



# LVL USER'S GUIDE

Technical Data for LVL Headers, Beams, Columns and Rim Board  
Applications for Residential Floor and Roof Systems



# PRODUCT LINE



With the use of ultrasonic grading technology, West Fraser wisely utilizes the inherent attributes of its wood resources to manufacture products that effectively satisfy the needs of the market while at the same time, contribute to a greener, more sustainable environment. In addition, these attributes also allow for superior fiber bending strength and workability.

## West Fraser™ LVL 3100F<sub>b</sub>-2.0E

- 1¾" and 3½" thick in I-Joist and lumber compatible depths to 18" deep

## West Fraser™ LVL 3000F<sub>b</sub>-1.8E

- 1¾" thick in I-Joist and lumber compatible depths to 18" deep

## West Fraser™ LVL 2750F<sub>b</sub>-1.7E

- 3½" thick in column, header and beam depths from 3½" to 18" deep

## West Fraser™ LVL 1700F<sub>b</sub>-1.3E

- 1¼" LVL structural rim, starter joists, stair stringers, joists and stringers (single or double) and multi-ply headers (dimensional lumber replacement)

All products have face, back and edges sealed for improved performance under normal construction exposure

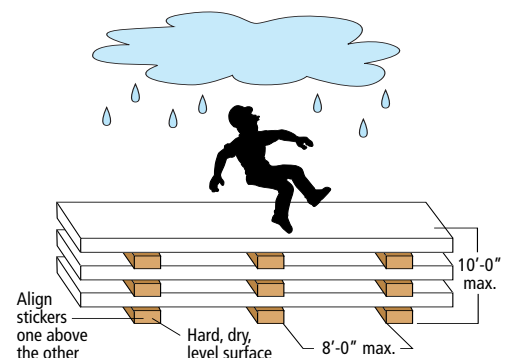
CODE EVALUATION REPORT NUMBERS: ICC ESR-1618, CITY OF LOS ANGELES – RR 25570, CITY OF NEW YORK MEA 406-04-E

# STORAGE, HANDLING AND INSTALLATION

Failure to follow good procedures for installation, storage and handling could result in unsatisfactory performance and unsafe structures.

- West Fraser™ LVL should be stored lying flat and protected from the weather.
- Stickers to be aligned one above the other and spaced no more than 8'-0" apart.
- Do not exceed a storage bundle height of 10'-0".
- Keep the material above ground to minimize the absorption of ground moisture and allow circulation of air.
- Report all forklift damage prior to shipment.
- West Fraser™ LVL is for use in covered, dry conditions only. Protect from the weather on the job site both before and after installation.
- Except for cutting to length, West Fraser™ LVL shall not be cut, drilled or notched. Heel cuts may be possible. Contact your West Fraser representative.
- Place first set of stickers on hard, level dry surface.
- **Do not install any damaged LVL.**

**CAUTION: Wrap may be slippery when wet**



These are general recommendations and in some cases, additional precautions may be required.



## DESIGN PROPERTIES

### 3100F<sub>b</sub>-2.0E 1<sup>3</sup>/<sub>4</sub>" WEST FRASER™ LVL ALLOWABLE DESIGN VALUES

Design Property	Depth							
	7 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>7</sup> / <sub>8</sub> "	14"	16"	18"
Moment (ft. lbs.)	4189	6636	6979	9605	10638	14517	18682	23337
Shear (lbs.)	2960	3777	3879	4594	4849	5717	6533	7350
Moment of Inertia (in <sup>4</sup> )	56	115	125	208	244	400	597	851
Weight (lbs./lin. ft.)	3.6	4.6	4.7	5.6	5.9	7.0	8.0	9.0

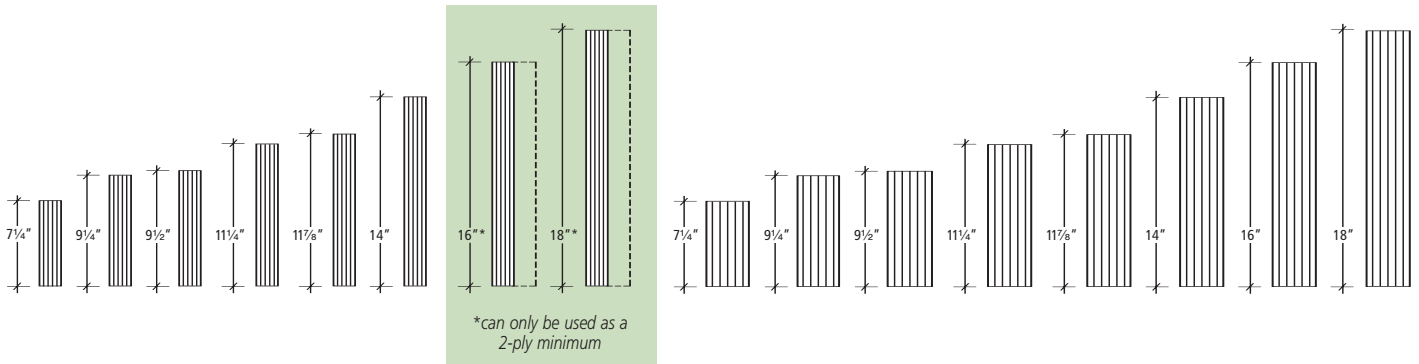
1. Lateral support of beam compression edge is required at intervals of 24" o/c or closer.
2. Lateral support of beam is required at bearing locations.
3. All 16" and 18" beam depths are to be used in multiple member units only.
4. Values are based on 100% load duration.

