



FOUNDATION PROJECT DESIGN PHILOSOPHY

The East River Waterfront Project is an essential link in the ongoing revitalization of Lower Manhattan. It will help to sustain the rich, creative environment that is enjoyed within the area and is synonymous with New York. This is an area that has pride in its diverse communities, job opportunities and entrepreneurial settings. The challenge is to recognize and celebrate these attributes and support the growth of the diverse urban communities along the waterfront by creating a flexible plan for the river's edge.

Today provides a chance to reexamine the opportunities and potential that this shoreline offers. The physical constraints of FDR Drive, the waterside and South Street provide a base to create a clear and coherent vision for the area. These constraints have been used as advantages to make stronger connections to the surroundings in a way that reveals and celebrates the shoreline and underlines the importance of this vital urban edge for local communities and New Yorkers.

Part of the goal, described in the following pages, is to find new waterfront uses. Through a set of appropriate urban interventions it is intended to revitalize the East River for a fuller enjoyment of this extensive public realm. It is a progressive but not prescriptive framework of proposals and ideas that will support the increasing needs for waterfront use within a comprehensive development strategy. This begins by providing a base infrastructure that can support both waterfront and community activities. Improving the esplanade, providing pavilions under the FDR Drive and opening piers to the public will provide a place for recreation, community and maritime activities.

This is planning by evolutionary rather than revolutionary measures. By adding new among the old and smaller public interventions into the larger waterfront context positive change is in place to bring new programs and uses for neighborhood and city wide benefit.



