

Architectural PRODUCTS

January-February 2017

DESIGN & HEALTH

office environments

human-centric lighting

Part of the greater picture: As design practices continue the shift toward consideration needs to be given to electrical illumination to not only balance space, but provide the proper levels of light to maximize productivity.



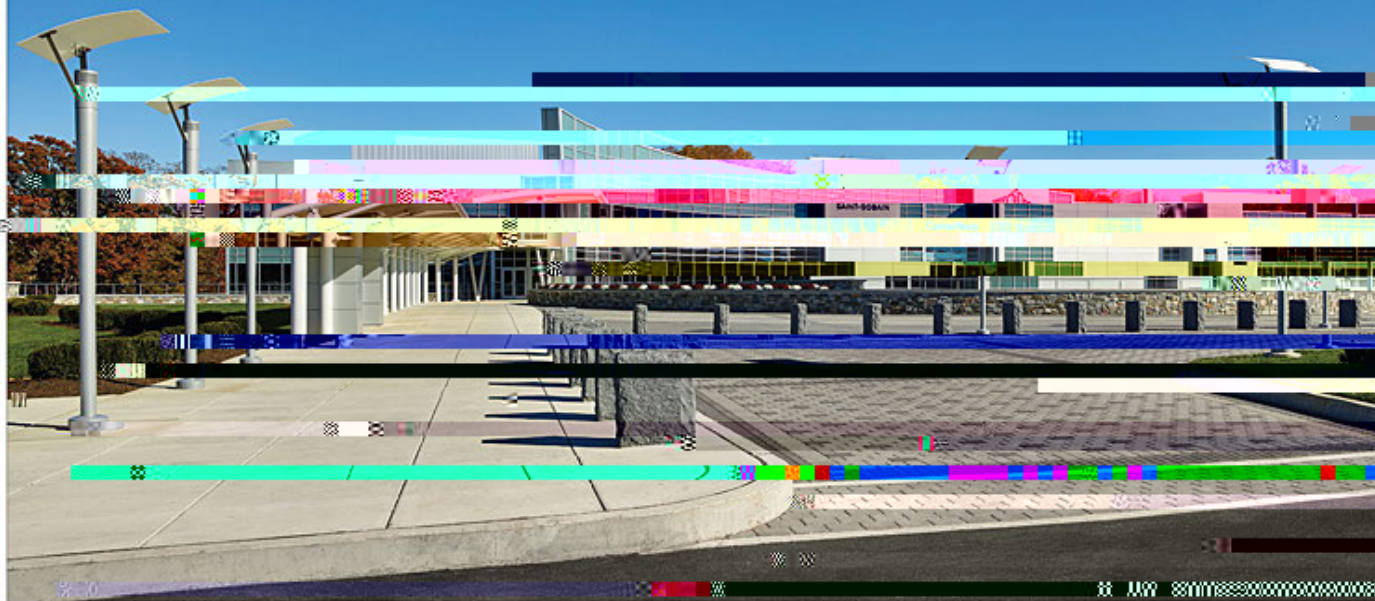
Function
Converging Architectural + Performance Goals



Bob Marshall, Senior Manager Technical
... Malvern, Pa. The company's "green guru," he
... more than 40 years in the field



Support Manager for CertainTeed Ceilings, Malvern, Pa.
... the company's architectural liaison, she provides resources for training and project coordination.



Saint-Gobain U.S. Headquarters Malvern, Pa.

With the arrival of the 21st century and return of the open office, acoustic control no longer can be designated a second-tier consideration. It certainly was not the case for Saint-Gobain when it came to designing its new North American headquarters. Being one of the world's major suppliers of building products, including many designated for acoustic control, the 300-year-old company and its U.S. subsidiary, CertainTeed, took on the challenge of creating a

high-tech environment that would not only be a next-generation workplace, but also a model for acoustic comfort. A 277,000-sq.-ft. living laboratory situated on 65 acres in an office park just outside of Philadelphia, the project involved a complete redesign and expansion of an abandoned '60s-era corporate facility. But making it quiet in this modern age was no simple task. Unlike lighting, which has a visible identity and programmable control techniques for managing its recognizable

invisibility. Architectural acoustics evolve from a source, a path and a receiver. Sounds from music, the birds or a preschool conversation are individually selectable and controllable. In a working environment, however, when the perceived sound level can't be controlled by employees' working habits, it can affect productivity. A key performance characteristic in good acoustic design is to provide the right level

of sound energy striking the environment. In this case, architectural control techniques were analyzed for open areas where individual quiet concentration was required to engage where conversation and collaboration would occur. Saint-Gobain's product line includes a different wall and ceiling products and they wished to put them to the test. For the project's designers, the decision on the core and the interior—it marked the first time they had

