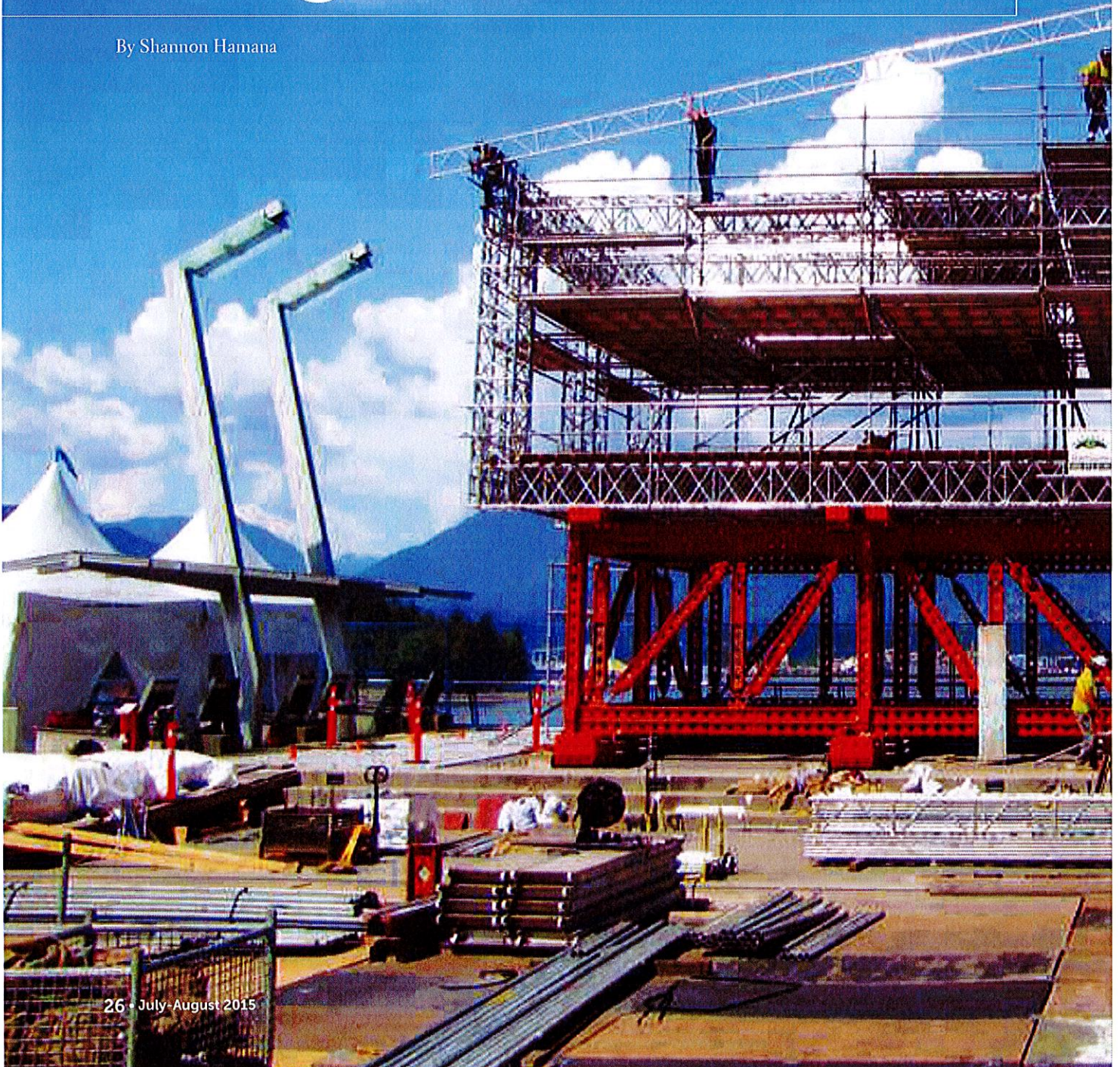


Scaffolding Built as Super Structure to Permanent Building Design Standards

By Shannon Hamana





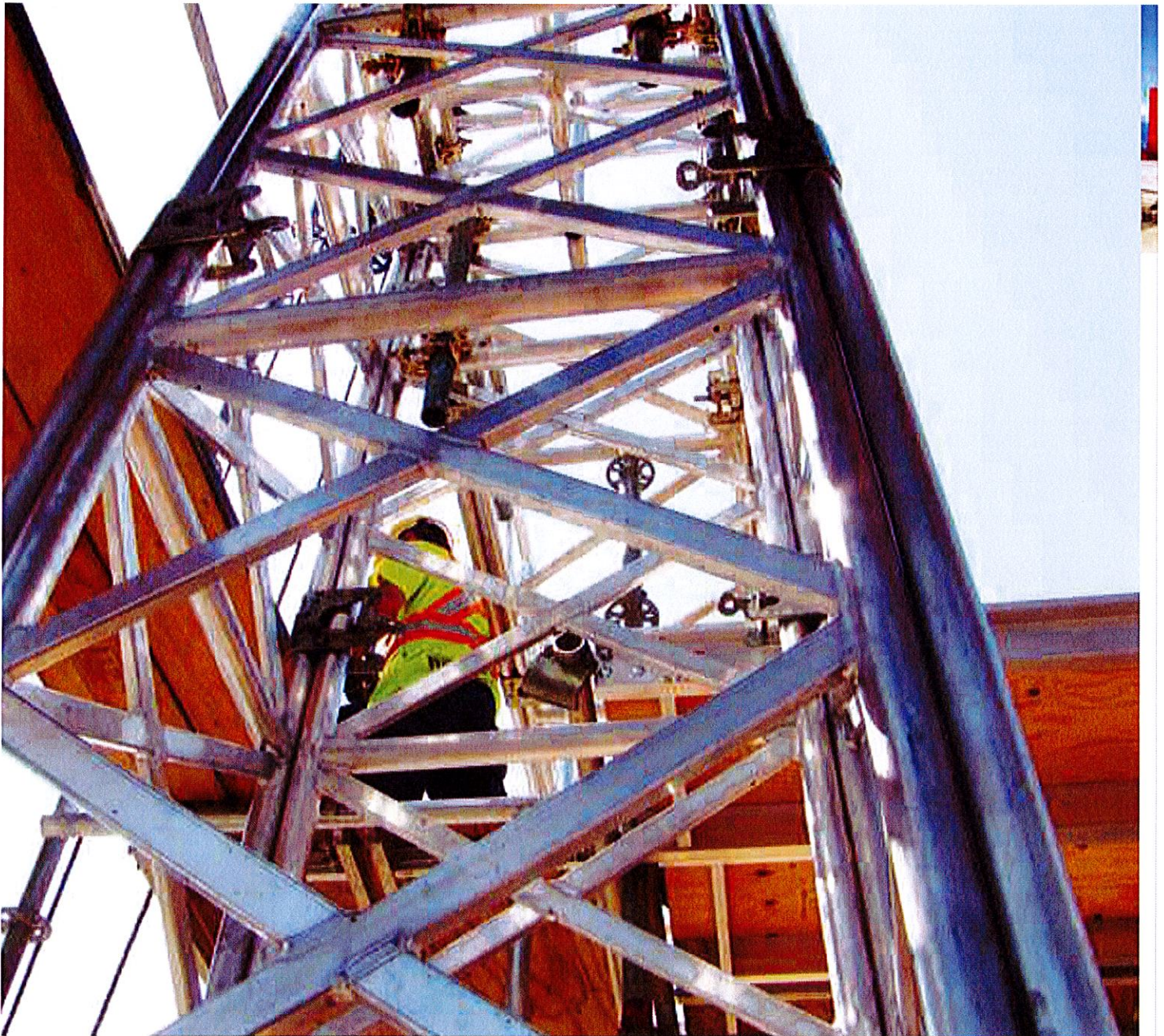
The spotlight has been on Canada recently for the FIFA Women's World Cup and also from a construction stand point following the eye catching construction of Fox Sports temporary broadcast studios located at Jack Poole Plaza in Vancouver, BC.

