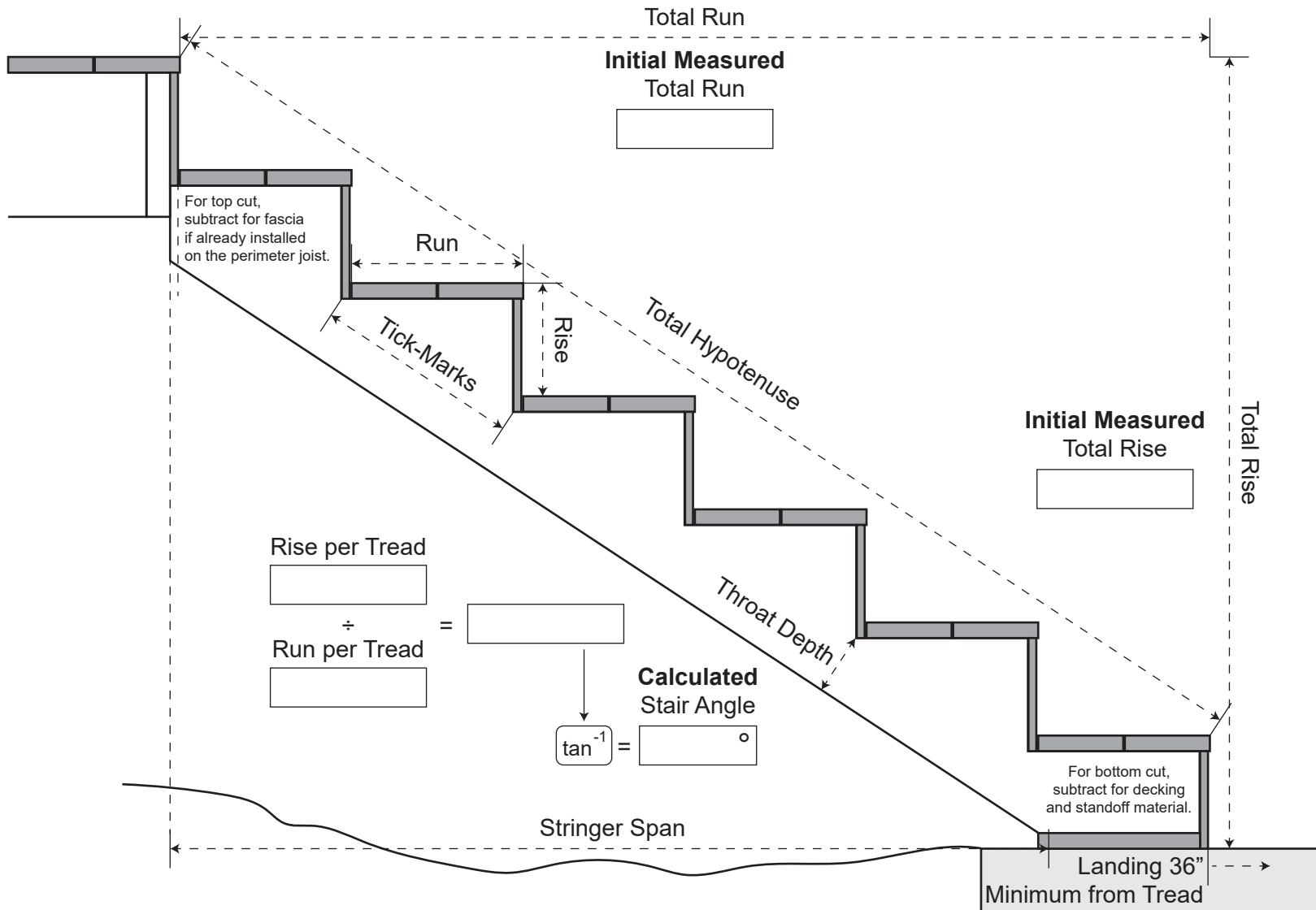


Stair Numbers Sheet

Cut with confidence.



