



HOUSE AND SMALL BUILDING FOUNDATION REINFORCING AND CONSTRUCTION SPAN TABLES

The enclosed tables, regulations and schedules are copies of various sections of the 2024 Ontario Building Code.

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NOTE: These tables are prepared as a guide only. The conversions from metric to imperial dimensions are soft conversions. For legal purposes, use the metric dimensions or hard conversions.

**Table 9.15.3.4.
Minimum Footing Sizes**

Forming part of Sentence 9.15.3.4.(1)

Number of floors supported	Minimum Width of Strip Footings, mm (in)		Minimum footing area for columns spaced 3m (9ft 10in) o/c ⁽¹⁾ , m ² (ft ²)
	Supporting exterior walls ⁽²⁾	Supporting interior walls ⁽³⁾	
1	250 (9 7/8)	200 (7 7/8)	0.40 (4.3)
2	350 (13 3/4)	350 (13 3/4)	0.75 (8.1)
3	450 (17 3/4)	500 (19 3/4)	1.0 (10.9)

Notes to table 9.15.3.4.:

- (1) See Sentence 9.15.3.7.(1)
- (2) See Sentence 9.15.3.5.(1)
- (3) See Sentence 9.15.3.6.(1)

Table 9.15.4.5.A.

Vertical Reinforcement for 150mm (5 7/8") Flat Insulating Concrete Form Foundation Walls

Forming part of Sentence 9.15.4.5.(2)

Maximum height of finished ground above finished basement floor	Minimum Vertical Reinforcement		
	Maximum Unsupported Basement Wall Height		
	2.44m (8'-0")	2.75m (9'-0")	3.00m (9'-10")
1.35 m (4'-5")	10M at 400mm (15 3/4") o/c	10M at 400mm (15 3/4") o/c	10M at 400mm (15 3/4") o/c
1.60 m (5'-3")	10M at 400mm (15 3/4") o/c	10M at 380mm (15") o/c	10M at 380mm (15") o/c
2.00 m (6'-7")	10M at 380mm (15") o/c	10M at 380mm (15") o/c	10M at 380mm (15") o/c
2.20 m (7'-3")	10M at 250mm (10") o/c	10M at 250mm (10") o/c	10M at 250mm (10") o/c
2.35 m (7'-9")	n/a	10M at 250mm (10") o/c	10M at 250mm (10") o/c
2.60 m (8'-6")	n/a	10M at 250mm (10") o/c	10M at 250mm (10") o/c
3.00 m (9'-10")	n/a	n/a	15M at 250mm (10") o/c

Table 9.15.4.5.B.

Vertical Reinforcement for 190mm (7 1/2") Flat Insulating Concrete Form Foundation Walls

Forming part of Sentence 9.15.4.5.(2)

Maximum height of finished ground above finished basement floor	Minimum Vertical Reinforcement		
	Maximum Unsupported Basement Wall Height		
	2.44m (8'-0")	2.75m (9'-0")	3.00m (9'-10")
2.20 m (7'-3")	none required	10M at 400mm (15 3/4") o/c	10M at 400mm (15 3/4") o/c
2.35 m (7'-9")	n/a	10M at 300mm (11 3/4") o/c	10M at 300mm (11 3/4") o/c
2.60 m (8'-6")	n/a	10M at 300mm (11 3/4") o/c	15M at 400mm (15 3/4") o/c
3.00 m (9'-10")	n/a	n/a	15M at 400mm (15 3/4") o/c

Table 9.15.4.5.C.

Vertical Reinforcement for 240mm (9 1/2") Flat Insulating Concrete Form Foundation Walls

Forming part of Sentence 9.15.4.5.(2)

Maximum height of finished ground above finished basement floor	Minimum Vertical Reinforcement		
	Maximum Unsupported Basement Wall Height		
	2.44m (8'-0")	2.75m (9'-0")	3.00m (9'-10")
2.20 m (7'-3")	none required	none required	none required
2.60 m (8'-6")	n/a	15M at 400mm (15 3/4") o/c	15M at 400mm (15 3/4") o/c
3.00 m (9'-10")	n/a	n/a	15M at 400mm (15 3/4") o/c

**Table 9.15.4.2.A.
Thickness of Solid Concrete, Concrete Core in Flat Wall Insulating Concrete Form and
Unreinforced Concrete Block Foundation Walls**

Forming part of Sentence 9.15.4.2.(1)

