

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:	\$21 million
Name of Project:	Scanlan Campus Center
Location of Project:	Windsor, CT
Date construction was completed (M/Y):	October 2019
Structural Design Firm:	CVM
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	Atkin Olshin Schade Architects
General Contractor:	Newfield Construction

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.

Located on a rural, 300-acre campus in Windsor, CT, The Loomis Chaffee School is an independent boarding and day school serving nearly 700 total students across grades 9-12. Loomis was chartered in 1874 and is a member of the Ten Schools Admissions Organization. In response to an increase in enrollment and within the framework of a developing master plan, the school has undertaken several concurrent projects, including the renovation and addition to the existing Campus Center. The new Campus Center creates a lively student hub by bringing together student dining, activities, and social spaces in one facility with a state-of-the-art, made-to-order server, formal dining halls, and a variety of flexible and inviting spaces for student interaction.

The original building was constructed in 1913 (a two-story masonry wall building with a full basement) with subsequent additions in 1969 (a two-story reinforced concrete beam and slab frame) and 1988 (a two-story steel frame). Each addition was essentially built around the stem of the original "T-shaped" building. This 2019 project included removing a portion of the 1988 addition with renovations to the balance of the building, and a new addition built partially over existing floor framing of the 1988 addition.

The renovations to the original building with subsequent additions consisted of several new door openings in masonry walls requiring new lintels, a new elevator pit and shaft, openings in the existing floor framing for two new stairs, as well as new HVAC equipment on existing floors and roof. A portion of the 1988 steel frame additions was demolished, leaving the first-floor framing in place, over which the new addition would be built. As the existing column openings did not have the capacity to support additional loads, though, floor penetrations were made through the existing framing, with new columns inserted to ground. Because of the proximity of the new and existing columns, the existing columns had to be temporarily shored allowing for the base to be cut off and a new combined spread footing placed with the existing column being reconnected. Due to the lack of expansion joints between the original building and any of the subsequent additions and modifications, this newest addition was hard connected to the previous construction.

The addition, a one-story steel moment frame structure with a full basement, forms a "C-Shape" around the previous additions and serves as their lateral system. The basement houses iLab space with exposed floor framing above and mechanical space which features air handling equipment visible through large windows. A useful plan of reinforced concrete ramps, steps, and benches was utilized to conceal existing foundations at lowered floor levels between the new addition and existing building.

The first floor houses two large dining halls, which feature barrel vault ceilings. To accommodate the barrel vault ceiling, 24" deep WF beams with a series of bents and collar tie beams were used to form the gambrel roof shape while providing a surface for the barrel vault framing to hang from. Sliding partitions were used between the dining halls to create separate areas, with partitions supported by steel framing under strict deflection requirements due to the use of electric motors when closing. Acoustics also played a role in this project due to the large dining hall spaces with all students on campus sharing meals together at the same time, so recommendations from acoustical studies were incorporated into structural design.

On the exterior of the building, the dormer windows and gable and barrel roof shapes replicate other historic buildings on the campus, as does the masonry facade and cast stone trim (supported by HSS beams). At the southwest corner of the building, a half-round bay was framed utilizing steel beams bent weak-axis and HSS posts, clad in cast-stone panels.

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



View of South Elevation showing the New Addition Foundation, 1969 Addition (Center), and 1988 Addition demolished to First Floor



View of New Addition steel framing looking East (existing 1969 Addition on left)



View of 1969 Addition with new steel framing built over 1988 Addition first floor framing, new columns are needed through the existing floor framing



Existing column temporarily shored for installation of new combined footing



New Addition interior with bent WF24 beams and hangers for barrel vault ceiling



Connection of New Addition framing to existing steel column with bent WF to avoid stacked beams



Half round bay framing with supplemental HSS members for support of case stone panels

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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