

A. PROJECT IDENTIFICATION

The proposed project is the creation of the Brooklyn Bridge Park, an approximately 85-acre park that would stretch along approximately 1.3 miles of Brooklyn’s East River waterfront from Jay Street in the north, to Atlantic Avenue in the south. The park would dramatically transform a largely underused and publicly inaccessible waterfront into an important new public amenity that would serve the borough and the region. The proposed park would be created from those areas encompassing Piers 1 through 6 and related upland property, the existing Empire-Fulton Ferry State Park and New York City Department of Parks and Recreation (DPR)-operated Main Street Park, and the Con Edison property on John Street east of the Manhattan Bridge (“John Street Site”), creating a continuous waterfront esplanade along the entire site. The park would include landscaped areas and ecological habitats; recreational facilities for sports such as soccer and basketball; a marina for recreational boating; protected waters for kayaking; and a limited amount of development essential to the park’s maintenance and operation, including retail, restaurant, residential, and hotel space. The development is also intended to enliven the site, attract visitors, and enhance security. The proposed project is the result of collaboration between New York State and New York City under the aegis of the Brooklyn Bridge Park Development Corporation (BBPDC), a subsidiary of the New York State Urban Development Corporation (UDC), doing business as the Empire State Development Corporation (ESDC).

The anticipated approvals required for the proposed project include: approval of the General Project Plan by BBPDC; adoption of the General Project Plan and State Environmental Quality Review Act (SEQRA) Findings by the ESDC pursuant to the UDC Act; authorization to conduct in-water construction activities under Articles 15 and 25 of the Environmental Conservation Law by the New York State Department of Environmental Conservation (NYSDEC); a possible NYSDEC Beneficial Use Determination (BUD) for use of dredged materials on site; coastal zone certification by the New York State Department of State; conveyance of the Empire Stores property by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) to the BBPDC and New York City approval for a street closing. City-owned parcels may be disposed, pursuant to the Urban Development Corporation Act, and approval may be required for the disposition of the John Street Site from the New York State Public Service Commission. At the federal level, permits from the United States Army Corps of Engineers (USACOE) would be required under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Aside from funding and the previously identified potential disposition of New York City-owned parcels, and the potential disposition of several City-owned parcels, no other City actions are anticipated because ESDC is expected to override local zoning and the requirements of the City Map, and the proposed project is not subject to the city’s Uniform Land Use Review Procedure (ULURP).

This Final Environmental Impact Statement (FEIS) assesses the proposed plan for Brooklyn Bridge Park in accordance with SEQRA. ESDC is the lead agency for SEQRA review. The

assessment methodology generally follows the guidelines of New York City's 2001 *City Environmental Quality Review (CEQR) Technical Manual*.

B. PURPOSE AND NEED

The proposed project would respond to a number of needs, as follows:

- The primary need to turn a prominent and declining segment of Brooklyn's waterfront into a public asset. The project area, with its beautiful views, large land and pier areas, and miles of water's edge should no longer remain moribund and isolated from the vibrant communities that surround it.
- The need to make the waterfront available for public access and use. The proposed project acknowledges that the extraordinary features of this segment of waterfront would be best preserved for the broadest public use. The piers on the site provide a unique opportunity to provide recreational space with access to the water and spectacular views of the harbor, the Manhattan skyline, and the Brooklyn skyline. As such, the proposed project is expected to attract people from New York's many diverse neighborhoods who will take advantage of the broad range of recreational opportunities available in the park.
- The need to create a project that will be financially self-sustaining. Under the terms of the Memorandum of Understanding (MOU) that was signed by Governor Pataki and Mayor Bloomberg in May 2002, creating Brooklyn Bridge Park, this must be accomplished by including in the project sufficient revenue-generating uses to cover the cost of maintenance and operations of the park (see Attachment A for text of MOU).
- The need to provide more publicly accessible open space in Brooklyn. Brooklyn is second only to Manhattan for its lack of open space, with 547 residents per acre of available open space. No major park has been built in the borough since Prospect Park in the 1860s. The provision of an 85-acre park would help to fill this need.
- The need to restore some of the natural habitat that once lined all of Brooklyn's shores.
- The need to acknowledge the key role this segment of waterfront has played in New York's history and to preserve its historic resources.

As described below, the proposed project has been designed to address these compelling public needs and to create a waterfront park and experience that encompasses a range of recreational activities serving Brooklyn and the city as a whole. The proposed array of uses responds to community comments and suggestions, particularly with respect to the need for maritime elements, recreational boating opportunities, and access to the water.

C. DESCRIPTION OF THE PROPOSED PROJECT

In the decades to come, assuming approvals and funding are in place, large areas of New York City's old industrial waterfront will be transformed to public open space. The combined effect of park planning efforts up and down Manhattan's East and West Sides, on Governor's Island, in Red Hook and Williamsburg/Greenpoint and along the Brooklyn Bridge waterfront will bring a level of public access to the city's waterways that has not been available for centuries. Directly across the East River from the proposed Brooklyn Bridge Park, the Mayor has called for new open space along the Manhattan waterfront in his *Vision for Lower Manhattan*, released in December 2002. Building on this vision, the New York City Department of City Planning (DCP), in conjunction with the Economic Development Corporation (EDC), has conducted a

study and has begun planning for a 2-mile stretch of Manhattan's East River waterfront from the Battery to the southern edge of East River Park with the aim of enhancing access to the waterfront and creating new recreational space. The Hudson River Park now under construction and stretching for 5 miles from Chambers Street to West 59th Street, is transforming Manhattan's west side waterfront.

The proposed Brooklyn Bridge Park would be a particularly valuable component of the city's emerging recreational waterfront because of its high visibility, remarkable views, historic surroundings, strong adjacent neighborhoods, and innovative programming and design, as discussed below.

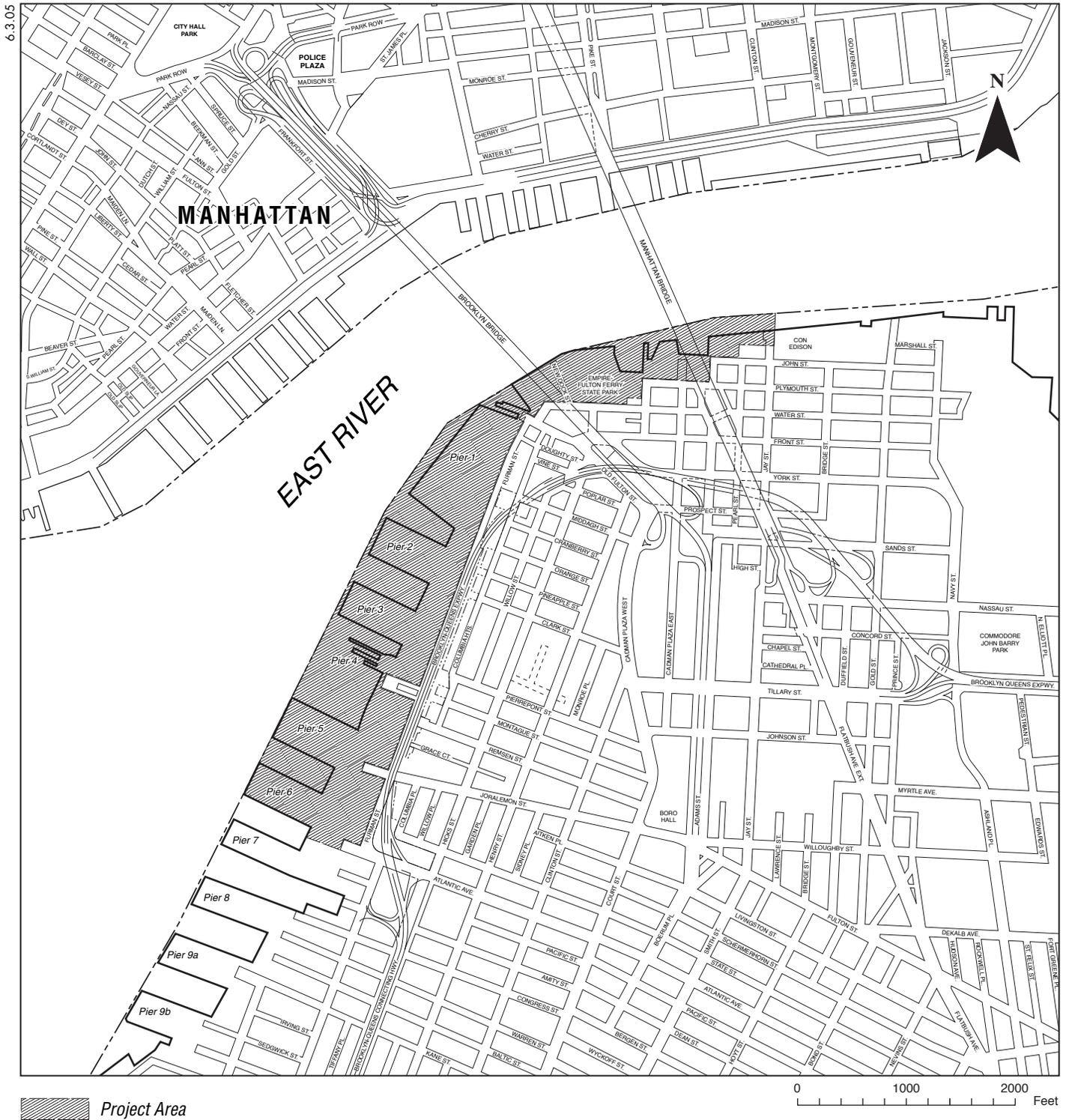
PROJECT AREA

The project site comprises the East River waterfront area from Pier 6 at the foot of Atlantic Avenue to just north of the Manhattan Bridge (see Figure 1-1). Currently, it contains a mix of active warehousing, storage, open space and recreation, and commercial uses. Other uses include vacant structures and areas, surface parking, and buildings used by the New York City Department of Environmental Protection (DEP) and Office of Emergency Management (OEM).

Pier 6, at the foot of Atlantic Avenue, contains a vacant piershed. Its upland area includes several covered storage huts, as well as open storage areas. Pier 5 is leased to American Warehousing of New York, Inc. and primarily handles imported cocoa. Most of the Pier 5 upland area is leased to the Watchtower—a Jehovah's Witnesses facility—for use as surface parking. In the upland area between Piers 5 and 6, a building at 360 Furman Street formerly housing Watchtower operations has been sold to a private developer and is currently vacant. Pier 4 is an unused pier with a dilapidated rail float bridge. The Metropolitan Transportation Authority (MTA) has an electrical substation on the upland area adjacent to Pier 4 and a fan plant building just outside the project site at the end of Montague Street. Pier 3 and a storage/garage building (Building 174) are leased by Strober Brothers for the warehousing of building supplies. Pier 2 contains a U.S. Coast Guard harbor light, but is otherwise vacant. Portions of Pier 1 are used by Express Industries and Terminal Corp. for warehousing paper products. Along Furman Street, the upland area of Pier 1 includes the vacant National Cold Storage buildings, a large deteriorated warehouse structure.

From Atlantic Avenue to Old Fulton Street, a stretch of more than $\frac{3}{4}$ of a mile, there is currently no public access to the waterfront. Industrial buildings and chain link fences topped with barbed wire line Furman Street and obstruct views of the waterfront and the Manhattan skyline and block physical access to the water's edge.

At the foot of Old Fulton Street is a public pier that includes a 1926 fireboat house; Barge Music, a floating entertainment venue; and the River Café, a restaurant partly housed on a barge. Directly under the Brooklyn Bridge is the Purchase Building, which houses city offices. The area between the Brooklyn and Manhattan Bridges is largely devoted to open space and recreational use. Empire-Fulton Ferry State Park, covering approximately 9 acres from the Brooklyn Bridge to about Main Street, includes lawn areas, a waterfront esplanade, the historic and currently vacant Empire Stores and the Tobacco Warehouse. In addition, Main Street playground—a recently completed 2.7-acre City park and playground—occupies the waterfront east of Main Street. A DEP water meter repair facility occupies a small building under the Manhattan Bridge. A small area north of the Manhattan Bridge is currently used for surface parking.



DESIGN APPROACH

Brooklyn Bridge Park would promote the public open space ideals of New York City's other landmark parks while simultaneously addressing new priorities that have come to the forefront of park design. The fundamental elements of every great park—the ability to serve diverse segments of the population and to provide opportunities for a range of programmatic activities—are as relevant to the designers of Brooklyn Bridge Park as they were to Frederick Law Olmsted in his nineteenth-century designs for Central and Prospect Parks. In the 21st century, however, parks are being required to meet even higher civic expectations—from economic self-sufficiency to ecological stewardship that extends beyond the limits of the park, to leadership in educating people about the natural and cultural history of the city. Brooklyn Bridge Park would embrace these new responsibilities as opportunities to expand the role that parks play in the development of the city.

DESIGN CONCEPTS

The three core design concepts—essential to every aspect of the design of Brooklyn Bridge Park—define a comprehensive approach to the park's relationship to the natural world, its social purpose of serving a diverse population, and its physical configuration. As defined by the park designers and described below, these concepts are Post-Industrial Nature, Urban Junctions, and Structural Economy.

