VIII. IMPLEMENTATION

The Governors Island Park and Public Space Master Plan represents the important first step in the multi-phase, mixed-use development strategy for the entire Island. The design and implementation of the Island's park and public spaces must be considered in the context of Island redevelopment.

The West 8 Team developed design concepts in parallel with a park and public space implementation plan. The team has tested the design against specific Island site conditions and the construction budget. They prepared a budget estimate and modified the design wherever necessary. They drafted a park phasing strategy that is flexible enough to address various funding and timing factors. The team has also developed a preliminary park operations and maintenance plan and budget with visitation projections to ensure that the design is cost effective not only to build but also to maintain.

IN THE CONTEXT OF ISLAND REDEVELOPMENT

OVERVIEW

Islands are special development sites; they present unusual opportunities for designers and unusual challenges to implementation. This is particularly true for an island like Governors Island which is currently accessible only by boat. The Governors Island Park and Public Space Master Plan capitalizes on the inherent qualities of this magical place, including its location, its natural beauty, and of course, the fundamental fact that this is an island. This same fundamental fact is at the core of understanding many aspects of the implementation of this plan.

The implementation of this plan depends largely on a single key understanding: islands are closed systems. Every design, construction, and maintenance decision impacts everything else, and therefore every decision must be coordinated, and solutions must be holistic.

The existing Island, future management, and future implementation of this Park and Public Space Master Plan are all integrally linked and cannot realistically be considered apart from one another.

This understanding has important implications for this plan:

- Park and public space construction must be coordinated with other investments in the Island. In addition to investments in open space, Island redevelopment depends on investments in its long-disused infrastructure. In the self-contained system of the Island, efficiency demands that some of these investments be made simultaneously. For example, some of the Island's utilities run beneath areas of the southern portion of the Island that will be excavated during the implementation of the Park and Public Space Master Plan. While these utilities are not required for the park and public spaces, they are necessary for future tenancies, and the work should be done simultaneously, or else areas will need to dug up and replaced at a later date.

- The operations and maintenance of the park and public space will be managed and funded in conjunction with the Island's overall operations development and public access.

  Given the Island's physical separation from the rest of the City, the delivery of all services requires accommodation to the limitations of access, the Island operating authority's relationship to public utilities and the site conditions. This is true for services and utilities for both the public spaces and tenant-occupied buildings.

  Just as the visitor to the Island should not experience a physical barrier between the federal property of the National Monument and the 150 acres owned by GIPEC, or between the National Historic District and the rejuvenated southern portion of the Island, nor will there be physical delineation between services provided for public space and mixed-use tenancies. Island staff will be responsible for all operations needed to support all the Island uses.

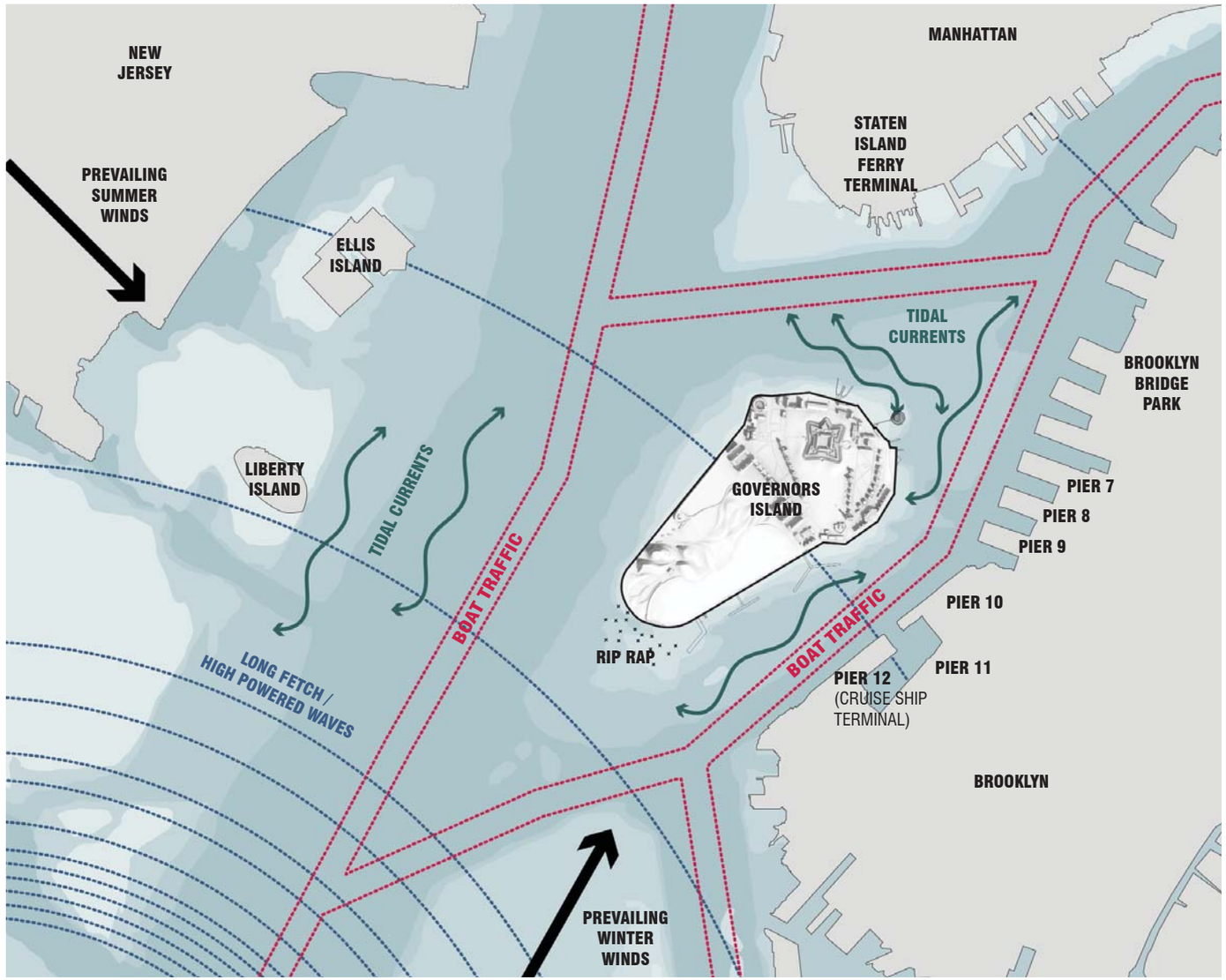
- Sustainable investments will pay back in a number of unusual ways. As a self-contained utility system, the Island has single points of access to the power, sewer, and water systems of the City as a whole. More importantly, new connections would require huge investments in new below-water conduits. As a result, any investments in storm water mitigation, reduced energy needs, or other aspects that maximize existing systems and obviate the need for investments off-Island are doubly valuable as they serve both public space and tenancies.

