



# **RedPlank™ LVL**

## **Scaffold Plank**



### **Laminated Veneer Lumber**

- **Safe** — proof-load tested at our plant to ensure compliance with RedBuilt quality standards and OSHA deflection limits
- **Reliable** — made from multiple layers of thin veneer to minimize the natural inconsistencies in wood, like knots.
- **Predictable** — manufactured to provide consistency you can feel.



# Welcome to RedBuilt Industrial

Utilizing products that were pioneered by our founders, RedBuilt lifts the Industrial application to a whole new level of service. Backed by our manufacturing technologies and supported by industry-leading technical service and sales support for contractors and engineers, RedBuilt can help you increase productivity, lower costs and work safer.

## Reliable Scaffold Planks

Scaffold companies need planks they can rely on — planks that can stand up to every type of stress — including rain, snow, heat, cold, heavy loads and wear from numerous assembly and dismantle cycles. RedPlank™ LVL is the solution: manufactured to be safe and reliable with predictable performance.

- **Safe** — proof-load tested at our plants to ensure compliance with RedBuilt quality standards and OSHA deflection limits.
- **Reliable** — made from multiple layers of thin veneer to minimize the natural inconsistencies in wood, like knots.
- **Predictable** — manufactured to provide consistency you can feel.

## Build Safely

We at RedBuilt are committed to working safely and want to remind you to do the same. We encourage you to follow the recommendations of OSHA ([www.osha.gov](http://www.osha.gov)) in the U.S. or provincial regulations ([www.canoshweb.org](http://www.canoshweb.org)) in Canada regarding:

- Personal protective equipment (PPE) for hands, feet, head and eyes
- Fall protection
- Product performance specification

For additional industrial products and applications, please visit the Industrial page at [www.RedBuilt.com](http://www.RedBuilt.com).

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## ABOUT THIS GUIDE

The RedPlank™ LVL Specifier's Guide is one of several guides that offer technical information and design recommendations for RedBuilt™ products. This guide provides information regarding engineered wood products in scaffolding applications.

## USA

| OSHA Defined Load Conditions |          | 1½" x 9¾" through 1½" x 9½" | 1½" x 11¾" | 1½" x 9¾" through 1½" x 9½" | 1½" x 11¾" | 1½" x 9" through 1½" x 9½" | 1½" x 11¾" |
|------------------------------|----------|-----------------------------|------------|-----------------------------|------------|----------------------------|------------|
| Plank Weight (lb/ft)         |          | 3.9                         | 4.8        | 4.2                         | 5.2        | 4.6                        | 5.6        |
| 1-Span Dry Use               | 50 psf   | 10'                         | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 75 psf   | 9'                          | 9'         | 10'                         | 10'        | 10'                        | 10'        |
|                              | 1-Person | 10'                         | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 2-Person | 8'                          | 9'         | 9'                          | 10'        | 10'                        | 10'        |
|                              | 3-Person | 6'                          | 7'         | 7'                          | 8'         | 7'                         | 9'         |
| 2-Span Dry Use               | 50 psf   | 10'                         | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 75 psf   | 9'                          | 9'         | 10'                         | 10'        | 10'                        | 10'        |
|                              | 1-Person | 10'                         | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 2-Person | 9'                          | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 3-Person | 7'                          | 8'         | 7'                          | 8'         | 8'                         | 8'         |
| 1-Span Wet Use               | 50 psf   | 9'                          | 9'         | 10'                         | 10'        | 10'                        | 10'        |
|                              | 75 psf   | 8'                          | 8'         | 9'                          | 9'         | 10'                        | 10'        |
|                              | 1-Person | 9'                          | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 2-Person | 7'                          | 8'         | 8'                          | 9'         | 9'                         | 10'        |
|                              | 3-Person | 5'                          | 6'         | 7'                          | 7'         | 6'                         | 7'         |
| 2-Span Wet Use               | 50 psf   | 10'                         | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 75 psf   | 9'                          | 9'         | 10'                         | 10'        | 10'                        | 10'        |
|                              | 1-Person | 10'                         | 10'        | 10'                         | 10'        | 10'                        | 10'        |
|                              | 2-Person | 7'                          | 9'         | 9'                          | 10'        | 9'                         | 10'        |
|                              | 3-Person | 5'                          | 6'         | 7'                          | 7'         | 6'                         | 8'         |

