

Residential Span Tables

Using Douglas Fir Larch # 2 or Better

Floor Joists: 2022 CRC Table R502.3.1(2) Live Load = 40 PSF Live Load Deflection Limit = L/360

SIZE	SPACING	Span w/No Ceiling 10 PSF Dead Load	Span w/Finished Ceiling 20 PSF Dead Load
2x6	12" OC	10' - 9"	10' - 8"
	16" OC	9' - 9"	9' - 3"
	24" OC	8' - 3"	7' - 6"
2x8	12" OC	14' - 2"	13' - 6"
	16" OC	12' - 9"	11' - 8"
	24" OC	10' - 5"	9' - 6"
2x10	12" OC	18' - 0"	16' - 5"
	16" OC	15' - 7"	14' - 3"
	24" OC	12' - 9"	11' - 8"
2x12	12" OC	20' - 11"	19' - 1"
	16" OC	18' - 1"	16' - 6"
	24" OC	14' - 9"	13' - 6"

Ceiling Joists: Table R802.5.1(1) Dead Load = 5 PSF Live Load = 10 PSF Live Load Deflection Limit = L/240

SPACING	2x4	2x6	2x8
12" OC	12' - 5"	19' - 6"	25' - 8"
16" OC	11' - 3"	17' - 8"	23' - 4"
24" OC	9' - 10"	15' - 0"	19' - 1"

Rafters: Table R802.4.1(2) (Provide Engineering for Tile) Live Load = 20 PSF Live Load Deflection Limit = L/240

SIZE	SPACING	10 PSF Dead Load	20 PSF Dead Load
2x4	12" OC	9' - 10"	9' - 10"
	16" OC	8' - 11"	8' - 7"
	24" OC	7' - 10"	7' - 10"
2x6	12" OC	15' - 6"	14' - 7"
	16" OC	14' - 1"	12' - 7"
	24" OC	11' - 11"	10' - 4"
2x8	12" OC	20' - 5"	18' - 5"
	16" OC	18' - 5"	16' - 0"
	24" OC	15' - 1"	13' - 0"
2x10	12" OC	26' - 0"	22' - 6"
	16" OC	22' - 6"	19' - 6"
	24" OC	18' - 5"	15' - 10"
2x12	12" OC	N/A	26' - 0"
	16" OC	26' - 0"	22' - 7"
	24" OC	21' - 4"	18' - 6"

Purlins: In Accordance with Section R802.4.5 of the 2022 CRC

PURLIN SIZE	Not smaller than the supported rafters
PURLIN BRACE SIZE AND SPACING	2X4 minimum and 4' o.c.
MAXIMUM PURLIN SPAN	8' - 0"