



# ENGINEERED WOOD PRODUCTS

Tri-State Forest Products offers the widest range and highest quality of engineered wood products of any distributor in the Midwest! Call our trained EWP staff today.

**NORDIC**  
STRUCTURES



THE OPEN JOIST



*PERMA-STRAIGHT*  
Laminated Columns



*Locations:*

Edwardsburg, MI	(888) 663-8419
Gaylord, MI	(855) 367-4477
Grand Rapids, MI	(877) 369-8469
Indianapolis, IN	(800) 256-8152
Lawrenceburg, KY	(800) 788-8865
Milan, TN	(844) 686-8931
Saginaw, MI	(877) 755-7122
Springfield, OH	(800) 949-6325
Toledo, OH	(866) 216-9025

[www.tsfpi.com](http://www.tsfpi.com)



# TOP TEN

## REASONS TO BUY ENGINEERED WOOD FROM TRI-STATE FOREST PRODUCTS

### 1.) NORDIC I-JOISTS

- ▶ Longest spanning joists in this EWP market
  - ⇒ NI 40x 11-7/8" joist simple spans 20'3" at 16" o.c.
  - ⇒ most competition only spans 18' to 19'6" at 16" o.c.
  - ⇒ 11-7/8" joist is used for majority of projects
- ▶ Black spruce MSR flange joists
  - ⇒ tight growth rings do not twist or bend
  - ⇒ less problems with vibration issues than lighter LVL flange joist
  - ⇒ 2-1/2" or 3-1/2" flanges compared to 1-1/2" or 2" LVL flange
  - ⇒ offers longer spans and wider nailing surfaces
  - ⇒ MSR (machine stress rated) flange offers a longer span with a
  - ⇒ smaller joist height
- ▶ Available in lengths up to 48'
  - ⇒ all lengths (even 2' increments) available for stock or job-lot up to 48'
- ▶ Every project you build using Nordic I-Joists will be a stronger floor system than you can get with any other brand of I-joist.
- ▶ Cleaner looking I-joist
  - ⇒ flanges are finger-jointed less often
  - ⇒ clear glue used to adhere flanges – no brown/black glue run-off on web
  - ⇒ flange is oriented so visual/natural imperfections are on the inside of joist

### 2.) MURPHY LVL (Laminated Veneer Lumber)

- ▶ 2.1E LVL—many competitors offer a 1.9E LVL
- ▶ Dimensionally stable
- ▶ APA quality assured
- ▶ Moisture repellent wax-based sealer
- ▶ Many size options

### 3.) PRICE & PROGRAMS

- ▶ very competitive pricing
- ▶ stocking dealer programs available with price advantages
- ▶ pricing for designed jobs, units from warehouse and truckloads



*continued on next page...*

## **TOP TEN** reasons to buy EWP from TSFPI continued...

### **4.) FULL RANGE OF ENGINEERED WOOD PRODUCTS**

- ▶ Nordic I-joists and Murphy LVL
- ▶ TriForce—open web floor joist system
- ▶ glu-lam beams—standard beams, IJC (I-Joist compatible), arched and standard in industrial and architectural grade
- ▶ treated glu-lam
- ▶ laminated columns for post frame & basement
- ▶ Express Header—insulated door & window headers
- ▶ laminated decking
- ▶ structural connectors
- ▶ pre-cut garage door headers



### **5.) HELP AND SUPPORT FROM TSFPI**

- ▶ we stand behind our work
- ▶ ability to correct problems very quickly when they arise
- ▶ willingness to help present ideas or suggestions to your builders directly
- ▶ engineered department can work with your sales staff or builders to fully understand any problem areas with print design or framing

### **6.) DESIGN STAFF**

- ▶ several full-time, in-house designers available during all business hours
- ▶ full size color layouts to show how the floor systems need to be framed
- ▶ immediate assistance to your sales staff or builder
- ▶ ability to size beams and provide sealed calcs by engineers

### **7.) SALES STAFF**

- ▶ outside sales staff members available in all of our shipping territory
- ▶ next day help on your jobsites if requested
- ▶ inside sales support to process your orders timely
- ▶ knowledgeable people to answer questions/concerns timely

### **8.) JOBSITE DELIVERY**

- ▶ jobsite delivery equipment available at all of our distribution center locations
- ▶ lead-times of one to two days on job sites generally

### **9.) STORE DELIVERY**

- ▶ delivery to your location within three business days of placing your order of any order increment of pieces, cut jobs and/or units

### **10.) ADVANTAGES OF DEALING WITH AN INDEPENDENT WHOLESALER**

- ▶ ability to control our own success
- ▶ we can choose to protect our stocking dealers in certain markets
- ▶ your business is truly important to us
- ▶ your company is not just a name on a customer list
- ▶ at TSFPI, we are DEDICATED TO YOUR FUTURE

Why should  
I use I-Joists?



