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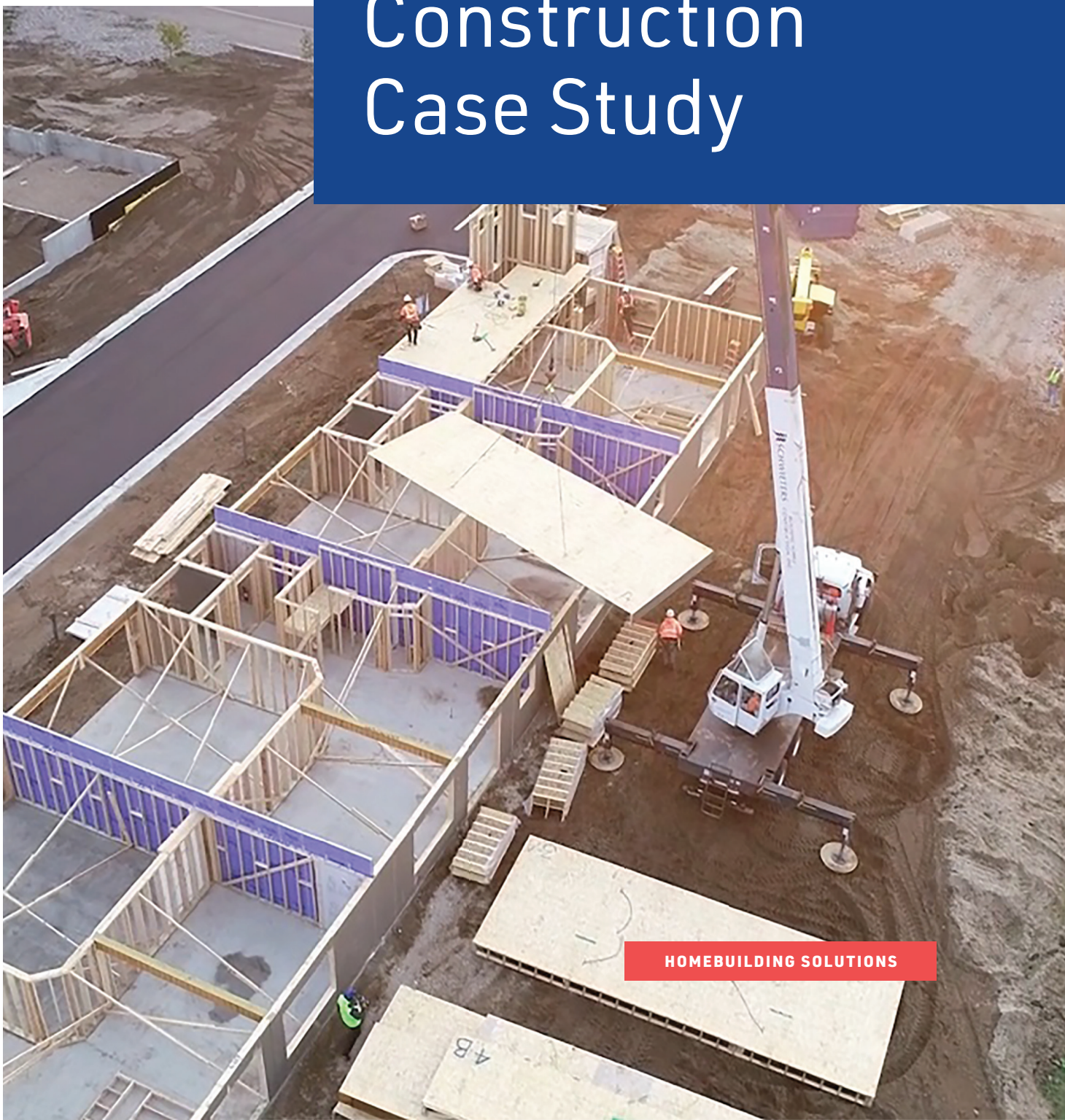
JL Schwieters Construction Case Study



