



COTTON BELT ELEMENTARY: A CASE STUDY

featuring cushion-backed modular carpet in Moraine

York, South Carolina

Milliken™

“

Carpet is an investment - and we wanted our design to be relevant 15 years from now. Moraine has that wow factor that will continue to look current well into the future.

”

Amy Hagner, Assistant Superintendent for Finance/Operations, York County School District



EXIT

The 21st-century school is anything but traditional. With a call to cater to students' individual learning needs, the physical environments must be adaptable, engaging, and above all, durable.

Faced with 88,000 square feet of old, peeling flooring due to 99% Relative Humidity (RH) in its subfloor, Cotton Belt Elementary knows the role appropriate performance-driven materials play in designing an effective learning environment. This case study details how Milliken was able to save the K-4 through fourth grade school an estimated \$255,000 in remedial moisture mitigation work and flooring installation costs through a single solution: Milliken cushion-backed modular carpet.



To have a warranty covering the amount of humidity in the subfloor was surprising. No other company would do that, and we knew from experience no other product would perform as well."

Stan Quinn, Maintenance Director, York County School District

THE CHALLENGE

“The only resolution from the previous installers was an expensive sealer, in addition to new carpet. We couldn't possibly afford it.”

Stan Quinn, Maintenance Director, York County School District

Half of Cotton Belt Elementary sits on a natural pond that was filled, compacted and then re-compacted to meet code before being built. The pond still makes its presence known two decades later by causing 99% RH in the school's subfloor. Moisture began reacting with the flooring adhesive, causing carpet tiles to peel, broadloom carpet to buckle and roll, and VCT to crack. The sight and smell of the moisture problem could not be ignored. York County School District Assistant

Superintendent Amy Hagner called on Milliken for their insight. She worked with Milliken closely over the past seven years at various schools throughout her district, and valued their expertise and honesty. She learned that Milliken could solve the subfloor moisture issues through their very carpet construction - and most importantly, without the costly tests, sealants and labor that other manufacturers require.



THE SOLUTION

“Moisture issues are a simple fix with Milliken modular carpet. It gives warranted assurance that flooring failure won't occur, doesn't require costly flooring prep, and allows customers to focus on design elements instead of worrying about performance.”

Heidi Burmeister, Sales Representative, Milliken

Milliken modular carpet was the single solution needed to protect Cotton Belt Elementary against flooring failure and create a positive learning environment that supports well-being.

Milliken modular carpet features an open-cell cushion backing with unparalleled functionality:



Withstanding all levels of RH and pH



Eliminating compatibility issues with a non-reactive construction that won't interact with traces of adhesive left on the subfloor from a previous installation



Preventing mold and mildew growth in flooring for improved indoor air quality



Wicking moisture vapor up and away from the subfloor, preventing the vapor from pooling into damaging liquid water



The cushion also supports active learning environments as students and teachers move throughout the day, oftentimes rearranging desks and seating in the process.

Milliken's open-cell cushion backing supports active interiors by:



Extending the life of the carpet up to 40 percent longer than hard backed carpet



Reducing leg muscle fatigue up to 24 percent for teachers and staff members constantly on their feet



Creating a comfortable environment for students to gather on the floor for group reading and learning



Reducing noise up to 50 percent more than hard-backed carpet, and 12 times more than hard surface and rubber flooring. Proper acoustics helps improve focus by 48 percent, decrease error rates by 10 percent*, and reduce vocal cord strain for teachers.

**According to David M. Sykes, Ph.D.*

THE DESIGN

“ Carpet is an investment – and we wanted our design to be relevant 15 years from now. Moraine has that wow factor that will continue to look current well into the future.”

Amy Hagner, Assistant Superintendent for Finance/Operations, York County School District

With performance guaranteed, Cotton Belt Elementary could focus on creating a positive, visually stimulating learning environment. They took advantage of Milliken’s suite of flooring solutions – including modular carpet, luxury vinyl tile (LVT) and entry solutions – to create the foundation for a visually inspiring, performance-driven school.

Milliken’s contemporary Moraine collection lends a forward-thinking aesthetic to the school. With a bank of standard accent colors, Moraine allowed the team to blend old and new by retaining existing facility finishes – ultimately creating a bright and cohesive space. Pops of bright teal help forgive dirt and traffic patterns, while progressive patterning elevates the elementary school with playful and youthful qualities.

Milliken Sales Representative Heidi Burmeister mixed three patterns within Moraine – Relief, Navigator and Regions – to create distinct yet connected spaces.

To accommodate the scale of the main corridor - almost two football fields in the length - Moraine in 50 cm x 1 m plank carpet tiles were selected. A teal border lines the space to create interest while providing visual cues to students - an easy point of reference for students to line up in a straight line. Classroom doorways are also highlighted with solid blocks of

colors. In classrooms, Navigator in a neutral colorway encourages teachers to add their own colors to the classroom and coordinates with ever-changing classroom decorations.

For areas where spills are a concern, Milliken LVT and entry matting were installed for enhanced durability and ease of maintenance.



Relief and Navigator with Custom Accents,
Quadras in Liftoff near entryway



Quadras in Liftoff



Relief and Navigator with Custom Accents



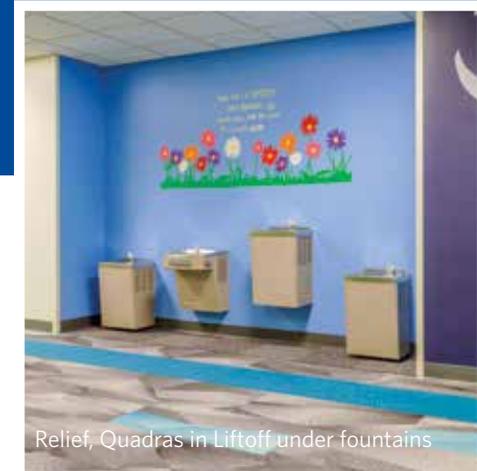
District in Graduate with
Midtown Village Accents

District injects color and energy in the cafeteria, with coordinating pops of color from Midtown Village and the bold number graphics of Graduate, to create a fun, open space.



