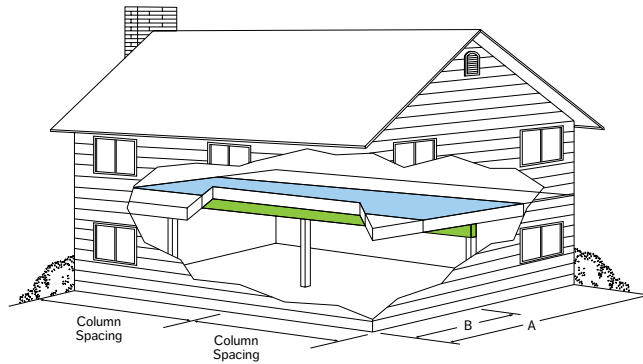


Floor Beams

Douglas-fir

The tables below show the size of the beams needed to support various floor systems. The tables are valid for loads of one floor only, i.e., a second story floor or one story floor over a basement.

When floor joists span continuously from wall to wall (not cut at beam) this table requires that "B" be not less than 45%, or greater than 55% of "A".



Tributary Area
(see page 45 of the residential design guide)

FLOOR BEAM - 1.6E RIGIDLAM LVL										
Width of Building (ft.)	Beam Support Spacing (ft.)									
	11	12	13	14	15	16	17	18	19	20
24	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-14 3-14	2-16 3-14	2-16* 3-14	2-18* 3-16	2-18* 3-16	2-20* 3-18	2-20* 3-18
28	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-14 3-14	2-16* 3-14	2-16* 3-14	2-18* 3-16	2-18* 3-16	2-18* 3-18	-- 3-18	- 3-20
32	2-14 3-11-7/8	2-14* 3-11-7/8	2-16* 3-14	2-16* 3-14	2-18* 3-16	2-18* 3-16	- 3-18	- 3-18*	- 3-18*	- 3-20*
36	2-14* 3-11-7/8	2-16* 3-14	2-16* 3-14	2-18* 3-14	- 3-16	- 3-16*	- 3-18*	- 3-18*	- 3-20*	- 3-20*
40	2-16* 3-11-7/8	2-16* 3-14	2-18* 3-14	- 3-16	- 3-16*	- 3-18*	- 3-18*	- 3-20*	- 3-20*	- -
44	2-16* 3-14	2-18* 3-14	- 3-14*	- 3-16*	- 3-16*	- 3-18*	- 3-20*	- 3-20*	- -	- -

FLOOR BEAM - 2.1E RIGIDLAM LVL										
Width of Building (ft.)	Beam Support Spacing (ft.)									
	11	12	13	14	15	16	17	18	19	20
24	2-11-7/8 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-14 3-11-7/8	2-16 3-14	2-16 3-14	2-18 3-14	2-18 3-16	2-18 3-16
28	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-14 3-11-7/8	2-16 3-14	2-16 3-14	2-18 3-14	2-18* 3-16	2-18* 3-16	2-20* 3-18
32	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-14 3-14	2-16 3-14	2-16* 3-14	2-18* 3-16	2-18* 3-16	2-20* 3-18	2-20* 3-18
36	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-14 3-11-7/8	2-16* 3-14	2-16* 3-14	2-18* 3-16	2-18* 3-16	2-20* 3-18	2-20* 3-18	- 3-18
40	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-14* 3-14	2-16* 3-14	2-18* 3-14	2-18* 3-16	2-20* 3-16	- 3-18	- 3-18*	- 3-20*
44	2-14 3-11-7/8	2-14* 3-11-7/8	2-16* 3-14	2-16* 3-14	2-18* 3-16	- 3-16	- 3-18*	- 3-18*	- 3-20*	- 3-20*

* see note 3

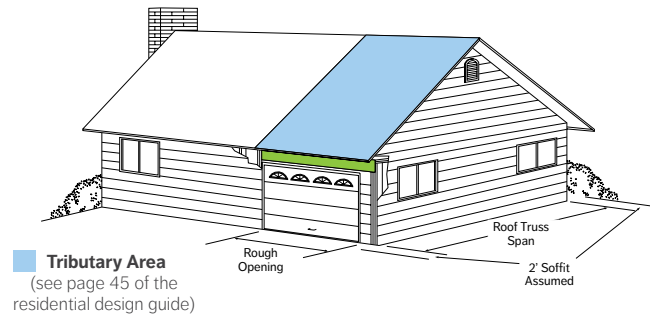
Notes:

1. Beam sizes are listed as the number of 1-3/4" thick pieces by the beam depth (e.g. 2-9-1/2" indicates two 1-3/4" pieces by 9-1/2" deep).
2. Beams sizes are based on continuous floor joist spans and simple or continuous beam spans. If the floor joists are not continuous, it is permissible to consider a Total Floor Joist Span "A" that is equal to 0.8 times the actual "A" dimension.
3. The minimum required end and intermediate bearing lengths (based on 575 PSI for 1.6E LVL and 750 PSI for 2.1E LVL) are 3" and 7-1/2" respectively unless the * symbol is shown. In that case, 4-1/2" and 10-1/2" end and intermediate bearing lengths are required.
4. All beams require support across their full width.
5. Beam sizes are based on residential floor loading of 40 PSF live load and 10 PSF dead load. The roof framing must be trusses supported at the exterior walls only.
6. Deflection is limited to L/360 at live load and L/240 at total load.

1-Story Garage Door Headers

Douglas-fir

The tables indicate the appropriate size header for various roof truss spans with 2' soffit. If the soffit is greater than 2', additional engineering is necessary.



1 STORY – 1.6E RIGIDLAM® LVL										
Roof Loading		Snow - 115%								
		25 PSF LL + 20 PSF DL			30 PSF LL + 20 PSF DL			40 PSF LL + 20 PSF DL		
Rough Opening (ft.)		9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14
	24	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16
	28	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14	2-9-1/2 3-9-1/2	2-18 3-14	2-20* 3-16
	32	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14	2-9-1/2 3-9-1/2	2-18 3-14	2-20 3-16	2-11-7/8 3-9-1/2	2-18* 3-16	2-22* 3-18
	36	2-9-1/2 3-9-1/2	2-18 3-14	2-20 3-16	2-9-1/2 3-9-1/2	2-18 3-14	2-20* 3-16	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18
Roof Loading		Non-Snow - 125%								
Rough Opening (ft.)		20 PSF LL + 15 PSF DL			20 PSF LL + 20 PSF DL			20 PSF LL + 25 PSF DL		
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-14
	24	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14
	28	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-14	2-16 3-14
	32	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-14	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14
	36	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16

1 STORY – 2.1E RIGIDLAM® LVL										
Roof Loading		Snow - 115%								
		25 PSF LL + 20 PSF DL			30 PSF LL + 20 PSF DL			40 PSF LL + 20 PSF DL		
Rough Opening (ft.)		9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14
	24	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14
	28	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-16 3-14
	32	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16
	36	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16
Roof Loading		Non-Snow - 125%								
Rough Opening (ft.)		20 PSF LL + 15 PSF DL			20 PSF LL + 20 PSF DL			20 PSF LL + 25 PSF DL		
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-11-7/8 3-11-7/8	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8
	24	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8
	28	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14
	32	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14
	36	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-14 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-16 3-14

* see note 2

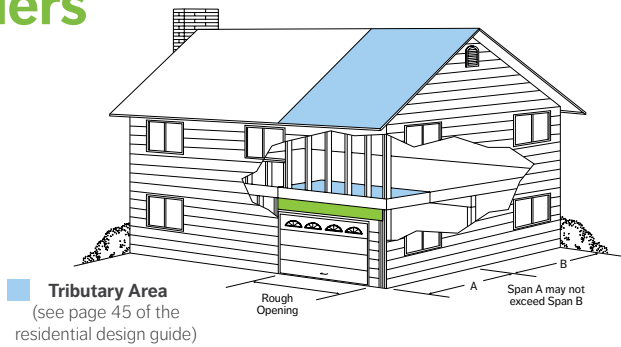
Notes:

- Header sizes are listed as the number of 1-3/4" thick pieces by the header depth (e.g. 2 - 9-1/2" indicates two 1-3/4" pieces by 9-1/2" deep).
- The minimum required end bearing length (based on 575 PSI for 1.6E LVL and 750 PSI for 2.1E LVL) is 4-1/2" unless the * symbol is shown. In that case, 6" is required.
- All headers require support across their full width. Use 2x4 cripples for two-piece headers and 2x6 cripples for three-piece headers.
- The roof framing is assumed to be trusses supported by the exterior walls only.
- Deflection is limited to L/240 at live load and L/180 at total load.

