

Maximum Floor Spans with Vibration Control – Clear Span

A310E WITH OPENING AND 2X4 STRONGBACK

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 9.5 inches / Minimum end-bearing length = 1.5 inches / Maximum offset of opening = 12 inch

		1x4 strapping		2x4 Strongback		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @			
		48" c/c	24" c/c	One	Two	12"	16"	19.2"	24"	12"	16"	19.2"	24"
No ceiling	Nailed only					14'-05"	13'-05"	12'-10"	12'-04"	15'-01"	14'-00"	13'-05"	12'-09"
		✓				14'-06"	13'-06"	12'-11"	12'-04"	15'-01"	14'-01"	13'-06"	12'-09"
			✓			14'-07"	13'-07"	13'-00"	12'-05"	15'-02"	14'-01"	13'-06"	12'-10"
				✓		15'-06"	14'-06"	13'-11"	13'-03"	15'-10"	14'-10"	14'-02"	13'-05"
		✓		✓		15'-07"	14'-07"	13'-11"	13'-03"	15'-10"	14'-10"	14'-03"	13'-06"
			✓	✓		15'-07"	14'-07"	14'-00"	13'-03"	15'-11"	14'-10"	14'-03"	13'-06"
		✓			✓	16'-01"	15'-01"	14'-06"	13'-07"	16'-03"	15'-03"	14'-08"	13'-07"
		✓			✓	16'-01"	15'-01"	14'-06"	13'-07"	16'-04"	15'-04"	14'-08"	13'-07"
		✓		✓	16'-02"	15'-02"	14'-06"	13'-07"	16'-04"	15'-04"	14'-08"	13'-07"	
					15'-07"	14'-09"	14'-03"	13'-09"	16'-05"	15'-06"	15'-00"	14'-00"	
	✓				15'-08"	14'-10"	14'-04"	13'-10"	16'-06"	15'-07"	15'-00"	14'-00"	
		✓			15'-09"	14'-11"	14'-04"	13'-10"	16'-06"	15'-07"	15'-01"	14'-00"	
			✓		16'-09"	15'-10"	15'-04"	14'-00"	17'-03"	16'-04"	15'-09"	14'-00"	
	✓		✓		16'-10"	15'-11"	15'-04"	14'-00"	17'-03"	16'-04"	15'-09"	14'-00"	
	✓	✓		16'-10"	15'-11"	15'-05"	14'-00"	17'-03"	16'-04"	15'-10"	14'-00"		
			✓	17'-04"	16'-05"	15'-11"	14'-00"	17'-08"	16'-10"	16'-00"	14'-00"		
✓			✓	17'-04"	16'-06"	15'-11"	14'-00"	17'-09"	16'-10"	16'-00"	14'-00"		
	✓		✓	17'-05"	16'-06"	15'-11"	14'-00"	17'-09"	16'-10"	16'-00"	14'-00"		
With ceiling	Nailed only					14'-10"	13'-10"	13'-03"	12'-08"	15'-05"	14'-05"	13'-10"	13'-01"
		✓				14'-10"	13'-10"	13'-03"	12'-07"	15'-05"	14'-04"	13'-09"	13'-01"
			✓			15'-00"	14'-00"	13'-05"	12'-09"	15'-07"	14'-06"	13'-11"	13'-03"
				✓		15'-11"	14'-11"	14'-03"	13'-07"	16'-03"	15'-02"	14'-07"	13'-10"
		✓		✓		15'-10"	14'-10"	14'-03"	13'-06"	16'-02"	15'-01"	14'-06"	13'-09"
			✓	✓		16'-00"	15'-00"	14'-04"	13'-08"	16'-04"	15'-03"	14'-08"	13'-11"
		✓			✓	16'-06"	15'-06"	14'-10"	14'-00"	16'-08"	15'-08"	15'-00"	14'-00"
	✓			✓	16'-05"	15'-05"	14'-09"	13'-11"	16'-07"	15'-07"	14'-11"	13'-11"	
		✓		✓	16'-07"	15'-06"	14'-11"	14'-00"	16'-09"	15'-09"	15'-01"	14'-00"	
					16'-01"	15'-02"	14'-08"	14'-00"	16'-11"	16'-00"	15'-05"	14'-00"	
	✓				16'-01"	15'-02"	14'-08"	14'-00"	16'-10"	15'-11"	15'-04"	14'-00"	
		✓			16'-03"	15'-04"	14'-10"	14'-00"	17'-00"	16'-01"	15'-06"	14'-00"	
			✓		17'-02"	16'-04"	15'-09"	14'-00"	17'-08"	16'-09"	16'-00"	14'-00"	
	✓		✓		17'-01"	16'-03"	15'-08"	14'-00"	17'-07"	16'-08"	16'-00"	14'-00"	
	✓	✓		17'-04"	16'-05"	15'-10"	14'-00"	17'-09"	16'-10"	16'-00"	14'-00"		
			✓	17'-09"	16'-11"	16'-00"	14'-00"	18'-02"	17'-03"	16'-00"	14'-00"		
✓			✓	17'-08"	16'-09"	16'-00"	14'-00"	18'-01"	17'-02"	16'-00"	14'-00"		
	✓		✓	17'-10"	17'-00"	16'-00"	14'-00"	18'-03"	17'-04"	16'-00"	14'-00"		

Notes:

1. The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
2. These spans are appropriate for single-span and simple-supported floors.
3. Consult appropriate sections of Alpa Floor System's "Application and Installation Guides using Alpa QFS®-A and QFS®-B Engineered Wood I-Joists" for proper installation procedures and methods.
4. Live load deflection is limited to L/360 and Total load deflection to L/240.