General Contractor BC Event Management fought off competition from six other North American bidders for the two story temporary broadcasting project.

As David Clark, President of BC Event Management, stated "we wanted no room for error, the time

constraint and uniqueness of this project allowed for zero defects, it had to be a "get it right first time approach" and they turned to Western Canada based Matakana Scaffolding Inc. to provide an innovative "out of the box" and workable solution. "Matakana came forward with the only workable proposal, ticked all the boxes, and thus was awarded the job."

The Matakana Group has a wealth of experience in the commercial, industrial and residential markets solving some of the most difficult access challenges, suspended platform and temporary roofing.



Challenge

The project was unique and faced a number of major obstacles. The structure needed to be designed and built to permanent design standards. In addition the loading restrictions and constraints on the Plaza (just paving stones and sand over the top of sand and styro-foam) made it impossible to use cranes or heavy forklifts. All material used in the project had to be erected in small pieces and built by hand. With an extremely short timeline, the project had to be built within two and a half weeks for all trades and a project tear down/removal to be completed in six days.

The project was unique and faced a number of major obstacles. The structure needed to be designed and built to permanent design standards.

The Matakana Group sees challenges as opportunities. The workable solution came courtesy of their in-house engineering team Matakana Engineering Services. The design team has a wealth of experience based on previous large temporary roof structures, heavy duty suspended systems, and custom solutions to tackle

access to large structures around Western Canada.

The City of Vancouver requested the Fox Sports Studio's temporary structure to be built in accordance of the National Building Code of Canada 2014. Matakana



Engineering Services was able to design and engineer the temporary structure to meet all permanent structure requirements. Jenish Castello, lead scaffold designer for the project says “the structure was designed to 1/50 wind pressure, designed to seismic, 2.4 KPa & 1.2 KPa live load on deck levels (deck level 1 & deck level 2 respectively) and minimum roof live load of 1 KPa. “

The key design components can be broken down into three phases. Due to the constraints of the job only certain materials would meet the specifications.

Solution Phase 1

Base of structure:

Custom foot pads were custom designed to adhere to the load restrictions imposed by the limitations of the plaza itself. Due to the loading constraints of the light concrete and paving stone combination, BC Event Management had to further reinforce and strengthen the tenant space below the plaza. The Orange Beams known as “MK2” can be configured into

The Orange Beams known as “MK2” can be configured into large truss structures allowing the support of massive loads, and huge spans.

large truss structures allowing the support of massive loads, and huge spans. They can be walked into areas inaccessible by cranes and erected in situ quickly. The soldiers are heavy duty, light weight structural steel sections that can be used as both beams and columns to bring exceptional strength and versatility. The base was completed in just two days.



INNOVATION + EXPERIENCE + INSURANCE =

*Solutions Driven*SM

Allied has focused on Scaffold Insurance for over 30 years

SCAFFOLD INSURANCE PROGRAM HIGHLIGHTS

- Largest insurance broker of scaffold risks in the country
- Risk management solutions to reduce costs
- Specialty coverage extensions
- General Liability, Umbrella Insurance, Auto Liability, Workers' Comp, and Equipment and Property Insurance coverage
- Safety Training & Workplace Compliance

