

ENTRY FORM



DVASE 2019 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

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

Approximate construction cost of facility submitted:	Building Core & Shell - 24 Million Tenant Fitout - 12 Million
Name of Project:	Mill 19 at Hazelwood Green
Location of Project:	Pittsburgh, PA
Date construction was completed (M/Y):	Aug 2017 - CD Document / GMP Issue Dec 9, 2018 - Substantial Completion
Structural Design Firm:	Bala Consulting Engineers
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	MSR - Minneapolis, MN
General Contractor:	Turner

Company Logo (insert .jpg in box below)



Important Notes:

- Please .pdf your completed entry form and email to bsagusti@barrhorstman.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.

Almono Mill 19 is a site in Pittsburgh PA which was the former Jones & Laughlin steel plant from WWII. Following the war, it was used to produce steel rolled shapes and bar stock material. A vacant brown field site in Pittsburgh for many years, the Regional Industrial Development Corporation (RIDC) acquired the building to begin re-purposing the site. The existing Mill 19 building is composed of riveted steel shapes and is approximately 110 feet wide, 1,200 feet long, with 46 feet clear to the bottom of the main roof trusses.

Three new buildings are to be constructed within the historic remnants of the existing mill structure. Mill 19A, submitted here, is the first of the three. This building is constructed of composite structural steel floor framing, braced frames and moment frames for the lateral resisting system, comprising three stories and 98,000 sq. ft. with a central expansion joint dividing the building into North and South sections. Exterior balconies, walkways, and stair cases let users traverse the exterior building skeleton that remains as they make their way to the ground level. The site was challenging structurally as the team had to work with intense geotechnical conditions dealing with underground vaults, tunnels, and manufacturing pits from the past.

The new structure also uses Fabreeka thermal break pads, bushings, and washers for connections of bridges thru the main building envelope.

Carnegie Mellon University is the tenant for this building and will host the Advanced Robotics for Manufacturing Institute (ARM) at this location. Bringing new manufacturing technology in Pittsburgh back to the roots of the historic steel plant location. A portion of the second floor is open, creating a two story high space containing an overhead gantry crane supplied by Reading Crane Company. This space is flanked by robotic labs and development suites for Carnegie Mellon University students and faculty. The second floor also holds an acoustically isolated work force training center. At this location the elevated structural slab was depressed to receive the isolated vibration and acoustic reducing floor system.

The project was documented and fully detailed in REVIT Structure, incorporating design information from RAM Structural System and RAM Elements. The existing building structure was laser scanned to have this information incorporated into the BIM Model environment for the design team.

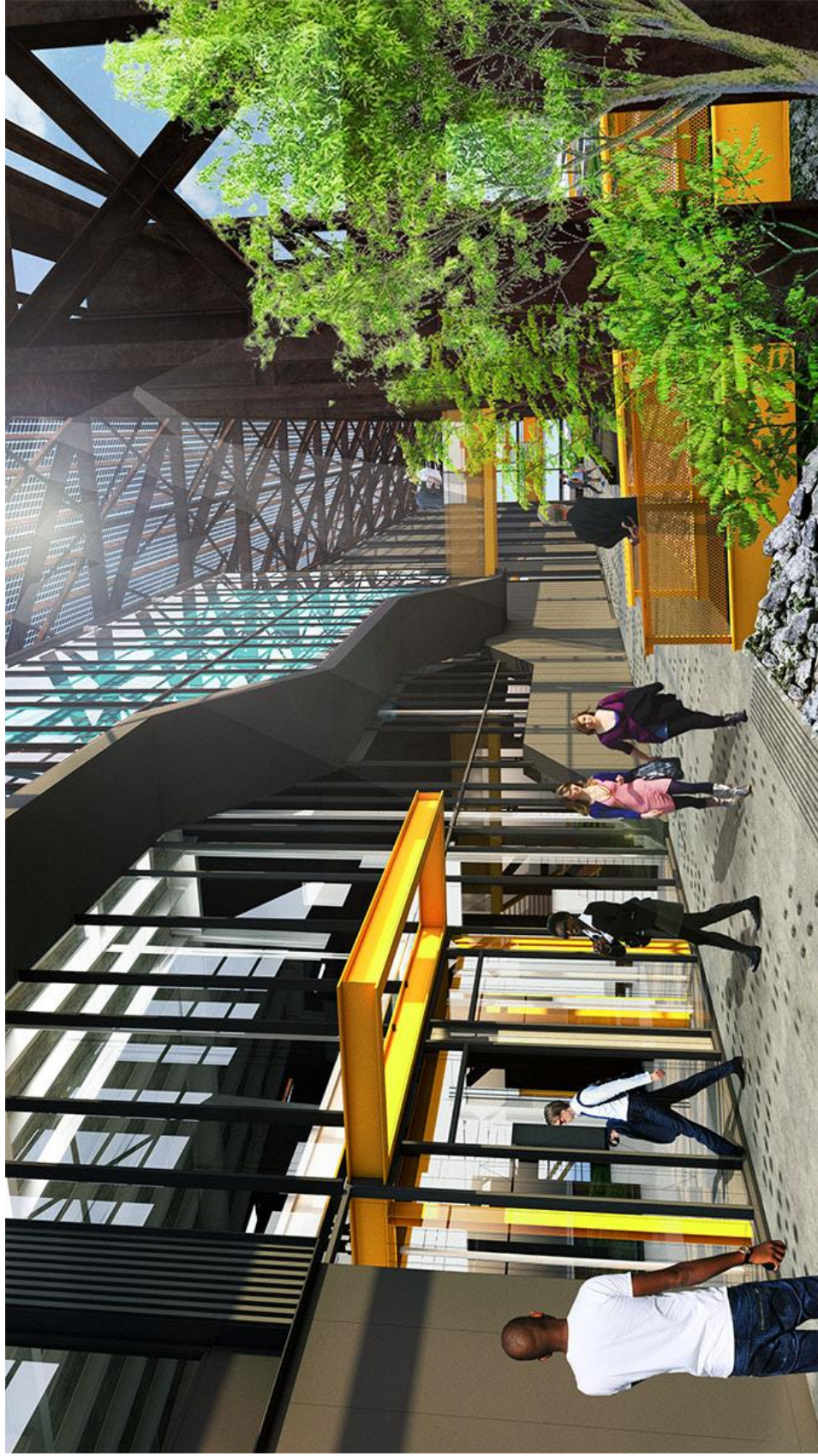
- The following 5 pages (maximum) can be used to portray your project to the awards committee through photos, renderings, sketches, plans, etc...