Type of Foundation Wall	Minimum Thickness of Concrete Block, mm (in)	Maximum Height of Finished Ground Above Basement Floor or Crawl Space Ground Cover, m (ft)			
		Height of foundation wall laterally unsupported at the top ⁽¹⁾⁽²⁾	Height of foundation wall laterally supported at the top ⁽¹⁾⁽²⁾		
			≤ 3.0m (9'-10")	≤ 2.5m (8'-2")	> 2.5m (8'-2") and ≤ 2.75m (9'-0")
Solid Concrete and concrete core in flat wall insulating concrete forms, ⁽³⁾ 15 MPa min. strength	150 (6)	0.8 (2'-7")	1.5 (4'-11")	1.5 (4'-11")	1.4 (4'-7")
	200 (8)	1.2 (3'-11")	2.15 (7'-0")	2.15 (7'-0")	2.1 (6'-11")
	250 (10)	1.4 (4'-7")	2.3 (7'-6")	2.6 (8'-6")	2.5 (8'-2")
	300 (12)	1.5 (4'-11")	2.3 (7'-6")	2.6 (8'-6")	2.85 (9'-4")
Solid Concrete and concrete core in flat wall insulating concrete forms, ⁽³⁾ 20 MPa min. strength	150 (6)	0.8 (2'-7")	1.8 (5'-11")	1.6 (5'-3")	1.6 (5'-3")
	200 (8)	1.2 (3'-11")	2.3 (7'-6")	2.3 (7'-6")	2.2 (7'-3")
	250 (10)	1.4 (4'-7")	2.3 (7'-6")	2.6 (8'-6")	2.85 (9'-4")
	300 (12)	1.5 (4'-11")	2.3 (7'-6")	2.6 (8'-6")	2.85 (9'-4")
Unreinforced Concrete Block	140 (5 ½)	0.6 (2'-0")	0.8 (2'-7")	-	-
	190 (7 ½)	0.9 (2'-11")	1.2 (3'-11")	(4)	(4)
	240 (9 ½)	1.2 (3'-11")	1.8 (5'-11")	(4)	(4)
	290 (11 ½)	1.4 (4'-7")	2.2 (7'-3")	-	-

Notes to Table 9.15.4.2.A.:

- (1) See Article 9.15.4.3.
- (2) See Article 9.15.4.6.
- (3) See Note A-Table 9.15.4.2.-A.
- (4) See Table 9.15.4.2.B.

Table 9.15.4.2.B.
Reinforced Concrete Block Foundation Walls Laterally Supported at the Top⁽¹⁾
 Forming part of Sentence 9.15.4.2.(4)

Maximum Height of Finished Ground Above Basement Floor or Crawl Space Ground Cover, m (ft) ⁽²⁾	Size and Spacing of Continuous Vertical Reinforcement, M at mm (in) o.c.					
	190 mm (7 ½") Minimum Wall Thickness			240mm (9 ½") Minimum Wall Thickness		
	Foundation Wall Height			Foundation Wall Height		
	≤ 2.5m (8'-2")	≤ 2.75m (9'-0")	≤ 3.0m (9'-10")	≤ 2.5m (8'-2")	≤ 2.75m (9'-0")	≤ 3.0m (9'-10")
0.8 (2'-7")	(3)	(3)	(3)	(3)	(3)	(3)
1.0 (3'-3")	(3)	1-15M at 1 800 (5'-11")	1-15M at 1 800 (5'-11")	(3)	(3)	(3)
1.2 (3'-11")	(3)	1-15M at 1 600 (5'-3")	1-15M at 1 600 (5'-3")	(3)	1-20M at 2 000 (6'-7")	1-20M at 2 000 (6'-7")
1.4 (4'-7")	1-15M at 1 600 (5'-3")	1-15M at 1 600 (5'-3")	1-15M at 1 600 (5'-3")	(3)	1-20M at 1 800 (5'-11")	1-20M at 1 800 (5'-11")
1.6 (5'-3")	1-15M at 1 400 (4'-7")	1-15M at 1 400 (4'-7")	1-15M at 1 400 (4'-7")	(3)	1-20M at 1 600 (5'-3")	1-20M at 1 600 (5'-3")
1.8 (5'-11")	1-15M at 1 400 (4'-7")	1-15M at 1 400 (4'-7")	1-15M at 1 200 (3'-11")	(3)	1-20M at 1 600 (5'-3")	1-20M at 1 600 (5'-3")
2.0 (6'-7")	1-15M at 1 200 (3'-11")	1-15M at 1 000 (3'-3") or 1-20M at 1 200 (3'-11")	2-15M at 1 200 (3'-11")	1-20M at 1 600 (5'-3")	1-20M at 1 600 (5'-3")	1-20M at 1 600 (5'-3")
2.2 (7'-3")	2-15M at 1 200 (3'-11")	2-15M at 1 000 (3'-3")	2-15M at 1 000 (3'-3")	1-20M at 1 400 (4'-7")	1-20M at 1 400 (4'-7")	1-20M at 1 400 (4'-7")
2.4 (7'-10")	2-15M at 1 000 (3'-3")	2-15M at 1 000 (3'-3")	2-15M at 800 (2'-7")	1-20M at 1 400 (4'-7")	1-20M at 1 400 (4'-7")	1-20M at 1 200 (3'-11")
2.6 (8'-6")	n/a	2-15M at 800 (2'-7") or 1-25M at 1 000 (3'-3")	2-15M at 800 (2'-7") or 1-25M at 1 000 (3'-3")	n/a	1-20M at 1 000 (3'-3")	1-20M at 1 000 (3'-3")
2.8 (9'-2")	n/a	n/a	1-20M at 600 (2'-0")	n/a	n/a	1-20M at 800 (2'-7") or 2-15M at 1 000 (3'-3")
3.0m (9'-10")	n/a	n/a	1-20M at 400 (1'-8") or 1-25M at 600 (2'-0")	n/a	n/a	2-15M at 800 (2'-7")

