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An Industry Effort to Harmonize Spandrel and Vision Glass

by Jordan Scott

Downtown Seattle's Avalara Hawk Tower, also known as 255 King, features Vitro Architectural Glass's Solarban 67 glass with ICD High Performance Coatings' Opaci-Coat-300 coating on the spandrel, creating a harmonized aesthetic.

Blending In

When discussing exciting glass industry trends it's not often that spandrel comes up in conversation. It's straightforward and steady. However, as technological advances and aesthetic preferences change vision glass, so, too, must the spandrel evolve.

Design decisions surrounding spandrel glass usually go one of two ways: standing out or blending in. Several paint companies, fabricators and glass manufacturers are focusing on improving the harmonization between vision and spandrel glass as architects increasingly prefer that aesthetic.

A Change in Vision

A building with spandrel glass that blends in with vision glass is not a new concept, but it has become more challenging in recent years according to Jeff de Waal, AGC Glass Co. North America's architectural sales manager for Canada. He says that in the 1990s, reflective glass was incredibly popular, making it easier to achieve a closer match between vision and spandrel glass.

Today, architects largely have moved away from reflective glass in favor of high visible light transmittance which, de Waal explains, is harder to match with opaque spandrel.

"We've gone so far that the glass almost starts to look black with the absence of reflectivity. It makes it a challenge to match," he says, adding that the difference in light transmittance creates different conditions between the two parts of the façade.

Michael Saroka, COO of Goldray Glass, based in Calgary, Alberta, says that harmonizing spandrel colors with vision glass is a decades-old concept, but one thing making the process more difficult is the addition of low-E coatings. He recommends using the same low-E coating on the spandrel and then opacify it to keep the reflectance the same across the vision and spandrel glass.

"You don't use the low-E coating for its solar properties on spandrel but as a design feature to match the vision glass," he says, adding that this does cost more than omitting the low-E coating on the spandrel.

Evolving Spandrel

Garth Tait, sales and technical support specialist for Hartung Glass Industries in Seattle, says that he's seen a demand for harmonizing colors since the company began offering spandrel glass. However, as projects have gotten larger they are seeing more volume.

"Over the years we've definitely seen a growth in spandrel insulating glass units (IGUs). Spandrel used to be monolithic shadow boxes. It wouldn't even have a coating on it. Now we've seen a shift to insulating with low-E coatings for the harmonizing aesthetic," says Tait. "As architects are designing more all-glass façades, we're seeing more spandrel to cover up the structure that was typically exposed before. As we go into more curtainwall, there is going to be more spandrel."

Finding Harmony

Glass industry companies are finding ways to increase the harmonization between vision and spandrel glass. At Goldray Glass, Saroka says the company uses a device to aid in color matching.

"When harmonizing spandrel you're looking for the reflective color of glass versus transmitted. Reflected color is black with a bit of a blue tint," he says, explaining that Goldray uses a spectrophotometer to identify the reflected colors. "[The spectrophotometer] can get the reflective color so that you can measure it. Then it's like matching any other color. Sometimes it requires trial and error until you can get an acceptable match."

To better the chances of matching spandrel with vision glass, de Waal suggests increasing the reflectivity of both, and adds that architects should view samples with reflectance or even request a mock-up if they're concerned about how it will look. He says architects often choose the vision glass they want and then ask what they can do with the spandrel.

"We listen to what they're trying to achieve and then make recommendations," he says. "Before we make any recommendations we ask as many questions as we can to understand the architect's vision and how they want

the building to look and perform ... We're careful about adhering to an architect's vision because the aesthetic is their signature."

The spandrel color should simulate the appearance of the vision glass, which is impacted by the color of the building's interior. de Waal says that a light gray spandrel could match the vision glass of buildings with light or gray interiors; misty white could simulate blinds behind vision glass in buildings that often have the blinds down.

AGC's new Lacobel T product is glass with the enameled paint baked into the glass when tempered. de Waal explains that the paint becomes more durable when baked into the glass rather than being painted on after it's tempered. He adds that it can complement the vision glass if the spandrel uses the same glass.

