

ENTRY FORM



DVASE 2017 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

Buildings under \$2M		Buildings Over \$100M	
Buildings \$2M-\$10M		Other Structures Under \$5M	
Buildings \$10M - \$30M		Other Structures Over \$5M	
Buildings \$30M - \$100M	x	Single Family Home	

Approximate construction cost of facility submitted:	\$31.7 million
Entry Fee:	FREE
Name of Project:	South Philadelphia Community Health and Literacy Center, Children's Hospital of Philadelphia
Location of Project:	S. Broad Street, Philadelphia, PA
Date construction was completed (M/Y):	May 2016
Structural Design Firm:	Keast & Hood Structural Engineers Philadelphia, PA
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	VSBA, LLC
General Contractor:	Perryman Building and Construction

Company Logo (insert .jpg in box below)



Important Notes:

- Please .pdf your completed entry form and email to bkoroncai@barrpino.com.
- Please also email separately 2-3 of the best .jpg images of your project, for the slide presentation at the May dinner and for the DVASE website. Include a brief (approx. 4 sentences) summary of the project for the DVASE Awards Presentation with this separate email.

- Provide a concise project description in the following box (one page maximum).

Include the significant aspects of the project and their relationship to the judging criteria.

**South Philadelphia Community Health and Literacy Center,
Children's Hospital of Philadelphia**

Philadelphia, PA

The new South Philadelphia Community Health and Literacy Center is located at the South West corner of the intersection of Broad and Morris Streets in Philadelphia. The site extending from Broad Street to 15th Street and from Morris Street to Castle Avenue is surrounded on three sides by 19th century townhouses. The new center is a unique partnership between the City of Philadelphia and the Children's Hospital of Philadelphia. Keast & Hood provided structural engineering to architectural firm, VSBA, LLC along with project MEP, Bruce E. Brooks & Associates and contractor, Perryman Building and Construction Services. The project has received coverage by multiple media outlets and was recognized by HiddenCity Philadelphia in their Most Intriguing Projects of 2016 list.

The 96,429 GSF site contains a public playground in addition to the new three story building. The first level of the 93,000 SF building houses a branch of the Philadelphia Public Library, a community recreation center and employee parking. The second floor contains a community health center and the third floor is home to CHOP's primary care center. Due to the varying uses and tenants throughout the building, open floor plans and moving columns were commonplace in the design. Keast & Hood's innovative design utilized moment frames throughout the structure to provide the flexibility needed for floor plans and to minimize erection time during construction. A specific example of moving columns occurred on the second and third floors where select columns for the offices could not carry down to the first floor. To mitigate this, loads were transferred to adjacent columns.

The LEED Silver certified building is comprised of structural steel framing with glazed curtain wall facing broad street on the upper 2nd and 3rd stories. The curtain-wall façade required creative structural design due to the architect's specification for a flush curtain wall and ceiling height. This required the edge of the beam be pushed back into the structure. Engineers detailed a design that provides curtain wall support (please see supporting graphics for engineering detail). The building's street level façade is comprised of storefront divided by cast stone piers. Masonry brick covers all other sides of the building, to complement the context of the surrounding neighborhood. The foundation is comprised of auger cast piles with pile caps and grade beams as to not disturb the adjacent SEPTA Broad Street line.

A small but key design element was the inclusion of the only Sendak Mural in extant for display in the new public library branch on the first floor. Keast & Hood designed support for the mural's display which also allowed for it to be easily installed without damage or modifications to the mural's support framing.

Key structural design challenges:

- Cast pile foundations mitigating poor site soils
- Moment connections
- Moving columns
- Open floorplans
- Cantilevered upper floors
- Cantilevered screen walls
- Support for the transplanted Sendak mural to be displayed
- Coordination in congested city site

- The following 5 pages (maximum) can be used to portray your project to the awards committee through photos, renderings, sketches, plans, etc...



South Philadelphia Community Health and Literacy Center, facing Broad Street. Shows curtain wall for floors 2 and 3, cantilevered entry way, and cantilevered screen wall.



Rear View of Building: Playground, Recreation Center, and Enclosed Staff Parking (photo © VSBA,LLC). Brick helps the building to fit in with the surrounding 19th century townhouses.



