Job of the Month

Hacker Industries, Inc.

August 2019

San Ramon Valley High School
Danville, California

The crowded San Ramon Valley High School campus, in Danville, California, included 11 aging "finger wing" classroom buildings that were outdated, inefficient and did not use the space well. When a budget was approved, a new, 3-story classroom building, including 52 classrooms and support spaces, was commissioned to provide the students with state-of-the-art learning facilities, gathering and dining space, as well as improved campus circulation.

Artist rendition of new, 3-story classroom building

The new classroom building was designed with a metal frame instead of wood. Light gauge steel (LGS) construction is very similar to wood-framed construction in principle, but requires different building materials and design specifications. For instance, LGS structures are non-combustible, which is a code requirement for some types of structures.

However, steel loses its strength in fire quite easily, so must be protected with fire-rated sheeting.

Another aspect to consider with LGS structures is they allow the passage of sound more readily than the more solid masonry construction, so creating sound control between rooms is imperative within the design. To improve the sound control in the corrugated metal deck flooring of the classroom building, developer **Lathrop Construction Associates, Inc.** contracted **NorCal Deck Coating, Inc.** to install sound control mats, which help absorb impact sound energy (IIC), and a special gypsum concrete underlayment, **Firm-Fill® CMD,** to add mass to the floor assembly, absorbing airborne sound energy (STC), and flatten the floors for finished floor coverings.

Flutes are filled with Firm-Fill® CMD; One row of Firm-Fill® SCM-250 is rolled onto the deck

NorCal Deck Coating poured over 65,000 square feet of Firm-Fill® CMD, a gypsum concrete specially formulated to work with steel structures and will provide a minimum compressive strength of 3,500 psi. Their first step to installing underlayments to a corrugated metal deck was to fill the deck flutes with the Firm-Fill® gypsum concrete and allow that to dry. They only needed to allow three hours of drying time before they began to lay the **Firm-Fill® SCM-250** sound control mat over the, now, flat floor provided by the Firm-Fill® CMD. SCM-250 is a 1/4" (6mm), random filament sound mat designed to limit impact noise between floors.

With the SCM loose-laid over the subfloor, the NorCal Deck Coating team topped it with another 1-1/4" of Firm-Fill® CMD to complete the underlayment sound control system.

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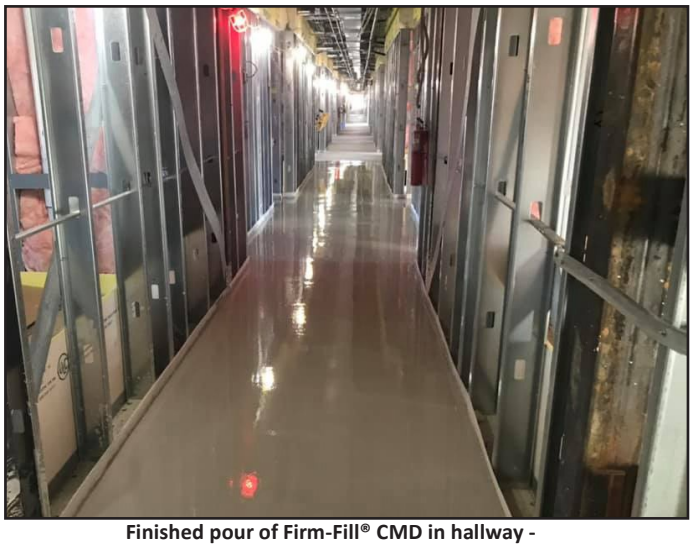
About NorCal Deck Coating, Inc.
Established on the principles of integrity, quality, and service, NorCal Deck Coating has become the contractor of choice for the most prominent builders in the region, providing gypsum concrete and sound control mat installation services for single-family, multi-family and commercial projects. With safety, efficiency, and professionalism as its core values, NorCal Deck Coating meets deadlines and delivers exceptional craftsmanship. To request a bid, visit their website: www.norcaldeck.com.

About Firm-Fill® Products
Designed for use in multi-family, commercial and institutional buildings with light-gauge steel framing and a corrugated steel deck, **Firm-Fill® CMD** is a lightweight, high-strength gypsum concrete floor underlayment. Installed at 1" above the top of the flutes, FIRM-FILL® CMD reduces deadloads and thickness, significantly lowering costs.

When **Firm-Fill® SCM-250** is used in conjunction with a 1" FIRM-FILL® Gypsum Concrete topping, the combined system has been tested to achieve a "Light Commercial" rating from the Tile Council of North America.

Job Highlights	
Owner:	San Ramon Valley Unified School District
General Contractor:	Lathrop Constrcution Associates, Inc.
Architect:	HKIT Architects
Applicator:	NorCal Deck Coating, Inc.
Project:	San Ramon High School
Assembly:	Corrugated Metal Deck
Application:	FIRM-FILL® CMD FIRM-FILL® SCM-250
Square Feet Installed:	65,000

The second lift of Firm-Fill® CMD is installed over Firm-Fill® SCM-250 at 1-1/4" in depth



Finished pour of Firm-Fill® CMD in hallway - the gypsum dried enough to walk on wtihin 90 minutes