All RedPlank™ LVL Scaffold Planks are manufactured to the following design properties, and are proof-tested at the manufacturing plant to verify that they meet or exceed these properties at the time of manufacture:

- Modulus of Elasticity (E): 2,200,000 psi
- Flexural Stress (F<sub>b</sub>): 2,900 psi
- Horizontal Shear Stress (F<sub>v</sub>): 145 psi

These design properties have been determined in accordance with ANSI A10.8-2011 Appendix C. They are applicable for planks that are in new or like-new condition, used in a dry-use service environment (moisture content < 19%) and are loaded in the plank orientation (flat-use). For wet-use service (moisture content between 19% and 30%), adjust all design values by 0.80.

### General Notes

- Load conditions are as defined by OSHA and CSA for intended application.
- Deflection is limited to L/60 for USA and L/80 for Canada.
- The spans shown are for standard frame sizes. For other span conditions, contact RedBuilt Technical Support.
- Always use appropriate length planks for the span condition. Refer to OSHA and CSA for minimum and maximum cantilever requirements.

## CANADA

| OSHA Defined Load Conditions |                                                                  | 1½" x 9" through 1½" x 9½" | 1½" x 9¾" through 1½" x 9½" | 1½" x 9" through 1½" x 9½" | 1½" x 11¾" |
|------------------------------|------------------------------------------------------------------|----------------------------|-----------------------------|----------------------------|------------|
| Application                  |                                                                  | 3.9                        | 4.2                         | 4.6                        | 5.6        |
| Dry Use                      | 50 psf (2.40 kN/m²)                                              | 9'                         | 10'                         | 10'                        | 10'        |
|                              | 75 psf (3.60 kN/m²)                                              | 8'                         | 9'                          | 10'                        | 10'        |
|                              | 500 lbs (7.26 kN)                                                | 6'                         | 7'                          | 8'                         | 9'         |
|                              | Worker and Tools (25 psf + 250 plf) (1.20 kN/m² + 3.63 kN/m)     | 8'                         | 9'                          | 10'                        | 10'        |
|                              | Worker and Materials (75 psf + 265 plf) (3.60 kN/m² + 3.88 kN/m) | 7'                         | 7'                          | 8'                         | 8'         |
|                              |                                                                  |                            |                             |                            |            |
| Wet Use                      | 50 psf (2.40 kN/m²)                                              | 9'                         | 9'                          | 10'                        | 10'        |
|                              | 75 psf (3.60 kN/m²)                                              | 8'                         | 9'                          | 9'                         | 9'         |
|                              | 500 lbs (7.26 kN)                                                | 5'                         | 6'                          | 7'                         | 8'         |
|                              | Worker and Tools (25 psf + 250 plf) (1.20 kN/m² + 3.63 kN/m)     | 8'                         | 8'                          | 9'                         | 9'         |
|                              | Worker and Materials (75 psf + 265 plf) (3.60 kN/m² + 3.88 kN/m) | 6'                         | 7'                          | 7'                         | 7'         |
|                              |                                                                  |                            |                             |                            |            |

## PRODUCT IDENTIFICATION



There are many grades of RedLam™ laminated veneer lumber (LVL). Use only scaffold grade for planking.

Now available with abraded surface.