### 3100F<sub>b</sub>-2.0E 3<sup>1</sup>/<sub>2</sub>" WEST FRASER™ LVL ALLOWABLE DESIGN VALUES

Design Property	Depth							
	7 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>2</sub> "	11 <sup>1</sup> / <sub>4</sub> "	11 <sup>7</sup> / <sub>8</sub> "	14"	16"	18"
Moment (ft. lbs.)	8377	13272	13958	19210	21275	29035	37364	46674
Shear (lbs.)	5921	7554	7758	9188	9698	11433	13067	14700
Moment of Inertia (in <sup>4</sup> )	112	230	250	416	488	800	1194	1702
Weight (lbs./lin. ft.)	7.2	9.2	9.4	11.2	11.8	14.0	16.0	18.0

1. Lateral support of beam compression edge is required at intervals of 24" o/c or closer.
2. Lateral support of beam is required at bearing locations.
3. Values are based on 100% load duration.

### 3100F<sub>b</sub>-2.0E 1<sup>3</sup>/<sub>4</sub>" AND 3<sup>1</sup>/<sub>2</sub>" WEST FRASER™ LVL AVAILABLE SIZES



### 3100F<sub>b</sub>-2.0E WEST FRASER™ LVL ALLOWABLE DESIGN STRESSES

Modulus of Elasticity	E = 2.0 x 10 <sup>6</sup> psi
Bending Stress	F <sub>b</sub> = 3100 psi
Shear (joist)	F <sub>v</sub> = 350 psi
Compression Perpendicular to Grain (joist)	F <sub>c(perp)</sub> = 750 psi
Compression Parallel to Grain	F <sub>c(para)</sub> = 3000 psi

1. F<sub>b</sub> based on 12" depths. For others depths, multiply by (12/d)<sup>(1/9)</sup>.
2. Design stresses are based on 100% load duration.
3. F<sub>c(perp)</sub> and E shall not be increased for duration of load.

## LIMITED LIFETIME WARRANTY

(\*to non-consumer buyers)

Sundre Forest Products Inc. warrants that its WEST FRASER™ LVL is free from defects in materials and workmanship, and, when correctly installed, will perform in accordance with Sundre Forest Products Inc.'s published specifications for the lifetime of the building.

West Fraser™ LVL used anywhere else except as shown in our published specifications is not covered in this warranty.

*\*A non-consumer is a person or entity who purchases a product for purposes of resale or to incorporate into another product which will be resold.*

### LIMITATIONS

Sundre Forest Products Inc. must be given a reasonable opportunity to inspect its WEST FRASER™ LVL before it will honor any claims under the above warranty.

If, after inspection, Sundre Forest Products Inc. determines that a product failure exists covered by the above warranty, Sundre Forest Products Inc. will pay to the owner of the structure an amount equal to the reasonable cost of labor and materials required to remove and replace or repair the defective product. The product must be protected from exposure to moisture from whatever source in accordance with provisions of the applicable building standards. Failure to protect the product from moisture, except for incidental exposure during construction, may cause the product to fail to perform as warranted and will void this limited lifetime warranty. Exposure to standing water and accumulations of snow and ice without reasonably prompt removal thereof will void this limited lifetime warranty.

### DISCLAIMER

Except for the express warranty and remedy set out above, Sundre Forest Products Inc. disclaims all other warranties and guaranties, express or implied, including implied warranties of merchantability or fitness for a particular purpose. No other warranty or guaranty will be made by or on behalf of the manufacturer or the seller or by operation of law with respect to the product or its installation, storage, handling, maintenance, use, replacement or repair. Neither Sundre Forest Products Inc. nor the seller shall be liable by virtue of any warranty or guaranty, or otherwise, for any special, incidental or consequential loss or damage resulting from the use of the product. Sundre Forest Products Inc. makes no warranty or guaranty with respect to installation of the product by the builder or the builder's contractor or any other installer.

Some states do not allow the exclusion or limitation of incidental or consequential damages and in such states the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have rights which will vary from state to state.

For information on the above warranty, contact Sundre Forest Products Inc., Customer Service Office at **1-877-408-9433**.



(877) 408.9433

[WWW.WESTFRASER.COM](http://WWW.WESTFRASER.COM)

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