

**NC Department of Insurance  
Office of the State Fire Marshal - Engineering Division  
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**Wood Girder Plates**

**Code:** 2018 Residential Code  
**Section:** R502.6

**Date:** April 26, 2019

**Question:**

Can wooden plates (not wedges) be used between wood girders and foundation piers?

**Answer:**

Yes. There is nothing in the code that prevents the use of wooden plates, but there is also nothing in the code that provides prescriptive design information for them either. The code does not restrict a wood girder from being out of level; so, we have to assume that plates to reduce that condition are a step in the right direction if the plates do not compromise the structural integrity of the pier/girder relationship.

The following guidelines will apply:

1. Plates would have to meet the requirement of Section R502.6 for bearing surface as well as applicable requirements for protection against decay in Section R317.
2. The minimum width of a plate must be the width of the girder that is being supported.
3. The minimum length of a plate must be the width of the pier on which it rests.
4. The maximum depth/thickness of a plate is restricted to less than 4 inches because of the available heights of standard masonry.
5. Multiple member plates (i.e. 2 or more pieces of wood stacked on top of each other) must have the members fastened together to form a single unit and the single unit plate must be fastened to the girder to prevent independent movement.
6. The plate material must be a minimum perpendicular to grain compressive strength equal to the wood girder material.
7. Horizontal forces are not resisted at the plate location.

For the purposes of this interpretation "wooden girder plate" is a flat member consisting of single or multiple pieces of wood with relatively even thickness and placed between the top of a pier and the bottom edge of a wood girder where it rests on the pier. This may also be referred to as a shim, but obviously cannot be of a wedge shape.

**Keywords:**

blocking, foundation