The wall-panel framing system developed by the Small Homes Council in 1954 used a double 2" x 6" continuous header or lintel placed at the top of the panels and extended around the entire house. The header required field use of lag screws and nails to fasten it to the top of the panels.

The nail-glued header presents several advantages over the double 2" x 6" continuous header, namely:

1. Lag screws are eliminated.
2. Less material is required.
3. lumber shrinkage problems are less.
4. Installation of the continuous top-plate in the field is simpler.

The nail-glued header is essentially a semi-box-beam. The headers are fabricated in a jig. After the recommended curing period, the headers are nailed to the 2" x 4" frames of the window and door panels. (A header is not necessary for solid-wall panels.) After all the panels are in place, they are tied together by a continuous header or lintel placed at the top of the panels and extended around the entire house. (A header is not necessary for solid-wall panels.)

The nail-glued header is fabricated in a jig. After the recommended curing period, the headers are nailed to the 2" x 4" frames of the window and door panels. When the double 2" x 6" continuous header is eliminated, the studs of all panels, including the solid-wall panels, must be lengthened to 92" inches.

To build the panels, the instructions for the basic wall-panel framing system as explained in Small Homes Council Instruction Sheet #20, Wall-Panel Construction, should be followed except as modified by the instructions below.

**NAIL-GLUED HEADER FOR SMALL HOMES COUNCIL’S WALL-PANEL SYSTEM**

**MATERIALS NEEDED FOR HEADER**

Web: One piece 12" x 48" x 1" (or thicker), C-D grade, exterior-type Douglas for plywood. C-G grade, or better, exterior-type plywood must be used if the plywood is to be exposed to the weather. The grain of the plywood should run in the 48" direction. The plywood must meet Commercial Standards CS-A-55 as certified by an approved testing laboratory. The nail-glued header is essentially a semi-box-beam. The headers are fabricated in a jig. After the recommended curing period, the headers are nailed to the 2" x 4" frames of the window and door panels.

Top Flange: One 2" x 4" x 48".

Bottom Flange: One 2" x 4" x 46 3/4".

Stiffeners: One 2" x 4" x 8 3/4".

Glue: Casein glue which meets Federal Specifications MM-M-173, Type I or II. (Type II contains mild inhibitor.)

Fasteners: 4d common nails or staples spaced 4" on center.

**PROCEDURE FOR FABRICATING HEADER**

- Nail-glue the material in accordance with the pattern given at the above right. For nail-gluing techniques, follow the instructions in Small Homes Council's Instruction Sheet #1, Nail-Gluing of Roof Trusses and Frames. Each structural member should have a moisture content of 19% or less.

- Place the header in the window frame, or door panel, and fasten it to the frames with 4d common nails spaced 4" on center.

- After all panels have been fabricated, cure them at temperatures above 50° F. Allow 16 hours as the curing period. The nail-glued header is essentially a semi-box-beam. The headers are fabricated in a jig. After the recommended curing period, the headers are nailed to the 2" x 4" frames of the window and door panels.

- The nail-glued header is essentially a semi-box-beam. The headers are fabricated in a jig. After the recommended curing period, the headers are nailed to the 2" x 4" frames of the window and door panels.

- The height of the web may be increased beyond 12 inches to accommodate various window heights, but should not be decreased. To build the panels, the instructions for the basic wall-panel framing system as explained in Small Homes Council Instruction Sheet #20, Wall-Panel Construction, should be followed except as modified by the instructions below.

**ADAPTATION TO VARIOUS SHEATHING THICKNESSES**

1. The height of the web may be increased beyond 12 inches to accommodate various window heights, but should not be decreased.
2. The height of the web may be increased so as to extend above and/or below the flanges of the header if desired.
3. Thicknesses of plywood greater than 8-inch may be used for the web to accommodate the various thicknesses of sheathing, or the 8-inch plywood may be stripped as shown below.