



RESIDENTIAL FLOOR  
& ROOF SYSTEMS

# QUICK GUIDE

 GP LAM<sup>®</sup> LVL WOOD I BEAM<sup>™</sup> JOISTS FIBERSTRONG<sup>®</sup> RIM BOARD

ENGINEERED  
LUMBER

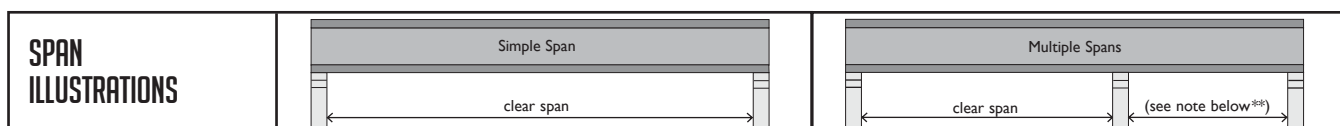
EDITION 5

WHAT YOU DON'T  
SEE MATTERS<sup>™</sup>



- Engineered to deliver high dimensional stability with consistent depth, stiffness and strength characteristics
- Dimensional stability for quieter floors, minimal squeaks and fewer callbacks
- Resists shrinking and twisting for less waste and more consistent performance
- Available with solid sawn lumber or laminated veneer lumber (LVL) flanges
- Available in value lengths from 20' to 48' (lengths up to 60' by special order)

## FLOOR JOIST MAXIMUM SPANS\*



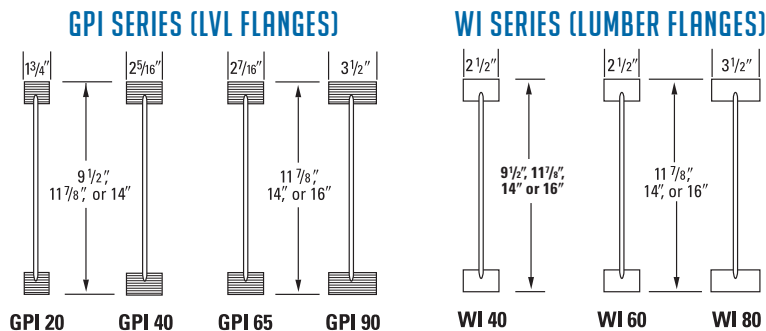
40 PSF LIVE LOAD + 10 PSF DEAD LOAD

IMPROVED PERFORMANCE (L/480)

