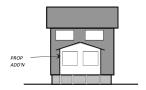


Peaked Roof, 1'0" Overhangs and Lookouts, (2) - Posts/Piers

A	, B			D	IMENSION '	В'			Table assumes 1'-0"	
	(b	4'	6'	8'	10'	12'	14'	16'	overhangs & lookouts	
		11"	12"	14"	15"	16"	17"	19"	Min. Footing Bottom Diameter	
	4'	2x8	2x8	2x8	2x8	2x8	2x8	2x8	Joist Size @ 16" O.C.	
	4	1-2x8 / 529	1-2x8 / 643	1-2x8 / 757	1-2x8 / 871	1-2x8 / 985	1-2x8 / 1,099	1-2x8 / 1,213	Beam 'A' / Reaction lbs *	
		2-2x8	2-2x8	2-2x8	2-2x10	2-2x12	3-2x12	3-2x12	Beam 'B'	
		12"	14"	16"	17"	18"	20"		Min. Footing Bottom Diameter	
	C.	2x8	2x8	2x8	2x8	2x8	2x8		Joist Size @ 16" O.C.	
	6'	1-2x8 / 793	2-2x8 / 964	2-2x8 / 1,135	2-2x8 / 1,306	2-2x8 / 1,477	3-2x8 / 1,648		Beam 'A' / Reaction lbs *	
13		2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	3-2x12		Beam 'B'	
	8'	13"	15"	17"	19"	20"	22"		Min. Footing Bottom Diameter	
see Note		2x8	2x8	2x8	2x8	2x8	2x10		Joist Size @ 16" O.C.	
ee		2-2x8 / 1,057	3-2x8 / 1,285	3-2x8 / 1,513	3-2x8 / 1,741	3-2x8 / 1,969	3-2x10 / 2,197		Beam 'A' / Reaction lbs *	
'A		2-2x8	2-2x8	2-2x10	2-2x12	3-2x10	3-2x12		Beam 'B'	
		15"	17"	19"	21"	22"		•	Min. Footing Bottom Diameter	
16	401	2x8	2x8	2x10	2x10	2x10			Joist Size @ 16" O.C.	
S	10'	3-2x8 / 1,322	3-2x8 / 1,607	3-2x10 / 1,892	3-2x10 / 2,177	3-2x10 / 2,462			Beam 'A' / Reaction lbs *	
DIMENSION		2-2x8	2-2x8	2-2x10	2-2x12	3-2x12			Beam 'B'	
Σ		16"	18"	20"	22"		_'		Min. Footing Bottom Diameter	
□	12'	2x10	2x10	2x10	2x12	Addition	s on posts / pie	ers which	Joist Size @ 16" O.C.	
	12	3-2x10 / 1,586	3-2x10 / 1,928	3-2x10 / 2,270	3-2x12 / 2,612	exceed 1	20 SF or deviate	from this	Beam 'A' / Reaction lbs *	
		2-2x8	2-2x8	2-2x10	2-2x12	table will	require a compl	ete	Beam 'B'	
		17"	19"	21"		design and	d drawings certif	ied by a	Min. Footing Bottom Diameter	
		2x10 @ 12" O.C.	2x12	2x12		MN licen	sed Structural Er	ngineer	Joist Size @ 16" O.C.	
	14'	3-2x10 / 1,850	3-2x12 / 2,249	3-2x12 / 2,648				-	Beam 'A' / Reaction lbs *	
		2-2x8	2-2x8	2-2x10					Beam 'B'	



NOTES:

- . Roof framing is assumed to have overhangs and lookouts ≤ 1'-0".
- 2. Roof framing is parallel to existing house.
- 3. Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with no intermediate (center) footing.
- 5. CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.
- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.

DESIGN LOADS:

Roof Load = 42 psf LL + 15 psf DL L/240

Wall Load = 10 psf DL

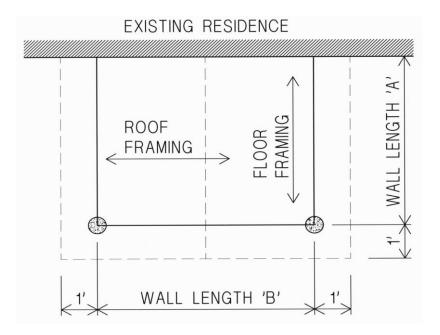
Floor Load = 40 psf LL + 10 psf DL L/360

Soil Bearing = 2,000 psf

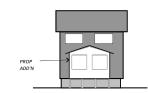
Capacity of (1) - 1/2 inch dia. lag bolt = 180 lbs



- 9. Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt or approved equal.
- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a minimum of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. The ledger attachment to the existing rim / structure controls.
- 14. Maximum grade to top of floor elevation shall not exceed 10'-0".
- 15. All wood exposed to the elements must be decay resistant or treated.
- 16. Walls and roof system to use the requirements shown in the Minnesota Residential Code.