HOMEBUILDING SOLUTIONS

MITEK CASE STUDY

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JL SCHWIETERS CONSTRUCTION (JLS) CASE STUDY

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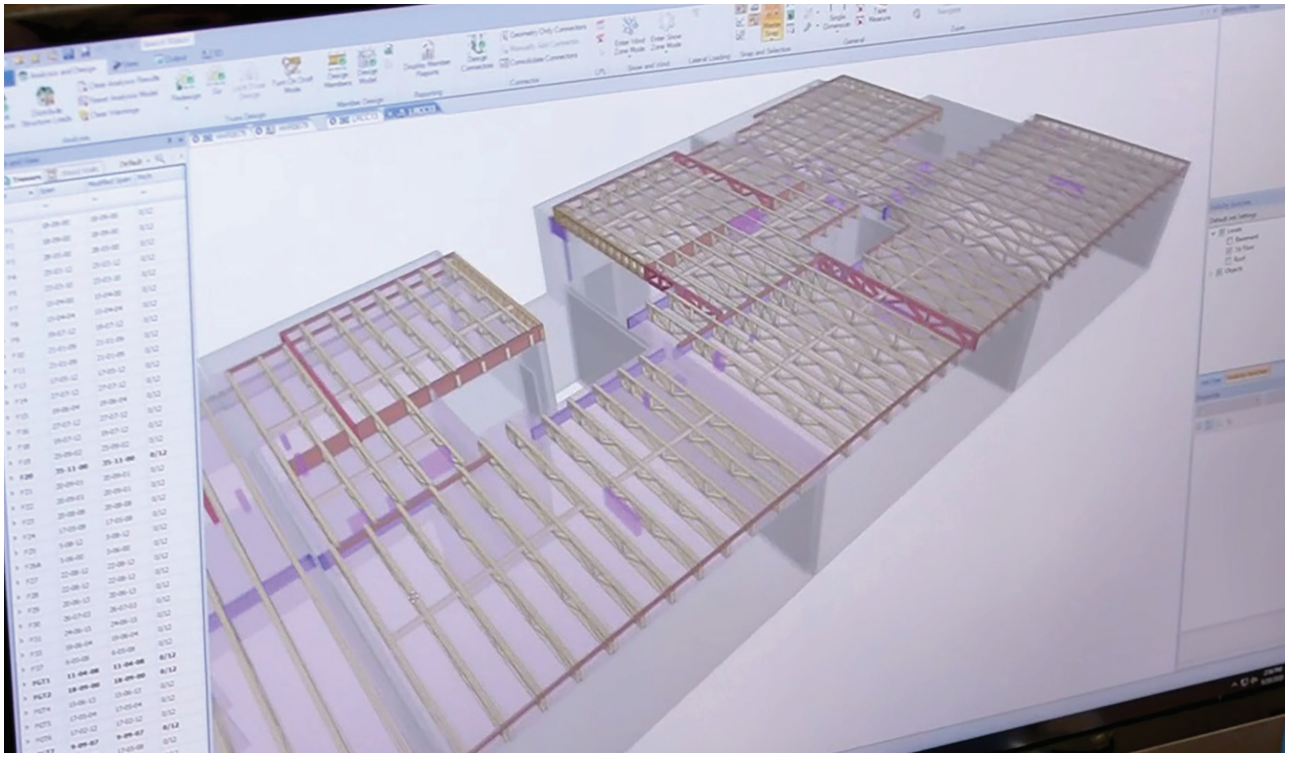
INTRODUCTION