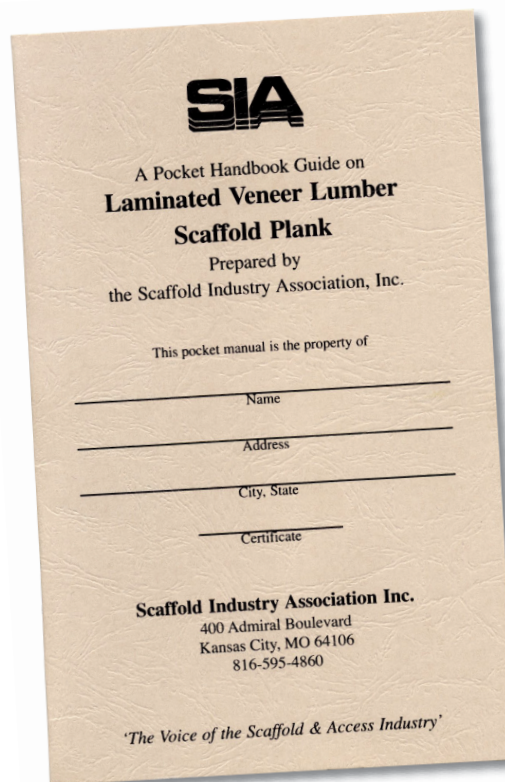
## VISUAL INSPECTION

RedBuilt is committed to providing our customers with scaffold plank that is free of manufacturing defects, and has employed a rigorous quality control system to help ensure the safety of every person using RedPlank™ Scaffold Planks. RedBuilt's commitment to safe and proper use of RedPlank™ Scaffold Planks must be complimented by your commitment to the same. A critical element to the safety of any scaffold plank is a good visual inspection program, which should outline frequency of inspection, what to look for, and when to remove planks from service.

Planks exhibiting the following forms of damage should be handled as noted below:

| Action                                                | Type of Damage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Plank should be cut back to remove the defect.</b> | <ul style="list-style-type: none"> <li>• <b>Drilled holes, saw cuts or notches</b></li> <li>• <b>Discoloration</b> from burns, chemical degradation or decay</li> <li>• <b>End splits</b>—Split lengths longer than one-half of the plank width should be cut back.</li> </ul>                                                                                                                                                                                                                                                                                                                                            |
| <b>Set plank aside for further evaluation.</b>        | <ul style="list-style-type: none"> <li>• <b>Dents, hammer marks</b> or similar could result in compromised plank strength and should be mechanically evaluated.</li> <li>• <b>Narrow-face splits</b>—Use a pocketknife or stiff probe to determine the depth of the split. Planks with splits deeper than ½" into the planks width and longer than 3" should be removed from service.</li> </ul>                                                                                                                                                                                                                          |
| <b>Remove plank from service.</b>                     | <ul style="list-style-type: none"> <li>• <b>Face Breaks</b>—Face breaks are difficult to detect when the plank is not loaded. They may best be observed when the plank is under load during a mechanical evaluation program (see pg. 5). Face breaks are a sign that the board's strength has been compromised.</li> <li>• <b>Gouges or depressions</b> are likely caused by falling objects, abuse from forklifts or misuse. These indicators often accompany other damage that may be more difficult to detect.</li> <li>• <b>Soft or crumbly wood</b> is likely caused by chemical attack or insect damage.</li> </ul> |

*This Pocket Handbook Guide has been developed by the Scaffold Industry Association and contains valuable information on inspecting, storing and handling LVL scaffold planks. RedBuilt supplies a complimentary copy of this document to all of our customers. Additional copies are available on request.*



Mechanical Evaluation can be an effective supplement to a visual inspection program. RedBuilt recommends that any physical evaluation of scaffold planks be done in a manner that does not cause damage to the planks (i.e. avoid test methods that involve impact loads and/or cause overstress to the plank). The following procedure can be used to determine a plank's ability to carry the intended design loads (reference Figure 1):

