

# MITEK BUILDER PRODUCTS DRIVES UP PROFITS FOR DEVELOPER OF A 1,200-UNIT LUXURY DEVELOPMENT

A case study by MiTek



**MiTek**  
A BERKSHIRE HATHAWAY COMPANY

Better Technology. Better Building.™

*"We depend on our relationship with MiTek to give our clients the edge to compete in their markets." - Bill Holmes, Madera Components*

**MiTek®**

## Executive Summary:

- **Cost-effective solutions from Hardy Frame® Shear Wall Systems and USP Structural Connectors were chosen for use in a 1,200-apartment, 47-unit luxury apartment development.**
- **465 shear walls were installed, along with \$250,000 worth of USP hangers, connectors, and straps.**
- **The Hardy Frames Shear Walls selection alone saved the developer \$30,000 from the cost of a competing brand.**
- **Madera Components (using MiTek's SAPPHIRE™ software) designed and manufactured all the roof and floor trusses.**
- **435 unique truss profiles were used; job value of trusses and walls was over \$1 million.**
- **The job exemplified precise coordination between the MiTek Builder Products division, the material dealer, the CM, the engineer, and the framer.**

Anyone driving south from LA on Rt. 15 would notice a hive of building activity near Corona, California. That's where the Encanto at Dos Lagos luxury apartments are coming out of the ground with the intensity and precision you normally associate with a military campaign.

A crew of more than 250 framers – their pneumatic guns relentlessly popping like 4th of July fireworks – are just finishing up the wood-frame structure that will house 1,200 apartments, built on 47 concrete slabs.

After the framers drive their last nails, the next set of trades will swarm into Encanto at Dos Lagos, as the plumbers set up for rough-out, electricians tack up boxes, and the drywallers reach for their hods and broad knives.

But the most interesting part of the project may not be the gorgeous apartments under construction, or the fitness center and pool being built for the community, or even the nearby golf and shops. In fact, what's fascinating about Encanto is what you can't even see once the siding and roofs are installed. Specifically, it's the innovation and creativity involved in meeting the demanding seismic requirements and area building



Two MiTek brands (Hardy Frame® Shear Wall System and USP Structural Connectors) were chosen for use in the 1,200-apartment, 47-unit luxury apartment development in southern California. A total of 465 shear walls were installed, along with \$250,000+ worth of USP hangers, connectors, and straps.

*"Honestly, we get such great service from Andy Perkins at Reliable Hardware and Supply, and the MiTek reps, we'd pay even more for their hardware." - Scott Blythe, Shaw Structures*



The building site was such a frenzy of activity, it kept 250 framers busy. Provisioning the site with the right materials, in the right quantities, at the right time demanded precision coordination between the MiTek Builder Products team, the material dealer, the CM, the engineer, and the framer.

codes through the engineering, connectors, shearwalls, and trusses contained in the walls and roofs.

Just the challenge of achieving clear spans and garage openings at the ground floor of Encanto's three-story wood frames took the engineering wizardry of Gouvis Group, where a team specified 465 shear walls, among many other items.

Originally, another shear wall had been specified at Encanto, but a value engineering analysis led by MiTek Builder Products revealed the other shear wall required a high-strength bolt embedded in the concrete in order to comply with their installation requirements. Due to the higher load capacity of the MiTek Hardy Frame Shear Wall System, those costlier bolts were not required, and that alone represented close to \$30,000 in savings. (In fact, for hangers and straps and connectors, the previous brand was removed and entirely replaced with MiTek's USP Structural Connectors product line.)

"We had – how shall I describe it? – an 'interesting day' when the building department showed up to inspect the preparation for the concrete pour," said Andy Perkins, the account manager at Reliable Hardware and Supply, based in nearby Riverside, which supplied the products from MiTek.

