

ENTRY FORM



DVASE 2017 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

Buildings under \$2M		Buildings Over \$100M	
Buildings \$2M-\$10M	X	Other Structures Under \$5M	
Buildings \$10M - \$30M		Other Structures Over \$5M	
Buildings \$30M - \$100M		Single Family Home	

Approximate construction cost of facility submitted:	\$3.81 million
Name of Project:	1818 Market Street Façade Repair and Restoration
Location of Project:	1818 Market St, Philadelphia, PA
Date construction was completed (M/Y):	October 2016
Structural Design Firm:	Joseph B. Callaghan, Inc.
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	NA
General Contractor:	Masonry Preservation Group, 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.

1818 Market Street

High-rises and high prices are common in Philadelphia's Financial District and 1818 Market Street is no exception. 1818 could be considered a "grandfather of the Financial District" as it is one of the oldest high-rises along Market Street; housing the headquarters of the banks and consultants that make the District buzz. It is a 40-story skyscraper completed in 1974 - at the time the tallest building in the City. It still holds the title today of being the tallest reinforced-concrete structure in the City of Philadelphia.

Joseph B. Callaghan, Inc. (JBCI) began servicing the needs of the building's façade when small pieces of concrete began to spall from the structure and fall to the street. In October 2015, building management engaged JBCI to manage the façade assessment, design, and construction administration for the entire 981,000 square foot building. JBCI recognized the challenges of the project due to the urgency of repairs needed, populated location, and immense structure size.

1818 Market Street is a mixed-use building with an exterior façade consisting of a cast-in-place reinforced concrete frame with windows between spandrel beams and columns. The concrete columns vary in size and contain a vertical aluminum window washing track mounted inside a cast-in recess. It has a parapet roof and the top 20 feet of the building is corrugated metal siding.

The main challenge of the design process was to develop the different repair type details and project accurate quantities for each. The team began the projection by surveying small, representative sections of the building. Using binoculars and calculations, the team projected the quantity of repairs needed for the entire façade. At the end of the project, the projected quantities were within 5% of actual repair quantities.

Another major challenge to be addressed was the parapet conditions at the roof level. Significant parapet repairs were required to ensure the safety of people on the roof and the pedestrians below. Due to the sensitive location along Market Street, the City's busiest transit and pedestrian corridor, and the weight of the materials to be removed, mast climbers were erected on the north elevation. Suspended swing scaffolding was used on all other elevations.

The building had an existing façade coating that, after power washing, still remained in some sections. The team tested the new coating's adhesion to the old coating to ensure compatibility. In addition to coating, the columns and spandrel beams required major rehabilitation. In spite of these major repairs on such a large structure, JBCI and the team completed the project on time and with little disruption to the surrounding streets below and building's tenants.

1818 Market Street is significant due to the urgency of repairs needed, populated urban location, and immense structure size. Construction costs totaled \$3.81million and the project was completed in October 2016, approximately one-year after work was started.

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

Additional Details of 1818 Market Street Façade Repair and Restoration

Project Team

Joseph B. Callaghan, Inc.

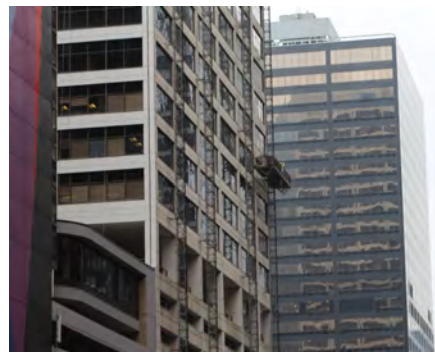
Masonry Preservation Group, Inc. (MPG)

Owner, Shorenstein Properties LLC

Specifications

- 981,000 square feet of office space
- 37 floors with six levels of parking below and mechanical floors at the uppermost levels
- Tallest reinforced-concrete structure in the city
- Mast climbers erected on North Elevation
- Cantilever work/access platform employed along South Elevation due to inability to permanently close alleyway to pedestrian and motor traffic





Mast Climbers - North Elevation



Column corner repair with instruction



Completed concrete repair before coating



Parapet repairs at roof level along Market Street



Completed concrete repairs with coating



Completed concrete repairs before coating



BEFORE:
Concrete repairs in process



AFTER:
Completed concrete repairs
with coating



BEFORE:
General condition of facade before
repair




AFTER:
Condition of building after
repairs and coating

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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