- Island-wide public access and views are also implicit. In the Island's Historic District, home to more than 50 vacant buildings, it is easy to imagine a mix of tenants in the existing structures with continued public access and use of the beautiful landscapes and paths in the District. Appropriate levels of privacy would be retained within the buildings themselves (depending on use).

  On the southern portion of the Island, where 33 acres are reserved for new building and development, neither the new uses nor structures are currently known. There will be view and public access corridors through these zones both of which front the Great Promenade which is fully accessible to the public.

  While the Park and Public Space Master Plan does not address the design of the structures or spaces within those development zones, it does articulate a shared edge between those zones and the public space. GIPEC has expressed its commitment to integration of those zones in the overall existing "campus-like" setting of the Island.

Governors Island in 2004, prior to the first phase of demolition.



MARINE AND HARBOR CONDITIONS

LEGEND

- *FETCH*
- *BOAT TRAFFIC*
- *CURRENTS*
- *WATER DEPTH: EL. 0.0'*
- *WATER DEPTH: EL. -60.0'*

north *0'* *250' 500'* *1000'* *0.5 MILES*

SITE CONDITIONS

The design for the park and public space takes into account myriad conditions of the Island itself. The Master Plan does not inventory all the work and studies performed to document and understand all the site conditions that are factored into the design. Four key conditions are described more fully here:

MARINE CONDITIONS AND SEA WALL

Governors Island is situated in the Upper New York Bay, at the confluence of the East and Hudson Rivers. The strategic location of the original island was underscored in the early 19th century when three forts were constructed there as part of a harbor-wide system of fortification. In the early 20th century, when the Island was doubled in size with landfill, a masonry seawall around the entire Island was constructed with the addition of rip rap at the southern tip to protect the Island and prevent erosion. The sea wall is carefully monitored and maintained to preserve its integrity.

Given the Island's unique location in the Harbor, its 2.2 miles of edge and the expansive horizons of water and sky, the park and public space brief charged the design team to explore connections to the harbor and to water as part of the park experience. More specifically, the team was asked to investigate the opportunities for get-downs, soft edges, and tidal wetlands within the context of the total acreage for the park and public spaces site, the construction budget and the objective of creating a destination with a broad mix of activities and users. The team was also asked to incorporate the sense of arrival, to design specific arrival areas and to include existing kayak facilities and boat moorage at Yankee Pier. The Park and Public Space Master Plan does not incorporate such dedicated maritime facilities as marinas.

The marine engineering analysis performed by the design team, including the engineering firm ARUP, documented extremely strong currents around the Island, the existence of cross-currents, a rapid drop-off of water depths, and significant wave action, particularly from long fetches to the south and west. Fetches are defined as the distance traveled by waves with no obstruction. The existing seawall and rip rap serve as wave attenuators but the rip rap shelf is quite uneven and descends quickly into deep, dangerous waters. Additionally the Island is surrounded by substantial shipping and transportation routes both in the Harbor and the Buttermilk Channel. These marine conditions all contribute to very dangerous conditions for direct water access around much of the Island.

The team also did considerable analysis of rising sea levels that are likely to accentuate existing marine conditions and increase the need for protective infrastructure. The plan illustrates the impact of these levels. The topographic and planting strategies for the park spaces on the southern island reflect this analysis.

The team explored the possibility of creating get-downs or breaks in the sea wall, either to create some form of tidal habitat or allow visitors to get down to the water's edge. It became clear that either of these strategies would require the construction of extensive new structures in the open water to both protect visitors and the land itself. Breaking through the seawall would involve complex and costly engineering solutions that would then be subject to ongoing issues of erosion and scouring, accretion, shore protection, and dredging. Given the costs, construction and permitting requirements for such structures, and the actual marine conditions documented surrounding the Island in all directions, it was not even clear that these strategies would be effective in preserving visitor safety let alone creating a desirable visitor experience. Thus, these strategies were not pursued.

The park and public spaces offer unique 360^{o} degree views of the Harbor, both from the Great Promenade and the Hills. The Wetland Gardens draw upon brackish groundwater and promote a varied habitat. The views, promenade railing, art and play experiences all accentuate the experience of the Harbor, weather and water. Kayaks, ferries and water taxis and historic and educational vessels transport visitors to the Island. It is hoped that the Island will continue to be home to an expanding number of programs that enrich visitors' understanding of the Harbor.

SOUTHERN ISLAND LANDFILL

When the original geologic Island was extended southward 103 acres between 1901-1912, the construction met the purely functional needs of the military and the actual fill available at that time. Behind a new seawall, engineers created a flat, uniform landscape with a minimal elevation to maximize space and function. The material that was imported only needed to support the roads and buildings that would be built. And at that time, engineers did not envision a future where sea levels would rise by two feet or more due to climate change. Therefore, the southern portion of the Island was delivered at an elevation several feet lower than the elevations along the seawall of the Historic District.

The southern portion of the Island needs substantial quantitative and qualitative enhancement to support its transformation into parkland. Fill materials need to be imported to supplement debris from on-Island demolition to create a topography that delivers varied experiences and views for visitors and provides appropriate elevations above seawater flooding for decades of tree growth. Quality top soils also need to be brought in to support healthy plant growth.

