

# TREX ELEVATIONS™ SPAN CHART

## TABLE E-50 RESIDENTIAL

### 50 PSF TOTAL LOAD

**Table Instructions:** Enter the table with a joist span and cantilever length, then read the maximum allowable box beam span.

JOIST SPAN LIMITS (FEET / CENTIMETERS)					
12" JOIST SPACING O.C.			16" JOIST SPACING O.C.		
MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	15' - 0"	457.2 cm		MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	13' - 0" 396.2 cm
MAXIMUM CANTILEVER LENGTH	4' - 0"	121.9 cm		MAXIMUM CANTILEVER LENGTH	4' - 0" 121.9 cm

(Single Trex 1 5/8" Joist)

(Single Trex 1 5/8" Joist)

### MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)																
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2	
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		29' - 9" 908.0	23' - 8" 720.7	20' - 8" 629.6	18' - 9" 572.0	17' - 5" 531.0	16' - 5" 499.7	15' - 7" 474.7	14' - 4" 454.0	13' - 10" 436.5	13' - 5" 421.5	12' - 8" 408.3	12' - 4" 396.6	12' - 0" 386.2	11' - 8" 376.8	11' - 4" 368.2	11' - 0" 362.4
	0' - 6" 15.2		23' - 8" 720.7	20' - 8" 629.6	18' - 9" 572.0	17' - 5" 531.0	16' - 5" 499.7	15' - 7" 474.7	14' - 4" 454.0	13' - 10" 436.5	13' - 5" 421.5	12' - 8" 408.3	12' - 4" 396.6	12' - 0" 386.2	11' - 8" 376.8	11' - 4" 368.2	11' - 0" 362.4	10' - 9" 353.1
	1' - 0" 30.5			18' - 9" 572.0	17' - 5" 531.0	16' - 5" 499.7	15' - 7" 474.7	14' - 4" 454.0	13' - 10" 436.5	13' - 5" 421.5	12' - 8" 408.3	12' - 4" 396.6	12' - 0" 386.2	11' - 8" 376.8	11' - 4" 368.2	11' - 0" 362.4	10' - 9" 353.1	10' - 6" 344.6
	1' - 6" 45.7				16' - 5" 499.7	15' - 7" 474.7	14' - 4" 454.0	13' - 10" 436.5	13' - 5" 421.5	12' - 8" 408.3	12' - 4" 396.6	12' - 0" 386.2	11' - 8" 376.8	11' - 4" 368.2	11' - 0" 362.4	10' - 9" 353.1	10' - 6" 344.6	10' - 3" 335.3
	2' - 0" 61.0					14' - 11" 454.0	14' - 4" 436.5	13' - 10" 421.5	13' - 5" 408.3	12' - 8" 396.6	12' - 4" 386.2	12' - 0" 376.8	11' - 8" 368.2	11' - 4" 360.4	11' - 0" 353.1	10' - 9" 346.6	10' - 6" 339.7	10' - 3" 332.8
	2' - 6" 76.2						13' - 10" 421.5	13' - 5" 408.3	13' - 0" 396.6	12' - 8" 386.2	12' - 4" 376.8	12' - 0" 368.2	11' - 8" 360.4	11' - 4" 353.1	11' - 0" 346.6	10' - 9" 339.7	10' - 6" 332.8	10' - 3" 325.9
	3' - 0" 91.4							13' - 0" 396.6	12' - 8" 386.2	12' - 4" 376.8	12' - 0" 368.2	11' - 8" 360.4	11' - 4" 353.1	11' - 0" 346.6	10' - 9" 339.7	10' - 6" 332.8	10' - 3" 325.9	10' - 0" 319.0
	3' - 6" 106.7								12' - 4" 376.8	12' - 0" 368.2	11' - 8" 360.4	11' - 4" 353.1	11' - 0" 346.6	10' - 9" 339.7	10' - 6" 332.8	10' - 3" 325.9	10' - 0" 319.0	9' - 9" 312.1
	4' - 0" 121.9									11' - 10" 360.4	11' - 7" 353.1	11' - 4" 346.6	11' - 0" 339.7	10' - 9" 332.8	10' - 6" 325.9	10' - 3" 319.0	10' - 0" 312.1	9' - 9" 305.2

### MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)																
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2	
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		37' - 6" 1144.1	29' - 9" 908.0	26' - 0" 793.2	23' - 8" 720.7	21' - 11" 669.1	20' - 8" 629.6	19' - 7" 598.1	18' - 9" 572.0	18' - 1" 550.0	17' - 5" 531.0	16' - 11" 514.4	16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2
	0' - 6" 15.2		29' - 9" 908.0	26' - 0" 793.2	23' - 8" 720.7	21' - 11" 669.1	20' - 8" 629.6	19' - 7" 598.1	18' - 9" 572.0	18' - 1" 550.0	17' - 5" 531.0	16' - 11" 514.4	16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9
	1' - 0" 30.5			23' - 8" 720.7	21' - 11" 669.1	20' - 8" 629.6	19' - 7" 598.1	18' - 9" 572.0	18' - 1" 550.0	17' - 5" 531.0	16' - 11" 514.4	16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9	14' - 7" 438.0
	1' - 6" 45.7				20' - 8" 629.6	19' - 7" 598.1	18' - 9" 572.0	18' - 1" 550.0	17' - 5" 531.0	16' - 11" 514.4	16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9	14' - 7" 438.0	14' - 4" 431.1
	2' - 0" 61.0					18' - 9" 572.0	18' - 1" 550.0	17' - 5" 531.0	16' - 11" 514.4	16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9	14' - 7" 438.0	14' - 4" 431.1	14' - 1" 424.2
	2' - 6" 76.2						17' - 5" 531.0	16' - 11" 514.4	16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9	14' - 7" 438.0	14' - 4" 431.1	14' - 1" 424.2	13' - 10" 417.3
	3' - 0" 91.4							16' - 5" 499.7	16' - 0" 486.6	15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9	14' - 7" 438.0	14' - 4" 431.1	14' - 1" 424.2	13' - 10" 417.3	13' - 7" 410.4
	3' - 6" 106.7								15' - 7" 474.7	15' - 3" 463.9	15' - 0" 457.2	14' - 11" 444.9	14' - 7" 438.0	14' - 4" 431.1	14' - 1" 424.2	13' - 10" 417.3	13' - 7" 410.4	13' - 5" 403.5
	4' - 0" 121.9									14' - 11" 454.0	14' - 7" 444.9	14' - 4" 436.5	14' - 1" 428.7	13' - 10" 421.5	13' - 7" 414.7	13' - 5" 408.3	13' - 2" 401.4	13' - 0" 394.5

#### NOTES:

- All loads and load combinations are determined using ASCE 7-05. DL=Dead Load, LL=Live Load, SL=Snow Load. When LL<SL, the total load (TL) is 1.2DL+1.6SL+0.5LL, otherwise TL=1.2DL+1.6LL+0.5SL.
- Loads used to produce the tables above are as follows: DL=10psf, LL=40psf, SL=0psf.
- Deflection limits for joists are determined using IBC-2009 Section R505, Steel Floor Framing. Joists - Live load deflection is limited to L/480, total deflection is limited to L/240, where L is the span length. Box Beams - Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
- Grey areas in tables indicate instances where the joists do not backspan twice the cantilever distance or where the maximum joist span is exceeded.
- Grey areas are established based on 12 in. O.C. joist capacity.
- A partial list of section properties for each member is provided in the Trex Elevations Deck Framing / Inspection Details Table.
- Joist and box beam capacity are determined with AISI-S100-07 (LRFD).
- Joist yield stress is assumed as 33ksi.
- Box beam yield stress is assumed as 50ksi.
- If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
- If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 10 should be multiplied by 0.60 for a "dropped" box beam and 0.70 for a "flush" box beam.
- This span chart should not be used for decks located in a hurricane zone (minimum load of 125 psf should be considered in hurricane zones).

# TREX ELEVATIONS™ SPAN CHART

## TABLE E-75 RESIDENTIAL

### 75 PSF TOTAL LOAD

**Table Instructions:** Enter the table with a joist span and cantilever length, then read the maximum allowable box beam span.

JOIST SPAN LIMITS (FEET / CENTIMETERS)					
12" JOIST SPACING O.C.			16" JOIST SPACING O.C.		
MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	14' - 0"	426.7 cm		MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	12' - 0" 365.8 cm
MAXIMUM CANTILEVER LENGTH	4' - 0"	121.9 cm		MAXIMUM CANTILEVER LENGTH	4' - 0" 121.9 cm

(Single Trex 1 5/8" Joist)

(Single Trex 1 5/8" Joist)

### MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		27' - 8" 843.0	21' - 11" 669.1	19' - 2" 584.5	17' - 5" 531.0	16' - 2" 493.0	15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8
	0' - 6" 15.2		21' - 11" 669.1	19' - 2" 584.5	17' - 5" 531.0	16' - 2" 493.0	15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5
	1' - 0" 30.5			17' - 5" 531.0	16' - 2" 493.0	15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5	10' - 6" 327.8
	1' - 6" 45.7				15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5	10' - 6" 327.8	10' - 3" 319.3
	2' - 0" 61.0					13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5	10' - 6" 327.8	10' - 3" 319.3	10' - 0" 310.8
	2' - 6" 76.2						12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5	10' - 6" 327.8	10' - 3" 319.3	10' - 0" 310.8	9' - 6" 295.6
	3' - 0" 91.4							12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5	10' - 6" 327.8	10' - 3" 319.3	9' - 11" 288.8
	3' - 6" 106.7								11' - 9" 358.5	11' - 6" 349.8	11' - 3" 341.8	11' - 0" 334.5	10' - 6" 327.8	10' - 3" 319.3	10' - 0" 310.8	9' - 6" 295.6	9' - 3" 288.8
	4' - 0" 121.9									11' - 0" 334.5	10' - 9" 327.8	10' - 6" 319.3	10' - 3" 310.8	10' - 0" 302.9	9' - 11" 295.6	9' - 8" 288.8	9' - 6" 288.8

### MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		34' - 10" 1062.1	27' - 8" 843.0	24' - 2" 736.4	21' - 11" 669.1	20' - 5" 621.1	19' - 2" 584.5	18' - 3" 555.2	17' - 5" 531.0	16' - 9" 510.6	16' - 2" 493.0	15' - 8" 477.5	15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6
	0' - 6" 15.2		27' - 8" 843.0	24' - 2" 736.4	21' - 11" 669.1	20' - 5" 621.1	19' - 2" 584.5	18' - 3" 555.2	17' - 5" 531.0	16' - 9" 510.6	16' - 2" 493.0	15' - 8" 477.5	15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0
	1' - 0" 30.5			21' - 11" 669.1	20' - 5" 621.1	19' - 2" 584.5	18' - 3" 555.2	17' - 5" 531.0	16' - 9" 510.6	16' - 2" 493.0	15' - 8" 477.5	15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0	13' - 7" 405.2
	1' - 6" 45.7				19' - 2" 584.5	18' - 3" 555.2	17' - 5" 531.0	16' - 9" 510.6	16' - 2" 493.0	15' - 8" 477.5	15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0	13' - 7" 405.2	13' - 4" 398.0
	2' - 0" 61.0					17' - 5" 531.0	16' - 9" 510.6	16' - 2" 493.0	15' - 8" 477.5	15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0	13' - 7" 405.2	13' - 4" 398.0	13' - 1" 391.3
	2' - 6" 76.2						16' - 2" 493.0	15' - 8" 477.5	15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0	13' - 7" 405.2	13' - 4" 398.0	13' - 1" 391.3	12' - 10" 385.0
	3' - 0" 91.4							15' - 3" 463.9	14' - 10" 451.7	14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0	13' - 7" 405.2	13' - 4" 398.0	13' - 1" 391.3	12' - 10" 385.0	12' - 5" 379.0
	3' - 6" 106.7								14' - 5" 440.7	14' - 2" 430.6	13' - 10" 413.0	13' - 7" 405.2	13' - 4" 398.0	13' - 1" 391.3	12' - 10" 385.0	12' - 5" 379.0	12' - 2" 379.0
	4' - 0" 121.9									13' - 10" 421.5	13' - 7" 413.0	13' - 4" 405.2	13' - 1" 398.0	12' - 10" 391.3	12' - 8" 385.0	12' - 5" 379.0	12' - 2" 379.0

**NOTES:**

- All loads and load combinations are determined using ASCE 7-05. DL=Dead Load, LL=Live Load, SL=Snow Load. When LL<SL, the total load (TL) is 1.2DL+1.6SL+0.5LL, otherwise TL=1.2DL+1.6LL+0.5SL.
- Loads used to produce the tables above are as follows: DL=10psf, LL=40psf, SL=25psf.
- Deflection limits for joists are determined using IBC-2009 Section R505, Steel Floor Framing. Joists - Live load deflection is limited to L/480, total deflection is limited to L/240, where L is the span length. Box Beams - Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
- Grey areas in tables indicate instances where the joists do not backspan twice the cantilever distance or where the maximum joist span is exceeded.
- Grey areas are established based on 12 in. O.C. joist capacity.
- A partial list of section properties for each member is provided in the Trex Elevations Deck Framing / Inspection Details Table.
- Joist and box beam capacity are determined with AISI-S100-07 (LRFD).
- Joist yield stress is assumed as 33ksi.
- Box beam yield stress is assumed as 50ksi.
- If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
- If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 10 should be multiplied by 0.60 for a "dropped" box beam and 0.70 for a "flush" box beam.
- This span chart should not be used for decks located in a hurricane zone (minimum load of 125 psf should be considered in hurricane zones).

# TREX ELEVATIONS™ SPAN CHART

## TABLE E-100 RESIDENTIAL

**100 PSF TOTAL LOAD**

**Table Instructions:** Enter the table with a joist span and cantilever length, then read the maximum allowable box beam span.