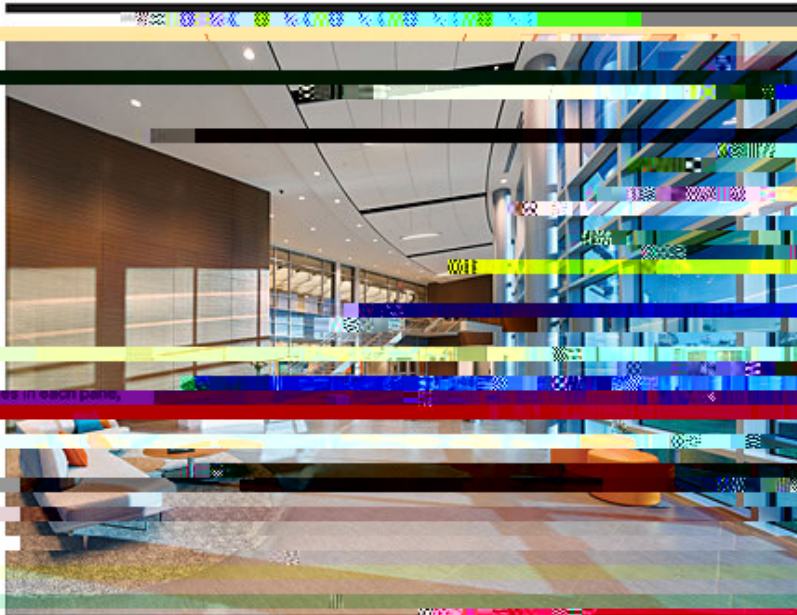
worked on a project using the client's own products. It's not often we get to sit down and talk through the details of each solution, says Heather Whitaker, a support manager for CertainTeed Ceilings. That may no longer be the case, however, due to a series of features, the on-site acoustical lab, otherwise known as the "Listening Lounge." It is a studio that allows for the use of different ceiling products to determine the most effective solu-

tion for a given space," says Bob Marshall, the company's senior manager of technical services. In total, 50 of Saint-Gobain's products, including SageGlass electrochromic glazing, The building received LEED Platinum certification by the U.S. Green Building Council and the GreenSource Award for Best Building

Called to Action

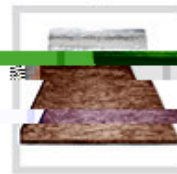
To manage the double-height main entryway, Decoustics Claro custom ceiling panels, installed with a Ceilencio system, are paired with the company's custom wood wall panels—acoustically absorbing products that add to the building's "wow" factor. Sage's electrochromic glass allows for three differ-

ent glass and color heat gain from the glassy facade, which has 17,000 sq. ft. of the specialty glazing is installed on the western and southern façades.

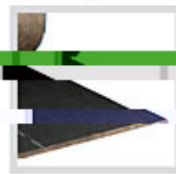


No HVAC Rumbblings

Sustainable R-13 and R-19 batt insulation are used in an environment that is quiet, comfortable and conserves energy and resources. To help contain unwanted crosstalk, moisture build-up and energy loss in the building, CertainTeed ToughGard TGR Rotary Duct Liner and SoftTouch Duct Wrap insulation are used



