APPENDIX B

S C O P E O F S E R V I C E S

TABLE OF CONTENTS

Contents

APPENDIX B-1

EXHIBITS TO SCOPE OF SERVICES

I. Definitions

All definitions set forth in the Contract to which this Appendix B (Scope of Services) is attached will have the same meaning herein unless otherwise defined or the context otherwise requires. Unless otherwise indicated herein, all reference to Sections are to Sections in this Appendix B. The following terms will have the following corresponding meanings:

"Agencies"	DCP, DEP, DOT, DPR, PDC, LPC, DSBS, DOB, NYPD, FDNY, HPD, OMB, NYSDEC, NYSDOS, NYSDOT, SHPO, USDOT, USACOE, NOAA, USFWS (all as defined in Appendix A or herein below), and any other agencies, bureaus, departments, offices, or other discrete entities of the City of New York, the State of New York or the United States that have jurisdiction over any activities carried out in respect of the Services and/or the Comprehensive Adaptation Plan and First Phase Project Plan.
"Comprehensive Adaptation Plan"	The Comprehensive Adaptation Plan will be a document that details the design and engineering of a Shoreline Extension, upland components, and tie-ins to protect the Project Area from the impacts of climate change, including the integration of transportation, maritime and interior drainage infrastructure, implementation planning, and strategies for placemaking, urban design and programming.
"Consultant Team"	Collectively, the Consultant and its respective Subcontractors
"Consulting Subcontract"	Any Subcontract entered into by either the Consultant or NYCEDC to perform consulting services in connection with the Master Plan
"EIS"	Environmental Impact Statement
"Engagement Plan"	A plan and timeline for community engagement developed in close consultation with NYCEDC and the City
"EPA"	US Environmental Protection Agency
"First Phase Project"	To be identified by the Consultant Team in consultation with NYCEDC and the City and developed with preliminary design and engineering, a detailed implementation plan, and preliminary cost estimates.
"USFWA" or "Fish and Wildlife"	United States Fish and Wildlife Service
"Master Plan"	All tasks and final deliverables related to the development of the Comprehensive Adaptation Plan and First Phase Project Plan.
"MTA"	Metropolitan Transportation Authority
"MOR"	Mayor's Office of Resiliency

"NOAA"	National Oceanic and Atmospheric Administration
"Pierhead Line"	A boundary set by the USACOE beyond which a pier may not extend
"Preliminary Design"	15-20% detailed design for First Phase Project
"Project Area"	The approximately .9-mile stretch encompassing the Seaport and the Financial District neighborhoods from the southern boundary of the Two Bridges project at the Brooklyn Bridge to The Battery, and extending approximately into the water no further than the Pierhead Line
"Project Manager"	Individual member of the Consultant Team to serve as a continuous liaison with NYCEDC
"Project Team"	Collectively, NYCEDC, MOR, the Deputy Mayor of Housing and Economic Development's Office, DOT, DEP, DPR, DCP, and any other person, entity or group specified by NYCEDC, including but not limited to other Agencies.
"Sandy"	Hurricane Sandy
"Seaport"	South Street Seaport neighborhood
"Select Shoreline Extension Alternatives"	A Selection of Shoreline Extension alternatives based on guiding principles and core criteria
"Shoreline Extension"	An extension of the shoreline, including upland components and tie-ins
"Shoreline Extension Alternatives"	Alternatives for the extension of the shoreline, to be developed through an iterative process in collaboration with NYCEDC, the City and a broad range of stakeholders
"Specialty Regulatory Agencies, Organizations, and/or Entities"	NYSDEC, Fish and Wildlife, USACOE, and others that may be identified by NYCEDC.
"Steering Committee"	A selected group of stakeholders chosen by the City to provide advisory and technical services for the Master Plan.
"Steering Committee"	A dedicated formal body of key stakeholders, both local and citywide/national, convened by NYCEDC and the City, who will help the City steer the Master Plan process
"Tasks"	A series of 9 tasks, each of which resulting in deliverables that must be reviewed and approved by NYCEDC, through the which the Consultant Team will perform the Services
"Transportation and Maritime Infrastructure"	Includes the FDR Drive, several maritime uses and all other related assets, which must be integrated, altered, and/or relocated to integrate with the Shoreline Extension
"USACOE" or "Army Corps"	US Army Corps of Engineers

II. General Information

1. Introduction

The Consultant will produce and deliver all Work Product as set forth in this Appendix B Scope of Services (collectively, the "Services"), including all tasks related to the Financial District and Seaport Climate Resilience Master Plan ("Master Plan") to protect against the projected impacts of climate change in the Financial District and the South Street Seaport ("Seaport") neighborhoods, more particularly described herein (the "Project"). The Project Area is an approximately .9-mile stretch from the southern boundary of the Two Bridges project at the Brooklyn Bridge to The Battery, and extending approximately into the water no further than the Pierhead Line ("Pierhead Line"), defined as a boundary set by the USACOE ("United States Army Corps of Engineers") beyond which a pier may not extend, and/or extent of current pier structures (the "Project Area") in Lower Manhattan, New York. See Exhibit 2 for a map of the Project Area.

The Consultant Team will develop the conceptual design of a shoreline extension, upland components and tie-ins (the "Shoreline Extension"), and the integration of transportation, maritime and interior drainage infrastructure to support the Shoreline Extension (together, the "Comprehensive Adaptation Plan"). The Comprehensive Adaptation Plan will also include a clear pathway to implementation, including strategies for permitting, financing, and governance, as well as strategies for placemaking, urban design, and programming for the Shoreline Extension. The Consultant Team will also develop preliminary design and detailed implementation plans for an appropriate first phase adaptation project (the "First Phase Project").

A successful project will define a Comprehensive Adaptation Plan and First Phase Project that have community support, are technically and financially feasible, and have clear viable pathways for permitting and implementation.

The Master Plan must achieve the following core project goals:

- **Climate Resilience:** The Project must guide the adaptation of these two neighborhoods to protect against multiple hazards of climate change, including storm surge, tidal inundation, groundwater table rise, and extreme precipitation.
- **Feasibility:** The Project must be feasible from an engineering, design and construction perspective, as well as from a permitting and financial perspective.
- **Transportation and Maritime Infrastructure Integration:** This area includes the FDR Drive and several maritime uses ("Transportation and Maritime Infrastructure"). This Project must consider how this Transportation and Maritime Infrastructure can be integrated, altered, relocated and/or improved to integrate with the Shoreline Extension.
- **Public Benefits:** This Project must create a compelling, attractive vision that enhances Lower Manhattan in a lasting way and integrates placemaking, public amenities, and environmental benefits where possible.
- **Public Buy-In:** This Project must build political and stakeholder support to carry forward the approval processes and long-term implementation of this generational effort.

In addition to the core project goals, the Master Plan should align with other City priorities and overarching principles, which will be further developed and refined through the community engagement process. These principles include:

- Development of a shared City-community vision through a robust engagement process that includes climate and resilience education to ensure diverse audiences can engage with this complex subject matter.
- Identification of environmentally conscious design solutions, including but not limited to:
    - Net zero or climate positive energy solutions to contribute to the City's goals of carbon neutrality.
    - Solutions that improve and expand drainage infrastructure, along with green infrastructure to enhance the quality of receiving water bodies.
    - Solutions that mitigate the urban heat island effect and reduce risk from increasing projected heat waves due to climate change.
- Creation of designs that encourage active street life, public waterfront access, and improved mobility in the area.

The overall Master Planning effort will include an iterative process in collaboration with the City and a broad range of stakeholders to assess alternatives for the Shoreline Extension ("Shoreline Extension Alternatives" or "Alternatives"), develop and test the design and engineering of select Shoreline Extension Alternatives ("Select Alternatives" or "Select Shoreline Extension Alternatives"), and lay a clear path forward for phasing and implementation for both a Comprehensive Adaptation Plan and First Phase Project. The Master Plan will also identify financing and governance strategies, including establishing a clear implementation plan to finance, construct, and manage the First Phase Project.

2. History & Background

For over 400 years, the historic identity of New York City has been rooted in Lower Manhattan. Serving for generations as the center of maritime uses and trade for the City, as well as a doorstep for immigrants through Ellis Island and Castle Clinton, Lower Manhattan also has transformed over time into a global economic and financial capital, with booming tourism and a growing residential population. Lower Manhattan comprises less than 1% of the entire City's land area but generates almost 10% of the City's total economic output, as measured by Gross City Product, and is the location of over 10% of all New York City jobs. It is home to almost 100,000 residents, with a 129% increase in residents living below Chambers Street since 2000. 26 ferry lines, 19 of the City's 25 subway lines, and the PATH train pass through Lower Manhattan.

Although the area suffered greatly from the tragedy of 9/11, its recovery proved Lower Manhattan's strength, as it turned disaster into an opportunity to rebuild and prosper. Since 2001, over $20 billion of public and private investment has bolstered Lower Manhattan's transformation into a thriving, 24-hour live-work district. Major investments have been made in Lower Manhattan's transit assets and commercial real estate, including Fulton Center, Brookfield Place, and the World Trade Center. Hotel development has catalyzed tremendous growth in tourism: In 2016, nearly 15 million visitors came to Lower Manhattan, a 19% increase over the previous year.

In October 2012, Hurricane Sandy hit New York City and exposed Lower Manhattan's vulnerabilities to climate change. The Hurricane flooded 17% of the City's land, claimed 44 lives, and caused $19 billion in damages and lost economic activity. In Lower Manhattan, the impact of Hurricane Sandy was devastating, causing two deaths and damaging thousands of buildings, including over 21,000 homes. It caused significant damage to transportation assets, power supply, open space, and water and sewer infrastructure. The combined volume of stormwater and sewage during the Hurricane overwhelmed the City's wastewater treatment system, causing 5.2 billion gallons of untreated or partially treated sewage to be discharged into the City's waterways. In addition, thousands of jobs in Lower Manhattan were lost or displaced due to Hurricane Sandy's direct, indirect, and induced impacts. This job loss disproportionately affected low- to moderate-income households, as many of the jobs lost were in industries like food services and retail with fewer resources to reopen immediately after the disaster. The event underscored not only Lower Manhattan's value as an economic, civic, and cultural heart of New York City, but also revealed how the impacts of climate change to Lower Manhattan will likely be felt across the city and beyond.