ACTIVITIES - ESPLANADE



ACTIVITIES - ESPLANADE



ACTIVITIES - PAVILIONS



ACTIVITIES - PIERS



ACTIVITIES - ESPLANADE + PIERS



ACTIVITIES - PIERS



ACTIVITIES - BURLING SLIP



ACTIVITIES - PECK SLIP



ACTIVITIES - BATTERY MARITIME BUILDING

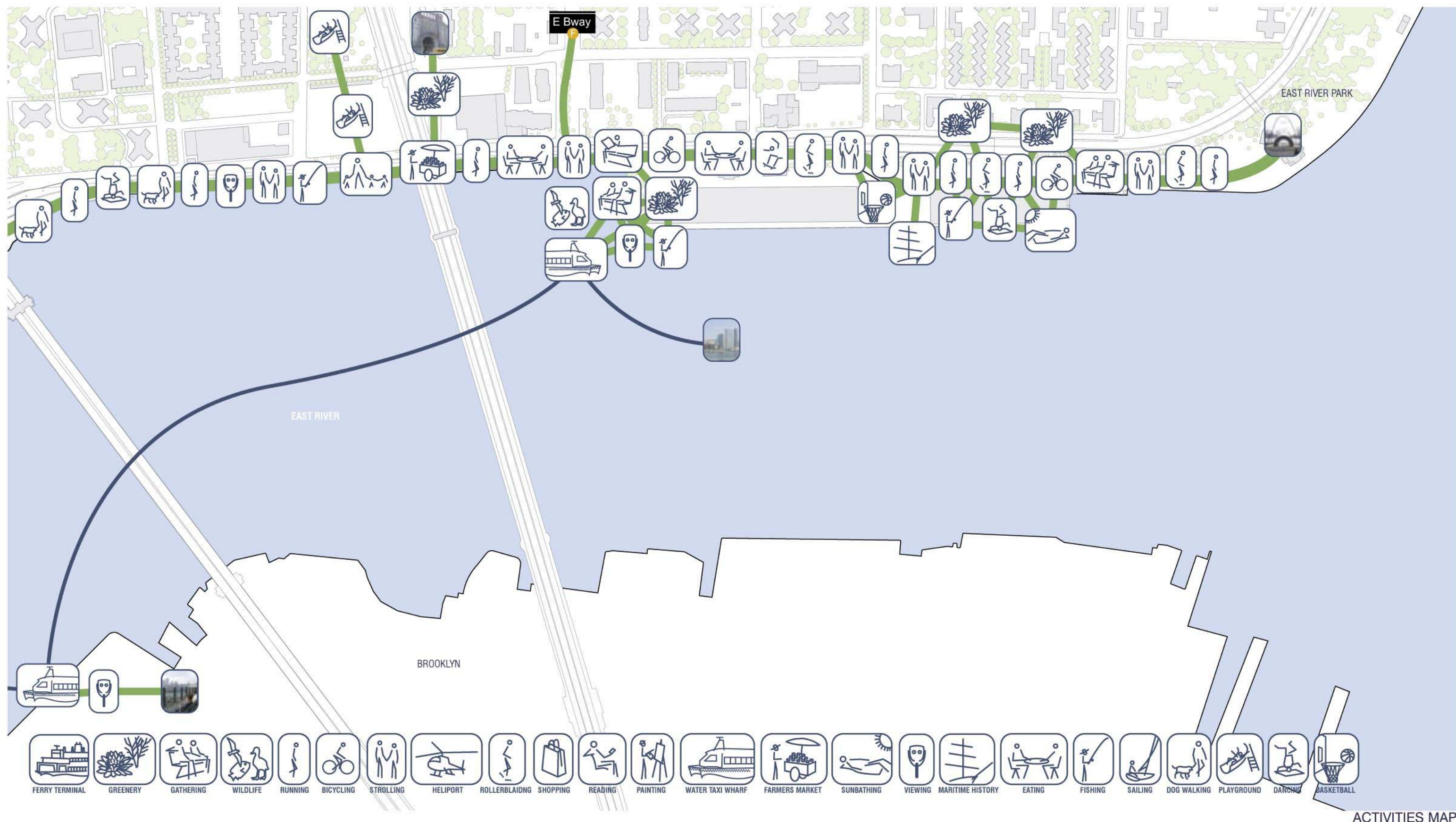


UNDERSTANDING NEEDS AND OPPORTUNITIES

One of the planning goals is to maximize year round waterfront use by introducing a new layer of public open space along the existing esplanade. The 2-mile stretch establishes focal points that enhance the length of the esplanade space and at the same time link the City to the waterfront.

New amenities such as pavilions under the FDR Drive, public access to piers, designated pedestrian and bike lanes will provide a mix of activities for residents and visitors through out the year. These new locations also enhance established links into adjoining neighborhoods and create further commercial, cultural and social opportunities along the length of the waterfront.





HOW CAN WE IMPROVE THE EXISTING ENVIRONMENT?

