

I-JOIST DESIGN GUIDE

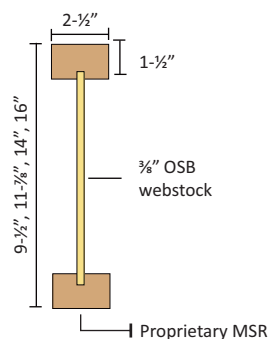
THE MOST COST-EFFECTIVE FLOORS START WITH I-JOISTS FROM KOTT

With our range of available I-Joist products, KOTT has you covered for all performance and price points.

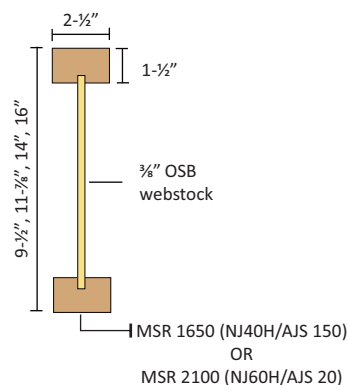
Our Design team will select the best combination of I-Joist products to value-engineer your floor for your application. This means we will meet or exceed your performance specifications, and by optimizing material and minimizing waste, will do so at the lowest possible price.

	LPI 20Plus	AJS 140	NJ40H/AJS 150	NJ60H/AJS 20	NJ40U/AJS 24	NJ60U/AJS 25
Best-suited for these applications						
Shorter spans, simple	●	●	●			
Longer spans, simple or continuous	●	●	●	●	●	●
For heavy loads/long spans				●	●	●
Where large holes are specified in design	●	●	●	●	●	●
Depths available						
9-1/2"	●	●	●	●	●	●
11-7/8"	●	●	●	●	●	●
14"	●	●	●	●	●	●
16"	●		●	●	●	●
Flange						
Size	2x3	2x3	2x3	2x3	2x4	2x4
Material	Proprietary MSR	Proprietary MSR	MSR 1650	MSR 2100	MSR 1650	MSR 2100

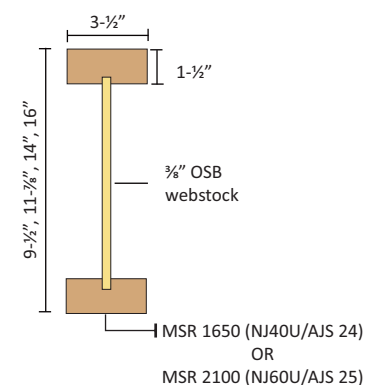
LPI 20Plus
AJS 140



NJ40H/AJS 150
NJ60H/AJS 20



NJ40U/AJS 24
NJ60U/AJS 25



Simple Span: 40 PSF LL/15 PSF DL (L/360), **5/8" OSB sheathing**, nailed and glued

Joist series	Joist Depth	Bare Joist				Ceiling			
		12"	16"	19.2"		12"	16"	19.2"	
LPI 20Plus	9-1/2"	15'-9"	14'-11"	14'-5"		16'-3"	15'-4"	14'-10"	
	11-7/8"	17'-8"	16'-8"	16'-1"		18'-3"	17'-2"	16'-7"	
	14"	19'-7"	18'-2"	17'-6"		20'-4"	18'-11"	18'-1"	
	16"	21'-4"	19'-10"	18'-11"		22'-2"	20'-7"	19'-9"	
AJS 140	9-1/2"	15'-7"	14'-9"	14'-3"		16'-0"	15'-2"	14'-8"	
	11-7/8"	17'-6"	16'-6"	16'-0"		18'-0"	17'-0"	16'-5"	
	14"	19'-3"	17'-11"	17'-4"		20'-0"	18'-7"	17'-11"	
NJ40H/ AJS 150	9-1/2"	16'-0"	15'-1"	14'-7"		16'-5"	15'-6"	15'-0"	
	11-7/8"	17'-11"	16'-11"	16'-4"		18'-6"	17'-5"	16'-10"	
	14"	19'-10"	18'-5"	17'-9"		20'-7"	19'-2"	18'-4"	
NJ60H/ AJS 20	9-1/2"	16'-5"	15'-6"	15'-0"		16'-10"	15'-11"	15'-4"	
	11-7/8"	18'-6"	17'-4"	16'-9"		19'-2"	17'-10"	17'-3"	
	14"	20'-7"	19'-1"	18'-3"		21'-3"	19'-9"	18'-11"	
NJ40U/ AJS 24	9-1/2"	16'-10"	15'-11"	15'-4"		17'-3"	16'-3"	15'-9"	
	11-7/8"	19'-2"	17'-10"	17'-3"		19'-9"	18'-4"	17'-8"	
	14"	21'-3"	19'-8"	18'-10"		21'-11"	20'-4"	19'-6"	
NJ60U/ AJS 25	9-1/2"	17'-5"	16'-5"	15'-10"		17'-9"	16'-9"	16'-2"	
	11-7/8"	19'-11"	18'-5"	17'-9"		20'-6"	19'-0"	18'-1"	
	14"	22'-1"	20'-5"	19'-6"		22'-9"	21'-1"	20'-2"	
	16"	24'-1"	22'-3"	21'-3"		24'-9"	22'-11"	21'-11"	

