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CHANNEL GLASS ILLUMINATES SCIENCE AT THE UNIVERSITY OF SAN FRANCISCO

The University of San Francisco's new John Lo Schiavo Center for Science and Innovation (CSI) brings science to the forefront of academic life. Its glossy, three-story exterior invites students into the facility, and then flows sleekly down into the hillside where below-grade laboratories and classrooms make efficient use of space on the landlocked campus.

For NBBJ architects, the inspiration for the new building came from a desire to bring passion to the study of science within the USF curriculum. "A key driver behind the CSI was to put science on display and create buzz within the student body," says Lilian Asperin-Clyman, principal at NBBJ.

To meet functional demands and generate the desired interest in the science facility, the design team looked to high-performance materials. A curtain wall with fritted glass and flexible shades provides students with views to informal



learning areas and outdoor spaces to encourage scientific discovery. Skylights and glazed teaching walls with a writable surface and visual connectivity help bathe lower, "garden level" education areas in sunlight to create the illusion of being above-grade. Sloped walkways promote seamless circulation between the building's main campus and garden-level spaces.

In implementing the design vision, one challenge was to create an attention-grabbing, garden-level façade that satisfies acoustic and thermal performance demands. NBBJ found their solution with Pilkington ProfilitTM channel glass from Technical Glass Products (TGP).

The linear, "U"-shaped, cast-glass channels are self-supporting and mounted in an extruded metal perimeter frame. They can be installed vertically or horizontally, and can form tight radii. In the case of CSI, the cast-glass channels animate and follow the curve of the building's adjacent walkway. The combination of raked and curved channel glass heads and sills make the size and positioning of each channel glass piece unique, and allow the façade to transition between curved and straight sections. In some instances, the linear glass channels step around architectural elements that intersect the walls at unusual angles.

Inside the CSI's garden-level entrance, a second layer of channel glass mirrors a portion of the exterior channel glass façade to create a glazed corridor. Its clear channel glass interior and translucent channel glass exterior combine to create what San Francisco Chronicle architecture critic John King hailed as the building's "most potent architectural retreat."

"The glazed hallway adds interest to the building by highlighting the silhouette of students walking inside," adds Asperin-Clyman. "It also improves safety on campus by allowing borrowed light to spill out from the building on to an area frequently traversed by students, faculty and visitors." The sloped walkway complies with ADA accessibility requirements and connects the entrance lobby to a student lounge.

Both the exterior façade and glazed channel glass hallway help the design team meet thermal and acoustic performance goals. The design incorporates clear channel glass with a low-emissivity coating in a custom painted thermally improved frame with head receptor. In select locations, the use of Lumira® aerogel in the enclosed space between the channels helps enhance energy performance and reduce sound transmission.

"By using unique, structurally sound and high-performing materials like Pilkington Profilit channel glass, we were able to experiment with geometry, layering and lighting to create spaces that not only attract students, but also satisfy the facility's highest functional requirements," concludes Asperin-Clyman.

Today, the innovative CSI building embodies the university's mission to bring science and discovery into the everyday lives of students. It is designed to LEED Gold standards.

For more information on Pilkington Profilit, along with TGP's other specialty architectural glass and framing products, visit www.tgpamerica.com.



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