ECOLOGY

The aquatic environment of the East River adjacent to the Lower Manhattan shoreline is characterized by existing physical habitats and aquatic life. These habitats may be effected by shoreline redevelopment activity that would interact with the existing resources. Existing information on aquatic life from previous sampling in the study area and other locations in the East River indicates that the majority of fish species are transient, moving in relation to seasonal habitat needs, response to tidal flow conditions and food availability.

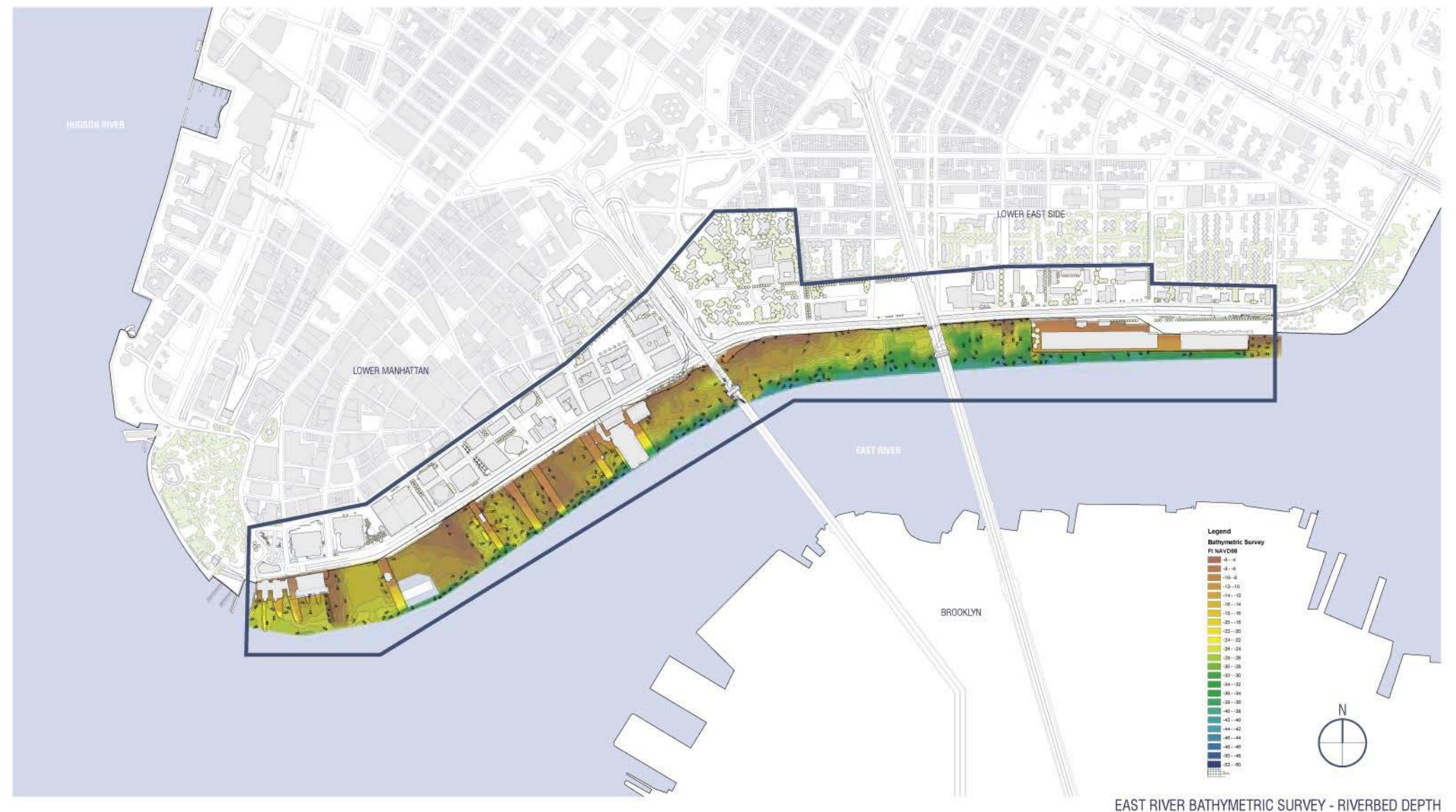
Bathymetric (depths) and tidal current surveys conducted in the spring of 2004 in the area between the bulkhead and pierhead line describe the physical conditions of the study area. The tidal current survey provides baseline information for calibrating a two dimensional computational fluid dynamics model. This model of the downstream portion of the study area shows flow and sedimentation patterns of alternative inwater redevelopment options.