Both Lower Manhattan and New York City are more resilient than they were when Hurricane Sandy hit, due to significant, multi-layered public and private investments made in the years since, as well as the tremendous leadership and effort of community stakeholders. In addition to hundreds of millions of dollars in public resilience investments, private property owners have invested over $100 million in building-level protections and improvements in the Financial District and the Seaport. City-wide, Con Edison has invested $1 billion to harden, protect, and elevate key electric, gas, and steam infrastructure. One year after Hurricane Sandy, a disaster recovery budget of $10.5 billion was approved for the MTA to rebuild and increase the climate resilience of the City's subway system. The City has updated its building codes, zoning rules, and design guidelines to ensure that our built environment and future capital investments are designed to withstand the impacts of a changing climate. The City has also worked extensively on community-based resilience efforts, conducting emergency preparedness trainings for community-based organizations, sending teams of emergency planning experts and providing resilience technologies to small businesses, and conducting outreach campaigns to inform New Yorkers about flood risk and insurance.

However, Lower Manhattan's physical conditions still present vulnerabilities. Lower Manhattan overall is characterized by a distinctive, densely-developed mix of tall, newer towers and a large proportion of old, historic buildings. These older buildings are particularly vulnerable and challenging to adapt due to their age and structure. Lower Manhattan also has particularly low-lying topography in some areas, dipping below the aging bulkhead at the coastal edge, as well as narrow streets and complex Transportation and Maritime Infrastructure.

Major reports in 2018 have solidified the scientific consensus that absent significant action, climate change will produce devastating global consequences at a faster rate than previously thought. A plan for action is needed to ensure that Lower Manhattan's vitality and growth continues in this century and into the next.

Previous Plans, Studies, and Climate Analysis

Since Hurricane Sandy, much work has been done to advance climate change adaptation in the area. One year after Sandy, the Bloomberg Administration released *A Stronger, More Resilient New York*, where the initial idea for a Shoreline Extension along the Financial District, Seaport, and Two Bridges areas was first presented. Upon the release of the *Southern Manhattan Coastal Protection Study* in 2014, which analyzed a potential Shoreline Extension, Lower Manhattan leaders and stakeholders called for a more comprehensive solution for Lower Manhattan as a whole, as well as the exploration of on-land adaptation alternatives. *OneNYC*, released in 2015, outlined bold goals and specific targets for a strong, sustainable, resilient, and equitable city, including strengthening our coastal defenses against flooding and sea level rise. The *OneNYC* goals were informed by the New York City Panel on Climate Change (NPCC), a group of climate change and impact scientists and professionals tasked with advising the City on climate resilience initiatives. The NPCC's updated climate change projections in 2019 were subsequently used to inform alternatives identified in the *Lower Manhattan Climate Resilience Study*.

A Stronger, More Resilient New York
In 2013, the City released *A Stronger, More Resilient New York*, a comprehensive plan that contains actionable recommendations for rebuilding the communities impacted by Sandy and increasing the resilience of infrastructure and buildings citywide while addressing the risks of climate change more broadly. An expansion of the PlaNYC strategic plan released in 2007, *A Stronger, More Resilient New York* proposed 257 initiatives to strengthen the coastline, upgrade buildings, protect City infrastructure and critical services, and make the City's neighborhoods safer and more vibrant. This included projects to address future climate risks such as feasibility studies for ambitious coastal protection projects, design and construction of "integrated flood protection" systems that incorporate a variety of temporary and permanent features to protect the City's waterfronts, and installation of storm surge barriers and armored levees.

Southern Manhattan Coastal Protection Study
A collaboration between NYCEDC and the Mayor's Office of Resiliency ("MOR"), the *Southern Manhattan Coastal Protection Study* from 2014 looked at the technical, legal, and financial feasibility of a multi-purpose levee (Shoreline Extension) concept that would protect a 1.3 mile area along the eastern edge of Southern Manhattan against the risks of climate change, while also providing opportunities for economic and community development. The feasibility study concluded that a multi-purpose levee is technically feasible in the Project Area and would not induce more severe flooding in either adjacent neighborhoods or across the East River. The study also concluded that it was legally feasible, fitting within the existing regulatory framework, and could be self-financing.

OneNYC
Since 2015, *OneNYC* has been the City's blueprint for creating a more equitable, sustainable, and resilient city. Building on prior long-term plans such as *PlaNYC*, *OneNYC* envisions how the physical city should be shaped to address a range of social, economic, and environmental issues while building on New York City's strengths. Taking into consideration the NPCC's updated set of climate projections, the plan establishes bold goals and specific targets, such as upgrading the City's buildings against changing climate impacts, adapting infrastructure systems across the region to maintain continued services, and strengthening the City's coastal defenses against flooding and sea level rise. An update and expansion of *OneNYC* was released in April 2019,

which detailed goals of achieving carbon neutrality and 100 percent clean electricity and delivering on critical resiliency projects to mitigate risks posed by climate change.

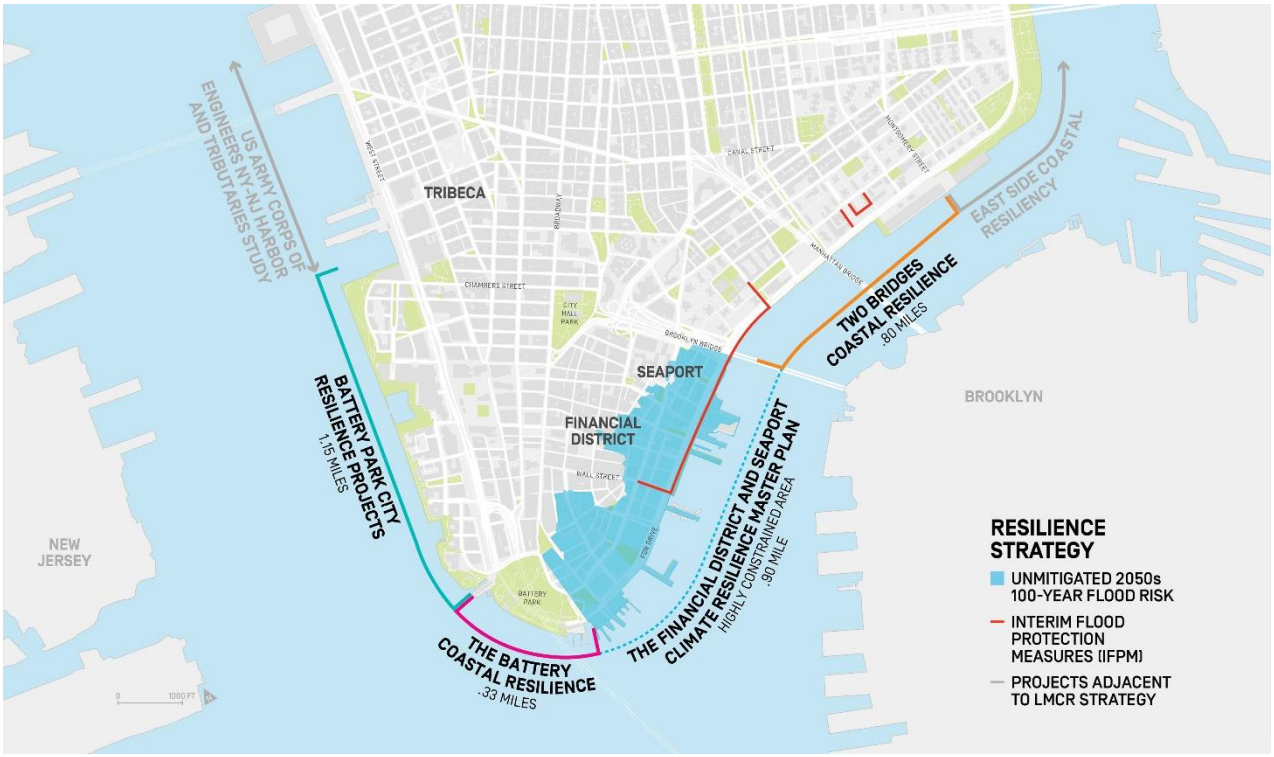
New York City Panel on Climate Change (NPCC)
In response to climate change and associated impacts to the City's infrastructure and to support goals outlined in *PlaNYC*, a panel of leading climate change and impact scientists, academics, and private sector practitioners were convened by the City to form the NPCC. The group was initially charged with advising the City on issues related to climate change and adaptation, acting as an advisory body. Following Sandy, the group was then tasked with providing up-to-date scientific information and analyses on climate risks to inform *A Stronger, More Resilient New York* and *OneNYC*, and subsequently the *Lower Manhattan Climate Resilience Study* released in March 2019.

Lower Manhattan Climate Resilience Study Findings & Recommendations
In response to community requests for a long-term comprehensive strategy for Lower Manhattan, NYCEDC and MOR advanced the Lower Manhattan Coastal Resiliency Project, which included a complete analysis of on-land alternatives. The recently-released *Lower Manhattan Climate Resilience Study*, which spans from the area below Montgomery Street on the east side to Chambers Street on the west side, provides a comprehensive climate risk assessment and resilience strategy for Lower Manhattan.

Unlike previous studies of Lower Manhattan, the *Lower Manhattan Climate Resilience Study* identifies a wide range of climate hazards, beyond coastal storm surge events, over a longer time horizon. The Study found that by the 2050s, 37 percent of properties in Lower Manhattan may be at risk from 100-year storm surge. By 2100, with over 6 feet of projected sea level rise, almost 50 percent of properties may be at risk from 100-year storm surge, and 20 percent of Lower Manhattan's streets may be exposed to daily tidal inundation. Groundwater table rise is projected to put 7 percent of buildings at risk of destabilization and expose 39 percent of streets with underground utilities to corrosion and water infiltration by 2100.

