

## A CUSTOM Case Study

GRAND CAYMAN AIRPORT - GEORGE TOWN, GRAND CAYMAN

# Grand Cayman Airport is Ready for Travelers with Stain Proof Fusion Pro® Grout



Over two million visitors arrive each year to experience the pristine color of the Cayman Islands' famous beaches, waters and coral reefs. To support record levels of travel, Owen Roberts International Airport (ORIA) on Grand Cayman has been expanded and renovated with large format tile. The airport now features a dome shaped like the shell of a sea turtle, an iconic symbol of this Caribbean paradise. Fusion Pro® Single Component® Grout was specified at ORIA for stain proof and color perfect performance as part of a full CUSTOM tile installation system.

Both Arrivals and Departures have been extended over multiple phases and a new food court is planned. Customs and the passenger greeting areas are more spacious, with increased service areas and accommodation for additional luggage carousels, and the airport can now service larger aircraft.

The tile installation system at ORIA was selected with the needs of the tile, the travelers, concourse movement and the tropical climate in mind. Architectural firm RS&H specializes in global aviation projects and has previously specified CUSTOM systems on large scale commercial construction.



130,000 square feet of large format 24" x 24" porcelain tile and 6" x 12" cove base was installed at ORIA to match the increased scope and scale of the airport. Crossville's Structure Porcelain Stone® Tile in Shale, Gypsum and Sandstone provides a contemporary, minimalist background for the wonders of the natural world waiting outside the airport.



Large format tile longer than 15" requires a non-slump, polymer-modified mortar to support its weight and prevent lippage that can be caused by doming. Truly flat tile assemblies are especially important at transportation hubs with wheeled traffic in order to prevent chipped tile edges. Tiles at ORIA were set with VersaBond®-LFT Professional Large Format Tile Mortar. VersaBond-LFT exceeds ANSI A118.4 and A118.11 and can be placed up to 3/4" on horizontal applications to assist with bedding large and heavy tile.

### Protecting Large Format Tile

Where needed to meet flatness requirements for large format tile, LevelQuik® RS Self-Leveling Underlayment was placed up to 1-1/2-inches deep. LevelQuik is a rapid-setting formula that can achieve an extra heavy-duty service rating for use in high-impact environments like airports. LevelQuik® Advanced Acrylic Primer, which can be used over both porous and non-porous concrete, was applied prior to leveling.

Surfaces to receive tile were prepared with RedGard® Waterproofing and Crack Prevention Membrane. Two coats of RedGard were applied to provide crack isolation exceeding ANSI A118.12 as well as ANSI A118.10 waterproofing protection. This versatile, liquid-applied, elastomeric membrane isolates in-plane cracks up to 1/8-inch and is rated for extra heavy-duty service.



"The installers' favorite product is the VersaBond-LFT; it is easy to use and works well under the 24 x 24 tile," offered Steve Gaffing of McAlpine Ltd.



Due to micro-textures, variable tile coatings, tile porosity and the potential for pigment stains, a quick and inexpensive pre-treatment may be recommended. No sealer or release product was needed, but installers applied Aqua Mix® Grout Release prior to grouting because it further speeds both application and clean up.

The second step was training installers in the team method to maximize Fusion Pro's advantages on a large job. Using a simple, rotating formation, 3-4 installers worked in an assembly line. The first worker spread grout in a small area, another followed to shape grout joints and 1-2 more removed excess from the tile and completed the cleaning.

### Fusion Pro® Grout

Today's tile-driven design focuses additional attention on the grout, so the joints need to look perfect. Fusion Pro® Single Component® Grout was chosen at the airport for its key benefits to the project owner: stain proof, color perfect performance. All of the heavy traffic tracks innumerable staining agents over the tile and Fusion Pro offers the most technologically advanced, non-epoxy grout protection against stains.

Fusion Pro is the original, authentic single component grout. Its unique, patented formula means that Fusion Pro is installed and maintained differently than more familiar cement or epoxy grouts. Most notably, Fusion Pro is applied and then cleaned immediately, plus it never needs the additional step of sealing to provide stain protection. Fusion Pro is ready to use from the bucket, preventing common jobsite issues of mixing such as over-watering and color variation. Single component grout delivers labor savings with no reliance on proper water ratios or time typically required for slaking or sealing.

"Fusion Pro was a very good product as it involves no mixing, has the same color throughout the job and comes in a usable size tub," said Gaffing. The grouting process began with two key steps to increase efficiency and overall production - always a concern on any project awaiting a return to service. First, the grout was tested on mock-ups to see if use of a grout release was required.



These first-time Fusion Pro installers learned that use of the proper tools, such as a medium-hard SuperiorBilt float, microfiber towels and clean water, allowed fast clean up with no accumulation of grout haze.

With no need to return and seal the grout, tiled surfaces were opened to light traffic in 24-36 hours. Permanently flexible Commercial 100% Solids Silicone Sealant was used to fill all soft joints to accommodate expected movement. The Urban Putty color was chosen for both grout and sealant to unify the three tile colors used on the project.



**PRODUCT USED** – LevelQuik®

Advanced Acrylic Primer; LevelQuik® RS Self-Leveling Underlayment; RedGard® Waterproofing and Crack Prevention Membrane; VersaBond®-LFT Professional Large Format Tile Mortar; Fusion Pro® Single Component® Grout; Aqua Mix® Grout Release; Commercial 100% Silicone Sealant

**LOCATION** – George Town, Grand Cayman, Cayman Islands

**YEAR COMPLETED** – 2018

**ARCHITECT** – RS&H, Tampa, FL

**CONTRACTOR** – McAlpine Ltd, Grand Cayman, Cayman Islands

**TILE CONTRACTOR** – Paramount Carpet, Grand Cayman, Cayman Islands; Mozaic Creations, Grand Cayman, Cayman Islands

**CBP ARCHITECTURAL CONSULTANT** – Nick Macrino, CSI, CCTS, CDT, CCSMITT, commercial architectural services representative; Roger Serrano, CTC, territory manager

**CBP REGIONAL TECHNICAL REPRESENTATIVE** – Cairo Molina, CTC, regional technical services representative

**Logistics**

Like any construction project, this one included its share of challenges but ORIA offered a couple of twists. Instead of running on “island time,” a remote tropical project like this requires a great deal of additional planning. In this case, shipping product actually means getting it onto a certain container ship in time, while keeping an eye on the weather to avoid delays. An even greater challenge was working in both new and renovated areas while maintaining the schedule and security concerns at a fully operational airport.

The complex logistics were managed by CUSTOM in close consultation with project managers Paramount Carpet and general contractor McAlpine. Both firms praised the support they received from the CUSTOM team. “Help was always available. The technical rep was easily contactable and replied promptly by email or phone. He was very helpful and knowledgeable about the products and their usage.” The foremen on the project reported that the installers benefited from rep site visits prior to the start of work, assistance with planning to ensure proper surface prep, expert demonstrations and hand-on product training.

The Grand Cayman International Airport joins two growing lists of CUSTOM projects: 1) international airports, and 2) large commercial installations in the Caribbean. CUSTOM’s international presence includes transportation centers and resorts throughout this region. With a dedicated team for the Caribbean Islands and Central America, site visits to support local flooring contractors are standard procedure, even off shore. The team extends their thanks to Mr. Gary Rankin, managing director at Paramount Carpets of Grand Cayman, who was instrumental in the vision and execution of this project.

2018 marks the 50th anniversary of Cayman Airways, founded by aviation pioneer Owen Roberts, for whom the airport was named. Interested in seeing the islands? <https://www.visitcaymanislands.com/en-us/>

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