



From Design to Delivery: Digital Transformation in Canadian Offsite Construction

UNB Off-site Construction Research Centre (OCRC) Webinar

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A SMARTER WAY TO BUILD, DESIGN & MANUFACTURE



Graitec helps industry leaders adopt **digital solutions** with **training, consulting, and technology** for smarter building and manufacturing.

Over 270 000 users

INDUSTRIES

Construction

Manufacturing

CLIENTS

✓ ARCHITECT

✓ ENGINEER

✓ CONTRACTOR

✓ FABRICATOR

✓ DATA MANAGER

✓ MANUFACTURER

✓ PRODUCT DESIGNER

TIMELINE



GRAITEC STRUCSOFT

1993



Founded in **Montréal, Quebec, Canada**
Primary activity: Software reseller



1994



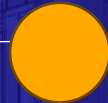
Became exclusive
HSBCAD reseller in NA

2003



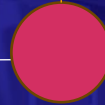
Released ProStud,
a light gauge steel
(LGS) framing
program

2007



StrucSoft begins
developing a Revit based
plugin for wood and light
gauge steel framing

2008



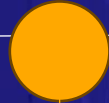
Released the first version
of **MWF** (Metal Wood
Framer) the very first
commercial Revit framing
application.

2021



Acquired by Graitec
Group

2025



MWF is rebranded
to 'Strucsoft'

**STRUCSOFT**

Our Approach

Trusted Partner

- Off the shelf software only solves part of the problem
- Every business is different – Flexibility is key to providing solutions

We aim to solve problems not “sell software”

- Find the gaps and build upon efficiency
- Create sustainable and flexible solutions that span the lifecycle of the product and business
- Recycle common solutions where applicable



The Workflow

Revit → Strucsoft → Onyx

2. Structural Model

Linking files will keep tabs on changes and coordinate construction in the model.

4. Shop Documentation

Create custom shop drawings, fully dimensioned BOMs and cut lists for manufacturing.

1. Source Data

Starting with the architectural .RVT means no data loss in file transfers.

3. Fabrication Model

The fabrication model is comprised of all features critical to the manufacturing process.

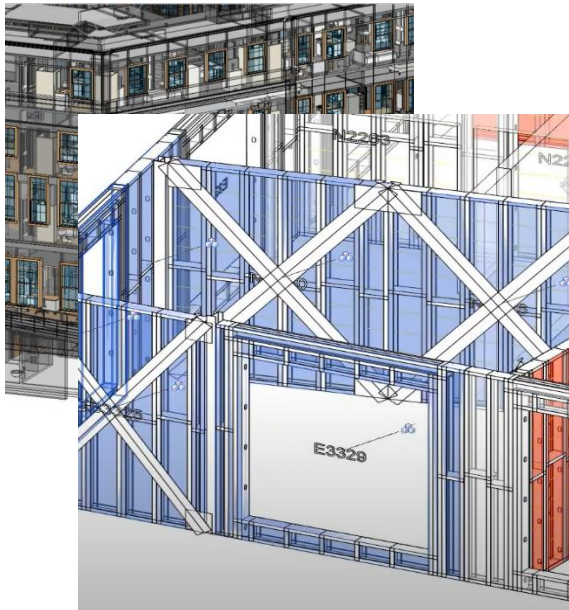
5. Manufacturing

CNC output is created leveraging the data from the source model and framing model.

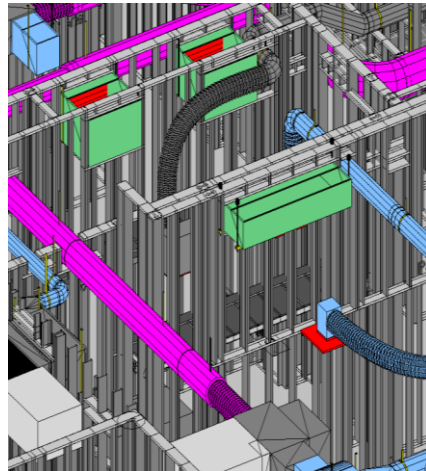
Strucsoft is a complete and automated Revit based framing solution.

