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Schluter Systems L.P.

Making an entrance:
Key factors for beautiful,
enduring entryways and foyers

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Tiling entryways and foyers

How to successfully install tiles in high-traffic areas prone to water, dirt, and movement stresses

By Sean Gerolimos, Schluter Systems LP

Entryways and foyers vary in size, use, and style, depending on the type of building. Despite their inherent differences, there remain various requirements that apply to virtually every case. Much of the building traffic will enter via the entryway or foyer, making these spaces ideal for creating positive first impressions.

Ceramic tiles are durable, hygienic, and offer a wide range of design palettes, making them a perfect fit for these applications. A comprehensive installation system will ensure a successful tile applica-

tion, thereby creating an entryway and foyer that is both attractive and durable, and sets the tone for the rest of the building.

Mitigating movement stresses

Virtually all substrates present significant challenges for ceramic

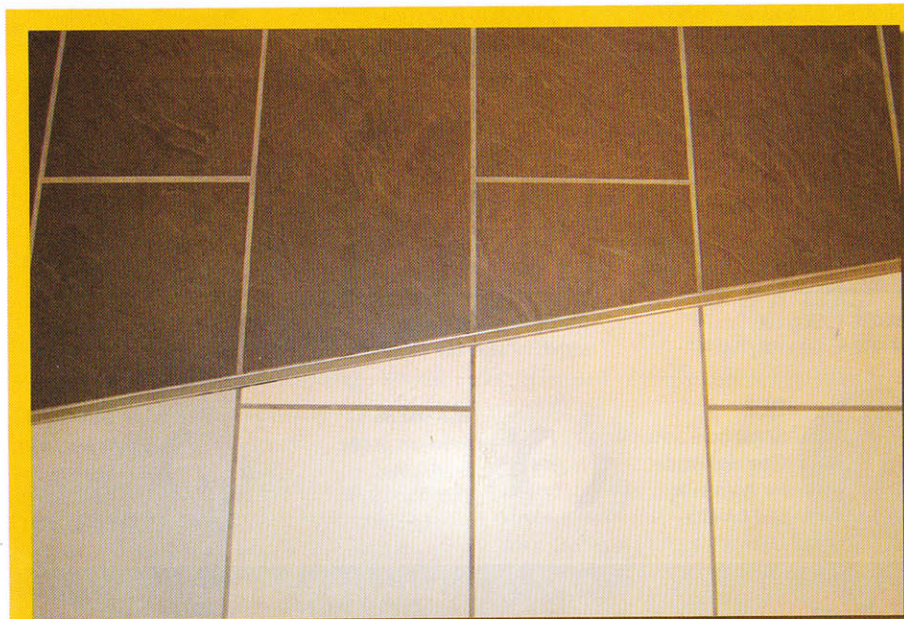
▲ A configured uncoupling membrane with an anchoring fleece laminated to the underside was installed throughout the entire 56,000 square foot area of The Grand Waikikian at Hilton Hawaiian Village Waikiki Beach Resort, allowing control joints to be used where the design allowed. (See sidebar on page 30.)

tile coverings. For example, all wood materials, including plywood, OSB, and framing members, are subject to expansion, contraction, bending, and deflection due to changes in moisture content and loading. Concrete, often considered a “good” substrate for tile, moves at a different rate than tile with changes in temperature, shrinks during the initial drying process as excess moisture is lost, and often cracks. This results in stresses in the tile covering and risks of cracking and delamination when tiles are bonded directly to the substrate using the thin-bed method.

Uncoupling membranes provide lateral flexibility and independent movement between the tile and

substrate, limiting the transfer of movement stresses. This protects the tiles from damage, thereby improving the performance of thin-bed assemblies. This method is based on a configured membrane with an anchoring fleece laminated to the underside. The membrane is bonded to the substrate by embedding the anchoring fleece in thin-set mortar. The top of the membrane features a grid of cavities that provide a mechanical lock for the thin-set mortar used to set the tiles. Support for the tiles is ensured by the column-like mortar structures formed in these cavities, which carry the loads from the tiles to the structural base.