Notes to Table 9.15.4.2.B:

- (1) See Article 9.15.4.3.
- (2) See Article 9.15.4.6.
- (3) No reinforcement required

**Table 9.23.3.4.
Nailing for Framing**

Forming part of Sentences 9.23.3.4.(1) and 9.23.14.4.(2)

Construction Detail	Minimum Length of Nails, mm	Minimum Number or Maximum Spacing of Nails
Floor joist or blocking perpendicular to sill plate or top wall plate below – toe nail	82	2 per floor joist or blocking
Rim joist, trimmer joist or blocking – supporting walls with required braced wall panels - to sill plate or top wall plate – toe nail	82	150 mm o.c.
Wood or metal strapping to underside of floor joist	57	2
Cross bridging to joists	57	2 at each end
Double header or trimmer joists	76	300 mm o.c.
Floor joist to stud (balloon framed construction)	76	2
Ledger strip to wood beam	82	2 per joist
Joist to joist splice (See also Table 9.23.14.8.)	76	2 at each end
Tail joist to adjacent header joist (end nailed) around openings	82	5
	101	3
Each header joist to adjacent trimmer joist (end nailed) around openings	82	5
	101	3
Stud to wall plate (each end) toe nail or end nail	63	4
	82	2
Doubled studs at openings, or studs at walls or wall intersections and corners	76	750 mm o.c.
Doubled top wall plates ⁽¹⁾	76	600 mm o.c.
Bottom wall plate or sole plate to floor joists, rim joists or blocking (exterior walls) ⁽²⁾	82	400 mm o.c.
Bottom wall plate or sole plate – in required braced wall panels – to floor joists, rim joists or blocking (exterior walls) ⁽²⁾	82	150 mm o.c.
Interior walls to framing or subflooring	82	600 mm o.c.
Required braced wall panels – in interior walls – to framing above and below	82	150 mm o.c.
Horizontal member over openings in non-loadbearing walls – each end	82	2
Lintels to studs	82	2 at each end
Ceiling joist to plate – toe nail each end	82	2
Roof rafter, roof truss or roof joist to plate – toe nail ⁽³⁾	82	3
Rafter plate to each ceiling joist	101	2
Rafter to joist (with ridge supported)	76	3
Rafter to joist (with ridge unsupported)	76	See Table 9.23.14.8
Gusset plate to each rafter at peak	57	4
Rafter to ridge board – toe nail – end nail	82	3
Collar tie to rafter – each end	76	3
Collar tie lateral support to each collar tie	57	2
Jack rafter to hip or valley rafter	82	2
Roof strut to rafter	76	3
Roof strut to loadbearing wall – toe nail	82	2
38 x 140 mm or less plank decking to support	82	2
Plank decking wider than 38mm x 140 mm to support	82	3
38 mm edge laid plank decking to support (toe nail)	76	1
38 mm edge laid plank to each other	76	450 mm o.c.
End-joist or end-rafter to built-up wall stud ⁽⁴⁾	76	5 or 8 ⁽⁵⁾

Note to Table 9.23.3.4.:

- (1) See Article 9.23.11.4 for requirements on the nailing of top plates in braced wall bands.
- (2) See Sentence 9.23.3.4.(2).
- (3) See Sentence 9.23.3.4 (3).
- (4) See Sentence 9.23.13.5(3).
- (5) Where heavyweight construction is used in the roof of the space, at least 8 nails are required (See Note A-9.23.13.2(1)(a)(i))

Maximum Spans for Floor Joists – General Case ⁽¹⁾

No.1 and No.2 Spruce

Table 9.23.4.2.-A

Forming part of Sentences 9.23.2.8(1), 9.23.4.2.(1) and (2), 9.23.9.4.(1) to (3)

