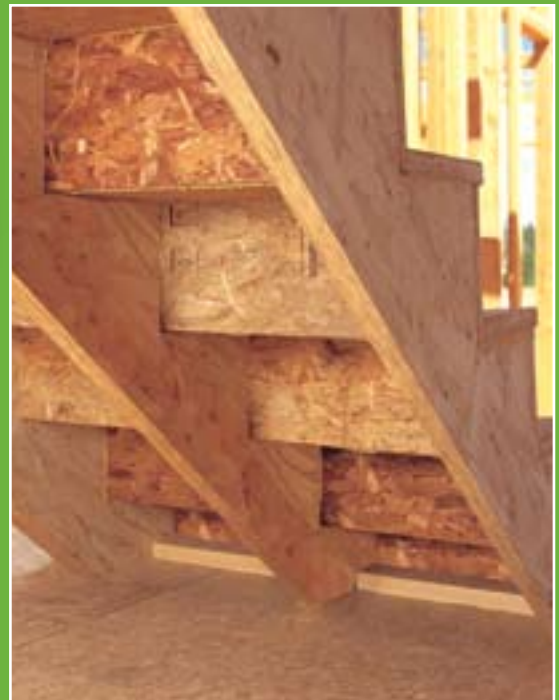




TRUS JOIST® 1¼" TIMBERSTRAND® LSL RIM BOARD STAIR STRINGERS

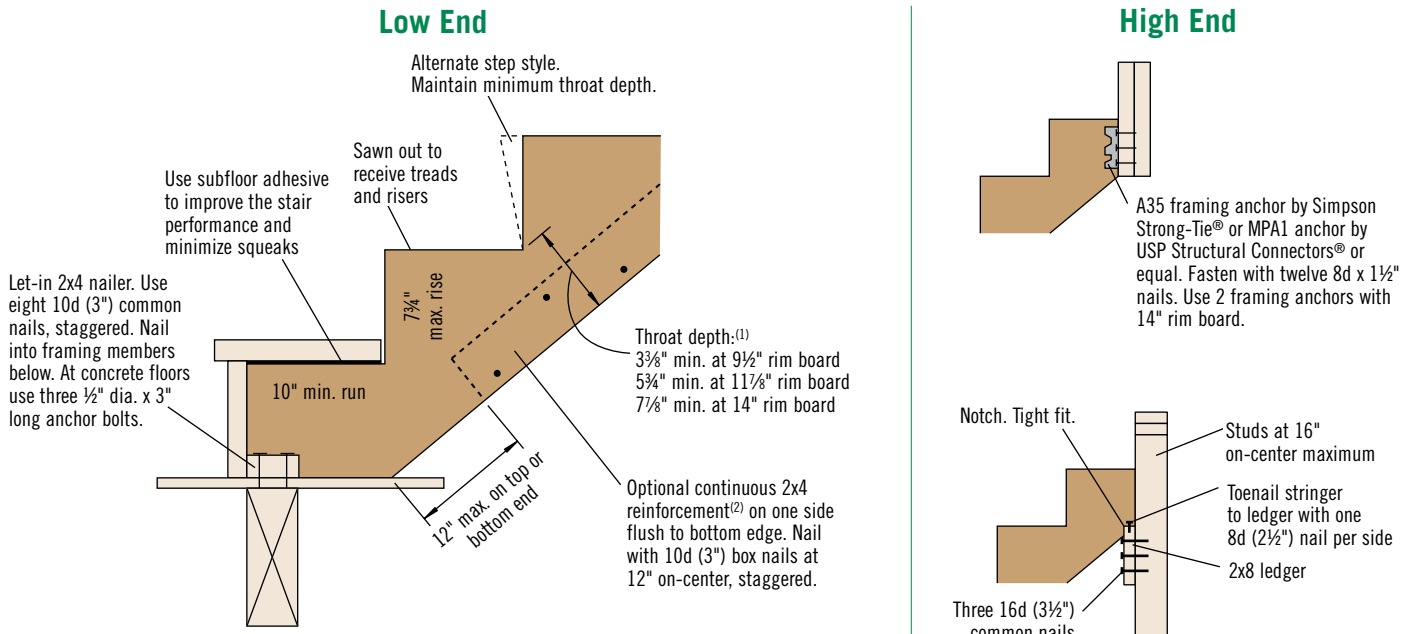
The Ideal Solution for Strong, Stable Stairs

- Straight and Consistent
- Eliminates Adjustments for Shrinkage
- Minimizes Material Waste
- Resists Bowing, Twisting, and Shrinking
- Significantly Reduces Callbacks
- Better Nail Holding Capability
- Includes Product Warranty



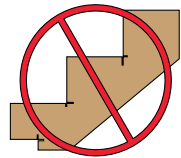
#TJ-8003 DESIGN GUIDE

Suggested Residential Stringer Attachment Details
40 psf Live Load and 12 psf Dead Load



- (1) Minimum throat depths may be reduced by an additional 1/4" for 11 1/8" and 14" material depths if 2x4 reinforcement is used and provided total rises and runs are limited to table values for unreinforced stringers.
- (2) Minimum No. 2 hem-fir, spruce-pine-fir or better grade.