SOFT TOUCH™
SoftTouch Duct Wrap
www.certainteed.com
Circle 369



TOUGH GARD™
ToughGard TGR
www.certainteed.com
Circle 368

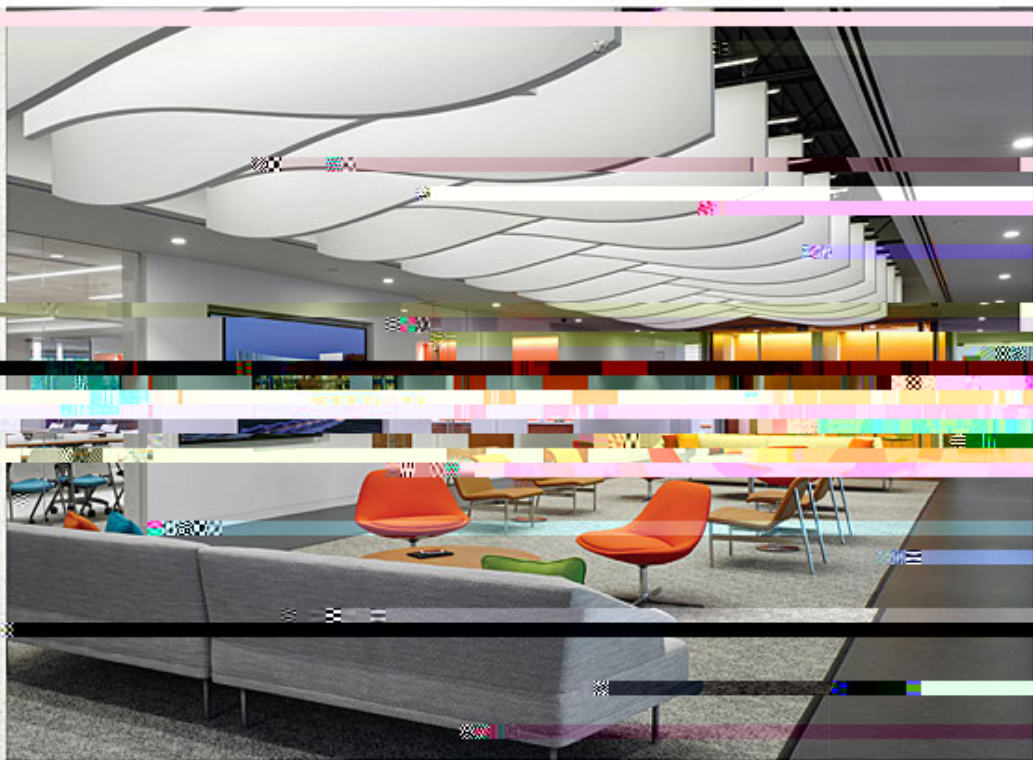
Some Open Office History

The open office theory had been put to the test as early as the beginning of the last century. Two historically significant buildings with open office areas were both designed by Frank Lloyd Wright. While visually stunning, acoustic considerations probably did not play a major role in their design. The first was the Larkin Building of 1904 in Buffalo, where workers at rows of desks carried out their duties in a six-story-high skylit central hall. In 1939, the administrative building at the headquarters for the S. C. Johnson Wax Co. opened in Racine, Wisc. Its centerpiece is the Great Workroom. Here employees at adjacent desks do their jobs beneath a series of thin white dendriform columns that rise and spread out at the ceiling. Custom furniture designed by Wright is manufactured by Steelcase. The introduction of open landscaping was hailed as the out-with-the-old with the new rationale for a new workplace layout. It quickly gained acceptance and became the headquarters for municipal institutions. Design doyenne Florence Knoll became a leading proponent for its wide adoption.

While it wasn't referred to as a "disrupter" back in 1956, the Quickborner Team, then an adjunct to a Hamburg, Germany-based office furniture dealer, came up with the concept that they could sell more office furnishings if they did away with most of the private offices. They would clear the central work areas in the various departments and move the support staff into the now-open space utilizing a new type of system for work surfaces, seating and storage. The successful concept was called "open plan" and cubicles and "work stations" entered the office planning lexicon. Such "cubbies" were separated by free-standing dividers, usually no more than 6-ft. high and upholstered in fabric with sound-absorbing materials that represented the technology then available.

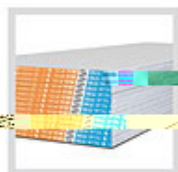
office layouts date from Frank Lloyd Wright's 1904 Larkin Building, followed by his Great Workroom in 1939 for the S. C. Johnson Wax Co. in 1939.