Maximum Floor Spans with Vibration Control – Clear Span

A312E WITH OPENING AND 2X4 STRONGBACK

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 11.875 inches / Minimum end-bearing length = 1.5 inches / Maximum offset of opening = 12 inch

		1x4 strapping		2x4 Strongback		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @				
		48" c/c	24" c/c	One	Two	12"	16"	19.2"	24"	12"	16"	19.2"	24"	
No ceiling	Nailed only					16'-02"	15'-01"	14'-05"	13'-10"	16'-11"	15'-09"	15'-01"	14'-04"	
		✓				16'-03"	15'-02"	14'-06"	13'-10"	17'-00"	15'-10"	15'-01"	14'-04"	
			✓			16'-04"	15'-03"	14'-07"	13'-11"	17'-00"	15'-10"	15'-02"	14'-05"	
				✓		17'-05"	16'-03"	15'-07"	14'-09"	17'-09"	16'-07"	15'-11"	15'-01"	
		✓		✓		17'-05"	16'-04"	15'-07"	14'-10"	17'-09"	16'-07"	15'-11"	15'-01"	
			✓	✓		17'-06"	16'-04"	15'-08"	14'-10"	17'-10"	16'-08"	15'-11"	15'-01"	
		✓			✓	18'-00"	16'-10"	16'-02"	15'-04"	18'-03"	17'-01"	16'-05"	15'-06"	
	✓			✓	18'-00"	16'-11"	16'-02"	15'-04"	18'-03"	17'-01"	16'-05"	15'-07"		
		✓		✓	18'-01"	16'-11"	16'-02"	15'-05"	18'-03"	17'-02"	16'-05"	15'-07"		
	Nailed and glued						17'-05"	16'-05"	15'-11"	15'-04"	18'-04"	17'-04"	16'-08"	15'-11"
		✓					17'-06"	16'-07"	16'-00"	15'-05"	18'-05"	17'-05"	16'-09"	15'-11"
			✓				17'-07"	16'-07"	16'-01"	15'-06"	18'-06"	17'-05"	16'-10"	15'-11"
				✓			18'-08"	17'-08"	17'-00"	15'-11"	19'-02"	18'-02"	17'-06"	15'-11"
		✓		✓			18'-09"	17'-08"	17'-01"	15'-11"	19'-03"	18'-02"	17'-07"	15'-11"
		✓	✓			18'-09"	17'-09"	17'-01"	15'-11"	19'-03"	18'-03"	17'-07"	15'-11"	
✓				✓		19'-04"	18'-04"	17'-08"	15'-11"	19'-09"	18'-08"	18'-00"	15'-11"	
✓			✓		19'-04"	18'-04"	17'-08"	15'-11"	19'-09"	18'-09"	18'-00"	15'-11"		
	✓		✓		19'-04"	18'-04"	17'-09"	15'-11"	19'-09"	18'-09"	18'-00"	15'-11"		
With ceiling	Nailed only					16'-08"	15'-06"	14'-11"	14'-03"	17'-04"	16'-02"	15'-06"	14'-09"	
		✓				16'-08"	15'-06"	14'-10"	14'-02"	17'-04"	16'-02"	15'-05"	14'-08"	
			✓			16'-10"	15'-08"	15'-01"	14'-04"	17'-06"	16'-04"	15'-07"	14'-10"	
				✓		17'-10"	16'-08"	16'-00"	15'-02"	18'-02"	17'-00"	16'-04"	15'-06"	
		✓		✓		17'-09"	16'-07"	15'-11"	15'-01"	18'-01"	16'-11"	16'-02"	15'-04"	
			✓	✓		17'-11"	16'-09"	16'-01"	15'-03"	18'-03"	17'-01"	16'-05"	15'-06"	
		✓			✓	18'-05"	17'-04"	16'-07"	15'-09"	18'-08"	17'-06"	16'-10"	15'-11"	
	✓			✓	18'-04"	17'-02"	16'-06"	15'-08"	18'-07"	17'-05"	16'-08"	15'-10"		
		✓		✓	18'-06"	17'-04"	16'-08"	15'-10"	18'-09"	17'-07"	16'-10"	15'-11"		
	Nailed and glued						18'-00"	17'-00"	16'-05"	15'-11"	18'-11"	17'-10"	17'-03"	15'-11"
		✓					17'-11"	16'-11"	16'-04"	15'-09"	18'-10"	17'-09"	17'-01"	15'-11"
			✓				18'-02"	17'-02"	16'-07"	15'-11"	19'-00"	18'-00"	17'-04"	15'-11"
				✓			19'-02"	18'-02"	17'-07"	15'-11"	19'-08"	18'-08"	18'-00"	15'-11"
		✓		✓			19'-01"	18'-01"	17'-05"	15'-11"	19'-07"	18'-07"	17'-11"	15'-11"
		✓	✓			19'-03"	18'-03"	17'-08"	15'-11"	19'-10"	18'-09"	18'-00"	15'-11"	
✓				✓		19'-10"	18'-10"	18'-00"	15'-11"	20'-03"	19'-03"	18'-00"	15'-11"	
✓			✓		19'-08"	18'-08"	18'-00"	15'-11"	20'-01"	19'-01"	18'-00"	15'-11"		
	✓		✓		19'-11"	18'-11"	18'-00"	15'-11"	20'-03"	19'-03"	18'-00"	15'-11"		

Notes:

1. The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
2. These spans are appropriate for single-span and simple-supported floors.
3. Consult appropriate sections of Alpa Floor System's "Application and Installation Guides using Alpa QFS®-A and QFS®-B Engineered Wood I-Joists" for proper installation procedures and methods.
4. Live load deflection is limited to L/360 and Total load deflection to L/240.

