

IB800 Maximum Floor Spans

40 psf Unfactored Live Load

15 psf Unfactored Dead Load

Limit States Design (LSD) 100% Load Duration L/360 live load, L/240 total load deflection criteria

IB EWP Inc.

Joist	Floor	Span	19/32" OSB glued and nailed				23/32" OSB glued and nailed				7/8" OSB glued and nailed			
			spacing of IB joist (o.c.)				spacing of IB joist (o.c.)				spacing of IB joist (o.c.)			
			12"	16"	19.2"	24"	12"	16"	19.2"	24"	12"	16"	19.2"	24"
7 7/8"	A	Single	15'-4"	14'-6"	14'-0"	16'-3"	15'-3"	14'-9"	14'-1"	17'-2"	16'-2"	15'-7"	14'-10"	
		Continuous	16'-2"	15'-2"	14'-8"	17'-0"	16'-0"	15'-5"	14'-10"	18'-0"	17'-0"	16'-4"	15'-7"	
	B	Single	15'-9"	14'-10"	14'-4"	16'-6"	15'-7"	15'-0"	14'-5"	17'-5"	16'-6"	15'-10"	14'-10"	
		Continuous	16'-6"	15'-7"	15'-0"	17'-4"	16'-4"	15'-9"	15'-1"	18'-5"	17'-3"	16'-8"	15'-11"	
	C	Single	17'-3"	16'-4"	15'-9"	17'-10"	16'-11"	16'-1"	14'-10"	18'-8"	17'-2"	16'-1"	14'-10"	
		Continuous	18'-1"	17'-1"	16'-6"	18'-10"	17'-8"	17'-1"	16'-5"	19'-9"	18'-6"	17'-9"	16'-7"	
	D	Single	16'-3"	15'-4"	14'-10"	16'-11"	16'-0"	15'-5"	14'-10"	17'-8"	16'-9"	16'-1"	14'-10"	
		Continuous	17'-0"	16'-0"	15'-6"	17'-8"	16'-8"	16'-1"	15'-6"	18'-7"	17'-6"	16'-10"	16'-2"	
8 5/8"	A	Single	16'-1"	15'-2"	14'-8"	17'-0"	16'-0"	15'-5"	14'-9"	18'-0"	16'-11"	16'-3"	15'-7"	
		Continuous	16'-11"	15'-11"	15'-5"	17'-10"	16'-9"	16'-2"	15'-6"	19'-1"	17'-9"	17'-1"	16'-4"	
	B	Single	16'-6"	15'-6"	15'-0"	17'-4"	16'-4"	15'-9"	15'-1"	18'-5"	17'-3"	16'-7"	15'-10"	
		Continuous	17'-4"	16'-4"	15'-9"	18'-3"	17'-2"	16'-6"	15'-10"	19'-6"	18'-1"	17'-5"	16'-8"	
	C	Single	18'-3"	17'-2"	16'-7"	19'-0"	17'-9"	17'-2"	16'-0"	19'-11"	18'-6"	17'-4"	16'-0"	
		Continuous	19'-4"	17'-11"	17'-4"	20'-1"	18'-9"	17'-11"	17'-2"	21'-0"	19'-8"	18'-10"	17'-4"	
	D	Single	17'-0"	16'-1"	15'-7"	17'-9"	16'-9"	16'-2"	15'-6"	18'-8"	17'-6"	16'-11"	16'-0"	
		Continuous	17'-10"	16'-10"	16'-3"	18'-9"	17'-6"	16'-11"	16'-3"	19'-9"	18'-5"	17'-8"	16'-11"	
9 1/4"	A	Single	16'-9"	15'-9"	15'-3"	17'-8"	16'-8"	16'-0"	15'-4"	18'-11"	17'-7"	16'-11"	16'-2"	
		Continuous	17'-7"	16'-7"	16'-0"	18'-9"	17'-6"	16'-10"	16'-2"	20'-1"	18'-7"	17'-9"	16'-11"	
	B	Single	17'-2"	16'-2"	15'-7"	18'-1"	17'-0"	16'-4"	15'-8"	19'-4"	17'-11"	17'-3"	16'-6"	
		Continuous	18'-0"	17'-0"	16'-5"	19'-2"	17'-10"	17'-2"	16'-6"	20'-6"	19'-0"	18'-2"	17'-3"	
	C	Single	19'-3"	17'-11"	17'-4"	20'-1"	18'-8"	17'-10"	17'-0"	21'-0"	19'-7"	18'-5"	17'-0"	
		Continuous	20'-4"	18'-11"	18'-1"	21'-3"	19'-9"	18'-10"	17'-11"	22'-2"	20'-9"	19'-10"	18'-5"	
	D	Single	17'-9"	16'-9"	16'-2"	18'-8"	17'-5"	16'-10"	16'-2"	19'-8"	18'-4"	17'-7"	16'-10"	
