Stokes
Deputy Commissioner for Historic Preservation
New York State Office of Parks, Recreation, and
Historic Preservation
Agency Building 1
Empire State Plaza
Albany, New York 12238

Dear Ms. Stokes:

The New York District, Army Corps of Engineers (Corps) is conducting a study to determine Federal interest in participating in the cost of placing material (sand) dredged from two offshore borrow areas onto nearby Rockaway Beach, Queens, New York (Attachment 1). This work is part of a plan to prevent long term beach erosion along Rockaway Beach from Beach 19th to 149th Streets. The study has been authorized under Section 934 of the Water Resources Development Act of 1986.

Current project plans call for the restoration of Rockaway Beach from Beach 19th to Beach 149th Streets and for future nourishment of two feeder beaches, (Beach 25th Street to Beach 39th Street and Beach 86th Street to Beach 110th Street), at three 3-year intervals. Sand for the construction of the project and subsequent nourishment cycles will be dredged from two offshore borrow areas (Attachment 1).

The National Register of Historic Places lists no properties within the project area that are currently on the Register or that are eligible for inclusion. A cultural resource study, prepared as part of a maintenance dredging project, entitled "Cultural Resources Reconnaissance Dredging Project, East Rockaway Inlet, New York" was written by J. Stephen Kopper (Attachment 2). This report found that there were no prehistoric or historic archaeological sites within the beachfront area bounded by Beach 19th Street and Beach 149th Street.

In addition, the Corps has coordinated with your office regarding a project authorized by Section 933 of the Water Resources Development Act of 1986 that involved dredging sand from the East Rockaway Inlet navigation channel and placing it on two sections of Rockaway Beach (Attachment 3). After a copy of the aforementioned cultural resource survey report was forwarded to your office on June 25, 1992, the Corps received your response, dated July 7, 1992, of no concern with regards to the Section 933 project (Attachment 4).

The Corps has plans to utilize two offshore borrow sites during the initial and subsequent nourishment phases of the project. The first borrow area, Borrow Area 1A and 1B, is located offshore Coney Island, New York and to the west of Rockaway Inlet (Attachment 1). In November 1992, Dr. Warren Reiss and Ocean Surveys, Inc. conducted a remote sensing survey of this area using side scan sonar and a magnetometer (Attachment 5). This investigation identified 10 "potential cultural resources" and 1 "probable significant cultural resource" based upon magnetometer and side scan sonar data. The "probable significant cultural resource" may be one or more shipwrecks, possibly a wooden hulled vessel(s) with associated large ferrous objects, such as an engine or anchor. According to current project plans, all potential resources identified by this survey will be avoided during dredging.

Borrow area 2 (Attachment 1) is located offshore of the sand placement area. Parts of this borrow site may have been used to nourish the beach during the original project in the late 1970s and early 1980s. Dredging records, however, have not indicated which areas may or may not have been impacted. As a result, the Corps has plans to conduct a remote sensing survey of the entire borrow site. The results of this investigation will be coordinated with your office upon completion of this survey.

