

Ground Contact Pressure Treated Lumber

Question from Matthews, NC:: While having a footing inspection the inspector noted we had used .25 PT and required us to use "ground contact" joists and rims. I cannot find anything in the 2006 IBC which specifies the requirements for GC lumber. Can someone please point me in the correct direction. I have two more decks to estimate with similiar grades. At the house we are on the ground and at the farthest near 28" above grade. Some joists are running over the existing concrete patio also.

Answer: After looking at the 2006 IBC, I believe that this is the section that you are looking for:

2304.11.4 Wood in Contact with the Ground or Fresh Water. Wood used in contact with the ground (exposed earth) in the locations specified in Sections 2304.11.4.1 and

2304.11.4.2 shall be naturally durable (species for both decay and termite resistance) or preservative-treated using water-borne preservatives in accordance with AWPA U1 (Commodity Specifications A or F) for soil or fresh water use. Exception: Untreated wood is permitted where such wood is continuously and entirely below the ground water level or submerged in fresh water.

2304.11.4.1 Posts or Columns. Posts and columns supporting permanent structures that are embedded in concrete that is in direct contact with the earth, embedded in concrete that is exposed to the weather, or in direct contact with the earth, shall be of preservative-treated wood.

2304.11.4.2 Wood Structural Members. Wood structural members that support moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, shall be of naturally durable or preservative-treated wood unless separated from such floors or roofs by an impervious moisture barrier.

The AWPA reference requires PT meeting the table under Use Category 4A: Ground Contact or Fresh Water. The table references ACQ products to be at 0.40 PCF.

The inspector seems to be referring to 2304.11.4.2, and if that is the case, then AWPA U1 would apply.

Ledger Attachment

Question from Huntington Station, NY 10/2008: There is a proposed (2009) prescriptive code for attaching a ledger board to the house that may be impossible to follow, specifically the nails 6" oc through the floor plywood into the floor joists of the house. What happens if you can't do this due to existing conditions like a kitchen cabinet in the way, a tile floor, a wood floor, or anything that would need to be removed or modified to allow for these nails from above to be installed. If left this way it will never be followed and inspections will almost never pass. This perscriptive code must be modified or not be a perscriptive" code.

Answer: It sounds like you are referring to IRC R502.2.2.3 (Supp.) and the related figure. Your concern is appreciated. We have heard from several builders with similar comments. This figure and language was added to the IRC by way of the 07 Supplement.

It will become building code in your area when (and if) your jurisdiction adopts either the 07 Supplement - or the 2009 IRC.

It must be noted that the code section with the Figure referencing the nailing at the floor sheathing and the tension devices is a suggestion, not a mandate. The language reads "shall be permitted to be" not "must". This is not to say that there won't be confusion in the field with respect to interpretation.

[You may be interested to know that the figure itself comes from FEMA 2007 - Homebuilders' Guide to Earthquake-Resistant Design and Construction, Chapter 7, Chimneys, Fireplaces, Balconies, and Decks, Figure 7-10].

Accordingly, NADRA has plans to submit a change proposal in the 08-09 code cycle to seek clarification that the prescription describes "a" method versus the "only" method.

Guard Attachment in Oregon

Question from Portland, Oregon 10/2008: I am in the Portland, Oregon market, and 60% of my permits come from the City of Portland Building Dept.

The Handrail/Guardrail code is interpreted that the top of a 36" post needs to withstand a "200 lb. in ANY direction". So the new Simpson HD2A bracket design is not sufficient for them. They say it only works in the direction away from the deck. They want it to be away AND toward the deck surface.

If the code read "200 lb in the direction away from the stand-able surface", this would give allow them to give up in the inward stress. Right now we need (2) HD2A brackets per post to satisfy the Portland building dept. As they say, "Oh well, it's only time and money".

Answer: The way the code reads, Portland certainly appears within their rights to enforce it they way they are. This is one of those cases where since there is no prescriptive design in the code, the jurisdiction has designated "policy" for administering the code. So, unless the contractor can provide an "alternative design" such as engineering or test results, to prove that the guard assembly will resist the design loading (as Portland interprets it) without the brackets, the policy requiring double bracketing is likely to continue to be enforced.

Your NADRA Codes and Standards committee will take a closer look at this to see if some kind of prescriptive language may be helpful to propose during the next code cycle. The problem with "prescriptive code" however, is that it can often result in limiting the contractor to specific design.

We will also look at your idea to limit the direction of the stress applied to be in an "inward" direction - however, that would be tough to get through the code process as the ICC tends to negatively perceive change proposals that "appear to" relax requirements - even though it would actually be to "clarify". ICC does have an "interpretation" service - so we will submit this question to them, and see what they come up with. The process takes awhile, however, we will be certainly communicate any response to you.