

**PSPE PHILADELPHIA CHAPTER  
OUTSTANDING ENGINEERING ACHIEVEMENT AWARD NOMINATION FORM – 2018/2019**

**Project Information:**

Name of Project:

The Rail Park

Location of Project:

1300 Noble Street, Philadelphia, PA 19123

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

See attached\*

Construction Cost: \$10.8 m. Completion Date: 6 / 14 / 18 Project or component must be complete in 2018

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: See attached\* Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

Client/Owner:

Names: See attached Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Person: Corey Fenwick Title: Strategic Communications Coordinator

Submitted by:

Firm/Organization: Urban Engineers, Inc Phone: 215-922-8080

Signature: *Corey Fenwick* Email: chfenwick@urbanengineers.com

To be Presented on December 6th by: Angelo Waters and Andrew Van Schooneveld

Email ajwaters@urbanengineers.com Cell Phone: 215-284-3161

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 19, 2018 Presentations: Thursday, December 6, 2018

Send by Email or Fax Nomination to: [oea@pspe-philly.org](mailto: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  
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## **\*Demonstrate engineering challenges and innovative solutions**

Philadelphia welcomed the highly-anticipated arrival of the Rail Park in June of 2018. The park is a new open public space project led by the Center City District (CCD) in conjunction with the City of Philadelphia, SEPTA, and the Friends of the Rail Park. The Rail Park is situated on a section of railroad right-of-way that was a part of the defunct Reading Railroad Viaduct, a timeworn arterial that once carried freight and passengers into Center City.

The first phase of the Rail Park starts at Broad and Noble streets and included the renovation and traffic calming of the 1300 block of Noble Street, as well as the transformation of the SEPTA-owned portion of the old viaduct spur that runs from 13<sup>th</sup> Street to the south side of Callowhill Street. The park consists of a quarter mile of public space and features lush gardens, trees, benches, large-scale swings, and gathering space. Efforts to restore the old right-of-way have been long sought after by the surrounding communities, and were made a reality when Center City District conducted a feasibility study that concluded restoration of this major industrial structure would be far less costly than demolition. Urban played a unique role in this project, conducting the initial design study and continuing on to provide structural, civil, and environmental engineering; and construction management through the completion of Phase I.

A lot of work went into transforming the old railroad right-of-way into the Rail Park. Much of the SEPTA Spur being renovated for Phase I was comprised of steel bridge structures. While the old steel structures suffered from rust and corrosion from years of abandonment, it was found to be structurally sufficient after targeted repairs. Environmental examinations were necessary to check the existing soil fill composition on the structure for contaminants and implement a corrective course of action if needed. Surface improvements were made in order to transform the railway into a landscaped pathway for recreational use. Major site improvements included the addition of staircases up from 13<sup>th</sup> Street and from Callowhill Street, and utility connections for irrigation and lighting. Structural additions included the installation of a cantilevered walkway for scenic overlooks as well as industrial sized swings. Landscape beds flank paths through the park, and there are areas for seating and gathering provided by benches and platforms constructed from a durable hardwood, Ipe.

Construction of the Rail Park presented the project team with several challenges and opportunities. Much of the demolition and construction activities on this abandoned elevated viaduct required high-reach, crane, and suspended work platforms. Work on the structure over live traffic required full and partial street closures.

The Rail Park was managed under the Urban's ISO 9001:2008/15 Quality Management System. Documentation for all aspects of the project were submitted, reviewed, and disseminated to the appropriate project partners through this quality assurance program. The project-specific procedures were designed to fully document project expectations, define specific responsibilities and lines of communication, and present the project schedule.

## **Demonstrate the importance of the engineering profession to society**

The Rail Park is a \$10.8 million construction project that has transformed a blighted section of the former Reading Railroad Viaduct into an elevated park with expansive city views that is now a destination for residents and visitors alike. Programmatically, the design remains simple. A path moves between areas of planting and seating. Four large wooden platforms punctuate the site providing spaces for lounging and gathering. The main walkway culminates in a series of iconic, civic-scale swings which can be seen from the street below.

Urban's construction management team served as the link between the owner, the contractor and other stakeholders to provide the best possible finished product. The challenges encountered during design and construction were met with a focused expertise to mitigate potential issues and delays. All project parties brought a strong effort and cooperative attitude to mitigate any challenges that arose.

The design techniques and strategies used to convert this dilapidated quarter-mile into a beautiful park can be replicated by other engineers throughout the country. There are many abandoned rail lines throughout the United States, and the success of projects like the Rail Park show that rehabilitation can create development opportunities, civic pride, and engagement.

## **Demonstrate a clear and tangible benefit to the Delaware Valley Region**

The Rail Park offers the North Chinatown and Callowhill communities a much needed park and green space. The design restores and maintains much of the existing steel and introduces materials of a similar industrial scale and character for the platforms, benches, and guardrails.

The new park was built upon old industrial structures that sat long abandoned and in disrepair for many decades. As for the structural integrity of the old viaduct, new structural steel was attached to the existing superstructure, new paint applied to the existing steel, and new pavement placed atop the cobblestones and rails in the streets. The rough-around-the-edges nature of the pre-construction structure manifested itself through the use of weathering elements, namely lpe hardwood and weathering steels. The architectural elements link the industrial heritage of the Reading Viaduct and surrounding neighborhood to its revitalized new construction.

CCD was originally drawn to the project in part because it has the potential to facilitate residential and light commercial development in the expanding communities of Center City and Chinatown. With 32% of the land in the area around the viaduct vacant and undeveloped, the opportunity existed to create a unique, mixed-use, mixed-income neighborhood like none other in the area. Its transformation is beginning to see an upturn in residential and commercial development surrounding the park and the desolate area has already sparked revitalization. Development teams have purchased and plan to purchase nearby lots for studios, offices, and other uses. And it's easy to make the connection between the Rail Park's groundbreaking and the revitalization of the North Broad Street corridor, which includes renovations at the old Metropolitan Opera House on North Broad. It's a promising effort that should spur further economic and environmental growth throughout Philadelphia.

## \*Key Participants

### **Owner/Client:**

#### **Center City District**

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### **Structural, Civil, Environmental Engineer and Construction Manager**

#### **Urban Engineers**

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### **General Contractor**

#### **A.P. Construction**

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### **Landscape Architect**

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### **Horticulture Consultants**

#### **Tend Landscape**

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### **Urban Signs**

#### **Urban Sign**

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### **Lighting**

#### **The Lighting Practice**

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### **Electrical Engineers**

#### **Arora Engineers**

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### **Design Surveyors**

#### **KS Engineers**

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### **Interpretive and Identification Signage**

#### **Cloud Gehshan**

400 Market Street, Suite 300  
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