To respond to these risks, the City analyzed and tested the engineering of many on-land alternatives within the various geographies of the area, from using deployable flood control measures to flood walls to raising the streets and hardening buildings.

As a result of the *Lower Manhattan Climate Resilience Study*, the City is advancing approximately $500 million in climate adaptation projects in the Two Bridges neighborhood, The Battery, and Battery Park City, covering approximately 70 percent of the Lower Manhattan shoreline, as well as temporary interventions in the Seaport and parts of the Two Bridges and Financial District neighborhoods. The Study also recommended further planning in the Financial District and the Seaport, which has led to the need for this Financial District and Seaport Climate Resilience Master Plan. The Master Plan Project Area represents over half of the original geography from the *Southern Manhattan Coastal Protection Study*; In the remaining 45 percent in the Two Bridges neighborhood, an on-land adaptation project was identified, combining permanent barriers and deployable protections.



The resilience strategy includes the following four capital projects and the Financial District and Seaport Climate Resilience Master Plan:

Interim Flood Protection Measures: In the South Street Seaport area and parts of the Financial District and Two Bridges neighborhoods, Emergency Management (EM) will spend approximately $3.5 million to deploy a combination of just-in-time Tiger Dams and pre-deployed HESCO barriers by the 2019 hurricane season as temporary measures in advance of a permanent solution.

Battery Park City: The Battery Park City Authority (BPCA), using approximately $134 million in bonds authorized by the City, will develop coastal protection projects to adapt to new climate conditions. The South Battery Park City component will include a protective barrier, such as a berm, in the back of The Battery. BPCA kicked off design in 2018 and is anticipated to start construction in 2020.

The Battery: NYCEDC, in partnership with NYC Parks, will invest approximately $165 million in the Battery to elevate the wharf and esplanade and tie into BPCA's project. Construction is anticipated to begin in 2021.

Two Bridges: NYCEDC is designing an integrated flood protection system for the Two Bridges neighborhood, comprised of permanent barriers and deployable or 'flip-up' protections that will preserve view corridors and public access. DDC will manage construction of the approximately $200 million investment, which is anticipated to begin in 2021.

The Financial District and Seaport Climate Resilience Master Plan: The Master Plan encompasses the remaining 30 percent of the Lower Manhattan coast where land-based adaptation measures were found to be too technically challenging and, therefore, the need for further engineering and design of a Shoreline Extension was determined. In this area, a unique convergence of climate risk and physical constraints have prevented any permanent resilience projects from advancing. The low-lying topography in this area would require taller interventions relative to other areas at over 18 to 20 feet (from NAVD88). Further, the lack of available space and concentration of above- and below-ground infrastructure (the FDR Drive, Hugh L. Carey Tunnel ("Battery Tunnel"), and four subway tunnels) make constructability of on-land barriers too challenging. Complex circulation needs, transportation, active waterfront uses, and many historic buildings all further exacerbate the complexity of planning and implementation.

3. The Project Area and Neighborhood Context

The Project Area encompasses the Seaport and the Financial District neighborhoods. Given the Project Area's adjacency to The Battery and Two Bridges resiliency projects, the Master Plan will tie into the capital projects described above within those two areas to ensure a comprehensive resilience strategy along the waterfront.

The Seaport

The Seaport is one of Manhattan's oldest neighborhoods, with some areas built on landfill in the 19th century. The Seaport serves a growing residential community and is home to several businesses. It is also the site of recent commercial redevelopment and a major destination for visitors to New York. Integrating active waterfront uses, view corridors, and public open space is a key goal to consider in designing flood protection at the edge. The waterfront contains several structures built on piles, such as some of the piers/platforms and parts of the esplanade.

The Seaport's topography is low-lying with an aging bulkhead, making it particularly susceptible to flooding. Compared with other areas in Lower Manhattan, the Seaport has a high edge relative to the interior, with lower-lying topography stretching further inland. This creates a 'bowl' effect where water that enters the Seaport area becomes trapped, presenting challenges for climate adaptation projects, including interior drainage capacity and complicated elevated tie-ins potentially stretching two to four blocks inland. The street network in the Seaport is dense and narrow, further complicating the alignments of large-scale interventions.

The Seaport presents a concentration of above and below-ground critical infrastructure and utilities that leave limited amounts of physical space for resilience measures. A high concentration of utilities runs along South Street, along with the elevated FDR Drive and Brooklyn Bridge at the neighborhood's northern end. The State Department of Transportation requires spacing around the FDR Drive's columns, footings, and underside to protect the structural integrity of the infrastructure and provide space for ongoing maintenance and repairs. Flood walls at the height required for protection in the future may be too tall and large to fit under the FDR Drive. The Battery Tunnel and the A/C Cranberry Tube are also located in this neighborhood and make it challenging to build flood protection infrastructure with deep foundations. In some cases, aging structures built on piles in the Seaport's waterfront may also be unable to support the weight of flood protection infrastructure.

The Seaport is also home to a designated historic district and a significant portion of Lower Manhattan's older buildings, two factors that make building-level measures challenging. Buildings that are less than six stories tall and were built before 1938, when the City's first modern building code was introduced, are particularly vulnerable to destabilization. Their shallow foundations and age may make these buildings more difficult to adapt to flood risk. Historic district regulations must also be considered for any permanent adaptation fixtures on buildings.

Finally, the Seaport contains a vibrant mix of existing structures, active maritime transportation, and commercial and recreational uses for residents, workers, and visitors. Any resilience measures must be coordinated with these uses and integrated with the complex circulation and access corridors that users of this active waterfront require.

The Financial District

The Financial District is an economic engine for the City and region. It is mostly comprised of large, commercial office buildings with some residential uses in an extremely dense network of narrow streets. The area is also a major transportation hub with a unique convergence of transportation assets, including the Staten Island and Governor's Island Ferries as well as multiple subway stations with strong connections to the maritime transit uses.

Like other neighborhoods on the east side, the Financial District is constrained by the FDR Drive, especially so as the elevated freeway slopes down to street level and into the Battery Park Underpass, as well as four additional subway tunnels. The coastal edge is particularly complex where the Battery Tunnel intersects with the Battery Maritime Building ferry terminal.

In addition to this complex network of vehicular transportation and maritime infrastructure, the Whitehall Terminal and Battery Maritime Building are critical waterfront uses. The coastal edge is particularly complex where the entrance to the Battery Tunnel intersects with pedestrian access to the Battery Maritime Building. Climate resilience projects must be integrated with the waterfront access and complex circulation patterns of cars, people, cargo, and bikes that these ferry terminals require.

Drainage

The *Lower Manhattan Climate Resilience Study* found that the combined sewer system capacity in Lower Manhattan is at risk of being overwhelmed by both sea level rise, which reduces the system's ability to discharge excess flow into the East River, and by increased frequency of extreme precipitation events. Sea level rise by the 2050s is expected to compromise the combined sewer system's ability to discharge at high tides in the event of extreme precipitation when the system is at capacity. Extreme rain events are projected to occur with more frequency in the future with climate change. Both the Seaport and Financial District, and the broader Lower Manhattan geography, are served by the Manhattan pump station, which will be at capacity with other resilience projects in Two Bridges and the Lower East Side advancing. There is a lack of available real estate in Lower Manhattan to make major upgrades to the drainage system, and a solution must be identified in order to accommodate water during future rain and coastal flooding events, as well as from daily tidal flooding.

III. Services in General

1. The Consultant Team

The Consultant is a firm prequalified through the Financial District and Seaport Climate Resilience Master Plan RFQ. The Consultant will lead a team comprised of approved Subcontractors. The Consultant Team will, without limitation, include professionals with the following expertise:

A. Experience successfully managing large-scale master planning processes;
B. A demonstrated track record of world-class technical expertise on large-scale climate adaptation measures (both planning and successful implementation), including climate impact modeling;
C. Experience managing and undertaking the successful design and implementation of complex engineering projects of a similar size and scale;
D. Experience doing drainage modeling, analysis, and design of large-scale drainage management systems and experience working with NYCDEP;
E. Expertise in hydraulic modelling, including the analysis of currents, navigational considerations, and scour;
F. Expertise in developing waterfront projects that improve ecology and access at the water's edge;
G. Experience with permitting processes, including environmental mitigation for in-water projects with United States Army Corps of Engineers, NYSDEC, Fish and Wildlife, and National Marine Fisheries, including environmental mitigation;
H. Experience with environmental review requirements of large-scale infrastructure projects;
I. Experience in planning for and implementing large-scale transportation projects, including mobility, maritime uses, and potential new transportation and maritime infrastructure;
J. Experience developing accurate, dynamic, and nuanced financial models;
K. Experience with public-private financing structures;
L. Experience leading successful and robust community engagement processes;
M. Experience working in New York City; and
N. Experience holding contracts for similar projects.

In order to successfully complete the Services as outlined in this Appendix B, the Consultant Team shall answer the following overarching questions:

1. The Consultant Team should consider a broad range of potential Shoreline Extension Alternatives that meet the core project goals. At one end of the spectrum, assuming no development, what Alternatives minimize footprint and cost and on the other end, assuming development, what Alternatives maximize private revenue potential? The Consultant Team should also consider the broad range of potential Alternatives that fall in between these two ends of the spectrum.
2. How can we ensure that the proposed solution(s) is permittable and buildable and has a clear implementation strategy?

3. What new drainage infrastructure is needed to support the Shoreline Extension Project and where will it be located?
4. How will existing and planned Transportation and Maritime Infrastructure (including maritime transportation, the historic South Street Seaport and the FDR Drive) need to be altered to integrate with a Shoreline Extension Project?
5. How do we execute an inclusive and diverse process that includes both education on climate change impacts and robust engagement around resiliency solutions in order to build a coalition of long-lasting support for implementation?

