

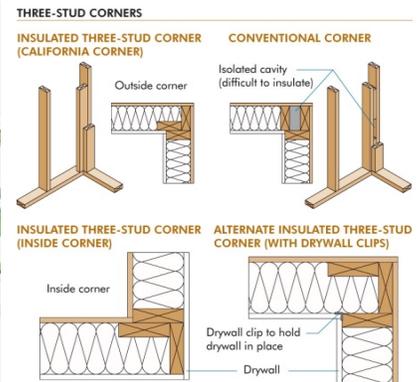
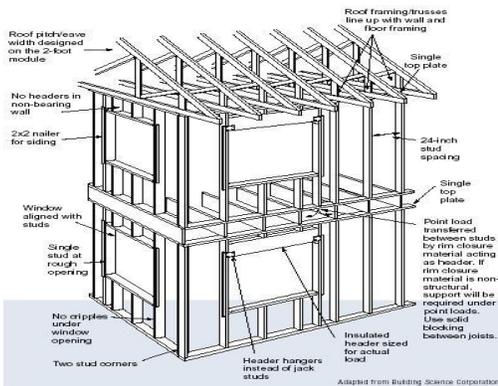
# Energy House Five – Update

## Advanced Framing for ENERGY STAR



Energy House Five is moving forward quickly. With the framing being finished, siding is about to start and the insulation is being installed, some exciting things are to be reported about how this project is different from most of the homes being built today. This ENERGY STAR home is a perfect example of advanced framing standards that are helping to make this project one of the most energy efficient homes in the Alexandria community.

## What is ENERGY STAR Advanced Framing?



“Advanced house framing, sometimes called optimum value engineering (OVE), refers to framing techniques designed to reduce the amount of lumber used and waste generated in the construction of a wood-framed house. These techniques boost energy efficiency by replacing lumber with insulation material while maintaining the structural integrity of the home. Advanced framing improves the whole-wall R-value by reducing thermal bridging (thermal flow that occurs when materials that are poor insulators displace insulation) through the framing and maximizing the insulated wall area.” Department of Energy -

<http://energy.gov/energysaver/articles/advanced-house-framing>



- Uses less lumber and generates less waste than typical framing methods
- Increases energy efficiency by replacing lumber with insulation material, resulting in a higher whole-wall R-value through reduced thermal bridging and increased insulation
- Designing on two-foot modules to make the best use of common sheet sizes and reduce waste and labor
- Spacing wall studs up to 24 inches on center
- Spacing floor joists and roof rafters up to 24 inches on center

- Using two-stud corner framing and inexpensive drywall clips or scrap lumber for drywall backing instead of studs



Reduced framing around windows



Insulation in corners saves energy



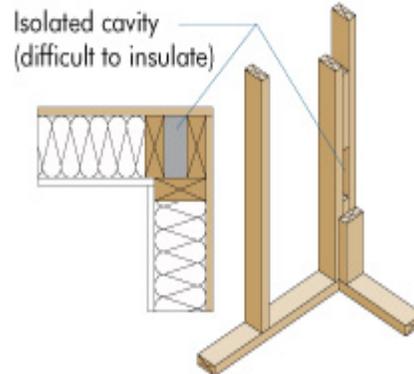
Less framing in walls saves materials

Advanced framing techniques can be implemented individually or as a complete package, depending on the builder. Fully implementing advanced framing techniques can result in materials cost savings of about \$500 or \$1000 (for a 1,200- and 2,400-square-foot house, respectively), labor cost savings of between 3 and 5 percent, and annual heating and cooling cost savings of up to 5 percent

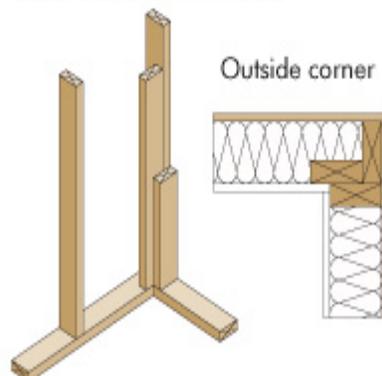
### THREE-STUD CORNERS

Excerpted from Figure 3 of the *Advanced Framing Construction Guide, Form M400*

#### CONVENTIONAL CORNER



#### INSULATED CORNER (CALIFORNIA CORNER)





Duct Free Zone – Mini Split Territory