Regions and Relief in foreground,
District in Arts Avenue

In Pre-K through second grade classrooms, Moraine is paired with Milliken's Freelay LVT in Polished Concrete for wet areas, such as the classroom sink.



Relief, Quadras in Liftoff under fountains

Quadras entry matting was installed in building and exterior classroom entrances, as well under water fountains, for added protection.

MAINTENANCE

The district maintenance team also takes advantage of Milliken's dry carpet cleaning solution and has been amazed at how it preserves the appearance of the carpet. In fact, Milliken modular carpet has floored the county's York Comprehensive High for seven years, and through expert construction and effective maintenance, the carpet still looks brand new. They hope to achieve the same result at Cotton Belt Elementary.



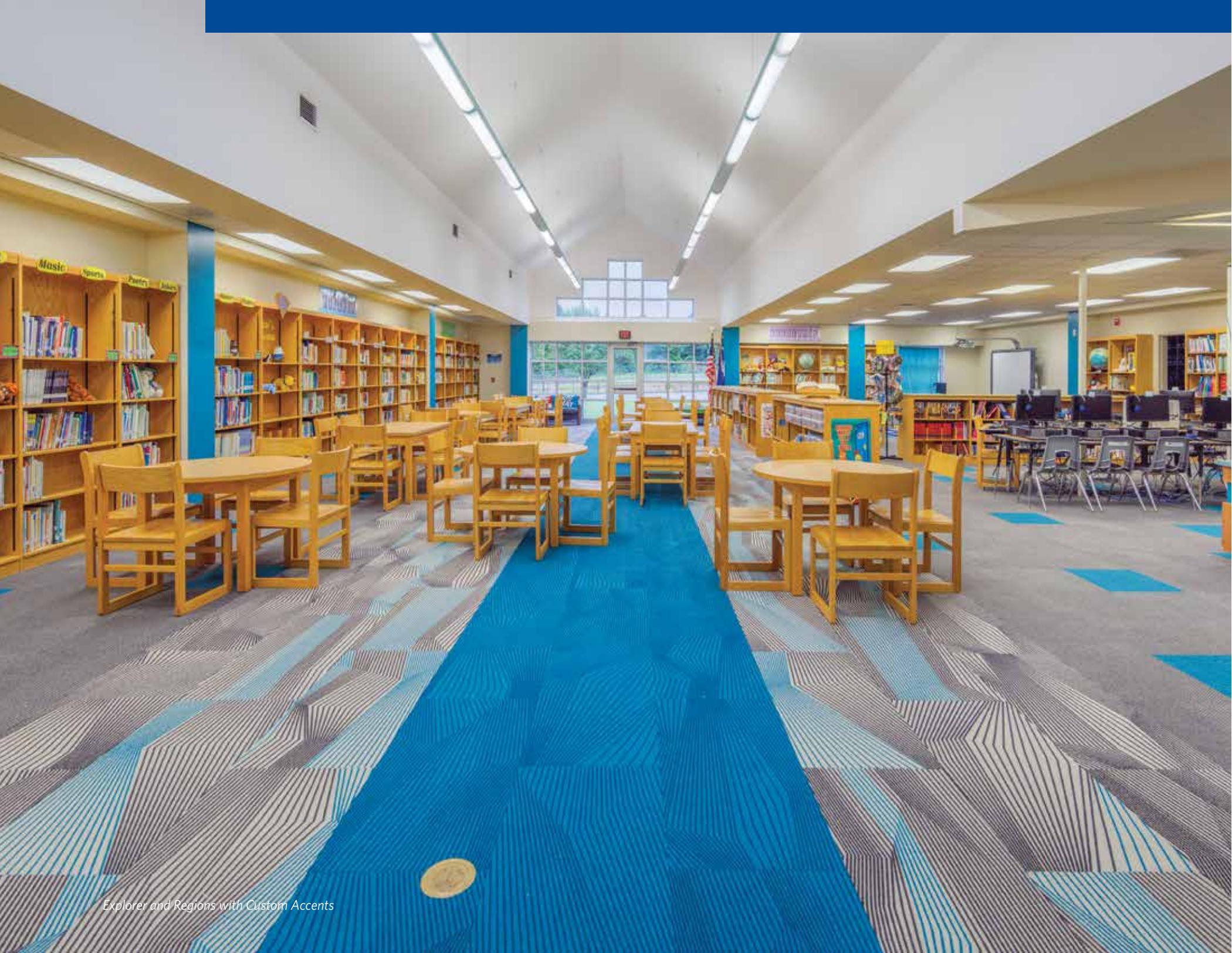
THE FEEDBACK

In a mere six weeks, Cotton Belt Elementary was like new. According to Amy, the look and feel of Moraine has “completely transformed the school’s environment.”

Teachers talk about the improved comfort underfoot and the walkability it allows throughout even long days. Students are also excited, as the renovation makes them feel as if they are almost in a new school, and in turn, they are eager to learn.

“ Milliken provides us the assurance that our schools will look like new decades into the future. We’ve seen it first hand at our 1,500-student high school, and we know it will ring true for Cotton Belt. It’s a story that needs to be told.”

Amy Hagner, Assistant Superintendent for Finance/Operations, York County School District



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Front Cover Image: Explorer and Regions with Custom Accents

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