# TOP TEN reasons to use I-Joists

- 1) environmentally friendly
- 2) value design floor system utilizing the wood fiber effectively and efficiently
- 3) lighter weight and fewer pieces when handling and installing
- 4) dimensional stability
- 5) superior strength
- 6) improved stiffness
- 7) multiple series of joists allowing design flexibility and increased span capabilities
- 8) consistent size and appearance with guaranteed performance
- 9) webs that have 1-1/2" knock-out holes throughout and can be cut or drilled to accommodate HVAC, plumbing and electrical installations
- 10) deeper depth joists for large residential and commercial applications



**NORDIC**  
STRUCTURES

 **TRI-STATE  
FOREST  
PRODUCTS**



## DO YOU THINK ALL LVL IS CREATED EQUAL?

### 2.1E LVL from Tri-State Forest Products

Tri-State Forest Products offers the next generation in laminated veneer lumber (LVL). Our LVL product will far exceed the competition in quality, strength, weathering, and the ability to be handled and installed by your contractors. See the benefits and features below.

#### Strength and Quality

This is a stronger LVL than the competitors product. Our product is produced by one of the elite engineered wood manufacturers in the industry. This LVL has a 3100  $F_b$  rating - ( $F_b$  rating = allowable bending per square inch) while many other 2.0E LVL only provide a 2850  $F_b$ . Most 1.9E products are only a 2650  $F_b$  rating.

#### Weather Sealer and Contractor Use

Checking is minimized because our LVL is cured in a controlled process in which waterproof adhesives boost stability and reduce warps and twists. All of our LVL products are machine ripped to generate uniform size and rigid, flat surfaces with superior nail holding characteristics. Our product has a moisture repellent wax-based sealer. The sealer is to make sure the product stays stable and protected through the construction process. Best practice is to store product covered for any extended period of time; however.



**Contact your Tri-State Forest Products sales rep for truckload and unit pricing. STOCK THE BEST!**

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Joist Series	Joist Depth	Simple Span				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.
BLI 40	9 1/2"	17'-11"	16'-05"	15'-06"	14'-06"	19'-07"	17'-10"	16'-04"	14'-07"
	11 7/8"	21'-05"	19'-07"	18'-06"	16'-08"	23'-04"	20'-05"	18'-07"	16'-07"
	14"	24'-04"	22'-02"	20'-06"	18'-04"	25'-11"	22'-05"	20'-05"	18'-03"
	16"	26'-11"	24'-03"	22'-04"	19'-09"	27'-11"	24'-02"	22'-00"	19'-08"

**Boise Cascade**

Joist Depth	BCI® Joist Series	Live Load deflection limited to L/80				
		12" o.c.	16" o.c.	19.2" o.c.	24" o.c.	32" o.c.
9-1/2"	4500s 1.8	16'-11"	15'-6"	14'-8"	13'-7"	11'-9"
	5000s 1.8	17'-6"	16'-0"	15'-2"	14'-1"	12'-5"
	6000s 1.8	18'-2"	16'-8"	15'-8"	14'-8"	13'-4"
	6500s 1.8	18'-8"	17'-1"	16'-1"	15'-0"	13'-8"
11-7/8"	4500s 1.8	20'-0"	18'-4"	17'-3"	15'-5"	13'-4"
	5000s 1.8	20'-9"	19'-0"	17'-11"	16'-7"	13'-4"
	6000s 1.8	21'-7"	19'-8"	18'-7"	17'-4"	14'-10"
	6500s 1.8	22'-2"	20'-3"	19'-2"	17'-10"	14'-10"
	60s 2.0	23'-7"	21'-6"	20'-4"	18'-11"	16'-4"
	90s 2.0	26'-7"	24'-3"	22'-10"	21'-3"	19'-4"

