

# TJ<sup>®</sup> INSULATED HEADERS, RIM BOARD, AND CORNERS

## Introducing TJ<sup>®</sup> Insulated Structural Framing Components

- Helps meet the 2011 Federal Energy Star Homes and 2009 International Energy Conservation Code Standards
- One-Piece Assemblies Help Reduce Labor and Material Costs
- Provides More Consistent R-values vs. Conventional Assemblies
- Reliable Performance
- Sized to Fit Conventional 2x6 Framing
- Features Dow<sup>®</sup> THERMAX<sup>™</sup> Insulation

**NEW!**

One-piece TJ<sup>®</sup> Insulated headers, rim board, and corners that help take the headache out of building green





Weyerhaeuser provides products for use in residential, multi-family, and light commercial applications. For more information on other applications or other Trus Joist® products, contact your Weyerhaeuser representative.

**Code Evaluations:**

ICC ES ESR-1387 and HUD MR 1265 for TimberStrand® LSL

**BUILDING GREEN  
WITH WEYERHAEUSER**

- 100% of the engineered wood products we manufacture are third-party certified to the SFI Certified Fiber Sourcing Standard
- No urea formaldehyde resins are added to any of our products
- Our manufacturing process uses nearly 99% of every log
- A wood framed house, on average, uses about 16% less embodied energy than one built with steel or concrete



Certified Sourcing  
www.sfiprogram.org  
SFI-00008

## Trus Joist® TJ® Insulated Structural Components

TJ® Insulated products from Weyerhaeuser are integrated, preassembled framing components that increase insulating values, reduce thermal bridging, and optimize materials and labor. Plus, they fit right into your existing structural frame layouts, and use typical design and installation procedures you are already familiar with.

TJ® Insulated products can be manufactured to meet your region's specific requirements. In addition, Weyerhaeuser engineers can help you design wall assemblies and installation details that meet both local codes and the new energy code requirements.

The insulated products shown in this guide use standard design and installation details; refer to the appropriate product guide for design information and additional details.



### R-17\* TJ® Insulated Headers

This one-piece header for 2x6 wall framing combines 3 1/2" Trus Joist® TimberStrand® LSL, 1 1/2"-thick insulation, and a 7/16" OSB face. A typical sandwich header requires additional calculations to ensure proper sizing and load transfer. But our unique design, using 3 1/2" TimberStrand® LSL, allows for a direct load path. The OSB face makes drywall attachment fast and easy.

**Available sizes:**

Total width: 5 1/2"

Depths: 4 3/8", 5 1/2", 7 1/4", 8 5/8", 9 1/4", 11 1/4", 11 7/8", 14", and 16"



### R-10\* TJ® Insulated Rim Board

Reduce the labor and materials needed to insulate your floor cavity with this one-piece, 1 1/4" Trus Joist® TimberStrand® LSL rim board, complete with 1" of insulation with a foil face. The insulated rim fits and fastens like a conventional rim board—and all it takes is one easy step.

**Available sizes:**

Total width: 2 1/4"

Depths: 9 1/2", 11 7/8", 14", and 16"



### R-30\* TJ® Insulated Corners

Trus Joist® TimberStrand® LSL or Framer Series® lumber combine with 4" of insulation to give you a better three-stud corner or interior wall (T) intersection that uses fewer structural materials. The assembly is sized for 2x6 exterior walls, provides a nailing surface for drywall, and meets ENERGY STAR requirements for corner framing.

**Available size:**

5 1/2" x 5 1/2"

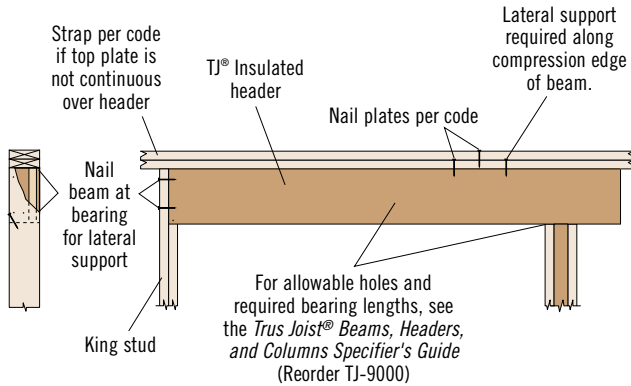
\* Wall assembly R-value.