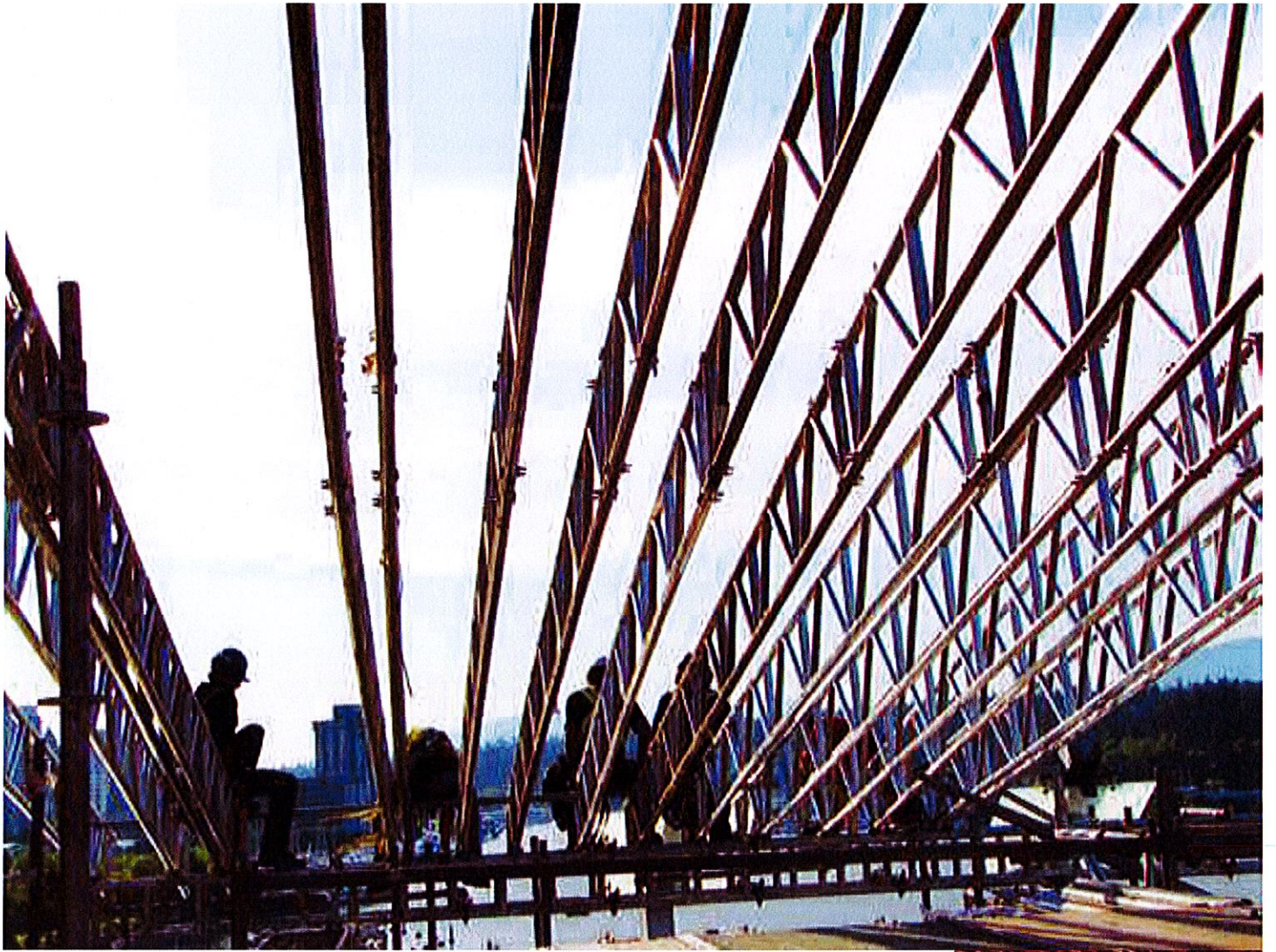
Risk.

You need more than just insurance. You need to see unseen risks, predict for them, and plan accordingly.

Allied delivers Solutions DrivenSM services that can reduce risk, heighten education, and drive efficiency. Let's talk about risk today.

Long-standing member of SAIA

AlliedForScaffold.com 800-569-9427



...saw the X-Beam 750 as a way to manage to hand build the structure while maintaining the high strength capability needed to reach seismic standards.