2. Project Management Structure

The Consultant will provide day-to-day management of the Consultant Team. The Consultant will assign an individual member of the Consultant Team to serve as a continuous liaison with NYCEDC (the "Project Manager").

The Project Manager will be responsible for all communications with and presentations to NYCEDC.

3. General Administrative Requirements

The Consultant will perform the following administrative tasks in connection with and as part of the Services:

(a) Meetings

The Consultant, and members of the Consultant Team, if applicable, will present at and participate in regular weekly progress meetings with NYCEDC. These meetings will include review of progress of the work according to the project and submissions schedules, review of principal programmatic, design and engineering decisions made by the Consultant Team, and identification of outstanding or potential problems and proposed solutions. Each weekly progress meeting will produce action items with identification of the party (or parties) responsible for completion, examine actual versus budgeted costs and review technical and administrative issues. The Consultant will be available to meet with NYCEDC and/or other members of the Project Team as often as is necessary or appropriate to effectively perform the Services.

The Consultant will function as coordinator for all meetings required in the performance of the Services, including coordination meetings with teams from MOR, DEP, DCP, DOT, DPR and other Agencies. In advance of such meetings, the Consultant will provide necessary data and prepare appropriate agendas and presentations for these meetings. When requested, the Consultant will also initiate and organize meetings.

In addition, the Consultant, and members of the Consultant Team, if applicable, will present at and participate in meetings with groups convened by NYCEDC, including but not limited to:

1. Agency partners and other City stakeholders
2. Steering Committee
3. Elected officials
4. Regulatory agencies
5. Public stakeholders

The Consultant Team will format all meeting minutes with the inclusion of columns labeled "Action Required by" and "Due Date," noting the firm/Agency and person required to perform an action and the date that the action must be performed by for each item listed. The minutes are to be forwarded to NYCEDC for review no later than twenty-four (24) hours after the meeting. NYCEDC's comments are to be incorporated and final minutes are to be distributed within two (2) business days to NYCEDC.

(b) Legal Requirements and Coordination for Development Project

The Consultant will obtain and compile copies of all pertinent specifications and Legal Requirements for completion of the Master Plan, including all standards, laws, rules, ordinances, and constraints mandated by any Agencies. The Consultant will be cognizant of the foregoing and of other Agencies' projects under design and construction, such as the Two Bridges and The Battery coastal resiliency projects, and will coordinate its Services with those of other projects (to the extent information on such other projects is publicly available or the relevant Agency or NYCEDC has provided such information to the Consultant).

The Consultant will identify, consult and coordinate with any applicable Specialty Regulatory Agencies, Organizations, and/or Entities that may have an interest in the Master Plan.

(c) Work Product

The Consultant will perform the Services and produce and deliver all Work Product in accordance with all Legal Requirements and this Contract. To the extent that specific requirements and regulations may not yet have been established for the type of Shoreline Extension contemplated under this Master Plan, the Consultant will conscientiously attempt to produce all such work in anticipation of such requirements and regulations.

The Consultant will perform the Services and produce and deliver all Work Product in accordance with any applicable City, State, and Federal design standards.

The Consultant will perform the Services and produce and deliver all Work Product with reference to and in conformity with technical information and data

furnished by NYCEDC and/or from any Agencies or other sources, including existing and legal lines and grades (or approved changes in legal grade), approved drainage plans, sewers, subsurface structures, and conditions of facilities. Additional information may be obtained through site inspection of the Project Area and from the Topographical and Utility Surveys and the Geotechnical Investigation that may be performed by the Consultant or one of the Subcontractors. This work is described in further detail in Task One. It will be the Consultant's responsibility to verify, identify and/or request all such data as may be required for planning and proper coordination of the Master Plan.

All deliverables are determined final at NYCEDC's sole discretion. The Consultant will revise and correct any and all Work Product (or cause such Work Product to be revised and corrected by the Consultant Team), without any additional compensation, in connection with the Services until the same will receive final approval by NYCEDC and by all Agencies from which approval is required. The Consultant will initiate all actions for incremental review of proposed designs, including all follow-up meetings, as required, to expeditiously resolve all questions and concerns and to obtain required approvals. NYCEDC will assist the Consultant in determining the full extent and range of certifying or approving Agencies.

IV. Specific Services

Overview of Tasks

The Consultant Team will perform the Services in the following series of tasks (the "Tasks" and each individually, a "Task"), in accordance with and by the deadlines set forth in the Progress Schedule attached as Exhibit 1:

Task One: Background Analysis
Task Two: Stakeholder Engagement
Task Three: Shoreline Extension Engineering & Design
Task Four: Transportation and Maritime Infrastructure Planning
Task Five: Interior Drainage Strategy
Task Six: Placemaking, Urban Design & Programming Strategy
Task Seven: Implementation Planning
Task Eight: Comprehensive Adaptation Plan & First Phase Project Plan
Task Nine: Additional Services as Needed

The Tasks will result in deliverables that must be reviewed and approved by NYCEDC before the deliverables are finalized. It is expected that the Tasks will overlap and be conducted through an iterative process, where tasks inform one another. The Comprehensive Adaptation Plan and First Phase Project Plan will need to be informed at all stages by stakeholder input, the three core

technical areas (Shoreline Extension Engineering and Design, Transportation and Maritime Infrastructure Planning, and Interior Drainage Strategy), and implementation viability. Placemaking, urban design, and programming will also be critical to developing a strong public-facing vision for the Project.

One of the key objectives of this process is to analyze any and all Alternatives for Shoreline Extension while also quickly weeding out non-viable Alternatives, to ensure that the maximum amount of time and resources is spent advancing engineering and design for the Select Alternatives.

While the Shoreline Extension should drive the technical analysis, Alternatives must thoughtfully integrate the other two core technical areas of Transportation and Maritime Infrastructure Planning and Interior Drainage Strategy with the Shoreline Extension. Further, given the unique complexities of implementing a Shoreline Extension, permitting and financing, as well as overall implementation planning, must integrated with the development of Alternatives in Task Three. Finally, stakeholder engagement is one of the most important aspects of this process. Engagement will begin from day one and continue throughout the life of this Project to ensure that this generational plan can withstand the upcoming change in administration and be carried through to implementation.

The Consultant Team should propose an approach that meets the goals of analyzing and narrowing many Alternatives quickly, while also considering the need to integrate all areas of stakeholder engagement, technical analysis, and implementation planning throughout the process.

Task One: Background Analysis

The Consultant Team will confirm and expand on analysis from the *Lower Manhattan Climate Resilience Study* of existing conditions, physical constraints and opportunities in the Project Area.

a) Guiding Principles

The guiding principles should be developed by the Consultant Team in consultation with NYCEDC, the City and the community stakeholders to identify opportunities for alignment with public policy goals and community priorities, including potential for new public amenities, alignment with sustainability goals, improvements to transportation, and other public benefits.

b) Core Criteria

Core evaluation criteria should be developed by the Consultant Team and sign-off on by NYCEDC within the first two months and should be focused on the five core project goals: climate resilience, feasibility, Transportation and Maritime Infrastructure integration, public benefits, and public buy-in. The core criteria should be refined in

consultation with NYCEDC and the City to inform the definition of Alternatives, as well as the development of conceptual engineering, design and cost estimates for the Comprehensive Adaptation Plan and preliminary engineering, design and cost estimates for the First Phase Project Plan.

The Consultant Team is anticipated to develop more detailed criteria for each of these five areas. The Consultant Team will lay out a clear distinction between how the core criteria will be applied early on when scoping the Shoreline Extension Alternatives, and later during conceptual design of the full Project Area and preliminary design of the First Phase Project.

c) Desktop Analysis

Analysis should include a thorough examination of all existing conditions that will impact the Shoreline Extension Alternatives. Analysis should include the development of maps and models, as well as define potential project impacts and constraints within the first two months.

The Consultant Team should thoroughly review the Site File to ensure this task is building upon and not repeating previous work product. By the time of contract execution, other sources of data the Consultant Team can expect to have available beyond the Site File include: as-builts for the East River Esplanade; bulkhead inspection report from Pier 15 to Pier 35; survey work, utility mapping, geotechnical analysis, and preliminary design for the Brooklyn Bridge Esplanade project; and any recent data collection from the Two Bridges and The Battery coastal resiliency projects.

Desktop analysis should include but not be limited to:

- Editable base maps and supporting memos of the Project Area
- Assessment and documentation of shoreline conditions
- Documentation of existing Transportation and Maritime Infrastructure
- Documentation of planned and proposed Transportation and Maritime Infrastructure, including later phases of the Second Avenue Subway
- Assessment of existing environmental conditions and benthic habitat to inform potential project impacts
- Documentation of existing telecommunications, electric, steam, and gas infrastructure

d) **Existing Conditions & Site Investigations**

It is anticipated that additional data collection will be needed in order to inform the existing conditions analysis. The Consultant Team is expected to identify the need for new data collection within the first three months. Any additional collection that may be anticipated should be included within Task Nine, Additional Services.

- Shoreline configuration (e.g., bulkhead, riprap, wetlands) and trends (e.g., erosion). The shoreline configuration analysis should utilize NYCEDC's waterfront inspection

manual and comply with rapid-level inspection criteria. Additional further inspection in some areas may be required pending the outcome of the initial rapid-level inspection.

