Q I am framing a house, and my local lumberyard has structural grade and stud grade 2x6s. Does it matter which I use to frame a window header?

A *Jeff Easterling, president of the Northeastern Lumber Manufacturers Association (NELMA), responds*: Before I address the differences between those two grades, here's a bit about the organization I represent. NELMA is the regional grading authority for lumber species in the Northeast and Great Lakes area for lumber mills operating there. We provide the training for the graders at the mills and for the computer experts for the grading machines. We also visit and make sure they are continuing to meet the specifications, which in this case is the national grading rule, or NGR. We do these checks at least once a month.

The short answer to the question is that it depends. There are a lot of factors that we need to know: how long the span is, what the loads above the window are, and so forth. Once those are known, carpenters can consult a span book, or discuss with an architect or structural engineer what the parameters are and see how they fit with the different grades of lumber.

I am assuming that the person asking the question is looking at the noticeable differences in price and appearance between the two grades mentioned. The description of stud grade says that it is rated for use in vertical applications or, in other words, repetitive installation in wall framing. It is the lowest lumber grade in terms of appearance—it has the most knots and allows for the most visual defects. It's designated that way because it's intended to be used where it won't be seen, behind drywall or sheathing. It is fine for that application, just not as pretty, and it is less expensive. Structural grade, on the other hand, is the highest grade and has the least number of defects. It's used for its strength and durability, and it costs more than stud grade. It's designated for use in ceiling joists, rafters, trusses, and headers.

Another factor is that different species of lumber (for example, Douglas fir, spruce, southern yellow pine) have different structural properties. This is also marked on the grade stamp. While it may not come up often that a building spec requires one species over another, it's good information for carpenters to be aware of.

The full answer for the reader is that for this application (window header), they should be looking at a structural grade and not stud grade. Then, depending on the load factors, they can determine whether they need the highest classification in select structural or No. 1, 2, or 3.

For more information on grading, visit NELMA's website at nelma.org, or go to youtube.com/nelmatv, where you can find a number of short videos on the topic.

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