HILLS PRE-LOADING

At the start of the 20th century, land reclamation construction technology involved depositing millions of cubic yards of fill material to form new usable land in what was formerly open water. Under the site on the southern part of the Island, this technique trapped underlying layers of marine silt and clay. These layers are compressible and susceptible to settlement due to increases in stress. Due to the weight of new material, any significant new construction here would cause these increases in soil stresses. Therefore, settlement effects must be analyzed across the entire area where re-grading will occur. In particular, the team must engineer the structural stability of the Hills due to their large loads. Building the Hills and the topography requires a "pre-loading" construction phase where weight from fill is loaded onto these areas so that the earth beneath the Hills stabilizes and drains out trapped water over time. This pre-loading phase is approximately 18 months and has been accounted for in the phasing plan.

BIRD AND ANIMAL HABITAT

There are no remnants of the original Island's native plant communities, and consequently, the current habitats for wildlife are very limited.

Governors Island is within the Atlantic Flyway and is a resting place for migratory birds. The plan increases the acreage and diversity of planted habitat available to birds. Migrating songbirds are heard across the Island in the spring and fall, and waterfowl like buffleheads, greater scaup and red-breasted mergansers spend the winter in the waters just over the seawall. However, Canada geese, and to a lesser extent, brant geese, are the dominant species in the fall and winter. The Island's current mammalian population is limited to small mammals, such as field mice, rats, squirrels and several species of bats.

The Island's current plant condition is dramatically simplified from its origins as "Nut Island." The vegetative cover consists primarily of lawn, ornamentals, shade trees and species common to landscaping. The southern half of the Island retains considerable acreage of asphalt, as well as lawn and trees.

The Park and Public Space Master Plan expands the planting palette to support visitation by a broader range of migratory birds and the insects upon which they feed. However, because Governors Island is surrounded by water, it is unlikely that the newly expanded habitat species will attract a more diverse mammal population unless those mammals are specifically introduced.

The Island in the early 20th century, shortly after the southern portion of the Island was created.

BUDGET SUMMARY

DETERMINING THE PARK BUDGET

In 2006, GIPEC presented a multi-pronged strategy for the redevelopment of Governors Island to city and state officials, community members and civic groups. This strategy clearly articulated that expanded public use and the creation of world-class park and public spaces are the first phases in a multi-phase mixed-use development strategy. In 2006, GIPEC also presented more specific goals for the park and public spaces that went beyond the requirements in the 2003 federal deed of transfer. The deed had stipulated public access and creation of a new park on the southern half of the Island, maintenance of the landscape and buildings in the National Historic District and repair to the existing perimeter road.

Governors Island is separated by water from existing communities in New York City. Therefore, the park and public space must be a destination, specifically justifying the journey. The Master Plan design needs to establish high standards for design. And, most importantly, the design needs to transform and integrate an Island currently divided in two — the unique Historic District and a desolate flat landfill — and create a set of public spaces alluring not only to public visitors but also to organizations and enterprises considering tenancies on the Island.

Given these goals for the park and public spaces, GIPEC conducted rigorous analyses to determine an appropriate construction or "hard cost" budget for the 87 acres that total the public open spaces on the Island. GIPEC decided to establish the budget at the outset, even prior to the competition to select the design team. GIPEC analyzed examples of other comparable public parks — large urban parks, waterfront parks, and destination parks — looking at their construction costs and the facilities and amenities they provided. GIPEC examined precedents both in the New York metropolitan area and further afield and adjusted costs for comparison with New York City construction costs.

In these precedent examples, actual costs were researched for paving and railings at waterfront esplanades, various ground surfaces, restoration of historic landscapes, public art, event and festival spaces, special features, visitor support, and maintenance and operations facilities. Upland costs were compared to waterfront costs. These actual costs were compared to the acreage of the site, the site conditions, and the requirements for the Island's public spaces. GIPEC also consulted with parks professionals, cost-estimators, policy makers, and park operations and maintenance experts to determine and validate an appropriate budget number.

With this research on comparables, GIPEC established the $200 million construction budget.

This budget addresses the ambitious goals for the transformation of the Island but is in line with other public spaces in the New York region both in terms of construction and operations and maintenance costs. GIPEC also calculated appropriate "soft costs" including fees necessary for design and environmental review, costs for infrastructure work on the park site necessary for whole-Island development and other appropriate costs for a large-scale construction project to be completed over several years.

COST CONTROLS THROUGHOUT THE DESIGN PROCESS

The budget established for park and public space construction has been a critical consideration throughout the design process. A clear budget is important for establishing reasonable parameters for the design and for framing very difficult decisions about priorities, and goals. In 2007, when GIPEC conducted an international competition and selected five finalist teams the criteria to evaluate the teams included adherence to the stated $200 million budget. GIPEC relied on cost estimators to validate that the winning concept submitted by the West 8 Team fit within the budget parameters.

For the park and public space design phases, GIPEC established a rigorous process for tracking and controlling cost. GIPEC requires the team to design within the fixed budget at each design phase. During the master planning phase, GIPEC and the West 8 Team tracked construction costs by working with two independent cost estimating teams, one from Turner Construction and one from Faithful + Gould.

These cost estimates were performed using the master plan level of information currently available: engineers' and landscape architects' sketches, qualitative descriptions, drawings, and estimated quantities and allowances. When estimated costs turned out to be too high, the design team modified some of the concepts to stay within the budget. Specific changes included reduction in the acreage devoted to perennial flowers at Liggett Terrace, use of asphalt paving as well as mosaic paving on the Great Promenade and careful research into the construction techniques and design of the Hills.

