

## Wood Frame Wall & Roof System

The wall structure on all of our wood frame buildings is constructed using # 1 Southern Yellow Pine lumber. The reason we use Southern Yellow Pine is that it is much stronger and has a higher stress rating than spruce or most other species of lumber. All walls are assembled with 2 x 4's placed 24" on centers with 2 x 4 top and bottom plates connected diagonally with heavy gauge steel T wall bracing for superior shear wall protection. Each 2 x 4 is connected to the top and bottom plate with heavy gauge hurricane clips, four clips on each 2 x 4 on the sidewalls and 2 clips each on the end walls.

The walls are connected to the floor structure with 4" lag bolts placed every 16 inches. This system of bolts give the structure superior up lift protection not provided by nails or straps that are nailed. From the hurricane clip connections on our roof rafters to the hurricane clip connection on all of our 2 x 4's, you have a continuous uninterrupted positive connection from the roof to the floor. There are no weak points in this system to compromise strength.

Another unique feature of our end gable wood frame buildings is the use of steel hat channel lathing to hold the fasteners used to secure the roof. While wood lathing is good, it is not as stable as steel, creating the possibility of fasteners backing out over a period of years causing leaks or damage. This is far less likely to occur with fastener connections made into steel. When we do put roofing fasteners into wood, we use only stainless steel fasteners, especially designed and engineered for use in wood.



Rectangular Wall Sections with T-Wall Bracing



Roof Joist with Collar-Tied Truss Plate Connections



Vaulted Wall and Roof System



Shear Wall Bracing with 60" End Door



Side Wall with T Wall Bracing and Top Plate Hurricane Connections