It leverages the power of Revit® to streamline workflows and automate the creation of steel and wood framing for any construction project. MWF quickly and easily frame entire projects with user defined templates and use construction data to generate documentation, schedules, cut lists, framing elevations, shop drawings and more.

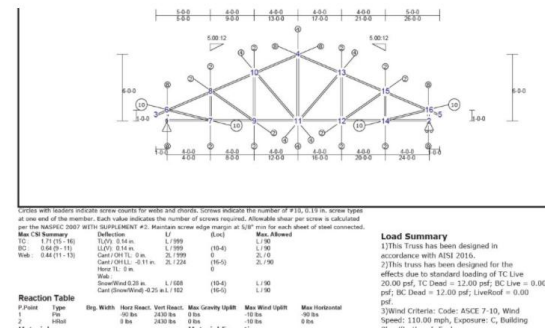
01 MODEL



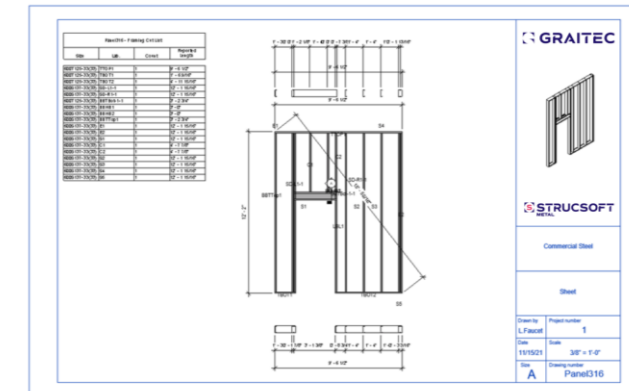
02 COORDINATE

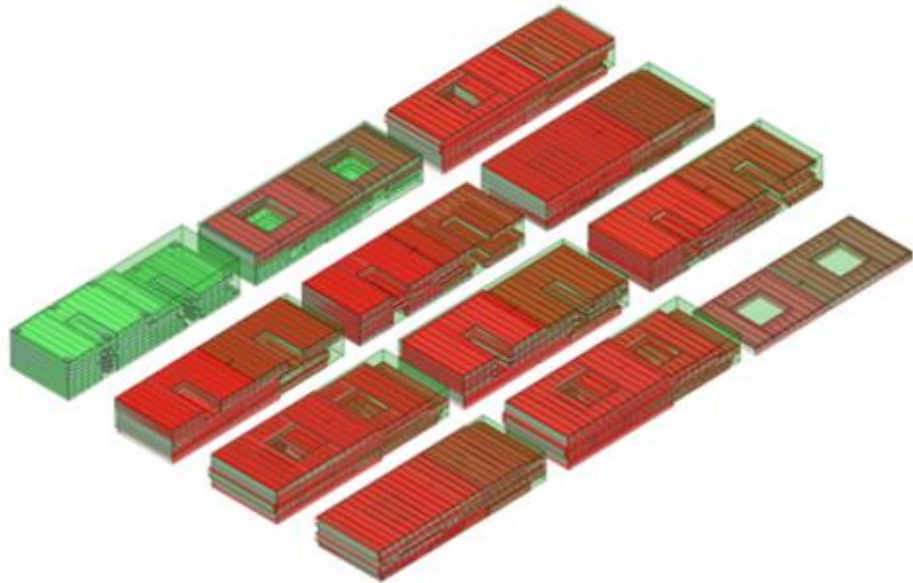
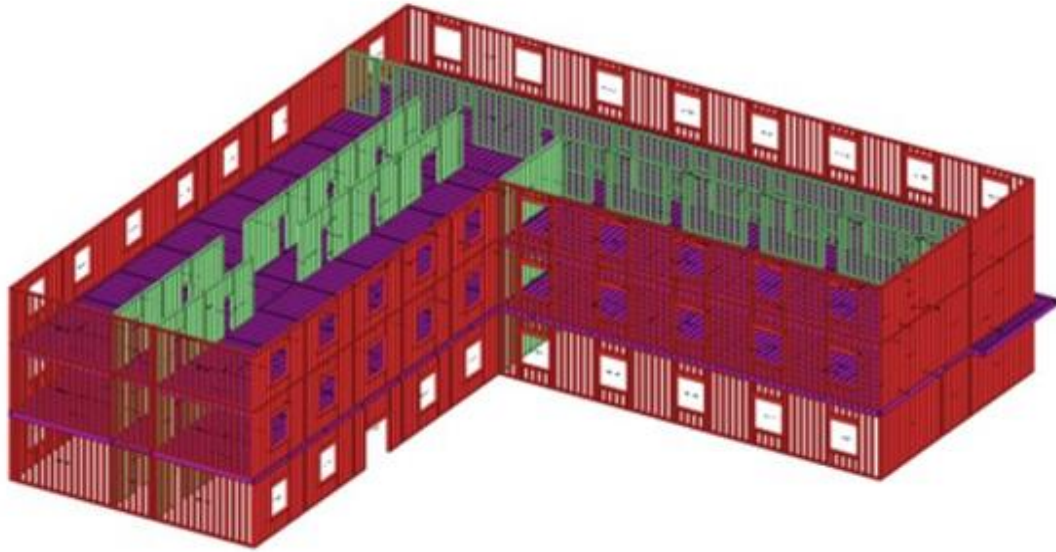