Team eliminated most private offices and divided work space with free-standing upholstered panels to create work stations, a panacea for many companies for its inherent flexibility.

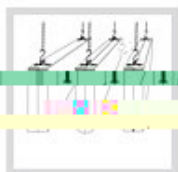


Sound Stoppers

An entryway gathering space just off the main lobby. A variety of CertainTeed's acoustical products are featured in this area. The ceiling features Silk Noise-Reducing Dry-wall for the walls and ceilings, while the exposed structure above features Decoustics Curved Baffles. Elsewhere with interior walls, AirRenewEssential IAQ Gypsum wall-board removes VOCs from the air, improving indoor air quality and promoting healthier living and work environments.



DRYWALL
SilentFX
www.certainteed.com
Circle 367



BAFFLES
Decoustics Curved
www.decoustics.com
Circle 366

"We helped the design team understand that it is more than just a new building or a showroom for our products. Our main focus was the performance of our solutions as the client's employees work in our offices."

— Heather Whitaker, Sales Training and Support Manager, CertainTeed Ceilings

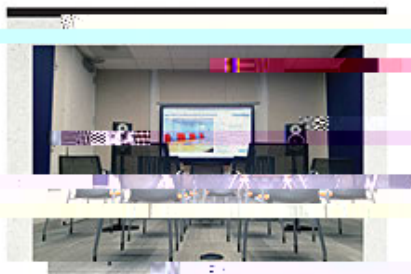


CEILING TILE
Ecophon Solo Hexagon
www.certainteed.com
Circle 365

CONTAINED COLLABORATION

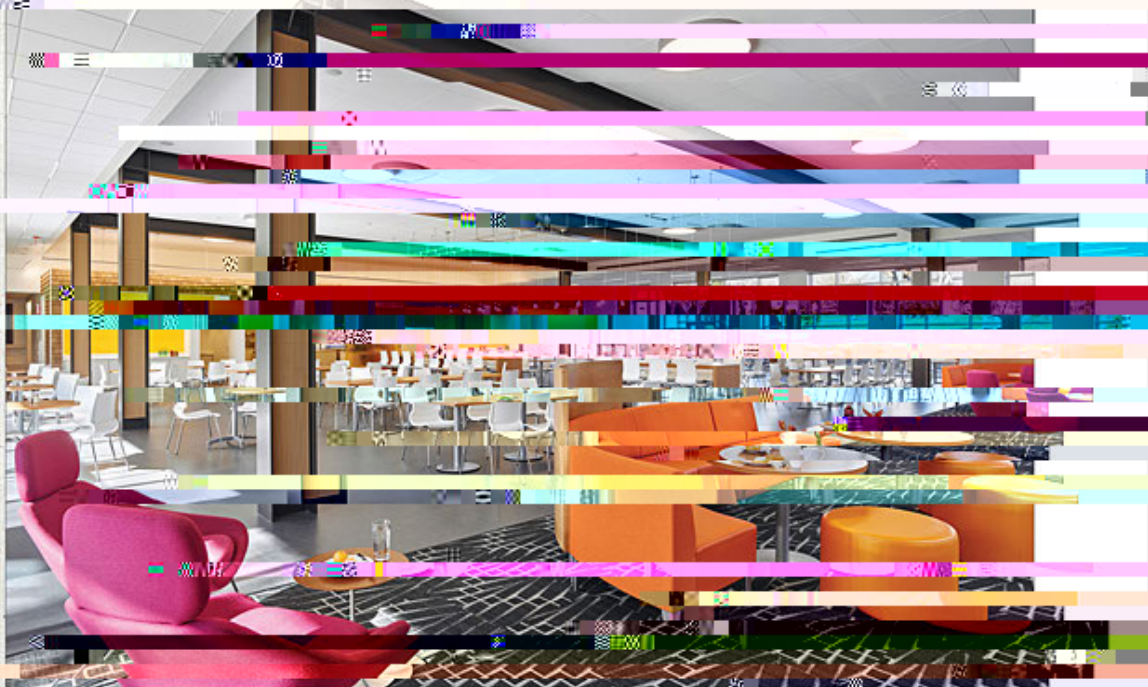
In focal spaces like the secondary lobbies and seating areas, an assortment of Ecophon Focus Ds and Solo Hexagon ceiling tiles all work to create a better, more productive workplace.