Definitions:

Ceiling

1/2" gypsum board applied to Joist or 1x4 strapping @ 24" o.c.

1 Row Blocking

blocking panel at midspan

1 Row Blocking & 1 Strapping

blocking panel at midspan; 1x4 strapping at midspan

1 Row Blocking & Ceiling

blocking panel at midspan; 1/2" gypsum board applied to Joist

3 Rows Blocking

blocking panels at each 1/4 of the span

3 Rows Blocking & 3 Strapping

blocking panels and 1x4 strapping at each 1/4 of the span

3 Rows Blocking & Ceiling

blocking panels at each 1/4 of the span; 1/2" gypsum board applied to Joist

Values that are shaded have a minimum end bearing of 3-1/2".

For full Notes on Span Charts, see pg 5.

Simple Span: 40 PSF LL/15 PSF DL (L/360), **5/8" OSB sheathing**, nailed and glued

Joist series	Joist Depth	1 Row Blocking				1 Row Blocking & 1 Strapping			
		12"	16"	19.2"		12"	16"	19.2"	
LPI 20Plus	9-1/2"	16'-9"	15'-10"	15'-4"		17'-7"	16'-8"	15'-7"	
	11-7/8"	19'-1"	17'-10"	17'-3"		20'-6"	19'-1"	18'-3"	
	14"	21'-5"	19'-11"	19'-1"		23'-1"	21'-6"	20'-6"	
	16"	23'-6"	21'-10"	20'-11"		25'-6"	23'-8"	22'-7"	
AJS 140	9-1/2"	16'-7"	15'-8"	15'-2"		17'-6"	16'-7"	15'-8"	
	11-7/8"	18'-11"	17'-8"	17'-2"		20'-4"	18'-11"	18'-1"	
	14"	21'-3"	19'-9"	18'-11"		22'-11"	21'-4"	20'-0"	
NJ40H/ AJS 150	9-1/2"	16'-11"	16'-0"	15'-6"		17'-9"	16'-10"	16'-1"	
	11-7/8"	19'-4"	18'-0"	17'-5"		20'-9"	19'-3"	18'-5"	
	14"	21'-8"	20'-1"	19'-3"		23'-4"	21'-8"	20'-8"	
	16"	23'-8"	22'-1"	21'-1"		25'-8"	23'-10"	22'-9"	
NJ60H/ AJS 20	9-1/2"	17'-5"	16'-5"	15'-11"		18'-3"	17'-3"	16'-8"	
	11-7/8"	20'-0"	18'-7"	17'-11"		21'-5"	19'-11"	19'-0"	
	14"	22'-5"	20'-10"	19'-11"		24'-1"	22'-5"	21'-5"	
	16"	24'-7"	22'-10"	21'-10"		26'-7"	24'-8"	23'-6"	
NJ40U/ AJS 24	9-1/2"	17'-10"	16'-10"	16'-3"		18'-10"	17'-8"	17'-1"	
	11-7/8"	20'-8"	19'-2"	18'-5"		22'-1"	20'-6"	19'-7"	
	14"	23'-1"	21'-6"	20'-6"		24'-10"	23'-1"	22'-0"	
	16"	25'-4"	23'-6"	22'-5"		27'-4"	25'-4"	24'-2"	
NJ60U/ AJS 25	9-1/2"	18'-5"	17'-4"	16'-9"		19'-7"	18'-2"	17'-6"	
	11-7/8"	21'-5"	19'-11"	19'-0"		22'-11"	21'-3"	20'-3"	
	14"	24'-0"	22'-3"	21'-3"		25'-9"	23'-10"	22'-9"	
	16"	26'-3"	24'-4"	23'-3"		28'-4"	26'-3"	25'-0"	