Post-Industrial Nature

The new park would establish natural habitats, new landscapes, new habitats, energy efficiencies, and innovative approaches to storm water management. "Post-industrial nature" refers to the adaptation of the project site, whose existing features are designed for industrial use, to a landscaped area with ecological features. The proposed design, which would reintroduce earlier site ecologies, are intended to reverse the previously antagonistic relationship between man-made structures and natural systems, exemplified on this site by the elimination of the natural shoreline, the separation of land from water, and almost uniformly impervious paving.

Urban Junctions

It is critical to offer a fully developed expression of the park at each of its three major entrances, and to create vibrant, active entrances that offer an immediate welcome. The term "urban junctions" refers to the organizing concept intended to moderate the site's isolation by carefully concentrating those elements of the program that would attract activity and relate most closely to nearby neighborhoods at the park entrances. Such program components include site orientation and strong indicators of park identity, neighborhood park and related uses, transportation infrastructure, and residential and commercial activity.

Structural Economy

The most economical way to use park resources is to match a desired park program with the areas of the site that already have the structural capacity, infrastructural resources or raw materials to support it. In the proposed plan, this reasoning has located the relatively light loads associated with recreational fields at the ends of piers, and reserved the upland areas of the park for mounds, hills, and buildings.

DESIGN GOALS

In addition to the design concepts, which generate much of the large-scale ideas regarding the park, the design has been organized to address specific goals. Taken together, these goals contribute to the safety, ecology, economic viability, comprehensibility, and experiential richness of the park.

Programmatic Range

Brooklyn Bridge Park would welcome all New Yorkers and serve a diverse population by providing a broad programmatic range of contemporary park activities—organized and individual sports, strolling, nature appreciation, sunbathing, kayaking, refreshment, and special events. Within this programmatic range, the park plan would provide users with sufficient flexibility to accommodate a variety of activities as needs change over time.

Neighborhood Parks and Citywide Parks

Daily users of a park help keep it safe and appealing, yet Brooklyn Bridge Park is a long walk from most people's homes or subway stops. Basic neighborhood park functions such as playgrounds, recreational lawns, and promenades would be available immediately upon entering the park through one of the three main entrances at Jay Street, Old Fulton Street, and Atlantic Avenue. Park uses intended to create a stronger draw—such as active recreation, court sports, and water uses (e.g., kayaking)—would be located farther inside the park and at the water's edge.

Variety at the Water's Edge

The water's edge is a critical programmatic element within Brooklyn Bridge Park; the sense of freedom and expansiveness experienced at the water's edge would draw the greatest number of visitors. The plan accepts the two existing edge types (constructed bulkhead and riprap) as useful remnants of the site's history, but also would revive earlier edge types (natural and floating) to offer people more ways to experience the water's edge.

Mosaic of Nature and Activity

Recreation and natural habitats can coexist. The strategy for the reintroduction of nature proposes an integrated approach that would weave nature in and out of other park uses, rather than segregating it to one or two controlled locations. Measures to accommodate the needs of one can be designed to support the needs of the other, thus creating the potential for a complementary mosaic of active and natural areas. Nature in the form of biologically rich plant and animal communities has been absent from the Brooklyn Bridge Park site for a long time, and this habitat complex for humans, wildlife, and plants would provide ecological advantages, nature-related recreation, and restful vistas to the users of the park.

Delineating the Public Realm

The public park space would be clearly delineated from revenue-generating uses in the project site. Users of the park would be able to benefit from the vitality and additional pedestrian activity created by revenue-generating commercial and residential uses, but the distinction between private and public spaces would be clear.

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Landmarks, Gateways, and Connecting Views

A carefully constructed sequence of visibility, both in the approach to the water and through the park space, is intended to make certain that Brooklyn Bridge Park is accessible and comprehensible both from a distance and within its confines. The proposed plan builds this sequence through landmarks that can be seen from afar, gateways that offer long views into the park, and connecting views that open up the experience of the space. The efforts include measures to fully protect the extraordinary views currently available within the park and its surrounding environs. For instance, the design intends to protect views at the Fulton Ferry and Atlantic Avenue entries, as well as the view plane and the existing views of the Brooklyn Bridge and the harbor from the Promenade. New structures have been carefully placed so that important viewsheds and protected view planes around the site have been fully respected.

Economic Self-Sufficiency

Although the State and City will underwrite the cost of park construction, once completed, the park itself must be self-sufficient. The funds to support park operations and maintenance must flow from revenue-generating park components. These features should be limited to a small area of parkland and must be consistent with maintaining an urban environment supportive of the mission of the park. In addition to the increased activity the residential and commercial land uses would bring to the site, they would provide the park with the financial resources needed to ensure its care and maintenance.

Topographical Variation

The design of the proposed park would allow for a range of experiences that overcome the sense of sameness generated by the site's linearity and flatness. Exaggerated topography, planted form, structures, and programmatic elements would add complexity and depth to the site's dominant features, such as the waterfront's constructed geometrical edges, the presence of the Brooklyn-Queens Expressway, the Manhattan and Brooklyn Bridges, and the Manhattan skyline.

Environmental Sustainability

The park would foster a healthy, productive relationship with the greater environment through the materials and practices employed in its construction, through the creation and maintenance of new natural habitats, and through the way it would coexist with the site's natural systems. Green technologies such as photovoltaic cells would be used to limit the park's consumption of natural resources and landscape strategies and innovative stormwater management techniques would be used to protect water quality.

Park Safety

The success of Brooklyn Bridge Park depends on its ability to inspire the kind of daily use that would overcome the isolation created by the East River and the Brooklyn-Queens Expressway. The safety in numbers provided by residents leaving for work and coming home in the evening, by hotel guests going out for a stroll, by users of the active recreational facilities in the park, and by ticket holders for Barge Music events would increase the park's appeal throughout the day and in all seasons of the year.

In addition, security arrangements similar to those of other large parks in New York—with park security officers and park staff supplementing the patrols of the New York Police Department—would be used to ensure public safety.

The proposed park would be designed in conformance with all applicable conventions and standards with regard to water safety. Floating platforms would feature a continuous railing and kayak launches would include railings at their edges. Wave fences, floating platforms and floating buoys would physically separate the park's in-water recreational activities from commercial marine operations and access to under-pier or high-level platform areas, forming an integrated barrier extending from the northwest corner of Pier 1 across Piers 2 and 3, extending to the northern edge of Pier 5. Lifeguards would be present at the site from May through October.

Microclimate

Areas within the park that are well suited to improved microclimatic conditions would be identified and fortified. Specially designed park areas would provide shade in the summer, warmth in the winter, protection from the wind, and moments of quiet within Brooklyn Bridge Park, encouraging visitors to extend their stay. Structures such as piersheds on Piers 2, 3, and 6 would provide shade and "shelterbelts" consisting of clusters of trees and bushes would protect areas of the park from wind.

Material and Building Reuse

The historic nature of the site would be preserved and integrated into the design of the park. For example, a vast amount of industrial material already on site would be selectively reused, reconstituted, or dismantled for use in the park's construction, from the piersheds to on-site fill to the industrial fragments incorporated in new park elements.

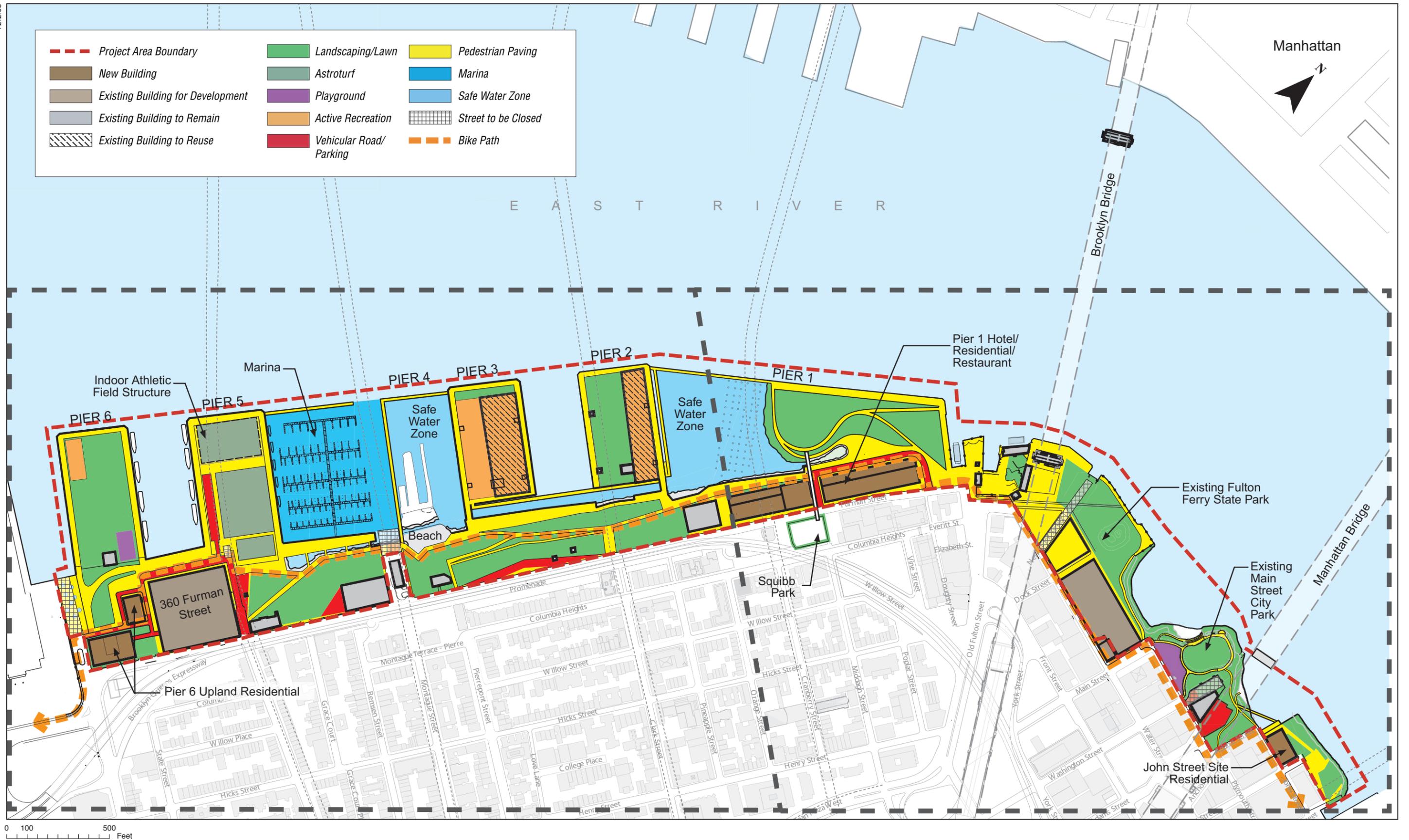
DESCRIPTION OF THE PROPOSED PLAN

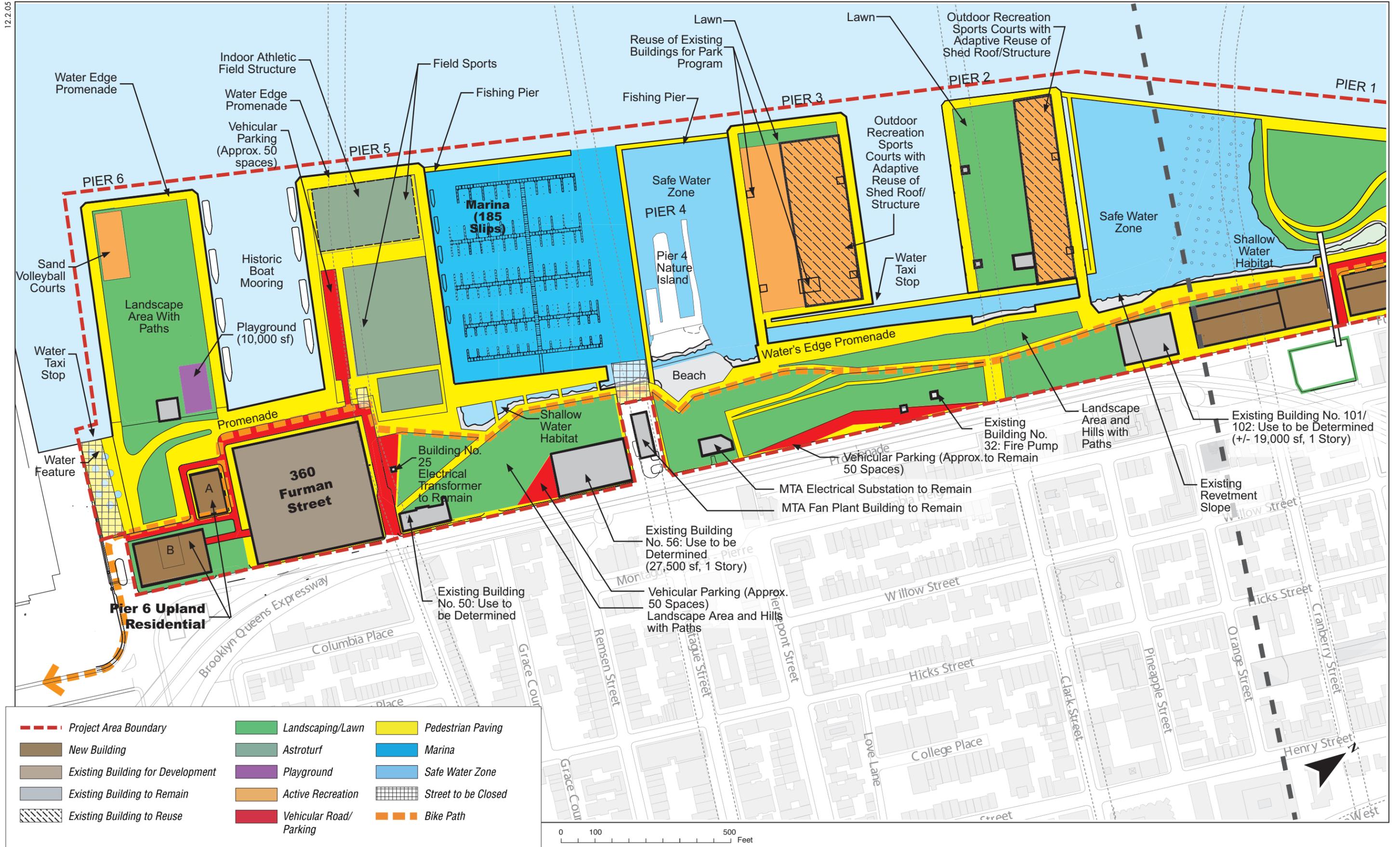
As shown in Figures 1-2 through 1-4, the plan provides for a continuous park extending along the East River from the foot of Atlantic Avenue to Jay Street, north of the Manhattan Bridge. The entire park would comprise approximately 85 acres. The plan, as currently proposed and described below, forms the basis for the impact studies in the EIS.