JOIST SERIES	JOIST DEPTH	SPACING (SIMPLE SPAN)				SPACING (MULTIPLE SPAN)			
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
GPI 20	9 1/2"	17'-01"	15'-07"	14'-09"	13'-10"	18'-07"	17'-00"	16'-01"	15'-00"
	11 7/8"	20'-05"	18'-08"	17'-08"	16'-06"	22'-03"	20'-04"	19'-02"	17'-05"
	14"	23'-03"	21'-03"	20'-01"	18'-09"	25'-04"	23'-02"	21'-04"	18'-06"
GPI 40	9 1/2"	18'-00"	16'-06"	15'-07"	14'-07"	19'-08"	17'-11"	16'-11"	15'-06"
	11 7/8"	21'-06"	19'-08"	18'-07"	17'-04"	23'-05"	21'-05"	19'-09"	17'-08"
	14"	24'-04"	22'-03"	21'-01"	19'-05"	26'-07"	23'-09"	21'-08"	19'-04"
GPI 65	11 7/8"	23'-03"	21'-03"	20'-00"	18'-08"	25'-04"	23'-01"	21'-09"	20'-04"
	14"	26'-05"	24'-02"	22'-09"	21'-03"	28'-10"	26'-03"	24'-09"	20'-08"
	16"	29'-04"	26'-09"	25'-03"	23'-07"	32'-00"	29'-02"	25'-11"	20'-08"
GPI 90	11 7/8"	26'-04"	24'-00"	22'-07"	21'-00"	28'-08"	26'-01"	24'-07"	22'-10"
	14"	29'-11"	27'-02"	25'-07"	23'-10"	32'-07"	29'-07"	27'-10"	25'-11"
	16"	33'-01"	30'-01"	28'-04"	26'-04"	36'-01"	32'-09"	30'-10"	26'-07"
WI 40	9 1/2"	18'-00"	16'-05"	15'-06"	14'-06"	19'-07"	17'-11"	16'-04"	14'-07"
	11 7/8"	21'-05"	19'-07"	18'-06"	16'-08"	23'-05"	20'-05"	18'-07"	16'-07"
	14"	24'-04"	22'-03"	20'-06"	18'-04"	25'-11"	22'-05"	20'-05"	18'-03"
WI 60	11 7/8"	22'-07"	20'-08"	19'-06"	18'-02"	24'-08"	22'-06"	21'-02"	19'-07"
	14"	25'-09"	23'-06"	22'-02"	20'-08"	28'-00"	25'-07"	24'-01"	19'-09"
	16"	28'-06"	26'-00"	24'-07"	22'-10"	31'-01"	28'-04"	24'-09"	19'-09"
WI 80	11 7/8"	24'-11"	22'-08"	21'-04"	19'-10"	27'-01"	24'-08"	23'-03"	21'-07"
	14"	28'-03"	25'-09"	24'-03"	22'-07"	30'-10"	28'-00"	26'-05"	23'-11"
	16"	31'-04"	28'-06"	26'-10"	25'-00"	34'-02"	31'-01"	29'-03"	23'-11"

\*Tabulated clear spans are based on uniform loads and composite action with glued-nailed sheathing. For important notes regarding this table, please refer to "System Performance" and "Floor Joist Maximum Spans" in Georgia-Pacific's "Engineered Lumber Residential Floor & Roof Systems Product Guide," Lit. Item #123040.

\*\*Note: For multiple-span joists: End spans must be at least 40% of the adjacent span. Spans shown above cover a broad range of applications. It may be possible to exceed these spans by analyzing a specific application with FASTBeam® selection software.



Referenced dimensions are nominal and used for design purposes.





- Resists shrinking, warping, splitting and checking
- 2.0E has high design values for bending, stiffness and shear strength
- FiberGuard™ sealant provides short-term protection from moisture during the construction phase
- Available in 2.0E, and 1 3/4" and 3 1/2" thicknesses (1 1/2" by special order), and depths from 3 1/2" to 24"
- Available in value lengths from 24' to 48' (lengths up to 60' by special order)

## 2.0E GP LAM ALLOWABLE EDGEWISE DESIGN STRESSES<sup>1</sup>

Modulus of Elasticity	$E = 2.0 \times 10^6$ psi
Shear Modulus of Elasticity	$G = 0.125 \times 10^6$ psi
Flexural Stress	$F_b^2 = 2,900$ psi
Horizontal Shear	$F_v = 285$ psi
Compression Perpendicular to Grain	$F_{c\perp} = 845$ psi

1. No increase is allowed to  $E$ ,  $G$  or  $F_{c\perp}$  for duration of load.
2. For depths ( $d$ ) other than 12" multiply  $F_b$  by  $(12/d)^{1/9}$  for 2.0E.



Ask your GP sales representative about sizes and availability of GP Glulam.

## SIMPLE-TO-USE SOFTWARE

Georgia-Pacific's FASTBeam® design software is an application package that helps determine the most cost-efficient and effective alternatives for use of Georgia-Pacific engineered lumber products, while FASTPlan® framing software analyzes and designs floor members, and generates a complete material list.



- Ideally suited for floor systems configured with Georgia-Pacific Wood I Beam™ joists
- Available in 12' lengths (1 1/8" thick)
- Available in depths from 9 1/2" to 16"

*Referenced dimensions are nominal and used for design purposes.*

## CAPACITIES

### Vertical Load:

Rim or starter joist = 4850 plf.