SPAN CHARTS



Simple Span: 40 PSF LL/15 PSF DL (L/360), **5/8" OSB sheathing**, nailed and glued

Joist series	Joist Depth	1 Row Blocking & Ceiling				3 Rows Blocking			
		12"	16"	19.2"		12"	16"	19.2"	
LPI 20Plus	9-1/2"	18'-0"	16'-7"	15'-7"		17'-3"	16'-4"	15'-7"	
	11-7/8"	21'-2"	19'-8"	18'-10"		19'-11"	18'-7"	17'-10"	
	14"	23'-10"	22'-3"	21'-3"		22'-5"	20'-10"	19'-11"	
	16"	26'-3"	24'-6"	22'-11"		24'-8"	22'-11"	21'-11"	
AJS 140	9-1/2"	18'-0"	16'-8"	15'-8"		16'-6"	15'-8"	15'-2"	
	11-7/8"	21'-1"	19'-7"	18'-6"		18'-9"	17'-7"	17'-1"	
	14"	23'-7"	21'-10"	20'-0"		21'-1"	19'-7"	18'-10"	
NJ40H/ AJS 150	9-1/2"	17'-4"	16'-5"	15'-11"		17'-5"	16'-6"	16'-0"	
	11-7/8"	19'-11"	18'-7"	17'-11"		20'-2"	18'-9"	18'-0"	
	14"	22'-4"	20'-10"	20'-0"		22'-8"	21'-1"	20'-2"	
	16"	24'-6"	22'-10"	21'-11"		24'-11"	23'-2"	22'-1"	
NJ60H/ AJS 20	9-1/2"	17'-9"	16'-10"	16'-3"		17'-11"	16'-11"	16'-5"	
	11-7/8"	20'-7"	19'-2"	18'-5"		20'-11"	19'-5"	18'-7"	
	14"	23'-1"	21'-6"	20'-7"		23'-5"	21'-9"	20'-10"	
	16"	25'-3"	23'-7"	22'-7"		25'-9"	23'-11"	22'-10"	
NJ40U/ AJS 24	9-1/2"	18'-2"	17'-2"	16'-8"		18'-5"	17'-4"	16'-9"	
	11-7/8"	21'-3"	19'-9"	18'-11"		21'-7"	20'-0"	19'-2"	
	14"	23'-9"	22'-1"	21'-2"		24'-2"	22'-5"	21'-5"	
	16"	26'-0"	24'-2"	23'-2"		26'-6"	24'-7"	23'-6"	
NJ60U/ AJS 25	9-1/2"	18'-10"	17'-8"	17'-1"		19'-1"	17'-10"	17'-3"	
	11-7/8"	22'-0"	20'-5"	19'-7"		22'-4"	20'-9"	19'-10"	
	14"	24'-7"	22'-10"	21'-10"		25'-1"	23'-3"	22'-2"	
	16"	26'-11"	25'-0"	23'-11"		27'-6"	25'-6"	24'-4"	

Simple Span: 40 PSF LL/15 PSF DL (L/360), **5/8" OSB sheathing**, nailed and glued