Peaked Roof, 1'0" Overhangs and Lookouts, (3) - Posts/Piers



Ах	R		DIMENSION 'B' see Note 14 8' 10' 12' 14' 16' 18' 20' 22' 24' 26' 28' 30'												
		8'	10'	12'	14'	16'	18'	20'	22'	overhangs & lookouts					
		12"	13"	14"	14"	15"	16"	17"	18"	18"	19"	19"	20"	Corner Footing Bottom Dia.	
		12"	13"	15"	16"	17"	16"	17"	18"	18"	19"	20"	21"	Center Footing Bottom Dia.	
	4'	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	Joist Size @ 16" O.C.	
		1-2x8 / 757	1-2x8 / 871	1-2x8 / 985	1-2x8 / 1,099	1-2x8 / 1,213	2-2x8 / 1,327	2-2x8 / 1,441	2-2x8 / 1,555	2-2x8 / 1,669	2-2x8 / 1,783	2-2x8 / 1,897	2-2x8 / 2,011	Beam 'A' / Reaction lbs *	
		2-2x8	2-2x8	2-2x8	2-2x8	2-2x8	3-2x8	3-2x8	3-2x10	3-2x10	3-2x10	3-2x12	3-2x12	Beam 'B'	
		13"	15"	16"	17"	18"	18"	19"			Corner Footing Bottom Dia.				
		13"	14"	15"	17"	18"	17"	18"						Center Footing Bottom Dia.	
	6'	2x8	2x8	2x8	2x8	2x8	2x8	2x8						Joist Size @ 16" O.C.	
		2-2x8 / 1,135	2-2x8 / 1,306	2-2x8 / 1,477	3-2x8 / 1,648	3-2x8 / 1,819	3-2x8 / 1,990	3-2x8 / 2,161						Beam 'A' / Reaction lbs *	
		2-2x8	2-2x8	2-2x8	2-2x8	2-2x10	3-2x8	3-2x8						Beam 'B'	
13		15"	16"	17"	19"				•					Corner Footing Bottom Dia.	
		14"	15"	17"	18"					Multi-Span				Center Footing Bottom Dia.	
see Note	8'	2x8	2x8	2x8	2x10									Joist Size @ 16" O.C.	
see		3-2x8 / 1,513	3-2x8 / 1,741	3-2x8 / 1,969	3-2x10 / 2,197				L ≤ 8'-0"		L ≤ 8'-0"			Beam 'A' / Reaction lbs *	
_₹		2-2x8	2-2x8	2-2x8	2-2x8					Countries		I		Beam 'B'	
		16"	18"	19"				Corner		Center See No		Corne	r	Corner Footing Bottom Dia.	
ō		15"	16"	18"						JCC NO	14			Center Footing Bottom Dia.	
ISI	10'	2x10	2x10	2x10					Simple Span			Simple Span		Joist Size @ 16" O.C.	
回回		3-2x10 / 1,892	3-2x10 / 2,177	3-2x10 / 2,462					simple span		Simple Span			Beam 'A' / Reaction lbs *	
DIMENSION		2-2x8	2-2x8	2-2x8					L > 8'-0"		L > 8'-0"			Beam 'B'	
		18"	19"											Corner Footing Bottom Dia.	
		15"	17"					Corner		Center		Corne	r	Center Footing Bottom Dia.	
	12'	2x10	2x12							See No	te 14			Joist Size @ 16" O.C.	
		3-2x10 / 2,270	3-2x12 / 2,612	A -I -I:+: -		:								Beam 'A' / Reaction lbs *	
		2-2x8	2-2x8		ns on posts / p eviate from thi									Beam 'B'	
		19"			te design and		•							Corner Footing Bottom Dia.	
	4.41	16"		•	ensed Structura	•	,							Center Footing Bottom Dia.	
	14'	2x12												Joist Size @ 16" O.C.	
		3-2x12 / 2,648												Beam 'A' / Reaction lbs *	
		2-2x8												Beam 'B'	

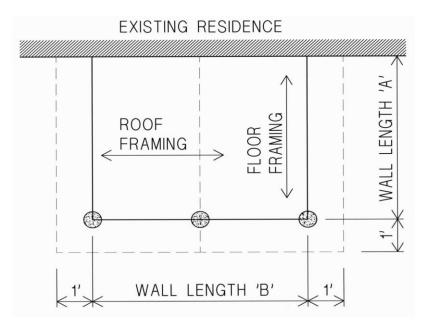
NOTES

- Roof framing is assumed to have overhangs and lookouts ≤ 1'-0".
- Roof framing is parallel to existing house.
- 3. Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with one intermediate (center) footing.
- 5. CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.