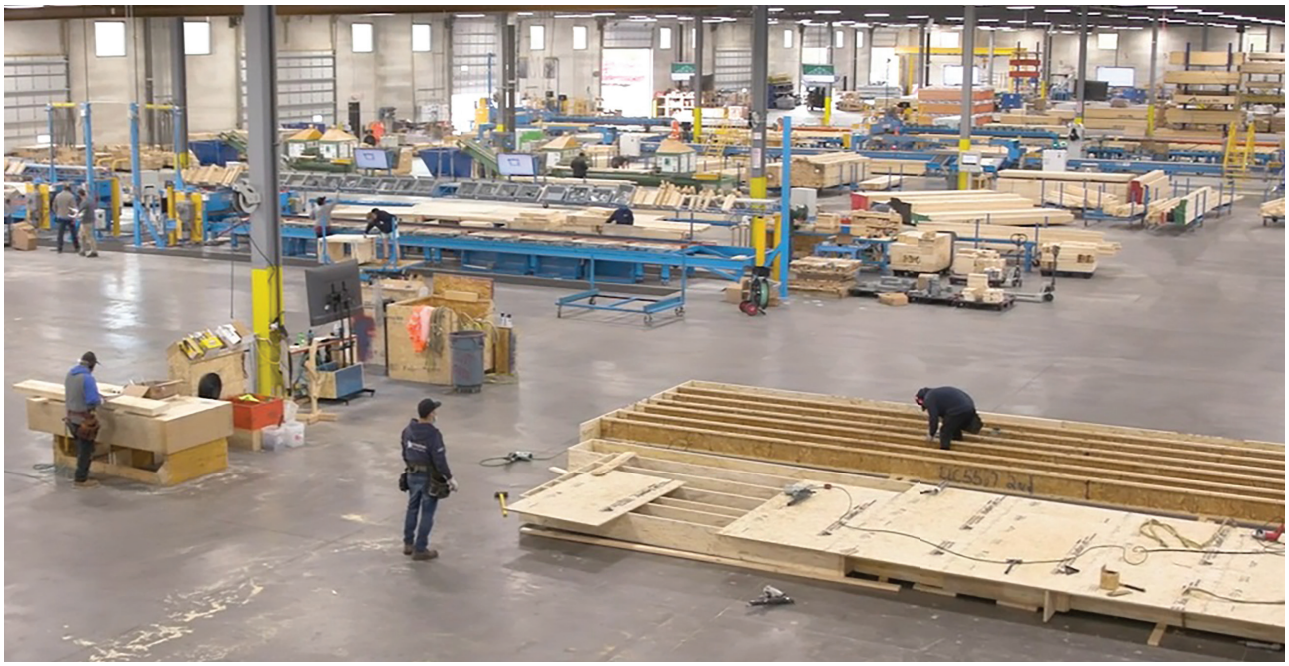


For more than four decades, JL Schwieters Construction (JLS) has provided quality and dependability to the building industry. Brothers John and Leo Schwieters built the company in Hugo, Minnesota, and it has grown and built a reputation of reliability in the Twin Cities' framing industry.

John's son, Blake, joined the company in 2013 and has risen through the ranks to Plant Manager, overseeing all prefabrication operations at the Hugo plant. With his background in mechanical engineering and passion for innovation, the new generation of leadership brings fresh ideas to the company.

"What motivates me every day is the fact that we have a real problem," Blake Schwieters said. "We have a housing crisis out there, and all of the things that we do every day is trying to solve that."

Nearly every aspect of the industry has felt the challenges in recent years – supply chain, labor, material costs, lead times and logistics – and those challenges have only become more pronounced since the global pandemic began.



A SOLUTION TO SEVERAL STRUGGLES

Blake said his father has always looked for more efficient ways to solve problems in the industry. With so many variables like weather and site conditions, John focused on factors he could control.

"His little saying was, 'Get the cords out of the field,'" Blake said. "You could completely wreck a day by just skill sawing through your extension cord."

By the early 2000s, JLS expanded its operations to include component manufacturing. From there, the company began building cassettes allowing it greater control over the building construction process and fabrication in a climate-controlled facility that is not dependent on fair weather.