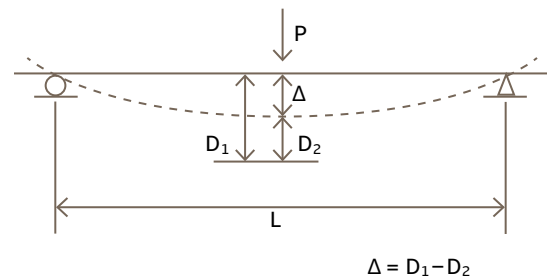
- 1) Set a clean (free of debris) plank on a frame or known span (L) in the table.
- 2) Apply a load of about 10 lbs to each end of the plank directly above the supports to settle the plank on the frame.
- 3) Measure the distance (D<sub>1</sub>) from the center of the plank's span to a known fixed location directly below the plank (could be the ground or a block).
- 4) Apply a point load (P) from the table at the center of the plank's span. NOTE: Load should be applied slowly and carefully to avoid impact or overstress.
- 5) Measure the distance (D<sub>2</sub>) from the same location on the plank and reference location as was measured for D<sub>1</sub>. The difference between the two measurements (D<sub>1</sub> minus D<sub>2</sub>) should be compared against the maximum deflection (Δ). If the deflection exceeds the maximum deflection in the table, it should be removed from service. If moisture is suspected, allow the plank to dry and then retest it.
- 6) Observe plank under load. Listen for cracking. Look for face breaks on bottom face of board. If either of these are observed, remove the plank from service.
- 7) Turn plank over and repeat this procedure for other face of plank.

The most effective way to determine a plank's moisture content is by weight. Simply weigh the plank, and divide its overall weight by the length of the plank to calculate its weight per foot. If a plank weighs more than the weight (w) in the table, it should be set aside to dry. Other means of determining moisture such as electrical-resistance meters may be used. Procedures for doing this should be discussed with both RedBuilt Technical Support and the moisture meter manufacturer, as these devices are not typically calibrated for use with engineered wood products.

## RedPlank™ LVL Evaluation Data

| Plank Cross-Section | Plank Weight W (lbs/ft) | Known Span L (ft) | Point Load P (lbs) | Max Deflection Δ (in) |
|---------------------|-------------------------|-------------------|--------------------|-----------------------|
| 1½" x 9¼"           | 4.2                     | 7                 | 480                | 1.29                  |
|                     |                         | 10                | 340                | 2.67                  |
| 1½" x 9½"           | 4.3                     | 7                 | 490                | 1.29                  |
|                     |                         | 10                | 340                | 2.60                  |
| 1½" x 11¾"          | 5.4                     | 7                 | 610                | 1.30                  |
|                     |                         | 10                | 430                | 2.66                  |
| 1⅝" x 9¼"           | 4.6                     | 7                 | 560                | 1.19                  |
|                     |                         | 10                | 390                | 2.41                  |
| 1¾" x 9½"           | 4.7                     | 7                 | 580                | 1.20                  |
|                     |                         | 10                | 400                | 2.41                  |
| 1⅝" x 11¾"          | 5.8                     | 7                 | 710                | 1.19                  |
|                     |                         | 10                | 500                | 2.43                  |
| 1¾" x 9"            | 4.8                     | 7                 | 630                | 1.10                  |
|                     |                         | 10                | 440                | 2.24                  |
| 1¾" x 9½"           | 5.1                     | 7                 | 670                | 1.11                  |
|                     |                         | 10                | 470                | 2.27                  |
| 1¾" x 11¾"          | 6.3                     | 7                 | 830                | 1.11                  |
|                     |                         | 10                | 580                | 2.26                  |

