Case Study

RECREATION SUSTAINABLE

Pikes Peak Summit Visitor Center

CASCADE, CO

Architect
RTA Architects Inc.
Colorado Springs, CO

Design Architect
GWWO Architects
Baltimore, MD

Vitro Products
Solarban® 70 Glass
(Formerly *Solarban*® 70XL Glass)

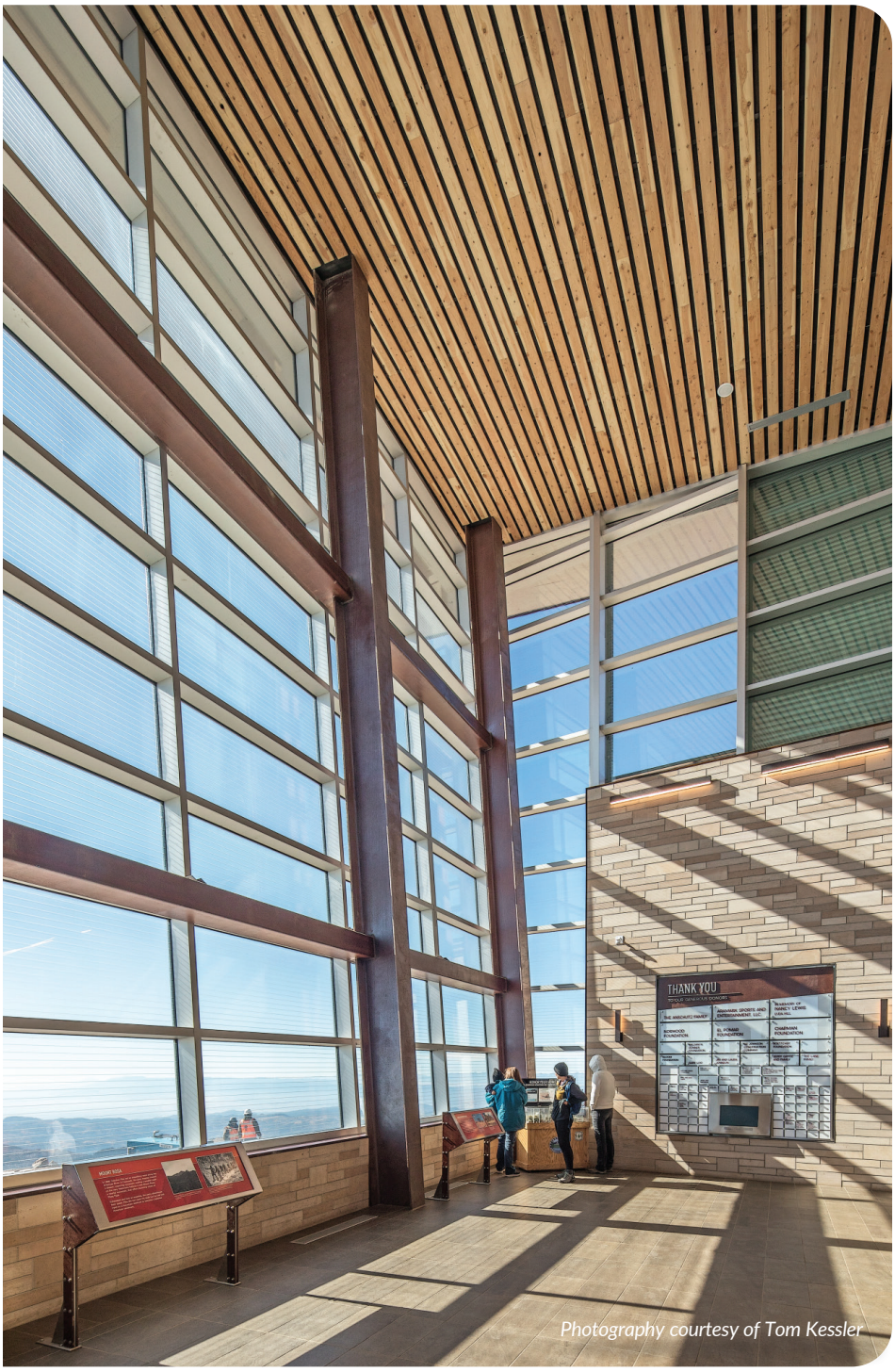
***Vitro Certified*™ Fabricator**
Oldcastle BuildingEnvelope®
Denver, CO

Glazing Contractor
El Paso Glass
Colorado Springs, CO

PROJECT BACKGROUND

At the crest of Pikes Peak sits the new, state-of-the-art Pikes Peak Summit visitor center. Located in Cascade, Colo., this modern facility provides a seamless, immersive experience that allows visitors to be surrounded by the natural forms of the environment as well as the expansive views of the rugged landscape surrounding America's Mountain.