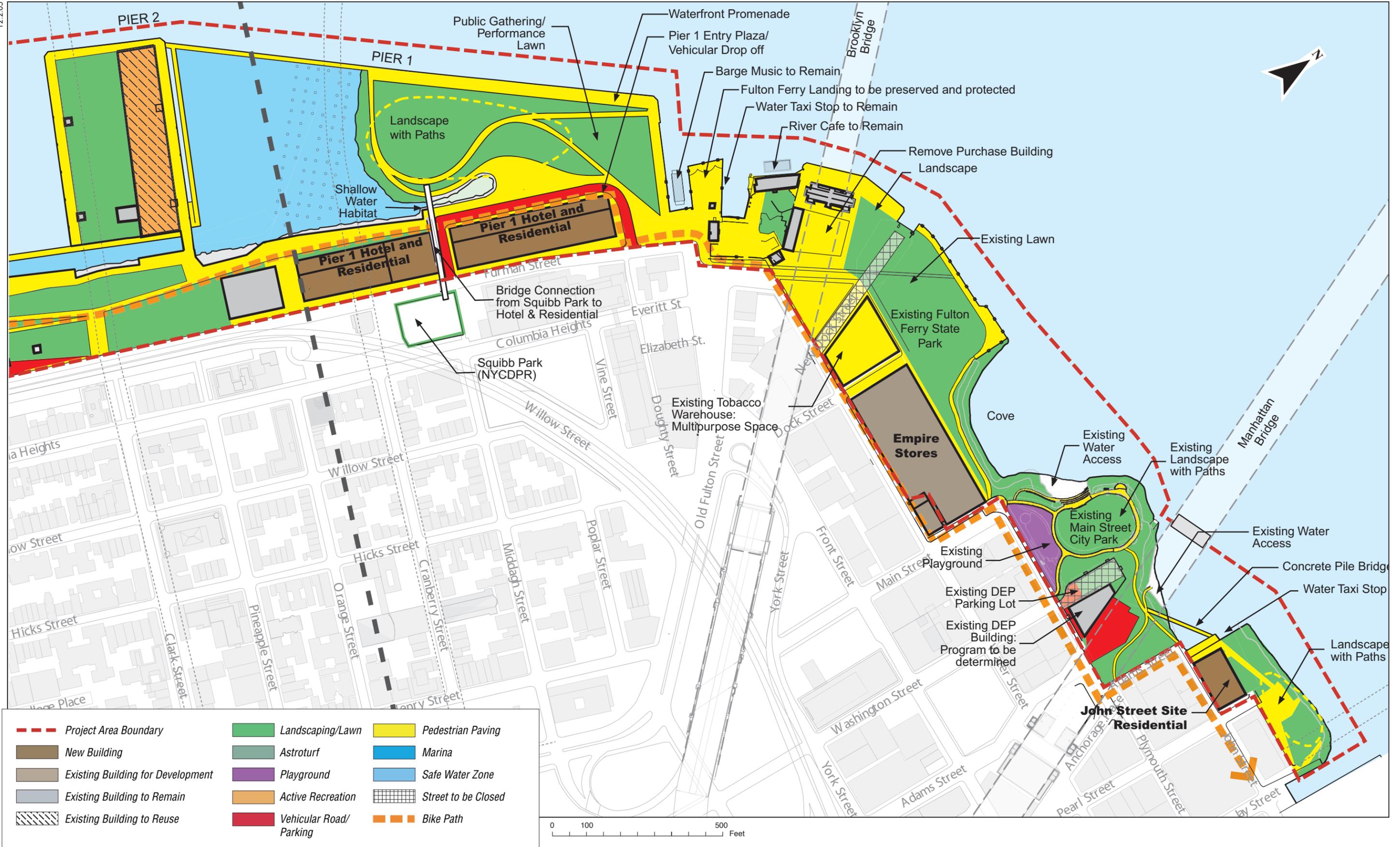
The proposed park would offer the public unparalleled access to the water, making innovative use of boardwalks, floating bridges, and canals that would wind along the water's edge. It would also include rolling hills, marshland, and abundant recreational opportunities with multi-purpose playing fields, playgrounds, shaded ball courts, open lawns, and 12 acres of safe paddling waters. There would be pockets of natural landscape on some of the parkland to attract birds and other wildlife.

The park's pathways would increase the water's edge from 2.4 miles to 4 miles and provide pedestrian connections both to the water and to the full range of the park's experiences. Features and amenities that would be incorporated into the proposed park include active recreational facilities (court sports such as basketball, handball, and volleyball on Piers 2 and 3 and field sports such as soccer and field hockey on Pier 5); water recreation areas for kayaking; a marina; bicycle paths and a greenway; civic lawns; and opportunities to access the waterfront at sea level.

In addition, a relatively small portion of the park would contain revenue generating development, including hotel, residential, retail and restaurant uses, ancillary office space, parking and, possibly, research and development facilities. These uses would attract people to the park and provide critical funding to sustain the maintenance and operation of the park. The development







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proposed to support park maintenance and operations and would take up approximately 8 acres, or about 10 percent of the total park area.

The entrances to the proposed park would be defined by three urban junctions, located, from south to north, at the foot of Atlantic Avenue, at Fulton Ferry Landing, and in D.U.M.B.O. (Down Under the Manhattan Bridge Overpass). The proposed park is designed so that at each of these entrances the visitor would have access to a wide range of amenities nearby and would not have to walk long distances to arrive at features such as playgrounds and lawn areas.

The proposed park is envisioned as five interconnected areas. From the south, these are: the Atlantic Avenue Gateway including Pier 6 and its upland; Piers 5, 4, 3, and 2 and their uplands; Pier 1 and Fulton Ferry Landing; the Interbridge Area; and North of the Manhattan Bridge and the Manhattan Bridge Gateway. The park program contains elements available throughout the park (“parkwide elements”) and specific components for each of the five subareas, as described below.

PARKWIDE ELEMENTS

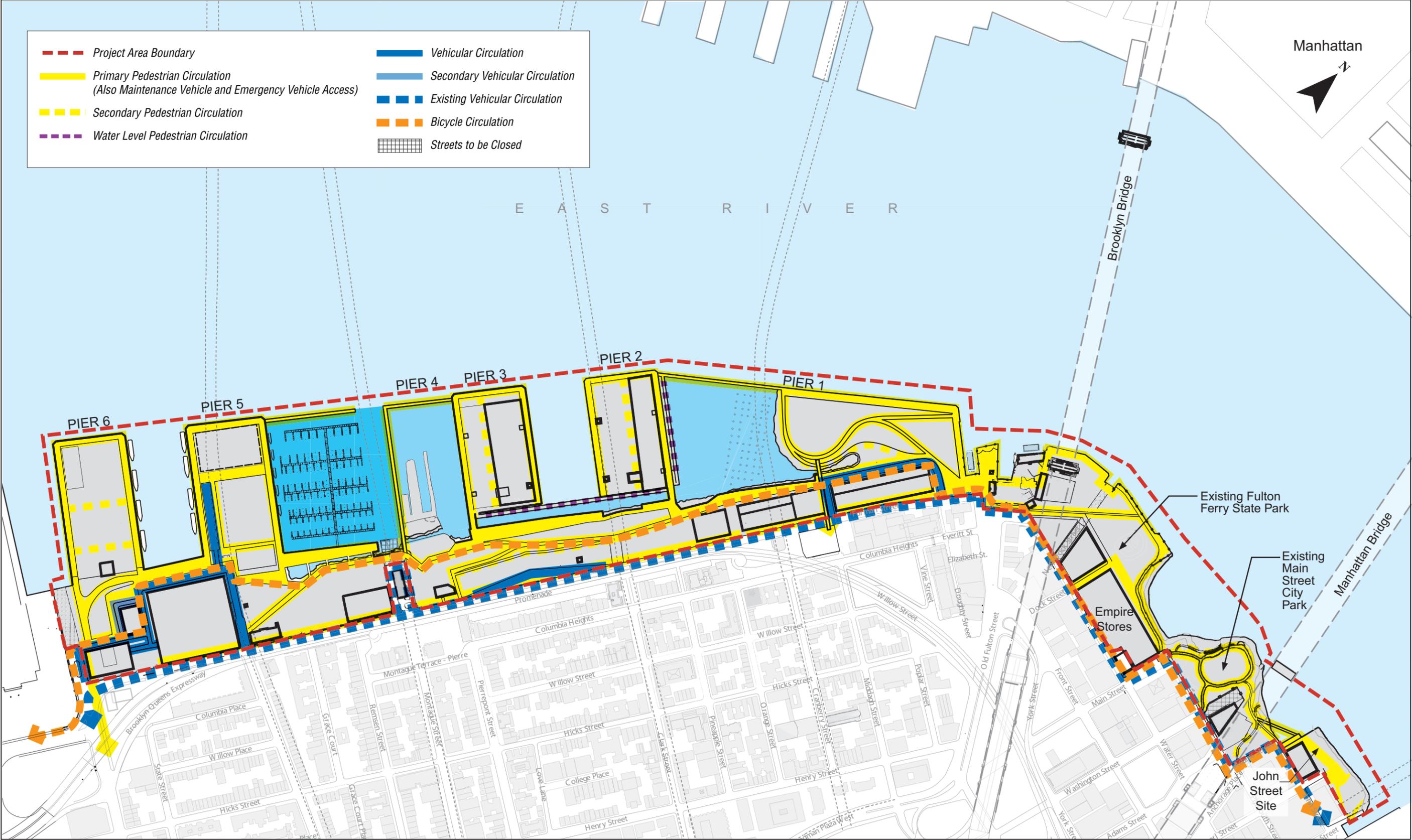
Waterfront Access and Circulation

One of the primary assets of Brooklyn Bridge Park is its proximity to the water. Several elements of the proposed plan permit interaction with the water, both visually and physically. The waterfront area across from Pier 4 could be transformed into a beach for launching kayaks and canoes. The area between Piers 1 and 6 would feature a waterfront promenade extending roughly along the bulkhead line (see Figure 1-5). This paved promenade would serve as a main pedestrian thoroughfare running through the park and would allow views of the water, piers, harbor, and the Manhattan skyline. Through a series of sloping ramps and floating and fixed walkways, park users would also be able to experience the water at sea level. This water-level access would allow for fishing, additional park circulation, and other water-dependent activities. These walkways would provide for an entirely different experience of the park, offering dramatic views of the columnar forest of piles that support the pier deck.

In the interbridge area, existing access to the water (in Empire-Fulton Ferry State Park, the Main Street Park, and Fulton Ferry Landing) would be extended to connect with the areas to the east and south. East of the existing Main Street Park, new walkways and an esplanade would be created, as well as a bridge linking the park to the area north of Adams Street.

“Safe Water” Zones and Water-Dependent Uses

From the southern edge of Pier 4 to the southern edge of Pier 1 two connected “safe water zones” are planned (see Figures 1-2 and 1-3). These would provide approximately 12 acres of secure water area for non-motorized boats including kayaks, canoes, and paddle boats. Marine structures would define the area, serving to attenuate waves from passing boats. Floating boardwalks would be arranged to contain the boaters and kayakers and provide additional wave attenuation within the safe water area. Connecting the two safe water zones, between Piers 3 and 4 and between Piers 1 and 2, would be a channel, created along the upland of Piers 2 and 3 by cutting away the existing pier structure from the upland portion of the pier. This “canal” would allow kayaks or other small non-motorized craft to navigate from the area between Piers 1 and 2 to the area south of Pier 3. Piers 2 and 3 would be connected across the canal to the upland areas of the park by an overhead pedestrian walkway that would also provide access for emergency vehicles. The remnants of Pier 4 would be left in place and used as a nature preserve. At Pier 1,



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some timber piles would be left in place following removal of the pier deck to preserve a physical record of the site's industrial past.

