

PRESS RELEASE

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PROFESSIONAL CONSULTANTS ANNOUNCES NEW FIELD TESTING SERVICE

Professional Consultants (PROCON) is pleased to announce new specialized testing services for the tile, stone and terrazzo industries. PROCON's new testing service will compliment their specialized expertise in providing technical and forensic services to the tile, stone and terrazzo industries. PROCON's testing service will be managed by James Harrington, Senior Construction Consultant with PROCON. Jim has 20+ years experience as a tile and stone contractor, and has recently completed an extensive training program at PROCON.

In announcing this new service, Richard Goldberg, Architect and President of PROCON indicated that "PROCON's new testing services are focused primarily on in-situ field testing and full-scale mock-up testing rather than small-scale, traditional materials laboratory testing. Laboratory evaluation is useful, but often does not reflect practical, real-world conditions". Having performed hundreds of forensic investigations of tile, stone and terrazzo installations, PROCON has recognized the need to apply a quantitative, scientific approach to testing tile and stone installations in-situ as a supplement to laboratory testing. Specialized equipment and training allow PROCON to conduct various ASTM and other construction industry test protocol on full-scale mock-ups or as-built construction to more accurately predict behavior before commencing construction, or to determine cause / origin of failure of floor construction assemblies. PROCON also partners with leading national testing labs, such as Architectural Testing Inc. to supplement our capabilities to conduct the most sophisticated testing of full-scale construction assemblies, such as natural stone and porcelain ceramic curtainwall façade systems.

PROCON is a consulting architectural and engineering company offering specialized technical and forensic services to the building design and construction industry. PROCON's areas of expertise include ceramic tile, stone, and terrazzo materials and building systems.

TYPES & BENEFITS OF FIELD TESTS CERAMIC TILE, STONE & TERRAZZO ASSEMBLIES

Field Testing services provided by PROCON for ceramic tile, stone, and terrazzo assemblies are as follows:

Tile Floor Assembly Performance Rating - Robinson Floor Testing (ASTM C-627) – this test is typically conducted in the laboratory on a 4 foot square section of tile floor assembly. While the laboratory test provides useful information, the test often is not a realistic reflection of typical workmanship or full-span floor deflection movement, both of which can further impact the performance rating of a tile or stone floor assembly. PROCON has investigated numerous failures where a floor assembly passed lab testing, yet failed field testing. PROCON has specialized equipment and experience to conduct this test in the field or in a test facility on both newly installed tile, as well as tile already placed in-service. Testing of mock-ups prior to construction confirms manufacturer claims and test data, and avoids future disputes.

Tensile Adhesion Strength (ASTM C-1583, C-321 D-4541, D-5064)– tile and stone installation product manufacturers test their products in the laboratory and publish “shear bond” strength physical characteristics, yet these tests can not be replicated in the field to confirm performance of as-built construction with published test data. PROCON has specialized equipment and experience to conduct and interpret this test in the field on both newly installed tile, as well as tile already placed in-service to determine in-situ tensile adhesion, as well as to extract and evaluate a cross-section of the tile assembly.

Static Coefficient of Friction (ASTM C-1028 Slip Resistance) - this test is typically conducted in the laboratory to determine the slip resistance performance of un-installed products. PROCON has specialized equipment and experience to conduct this test in the field on both newly installed tile, as well as tile already placed in-service (perhaps subject to a slip-fall claim) to determine in-situ slip resistance. This test has value to protect the tile manufacturer, distributor and contractor by confirming tile slip resistance performance prior to placing tile in-service. As a forensic tool, this test can be used to defend or prosecute slip-fall claims, especially when contamination or maintenance regimens can affect the original surfaces’ slip resistance.

Acoustic Sounding Testing (ASTM D-4580) – this test has traditionally been performed by dragging a heavy chain over a completed tile floor assembly to detect suspect voids or loss of adhesion beneath the tile. PROCON uses more efficient and accurate rotary percussive equipment, as well as ground penetrating radar to conduct non-destructive evaluation of voids, adhesion failure, and other sub-surface anomalies beneath tile floor assemblies. This procedure is not only a valuable non-destructive forensic tool, but also a valuable test that can be conducted during construction to assure quality by detecting defects for correction during construction.

Moisture Vapor Transmission Testing (ASTM F-2170, F-1869) - Failures of ceramic and stone tile floor assemblies are often the result of excessive moisture vapor transmission (MVT) through concrete slabs. PROCON utilizes both anhydrous calcium chloride and digital electronic relative humidity probe equipment to provide accurate measurement and analysis of MVT. Excessive MVT can occur either from internal residual moisture in concrete, or from external sources, such as high subsurface water conditions and water infiltration. Deterioration of materials can occur as a result of both exposure to moisture, as well as damaging high pH (alkalinity) levels caused by elevated MVT.