

Section 3 – Starting with Steel

Craftsmen Homes has been building with steel from many years and understands Lane Framing's system and construction process. Most of the investment required to switch to steel was carried by Lane Framing. The builder simply contracts out the materials, supplies, and framing components of the home.

The builder and framer have worked together for years and continually improve the overall process. Below are some of the advancements and evolutions adopted over time by the builder and framer.

Builder Issues

Plans

To avoid costly plan modification charges, it is important to design the home to be built with steel from the beginning. Craftsmen Homes works with their clients early in the process to decide on the framing material to reduce costs associated with switching framing materials once the plans are finalized.

Fabrication Area

When evaluating a new development or project, Craftsmen Homes pays particular attention to the construction site's space considerations to determine the feasibility of on-site steel wall panel fabrication. The ability to fabricate panels on-site not only reduces transportation costs but also offers the builder greater flexibility and response times with panel modifications and production.

At least a quarter acre is needed for on-site fabrication to handle material storage, the fabrication area, and completed panel storage. Lane Framing prefers to store the panels near the fabrication area until the construction site is ready for the panels. The further away the storage area and fabrication zone are from the construction site the more resources are expended transporting the panels, reducing one of the advantages offered by on-site panel fabrication.

Framer/Fabricator Issues

The framer and wall panel fabricator, Lane Framing, negotiates a contract with the builder prior to beginning a project. The framing responsibilities, as well as framing materials costs and total price are settled at this time.

On-site Fabrication

Lane Framing panelized the cold-formed steel wall panels at the construction site, with a third-party supplying the studs and tracks cut-to-length. The supplied steel framing members are stacked in piles to facilitate selecting the correct length and size during panel fabrication.

The framing crew prefers to fabricate the wall panels on a future home's concrete slab. This way a flat surface is provided without having to use a framing table or other expensive equipment. The fabrication area and steel framing members are open to the environment and weather. However the framing supplies, such as screws, are kept in a storage locker.

For the observed homes, the wall panels were fabricated on-site at another development and transported by flatbed truck. Because the three observed homes are models and full home production will not begin for a few months, it was determined not to be cost effective to fabricate three homes at this site.

Model Home

Model home construction focuses on the construction sequence and minor design modifications that can reduce material costs. The model home also offers an opportunity for the trade crews to walk-through the home to identify and address any potential areas of conflict.

The model home is also used as a guide to produce layout coils. Each panel's design characteristics are marked on two 1 ¼ inch coils of strapping, one coil for the top track and one coil for the bottom track. The coils are then used by the fabricating crew to construct the panels. The wall height of the panels dictates how far apart the coils are placed. The coil is unrolled as far as space constraints dictate and the crew builds the panels between the coils based on the markings on the coil.