Outside the safe water zones, the area between Piers 5 and 6 would provide slips for the mooring of historic or educational vessels. Between Piers 5 and 4 would be an approximately 185-slip marina for sailboats and powerboats. The marina would provide limited boating services, including utility hook-ups and fueling.

Water taxi stops would be located along the south side of Pier 6, at the slip between Piers 2 and 3, at the north side of Pier 1, and near the John Street site, allowing waterborne transportation options for park users and others coming to the project site.

Bikeways

A designated bikeway, coordinated with the Greenway Initiative effort, would be integrated into the park from Pier 1 to Pier 6 (see Figures 1-2 through 1-4). Entry for cyclists to the park would primarily be at Old Fulton Street and Atlantic Avenue. At Fulton Ferry Landing, the bicycle route connects north to the proposed Greenway route along Water Street.

Vehicular Access and Parking

Vehicular access and parking would be needed for both park visitors and for users of commercial and residential buildings on the project site (see Figure 1-6). New streets would be created within the park to allow access from Furman Street to the hotel, restaurant and residential uses in the park. These streets, which would be constructed and maintained by BBPDC, would provide a clear boundary between park spaces and development parcels. If approved by the City of New York, Joralemon Street would be closed to vehicular traffic at Furman Street to minimize park-generated traffic along Joralemon Street; it would remain open for pedestrians.

In the cold weather months, park users would be permitted to drive onto and park at Pier 5, which would allow field sports teams and their supporters to reach the playing fields directly by vehicle and provide for drop-offs and pick-ups.

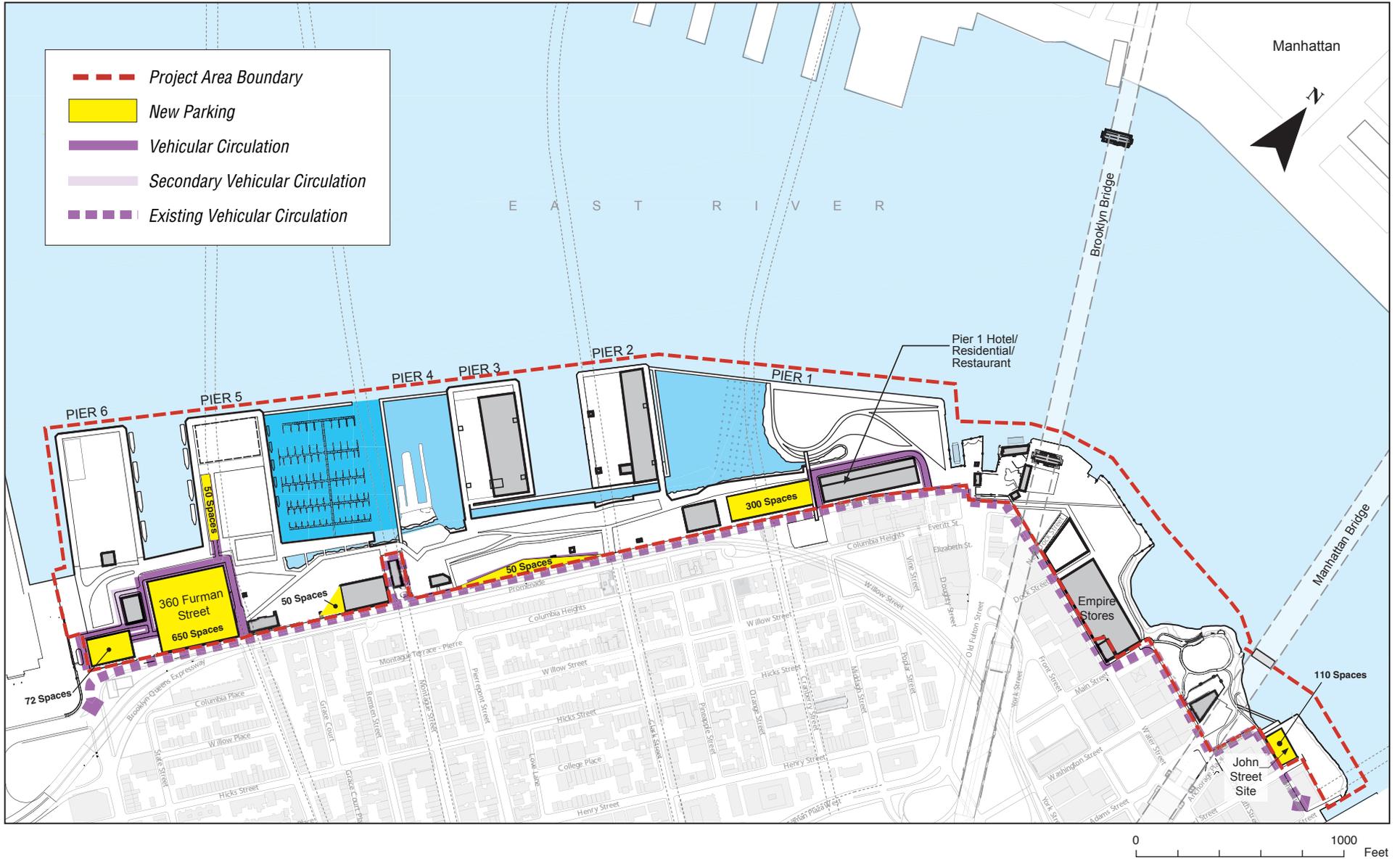
Parking would be provided in parking areas to be created within the park boundaries, and in off-street parking facilities (within approximately ¼-mile). Overall, there would be an estimated 1,283 parking spaces within the park boundaries, with approximately 651 spaces in 360 Furman Street (of which 500 would be for public use), approximately 72 spaces on the Pier 6 uplands, approximately 300 spaces for Pier 1 development, approximately 50 spaces at Pier 5, approximately 100 spaces along Furman Street at the eastern edge of the uplands between Piers 2 and 5, and approximately 110 spaces at the John Street Site. Service vehicles and deliveries would be accommodated within the park.

Renewable Energy

The park design would incorporate new technology to provide renewable energy, such as solar energy, to the extent practicable. Photovoltaic cell installations alone could provide a significant amount of the energy demand of Brooklyn Bridge Park, so consideration is being given to combining photovoltaic cells and possibly hybrid streetlights in the energy budget for the project. Photovoltaic cells would be mounted on the roofs of the remaining piersheds.

Habitat

An important design goal is to establish the maximum number of sustainable, functioning habitats in the Brooklyn Bridge Park. Natural habitats would include dunes on Pier 6; coastal forest on Pier 1 and its upland, and the uplands of Piers 4 and 5; shrubland on Piers 1, 2, and 3



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and on the uplands of Piers 5 and 6; a wildflower meadow on the uplands on Piers 2 and 3; marsh and shallow water habitats on and adjacent to Piers 1 and 4 and between the Brooklyn and Manhattan Bridges; and freshwater swale and wetlands near Piers 2 and 3.

By following ecological principles and guidelines in construction, these landscapes would need only modest management as the decades pass. These diverse natural areas would be linked together ecologically, to support one another in ecological function and provide valuable habitat for resident or migrating wildlife. The diversity and scale of the new natural landscapes would act as an ecological magnet, attracting wildlife, such as birds and butterflies, enriching the park experience for its users.

Building and Material Reuse

A vast amount of industrial material can be selectively reused, reconstituted, or dismantled for use in the park's construction. For example, existing Port Authority of New York and New Jersey (PANYNJ or Port Authority) sheds could be reused as shade structures, industrial fragments such as mooring cleats could be saved to maintain the maritime quality of the site, and buildings and pier structures that are being demolished can be crushed and used as on-site fill.

The proposed plan envisions the reuse of a number of existing buildings located throughout the park site. For example, the existing Port Authority sheds located on Piers 2 and 3 could be structurally modified and transformed into shade structures, or modified to provide areas of sheltered active recreation. The plan would also reuse existing maintenance buildings for park maintenance and operations.

Sound Attenuation

The Brooklyn-Queens Expressway, a busy highway that is cantilevered over Furman Street, and the Brooklyn and Manhattan Bridges—the latter also containing a major subway route—create high noise levels in the project area. The park designers had to work within the constraints created by the high noise levels of this nearby elevated roadway and the bridges. The 20'-30' high hills in the uplands between Piers 2 and 5, described below, would be designed specifically to create protected pathways through the park in which, at some locations, the noise of the highway would be substantially reduced. Additionally, existing and proposed buildings within the park would buffer some of the roadway noise. Noise levels outside the park, including along the Promenade, would not be noticeably increased by the hills or the new buildings in the park.

BROOKLYN BRIDGE PARK SUBAREA PLANS

Atlantic Avenue Gateway and Pier 6

Atlantic Avenue, a major Brooklyn arterial roadway, slopes down a hill towards the water, where it would serve as the southern entrance to the proposed park. The park design calls for this entrance to serve as a gateway to the park, combining spectacular views and convenient recreation. The topography would afford a clear view of the water as one approaches the park. The park itself would be visible in the distance as a burst of green as one passes beneath the Brooklyn-Queens Expressway. The upland area of Pier 6, located at the foot of Atlantic Avenue, would provide all the amenities of a neighborhood park including playgrounds, lawns, access to the waterfront, and recreational opportunities.

Moving farther away from the upland, a “beach barrier” with dunes is proposed on Pier 6 to take advantage of this location's sunny, windy environment and well-drained structure. Active programming, such as playgrounds and recreation-beach volleyball could be located on Pier 6. Vegetation, including a variety of native shoreline plants, and topographical forms would

provide shelter from the wind. An existing concrete masonry building at the edge of the pier that abuts the upland area could be preserved and used as a visitor's center and comfort station.

Piers 5, 4, 3, and 2 and Related Uplands

Promenade and Uplands. As described above, a waterfront promenade would extend from the Atlantic Avenue entrance all the way to the Fulton Ferry Landing. In the south, the promenade would bridge over a newly created tidal inlet. The promenade would meander slightly, sometimes directing views to the water, at other times directing views to Manhattan. A storm water collection system would criss-cross the promenade and would provide natural irrigation to the overall planting and landscape program. Some of the existing upland buildings would be reused for park maintenance and operations. A shed on Pier 2 or 3 would be used to store non-motorized boats. An existing building on the park uplands could also be used for this activity.

The upland area between Piers 2 and 5 would have an elevated and sloped topography that would reduce noise from the Brooklyn-Queens Expressway and provide views of the harbor from the uplands (see rendering 1 of Figure 1-7). These slopes would rise from 20 to 30 feet in height, creating hills that would run parallel to the waterfront and the Brooklyn-Queens Expressway. The slopes would rise gently on the waterfront side of the hills, creating broad open lawns suitable for seating and picnicking. Without obstructing the view from Brooklyn Heights, steeper slopes facing the Brooklyn-Queens Expressway would include denser plantings and would provide scenery that would create a strong image of the park from the roadway. Approximately 100 parking spaces would be created within the park boundary along Furman Street at the eastern edge of the uplands.

Pier 5. The proposed plan includes three outdoor fields on Pier 5 on which any of the following sports could be played: soccer, football, rugby, cricket, lacrosse, or field hockey (see rendering 2 of Figure 1-8). In addition, it is contemplated that the field at the western edge of Pier 5 could be housed in an indoor structure (see rendering 3 of Figure 1-8). This structure would provide year-round sports courts while maintaining the transparency of a lightweight structure. Pier 5's perimeter would provide a continuous water's edge esplanade from which park patrons may fish or sit or walk along. It should be noted that the indoor athletic facility is not included in the budget for the park and would only be included if additional funding could be raised for its construction.

Pier 4. A shallow water habitat area would be created in the vicinity of Pier 4 and the adjacent railroad float transfer bridge. This area would be interesting to look at and protected through its physical isolation from the rest of the park. In the area of Pier 4, a new floating boardwalk would be created that would connect to the larger circuit of walkways and provide a place for launching kayaks and bird-watching. On the upland area adjacent to Pier 4, there could be a new beach that would connect to the larger circuit of walkways (see rendering 1 of Figure 1-7). The beach would provide direct access to the water and serve as a launching point for non-motorized boats, but swimming would not be permitted.

Boating Channel. A marine structure that connects Piers 2 and 3 to the upland would be removed and replaced with narrow bridges, thus creating an open water channel through this portion of the park (see rendering 4 of Figure 1-9). New floating walkways along this channel would provide a circulation network within the park, and their position below the level of the pier deck would allow park visitors to explore and discover the previously obscured marine infrastructure. Transition walkways would be created to provide ADA access and strong connections from the floating boardwalks back to the existing pier platforms. The boating channel would also connect the safe kayaking zone from the Pier 1 basin to the basin between Piers 3 and 5.



