

Architects' GuideTM TO GLASS & METAL

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Gotham Glazing

Glassy NYC
Projects Shine
Inside and Out

Also Inside:

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- Walkable Skylight Considerations
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Considerations for Walkable Skylights

Glass floors can be used in a wide variety of applications, and the walkable skylight is one that continues to rise in popularity.

Here are three factors to consider when designing for a skylight that will also serve as a glass floor:

1 - Ease of Implementation: Many factors go into the design, engineering and implementation of a walkable skylight. However, architects usually don't have time to hash out every little detail of the skylight.

"Often times, architects are looking for something pre-fabricated that they can drop into their drawings without complications," says Wayne Conklin, owner of Glass Flooring Systems. "They're seeking the path of least resistance."

Michael Ingui of Baxt Ingui Architects has worked on a dozen projects, primarily high-end residential applications, that include a walkable skylight.

"It makes a big difference if a contractor can basically just buy it and put it in," he says. "The ease of installation can be the difference in whether or not [the walkable skylight] is actually incorporated into the project's design."

Additionally, it's critical to find a supplier that makes AutoCAD, Building Information Modeling

(BIM) details and site condition information available to architects ahead of time.

"It's all about being able to validate all the things architects need—from energy code compliance to testing and performance values," says Conklin.

2 - Glass System Makeup: The makeup of a walkable skylight can vary from project to project depending on what needs to be achieved on the exterior and interior.

"Do you want a clear skylight?" Ingui asks. "Does it need a texture that makes it less slippery? Is it being used for residential, low-traffic use, or is a commercial application?"

The exterior glass is often laminated for structural purposes. On the interior side, the system may include an insulating glass component for energy efficiency.

Glass Flooring Systems, for example, uses a stepped framing system in which the glass that will be walked on is not in direct contact with the insulating glass unit (IGU) spacer. Otherwise, live loads, snowloads and the weight of the glass itself can affect the integrity of the spacer.

Inside the building, daylighting is the most obvious driver in the use of skylights, so an architect may want to select glass types that maximize this. Low-E coatings, colored interlayers and clear or frosted glass textures may also be used.

"Being able to have a system you can customize in this way that is also easy for contractors to install is really a win-win," says Ingui.

3- Testing and Performance Values: Virtually all of the factors discussed above involve some kind of testing, starting with performance values.

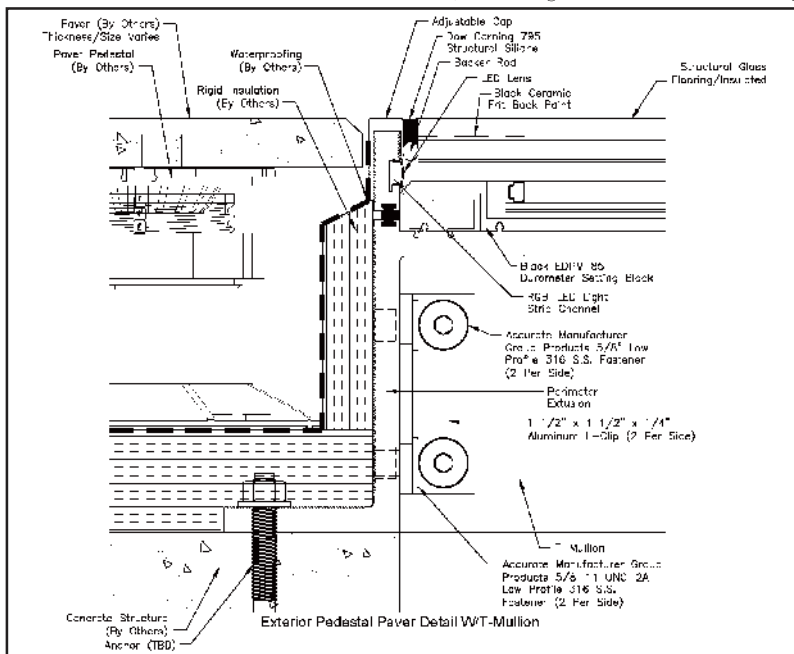
"Architects are held to the standard of energy code compliance," says Conklin. "And it's about the whole building envelope. You can't say, 'I'm going to be energy-code-compliant with the entire building, except for this part.'"

Air and water infiltration are important aspects of the system that must be tested, and anti-slip textures may be required to meet slip-resistance testing such as ASTM c1028 or UL 410. In some locations, impact testing may also be required.

Finally, having many images of past projects and applications on hand is critical to getting a client to buy in to the idea of a walkable skylight.

"For many of these clients, seeing is believing," says Ingui. **AGG**

Detail courtesy of Glass Flooring Systems



Walkable skylight manufacturers should have testing, detail information and engineering readily available for ease of implementation for architects. Pictured is an example of an exterior walkable skylight pedestal paver detail.