The Sweet Smell of Lumber

There is nothing quite like the sweet smell of freshly cut Douglas Fir. Laymen and carpenters alike savor the aroma, sounds and textures associated with framing lumber. Some industry pundits envision a day when residential job sites will no longer smell and sound so familiar. In fact, some projects are already absent the wail of the skill saw and the clamor of framing hammers. Are *you* ready for laminated veneer lumber, oriented strand board and steel framing?

Remember just a year ago when wild wood price swings captured headlines? The sting that was felt by builders and architects hasn't faded. Although prices have abated, they've recently jumped again (nearly 30%!) The move to develop alternatives to conventional lumber (traditional pieces of wood cut from trees) started long before the recent price gyrations. They were given a boost by a focus on the dwindling supply of old growth forest and production lumber.

Some of the "new" alternative products have actually been around for decades. It has only been relatively recently, however, that many of them have become economically viable on residential projects. Many of these products have been mainstays in commercial construction for a long time. Some are being routinely found in production housing.

The last areas in the construction industry that typical embrace new innovations in framing are "custom" new residential and finally, in last place, comes the residential remodeling market. This sequence is due to a variety of factors, including economics, skills available, lack of repetition (at which many of the products excel), and even the small size of the typical remodeling contractor which limits time and energy available to learn something new.

Engineered wood products that just a few years ago seemed like exotic curiosities are now routinely being used on our job sites. These products can result in significant savings of time and money. A variety of even newer products are just over the horizon to replace familiar 2x4's and 4x12's.

One of the oldest engineered wood products is the glue-laminated beam ("glu-lam"). Usually used for beams, they are made from dimensional lumber that has been factory glued. Since they're made from small pieces, they can be made in virtually any length, bypassing what is normally a 30' limit for dimensional lumber. Curves and very large sizes are also possible. They are also more predictable in performance since they are made under factory control. Architects and engineers use "glu-lams" in residences mostly for roof and floor beams. They are often concealed in the structure or wrapped in finished wood because the laminations are pretty obvious. They can be up to two times stronger than normal wood. They are not much stiffer, however, so to keep a floor beam from being bouncy, you still might need a relatively deep member.

Structural steel has been around much longer than glue-laminated wood. Our office has been using it in homes to solve structural problems for nearly 20 years. Because it is about 20 times stronger than wood and also much stiffer, you can solve a structural problem in much less depth than you can with a wood member.

I get a kick when I go through someone's house and see a "beam" plunked in the middle of a ceiling. Catching my curious stare, my host usually goes into a somber explanation of: "Well, there was a bearing wall that came out there and our designer had to put in a massive wood beam." It is actually *rare* that a beam in a house has to show. A steel channel or I section can fit into the ceiling flush and costs are usually quite reasonable. With wood pieces bolted onto the steel, carpenters can attach it to wooden posts, almost as if it were a piece of wood.

Of course, not every contractor would agree with this casual assessment of using structural steel in homes. We had a project out for bid recently that utilized an I-beam. The contractors that were comfortable with using an occasional steel member figured its cost as $400.00. One bidder, however, was afraid of steel, and his cost was *five times* as much as the lower bids! The point of this example: please don't accept that goofy looking beam sticking down from your ceiling! And if your contractor is afraid of steel, have him lighten up and check it out!