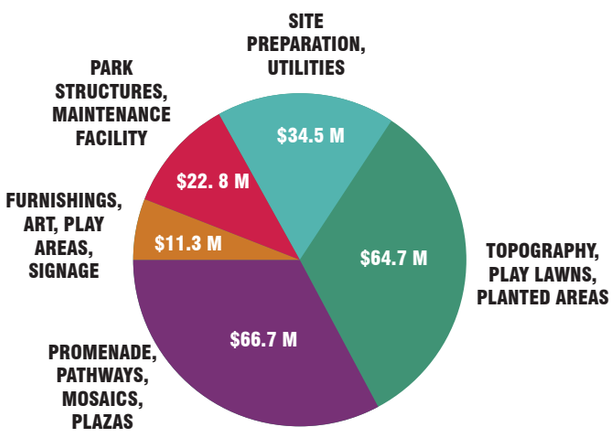
Later design phases include preparation of schematic design, design development, and construction documents. As the design progresses through these phases, cost estimating will be based on drawings and unit or volume quantity calculations that become more and more

Construction of parks and public spaces requires significant investments.

precise. The estimates will continue to be tested against the budget, and design decisions will be made to stay on-budget. This process will help GIPEC and the West 8 Team keep on-going control of costs.

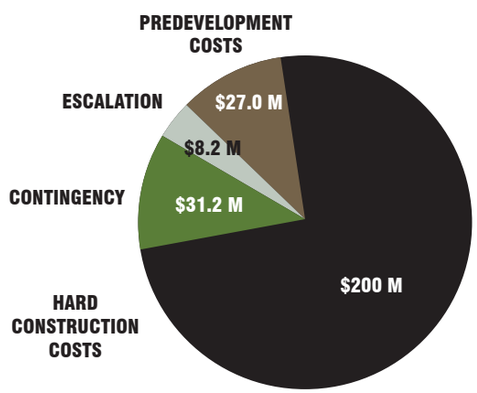
TOTAL PARK COSTS

Total park and public space costs include construction (or "hard costs") of $200 million (2009 dollars). These hard costs, standard for any large-scale project, include direct costs and payments to subcontractors; construction contingency; design contingency; general conditions, overhead and profit; and costs associated with mobilization and access.



Park and Public Space Construction Cost: $200 million (2009 Dollars)

Total park and public space costs are estimated at $270 million (2009 dollars) including the hard costs detailed in the chart at left and $70 million in escalation and the so-called "soft costs" that are standard for a large-scale project. These include pre-development costs (design and engineering fees and environmental review costs), testing and permitting fees, construction management preconstruction services, and the owner's contingency.



Total Park and Public Space Cost: $270 million (2009 Dollars)

It will take several years to complete the design, conduct the appropriate environmental and any necessary regulatory reviews, and construct the park and public spaces, taking into account weather and the necessary pre-loading of the Hills as detailed in the phasing section of the Master Plan. However, the budget presumes that while the work proceeds in necessary phases over time, there is a clear, multi-year financial commitment to the project at the outset. Such a commitment insures the most cost-effective management of the project and controls escalation.

ASSOCIATED COSTS

GIPEC is responsible for the maintenance and creation of all Island infrastructure necessary to support public uses and future tenancy. Such infrastructure investment is an ongoing commitment to address historic stabilization, seawall and maritime infrastructure, demolition, and utilities. These capital projects are phased according to the availability of resources, identifiable needs and the logic of sequencing. Creation of the park and public space is the first phase of a multi-phase development strategy. In parallel with this phase is continued investment in Island infrastructure.

Given the physical layout of the Island, there are a number of specific capital projects addressing utility work, the seawall, and roads and sidewalks that must be executed prior to, or concurrent with the construction of the park, Great Promenade and public spaces. These projects are required for overall Island needs and are not strictly related to park and public space uses. For example, a utility line serving new tenants in the southern development zone should be repaired prior to the paving of the Great Promenade and not afterwards.

These associated capital projects total approximately $70 million (hard and soft costs in 2009 dollars).

ESCALATION AND THE TIMING OF FUNDING

While the park and public spaces require several years for design, review and construction, the budget presumes an up- front commitment of funds to construct these spaces in the logical sequence determined by the design and construction teams working in concert with GIPEC. This sequence would take advantage of economies of scale and limit mobilization and demobilization costs. However, if commitments are made over time only for discrete features or budget amounts, additional costs are incurred, reducing the cost-effective use of resources. With each phase separated out by time and uncertainty, escalation costs would be compounded and costs for demobilization and remobilization incurred. Such costs and trade-offs are typical of many public works projects and are not unique to the Island or the nature of the public space envisioned.

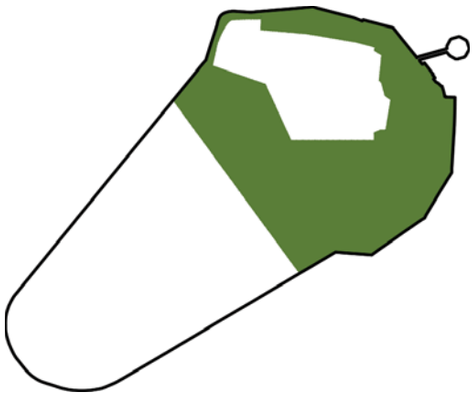
Due to the effects of escalation, such funding scenarios which take place over a longer period of time dictate that the total cost of the project increases. Alternatively, if the total budget remains fixed but funding decisions are made over many years, the initial budget would be inadequate for all the features described in the Master Plan.

Given uncertainties of public funding and timing, GIPEC will need to continually re-evaluate budget, costs and features when decisions are made to proceed with design, environmental review, and construction.

PUBLIC INVESTMENT AND THE STRATEGIC REDEVELOPMENT OF GOVERNORS ISLAND

Investment in the park and public space over time is part of the overall redevelopment strategy and capital program for Governors Island. The public sector, through GIPEC, has made significant investments to enable public access, stabilize and preserve publicly owned assets (infrastructure and historic buildings), and catalyze private investment in the Island's future. A key part of the strategy to prepare the Island for greater public use and to attract private investment is the funding and creation of this world-class destination park and public space. The full scope of capital needs to support the redevelopment strategy, apart from the projects necessary prior to park and public space construction detailed above, is not discussed in this plan.