2-Story Garage Door Headers

Douglas-fir

The tables consider the combined loads from a wall, second story floor (1/4 of total floor joist span) and various roof truss spans with a 2' soffit. Intermediate floor beam assumed. If the soffit exceeds 2', additional engineering will be necessary.



2 STORY – 1.6E RIGIDLAM® LVL

Roof Loading		Snow - 115%								
		25 PSF LL + 20 PSF DL			30 PSF LL + 20 PSF DL			40 PSF LL + 20 PSF DL		
Rough Opening (ft.)		9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-18 3-16	2-20 3-16	2-11-7/8 3-9-1/2	2-18 3-16	2-20 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18
	24	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-18* 3-16	2-22* 3-18	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18
	28	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18	2-11-7/8 3-11-7/8	2-22* 3-18	- 3-20
	32	2-11-7/8 3-9-1/2	2-20* 3-18	- 3-20	2-11-7/8 3-11-7/8	2-22* 3-18	- 3-20	2-14 3-11-7/8	- 3-18	- 3-20*
	36	2-11-7/8 3-11-7/8	2-22* 3-18	- 3-20	2-14 3-11-7/8	- 3-18	- 3-20*	2-14 3-11-7/8	-- 3-20*	- 3-22*
Roof Loading		Non-Snow - 125%								
Rough Opening (ft.)		20 PSF LL + 15 PSF DL			20 PSF LL + 20 PSF DL			20 PSF LL + 25 PSF DL		
Rough Opening (ft.)		9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-18 3-16	2-20 3-16
	24	2-9-1/2 3-9-1/2	2-18 3-16	2-20 3-16	2-11-7/8 3-9-1/2	2-18 3-16	2-20 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18
	28	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-18* 3-16	2-22* 3-18
	32	2-11-7/8 3-9-1/2	2-18* 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18	2-11-7/8 3-9-1/2	2-20* 3-18	- 3-20
	36	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18	2-11-7/8 3-9-1/2	2-20* 3-18	- 3-20	2-11-7/8 3-11-7/8	2-20* 3-18	- 3-20

2 STORY – 2.1E RIGIDLAM® LVL

Roof Loading		Snow - 115%								
		25 PSF LL + 20 PSF DL			30 PSF LL + 20 PSF DL			40 PSF LL + 20 PSF DL		
Rough Opening (ft.)		9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16
	24	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-11-7/8 3-9-1/2	2-18 3-16	2-20 3-18
	28	2-9-1/2 3-9-1/2	2-18 3-16	2-20 3-16	2-11-7/8 3-9-1/2	2-18 3-16	2-20 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18
	32	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18
	36	2-11-7/8 3-9-1/2	2-18* 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-20* 3-16	2-22* 3-18	2-11-7/8 3-9-1/2	2-20* 3-18	- 3-20
Roof Loading		Non-Snow - 125%								
Rough Opening (ft.)		20 PSF LL + 15 PSF DL			20 PSF LL + 20 PSF DL			20 PSF LL + 25 PSF DL		
Rough Opening (ft.)		9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"	9'-3"	16'-3"	18'-3"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-16 3-14	2-16 3-14	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16
	24	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16
	28	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-16 3-14	2-18 3-16	2-9-1/2 3-9-1/2	2-18 3-16	2-20 3-16
	32	2-9-1/2 3-9-1/2	2-18 3-14	2-20 3-16	2-11-7/8 3-9-1/2	2-18 3-16	2-20 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18
	36	2-11-7/8 3-9-1/2	2-18 3-16	2-20 3-18	2-11-7/8 3-9-1/2	2-18 3-16	2-20* 3-18	2-11-7/8 3-9-1/2	2-18* 3-16	2-20* 3-18

* see note 3

Notes:

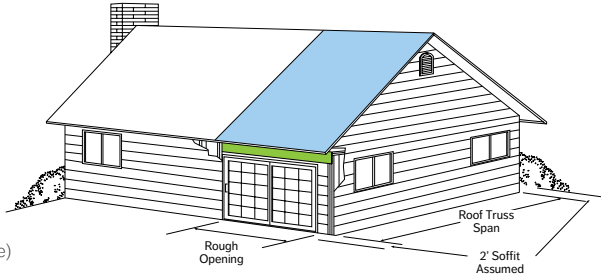
- Header sizes are listed as the number of 1-3/4" thick pieces by the header depth (e.g. 2 - 9-1/2" indicates two 1-3/4" pieces by 9-1/2" deep).
- Header sizes are based on the assumption that the floor joists are supported in the middle of the building by a beam or wall.
- The minimum required end bearing length (based on 575 PSI for 1.6E LVL and 750 PSI for 2.1E LVL) is 4-1/2" unless the * symbol is shown. In that case, 6" is required.
- All headers require support across their full width. Use 2x4 cripples for two-piece headers and 2x6 cripples for three-piece headers.
- Header sizes are based on residential floor loading of 40 PSF live load, 10 PSF dead load and 80 PLF wall load. The roof framing must be trusses supported by the exterior walls only.
- Deflection is limited to L/360 at live load and L/240 at total load.

1-Story Window & Patio Door Headers

Douglas-fir

The tables indicate the appropriate size header for various roof truss spans with 2' soffit. If the soffit is greater than 2', additional engineering is necessary.

Tributary Area
(see page 45 of the residential design guide)



1 STORY – 1.6E RIGIDLAM® LVL											
Roof Loading		Snow - 115%									
		25 PSF LL + 20 PSF DL					40 PSF LL + 20 PSF DL				
Rough Opening (ft.)		6'-0"	8'-0"	9'-0"	10'-0"	12'-0"	6'-0"	8'-0"	9'-0"	10'-0"	12'-0"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14
	24	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-14	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-16 3-14
	28	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-18 3-14
	32	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-14 3-11-7/8	2-18 3-16
	36	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-14 3-11-7/8	2-18 3-16
Roof Loading		Non-Snow - 125%									
Rough Opening (ft.)		20 PSF LL + 15 PSF DL					20 PSF LL + 25 PSF DL				
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8
	24	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-14
	28	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14
	32	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-14	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14
	36	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-16 3-14

1 STORY – 2.1E RIGIDLAM® LVL											
Roof Loading		Snow - 115%									
		25 PSF LL + 20 PSF DL					40 PSF LL + 20 PSF DL				
Rough Opening (ft.)		6'-0"	8'-0"	9'-0"	10'-0"	12'-0"	6'-0"	8'-0"	9'-0"	10'-0"	12'-0"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8
	24	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-14
	28	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14
	32	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14
	36	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-16 3-14
Roof Loading		Non-Snow - 125%									
Rough Opening (ft.)		20 PSF LL + 15 PSF DL					20 PSF LL + 25 PSF DL				
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8
	24	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8
	28	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8
	32	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8
	36	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-14 3-11-7/8	2-9-1/2 3-9-1/2	2-9-1/2 3-9-1/2	2-11-7/8 3-9-1/2	2-11-7/8 3-11-7/8	2-16 3-14

* see note 2

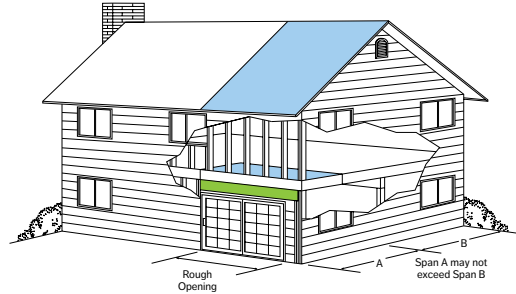
Notes:

- Header sizes are listed as the number of 1-3/4" thick pieces by the header depth (e.g. 2 - 9-1/2" indicates two 1-3/4" pieces by 9-1/2" deep).
- The minimum required bearing length (based on 575 PSI for 1.6E LVL and 750 PSI for 2.1E LVL) is 4-1/2" unless the * symbol is shown. In that case, 6" is required.
- All headers require support across their full width. Use 2x4 cripples for two piece headers and 2x6 cripples for three piece headers.
- The roof framing is assumed to be trusses supported by the exterior walls only.
- Deflection is limited to L/240 at live load and the lesser of L/180 or 5/16" at total load.