TimberStrand® LSL
stair stringers are intended for dry-use applications.



DO NOT over cut stair stringer

1 1/4" 1.3E TimberStrand® LSL

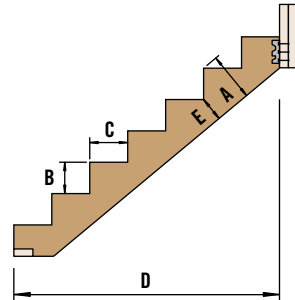
	Allowable Design Stresses (100% Load Duration)	Specified Strengths ⁽¹⁾ (Standard Term)
Shear modulus of elasticity	G = 81,250 psi	81,250 psi
Modulus of elasticity	E = 1.3 x 10 ⁶ psi	1.3 x 10 ⁶ psi
Flexural stress	F _b = 1,700 psi ⁽²⁾	3,140 psi ⁽¹⁾
Compression perpendicular to grain	F _{c⊥} = 680 psi ⁽³⁾	1,240 psi ⁽²⁾
Compression parallel to grain	F _c = 1,400 psi	2,235 psi
Horizontal shear perpendicular	F _v = 400 psi	745 psi

CAUTION
Stair stringer tables and attachment details are intended for use with TimberStrand® LSL only. Consult designer for attachment details for live loads greater than 40 psf.

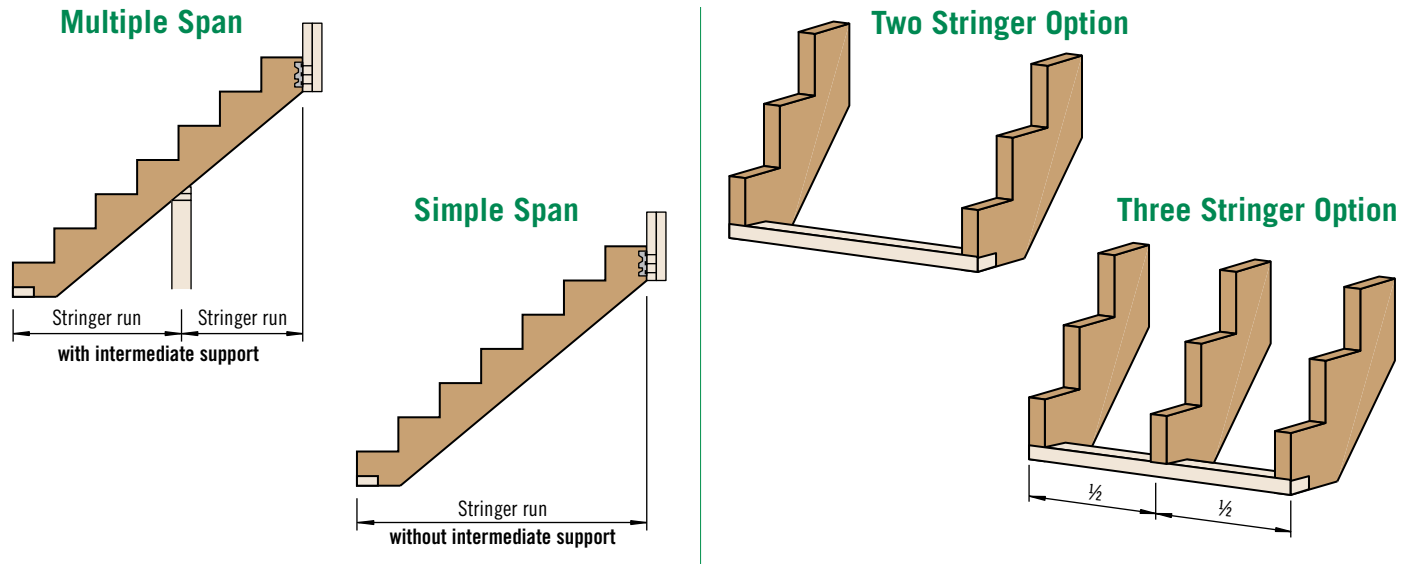
- (1) Specified strengths are based on Limit States Design per CSA 086-01.
- (2) For 12" depth. For others, multiply by $[\frac{12}{d}]^{0.092}$
- (3) F_{c⊥} shall not be increased for duration of load.