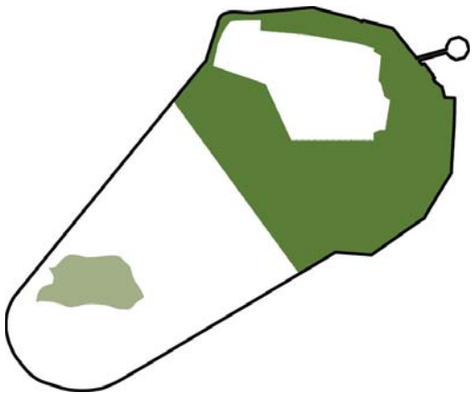
On-going operations and maintenance costs for the park and public space, in the context of the Island's overall visitation, access and operation responsibilities are discussed in the Park Operations and Maintenance Summary.



PHASE 1:
COMPLETE PARK & PUBLIC SPACE NORTH OF DIVISION ROAD

Phase 1 builds on the public's current enjoyment of the Island's open spaces and historic assets to establish a strong foundation for future growth. This phase addresses the rejuvenation of the historic landscapes and completion of the northern half of the Great Promenade.

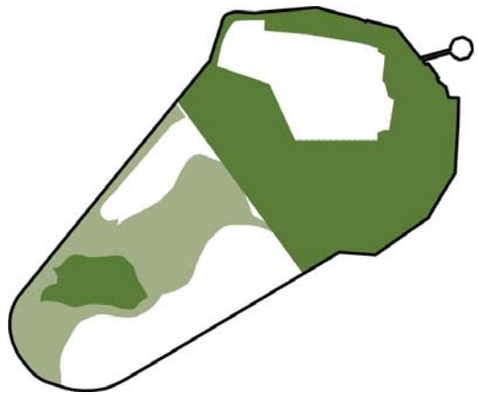
Liggett Terrace, Soissons and Yankee Landings are completed.



PHASE 2A:
HILLS PRELOADING AND UTILITY DIVERSIONS

The topographical transformation of the Island begins through initial utility re-routing and the preloading of the Hills area. Since the southern part of the Island is landfill, the volume and mass of fill that is the core of the Hills needs to settle for a period of approximately 18 months.

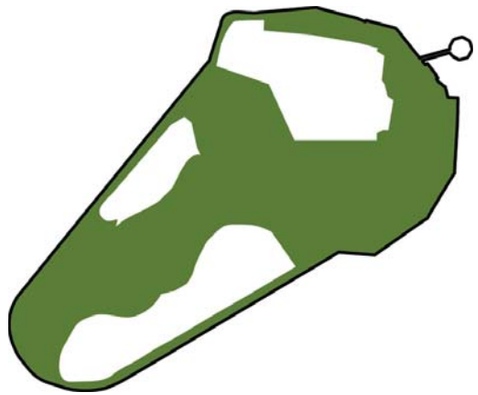
Since the Hills are integral to all of the topographical change on the southern park site, no other work can proceed on the southern portion of the Island until Phase 2A is complete.



PHASE 2B :
FINISH HILLS, GRADING, UTILITIES AT LAWN & GROVE AREAS

The Hills are graded, paved and planted and the remaining grading and utility work on the southern park and public spaces site is completed.

At the end of this phase, which takes approximately 18 months, the public can enjoy the 360° Harbor panorama from the top of the Hills.



PHASE 3:
COMPLETE PARK & PUBLIC SPACE SOUTH OF DIVISION ROAD

Phase 3 completes the entire southern half of the park and public spaces, including bicycling and pedestrian paths, trees and other planting and the construction of the Shell. This phase delivers the Hammock Grove, the Play Lawn, the Wetland Gardens, the South Prow, Liberty Terrace, and the southern Great Promenade.

The Island's park and public spaces are complete.

PHASING LEGEND

IN PROGRESS

COMPLETED AT END OF PHASE

PARK AND PUBLIC SPACE PHASING

The physical transformation of Governors Island will happen over multiple years, in phases. The primary rationale behind the park and public space phasing is to build upon the Island's current success and existing assets as the foundation of future growth. The size and configuration of the large, non-linear site, as well as the specifics of the design and existing site conditions, also exert influence on timing and sequencing of the phases. In addition, significant capital investment from the public sector is needed, and the timing and magnitude of commitments for capital funds will affect phasing decisions.

The objectives underlying this preliminary phasing plan are:

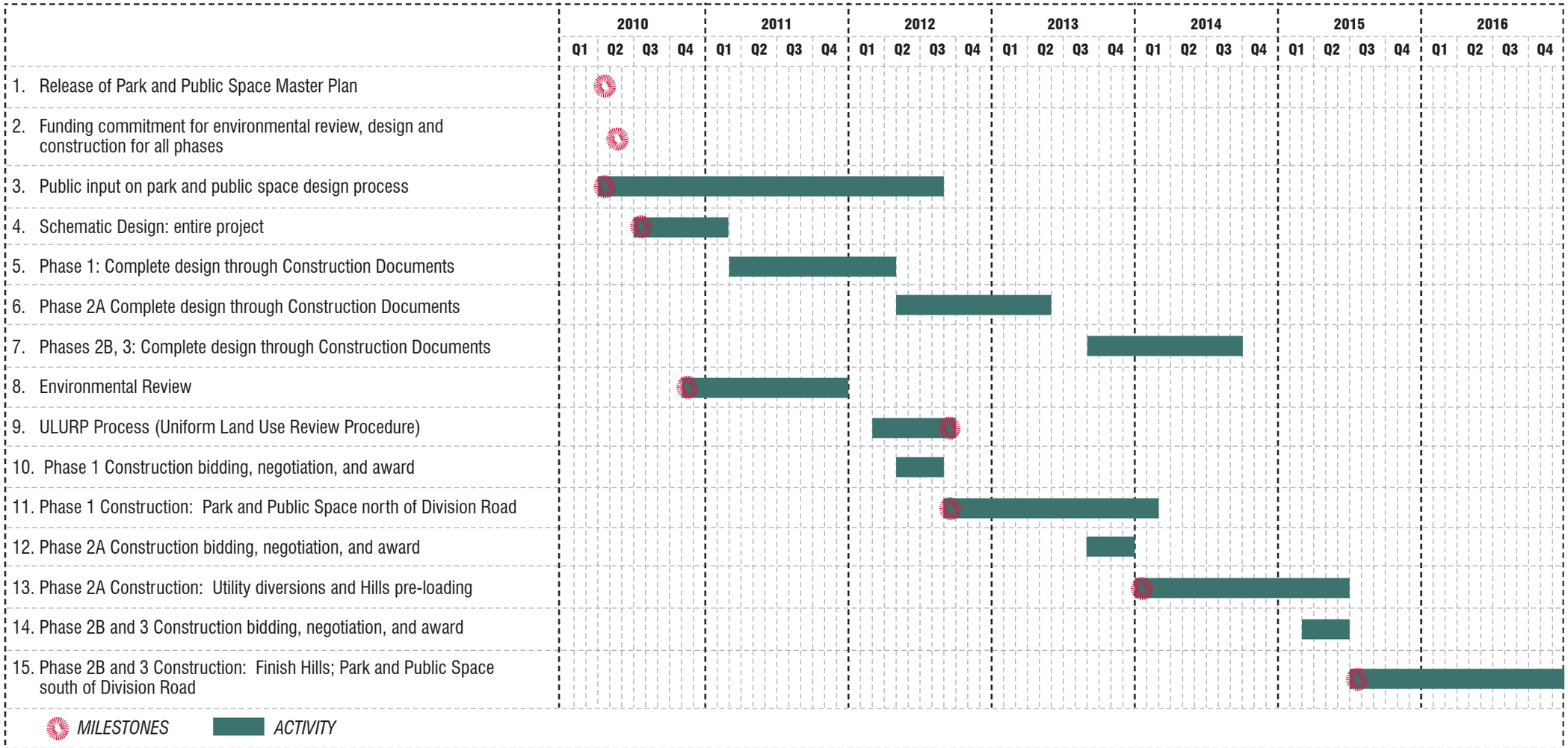
- To maximize cost effectiveness
- To create feasible phases of construction that deliver public benefits with each stage
- To enable on-going operations of the Island, including new tenancies
- To guarantee continued public access and programs during construction stages
- To provide a flexible approach that works with various funding scenarios
- To support and catalyze GIPEC's mixed-use Island redevelopment plan

