

CONTEMPORARY

STONE & TILE design

www.cstdmag.com A **bnp** PUBLICATION

Summer 2014 Volume 21 No. 3

Coverings product review
Installation case studies



Upscale urban lifestyle elegantly displayed in Mexico

Exterior stone facade installation creates luxury
feel at premier condominium complex

San Pedro Garza Garcia is one of the wealthiest neighborhoods in the metro area of Monterrey, the third largest city in Mexico. Families in San Pedro have lived there for many years — even centuries. As the newest generations wish to settle near their friends and relatives, but with all modern amenities, they have turned to apartment/condominium-style living.

The El Alear Condominium complex has met their needs with elegance and beauty. The project, designed by Dr. Esteban Astudillo and architect Agustín Landa Ruiloba, comprises four connected buildings that house a total of 46 exclusive luxury condominiums, with a separate lobby for each of the buildings.

The entire facade of the condominium buildings is covered in large-format Chinese limestone (1

meter long x 50 cm wide x 2 cm thick) with a fiberglass-reinforced backing. Two colors of the limestone — Silk Georgette and Brown Serpentiatta — were selected by the owner's representative and were imported to Mexico by Marmoles Arca of Monterrey, Nuevo León. Each stone tile weighs approximately 40 pounds and has a honed finish. The installers protected the surface of the stones with a penetrating sealer before they were set in place.

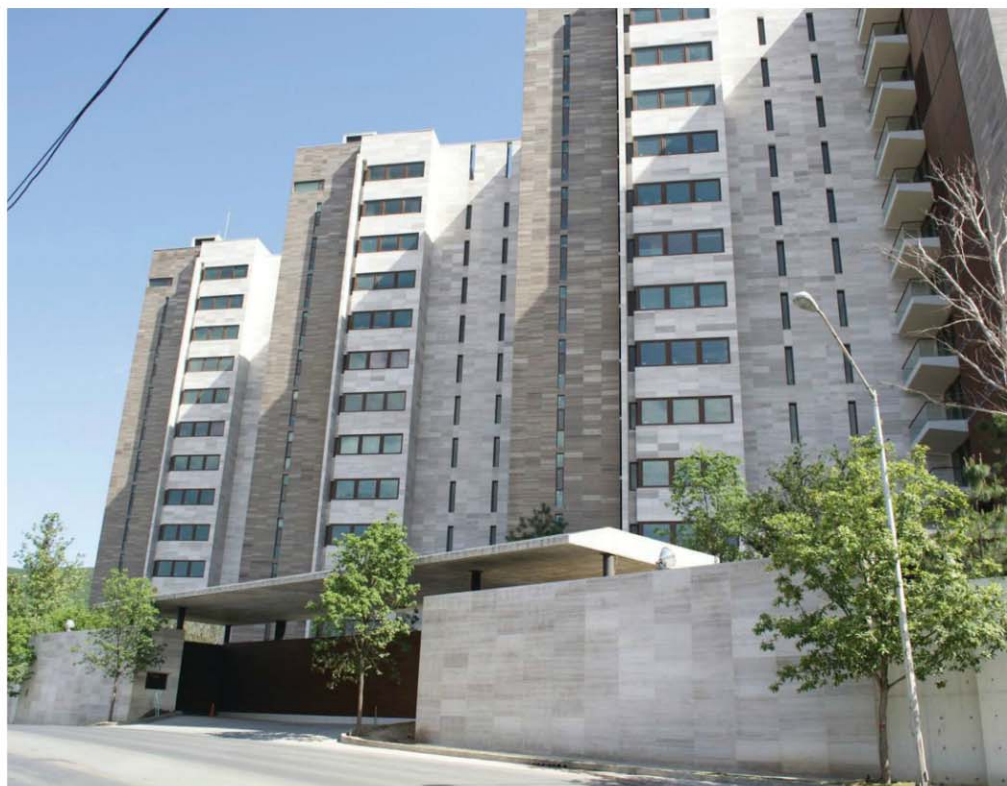
Tiling the 400,000 square feet of the facade was a challenge because Monterrey has a very hot and very windy climate, so the installers had to work quickly. The work took place from January 2013 to January 2014. The primary installation process used mortar and grout, which was supplemented with mechanical anchoring of each stone as an increased safety precaution for the nearly