Aquatic environmental conditions are a prominent factor in the evaluation of redevelopment options and form a set of base criteria for the Foundation Projects preferred options.

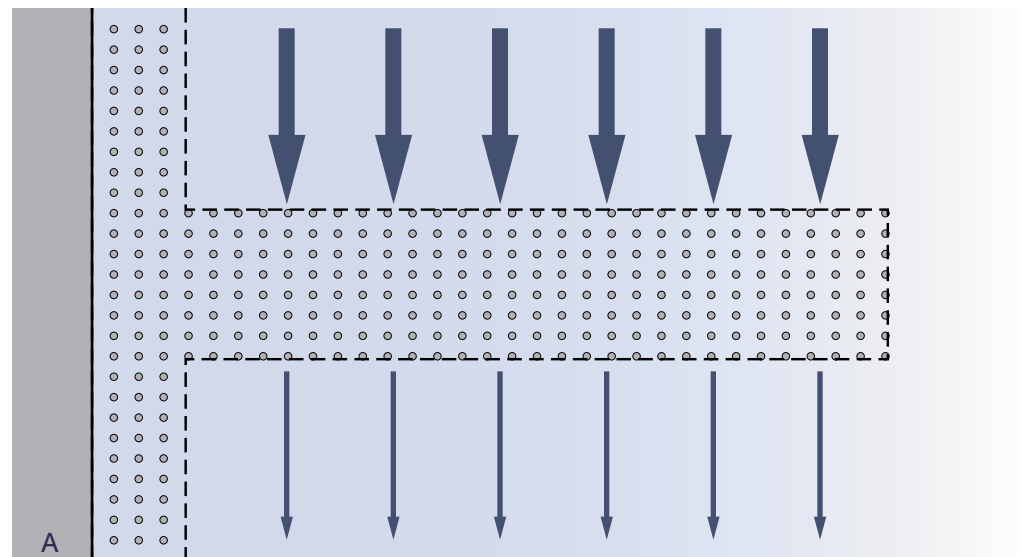
Major design considerations to accommodate aquatic life needs includes:

1. Reconfiguration of overwater structures so that there would be no net increase in the amount of overwater coverage;
2. New or rebuilt inwater structure (piers) which would be built with widely spaced support piles to permit tidal flow beneath those structures and to minimize sediment buildup;
3. Where appropriate (tidal current and sedimentation permitting) structural habitat elements would be added to provide both surface area for the attachment of invertebrates and retreats for fish and mobile invertebrates (crabs and lobsters).

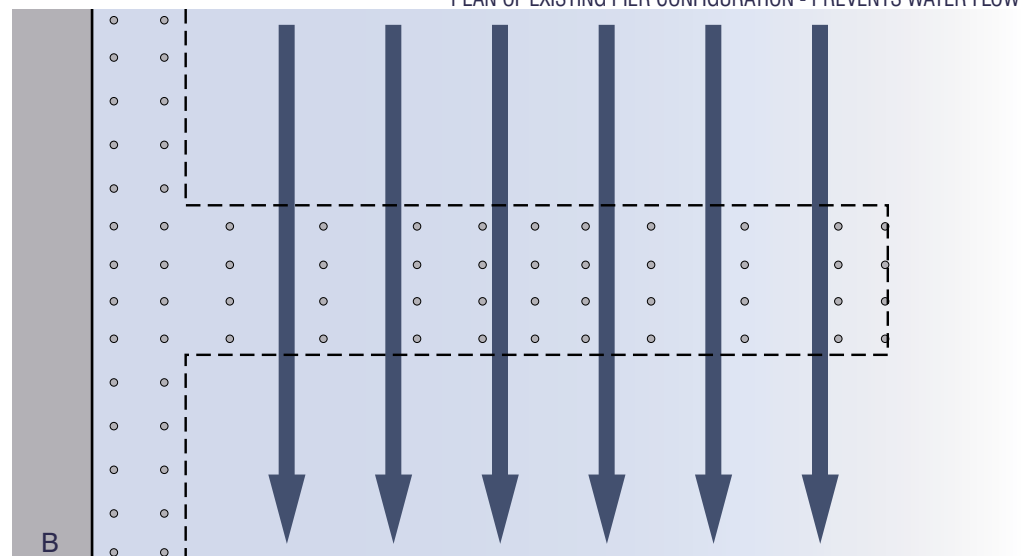
These aquatic design considerations utilize the inwater changes associated with proposed project elements to enhance aquatic habitats and recover some of the aquatic habitat values that were lost during historical changes to this shoreline.