With these primary objectives in mind, the preliminary phasing plan defines three geographic phases of construction: Phase 1, Phases 2A and 2B, and Phase 3 (see diagrams opposite). Phase 1 establishes the gateways to Governors Island at Soissons and Yankee Landings and completes Liggett Terrace, the northern half of the Great Promenade and the rejuvenation of the Historic District landscapes. Phase 2A includes pre-loading of the Hills area and begins utility work on the southern Island. Phase 2B includes grading and utilities at the Play Lawn and Hammock Grove areas and completes the Hills. The entire southern half of the park, public spaces and Great Promenade is finished in Phase 3.

GIPEC seeks to maximize the impact of each dollar spent.

As further design phases occur (schematic design through preparation of construction documents) and funding decisions are made, GIPEC and the design team will be updating the phasing plan. They will continue a rigorous process of testing costs and feasibility. Dividing the project into too many small segments would incur prohibitive costs from inefficiencies, lost economies of scale and the demobilization and remobilization of subcontractors. Defining geographic areas for phasing is challenging because the Island is not a linear site like more conventional waterfront esplanades and parks. As the phasing plan is refined, GIPEC will seek to maintain economies of scale and efficient scheduling of construction trades.

TIMELINE FOR DESIGN, ENVIRONMENTAL REVIEW, AND CONSTRUCTION OF GOVERNORS ISLAND PARK AND PUBLIC SPACES



Assumes funding commitments made at one time, upfront. Capital budgets coordinated with the construction timeframe.

The phasing plan includes both a geographic delineation of phases and a potential timeline for their design and construction.

As detailed in the timeline (see diagram opposite) GIPEC invites public input on the design which continues for some time.

The next design phases include schematic design, design development, and preparation of construction documents. Design occurs in parallel with environmental review, which must be completed prior to the beginning of any construction.

Phase 1 construction for the northern half of the Island is estimated to last eighteen months. Construction of Phase 2A (pre-loading of the Hills) is estimated to take eighteen months and is necessary before the construction of any other southern Island parkland. In terms of logical construction sequencing, the work for Phases 2B and 3 then follows Phase 2A, and this progression is indicated in the timeline. Construction for Phases 2B and 3 are each estimated to take 18 months, and they can occur simultaneously or independently.

The overall timeline for design and full construction of the park and public spaces could be seven years.

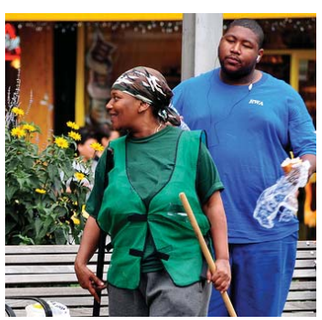
This timeline assumes that:

- funding commitments for design, environmental review, and construction are made at one time, up-front
- capital budgets are coordinated with the construction timeframe
- construction of Phases 2B and 3 occur simultaneously

The overall timeline for the park and public spaces would be protracted if, rather than the up-front funding scenario described above, funding commitments are made for each phase, over time. If each construction phase were subject to an annual capital budget appropriation to designate capital funds for that phase, this would introduce a level of uncertainty and inefficiencies to the design and construction schedule that would result in a longer extension of the timeline.

Phase 1 would still be the logical first or early phase. However, periodic funding commitments would necessitate the staggering of the design of Phases 2A, 2B, and 3 and also of the construction of those phases. The project timeline would then be considerably longer than six and a half years and would compound escalation costs.

With the longer timeline, due to escalation, either the total cost of the project increases, or, alternatively, if the total budget remains fixed, the initial budget would be inadequate for all the features described in the master plan, necessitating trade-offs. GIPEC will update the phasing diagrams and timeline as necessary as the project progresses.



OPERATIONS AND MAINTENANCE

INTRODUCTION

Operations and maintenance are critical to the success of any park or public space. The initial design has a significant impact on the ease and cost of keeping the spaces clean and in good repair. GIPEC and the design team developed cost estimates for annual operations and maintenance as well as construction. The estimates, prepared by ETM Associates, a nationally recognized expert in park operations, were compared with current budgets for a range of existing parks and public spaces and based on the actual design articulated in the master plan. In some cases, designs were modified specifically to address concerns about operating expenses.

