ENTRY FORM

DVASE
2019 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

Buildings under $5M	X	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:	$3.74M
Entry Fee:	**FREE**
Name of Project:	Yacht Club of Stone Harbor Dining Addition and Renovations
Location of Project:	Stone Harbor, NJ
Date construction was completed (M/Y):	Under Construction, Projected Completion – Spring 2019
Structural Design Firm:	Michael A. Beach & Associates
Affiliation:	**All entries must be submitted by DVASE member firms or members.**
Architect:	OSK Design Partners
General Contractor:	Winfield Developers, LLC

Company Logo (insert .jpg in box below)

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.

Original construction on the Stone Harbor Yacht Club was completed for the Stone Harbor Realty Company in 1911. The club is located on the bay in Stone Harbor on Sunset Drive near 89th Street. After original construction was complete, the Club operated for approximately 18 years but eventually failed at the start of the Great Depression. However, later in 1929 a small group of men reorganized the club as The Yacht Club of Stone Harbor by selling proprietary memberships. Over the past 108 years the club has been run as a membership facility with dining facilities, social events, and host to many destination weddings. Since its inception, the original building has undergone many additions and renovations to become the 13,800 square foot facility as it is today. The existing building is predominately a wood framed one and two story structure with a sand crawl space below many of the spaces on the first floor. Steel framing was used in some of the previous additions and renovations to provide larger open spaces required for dining and ballrooms. The existing foundation for the building is comprised of a mix of conventional concrete spread footings and timber pile supported foundations.

In the spring of 2017, The Club started planning and design of a renovation/addition project to expand the dining and improve kitchen operations. The added 2,300 square foot dining area was to be provided by constructing a second floor addition over the existing dining and kitchen areas. A small service kitchen and bar was also proposed for the new second floor dining area. Existing second floor offices were also renovated and expanded with the additional floor space provided in the new project. A new elevator needed to be retrofitted into the building to provide a means for handicap accessibility to the second floor. Construction of the new addition was complicated by the need to work within the walls of the existing historic structure. New pile foundations and a steel structure needed to be constructed within the footprint of the existing building. In addition, the construction project schedule was extremely accelerated as the building could only be shut down for 8 months between September 2018 and the end of April 2019.