Because all tile coverings expand and contract with chang-



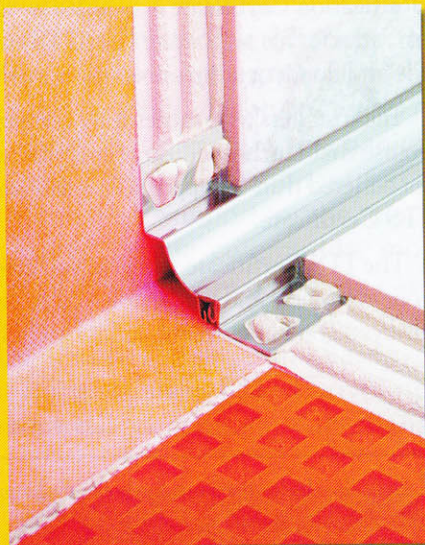
Movement joints are a low-maintenance way to protect the tile assembly in high-traffic areas.

es in moisture, temperature, and loading, movement joints are an essential component in any tile assembly. Prefabricated movement-joint profiles can replace sealant joints in tile fields and at restraining surfaces. These profiles provide a maintenance-free alternative to sealant joints that typically require periodic replacement. They also protect tile edges and improve the integrity of the tile assembly as a whole.

Waterproofing protects moisture-sensitive substrates

Inhabitants or visitors often track dirt, dust and water on their shoes when they enter the building. Uncoupling membranes are typically waterproof and offer essential protection for moisture-sensitive substrates. For complete waterproofing, seams and floor-to-wall transitions can be sealed

with bonded waterproofing membranes. Waterproofing floor-to-wall transitions ensure that moisture from the outdoors and from cleaning solutions will not penetrate and damage the base of gypsum board walls.



Cove profiles provide a wall-to-floor transition that is easy to clean in public areas.



A configured uncoupling membrane provides the load support and stress relief required in busy entryways.

Uncoupling membrane saves the day at The Grand Waikikian

About four years ago, A-1 Construction Corporation in Honolulu, Hawaii installed 56,000 square feet of tile throughout the main lobby, breezeways, terraces and elevator lobbies in The Grand Waikikian at Hilton Hawaiian Village Waikiki Beach Resort. As the name implies, the resort is located on Waikiki beach and strives to make a first and lasting impression consistent with their oceanfront paradise location. The tiled floors were designed and constructed to be as eye-catching as the rest of the lobby design, but they also have to stand up to frequent foot traffic.

Part of the design plan for the floor called for granite inlays to be placed within the porcelain tile field. Patterns were cut in the porcelain tiles using a water-jet system. The inlays were cut in the same way and custom-fit into their locations on the floor, creating a striking design in high profile areas of the resort.

This design created limitations on where control joints could be used on the floor, but the assembly still needed to accommodate potential movement issues. A configured uncoupling membrane with an anchoring fleece laminated to the underside was installed throughout the entire 56,000 square foot area, allowing control joints to be used where the design allowed. This assembly allows the necessary independent movement between the tile and the substrate so the floor can continue to look luxurious and meet all of the performance needs of this idyllic resort for many years.

Profiles enhance and finish tile bases

While wood bases are very popular and can be installed over bonded waterproofing membranes, tiled bases or wainscotings are more durable and hygienic in the long run. Poorly-designed floor-to-wall transitions, however, can collect dust and dirt and are difficult to keep clean. Cove base is a ceramic base that provides a rounded transition between the floor and wall, thus making cleaning easier. When tile lines don't include cove base or other ceramic trim pieces, cove-shaped profiles provide a solution. They can be integrated with field tile to create a smooth, easy-to-clean transition that enhances the overall aesthetic appeal of the application.

The availability of ceramic tile trim supply can be spotty, depending on the manufacturer. In fact, imported European tile lines may not provide trim at all, since ceramic trim has limited use overseas. Wall profiles are an alternative to ceramic trim, which can be used instead of surface bullnose or to finish and protect tile edges at outside wall corners and at the top of tile bases and wainscotings. A variety of accessories, including inside and outside corners, are available for most wall profiles.

Profiles are effective at floor-covering transitions

While most of us in the tile industry would prefer to see tiles used

on floors throughout the building, in reality there is a need for clean transitions from tiled entryways and foyers to adjacent floor coverings, such as hardwood or carpet, particularly in residences. Floor profiles are used to finish and protect tile edges at these transitions, with sloped profiles available to address height differences between tile coverings and adjacent floor coverings. In fact, many of these profiles provide slopes that comply with the guidelines in the

Americans with Disabilities Act.

Entrances that combine beauty with durability

Ceramic tiles are durable, hygienic, and offer a wide range of design options, making them the ideal covering for entryways and foyers. A comprehensive system approach as presented above will help ensure an attractive entrance into a home or public building that successfully combines beauty and utility with long-term durability.



Clean transitions are essential between dissimilar floor coverings.