

Double Fir Specific Gravity .50, Old growth (close grain) is .44 New Growth  
 Specific Gravity is .37  $.44/.50 = .88$   $.37/.50 = .74$

FASTENER	DOUGLAS FIR	Close Grain REDWOOD
10d with 1 1/2" penetration	188#	.88 X 188# = 165#
8d toenail 1" penetration	120#	106#
15 gage staples 1" penetration	45#	40#

Bolts in 1 1/2" sill

BOLT	1 1/2" DOUGLAS FIR	1 1/2" Open Grain REDWOOD
1/2 bolt	1,037#	.74 X 1037# = 912#
1/2 bolt with MSP	1,340#	1179#
5/8 bolt	1,485#	1306#
5/8 bolt with MSP	1,485	1306#
5/8 bolt in 3 by	1,890#	

Bolts in 2" sill

BOLT	Close Grain REDWOOD
1/2 bolt	1,119#
1/2 bolt with MSP	1,340#
5/8 bolt	1,555#
5/8 bolt with MSP	1,555#

URFP	DOUGLAS FIR	Old Growth REDWOOD
	1,530#	.88 X 1530# = 1346#

URFP	DOUGLAS FIR	New Growth REDWOOD
	1,530#	.74 X 1530# = 1132#

UFP10	DOUGLAS FIR	Old Growth REDWOOD
	1,340#	.88 X 1340# = 1179#

UFP10	DOUGLAS FIR	New Growth REDWOOD
	1,340#	.74 X 1340# = 991#

STT	DOUGLAS FIR	REDWOOD
L90	925#	.88 X 925# = 814#
A23	535#	470#
LTP4	670#	589#
H10AR	490#	----
H10A	565#	

New growth redwood multiply these values by .74

### SIMPSON SDS SCREWS

	DOUGLAS FIR	REDWOOD
1 1/2" penetration	300#	.88 X 300# = 264#
2" penetration	450#	396#
Over 2 1/4" penetration	550#	484#

TABLE 4—CONNECTION GEOMETRY

CONDITION <sup>1</sup>		MINIMUM DISTANCE OR SPACING (in.)
Edge distance	Perpendicular to grain loading (Loaded or unloaded edge)	1 1/2
	Parallel to grain loading	1
End distance	Perpendicular to grain loading	4
	Parallel to grain loading (Loading toward or away from end)	3
Spacing (Loading parallel or perpendicular to grain)	Between fasteners in a row	3
	Between rows	3
	Between staggered rows	1 1/2

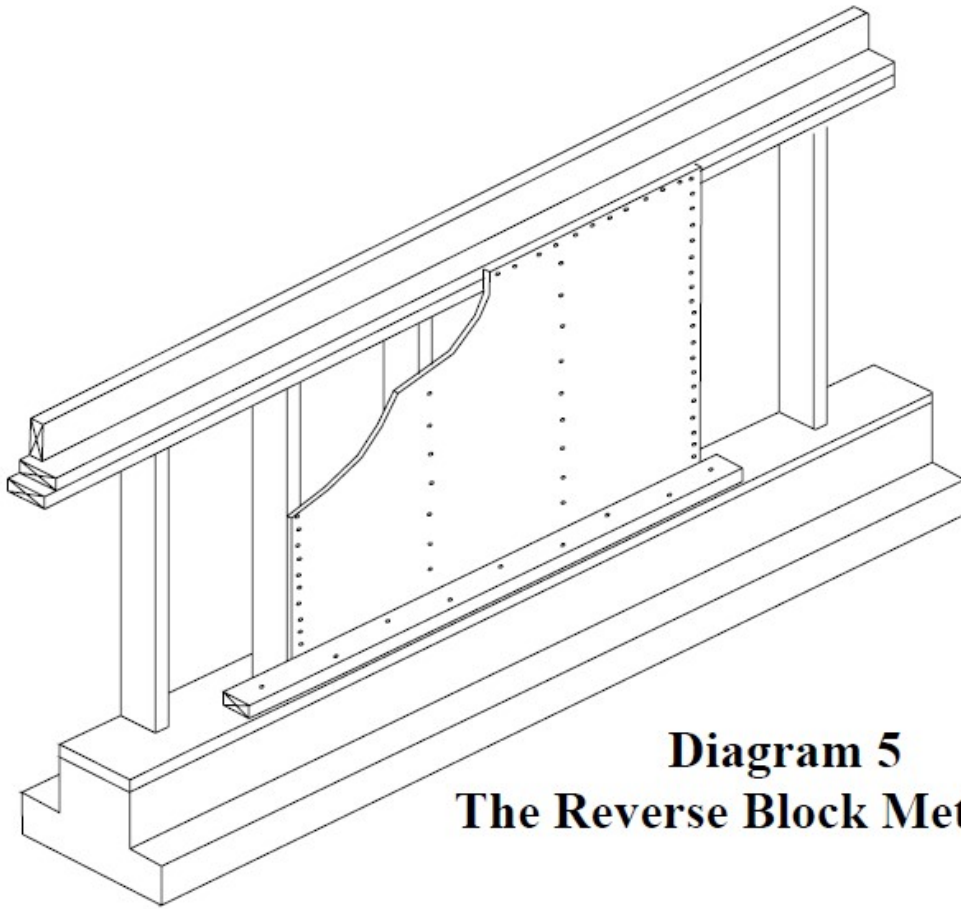
For SI: 1 inch = 25.4 mm.

<sup>1</sup>Edge distances, end distances and spacing of the screws must be sufficient to prevent splitting of the wood, or as required by this table, whichever is the more restrictive.

<sup>2</sup>Values for spacing between staggered rows apply where screws in adjacent rows are offset by half of the spacing between screws in a row.

**Table C12.4-1 Nail Minimum Spacing Tables**

	Wood Side Members	
	Not	
	Prebored	Prebored
Edge distance	$2.5d$	$2.5d$
End distance		
- tension load parallel to grain	$15d$	$10d$
- compression load parallel to grain	$10d$	$5d$
Spacing (pitch) between fasteners in a row		
- parallel to grain	$15d$	$10d$
- perpendicular to grain	$10d$	$5d$
Spacing (gage) between rows of fasteners		
- in-line	$5d$	$3d$
- staggered	$2.5d$	$2.5d$



**Diagram 5**  
**The Reverse Block Method**