Glossary

Term	Definition
(A) Material Depth	Depth of product before steps are cut.
(B) Step Rise	Unit rise of individual step.
(C) Step Run	Unit run of individual run (nosing ignored).
(D) Stringer Run	Horizontal span between stairway supports.
(E) Throat Depth	Net depth of stringer once steps are cut. Measured from step perpendicular to bottom edge of stringer.



MAXIMUM STRINGER RUN FOR 1¼" 1.3E TIMBERSTRAND® LSL



40 psf Live Load and 12 psf Dead Load

Material Depth	36" Tread Width				42" Tread Width		44" Tread Width		48" Tread Width	
	2 Stringers		3 Stringers		3 Stringers		3 Stringers		3 Stringers	
	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement
9½"	5'-0"	5'-10"	5'-10"	7'-6"	5'-10"	6'-8"	5'-10"	6'-8"	5'-0"	6'-8"
11⅞"	8'-4"	10'-0"	10'-0"	10'-10"	9'-2"	10'-10"	9'-2"	10'-0"	9'-2"	10'-0"
14"	11'-8"	11'-8"	13'-4"	13'-4"	12'-6"	12'-6"	12'-6"	12'-6"	11'-8"	11'-8"

100 psf Live Load and 12 psf Dead Load

Material Depth	36" Tread Width				42" Tread Width		44" Tread Width		48" Tread Width	
	2 Stringers		3 Stringers		3 Stringers		3 Stringers		3 Stringers	
	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement	Without Reinforcement	With 2x4 Reinforcement
9½"	3'-4"	4'-2"	4'-2"	5'-0"	4'-2"	5'-0"	4'-2"	5'-0"	3'-4"	4'-2"
11⅞"	6'-8"	6'-8"	7'-6"	8'-4"	6'-8"	7'-6"	6'-8"	7'-6"	6'-8"	7'-6"
14"	8'-4"	8'-4"	10'-0"	10'-0"	9'-2"	9'-2"	9'-2"	9'-2"	9'-2"	9'-2"

General Guidelines for Calculating Step Rise and Run

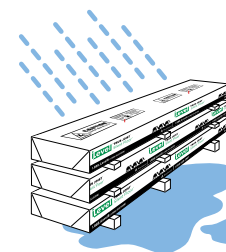
- The rise times the run should equal approximately 75".
- Two times the rise plus one run should equal approximately 25".
- Rise plus run should be 17" to 18".

General Notes

- Maximum stringer runs shown are valid for U.S. codes (working stress) or Canadian codes (Limit States Design). Loads shown are unfactored.
- Deflection criteria of L/360 live load and L/240 total load.
- Stairway assembly is unstable until treads are installed.
- Use subfloor adhesive to improve the stair performance and minimize squeaks.
- Tables based on 7¾" maximum rise and 10" minimum run. Local codes may be more restrictive.
- Maximum rise between floors or landings permitted by code is 12'-0".
- Keep materials dry. Add vapor barrier at bottom of stair stringer if it is in contact with concrete.
- The attachment details shown are suggestions only; alternate details are possible. Responsibility remains with the project designer or engineer of record.
- For assistance with loading conditions and stair configurations not shown, contact your iLevel representative.

Product Storage

Protect products from sun and water



CAUTION:
Wrap is slippery
when wet or icy

Use support blocks at
10' on-center to keep
products out of mud
and water



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At iLevel, our goal is to help you build solid and durable homes by providing high-quality residential building products and unparalleled technical and field support.

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

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 our Structurwood® wall sheathing with its handy two-way nail lines.

Software Solutions: If you are a design professional or lumber dealer, iLevel offers a full array of software packages to help you specify individual framing members, create cut lists, manage inventories—even help you design whole-house framing solutions. Contact your iLevel representative to find out how to get the software you need.

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OUR GUARANTEE

iLevel TRUS JOIST
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PRODUCT WARRANTY

iLevel warrants that its Trus Joist products and iLevel® rim board will be free from manufacturing errors or defects in workmanship and material. In addition, provided the product is correctly installed and used, the company warrants the adequacy of its design for the normal and expected life of the building.

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January 2008
 Reorder TJ-8003

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