Beach opposite Pier 4 and sloped topography on uplands 1



Soccer field at Pier 5 **2**



Multi-use recreational facility **3**



Boating channel at Pier 3 4

Piers 2 and 3. Portions of the warehouse sheds on Piers 2 and 3 would be reused to house active recreation courts such as basketball, volleyball, or handball (see renderings 5 and 6 of Figure 1-10). By modifying the existing building facades and roofs, these sheds would provide essential shading at a fraction of what it would cost to build brand-new shade structures. In addition to conserving park dollars, the reuse of these structures is consistent with the park's commitment to both environmental sustainability and the continuity of the industrial history of the site. In conjunction with planting, these architectural measures may also be used to enhance microclimatic wind shelters. The remainder of the pier area would be transformed into large programmatically flexible civic lawns and waterfront promenades (see rendering 7 of Figure 1-11). A sloping ramp along the northern edge of Pier 2 would provide views of the piles supporting the pier and would allow park users to experience the water at sea level (see rendering 8 of Figure 1-11).

Pier 1 and Fulton Ferry Landing

Pier 1. Despite its name, the majority of Pier 1 is a peninsula of solid ground that projects into the East River rather than a pile-supported platform. The depth and weight-bearing capacity of this land offers one of the few opportunities on this site for elevated topography, large trees, and infrastructure-heavy park uses at the water's edge. A hill on Pier 1 would momentarily obscure the large-scale views to the harbor and provide a contrasting moment of enclosure within the park (see rendering 9 of Figure 1-12). At the hill's apex, the longer views would again be revealed, but even more so, with views into the park and out towards the harbor, Governor's Island, the Statue of Liberty, Manhattan, and the Brooklyn Bridge. An esplanade would run along the portion of the pier fronting on the East River, and shallow water habitat zones would be established along the southern pier edge.

By removing the pile-supported deck portion of Pier 1 and providing additional walkways, the project would create a new waterfront promenade and provide a large basin for kayaking (see rendering 10 of Figure 1-12). Some of the exposed piles would remain as historical remnants that would be interesting from the upland and the water (see rendering 11 of Figure 1-13). Three tennis courts would be provided on the roof of a building at Pier 1.

The removal of the National Cold Storage buildings would allow for a pedestrian bridge over Furman Street that would provide an entrance to the park from the adjoining Brooklyn Heights neighborhood. The pedestrian bridge would link the hill on Pier 1 to Squibb Park. Squibb Park, east of Furman Street between Cranberry and Middagh Streets, is an existing city park just outside the project area. It occupies an isolated terrace between Brooklyn Heights and Furman Street. With only one available entrance, this dead-end park is perceived as dangerous and is currently closed but is expected to be reopened to the public in the future. The use of this park would be enhanced and the urban connections between Brooklyn Bridge Park, and the neighborhoods to the east would be strengthened by building a bridge over Furman Street from Squibb Park to Pier 1.

Fulton Ferry Landing. A large civic plaza is proposed at the base of Fulton Ferry Landing to provide a generous public gathering space at the park entrance and is bracketed by large planted spaces to provide shade. The Fulton Ferry Landing, which would serve as another major gateway to the project area, would retain most of its existing features. Changes envisioned include simplified vehicular access and relocation of some parking.

To create a scenic Fulton Ferry gateway and improve physical and visual connections within the proposed park, the Purchase Building would be removed. The building, at Water and Dock



Athletic courts at Pier 2 5



Athletic courts at Pier 3 6



Multi-purpose civic lawn at Pier 2 7



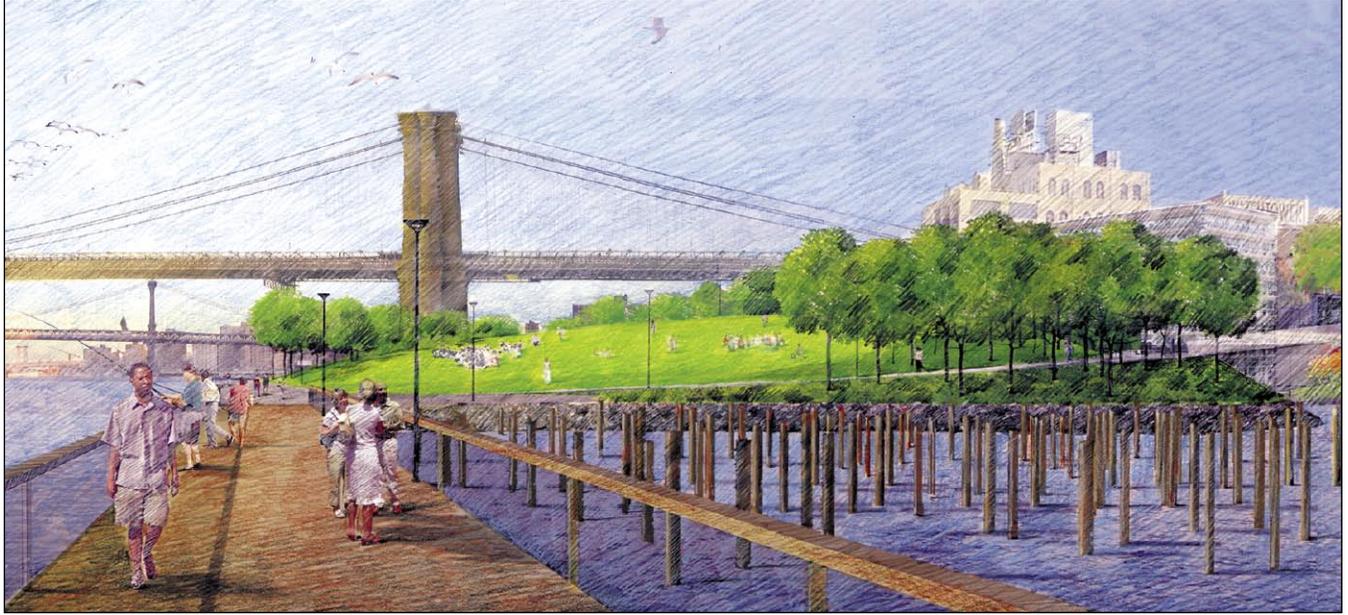
Ramp along the northern edge of Pier 2 8



Proposed hill at Pier 1 9



Promenade at the Pier 1 tidal incursion 10



Pier 1 boat basin and walkway connecting Piers 1 and 2 11

Streets under the Brooklyn Bridge anchorage, is located at a pivotal point of the project site and currently blocks critical views and the physical circulation corridor planned for the park. Visibility and circulation within the park would be vastly improved by the proposed removal of the Purchase Building (see rendering 12 of Figure 1-14). Although it is located within the Fulton Ferry Historic District (State/National Register, New York City Historic District), and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) have determined that the Purchase Building is not a contributing element of their respective historic districts. The notable public benefit to the park with respect to views and programming outweigh the benefits of retaining the building.

This major park entrance demonstrates a powerful sequence of landmark, gateway, and connecting views: the unmistakable form of the Brooklyn Bridge pier beckons from afar, leading to arrival at the Fulton Ferry Landing, at which point further views through the park are revealed to the Manhattan Bridge, the East River, and Empire-Fulton Ferry State Park.

Interbridge Area

The area between the Brooklyn and Manhattan Bridges is already largely developed as parkland, containing both Empire-Fulton Ferry State Park and the new Main Street Park at the foot of Main Street, both of which would be incorporated into the proposed project (see rendering 13 of Figure 1-15). Near these structures, at the water's edge, the existing open water cove would be retained to allow park visitors to reach the shoreline. A new, bowl-shaped lawn is planned for in Empire-Fulton Ferry State Park that would enhance the use of the space. The existing DEP building adjacent to the Manhattan Bridge at Washington Street may be reused for community, cultural, educational, or other uses. Nearby, the restored exterior shell of the former Tobacco Warehouse, which may require other improvements, could house a walled garden, café, or space for arts groups. An outdoor ice skating area is planned for the location under the Brooklyn Bridge. The rink would operate only when the weather is below freezing.

North of the Manhattan Bridge

The northernmost precinct of Brooklyn Bridge Park is at a bend in the river and is bordered by a large electrical transformer to the east. Given the existing circulation network, it would be necessary to travel city streets to get from this area to the remainder of the park. To form a connection that allows for the internal continuity of the park, a pedestrian bridge across the cove underneath the Manhattan Bridge is proposed (see rendering 14 of Figure 1-15). The creation of a hill at this major park entrance would result in one of the most spectacular harbor views within the park, encompassing the Manhattan and Brooklyn Bridges to the south, and the East River to the north. To facilitate river-viewing, the mounded site would feature planting, paved area, site furnishings, and lawn.

DEVELOPMENT COMPONENT

Requirement That the Park Be Financially Self-Sustainable

Under the terms of the 2002 MOU between the state and city that created the project, the park is required to be financially self-sustaining, i.e., the park's annual maintenance and operation budget must be funded through revenue generated from within the park. As shown on Table 1-1, the annual maintenance and operations costs for the park are preliminarily projected to be approximately \$15.2 million, in 2004 dollars. This budget assumes a park of approximately 85 acres, and is comprehensive, only excluding administration costs for special events, costs for special programming, and costs for major structural repairs, which would be handled through a maintenance reserve.



Old Fulton Street looking through to the Empire-Fulton Ferry State Park 12



Empire-Fulton Ferry State Park with opened views through to Pier 1 **13**



Proposed walkway and landscape north of the Manhattan Bridge **14**

Table 1-1

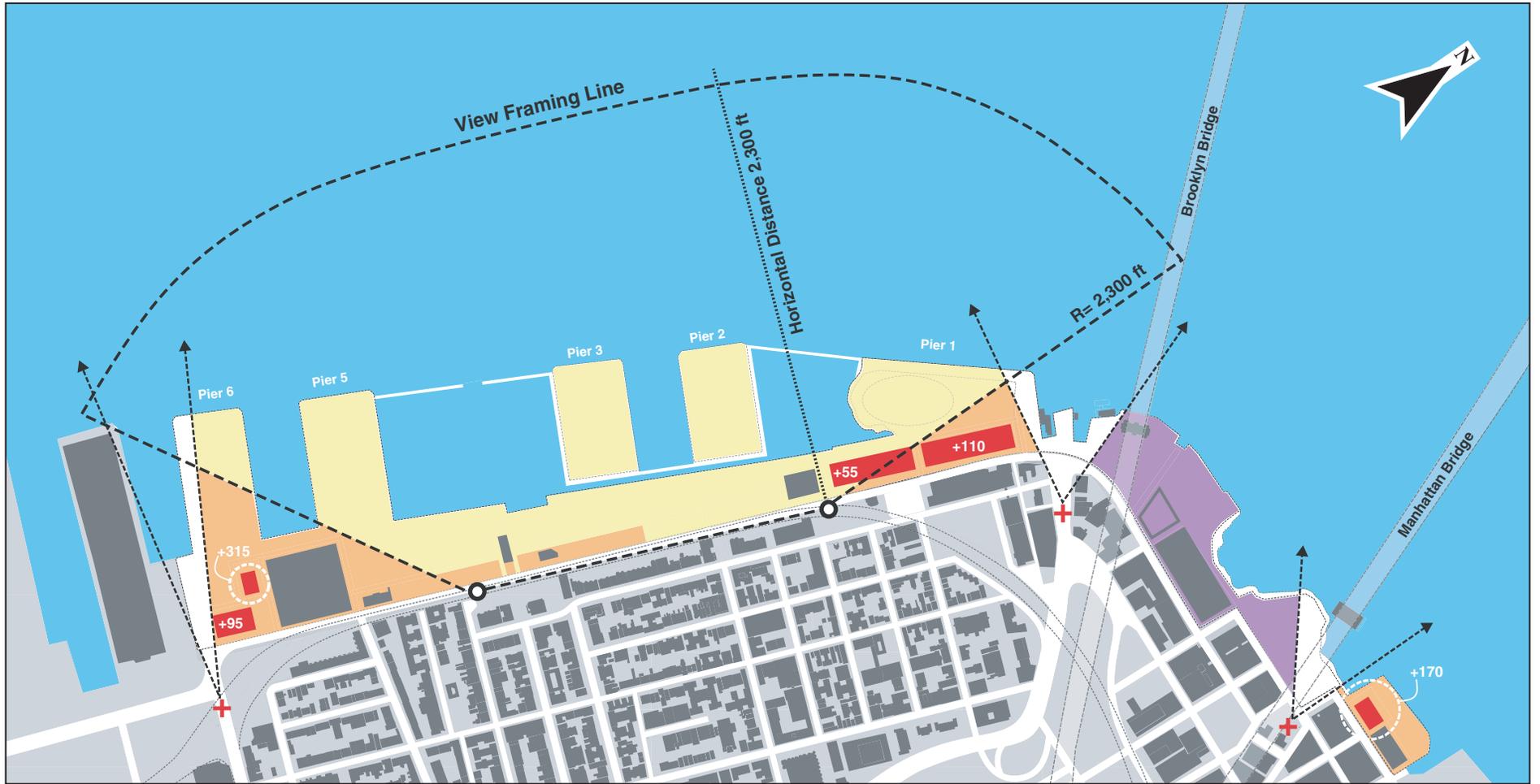
Brooklyn Bridge Park Maintenance and Operations: Budget Summary

Park Component	Cost*	Area (sf)	Cost/sf
Hardscape Areas—including building maintenance and artificial turf	\$1,191,848	1,370,486	\$0.87
Lawn Areas		394,147	
Active Natural Lawn	395,264	See above	1.00
General Lawn—irrigation and soil tests	80,738	See above	0.20
Planted Areas			
Display Gardens	102,737	19,550	5.26
Mixed-Use Landscape	268,564	75,878	3.54
General Planting (Upland)	1,115,843	515,225	2.17
Wetland and Marsh Landscapes	139,786	82,313	1.70
Pier Landscape	267,800	149,967	1.79
Water Areas			
Rip Rap Shoreline—planted and unplanted	43,580	73,404	0.59
Safe Water Area	399,251	528,600	0.89
Playground Maintenance	63,886	26,497	2.41
Maintenance Contingency (10%)	406,930		
Operations Staff—Security and Recreational	2,681,757		
Costs for supplies, uniforms, postage, travel, etc.	180,000		
Administration Staff	1,200,000		
Annual Property and Risk Insurance	200,000		
ANNUAL LANDSCAPE OPERATING COST	\$8,737,982	3,236,067	
Total Electrical Cost for Park Lighting	\$473,514		
Total Cost for Park Water	194,561		
Total Cost of Park Heating	93,213		
Utility Contingency (10%)	76,129		
TOTAL UTILITY EXPENSE	\$837,417		
TOTAL ANNUAL OPERATING COST	\$9,575,399		
Annual capital maintenance, 1.4% of construction cost estimated @ \$130 million	\$1,820,000		
Vehicle replacement, 12.5% of initial cost	202,088		
Annual Marine Infrastructure Maintenance	3,600,000		
TOTAL ANNUAL MAINTENANCE COSTS	\$5,622,088		
TOTAL ANNUAL MAINTENANCE & OPERATING COSTS	\$15,197,487		
Notes:	Costs exclude pier replacement and major structural repairs, special events, or cultural and educational programming.		
Sources:	Michael Van Valkenburgh Associates and Mathews Nielsen Landscape Architects, P.C., <i>Brooklyn Bridge Park Maintenance and Operations Budget</i> , November 2004. Marine infrastructure maintenance cost figures from DMJM+Harris Report.		

