

MAXIMUM ALLOWABLE SPANS - 2001 CALIFORNIA BUILDING CODE

FLOOR JOISTS -- 40# LL + 10# DL BASED ON TABLE 23-IV-J-1

	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
2x6 #2 DF	10' 9"	9' 9"	9' 0"	7' 11"
2x6 #1 DF	10' 11"	9' 11"	9' 4"	8' 6"
2x6 SS DF	11' 4"	10' 4"	9' 8"	9' 0"
2x8 #2 DF	14' 2"	12' 7"	11' 3"	10' 2"
2x8 #1 DF	14' 5"	13' 1"	12' 1"	11' 0"
2x8 SS DF	15' 0"	13' 7"	12' 10"	11' 11"
2x10 #2 DF	17' 8"	15' 3"	14' 0"	12' 3"
2x10 #1 DF	18' 5"	16' 5"	14' 9"	13' 4"
2x10 SS DF	19' 1"	17' 4"	16' 4"	15' 2"
2x12 #2 DF	20' 6"	17' 7"	16' 0"	14' 4"
2x12 #1 DF	21' 11"	19' 1"	17' 0"	15' 4"
2x12 SS DF	23' 3"	21' 1"	19' 10"	18' 5"

CEILING JOISTS -- 10# LL + 5# DL BASED ON TABLE 23-IV-J-3

	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
2x4 Standard DF	N/A	N/A	N/A	N/A
2x4 Stud DF	10' 7"	9' 4"	8' 5"	N/A
2x4 #2 DF	12' 5"	11' 3"	10' 7"	9' 10"
2x4 #1 DF	12' 8"	11' 6"	10' 10"	10' 0"
2x4 SS DF	13' 2"	11' 11"	11' 3"	10' 5"
2x6 #2 DF	19' 6"	17' 8"	16' 4"	14' 9"
2x6 #1 DF	19' 11"	18' 1"	17' 0"	15' 9"
2x6 SS DF	20' 8"	18' 9"	17' 8"	16' 4"
2x8 #2 DF	25' 8"	23' 4"	21' 6"	19' 6"
2x8 #1 DF	26' 0"	23' 10"	22' 5"	19' 11"
2x8 SS DF	26' 0"	24' 8"	23' 3"	21' 7"
2x10 #2 DF	26' 0"	26' 0"	26' 0"	26' 0"

RAFTERS -- 20# LL + 10# DL
BASED ON TABLE 23-IV-R-1

	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
2x4 Standard DF	6' 11"	6' 0"	5' 5"	4' 11"
2x4 Stud DF	7' 10"	6' 9"	6' 2"	5' 6"
2x4 #2 DF	10' 9"	9' 4"	8' 6"	7' 7"
2x4 #1 DF	10' 9"	9' 10"	9' 0"	8' 0"
2x4 SS DF	11' 4"	10' 4"	9' 8"	9' 0"
2x6 #2 DF	15' 11"	13' 9"	12' 7"	11' 3"
2x6 #1 DF	16' 11"	14' 8"	13' 4"	11' 11"
2x6 SS DF	17' 10"	16' 3"	15' 2"	14' 2"
2x8 #2 DF	19' 6"	16' 10"	15' 5"	13' 9"
2x8 #1 DF	20' 11"	18' 1"	16' 7"	14' 10"
2x8 SS DF	23' 7"	21' 5"	20' 0"	18' 4"
2x10 #2 DF	23' 11"	20' 8"	18' 11"	16' 11"
2x10 #1 DF	25' 10"	22' 4"	20' 5"	18' 3"
2x10 SS DF	26' 0"	26' 0"	25' 0"	22' 4"

RAFTERS -- 20# LL + 15# DL
BASED ON TABLE 23-IV-R-3

	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
2x4 Standard DF	6' 5"	5' 6"	5' 1"	4' 6"
2x4 Stud DF	7' 3"	6' 3"	5' 9"	5' 1"
2x4 #2 DF	9' 11"	8' 7"	7' 10"	7' 0"
2x4 #1 DF	10' 6"	9' 1"	8' 4"	7' 5"
2x4 SS DF	11' 4"	10' 3"	9' 9"	9' 0"
2x6 #2 DF	14' 8"	12' 9"	11' 7"	10' 5"
2x6 #1 DF	15' 8"	13' 7"	12' 4"	11' 1"
2x6 SS DF	17' 10"	16' 1"	14' 8"	13' 2"
2x8 #2 DF	18' 0"	15' 7"	14' 3"	12' 9"
2x8 #1 DF	19' 5"	16' 9"	15' 4"	13' 8"
2x8 SS DF	23' 6"	20' 9"	19' 0"	17' 0"
2x10 #2 DF	22' 1"	19' 2"	17' 6"	15' 8"
2x10 #1 DF	23' 11"	20' 8"	18' 11"	16' 11"
2x10 SS DF	26' 0"	25' 4"	23' 1"	20' 8"