**Figure 1 – Mechanical Evaluation Diagram**

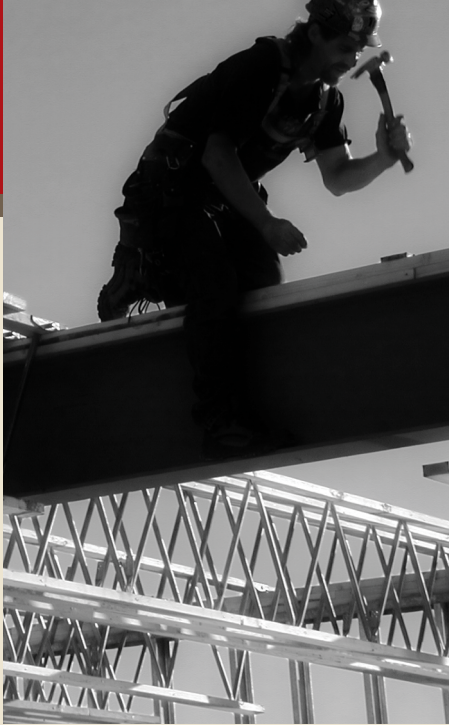


# STORAGE AND HANDLING

**These simple practices will help prevent damage to your scaffold plank inventory.**

- Do not throw planks from a truck, scaffold or building.
- Do not push bundles of scaffold planks with the tips of a fork.
- Do not overload scaffold planks. (Loads should not exceed those shown above for mechanical evaluation without prior evaluation from a licensed engineer.)
- Do not store heavy materials on scaffold planks for extended periods of time.
- Do not jump on scaffold planks.
- Do not use scaffold planks for other purposes (formwork, shoring, mudsills, wheelbarrow ramps, etc.)
- When preparing scaffold planks for storage, stack them in a way to promote good air circulation and minimize decay. This should include:
  - Allow wet planks to dry prior to covering them with wrap.
  - Use vertically aligned stickers between bundles.
  - Wrap (if used) should not cover bottom.
  - Bundles should be stored elevated, in an area with good drainage.