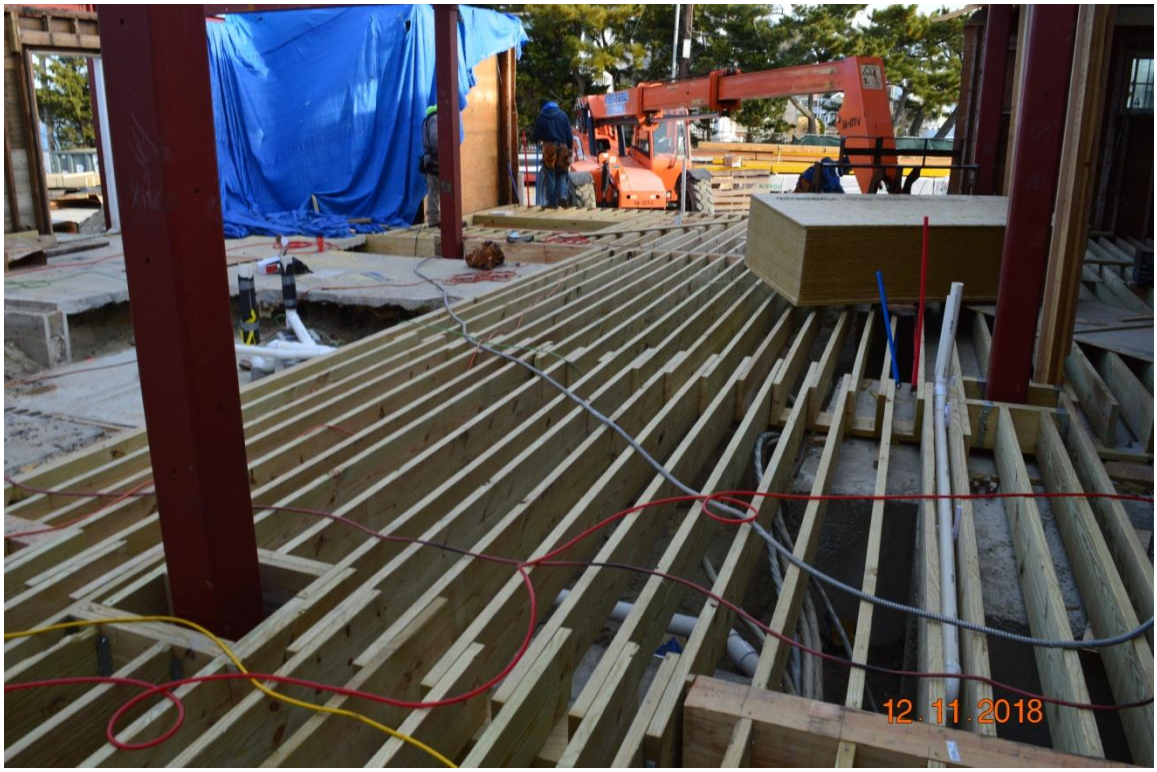
Many complications were uncovered as design began on the project including rot of existing wood framing, existing foundation settlements, unconventional wood framing conditions, and undersized/overloaded wood framing conditions. Existing wood framing supporting the kitchen in the facility was so severely rotted and overloaded that the entire floor area needed to be replaced. Helical piles and concrete pile caps were used for all new steel column and bearing wall locations bounded within the existing building footprint. Many of the helical piles needed to be installed using hand operated installation equipment since heavier construction equipment could not gain access into the existing building. The foundation construction was further complicated by the need to work in existing crawl space areas with limited access and headroom. The new second floor and roof areas are all supported by steel framing with engineered lumber floor joists and a combination of stick framed and engineered wood truss roofs. Temporary shoring was required at many locations to support existing framing that was supported by bearing walls that were being removed with the new project. Existing floor and roof framing was temporarily shored to install the new steel framing. The majority of the addition exterior walls consisted of full height windows and sliding glass doors to provide a view of the bay and create an open air dining experience. The limited amount of solid walls and need for clear open dining spaces mandated that the lateral force resisting system be comprised of steel moment frames.

Since new floor heights for the addition had to match the existing second floor height and Stone Harbor zoning limitations prohibited raising the roof above the existing roof elevation, the new steel framing and floor framing needed to be as shallow as possible. This limitation required beams in several locations to be column type sections with one particular roof girder becoming a W12x87 section to span 37 feet over the new dining area. The new elevator servicing the second floor addition required a 4 foot deep pit in the existing crawl space. The new elevator pit required the installation of several helical piles to support the concrete pit. The CMU walls of the elevator shaft and were used to support many of the existing floor joists and beams that were cut and shored to allow for the installation of the new shaft. All of this work needed to be completed in the existing crawl space.

Overall the Yacht Club is extremely happy with the project and is looking forward to re-opening for this summer season.

Steel columns for dining room addition installed into crawl space on pile caps.

Steel column supported on pile cap in crawl space. New wood framing installed over crawl space to replace rotted floor areas.



Crawl space framing reconstruction.

Additions and renovations under construction.

New steel framing being installed around existing wood construction to remain.

Steel framing for new second floor and roof at addition.

Rendering of completed project.

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

Submitted by:

Print name:	**Signature:**	**Date:**
Paul Constantini		**03/29/19**

Submitting Firm:	**Michael A. Beach & Associates**	
Mailing address:	**200 Birchfield Drive Suite 205 Mount Laurel, NJ 08054**	
Telephone:	**Fax:**	**Email:**
856-273-1909	**856-273-1480**	**paulc@mabeachassoc.com**