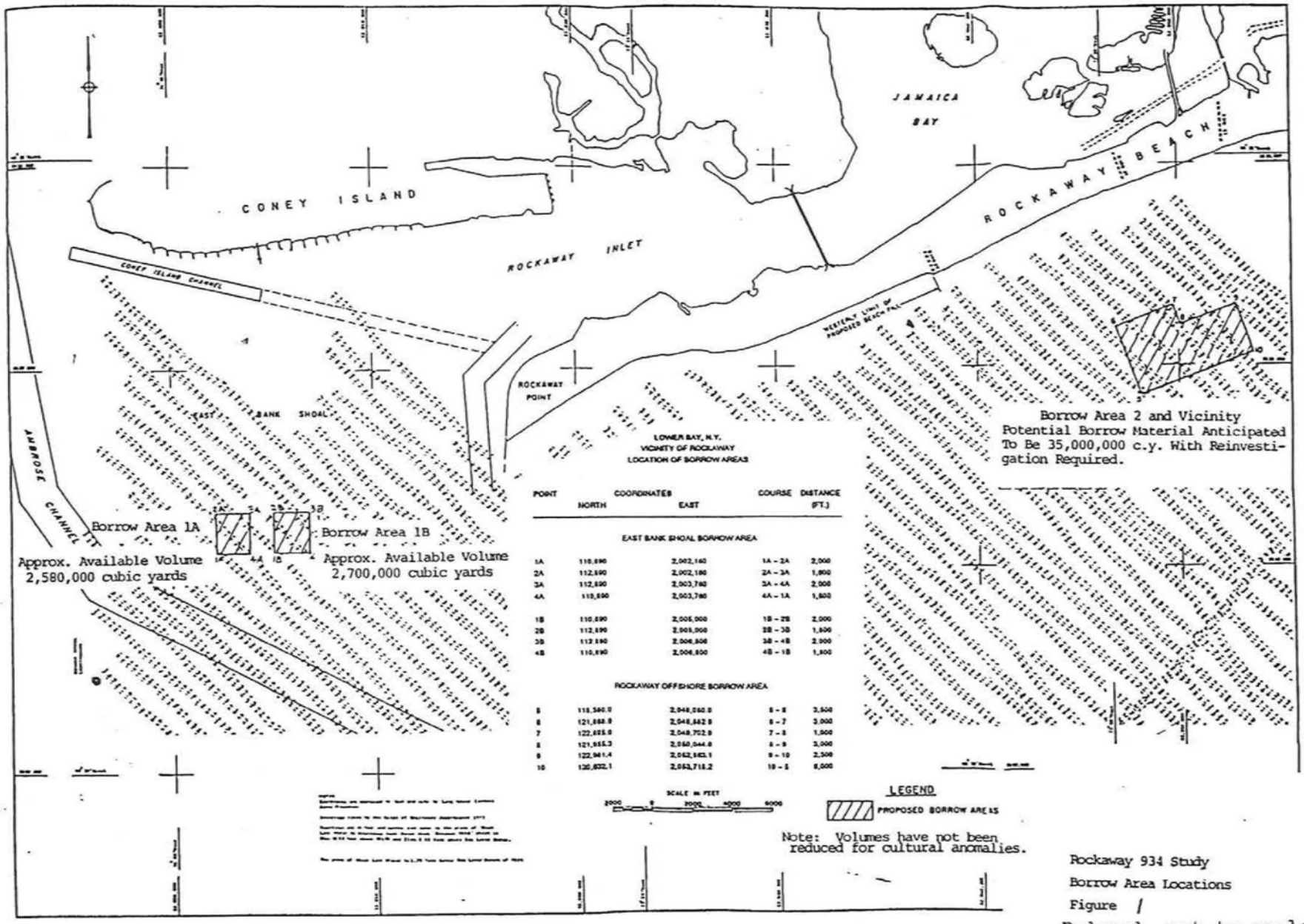
On the basis of current project plans and pending review by your office, the Corps is of the opinion that the Atlantic Coast of New York City, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, New York, Section 934 Project will have no effect on historic properties located on Rockaway Beach, from Beach 19th to 149th Streets, or within Borrow Areas 1A and 1B. Please provide us with Section 106 comments as pursuant to 36 CFR 800.5.

If you or your staff have any questions or require additional information, please contact Nancy Brighton, Project Archaeologist, (212)264-4663. Thank you for your assistance.