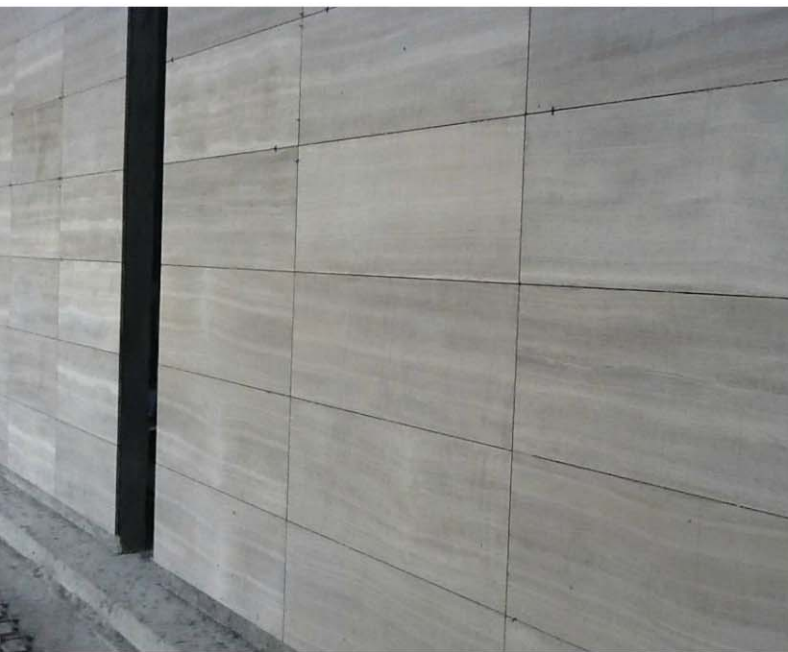
The El Alear Condominium complex in San Pedro Garza García, Monterrey, Nuevo León, Mexico, which were designed by Dr. Esteban Astudillo and architect Agustín Landa Ruiloba, comprises four connected buildings that house a total of 46 exclusive luxury condominiums, with a separate lobby for each of the buildings.

40-pound tiles. The tiles were adhered to a concrete substrate.

The installation of the large-format tiles required a superior adhesive with excellent bond strength. Mapei's Ultraflex LFT (large-format tile mortar) and two other competitive mortars were considered for the installation. One of the products did not completely meet the architectural specifications, which narrowed the decision to two mortars. "Pull" tests were performed onsite by the Engineering Department of the local university, Universidad Autónoma de Nuevo León (UANL), to measure bond strength. The purpose of the test was to measure the maximum tensile strength of tile on concrete. The test sample is



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The primary installation process used mortar and grout, which was supplemented with mechanical anchoring of each stone as an increased safety precaution for the nearly 40-pound tiles. The tiles were adhered to a concrete substrate.



Using Ultraflex LFT from Mapei of Deerfield Beach, FL, allowed the installers to create a smooth flush look to the tiles all along the installation.

subjected to increasing tensile stress until failure occurs. The weakest path could be along an interface between two layers or a cohesive failure within one layer or a combination of these.

The competitive product failed at 2,100 pounds, but Ultraflex LFT reached a force of 4,000 pounds. At this point, Ultraflex LFT had reached the maximum limits of the testing machine's capabilities without being pulled off, and the university technicians ended the test. Because of the superior results, Ultraflex LFT mortar was selected for the installation.

Another challenge that was solved through the use of Ultraflex LFT was the issue of the flatness of the exterior surface. The plumb of the wall was not always straight over the entire 10-story height of the building, creating a need for a medium-bed mortar that could, within limits, compensate for irregularities in the flatness of the extended surface. Using Ultraflex LFT allowed the installers to create a smooth flush look to the tiles all along the installation.

Efflorescence frequently occurs after a new tile or natural stone installation has been completed and is often seen along the grout lines. Specially formu-

lated Ultracolor® Plus rapid-setting floor and wall grout contains no Portland cement, thus virtually eliminating common problems related to typical grouts such as mottling, color inconsistency and efflorescence. For this reason, the installers used Ultracolor Plus to grout the 400,000 square feet of limestone facade.

Each of the buildings is designed to have only one single apartment per floor. Two elevators and a set of service stairs provide access to each apartment. None of the apartments look into each other, thus affording complete privacy. As each apartment is sold, the owners get to choose their own finishes.

For those who chose tile, whether just for the bathrooms or for all floors in the apartment, the tiles were set with Ultraflex 2 mortar as specified by El Alear. Mapeguard 2 was installed for soundproofing between floors above ground level. The bathrooms were treated with Mapelastic AquaDefense for waterproofing. In the striking lobbies of each building, as well as other common areas, porcelain stone tiles were also set with Ultraflex 2.

When the project was completed, the installers had created a world of comfort, beauty and luxury for the inhabitants of El Alear Condominiums. ■

**El Alear Condominiums
San Pedro Garza Garcia
Monterrey, Nuevo León, Mexico**

Job Conditions: Tiling 400,000 square feet of the facade was a challenge because of a very hot and very windy climate. Installers had to work quickly. Additionally, the plumb of the wall was not always straight over the entire 10-story height of the building, creating a need for a medium-bed mortar that could, within limits, compensate for irregularities in the flatness of the extended surface.

Products Used: Ultraflex LFT (large-format tile mortar), Ultracolor® Plus rapid-setting floor and wall grout, Ultraflex 2 mortar, Mapeguard 2 and Mapelastic AquaDefense for waterproofing — all from Mapei of Deerfield Beach, FL

Architect: Arq. Agustin Landa Ruilobo

General Contractor: Postensados y Diseños de Estructuras S.A. de C.V.

Structural Designer: Dr. Esteban Astudillo