



ENTRY FORM

DVASE 2019 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

Buildings under \$5M		Buildings Over \$100M	x
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:	\$130 million
Name of Project:	The Hamilton
Location of Project:	440 North 15 th Street, Philadelphia, PA
Date construction was completed (M/Y):	February 2019 (Phase I)
Structural Design Firm:	The Harman Group
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	MY Architecture
General Contractor:	Clemens Construction Company, Inc.

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.

The Hamilton, a 504,000 square foot mixed-use residential development near Philadelphia's burgeoning Museum District neighborhood, is comprised of two buildings standing at 10 and 16 stories and includes 576 residential units (279 units are part of Phase I and 297 units will be part of Phase II), residential amenities, 3,300 square feet of ground-floor retail, a community plaza/garden, and underground parking.

Phase I is a ten-story overbuild of an existing 1940s garage with cold formed flat strap load bearing walls supporting a mix of precast hollow core and solid plank at levels 3 and above. The 2nd floor level is a steel framed transfer level above public and back of house architectural program space at ground level. Braced frames transfer lateral loads from the 2nd level down to new foundations at the basement level of the existing garage structure.

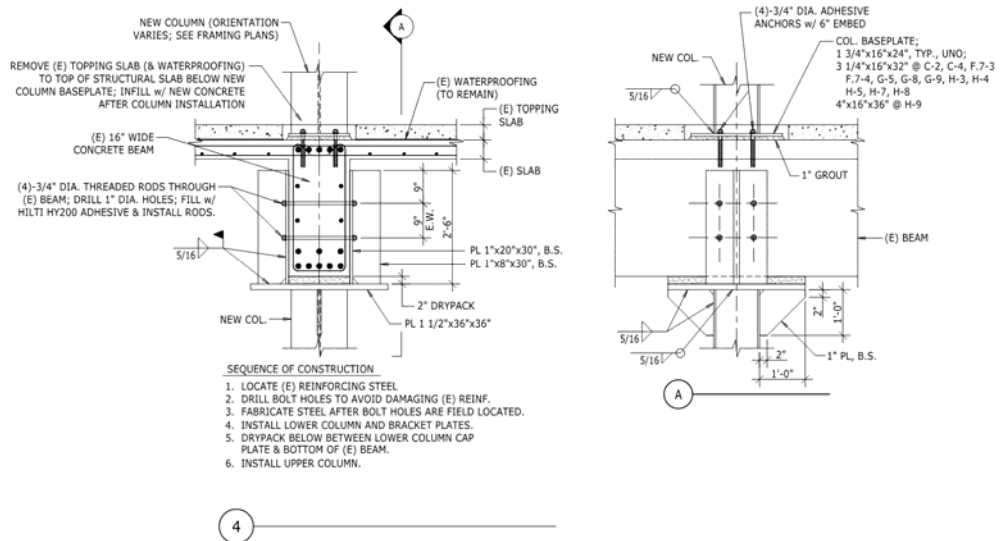
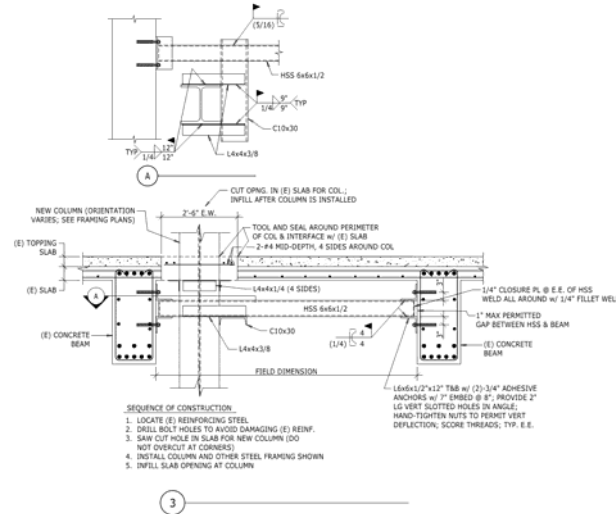
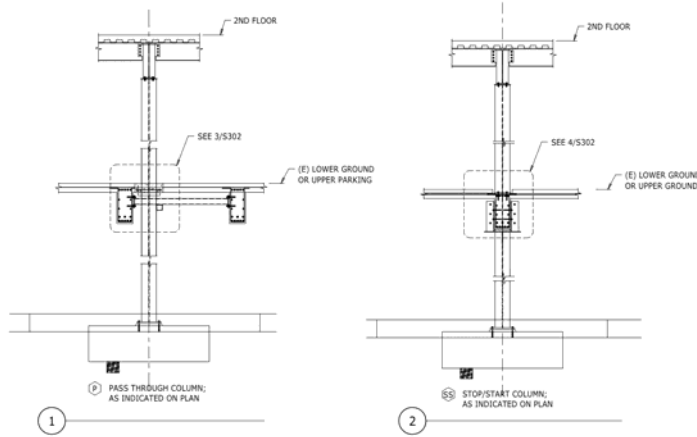
The structural design prioritized retaining as much of the original structure as possible, which included using existing concrete columns and foundations to the greatest extent possible to minimize construction cost, reduce the amount of demolition waste that needed to be disposed and use the lowest remaining level of the existing structure for new residential parking spaces.

The original structure was cast-in-place concrete designed for heavy floor loads; removing two levels of the existing structure allowed the placement of some new columns directly onto the remaining existing columns without the need to reinforce the existing columns and foundations to carry the new loads. Since there were no existing drawings available, the project team worked to assess the capacity of the structure by conducting a series of tests using GPR to locate reinforcing steel, as well as limited destructive evaluation at portions of the structure scheduled for demolition.

New steel columns and braces were threaded through openings cut in the ground level of the existing structure to remain and placed on new foundations constructed at the basement level. Columns were braced to the existing structure at the ground level. Some new steel columns termed "start/stop columns" were required to transfer loads from above down to the basement level while maintaining the existing concrete beams / girders to remain and facilitate erection. Portions of the 18-inch slab on grade at the lowest level were cut out and removed to install new foundations. Some braced frame columns did not have the benefit of large dead loads from above because of transfer conditions; this required creating combined footings with other columns to provide sufficient dead load to resist the design uplift forces.

Phase II of the project will be built on the east side of the site on existing grade. The site contains existing slabs, voids, and debris from previous structures which will present a challenge for foundation construction. The structural system will be steel frame with precast plank, and conventional braced frames. The 2nd level will be a transfer level. D Beams as part of the Girder-Slab® system will be used at the typical residential levels.

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



PASS THROUGH & START / STOP COLUMN DETAILS



EXISTING STRUCTURE DEMOLITION ABOVE GROUND LEVEL



NEW STOP / START COLUMNS BELOW GROUND LEVEL



NEW BRACE / COLUMN THROUGH GROUND LEVEL SLAB



NEW COMBINED FOOTING AT BRACED FRAME ADJACENT TO EXISTING COLUMNS



NEW COLUMN SUPPORTED ON EXISTING COLUMN STUB ABOVE GROUND LEVEL



PODIUM TRANSFER LEVEL LOOKING SOUTHEAST



NEW BRACED FRAME BELOW EXISTING GROUND LEVEL



VIEW LOOKING NORTHEAST

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 is granted 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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