		Continuous	18'-9"	17'-6"	16'-11"	19'-9"	18'-4"	17'-7"	16'-11"	20'-10"	19'-5"	18'-6"	17'-7"	
9 1/2"	A	Single	17'-0"	16'-0"	15'-5"	17'-11"	16'-10"	16'-3"	15'-7"	19'-3"	17'-10"	17'-2"	16'-4"	
		Continuous	17'-10"	16'-9"	16'-3"	19'-0"	17'-8"	17'-0"	16'-4"	20'-5"	18'-11"	18'-0"	17'-2"	
	B	Single	17'-5"	16'-4"	15'-10"	18'-5"	17'-2"	16'-7"	15'-11"	19'-8"	18'-3"	17'-6"	16'-8"	
		Continuous	18'-4"	17'-2"	16'-7"	19'-6"	18'-1"	17'-5"	16'-8"	20'-10"	19'-4"	18'-5"	17'-6"	
	C	Single	19'-8"	18'-3"	17'-7"	20'-5"	19'-0"	18'-2"	17'-4"	21'-4"	20'-0"	18'-10"	17'-5"	
		Continuous	20'-9"	19'-3"	18'-5"	21'-7"	20'-1"	19'-2"	18'-3"	22'-7"	21'-1"	20'-2"	19'-1"	
	D	Single	18'-0"	17'-0"	16'-5"	19'-0"	17'-8"	17'-1"	16'-5"	20'-0"	18'-8"	17'-10"	17'-0"	
		Continuous	19'-1"	17'-9"	17'-2"	20'-1"	18'-8"	17'-10"	17'-2"	21'-2"	19'-9"	18'-10"	17'-10"	
11 1/4"	A	Single	18'-9"	17'-6"	16'-11"	20'-1"	18'-7"	17'-9"	17'-0"	21'-6"	19'-11"	18'-11"	17'-10"	
		Continuous	19'-11"	18'-5"	17'-9"	21'-4"	19'-8"	18'-9"	17'-10"	22'-9"	21'-1"	20'-1"	18'-11"	
	B	Single	19'-4"	17'-11"	17'-3"	20'-7"	19'-1"	18'-2"	17'-4"	22'-0"	20'-5"	19'-5"	18'-4"	
		Continuous	20'-6"	19'-0"	18'-2"	21'-10"	20'-3"	19'-3"	18'-3"	23'-4"	21'-8"	20'-7"	19'-5"	
	C	Single	22'-3"	20'-8"	19'-9"	23'-1"	21'-6"	20'-6"	19'-5"	24'-1"	22'-6"	21'-6"	20'-0"	
		Continuous	23'-6"	21'-10"	20'-10"	24'-4"	22'-8"	21'-8"	20'-6"	25'-5"	23'-9"	22'-8"	21'-5"	
	D	Single	20'-4"	18'-10"	18'-0"	21'-4"	19'-10"	18'-11"	17'-11"	22'-6"	20'-11"	19'-11"	18'-10"	
		Continuous	21'-6"	19'-11"	19'-1"	22'-7"	20'-11"	20'-0"	19'-0"	23'-9"	22'-2"	21'-1"	19'-11"	
11 7/8"	A	Single	19'-5"	17'-11"	17'-4"	20'-9"	19'-2"	18'-3"	17'-5"	22'-2"	20'-7"	19'-6"	18'-5"	
		Continuous	20'-7"	19'-0"	18'-3"	22'-0"	20'-4"	19'-4"	18'-4"	23'-6"	21'-9"	20'-9"	19'-6"	
	B	Single	20'-0"	18'-6"	17'-9"	21'-3"	19'-8"	18'-9"	17'-10"	22'-8"	21'-1"	20'-1"	18'-11"	
		Continuous	21'-2"	19'-8"	18'-10"	22'-7"	20'-11"	19'-11"	18'-11"	24'-1"	22'-4"	21'-3"	20'-1"	
	C	Single	23'-1"	21'-5"	20'-5"	23'-11"	22'-3"	21'-3"	20'-1"	24'-11"	23'-3"	22'-3"	20'-9"	
		Continuous	24'-4"	22'-7"	21'-7"	25'-3"	23'-6"	22'-5"	21'-3"	26'-3"	24'-7"	23'-6"	22'-2"	
	D	Single	21'-0"	19'-6"	18'-8"	22'-1"	20'-6"	19'-6"	18'-7"	23'-3"	21'-8"	20'-8"	19'-6"	
		Continuous	22'-3"	20'-7"	19'-9"	23'-4"	21'-8"	20'-8"	19'-8"	24'-7"	22'-11"	21'-10"	20'-7"	
14"	A	Single	21'-7"	19'-11"	19'-1"	23'-0"	21'-3"	20'-3"	19'-2"	24'-8"	22'-10"	21'-8"	20'-5"	
		Continuous	22'-10"	21'-2"	20'-3"	24'-5"	22'-7"	21'-6"	20'-4"	26'-1"	24'-2"	23'-0"	21'-8"	
	B	Single	22'-3"	20'-7"	19'-8"	23'-8"	21'-11"	20'-10"	19'-9"	25'-2"	23'-5"	22'-3"	21'-0"	
		Continuous	23'-7"	21'-10"	20'-11"	25'-1"	23'-3"	22'-2"	21'-0"	26'-8"	24'-10"	23'-8"	22'-3"	
