



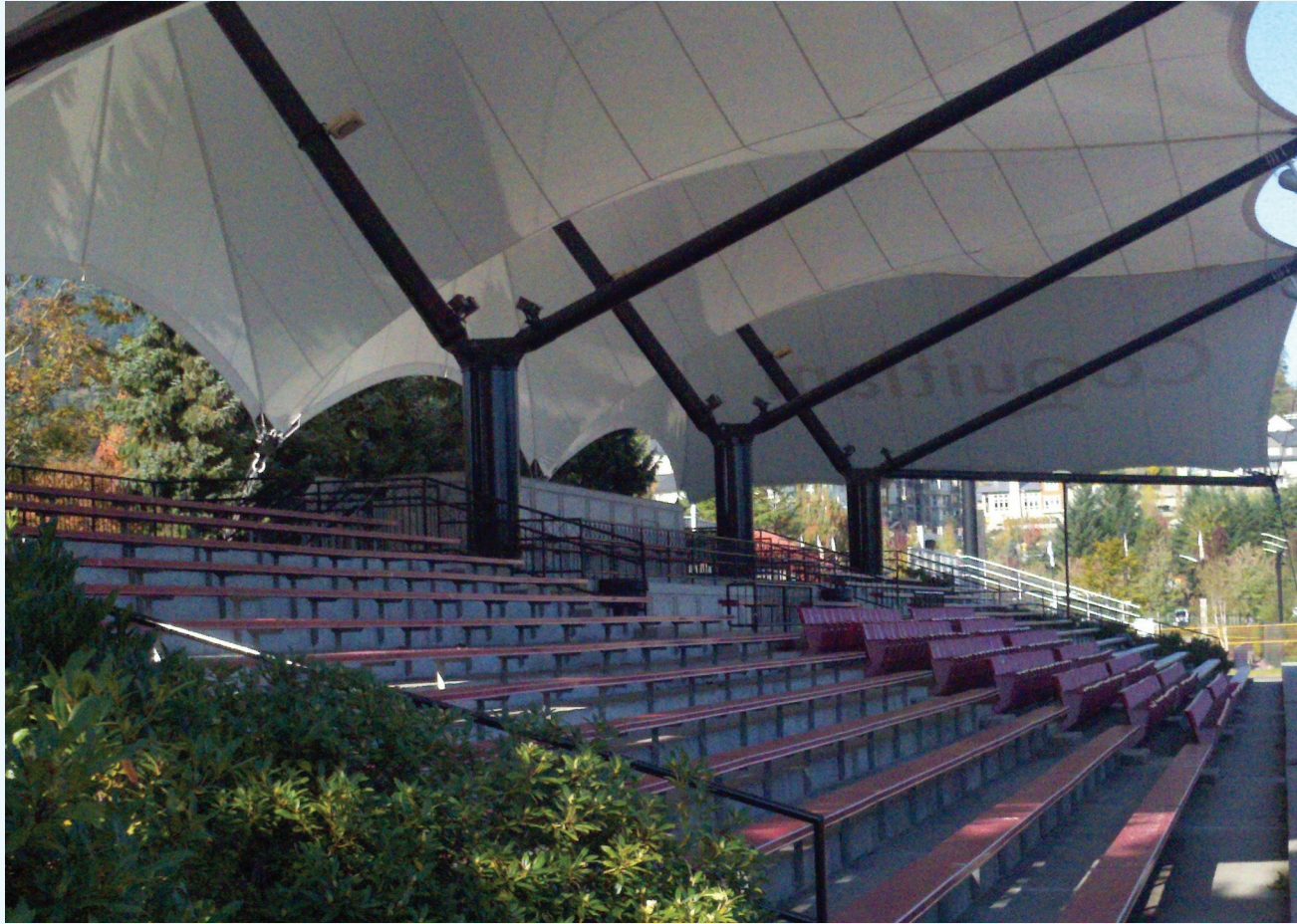
AIR AND TENSION STRUCTURES

77 PERCY PERRY STADIUM

Date: April 10, 2010

Size: 70' x 220'

Fabric: Ferrari 1202 T2 by InTents
from Ferrari



What was the project all about?

As a home to many sports clubs, Percy Perry Stadium is a multipurpose facility built for the 1991 B.C. Summer Games. The highlight of the facility features a tensile fabric structure used as a canopy to cover spectators during sporting events. As part of a \$10M expansion and renovation, the city solicited several companies to replace the membrane. This would include engineering analysis and review, along with finite survey work to ensure the details would be able to be recreated. New membrane, cables, tensioning system and upgrades would be required on the project.

What was the purpose of this project?

What did the client request?

Signature was contracted to design, manufacture, project manage and install the replacement membrane cover. Not having the original drawings required Signature to reverse engineer the structure to determine design inputs, interpret biaxial test specs, and design a shape that would meet new IBC codes. The existing steel, guy cables and foundations were verified to meet reaction loads of the new membrane. Coordination of the methods and construction process ensured a seamless project without interruption or interference to existing stadium operations. No landscaping or existing infrastructure were impacted during the installation and an aggressive timeline to coincide with other revitalization efforts were met.

The client also requested upgrades due to the structures ponding and leaking so Signature redesigned the slope of the profile and removed old gutter systems.

The City of Coquitlam also requested color specific logos on either end of the structure

In which city, state and country was the project installed or used?

The City of Coquitlam, British Columbia, Canada

What is unique or complex about this project?

The challenge to 'retrofit' new membrane on a system that was nearly 15 years old required very specific engineering and survey work to be done.

Though the membrane looks symmetrical the re-design actually has 131 unique membrane panels welded together. The patterning and computer cutting was unique and required a high level of quality control.

Some of the systems in place were outdated in comparison to new tensile structures and working with the existing system, combining new components while concentrating on keeping costs down, kept the Signature team challenged and focused through the design and construction process.

The construction team committed to working around existing landscaping and only from the back of the structure, as the City had the track also being replaced at the same time.

What were the results of this project?

The City is very satisfied and thanked Signature for their efforts and hard work. The relationship is ongoing as the City hired Signature to maintain the structure over the next 3 years. The City's project manager has recommended Signature for other projects in Vancouver area.

Is there any other relevant information that may impact the judges' decision?

We hope you review the quality of work we performed and consider the additional complexities the project and site challenged us with.