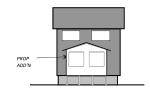
DESIGN LOADS:

Capacity of (1) - 1/2 inch dia. lag bolt = 180 lbs Capacity of (1) - 1/2 inch dia. thru-bolt = 350 lbs

- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt (with 7 inches embedment) or approved equal.
- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a min. of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. Ledger attachment to the existing rim / structure controls.
- Beam 'B' ≤ 16'-0" (wall length B) shall be one length of lumber (multi-span condition). Beam 'B' > 16'-0" (wall length B) shall be two separate lengths of lumber (two simple spans) and spliced at the center post / pier.
- 15. Maximum grade to top of floor elevation shall not exceed 10'-0".



Peaked Roof, 2'0" Overhangs and Lookouts, (2) - Posts/Piers



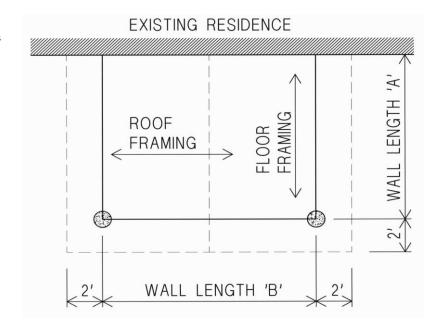
Ах	, R			D	IMENSION '	B'			Table assumes 2'-0"
		4'	6'	8'	10'	12'	14'	16'	overhangs & lookouts
		12"	13"	15"	16"	18"	19"		Min. Footing Bottom Diameter
	4'	2x8	2x8	2x8	2x8	2x8	2x8		Joist Size @ 16" O.C.
	4	1-2x8 / 643	1-2x8 / 757	1-2x8 / 871	1-2x8 / 985	1-2x8 / 1,099	2-2x8 / 1,213		Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x10	2-2x12	2-2x12	3-2x12		Beam 'B'
		13"	15"	17"	18"	20"	21"		Min. Footing Bottom Diameter
	6'	2x8	2x8	2x8	2x8	2x8	2x8		Joist Size @ 16" O.C.
	6.	2-2x8 / 964	2-2x8 / 1,135	2-2x8 / 1,306	2-2x8 / 1,477	3-2x8 / 1,648	3-2x8 / 1,819		Beam 'A' / Reaction lbs *
13		2-2x8	2-2x8	2-2x10	2-2x12	3-2x10	3-2x12		Beam 'B'
.e 1		15"	17"	18"	20"	22"		_	Min. Footing Bottom Diameter
Note	O.	2x8	2x8	2x8	2x8	2x10			Joist Size @ 16" O.C.
see	8'	3-2x8 / 1,285	3-2x8 / 1,513	3-2x8 / 1,741	3-2x8 / 1,969	3-2x10 / 2,197			Beam 'A' / Reaction lbs *
'A'		2-2x8	2-2x8	2-2x10	2-2x12	3-2x12			Beam 'B'
		16"	18"	20"	22"	23"			Min. Footing Bottom Diameter
16	10'	2x8	2x10	2x10	2x10	2x12			Joist Size @ 16" O.C.
SI	10	3-2x8 / 1,607	3-2x10 / 1,892	3-2x10 / 2,177	3-2x10 / 2,462	3-2x12 / 2,747			Beam 'A' / Reaction lbs *
DIMENSION		2-2x8	2-2x8	2-2x10	2-2x12	3-2x12			Beam 'B'
Σ		17"	19"	21"	23"		-		Min. Footing Bottom Diameter
□	12'	2x10	2x10	2x12	2x12	Addition	s on posts / pie	ers which	Joist Size @ 16" O.C.
	12	3-2x10 / 1,928	3-2x10 / 2,270	3-2x12 / 2,612	3-2x12 / 2,954	exceed 1	20 SF or deviate	from this	Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x10	2-2x12	table will	require a compl	ete	Beam 'B'
		18"	21"			design and	d drawings certif	ied by a	Min. Footing Bottom Diameter
	441	2x12	2x12			MN licen	sed Structural Er	ngineer	Joist Size @ 16" O.C.
	14'	3-2x12 / 2,249	3-2x12 / 2,648						Beam 'A' / Reaction lbs *
		2-2x8	2-2x8						Beam 'B'

NOTES:

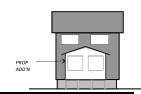
- Roof framing is assumed to have overhangs and lookouts > 1'-0", but ≤ 2'-0".
- 2. Roof framing is parallel to existing house.
- Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with no intermediate (center) footing.
- CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.
- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- 9. Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt or approved equal.