Identification of Development Parcels

Once the annual maintenance and operation costs of the park were calculated, there were several additional steps necessary to establish a development program. First, the planning team identified possible sites for new buildings. The challenge for locating proposed new development on the site is three-fold:

- The potential locations of new buildings on the project site are severely restricted by the view planes and viewsheds across the site; any new buildings would have to be located so as not to obstruct views of the harbor and the Lower Manhattan skyline from the Brooklyn Heights Promenade and to protect viewsheds from the foot of Atlantic Avenue and Old Fulton Street and from the base of the Manhattan Bridge (see Figure 1-16).
- Development, in order to be successful, must be accessible, and the opportunities for such access in the project site are essentially limited to Atlantic Avenue, Old Fulton Street and D.U.M.B.O. Thus the search for development locations was focused in these three areas.



- Park Entry Viewshed
- Designated Parkland - Unavailable
- Development Controlled by Scenic View District
- Area Outside Scenic View District
- Proposed Building Footprint

0 1000 Feet

- Development should maximize parkland while minimizing building footprints. Planning for development in the project area included the reuse of existing structures.

Selection of Appropriate Land Uses

In the next step in the analysis, the team considered a range of land uses and tested them against three major criteria: feasibility, compatibility with park uses, and the ability to maximize parkland while creating the necessary income stream for park maintenance and operation. The initial range of uses analyzed included recreational uses, public parking, office, local retail, destination (large format) retail, housing, and hotel. These uses were screened as follows:

- Recreational uses, such as an ice hockey facility or an Olympic-sized swimming pool, would require government subsidy and would not be able to generate any revenue for the park. These uses were eliminated as infeasible.
- An examination of demand for monthly and daily parking within a reasonable distance of the park site found that there would not be enough demand to justify the construction of additional parking structures as a revenue-generating use for the park.
- The project site was found to be infeasible for office use for several reasons: (1) the site is not located near enough to public transportation; (2) since the location is not competitive with more central office locations it could not command rents commensurate with new construction; (3) office uses are only active during business hours, and are therefore not considered to be park compatible; and (4) the footprints of modern office buildings are large, and development of this use would therefore not maximize the area available for parkland.
- Local retail ancillary to the proposed development could be accommodated in the park; however, this location is too far from population centers to generate the foot traffic necessary to support a significant amount of stand-alone local retail.
- Large format (“big box”) retail, at a size adequate to produce a revenue flow for the park, was found to require substantial acreage including parking, to generate large amounts of automobile and truck traffic, and to be generally incompatible with park use.
- Although big box retail would not be appropriate for the park, a concentration of retail and restaurant uses in the existing Empire Stores buildings was considered suitable, because it would add population to the park entrance and be contained in existing structures.
- Hotel and residential uses were found to be feasible, compatible with park use, and able to maximize parkland. These uses, which could be accommodated in a relatively small area of parkland (including a large existing building), have the advantage of being active seven days a week, even in winter. They would provide patrons for the park and eyes on the park, as well. Finally, there is demand for both of these uses in this location, so that they would be able to produce the revenue flow required for park maintenance and operation. These uses are the most economically effective in terms of meeting the primary goal of having the greatest possible amount of open park space and leaving at least 80 percent of the total area to remain as open public park and recreation space.

The final step in the analysis was to create the smallest program that could prudently support the annual maintenance and operations of the park. The park planners established a revenue budget based on development budgets for each site. Components of the development budget included comparable land sales and construction costs and financing assumptions based upon industry standards. It should be noted that the revenue analysis was completed in late 2004 and all

Brooklyn Bridge Park FEIS

assumptions, including land values, construction costs, and financial assumptions, are based on data available at that time.

Development Program by Park Subarea

Overall, the park’s development components would include approximately 1,210 units of housing, 225 hotel rooms, 151,200 square feet of retail uses, 86,400 square feet of restaurants, cafes and other eateries, 30,000 square feet of meeting space, 36,000 square feet of offices, 128,400 square feet for research and development or educational uses, and 1,283 parking spaces. The uses proposed for each of the park’s subareas are described below. A breakdown of park components is provided in Table 1-2.

**Table 1-2
Summary of Proposed Park Components**

Park Components	Development (sq. ft. or residential units)	Acreage
<u>Sports courts, fields, and playgrounds</u>	===	<u>8.5</u>
<u>Safe water areas</u>	===	<u>12.1</u>
<u>Lawns, plazas, and landscaped areas</u>	===	<u>36.7</u>
<u>Esplanades and paths</u>	===	<u>14.5</u>
<u>Vehicular roads and parking</u>	===	<u>3</u>
<u>Park-related buildings</u>	===	<u>2.2</u>
<u>Development program</u>	===	<u>8.2</u>
<u>TOTAL</u>	===	<u>85.2</u>
<u>Description of Development Program</u>	===	
<u>Area In Existing Buildings</u>	===	<u>4.9</u>
<u>Area In New Buildings</u>	===	<u>3.3</u>
<u>Residential</u>	<u>1,210 units</u>	
<u>Hotel</u>	<u>225 rooms</u>	
<u>Retail</u>	<u>151,200 sf</u>	
<u>Restaurant/Café</u>	<u>86,400 sf</u>	
<u>Office</u>	<u>36,000 sf</u>	
<u>Other</u>	<u>213,700 sf</u>	
<u>Parking</u>	<u>1,283 spaces</u>	
<u>Notes:</u>	<u>The proposed marina, which is approximately 8 acres, is not included in the 85.2 acre total, nor is it included as part of the safe water area or commercial development.</u>	
<u>Sources:</u>	<u>Brooklyn Bridge Park Development Corporation, Michael Van Valkenburgh Associates.</u>	

Uplands of Pier 6. Two new buildings—approximately 95 feet and 315 feet in height—would frame this major entrance to the park. The visibility of the new structures would be diminished from the surrounding area due to changes in elevation. The smaller building, located closer to Furman Street, is expected to include up to 3,000 square feet of retail use on the ground floor. The 430 new housing units would introduce a critical mass of residents so that the site would benefit from neighborhood “eyes” on the park. An estimated 72 parking spaces would be provided for residents and the public.

Uplands Between Piers 5 and 6. Separated from the park by a new roadway, 360 Furman Street, a former industrial building, would be converted to residential use as part of the proposed project. Up to two stories could be added to the building’s main roof, increasing the main roof height from 146 to 169 feet. The building would accommodate up to 500 residential units,

ground-floor retail and/or restaurant uses, and an estimated 651 parking spaces for building residents and the public.

Uplands of Pier 1. The deteriorated and long-vacant National Cold Storage buildings would be demolished. That site would accommodate a vibrant mix of development, including a restaurant, 150 residential units, and an approximately 225-room hotel in two buildings, one of 55 feet and one of approximately 110 feet in height. This hotel/residential complex could include meeting rooms and a spa, as well as up to 300 parking spaces. Approximately 17,500 square feet of floor area would be occupied by restaurant/café uses. Limited vehicular access would be permitted to the development areas on uplands. The streets would be used to delineate the urban edge and provide services and drop-off zones.

Fulton Ferry Landing and Interbridge Area.

Empire Stores: Under the proposed project, the now-vacant Civil War-era Empire Stores warehouses would be restored as a mixed-use project and would house approximately 50,000 square feet of restaurant uses, approximately 70,000 square feet of retail, 36,000 square feet of office space, and 128,000 square feet of educational or research and development uses. Approximately 3,000 square feet of ground floor retail space would be included on this site.

North of the Manhattan Bridge—John Street Site.

To advance the development of this area as a major point of entry into the park, a parcel along John Street between Adams and Pearl Streets (the John Street Site) would include an approximately 170-foot high residential building with approximately 130 units and up to 110 parking spaces, which could accommodate ground-floor retail uses.

Revenue Analysis

The proposed development program for the park would provide the necessary revenues and reserves to fund park maintenance and operations (see Table 1-3). Return to the park would be maximized by combining upfront payments from developers of the revenue-generating uses with park maintenance fees from apartment owners and tenants. The upfront and other one-time payments, including purchase fees from the developers, mortgage recording tax, and payments in lieu of sales taxes (PILOSTs) would form an “endowment”—a reserve and investment fund for the park. Income from investing the endowment plus income from ground rent payments, payments-in-lieu-of real estate taxes (PILOTs), and other annual fees and taxes would create an annual flow of revenue, which would be used to pay for park maintenance and operation.

In the early years, as the park and the development components are constructed, the annual income flow from the development is not projected to entirely cover the cost of park maintenance and operations. This would occur for at least two reasons: first, the park would be on line before all the development would have been completed; second, tax incentive programs available in the early years would depress the annual revenue during that period. Therefore, it is anticipated that a draw on the capital reserves in the endowment would be necessary to cover that shortfall. However, it is expected that there would be enough money in the reserves to cover that draw.

Once the tax incentives phase out, it is anticipated that endowment investment and revenue flow would become adequate to support the maintenance and operation of the park, with some funds left over to begin replenishing the capital reserves, approximately 20 years after the start of park construction.

Table 1-3***

Development Analysis: Cash Flow Summary*

	Year 1	Year 5	Year 10	Year 15	Year 19	Year 20
Recurring Fees	\$5.01	\$10.99	\$12.25	\$21.08	\$27.64	\$28.83
Return on Investment	\$1.46	\$3.84	\$2.85	\$1.32	\$0.89	\$0.90
Annual Revenue	\$6.47	\$14.84	\$15.10	\$22.41	\$28.53	\$29.73
Park Maintenance and Operations**	\$4.81	\$18.69	\$21.67	\$25.12	\$28.28	\$29.12
Net Income (Loss)	\$1.66	(\$3.86)	(\$6.57)	(\$2.72)	\$0.25	\$0.60
Invested Capital	\$58.33	\$77.70	\$54.08	\$24.00	\$17.85	\$18.11

Notes:

* All numbers in millions of dollars.

** Maintenance and operations costs for the completed park are estimated at \$15.2 million in 2004 dollars; these have been increased to account for inflation, at the rate of 3 percent per year.

*** The analysis reflected in this table has been modified from the analysis that was presented in the Draft Environmental Impact Statement in the following ways: (1) as-of-right tax abatements have been taken into account for revenue projections for the planned hotel on Pier 1, and (2) the upfront land payment for the residential development on Pier 1 has been discounted to reflect the expectation that the developer selection process may take place later for the Pier 1 area than for other development components, and (3) the brownstones proposed along Furman Street have been excluded from the revenue analysis.

Sources: Susan Fine, 2004-2005.

In an effort to try to reduce the development program, the park planners considered lower levels of development and the associated cash flows, in particular the program for the Reduced Density alternative presented in Chapter 20, "Alternatives." As reported in that chapter, under this option, which would reduce the size of residential development on the Pier 6 uplands, the capital reserve could not recover from lack of income in the early years, and the park would run out of money approximately 10 years after it is built.

The development program contained in the proposed plan represents the minimal level of development that is required to prudently support the annual maintenance and operations of the park based on the analysis undertaken in 2004. However, the actual development will emerge as the result of a competitive developer selection process, and therefore development may be smaller, if market conditions permit it, because the value of land and other factors may well be different from those assumed in this analysis. Therefore, for purposes of the EIS studies, the specific development program described herein applies, but it is also understood that the ultimate program may vary somewhat from the proposed plan. Given that the EIS studies establish an "envelope" of maximum impact and the MOU stipulates the development footprint may not exceed 20 percent of the park, it is understood that the actual program cannot exceed that of the proposed plan without further environmental analysis, and that the ultimate program may be smaller than what is studied in the EIS. The financial information for the maintenance and operations budget and revenue analysis for the proposed project, for the Reduced Density Alternative, for the Modified Design Alternative, and the Modified Pier 6 Residential Building Alternative is included in Appendix C of this FEIS.