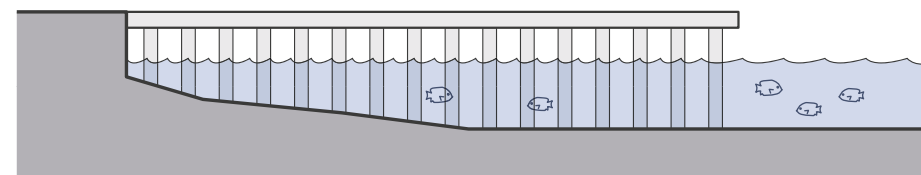
EAST RIVER BATHYMETRIC SURVEY - RIVERBED DEPTH



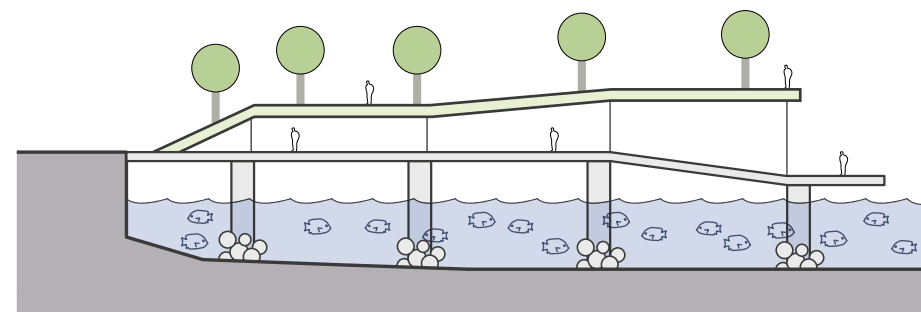
PLAN OF EXISTING PIER CONFIGURATION - PREVENTS WATER FLOW



PLAN OF PROPOSED PIER CONFIGURATION - PROVIDES LONGER SPAN FOR BETTER WATER FLOW



EXISTING PIER CONFIGURATION - ELEVATION



NEW PIER CONFIGURATION - ELEVATION OF LONGER SPAN WITH VIERENDEEL TRUSS

1. WILL IMPROVE HABITAT WITH BETTER WATER FLOW
2. WILL IMPROVE HABITAT GROWTH BY ATTACHING REEF BALLS TO PIER PILE

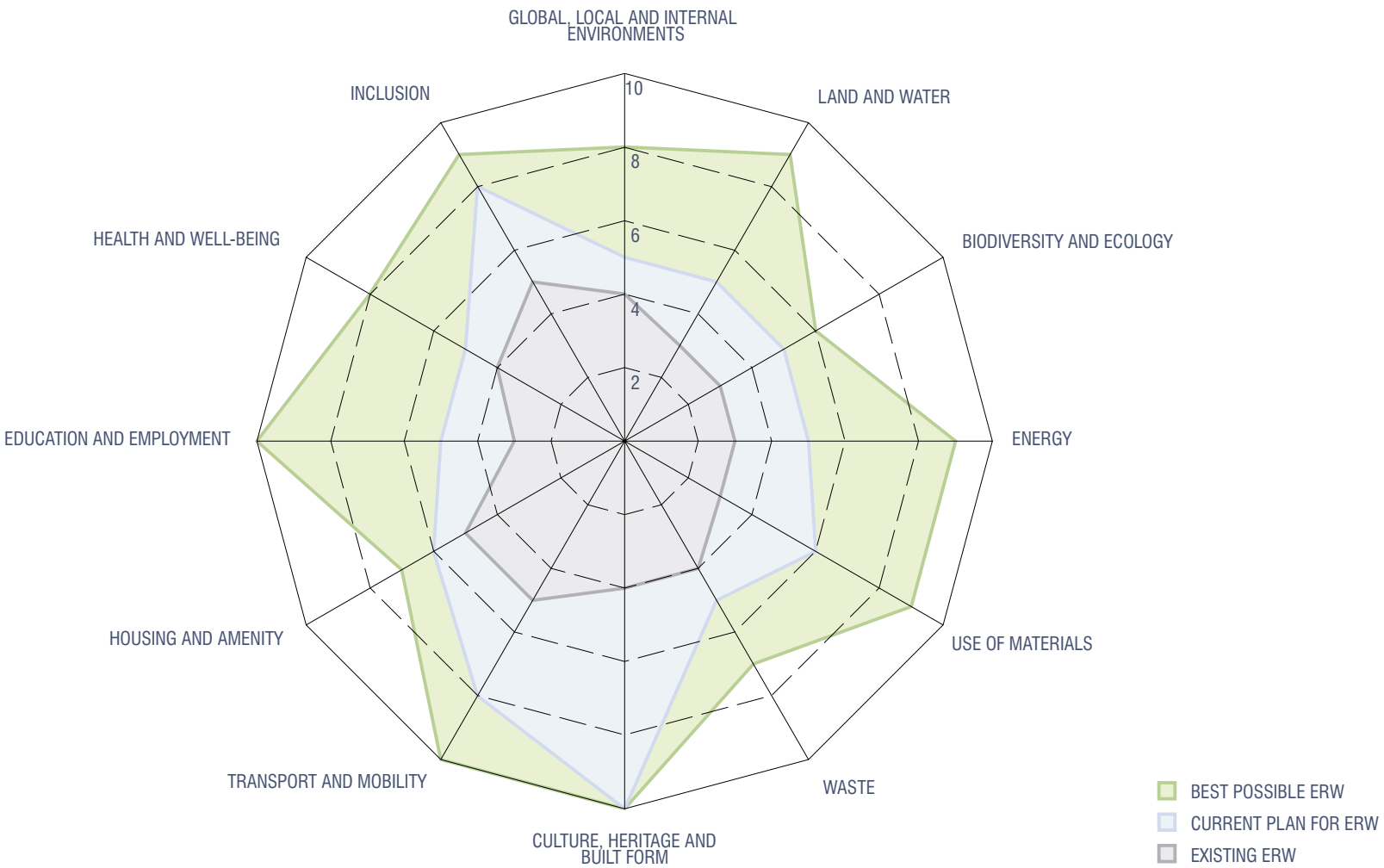
SUSTAINABLE DESIGN

Sustainable design for the East River Waterfront means responding to environmental issues, social responsibility and economic development all with equal concern. In a broad sense, the project represents sustainable development as it enhances city life and encourages people to live in the dense urban area of New York City. New York has the lowest per capita energy use, the most extensive public transportation system, the most ethnic and cultural diversity, the strongest economic engine and densest land use in the United States. All of these factors make it arguably the ‘greenest’ city in the country.

But New York lacks some environmental features. It has low biodiversity, it generates large amounts of solid waste and has concentrated pollution issues from air to water to noise pollution.

The East River Waterfront Study addresses issues of sustainability throughout the Foundation Plan. The rebuilding of Pier 15 with a new habitat sensitive design will allow aquatic life to flourish in the East River. Small additions such as placing reef balls on existing pier promote biodiversity without great cost or intervention. Reprogramming and reusing the space under the FDR with commercial, recreational and community programs promotes the use of new materials and potential cultural destinations. By implementing the Foundation Plan a base framework will be put in place as an example for future sustainable projects.

New York is an exemplary model of economic, social and sustainable development. This waterfront development project will encourage and improve the unique qualities that are already in place.



SUSTAINABILITY PERFORMANCE ASSESSMENT DIAGRAM



REUSE AND REDUCE
The flexible nature of the design elements allows built spaces to adapt for future uses without being torn down.

1



HERITAGE AND BUILT FORM
The revitalization of the waterfront will improve visitation to existing cultural institutions and establish new centers.

2



INCLUSION
Continuing the development process, local residents are consulted to ensure their views are considered in the design.

3



GLOBAL AND LOCAL ENVIRONMENTS
The best practiced standards for global climate change, indoor air quality, pollution, noise, vibration, daylight and light pollution will be used.

4



USE OF MATERIALS
Environmentally sustainable design and construction techniques will be utilized wherever possible.

5



EDUCATION AND EMPLOYMENT
Employment opportunities will be generated both during the construction phase and post-occupancy.

6



ECOLOGY
The production of phytoplankton in the water drives the marine food chain. Sunlight is required for phytoplankton to exist. No new structures will be added that increase shading on the water.

7



CULTURE AND BUILT FORM
Tall ships, piers and docks are fundamental cultural elements of the ERW landscape. They recall the history of the place and remind visitors of past generations.