DESIGN LOADS:

- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a minimum of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. The ledger attachment to the existing rim / structure controls.
- 14. Maximum grade to top of floor elevation shall not exceed 10'-0".



Peaked Roof, 2'0" Overhangs and Lookouts, (3) - Posts/Piers



Ах	R					DI	MENSION	'B' see No	e 14					Table assumes 2'-0"
		8'	10'	12'	14'	16'	18'	20'	22' 24' 26' 28'				30'	overhangs & lookouts
		12"	14"	14"	15"	16"	17"	18"	19"	19"	20"	21"	21"	Corner Footing Bottom Dia.
		13"	15"	16"	17"	18"	17"	18"	19"	20"	21"	22"	22"	Center Footing Bottom Dia.
	4'	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	Joist Size @ 16" O.C.
		1-2x8 / 871	1-2x8 / 985	1-2x8 / 1,099	1-2x8 / 1,213	2-2x8 / 1,327	2-2x8 / 1,441	2-2x8 / 1,555	2-2x8 / 1,669	2-2x8 / 1,783	2-2x8 / 1,897	2-2x8 / 2,011	2-2x8 / 2,125	Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x8	2-2x10	3-2x8	3-2x8	3-2x10	3-2x10	3-2x12	3-2x12	3-2x12	Beam 'B'
		14"	16"	17"	18"	19"	20"	20"						Corner Footing Bottom Dia.
		14"	16"	17"	18"	20"	19"	20"						Center Footing Bottom Dia.
	6'	2x8	2x8	2x8	2x8	2x8	2x8	2x8						Joist Size @ 16" O.C.
		2-2x8 / 1,306	2-2x8 / 1,477	3-2x8 / 1,648	3-2x8 / 1,819	3-2x8 / 1,990	3-2x8 / 2,161	3-2x8 / 2,332						Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x8	2-2x10	3-2x8	3-2x10						Beam 'B'
13		16"	17"	18"	20"				_	NA. JAL C		,	Corner Footing Bottom Dia.	
e 1		15"	17"	18"	19"			-	Multi-Span					Center Footing Bottom Dia.
Note	8'	2x8	2x8	2x10	2x10				L ≤ 8'-0)"	L ≤ 8'-(0"		Joist Size @ 16" O.C.
see		3-2x8 / 1,741	3-2x8 / 1,969	3-2x10 / 2,197	3-2x10 / 2,425									Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x10			•	Corner		Center	•	Corner	Beam 'B'
DIMENSION 'A'		18"	19"	20"		•					See Note 14			Corner Footing Bottom Dia.
ō		16"	17"	19"									'	Center Footing Bottom Dia.
ISI	10'	2x10	2x10	2x12					Simple S	pan	Simple S	pan		Joist Size @ 16" O.C.
		3-2x10 / 2,177	3-2x10 / 2,462	3-2x12 / 2,747					L > 8'-0	\"	L > 8'-(0"		Beam 'A' / Reaction lbs *
≥		2-2x8	2-2x8	2-2x8				-	L > 0 - C	,	L > 0 -1	U		Beam 'B'
		19"	20"		-			I	Corner		Center		Corner	Corner Footing Bottom Dia.
		16"	18"						Corner		See Note 14		Corner	Center Footing Bottom Dia.
	12'	2x12	2x12		•	sts / piers whic							ı	Joist Size @ 16" O.C.
		3-2x12 / 2,612	3-2x12 / 2,954			om this table was and drawings	•							Beam 'A' / Reaction lbs *
		2-2x8	2-2x8			uctural Engine	•							Beam 'B'
							.							
	14'													

NOTES:

- Roof framing is assumed to have overhangs and lookouts > $1'-0'' \le 2'-0''$.
- Roof framing is parallel to existing house. 2.
- Floor joists are perpendicular to existing house.
- Footings are at corners of addition with one intermediate (center) footing.
- CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.

DESIGN LOADS:

Roof Load = 42 psf LL + 15 psf DL L/240

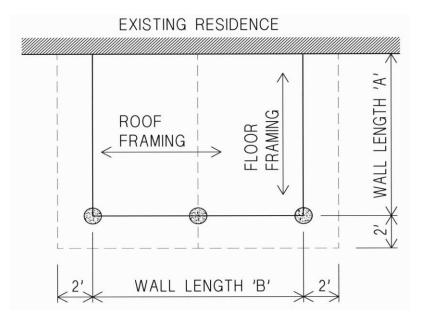
Wall Load = 10 psf DL

Floor Load = 40 psf LL + 10 psf DL L/360

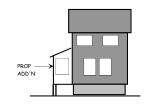
Soil Bearing = 2,000 psf

Capacity of (1) - 1/2 inch dia. lag bolt = 180 lbs

- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt (with 7 inches embedment) or approved equal.
- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a min. of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. Ledger attachment to the existing rim / structure controls.
- Beam 'B' ≤ 16'-0" (wall length B) shall be one length of lumber (multi-span condition). Beam 'B' > 16'-0" (wall length B) shall be two separate lengths of lumber (two simple spans) and spliced at the center post / pier.
- 15. Maximum grade to top of floor elevation shall not exceed 10'-0".