Jim Wenker, Production Manager at JLS, said one of the many benefits of building cassettes is the collaboration with mechanical, plumbing, and HVAC crews to ensure greater accuracy, and, ultimately, make the process smoother for all involved. JLS is focused on cutting down cycle time in the field, Wenker said, and by building with cassettes, they can set a floor on a single-family home in an hour as opposed to a day's worth of work for a three-person crew to cut and build in the field.

"The proof to me was, all of a sudden, we had run out of the foundations," Blake said. "So that was exciting for me to realize that it was really that big of a difference, that we were exceeding our customers' timelines."

JLS began manufacturing floor cassettes in 2017. Many national builders that JLS partners with were excited about the potential because they had seen cassettes used successfully in other markets. Wenker said, initially, some engineers were hesitant because they hadn't worked with cassettes before. After seeing how successful the process is, they are now designing differently to incorporate the cassettes into the initial designs.

Building with cassettes took a process that was once unpredictable and made it a non-factor.

Operations were no longer dependent on the Minnesota weather, which can be both unpredictable and brutal.

A SAFER APPROACH TO BUILDING

The field crew has embraced building with floor cassettes because it is safer and has resulted in fewer aches and injuries. They're spending less time climbing ladders reducing fatigue and the chance for falls. Several safety features can be designed and incorporated into the panels like tie off points.

"You're not bending over hand-framing stuff," Ben Lehrer, Foreman at JLS, said. "Everything comes out panelized. Then you crane everything up and put it together with the floor cassettes. Now, we're sheeting just a few feet off the ground rather than nine feet off the ground."

"YOU CAN'T HANG LABOR"

Manufacturing and building with panels and cassettes offer a solution for the building construction industry as it faces ongoing labor shortages.

"Another thing that my dad always said is, 'You can't hang labor, you can't store it, it's fleeting,'" Blake said. "In a way, we were able to store labor in inventory, in a finished panel."

By building with components, they are able to simplify the process. Panels and cassettes are stacked in the order they will be assembled on the jobsite. Floor systems can be installed within minutes of arriving and require fewer people to frame the building.

A SOLUTIONS-DRIVEN APPROACH TO BETTER BUILDING

JLS and MiTek have become great solutions partners in the industry. JLS uses MiTek software to simplify the process of designing panels and cassettes.

"MiTek software has given us the ability to communicate very complicated framing specifics very easily," said Terry Bomstad, Floor Panel Designer at JLS. "It allows us to dive into detail according to a plan and incorporate it all the way through the process from a materials list to actually being built on the shop floor, to installation in the field."

MiTek software maximizes design freedom by incorporating many architectural details into individual truss designs such as concealed beams, cantilever, and balconies. These fabricated designs reduce framing complexity and install time.

MiTek software captures all the designs qualities of a building in a central digital location. Users can manage multiple change orders for wall panels and floor trusses simultaneously. The cloud makes software upgrades a breeze, so the team is always running the latest version.

These features have been particularly beneficial over the past year and a half during the pandemic as many team members are working from home or other remote locations. It ensures all parties have access to the most up to date content needed to successfully execute the project plans.

For Bomstad, the most valuable feature is the ability to collaborate with both the panel and the truss component. He can put details into a drawing and communicate to the field crew exactly what must be done and where.

MAKE IT REPEATABLE

In addition to software in the design office, JLS sees the long-term value of adopting automation and is equipped with MiTek machinery in its manufacturing facility. The MiTek Direct Drives the company has invested in have cut their roof-truss labor nearly in half compared to traditional truss lines.

"The MatchPoint BLADE is a powerhouse for us," Blake said. "It really allowed us to save a lot of time, increase our quality, and all of the good things you're looking for in manufacturing."

Partnering with MiTek has provided JLS the software and automation solutions to address the housing shortage, putting them in a position to meet the regional demands for building homes.