A Matching Partnership

The team at ICD High Performance Coatings, based in Ridgefield, Wash., is hoping that the term "façade-visual harmonization" will catch on. The company has partnered with Vitro Architectural Glass to make color matching painless when working with the two companies. ICD offers spandrel colors that are already color-matched to Vitro's various glass types. The harmonizing color chart lists Solarban low-E coatings for vision glass with the corresponding ICD harmonizing spandrel color for each. Vitro provided the most common Solarban glass configurations and ICD crafted the harmonizing colors.

When a harmonized façade aesthetic is desired, ICD Coatings marketing manager Casey Anderson says her company recommends using its color coating on surface number four of an IGU. She says this creates a more blended appearance by replicating the depth of the vision glass.

If a low-E coating is present in the vision configuration, her company recommends continuing this effect in the spandrel to maintain the same reflectivity, tone and potential metallic effects across the whole façade.

"Sometimes a low-E coating on spandrel glass can be value engineered

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Harmony is King

Downtown Seattle's Avalara Hawk Tower, also known as 255 King, is a recent example of harmonizing spandrel and vision glass. Designed by Freiheit Architecture, the building's façade includes more than 30,000 square feet of Solarban 67 glass by Vitro Architectural Glass with Opaci-Coat-300 in Mucky Water from ICD Coatings. This portion of the façade makes up approximately 25% of the building envelope, according to Garth Tait, sales and technical support specialist for Hartung Glass Industries, the glass fabricator on the project.

"The design trend toward spandrel harmonization appears to be increasing significantly, especially on large-scale tower projects," says Andre Kenstowicz, architectural manager for Vitro Architectural Glass in Seattle, who adds that the 255 King project uses harmonization to create a uniform glass look across the façade.

"If the design intent is glass façade harmonization, then sometimes the best spandrel glass is that which cannot be immediately identified as spandrel," he explains. "In addition to utilizing the ICD Harmonizing Color Chart, maintaining the Solarban low-E coating in the spandrel area also aids the look of façade continuity."

The glass was glazed by Northwest Window Installation.

Blending In

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out as an option after being specified for the spandrel IGU configuration to create a harmonizing appearance," she says. "Keep in mind, this decision also causes an alteration in the façade appearance and may warrant a different color coating selection, based on the newly adjusted aesthetic."

Anderson also notes that surface two is the recommended application if the spandrel color accent is meant to create a banding effect or prominent color theme.

ICD Coatings architectural specialist Kate Stewart adds that without the awareness of harmonizing color options, warm or medium gray colors may be specified, but could result in a higher contrast to the vision glass.

Standing Out

While many architects prefer spandrel and vision glass to appear harmonized, bright colored spandrel is still used in many projects. de Waal says that architects often choose brighter colors when wanting to create a contrast.

"Brighter colors are the better route to go if a product has high light transmittance and no reflectivity. It may be a better option than trying to match in that case," he says.

James Wright, managing partner for Deco Glass Solutions LLC in Cincinnati, says that bright colors such as yellows and reds have started to appear more so in the past ten years. He's also seen acid-etched glass used for spandrel.

"It's a trend over in Europe. I'm assuming it will come to the U.S., like most things do," he says. "Acid-etched glass with a paint behind it will give it a colored look but diffused."

Another way to make a building stand out is by using digital printing. Tait says this method is changing both spandrel and vision glass, allowing for an artistic design element to be printed across a façade with varying levels of opacity and pixilation.

Despite many ways to make a building stand out, Wright says white, black and warm gray colors are used for spandrel most often.

"Whoever makes the decision wants a building to look cool and new," he



Another Seattle project, 4545 Roosevelt, uses a variety of bold colored metal cladding panels next to Vitro's Solarban 70XL, Solarban 67, Solarban 60 and Solarblue with ICD's Opaci-Coat-300 in Harmony Gray for the spandrel areas to create a checkerboard effect.

says, "and while bright colors look nice, at the end of the day, people lean toward more neutral colors."

Saroka agrees, adding that when architects want to design a unique building they often choose a unique shape rather than color. However, there are more people wanting to set their building apart and he's seeing bright colors used more.

While those wanting to include pops of color using bright spandrel remain limited, companies will continue to find ways to create increased harmonization between vision and spandrel glass. ■

the author



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