ONTARIO TRUSS REPORT

Right For The Job

LSL Makes Conventional Framing Lumber Obsolete, And Makes A Money-Saving Substitute For LVL

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Sometimes it seems as if tradition trumps logic in the building trades. Innovations are often surprisingly slow to catch on, even when they offer obvious advantages.

One can understand cautious builders taking a "wait and see" approach to using new materials or construction techniques. But builders may not understand that being overly cautious can cost them time and money—and may ultimately reduce the quality and durability of the homes they build.

Most builders are more than familiar with the frustrations of conventional wood. From flaws like knots and splits and performance issues like cupping, warping and shrinking to supply issues like unpredictable prices and the limited availability of longer lengths, traditional lumber has always come with more than its share of headaches.

These shortcomings can create real problems in key areas such as roof and floor support, wall framing, rim board, door and window headers, stair stringers and truss chords. Strength, length, straightness and consistency are essential in these applications, but they are the very characteristics that traditional lumber often lacks.

The consequences are wide ranging. Architects and designers must limit their concepts due to materials-based restrictions on floor, ceiling and roof sizes. Building crews spend hours culling lumber on the job site, with large amounts of material going to waste. Still more time is spent nailing pieces of lumber together to "build up" beams with the required strength for door, window and garage door headers. And then there's every builder's nightmare: callbacks. Walls that bow, twist, or warp can cause kitchen cabinets and countertops to gap and separate from a wall and bath tiles to crack, infuriating homeowners, in no small part because tile and cabinets are big-ticket items. Add up the time and money lost to these issues, and you've got the hidden cost of using traditional lumber. It's a cost that can wreak havoc on your bottom line.

There is an engineered wood product that reduces the drawbacks of conventional framing lumber. It's Laminated Strand Lumber, also known as LSL.

Today's top LSL products, such as LP® SolidStart® LSL, are created from a mixture of aspen and maple hardwoods, which are chosen for their superior strength. The raw logs are debarked, cut into strands and blended with precise amounts of waterproof,

formaldehyde-free adhesives. The blended wood strands are formed into dense mats. A massive steam press then uses steam and pressure to convert the mats into panels. Panels are cut and tested before receiving a protective edge-seal.

Because moisture levels are carefully controlled throughout the manufacturing process, LSL has a 7%–10% moisture content. That's similar to the naturally occurring moisture equilibrium inside a home, which helps eliminate twisting, shrinking, warping and bowing.

Available in a wide range of depths, thicknesses, lengths and grades, LSL is consistently straight and true. Use it where you would use traditional lumber—but don't worry about common flaws like knots and splits. What's more, LSL offers load-bearing capacities that traditional lumber can't match. The strongest on the market is LP SolidStart LSL, which is rated up to 1.75E, making it the ideal framing material for areas in which strength and precision are vital. Architects and designers can create larger rooms, without being held back by the limitations of spans assembled with traditional lumber.

Laminated Veneer Lumber (LVL) is another material engineered for performance and durability. LVL is manufactured from ultrasonically graded veneers bonded with exterior-grade adhesives. With strengths as high as 1.9E and 2.0E, LVL is even stronger than LSL. But LVL also commands a higher price than LSL. Since LSL is more than strong enough for most uses, the superior strength of LVL is often unnecessary and amounts to over-engineering.

The engineering staff at LP Building Products recently conducted a study of support beam materials, reviewing more than 1,740 real-world floor beam calculations from their files. Ultimately, they determined that 1.75E LSL could have replaced 1.9E LVL in 95% of the applications. That's size-for-size replacement in 9-1/2″, 11-7/8″ and 14″ floor beams, 95% of the time.

These days, every builder is looking for ways to cut costs without cutting quality. LSL offers a cure for the costly headaches of traditional framing lumber and the high cost of over-engineering with LVL. That's the kind of support we all could use.

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The Ontario Wood Truss Fabricators Association (OWTFA) represents the common interests of the truss industry in Ontario, including promoting the use of wood trusses in residential, commercial and agricultural structures. Virtually all truss fabricators in Ontario also sell Engineered Wood Products. For more information please contact Mike Phillips, Executive Director of the Ontario Wood Truss Fabricators Association (OWTFA) at 416-235-0194 or www.owtfa.com.