

PROJECT: PORCELANOSA NEW YORK CITY

FIRM: GILSANZ MURRAY STEFICEK NEW YORK CITY

n autumn 2015, Porcelanosa, a Spanish manufacturer of tiles and kitchen/bath finishes, opened a new 18,000-square-foot New York showroom at 202 Fifth Ave. Occupying the former Commodore Criterion building, the store required a full gut renovation to create seven levels within a building envelope that previously had only six levels. In contrast, the terra-cotta exterior is regulated by the NYC Landmarks Preservation Commission and could not be significantly altered.

The new interior consists of a three-story public showroom extending from the basement to the second floor and a materials library for designers at the upper levels. There are two floors of offices in between.

The original structure consisted of wood-

framed floors supported by a line of four cast-iron columns, which were eliminated during the demolition and floor heights were redistributed. The western portion of the new floors includes the concrete core and 8-inch flat-plate con-

crete slabs. The remaining floors consist of steel beams and 4-inch concrete metal deck slabs resulting in column-free open layouts.

Ramon Gilsanz

Because the wood-framed floors braced the exterior masonry wall, demolition had to be coordinated with temporary shoring until the new floor slabs and frames were installed.

"We did a lot of work with the construction sequencing," says Ramon Gilsanz, founding partner of Gilsanz Murray Steficek, which provided structural and stability engineering for the project, as well as special inspection. "We also worked with the architect so that the new floors were not exactly at the same elevation with the old floors, which meant the demolition of the

old floor and construction of the new floor could be done independently."

The new structure is heavier than the original and the anticipated live loads are also much higher. Whereas office buildings typically

assume live loads of 50 psf, the showroom is designed for live loads of 125 psf. Flat-jack testing showed that the existing exterior masonry walls were not strong enough to support the required loads.

Shotcrete was used to reinforce the original masonry perimeter walls to support the gravity loads from the steel floor beams. New pile foundations were installed to support the concrete core and new shotcrete walls. To make room for the 48-inch pile caps, portions of the existing masonry walls had to be undercut about 12 inches. The pile sections were installed one at a time, with a maximum undercut span of 6 feet.