Joist Size mm in	Maximum Span, m / ft-in								
	With Strapping ⁽²⁾			With Bridging			With Strapping and Bridging ⁽²⁾		
	Joist Spacing, mm / in			Joist Spacing, mm / in			Joist Spacing, mm / in		
	300 / 12"	400 / 16"	600 / 24"	300 / 12"	400 / 16"	600 / 24"	300 / 12"	400 / 16"	600 / 24"
38 x 89 2" x 4"	1.86 m 6'-1"	1.72 m 5'-7"	1.58 m 5'-2"	1.99 m 6'-6"	1.81 m 5'-11"	1.58 m 5'-2"	1.99 m 6'-6"	1.81 m 5'-11"	1.58 m 5'-2"
38 x 140 2" x 6"	2.92 m 9'-6"	2.71 m 8'-10"	2.49 m 8'-2"	3.14 m 10'-3"	2.85 m 9'-4"	2.49 m 8'-2"	3.14 m 10'-3"	2.85 m 9'-4"	2.49 m 8'-2"
38 x 184 2" x 8"	3.54 m 11'-7"	3.36 m 11'-0"	3.20 m 10'-5"	3.81 m 12'-6"	3.58 m 11'-8"	3.27 m 10'-8"	3.99 m 13'-1"	3.72 m 12'-2"	3.27 m 10'-8"
38 x 235 2" x 10"	4.17 m 13'-8"	3.96 m 12'-11"	3.77 m 12'-4"	4.44 m 14'-6"	4.17 m 13'-8"	3.92 m 12'-10"	4.60 m 15'-1"	4.29 m 14'-0"	4.00 m 13'-1"
38 x 286 2" x 12"	4.75 m 15'-7"	4.52 m 14'-9"	4.30 m 14'-1"	5.01 m 16'-5"	4.71 m 15'-5"	4.42 m 14'-6"	5.17 m 16'-11"	4.82 m 15'-9"	4.49 m 14'-8"

Notes to Table 9.23.4.2.-A:

- (1) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed live load on the floor does not exceed that specified for residential areas as described in Table 4.1.5.3.
- (2) See Sentence 9.23.9.4.(5) for alternatives to strapping.

Maximum Spans for Floor Joists – Special Case ⁽¹⁾

No.1 and No.2 Spruce

Table 9.23.4.2.-B

Forming part of Sentences 9.23.2.8(1), 9.23.4.2.(1) and (2), 9.23.4.4.(2) and 9.23.9.4.(4) and (6)

Joist Size mm in	Maximum Span, m / ft-in								
	Joists with Ceilings Attached to Wood Furring						Joists with Concrete Topping		
	Without Bridging			With Bridging			With or Without Bridging ⁽²⁾		
	Joist Spacing, mm / in			Joist Spacing, mm / in			Joist Spacing, mm / in		
	300 / 12"	400 / 16"	600 / 24"	300 / 12"	400 / 16"	600 / 24"	300 / 12"	400 / 16"	600 / 24"
38 x 89 2" x 4"	1.99 m 6'-6"	1.81 m 5'-11"	1.58 m 5'-2"	1.99 m 6'-6"	1.81 m 5'-11"	1.58 m 5'-2"	1.99 m 6'-6"	1.81 m 5'-11"	1.58 m 5'-2"
38 x 140 2" x 6"	3.14 m 10'-3"	2.85 m 9'-4"	2.49 m 8'-2"	3.14 m 10'-3"	2.85 m 9'-4"	2.49 m 8'-2"	3.14 m 10'-3"	2.85 m 9'-4"	2.49 m 8'-2"
38 x 184 2" x 8"	3.87 m 12'-8"	3.64 m 11'-11"	3.27 m 10'-8"	4.12 m 13'-6"	3.75 m 12'-3"	3.27 m 10'-8"	4.12 m 13'-6"	3.75 m 12'-3"	3.27 m 10'-8"
38 x 235 2" x 10"	4.55 m 14'-11"	4.28 m 14'-0"	3.91 m 12'-9"	4.99 m 16'-4"	4.75 m 15'-7"	4.18 m 13'-8"	5.27 m 17'-3"	4.79 m 15'-8"	4.13 m 13'-6"
38 x 286 2" x 12"	5.18 m 16'-11"	4.88 m 16'	4.46 m 14'-7"	5.65 m 18'-6"	5.37 m 17'-7"	5.06 m 16'-7"	6.23 m 20'-5"	5.81 m 19'-0"	4.79 m 15'-8"

Notes to Table 9.23.4.2.-B:

- (1) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed live load on the floor does not exceed that specified for residential areas as described in Table 4.1.5.3.
- (2) No bridging is assumed for spans for floor joists with concrete topping.