- Utilities and topographical survey (including waterfront streets, parks, and tax lots)
- Bathymetric survey
- Geotechnical survey
- Natural features (e.g., open water, littoral zone, wetlands)
- Water quality
- Inventory of all water-related improvements and uses within and near the inlets including whether such uses are active or inactive and legally permitted or illegal
- Known environmental contamination issues, both in-water and upland sites (e.g., E designations); Phase I and Phase II Environmental Site Analysis of publicly-controlled sites.
- Historic and/or cultural assets, including the inlets as they relate to the history of the neighborhoods, New York City history, and the history of local indigenous cultures
- Hydrologic and hydraulic surveys, including freshwater sources, water depth, currents, wave heights and directions, water quality, mean tidal cycle, salinity, inundation duration period, and drainage configurations
- Bio-benchmark studies
- Wetland delineation
- Biological resources survey that identifies and maps habitat types and vegetative communities
- Title search

e) Hydrological Modeling of Climate Scenarios

Using current climate conditions and climate scenarios projected by the New York City Panel on Climate Change up to the year 2100, this analysis should build on the *Lower Manhattan Climate Resilience Study*. The modeling should examine hydrological flows from multiple climate risk scenarios including storm surge, sea level rise, and extreme precipitation scenarios and should include the 5-, 10-, 25-, and 100-year precipitation events and the current and anticipated future 5-, 10-, 25-, and 100-year storm surge events. This model will be used to test the resiliency benefits for Shoreline Alternatives in Task 3 and interior drainage strategies in Task 5, as well as to inform which Shoreline Extension Alternatives and drainage strategies to advance.

Task One Deliverables:

1. Guiding principles to be developed in consultation with NYCEDC, the City and Community stakeholders to inform design, programming, and potential public benefits
2. Core criteria to assess and develop set of Shoreline Extension Alternatives, Conceptual Design for Comprehensive Adaptation Plan and Preliminary Design for First Phase Project Plan
3. Memo or presentation outlining findings from the desktop analysis about existing conditions and identified constraints and opportunities to guide design in the Project Area
4. Updated memo or presentation outlining findings from existing conditions and site investigations
5. Complete compilation of all analysis and field work, including surveys, site investigations, and other deliverables about existing conditions from field work
6. Hydrological model to inform later tasks, including Shoreline Extension Alternatives and Interior Drainage Strategy

Task Two: Stakeholder Engagement

The Consultant Team will support and participate in the City's effort to conduct a robust and intensive community engagement process. Public and stakeholder engagement will be ongoing throughout the Master Plan process and will provide key input to decisions and deliverables required in this Scope of Services. Public and stakeholder engagement will aim to fulfill the following objectives:

1. Educate the public on climate risks and issues, different solutions for climate adaptation, and trade-offs to getting to an implementable climate adaptation project.
2. Provide opportunities for meaningful informed input from a diverse set of stakeholders to inform the Master Plan process from start to finish.
3. Build the foundation for a generational coalition of supporters to advocate for the implementation of the Master Plan and for climate resilience in Lower Manhattan.
4. Reach a diverse range of local and citywide stakeholders, including but not limited to residents, business owners, leaseholders, property owners, users of infrastructure, environmental advocacy groups, climate resilience advocacy groups, and youth.

The Consultant Team will be expected to provide materials and innovative tools that translate technical content and complex issues in a clear and engaging manner for public audiences. The Consultant Team will be expected to help lead public engagement activities and represent their work to diverse audiences.

a) Agency Engagement

Prepare for and attend meetings with cooperating, involved, and interested City agencies which may include, but are not limited to:

- MOR
- Mayor's Office of Sustainability
- DEP

- DOT
- DCP
- DPR
- NYC Office of Emergency Management
- NYC Department of Design and Construction
- OMB
- DOB
- DSNY
- DSBS
- NYC Landmarks Preservation Committee
- NYC Public Design Commission
- HPD
- NYC School Construction Authority
- NYPD
- Fire Department, City of New York

Prepare for and attend meetings with public agencies and other governmental and quasigovernmental entities that have an interest in the Master Plan. In addition to City agencies, such entities may include, but are not limited to:

- Battery Park City Authority
- The Battery Conservancy
- Trust for Governors Island
- Lower Manhattan Development Corporation
- National Parks Service
- New York City Housing Authority
- Port Authority of New York and New Jersey
- Interstate Environmental Commission
- MTA
- NYSDEC
- NYSDOS
- NYSDOT
- OPRHP NYS Office of General Services
- State Coastal Zone Management Program (NYS Department of State)
- USACOE
- United States Environmental Protection Agency
- United States Coast Guard
- USFWA

b) Public and Stakeholder Engagement Plan

In close consultation with NYCEDC and the City, the Consultant Team will create an engagement plan and timeline, to be implemented in conjunction with other tasks (the "Engagement Plan"). The Consultant Team will identify creative strategies to effectively

engage, educate and empower the diverse group of stakeholders at each stage of the process to inform both the Comprehensive Adaptation Plan and the First Phase Project Plan.

Activities may include discussions and informal meetings with individual stakeholders, charrettes/workshops, information sessions/open houses, public meetings, site tours, stakeholder surveys, online platforms, engagement with media outlets, and other types of outreach. The Engagement Plan should also consider the use of technology, grassroots outreach, public art and visuals, and other innovative tools to ensure a broad and inclusive engagement process. Engagement must include a strong educational component in order to empower stakeholders to understand both the climate risks as well as proposed adaptation options, and to effectively weigh in on decisions for the Comprehensive Adaptation Plan and First Phase Project Plan.

The Engagement Plan must detail key public milestones and opportunities for stakeholder input to be incorporated in final deliverables. It must also detail responsibilities for engagement, whether held by the Consultant, members of the Consultant Team, NYCEDC, MOR, Agencies, or any other relevant party. The Engagement Plan is subject to NYCEDC's approval, and once finalized, the Consultant and Consultant Team will perform the relevant duties identified therein.

c) Public and Stakeholder Engagement Meetings

The Consultant Team will support NYCEDC's efforts to plan and facilitate all stakeholder meetings and public engagement events. The Consultant Team is expected to attend and at times lead meetings with a wide range of stakeholders, including but not limited to: Community Board leadership, elected officials, large property owners, community developments and organizations, City agencies, and other public and quasi-public entities.

The Consultant Team will plan and prepare all logistics for events, including identifying locations, setting up, and staffing. The Consultant Team will also serve as presenters and/or facilitators at large, public-facing workshops and events, as well as gather and document feedback from all public engagement sessions. Based on the needs of stakeholders, the Consultant may be required to produce materials in English, Spanish, and Chinese, as well as provide for simultaneous English/Spanish and English/Chinese (Mandarin and Cantonese) translation. The exact nature and number of the community engagement sessions is to be determined in consultation with NYCEDC, but the Consultant Team should expect one large-format public meeting every other quarter at minimum.

d) Steering Committee Engagement Meetings

The City will convene a dedicated formal body of key stakeholders, both local and citywide/national, ("Steering Committee") who will help the City steer the Master Plan process to a successful conclusion. This Steering Committee will be regularly engaged in the technical analysis of the planning process, help lead and plan public engagement, and help the City weigh different objectives at key decisions and milestones.

The Consultant Team will help support the Steering Committee process and meetings, participating as technical advisors in meetings with the full body as well as other meetings and workshops with individuals on the steering committee. As with the public engagement events, the Consultant Team will plan and prepare logistics and materials and may serve as facilitators for Steering Committee meetings.

e) Engagement Materials

In consultation with the City, the Consultant Team will be responsible for developing accessible materials that clearly communicate complex and technical content for diverse public audiences. These materials must creatively visualize potential alternatives and solutions and effectively frame nuanced issues and difficult trade-offs for meaningful discussion. Materials and documents for engagement meetings will be expected to go through multiple rounds of review and revision based on Agency and stakeholder feedback.

Engagement materials may include the following:

- Renderings, video and graphics, 3D models, and other explanatory tools to support the engagement strategy;
- Materials and potential meeting facilitation services at quarterly meetings of the Steering Committee;
- Materials for briefings with elected officials and stakeholders;
- Posters, boards, flyers, surveys, and brochures for public distribution at information sessions, public meetings, open houses, workshops/charrettes, tours, etc.;
- Online platforms and web content; and
- Marketing and social media materials to brand and advertise this process.

Task Two Deliverables:

1. Engagement Plan and Timeline
2. Engagement materials including renderings, video and graphics, 3D models, content for project webpage, and other explanatory tools to support the engagement strategy
3. Presentations and materials for steering committee meetings and public meetings/events
4. Marketing materials, social media and web-friendly content to brand and advertise this process
5. Materials for briefings with agencies, elected officials, and stakeholders

Task Three: Shoreline Extension Engineering and Design

a) Scoping of Shoreline Extension Alternatives

The Consultant Team will further refine the set of core criteria, as outlined in Task One, to evaluate and analyze a variety of climate adaptation tools and infrastructure. The Consultant Team is expected to begin with the broadest range of possible Shoreline Extension Alternatives, and then narrow down to a refined set of Select Alternatives. This

will be achieved through an iterative process in consultation with NYCEDC and the City that is expected to include analysis of existing conditions, order of magnitude cost estimating, high level financial analysis, high level engineering feasibility, an early assessment of permitting and implementation viability, and opportunities for public benefits.

To assess the broad range of potential Shoreline Extension Alternatives, the Consultant Team is expected to identify:

- Level of flood risk reduction
- Boundaries of Shoreline Extension
- Type of fill and/or technology
- Order of magnitude cost estimate
- Assessment of risks and mitigations, including but not limited to the following:
    - Conflicts with above- and below-ground infrastructure
    - Conflicts with adjacent capital projects in Two Bridges and The Battery
    - Upland tie-ins and navigation of grade changes for reasonable mobility
    - Negative in-water impacts (i.e. water rebound, navigational concerns, East River habitats/ecology, scour impacts on bridges or tunnels)

The Consultant Team is expected to utilize the hydrological model of climate risk scenarios from Task One to assess the viability of Alternatives.

The Consultant Team should identify subarea geographies and then consider Alternatives within each subarea, in order to create a menu of mix-and-match Alternatives for the full Project Area. Through an iterative process, the Consultant Team will go from assessing a broad range of Alternatives by subarea to scoping a defined set of Shoreline Extension Alternatives for each subarea geography.

The Consultant Team should consider Alternatives with and without development. Shoreline Extension Alternatives without development should be optimized to minimize the footprint of the Shoreline Extension and overall project cost. Alternatives with development should be optimized for financial viability, assuming revenue from the development program. These Alternatives should be limited to a maximum potential footprint from the shoreline to the current Pierhead Line.

