



Framing Plans for Wood Trusses Metal Plate Connected

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Building Official

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Purpose

The overall goal of this policy is to have a “complete” set of approved plans on-site that have been clearly coordinated between the building designer, truss manufacturer, truss designer and Building Development Plan Review Section. This will then allow for the proper installation, construction, and inspection of the metal plate connected wood truss system.

Program Criteria

All approved building plans must include complete framing plans for metal plate connected wood trusses. This policy provides specific requirements for residential framing plans for metal plate connected wood trusses. (Note: [Policy: Framing Plans for Conventional Lumber and I-Joist](#) has been issued with the requirements for residential floor framing with conventional lumber and I-Joist.)

The approved plans must have the following minimum information incorporated in advance of the Close-In Inspection:

1. Shop Drawings – The wood truss shop drawings with the associated engineering calculations must be provided. The shop drawings and calculations must be signed/sealed by a Virginia Registered Design Professional.

In accordance with the International Residential Code (IRC), the wind speed design for Prince William County is 115 miles per hour and is to be specified on the Shop Drawings. Also, the Shop Drawings are to indicate the Wind Uplift Pressures, the live load, the dead loads and the member deflection and limits.

2. Permanent Bracing – The permanent lateral bracing between the trusses is to be clearly specified. At a minimum the bracing location, type of material and the required connections between the trusses and the permanent lateral bracing are to be specified.
3. Truss Layout Plan – The truss layout plan must be provided showing the location of the trusses.
4. Connections between Truss and Non-Truss Components – If the Wind Uplift Pressure provided on the Shop Drawings is less than 200 pounds per square foot, the truss is to be fastened in accordance with the IRC, R802.11.1 Roof Tie-Down.

If the Wind Uplift Pressure is 200 pounds per square foot or more, the truss may require special connectors in accordance with IRC 802.11.1 Roof Tie-Down with the appropriate connections to resist the uplift forces. The special connectors are to be specified on the approved plans.



If the builder has chosen to submit the building plans for review, only the Truss Shop Drawings are required to be signed and sealed by a Virginia Registered Design Professional. If the builder has chosen the Residential Priority Plan Process (e.g. Waived Residential Plan Review), there is one additional requirement. The Architect or Professional Engineer of Record shall attach a completed Truss Plan Cover Sheet, which is signed and sealed. If the Architect or Professional Engineer of Record is not available, the new Architect or Professional Engineer of Record must file new building plans.

Please note that the policy on wood truss field repairs will remain the same. The truss repair design must be signed/sealed by a Virginia Registered Design Professional. The truss repair design must be provided directly to the inspector at the time of the Close-In Inspection. The inspector will attach the truss repair design to the County's copy of the building permit.

Attachment/Hyperlinks

- [Truss Plan Cover Sheet](#)