**COMPARE THE DIFFERENCE**

JOIST DEPTH	JOIST SERIES	SIMPLE SPANS			
		ON CENTER SPACING			
		12"	16"	19.2"	24"
9-1/2"	NI-20	16'-7"	15'-3"	14'-5"	13'-6"
	NI-40x	18'-8"	17'-0"	16'-1"	15'-0"
	NI-60	18'-11"	17'-4"	16'-4"	15'-3"
	NI-70	20'-6"	18'-9"	17'-8"	16'-5"
	NI-80	20'-11"	19'-1"	18'-0"	16'-9"
11-7/8"	NI-20	19'-11"	18'-3"	17'-3"	16'-1"
	NI-40x	22'-2"	20'-3"	19'-2"	17'-2"
	NI-60	22'-8"	20'-8"	19'-6"	18'-2"
	NI-70	24'-5"	22'-3"	21'-0"	19'-7"
	NI-80	24'-11"	22'-8"	21'-4"	19'-11"
	NI-90	25'-7"	23'-3"	21'-11"	20'-5"
	NI-90x	25'-9"	23'-6"	22'-1"	20'-7"
14"	NI-40x	25'-2"	22'-11"	21'-2"	18'-11"
	NI-60	25'-9"	23'-6"	22'-2"	20'-8"
	NI-70	27'-8"	25'-3"	23'-9"	22'-2"
	NI-80	28'-3"	25'-9"	24'-3"	22'-7"
	NI-90	29'-0"	26'-5"	24'-10"	23'-1"
16"	NI-60	28'-6"	26'-0"	24'-7"	22'-10"
	NI-70	30'-8"	27'-11"	26'-4"	24'-6"
	NI-80	31'-4"	28'-6"	26'-10"	25'-0"
	NI-90	32'-1"	29'-2"	27'-6"	25'-7"
	NI-90x	32'-7"	29'-8"	27'-11"	26'-0"

**Nordic** manufactures a superior product that will out-span major competitors I-joists. The 40 series 11-7/8 at 16" o.c. spans 20'3" and has a full 2-1/2" flange to nail to. Also, the joist itself has a much cleaner look to it using clear glue and has much less visible wane than competitors.


**PLEASE SEE FULL NORDIC BROCHURE FOR MORE SPAN DETAILS AND SPECIFICATIONS**

INFORMATION ON THIS PAGE WAS SOURCED FROM MANUFACTURE WEBSITES.

# AN IN DEPTH LOOK...

## NORDIC NI 40x vs. BOISE BCI-5000

Nordic NI 40x out-spans the BCI-5000 by 15" for 11-7/8" for 16" o.c. Every project will feel firmer and stiffer with the NI 40x product. The builders are used to the MSR flange and will be expecting that level of performance. Anything less will not leave a warm, fuzzy feeling and send them back to something they know works. The following chart shows the joist design properties and allowable floor spans based on a glued and nailed span rated sheathing with a minimum thickness of 23/32" (48/24 or 24"o.c.) under a L/480 live load deflection:

Joist series	Joist depth	Allowable floor simple spans 40psf(live) +10psf(dead)		
		12" o.c.	16" o.c.	19.2" o.c.
<b>NORDIC</b> STRUCTURES NI 40x	9-1/2"	18'8"	17'	16'1"
	11-7/8"	22'2"	20'3"	19'2"
	14"	25'2"	22'11"	21'2"
 Boise Cascade BCI5000s	9-1/2"	17'6"	16'0"	15'2"
	11-7/8"	20'9"	19'0"	17'11"
	14"	21'7"	21'7"	20'2"

As you can see, our Nordic NI 40x series joist series has better design properties and longer allowable spans than the BCI 5000s. The bending moment capacity and bending stiffness (EI) are higher and are the governing factors in most residential applications. A higher bending stiffness also generates a better floor performance (i.e. less vibration)

- NI 40x flange is wider. 2-1/2" vs. BCI-5000s flange at 2"
- NI 40x series flange is deeper. 1-1/2" vs. BCI-5000s flange at 1-1/8". The standard gun nails will protrude through the BCI-5000s flange 5/8 of an inch minimizing holding power. The thin flange may also be more susceptible to cupping. Since we all know that 1-3/4" LVL can cup it only makes sense that the thinner flange closer to plywood with a 3/8" relief cut on the underside to accept the web may also cup. The thin flange may also be more susceptible to splitting when filling hanger holes.
- 2x3 MSR flange joists have all but eliminated the vibration problems affecting the industry just 7 to 10 years ago. Back then the predominate joist had a 1-1/2"x1-1/2" LVL flange or 2.25 cubic feet. The BCI joist at 1-1/8"x2" is still only 2.25 cubic feet. The reduced mass in the flange could very well bring back one of the old problems associated with I-joist which is vibration.
- Ask yourself why Boise is pushing this product. Is it because it is better? Or is it because it is cheaper? What will your builder think? This joist is not about making a better product. This joist is about making a cheaper product to compete with a product that is already proven and well received both in performance and price.

