

EIFS Design Flexibility Durability Converts Warehouse into Office Space

Strength and Beauty Revived in Old Structure

Case Study

Schuler Books, Grand Rapids, Mich.

The Construction Challenge

Renovating an existing factory warehouse composed of masonry into a refined, choice retail space.

Wall System Solution

Sto EIFS and surface conditioners.



About the Architect

Jim Boles is a six-year veteran at Greiner, Inc., an international engineering and architectural firm. Boles works out of Greiner's Grand Rapids office, which includes about 200 employees who provide architectural support for the company's engineering offices. The company specializes in schools, health care work and air-

These before (above) and after (right) photos of the Schuler Books building show how using EIFS and surface conditioners can turn a 1958 warehouse into prize retail space.



port design, serving Michigan and northern Indiana. Health care is Boles' area of expertise.

About the Contractor

Ken Skinner is project manager for the Bouma Corporation, which is a 45-year-old specialty contracting company for renovation projects in Grand Rapids. A Bouma staff of eight people worked on the Schuler Books project. Skinner, who has been with Bouma four years, was the project coordinator. John Johnson was the plastering leader for the job. According to Skinner, the Schuler Books project was design-build from the beginning, necessitating a close working relationship between the owner, Bouma and Greiner.

Summary

This case study provides insight into how exterior insulation and finish systems and surface conditioners from Sto were used in the renovation of an old warehouse in Grand Rapids, Mich. The warehouse was originally a Midwest distribution center for Volkswagen. The section that received the new facelift was built in 1958. The project involved extensive use of expanded polystyrene insulation boards that were cut into ornamental shapes, columns and cornice details.

This article includes in-depth comments from the architect and contractor on the project, including the design goals and product specifications for the Schuler Books building.

“Turning something ugly into something beautiful.” That’s the way Ken Skinner describes the renovation he coordinated of an old, masonry factory warehouse in Grand Rapids, Mich. Transformation might be a better description, since the refurbished building will be used as retail space for new tenant Schuler Books.

“We put a new front on an old warehouse and I think everybody is

really happy with the results,” said Skinner, project coordinator for Bouma Corporation, a specialty contractor in Grand Rapids, Mich. The dramatic new outside surface of the building is an exterior insulation and finish system from Sto Finish Systems Division, an Atlanta-based manufacturer of specialty construction products.

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outlined by the owner,” said architect Jim Boles of Greiner, Inc., an engineering firm also in Grand Rapids. Added project coordinator Skinner: “It (EIFS) provides a lot of versatility and the biggest bang for your buck.”

UNIQUE, COST-EFFECTIVE ALTERNATIVE

Selecting the right materials for a renovation project can be tricky because you are trying to strike a balance between beauty, durability and cost. As is often the case, the owner of the Schuler Books building wanted to keep the number of maintenance materials to a minimum, thus saving money in the long-run.

Architect Boles explains: “The owners don’t want to depend on the tenant to maintain the exterior, nor do they want to put a lot of money into maintaining it. So we were trying to get the maximum amount of detail at the lowest cost, yet still uphold the ‘maintainability’ of the structure.”

According to Boles, you have a much larger pallet of materials from which to consider when you are starting a project from scratch. “We were starting with an existing block building, which had a nice plain, flat wall,” he said. “We didn’t want to add footings for brick or try to hang a shelf angle off of the CMU, so we didn’t use a masonry product for that reason.”

ENSURING A SUCCESSFUL INSTALLATION

When the Bouma crew began their renovation, the building’s exterior was fleeting yet still standing. Architect Boles and his staff at Greiner handled the structural requirements for the renovation by specifying a reinforced CMU parapet. The challenge for project manager Skinner and his staff was applying the EIFS to a variety of different surfaces: the old substrate, plywood, even glazed brick.

According to Skinner, the first step was to apply a water-based surface conditioner for restoring the various surfaces to sound condition prior to applying the EIFS. Serving as an adhesive intermediary, this initial step ensured that the coatings would adhere better and last longer. The conditioner was also used to protect the substrate from weather deterioration.

After installing the surface conditioner, the Bouma crew installed the EIFS. The system consists of five component layers: an exterior finish, a base coat and mesh, an insulator, an attachment to bind the insulator to the building and a substrate to which the insulator is attached. A glass fiber-reinforcing mesh was also installed in the front of the building for impact protection.

The building faces north so a mildew-resistant finish

was important to the owner's low maintenance goals. The crew, troweled on a silicone-enhanced, textured wall finish on the flat surfaces of the structure using a sprayer for the detail work. "The good thing about the textured finish is that we were able to spray it on the really detailed parts of the cornices and columns, which saved time," said project coordinator Skinner.

“EIFS was the only way to get the shapes and details that everybody wanted while still meeting the ease-of-maintenance requirements and cost parameters outlined by the owner.”

ADAPTABLE EIFS

The original elevation for the Schuler Books project as drawn by Boles showed some yet undefined lines at the cornices of the structure, as well as some pilasters with a round object at the top. "My original intention was for that round object to be a light fixture, but the owner turned it into a round shape that was finished with porcelain tile over EIFS base coat and foam to match the chamfered tile pilaster base," Boles said.

Once Schuler Books was declared the new tenant, they also wanted a col-

umn and the cornices to have more detail, which Boles did by drafting a profile. "I made it as difficult as I could," Boles said. "I knew what the Schulers wanted and they were very happy when they actually saw the details in profile. Then when I presented it to Phil Catalano, the EIFS distributor for the project, he said: 'Yes, we can do that!'"

Boles took pride in seeing his sketches come to life. "I'm impressed with the foam shapes and the detailing the installer and contractor came up with from just my sketch," he said. "I did a fairly good sketch, but I didn't actually draw dimensions for a lot of it. I just drew up a shape and they used EIFS to reproduce it very accurately."

Skinner and his staff completed the EIFS installation on the Schuler Books building in just four weeks.

AN EFFECTIVE (AND FUN-TO-WATCH) RENOVATION

For architect Boles, the Schuler Books project was a rewarding experience because he stepped out-

side his familiar health care niche to design a building that balanced the desires of the developer, owner and tenant. According to Boles, the developer wanted as much glass as he could get, the owner required low maintenance, nominal cost and good looks, while the tenant wanted the facility to match his existing store.

"This project was a chance for me to do some design work on something purely aesthetic, with very little function involved," said Boles. "With my usual health care projects, there is a lot less aesthetic design involved. It was fun to see this one develop."

Architect Boles and Project Coordinator Skinner affirmed that high-quality EIFS materials not only offer an effective solution for new construction, but also for renovation. The new Schuler Books building is a shining example of how superior building materials allow for the most effective construction-providing protection, beauty and endurance. *CD*