



KB Home

Off-Site Design and Framing Methods Lead to Cycle-Time Reductions for KB Home Project.

Shorter framing cycle times for the KB Home Project were realized through collaboration enabled in part by MiTek's SAPPHIRE® 3D BIM structural models and manufacturing that uses MiTek automated equipment.

KB HOME: BACKGROUND

The BUILDER KB Home ProjeKt is an innovative collaboration that combines architecture, technology and science to help homeowners improve their physical and emotional health and well-being. The off-site construction framing process of this model home incorporates 3D-modeled and advanced panelized framing. Using a highly collaborative approach, the design and construction accounts for all the framing details, as well as the MEP placement and HVAC optimization in the building process.

According to the CDC, the conditions in the places that we live, learn, work and play are the single greatest factor in our health. Today's technological advancements are helping make smart homes a reality in order to help homeowners improve their physical and emotional health and well-being. Off-site design and framing methods leading to cycle-time reductions that are key to solving the continuing framing labor shortage and the lack of new housing.

The BUILDER KB Home ProjeKt aims to demonstrate innovative designs never seen before in homebuilding. As we look forward to "Where Tomorrow Lives," we anticipate a home that will evolve with the shared economy and housing trends.



WHERE TOMORROW LIVES

“The home of tomorrow must meet the future needs of its residents, so we designed the KB Home ProjeKt as a smart, sustainable, flexible home that looks beyond energy savings and helps people live a healthier, more energetic life,” said Jeff Mezger, KB Home chairman, president and chief executive officer. “The challenge for builders is to employ technology to design healthy homes that are attainable for everyone — from first-time buyers to empty nesters — so that future homeowners can benefit from a healthy home.”



| MITEK TECHNOLOGY: HIGHLY ACCELERATED CONSTRUCTION PACE WHEN MOVING FROM “DIRT TO DRY-IN”

The KB Home ProjekT was aided by MiTek’s technology, which features 3D structural framing software and automated manufacturing to integrate the off-site process from design all the way through to the manufacturing and final jobsite assembly of the framing. Shorter framing cycle times were realized through collaboration enabled in part by MiTek’s SAPPHIRE® 3D BIM structural models and manufacturing that uses MiTek automated equipment.

“Off-site design and framing methods like this, coupled with the cycle-time reduction they create, are key to solving the continuing framing labor shortage and the lack of new housing.”

SENIOR VICE PRESIDENT, GLOBAL RESIDENTIAL MARKETING AT MITEK

GREGG RENNER

MiTek’s SAPPHIRE Build Portal provided a central digital repository to track and maintain version control of documents and plans for the KB Home ProjeKt. Truss and panel design and manufacturing were enabled by MiTek’s SAPPHIRE design and process-management software solutions, which also drive MiTek’s automated equipment to create the final structural components.

MiTek’s Hardy Frame® and USP® Structural Connectors are featured as well, and MiTek’s Wrightsoft Corporation’s Production Home Design Service Group created the optimized HVAC system design to optimize the home’s comfort, efficiency, and indoor air quality. MiTek’s SAPPHIRE structural BIM model of the home was also central to Wrightsoft’s design for the highly efficient system and its layout.

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THE FUTURE OF HOUSING

This home demonstrated how currently-available technologies can be pushed to high levels, and still be an efficient solution in homes of any size. MiTek's technology is a strong example of this at work, with this project featuring 3D structural framing software and automated manufacturing that integrated the off-site process from design all the way through to the manufacturing and final jobsite assembly of the framing.



THE FUTURE OF HOUSING WILL EMERGE THROUGH:

- THE TECHNOLOGY THAT ENABLES IT
- THE PROCESSES THAT DISCIPLINE IT
- AND THROUGH THE BOLD LEADERS THAT ENVISION AND ACHIEVE IT

MiTek is genuinely inspired and grateful to be a resource that helps our industry develop these new paths, those that are bringing new solutions for the future of housing.

| ABOUT SAPPHIRE® BUILD

SAPPHIRE Build is one unified system, including these modules:

WORKFLOW

A workflow-based approach allows building companies to implement business processes that provide a structured approach to management of product information, product changes, vendor management, scheduling, finances and customer information. SAPPHIRE™ Build is flexible and open to user customization of all workflows.

COLLABORATION PORTAL

Users can maintain real-time information between the office, the field staff and vendors, creating visibility and accuracy.

PRODUCTION

Users can approve purchase orders in the field directly from the schedule, document job specific details, communicate with vendors, request variance purchase orders and view plan and selection information in real time.

LAND MANAGEMENT

Get built-in land development functionality that allows users to manage the land possessions, entitlements and development, with full visibility of the costs from the initial land purchase.



| ABOUT KB HOME

KB Home (NYSE: KBH) is one of the largest and most recognized homebuilders in the United States and has been building quality homes for over 60 years. Today, KB Home operates in 38 markets across eight states, serving a wide array of buyer groups. What sets us apart is giving our customers the ability to personalize their homes from homesites and floor plans to cabinets and countertops, at a price that fits their needs. And as the first builder ever to make every home we build ENERGY STAR® certified, KB Home is able to not only design thoughtful living spaces but ones that lower the cost of homeownership. We also work with our customers every step of the way, building strong personal relationships so they have a real partner in the homebuying process and the experience is as simple and easy as possible.

KB Home stands out from other homebuilders as the company gives homebuyers exceptional choice and control. KB Home starts by offering a wide variety of homes at an affordable base price. From there, the builder gives buyers the ability to personalize their homes from homesites and floor plans to design features. All homes built surpass ENERGY STAR® certification standards, meaning the homes have substantially lower monthly utility costs when compared to typical resale homes. The KB Home team works hand in hand with homeowners every step of the way so they have a real partner in the process.

For more information on KB Home, visit KBHome.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 for our customers' success through continuous process improvement is the company's hallmark. A Berkshire Hathaway company since 2001, the Company has operations in more than 40 countries on six continents. Learn more: www.MiTek-US.com and www.Mii.com.

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