Explained in more detail in Sub-task E, financial analysis will be a critical component to the early analysis and vetting of Shoreline Extension Alternatives. The Consultant Team should develop a dynamic, flexible model that can inform the Shoreline Extension at each stage of analysis, including the vetting and selection of Alternatives, design and engineering of Select Alternatives, and implementation planning. Financing models should be considered for Alternatives both with and without development.

From these Alternatives, the Consultant Team, in consultation with the City and community stakeholders, will develop Select Shoreline Extension Alternatives for the full Project Area, including Alternatives with and without development to be studied in the following sub-task.

b) Conceptual Design and Engineering of Select Shoreline Extension Alternatives

Building on the previous task, the Consultant Team will further define and evaluate each of the Select Shoreline Extension Alternatives.

The Consultant Team should build on the core criteria to develop design and engineering criteria to further evaluate project viability and maximize transparency in decision-making around Alternatives. The Consultant Team is expected to develop conceptual designs, as well as more detailed engineering, conceptual cost estimates, and an implementation strategy for each of the Select Alternatives.

The conceptual design of the Select Alternatives should consider:

- Design & Engineering
    - Design elevations and level of flood risk reduction
    - Upland components, including tie-ins, navigation of grade changes, and edge conditions
    - The number and nature of any deployable aspects of flood protection
    - Transportation and mobility needs
    - Feedback from permitting agencies and revisions to design based on feedback
    - Effects on ecological systems and habitats (vegetative, bird, fish, benthic)
    - Technical feasibility
    - Sourcing and composition of fill
    - Structural aspects of sedimentation and erosion-resistant design
    - Screening for environmental impacts and mitigation options and opportunities to enhance the environment and ecology, including potential vetting with the scientific community
    - Screening for erosion, scour, and potential coastal surge displacement in surrounding areas, as well as navigational concerns with consideration given to any potential effects on the Staten Island Ferry and on bridges and tunnels
    - Seismic considerations
    - The need for a seepage barrier, and if applicable, impacts to groundwater levels and flow behind the seepage barrier
    - Assessment of proposed feasibility, cost, and siting of new infrastructure for drainage, energy, etc. that aligns with the City's sustainability and resiliency goals
- Integration
    - Integration with existing waterfront open spaces and buildings
    - Integration with all adjacent capital projects, including but not limited to: Two Bridges Coastal Resilience, The Battery Coastal Resilience, and Brooklyn Bridge Esplanade
    - Integration with existing above- and below-grade infrastructure, including but not limited to tunnels, utilities, and drainage infrastructure
- Implementation and other considerations

- Fire and life safety analysis
- Maintenance and operation planning
- Construction methodology and construction impacts on air quality, traffic, and noise
- Property acquisition required, if any, as well as considerations related to adjacent properties and owners
- Waterfront zoning and other relevant zoning regulations

c) Analysis of Permitting and Approvals

Given the complexity of permitting and approvals for an in-water project, requirements for implementation should be considered at each stage, including the vetting and selection of Alternatives, design and engineering of Select Alternatives and implementation planning (as described in more detail in Task Seven).

From the scoping of Alternatives through to First Phase Project development, the Consultant Team should look for opportunities to integrate ecological benefits and mitigation into the project to ensure that Shoreline Extension Alternatives can be successfully permitted and implemented. The Consultant Team will be expected to develop mitigation strategies with a preference for on-site mitigation, but also evaluating potential for off-site mitigation options.

The assessment of required approvals and permitting pathways should include but not be limited to navigable waterway and coastal regulations, as well as 'in-water' permits with State and Federal partners. The Consultant Team should confirm and build on the list below of permitting agencies and legislative requirements:

- United States Army Corps of Engineers
- State Coastal Zone Management Program (NYS Department of State)
- United States Environmental Protection Agency
- United States Fish and Wildlife Service
- National Oceanic and Atmospheric Administration
- NYS Department of Environmental Conservation
- Navigable Water Servitude (for the de-mapping and filling in of a navigable waterway):
    i. Navigational Servitude statute waiver needed by new statute
    ii. Compromising refuel petroleum products route in East River
    iii. Non-navigability statute
    iv. Section 404(b)(1) Clean Water Act Compliance by permit only

d) Analysis of Tidal Forces and Changes in Current

The Consultant Team will be expected to analyze the impacts of the Select Alternatives on tidal forces and changes in current in the East River and upper harbor. This analysis should consider three core issues: water rebound, navigational effects, and scour, as well as their impact on the maritime assets and/or other infrastructure, including bridges and tunnels.

e) Financial Analysis

In parallel with the other sub-tasks within Task Three, the Consultant Team will develop a series of financial analyses capable of testing multiple scenarios. The financial analyses may be more high-level initially, comparing estimated capital, up-front, and operating costs with estimates for income streams based on blended land values (using an indicative topside use program to be agreed upon with NYCEDC), tax revenues and value capture, to assist in narrowing down the broadest range of possible alternatives for Shoreline Extension to a refined set of options through an iterative process.

The financial analyses should include a dynamic financial model that demonstrates the financial impact to the City, comparing all expected revenues (e.g., proceeds from land disposition, tax revenues, value capture) with all expected expenses (e.g., project planning and project management costs, bond financing, construction and maintenance of infrastructure and municipal facilities required within the Project Area and in surrounding areas).

The financial analyses and the associated financial model will need to be capable of quickly evolving into sophisticated, detailed, dynamic, and highly iterative tools as the Project progresses. This will include the ability to analyze multiple iterative scenarios at an intervention-by-intervention and building-by-building level (including multiple combinations of topside uses) and the impact of timing for construction of each intervention or development, all to assist with identifying optimal phasing and financing strategies.

For any potential development on the Shoreline Extension, the model should include a dynamic pro forma for the Master Plan from a private developer's perspective, capable of analyzing multiple combinations of uses, buildings and locations to determine realistic income projections for such development. The Consultant Team will indicate, for each property type and each location within each subarea geography of the Project Area, at what point in time the development of that portion of the Project Area in accordance with the conceptual programs developed in Task Six becomes conventionally financeable.

The financial model should include the following:

- Conceptual cost estimates for the Comprehensive Adaptation Plan, including but not limited to the Shoreline Extension, Transportation and Maritime Infrastructure, Interior Drainage, utilities, and public amenities, with all hard and soft costs itemized and a statement of sources and uses of funds;
- Preliminary cost estimates for the First Phase Project Plan, including but not limited to the Shoreline Extension, Transportation and Maritime Infrastructure, Interior Drainage, utilities, and public amenities, with all hard and soft costs itemized and a statement of sources and uses of funds;
- Financial losses avoided as a result of Shoreline Extension Project;
- Phasing schedule, including estimated construction time;

- Operating pro formas that include any necessary capital improvements over time and capital reserves;
- Debt service payments and other financing terms such as interest rate, loan to cost (or loan to value as applicable), coverage ratio, term of loan, and payment schedule;
- Details of any as-of-right or discretionary real estate tax, other tax, energy, or other governmental benefits assumed in the model;
- An itemized list of all assumptions used, including market rate land values and rental rates, expenses, escalations, discount rates, capitalization rates, and absorption rates, etc., including identifying the sources of that data and the comparable properties used;
- Detailed development costs, with all hard and soft costs itemized and a statement of sources and uses of funds; and
- An Internal Rate of Return (IRR), cash-on-cost, and cash-on-cash return analysis.

The Consultant Team will consider a 40-year outlook to align with bond retirement. The Consultant Team will test a variety of financing mechanisms for the Shoreline Extension, climate resilience and infrastructure work, such as public-private partnerships, co-funding, government-supported debt, superannuation funds, institutional investment, insurance surcharges, or alternative procurement mechanisms. The Consultant will identify the funding mechanisms that it believes are the most viable and worthy of exploration and propose such mechanisms to NYCEDC for approval before completing the work and presenting the results.

Task Three Deliverables:

1. Memo or presentation outlining all potential Shoreline Extension Alternatives measured against the guiding principles and core criteria, as well as Select Alternatives and rationale for selecting these Alternatives. Visuals should be included wherever possible. This may include rough sketches, maps, and conceptual diagrams to illustrate ideas effectively for a lay audience.
2. Technical feasibility report to include the following:
    a. Conceptual design, engineering and cost estimates for Select Alternatives, including plan drawings, cross-sections, elevations, axon/perspective drawings, renderings and other illustrative materials to convey the details of the concepts.
    b. Detailed analysis of all potential permits and legislation needed in order to inform scoping of the Shoreline Extension Project.
3. Analysis of tidal forces and changes in current including key conclusions to inform Shoreline Extension and maritime uses
4. Financial feasibility analyses and financial model(s) in Microsoft Excel format with supporting user manual. The financial model(s) must be in electronic format with all original formatting and formulas (no hard coding) and have no hidden or locked sheets or cells.
5. Construction and design feasibility including but not limited to: analysis of volume of fill, amount of reclaimed land, new water depths, potential means and methods, etc.

Task Four: Transportation & Maritime Infrastructure Planning

a) Assessment of Maritime Uses & the FDR Drive

The Consultant Team will review all Transportation and Maritime Infrastructure, adjacent to, above or within the Shoreline Extension. This will include the FDR Drive and the Brooklyn Bridge and its approaches, as well as existing maritime assets, including the historic Battery Maritime Building (with ferry service to Governors Island), Whitehall Ferry Terminal, the Downtown Manhattan Heliport, Piers 11, 15, 16, and 17, and the portions of the historic South Street Seaport located along the waterfront (the "Transportation and Maritime Infrastructure").

For each piece of infrastructure, the Consultant Team should determine what can be altered and/or moved, what likely needs to stay in place in the long-term, and where there are opportunities to improve or expand maritime uses as a part of the Shoreline Extension. For the FDR Drive, the Consultant Team should evaluate the potential to alter and/or reconfigure the roadway to better integrate with the Shoreline Extension Project and serve potential resiliency functions.