ISLAND-WIDE OPERATIONS AND MAINTENANCE

The analysis described here focuses exclusively on the Island's park and public spaces. GIPEC expects to include the operations costs in its overall operating budget that, over time, will be funded by payments from Island tenants as well as public appropriations.

As the authority that owns 150 acres of the Island's 172 acres, GIPEC is responsible for such Island wide operations as: ferry transportation, public safety, utilities and waste management. The scale of these tasks will change over time as the Island development proceeds, but they are the core tasks necessary for any level of operation. The analysis here assumes that these tasks are provided for in a separate Island-wide operating budget that will be scaled, as development proceeds in phases, according to public space and tenant needs, available resources and sources of revenue.

It is assumed that GIPEC will continue to operate a free public ferry to serve park users and Island visitors with a schedule and service appropriate to visitation levels for the Island's public space and buildings. GIPEC also expects to operate whatever vehicle ferry is required for service, construction and emergency vehicles. Private ferry and water taxi operators may service particular Harbor locations, Island tenants and events. GIPEC is also responsible for public safety both on the Island and in any passenger waiting room(s) or vehicle queues. These costs would be reflected in an overall GIPEC budget, as they are currently. Specific personnel to oversee safety in public spaces are included in the park and public space budget. GIPEC is also responsible for the delivery of all utilities and maintenance of utility infrastructure on the Island for both the public spaces and tenants and is responsible for certain administrative functions.

VISITATION

The park and public spaces on Governors Island will serve all Island visitors including:

- Park and public space users
- Visitors to the Governors Island National Monument
- Tenants in the Historic District and southern development zones, including their staff, visitors and guests

Development of the Island is expected to proceed over a number of years and phases. The timing of these phases will affect visitation projections.

Operations and maintenance of parks and public spaces involve many tasks.

Visitation by park users was estimated based on data from other urban parks and visitation patterns for Governors Island since 2005. It was challenging to find comparable destination urban parks. Most parks do not have very rigorous methodologies for quantifying visits and distinguishing visits from unique visitors and types of use. National Parks such as Alcatraz Island and Liberty and Ellis Islands serve tourists rather than city residents while other parks are set within communities and do not require a journey for most of their users. Toronto Island Park in Toronto, Canada is a useful analogue to Governors Island and its visitor data was studied. While Governors Island visitation has doubled each year for the last three years, the Island has only been open to the public for a few years, has limited facilities and programs and is open only seasonally and only a few days a week.

GIPEC and the design team estimate that the new Island park and public spaces will attract approximately 1.3 million visits per year from people coming solely for use of these spaces. This estimate takes into account the typical seasonality of park use, the projected seasonality for this location and the specific features of the design. It assumes that the Island, like other public spaces, is open 365 days per year and is accessible through evening hours. This projection includes estimates of numbers of park visitors attending special events, recreation by permit (such as sports field use) and general park and public space users.

The park and public space will also be used by Island tenants, including their staff and visitors. New York Harbor School students will walk through the Historic District to school each day, may play sports on the fields, observe plants in the Wetland Gardens, and use the docks and piers. Other tenants will have different uses of the public space and park. Potential tenancies in the existing buildings and development zones include education and dormitories, hospitality and conference, office and "think tanks," and mixed cultural uses and attractions. It would be premature to more precisely quantify the number of hours tenants would spend in the public spaces. For purposes of estimating visitation and operations and maintenance needs, GIPEC analyzed the potential space available on the Island and permitted mix of uses. Counting each individual tenant staff or visitor using the public space only once per day, GIPEC estimated an additional 2.8 to 4 million annual visits to the park and public space. Once the Island's development has advanced to later phases, total tenant-related visitation will depend on total development, total development type, and uses, etc.

Thus, the visitation from park and public space visitors and Island tenants is expected to build to 4.1 to 5.3 million annual visits.

MAINTAINING THE PARK AND PUBLIC SPACES

The analysis identifies and budgets for management practices necessary to preserve and protect the capital investment, sustain high and consistent Island-wide standards of maintenance, and serve the needs of visitors and Island tenants. The coordination of the operations and maintenance plan with the evolving design will ensure that the design includes sufficient space for maintenance facilities and functions such as equipment yards and storage sheds. This analysis includes the estimated cost of annual operations and maintenance, as well as costs for attic stock (on-hand replacement stock) and an annual capital replacement reserve.

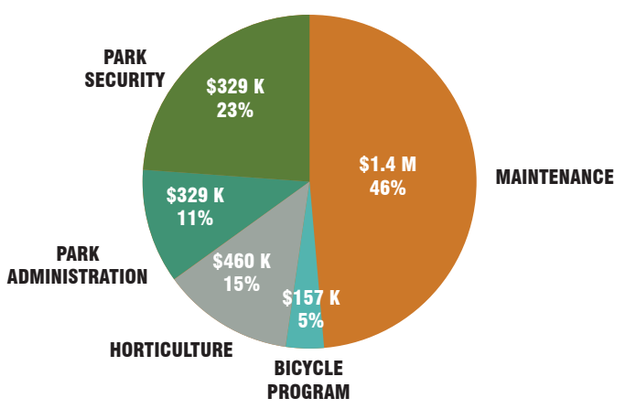
In developing a preliminary maintenance and operations budget, the West 8 Team was careful to account for standard maintenance procedures (cleaning, snow and trash removal, grounds maintenance, etc.), as well as any special requirements related to Governors Island's marine setting and aspects of the park and public space design. For example, the West 8 Team will be careful to select plant and furnishing materials that are able to withstand exposure to the Island's marine environment. Similarly, the design of the multipurpose fields and lawns will take into account use for both team sports and large festivals.

The preliminary maintenance and operations plan includes recommendations for the maintenance of distinctive elements, such as public art, play areas, water features, and Liggett Terrace flower beds.