### Horizontal load (lateral seismic or wind):

200 plf using a load duration factor of 160%

### 1/2" lag or through fastener attaching ledger to rim board:

350 lbs. lateral load per fastener

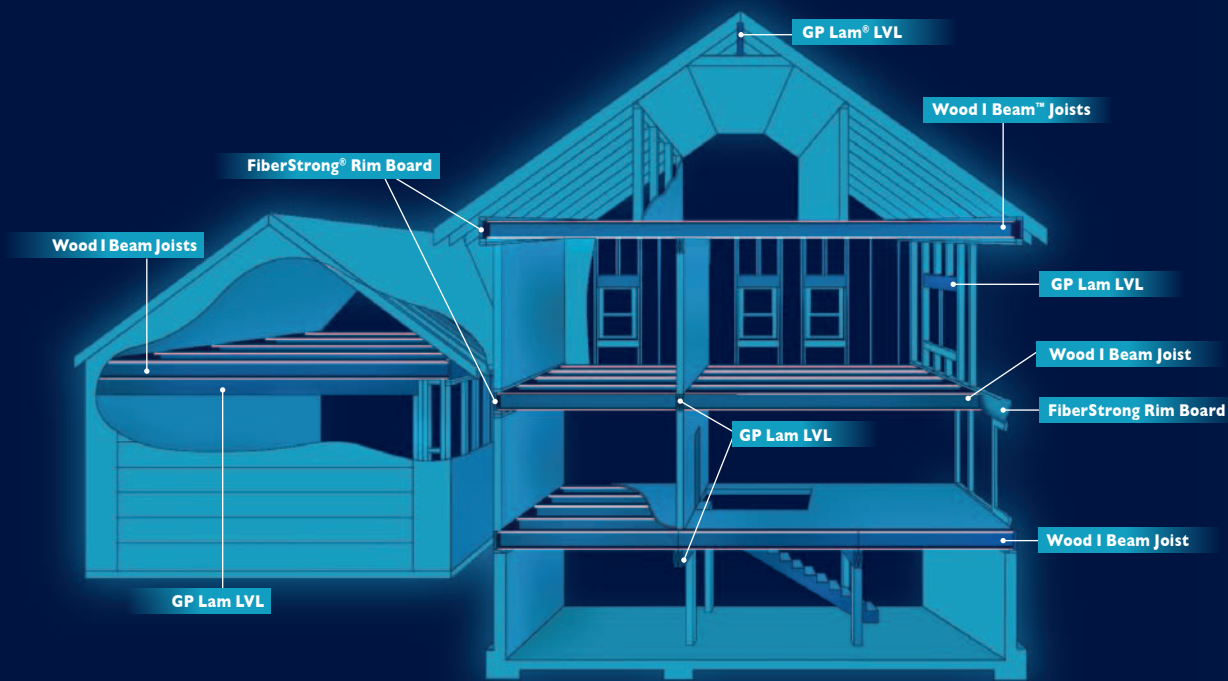
### Lateral loads for nails in wide face of rim board:

Design per 2012 & 2005 NDS using Douglas Fir-Larch values



# ENGINEERED FOR PERFORMANCE

WHAT YOU DON'T SEE MATTERS™



 **WOOD I BEAM™**  
joists

 **GP LAM®**  
LAMINATED VENEER LUMBER

 **FIBERSTRONG®**  
RIM BOARD

 **GP Glulam**

DISTRIBUTED BY:



**Georgia-Pacific**  
Engineered Lumber

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**877-437-9759**



This NAHB Research Center Green Approved mark is your assurance that a product is eligible for points toward National Green Building Certification. Visit [www.GreenApprovedProducts.com](http://www.GreenApprovedProducts.com)



*Good for you. Good for our forests.™*

Engineered lumber from Georgia-Pacific is made from wood that is sourced through a system that is third-party certified to the Sustainable Forestry Initiative® (SFI®) procurement standard.

\* See manufacturer's warranty for terms, conditions and limitations ([www.gp.com/build](http://www.gp.com/build)).

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