UNDER ARMOUR® STORE
MALL OF AMERICA®
Project Spotlight

CUSTOMER:
Under Armour®
Mall of America®, Bloomington, MN

CONCRETE CONTRACTOR:
Concrete Arts
Hudson, WI

GENERAL CONTRACTOR:
Retail Construction Services
Lake Elmo, MN
Challenge

Polishable toppings are fast becoming the cementitious product of choice when it comes to retrofitting commercial and retail applications. These products offer highly polished surfaces, higher degrees of durability, and quick turnaround for floor owners. These wear toppings are great fits for placements in shopping mall retail stores, such as those found at the Mall of America in Bloomington, MN.

With this particular job, however, the existing conditions, project timeline and site availability all proved challenging.

Existing Conditions — The Under Armour floor is a composite deck, located on the second level of the Mall of America. The existing surface was badly cracked and in poor condition. And, the floor had an existing self-leveling underlayment topping that needed removal, ranging in elevation from ½” to 1½” (1.3 cm to 3.81 cm).

Timeline — The general contractor held Concrete Arts to a tight timeline. Retail Construction Services needed the floor prepped, installed, and completed in a 10 day period, a large majority of which needed to be performed overnight.

Situation

The 7,200 square foot (669 square meter) Under Armour® Store in the Mall of America® is a showcase for the company’s performance footwear, apparel and equipment.

In early 2014, the company knew the store needed a polishable floor that could stand up to high traffic and complement Under Armour’s products.

The company put out their retail space update to bid through general contractor Retail Construction Services.

Hudson, Wisconsin-based Concrete Arts was one of several contractors to bid the project, offering several competing polishable toppings. Concrete Arts submitted L&M™ DURAFLOOR TGA™ samples to the owners, talking about the polishable topping’s decorative, exposed aggregate finish, its durability, and its low-maintenance benefits. Under Armour management liked the samples Concrete Arts provided, and selected them for the job.

“L&M™ DURAFLOOR TGA™ was the perfect solution to get the Under Armour® floor from point A to Point B, giving the floor owners a highly polished, decorative, durable, and easy-to-clean floor.”

~ Jeff Bonkiewicz
LATICRETE SPD Channel Manager

The polishable topping provided a finished floor with an architectural feel of decorative, exposed aggregate and sand while leveling out Under Armour’s existing worn floor.”

~ Tom Graf
Owner of Concrete Arts
A LATICRETE Solution

Concrete Arts easily overcame these challenges through a combination of good planning and LATICRETE products. Due to the uneven nature of the floor, Concrete Arts started by shotblasting the entire floor to a CSP 4. Despite this profiling, some of the floor areas were 1” to 1½” (2.5 cm to 3.81 cm) higher within a 12” (30.5 cm) span, which made the topping placement difficult.

After the shotblast was complete, the crew used over four cases of L&M™ RESTORE™ concrete crack repair material to fill as many random cracks and spalls as possible.

L&M RESTORE is a fast-setting, low-odor, two-component advanced polymer resin designed for patching and repairing concrete. L&M RESTORE has a very thin consistency and high bonding strength, allowing it to penetrate deep into concrete and create a tenacious bond for a permanent repair. L&M RESTORE sets quickly and can be scraped within 30 minutes to repair worn, spalled and cracked concrete.

After the repairs were done, the Concrete Arts crew applied DRYTEK™ Epoxy Primer to the surface and seeded the epoxy primer to rejection with coarse silica sand. The crew returned the next day, scraped off the loose sand and swept it all up.

DRYTEK Epoxy Primer is a two-component, high-solids epoxy primer applied with a sand broadcast for use with DRYTEK decorative wear surfaces and decorative polishable wear toppings.

The new L&M DURAFLOOR TGA™ decorative topping was placed in two pours, with thickness ranging from 3/8” up to 1½” (1 cm to 3.81 cm). Since their access to the job was so tight, they hand-mixed 575 bags of L&M DURAFLOOR TGA and used Hippo mixers to transport the material for placing. Even though job site access was difficult, the crew placed the DURAFLOOR TGA within two days.

DURAFLOOR TGA is a unique blend of cements, polymers, color and mineral aggregates to be used to resurface and repair existing concrete surfaces. It combines the durability of concrete with color and decorative aggregate to produce a high-performance floor with enduring beauty.

After waiting for 16 hours for the material to cure, Concrete Arts began to grind. Starting with 80-grit metal diamonds, they took the floor up through the 1,500-grit step, using L&M LiON HARD® densifier after the 400-grit step. The company applied translucent L&M VIVID DYE™ before the 800-grit step, and locked it in with L&M LiON HARD. Concrete Arts then sealed the topping with L&M PERMAGUARD™ to protect the surface from oil and other contaminants.

L&M LiON HARD is a VOC-free, environmentally friendly lithium silicate concrete floor densifier, hardener and sealer. This product penetrates bare concrete surfaces and transforms them into a permanently dust-free floor with a proud gloss that gets better with age.

L&M VIVID DYE is formulated using extremely fine molecules of color designed to penetrate and color interior concrete surfaces. L&M VIVID DYE is ideal for use with the L&M PERMASHINE polished concrete floor system, but can also be used as a base color or touch-up for colored concrete.

L&M PERMAGUARD is a low-odor, VOC-compliant topical sealer that effectively protects concrete and other natural stone floor surfaces from the damaging effects of staining, defacing and deterioration.

The grinding process took six days to complete.

Outcome

The concrete contractor finished a job they can be proud of, and Under Armour has a beautiful, durable, easy-to-clean floor. Additionally, they received the quick turnaround demanded by their tight construction project schedule.

Concrete Arts did a great job of overcoming the obstacles, given the lack of access to the job location and time constraints.

L&M DURAFLOOR TGA provides a beautiful, durable, and very low-maintenance flooring solution that complements high-traffic retail spaces, such as those found in Mall of America. This versatile product can be used as a complete decorative floor overlay and in new or existing concrete repair projects.