Maximum Floor Spans with Vibration Control – Clear Span

A312E WITH OPENING AND 2X6 STRONGBACK

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 11.875 inches / Minimum end-bearing length = 1.5 inches / Maximum offset of opening = 12 inch

		1x4 strapping		2x6 Strongback		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @				
		48" c/c	24" c/c	One	Two	12"	16"	19.2"	24"	12"	16"	19.2"	24"	
No ceiling	Nailed only					16'-02"	15'-01"	14'-05"	13'-10"	16'-11"	15'-09"	15'-01"	14'-04"	
		✓				16'-03"	15'-02"	14'-06"	13'-10"	17'-00"	15'-10"	15'-01"	14'-04"	
			✓			16'-04"	15'-03"	14'-07"	13'-11"	17'-00"	15'-10"	15'-02"	14'-05"	
				✓		18'-08"	17'-07"	16'-10"	15'-11"	18'-10"	17'-08"	17'-00"	15'-11"	
		✓		✓		18'-08"	17'-07"	16'-10"	15'-11"	18'-10"	17'-09"	17'-00"	15'-11"	
			✓	✓		18'-08"	17'-07"	16'-11"	15'-11"	18'-10"	17'-09"	17'-00"	15'-11"	
		✓			✓	19'-05"	18'-04"	17'-08"	15'-11"	19'-06"	18'-05"	17'-08"	15'-11"	
			✓		✓	19'-05"	18'-04"	17'-08"	15'-11"	19'-06"	18'-05"	17'-08"	15'-11"	
	Nailed and glued						17'-05"	16'-05"	15'-11"	15'-04"	18'-04"	17'-04"	16'-08"	15'-11"
		✓					17'-06"	16'-07"	16'-00"	15'-05"	18'-05"	17'-05"	16'-09"	15'-11"
			✓				17'-07"	16'-07"	16'-01"	15'-06"	18'-06"	17'-05"	16'-10"	15'-11"
				✓			20'-00"	19'-00"	18'-00"	15'-11"	20'-04"	19'-04"	18'-00"	15'-11"
		✓		✓			20'-00"	19'-01"	18'-00"	15'-11"	20'-04"	19'-04"	18'-00"	15'-11"
			✓	✓			20'-01"	19'-01"	18'-00"	15'-11"	20'-04"	19'-04"	18'-00"	15'-11"
		✓			✓		20'-10"	19'-08"	18'-00"	15'-11"	21'-01"	19'-08"	18'-00"	15'-11"
			✓		✓		20'-10"	19'-08"	18'-00"	15'-11"	21'-01"	19'-08"	18'-00"	15'-11"
With ceiling	Nailed only					16'-08"	15'-06"	14'-11"	14'-03"	17'-04"	16'-02"	15'-06"	14'-09"	
		✓				16'-08"	15'-06"	14'-10"	14'-02"	17'-04"	16'-02"	15'-05"	14'-08"	
			✓			16'-10"	15'-08"	15'-01"	14'-04"	17'-06"	16'-04"	15'-07"	14'-10"	
				✓		19'-01"	18'-00"	17'-03"	15'-11"	19'-03"	18'-02"	17'-05"	15'-11"	
		✓		✓		19'-00"	17'-11"	17'-02"	15'-11"	19'-02"	18'-00"	17'-04"	15'-11"	
			✓	✓		19'-02"	18'-01"	17'-04"	15'-11"	19'-04"	18'-02"	17'-06"	15'-11"	
		✓			✓	19'-11"	18'-10"	18'-00"	15'-11"	20'-00"	18'-11"	18'-00"	15'-11"	
			✓		✓	19'-10"	18'-08"	18'-00"	15'-11"	19'-11"	18'-09"	18'-00"	15'-11"	
	Nailed and glued						18'-00"	17'-00"	16'-05"	15'-11"	18'-11"	17'-10"	17'-03"	15'-11"
		✓					17'-11"	16'-11"	16'-04"	15'-09"	18'-10"	17'-09"	17'-01"	15'-11"
			✓				18'-02"	17'-02"	16'-07"	15'-11"	19'-00"	18'-00"	17'-04"	15'-11"
				✓			20'-06"	19'-07"	18'-00"	15'-11"	20'-10"	19'-08"	18'-00"	15'-11"
		✓		✓			20'-05"	19'-05"	18'-00"	15'-11"	20'-09"	19'-08"	18'-00"	15'-11"
			✓	✓			20'-07"	19'-07"	18'-00"	15'-11"	20'-11"	19'-08"	18'-00"	15'-11"
		✓			✓		21'-04"	19'-08"	18'-00"	15'-11"	21'-07"	19'-08"	18'-00"	15'-11"
			✓		✓		21'-03"	19'-08"	18'-00"	15'-11"	21'-06"	19'-08"	18'-00"	15'-11"

Notes:

- The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
- These spans are appropriate for single-span and simple-supported floors.
- Consult appropriate sections of Alpa Floor System's "Application and Installation Guides using Alpa QFS®-A and QFS®-B Engineered Wood I-Joists" for proper installation procedures and methods.
- Live load deflection is limited to L/360 and Total load deflection to L/240.