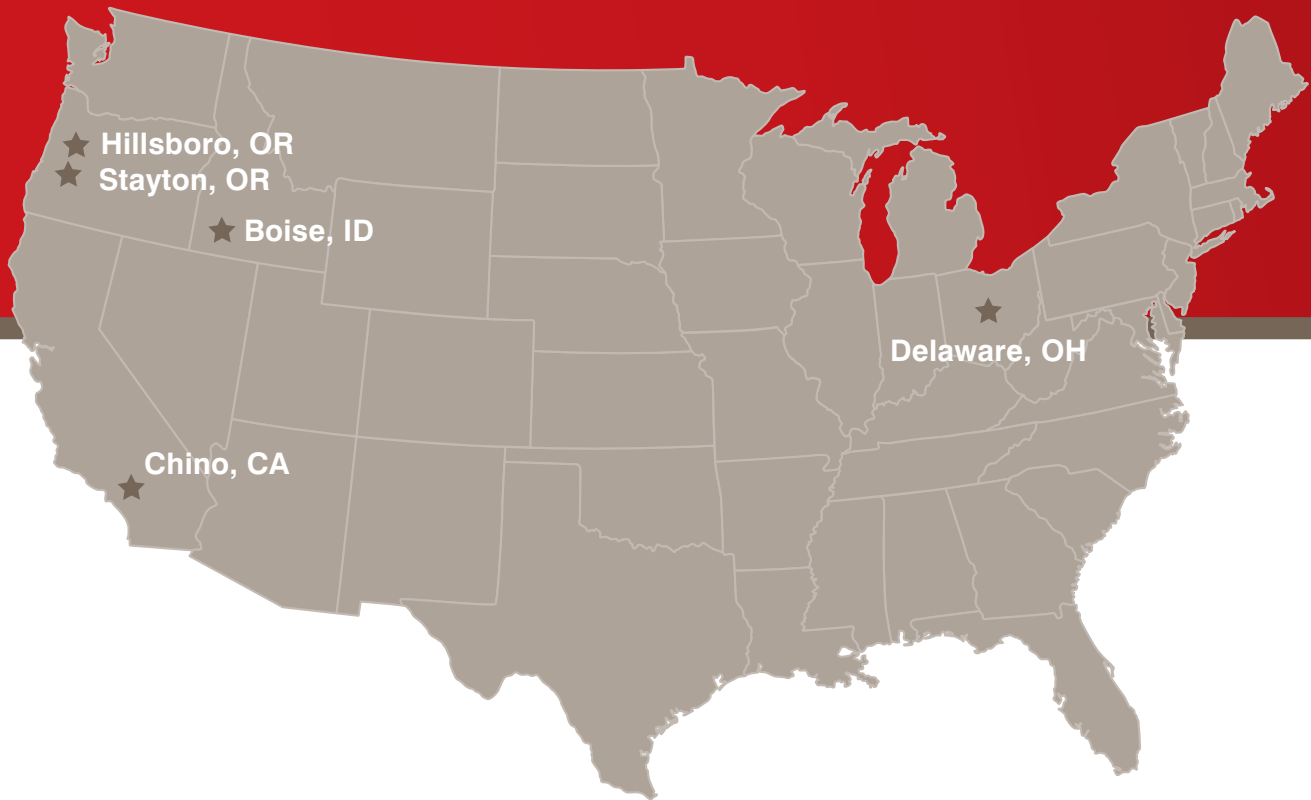
# ABOUT REDBUILT



The RedBuilt name is a tip of the hard hat to Harold “Red” Thomas. In 1958, his keen business sense crossed paths with the creative genius of inventor Art Troutner. When Art showed Red his latest creation, the open web truss, Red recognized its potential immediately. With little more than \$8,000, some machinery and an old barn, the two founded a company and revolutionized the commercial building products industry.

In August 2009, Atlas Holdings ([www.atlasholdings.com](http://www.atlasholdings.com)) — a private capital firm working with a group of senior leaders and experienced managers — purchased the commercial division of the company founded by Red and Art.

Today, as RedBuilt, the company now operates four manufacturing plants, plus multiple design centers with sales offices throughout the United States — including our headquarters in Boise, Idaho.



## COMPANY FACILITIES

### HILLSBORO, OR

Open-web manufacturing, accessory fabrication, Design Center

550 SW Bailey Ave.  
Hillsboro, OR 97123

Phone: 503-648-6641  
Fax: 503-640-2322

### STAYTON, OR

I-joist manufacturing and cut-up, LVL manufacturing, accessory fabrication

2345 W Deschutes Dr.  
Stayton, OR 97383

Phone: 503-769-7676  
Fax: 503-769-4413

### DELAWARE, OH

Open-web manufacturing, I-joist cut-up, accessory fabrication, Design Center

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Delaware, OH 43015

Phone: 740-363-1317  
Fax: 740-369-1154

### CHINO, CA

Open-web manufacturing, I-joist cut-up, accessory fabrication, Design Center

5088 Edison Ave.  
Chino, CA 91710

Phone: 909-465-1215  
Fax: 909-627-3627

### BOISE, ID

Corporate Headquarters, Design Center

200 E Mallard Dr.  
Boise, ID 83706

Phone: 208-364-1316  
Fax: 208-364-1300

*Go to [redbuilt.com](http://redbuilt.com) to find the name and contact information for your local RedBuilt Technical Sales Representative.*

RedPlank™ LVL is available in standard lengths and sizes through RedBuilt's reload facilities. Please contact your RedBuilt Industrial Sales Representative for information on product availability.



## SERVICE AND SUPPORT YOU CAN COUNT ON.

RedBuilt is committed to creating superior structural solutions. How? By offering efficient structural building products supported by the broadest range of services available:.

- RedBuilt representatives and experienced technical staff are located throughout the United States to help with technical information, questions or regulatory compliance.
- At RedBuilt, our goal is to help you build safe and solid structures by providing high-quality products and unparalleled technical and field support.



### CONTACT US

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