



ENTRY FORM

DVASE 2010 Excellence in Structural Engineering Awards Program

PROJECT CATEGORY (check one):

New Building under \$30M		Other Structures Under \$10M	
New Building over \$100M		Other Structures Over \$10M	
New Building \$30M - \$100M	X	Free Style	

Approximate construction cost of facility submitted:	\$48,000,000
Entry Fee:	FREE
Name of Project:	Towson Town Center Garage Expansion
Location of Project:	Towson, MD
Date construction was completed (M/Y):	1/2008
Structural Design Firm:	Timothy Haahs & Associates, Inc.
Affiliation:	All entries must be submitted by DVASE member firms or members.
Architect:	Timothy Haahs & Associates, Inc.
General Contractor:	Whiting-Turner Contracting Co.

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.

In 2007, the Towson Town Center in Towson, MD embarked on a \$76 million expansion and renovation project. This major project included a 400 space expansion of an existing 500 space parking facility to accommodate the inevitable growth from the mall expansion. Owners of the town center approached this expansion with a “big picture” attitude, choosing to **integrate significant mixed-use space within the garage**. The purpose of this strategy was to better utilize available space, as well as to integrate a downtown atmosphere, creating a greater feeling of community, as well as **an inviting “gateway”** to the town center.

The expanded parking structure created a unique connection between the garage and the shopping center. Popular restaurant chains P.F. Chang’s and The Cheesecake Factory utilize the facility, with restaurant space inside at grade level, as well as outdoor seating areas bringing more pedestrian activity to the street. The garage also shares a corner with Crate & Barrel, one of the town center’s destination stores. Additionally, the garage connects to the mall via an exquisite pedestrian walkway featuring ornate ceilings, vivid lighting and a welcoming connection between the garage and the outside. The walkway connects the garage stair/elevator tower to the mall atrium at the second level, leading visitors through the garage, to the valet area and street and retail areas.

The location of the mixed-use facility on a **tight, oddly-shaped footprint** created significant challenges for the design team, including **the inability to provide a ramp in the expansion area**. The team also incorporated a **unique shearwall layout** to meet the needs of the seismic conditions, as well as the heavy garage loads. Many curvilinear foundation walls were placed throughout the structure due to the unique footprint of the garages combined with the trapezoidal shape of the garage addition. This unique trapezoidal shape also required **the use and construction of skewed double tees** to fit the garage structure properly.

The area available for expansion formed a pentagon-shaped footprint, creating an awkward design layout. To accommodate the 400 spaces needed to serve the mall expansion, each level resulted in an average efficiency of 335 sf/space. The garage expansion included only the horizontal addition of each level. There are no ramps within the expansion area due to its odd shape. Users must enter and exit through the existing garage. The garage addition found some savings in utilizing shared foundations with the adjacent, existing parking structure.

When construction of the garage was nearly complete, the owner realized that a portion of the Crate & Barrel wood floor needed to expand into the garage. As a result, the design team developed a solution to **recess the top two inches of concrete in this section** of the garage so that the store could lay their floor inside. The design also accounted for the installation of an interstitial roof above one of the restaurant areas. Although the waterproofing systems in the garage were sufficient to protect the units below, the team offered this special secondary roof design for the owners’ peace of mind.

The team **salvaged and recycled materials from the old garage onto the new**, implementing sustainable practices where possible. The owner saved metal grates from the façade of the existing garage, and reused them as the grill lattice framework and screening on the new façade. Not only did this provide a cost savings practice for the project, but it also added to the blending of both facades together from the existing structure into the expansion. The team designed the north stair tower with unique storefront detailing over a cantilevered landing to create an open, spacious feeling inside. A single elevator cab serves the entire facility. Two escalators carry shoppers to and from the first and second floor retail establishments.

The successful redevelopment of the Towson Town Center hinged on the **expansion of the parking structure**. The expansion accomplished the primary goal of accommodating significant increases in parking demand as a result of the mall expansion. The owner and design team had a **greater vision for the project**, transforming the entire development, including the streetscape. The integration of mixed-use space and outdoor attractions has changed the environment from a basic indoor shopping center to a vibrant, pedestrian-friendly “main street” atmosphere that will continue to shape the modern character of development long into the future.

Please attach your photos as previously described in the call for entries document and insert captions for the photos in the following boxes.

Photo 1: One of the ornate entrances to the mall from the garage.



Photo 2: The side façade of the parking structure showing P.F. Chang's below.



Photo 3: The corner of the parking structure expansion shows large familiar restaurant chains.



Photo 4: This corner shows the structural merit of the circular tower incorporated into the design of the parking structure.

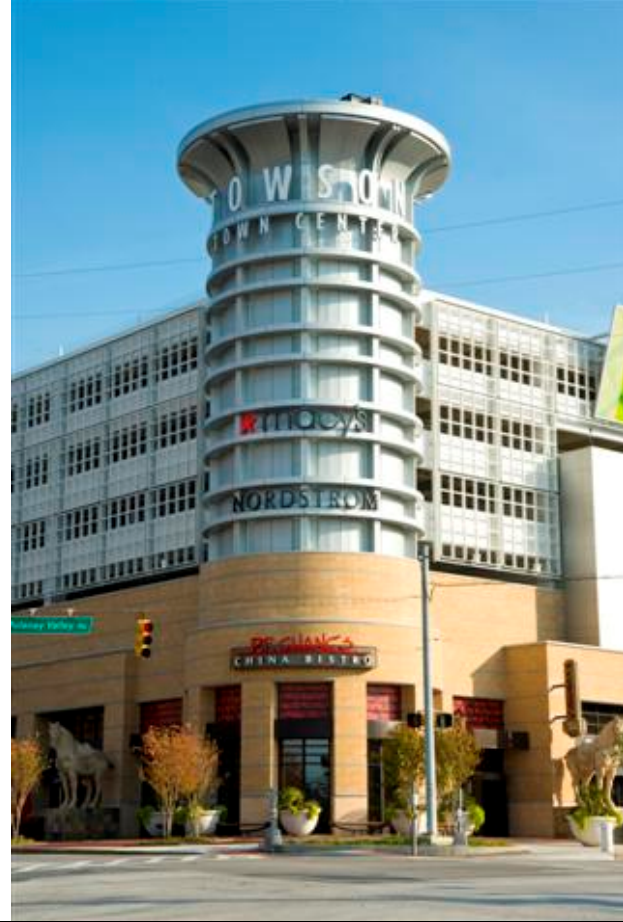


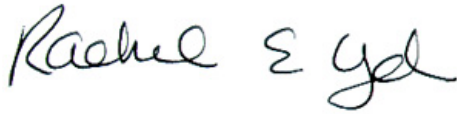
Photo 5: The top tier of the garage is visible at this welcoming entrance to the mall.



By signing, signatory agrees to the following and represents that he or she is authorized to sign for the structural design firm of record:

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Submitted by:

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