The Consultant Team will prepare a matrix that lists all pieces of infrastructure and grades them according to the following categories:

1. Cannot be moved for the foreseeable future. Must be accommodated below, within or above the Shoreline Extension without disrupting the location and use of the infrastructure.
2. Potential to move or alter the infrastructure to facilitate Shoreline Extension, but such accommodation poses significant challenges/impacts:
    i) Such challenges may include issues related to logistics, financial implications, or phasing; and
3. Can be moved or altered to facilitate Shoreline Extension. Identify how the infrastructure will be accommodated, whether the plan is contingent on other projects, when the accommodation can be made in the overall Comprehensive Adaptation Plan schedule and phasing, what the financial implications are and how the infrastructure may be improved/enhanced.

The Consultant Team must also consider current leases and deal structures when developing this matrix.

In support of this matrix, the Consultant Team will prepare a set of plans and diagrams showing where pieces of this infrastructure is located in the Project Area, and if any infrastructure is proposed to be moved and/or integrated into a Shoreline Extension, where it would be located after such change, together with a summary of the associated financial implications and potential benefits or improvements to the infrastructure.

b) Conceptual Design and Engineering of Alterations to Maritime Uses & the FDR Drive

The Consultant Team will develop an engineering feasibility assessment and conceptual design of integration with the Transportation and Maritime Infrastructure. This task will

include the analysis of current operations, collaborative development of conceptual design, site plans, sectional drawings, renderings, and other diagrams to illustrate the concepts for modification, relocation and/or improvement of the Transportation and Maritime Infrastructure. The team will do conceptual engineering, which will include in-water and on-land geotechnical borings (if necessary) and document review to assist in the refinement of plans. The level of engineering should be appropriate to determine feasibility and provide conceptual level cost estimates, together with updated financial analyses.

This study will help define a balance between the benefits of new adaptive infrastructure and the need for mobility and safety, setting forth strategies for Transportation and Maritime Infrastructure improvements adapting to current needs and future trends across all modes (i.e., walking, ferry, subway, bus, bicycle, auto, taxi, trucks, etc.), identifying and addressing existing/longstanding transportation challenges, as well as the challenges and opportunities anticipated in the near future.

c) Transportation Analysis

For the Select Alternatives with development, the Consultant Team will analyze subway, bus, and ferry ridership and line haul capacity and provide recommendations for improvements to accommodate an increase in the population of transit users (residents, visitors, and workers) based on the programming plan developed in Task Two.

Based on desktop analysis of trip demand generated by program in Task Six, the Consultant Team will develop a preliminary plan for station(s), bus, ferry, and subway line haul capacity, and other transit improvements needed to accommodate development at the scale anticipated with each Shoreline Extension Alternative. Given the importance of critical transit hubs and connections in the Project Area, the analysis should also consider connections and circulation between transportation uses.

In collaboration with appropriate agencies (and other current or future transit providers, if desired), the Consultant Team shall:

- Estimate trip demand based on program developed in Task Six and projected system-wide growth, by mode and for all cumulative and peak weekday hours. For transit trips, allocate trips to specific transit modes (subway, bus, ferry, etc.), subway lines or bus routes, and stations (including but not limited to Fulton Street, Wall Street, and Whitehall Street stations as well as Pier 11 and Whitehall Ferry terminals).
- Calculate capacity requirements based on a comparison of future trip demand with projected station and line haul capacity by mode. In order to establish a baseline for current station capacity, NYCEDC will work with City and State partners to gather relevant data.
- Identify station, line haul, and bus improvements needed to meet NYCT level of service and accessibility guidelines. Develop conceptual cost estimates for recommended upgrades.

Based on other planned and/or proposed transportation improvements in Lower Manhattan at large, develop a list with associated cost estimates for other transportation interventions that should be considered to address current and future circulation needs for the neighborhood.

Task Four Deliverables:

1. Assessment of existing and planned Transportation and Maritime Infrastructure and recommendations to leave in place, modify, relocate and/or improve in order to integrate with Shoreline Extension Alternatives
2. Conceptual design, engineering, and cost estimates of Transportation and Maritime Infrastructure alterations
3. Overall strategy for transportation network improvements and future circulation with Shoreline Extension Alternatives, including pedestrian, bike, bus, subway, ferry, goods movements, and automobile
4. Memo summarizing the findings of the transportation needs assessment and improvement plan, including conceptual designs for station, capacity and other transportation improvements, and corresponding conceptual cost estimates.
5. Updated financial feasibility analyses and financial model(s) in Microsoft Excel format with supporting user manual. The financial model(s) must be in electronic format with all original formatting and formulas (no hard coding) and have no hidden or locked sheets or cells.

Task Five: Interior Drainage Strategy

Given the complex nature of drainage issues in this area, the Consultant Team should approach this task to understand critical gaps in existing and future drainage capacity and then identify where new drainage infrastructure can be sited within the Shoreline Extension Alternatives.

a) **Refine Drainage Model**

The Consultant Team will be anticipated to refine DEP's existing calibrated Long-Term Control Planning model that was previously refined under the East Side Coastal Resiliency (ESCR) and Two Bridges projects (to be provided by DEP, following departmental security protocols) to include additional sewers and identify vulnerable locations within the Manhattan Newtown Creek drainage area. This work should include a written plan submitted to DEP for model modification, calibration, and validation (MCV plan), which may include incorporating as-built drawings, conducting field work (i.e. surveying or inspections) as needed to confirm key information, and potentially conducting flow-metering. The Consultant Team, in consultation with the City, should identify low lying and/or vulnerable areas and restrict more detailed sewer modeling and field work to those areas.

The consultant team should anticipate Quality Assurance (QA) periods with DEP, both to review the MCV plan and to review the results of calibration, validation, and refinements to the model.

b) **Testing Options for New Drainage Infrastructure**

The Consultant Team, in consultation with the City and stakeholders, will identify options for new infrastructure to increase drainage capacity, i.e. new pump stations, tunnels and/or storage tanks. The Consultant Team should also develop options for managing drainage on the new land created with the Shoreline Extension, including green and grey solutions.

At a minimum, all proposed alternatives must manage interior drainage for the Project Area, while ensuring drainage solutions do not make flooding conditions worse in other sub-catchment areas within the Manhattan Newtown Creek Sewer Shed. This should include:

- Providing level of service (LOS) for a combined 2-year rainfall and 100-year storm surge event (hyetograph will be provided by DEP)
- Evaluate the performance of the drainage system based on the 100-year storm surge with and without wave action.
- Providing level of service (LOS) to withstand the 2050 SLR (30").

The Consultant Team should evaluate solutions that will improve drainage conditions under different climate scenarios from Task Three with the Select Shoreline Extension Alternatives. This will be an iterative process and the Consultant Team should ensure that this task informs the Shoreline Extension and Transportation and Maritime Infrastructure aspects of this scope and vice versa.

Evaluation should be consistent with the criteria used for the ESCR and Two Bridges projects. In addition to improving the drainage condition, this analysis should consider:

- Design/engineering feasibility
- Constructability
- Cost
- Social and environmental considerations
- Consistency with agency and Citywide goals
- Operation and maintenance cost

c) Drainage Strategy

The consultant team should develop a drainage strategy that integrates with the analysis and recommendations from the two other key technical aspects of the scope – Shoreline Extension and Transportation and Maritime Infrastructure.

The strategy should include a phasing plan that integrates with the First Phase Project and is based on modeled climate impacts, capital funding availability and updated financial analysis. For any new infrastructure, the consultants, informed by DEP's siting requirements, should identify the location and estimated cost of the proposed infrastructure.

The strategy will describe how the proposed interventions would operate and be maintained, particularly in event of a major storm, including cost and time required to restore the system to full functioning.

The strategy should also consider the impact of the isolation of the ESCR/Two Bridges and Battery Park City areas and factor in any potential increase to flood volume and SBUs that result from this project.

Task Five Deliverables:

1. Completed model(s) with existing and updated drainage networks and climate scenarios must be provided to DEP. The model is propriety to DEP upon completion of work. The model should be in Infoworks ICM and should be accompanied by a technical memo outlining calibration/validation results, modeling scenarios, assumptions, analysis of modeling results, and shall include all technical attachments.
2. Memo comparing potential drainage solutions under different climate scenarios and with Select Shoreline Extension Alternatives that clearly demonstrate the analysis and determination of preferred solutions. Memo should include considerations of resiliency benefits, O&M, and feasibility (including design, engineering, financial, operational cost).
3. Drainage strategy, including conceptual cost estimates and phasing/implementation plan.
4. Updated financial feasibility analyses and financial model(s) in Microsoft Excel format with supporting user manual. The financial model(s) must be in electronic format with all original formatting and formulas (no hard coding) and have no hidden or locked sheets or cells.

Task Six: Placemaking, Urban Design and Programming Strategy

a) Urban design guidelines

The Consultant Team will develop urban design and programming strategies for integrating large-scale climate adaptation infrastructure with the existing neighborhoods and with waterfront uses and access, as well as maximizing public benefits.

