PSPE PHILADELPHIA CHAPTER
OUTSTANDING ENGINEERING ACHIEVEMENT AWARD NOMINATION FORM – 2023

Project Information:

Name of Project:
The Battery

Location of Project:
Philadelphia, PA

Description of Project, Include specific details (use two additional pages if necessary):
See following page

Construction Cost: $153.6M Completion Date: 10 / 15 / 23 Project or component must be complete in 2023

Primary Engineering Disciplines Represented by the Project (check those that apply):

Mechanical_____; Electrical _____; Civil ✓; Structural _____; Chemical _____

Organizations/Firms That Contributed to the Project and are Responsible for the Achievement (provide additional sheets as required):

Names: Langan Engineering and Environmental Services, Inc. Phone: 215-845-8900
Address: 1818 Market Street, Suite 3300, Philadelphia, PA 19103 Email: jwarren@langan.com
Contact Person: Jennifer Warren Title: Associate

Client/Owner:

Names: L-A Battery QOZ, LLC Phone: 609-774-2178
Address: 1325 N Beach St, Philadelphia, PA 19125 Email: tony@batesmill.com
Contact Person: Tony Bates Title: Real Estate Acquisitions & Development

Submitted by:

Firm/Organization: Langan Engineering and Environmental Services, Inc. Phone: 610-256-4559
Signature: Katherine Kubiak Email: kkubiak@langan.com
To be Presented on December 5th by: Jenn Warren
Email jwarren@langan.com Cell Phone: 551-404-0170

Addition Firms that contributed:

Names: Stada Phone: (215-440-0190
Address: 325 Chestnut Street, Suite 909, Philadelphia, PA 19106 Email: ckenney@stradallc.com
Contact Person: Chris Kenney Title: Principal

Names: Fastrack Construction, Inc. Phone: 610-308-7000
Address: 520 Pennsylvania Ave, Fort Washington, PA 19034 Email: wdunlop@fstrack.com
Contact Person: Wayne Dunlop Title: Executive Vice President

Names: S.T. Hudson Engineers, Inc. Phone: 856-342-6600
Address: 900 Dudley Ave, Cherry Hill, NJ 08002 Email: jmethven@sthe.com
Contact Person: Jim Methven Title: Senior Project Manager

A $50 Entry Fee is required and is to be submitted with the Nomination Form.
The entry fee is to be made payable to PSPE, Philadelphia Chapter.
Nomination is due: November 17, 2023 Presentations: Thursday, December 7, 2023
Send by Email or Fax Nomination to: oea@pspe-philly.org or 215-885-3732
Payment of the Application Fee may be check or by credit card.
To pay by credit card, click to PAYPAL BUYNOW button on our website http://www.pspe-philly.org/oea/entryfee.htm

To pay by check please mail to:
Fredric L. Plotnick, Ph.D., Esq., P.E. Chairman, Outstanding Engineering Achievement Awards
5000 Boardwalk Apt 1901, Ventnor NJ 08406 Phone: 215-885-3733, Fax: 215-885-3732,
email: oea@pspe-philly.org or oea@fplotnick.com or fplotnick@fplotnick.com

Langan paid $50 by credit card on PAYPAL BUYNOW.

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This new Beach Street development on the Delaware River waterfront includes renovating the abandoned Delaware Power Station in the city's Fishtown neighborhood. Built by the Philadelphia Electric Company in 1920, the plant supplied power to most of Philadelphia at the end of WWI until it was shuttered in 2004. The new 500,000-square-foot development will include event space, offices, and residential apartments. The renovation of the building included a two-story residential addition over the Boiler House section of the building and an amenity deck on the roof. Next to the main building, the old Screen House and Pump Room, Ash House, and Coal Tower will receive exterior renovations, concrete repairs, and new windows. While the abandonment of the power plant was disappointing for the city because the building was an iconic structure, its preservation and reuse are exciting for the neighborhood and city.

After the building renovation, the project's next phase includes a 300-space surface parking lot, landscaping, stormwater management, and site lighting. The waterfront project also includes an extension of the Delaware River Trail along the 900-foot frontage. The trail will connect to the Delaware River Trail in Penn Treaty Park to the south and extend to the northern boundary of the power station site.

Incorporating existing features into a design is an essential aspect of engineering. It involves considering the existing components and structures and finding ways to give them a new purpose. With this approach, it is crucial to carefully evaluate the current features to find ways they work with the new design. There were very few record plans for the building, so the design team requested field investigations around the building to help confirm conditions. Even with some investigations, conditions varied in locations, and the team needed to work closely with the construction team to develop alternate solutions to field challenges. Underground utilities that the team needed to work around include a 96" PWD storm sewer and outfall, PWD interceptor chamber and regulating equipment, an Exelon Power generation facility, a 20' electric easement with large structures whose grade could not be adjusted, rail lines through the site that needed to remain for historical purposes, underground piping from the steam generation including intake and outfall pipes connected to the river, and underground basement structures left from the former second Boiler House that was built and previously demolished.

Some of the design challenges included design features such as stormwater solutions that work with the existing features, respecting the Philadelphia Water Department (PWD) regulations, working with the site conditions in the floodplain, and respecting the 40 to 70-foot PWD right of way with its storm sewer and outfall that cross the site. The team also worked closely with PWD to work around the 96" public storm sewer that extends through the former right of way of Palmer Street. Another design challenge included incorporating existing features, such as the rails, into the site design.

Multiple Langan disciplines collaborated on this project, including site/civil engineering, landscape architecture, traffic engineering, and limited geotechnical engineering support. We appreciate the opportunity to work with a great team to bring a new life to a Philadelphia landmark.