Developed with architectural acoustics consultants Acentech, the auralization lab is framed with high-performance Ecophon acoustic wall panels. It can be adjusted to various noise reduction coefficient and ceiling attenuation class levels. "It is a virtual demonstration sound modeling tool to inform specifiers how ceiling design, materials and products specifications can perform in a space," Marshall points out. "They can actually hear how the space will sound like and be able to rate it for a building early in the planning process."



Developed with architectural acoustics consultants Acentech, the auralization lab is framed with high-performance Ecophon acoustic wall panels. It can be adjusted to various noise reduction coefficient and ceiling attenuation class levels. "It is a virtual demonstration sound modeling tool to inform specifiers how ceiling design, materials and products specifications can perform in a space," Marshall points out. "They can actually hear how the space will sound like and be able to rate it for a building early in the planning process."

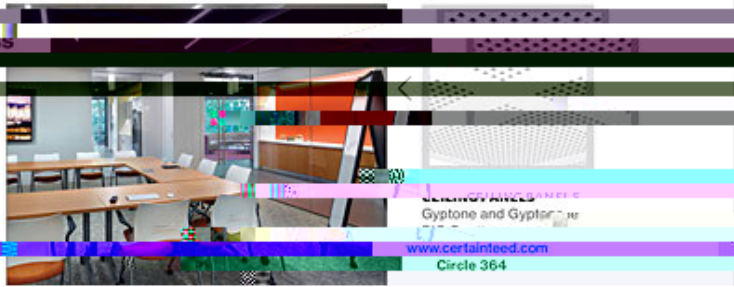
Developed with architectural acoustics consultants Acentech, the auralization lab is framed with high-performance Ecophon acoustic wall panels. It can be adjusted to various noise reduction coefficient and ceiling attenuation class levels. "It is a virtual demonstration sound modeling tool to inform specifiers how ceiling design, materials and products specifications can perform in a space," Marshall points out. "They can actually hear how the space will sound like and be able to rate it for a building early in the planning process."



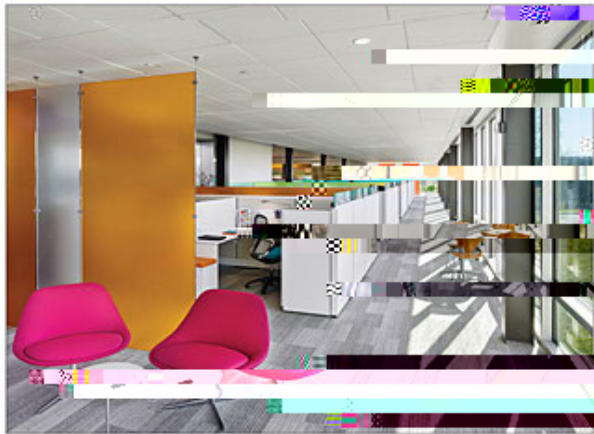
Touch of Wood

In the cafeteria, to help soften the steel columns, the interior designers selected CertainTeed Cedar Impression roofing shingles—a 2016 PIA-winning product—and certainly a creative way to incorporate an exterior roofing product inside; in this case, CedarLife Color Blends.

Saint-Gobain and CertainTeed are partnering with Dr. Isha Ghosh, of the University of Oregon, to assess the impact of the building's design on the occupant experience, measuring factors such as IAQ, visual, thermal and acoustic comfort.



SECURITY PANELS
Gyptone and Gyptone
www.certainteed.com
Circle 364



GLASS ACT
One of Saint-Gobain's latest security products, specifically Sekurit, is featured in this training room. A laminated glass paired with Sekurit frameless safety glass, it offers a range of acoustic properties helping to keep the room quiet. Gyptone and Gyptone ceiling panels and ceiling tiles further enhance acoustics to make this

CEILING PANELS

DOUBLE TEAM

To dissipate noise in more office spaces, the designers employed an innovative two-part solution offering exceptional sound absorption. Sekurit and Gyptone ceiling panels.