Maximum Floor Spans with Vibration Control – Clear Span

A314E WITH OPENING AND 2X4 STRONGBACK

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 14 inches / Minimum end-bearing length = 1.5 inches / Maximum offset of opening = 12 inch

		1x4 strapping		2x4 Strongback		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @			
		48" c/c	24" c/c	One	Two	12"	16"	19.2"	24"	12"	16"	19.2"	24"
No ceiling	Nailed only					17'-07"	16'-05"	15'-09"	15'-00"	18'-05"	17'-02"	16'-05"	15'-00"
		✓				17'-08"	16'-06"	15'-10"	15'-00"	18'-06"	17'-02"	16'-05"	15'-00"
			✓			17'-09"	16'-07"	15'-11"	15'-00"	18'-06"	17'-03"	16'-06"	15'-00"
				✓		18'-11"	17'-08"	16'-11"	15'-00"	19'-03"	18'-00"	17'-03"	15'-00"
		✓		✓		18'-11"	17'-08"	16'-11"	15'-00"	19'-04"	18'-01"	17'-03"	15'-00"
			✓	✓		19'-00"	17'-09"	17'-00"	15'-00"	19'-04"	18'-01"	17'-04"	15'-00"
		✓			✓	19'-06"	18'-04"	17'-06"	15'-00"	19'-10"	18'-07"	17'-09"	15'-00"
		✓			✓	19'-07"	18'-04"	17'-07"	15'-00"	19'-10"	18'-07"	17'-10"	15'-00"
		✓		✓	19'-07"	18'-04"	17'-07"	15'-00"	19'-10"	18'-07"	17'-10"	15'-00"	
					18'-11"	17'-10"	17'-03"	15'-00"	19'-11"	18'-09"	18'-01"	15'-00"	
	✓				19'-00"	17'-11"	17'-04"	15'-00"	20'-00"	18'-10"	18'-02"	15'-00"	
		✓			19'-02"	18'-00"	17'-05"	15'-00"	20'-01"	18'-11"	18'-03"	15'-00"	
	✓		✓		20'-03"	19'-01"	18'-05"	15'-00"	20'-10"	19'-08"	18'-09"	15'-00"	
	✓		✓		20'-03"	19'-02"	18'-06"	15'-00"	20'-10"	19'-08"	18'-09"	15'-00"	
		✓	✓		20'-04"	19'-02"	18'-06"	15'-00"	20'-10"	19'-09"	18'-09"	15'-00"	
				✓	20'-11"	19'-09"	18'-09"	15'-00"	21'-04"	20'-03"	18'-09"	15'-00"	
✓			✓	20'-11"	19'-10"	18'-09"	15'-00"	21'-04"	20'-03"	18'-09"	15'-00"		
	✓		✓	20'-11"	19'-10"	18'-09"	15'-00"	21'-05"	20'-03"	18'-09"	15'-00"		
With ceiling	Nailed only					18'-02"	16'-11"	16'-03"	15'-00"	18'-11"	17'-08"	16'-11"	15'-00"
		✓				18'-01"	16'-10"	16'-02"	15'-00"	18'-10"	17'-07"	16'-10"	15'-00"
			✓			18'-04"	17'-01"	16'-05"	15'-00"	19'-01"	17'-09"	17'-00"	15'-00"
				✓		19'-04"	18'-01"	17'-04"	15'-00"	19'-09"	18'-06"	17'-09"	15'-00"
		✓		✓		19'-03"	18'-00"	17'-03"	15'-00"	19'-08"	18'-05"	17'-07"	15'-00"
			✓	✓		19'-05"	18'-03"	17'-05"	15'-00"	19'-10"	18'-07"	17'-10"	15'-00"
		✓			✓	20'-00"	18'-09"	18'-00"	15'-00"	20'-03"	19'-00"	18'-03"	15'-00"
		✓			✓	19'-11"	18'-08"	17'-10"	15'-00"	20'-02"	18'-11"	18'-01"	15'-00"
		✓		✓	20'-01"	18'-10"	18'-01"	15'-00"	20'-04"	19'-01"	18'-04"	15'-00"	
					19'-06"	18'-06"	17'-10"	15'-00"	20'-06"	19'-05"	18'-08"	15'-00"	
	✓				19'-06"	18'-05"	17'-09"	15'-00"	20'-05"	19'-03"	18'-07"	15'-00"	
		✓			19'-09"	18'-08"	18'-00"	15'-00"	20'-08"	19'-06"	18'-09"	15'-00"	
			✓		20'-09"	19'-08"	18'-09"	15'-00"	21'-04"	20'-03"	18'-09"	15'-00"	
	✓		✓		20'-08"	19'-07"	18'-09"	15'-00"	21'-03"	20'-01"	18'-09"	15'-00"	
		✓	✓		20'-10"	19'-09"	18'-09"	15'-00"	21'-05"	20'-04"	18'-09"	15'-00"	
				✓	21'-05"	20'-04"	18'-09"	15'-00"	21'-11"	20'-10"	18'-09"	15'-00"	
✓			✓	21'-04"	20'-02"	18'-09"	15'-00"	21'-09"	20'-08"	18'-09"	15'-00"		
	✓		✓	21'-06"	20'-05"	18'-09"	15'-00"	22'-00"	20'-10"	18'-09"	15'-00"		

Notes:

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Maximum Floor Spans with Vibration Control – Clear Span

A314E WITH OPENING AND 2X6 STRONGBACK

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 14 inches / Minimum end-bearing length = 1.5 inches / Maximum offset of opening = 12 inch

		1x4 strapping		2x6 Strongback		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @				
		48" c/c	24" c/c	One	Two	12"	16"	19.2"	24"	12"	16"	19.2"	24"	
No ceiling	Nailed only					17'-07"	16'-05"	15'-09"	15'-00"	18'-05"	17'-02"	16'-05"	15'-00"	
		✓				17'-08"	16'-06"	15'-10"	15'-00"	18'-06"	17'-02"	16'-05"	15'-00"	
			✓			17'-09"	16'-07"	15'-11"	15'-00"	18'-06"	17'-03"	16'-06"	15'-00"	
				✓		20'-03"	19'-01"	18'-03"	15'-00"	20'-05"	19'-02"	18'-05"	15'-00"	
		✓		✓		20'-03"	19'-01"	18'-03"	15'-00"	20'-05"	19'-03"	18'-05"	15'-00"	
			✓	✓		20'-04"	19'-01"	18'-04"	15'-00"	20'-06"	19'-03"	18'-05"	15'-00"	
		✓			✓	21'-01"	19'-11"	18'-09"	15'-00"	21'-02"	20'-00"	18'-09"	15'-00"	
				✓	21'-01"	19'-11"	18'-09"	15'-00"	21'-03"	20'-00"	18'-09"	15'-00"		
		✓		✓	21'-02"	19'-11"	18'-09"	15'-00"	21'-03"	20'-00"	18'-09"	15'-00"		
	Nailed and glued						18'-11"	17'-10"	17'-03"	15'-00"	19'-11"	18'-09"	18'-01"	15'-00"
		✓					19'-00"	17'-11"	17'-04"	15'-00"	20'-00"	18'-10"	18'-02"	15'-00"
			✓				19'-02"	18'-00"	17'-05"	15'-00"	20'-01"	18'-11"	18'-03"	15'-00"
				✓			21'-08"	20'-07"	18'-09"	15'-00"	22'-00"	20'-11"	18'-09"	15'-00"
		✓		✓			21'-08"	20'-07"	18'-09"	15'-00"	22'-00"	20'-11"	18'-09"	15'-00"
		✓	✓			21'-08"	20'-07"	18'-09"	15'-00"	22'-00"	20'-11"	18'-09"	15'-00"	
✓				✓		22'-07"	21'-06"	18'-09"	15'-00"	22'-10"	21'-06"	18'-09"	15'-00"	
			✓		22'-07"	21'-06"	18'-09"	15'-00"	22'-10"	21'-06"	18'-09"	15'-00"		
	✓		✓		22'-07"	21'-06"	18'-09"	15'-00"	22'-10"	21'-06"	18'-09"	15'-00"		
With ceiling	Nailed only					18'-02"	16'-11"	16'-03"	15'-00"	18'-11"	17'-08"	16'-11"	15'-00"	
		✓				18'-01"	16'-10"	16'-02"	15'-00"	18'-10"	17'-07"	16'-10"	15'-00"	
			✓			18'-04"	17'-01"	16'-05"	15'-00"	19'-01"	17'-09"	17'-00"	15'-00"	
				✓		20'-09"	19'-06"	18'-09"	15'-00"	20'-11"	19'-08"	18'-09"	15'-00"	
		✓		✓		20'-08"	19'-05"	18'-07"	15'-00"	20'-10"	19'-07"	18'-09"	15'-00"	
			✓	✓		20'-10"	19'-07"	18'-09"	15'-00"	21'-00"	19'-09"	18'-09"	15'-00"	
		✓			✓	21'-07"	20'-05"	18'-09"	15'-00"	21'-08"	20'-06"	18'-09"	15'-00"	
				✓	21'-06"	20'-03"	18'-09"	15'-00"	21'-07"	20'-04"	18'-09"	15'-00"		
		✓		✓	21'-08"	20'-05"	18'-09"	15'-00"	21'-09"	20'-07"	18'-09"	15'-00"		
	Nailed and glued						19'-06"	18'-06"	17'-10"	15'-00"	20'-06"	19'-05"	18'-08"	15'-00"
		✓					19'-06"	18'-05"	17'-09"	15'-00"	20'-05"	19'-03"	18'-07"	15'-00"
			✓				19'-09"	18'-08"	18'-00"	15'-00"	20'-08"	19'-06"	18'-09"	15'-00"
				✓			22'-02"	21'-02"	18'-09"	15'-00"	22'-07"	21'-06"	18'-09"	15'-00"
		✓		✓			22'-01"	21'-00"	18'-09"	15'-00"	22'-05"	21'-04"	18'-09"	15'-00"
		✓	✓			22'-03"	21'-02"	18'-09"	15'-00"	22'-07"	21'-06"	18'-09"	15'-00"	
✓				✓		23'-01"	21'-06"	18'-09"	15'-00"	23'-05"	21'-06"	18'-09"	15'-00"	
			✓		23'-00"	21'-06"	18'-09"	15'-00"	23'-03"	21'-06"	18'-09"	15'-00"		
	✓		✓		23'-02"	21'-06"	18'-09"	15'-00"	23'-05"	21'-06"	18'-09"	15'-00"		

Notes:

- The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
- These spans are appropriate for single-span and simple-supported floors.
- Consult appropriate sections of Alpa Floor System's "Application and Installation Guides using Alpa QFS®-A and QFS®-B Engineered Wood I-Joists" for proper installation procedures and methods.
- Live load deflection is limited to L/360 and Total load deflection to L/240.