Maximum Spans for Ceiling Joists – Attic Not Accessible by a Stairway

No.1 and No.2 Spruce

Table 9.23.4.2.-C

Forming part of Sentences 9.23.2.8.(1), 9.23.4.2.(1) and 9.23.14.10.(2)

Joist Size mm / in	Maximum Span, m / ft-in		
	Joist Spacing, mm / in		
	300 / 12"	400 / 16"	600 / 24"
38 x 89 / 2" x 4"	3.11 m / 10'-2"	2.83 m / 9'-3"	2.47 m / 8'-1"
38 x 140 / 2" x 6"	4.90 m / 16'-0"	4.45 m / 14'-7"	3.89 m / 12'-9"
38 x 184 / 2" x 8"	6.44 m / 21'-1"	5.85 m / 19'-2"	5.11 m / 16'-9"
38 x 235 / 2" x 10"	8.22 m / 26'-11"	7.47 m / 24'-6"	6.52 m / 21'-4"
38 x 286 / 2" x 12"	10.00 m / 32'-9"	9.09 m / 29'-9"	7.94 m / 26'-0"

Maximum Spans for Roof Joists – Specified Snow Load 2.0 kPa / 41.8 lbs/sq.ft.

No.1 and No.2 Spruce

Table 9.23.4.2.D

Forming part of Sentences 9.23.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Joist Size mm / in	Maximum Span, m / ft-in		
	Joist Spacing, mm / in		
	300 / 12"	400 / 16"	600 / 24"
38 x 89 / 2" x 4"	1.96 m / 6'-5"	1.78 m / 5'-10"	1.56 m / 5'-1"
38 x 140 / 2" x 6"	3.08 m / 10'-1"	2.80 m / 9'-2"	2.45 m / 8'-0"
38 x 184 / 2" x 8"	4.05 m / 13'-3"	3.68 m / 12'-0"	3.22 m / 10'-6"
38 x 235 / 2" x 10"	5.18 m / 16'-11"	4.70 m / 15'-5"	4.11 m / 13'-5"
38 x 286 / 2" x 12"	6.30 m / 20'-8"	5.73 m / 18'-9"	5.00 m / 16'-4"

Maximum Spans for Roof Rafters – Specified Snow Load 2.0 kPa / 41.8 lbs/sq.ft.

No.1 and No.2 Spruce

Table 9.23.4.2.F

Forming part of Sentences 9.23.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Joist Size mm / in	Maximum Span, m / ft-in		
	Joist Spacing, mm / in		
	300 / 12"	400 / 16"	600 / 24"
38 x 89 / 2" x 4"	2.47 m / 8'-1"	2.24 m / 7'-4"	1.96 m / 6'-5"
38 x 140 / 2" x 6"	3.89 m / 12'-9"	3.53 m / 11'-6"	3.08 m / 10'-1"
38 x 184 / 2" x 8"	5.11 m / 16'-9"	4.64 m / 15'-2"	3.89 m / 12'-9"
38 x 235 / 2" x 10"	6.52 m / 21'-4"	5.82 m / 19'-1"	4.75 m / 15'-7"
38 x 286 / 2" x 12"	7.80 m / 25'-7"	6.76 m / 22'-2"	5.52 m / 18'-1"

Maximum Spans for Built-up Wood Floor Beams Supporting not more than One Floor⁽¹⁾⁽²⁾

No.1 and No.2 Spruce

Table 9.23.4.2.-H

Forming part of Sentences 9.23.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Supported Length, m ⁽³⁾⁽⁴⁾ / ft-in	Maximum Span, m ⁽⁵⁾⁽⁶⁾ / ft-in								
	Size of Built-up Beam, mm / ft-in								
	3-38x184 3-2"x8"	4-38x184 4-2"x8"	5-38x184 5-2"x8"	3-38x235 3-2"x10"	4-38x235 4-2"x10"	5-38x235 5-2"x10"	3-38x286 3-2"x12"	4-38x286 4-2"x12"	5-38x286 5-2"x12"
2.4 m 7'-10"	3.07 m 10'-0"	3.38 m 11'-1"	3.64 m 11'-11"	3.92 m 12'-10"	4.32 m 12'-2"	4.65 m 15'-3"	4.57 m 14'-11"	5.25 m 17'-2"	5.59 m 18'-4"
3.0 m 9'-10"	2.85m 9'-4"	3.14 m 10'-3"	3.38 m 11'-1"	3.52 m 11'-6"	4.01 m 13'-1"	4.32 m 14'-2"	4.09 m 13'-5"	4.72 m 15'-5"	5.25 m 17'-2"
3.6 m 11'-9"	2.63 m 8'-7"	2.95 m 9'-8"	3.18 m 10'-5"	3.22 m 10'-6"	3.71 m 12'-2"	4.06 m 13'-3"	3.73 m 12'-2"	4.31 m 14'-1"	4.82 m 15'-9"
4.2 m 13'-9"	2.44 m 8'-0"	2.80 m 9'-2"	3.02 m 9'-10"	2.98 m 9'-9"	3.44 m 11'-3"	3.84 m 12'-7"	3.46 m 11'-4"	3.99 m 13'-1"	4.46 m 14'-7"
4.8 m 15'-8"	2.28 m 7'-5"	2.63 m 8'-7"	2.89 m 9'-5"	2.79 m 9'-1"	3.22 m 10'-6"	3.60 m 11'-9"	3.23 m 10'-7"	3.73 m 12'-2"	4.17 m 13'-8"
5.4 m 17'-8"	2.15 m 7'-0"	2.48 m 8'-1"	2.77 m 9'-1"	2.63 m 8'-7"	3.03 m 9'-11"	3.39 m 11'-1"	3.05 m 10'-0"	3.52 m 11'-6"	3.93 m 12'-10"
6.0 m 19'-8"	2.04 m 6'-8"	2.35 m 7'-8"	2.63 m 8'-7"	2.49 m 8'-1"	2.88 m 9'-5"	3.22 m 10'-6"	2.89 m 9'-5"	3.34 m 10'-11"	3.73 m 12'-2"