8



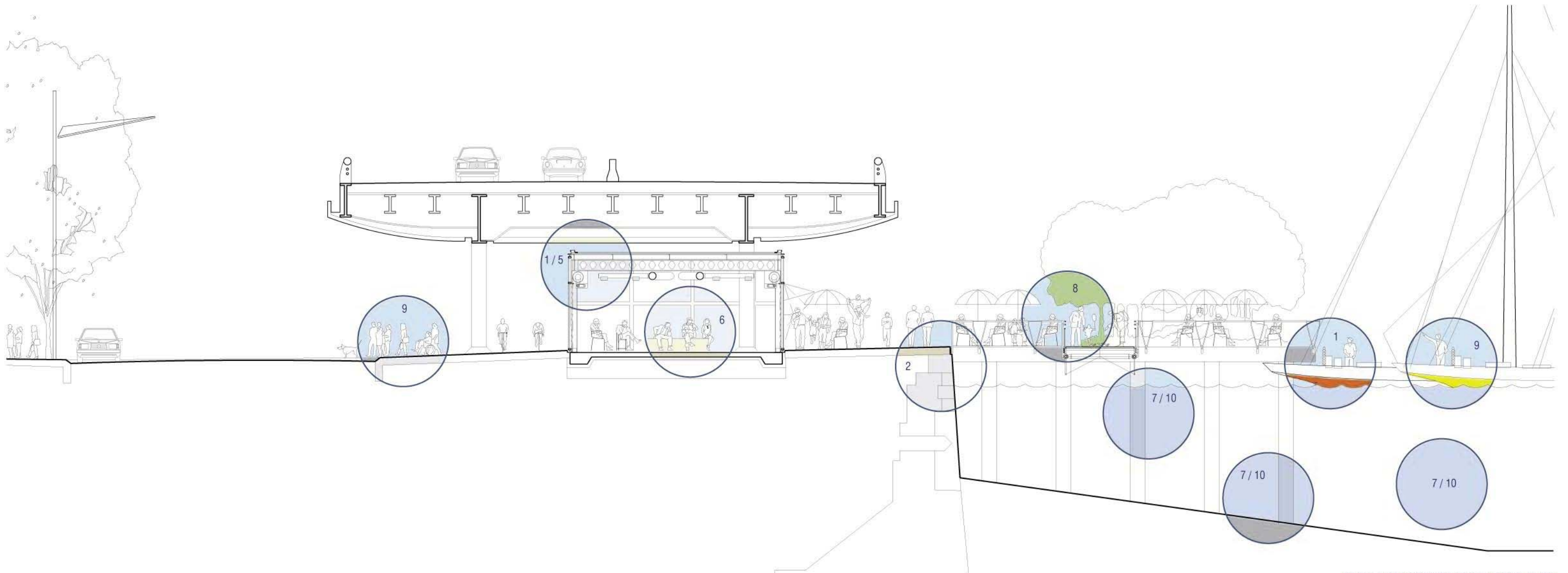
TRANSPORT AND MOBILITY
Pedestrian access to the waterfront will be greatly improved with the reconfiguration of the esplanade. Designated bicycle paths will improve bicycle safety.

9



BIODIVERSITY
The Foundation Plan will make positive enhancement to the biodiversity of water's edge. A major goal of the design will be the facilitation of water edge ecosystems.

10



SUSTAINABILITY SECTION THRU THE ESPLANADE

TRANSPORTATION

In recent history, the waterfront has been the location for the placement of major elements of the City’s transportation infrastructure; as such the FDR Drive viaduct, the Brooklyn and Manhattan Bridges, three ferry terminals and the Downtown Heliport are present within this study area. In addition, local streets such as Water Street and South Street provide major connections within the Lower Manhattan street network. Finally, cross streets located in the historic slips are arrayed along the length of the study areas and link the waterfront with the financial district and other upland communities.

Increasing connectivity and enhancing access along the waterfront between the East River Park and Battery Park are critical issues with regard to ensure the future success of the study area. Today, access to the waterfront from the north and south is constrained by existing infrastructure such as the Battery Park Underpass and the current entrance into East River Park. Vehicular and pedestrian traffic operations in and around the Battery Maritime Building, Whitehall Ferry Terminal and the Battery Park Underpass constrain access to the area and will be further exacerbated by the redevelopment of Governors Island and other future projects adjacent to the area.

To enhance access and egress to these facilities for both vehicular and pedestrian traffic, the study team reviewed a series of alternatives for the FDR Drive, South Street, the Battery Park Underpass, John Street/Burling Slip, Peck Slip and Montgomery Street. Improvements in these areas will provide a safer pedestrian environment while maintaining traffic operations and access to the surrounding area.

To evaluate the potential benefits and impacts of the proposed foundation plan alternatives, the study team established an existing 2004 transportation network that was projected to reflect the 2025 horizon year transportation network, which was established as the base year for alternatives analysis. The 2025 horizon year incorporated minor and major infrastructure improvements that include the reactivation of Governors Island; the relocation of Fulton Fish Market; and, the reconstruction of the Brooklyn Bridge approach ramps. Below are highlights of the transportation alternatives evaluated and the study team recommendations:

FDR Drive

A range of FDR Drive alternatives was evaluated to determine the potential benefits and impacts of deconstructing or reconfiguring the FDR Drive including:

- 1. Deconstruction of the FDR Drive between the Brooklyn Bridge and the Battery Park Underpass as an at-grade facility in combination with a one-way couplet along South Street and Water Street between Old Slip and Robert F Wagner Place.
- 2. Deconstruction of the FDR Drive between the Brooklyn Bridge and the Battery Park Underpass as an at-grade boulevard.
- 3. Narrow cross-section of FDR Drive between the Brooklyn Bridge and the Battery Park Underpass in combination with a one-way couplet along South Street and Water Street between Whitehall Street and Robert F Wagner Place.
- 4. Narrow cross-section of FDR Drive between the Brooklyn Bridge and the Battery Park Underpass in combination with a narrowed cross section along South Street.
- 5. Current FDR Drive with narrowed cross section along South Street.