	C	Single	25'-11"	24'-1"	23'-0"	26'-10"	25'-0"	23'-10"	22'-7"	27'-10"	26'-1"	24'-11"	23'-6"	
		Continuous	27'-4"	25'-5"	24'-3"	28'-3"	26'-5"	25'-2"	23'-10"	29'-4"	27'-6"	26'-4"	24'-9"	
	D	Single	23'-6"	21'-10"	20'-10"	24'-8"	22'-11"	21'-10"	20'-8"	25'-11"	24'-2"	23'-0"	21'-8"	
		Continuous	24'-10"	23'-1"	22'-1"	26'-1"	24'-2"	23'-1"	21'-11"	27'-5"	25'-6"	24'-4"	22'-11"	
16"	A	Single	23'-6"	21'-8"	20'-9"	25'-1"	23'-2"	22'-0"	20'-10"	26'-10"	24'-10"	23'-7"	22'-2"	
		Continuous	24'-11"	23'-0"	22'-0"	26'-7"	24'-7"	23'-4"	22'-1"	28'-5"	26'-3"	25'-0"	23'-6"	
	B	Single	24'-3"	22'-5"	21'-5"	25'-9"	23'-10"	22'-8"	21'-6"	27'-5"	25'-6"	24'-3"	22'-10"	
		Continuous	25'-8"	23'-9"	22'-9"	27'-3"	25'-3"	24'-1"	22'-10"	29'-1"	27'-0"	25'-9"	24'-3"	
	C	Single	28'-6"	26'-6"	25'-3"	29'-5"	27'-5"	26'-2"	24'-9"	30'-6"	28'-7"	27'-4"	25'-9"	
		Continuous	30'-1"	27'-11"	26'-8"	31'-0"	28'-11"	27'-7"	24'-9"	32'-3"	30'-2"	28'-10"	24'-9"	
	D	Single	25'-9"	23'-10"	22'-10"	27'-0"	25'-0"	23'-10"	22'-7"	28'-4"	26'-4"	25'-1"	23'-8"	
		Continuous	27'-3"	25'-3"	24'-1"	28'-6"	26'-5"	25'-3"	23'-11"	29'-11"	27'-10"	26'-7"	24'-9"	
18"	A	Single	25'-4"	23'-5"	22'-5"	27'-1"	25'-0"	23'-9"	22'-6"	28'-11"	26'-9"	25'-5"	23'-11"	
		Continuous	26'-11"	24'-10"	23'-9"	28'-8"	26'-6"	25'-3"	23'-10"	30'-8"	28'-4"	27'-0"	24'-9"	
	B	Single	26'-2"	24'-3"	23'-2"	27'-10"	25'-9"	24'-6"	23'-2"	29'-7"	27'-6"	26'-2"	24'-8"	
		Continuous	27'-9"	25'-8"	24'-7"	29'-6"	27'-4"	26'-0"	24'-8"	31'-4"	29'-2"	27'-9"	24'-9"	
	C	Single	31'-1"	28'-11"	27'-7"	32'-1"	29'-11"	28'-6"	26'-11"	33'-7"	31'-1"	29'-8"	28'-0"	
		Continuous	33'-1"	30'-5"	29'-0"	34'-5"	31'-6"	30'-1"	24'-9"	36'-0"	33'-1"	30'-11"	24'-9"	
	D	Single	28'-0"	25'-11"	24'-9"	29'-4"	27'-2"	25'-10"	24'-6"	30'-8"	28'-7"	27'-3"	25'-8"	
		Continuous	29'-7"	27'-5"	26'-2"	30'-11"	28'-8"	27'-4"	24'-9"	32'-7"	30'-2"	28'-9"	24'-9"	
20"	A	Single	27'-0"	24'-11"	23'-10"	28'-10"	26'-7"	25'-4"	23'-11"	30'-9"	28'-6"	27'-1"	25'-5"	
		Continuous	28'-8"	26'-5"	25'-3"	30'-7"	28'-2"	26'-10"	24'-9"	32'-10"	30'-2"	28'-8"	24'-9"	
	B	Single	27'-10"	25'-10"	24'-8"	29'-7"	27'-5"	26'-1"	24'-9"	31'-6"	29'-3"	27'-11"	26'-3"	
		Continuous	29'-7"	27'-4"	26'-2"	31'-4"	29'-1"	27'-8"	24'-9"	33'-10"	31'-0"	29'-7"	24'-9"	
	C	Single	34'-2"	31'-1"	29'-7"	35'-4"	32'-2"	30'-7"	28'-11"	36'-10"	33'-10"	31'-10"	30'-0"	
		Continuous	36'-7"	33'-0"	30'-11"	37'-11"	34'-7"	30'-11"	24'-9"	39'-6"	36'-4"	30'-11"	24'-9"	
	D	Single	30'-0"	27'-9"	26'-6"	31'-4"	29'-0"	27'-8"	26'-2"	33'-1"	30'-6"	29'-1"	27'-5"	
		Continuous	31'-8"	29'-3"	28'-0"	33'-5"	30'-8"	29'-2"	24'-9"	35'-7"	32'-4"	30'-9"	24'-9"	