Sincerely,

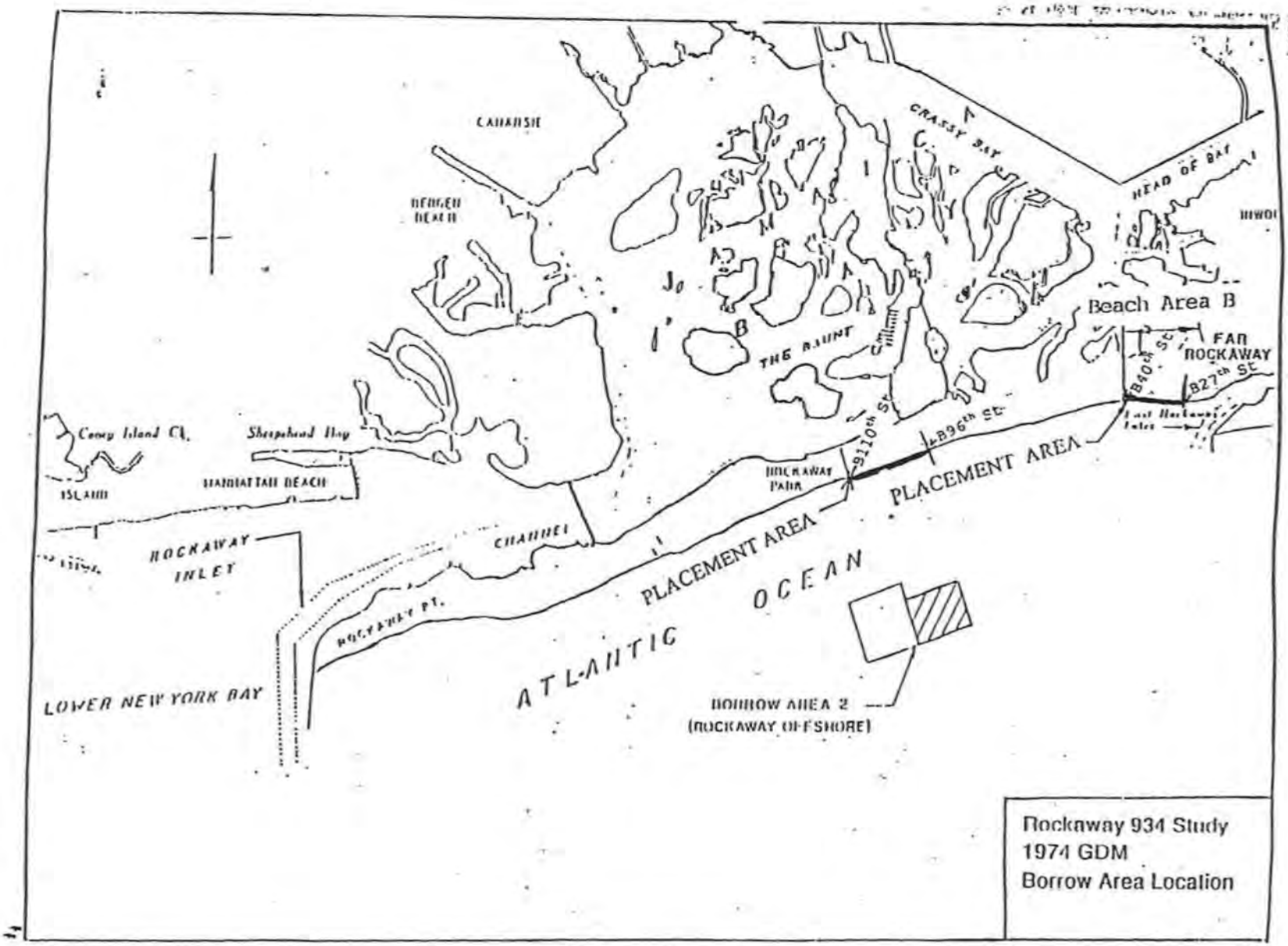
Bruce A. Bergmann
Chief, Planning Division

Attachments



Rockaway 934 Study
Borrow Area Locations
Figure 1
Reduced, not to scale

Attachment 1



ATTACHMENT 2

Attachment 2

CULTURAL RESOURCES RECONNAISSANCE

DREDGING PROJECT
EAST ROCKAWAY INLET, NEW YORK

by

J. Stephen Kopper
Department of Anthropology, C.W. Post Center
Long Island University, Greenvale, NY 11548

May 10, 1979

Funded by the Department of the Army,
New York District Corps of Engineers,
26 Federal Plaza, New York, NY 10007

Prepared Under the Supervision of J. Stephen Kopper,
Principal Investigator

J. Stephen Kopper
Principal Investigator

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

June 3, 1992

Environmental Assessment Section
Environmental Analysis Branch

Ms. Julia S. Stokes
Deputy Commissioner for Historic Preservation
New York State Office of Parks, Recreation, and Historic Preservation
Agency Building 1
Empire State Plaza
Albany, New York 12238

Dear Ms. Stokes:

The New York District, Army Corps of Engineers (Corps) is conducting a study to determine Federal interest in participating in the cost of placing material (sand) dredged from the East Rockaway Inlet navigation channel, located in Queens County, New York, onto nearby Rockaway Beach (Attachment 1). This work is part of a scheduled maintenance dredging operation of the channel as well as an attempt to prevent long term beach erosion on a portion of Long Beach Island. The study has been authorized under Section 933 of the Water Resources Development Act of 1986.

The Federal portion of the navigation channel begins to the southwest of Atlantic Beach, Long Beach Island, and proceeds in a north to northeasterly direction towards Rockaway where it terminates offshore, southwest of Beach 20th Street (Attachment 2). Maintenance dredging is necessary to prevent the build-up of shoals in the channel which create shallow depths and hazardous navigation conditions for local mariners. The area of the proposed placement of dredged material will be at one of two sections of Rockaway Beach in the Town of Far Rockaway. These sections are Beach 32nd Street to Beach 36th Street and Beach 56th to Beach 60th Street. Both are areas of intense erosion. Sand will be used to build up the existing beach to withstand wave and storm action (Attachment 3).