Maximum Floor Spans with Vibration Control – Clear Span^o

B310E WITH NO OPENING

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 9.5 inches / Minimum end-bearing length = 1.5 inches/ Maximum offset of opening = 12 inch

		1x4 strapping		Blocking		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @				
		48" c/c	24" c/c	one row	two rows	12"	16"	19.2"	24"	12"	16"	19.2"	24"	
No ceiling	Nailed only					14'-04"	13'-04"	12'-10"	12'-03"	15'-00"	13'-11"	13'-04"	12'-07"	
		✓				14'-05"	13'-05"	12'-10"	12'-03"	15'-00"	14'-00"	13'-05"	12'-07"	
			✓			14'-06"	13'-06"	12'-11"	12'-04"	15'-01"	14'-00"	13'-05"	12'-07"	
				✓		15'-00"	14'-00"	13'-05"	12'-07"	15'-06"	14'-06"	13'-11"	12'-07"	
		✓		✓		15'-00"	14'-01"	13'-06"	12'-07"	15'-06"	14'-06"	13'-11"	12'-07"	
			✓	✓		15'-01"	14'-01"	13'-07"	12'-07"	15'-07"	14'-07"	14'-00"	12'-07"	
		✓			✓	15'-08"	14'-08"	14'-01"	12'-07"	16'-01"	15'-01"	14'-01"	12'-07"	
	Nailed and glued						15'-06"	14'-08"	14'-01"	12'-07"	16'-04"	15'-05"	14'-01"	12'-07"
		✓					15'-07"	14'-09"	14'-01"	12'-07"	16'-05"	15'-05"	14'-01"	12'-07"
			✓				15'-08"	14'-10"	14'-01"	12'-07"	16'-06"	15'-05"	14'-01"	12'-07"
				✓			16'-02"	15'-04"	14'-01"	12'-07"	16'-10"	15'-05"	14'-01"	12'-07"
		✓		✓			16'-03"	15'-04"	14'-01"	12'-07"	16'-11"	15'-05"	14'-01"	12'-07"
			✓	✓			16'-04"	15'-05"	14'-01"	12'-07"	16'-11"	15'-05"	14'-01"	12'-07"
		✓			✓		16'-10"	15'-05"	14'-01"	12'-07"	17'-05"	15'-05"	14'-01"	12'-07"
With ceiling	Nailed only					14'-09"	13'-09"	13'-02"	12'-07"	15'-04"	14'-04"	13'-09"	12'-07"	
		✓				14'-09"	13'-09"	13'-02"	12'-07"	15'-04"	14'-03"	13'-08"	12'-07"	
			✓			14'-11"	13'-11"	13'-04"	12'-07"	15'-06"	14'-06"	13'-10"	12'-07"	
				✓		16'-00"	15'-00"	14'-01"	12'-07"	16'-05"	15'-05"	14'-01"	12'-07"	
		✓		✓		16'-00"	14'-11"	14'-01"	12'-07"	16'-05"	15'-04"	14'-01"	12'-07"	
			✓	✓		16'-02"	15'-02"	14'-01"	12'-07"	16'-06"	15'-05"	14'-01"	12'-07"	
		✓			✓	17'-02"	15'-05"	14'-01"	12'-07"	17'-06"	15'-05"	14'-01"	12'-07"	
	Nailed and glued						17'-02"	15'-05"	14'-01"	12'-07"	17'-05"	15'-05"	14'-01"	12'-07"
		✓			✓		17'-04"	15'-05"	14'-01"	12'-07"	17'-07"	15'-05"	14'-01"	12'-07"
			✓				16'-00"	15'-02"	14'-01"	12'-07"	16'-10"	15'-05"	14'-01"	12'-07"
		✓					16'-00"	15'-01"	14'-01"	12'-07"	16'-09"	15'-05"	14'-01"	12'-07"
			✓				16'-02"	15'-04"	14'-01"	12'-07"	17'-00"	15'-05"	14'-01"	12'-07"
		✓		✓			17'-03"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"
			✓	✓			17'-02"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"
Nailed and glued						17'-05"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	
	✓			✓		17'-10"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	
		✓		✓		17'-10"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	
	✓				✓	17'-10"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	
		✓		✓		17'-10"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	
	✓			✓		17'-10"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	
		✓		✓		17'-10"	15'-05"	14'-01"	12'-07"	17'-10"	15'-05"	14'-01"	12'-07"	

Notes:

1. The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
2. These spans are appropriate for single-span and simple-supported floors.
3. Consult appropriate sections of Alpa Floor System's "Application and Installation Guides using Alpa QFS[®]-A and QFS[®]-B Engineered Wood I-Joists" for proper installation procedures and methods.
4. Live load deflection is limited to L/360 and Total load deflection to L/240.
5. Blocking shall be installed at mid span. If two rows of blocking are required the rows shall be located at 24" on both sides of center span.

