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Carmel City Center Project Spotlight: October 2012



LOCATION:
Carmel, IN

ARCHITECT:
Pedcor Design Group, LLC
Carmel, IN

GENERAL CONTRACTOR:
Smock Fansler Corporation
Indianapolis, IN

LATICRETE INSTALLER:
Santarossa Mosaic & Tile Co. Inc.
Indianapolis, IN

LATICRETE DISTRIBUTOR:
Architectural Brick & Tile
Fishers, IN

Vibrant City Center Fortified by LATICRETE

by Tanja Kern

In Carmel City Center, Indiana's new landmark destination, residents and business professionals need only step out of their front doors to access unique retail stores, a mixed bag of highly rated restaurants and great entertainment for just about anyone. The one million square foot, \$300 million, mixed-use project was developed on a 15-acre site in the heart of Carmel, Indiana, by the City of Carmel, the Carmel Redevelopment Commission and Pedcor City Center Development Company.

Inspired by Carmel Mayor Jim Brainard, the lifestyle center includes luxury residences, retail shops, cultural landmarks and dining. It is an elegant oasis of activity that features two acres of clay-paved city streets, a roundabout and plazas that are punctuated with urban fountains, echoing the charm and vibrant urban activity of European piazzas and streetscapes.

Architecture firm Pedcor Design Group said it chose to use clay pavers for the surface of the plazas, streets and public ways because "clay is a material with a pedestrian friendly human scale, and it possesses a timeless vibrant color." The designers specified Pedestrian ASTM 902 clay pavers on sidewalks and Vehicular ASTM1272 clay pavers on the streets and the roundabout. The very complex paver design required a matrix describing 42 unique paver sizes and patterns using seven colors of clay pavers. Drawings were printed in color to facilitate installation of the complex design and minimize errors in the field.

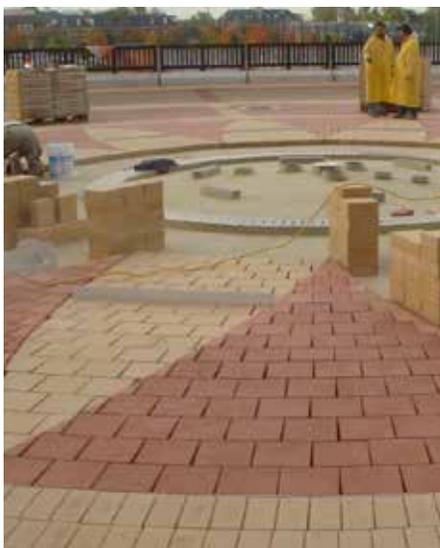
Hanover Square Plaza

The focal point of the City Center project is Hanover Square Plaza, which contains a symmetrical flush fountain and a center "geyser" water feature.

The paved periphery around the fountain was of special concern to the engineering and design team because the surface would be continuously wet during the summer months. Therefore, the paver surface had to be designed to be impervious to water, engineered for foot traffic and sloped so that water in the area around the fountain drains back into the custom 16-foot stainless steel spray ring in the center.

"After much research and several discussions with the LATICRETE technical staff and product representatives, our firm chose to use a single source system of waterproofing, mortars and sealants that could be warranted for a long period of time," said Pedcor Senior Project Architect Donald S. Slander NCARB, AIA, CSI. "We chose LATICRETE because it manufactures products that meet the project requirements, are recognized as a standard in the industry and has been successfully used by our contractor and subcontractor for many years."

Santarossa Mosaic & Tile Co. Inc. of Indianapolis, Ind. managed the intricate brick installation, which was coordinated by Project Manager John Rigby. The use of LATICRETE products became crucial to the success of the installation because they helped the team install the brick swiftly,



expertly and within the established construction deadline. Rigby also relied on the long-term, high-performance guarantee of LATICRETE® products.

The Santarossa team successfully set the pavers in place by using LATICRETE 254 Platinum, the ultimate one-step, polymer fortified, thin-set mortar ideal for exterior paver and brick projects. Before putting down the pavers in wet areas, the team applied LATICRETE Hydro Ban® the high-performance thin, load-bearing waterproofing/crack isolation membrane.

Project Engineering

The project, which won the Brick Industry Association's 2012 Brick in Architecture Award or Paving & Landscape Architecture, was a complicated feat, to say the least. Seismic design considerations required the separation of buildings from walks and streets and the parking garage below the elevated plaza deck. Design of walkway and street expansion systems required the integration of pavers and setting bed into the overall composite design.

The team designed a 24-inch-thick clay paver sandwich consisting of a concrete mud slab, 360-ml waterproof membrane that is sloped to an internal drainage system and is supported by a precast concrete parking garage structure.

Structural constraints of the plaza sandwich thickness and overburden loads required a tolerance of +/- of 1/4-inch in curb and pavement finish elevation design. The plaza's secondary internal drainage system required the slopes of all mud slabs to be engineered in relation to the finish, and there were two drainage systems used in this project. The street paver surface

drainage was a combination of conventional curbs and cast iron curb boxes with custom concrete overflow drains. The plaza's stacked construction has a secondary drainage system consisting of a 360-mil waterproof membrane and proprietary leak detection system over a concrete mud slab sloped to a series of internal drains.

Engineered slopes were required to accommodate pedestrian and integration of fountain equipment into the plaza structure. On the plaza walkways, the clay pavers were set on a bituminous setting bed. At wet areas around the central fountain, pavers were mortar-set over LATICRETE Hydro Ban using LATICRETE 254 Platinum thin set mortar. LATICRETE Latasil™, the high-performance silicone sealant was used at the expansion joints, which were created to accommodate paver movement and ensure a watertight condition. The entire area was grouted with durable, high-performance cement-based LATICRETE PermaColor™ Grout.

The Hanover Square installation is the social and architectural focal point of the Carmel City Project. Thanks to a seasoned team of professionals and a family of highly technical installation products from LATICRETE, the square will be the heart of the vibrant urban center for decades — if not centuries — to come.

