

WATERWIRE

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Rendering courtesy of: Battery Park City Authority & AECOM

IN THE NEWS WEDG

South Battery Park City Resiliency (SBPCR) Achieves 13th WEDG® Verification in the Nation

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Blue paint on eleven light poles at Battery Park City’s Wagner Park provide a vivid reminder of how high floodwaters could reach in a future storm event. To address the significant threat that rising sea levels and increasing storm severity and frequency bring to coastal neighborhoods, Battery Park City Authority led the South Battery Park City Resiliency project. In December 2023, that project earned the rigorous WEDG® (Waterfront Edge Design Guidelines) Verification.

WEDG is a national rating system and gold standard for resilient, ecological, and accessible waterfront design. External specialists in engineering, architecture, and landscape architecture determined that the project exceeded the requirements for WEDG Verification, earning 125 out of 215 possible points in the standard. (115 are needed to pass).

South Battery Park City Resiliency reduces flood risks for Wagner Park, the Museum of Jewish Heritage, Pier A Plaza, the northern border of the Historic Battery, and numerous residential and commercial properties. While a massive project on its own, the project is part of a larger set of integrated coastal flood risk management projects through the Lower Manhattan Coastal Resiliency Master Plan. South Battery Park City Resiliency is a key component of this larger effort to protect Lower Manhattan in response to sea-level rise, coastal flooding, storm surge, increased precipitation, and other intensifying climate change impacts.

Hidden Protection

The challenge that Battery Park City Authority and its design team, led by engineering giant AECOM, had is that making the site and the neighborhood it protects resilient to rising floodwaters requires stopping water that could easily overtop the existing site. But they must make the site resilient without diminishing the views from one of Manhattan’s most cherished park spaces. They did this by hiding many of the resilience features of the site.

Much of the park is raised 10 feet from its present elevation to a level that will be resilient against the 2050s 100-year storm. Yet, as they walk along the site, visitors will not see the large seawall that makes this elevation possible. Across the site, a network of planters, stepped benches, and winding pathways through native planting areas conceal the seawall and protective features into the landscape. This approach creates new viewsheds of the waterfront and integrates a raised lawn with commanding views of the harbor. The team also incorporated universal access throughout the site, including creative solutions to accommodate significant grading changes, which will allow the park to be accessible by all individuals regardless of disability.



Creating a Flourishing Habitat Amidst Steel and Stone

At the south end of the site along the Pier A Inlet, new habitat space will emerge. Today, stone riprap provides an unwelcoming and unproductive shoreline edge. Once built, this section of shoreline will consist of plantings on stepped terraces in the intertidal zone that will bring marine life to the site. An overwater platform will use grating to allow viewing of the habitat space while also letting light penetrate the water which is key to the success of near-shore in-water habitats. The ecological improvements will provide habitat for striped bass, scup, blue fish, oysters, lobsters, blue crabs, ring-billed gulls, and great blue herons. The lowest step in the terrace integrates tide pools and intertidal grasses that will at times be below tide and at times above. Low and high marsh plantings make up the upper terraces.

The replacement of portions of the existing relieving platform with grating will increase light exposure to water and support the sinuosity of the shoreline through increased curved, broad surface. The use of EConcrete cladding on the bulkhead along the Pier A inlet will also help encourage marine growth at the site. EConcrete allows marine life to adhere to structural materials, providing more ecological benefit than standard concrete. Park users will be able to engage with the habitat space via an overlook, which will also serve as a passive educational zone.

Unproductive gardens will be replaced with maritime meadow spaces full of native grassland, shrubs, and tree species that provide nectar for bird and insect pollinators. Plants were specifically curated to balance ornamental qualities with erosion resistance and salt tolerance during storm events. The pavilion roof will also include 2,200 square feet of green roof and habitat plantings.

Throughout the design process, the project team purposefully integrated access and feedback from stakeholder engagement into the plan for the park. Discussions with residents and other stakeholders changed the scale of the lawn, created safety enhancements and a realigned bikeway, and spurred additional community space.

At its completion, South Battery Park City Resiliency will help to protect the immediate site and its key infrastructure, including transportation, utilities, and stormwater systems from coastal risks. For park users, the site will have become more resilient, ecological, and accessible.

Battery Park City Authority incorporated WEDG into Request for Proposals for the North/West Battery Park City Resiliency Project as well as its Battery Park City Green Guidelines. Future projects to protect Manhattan and beyond should also consider WEDG to underscore the need for resilience, ecology, and access on waterfront sites.

The Design Team

Battery Park City Authority led the project with architect and engineer AECOM. The project team includes:

- AECOM NYC Landscape Studio: Landscape Architecture and Public Realm Design Lead
- AECOM Engineering: Civil, Structural & Marine Structural Engineering, Coastal Modeling, Interior Drainage, Permitting, FEMA Compliance
- Arch Street Communications: Community Engagement
- Atelier Ten: Sustainability Certification
- Magnusson Klemencic Associates: Civil Engineering
- Milhouse Engineering: Mechanical, Electrical, and Plumbing
- Nautilus International Development Consulting: Urban Design, Sustainability
- Noel: Permit Expediting
- Oweis Engineering Inc: Geotechnical Engineer
- SiteWorks: Landscape Architect of Record
- Thomas Phifer and Partners: Pavilion Design
- Tillotson Design Associates: Lighting Design

Waterfront Alliance commends the team's undertaking in the redesign of Wagner Park and looks forward to the project's completion.

Original article can be found online at: <https://waterfrontalliance.org/2024/01/23/south-battery-park-city-resiliency-sbpcr-achieves-13th-wedg-verification-in-the-nation/>