**Available in select markets; call for more information.**

# R17\* TJ® INSULATED HEADERS

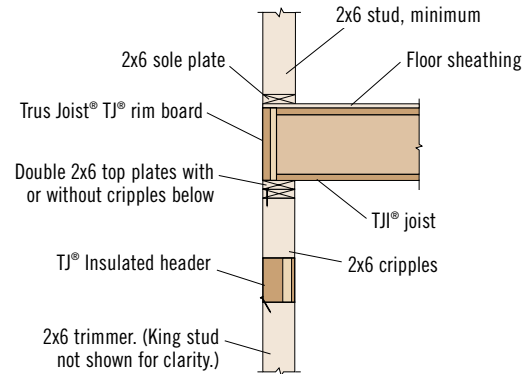
TJ® Insulated headers may be designed using standard design procedures for TimberStrand® LSL headers. Connection details specific to TJ® Insulated headers are shown below. For design stresses, load tables, standard installation details, and other information, see the *Trus Joist® Beam, Header, and Column Specifier's Guide* (Reorder TJ-9000).

## TJ® Insulated Header Attachment



IS1

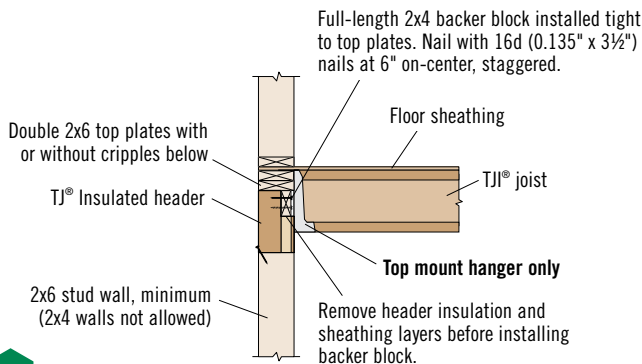
## Dropped TJ® Insulated Headers



IS2

Double 2x6 top plates are required above the header.

## TJ® Insulated Header to Joist Connection



IS3

## General Notes for TJ® Insulated Headers

- TJ® Insulated headers installed in a standard wall assembly have a thermal performance of R17 or U-0.058. Thermal performance is based on all of the wall components.
- TJ® Insulated headers meet Energy Star requirements.
- Size and install TJ® Insulated headers using 3½" TimberStrand® LSL header information and details in the *Trus Joist® Beams, Headers, and Columns Specifier's Guide* (Reorder TJ-9000), the details shown here, and any project plans.
- See below for rigid foam properties and dew point analysis.

*TJ® Insulated products are intended for dry-use applications*

# RIGID FOAM PROPERTIES AND DEW POINT ANALYSIS

## Rigid Foam Properties

Interior Finish	Class A
Water Vapor Transmission <sup>(1)</sup>	< 0.03 perms
Vapor Barrier	Type 1
Air Resistance	Effective air barrier

(1) Water vapor transmission value is based on ASTM E96.

## Dew Point Analysis

Dew point analysis was conducted on the TJ® Insulated header, rim board, and corner under various temperature and humidity conditions. The calculations were based on the theory of Water Vapor Migration presented in the *ASHRAE 2009 Fundamentals Handbook* (Glaser method). Dew point theory predicts the rate of moisture accumulation or rate of drying from a critical location within the assembly.

Under the following interior and exterior conditions, the calculations predict no appreciable condensation accumulation within a wall system that includes TJ® Insulated products.

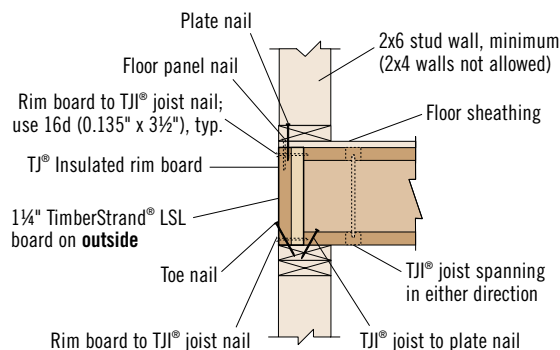
	Cool Exteriors		Warm Exteriors	
	Interior	Exterior	Interior	Exterior
Temperature (F)	50°-75°	0°-50°	65°-85°	50°-100°
Relative Humidity	25%-50%	10%-65%	30%-65%	10%-90%

ASHRAE does not recommend the dew point method as the sole basis for hygrothermal design of building envelope assemblies. Actual performance may vary depending upon air infiltration, initial conditions, workmanship, and type of building materials.