Shed Roof, 1'0" Overhangs and Lookouts, (2) - Posts/Piers



Α >	/ R			D	DIMENSION 'B'												
	`	4'	6'	8'	10'	12'	14'	16'	overhangs & lookouts								
		11"	12"	13"	15"	16"	17"		Min. Footing Bottom Diameter								
	41	2x8	2x8	2x8	2x8	2x8	2x8		Joist Size @ 16" O.C.								
	4'	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415		Beam 'A' / Reaction lbs *								
		2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	3-2x12		Beam 'B'								
		12"	14"	15	17"	18"		•	Min. Footing Bottom Diameter								
	c.	2x8	2x8	2x8	2x8	2x8			Joist Size @ 16" O.C.								
	6'	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622			Beam 'A' / Reaction lbs *								
œ		2-2x8	2-2x8	2-2x10	2-2x12	3-2x12			Beam 'B'								
e 13	8'	14"	16"	17"	19"	20"			Min. Footing Bottom Diameter								
see Note		2x8	2x8	2x8	2x8	2x8			Joist Size @ 16" O.C.								
ee [2-2x8 / 829	2-2x8 / 829	2-2x8 / 829	2-2x8 / 829	2-2x8 / 829			Beam 'A' / Reaction lbs *								
		2-2x8	2-2x8	2-2x12	3-2x12	3-2x12			Beam 'B'								
Α'		15"	17"	19"	21"		_		Min. Footing Bottom Diameter								
N	401	2x8	2x8	2x8	2x8				Joist Size @ 16" O.C.								
SIC	10'	3-2x8 / 1,037	3-2x8 / 1,037	3-2x8 / 1,037	3-2x8 / 1,037	Additio	ns on posts / pie	rs which	Beam 'A' / Reaction lbs *								
Z		2-2x8	2-2x10	2-2x12	3-2x12	exceed 1	.20 SF or deviate	from this	Beam 'B'								
DIMENSION		16"	19"	20"	22"	table will	require a compl	ete design	Min. Footing Bottom Diameter								
D	12'	2x8	2x8	2x8	2x8		awings certified I	J	Joist Size @ 16" O.C.								
	12	3-2x8 / 1,244	3-2x8 / 1,244	3-2x8 / 1,244	3-2x8 / 1,244		sed Structural En	•	Beam 'A' / Reaction lbs *								
		2-2x8	2-2x10	2-2x12	3-2x12	liceris	sca Stractarar En	giricci	Beam 'B'								
		18"	20"	22"		•			Min. Footing Bottom Diameter								
	4.41	2x10	2x10	2x10					Joist Size @ 16" O.C.								
	14'	3-2x10 / 1,451	3-2x10 / 1,451	3-2x10 / 1,451					Beam 'A' / Reaction lbs *								
		2-2x8	2-2x10	3-2x10					Beam 'B'								

NOTES:

- 1. Roof framing is assumed to have overhangs and lookouts $\leq 1'-0''$.
- Roof framing is perpendicular to existing house.
- 3. Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with no intermediate (center) footing.
- 5. CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.
- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt or approved equal.

DESIGN LOADS:

Roof Load = 42 psf LL + 15 psf DL L/240

Wall Load = 10 psf DL

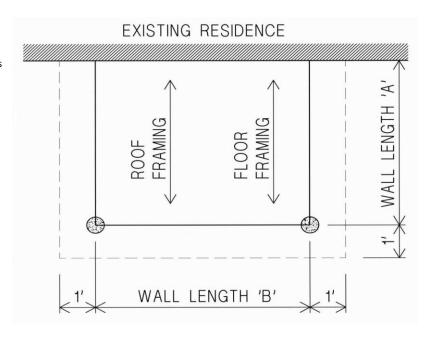
Floor Load = 40 psf LL + 10 psf DL L/360

Soil Bearing = 2,000 psf

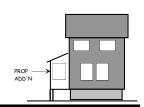
Capacity of (1) - 1/2 inch dia. lag bolt = 180 lbs

Capacity of (1) - 1/2 inch dia. thru-bolt = 350 lbs

- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a minimum of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. The ledger attachment to the existing rim / structure controls.
- 14. Maximum grade to top of floor elevation shall not exceed 10'-0".



