

Case Study:

Washington, D.C. "Newseum" uses SentryGlas® to symbolize media transparency

World-renowned Polshek Partnership Architects followed the guiding principles of the Freedom Foundation's mission - free press, free speech and free spirit - when designing the Newseum, a 23.226 m² (250,000 sq ft) museum showcasing a free press as a cornerstone of democracy.

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The Newseum's 418 m² (4,500 sq ft) "window on the world" is a point-fixed, lowiron glass curtainwall made with SentryGlas® for extra transparency.

Open design in low-iron glass emphasizes the role of a free press

World-renowned Polshek Partnership Architects followed the guiding principles of the Freedom Foundation's mission - free press, free speech and free spirit - when designing the Newseum, a 23.226 m² (250,000 sq ft) museum showcasing a free press as a cornerstone of democracy. This stunning glass and steel structure occupies a prominent spot in Washington, between the U.S. Capitol and the White House.

Polshek Partnership's use of SentryGlas® contributes to the Newseum's aesthetic and metaphorical successes, making it easily recognized and remembered by visitors from around the world. According to architect James Polshek, "The Newseum is almost all glass where its neighbors are almost all stone. It's transparent where they are opaque, light where they're heavy, breezily informal where they are attired for a decorous sit-down dinner. Transparency as a metaphor for a free press and an open society was guiding principle of the design."

A key component of Polshek's design is what he refers to as a "window on the world," a 418.06 m² (4,500 sq ft) glass curtainwall constructed with SentryGlas®.

Pedestrians outside can see the Newseum's giant news screen, as well as visitors circulating on ramps and bridges. Visitors on the museum's upper floors can see the Capitol building through this façade, establishing a visual connection between the concepts of a free press and democracy.

SentryGlas® interlayer was specified for the glass because of its structural strength performance, transparency and edge stability. The pointsupported framing system paired with the SentryGlas® interlayer contributes to the open, minimally-framed look that Polshek Partnership desired.

In addition to inherent strength, SentryGlas® offers excellent edge stability and optical properties. The open-edged sheets are insensitive to edge discoloration.

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Moreover, SentryGlas® interlayer enhances the safety and strength of the entire assembly. Its post-break strength is higher than that of PVB, and it keeps glass in place even when shattered. The use of two layers of 10 mm (3/8 in.) low-iron tempered glass laminated with 1.52 mm (60 mil) SentryGlas® allowed Polshek partnership to achieve its transparent "window on the world."

SentryGlas® also was used in the Five Freedoms walkway, a glass pathway etched with the five first amendment freedoms: press, speech, religion, petition and assembly. Laminated glass with SentryGlas® interlayer was supplied by Cristacurva. "We created a building that is inviting, open and transparent, one that reflects the role a free press should play in a democracy," said Polshek.



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Lighter façade panels enable more subtle supporting structures

For decades, interlayers made of polyvinyl butyral (PVB) have been the industry standard when producing laminated safety glass. Architects are well aware of the possibilities and limitations of such glass when used extensively in façade engineering, for roofing and window panels. In contrast, SentryGlas® enables an entirely new approach because the interlayer is over 100 times stiffer and five times stronger than PVB. As a consequence, there

is an almost perfect transmission of load between two laminated sheets of glass, even at high temperatures, leading to the excellent flexural behavior of the glass when under load - also under direct sunlight in high summer. Accordingly, laminates with SentryGlas® show less than half the rate of deflection when compared to laminates with PVB, when under the same load, and thus almost the same behavior as monolithic glass of the same thickness.

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As well as improved strength and stiffness, other benefits of SentryGlas® include:

- **Safety:** In the event of breakage, glass fragments remain firmly bonded to the interlayer, reducing the chance for injury
- **Security:** SentryGlas® can be used in glazing that withstands bullets, hurricane-force winds and even bomb blasts
- **Durability:** SentryGlas® is extremely durable and resistant to clouding, even after years of exposure
- **Design Versatility:** SentryGlas® can be used in glass manufactured flat or curved, including annealed, toughened, heat-strengthened, spandrel, wired, patterned and color tinted glass
- **UV control:** SentryGlas® is available with or without UV transmittance

REGIONAL CONTACT CENTERS

Kuraray Co., LTD
Ote Center Bldg.
1-1-3, Otemachi
Chiyoda-ku, Tokyo, 100-8115, Japan
Phone: +81 3 6701 1508

Kuraray Europe GmbH
Glass Laminating Solutions
Philipp-Reis-Str. 4
65795 Hattersheim, Germany
Phone: +49 (0) 69 30585300

Kuraray Americas, Inc.
2625 Bay Area Blvd. #600
Houston TX 77058, USA
Phone: +1.800.423.9762

Kuraray Mexico S.de R.L. de C.V.
Homero 206, Polanco V seccion,
cp 11570,
Mexico City, Mexico
Phone: +52 55 5722 1043

For further information
about SentryGlas®, please visit
www.sentryglas.com

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