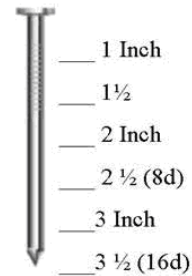




Appendix B Truss Handout

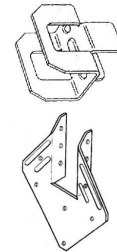
Fasteners Used

- Trusses to be toe-nailed with (1) 16 penny nail on one side of the gusset plate and (2) 16 penny nails on the other side. Note this is from one side of the truss the same nailing pattern is to be used for the opposite side.
- On sheathing use 8 penny nails. The perimeter is to be nailed every 4 to 6 inches and the field is to be nailed every 6” to 8” inches.
- Hurricane clips are to be installed with 8 penny nails installed in all of the pre-manufactured openings.



Placement of Hurricane Clips and H Clips

- H clips – Are placed on the horizontal edge only with one clip per truss opening.
- Hurricane Clip – Are placed one per truss.



Words to Know

- **Gable** – The end of a building as distinguished from the front or the rear side; the end of a ridged roof which at its extremity is not returned on itself but is cut off in a vertical plane which above the eaves is triangular in shape due to the slope of the roof.
- **Hurricane Clip / Hurricane Tie** – Pre-engineered metal connector for attaching roof trusses/rafters to walls below. It provides a continuous structural load transfer path from the top of a building to its foundation, helping to protect buildings from damage resulting from high wind.
- **Pitch of a Roof** – The proportion obtained by dividing the height by the span.
- **Plywood Clip (H Clip)** - Metal connectors used to join roof decking sheets between each rafter or truss. No nails are used with these connectors. Their profile looks like the letter “H” and they slide over the edges of two adjoining sheets.

- **Roof Sheathing / Sheeting** – The boards or sheet material fastened to the roof rafters on which the shingle or other roof covering is laid.
- **Strongback** – Is a framing member which acts as a secondary support member to existing structure.
- **Truss** – Beams or other supports connected to support a roof; an assemblage of timbers, fastened together so as to mutually support each other and to prevent sagging or distortion of any kind; used as one of the principal supports of a roof.
- **Valley** – A rafter that forms the intersection of an internal roof angle; the term applied to a depressed angle formed by the meeting at the bottom of two inclined sides of a roof; opposite of a hip.

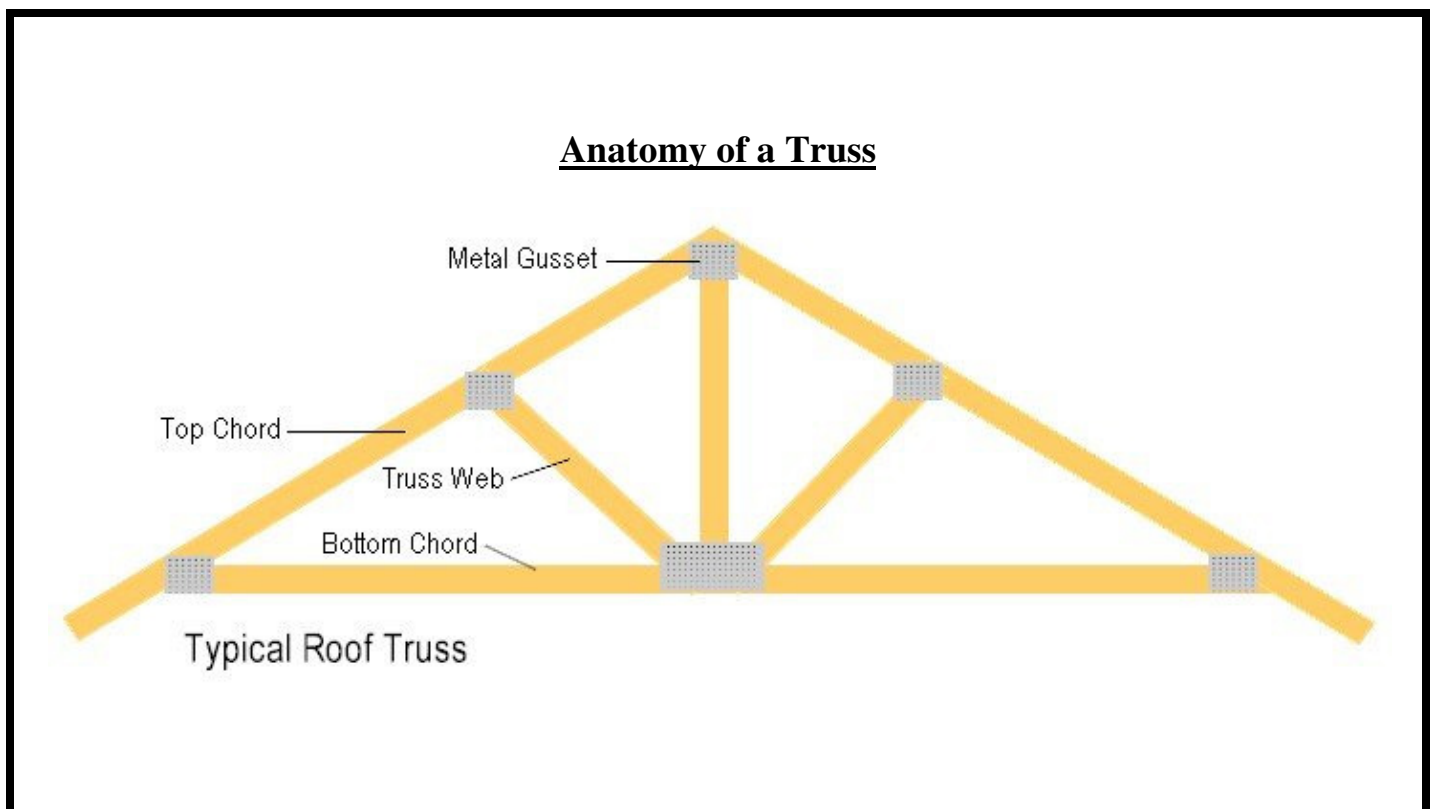
Additional Notes:

- Mark roof truss locations on the exterior side wall top plates. Begin marking from the same end of the house on both walls. If you begin marking on the rear of the house the first common truss will be positioned on the side of the marks toward the front of the house.
- Be sure to install lateral temporary bracing on the trusses prior to sheathing.
- After the trusses have been set install two rows of permanent lateral bracing on the top side of the bottom chord these are to run the entire length of the building.
- Before erecting the roof trusses, make sure that all of the long exterior walls are plumbed, and braced not more than 10 feet apart. (If this is *not* yet the case)
- Stack all of the trusses flat, and supported on the interior and exterior walls, with the weight of the roof trusses distributed as equally as possible.
- Adequate bracing plays a major role in the structural integrity of a trussed roof system. The most common cause of the "dominoing" of trusses is the inadequate placement of temporary bracing. The gable end truss must be adequately positioned, because all of the other trusses are positioned from this one.
- After the trusses are assembled, permanently install the diagonal bracing to the gable end. This bracing will provide additional strength to each gable end by creating structural continuity with each gable end truss and the first few common trusses. Diagonal bracing prevents lateral movement of the gables. Gable bracing spacing per engineer's drawings and specifications.

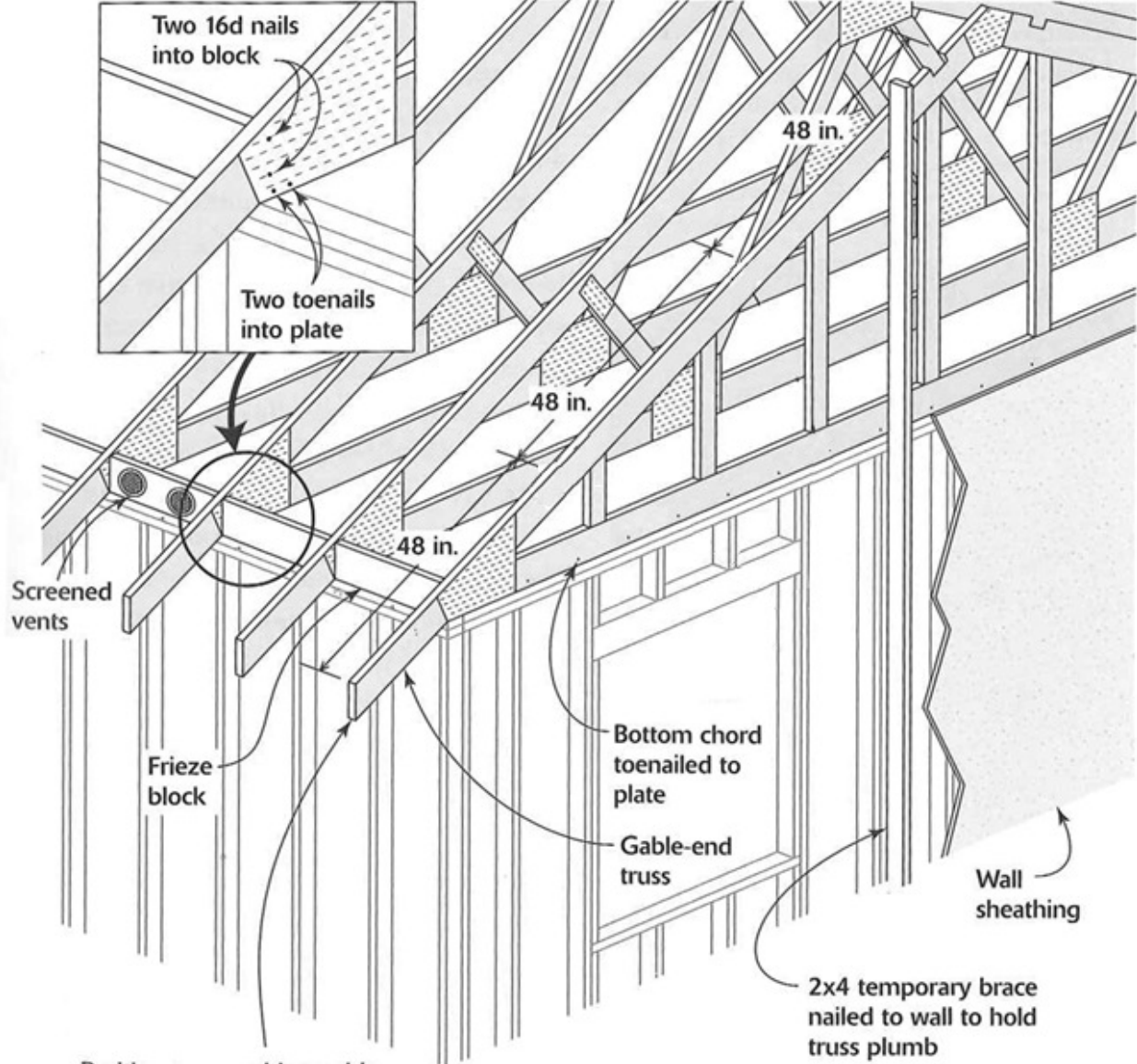
Safety:

- Observe all rules and precautions specified under general, power tools and ladders (see safety manual handout).
- Remove nails from discarded lumber as soon as practical.

- Always wear a hard hat when work is being done overhead during the framing stage. Watch for materials falling from above.
- Use caution when walking on floor joists. Watch your footing.
- Install a slide guard about 6” from the bottom of the first course of roof sheathing as soon as it is installed to prevent tools or personnel from sliding off the roof.
- Take precautions when climbing onto or off of the roof. This is when many roof related falls occur.
- Do not step backwards on a roof. Every year, experienced roofers fall off the roof by stepping backwards off of the edge.
- Loose materials and sawdust should be removed frequently from the roof surfaces.
- When standing up gables, make sure there are enough people to hold up the wall, and have bracing ready so it can be fastened as soon as possible. Workers should not be positioned on the outside of the wall.
- Make sure the gable is fully supported until the bracing is up.
- Never work on the roof alone.

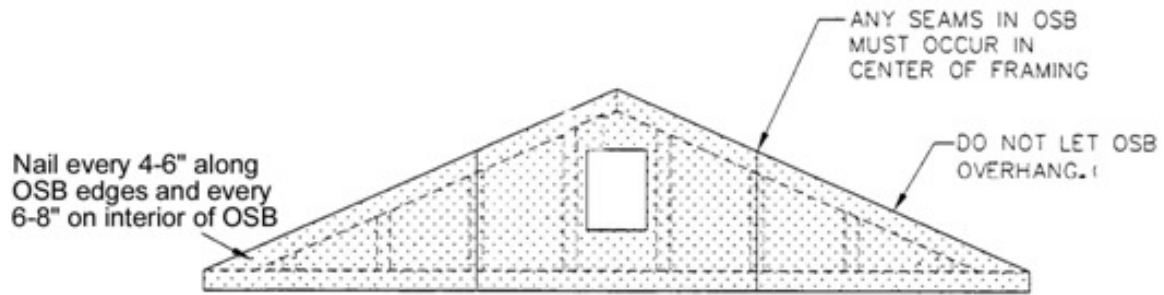


GABLE-END TRUSS DETAILS



Position trusses side-to-side to give you an equal overhang at both eaves.

The gable-end truss is set in place first, followed by all the regular trusses.



GABLE END TRUSS