JOIST SPAN LIMITS (FEET / CENTIMETERS)					
12" JOIST SPACING O.C.			16" JOIST SPACING O.C.		
MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	12' - 0"	365.8 cm	MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	11' - 0"	335.3 cm
MAXIMUM CANTILEVER LENGTH	4' - 0"	121.9 cm	MAXIMUM CANTILEVER LENGTH	3' - 0"	91.4 cm

(Single Trex 1 5/8" Joist)

(Single Trex 1 5/8" Joist)

### MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS)

CANTILEVER LENGTH (FEET/CENTIMETER)		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		25' - 2" 765.9	19' - 11" 607.9	17' - 5" 531.0	15' - 10" 482.5	14' - 8" 447.9	13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	12' - 1" 368.2	11' - 8" 355.5	11' - 4" 344.4	11' - 0" 334.5			
	0' - 6" 15.2		19' - 11" 607.9	17' - 5" 531.0	15' - 10" 482.5	14' - 8" 447.9	13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	12' - 1" 368.2	11' - 8" 355.5	11' - 4" 344.4	11' - 0" 334.5	11' - 4" 344.4	11' - 0" 334.5	10' - 8" 325.7	10' - 8" 325.7
	1' - 0" 30.5			15' - 10" 482.5	14' - 8" 447.9	13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	12' - 1" 368.2	11' - 8" 355.5	11' - 4" 344.4	11' - 0" 334.5	10' - 8" 325.7	10' - 8" 325.7	10' - 5" 317.8	10' - 5" 317.8	10' - 2" 310.5
	1' - 6" 45.7				13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	12' - 1" 368.2	11' - 8" 355.5	11' - 4" 344.4	11' - 0" 334.5	10' - 8" 325.7	10' - 5" 317.8	10' - 5" 317.8	10' - 2" 310.5	10' - 2" 310.5	9' - 11" 301.1
	2' - 0" 61.0					12' - 7" 382.9	12' - 1" 368.2	11' - 8" 355.5	11' - 4" 344.4	11' - 0" 334.5	10' - 8" 325.7	10' - 5" 317.8	10' - 5" 317.8	10' - 2" 310.5	10' - 2" 310.5	9' - 11" 301.1	9' - 11" 292.1
	2' - 6" 76.2						11' - 8" 355.5	11' - 4" 344.4	11' - 0" 334.5	10' - 8" 325.7	10' - 5" 317.8	10' - 5" 317.8	10' - 2" 310.5	10' - 2" 310.5	9' - 11" 301.1	9' - 11" 292.1	9' - 7" 283.9
	3' - 0" 91.4							11' - 0" 334.5	10' - 8" 325.7	10' - 5" 317.8	10' - 5" 317.8	10' - 2" 310.5	10' - 2" 310.5	9' - 11" 301.1	9' - 11" 292.1	9' - 7" 283.9	9' - 4" 276.3
	3' - 6" 106.7								10' - 5" 317.8	10' - 2" 310.5	10' - 2" 310.5	9' - 11" 301.1	9' - 11" 292.1	9' - 7" 283.9	9' - 7" 283.9	9' - 4" 276.3	9' - 1" 269.3
	4' - 0" 121.9									9' - 11" 301.1	9' - 7" 283.9	9' - 7" 283.9	9' - 4" 276.3	9' - 4" 276.3	8' - 10" 269.3	8' - 10" 269.3	8' - 7" 269.3

### MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS)

CANTILEVER LENGTH (FEET/CENTIMETER)		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		31' - 8" 964.9	25' - 2" 765.9	21' - 11" 669.1	19' - 11" 607.9	18' - 6" 564.3	17' - 5" 531.0	16' - 7" 504.4	16' - 3" 482.5	15' - 10" 463.9	15' - 3" 447.9	14' - 8" 433.9	14' - 3" 421.5	13' - 10" 410.4	13' - 10" 410.4	13' - 2" 391.3
	0' - 6" 15.2		25' - 2" 765.9	21' - 11" 669.1	19' - 11" 607.9	18' - 6" 564.3	17' - 5" 531.0	16' - 7" 504.4	16' - 3" 482.5	15' - 10" 463.9	15' - 3" 447.9	14' - 8" 433.9	14' - 3" 421.5	13' - 10" 410.4	13' - 10" 410.4	13' - 6" 400.4	13' - 2" 391.3
	1' - 0" 30.5			19' - 11" 607.9	18' - 6" 564.3	17' - 5" 531.0	16' - 7" 504.4	16' - 3" 482.5	15' - 10" 463.9	15' - 3" 447.9	14' - 8" 433.9	14' - 3" 421.5	13' - 10" 410.4	13' - 6" 400.4	13' - 6" 400.4	13' - 2" 391.3	12' - 7" 382.9
	1' - 6" 45.7				17' - 5" 531.0	16' - 7" 504.4	16' - 3" 482.5	15' - 10" 463.9	15' - 3" 447.9	14' - 8" 433.9	14' - 3" 421.5	13' - 10" 410.4	13' - 6" 400.4	13' - 6" 400.4	13' - 2" 391.3	12' - 7" 382.9	12' - 7" 382.9
	2' - 0" 61.0					15' - 10" 482.5	15' - 3" 463.9	14' - 8" 447.9	14' - 3" 433.9	13' - 10" 421.5	13' - 6" 410.4	13' - 6" 410.4	13' - 2" 400.4	13' - 2" 400.4	12' - 10" 391.3	12' - 7" 382.9	12' - 4" 375.3
	2' - 6" 76.2						14' - 8" 447.9	14' - 3" 433.9	13' - 10" 421.5	13' - 6" 410.4	13' - 6" 410.4	13' - 2" 400.4	13' - 2" 400.4	12' - 10" 391.3	12' - 7" 382.9	12' - 7" 382.9	12' - 4" 375.3
	3' - 0" 91.4							13' - 10" 421.5	13' - 6" 410.4	13' - 6" 410.4	13' - 2" 400.4	12' - 10" 391.3	12' - 7" 382.9	12' - 7" 382.9	12' - 4" 375.3	12' - 1" 368.2	12' - 1" 368.2
	3' - 6" 106.7								13' - 2" 400.4	12' - 10" 391.3	12' - 7" 382.9	12' - 7" 382.9	12' - 4" 375.3	12' - 4" 375.3	12' - 1" 368.2	11' - 10" 361.6	11' - 10" 361.6
	4' - 0" 121.9									12' - 7" 382.9	12' - 4" 375.3	12' - 4" 375.3	12' - 1" 368.2	12' - 1" 368.2	11' - 10" 361.6	11' - 8" 355.5	11' - 8" 355.5

**NOTES:**

- All loads and load combinations are determined using ASCE 7-05. DL=Dead Load, LL=Live Load, SL=Snow Load. When LL<SL, the total load (TL) is 1.2DL+1.6SL+0.5LL, otherwise TL=1.2DL+1.6LL+0.5SL.
- Loads used to produce the tables above are as follows: DL=10psf, LL=40psf, SL=50psf.
- Deflection limits for joists are determined using IBC-2009 Section R505, Steel Floor Framing. Joists - Live load deflection is limited to L/480, total deflection is limited to L/240, where L is the span length. Box Beams - Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
- Grey areas in tables indicate instances where the joists do not backspan twice the cantilever distance or where the maximum joist span is exceeded.
- Grey areas are established based on 12 in. O.C. joist capacity.
- A partial list of section properties for each member is provided in the Trex Elevations Deck Framing / Inspection Details Table.
- Joist and box beam capacity are determined with AISI-S100-07 (LRFD).
- Joist yield stress is assumed as 33ksi.
- Box beam yield stress is assumed as 50ksi.
- If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
- If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 10 should be multiplied by 0.60 for a "dropped" box beam and 0.70 for a "flush" box beam.
- This span chart should not be used for decks located in a hurricane zone (minimum load of 125 psf should be considered in hurricane zones).

# TREX ELEVATIONS™ SPAN CHART

## TABLE E-125 RESIDENTIAL

### 125 PSF TOTAL LOAD

**Table Instructions:** Enter the table with a joist span and cantilever length, then read the maximum allowable box beam span.

JOIST SPAN LIMITS (FEET / CENTIMETERS)					
12" JOIST SPACING O.C.			16" JOIST SPACING O.C.		
MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	10' - 0"	304.8 cm		MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	9' - 0" 274.3 cm
MAXIMUM CANTILEVER LENGTH	3' - 0"	91.4 cm		MAXIMUM CANTILEVER LENGTH	2' - 0" 61.0 cm

(Single Trex 1 5/8" Joist)

(Single Trex 1 5/8" Joist)

### MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		23' - 4" 711.0	18' - 6" 564.3	16' - 2" 493.0	14' - 8" 447.9	13' - 8" 415.8	12' - 10" 391.3	12' - 2" 371.7	11' - 8" 355.5	11' - 3" 341.8	10' - 9" 326.9					
	0' - 6" 15.2		18' - 6" 564.3	16' - 2" 493.0	14' - 8" 447.9	13' - 8" 415.8	12' - 10" 391.3	12' - 2" 371.7	11' - 8" 355.5	11' - 3" 341.8	10' - 9" 326.9	10' - 3" 311.7					
	1' - 0" 30.5			14' - 8" 447.9	13' - 8" 415.8	12' - 10" 391.3	12' - 2" 371.7	11' - 8" 355.5	11' - 3" 341.8	10' - 9" 326.9	10' - 3" 311.7	9' - 9" 298.4					
	1' - 6" 45.7				12' - 10" 391.3	12' - 2" 371.7	11' - 8" 355.5	11' - 3" 341.8	10' - 9" 326.9	10' - 3" 311.7	9' - 9" 298.4	9' - 5" 286.7					
	2' - 0" 61.0					11' - 8" 355.5	11' - 3" 341.8	10' - 9" 326.9	10' - 3" 311.7	9' - 9" 298.4	9' - 5" 286.7	9' - 1" 276.3	9' - 1" 266.9				
	2' - 6" 76.2						10' - 9" 326.9	10' - 3" 311.7	9' - 9" 298.4	9' - 5" 286.7	9' - 1" 276.3	8' - 9" 266.9	8' - 9" 258.4				
	3' - 0" 91.4							10' - 9" 326.9	9' - 9" 298.4	9' - 5" 286.7	9' - 1" 276.3	8' - 9" 266.9	8' - 6" 258.4				
	3' - 6" 106.7								9' - 9" 298.4	9' - 5" 286.7	9' - 1" 276.3	8' - 9" 266.9	8' - 6" 258.4				
	4' - 0" 121.9									9' - 9" 298.4	9' - 5" 286.7	9' - 1" 276.3	8' - 9" 266.9	8' - 6" 258.4			

### MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		29' - 5" 895.8	23' - 4" 711.0	20' - 5" 621.1	18' - 6" 564.3	17' - 2" 523.8	16' - 2" 493.0	15' - 4" 468.3	14' - 8" 447.9	14' - 2" 430.6	13' - 8" 415.8	13' - 8" 402.8				
	0' - 6" 15.2		23' - 4" 711.0	20' - 5" 621.1	18' - 6" 564.3	17' - 2" 523.8	16' - 2" 493.0	15' - 4" 468.3	14' - 8" 447.9	14' - 2" 430.6	13' - 8" 415.8	13' - 3" 402.8	13' - 3" 391.3				
	1' - 0" 30.5			18' - 6" 564.3	17' - 2" 523.8	16' - 2" 493.0	15' - 4" 468.3	14' - 8" 447.9	14' - 2" 430.6	13' - 8" 415.8	13' - 3" 402.8	12' - 10" 381.0	12' - 10" 368.3				
	1' - 6" 45.7				16' - 2" 493.0	15' - 4" 468.3	14' - 8" 447.9	14' - 2" 430.6	13' - 8" 415.8	13' - 3" 402.8	12' - 10" 381.0	12' - 6" 371.7	12' - 6" 358.0				
	2' - 0" 61.0					14' - 8" 447.9	14' - 2" 430.6	13' - 8" 415.8	13' - 3" 402.8	12' - 10" 381.0	12' - 6" 371.7	12' - 2" 363.2	12' - 2" 350.5				
	2' - 6" 76.2						13' - 8" 415.8	13' - 3" 402.8	12' - 10" 381.0	12' - 6" 371.7	12' - 2" 363.2	11' - 11" 350.5	11' - 11" 337.8				
	3' - 0" 91.4							12' - 10" 381.0	12' - 6" 371.7	12' - 2" 363.2	11' - 11" 350.5	11' - 8" 337.8	11' - 8" 325.1				
	3' - 6" 106.7								12' - 10" 381.0	12' - 6" 371.7	12' - 2" 363.2	11' - 11" 350.5	11' - 8" 337.8	11' - 8" 325.1			
	4' - 0" 121.9									12' - 10" 381.0	12' - 6" 371.7	12' - 2" 363.2	11' - 11" 350.5	11' - 8" 337.8	11' - 8" 325.1		

**NOTES:**

- All loads and load combinations are determined using ASCE 7-05. DL=Dead Load, LL=Live Load, SL=Snow Load. When LL<SL, the total load (TL) is 1.2DL+1.6SL+0.5LL, otherwise TL=1.2DL+1.6LL+0.5SL.
- Loads used to produce the tables above are as follows: DL=10psf, LL=40psf, SL=75psf.
- Deflection limits for joists are determined using IBC-2009 Section R505, Steel Floor Framing. Joists - Live load deflection is limited to L/480, total deflection is limited to L/240, where L is the span length. Box Beams - Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
- Grey areas in tables indicate instances where the joists do not backspan twice the cantilever distance or where the maximum joist span is exceeded.
- Grey areas are established based on 12 in. O.C. joist capacity.
- A partial list of section properties for each member is provided in the Trex Elevations Deck Framing / Inspection Details Table.
- Joist and box beam capacity are determined with AISI-S100-07 (LRFD).
- Joist yield stress is assumed as 33ksi.
- Box beam yield stress is assumed as 50ksi.
- If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
- If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 10 should be multiplied by 0.60 for a "dropped" box beam and 0.70 for a "flush" box beam.