Maximum Floor Spans with Vibration Control – Clear Span

B312E WITH NO OPENING

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 11.875 inches / Minimum end-bearing length = 1.5 inches

		1x4 strapping		Blocking		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @			
		48" c/c	24" c/c	one row	two rows	12"	16"	19.2"	24"	12"	16"	19.2"	24"
No ceiling	Nailed only					16'-00"	14'-11"	14'-04"	13'-08"	16'-09"	15'-07"	14'-11"	14'-02"
		✓				16'-01"	15'-00"	14'-05"	13'-09"	16'-10"	15'-08"	15'-00"	14'-03"
			✓			16'-02"	15'-01"	14'-05"	13'-10"	16'-10"	15'-09"	15'-00"	14'-03"
				✓		16'-10"	15'-09"	15'-02"	14'-04"	17'-05"	16'-03"	15'-07"	14'-04"
		✓		✓		16'-11"	15'-10"	15'-02"	14'-04"	17'-05"	16'-04"	15'-08"	14'-04"
			✓	✓		17'-00"	15'-10"	15'-03"	14'-04"	17'-06"	16'-04"	15'-08"	14'-04"
		✓			✓	17'-08"	16'-06"	15'-10"	14'-04"	18'-01"	17'-00"	16'-00"	14'-04"
		✓			✓	17'-08"	16'-07"	15'-11"	14'-04"	18'-02"	17'-00"	16'-00"	14'-04"
		✓		✓	17'-09"	16'-07"	15'-11"	14'-04"	18'-02"	17'-01"	16'-00"	14'-04"	
					17'-04"	16'-04"	15'-10"	14'-04"	18'-03"	17'-03"	16'-00"	14'-04"	
	✓				17'-05"	16'-05"	15'-11"	14'-04"	18'-04"	17'-03"	16'-00"	14'-04"	
		✓			17'-06"	16'-06"	16'-00"	14'-04"	18'-04"	17'-04"	16'-00"	14'-04"	
			✓		18'-01"	17'-02"	16'-00"	14'-04"	18'-10"	17'-07"	16'-00"	14'-04"	
	✓		✓		18'-02"	17'-02"	16'-00"	14'-04"	18'-11"	17'-07"	16'-00"	14'-04"	
		✓	✓		18'-03"	17'-03"	16'-00"	14'-04"	18'-11"	17'-07"	16'-00"	14'-04"	
				✓	18'-11"	17'-07"	16'-00"	14'-04"	19'-07"	17'-07"	16'-00"	14'-04"	
✓			✓	18'-11"	17'-07"	16'-00"	14'-04"	19'-07"	17'-07"	16'-00"	14'-04"		
	✓		✓	19'-00"	17'-07"	16'-00"	14'-04"	19'-08"	17'-07"	16'-00"	14'-04"		
With ceiling	Nailed only					16'-06"	15'-05"	14'-09"	14'-01"	17'-02"	16'-01"	15'-04"	14'-04"
		✓				16'-06"	15'-04"	14'-09"	14'-01"	17'-02"	16'-00"	15'-03"	14'-04"
			✓			16'-08"	15'-07"	14'-11"	14'-03"	17'-04"	16'-02"	15'-06"	14'-04"
				✓		18'-00"	16'-11"	16'-00"	14'-04"	18'-06"	17'-05"	16'-00"	14'-04"
		✓		✓		18'-00"	16'-10"	16'-00"	14'-04"	18'-05"	17'-03"	16'-00"	14'-04"
			✓	✓		18'-02"	17'-00"	16'-00"	14'-04"	18'-07"	17'-06"	16'-00"	14'-04"
		✓			✓	19'-06"	17'-07"	16'-00"	14'-04"	19'-09"	17'-07"	16'-00"	14'-04"
		✓			✓	19'-05"	17'-07"	16'-00"	14'-04"	19'-08"	17'-07"	16'-00"	14'-04"
		✓		✓	19'-07"	17'-07"	16'-00"	14'-04"	19'-10"	17'-07"	16'-00"	14'-04"	
					17'-10"	16'-11"	16'-00"	14'-04"	18'-09"	17'-07"	16'-00"	14'-04"	
	✓				17'-10"	16'-10"	16'-00"	14'-04"	18'-08"	17'-07"	16'-00"	14'-04"	
		✓			18'-01"	17'-01"	16'-00"	14'-04"	18'-11"	17'-07"	16'-00"	14'-04"	
			✓		19'-04"	17'-07"	16'-00"	14'-04"	20'-00"	17'-07"	16'-00"	14'-04"	
	✓		✓		19'-04"	17'-07"	16'-00"	14'-04"	19'-11"	17'-07"	16'-00"	14'-04"	
		✓	✓		19'-06"	17'-07"	16'-00"	14'-04"	20'-02"	17'-07"	16'-00"	14'-04"	
	✓			✓	20'-03"	17'-07"	16'-00"	14'-04"	20'-03"	17'-07"	16'-00"	14'-04"	
✓			✓	20'-03"	17'-07"	16'-00"	14'-04"	20'-03"	17'-07"	16'-00"	14'-04"		
	✓		✓	20'-03"	17'-07"	16'-00"	14'-04"	20'-03"	17'-07"	16'-00"	14'-04"		

Notes:

1. The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
2. These spans are appropriate for single-span and simple-supported floors.
3. Consult appropriate sections of Alpa Floor System's "Application and Installation Guides using Alpa QFS®-A and QFS®-B Engineered Wood I-Joists" for proper installation procedures and methods.
4. Live load deflection is limited to L/360 and Total load deflection to L/240.
5. Blocking shall be installed at mid span. If two rows of blocking are required the rows shall be located at 24" on both sides of center span.