D. PROJECT PLANNING

DEVELOPMENT HISTORY

The project area has a rich history that dates back to the city's earliest settlements. Located at the narrowest part of the East River, the area grew up around ferry service to Manhattan that lasted from 1642 to 1924—nearly 300 years. It was a market district from the beginning. Even in the early years Manhattan relied on food from outlying farm areas. Long Island was the most important of these and quantities of produce and meats were conveyed to New York by ferry. The district developed with produce markets, slaughterhouses, shops, businesses associated with the growing ferry traffic and commerce, residences, pubs, and inns.

Robert Fulton's steam ferry, franchised in 1812, opened a new era. The larger, more sophisticated ships could make the trip from Brooklyn to Manhattan in eight minutes. The safety, reliability and speed attracted commuters to the route. It was about this time that Brooklyn Heights, set high on a bluff east and south of the ferry slip, began to develop as a prosperous suburb. The section surrounding the ferry to the south and east continued to grow into a thriving commercial district. In an atmosphere similar to Wall Street at the time, banks and insurance companies centered on Front Street. Shops and markets lined Fulton Street (now Cadman Plaza West), with lodgings above.

By the mid-19th century, new streets were added on fill, many of the others were widened, and the area was solidly established as a commercial and industrial waterfront district. Several railroad lines converged at Fulton Ferry from various points in Brooklyn, then the second largest city in the North. However, the growth of the borough eastward and newly available transportation access encouraged the expansion of Brooklyn's urban center inland, away from the waterfront. This movement was greatly accelerated by the completion of the Brooklyn Bridge in 1883; it passed over the waterfront district and improved access by rail and buggy to the south. The Manhattan Bridge, opened in 1909, strongly supported this trend. By the beginning of the 20th century, the waterfront area surrounding the ferry landing was no longer key to Brooklyn's commerce. The great bridges crossing above the site clearly divided it from neighboring development. As a result, a different growth pattern had emerged. Manufacturing and warehousing, already present in the mix of commercial uses, began to dominate the waterfront area. The first Empire Store building was constructed on Plymouth Street in 1869, the year construction on the Brooklyn Bridge began. In the next 15 years more Empire Stores followed, as did the Martin Stores on Furman Street. By 1880, the Plymouth and Furman Street waterfronts were completely covered by brick warehouses storing a variety of food items, giving this portion of Brooklyn the name "the walled city."

The project area and its immediate surroundings continued as a strong waterfront industrial district through the first half of the 20th century. The waterfront itself was owned almost entirely by the New York Dock Company, which rebuilt or enlarged nearly all the piers and bulkheads along the waterfront and expanded local rail lines to all the waterfront stores in the early 1900s. In the 1950s, the company sold its holdings to the Port Authority (then the Port of New York Authority), which removed approximately 25 old finger piers and demolished more than 130 storage warehouses to build the Brooklyn Marine Terminal, stretching from Fulton Street to the Atlantic Basin. Between 1956 and 1964, the Port Authority built 13 new, wide piers and upland areas to handle break-bulk cargo and truck traffic. Piers 1-3, 5, and 6 were constructed at this time; the gantry at Pier 4 dates from an earlier period.

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However, in the 1950s other forces were combining to weaken the waterfront district. First, following World War II and the Korean War, the waterfront set into a steady decline as New York's older port areas lost ground to container shipping and to competition from other east coast cities. Activity in the Brooklyn Navy Yard, long an anchor of employment, began to wane. Then came the Brooklyn-Queens Expressway, which in the early 1950s further undermined the area's stability, by creating an approximately 60-foot-high elevated structure parallel to Furman Street and removing numerous residential buildings in Brooklyn Heights, thus separating this neighborhood from the waterfront; between the two bridges, the highway's construction demolished a number of industrial buildings and created a third barrier across the district's southern boundary.

By the late 1970s activity on the Brooklyn Heights piers had diminished, and the Empire Stores stood empty, its piers rotted away. In 1975, the Empire Stores, the last remaining buildings of their type, and the immediately surrounding area, were designated as a National Register Historic District and a New York City Landmarks Preservation Commission Historic District. The State bought the Empire Stores property (9 acres between Main and Dock Street) in 1978 to allow public access to the waterfront, as well as to preserve the historic structures. It is now known as Empire-Fulton Ferry State Park. Just south of the Brooklyn Bridge, the Port Authority began searching for alternative uses for Piers 1 through 5, which were producing only modest levels of revenue as warehousing facilities and were fast becoming obsolete. All cargo ship operations on Piers 1-6 ended in 1983.

PLANNING HISTORY

In 1984, shortly after the close of cargo operations, the Port Authority announced plans to sell the piers for commercial development. These actions set in motion a number of responses resulting in a complete re-evaluation of the project area's value as a public resource.

During the next ten years a number of plans and proposals were put forth for the Empire Stores and the piers, including major private development (including as many as 3,000 residential units). In response to the Port Authority's plans for commercial development on its piers, in 1985, the Friends of Fulton Ferry Landing (Brooklyn Bridge Park Coalition's predecessor) was formed by the local community to help formulate a new vision for public use of the piers and adjoining waterfront properties. In 1992, the community and their local elected officials united behind a statement of "Thirteen Guiding Principles" to guide the future development of the Downtown Brooklyn Waterfront. These principles, described in greater detail below, included creating a financially self-sustaining park while realizing open space goals. In 1994, the City and State announced the intention to create Brooklyn Bridge Park.

In 1998, the Downtown Brooklyn Waterfront Local Development Corporation (LDC) was established, and with funding from the New York State Legislature, undertook a year-long public planning process to forge a concept for Brooklyn Bridge Park. The LDC planning effort was rooted in an intensive public process, which included workshops, design charrettes, community meetings, and broad public forums to formulate a vision for the park. The result of the community effort was the Brooklyn Bridge Park Illustrative Master Plan, dated September 2000, which presented a conceptual framework for a waterfront park.

On May 2, 2002, Governor George Pataki and Mayor Michael Bloomberg signed an MOU in which they agreed to work together to realize the vision of a unified, sustainable public park, using provisions contained in the 2000 Illustrative Master Plan as a guide in refining the plan.

The MOU between the State of New York and the City of New York outlines guidelines for the creation, development, and operation of Brooklyn Bridge Park, including the following:

- The Illustrative Master Plan developed by the Downtown Brooklyn Waterfront Local Development Corporation will provide the basis for the development of the project.
- New York State and New York City have created the BBPDC, a new subsidiary of the Empire State Development Corporation, to develop the park.
- BBPDC is an entity governed by an 11-member board of directors, of which 6 are appointed by the Governor and 5 by the Mayor. The board is chaired by the ESDC Chairman and vice-chaired by the Deputy Mayor for Economic Development and Rebuilding.
- Revenues from commercial development within the park will be used for maintenance and ongoing operations of the park.
- New York State will contribute \$85 million through the Port Authority of New York and New Jersey, and the city will contribute \$65 million toward the project.
- At least 80 percent of the land in the park will be protected in perpetuity as parkland.
- The city-owned and state-owned parcels of the park will be developed and operated as a unified and seamless park.

Building on the Illustrative Master Plan, and incorporating additional public input and review, as well as engineering and other studies, BBPDC released the Brooklyn Bridge Park Concept Plan in 2003. The Concept Plan was a key step in the evolving planning process, serving as the transition from a community-based planning initiative to the more formal design and approval process.

In 2004, BBPDC retained a design team to undertake the more detailed design process, building from the earlier Concept Plan. This more detailed phase of planning, which was substantially based on the 2000 Illustrative Master Plan, allowed park planners to further refine concepts. For example, engineering studies that were not able to be conducted within the resources of the 2000 Illustrative Master Plan led to key discoveries in the 2005 effort. For instance, marine engineering studies conducted as part of the 2005 effort revealed that the marina would be better placed between Piers 4 and 5 because the current flow in the East River causes silt to build up between Piers 1 and 2, but the same effect does not occur further south between Piers 4 and 5.

The engineering and cost estimating studies conducted as part of the 2005 effort included an analysis of an indoor recreation facility previously planned on Pier 5. The analysis showed that the proposed uses could not be accommodated in the existing Pier 5 shed structure because the column spans were too narrow and the load bearing capacity of the pier was not sufficient to support the proposed use. The 2005 plan proposes to replace the recreation facility on Pier 5 with a lighter weight indoor recreation facility, provided that additional funds could be raised to pay for the building.

Other elements of the 2000 Illustrative Master Plan that have been further developed include the placement of active recreation in the park. Many of the sports in the 2000 Illustrative Master Plan were located in a pay-to-play facility located on Pier 5 (described above). Other locations for active recreation were located at the D.U.M.B.O. entrance to the park and on the rooftops of buildings. In the 2005 plan, the active recreation is primarily located in the center of the park on the piers. The reason for this change is because court sports require flat surfaces and the piers are ready-made flat surfaces. This change in location results in a more rational park plan and in savings to the budget because the piers exist and therefore new space does not have to be built to

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accommodate the court sports. A by-product of this change is that the 2005 plan would significantly increase the amount of recreation offered to the public, as compared to the 2000 Illustrative Master Plan. For instance, the 2000 Illustrative Master Plan included fewer handball courts, basketball courts, and playgrounds than the 2005 plan. It did not contain volleyball courts, an in-line hockey rink, or a multi-use field that could be used for soccer or softball. In total, the proposed project would contain approximately 40 acres of active recreation and would dedicate approximately 77 acres to recreation, compared to the 2000 Illustrative Master Plan, which offered 21 acres of active recreation, and 57 acres of recreation in total.

An additional benefit of changing the location of the active recreation is that the sports that are more regional in nature (i.e., court sports, water-based activities) are located in the middle part of the park (the portion that takes longer to travel to) and the more local activities (i.e., playgrounds, passive space, etc.) are found at each entrance to the park.¹

The detailed planning process that began in 2004 has clarified the feasibility of certain park elements and, ultimately, enabled the creation of a park that could be built within the budgeted capital costs and sustained by using a minimal amount of park area for revenue-generating development. The result of this effort is the proposed 2005 Brooklyn Bridge Park plan. That plan and the approvals necessary to implement it form the basis for the proposed project described above and analyzed in this FEIS.

PLANNING CONTEXT

GUIDING PRINCIPLES

As noted above, in 1992 park advocates released 13 guiding principles as a framework for park planning and development. Throughout the conceptual design phase and current master planning process, these principles—along with the goals set forth in the 2002 MOU—have informed the design of the project. The 13 principles include:

1. Comprehensive planning—encompassing the entire waterfront area between the Manhattan Bridge and Atlantic Avenue in a public planning process.
2. Full public participation and full public review throughout the planning, development and management process.
3. Retain and enhance scenic views—preserving street-end view corridors and taking advantage of the sites' broad vistas.
4. Public ownership to plan, develop, operate and manage the site.
5. Maximize dedicated park land and open space for year-round public recreation, both active and passive.
6. Foster public access and uses from Brooklyn and throughout the region while respecting and protecting the character of, and minimizing impacts on, adjacent communities.
7. Developing and providing for enforcement of design and construction guidelines.

¹ The public pool included in the 2000 Illustrative Master Plan has been eliminated because it exceeds the load bearing capacity of the pier locations, as well as the park resources and operation costs. It should be noted that a public pool has been constructed in the new YMCA at the corner of Court Street and Atlantic Avenue, a location that more conveniently serves the local communities.

8. Developing a fiscally prudent plan—encourage certain uses to produce revenues committed to the operation and maintenance of dedicated park and open space areas and contribute to capital development costs. Specialized commercial uses shall be encouraged and residential and office uses shall be discouraged.
9. Foster job development.
10. Foster water-related development.
11. Require a scale and built form that relates closely to the surrounding neighborhoods.
12. Foster the relationship between the site and Downtown Brooklyn, including increased transportation opportunities.
13. Minimize noise and air pollution.

As described above, the proposed project adheres to these 13 guiding principles. However, in undertaking detailed planning for the project, it became clear that a moderate amount of residential use, which is identified in principle 8 as a use to be discouraged, would be an essential element in the success of the park. The inclusion of housing is the most efficient means of making the proposed park financially self-sustaining, as housing produces the most revenue with the smallest building footprint. Furthermore, residential use would bring full-time residents to the park's edge, adding people to the park, bringing eyes on the park, linking the park to the community and thus ameliorating its physical isolation, and providing revenue.

NEW YORK CITY COMPREHENSIVE WATERFRONT PLAN

The *Comprehensive Waterfront Plan*, issued by the New York City Department of City Planning (DCP) in 1992, presents a long-range vision for New York City's waterfront. This plan called for publicly accessible open space to be provided on the project site and recommended that proposals for the Port Authority-owned Piers 1-5 consider the inclusion of housing, mixed uses, recreation, open space, and marina development.

