

PROJECT PROFILE

Alaska Railroad Freight Shed

Anchorage, Alaska

Architect:
ECI/Hyer Architects

Contractor:
Watterson
Construction Inc.

Structural Engineer:
Schneider Structural
Engineers



"We really like the way Schneider Structural Engineers approach the concept of a project and engage in design early. They love to seek innovative solutions. When they're involved up front, structural becomes part of the design." — Brian Meissner, ECI/Hyer Architects

ALASKA RAILROAD FREIGHT SHED

The 1941 Alaska Railroad Freight Shed is a 700-foot-long heavy-timber structure in Anchorage's historic Ship Creek District. In 2009, the exterior of this long-shuttered warehouse was peeled away and an energy-efficient core and shell were added. Using old-school carpentry materials and techniques, the original handcrafted character was maintained inside and out. The structural challenge was to retain the authenticity of the original framing while accommodating the additional weight of the new building envelope and meeting stringent seismic building code requirements. Schneider Structural Engineers added concealed timber "overframing" and exposed structural steel braced frames without detracting from the cadence of the original timber framing. The result is a modern energy-efficient building that meets LEED® criteria and preserves the integrity of this historic landmark.

HIDDEN STRUCTURAL SOLUTIONS PRESERVE HISTORIC INTEGRITY

- This is Alaska's first historic building to be reconstructed to meet LEED® environmental standards and be certified by the U.S. Green Building Council.
- The renovation entailed bringing the 1941 structure up to current seismic, snow and other building code standards, while following the National Park Service preservation guidelines and LEED® core-and-shell certification requirements.
- Schneider Structural Engineers developed a "now-you-see-it, now-you-don't" engineering plan to add modern office performance requirements, insulate the walls to R-14, meet seismic code demands and sandwich these improvements into the middle of existing walls. Completed, the exterior walls look as they did before – only thicker, enhancing the effect of the historic windows and overhead doors.
- Schneider's engineers also added a 10-inch framing assembly and R-40 insulation to the roof spans without impacting the aesthetic of the existing roof. New canopy and fascia details retain the character of the original roofline.
- A 1970s concrete masonry addition was re-skinned to blend into the original structure. The project also includes a raised and heated pedestrian walkway.
- This historic warehouse is the focal point of the Ship Creek revitalization project in downtown Anchorage, offering 36,000 square feet of industrial loft-style commercial and retail space.

"Having an historic building in the community helps maintain a sense of place and is important for future generations. And keeping an existing building is the most sustainable practice."

— Doug Gasek, State Historian, Alaska Office of History and Archaeology