03 ENGINEER



04 MANUFACTURE





Stacking & Bundling

- ✓ Organize panels into bundles or stack for transportation

Manufacturing

- ✓ Manage, define and modify work orders

Panel editing

- ✓ Make last-minute edits using the CNC editor

Component tracking

- ✓ Generate bar codes / QR codes

- ✓ **Make edits to operations and wall panels**
- ✓ **Add panels to Work Orders and Roll Orders**
- ✓ **Sort, stack and bundle panels**
- ✓ **Print alpha-numeric barcodes**
- ✓ **Export shipping reports to .CSV**



Customer Spotlight

Digital Building Components (DBC)



Achieving sustainability at scale with prefabricated construction powered by VDC and smart digital framing solutions

Phoenix, AZ

2D Panelized Systems

Healthcare, Commercial, Residential, IT Infrastructure

Material: Light Gauge Steel



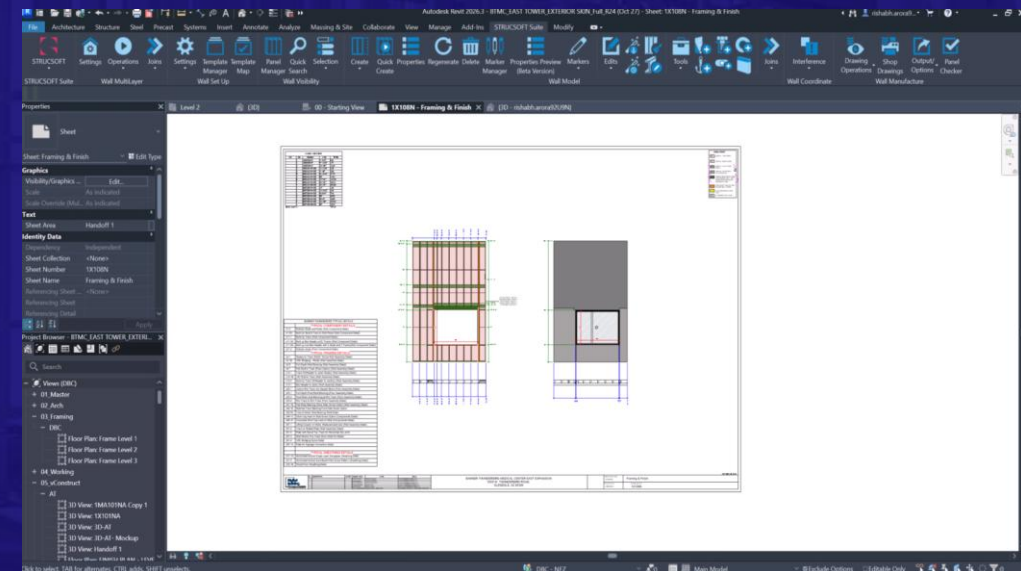
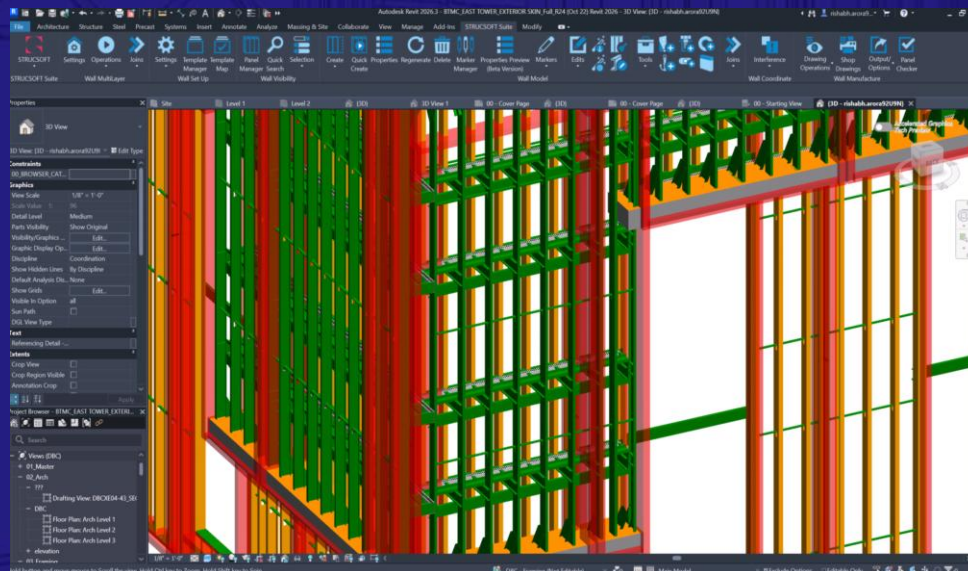
Customer Spotlight

Digital Building Components (DBC)

80% Time Savings in Digital Modeling
40% Overall time savings

Leveraging the power of DfMA to achieve end-to-end efficiency in the design and fabrication of cold formed steel framing

- Revit modeling
- Coordination
- Documentation
- Roll-former integration



Customer Spotlight

Blueprint Robotics



Blueprint Robotics is a Baltimore based subcontractor and offsite manufacturer specializing in multi-family wood construction, focusing on residential and commercial projects

Baltimore, MD

2D Panelized Systems

Residential, Commercial

Material: Wood



Customer Spotlight

Digital Building Components (DBC)

- Implemented a high-stakes, live-project transition to our Revit-based, framing software without factory downtime
- Used Strucsoft Wood to model framing components, produce shop drawings and generate CNC code for fabrication
- Achieved 2.5x factory output – from 60,000 to 150,000 linear sq.ft. Of wall panel production
- Successfully leveraged BIM technology to maximize factory production capacity



CUSTOMER SUCCESS STORY

CLIENT: PCI LAS VEGAS
PROJECT: Sphere
Location: LAS VEGAS, NV
Delivery Date: May 2023

HEIGHT: 111.5m *Tallest spherical*
WIDTH: 157m *building in the world*



SOFTWARE USED:



8000+ Total Wall & Floor panels
modelled with Strucsoft Metal

132 Wall Templates Types

33 Floor Templates Types

173 Unique Opening configurations

