

## Case Study #6: Roof Analysis

Client: The Victor Myers Companies, Dallas, Texas

**Project:** The architectural plans, as well as the structural engineer's drawings, specified stick-framing this roof with 2x6 rafters. The heel height on the rafters was 4-1/4". A large part of the structure was 2-stories and specified 14" TJIs for the floor joist for the second floor. There were numerous tall beams specified as well, sitting atop the main floor walls - also where the 2x6 rafters were to bear.

The 3D model quickly pointed out that there were TJIs and beams sticking out through the roof all around. This caused the project to be put back to the engineers to verify that the beams could be clipped to match roof plane, and that the TJIs could be clipped to match roof plane as well. The result was that the TJIs could be clipped if gusset plates were nailed to each side at the end. Several of the beams had to be re-engineered and several of the walls had to be changed to 2x6 from 2x4 for adequate bearing.

This would have been a costly framing job had this not been caught in advance.

