

# SarnaProof



**Project**

Fort Albany Educational Complex  
Fifth Street  
Fort Albany, Ontario Canada

**Building Owner**

Peetabeck Education Authority

**Architectural Firm**

ANO Architects Inc. and  
H. Bradford Green Architects, Inc.

**Roofing Contractor**

Designed Roofing, Inc.  
North Bay, Ontario

**Roofing System**

Sarnafil's G410 fiberglass reinforced adhered roof system using a 55 mil custom-colored Pewter Gray membrane and Pacific Turquoise membrane covering the battens.

**Project Size**

70,000 sq. ft. (6,500 m<sup>2</sup>)

**Completed**

Summer 2001

The Fort Albany Educational Complex in Fort Albany, Ontario, is more than an elementary and high school. It's also a community center that houses a gym, a library and a shop area – all protected by a Sarnafil roof.

To design the complex, Roch Belair, a principal at ANO Architects of Timmins, Ontario, joined forces with Brad Green, owner of the architectural firm H. Bradford Green of Thunder Bay, Ontario. They spent nearly a week in Fort Albany, collecting as much information about the community as possible – the town's history, residents' values and culture – prior to designing the facility. Because the area's history was so heavily influenced by Native Indians, the design chosen incorporates the Native notion of the circle.

"The whole geometry of the building is set within their culture," says Belair. "The circle is very important to them,

because it means the circle of life." The building's curve is echoed in the landscaping, where we find at its center a ceremonial fire pit surrounded by patterned colored concrete paving, with a suspended dream catcher above.

The main portion of the roof is a barrel vault area that terminates in a goose head over the main entrance. When seen from above, the barrel vault portion of the roof makes up the wings of the goose. "A lot of the survival of the Canadian Natives originates from the Canada goose," says Belair. "Even now, school stops for two weeks in the fall and the spring so they can hunt the geese." The design also incorporates chevrons that keep snow from sliding off the roof. When seen from a distance, the chevrons, which are eight feet long on each side, look like upside down V's and are reminiscent of artists' renditions of birds flying.



## Building Design Offers Unique Roofing Challenges

Once the design was completed, it was time to find a roofing product that could withstand the severe northern winters. The design of the roof, with all of the various slopes and contours, presented more of a challenge than an average low-sloped roof. The architects needed a product that met the aesthetic requirements of the building design while assuring long-term watertight protection against the area's severe climate. And because of the numerous, complicated intersections of the varied roof lines, maintaining watertightness was a particular concern. And finally, a winter construction schedule meant the chosen product needed to be able to be installed in cold conditions.

The solution was Sarnafil's G410 fiberglass reinforced, adhered roof system because it offered the proven performance in cold climates, cold weather installation ability, and its heat-welded seams provided peace of mind that the entire roof would not leak. "We have experience using Sarnafil in harsh climates, and it has always functioned well," says Belair.

Color was another important consideration. "With other products you're limited

to stock colors," says Belair. "With Sarnafil, you can do any color you can imagine." A 55 mil Pewter Gray colored membrane was selected for the roof surface, while the chevrons and battens were covered with 55 mil membrane in Pacific Turquoise.

Designed Roofing Inc. of North Bay, Ontario, a Sarnafil Elite level contractor, was chosen for the installation due to its superior track record of quality Sarnafil roof system installations. This family-run company, owned by Frank Valenti, has been in operation for over 20 years, growing in size from one crew to three.

## Cold Weather Installation Begins

Location and weather considerations were important in the scheduling and completion of the project. The roofing materials began shipping in December 2000 – almost the height of winter. Normally, shipping materials is a straightforward procedure. In this case, however, the materials had to be transported by truck to Cochrane, then to the end of the rail line at Moosonee, about 80 miles from Fort Albany. Since there are no roads connecting Moosonee and Fort Albany, the materials then had to be reloaded onto a truck and transported on temporary winter roads over

frozen ground and swamp to arrive at their final destination a month later. In non-winter months, materials are transported by barge.

To get the workers to the site, Designed Roofing chartered a plane. The plane carried six men at a time, dropping one crew off at the site and then bringing out a new crew ten days later.

Each day during installation, Designed Roofing crews were connected to a safety harness to combat the constant high winds that sweep over the area from James Bay. "We had to work with the wind, and there were certain days we couldn't work at all," says Valenti.

The roof deck assembly on this project was more complicated than that of a typical roof. "We could have done this a lot cheaper by putting the membrane directly on top of the insulation," says Belair. "But because of the environment of Fort Albany, we wanted to create a vented roof space between the rigid insulation and the membrane above." To accomplish this, a perforated metal deck was placed on top of wood purlins, followed by a vapor barrier, eight inches of rigid insulation, a built-up element of wood framing to support 2x4s and a plywood deck, then the Sarnafil membrane.

Deck preparation is critical on adhered systems, so there was a lot of cleaning and patching involved. "It's just like putting down vinyl flooring in your kitchen – you don't want to see any pieces of wood or any cracks," says Valenti. "Because it's an exposed roof – on a slope so you can see it – the architects were really concerned with aesthetics."

By August, Fort Albany had a new educational complex with a durable roof that complements the form and color of the building beneath. Says Valenti, "Everybody seems to like it, and we're pretty proud of our work." Best of all, Sarnafil's quality product means the roof on the Fort Albany Educational Complex will stand the test of time.

For more information on how you can have a cost-effective Sarnafil roofing or waterproofing system on your institutional, industrial or commercial building, contact Sarnafil today.  
1-800-451-2504 • Fax 1-781-828-5365 • e-mail: [webmaster@sarnafilus.com](mailto:webmaster@sarnafilus.com) • [www.sarnafilus.com](http://www.sarnafilus.com)

  
**Sarnafil Division**