The National Register of Historic Places lists no properties within the project areas that are currently on the Register or that are eligible for inclusion. A cultural resource study, prepared as part of a similar maintenance

dredging project, entitled "Cultural Resources Reconnaissance Dredging Project, East Rockaway Inlet, New York" was written by J. Stephen Kopper (Attachment 4). This report found that there were no prehistoric or historic archaeological sites within the beachfront area bounded by Beach 19th Street and Beach 149th Street, which includes both proposed nourishment areas.

On the basis of current project plans and pending review by your office, the Corps is of the opinion that the Section 933, East Rockaway Inlet, New York Project will have no effect on historic properties. Please provide us with Section 106 comments as pursuant to 36 CFR 800.5.

If you or your staff have any questions or require further information on this project, please contact Nancy Brighton (212)246-4663. Thank you for your assistance.

Bruce A. Bergmann
Chief, Planning Division

Attachments

Attachment 4

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238-0001

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

July 7, 1992

Mr. Bruce A. Bergmann
Chief, Planning Division
Department of the Army
Environmental Analysis Branch
Jacob K. Javits Federal Building
New York, New York 10278-0090

Dear Mr. Bergmann:

Re: CORPS
East Rockaway Inlet Channel
Dredging
Queens County
92PR1171

Thank you for requesting the comments of the State Historic Preservation Office (SHPO) concerning the property referenced above. The information which you submitted has been reviewed in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations.

Based upon this review, the SHPO has no concerns regarding this project's impact on archeological resources.

If you have any questions, please call Vic DiSanto of our Project Review Unit at (518) 474-0479.

Sincerely,

David S. Gillespie

David S. Gillespie
Director
Field Services Bureau

DSG/VJD:gc

ATLANTIC COAST OF NEW YORK CITY
EAST ROCKAWAY INLET TO ROCKAWAY INLET
AND JAMAICA BAY, NEW YORK
SECTION 934 STUDY
BORROW AREAS 1A AND B
REMOTE SENSING SURVEY

Prepared For:

NEW YORK DISTRICT
CORPS OF ENGINEERS
26 FEDERAL PLAZA
NEW YORK, NY 10278

Under Contract Number
DACW51-92-D-0003

Principal Investigator:

Warren C. Riess

Warren C. Riess, Ph.D.

February 11, 1993

Prepared By:
WCH Industries, Inc., 14 Felton Street, Waltham, Massachusetts 02154

In Association With
Boston Affiliates, Inc., 156 Milk Street, Boston, Massachusetts 02109

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238-0001

July 7, 1992

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Chief, Planning Division
Department of the Army
Environmental Analysis Branch
Jacob K. Javits Federal Building
New York, New York 10278-0090

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Dredging
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David S. Gillespie
Director
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DSG/VJD:gc

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE
Orin Lehman
Commissioner

New York State Office of Parks, Recreation and Historic Preservation
The Governor Nelson A. Rockefeller Empire State Plaza
Agency Building 1, Albany, New York 12238-0001

June 19, 1992

Mr. Bruce A. Bergmann
Chief, Planning Division
Department of the Army
New York District, Corps of Engineers
Jacob K. Javits Federal Building
New York, New York 10278-0090

Dear Mr. Bergmann:

Re: CORPS
East Rockaway Inlet Channel Dredging
Queens County
92PR1171

Thank you for requesting the comments of the State Historic Preservation Office (SHPO) concerning the property referenced above. The information which you submitted has been reviewed in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations.

Please submit the cultural resource management report cited in your letter to the SHPO for review. If you have any questions, please call Vic DiSanto at (518) 474-0479.

Sincerely yours,

David S. Gillespie
Director
Field Services Bureau

DSG/VJD:tr

received 6/25/92
EDY

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

REPLY TO
ATTENTION OF

June 3, 1992

Environmental Assessment Section
Environmental Analysis Branch

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Deputy Commissioner for Historic Preservation
New York State Office of Parks, Recreation, and Historic Preservation
Agency Building 1
Empire State Plaza
Albany, New York 12238

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Bruce A. Bergmann
Chief, Planning Division

Attachments