Maximum Floor Spans with Vibration Control – Clear Span

B314E WITH NO OPENING

Live load @ 40 psf / Dead load @ 15 psf

Joist Depth = 14 inches / Minimum end-bearing length = 1.5 inches

		1x4 strapping		Blocking		5/8" OSB subfloor on joists @				3/4" OSB subfloor on joists @				
		48" c/c	24" c/c	one row	two rows	12"	16"	19.2"	24"	12"	16"	19.2"	24"	
No ceiling	Nailed only					17'-04"	16'-02"	15'-06"	14'-10"	18'-02"	16'-11"	16'-02"	15'-00"	
		✓				17'-06"	16'-03"	15'-07"	14'-11"	18'-03"	17'-00"	16'-03"	15'-00"	
			✓			17'-07"	16'-04"	15'-08"	15'-00"	18'-03"	17'-00"	16'-04"	15'-00"	
				✓		18'-04"	17'-02"	16'-06"	15'-00"	18'-11"	17'-09"	17'-00"	15'-00"	
		✓		✓		18'-05"	17'-02"	16'-06"	15'-00"	19'-00"	17'-09"	17'-00"	15'-00"	
			✓	✓		18'-06"	17'-03"	16'-07"	15'-00"	19'-00"	17'-10"	17'-01"	15'-00"	
		✓			✓	19'-03"	18'-00"	17'-04"	15'-00"	19'-09"	18'-06"	17'-07"	15'-00"	
		✓			✓	19'-03"	18'-01"	17'-04"	15'-00"	19'-09"	18'-06"	17'-07"	15'-00"	
	Nailed and glued						18'-09"	17'-08"	17'-01"	15'-00"	19'-09"	18'-08"	17'-07"	15'-00"
		✓					18'-10"	17'-09"	17'-02"	15'-00"	19'-10"	18'-08"	17'-07"	15'-00"
			✓				18'-11"	17'-11"	17'-03"	15'-00"	19'-10"	18'-09"	17'-07"	15'-00"
				✓			19'-08"	18'-07"	17'-07"	15'-00"	20'-06"	19'-03"	17'-07"	15'-00"
		✓		✓			19'-09"	18'-08"	17'-07"	15'-00"	20'-06"	19'-03"	17'-07"	15'-00"
			✓	✓			19'-10"	18'-09"	17'-07"	15'-00"	20'-07"	19'-03"	17'-07"	15'-00"
		✓			✓		20'-07"	19'-03"	17'-07"	15'-00"	21'-03"	19'-03"	17'-07"	15'-00"
		✓			✓		20'-07"	19'-03"	17'-07"	15'-00"	21'-04"	19'-03"	17'-07"	15'-00"
With ceiling	Nailed only					17'-11"	16'-09"	16'-00"	15'-00"	18'-08"	17'-05"	16'-08"	15'-00"	
		✓				17'-11"	16'-08"	16'-00"	15'-00"	18'-07"	17'-04"	16'-07"	15'-00"	
			✓			18'-01"	16'-11"	16'-02"	15'-00"	18'-10"	17'-07"	16'-10"	15'-00"	
				✓		19'-08"	18'-06"	17'-07"	15'-00"	20'-02"	18'-11"	17'-07"	15'-00"	
		✓		✓		19'-08"	18'-05"	17'-07"	15'-00"	20'-01"	18'-10"	17'-07"	15'-00"	
			✓	✓		19'-10"	18'-07"	17'-07"	15'-00"	20'-03"	19'-01"	17'-07"	15'-00"	
		✓			✓	21'-04"	19'-03"	17'-07"	15'-00"	21'-07"	19'-03"	17'-07"	15'-00"	
		✓			✓	21'-03"	19'-03"	17'-07"	15'-00"	21'-06"	19'-03"	17'-07"	15'-00"	
	Nailed and glued						19'-04"	18'-04"	17'-07"	15'-00"	20'-04"	19'-03"	17'-07"	15'-00"
		✓					19'-04"	18'-03"	17'-07"	15'-00"	20'-03"	19'-01"	17'-07"	15'-00"
			✓				19'-07"	18'-06"	17'-07"	15'-00"	20'-06"	19'-03"	17'-07"	15'-00"
				✓			21'-01"	19'-03"	17'-07"	15'-00"	21'-09"	19'-03"	17'-07"	15'-00"
		✓		✓			21'-00"	19'-03"	17'-07"	15'-00"	21'-08"	19'-03"	17'-07"	15'-00"
			✓	✓			21'-03"	19'-03"	17'-07"	15'-00"	21'-11"	19'-03"	17'-07"	15'-00"
		✓			✓		22'-03"	19'-03"	17'-07"	15'-00"	22'-03"	19'-03"	17'-07"	15'-00"
		✓			✓		22'-03"	19'-03"	17'-07"	15'-00"	22'-03"	19'-03"	17'-07"	15'-00"
	✓		✓		22'-03"	19'-03"	17'-07"	15'-00"	22'-03"	19'-03"	17'-07"	15'-00"		

Notes:

1. The spans are determined in accordance with N.B.C.C. 2005 in conjunction with CAN/CSA 086 and as per the vibration requirements of CCMC for engineered wood joists.
2. These spans are appropriate for single-span and simple-supported floors.
3. Consult appropriate sections of Alpha Floor System's "Application and Installation Guides using Alpha QFS®-A and QFS®-B Engineered Wood I-Joists" for proper installation procedures and methods.
4. Live load deflection is limited to L/360 and Total load deflection to L/240.
5. Blocking shall be installed at mid span. If two rows of blocking are required the rows shall be located at 24" on both sides of center span.