



## **BIG, NYCEDC and Gilbane break ground on Solar One Education Center**

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Manhattan, NY The BIG-designed home for environmental learning and innovation, designed in collaboration with Silman Structural Engineers and Cosentini Associates in Stuyvesant Cove Park – within the East Side Coastal Resiliency Redevelopment – will offer educational programming on New York’s ecology in a structure designed to withstand flooding events and provide life-saving recharging capabilities during power outages.

Bjarke Ingels Group (BIG), NYC Economic Development Corp. (NYCEDC) and Gilbane have broken ground on non-profit Solar One’s new home and environmental education center. The center will also act as a gateway to the northernmost point of the East Side Coastal Resiliency Waterfront Redevelopment, designed by BIG in collaboration with AKRF, ONE and MNLA.

Located at the corner of 23rd St. and Ave. C on the East River coastline, the Solar One Environmental Education Center will be home to Solar One, whose mission is to design and deliver innovative education, training and technical assistance within Stuyvesant Cove Park and around New York. The 6,362 s/f, two-story learning center will replace the former Solar One building at the

same site, which became a refuge for area residents in Hurricane Sandy's aftermath by providing recharging capabilities to nearby hospitals when the entire energy grid went down south of 34th St. Construction on the new center is aimed to be completed at the end of 2024.

The Solar One Environmental Education Center aims to follow the OneNYC principles – New York City's plan for development based on principles of growth, equity, sustainability and resiliency – and exceeding 2020 New York City Energy Conservation Code requirements for roof, wall and floor insulation.

Located within a high-risk VE flood zone, the program on the building's ground floor will only include functions that are waterproof in the case of a storm.

The second-floor program, meanwhile, will include all functions that are required to stay dry.

The Solar One Environmental Education Center will house flexible indoor classrooms that can be used for community functions and specialized education programs; a lecture space; outdoor terraces; office facilities for Solar One, NYCEDC and Parks Department staff; and storage associated with the various recreational and stewardship functions of the surrounding park on the lower floor. The Solar One center will generate energy via a solar array with battery storage alongside FDR Drive, allowing the building to provide power to nearby New Yorkers in the event of outages from future natural disasters.

“Together, this center we're creating is sustainable. It will feature interactive exhibits on urban environmental stewardship and innovative public programming to equip our community with the knowledge and tools needed to champion a cleaner, greener and brighter future for all,” said Solar One CEO Stephen Levin.

“The Solar One Environmental Education Center presents a unique opportunity to create a new center for environmental innovation and learning while integrating with its surrounding community through educational outreach programs,” said Ryan Harvey, senior architect at BIG. “As an entryway to our East Side Coastal Resiliency Waterfront Redevelopment, the project will take advantage of its location along the East River shoreline, educating the immediate community and New York City at large about how its ecology and the built environment co-exist.”

The building's primary occupiable level will be located above the design flood elevation at 19'-1" above sea level. This allows for integration into the surrounding landscape, which incorporates Riprap embankment stone found at shoreline to help avoid erosion and mitigate damage from wave action. The elements situated below the center will be able to break away and ultimately be reinstated after a flood.

The education center will incorporate eco-conscious materials including wood sheathing and wood siding sourced from Forest Stewardship Council-certified forests in North America. It will also utilize

a minimal amount of concrete, only placing it structurally below the flood elevation level before transitioning to steel - which is lighter weight and recyclable – as it rises.

The Solar One building will utilize photovoltaic electricity generation in combination with battery storage to offset total and peak electricity consumption. The mechanical heating and cooling systems will consist of high efficiency variable refrigerant flow (VRF), a type of heat-pump technology that minimizes energy consumption, materials and components.

The educational center would not have been possible without current and former elected officials including: council speaker Adrienne Adams, council member Keith Powers, former council member Dan Garodnick, borough president Mark Levine, former borough presidents Gale Brewer and Scott Stringer, NYS senator Brian Kavanagh, NYS senator Brad Hoylman-Sigal, NYS senator Tom Duane, NYS assemblymember Harvey Epstein and former U.S. rep. Carolyn Maloney.

As an example of social infrastructure on the waterfront, the Solar One Environmental Education Center showcases New York City's capacity to harness energy from the sun in a resilient structure that can both withstand natural disasters and provide alternative energy to the surrounding neighborhood.

Size: 14,501 s/f

Client: Solar One, NYC Economic Development Corp. (EDC), Gilbane Building Company

Collaborators: Silman Structural Engineers, AKRF, Cosentini Associates, KM Associates, Cerami Associates, HLB, Lerch Bates, CCI, Construction Specification Inc., Socotec

Partner-in-charge: Bjarke Ingels, and Douglass Alligood

Design lead: Daniel Sundlin

Project manager/project architect: Ryan Harvey

Team: Adam Robert Poole, Ahmad Tabbakh, Ania Podlaszewska, Beat Schenk, Catrina Nelson, Daniella Eskildsen, Fiona Lu, Jan Leenknecht, Jasmine Idiakhoa, Luca McLaughlin, Lucas Stanley Carriere, Margaret Tyrpa, Martynas Norvila, Maxwell Moriyama, Neha Sadruddin, Nicolas Lapierre, Rasmus Streboel, Sang Ha Jung, Seth Byrum, Tony-Saba Shiber, Veronica Lalli, Vi Madrazo, Yu Inamoto, and Zach Walters

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