



# Ask the Expert

How is glass sustainable?

As you think about the environmental impact of a commercial building, glass may not be the first consideration that comes to mind. But that's an oversight. Glass, in fact, is an essential part of the equation. By choosing the right glass, you can maximize the natural daylight in

your space while minimizing unnecessary heat transfer. Not only does this make conditions more comfortable for the occupants, it also significantly reduces the heating and cooling load for the building. And this, of course, reduces the overall energy usage—benefiting both the owner's bottom line and



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As in many areas of construction, glass technology has evolved and improved over time. This is definitely the case as the industry has moved to green building strategies. **Ken Hallam** has witnessed this firsthand over his 40-plus years in the industry. As he works with clients at **Binswanger Glass**, he educates them on how to choose the most efficient, effective, and attractive glass solutions for their projects. There are so many promising technologies out there today that make sustainability more accessible than before. Here Hallam offers his insights into how glass is a critical component of a green building.

the environment.

Glass technologies have improved greatly over the last decade. One particular area of innovation is in the different coatings that can be applied to glass to block out specific parts of the solar spectrum. At one end of the spectrum is ultraviolet light—these are the rays that cause fabrics and other interior materials to fade. At the other end is infrared light, which transfers heat into the space. In the middle is visible light, which is what you want to maximize in your interior, both for its mood-boosting properties as well as its ability to cut your electricity bill.

The glass coatings target ultraviolet and infrared light while preserving the transfer of visible light. In doing so they reduce the U-value of the window. The U-value measures

the rate of heat transfer (the lower the value, the more efficient it is). And, amazingly, these coatings are incredibly thin—some are just 2 microns thick, which, for reference, is 1/50th the diameter of a human hair. Not only do these innovations reduce heat transfer and cut your heating and cooling costs, they also protect the interior, preventing furniture from deteriorating due to sun damage.

By choosing the right glass for your project, you can reduce the building's energy consumption while improving the comfort for everyone inside. What could be more sustainable than that?



Read more from Binswanger Glass in the winter issue of gb&d when **Hallam explores the latest commercial glass solutions.**

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PHOTOS: COURTESY OF BINSWANGER GLASS

Binswanger Glass of Charlotte, North Carolina's contract division installed the curtain wall facade in this 10-story mixed-use building in downtown Raleigh. One Glenwood sits at one of the highest elevations in the city at the intersection of Raleigh's two most prominent streets—Glenwood Avenue and Hillsborough Street.