Above - Mill 19 site with Pittsburgh in the background. Mill19A is at this close 1/3rd of the building.

Below - the end of the Mill 19S is seen behind the historic crane, and within the existing steel skeleton of the original mill.





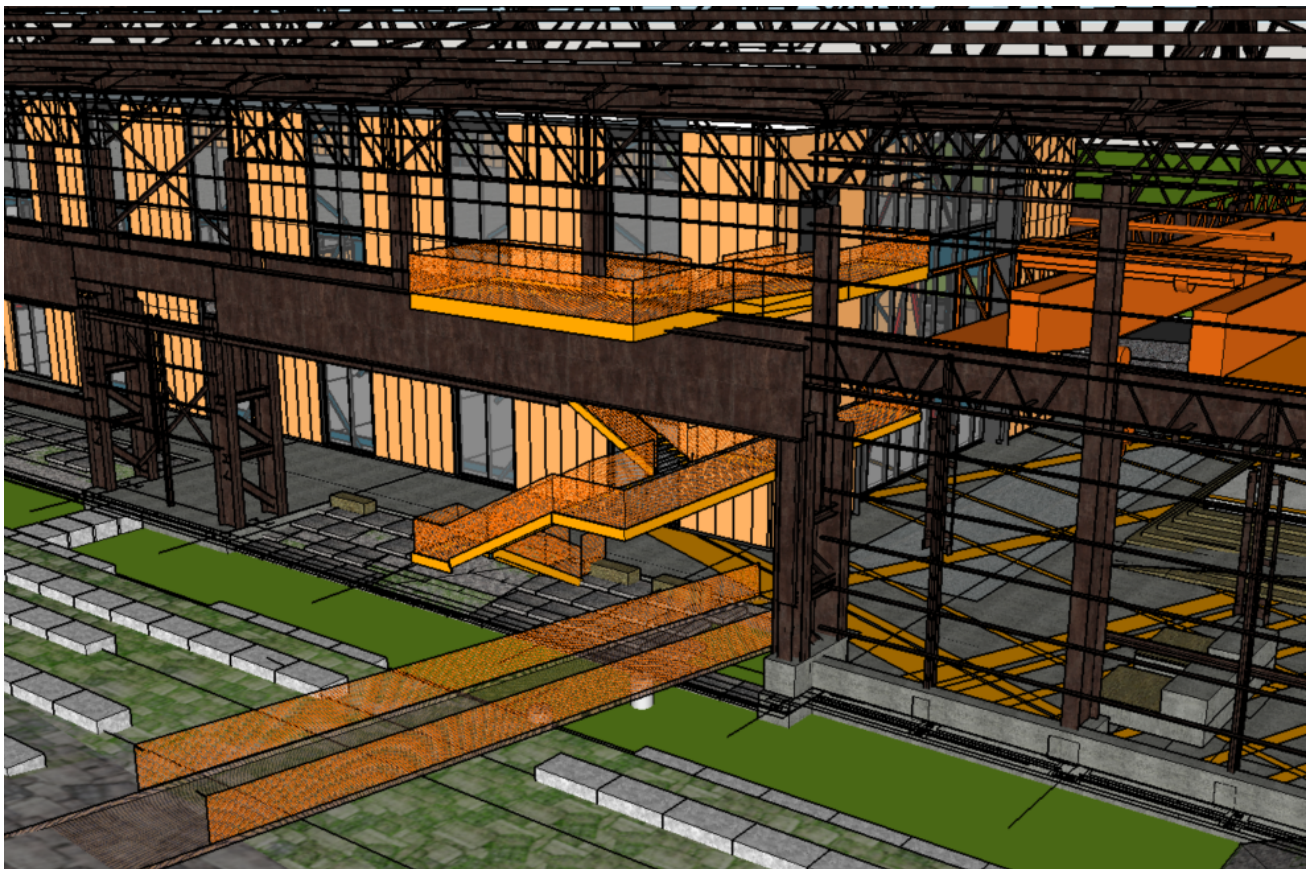
In this rendering, the entrance to the building is located within the historic steel frame structure and below the expressed stair from level 2 to level 3. This hung stair system is suspended from the cantilevered roof framing and also supports the curtain wall glazing.



Above - The two story high-bay work space for CMU Robotics facility with the offset leg overhead crane. The crane rail to the left is higher for trucks backing into the building, while the rail on the right aligns with the second floor space.

Below - One of the three internal communicating staircases. This stair is suspended from the second floor framing and is composed of curved HSS members and stringers.





Above - The sketchup rendering of the south balcony and stair cases leading to grade along with a weathering steel bridge over the landscape feature.

Below - One of the exterior stair cases connecting level 3 and level 2 bridges. (Drawing shown on next page). The existing mill structure supports these exposed stairs and bridges as we tie back to the new building with Fabreeka thermal break connections.



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**

Submitted by:

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