Case Study

Office Bldg | Retail | Multi Unit | Sustainable

Watershed

SEATTLE, WASHINGTON

Owner:
Hess Callahan Grey Group

Architect:
Weber Thompson Architects

Glass Fabricator:
Northwestern Industries

Glazing Contractor:
Mission Glass

Vitro Products:
Solarban® 60 Glass

Solarban® 60 glass by Vitro Architectural Glass contributes to 7-story Watershed's Living Building Challenge petal certification and to meeting Seattle's Living Building Pilot Program's stringent requirements, which include using 25% less energy per square foot than a baseline office building.

PROJECT BACKGROUND

In the progressive city of Seattle where sustainable design is well established, it's not always easy for a new building to stand out. Seeking to meet that challenge, developer Hess Callahan Grey Group tasked architect Weber Thompson with designing Watershed, a deeply green project that achieved both Living Building Challenge (LBC) petal certification and Seattle's aggressive Living Building Pilot Program (LBPP) standards.

This meant using 25% less energy per square foot, consuming 75% less water than a baseline office building and meeting LBC petal standards for place, materials and beauty.

"The stakes were high for Watershed to perform," recalls Myer Harrell, AIA, LEED AP, AIA, LEED AP BD+C, Homes, principal, director of sustainability, principal, Weber Thompson, Seattle.

Vitro® Architectural Glass

Watershed | Seattle, Washington

A key strategy was designing an efficient core and shell building envelope. To help create a beautiful structure with enhanced daylight, views and thermal efficiencies, the architects turned to Vitro Architectural Glass. Informed by an Energy Analyst model and input from Vitro Glass, Harrell's team selected *Solarban*® 60 solar control, low-emissivity (low-e) glass for retail spaces and punched openings throughout the 7-story, 72,000 square-foot building.

With a solar heat gain coefficient (SHGC) of 0.39 and visible light transmittance (VLT) of 70% standard one-inch insulating glass unit (IGU), *Solarban*® 60 glass offers an optimized balance of solar heat gain protection, clarity and cost, and contributes to the building's Energy Use Intensity (EUI) target of 32 (kBTU/sf/year).

On the Watershed's south facade, *Solarban*® 60 glass provides occupants—including those from Weber Thompson, whose offices are situated on the second floor—with stunning views of downtown Seattle, Mt. Rainier, Lake Union and the George Washington Memorial Bridge. On the west side of the building, *Solarban*® 60 glass promotes "people watching" in the Fremont neighborhood through openings averaging of 3½ feet wide and 9 feet high.

Complementing the openings, Watershed features lavish outdoor spaces including roof decks, landscaping and an open-air entry lobby designed with a steel hangar door that folds up to become a canopy element.

"All of these outdoor spaces promote health and wellness, chance encounters between building occupants and connection to the elements and seasons," says Harrell. "This is supported by good glazing—connecting the indoors to outdoors, especially at the retail ground floor, the Troll Avenue entrance and the open-air lobby where these connections can be maintained without sacrificing energy performance."

Another notable design feature is an overhanging, cantilevered roof, which collects rainwater in a 20,000-gallon cistern for grey water use.

To comply with the Living Building Materials Petal, the architect selected red-list free materials. Locally sourced and fabricated steel and concrete were used for the structural system. Western red cedar accents stained with non-toxic LifeTime Wood Treatment at the main entries, soffits and canopies blend in well with the glazing, creating a visual cue to the local region's rich lumber heritage, relates Cody Lodi, AIA, LEED AP, principal, Weber Thompson.

By earning LBPP certification from the city of Seattle, Watershed was permitted to increase the floor space in the building by 15%, enhancing the project's economic feasibility by creating more rentable space.

Other sustainable design elements include the use of salvaged and recycled materials, building-integrated photovoltaics and a variable refrigerant flow HVAC system with a dedicated outdoor air system for energy efficiencies and enhanced air quality. The building also features operable awning windows, energy and water building performance dashboards, and educational signage.

"In a city that cares deeply about sustainability, Watershed sets the standard for green building design and development." states building owner, the Hess Callahan Grey Group. "It creates immediate value for tenants and the surrounding neighborhood."

For more information about *Solarban*® 60 glass and the rest of Vitro Glass's full line of architectural glasses, visit www.vitroglazings.com or call 1-855-VTRO-GLS (887-6457).

Achieving the delicate balance of solar heat gain protection, optimizing daylighting and providing views, Weber Thompson specified *Solarban*® 60 glass for the storefront and punched openings for Watershed.

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