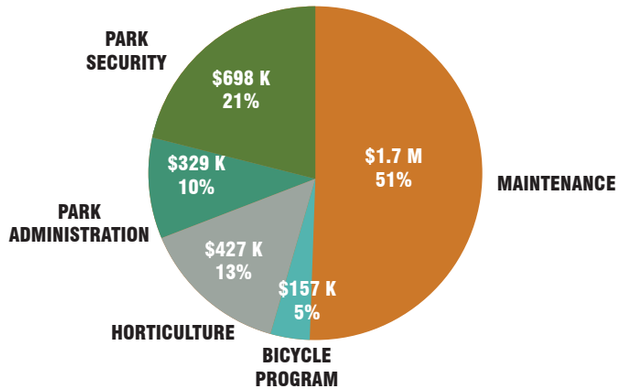
The free bicycle program is a signature of the park experience. To find the most cost-efficient and user-friendly way to run this program, the team researched free bicycle programs. The low-tech "white bicycle" program of Hoge Veluwe Park in the Netherlands is considered the most successful and is most similar to GIPEC's vision. The operation of the free bicycle program is included in the budget. The park construction budget provides for the initial number of bicycles needed although design of the bicycles will be determined in later phases.

PARK OPERATIONS AND MAINTENANCE BUDGET

The estimated annual operations and maintenance budgets for the park and public space are $3,060,000 for the opening years (Years 1-3) and $3,365,000 for "stabilized years" (Year 4 and onwards). These figures are in-line with the operations and maintenance costs for other comparable large, urban, waterfront parks. The budget includes park administration and maintenance; horticulture and security staff; equipment, supplies, and overhead; and the free bicycle program. The cost of maintaining and operating the park is expected to be slightly less in Years 1-3 because fewer staff are needed when visitorship is still growing and the landscape is young. The budgets assume a core of permanent staff supported by both seasonal workers and service contracts for specialized, periodic or occasional work such as arborist services. This balance of permanent and seasonal staff is similar to best practices at other public spaces.



Budget breakdown (Years 1-3)
Total: $3,060,000



Budget breakdown (stabilized year)
Total: $3,365,000

Three different kinds of replacement costs are considered for ongoing maintenance and repair: "attic stock," annual maintenance replacement costs, and annual capital replacement costs. Some elements that would be difficult or costly to order in small quantities, such as bicycles and railing segments, should be purchased when the project is first built and stockpiled for use as needed (attic stock). Attic stock costs are included in the construction cost estimate. Annual maintenance replacement costs include items that need to be regularly replaced due to wear and tear, such as plants, bench slats, gravel pathway material, ball field clay, etc. Costs for these items will be included in the annual operating budget as a maintenance expense.

Capital replacement costs are associated with the replacement or repair of park and public space features, such as play equipment, pavement, etc. Most of these costs should be minimal initially, since the park and public spaces will be newly constructed, but they will increase over time as features wear out and need capital repair or replacement. Typically, capital replacement funds are budgeted annually and costs are determined as a percentage of the construction budget. The team's operations and maintenance experts recommend a target of 1% of the park construction budget or $2,000,000 annually by Years 7-10. Because capital replacement costs are minimal in the first several years after opening, the capital replacement budget in Year 1 would be $500,000 and increase gradually to the 1% target by Year 7. All costs are 2009 dollars. These capital replacement costs will be included in the Island-wide capital budget. It should be noted that operations and maintenance costs for the seawall, marine infrastructure and docks on the Island, and any off-Island facilities dedicated for Governors Island use are included in the overall Island budget.

FUTURE FUNDING FOR FULL-ISLAND OPERATIONS

The park and public spaces occupy approximately 87 acres of the 150 acres of Governors Island owned and managed by GIPEC. It is expected that future tenants, which will represent a mix of public, commercial and non-profit uses, will provide a revenue source to GIPEC. Such revenue, in the form of rent and other payments, will supplement and over time will one day replace the public sector funding which now accounts for one hundred percent of the funding for Governors Island. As the public spaces envisioned in the master plan are built, and tenancies established, GIPEC will develop appropriate operating and capital budgets to support expanded public usage and tenant needs, taking into account the mix of financial support and revenue available to support the Island.

One of the original development principles for Governors Island is that the Island should be self-sufficient from an operating perspective upon full redevelopment. At the time of the federal transfer in 2003, the State of New York and the City of New York agreed that all rent, Common Area Maintenance, and Payments in Lieu of Taxes (PILOTs) from future tenants on the Island would be dedicated to GIPEC to fund Island operations. While the timeline and budget for GIPEC operations at full occupancy and development will proceed in phases, this existing revenue agreement would enable GIPEC to achieve the goal of self-sustainability.

At full development, taking into account the existing 1.4 million square feet of vacant historic structures and the building sites available in the development zones on the southern portion of the Island, the Island could accommodate between 2.8 million square feet of built structures (the amount in place when the U.S. Coast Guard left in 1997) and 4 million square feet or more. The actual total of built space, and associated density, height and massing in the southern development zones, will be the subject of a later full-Island master plan. This plan and associated development guidelines will be developed with extensive community outreach, actual market demand from potential tenants and a much more precise sense of actual uses both of the new and historic structures. This planning and development process will take place in phases over coming years.

Given the broadest possible range of tenants and full development scenarios, and taking into account the fact that the Island's rents are always likely to be slightly lower than rents in Manhattan and other centrally located business districts, it is reasonable to assume that tenants will be able to provide (on average) $5 to $10 or more per square foot in rent, PILOTs and other charges. At this level, which will occur after several phases of development, the Island is likely to generate $30 to $40 million per year in funding to support operations. This would be sufficient to support a very high level of operations for the Island, including maintenance of the park and public spaces, and to fund a capital replacement reserve.

In addition to rents generated by tenants, various traditional and non-traditional sources of public and private funding are potentially available to supplement the cost of maintaining all or part of the park and public spaces. A variety of conservancy and non-profit partnerships exist in New York City and elsewhere in the nation to support programming, public art, horticultural displays and core operations and maintenance of public parks. Additionally, there are potentially other supplemental sources of funds including programming sponsorships, events and concessions that provide amenities to park and public space users that can be explored at the appropriate time.