



**Client:**  
UBC & Vertex Systems

**Project:**  
Young Residence

**Location:**  
Arizona, USA

**Products:**  
FRAMA™ 3200

## Project Summary

- Project: Young Residence, Arizona, USA – 18,315 sq. ft.
- Challenge: Hybrid structure with large span trusses and mixed materials
- Solution: Integrated digital detailing-to-fabrication workflow using **Vertex BD** automated BIM software and Howick's FRAMA™ roll-forming technology
- Machine used: **Howick FRAMA™ 3200**

## Result

- Design & detailing services completed in 25 working days
- High-precision combination of hybrid structure coordinated from a single model
- Framing exactly matched BIM model without file conversions or data re-entry

## The project

**UBC BIM Services** thrives on solving complex structural challenges, and the Young Residence in Arizona was no exception. Spanning over 18,000 sq. ft., this hybrid two-story residence combined light gauge steel framing with hot-rolled steel, red iron and timber elements to achieve architectural intent and structural integrity. This was a test of engineering coordination, digital precision and streamlined automation.

## Turning BIM into machine ready data

The project's success lay in **UBC's BIM** expertise supported by **Vertex BD's** intelligent design software and Howick's precise roll-forming technology.

Leveraging Vertex BD's direct integration with Howick

FRAMA™ roll-forming machines, UBC BIM used Vertex BD's software to generate machine-ready data without any additional file conversion or loss of accuracy.

This digital connection reduced the risk of translation errors and accelerated production while ensuring studs, tracks, and trusses aligned with the design intent.

## Rapid fabrication through automation

For this project, fabrication was carried out by **Revolution Steel**, a Howick customer known for precision framing solutions. Using a Howick FRAMA™ 3200 roll-forming machine, Revolution Steel translated machine-ready data directly from the Vertex BD software to produce framing components with exceptional accuracy.

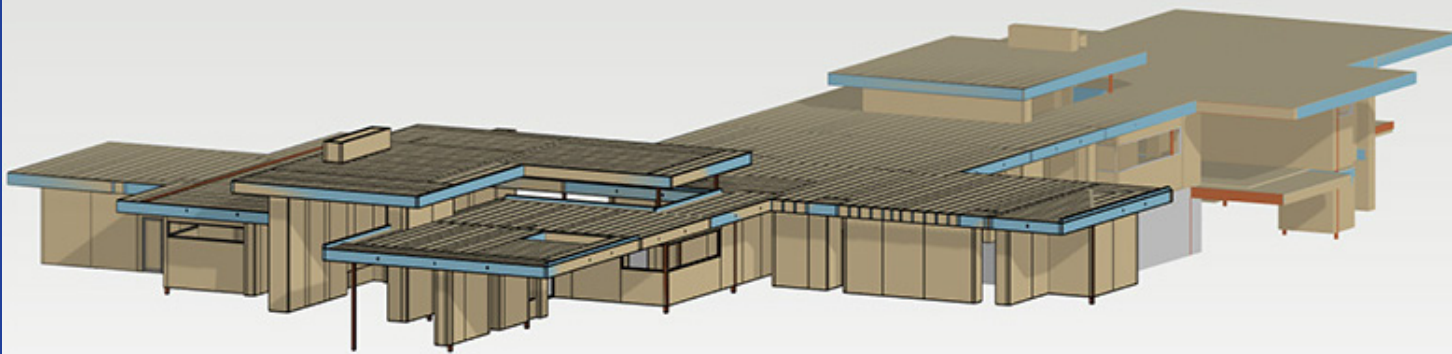
This seamless digital-to-physical connection was made possible by Howick's open language control system, which allows direct data transfer from the BIM model to the machine without the need for file conversions or manual re-entry. The result? Steel profiles fabricated with accuracy down to 0.5mm, ensuring each stud and track precisely matched the original shop drawings.

General Contractor **Arcadia Builders**, client of UBC BIM Services, managed the onsite execution, benefiting from a fabrication process that was both fast and highly coordinated. Together, this ecosystem of design, detailing and automation delivered a high performance hybrid structure with minimal error, reduced waste, and improved build efficiency.

## Delivering results that matter

Design and detailing for this large hybrid structure was





completed in 25 working days, with the client commending UBC BIM Services for their attention to detail and professionalism.

By smartly integrating Vertex BD's intelligent software with Howick's roll-forming technology, UBC BIM Services created a truly seamless digital-to-physical workflow, that reduced both time and labour while enhancing precision and project control.

## About the partners

### UBC BIM Services

UBC BIM Services provides high-level BIM modelling, detailing, and coordination services for the AEC industry. With over 75 engineers, modelers and detailers, UBC is a one stop shop for light gauge steel and timber framed structures. [ubcbim.com](http://ubcbim.com)

### Vertex Systems

Vertex BD is a powerful BIM design and manufacturing software solution that automates the creation of panel drawings and NC manufacturing data for fabrication. Over 18,000 users in 147 countries rely on Vertex with tools that automate repetitive tasks and make information sharing easy. [vertexcad.com/bd](http://vertexcad.com/bd)

### Revolution Steel

Revolution Steel leverages advanced technology and precision fabrication to deliver steel framing solutions with unmatched accuracy and efficiency. Their vertically integrated process, from robotic site layout and 3D scanning to digitally engineered panels, ensures homes and buildings are framed to exacting standards with minimal waste and faster timelines. [revolutionsteel.com](http://revolutionsteel.com)

# HOWICK

## ABOUT HOWICK LTD

Howick Ltd manufactures precision roll-forming machines and technology for light steel framing. For nearly 50 years we have been innovating in this space, creating systems and machines that are now employed by construction businesses in over 80 countries the world over. We are proud of the formidable reputation we have built up over that time for performance, reliability and service.

Unique in our sector, Howick steel roll-forming systems are 100% manufactured at our plant in Auckland, with top quality New Zealand made componentry either made in at the Howick factory or sourced locally.

**FOR MORE INFO OR QUOTES CONTACT**

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