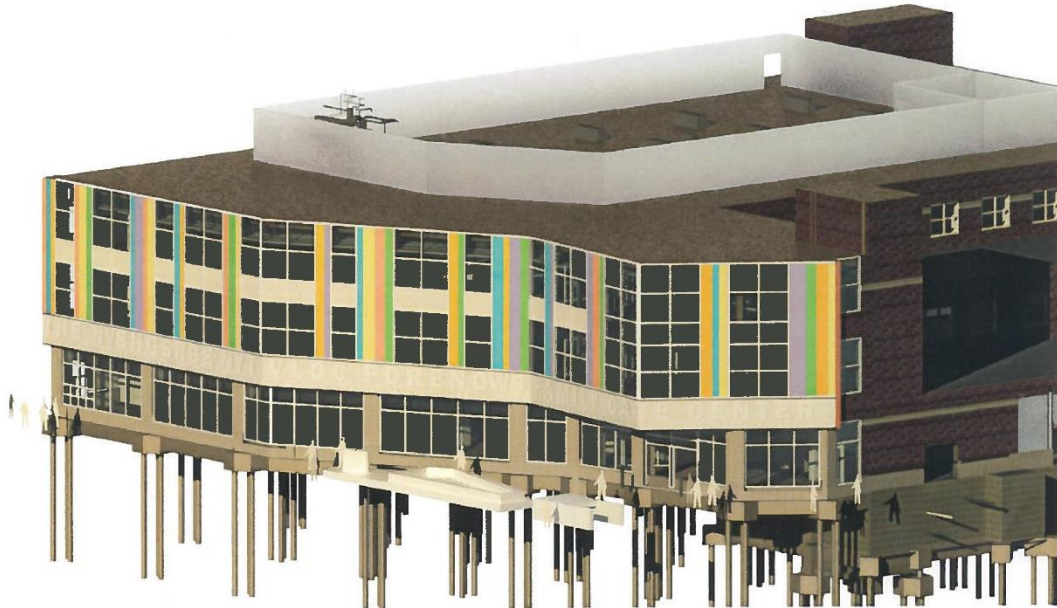
A branch of the Philadelphia Free Library occupies the first floor and houses the transplanted Maurice Sendak mural from the Rosenbach museum and library. (photo ©VSBA, LLC)



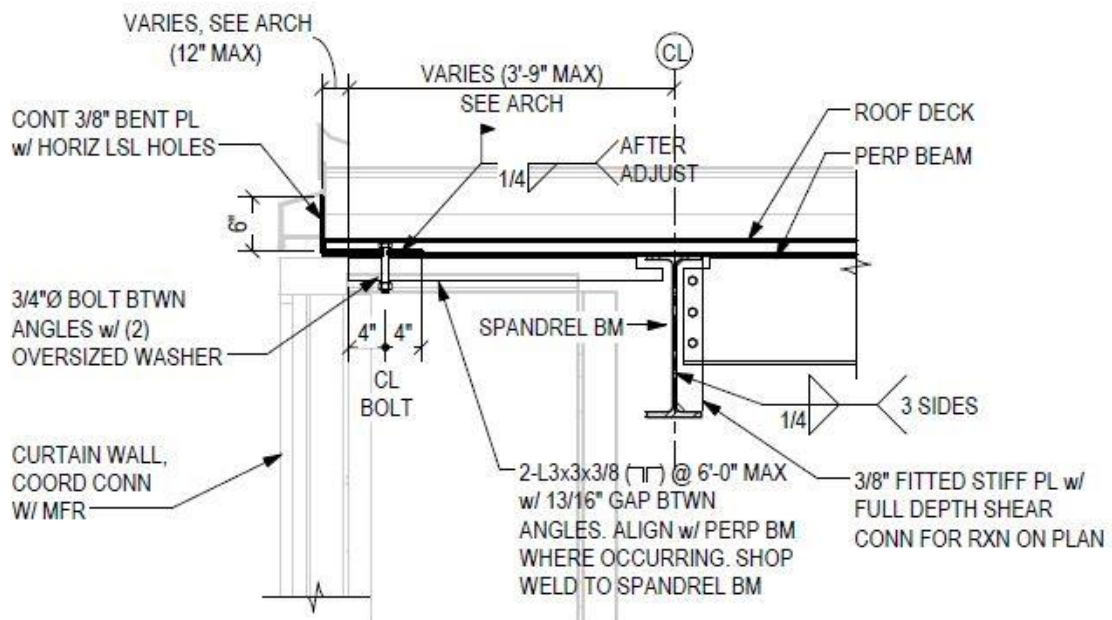
Community Health Center waiting area, occupies the second floor. (photo ©VSBA, LLC)



New structural steel framing erected during construction. The use of moment frame connections provided accelerated construction time and allowed for open floorplans throughout the building. (photo ©Keast & Hood)



Capture of the Architectural and Structural BIM models combined, showing the auger cast in place footings. (image © Keast & Hood)



Structural detail designed by Keast & Hood illustrating the deck and curtain wall support connection. (structural detail © Keast & Hood)



A view of the specified detail in the field. (photo ©Keast & Hood)



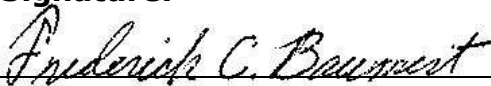
The Sendak mural was moved from its location at the Rosenbach museum and library in Rittenhouse to the first floor of the new building which houses a branch of the Philadelphia Public Library. Engineers designed support for the feature element to be displayed in its new home. (top photo ©Keast & Hood, bottom photo ©philly.com)



By signing, signatory agrees to the following and represents that he or she is authorized to sign for the structural design firm of record:

All entries become the property of DVASE and will not be returned. By entering, the entrant grants a royalty-free license to DVASE to use any copyrighted material submitted.

Submitted by:

Print name: Frederick C. Baumert, PE, CCS	Signature: 	Date: Apr 11, 2017
Submitting Firm:	Keast & Hood	
Mailing address:	400 Market Street Suite 1250 Philadelphia, PA 19106	
Telephone: (215) 625-0099	Fax: (215) 625-9408	Email: fbaumert@keasthood.com