Notes to Table 9.23.4.2.-H:

- (1) Beam spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed live load on the floor does not exceed that specified for residential areas as described in Table 4.1.5.3.
- (2) When floors have a concrete topping of not more than 51 mm (2"), the spans must be multiplied by 0.8.
- (3) Supported length means half the sum of the joists spans on both sides of the beam.
- (4) Straight interpolation may be used for other supported lengths.
- (5) Spans are clear spans between supports. For total span, add two bearing lengths.
- (6) 3-ply beams with supported lengths greater than 4.2 m (13' 9") require minimum bearing length of 114 mm (4 1/2"). All other beams require minimum bearing length of 76 mm (3").

Maximum Spans for Built-up Wood Floor Beams Supporting not more than Two Floors⁽¹⁾⁽²⁾

No.1 and No.2 Spruce

Table 9.23.4.2.-I

Forming part of Sentences 9.23.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Supported Length, m ⁽³⁾⁽⁴⁾ / ft-in	Maximum Span, m ⁽⁵⁾⁽⁶⁾ / ft-in								
	Size of Built-up Beam, mm / ft-in								
	3-38x184 3-2"x8"	4-38x184 4-2"x8"	5-38x184 5-2"x8"	3-38x235 3-2"x10"	4-38x235 4-2"x10"	5-38x235 5-2"x10"	3-38x286 3-2"x12"	4-38x286 4-2"x12"	5-38x286 5-2"x12"
2.4 m 7'-10"	2.41 m 7'-10"	2.79 m 9'-1"	3.03 m 9'-11"	2.95 m 9'-8"	3.41 m 11'-2"	3.81 m 12'-6"	3.42 m 11'-2"	3.95 m 12'-11"	4.42 m 14'-6"
3.0 m 9'-10"	2.16 m 7'-1"	2.49 m 8'-2"	2.79 m 9'-1"	2.64 m 8'-7"	3.05 m 10'-0"	3.41 m 11'-2"	3.06 m 10'-0"	3.53 m 11'-6"	3.95 m 12'-11"
3.6 m 11'-9"	1.97 m 6'-5"	2.27 m 7'-5"	2.54 m 8'-4"	2.41 m 7'-10"	2.78 m 9'-1"	3.11 m 10'-2"	2.79 m 9'-1"	3.23 m 10'-7"	3.61 m 11'-10"
4.2 m 13'-9"	1.82 m 5'-11"	2.11 m 6'-11"	2.35 m 7'-8"	2.23 m 7'-3"	2.57 m 8'-5"	2.88 m 9'-5"	2.59 m 8'-5"	2.99 m 9'-9"	3.34 m 10'-11"
4.8 m 15'-8"	1.71 m 5'-7"	1.97 m 6'-5"	2.20 m 7'-2"	2.09 m 6'-10"	2.41 m 7'-10"	2.69 m 8'-10"	2.42 m 7'-11"	2.79 m 9'-1"	3.12 m 10'-2"
5.4 m 17'-8"	1.61 m 5'-3"	1.86 m 6'-1"	2.08 m 6'-9"	1.97 m 6'-5"	2.27 m 7'-5"	2.54 m 8'-4"	2.28 m 7'-5"	2.63 m 8'-7"	2.95 m 9'-8"
6.0 m 19'-8"	1.53 m 5'-0"	1.76 m 5'-9"	1.97 m 6'-5"	1.86 m 6'-1"	2.15 m 7'-0"	2.41 m 7'-10"	2.11 m 6'-11"	2.50 m 8'-2"	2.79 m 9'-1"

Notes to Table 9.23.4.2.-I:

- (1) Beam spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed live load on the floor does not exceed that specified for residential areas as described in Table 4.1.5.3.
- (2) When floors have a concrete topping of not more than 51 mm (2"), the spans must be multiplied by 0.8.
- (3) Supported length means half the sum of the joists spans on both sides of the beam.
- (4) Straight interpolation may be used for other supported lengths.
- (5) Spans are clear spans between supports. For total span, add two bearing lengths.
- (6) 3-ply beams require minimum bearing of 114 mm (4 1/2"). 4-ply and 5-ply beams with supported lengths greater than 3 m (9' 10") require minimum bearing length of 114 mm (4 1/2"). All other beams require minimum bearing length of 76 mm (3").