This will include developing urban design guidelines for the shoreline extension, upland tie-ins, as well as edge conditions where the shoreline extension meets existing neighborhoods and waterfront. The guidelines should consider:

- Best practices and characteristics for shoreline extensions
- Maritime uses
- Other waterfront uses and access
- Visual connectivity from upland neighborhoods and visual corridors
- Open Space network and public amenities
- Building form and density
- Pedestrian, cyclist, transit and vehicular network

- Relationship to adjacent neighborhood and waterfront contexts including neighboring historic districts and historic resources, as well as programming initiatives in surrounding geographies (i.e. The Battery, East River Esplanade, and Brooklyn Bridge Esplanade)
- Existing and potential zoning tools

b) Placemaking/programming & trade-offs analysis

The Consultant Team should develop a flexible framework for placemaking and programming on the Shoreline Extension, taking into consideration different uses, densities, and heights (for alternatives with development), and streetscapes, other urban design elements, and public amenities (for alternatives both with and without development). This framework should incorporate analysis of trade-offs between Shoreline Extension Alternatives with and without development as they relate to financial viability, affordable housing, sustainability, job creation, and urban design considerations (e.g. building form, height to open space ratios). The framework should be developed in accordance with City goals and criteria around equity, resiliency, and sustainability outlined in *OneNYC.*

c) Programming plan

For each of the Select Alternatives, the Consultant Team will be expected to develop plans for programming, including:

- Conceptual plans for edge conditions and mobility/accessibility
- Conceptual circulation plans for pedestrians, cyclists, and motorists, in line with transportation analysis and conceptual improvement plan developed in Task Four
- Public amenities, including approximate amount and types of public and open space
- Siting of infrastructure
- Minimum spot elevations, with any sloping anticipated
- Updated financial analysis, including order of magnitude cost estimates and income to the City, such as proceeds from land dispositions and tax revenues

In addition to the list above, for the alternatives with development, the plans for programming will include:

- Potential building typologies, with high-level building height and massing guidelines, and general ground floor use/activation strategies;
- Approximate program and land use mix by square foot to inform financial and transportation analysis
- Conceptual site plans
- Potential revenue generation
- Evaluation of development's contribution to citywide emissions reduction goals

For the selected First Phase Project, the Consultant Team will be expected to develop more detailed drawings and plans for urban design and topside programming, including:

- Conceptual site plans
- Conceptual program and land use mix by square foot
- Conceptual circulation plans for pedestrians, cyclists, transit users and motorists, and maritime/ferry users
- Conceptual plans and cost estimates for new infrastructure, including construction and long-term maintenance

Any parks/open space plans must be reviewed by and coordinated with NYC Parks throughout the project. Any public release of materials including proposed plans for parks/open spaces must be signed off in advance of any meetings with the public.

d) Utilities, energy, and communications infrastructure planning

The Consultant Team should develop an energy framework, including assessing new demand (electricity, heating, cooling, etc.) needs associated with the proposed Shoreline Extension, analyzing and identifying potential infrastructure and utility upgrades, and proposing innovative solutions to meet future demands and meet the City's resilience and sustainable energy goals.

Finally, the Consultant Team will also be anticipated to develop ideas for new communications infrastructure. The Services may include the identification of solutions to protect existing utilities, transportation tunnels, and other underground infrastructure from groundwater intrusion. Additional infrastructure planning is outlined in previous tasks on transportation and drainage infrastructure.

Task Six Deliverables:

1. Urban design guidelines, refined in consultation with stakeholders
2. Conceptual programming for Select Alternatives, with and without development
3. Framework for utility, energy, and communications infrastructure planning
4. Supporting visuals, such as sketches, maps, diagrams, renderings, etc., to effectively illustrate ideas for a lay audience.

Task Seven: Implementation Planning

Implementation planning will inform every stage of this project from scoping Shoreline Extension Alternatives to developing design and engineering.

The Consultant Team will be expected to develop a clear implementation plan for the Comprehensive Adaptation Plan and First Phase Project, including supporting the City in establishing a governance entity, creating a phasing and implementation plan and developing a detailed First Phase Project design, as well as permitting, legislative, and governance strategy.

a) Analysis and Strategy for Approvals and Permitting Pathways

The Consultant Team will be expected to study and identify the required approvals and permitting pathways (City, State, federal, and other, including legislative) throughout the course of this scope in order to inform the development and evaluation of Select Shoreline Extension Alternatives and development of the Comprehensive Adaptation Plan and First Phase Project. The team will be expected to attend meetings with various regulatory agencies to advance understanding of permitting requirements and viability of Alternatives.

b) Permitting and Legislative Plan

The Consultant Team will also develop a complete permitting and legislative plan for the full Project Area and a more detailed permitting and legislative plan, including potential drafting of initial documents and mitigation planning, for the First Phase Project. The Consultant Team shall identify any legislative/policy changes required for full implementation of the plan and timeline/process associated with each. The Consultant Team will also be anticipated to develop a comprehensive environmental mitigation plan.

c) Phasing Plan

The Consultant Team shall develop a detailed phasing plan for the full Project Area. The plan should incorporate the permitting strategy that describes which permits and approvals are necessary and when these need to be obtained. The plan will establish a timeline for implementation of each phase, including critical path items such as permits/approvals and associated environmental review; property acquisition and disposition; stakeholder outreach; rezoning of adjacent upland areas; and site preparation, design, and construction.

d) Development of a Governance Entity

The City will be advising on governance strategy for this plan. The Consultant Team will support the City in weighing different options for structuring the governance entity based on different considerations of overall project control, ownership of the Shoreline Extension and associated development and air rights, and financing mechanisms, costs, and returns. The Consultant Team is anticipated to support the City in the establishment of the governance entity, including legal assistance and preparation of legal documents and materials as necessary.

Task Seven Deliverables:

1. Comprehensive permitting, phasing and legislative plan for Comprehensive Adaptation Plan
2. Detailed permitting and legislative plan for First Phase Project
3. Comprehensive Environmental Mitigation Plan
4. Documentation, legal and otherwise, as needed to establish governance entity, including supporting the City in its evaluation of options

Task Eight: Comprehensive Adaptation Plan and First Phase Project Plan

The Consultant Team will develop a Comprehensive Adaptation Plan for the full Project Area that details one or two viable Alternatives. In consultation with NYCEDC, the City and stakeholders, the Consultant Team will assess the Select Shoreline Extension Alternatives against the core criteria and guiding principles and recommend which Alternative or Alternatives to advance in the Comprehensive Adaptation Plan. The Comprehensive Adaptation Plan will integrate and synthesize the outcomes of the three core areas of technical analysis conducted in previous tasks, on Shoreline Extension, Transportation and Maritime Infrastructure, and Interior Drainage. The Plan will present a long-term vision for the Project Area at full implementation of one or two viable alternative and detailed plans for phased implementation.

The concluding work in this Task will be to memorialize the Comprehensive Adaptation Plan into a Public Summary Report. The process to develop the Comprehensive Adaptation Plan will involve and incorporate input and review from NYCEDC and other stakeholders determined by NYCEDC at each milestone and deliverable. It will also incorporate feedback gathered through stakeholder engagement.

The Consultant Team will also be expected to create one detailed First Phase Project Plan that is developed to the extent necessary for an environmental review process to begin after the conclusion of this Scope of Work.

The Comprehensive Adaptation Plan must be aligned with the outcomes of previous and concurrent Tasks and meet the Core Criteria and Guiding Principles.

a) Comprehensive Adaptation Plan

The Comprehensive Adaptation plan will bring together all tasks into a clear and comprehensive strategy with associated visuals and narrative. The plan should integrate the following tasks into the Comprehensive Adaptation Plan:

- A comprehensive design of the Shoreline Extension
- Plan for integration of the FDR Drive and Transportation and Maritime Infrastructure with Shoreline Extension
- Recommendations for transportation improvements for alternatives with development
- Comprehensive interior drainage strategy
- Conceptual cost estimates for Shoreline Extension, Transportation and Maritime Infrastructure, Interior Drainage, public amenities and any other costs associated with successfully implementing the Comprehensive Adaptation Plan
- Detailed implementation strategy for permitting, governance, and financing for Comprehensive Adaptation Plan
- Energy strategy and approach to Shoreline Extension and integration of energy and telecommunications infrastructure needs to support the proposed Plan

- Detailed phasing strategy for the Comprehensive Adaptation Plan
- Summary of community engagement and how stakeholder input has informed the planning and design

b) Detailed First Phase Project Plan

The First Phase Project plan will include preliminary designs (i.e. 15-20%), engineering and infrastructure plans, in-depth implementation strategy, preliminary cost estimates and detailed financing strategy. The Consultant Team should test multiple Alternatives to identify the First Phase Project in consultation with the City. The First Phase Project Plan should include:

- Preliminary design of Shoreline Extension, including:
  - Foundation design
  - Structural design
  - Sourcing and composition of fill
  - Utility impacts
  - Possible re-grading of adjacent streets
  - Locations and design considerations for vehicular, pedestrian, and bicycle access to the Shoreline Extension
- Detailed design of Shoreline Extension access locations and design strategies from adjacent communities;
- Urban design guidelines;
- Program and land use mix by square foot;
- Building typologies;
- Primary and secondary street grid and circulation patterns;
- Characteristics of public and open space;
- Amount, types, and locations of appropriate community facilities;
- Preliminary plan for public services;
- Preliminary utility and infrastructure strategy;
- Preliminary drainage strategy;
- Transportation and trip-distribution analysis;
- Total development costs;
- All financial analyses updated and refined to reflect the First Phase Project with development;
- Permitting and legislative strategy;
- Initiation of permitting applications;
- Benefit cost analysis;
- Detailed guidelines for construction implementation;
- Renderings;
- Sustainability plan; and
- Integration with long-term phasing plan.

c) Public Summary Report

The public summary report should clearly outline the process, including technical analysis, engagement and implementation planning, including how alternatives were evaluated and analyzed, as well as how and why decisions were made to advance the Select Shoreline Extension Alternatives, Comprehensive Adaptation Plan, and First Phase Project. The report should capture stakeholder and public engagement and input throughout the process and how this input informed the plan, alongside the technical analysis.

The report should also outline how the Comprehensive Adaptation Plan and First Phase Project will advance beyond this master planning process, including clear steps to implementation, as well as recommendations for future stakeholder and public engagement.

Task Eight Deliverables:

1. Drafts and Final Comprehensive Adaptation Plan
2. Drafts and Final Detailed First Phase Project Plan
3. Drafts and Final Public Summary Report

Task Nine: Additional Services

From time to time, NYCEDC may require the Consultant Team to provide services related to the Project that are not specifically set forth above. Services and Work Product related to this task may include, but are not limited to:

a) Existing Conditions and Site Investigations
b) Expense costs for stakeholder engagement
c) Travel costs for site visits to document precedent projects and inform Shoreline Extension approach
d) Passenger counts of station elements may be required and should be performed by the consultant. (Note that passenger counts must take place during the regular public-school year, on weekdays, at the peak hour).