

White Plains City Center Garage • Parking Deck

LOCATION

Martine Avenue
White Plains, New York

OWNER

Joint Venture:
LC White Plains
Development;
Cappelli Enterprises,
Valhalla, NY

ARCHITECT

Street-Works Development
and Consulting Group
30 Glenn Street
White Plains, NY

ENGINEER

Desman Associates
49 W. 37th St.
New York, NY

GENERAL CONTRACTOR

George A. Fuller Company
115 Stevens Avenue
Valhalla, NY

PRECAST PRODUCER

UNISTRESS Corporation
550 Cheshire Road
Pittsfield, MA
(1,900 precast elements)

LIGHTWEIGHT EXPANDED AGGREGATE PRODUCER

Norlite Corporation
Cohoes, NY
(1,100 double tee supports
with 16,500 yd³ of Norlite
aggregate)

Structural Lightweight Concrete Reduces Deadload and Improves Fire Rating In 11-Story Parking Structure



Parking garage as seen from Martine Ave. Exterior thin brick spandrels are shown.



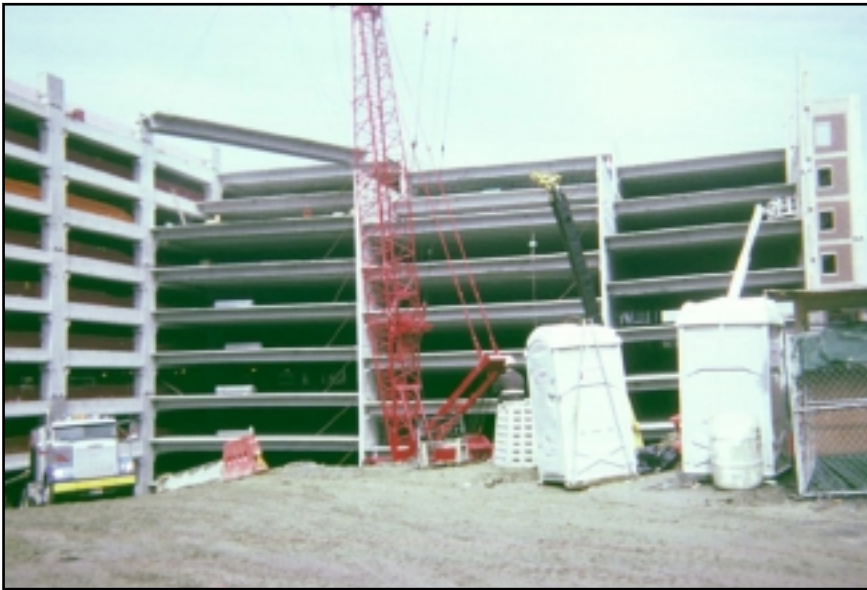
1,100 lightweight double tee deck members were used to reduce dead load and improve fire rating.

1,100 Lightweight Concrete Double Tee Supports Used in New White Plains Parking Garage for Mall, Condos and Apartments

The new White Plains City Center Garage provides parking for a shopping mall, condos, apartments, and the public in downtown White Plains, New York. The garage also includes a top floor with a health club, swimming pool, and meeting room facility.

The parking facility provides more than 723,000 square feet of structural deck on 10 levels. It was designed and constructed for adding a future level with the health club and pool. Work on the base structure was completed in the first half of 2003. Work on the health club addition (11th floor level) is already under way.

Some of the structural members, particularly the precast columns, are massive in size. The largest are 6' x 3' at the base and were cast with 10 ksi concrete. Column sections were limited to two and three stories in height in order to keep lifting weights to a practical size for erection. 1,100 pretopped double tee deck members were cast with structural lightweight concrete to reduce dead load and improve fire



Parking facility under construction



Plaza side view of parking structure



View of parking structure from Martine Ave.



View of parking structure from Martine Ave.

rating. 16,500 yd³ of Norlite structural lightweight aggregate was used in the lightweight concrete. Interior light walls and full depth exterior walls were used for lateral restraint in both directions.

1,900 precast pieces were required on the project excluding the health club. A 300-ton crane with a luffing jib was used for the primary setting crane. Erection started in November 2002 and was completed in June 2003. In some areas erection was begun three levels below street-level grade.

Some of the exterior full-depth spandrels, shown in bottom 3 photographs, are finished with thin brick. The panels are highlighted with lightly sand-blasted buff concrete. The facade design and brick detailing help the large parking structure to blend harmoniously with the character and architecture of the surrounding buildings.



View of parking structure from Martine Ave.



One of City Center's two 35-story towers rises behind the structural lightweight concrete parking structure

White Plains Finds Its Head

In 2000, the architectural and planning firm of Beyer Blinder Belle, LLP, was retained by the city of White Plains to study viable options for development of a significant architectural presence in the center of the city. Frederick Bland, a principal with the firm said, "I call White Plains a city with shoulders, but no head." In other words, the city had no architectural focal point, no elegant buildings that rose from the city's skyline.

The city passed an ordinance raising the height limit for buildings within the city's center to 350 feet. This opened the way for the development of an entire city block in the heart of downtown White Plains. The \$320-million project, called City Center, is a 1.1-million-square-foot residential, entertainment and retail complex featuring twin 35-story towers, an 11-story parking garage, and two plaza parks with specimen plantings, landscaping and fountains. The project is being touted as the catalyst for the revitalization of downtown White Plains.

For Additional Information About Structural Lightweight Aggregate

NORLITE CORPORATION

628 S. Saratoga Street • Cohoes, NY 12047
578-235-0030 • Fax 578-235-0233 • email: farchambault@norliteagg.com
www.norliteagg.com

Expanded Shale, Clay and Slate Institute

Suite 102 • 2225 Murray-Holladay Road • Salt Lake City, Utah 84117
801-272-7070 • Fax 801-272-3377 • e-mail: info@escsi.org
www.escsi.org