2-Story Window & Patio Door Headers

Douglas-fir

The tables consider the combined loads from a wall, second story floor (1/4 of total floor joist span) and various roof truss spans with a 2' soffit. Intermediate floor beam assumed. If the soffit exceeds 2', additional engineering will be necessary.



Tributary Area
(see page 45 of the residential design guide)

2 STORY – 1.6E RIGIDLAM® LVL											
Roof Loading		Snow - 115%									
		25 PSF LL + 20 PSF DL					40 PSF LL + 20 PSF DL				
Rough Opening (ft.)		6'-0"	8'-0"	9'-0"	10'-0"	12'-0"	6'-0"	8'-0"	9'-0"	10'-0"	12'-0"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16
	24	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18	2-9-1/2	2-11-7/8	2-14	2-14	2-18
		3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-16
	28	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18	2-9-1/2	2-11-7/8	2-14	2-16	2-20
		3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-16
	32	2-9-1/2	2-11-7/8	2-14	2-16	2-18	2-9-1/2	2-11-7/8	2-14	2-16	2-20*
		3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-16	3-9-1/2	3-11-7/8	3-11-7/8	3-14	3-18
	36	2-9-1/2	2-11-7/8	2-14	2-16	2-20	2-9-1/2	2-11-7/8	2-14	2-16	2-22*
		3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-18	3-9-1/2	3-11-7/8	3-11-7/8	3-14	3-18
Roof Loading		Non-Snow - 125%									
Rough Opening (ft.)		20 PSF LL + 15 PSF DL					20 PSF LL + 25 PSF DL				
		6'-0"	8'-0"	9'-0"	10'-0"	12'-0"	6'-0"	8'-0"	9'-0"	10'-0"	12'-0"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14
	24	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16
	28	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16
	32	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18	2-9-1/2	2-11-7/8	2-14	2-16	2-18
		3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-16
	36	2-9-1/2	2-11-7/8	2-14	2-14	2-18	2-9-1/2	2-11-7/8	2-14	2-16	2-20
		3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-16	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-18

2 STORY – 2.1E RIGIDLAM® LVL											
Roof Loading		Snow - 115%									
		25 PSF LL + 20 PSF DL					40 PSF LL + 20 PSF DL				
Rough Opening (ft.)		6'-0"	8'-0"	9'-0"	10'-0"	12'-0"	6'-0"	8'-0"	9'-0"	10'-0"	12'-0"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-16	3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14
	24	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14
	28	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16
	32	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-18	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16
	36	2-9-1/2	2-11-7/8	2-11-7/8	2-14	2-18	2-9-1/2	2-11-7/8	2-14	2-16	2-20
		3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-16
Roof Loading		Non-Snow - 125%									
Rough Opening (ft.)		20 PSF LL + 15 PSF DL					20 PSF LL + 25 PSF DL				
		6'-0"	8'-0"	9'-0"	10'-0"	12'-0"	6'-0"	8'-0"	9'-0"	10'-0"	12'-0"
Roof Truss Span with 2' Soffit Assumed	20	2-9-1/2	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14
	24	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14
	28	2-9-1/2	2-9-1/2	2-11-7/8	2-11-7/8	2-16	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14
	32	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-14
	36	2-9-1/2	2-9-1/2	2-11-7/8	2-14	2-16	2-11-7/8	2-11-7/8	2-11-7/8	2-14	2-18
		3-9-1/2	3-9-1/2	3-9-1/2	3-11-7/8	3-14	3-9-1/2	3-9-1/2	3-11-7/8	3-11-7/8	3-16

* see note 3

Notes:

- Header sizes are listed as the number of 1-3/4" thick pieces by the header depth (e.g. 2-9-1/2" indicates two 1-3/4" pieces by 9-1/2" deep).
- Header sizes are based on the assumption that the floor joists are supported in the middle of the building by a beam or wall.
- The minimum required end bearing length (based on 575 PSI for 1.6E LVL and 750 PSI for 2.1E LVL) is 4-1/2" unless the * symbol is shown. In that case, 6" is required.
- All headers require support across their full width. Use 2x4 cripples for two-piece headers and 2x6 cripples for three-piece headers.
- Header sizes are based on residential floor loading of 40 PSF live load, 10 PSF dead load and 80 PLF wall load. The roof framing must be trusses supported by the exterior walls only.
- Deflection is limited to L/360 at live load and the lesser of L/240 or 5/16" at total load.