Based on our superior spans a project may require MORE BCI material.

Based on simple flange size and mass and span capacity, every project built with our product (even if it's our smallest) the NI 40x joists will be stiffer and out-perform the BCI-5000s.

**Our I-Joists also out-performs their next step up, the BCI-6000s.  
You can do MORE with LESS.**



## NORDIC COMPANY PROFILE

Nordic's heritage can be traced back to 1961, when Lucien Fillion and five part-time employees began sawing timbers for the local mining industry, creating Chantiers Chibougamau Ltd (CCL). From the outset, a focus on providing quality wood products for the ever-changing market meant staying at the forefront of innovation and customer service.

Innovation and new products result from a flow of feedback from architects, designers, specifiers and OEMs that share Nordic's passion for excellence. Nordic has established itself as the premier solid-sawn I-joist in the market, with proprietary small-block technology, consistent in-line tension testing, and the emergence of the first laminated solid-sawn flange joist, the NI-90x series.

Nordic EWP has been marketing Nordic Joist and Nordic Lam products since its inception in 2000. Attention to product development, quality, and exceptional service have allowed Nordic to grow into a supplier of international scope.

# NORDIC STRUCTURES



**Tri-State Forest Products is independently run and we put quality and service in front of anything else. Using Tri-State Forest Products as your engineered lumber supplier will ensure that you are buying the highest quality EWP program that is available from any supplier. Including the best looking products and best performing I-Joist along with great service and a very strong support staff.**



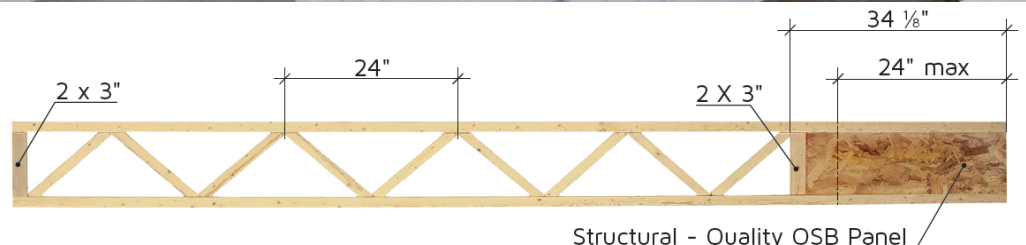


# THE OPEN JOIST



FEATURES	BENEFITS	
SOLID SAWN KILN-DRIED CHORDS	<ul style="list-style-type: none"> <li>• Wide nailing surfaces 2.5" &amp; 3.5"</li> <li>• Glued finger-joints eliminate potential squeaking</li> <li>• Dimensional stability</li> <li>• Ease of installation</li> </ul>	Labor savings
SOLID SAWN KILN-DRIED WEBS	<ul style="list-style-type: none"> <li>• 2"x2" webs</li> <li>• Most effective wood usage</li> <li>• Environmentally friendly</li> </ul>	Labor savings
WEB STOCK OSB END DETAIL	<ul style="list-style-type: none"> <li>• 24" trimmable end</li> <li>• Trimmable one end only</li> <li>• Manufactured in 2-foot increments</li> </ul>	Labor savings
GLUED FINGER JOINTS TRIANGULATION	<ul style="list-style-type: none"> <li>• Long-Term performance</li> <li>• Accuracy</li> <li>• No plate corrosion</li> <li>• No potential mechanical, electrical and plumbing damage due to metal connectors</li> <li>• Eliminates potential squeaking</li> </ul>	Labor savings
TRIANGULATED CONFIGURATION	<ul style="list-style-type: none"> <li>• Proven</li> <li>• Light handling</li> <li>• No on-site thinking for holes for mechanical, electrical and plumbing</li> <li>• Increased floor performance</li> </ul>	Labor savings
QUALITY GUARANTEED	<ul style="list-style-type: none"> <li>• Independent third-party inspection</li> <li>• Individually tested to exceed load capacity</li> <li>• Unrivaled floor performance</li> </ul>	

The Open Joist TRIFORCE<sup>®</sup> relies on more than 25 years of expertise and represents the synthesis of all the features and benefits of all types of joists combined.





All information provided in this document was sourced from manufacturer websites and printed literature. Any information in this document is subject to change without notice.