ENTRY FORM



DVASE 2020 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

Buildings under \$5M	J	Buildings Over \$100M	
Buildings \$5M - \$15M		Other Structures Under \$1M	
Buildings \$15M - \$40M		Other Structures Over \$1M	
Buildings \$40M - \$100M		Single Family Home	

Approximate construction cost of facility submitted:	< \$5 MILLION (THE ADAPTIVE RE-USE PORTION OF PROJECT - WHICH IS BEING SUBMITTED)
Name of Project:	ESPERANZA HEALTH CENTERS - ADAPTIVE REUSE OF KENSINGTON TRUST COMPANY BUILDING
Location of Project:	PHILADELPHIA, PA
Date construction was completed (M/Y):	SEPTEMBER 2019
Structural Design Firm:	ORNDORF AND ASSOCIATES
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	BRAWER & HAUPTMAN ARCHITECTS
General Contractor:	TARGET BUILDING CONSTRUCTION

Company Logo (insert .jpg in box below)



Important Notes:

- Please .pdf your completed entry form and email to <u>bsagusti@barrhorstman.com</u>.
- Please also email separately 2-3 of the best .jpg images of your project, for the slide presentation at the annual 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.

Esperanza Health Center – Adaptive Reuse Philadelphia, PA

When Esperanza Health Center's three existing locations were at capacity in North Philadelphia, they acquired the 1930'sera 4-story Kensington Trust Company Building at Kensington and Allegheny avenues. Esperanza had been serving the Latino and Spanish-language community in the area for almost 30 years and needed the additional 35,000 sqft of space the building provided. The monumental building, with its stone column façade and location in the heart of a suffering neighborhood allowed the project to offer additional space for their medical services and also a means to positively impact the community.

The \$22 million overall project included the adaptive reuse of the Kensington Trust Company Building, with a new parking garage and health and wellness facility on the rear of the property. O&A's involvement was in the adaptive reuse and renovation of the main building which started construction in 2018 and concluded in September of 2019. The new structural elements of the building included a partial infill of the 2nd floor open space, expansion of the rear elevator shaft, roof dunnage and equipment support and the addition of two exterior stair towers at the rear.

O&A's first step was to fully survey and analyze the existing for structural adequacy. The survey indicated, and historical photos confirmed, that the existing structure is actually a 1930's horizontal and vertical expansion of a smaller bank building dating back to 1915. Of interest was the framing of the original 1915 structure. The 2nd floor of the 1915 structure consists of a draped wire-mesh with unreinforced concrete supported on wide-flange beams while the roof framing (now 3rd floor) is a flat-arch terracotta floor system supported on wide flanged beams. Cores were taken of each system and analyzed. Utilizing historical WF shape tables and material specs available from the AISC, the existing framing was also analyzed and the entire system deemed safe for the new building use. The remainder of the structure is structural concrete slab supported on WF steel beam, girders, columns, and exterior brick masonry bearing walls.

The primary structural challenge of the new work was the infill of approximately 2700sqft of open space on the 2nd floor with two steel-framed mezzanines on either side of the lobby. The original architectural layout provided new columns inset of the walls and within the interior, but their intent was always to maintain the openness the space. So O&A went to work to eliminate the additional columns and support the mezzanine entirely off the existing structure. At the existing columns, historical AISC data again was used to confirm structural adequacy under the increased load. We also ordered weldability testing for the steel to ensure proper elemental makeup and had test pits dug at the footings to ensure adequate bearing capacity. At the exterior bearing walls, we examined the existing brick and conservatively designed a 3'-0 'grillage beam' to be pocketed into the masonry to distribute the bearing load within the wall and also provide a typical attachment point for a standard beam-to-beam shear connection. Finally, cantilevers were designed at each mezzanine projecting into the lobby to keep primary framing in line with existing gridlines. The result was a framing scheme that significantly reduced cost and increased the utility of the space.

To bring egress up to code, two exterior steel-framed stair towers were added at the rear of the building. To preserve the exterior and prevent additional loading on the existing building, we designed the towers with stand-alone lateral systems limited to less than 1" total drift over the 54ft height. We achieved this with half-height kicker braced frames in the weak direction and moment frames in the strong direction.

The rear elevator expansion required a new CMU shaft and removal and new support of floor systems from the 1915 and 1930 structures To accommodate mechanical chases running directly adjacent to the shaft, 16" tall concrete 'bond' beams were designed within the wall depth at each floor.

The roof framing was revealed to be near existing design capacity. For the two large RTUs, an 850sqft steel dunnage and platform support was posted-up from the steel columns. For an array of (18) condensing units, we located them along girder lines at a spacing to allow acceptable load distribution over the existing without additional reinforcement.

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











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.

If selected as an award winner, you may be offered the opportunity to present your project at a DVASE breakfast seminar. Would you be willing to present to your colleagues? **YES NO**

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Submitted by:							
Print name:		Signature;		Date:			
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