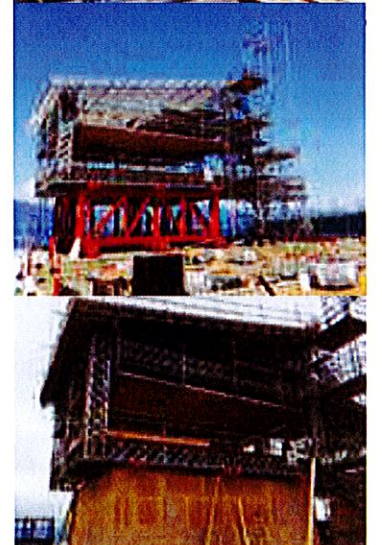
Phase 2

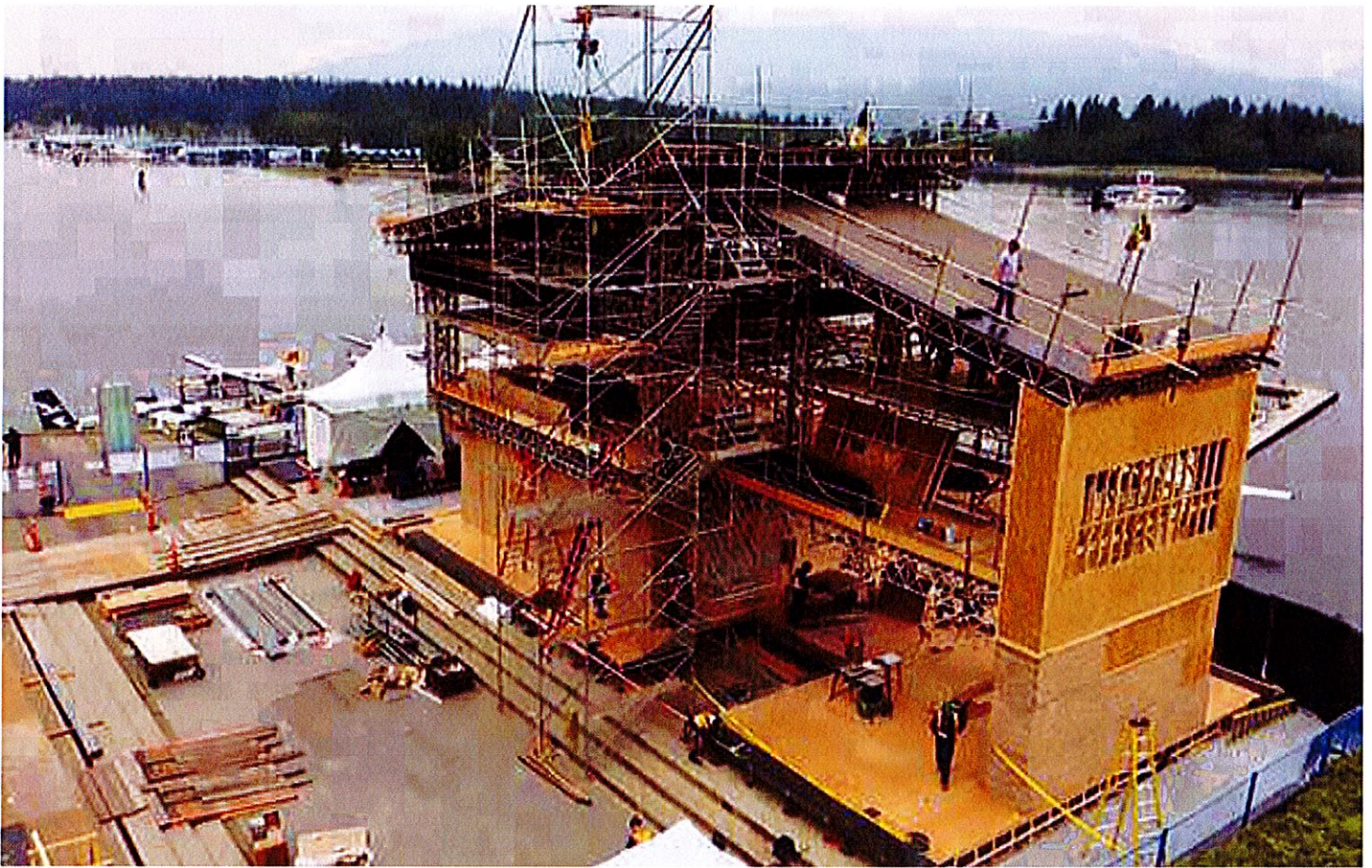
Superstructure & Roof:

Scaffolding was identified as the most suitable material to form the main superstructure.

Due to the constraints of the project, President of Matakana Nick Shaw turned to SSP (Specialist Scaffolding Products) a Canadian company that specializes in supplying highly innovative scaffolding

systems. SSP recently brought a high strength Apollo X-Beam from the UK and introduced it to the North American market. Nick saw the X-Beam 750 as a way to manage to hand build the structure while maintaining the high strength capability needed to reach seismic standards. The beams high strength capability open up all sorts of possibilities for large temporary roofs, cantilevers and suspending heavy loads. The inclusion of the X-beam on the Fox





Scaffold Training Institute



- Providing professional scaffold training services worldwide for over 20 years.
- Courses from 8 hours to 40 hours
- “Train-The-Trainer” courses



Scaffold Training Institute
Houston, Texas
281-332-1613
www.scaffoldtraining.com

Studio was its North American debut. The custom design used the 750 Apollo X-Beam for the vertical and horizontal members of the structure which ran into specially designed custom built multiway connectors also created by Apollo Cradles from the UK. The connectors resisted tension/sway on the framed structure and that also allowed leaving the second floor as an open structure with guardrails.

The roofing structure selected was another SSP supplied product: the 450 Clear Span temporary roofing system. The superstructure took a total of two days, the roof was completed in three days.

Phase 3

Cladding and Dressing of Structure:

The exterior of the building was covered with a mix of cladding and plywood. A large 6.4 by 3.4 meter high-resolution screen was built into the building's exterior. There were fifteen cameras, including a “crane-cam” with the ability to extend more than 15 meters, two 2.1-meter touchscreens, a retractable motorized rain shield and a drone for aerial shots in and around the set, along with the additional furnishings.



USA President's Best Supplier

STVA

SCAFFOLD · SHORING · SYSTEMS
MANUFACTURING & SALES

**We're Expanding
Our Panaseas-
Rizhao Factory!**

Let Us Quote Your Next
Containers of Scaffold,
Shoring or System Equipment

Call NOW or Visit Us
at STVAonline.com
877-890-8490

SAIA
Scaffolding & Shoring
Association

Facebook Twitter Google+

Not always smooth sailing

However, it wasn't all smooth sailing, quite literally, as at the eleventh hour the freighter transporting the critical components of the X-Beam scaffold and multiway connectors broke down. Indeed, the ship and its cargo were so far behind schedule that it didn't dock in Vancouver until well after the completion date of the structure.

The "get it done by all means necessary" attitude adopted by Apollo Cradles and the Matakana Group ensured that the project stayed on track. Matakana placed a second order and spent what was required to air freight the replacement order at short notice to ensure it arrived on time. In addition the team at Apollo Cradles worked hard around the clock to meet the tight deadlines for the second order.

Results

The project ticked all the boxes and the scaffolding component provided by Matakana was completed an impressive two days ahead of schedule.

David Clark of BC Event Management described the project as "a construction marvel, kudos to the Matakana Group, it was an extremely effective solution to what was a very challenging problem. They pulled out all of the stops to ensure the project was a huge success." •

About the Author

Shannon Hamana is a Construction Manager at Matakana Scaffolding, info@matakanascaff.com.