# TREX ELEVATIONS™ SPAN CHART

## TABLE E-150 RESIDENTIAL

**150 PSF TOTAL LOAD**

**Table Instructions:** Enter the table with a joist span and cantilever length, then read the maximum allowable box beam span.

JOIST SPAN LIMITS (FEET / CENTIMETERS)					
12" JOIST SPACING O.C.			16" JOIST SPACING O.C.		
MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	9' - 0"	274.3 cm		MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	8' - 0" 243.8 cm
MAXIMUM CANTILEVER LENGTH	2' - 6"	76.2 cm		MAXIMUM CANTILEVER LENGTH	1' - 6" 45.7 cm

(Single Trex 1 5/8" Joist)

(Single Trex 1 5/8" Joist)

### MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		21' - 11" 669.1	17' - 5" 531.0	15' - 3" 463.9	13' - 10" 421.5	12' - 10" 391.3	12' - 1" 368.2	11' - 5" 347.7	10' - 8" 325.2	10' - 1" 306.6						
	0' - 6" 15.2		17' - 5" 531.0	15' - 3" 463.9	13' - 10" 421.5	12' - 10" 391.3	12' - 1" 368.2	11' - 5" 347.7	10' - 8" 325.2	10' - 1" 306.6	9' - 7" 290.9	9' - 1" 277.3					
	1' - 0" 30.5			13' - 10" 421.5	12' - 10" 391.3	12' - 1" 368.2	11' - 5" 347.7	10' - 8" 325.2	10' - 1" 306.6	9' - 7" 290.9	9' - 1" 277.3	8' - 9" 265.5					
	1' - 6" 45.7				12' - 1" 368.2	11' - 5" 347.7	10' - 8" 325.2	10' - 1" 306.6	9' - 7" 290.9	9' - 1" 277.3	8' - 9" 265.5	8' - 4" 255.1					
	2' - 0" 61.0					10' - 8" 325.2	10' - 1" 306.6	9' - 7" 290.9	9' - 1" 277.3	8' - 9" 265.5	8' - 4" 255.1	8' - 1" 245.8					
	2' - 6" 76.2						9' - 7" 290.9	9' - 1" 277.3	8' - 9" 265.5	8' - 4" 255.1	8' - 1" 245.8						
	3' - 0" 91.4																
	3' - 6" 106.7																
	4' - 0" 121.9																

### MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)															
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0		27' - 8" 843.0	21' - 11" 669.1	19' - 2" 584.5	17' - 5" 531.0	16' - 2" 493.0	15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	13' - 4" 405.2					
	0' - 6" 15.2		21' - 11" 669.1	19' - 2" 584.5	17' - 5" 531.0	16' - 2" 493.0	15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0					
	1' - 0" 30.5			17' - 5" 531.0	16' - 2" 493.0	15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2					
	1' - 6" 45.7				15' - 3" 463.9	14' - 5" 440.7	13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5					
	2' - 0" 61.0					13' - 10" 421.5	13' - 4" 405.2	12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 4" 345.7					
	2' - 6" 76.2						12' - 10" 391.3	12' - 5" 379.0	12' - 1" 368.2	11' - 9" 358.5	11' - 4" 345.7						
	3' - 0" 91.4																
	3' - 6" 106.7																
	4' - 0" 121.9																

**NOTES:**

- All loads and load combinations are determined using ASCE 7-05. DL=Dead Load, LL=Live Load, SL=Snow Load. When LL<SL, the total load (TL) is 1.2DL+1.6SL+0.5LL, otherwise TL=1.2DL+1.6LL+0.5SL.
- Loads used to produce the tables above are as follows: DL=10psf, LL=40psf, SL=100psf.
- Deflection limits for joists are determined using IBC-2009 Section R505, Steel Floor Framing. Joists - Live load deflection is limited to L/480, total deflection is limited to L/240, where L is the span length. Box Beams - Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
- Grey areas in tables indicate instances where the joists do not backspan twice the cantilever distance or where the maximum joist span is exceeded.
- Grey areas are established based on 12 in. O.C. joist capacity.
- A partial list of section properties for each member is provided in the Trex Elevations Deck Framing / Inspection Details Table.
- Joist and box beam capacity are determined with AISI-S100-07 (LRFD).
- Joist yield stress is assumed as 33ksi.
- Box beam yield stress is assumed as 50ksi.
- If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
- If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 10 should be multiplied by 0.60 for a "dropped" box beam and 0.70 for a "flush" box beam.