PLAN FOR THE BROOKLYN WATERFRONT

The *Plan for the Brooklyn Waterfront*, issued by DCP in 1994, is a detailed study of Brooklyn's waterfront conducted in conjunction with the *Comprehensive Waterfront Plan*. The *Plan for the Brooklyn Waterfront* recommended the transformation of the project site primarily for public use and activity and the creation of a public waterfront from Washington Street under the Manhattan Bridge to Atlantic Avenue. The plan identified a potential greenway/bikeway route running along the length of the project site's waterfront.

LOCAL WATERFRONT REVITALIZATION PROGRAM

The project site is located within the boundaries of the coastal zone. Pursuant to Federal legislation, New York State and City have adopted policies aimed at protecting resources in the coastal zone. New York City's Waterfront Revitalization Program (WRP) contains 10 major policies, each with several objectives focused on improving public access to the waterfront; reducing damage from flooding and other water-related disasters; protecting water quality, sensitive habitats, such as wetlands, and the aquatic ecosystem; reusing abandoned waterfront structures; and promoting development with appropriate land uses. The New York State Department of State (NYS DOS) or the applicable state agency has this responsibility on the state level. Planning for the park was undertaken in accordance with the coastal policies, as

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demonstrated in Chapter 13, “Waterfront Revitalization Program,” which provides a detailed analysis of the compatibility of the Proposed Action with the 10 WRP policies.

OTHER PUBLIC POLICY INITIATIVES

DCP’s 1993 Greenway Plan for New York City and the 1997 New York City Bicycle Master Plan, developed DCP and the New York City Department of Transportation (NYCDOT), identify greenway and bikeway routes citywide. The plans call for the development of the Brooklyn Waterfront Trail, a multi-use trail and bicycle path extending from Fulton Ferry Pier on the project site south to Red Hook. DCP’s New York City Cycling Map identifies a recommended on-street cycling route on and adjacent to the project site along Furman, Old Fulton, and Dock Streets, and the Fulton Ferry Pier.

E. CONSTRUCTION SCHEDULE

If the proposed project is approved, it is anticipated that the Port Authority will convey Piers 1, 2, 3, and 5 to the State of New York to enable construction to begin by 2007, with completion of the proposed project by 2012. Piers 4 and 6 are already owned by the city.

Once site control is achieved, it is the intention of the BBPDC to develop a program of interim uses for the piers to enliven the site. As park components are completed they would be available for public use. In addition, to the extent feasible, the existing city parks and Empire-Fulton Ferry State Park would remain available for public use as construction proceeds.

The total public construction cost for the proposed park is estimated at \$130 million dollars. As described above, additional private investment is also anticipated. Public funding would be provided by a number of sources, including New York State, New York City, and the Port Authority. Funds to maintain and operate the project are expected to be covered by revenues generated by development in the project area.

F. PUBLIC APPROVAL PROCESS

APPROVALS

Approvals required for the proposed project include:

- Approval of the General Project Plan by BBPDC;
- Adoption of the General Project Plan and SEQRA findings by ESDC pursuant to the UDC Act;
- Authorization to conduct in-water construction activities under Articles 15 and 25 of the Environmental Conservation Law by NYSDEC;
- Coastal zone certification by the New York State Department of State;
- Conveyance of the Empire Stores property by OPRHP to the BBPDC;
- Possible NYSDEC beneficial use permit for the use of dredged material on site;
- Federal permits from the USACOE under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act;
- New York City approval for the closing to vehicular traffic of Joralemon Street at Furman Street;

- Potential disposition of New York City-owned parcels pursuant to the Urban Development Corporation Act; and
- Approval for the disposition of the John Street Site may be required from the New York State Public Service Commission.

ENVIRONMENTAL REVIEW

The EIS for the Brooklyn Bridge Park Project has been prepared pursuant to SEQRA and its implementing regulations. The environmental review provides a means for decision-makers to take a “hard look” at the environmental effects of a proposed project, evaluate reasonable alternatives, and identify (and, to the maximum extent practicable, mitigate) significant adverse environmental effects. The environmental review process is outlined below.

- *Establishing a Lead Agency.* Under SEQRA/CEQR, the “lead agency” is the public entity responsible for conducting environmental review. Usually, the lead agency is also the entity primarily responsible for carrying out, funding, or approving the proposed action. As previously stated, the lead agency for the proposed project is ESDC.
- *Determination of Significance.* The lead agency’s first charge was to determine whether the proposed action might have a significant impact on the environment. To do so, it prepared an Environmental Assessment Form (EAF). The proposed project was the subject of an EAF, which was issued in May 2003. ESDC determined that the project might have a significant effect on the environment—requiring that an EIS be prepared—and issued a Positive Declaration.
- *Scoping.* Once the lead agency issued its Positive Declaration, it then issued a draft scope of work for preparing the EIS. “Scoping,” or creating the scope of work, is the process of focusing the environmental impact analyses on the key issues that are to be studied. A public scoping meeting was held to take comments on the draft scoping document, dated May 23, 2003. The meeting took place on Thursday, June 26, 2003 at Brooklyn Borough Hall, Court Room, Second Floor, 209 Joralemon Street, Brooklyn, New York, 11202. Written comments on the draft Scope of Work were also accepted until the close of business on Monday, July 7, 2003. A final scope of work, reflecting comments made during scoping and other refinements to the proposed project, was issued on June 17, 2005.
- *Draft Environmental Impact Statement (DEIS).* In accordance with the final scope of work, a DEIS is prepared. The lead agency and other involved agencies will review all aspects of the document, calling on other agencies to help, as deemed appropriate. Once the lead agency is satisfied that the DEIS is complete, it issues a Notice of Completion and circulates the DEIS for public review. A DEIS was completed for the proposed project, and a notice of completion for the DEIS was issued on July 26, 2005.
- *Public Review.* Publication of the DEIS and issuance of the Notice of Completion signal the start of the public review period. During this time, the public may review and comment on the DEIS either in writing or at a public hearing convened for the purpose of receiving such comments. The lead agency must publish a notice of the hearing at least 14 days before it takes place and must accept written comments for at least 10 days following the close of the hearing. The public review period must extend for a minimum of 30 days. All substantive comments received at the hearing or during the comment period become part of the SEQRA record and must be summarized and responded to in an FEIS. Public review of the DEIS began on July 25, 2004 with the issuance of the Notice of Completion and publication of the DEIS. A public hearing was held on September 19, 2005 in the Dibner Auditorium at

Polytechnic University, to accept oral comments. The oral comments and written submissions on the DEIS received through November 2, 2005, the close of the public comment period, were considered in the preparation of the FEIS.

- *Final Environmental Impact Statement (FEIS).* The FEIS responds to all substantive comments made on the DEIS, either in a separate chapter or in changes to the body of the text, graphics, and charts. The lead agency has determined that the FEIS is complete and has issued a Notice of Completion and published the document.
- *Findings.* To demonstrate that the responsible public decision-maker has taken a hard look at the environmental consequences of a proposed action, any agency taking a discretionary action regarding a project must adopt a formal set of written findings, reflecting its conclusions about the significant adverse environmental impacts of the proposed action, potential alternatives, and potential mitigation measures. The findings may not be adopted until 10 days after the Notice of Completion has been issued for the FEIS. Once findings are adopted, the lead and involved agencies may take their actions (or take “no action”).

G. FRAMEWORK FOR ANALYSIS

SCOPE OF ENVIRONMENTAL ANALYSIS

As set forth in the Positive Declaration, the lead agency has determined that the proposed project may result in one or more significant adverse environmental impacts and thus requires preparation of an EIS. The EIS has been prepared in accordance with the guidelines set forth in the *CEQR Technical Manual*, which sets forth methodologies and guidelines for environmental impact assessment consistent with SEQRA.

For all technical analyses in the EIS, the assessment includes a description of existing conditions, an assessment of conditions in the future without the proposed project for the year that the proposed project would be completed, and an assessment of conditions for the same year with the completion of the proposed project in the future. Identification and evaluation of impacts of the proposed project are based on the change from the future without the proposed project to the future with the proposed project.

ANALYSIS YEAR

An EIS analyzes the effects of a proposed action on its environmental setting. Since typically a proposed action, if approved, would take place in the future, the action’s environmental setting is not the current environment but the environment as it would exist at project completion, in the future. Therefore, future conditions must be projected. This prediction is made for a particular year, generally known as the “analysis year” or the “Build year,” which is the year when the action would be substantially operational. As previously described, 2012 is the year that the proposed Brooklyn Bridge Park would be completed.

DEFINITION OF STUDY AREAS

For each technical area in which impacts may occur, a study area is defined for analysis. This is the geographic area likely to be affected by the proposed project for a given technical area, or the area in which impacts of that type could occur. Appropriate study areas differ depending on the type of impact being analyzed. Often it is appropriate to use primary and secondary study areas: the primary study area is closest to the project area and therefore is most likely to be affected; the

secondary study area is farther away and receives less detailed analysis. Generally, the primary study area is most likely to be more directly affected by the proposed project, and those effects can be predicted with relative certainty, while the secondary study area could experience indirect effects, such as changes in trends. It is anticipated that the direct principal effects of the proposed project would occur within the project study areas. The methods and study areas for addressing impacts are discussed in the individual technical analysis sections.

DEFINING BASELINE CONDITIONS

EXISTING CONDITIONS

For each technical area being assessed in the EIS, the current conditions must first be described. The assessment of existing conditions establishes a baseline, not against which the project is measured, but from which future conditions can be projected. The prediction of future conditions begins with an assessment of existing conditions because these can be measured and observed. Studies of existing conditions are generally selected for the reasonable worst-case conditions. For example, the times when the greatest number of new vehicular, pedestrian and transit trips to and from a project site would occur are measured for the traffic analysis. The project impacts are then assessed for those same traffic peak periods.

DEFINITION OF FUTURE WITHOUT THE PROPOSED PROJECT

The “future without the proposed project,” or “No Build condition,” describes a baseline condition, which is evaluated and compared to the incremental changes due to the proposed project. The No Build condition is assessed for the same 2012 analysis year as the proposed project.

The No Build condition uses existing conditions as a baseline and adds to it changes known or expected to be in place by 2012. For many technical areas, the No Build condition incorporates known development projects that are likely to be built by the analysis year. This includes development currently under construction or which can be reasonably anticipated due to the current level of planning and public approvals. The No Build analyses for some technical areas, such as traffic, use a background growth factor to account for a general increase expected in the future. Such growth factors may also be used in the absence of known development projects. The No Build analyses must also consider other future changes that will affect the environmental setting. These could include technology changes, such as advances in vehicle pollution control and roadway improvements, and changes to City policies, such as zoning regulations.

The No Build condition in the project area is anticipated to be a general continuation of existing conditions, in which very little takes place on Piers 1 through 6. Although it is likely that the Port Authority would develop or sell its properties (Piers 1, 2, 3, and 5) for subsequent development, it is most conservative to assume no change, because this would create the greatest increment for project impact analysis. Similarly, although it is possible that the vacant building at 360 Furman Street could be reoccupied with a light industrial or warehouse use, or possibly converted to residential use if the property were rezoned, the current vacant condition is assumed in the EIS analyses to assure a conservative assessment of impacts. This approach has been applied to reuse of the Empire Stores, as well. The exception is the National Cold Storage buildings, which are in such poor condition that they are assumed to be demolished in the future without the project.

Changes in conditions in the surrounding area in the future without the project include construction of a number of residential projects and some commercial projects. As described in

Chapter 2, “Land Use, Zoning and Public Policy,” the list of projects proposed, under construction, or recently completed by 2012, is divided into those within the land use study area and those within the area used for assessment of transportation impacts (see Tables 2-2 and 2-3).

IDENTIFYING SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS

Identification of significant adverse environmental impacts is based on the comparison of future conditions without and with the proposed project. In certain technical areas (e.g., traffic, air quality, and noise) this comparison can be quantified and the severity of impact rated in accordance with the *CEQR Technical Manual*. In other technical areas, (e.g., neighborhood character) the analysis is more qualitative. The methodology for each technical analysis is presented at the start of each technical chapter.

MITIGATION

Mitigation measures for all significant adverse impacts identified in this DEIS are described in Chapter 19, “Mitigation.” SEQRA requires that any significant adverse impacts identified in the EIS be minimized or avoided to the fullest extent practicable, given costs and other factors. In the DEIS, options for mitigation can be presented for public review and discussion, without the lead agency having selected one for implementation. Where no mitigation is available, the EIS must disclose the potential for unmitigated significant adverse impacts.

ALTERNATIVES

Chapter 20, “Alternatives,” assesses a range of alternatives to the proposed project. SEQRA requires that a description and evaluation of the range of reasonable alternatives to the action be included in an EIS at a level of detail sufficient to allow a comparative assessment of the alternatives to a proposed action. Alternatives and the rationale behind their selection are important in the disclosure of environmental effects of a proposed action. Alternatives provide options to the proposed action and a framework for comparison of potential impacts and project objectives. If the environmental assessment and consideration of alternatives identify a feasible alternative that eliminates or minimizes significant adverse impacts, the lead agency may want to consider adopting that alternative as the proposed action. SEQRA also requires consideration of a “no action alternative” that evaluates environmental conditions that are likely to occur in the future without the proposed action. *