"When the inspector came to the site, the conversion work to Hardy Frames had not been fully completed, and the inspector had only the specifications for the high-strength anchor bolts. He

*MiTek's Hardy Frame® Shear Wall System didn't require the higher-strength bolts that the alternative demanded. That alone represented close to \$30,000 in savings for the developer.*

didn't realize the Hardy Frame® Shear Wall System did not require the more expensive embedments. That confusion led to a threatened stop order on the job."

"Well," Perkins added, "the developer got wind of the glitch and called me in and demanded that the job be returned to previous shear wall products by day's end. I said, sure thing, but if I pull that trigger, you will be paying an extra \$30,000 for the high-strength bolts to support the walls, which is close to four times the price of the Hardy Frames embed. That statement ended the conversation pretty quickly, with the developer endorsing the installation of USP Connectors and Hardy Frames Shear Walls throughout the job. This was a large job for Reliable. The hangers and straps alone were valued over \$250,000."



A cost analysis led by the MiTek Builder Products team revealed a much less costly approach through solutions by using Hardy Frames products and USP Structural Connectors.

*“With the Encanto project, you could see the lengths everyone went to get the MiTek Builder Products in there,” said Huan Nguyen at Gouvis Group. “We were convinced it was worth the effort, even though it was no minor task to do the re-engineering and the swap outs.”*

## Framers Are Happy... When They Have Nails

If that wasn't enough excitement for one day with the inspectors, the framing contractor Scott Blythe from Shaw Structures got in on the action as well.

“When you look at a comparison between shear wall systems, you recognize that they perform basically the same structural tasks,” Scott Blythe said. “So in a situation like that, where the cost savings are very clear, we agreed with the switch to MiTek's USP and Hardy Frames products. But honestly, we also get such great service from Andy Perkins at Reliable Hardware and Supply, and the MiTek reps, we'd even pay more for their hardware. That's how much it means to us to have products on hand and on time, which is what MiTek and Reliable pride themselves on.”

“On this Encanto at Dos Lagos project, we were running \$1 million a month in lumber at its peak,” Scott Blythe added, “and we were going through 48 cartons of 16d pneumatic nails every six hours. I had to keep 250 framers busy. Well, one day at Encanto, it was clear that we'd run out of nails by the end of the day, and I called Andy's cell at noon to explain the problem. You see, framers are happiest when they have nails. By 2:30, just as we were running low, a pickup truck that Andy arranged rolled up to the site with a pallet of 48 cartons of nails. *That's* personal service. That's why, even if cost were an issue, we'd stick with Reliable and MiTek. They do whatever it takes to keep my guys at top productivity.”

## Responsiveness to Dealers

“As a supplier, even beyond the cost savings, I see a great deal of responsiveness from MiTek,” said Reliable's Andy Perkins, “and by ‘responsiveness’ I don't just mean their relationship to me. They are responsive to my customers' needs as well, which makes me look great. There's a professional discourse that is entirely unique between the dealers and the MiTek team. How to explain it? Once, the USP team even developed and engineered a hanger because I asked on behalf of a customer! No kidding.

Here's what happened: USP had such a high load value on a particular hanger that one hanger exceeded both of the alternative models. I used this advantage on a job that had over 11,000 of these hangers specified, and I made a ‘customer for life’ when we saved them thousands of dollars by using USP's lighter gauge, yet stronger hanger. But I still needed a heavier hanger, because the lighter hanger was not weldable. So, USP developed this heavier hanger and put it in the line, and had a product to answer to this specific demand as well.”



“Encanto used a great many USP Structural Connector products, plus the 465 Hardy Frames Shear Wall Systems,” said MiTek's Landon Boucher. “When you have an order that large, and a job that is so dynamic, with structures in different phases over an eight month period, the delivery of MiTek Builder Products has to be for precision quantities and right on time, every time.”



“With the Encanto project, you could see the lengths everyone went to get MiTek Builder Products in there instead of the alternative,” said Huan Nguyen at Gouvis Group. “We were convinced it was worth the effort, even though it was no minor task to do the re-engineering and the swap outs. The service and product availability that MiTek could offer was very favorable to our client, the developer, and his subs.”

