



Trus Joist MacMillan®

Parallam® PSL Ties and Timbers

The Engineers' choice. Easy-to-source long lengths, superior strength, and treatable to the core, Parallam® PSL ties and timbers from Trus Joist MacMillan are the engineers' choice for designing railroad bridges and as heavy haul or switch ties. Parallam® PSL ties and timbers offer a package of benefits unparalleled by traditional timber, glulam, concrete or steel.

Unparalleled sizes and availability. Parallam® PSL ties and timbers are manufactured in sizes up to 11" x 19" x 66' long, and ready for treatment immediately. Parallam® PSL ties and timbers make it easy to manage just-in-time delivery schedules.

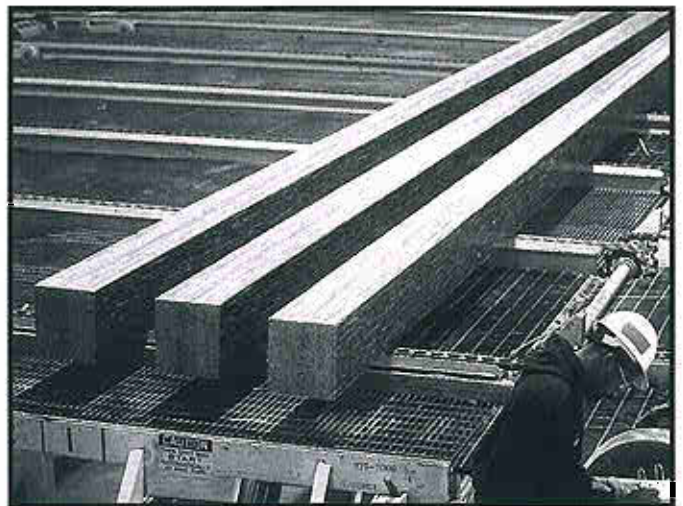
Unparalleled protection against insects and decay.

The internal structure of Parallam® PSL ties and timbers allows uniform penetration of creosote treatment throughout the cross-section, providing maximum protection against decay and insect attack, while significantly reducing treatment cycle time versus many commonly used species.



Parallam® PSL

Parallam® PSL ties and timbers have avenues for preservative treatment to fully penetrate the cross section and protect wood fibers.



Unparalleled strength and stability. The strength and consistency of Parallam® PSL ties and timbers gives engineers the power to design bridges that optimize material and reduce installation time and costs. And, because Parallam® PSL ties and timbers are made to resist twisting, cupping and splitting, they are easy to work with in the field.



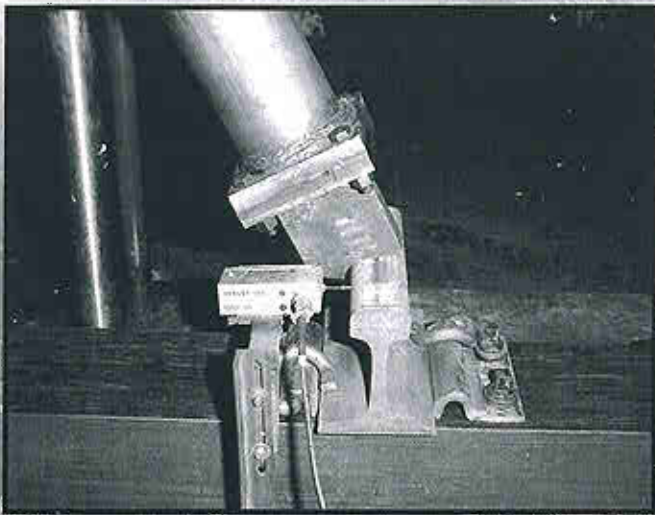
Design Properties Comparison of Timbers Used in Railroad Bridges (Beam Orientation)