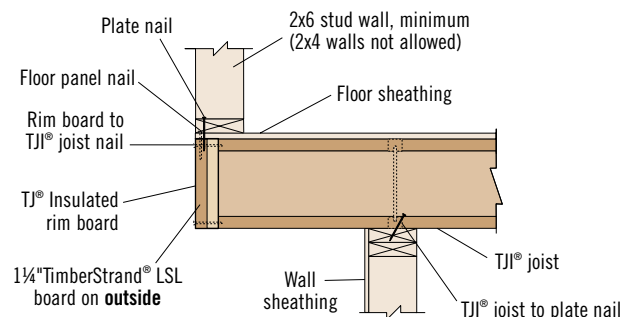
# R10\* TJ® INSULATED RIM BOARD

TJ® Insulated rim board may be designed using standard design procedures for TimberStrand® LSL rim board. Connection details specific to TJ® Insulated rim board are shown below. For design stresses, load tables, standard installation details, and other information, see the Trus Joist® rim board specifier's guide (Reorder TJ-8000).

## Typical Installation



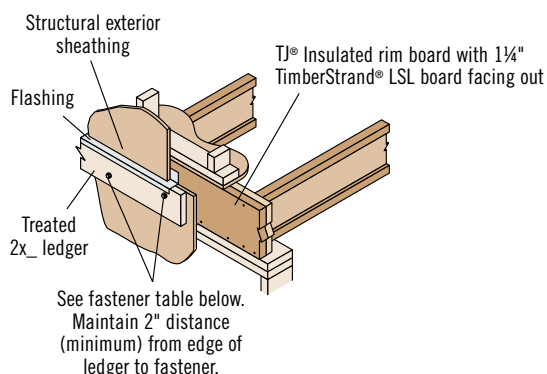
## Cantilever Installation



**IS4** Cover all butt joints along rim board with foil tape.

**IS5** Additional connections may be required to transfer lateral loads from wall above

## Deck Attachment



Fastener	Allowable Load <sup>(1)</sup> (lbs)
	1 1/4" TimberStrand® LSL Rim Board
3/8" lag bolt	400
1/2" lag bolt	475

(1) Allowable load determined in accordance with AC 124.

- Corrosion-resistant fasteners required for wet-service applications.

**IS6**

## General Notes for TJ® Insulated Rim Board

- TJ® Insulated rim board must be installed with the TimberStrand® LSL on the outside.
- When installing TJ® Insulated rim board, the rim board to TJ® joist nails must be 16d (0.135" x 3 1/2").
- TJ® Insulated rim board installed in a standard floor assembly has a thermal performance of R10 or U-0.098. Thermal performance is based on all components.
- Cover all butt joints along rim board with foil tape.
- 1 1/4" TimberStrand® LSL rim board is recognized by ICC-ES ESR 1387 as providing the lateral load transfer capacity equivalent to 2" nominal Douglas fir-larch or southern pine in horizontal diaphragms.
- Size and install TJ® Insulated rim board using information and details in the Trus Joist® rim board specifier's guide (Reorder TJ-8000), the details shown here, and any project plans.
- See page 3 for rigid foam properties and dew point analysis.

*TJ® Insulated products are intended for dry-use applications*

## Minimum Fastening Requirements<sup>(1)</sup> for TJ® Insulated Rim Board

Specification	Fastener Size	Fastener Quantity /Spacing
Plate Nail	16d (0.135" x 3 1/2")	16" on-center
Floor Panel Nail	8d (0.131" x 2 1/2")	6" on-center
TJI® Joist to Plate Nail	8d (0.113" x 2 1/2")	2, one on each side of the joist web
Rim Board to TJI® Joist Nail <sup>(2)</sup>	16d (0.135" x 3 1/2")	2, one into each flange
Toe Nail	10d (0.131" x 3")	6" on-center

(1) Additional nailing may be required. Refer to Javelin® plans or other job specifications, if provided, or the Trus Joist® rim board guide (Reorder TJ-8000), as required. See footnote 2.

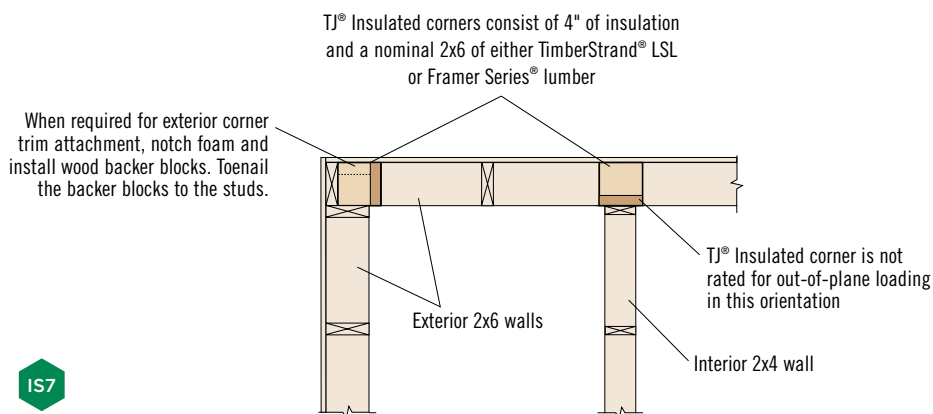
(2) Always use 16d (0.135" x 3 1/2") nails for attaching TJ® Insulated rim board to joist flanges.