RAFTERS -- 30# LL + 10# DL
BASED ON TABLE 23-IV-R-2

	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
2x4 Standard DF	6' 0"	5' 2"	4' 9"	4' 3"
2x4 Stud DF	6' 9"	5' 10"	5' 4"	4' 10"
2x4 #2 DF	9' 4"	8' 1"	7' 4"	6' 7"
2x4 #1 DF	9' 7"	8' 6"	7' 9"	7' 0"
2x4 SS DF	9' 10"	9' 0"	8' 7"	7' 10"
2x6 #2 DF	13' 9"	11' 11"	10' 10"	9' 9"
2x6 #1 DF	14' 8"	12' 8"	11' 7"	10' 4"
2x6 SS DF	15' 1"	14' 1"	13' 6"	12' 4"
2x8 #2 DF	16' 10"	14' 7"	13' 4"	11' 11"
2x8 #1 DF	18' 1"	15' 8"	14' 4"	12' 10"
2x8 SS DF	20' 5"	18' 7"	17' 9"	15' 10"
2x10 #2 DF	20' 8"	17' 11"	16' 4"	14' 8"
2x10 #1 DF	22' 4"	19' 4"	17' 8"	15' 10"
2x10 SS DF	26' 0"	23' 8"	21' 8"	19' 4"

RAFTERS -- 30# LL + 15# DL
BASED ON TABLE 23-IV-R-4

	12" o.c.	16" o.c.	19.2" o.c.	24" o.c.
2x4 Standard DF	5' 8"	4' 11"	4' 5"	4' 0"
2x4 Stud DF	6' 5"	5' 6"	5' 1"	4' 6"
2x4 #2 DF	8' 9"	7' 7"	6' 11"	6' 3"
2x4 #1 DF	9' 3"	8' 0"	7' 4"	6' 7"
2x4 SS DF	10' 0"	9' 0"	8' 3"	7' 8"
2x6 #2 DF	13' 0"	11' 3"	10' 3"	9' 2"
2x6 #1 DF	13' 10"	11' 11"	10' 11"	9' 9"
2x6 SS DF	15' 8"	14' 2"	13' 0"	11' 7"
2x8 #2 DF	15' 11"	13' 9"	12' 7"	11' 3"
2x8 #1 DF	17' 1"	14' 10"	13' 6"	12' 1"
2x8 SS DF	20' 8"	18' 4"	16' 9"	15' 0"
2x10 #2 DF	19' 6"	16' 11"	15' 5"	13' 9"
2x10 #1 DF	21' 1"	18' 3"	16' 8"	14' 11"
2x10 SS DF	25' 10"	22' 4"	20' 5"	18' 3"

FLOOR GIRDERS -- 40# LL + 10# DL

Loads from one floor only - roof or ceiling loads need additional support

	4x6 #2 DF	4x8 #2 DF	4x10 #2 DF	4x12 #2 DF
4' o.φ.	8' 2"	10' 9"	13' 2"	15' 4"
4' 6" o.φ.	7' 8"	10' 1"	12' 5"	14' 6"
5' o.φ.	7' 3"	9' 7"	11' 9"	13' 9"
5' 6" o.φ.	6' 11"	9' 2"	11' 3"	13' 1"
6' o.φ.	6' 8"	8' 9"	10' 9"	12' 6"
6' 6" o.φ.	6' 5"	8' 5"	10' 4"	12' 0"
7' o.φ.	6' 2"	8' 1"	9' 11"	11' 7"
7' 6" o.φ.	5' 11"	7' 10"	9' 7"	11' 2"
8' o.φ.	5' 9"	7' 7"	9' 4"	10' 10"
9' o.φ.	5' 5"	7' 2"	8' 9"	10' 3"
10' o.φ.	5' 2"	6' 9"	8' 4"	9' 8"
12' o.φ.	4' 8"	6' 2"	7' 7"	8' 10"