DECK LUMBER ALTERNATIVES

Introduction

Decks are an excellent way to create useful outdoor living areas for playing, entertaining, and enjoying nature. Most decks are built using wood such as cedar, redwood or treated pine. These materials use many of our dwindling natural resources and require annual cleaning and resealing to maintain beauty and serviceability. Alternative deck materials, made from recycled wood and plastic or 100% plastic, virtually eliminate deck maintenance and will last many times longer than wood decks without issues of rotting, splitting, splintering, etc.

Composite lumber, typically a 50/50 blend of recycled wood (from lumber mills or furniture manufacturers) and recycled plastic, is more rigid than 100% plastic lumber due to the wood fibers. Boards for both types are manufactured in solid or hollow forms, with wood looks and texture. Manufacturers of these materials also produce door and window frames, exterior trim and molding.

Green Building Benefits

Recycled Content & Better Material Use

Composite lumber typically uses wood waste from industrial processing. Plastic lumber is usually manufactured from 90-100% recycled post-consumer plastic, but products some are from virgin plastic or post-industrial processes (reducing some environmental benefits). Most of the post-consumer plastic was originally used as some form of disposable container and is actually entering a more useful stage of its life as a more durable and long-lived good.

Durability

Plastic or plastic composite decking materials will last significantly longer and require very little maintenance in comparison to wood decking. The high recycled content in conjunction with high durability reduces the burden of construction materials on our budgets and our environment.

Promote the Local Economy

Composite lumber is made in many locations throughout the United States and Canada. Each time you make a purchase of local products, you keep money circulating locally, which benefits the local tax base, job creation and other local businesses.

Affordability

An obstacle to use of alternative decking materials is the perceived cost, yet in fact, this is where these materials actually cost much less than wood overall. The first cost of the materials can be twice that of treated wood, about the same as cedar and usually less than redwood, but the costs remain stable, while lumber prices continue to fluctuate and generally rise. The initial installation labor cost and the material cost of the structural members is the same for any deck material.

When one considers the cost of owning a composite lumber deck versus a wood deck, the composites are much cheaper. Composites do not require annual cleaning and resealing to maintain their lifespan and performance. Lumber requires an annual cleaning and resealing that can cost $1-2 per square foot. Lumber will also eventually rot, split and cause dangerous splinters, whereas composite lumber is immune to those problems. Many composite lumber products also come with a 20-year warranty, whereas lumber has no such warranties.

Green vs. Conventional

Composite	Wood
High Recycled Content (up to 100%)	Virgin, and much from old-growth forests
Very Durable and Low-Maintenance;	Needs annual cleaning & resealing, adding new chemicals and straining budgets
Slip resistant; will not splinter, split or rot	Easily splinters, splits and rots after a few years of use
Available in many colors and patterns	Must be stained or painted
Material cost: $1.50-$2.50 per linear foot	Material cost: $1-2.50 per linear foot
O&M cost: Normal labor to sweep off leaves and wash	O&M cost: Same as composite, plus $1-2 per square foot annually to deep clean and reseal

Installation

Most alternative decking materials require structural support every 16" (although some allow for 24") whereas 2" lumber usually only requires 24" support (1.5" lumber requires 16" supports). If replacing an existing wooden deck surface, additional structural support may be necessary. Follow the manufacturer's specifications regarding support and spacing between boards. Alternative decking materials can be cut, drilled, shaped and fastened in the same manner as wood. Some products also allow bending and a mix of colors to add aesthetic appeal to your deck design. Some manufactures recommend special deck screws to prevent the material from "puckering" around the screw head. You may also pre-drill and countersink each hole to eliminate this propensity. Alternative materials may also use some of the popular hidden deck fasteners used for wood.

Operation and Maintenance

One of the greatest attributes of using alternative deck lumber is the near absence of regular maintenance. Like wood, the color will fade to grey after years of UV exposure; however, newer products have UV inhibitors that reduce fading significantly. More importantly, the composite materials will not crack, splinter, rot, nor require annual deep cleaning and resealing.

The structural members are more likely to require maintenance attention if composed of standard treated dimensional lumber. To truly achieve a "maintenance-free" deck a few manufacturers are beginning to introduce structural systems that complement the physical properties and longevity of their alternative decking materials.

Bay Area Suppliers

Composite lumber is available from almost every retail outlet that sells wood. Retailers will usually carry one to ten different manufacturers' products such as the manufacturers listed in the next column:

- Search the **Materials Database** from Bay Area Build It Green to find local suppliers and services: www.build-green.org
- Boardwalk composite lumber (**http://www.certainteed.com/certainteed/undefined/FenceDeckRail/ProdIndex/Deck/Composite/Boardwalk/boardwalk.htm**)
- Carefree composite, Durawood plastic, and TriMax fiber-reinforced structural lumber (**www.usplasticlumber.com**)
- Choicedeck composite lumber (**www.choicedek.com**)
- CorrectDeck composite lumber (**www.correctdeck.com**)
- Eon plastic lumber (**www.eonoutdoor.com**)
- Evergrain composite lumber (**www.evergrain.com**)
- E-Z Deck fiber-reinforced composite lumber (**www.ezdeck.com**)
- Fiberon composite lumber (**www.fibercomposites.com**)
- Geodeck composite lumber (**www.geodeck.com**)
- Nexwood composite lumber (**www.nexwood.com**)
- Rhinodeck composite lumber (**www.rhinodeck.com**)
- Tendura composite lumber (**www.tendura.com**)
- Timbertech composite lumber (**www.timbertech.com**)
- Trex composite lumber (**www.trex.com**)
- XTENDEX composite lumber (**www.xtendex.com**)
- Search the **Materials Database** from Bay Area Build It Green to find more local suppliers and services: (www.build-green.org)

For More Information

- For more information about Green Building, visit our website at: www.greenaffordablehousing.org or call Bruce Mast at 510-271-4785.

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