*TJ® Insulated rim board must be installed with the TimberStrand® LSL on the outside*

## R-30\* TJ® INSULATED CORNERS

TJ® Insulated corners may be designed using standard wall framing design procedures for studs. Suggested TJ® Insulated corner connection details are shown below. For further stud design information, see the *Trus Joist® U.S. Wall Specifier's Guide* (Reorder TJ-9003) for TJ® Insulated corners constructed using TimberStrand® LSL. For TJ® Insulated corners constructed using Framers Series® lumber, see the *Framer Series® Lumber Specifier's Guide* (Reorder LB-4020). TJ® Insulated corners alone are not substitutes for columns.

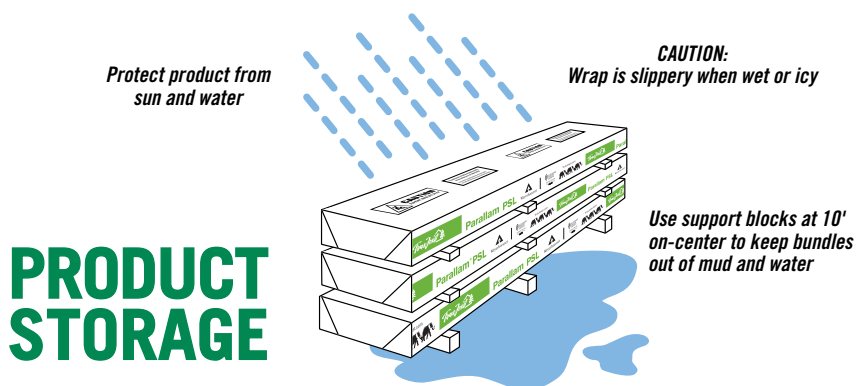
### TJ® Insulated Corner Installation (Top View)



### General Notes for TJ® Insulated Corners

- TJ® Insulated corners installed in a standard wall system have a thermal performance of R30 or U-0.033. Thermal performance is based on all of the wall components.
- TJ® Insulated corners meet Energy Star requirements.
- Size and install TJ® Insulated corners using information and details in Weyerhaeuser literature for 2x6 studs, the details shown here and any project plans. For TJ® Insulated corners constructed using TimberStrand® LSL, see the *Trus Joist® Residential Wall Specifier's Guide* (Reorder TJ-9003) for stud design information. For TJ® Insulated corners constructed using Framers Series® lumber, see Weyerhaeuser's *Framer Series® Lumber Specifier's Guide* (Reorder LB-4020).
- See page 3 for rigid foam properties and dew point analysis.

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# WE CAN HELP YOU BUILD SMARTER

You want to build solid and durable structures—we want to help. Weyerhaeuser provides high-quality building products and unparalleled technical and field assistance to support you and your project from start to finish.

**Floors and Roofs:** Start with the best framing components in the industry: our Trus Joist® TJI® joists; TimberStrand® LSL rim board; and TimberStrand® LSL, Microllam® LVL, and Parallam® PSL headers and beams. Pull them all together with our self-gapping and self-draining Weyerhaeuser® Edge Gold™ floor panels and durable Weyerhaeuser® roof sheathing.

**Walls:** Get the best value out of your framing package—use TimberStrand® LSL studs for tall walls, kitchens, and bathrooms, and our traditional, solid-sawn lumber everywhere else. Cut down installation time by using TimberStrand® LSL headers for doors and windows, and Weyerhaeuser® wall sheathing with its handy two-way nail lines. Use our TJ® Shear Brace for extra support in walls with large openings or in high wind or seismic areas.

**Software Solutions:** Whether you are a design professional or lumber dealer, Weyerhaeuser offers an array of software packages to help you specify individual framing members, create cut lists, manage inventories—even help you design a complete structural frame. Contact your Weyerhaeuser representative to find out how to get the software you need.

**Technical Support:** Need technical help? Weyerhaeuser has one of the largest networks of engineers and sales representatives in the business. Call us for help, and a skilled member from our team of experts will answer your questions and work with you to develop solutions that meet all your structural framing needs.



Visit [www.woodbywy.com/warranty](http://www.woodbywy.com/warranty) for copies of this and other Trus Joist® Engineered Wood Product warranties.


## CONTACT US

**1888.453.8358 • [woodbywy.com/contact](http://woodbywy.com/contact)**

Contact your local representative or dealer at:

### March 2012 • Reorder TJ-9009

This document supersedes all previous versions. If this is more than one year old, contact your dealer or Weyerhaeuser rep.  
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