The evaluation showed that maintaining the current FDR Drive cross section in combination with a narrowed South Street cross section provided the most benefit with respect to transportation infrastructure and urban design goals.

South Street

The benefit of the FDR Drive is that it provides drivers with a dedicated high-speed facility to access destinations on the west side of Manhattan as well as destinations north of the study area while avoiding the local street network. Maintaining the elevated FDR Drive allows South Street to keep its local street character, which provides access to local residents, businesses and the East River Waterfront.

The proposed cross section along South Street between Old Slip and Robert F Wagner Senior Place will accommodate a single through lane in both the northbound and southbound directions in combination with a center turn lane. Drop-off and pick-up lanes will also be provided at strategic locations along the street. The

proposed cross section along South Street between Robert F Wagner Senior Place and Montgomery Street will consist of a single through lane in both the northbound and southbound directions in combination with a parking lane on either side of the street.

The proposed cross section will also provide continuous sidewalks on both the east side and west side of South Street. The Foundation Plan will also connect the East River Park and Battery Park bike lanes by providing a discrete and continuous bike lane along the South Street corridor within the study area.

Battery Park Underpass

The extension of the Battery Park Underpass north by approximately 335 feet provides improvements to north-south and east-west connections for both vehicular and pedestrian traffic. The extension of the Battery Park Underpass provides the Battery Maritime Building with a ¾ acre pedestrian plaza that directly connects East River Park with Battery Park through Peter Minuit Plaza. This new plaza also creates additional vehicular access to both the Battery Maritime Building and the Whitehall Ferry Terminal through strategically placed pick-up and drop-off lanes. The extension of the Battery Park Underpass allows for the reconnection of Water Street and South Street through Broad Street. The Broad Street connection minimizes pedestrian vehicular conflicts in front of the Battery Maritime Building and the Whitehall Ferry Terminal while improving pedestrian and vehicular traffic operations along Water Street. The Battery Park Underpass extension in combination with the proposed narrowed South Street enhances intermodal connections in Lower Manhattan and meets both the transportation infrastructure and urban design goals.

Peck Slip

Currently, Peck Slip is a cobblestone street with a central at-grade plaza that functions as a public parking area with vehicular traffic and parallel parking on the north and south side of the street. The central parking area is not well delineated and induces vehicular-pedestrian conflicts. The foundation plan eliminates the central at-grade parking area while maintaining parallel parking along the north and south sides of the street. The plan will establish a central pedestrian plaza with vehicular traffic on the north and south side of the street. The proposed plan will have no significant impact to traffic operations along Peck Slip.