Maximum Spans for Built-up Wood Floor Beams Supporting not more than Three Floors⁽¹⁾⁽²⁾

No.1 and No.2 Spruce

Table 9.23.4.2.-J

Forming part of Sentences 9.23.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Supported Length, m ⁽³⁾⁽⁴⁾ / ft-in	Maximum Span, m ⁽⁵⁾⁽⁶⁾ / ft-in								
	Size of Built-up Beam, mm / ft-in								
	3-38x184 3-2"x8"	4-38x184 4-2"x8"	5-38x184 5-2"x8"	3-38x235 3-2"x10"	4-38x235 4-2"x10"	5-38x235 5-2"x10"	3-38x286 3-2"x12"	4-38x286 4-2"x12"	5-38x286 5-2"x12"
2.4 m 7'-10"	2.01 m 6'-7"	2.32 m 7'-7"	2.60 m 8'-6"	2.46 m 8'-0"	2.84 m 9'-3"	3.17 m 10'-4"	2.85 m 9'-4"	3.29 m 10'-9"	3.68 m 12'-0"
3.0 m 9'-10"	1.80 m 5'-10"	2.08 m 6'-9"	2.32 m 7'-7"	2.20 m 7'-2"	2.54 m 8'-4"	2.84 m 9'-3"	2.55 m 8'-4"	2.95 m 9'-8"	3.29 m 10'-9"
3.6 m 11'-9"	1.64 m 5'-4"	1.90 m 6'-2"	2.12 m 6'-11"	2.01 m 6'-7"	2.32 m 7'-7"	2.59 m 8'-5"	2.33 m 7'-7"	2.69 m 8'-10"	3.01 m 9'-10"
4.2 m 13'-9"	1.52 m 4'-11"	1.75 m 5'-8"	1.96 m 6'-5"	1.85 m 6'-0"	2.15 m 7'-9"	2.40 m 7'-10"	2.10 m 6'-10"	2.49 m 8'-2"	2.78 m 9'-1"
4.8 m 15'-8"	1.40 m 4'-7"	1.64 m 5'-4"	1.84 m 6'-0"	1.68 m 5'-6"	2.01 m 6'-7"	2.24 m 7'-4"	1.91 m 6'-3"	2.33 m 7'-7"	2.60 m 8'-6"
5.4 m 17'-8"	1.28 m 4'-2"	1.55 m 5'-1"	1.73 m 5'-8"	1.54 m 5'-0"	1.89 m 6'-2"	2.12 m 6'-11"	1.76 m 5'-10"	2.16 m 7'-1"	2.46 m 8'-0"
6.0 m 19'-8"	1.19 m 3'-10"	1.47 m 4'-9"	1.64 m 5'-4"	1.44 m 4'-8"	1.76 m 5'-9"	2.01 m 6'-7"	1.64 m 5'-4"	2.00 m 6'-6"	2.33 m 7'-7"

Notes to Table 9.23.4.2.-J:

- (1) Beam spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed live load on the floor does not exceed that specified for residential areas as described in Table 4.1.5.3.
- (2) When floors have a concrete topping of not more than 51 mm (2"), the spans must be multiplied by 0.8.
- (3) Supported length means half the sum of the joists spans on both sides of the beam.
- (4) Straight interpolation may be used for other supported lengths.
- (5) Spans are clear spans between supports. For total span, add two bearing lengths.
- (6) 3-ply beams with supported lengths greater than 4.2 m (13' 9") require minimum bearing length of 152 mm (6"). All other beams require minimum bearing length of 114 mm (4 1/2").