“Encanto used a great many products from USP Structural Connectors, plus the 465 Hardy Frames Shear Walls,” said Landon Boucher, regional sales manager for MiTek. “When you have an order that large, and a job that is so dynamic, with structures in different phases

over an eight month period, the delivery of MiTek Builder Products has to be for precision quantities and right on time, every time. Along with our district sales manager, Rich Jacobs, I worked with Reliable Hardware and Supply to assure that our logistical capabilities were aligned with the project demands, and it was backed up by all the documentation needed for the engineers, the framing contractors, the developer, and the building inspector. We do this on a regular basis, but with a high profile job like the Encanto project, it a real pleasure to work with all parties to make sure everything really came together.”

## Roof and Floor Trusses Too

Encanto used roof trusses throughout, and they were all manufactured by Madera Components Inc., a family-owned business in Phoenix (400 miles away). Working from a 17-acre facility, Madera Components provides both floor trusses and roof trusses with multi- state coverage.

“Madera Truss uses MiTek’s SAPPHIRE™ Suite software for its truss design, and on Encanto we used SAPPHIRE™ to design and manage manufacturing of all the roof trusses for the job,” said Bill Holmes, Madera’s outside sales representative, who has been with Madera since 1999. “There were 435 truss profiles with Encanto. Not 435 trusses, but 435 individual truss designs, of which multiple copies were made for installation in 47 structures. The value of the trusses alone was over \$1 million, delivered in over 10 phases. What’s more, the job involved some tight coordination with the utilities, so we accomplished some delicate staging with our deliveries, working from 400 miles away over an eight-month job duration. We depend on our relationship with MiTek to give our clients the edge to compete in their markets,” Holmes added.

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## About MiTek's Builder Products Division

A division of MiTek USA, the Builder Products division integrates a number of building products and brands that MiTek has assembled after a remarkable series of acquisitions. These product brands include USP Structural Connectors, the Z4 Tie-Down System, and the Hardy Frame Shear Wall System. Also offered through the Builder Products division is SAPPHIRE *Supply*, an estimating and design module within the MiTek SAPPHIRE software suite, designed for lumber and building material suppliers. This module is also compatible with SAPPHIRE *Viewer* for collaboration with builders and others in the design and optimization of the wood structural frame. Learn more: [www.MiTekBuilderProducts.com](http://www.MiTekBuilderProducts.com).

## About USP Structural Connectors

USP Structural Connectors, a MiTek product line, is a code-approved line of engineered structural connectors, anchors, and epoxy for the residential, commercial construction, and DIY sectors. USP offers more than 4,000 SKUs backed by professional engineering, technical support, innovative software solutions, and a North American sales team. USP has a long-standing history of providing its customers with a competitive advantage. Learn more: [www.MiTekBuilderProducts.com](http://www.MiTekBuilderProducts.com).

## About Hardy Frames

Hardy Frames, a MiTek product, is the original prefabricated steel shearwall system developed for residential construction. The Hardy Frame system allows Building Design Professionals to economically and safely minimize wall framing and to maximize wall openings while resisting high wind and earthquake loads. The Hardy Frame product line includes Panels, Brace Frames and Moment Frames. Learn more: [www.MiTekBuilderProducts.com](http://www.MiTekBuilderProducts.com).

## About MiTek Industries

MiTek Industries is a diversified global supplier of software, engineered products, services, and equipment to the residential, commercial, and industrial, construction sectors. MiTek Industries' passion for our associates' well-being and our customers' success is the company's hallmark. A Berkshire Hathaway company (NYSE: brk-a, NYSE: brk-b) since 2001, the Company has operations in more than 40 countries on six continents. Learn more: [www.MiTekBuilderProducts.com](http://www.MiTekBuilderProducts.com), [www.MiTek-us.com/](http://www.MiTek-us.com/) and [www.Mii.com](http://www.Mii.com).

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