While Pikes Peak has stunning vistas, at an elevation of 14,000 feet, the environment can also be extremely hostile. The high-alpine terrain as well as arctic-level climate and hurricane-force winds present many unique challenges. Upwards of a quarter of an inch of wind-borne debris can be moved around on the summit with ease.



Solarban® 70 glass by Vitro Architectural Glass gives visitors an immersive experience.

Vitro® Architectural Glass

With all these challenges, specifying glass in this unique environment is highly important, as it must be able to withstand a myriad of natural forces. Fortunately for architect of record, RTA Architects Inc. of Colorado Springs, Colo., the firm found the perfect solution in *Solarban*® 70 glass by Vitro Architectural Glass.

"Working and designing for the summit of Pike's Peak is like a giant science experiment because there are so many different variables," said Mike Riggs, associate principal, RTA Architects. "We had several partners do wind analysis, and their assessments indicated winds of more than 195 miles per hour. We found that most of the glass types we sampled would be heavily degraded by the environment. So, the composition of *Solarban*® 70 glass and its uniqueness to resist not only the wind pressures but also wind-born debris played an important role in our selection."

Solarban® 70 glass strikes the right balance between form and function with a transparent, color-neutral aesthetic and unprecedented solar control and visible light transmittance (VLT). When coupled with conventional clear glass in a one-inch insulating glass unit (IGU), *Solarban*® 70 glass features a solar heat gain coefficient (SHGC) of 0.27 and VLT of 64%.

"The previous summit building had very limited glazing and viewpoint opportunities, which closed off the building from the natural environment," said Riggs. "Now, visitors can truly take in the mountain, its beautiful vistas, and gorgeous environment. Then there's the thermal aspect to *Solarban*® 70 glass. We had to work with the dynamic of the arctic-level climate and the building spaces. We wanted to take in as much solar heat gain through this environment as we could while also keeping out enough of it, so we didn't overheat the space."

RTA Architects also understood the importance of specifying bird-friendly glass for the Pikes Peak Summit visitor center due to the many migratory and predatory birds in the area. This portion was completed by Walker Glass, whose striped bird-friendly acid-etch treatment is visible on 10,000 square-feet of glass on the outside of the facility. The stripes are meant to generate contrast so the birds will recognize the glass as an impassible medium. In addition to Walker Glass, glass fabricator Oldcastle Denver, glazing contractor El Paso Glass, and design architect, GWWO Architects of Baltimore, Md., were also partners in realizing the project.

The Pikes Peak Summit Visitor Center has received multiple awards and accolades since its opening in June 2021. Recent honors include: 2022 Project of the Year by ENR Mountain States, 2022 Colorado Professional Award presented by ASLA (American Society of Landscape Architects) and 2022 ACEC Colorado (American Council of Engineering Companies of Colorado) Engineering Excellence Award. Additionally, it's the most sustainable high-altitude structure in the country, if not the world. Close to one-million visitors per year get to partake in this truly one-of-a-kind experience.

"It's a great recognition when doing the right things for the right place is awarded and recognized by, most importantly, the people that visit Pikes Peak but also by the design and engineering teams," said Riggs. "I've never had a project in 20 years that really, deeply grabs your soul. It's a very deep connection I have now with the place, and it's not necessarily with the building but how that building has become integrated with the place that's Pikes Peak."

Striped bird-friendly acid-etch treatment done by Walker Glass.

To learn more about *Solarban*® 70 glass and other high-performance glass products by Vitro Glass, visit **vitroglazings.com** or call **1-855-VTRO-GLS (887-6457).**

Vitro® Architectural Glass