Refer to Notes on page 6



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Notes for Floor Span Tables:

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- (a) Allowable spans are applicable to floor construction. For ultimate limit states a load factor of 1.5 is applied to the live load and a load factor of 1.25 applied to the dead load. The serviceability limit states include the 1997 CCMC concluding report vibration criteria, including use of 1.2 composite stiffness factor for multiple span conditions. The live and total load deflection limits are indicated at the top of the table. The design is to CSA O86-19 and the 2020 NBCC.
- (b) Spans are based on partial composite action with glued and nailed OSB subfloor conforming to CSA O325. The span ratings are as follows: 1F20 (19/32" thick), 1F24 (23/32" thick) and 1F32 (7/8" thick).
- (c) Minimum bearing length shall be 1-3/4" for end bearing when I-joists are used with the 40L span tables, and minimum 3 1/2" length with 50L and 100L tables. Use 3-1/2" for all interior bearings. Maximum design spans in the table are measured from the inside face of bearings for simple spans and from inside face of end bearing to centre of interior bearing for continuous spans.
- (d) Bearing stiffeners are not required when I-joists are used with the spans given in the 40L tables, except as required by hanger manufacturers. Bearing stiffeners are required at all bearings when I-joists are used with the 50L and 100L span tables.
- (e) This table is based on uniform loads. For applications other than uniformly distributed loads, or other applications beyond the scope of the indicated design criteria, an engineering analysis may be required based on the use of the design properties given in CCMC 14146-R and APA PR-L330(C) evaluation reports. For technical support, contact IB EWP Inc. or your local IB EWP Inc. distributor.
- (f) Continuous spans given in the table above are the longest spans between bearings for a joist with three bearings. The ratio of the shorter span to the longer span must be greater than 40%. For two spans with a ratio of between 40% and 80%, provide metal hangers or equivalent to withstand an uplift force at the end of the shorter span. Calculate factored uplift (pounds) at the end of the shorter span with the longer span (only) loaded with live load. For all other applications, consult IB EWP Inc.

Legend: Assembly "A" = Indicated subfloor with no additional components added.
Assembly "B" = Assembly "A" plus 1/2" thick gypsum board applied directly to the bottom flange.
Assembly "C" = Assembly "B" plus one row of I-joist blocking at mid-span.
Assembly "D" = Assembly "A" plus one row of I-joist blocking at mid-span.



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