# TREX ELEVATIONS™ SPAN CHART

## TABLE E-200 RESIDENTIAL

**200 PSF TOTAL LOAD**

**Table Instructions:** Enter the table with a joist span and cantilever length, then read the maximum allowable box beam span.

JOIST SPAN LIMITS (FEET / CENTIMETERS)					
12" JOIST SPACING O.C.			16" JOIST SPACING O.C.		
MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	8' - 0"	243.8 cm		MAXIMUM JOIST SPAN (LEDGER TO BOX BEAM)	7' - 0" 213.4 cm
MAXIMUM CANTILEVER LENGTH	1' - 0"	30.5 cm		MAXIMUM CANTILEVER LENGTH	0' - 6" 15.2 cm

(Single Trex 1 5/8" Joist)

(Single Trex 1 5/8" Joist)

### MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)																	
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2		
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0	19' - 11" 607.9	15' - 10" 482.5	13' - 10" 421.5	12' - 7" 382.9	11' - 4" 345.6	10' - 4" 315.5	9' - 7" 292.1	9' - 0" 273.2										
	0' - 6" 15.2	15' - 10" 482.5	13' - 10" 421.5	12' - 7" 382.9	11' - 4" 345.6	10' - 4" 315.5	9' - 7" 292.1	9' - 0" 273.2	8' - 5" 257.6										
	1' - 0" 30.5		12' - 7" 382.9	11' - 4" 345.6	10' - 4" 315.5	9' - 7" 292.1	9' - 0" 273.2	8' - 5" 257.6	8' - 0" 244.4										
	1' - 6" 45.7																		
	2' - 0" 61.0																		
	2' - 6" 76.2																		
	3' - 0" 91.4																		
	3' - 6" 106.7																		
	4' - 0" 121.9																		

### MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS)

		JOIST SPAN (LEDGER TO BOX BEAM) (FEET / CENTIMETERS)																	
		0' - 0" 0.0	1' - 0" 30.5	2' - 0" 61.0	3' - 0" 91.4	4' - 0" 121.9	5' - 0" 152.4	6' - 0" 182.9	7' - 0" 213.4	8' - 0" 243.8	9' - 0" 274.3	10' - 0" 304.8	11' - 0" 335.3	12' - 0" 365.8	13' - 0" 396.2	14' - 0" 426.7	15' - 0" 457.2		
CANTILEVER LENGTH (FEET/CENTIMETER)	0' - 0" 0.0	25' - 2" 765.9	19' - 11" 607.9	17' - 5" 531.0	15' - 10" 482.5	14' - 8" 447.9	13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	12' - 0" 365.8									
	0' - 6" 15.2	19' - 11" 607.9	17' - 5" 531.0	15' - 10" 482.5	14' - 8" 447.9	13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	11' - 11" 362.2	11' - 3" 343.6									
	1' - 0" 30.5		15' - 10" 482.5	14' - 8" 447.9	13' - 10" 421.5	13' - 2" 400.4	12' - 7" 382.9	12' - 0" 365.8	11' - 11" 362.2	11' - 3" 343.6									
	1' - 6" 45.7																		
	2' - 0" 61.0																		
	2' - 6" 76.2																		
	3' - 0" 91.4																		
	3' - 6" 106.7																		
	4' - 0" 121.9																		

**NOTES:**

- All loads and load combinations are determined using ASCE 7-05. DL=Dead Load, LL=Live Load, SL=Snow Load. When LL<SL, the total load (TL) is 1.2DL+1.6SL+0.5LL, otherwise TL=1.2DL+1.6LL+0.5SL.
- Loads used to produce the tables above are as follows: DL=10psf, LL=40psf, SL=150psf.
- Deflection limits for joists are determined using IBC-2009 Section R505, Steel Floor Framing. Joists - Live load deflection is limited to L/480, total deflection is limited to L/240, where L is the span length. Box Beams - Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
- Grey areas in tables indicate instances where the joists do not backspan twice the cantilever distance or where the maximum joist span is exceeded.
- Grey areas are established based on 12 in. O.C. joist capacity.
- A partial list of section properties for each member is provided in the Trex Elevations Deck Framing / Inspection Details Table.
- Joist and box beam capacity are determined with AISI-S100-07 (LRFD).
- Joist yield stress is assumed as 33ksi.
- Box beam yield stress is assumed as 50ksi.
- If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
- If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 10 should be multiplied by 0.60 for a "dropped" box beam and 0.70 for a "flush" box beam.