

BSC Information Sheet 701

What's Wrong With This Project?

Top Chord Bearing Truss



- A top chord bearing truss is used to support the second story floor assembly; the ends of these trusses are visible on the exterior.

Issue

Top chord bearing truss in conventional residential construction framing in Phoenix, Arizona, consumed considerably more wood than should have been used resulting in extra costs of both time and materials.

Description of Implementation Error

Between the floors, a top chord bearing truss is used to support the second story floor assembly. The ends of these trusses are visible on the exterior, and to support between them requires considerable wood blocking. In the past, this technique of “balloon framing” was used in combination with stucco cladding to minimize the risks of cracking in the stucco due to inter-floor framing shrinkage, but improved products such as OSB with dimensional stability, and stucco control joints can be used to alleviate issues with stucco cracking.

Risks

Had Advanced Framing techniques been used an overall savings of approximately \$2,000 per building would have been realized. The money could have been available to improve other building components to make them more energy efficient in addition to increasing the builder’s profit margin and improving the marketability of the product.

Required Corrections

Replace industry standard wall construction with Advanced Framing techniques.

References

BSI-023: Wood is Good . . . But Strange¹;
BSI-030: Advanced Framing²

1 Lstiburek, Joseph. (September 2009). "BSI-023: Wood is Good . . . But Strange." Building Science Corporation, <http://www.buildingscience.com/documents/insights/bsi-023-wood-is-good-but-strange/>. Accessed March 22, 2011.

2 Lstiburek, Joseph. (February 2010). "BSI-030: Advanced Framing." Building Science Corporation, <http://www.buildingscience.com/documents/insights/bsi-030-advanced-framing/>. Accessed January 7, 2011.