Shed Roof, 1'0" Overhangs and Lookouts, (3) - Posts/Piers



Ах	R					DI	MENSION	'B' see Note	e 14					Table assumes 1'-0"
		8' 10' 12' 14'				16'	18'	20'	22'	24'	26'	28'	30'	overhangs & lookouts
		11"	11"	12"	13"	13"	14"	15"	15"	16"	16"	17"	17"	Corner Footing Bottom Dia.
		13"	15"	16"	17"	18"	17"	18"	19"	20"	21"	22"	22"	Center Footing Bottom Dia.
	4'	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	Joist Size @ 16" O.C.
		1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	1-2x8 / 415	Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x8	2-2x10	3-2x8	3-2x8	3-2x10	3-2x10	3-2x12	3-2x12	3-2x12	Beam 'B'
		12"	13"	14"	15"	15"	16"	17"						Corner Footing Bottom Dia.
		15"	17"	18"	20"	21"	20"	21"						Center Footing Bottom Dia.
	6'	2x8	2x8	2x8	2x8	2x8	2x8	2x8						Joist Size @ 16" O.C.
		1-2x8 / 622	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622	1-2x8 / 622						Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x10	2-2x10	3-2x10	3-2x10						Beam 'B'
13		14"	15"	16"	16"									Corner Footing Bottom Dia.
e 1		17"	18"	20"	22"									Center Footing Bottom Dia.
Note	8'	2x8	2x8	2x8	2x8									Joist Size @ 16" O.C.
see		2-2x8 / 829	2-2x8 / 829	2-2x8 / 829	2-2x8 / 829									Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x10					Multi-Spa	ın			Beam 'B'
<u>-</u>		15"	16"	17"										Corner Footing Bottom Dia.
16		18"	20"	22"				L ≤ 8'-0"			L ≤ 8'-0"			Center Footing Bottom Dia.
Si	10'	2x8	2x8	2x8					1					Joist Size @ 16" O.C.
		3-2x8 / 1,037	3-2x8 / 1,037	3-2x8 / 1,037					rner	Center			Corner	Beam 'A' / Reaction lbs *
DIMENSION		2-2x8	2-2x8	2-2x10						Se	e Note 14			Beam 'B'
		16"	18"		•									Corner Footing Bottom Dia.
		19"	22"						Simple Spa	in	Simple Sp	an		Center Footing Bottom Dia.
	12'	2x8	2x8		Additions on p	osts / niers wh	nich exceed		L > 8'-0"		L > 8'-0"			Joist Size @ 16" O.C.
		3-2x8 / 1,244	3-2x8 / 1,244		120 SF or devi	, , ,			2,00		2700			Beam 'A' / Reaction lbs *
		2-2x8	2-2x8		require a com			Cor	ner	■ Ce	enter	•	Corner	Beam 'B'
		18"			certified by a N	ЛN licensed St	ructural				e Note 14			Corner Footing Bottom Dia.
		21"			Engineer									Center Footing Bottom Dia.
	14'	2x10												Joist Size @ 12" O.C.
		3-2x10 / 1,451												Beam 'A' / Reaction lbs *
		2-2x8												Beam 'B'

NOTES

- 1. Roof framing is assumed to have overhangs and lookouts not exceeding 1'-0".
- 2. Roof framing is perpendicular to existing house.
- 3. Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with one intermediate (center) footing.
- 5. CANTILEVERS may not exceed depth of joist or beam.
- Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.

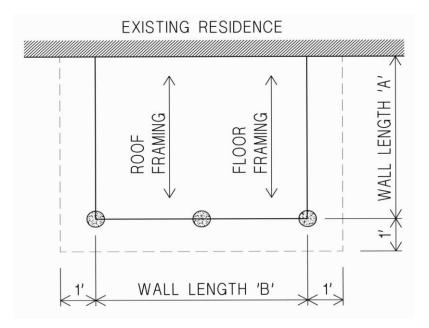
DESIGN LOADS:

Floor Load = 40 psf LL + 10 psf DL L/360

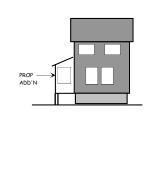
Soil Bearing = 2,000 psf

Capacity of (1) - 1/2 inch dia. lag bolt = 180 lbs Capacity of (1) - 1/2 inch dia. thru-bolt = 350 lbs

- 7. Wood for Beam 'B' must be pressure treated.
- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt (with 7 inches embedment) or approved equal.
- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a min. of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. Ledger attachment to the existing rim / structure controls.
- Beam 'B' ≤ 16'-0" (wall length B) shall be one length of lumber (multi-span condition). Beam 'B' > 16'-0" (wall length B) shall be two separate lengths of lumber (two simple spans) and spliced at the center post / pier.
- 15. Maximum grade to top of floor elevation shall not exceed 10'-0".