Calculated Individual Rise per Tread

<input type="text"/>	<input type="text"/>	A	×	<input type="text"/>	=	<input type="text"/>
DECIMAL	FRACTION			<u>-1</u>		CHECK

Calculated Individual Run per Tread

<input type="text"/>	<input type="text"/>	B	×	<input type="text"/>	=	<input type="text"/>
DECIMAL	FRACTION					CHECK

$\sqrt{\text{of } (A^2 + B^2)} = \text{Calculated Individual Hypotenuse}$

<input type="text"/>	<input type="text"/>	C	×	<input type="text"/>	=	<input type="text"/>
DECIMAL	FRACTION					

This is your "tick-mark" increment!

+ 4
Minimum Stringer Board Length



YouTube instructions for calculating rise & run

CHECK
Should be close to the
Final Measured Total Hypotenuse

* *

36" Wide Staircase, Spans on Two Stringers

LVL Stringer Material	Throat Depth (in.)	Max Span (in.)	Max # of Treads (11 in.)
(1) 2x10	4 1/4	80	8
(2) 2x10	4 1/4	101	10
(1) 2x12	6 1/4	118	11
(2) 2x12	6 1/4	149	14
(1) 1-3/4x14	9	179	17
(2) 1-3/4x14	9	226	21

48" Wide Staircase, Spans on Two Stringers

LVL Stringer Material	Throat Depth (in.)	Max Span (in.)	Max # of Treads (11 in.)
(1) 2x10	4 1/4	73	7
(2) 2x10	4 1/4	92	9
(1) 2x12	6 1/4	107	10
(2) 2x12	6 1/4	135	13
(1) 1-3/4x14	9	163	15
(2) 1-3/4x14	9	205	19

66" Wide Staircase, Spans on Two Stringers

LVL Stringer Material	Throat Depth (in.)	Max Span (in.)	Max # of Treads (11 in.)
(1) 2x10	4 1/4	65	6
(2) 2x10	4 1/4	82	8
(1) 2x12	6 1/4	96	9
(2) 2x12	6 1/4	121	12
(1) 1-3/4x14	9	146	14
(2) 1-3/4x14	9	183	17

Wide Staircase, Interior Stringers 66" OC

LVL Stringer Material	Throat Depth (in.)	Max Span (in.)	Max # of Treads (11 in.)
(1) 2x10	4 1/4	52	5
(2) 2x10	4 1/4	65	6
(1) 2x12	6 1/4	76	7
(2) 2x12	6 1/4	96	9

See full tables and notes before building.
For doubled stringers (2), use a 2nd LVL stringer
OR add LVL board the same width as the throat depth.

LVL Stringers

These span tables developed using the following:

1. Live load of 40 psf
2. Dead load of 12 psf
3. Live load deflection limited to $l/360$
4. Total load deflection limited to $l/240$
5. The maximum deflection limited to 1"
6. Calculations based on a 7-3/4" riser and a 10" tread
7. Self weight of LVL material calculated assuming LVL weighs 41 PCF
8. Load of railing not considered in calculations
9. Deflection controls in all cases.

Wide / Waterfall Stairs

1. Waterfall staircase with stringers located at 5'-6" o.c.
2. Calculations in this table are for interior stringers of the waterfall staircase
3. Stringers designed with 5'-6" of tributary area.

LVL Treads

1. Live load equal 40 psf
2. Dead load equal 12 psf
3. Total live and 1/2 dead load for 12" wide step placed on toe board for distributed load verification (7'-4" max length, deflect controls)
4. A point load of 300 lb. (live) applied to mid span of toe board with dead load for point load verification (5'-8" max length, deflection controls)
5. 2x4 LVL Nose Board will span 5'-8" + 1-1/2" of LVL material at either side would accommodate a 5'-11" wide staircase.
6. Deflection controls in all cases.



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