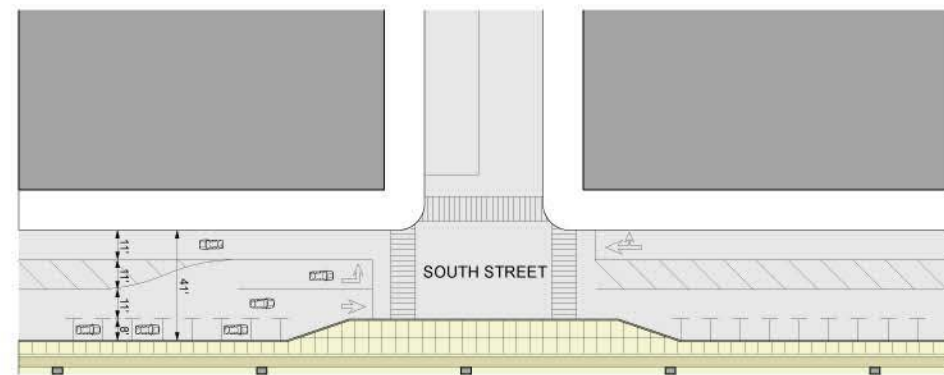


John Street/Burling Slip

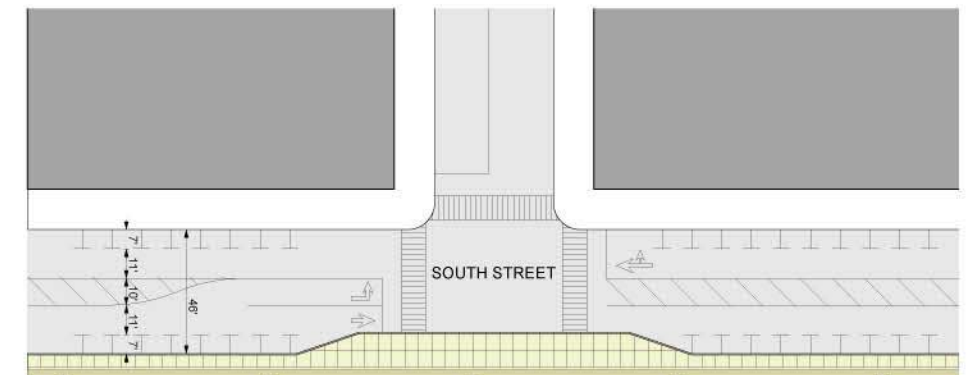
John Street/Burling Slip is an active two-way roadway with unfettered access to the parking lot just north of the street. The parking lot also provides access to the local businesses just north of John Street/Burling Slip. The proposed plan will establish a curb line to the north of John Street/Burling Slip. The slip will remain a two-way roadway with parallel and angle parking on the south and north curb line, respectively. Access to the local businesses will be provided through mountable curbs.

Montgomery Street

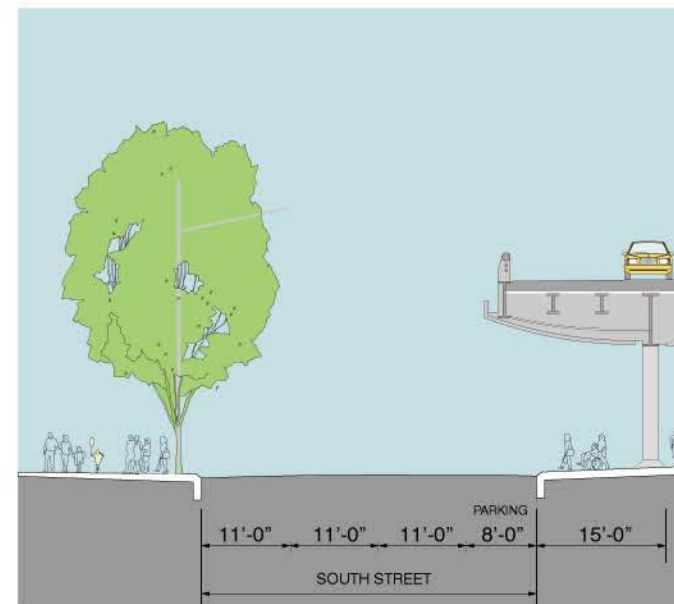
The existing width of Montgomery Street accommodates two-way traffic operations with parallel parking on both sides of the street. The Foundation Plan proposes the reconfiguration of the south side Montgomery Street to accommodate angle parking increasing the available number of parking spaces.



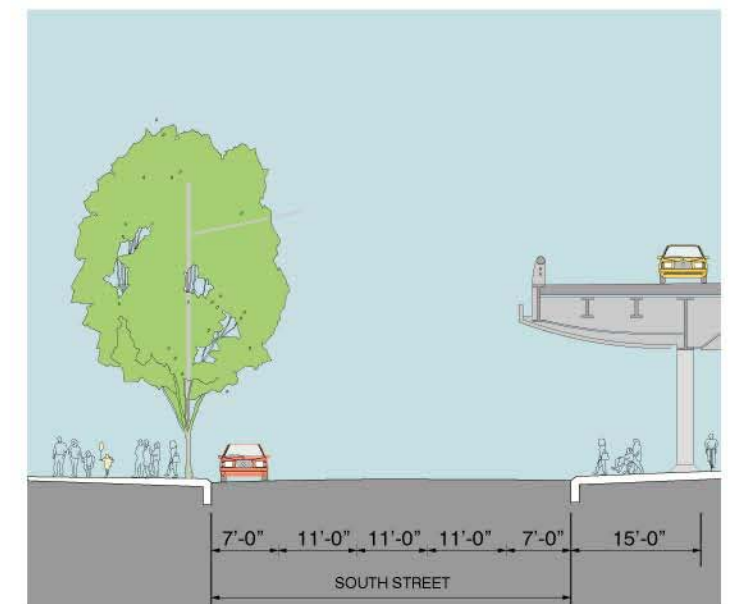
SOUTH STREET SOUTH OF BROOKLYN BRIDGE - PLAN



SOUTH STREET NORTH OF BROOKLYN BRIDGE - PLAN



SOUTH STREET SOUTH OF BROOKLYN BRIDGE - SECTION



SOUTH STREET NORTH OF BROOKLYN BRIDGE - SECTION





PLAN OVERVIEW

THE FOUNDATION PROJECTS



BATTERY MARITIME BUILDING PLAZA

1



PIER FIFTEEN

2



BURLING SLIP

3



NEW MARKET BUILDING

4



PECK SLIP

5





THE ESPLANADE

6



SLIP PROTOTYPE

7



PIKE/ALLEN STREET

8



PIER THIRTY-FIVE

9



EAST RIVER PARK CONNECTOR

10



PROJECT INDEX