Shed Roof, 2'0" Overhangs and Lookouts, (2) - Posts/ Piers



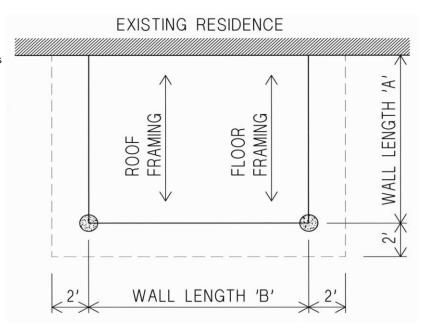
Ax	, R		Table assumes 2'-0"						
775		4'	6'	8'	10'	12'	14'	16'	overhangs & lookouts
		12"	13"	15"	16"	17"	18"		Min. Footing Bottom Diameter
	4'	2x8	2x8	2x8	2x8	2x8	2x8		Joist Size @ 16" O.C.
	4	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529		Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x10	2-2x12	3-2x10	3-2x12		Beam 'B'
		13"	15"	17"	18"	19"		•	Min. Footing Bottom Diameter
	6'	2x8	2x8	2x8	2x8	2x8			Joist Size @ 16" O.C.
	6.	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793			Beam 'A' / Reaction lbs *
3		2-2x8	2-2x8	2-2x10	2-2x12	3-2x12			Beam 'B'
e 13		15"	17"	18"	20"		<u>-</u> '	Min. Footing Bottom Diameter	
Note	8'	2x8	2x8	2x8	2x8			Joist Size @ 16" O.C.	
see I		2-2x8 / 1,057	2-2x8 / 1,057	2-2x8 / 1,057	2-2x8 / 1,057				Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x12	3-2x12			Beam 'B'	
'A'		16"	18"	20"	22"	Additio	ns on posts / pie	Min. Footing Bottom Diameter	
N	10'	2x10	2x10	2x10	2x10		20 SF or deviate		Joist Size @ 16" O.C.
SIC	10	2-2x10 / 1,322	2-2x10 / 1,322	2-2x10 / 1,322	2-2x10 / 1,322	table will require a complete design			Beam 'A' / Reaction lbs *
Z		2-2x8	2-2x10	2-2x12	3-2x12		awings certified I	J	Beam 'B'
DIMENSION		18"	20"	22"	23"		Ü	•	Min. Footing Bottom Diameter
D	421	2x10	2x10	2x10	2x10	licens	ed Structural En	gmeer	Joist Size @ 16" O.C.
	12'	3-2x10 / 1,586	3-2x10 / 1,586	3-2x10 / 1,586	3-2x10 / 1,586				Beam 'A' / Reaction lbs *
		2-2x8	2-2x10	3-2x10	3-2x12				Beam 'B'
		19"	21"	23"					Min. Footing Bottom Diameter
	1.01	2x10	2x10	2x10					Joist Size @ 16" O.C.
	14'	3-2x10 / 1,850	3-2x10 / 1,850	3-2x10 / 1,850					Beam 'A' / Reaction lbs *
		2-2x8	2-2x10	3-2x10					Beam 'B'

NOTES:

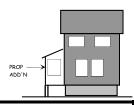
- 1. Roof framing is assumed to have overhangs and lookouts > 1'-0", but $\le 2'-0"$.
- 2. Roof framing is perpendicular to existing house.
- Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with no intermediate (center) footing.
- CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.
- Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt or approved equal.

DESIGN LOADS:

- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a minimum of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. The ledger attachment to the existing rim / structure controls.
- 14. Maximum grade to top of floor elevation shall not exceed 10'-0".