	Bending F _b (psi)	Shear F _v (psi)	Stiffness MOE x 10 ⁶ (psi)	Compression Perpendicular F _{cL} (psi)	Density (pcf)
Parallam® PSL	2900	290	2.0	750	41
Southern Pine	1500	110	1.5	375	39
Douglas Fir	1600	85	1.6	625	37
Red Oak	1350	80	1.2	820	48
24F-V4 Glulam	2400	190	1.8	650	37

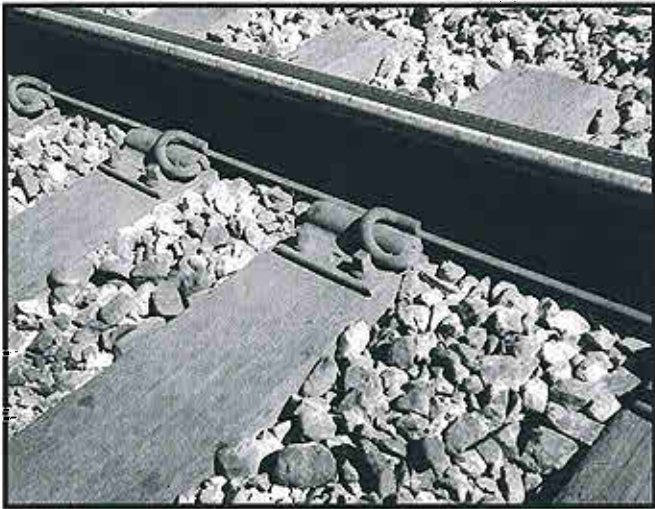
• Select structural grade southern pine, Douglas fir and red oak values taken from AF&PA 1997 National Design Specification® (NDS) for Wood Construction. Parallam® PSL timber values taken from NER-481.

• Design values shown are for normal load duration and dry service conditions. Design values shall be multiplied by the appropriate wet service factors.

• Values shown based on 12" depths.



November, 1997 – Parallam® PSL ties showed excellent resistance to lateral displacement and plate cutting following two million cycles of the Inclined Load Fatigue Test at CANAC International, Inc.



March, 1998 – Tests sponsored in conjunction with the Railway Tie Association and Transportation Technology Center in Pueblo, Colorado show Parallam® PSL ties after enduring approximately 75 MGT on section 7 (7° curve) of FAST High Tonnage Loop (HTL). These ties continue to show excellent wear characteristics after over 125 MGT, at the time of printing.



Call your Trus Joist MacMillan Industrial Representative for more information about Parallam® PSL ties and timbers

1-800-423-5808

www.tjm.com

A history of success. Parallam® PSL has a history of success in exterior structural applications including vehicular bridges, wood sound walls, marine applications and amusement park structures. In addition, Parallam® PSL has been tested for strength and durability as railroad ties by CANAC, and in heavy haul sections at FAST in Pueblo, Colorado. Complete CANAC test results are available upon request.

Standard Dimensions for Parallam® PSL Ties and Timbers

Load applied perpendicular to wide face of strand (plank orientation)

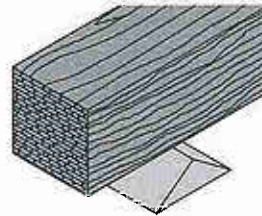
Parallam® PSL Ties

7" x 9"

7⁷/₈" x 7⁷/₈"

7⁷/₈" x 10"

11⁷/₈" x 10"



Load applied parallel to wide face of strand (beam orientation)

Parallam® PSL Timbers

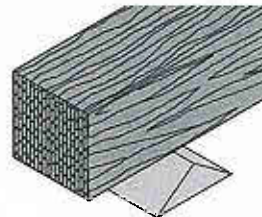
Widths:

3¹/₂", 5¹/₄", 10⁷/₈"

Depths:

6⁷/₈", 7⁷/₈", 9¹/₂", 11⁷/₈",

14", 16", 19"



Sizes listed available in lengths up to 66'

Dimensions listed are actual. For sizes not listed, call your Industrial Area Manager or Trus Joist MacMillan at 1-800-423-5808.

See *NER-481* for design properties.