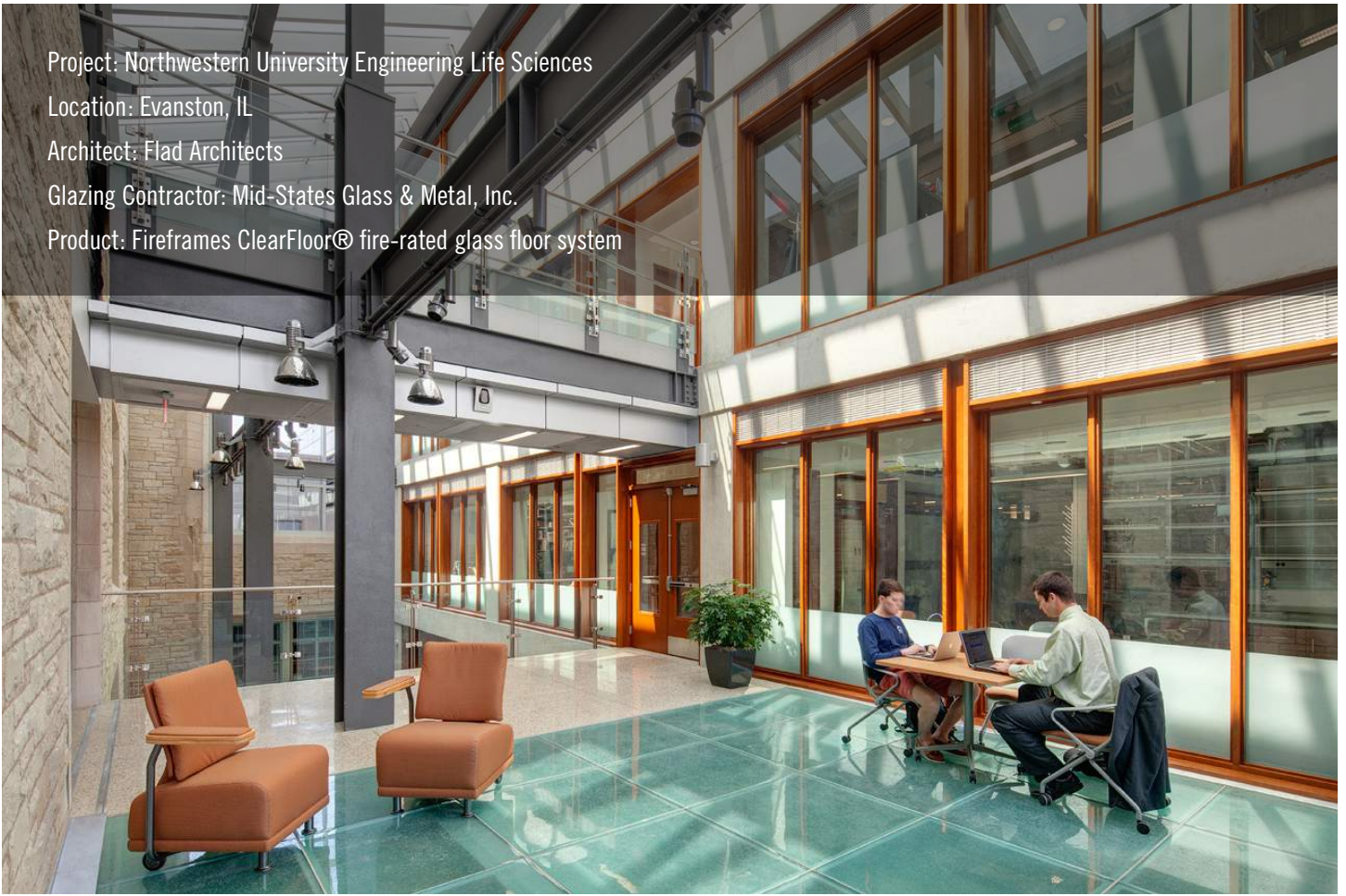


Project: Northwestern University Engineering Life Sciences  
Location: Evanston, IL  
Architect: Flad Architects  
Glazing Contractor: Mid-States Glass & Metal, Inc.  
Product: Fireframes ClearFloor® fire-rated glass floor system



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Northwestern University's Engineering Life Sciences infill is a bright, multi-disciplinary space with collaborative gathering areas and cutting-edge classrooms, laboratories and research rooms. The expansion rises five stories, bridging two of the campus' existing building wings. It is designed to LEED Silver standards.

"The original building had courtyards that were turned into parking lots," explains Matt Garrett, project architect at Flad Architects. "The infill makes use of this previously underused space and encourages interconnectivity with students and faculty in neighboring buildings."

In implementing the infill design, Flad Architects faced the challenge of ensuring adequate, balanced light in the space, given the adjacent, existing building wings. This was particularly important in the nuclear magnetic resonance lab and other ground floor areas, as too much direct sunlight could harm specialized instruments.

To allow for light penetration from the fifth floor to the ground floor, the design team desired a large, central atrium. It would allow light to spill down and throughout the building to promote student wellbeing. One potential setback with drawing light through the atrium was meeting fire and life safety codes. The firm needed a code-approved floor to divide the shaft into two segments, and to provide a barrier to fire and chemicals in the case of an accident. However, many of the floor systems available to meet these stringent fire and life safety codes were opaque fire-stopping materials such as concrete and corrugated steel.

To satisfy fire and life safety codes and help illuminate the infill, the design team used a fire-rated glass floor system developed by Technical Glass Products (TGP). The Fireframes ClearFloor® System consists of two-hour fire-rated Pilkington Pyrostop® heat barrier glass; a tempered, laminated walking surface glass; and a steel framing grid. It is fire-rated for two hours and provides a barrier to flames and smoke, as well as radiant and conductive heat. During a fire, this capability ensures the glass floor system's surface remains cool enough for individuals to walk across for the duration of its two-hour fire rating.

"We needed a fire barrier in the atrium, but we didn't want researchers and students to be in the dark," says Garrett. "The fire-rated glass floor system allowed us to compartmentalize a very large volume of space without blocking off access to daylight."

The fire-rated glass floor system supports loads up to 150 psf (732 kg/m<sup>2</sup>), which creates additional usable space in the project. The system's textured, top-surface glass provides students and faculty with the necessary traction to walk across its surface without slipping. The use of ceramic etched laminated glass creates a mild opacity that allows the system to diffuse daylight from above the atrium down into the nuclear magnetic resonance ground-floor lab.

"The soft, milky appearance of the fire-rated glass floor system was really important from a daylighting perspective," says Garrett. "Direct sunlight could damage the highly specialized instruments in the nuclear magnetic resonance lab. The pattern on the glass creates just enough opacity to allow for the transfer of soft, even light."

Today, students studying on the fire-rated glass floor system can see the shape of instruments in the lab below. At the same time, the translucent glass provides privacy from ground-floor occupants looking up towards the light well above.

"It's great to see the students are comfortable on the fire-rated glass floor. They have no hesitation to spend time studying on it," adds Garrett.

For more information on the Fireframes ClearFloor System, along with TGP's other specialty architectural glass and framing, visit [www.fireglass.com](http://www.fireglass.com).