



Project Profile Grotto Sauna

Ambitious architecture in a remote and demanding environment



© Grotto Sauna – Photographs by Jonathan Friedman

→ General Information

Building Name	Grotto Sauna
Building Location	Georgian Bay, Canada
Country	Canada
Project Size	800 ft ²
Building Type	Sauna
Project Type	New Construction
Type of Cladding	Red cedar planks
Total Building Costs	n/a
Owner	Private
Architect	PARTISANS
Consultant	Building Science Consulting, Inc.
Project Management	PARTISANS
Sub-Contractor for DELTA® Products	Jordan Construction
Year	2014

→ Project Description

The Grotto Sauna near Parry Sound, Ontario, Canada, drew inspiration from the historical definition of a grotto – a secret water filled cave, concealed within unexpected rock formations. Perched on a private island in Lake Huron, the OAA Design Excellence Award nominated building is embedded in the ancient rock formation, the Canadian Shield, which forms the backbone of North America. The sculpted space compliments and becomes part of the prehistoric landmark.

Challenging the standards of current practices in the construction industry, every detail was communicated with a millwork and steel fabrication partner. Together, a new process of fabrication was developed, utilizing state of the art 3D technology to scan, model and build the Grotto, so that the building would sit naturally in the rock formation. To complement the surreal environment, PARTISANS decided on a simple, burnt Red Cedar exterior. In contrast, the curved White Cedar interior helps optimize air flow.

The Grotto requires two high performance ovens. Insulation was needed not only to protect its components from heating or cooling too quickly,

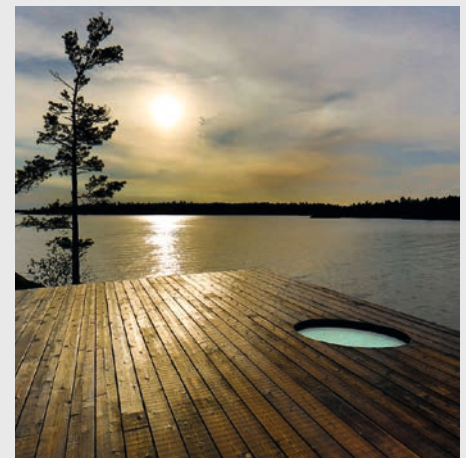
but also to make the Grotto energy efficient. The space behind the wood panels creates convection currents that allow the skin to breathe through the ventilation pores that were carved into seats and seams of the cedar panels.

PARTISANS chose DELTA®-FASSADE S, a water-resistant barrier (WRB), to accommodate for the extreme temperature changes occurring inside and outside of the structure. Pouring water on the

oven creates steam that makes the humidity within the structure jolt up in short, extreme bursts. DELTA®-FASSADE S has high vapor permeability, allowing for the moisture vapor that accumulates inside to escape. On the exterior, it acts as a durable drainage plane, channeling water from wind-driven rain and snow to the outside of the structure. The watertight membrane helps protect the building enclosure from damaging effects of moisture infiltration.



Simple angles complement the rock formation



Burnt Red Cedar planks allow the landscape to shine



→ Challenges

When PARTISANS met on site, they knew that their most prominent challenge was to make a free-standing structure that respected and complimented the environment. Understanding the rock formation was the first step in construction. After examination of the setting, it was determined that the best course of action was to prefabricate the building and deliver it to the site by barge and crane.

PARTISANS chose DELTA®-FASSADE S, a lightweight and tear-resistant WRB, that could stand up to the rigors of the pre-fabrication of the Grotto Sauna,

making installation fast, easy, and reliable. This technologically-advanced membrane could withstand the stress of moving to the jobsite.

Open joint cladding was to be installed on The Grotto Sauna, so PARTISANS needed a WRB that was UV resistant. DELTA®-FASSADE S has excellent stability against ultraviolet light. Its matte black coloring creates a deep 3D effect that makes the red Cedar panels visually “pop” forward from the black background. DELTA®-FASSADE S will provide sustainable moisture and UV protection behind the Grotto Sauna’s open joint cladding for many years to come.

→ Other DELTA®-FASSADE S Projects

- 2013 – Spa Balnea, Bromont-sur-le-lac, Quebec, Canada
- 2013 – University of Oregon, Collaborative Life Science Building in Portland, Oregon, USA
- 2015 – Audain Art Museum, Whistler, British Columbia, Canada
- 2015 – Institutional Advancement Building, Kent State University, Kent, Ohio, USA



An understated exterior allows environmental harmon