Maximum Spans for Spruce – Pine – Fir Lintels – Non-Structural Sheathing⁽¹⁾

No.1 and No.2 Spruce

Table 9.23.12.3.-C

Forming part of Sentences 9.23.2.8.(1), 9.23.4.5.(1), 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size, mm / in ⁽²⁾	Maximum Span, m / ft-in ⁽³⁾⁽⁴⁾	
		Exterior Walls	Interior Walls
Limited attic storage and ceiling	2-38x89 / 2-2x4	No values in this field	1.27 m / 4'-2"
	2-38x140 / 2-2x6		1.93 m / 6'-3"
	2-38x184 / 2-2x8		2.35 m / 7'-8"
	2-38x235 / 2-2x10		2.88 m / 9'-5"
	2-38x286 / 2-2x12		3.34 m / 10'-11"
Roof and ceiling only [tributary width of 0.6 m (1'-11") maximum] ⁽⁵⁾	2-38x89 / 2-2x4	2.02 m / 6'-7"	1.88 m / 6'-2"
	2-38x140 / 2-2x6	3.18 m / 10'-5"	2.96 m / 9'-8"
	2-38x184 / 2-2x8	4.18 m / 13'-8"	3.88 m / 12'-8"
	2-38x235 / 2-2x10	5.34 m / 17'-6"	4.96 m / 16'-3"
	2-38x286 / 2-2x12	6.21 m / 20'-4"	5.87 m / 19'-3"
Roof and ceiling only [tributary width of 4.9 m (16'-0") maximum] ⁽⁶⁾	2-38x89 / 2-2x4	1.01 m / 3'-3"	0.93 m / 3'-0"
	2-38x140 / 2-2x6	1.48 m / 4'-10"	1.35 m / 4'-5"
	2-38x184 / 2-2x8	1.80 m / 5'-10"	1.64 m / 5'-4"
	2-38x235 / 2-2x10	2.20 m / 7'-2"	2.01 m / 6'-7"
	2-38x286 / 2-2x12	2.56 m / 8'-4"	2.33 m / 7'-7"
Roof, ceiling and 1 storey ⁽³⁾⁽⁶⁾⁽⁷⁾	2-38x89 / 2-2x4	0.89 m / 2'-11"	0.74 m / 2'-5"
	2-38x140 / 2-2x6	1.27 m / 4'-2"	1.02 m / 3'-4"
	2-38x184 / 2-2x8	1.55 m / 5'-1"	1.20 m / 3'-11"
	2-38x235 / 2-2x10	1.89 m / 6'-2"	1.45 m / 4'-9"
	2-38x286 / 2-2x12	2.15 m / 7'-0"	1.66 m / 5'-5"
Roof, ceiling and 2 storeys ⁽³⁾⁽⁶⁾⁽⁷⁾	2-38x89 / 2-2x4	0.83 m / 2'-8"	0.64 m / 2'-2"
	2-38x140 / 2-2x6	1.19 m / 3'-10"	0.88 m / 2'-10"
	2-38x184 / 2-2x8	1.44 m / 4'-8"	1.05 m / 3'-5"
	2-38x235 / 2-2x10	1.72 m / 5'-7"	1.27 m / 4'-2"
	2-38x286 / 2-2x12	1.96 m / 6'-5"	1.45 m / 4'-9"
Roof, ceiling and 3 storeys ⁽³⁾⁽⁶⁾⁽⁷⁾	2-38x89 / 2-2x4	0.80 m / 2'-7"	0.59 m / 1'-11"
	2-38x140 / 2-2x6	1.14 m / 3'-8"	0.81 m / 2'-7"
	2-38x184 / 2-2x8	1.35 m / 4'-5"	0.97 m / 3'-2"
	2-38x235 / 2-2x10	1.62 m / 5'-3"	1.17 m / 3'-10"
	2-38x286 / 2-2x12	1.84 m / 6'-0"	1.35 m / 4'-5"

Notes to Table A-15:

- (1) Where structural sheathing is used, lintel spans may be increased by 15%. Structural sheathing consists of a minimum 9.5 mm thick structural panel conforming to CSA O121, CSA O151, CSA O325 or CSA O437.0 fastened with a least two rows of fasteners to the exterior face of the lintel, and a single row to the top plates and studs. Fasteners shall conform to Table 9.23.3.5.-A
- (2) A single piece of 89 mm (4") thick lumber may be used in lieu of 2 pieces of 38 mm (2") thick lumber on edge.
- (3) If floor joists span the full width of the building without support, lintel spans shall be reduced by 15% for "Roof, ceiling and 1 storey", by 20% for "Roof, ceiling and 2 storeys", and by 25% for "Roof, ceiling and 3 storeys".
- (4) For ends of lintels fully supported by walls, provide minimum bearing length of 38 mm (2") for lintel spans up to 3 m (9'-10"), or minimum bearing length of 76 mm (3") for lintel spans greater than 3 m.
- (5) Spans for 0.6 m (2'-0") tributary width are calculated for lintels in end walls that support only a 0.6 m (2'-0") width of roof and ceiling, but do not support roof joists, roof rafters or roof trusses.
- (6) Lintel spans are calculated based on a maximum floor joist, roof joist or rafter span of 4.9 m (16'-0") and a maximum roof truss span of 9.8 m (32'-2"). Lintel spans may be increased by 5% if rafter and joist spans are not more than 4.3 m (14'-0") and roof truss spans are not more than 8.6 m (28'-2"). Spans may be increased by 10% if rafter and joist spans are not more than 3.7 m (12'-0") and roof trusses are not more than 7.4 m (24'-3").
- (7) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed live load does not exceed that specified for residential areas as described in Table 4.1.5.3.