



June 2012 Newsletter



“Summer is the time when one sheds one’s tensions with one’s clothes, and the right kind of day is jeweled balm for the battered spirit. A few of those days and you can become drunk with the belief that all’s right with the world. “

~Ada Louise Huxtable

COLUMN SUPPORTS AND TRUSS SYSTEMS

We are supposed to be continuing our section on foundations and the effects of water in the foundation; however, I would like to address an ongoing controversy that is causing us all a little bit of frustration. I can only imagine how frustrating it is to read an inspection report that requires an improvement that is now demanded by a buyer that a contractor and an engineer say is not required. Who’s right and what do you do? To resolve this concern I would like to take a minute and lay out a path so you can clearly understand representations made and improvements needed.

Far too often I hear a contractor state that the engineer said that the truss system is a self-supporting independent system that does not require support. There is no question that this is a 100% accurate representation; however, that representation applies to the roof system and not the wall structure. Just because the trusses do not require support does not mean we are not required to install columns. To better understand why we are required by code I will reference International Residential Code 1&2 Family Dwelling ‘06, ‘03, ‘98, ‘78, Table 602.7. For the ease of reading I have scanned in the 1998 Table of Spans. All other tables are a little harder to read but say the same thing. The table is very simple. Each 2x12 under a roof load can span 12 feet while a wall system that is not critical to the support of the roof can span 16 feet.

**TABLE 602.7
MAXIMUM SPANS FOR HEADERS LOCATED
OVER OPENINGS IN WALLS (feet)**

SIZE OF HEADER ^{a,b}	HEADERS IN BEARING WALLS ^c			HEADERS IN WALLS NOT SUPPORTING FLOORS OR ROOFS
	Supporting roof and ceiling only	One story above	Two stories above	
2-2x4	4	—	—	—
2-2x6	6	4	—	—
2-2x8	8	6	—	10
2-2x10	10	8	6	12
2-2x12	12	10	8	16

For Sfr: 1 inch = 25.4 mm, 1 foot = 304.8 mm.
^a Nominal 4-inch-thick single headers shall be permitted to be substituted for double members.
^b Spans are based on No. 2 Grade lumber with 10-foot tributary floor and roof loads.

COLUMN SUPPORTS AND TRUSS SYSTEMS (Continued)

But why? It is simple (Reference: 1994 Standard Grading Rules for Southern Yellow Pine Section 752). To write or apply a code to a natural product that supports a constructive product (i.e. our homes), first you must consider the natural defects in the products you're using to support your roof and wall. Section 752 Standard Grading Rules for Southern Yellow Pine (SPI B) has tested and confirmed that the natural weakness in pine is that it will sag! To prevent that sag they have recommended that you not pass 16 foot in distance without a column support. This is a simple representation as to how code is written. The value to you as a home owner is not only does the code guard the structural requirements of construction but the cosmetic as well.

The natural allowable sag in a 2x12 at 20 feet can be as much as 1 ½ inches and be structurally sound. A doubled 2x12 is expected to sag ½ of that over 20 years. Let's take a minute and think. What is the difference between the rear porch and the garage opening? Same truss system, same load design; however, above that 18 foot opening is a 16 inch by 3 inch laminated beam. This beam has nothing to do with the load of the roof over the garage, in fact in most cases the truss system does not even sit on the outer wall so why do we insist on installing such a large beam. Well it is simple: to prevent an ugly sag! Will the home fall over? Not a chance! Is the wall structurally sound? Yes 100%! So then why do we install such a large beam? Because good builders do not like ugly sags, structurally sound or not!

So the solution is simple. If the gap is too large and it is your listing the chances are good that a comment will be made. So consider this, is it better to fix it before the inspection? Most buyers often think the worst of every structural representation regardless of what anyone says. This problem only compounds itself when the contractor, engineer and inspector disagree. So what is the simple fix? I have included several photos so you can be on the lookout for this concern and to better understand what we are talking about. If you find your listing looks like this take a picture and email it to our office for a free consultation. The worst that will happen is that you may have to install a column.

