

PCANY NEWSLETTER

PRECAST CONCRETE ASSOCIATION OF NEW YORK, INC.

April 2008

Volume 19, No. 4

Helping to Make Concrete Sustainable

Focus of This Issue: Parking Garages

Sky View Parc – A Residential and Commercial Development

Undergoing the final phase of fit out, this Flushing, New York parking structure was the largest garage, at the time, undertaken by Unistress, Pittsfield, MA. (They since have started an even larger one!) Built to park 2633 cars, it equated to 605,500 s.f. of double tees, typically 60' long, 12' wide, and 2'-11" deep. Code called for a 2 hour fire rating, requiring the pre-topped tee flanges to be 5" thick.



Sky View Parc garage construction nearing completion

Photo from Unistress Corp



Sky View Park, Flushing, taking shape

Photo by Unistress Corp

Complicating the layout of the structure, the access ramps are at different locations throughout the garage. The layout had typically 42' column bays and 12 stair towers. Of the 12 stair towers, 10 utilized plant fabricated stairboxes, each with the stair risers pre-installed prior to delivery. The structure is a part of a high rise residential - commercial complex, with some big box stores getting direct access to the parking areas on the east side.

Project Credits: Owner – Muss Brooklyn Development Corp, Forest Hills, NY; General Contractor – CE Flushing, LLC, Flushing; Engineer – DeSimone Consulting Engineers, New York City; Architect – Urbitran/Rosenbloom, New York City; Precast Supplier – Unistress Corp, Pittsfield, MA, whom we welcome as a Producer Member. □

Meetings of Interest –

April 25, 2008 – New York State Concrete Masonry Association Spring Conference, Saratoga Springs : Masonry design – effective compliance to new code provisions; Safe & sustainable – hollow core concrete plank & concrete masonry design; Design & Installation of moisture resistant concrete masonry structures. Registration info at www.nys-cma.org.

May 1, 2008 – Joint Meeting, NYSDOT Materials, Structures, & PCANY, 8:30 a.m. – 12:30 p.m., Meeting Room 125, Concourse Level, NY SOGS, Albany. Agenda (when available) at www.pcany.org. □

Newcrete Products Does Garages

North Street - Bethlehem, PA

The integration of the Parking Authority office and the Bus Terminal into the parking structure, along with the community-friendly architecture, provides a structure that enhances the overall area. The simple and logical pedestrian and vehicular way finding presents the user with an easy-to-navigate structure. Specifications of durability-enhancing features, chloride inhibitors, low water/cement ratio concrete, and high quality sealers will keep the projected maintenance cost low.

Description

- Three-bay single helix with two-bay traffic on the outer ramp and one-way traffic on the two adjacent flat bays.
- The glass-walled elevator tower is next to the pedestrian bridge that links the adjacent retail and office complex.
- Precast concrete framing systems with a maximum usage of plant-topped and washed tees form the

main structural system. The precast facade uses the same thin brick as the adjacent structure and provides an architectural residential neighborhood.

- The Parking Authority was relocated to the 6,300 square-foot office on the first floor level. Additionally, a 2,000 square-foot inter modal bus terminal was located at street level.

Data

Building Dimensions: 175' x 308'
 Number of Tiers: 5
 Supported, 1 on Grade
 Gross Parking Area (square feet): 263,000
 Number of Spaces: 800
 Construction Cost: \$10,200,000
 Cost/Space: \$12,750
 Total Number of Precast Members: 638
 Award Winning Structure 2002

Pennsylvania Parking Association Award of Excellence

Nittany Lion Inn - State College, PA

Located across from the Keller Conference Center and the Nittany Lion Inn, was a one-story parking deck. Phase I expanded the existing structure to six levels with 638 parking spaces. Phase II expanded the structure to accommodate an additional 850 cars. Both facilities recognized the need for a building with an architectural presence. Issues such as frontal views, creation of green space, entry, and movement were addressed to maximize the building's most basic functional elements.



Description

- Parking structure was expanded horizontally three bays at heights to match existing levels.
- Parking structure was initially a single-threaded helix with two-way ninety degree parking. After the expansion, it was converted to a double threaded helix with one-way angled parking.
- Construction and restriping of the new expansion resulted in a total of 1488 parking spaces.

Phase II Data

Building Dimensions: 272' x 168'
 Number of Tiers: 5 Supported, 1 on Grade
 Gross Parking Area (square feet): 221,000
 Number of Spaces: 850
 Construction Cost: \$1,900,000
 Cost/Space: \$10,700
 Total Number of Precast Members: 1095

(continued on next page)

University Avenue - Philadelphia, PA

In May 2000 a team was commissioned to design the University Avenue Parking Facility. The site, where the Philadelphia Civic Center was previously located, is considered a major gateway to the University of Pennsylvania and the Children's Hospital of Philadelphia. The exterior facade is dramatically presented with curved spandrels to maximize the boundaries of the property. The structure is designed with a four bay, grid column system.

Description

- Design is a double-threaded helix ramping system allowing for rapid one-way vertical travel.
- Curved precast components enhance the attractiveness of the large parking structure.

- Maximum usage plant-topped and washed tees form the main structural system.
- Largest parking structure located within the city limits of Philadelphia.
- Architectural Panels were produced with six distinct finishes to create a blended, unique exterior appearance.

Data

Building Dimensions: 291' x 310'

Number of Tiers: 9 Supported, 1 on Grade

Gross Parking Area (square feet): 660,000

Construction Cost: \$23,000,000

Cost/Space: \$11,598

Total Number of Precast Members: 638



The above articles were provided by Newcrete Products, Division of New Enterprise Stone & Lime Co., Randi Romani, Collegetown, PA. □

On-site Training Network Courses: May 7, 2008 Inspection of Existing Residential On-site Systems, May 28-29, 2008 Alternative On-site Wastewater Treatment Technology Training, both at the NYS Fairgrounds, Syracuse. Info & registration at www.wastewater.delhi.edu. □

No Gambling With Precast – It’s A Sure Bet For Parking Structures



L.C. Whitford Materials Co. expanded their product capabilities into parking garages not too long ago, as shown in their website photo of the Seneca Allegany Casino structure. And they have another similar facility in the works – watch for it in a future Newsletter.

Currently, there are two very helpful publications related to parking structures available from the Prestressed Concrete Institute: Maintenance Manual for Precast Parking Structures, MNL_136_04, intended for the owners, operators, architects, and engineers of precast parking structures in order to assist them in extending their structure’s service life; and Parking Structures: Recommended Practice for Design and Construction, P_MNL-129-98. These can be purchased very reasonably from the PCI Bookstore, or downloaded from the Knowledge Bank on their website, www.pci.org/publications/parking/index.cfm. If you need some help, please contact us at PCANY. □

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Median USA Parking Structure Construction Costs 2008

Carl Walker Parking, Kalamazoo, MI recently published their annual (since 2004) Construction Cost Outlook, and to quote from Joey D. Rowland, PE: "Reality vs. Perception – the reality is that the cost of parking structures appears to have stabilized compared to previous years. However, the perception among some is that the cost of parking continues to increase at an alarming rate". So their latest letter examines the realities and perceptions, attempts to explain the difference, and offers representative costs around the country. Overall, he reports the 2008 median parking structure construction costs are \$14,631 per space, or \$44.39 per square foot. Contact him at jrowland@carlwalker.com. □

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