Shed Roof, 2'0" Overhangs and Lookouts, (3) – Posts/ Piers



Ах	, B					DI	MENSION	'B' see No	te 14					Table assumes 2'-0"
		8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	overhangs & lookouts
		12"	12"	13"	14"	15"	15"	16"	16"	17"	18"	18"		Corner Footing Bottom Dia.
		14"	16"	17"	19"	20"	19"	20"	21"	22"	23"	23"		Center Footing Bottom Dia.
	4'	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8	2x8		Joist Size @ 16" O.C.
		1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529	1-2x8 / 529		Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x8	2-2x10	3-2x8	3-2x10	3-2x10	3-2x12	3-2x12	3-2x12		Beam 'B'
		13"	14"	15"	16"	17"	17"	18"				_	Corner Footing Bottom Dia.	
		16"	18"	19"	21"	22"	21"	22"						Center Footing Bottom Dia.
	6'	2x8	2x8	2x8	2x8	2x8	2x8	2x8						Joist Size @ 16" O.C.
		1-2x8 / 793	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793	1-2x8 / 793						Beam 'A' / Reaction lbs *
		2-2x8	2-2x8	2-2x8	2-2x10	2-2x10	3-2x10	3-2x10					Beam 'B'	
13		15"	16"	17"	18"									Corner Footing Bottom Dia.
te 1	8'	17"	19"	21"	23"			_						Center Footing Bottom Dia.
see Note		2x8	2x8	2x8	2x8					Multi-Sp	an			Joist Size @ 16" O.C.
ee		2-2x8 / 1,057	2-2x8 / 1,057	2-2x8 / 1,057	2-2x8 / 1,057									Beam 'A' / Reaction lbs *
ا م.		2-2x8	2-2x8	2-2x10	2-2x10			F	L ≤ 8'-0	"	L ≤ 8'-0)"		Beam 'B'
		16"	17"	18"		•		I		l			•	Corner Footing Bottom Dia.
l ó l		19"	21"	23"					Corner		enter ee Note 14		Corner	Center Footing Bottom Dia.
S	10'	2x8	2x8	2x8						3	ee Note 14			Joist Size @ 16" O.C.
		3-2x8 / 1,322	3-2x8 / 1,322	3-2x8 / 1,322					6: 1.6	l l	6: 1.6		7	Beam 'A' / Reaction lbs *
DIMENSION		2-2x8	2-2x8	2-2x10				F	Simple Sp	oan	Simple S	pan		Beam 'B'
		18"	19"						L > 8'-0	"	L > 8'-0)"		Corner Footing Bottom Dia.
		20"	22"											Center Footing Bottom Dia.
	12'	2x10	2x10					•	Corner	" c	enter		Corner	Joist Size @ 16" O.C.
		3-2x10 / 1,586	3-2x10 / 1,586			, ,	ich exceed 120)		S	ee Note 14			Beam 'A' / Reaction lbs *
		2-2x8	2-2x8		F or deviate fr		•							Beam 'B'
		19"				_	s certified by a	3						Corner Footing Bottom Dia.
		21"		ľ	MN licensed St	ructurai Engine	eer							Center Footing Bottom Dia.
	14'	2x10												Joist Size @ 12" O.C.
		3-2x10 / 1,850												Beam 'A' / Reaction lbs *
		2-2x8												Beam 'B'

NOTE

- 1. Roof framing is assumed to have overhangs and lookouts > 1'-0", but \leq 2'-0".
- 2. Roof framing is perpendicular to existing house.
- 3. Floor joists are perpendicular to existing house.
- 4. Footings are at corners of addition with one intermediate (center) footing.

DESIGN LOADS:

- 5. CANTILEVERS may not exceed depth of joist or beam.
- 6. Beam sizes for Beams 'A' and 'B' are for Southern Pine No. 2 or Better.
- 7. Wood for Beam 'B' must be pressure treated.
- 8. Diagonal bracing (beam to post) is required on all additions ≥ 4'-0" from grade to top of floor elevation. If Beam 'B' is attached directly to the top of the concrete piers, diagonal bracing is not required.
- 9. Beams shall be attached to the posts with a post / column cap or the post notched 3 inches from one side (two 2x only) and thru bolted with two or three 1/2 inch diameter bolts and washers. Three ply 2x beams require post / column caps.
- 10. Posts shall be a minimum 6x6 and be attached to the concrete piers with a post base and anchor bolt (with 7 inches embedment) or approved equal.
- 11. Concrete piers shall be reinforced with a minimum of (1) #4 bar vertical.
- 12. The ledger shall be attached to the existing rim with a min. of two rows 1/2 inch diameter lag bolts at 16 inches O.C.
- *13. Beam 'A' may not be able to be connected to the ledger due to its reaction. Beam 'A' may have to be pocketed into the wall with solid bearing to the foundation (flash as req.). The connection of Beam 'A' at the residence must be reviewed and approved. Ledger attachment to the existing rim / structure controls.
- Beam 'B' ≤ 16'-0" (wall length B) shall be one length of lumber (multi-span condition). Beam 'B' > 16'-0" (wall length B) shall be two separate lengths of lumber (two simple spans) and spliced at the center post / pier.
- 15. Maximum grade to top of floor elevation shall not exceed 10'-0".

Capacity of (1) - 1/2 inch dia. lag bolt = 180 lbs Capacity of (1) - 1/2 inch dia. thru-bolt = 350 lbs

