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SOLAR ROADWAYS AT JEFF JONES TOWN SQUARE HARTUNG GLASS INDUSTRIES & SOLAR ROADWAYS

HARTUNG-GLASS.COM, SOLARROADWAYS.COM
PHOTOS BY SOLAR ROADWAYS

Jeff Jones Town Square in Sandpoint, Idaho, is home to the first public installation of Solar Roadways, hexagonal glass-topped solar panels designed to be able to replace outdoor roadway and sidewalk surfaces. Installed in February, the walkable and bike-able 150-square-foot installation features 30 Solar Roadways SR3.1 panels. The multifunctional panels contain solar conversion technology, heating technology and embedded LED lights that glow under sun or snow.

Solar Roadways, solarroadways.com, constructed, supplied and installed the 15.6-inch long by 1-1/2 inch thick hexagonal panels. The panels are topped with low-iron glass to maximize solar transmission, and thus maximize performance. The low-iron glass is Vitro Starphire glass, vitroglassings.com, and was supplied and fabricated by Hartung Glass Industries, hartung-glass.com. The top of the panel features a fritted texture of crushed glass applied by Solar Roadways, which provides traction for walking, running, jumping and biking over the pedestrian-centric installation.





JUDGE'S TAKE :

AS A TECHNOLOGY GEEK AND LONGTIME GLAZIER, THE SOLAR GLASS FLOOR IS EXEMPLARY OF THE WAY THE INDUSTRY IS HEADING. THIS CREATIVE USE SHOWS OFF THE SPECTACULAR WORLD OF WHAT GLASS CAN BE. IT IS CONSUMER FRIENDLY, GREEN AND [COMES] WITH THE INCLUDED 'WOW' EFFECT OF INTERACTIVE LED LIGHTS. YOU WILL CERTAINLY BE SEEING MORE OF THIS COME TO THE FOREFRONT IN THE ADVANCING NEW WORLD OF GLASS."

*Glass Magazine Awards
Judge Glen Greenberg,
chief technologist,
president, Elmont Glass Co.,
elmontglasswest.com.*



Each 44-watt panel is engineered to reduce electrical costs by collecting and storing solar energy, which is converted to AC energy, explain Solar Roadways owners Scott and Julie Brusaw. The multicolored light show is courtesy of the LEDs that are embedded in each panel, which have the potential to create 16 million colors. Solar Roadways intends the Sandpoint project to be a dynamic installation, which will be updated with the latest product developments. The surface of the roadway is kept clear from ice and snow due to the four built-in heating elements installed in each panel, which sense external conditions and prevent the panel temperature from dropping below freezing.

Jeff Jones Town Square serves as a central gathering place for the greater Sandpoint community, and the Solar Roadways installation acts as a centerpiece for the square. City officials say the Solar Roadways installation represents the future- and technology-focused direction of the city. “Sandpoint is a city that historically had a resource extraction-based economy. ... In the 21st century, we have seen the evolution of technology-based industries in the city. Solar Roadways epitomizes the new face of Sandpoint, and the innovation and entrepreneurship of Sandpoint,” said Sandpoint Mayor Shelby Rognstad during the Solar Roadways unveiling press conference.

The Solar Roadways panels are designed to be tough enough for any walking or driving surfaces, according to the company. The hexagonal shape of the panels provides stability and distributes loads against the multiple sides. The panels have been tested at a civil engineering lab and were found to have a load strength of 250,000 pounds. According to Scott and Julie Brusaw, this was well over enough to handle the weight of fully loaded semi-trucks.

Towards the goal of serving as a highway, each panel has 336 multicolored LEDs for road signage and graphic elements. In addition to being solar-powered and LED-lit, the panels are also intelligent, thanks to their microprocessor enhanced circuit boards. The panels’ unique intelligence was engineered to enable other technologies for roads, parking lots, and other surfaces, such as dynamic charging for electrical vehicles and autonomous vehicles, the Brusaws report.

“Solar Roadways is a revolutionary technology and revolutionary idea—one that is poised to change the face of the world and how we travel,” Rognstad said.