Joist series	Joist Depth	3 Rows Blocking & 3 Strapping				3 Rows Blocking & Ceiling			
		12"	16"	19.2"		12"	16"	19.2"	
LPI 20Plus	9-1/2"	18'-5"	16'-7"	15'-7"		18'-5"	16'-7"	15'-7"	
	11-7/8"	22'-1"	20'-0"	18'-9"		22'-1"	20'-0"	18'-9"	
	14"	25'-4"	22'-10"	21'-4"		25'-3"	22'-10"	21'-4"	
	16"	28'-2"	25'-1"	22'-11"		28'-2"	25'-1"	22'-11"	
AJS 140	9-1/2"	17'-4"	16'-5"	15'-8"		17'-9"	16'-8"	15'-8"	
	11-7/8"	20'-2"	18'-9"	17'-11"		20'-9"	19'-4"	18'-2"	
	14"	22'-8"	21'-1"	20'-0"		23'-4"	21'-9"	20'-0"	
NJ40H/ AJS 150	9-1/2"	18'-11"	17'-1"	16'-1"		17'-10"	16'-11"	16'-1"	
	11-7/8"	22'-6"	20'-6"	19'-3"		20'-10"	19'-5"	18'-7"	
	14"	25'-7"	23'-4"	21'-5"		23'-4"	21'-10"	20'-10"	
	16"	28'-5"	25'-3"	23'-1"		25'-8"	23'-11"	22'-11"	
NJ60H/ AJS 20	9-1/2"	19'-8"	18'-2"	17'-0"		18'-4"	17'-4"	16'-9"	
	11-7/8"	23'-3"	21'-7"	20'-4"		21'-6"	20'-0"	19'-2"	
	14"	26'-4"	24'-5"	23'-2"		24'-1"	22'-6"	21'-6"	
	16"	29'-3"	27'-1"	25'-2"		26'-6"	24'-8"	23'-7"	
NJ40U/ AJS 24	9-1/2"	20'-2"	18'-9"	17'-10"		18'-11"	17'-8"	17'-1"	
	11-7/8"	23'-11"	22'-2"	21'-1"		22'-1"	20'-7"	19'-8"	
	14"	27'-1"	25'-1"	23'-10"		24'-10"	23'-1"	22'-1"	
	16"	30'-0"	27'-10"	26'-5"		27'-3"	25'-4"	24'-3"	
NJ60U/ AJS 25	9-1/2"	20'-11"	19'-5"	18'-6"		19'-7"	18'-2"	17'-7"	
	11-7/8"	24'-9"	22'-11"	21'-9"		22'-11"	21'-3"	20'-4"	
	14"	28'-0"	25'-11"	24'-7"		25'-8"	23'-10"	22'-9"	
	16"	31'-0"	28'-9"	27'-3"		28'-2"	26'-2"	25'-0"	

Definitions:

Ceiling

1/2" gypsum board applied to Joist or 1x4 strapping @ 24" o.c.

1 Row Blocking

blocking panel at midspan

1 Row Blocking & 1 Strapping

blocking panel at midspan; 1x4 strapping at midspan

1 Row Blocking & Ceiling

blocking panel at midspan; 1/2" gypsum board applied to Joist

3 Rows Blocking

blocking panels at each 1/4 of the span

3 Rows Blocking & 3 Strapping

blocking panels and 1x4 strapping at each 1/4 of the span

3 Rows Blocking & Ceiling

blocking panels at each 1/4 of the span; 1/2" gypsum board applied to Joist

Values that are shaded have a minimum end bearing of 3-1/2".

For full Notes on Span Charts, see pg 5.

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

Joist series	Joist Depth	Bare Joist				Ceiling			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
LPI 20Plus	9-1/2"	16'-7"	15'-8"	15'-1"	14'-5"	17'-0"	16'-1"	15'-6"	14'-5"
	11-7/8"	18'-9"	17'-7"	16'-11"	16'-3"	19'-5"	18'-1"	17'-5"	16'-8"
	14"	20'-11"	19'-5"	18'-6"	17'-8"	21'-7"	20'-1"	19'-2"	18'-3"
	16"	22'-9"	21'-1"	20'-2"	19'-1"	23'-7"	21'-11"	20'-11"	19'-8"
AJS 140	9-1/2"	16'-7"	15'-7"	15'-1"		17'-0"	16'-0"	15'-2"	
	11-7/8"	18'-8"	17'-6"	16'-10"		19'-3"	18'-0"	17'-4"	
	14"	20'-9"	19'-3"	18'-4"		21'-5"	19'-11"	19'-1"	
NJ40H/ AJS 150	9-1/2"	16'-10"	15'-10"	15'-4"	14'-8"	17'-3"	16'-3"	15'-8"	14'-10"
	11-7/8"	19'-0"	17'-9"	17'-1"	16'-5"	19'-8"	18'-3"	17'-7"	16'-11"
	14"	21'-2"	19'-7"	18'-9"	17'-10"	21'-10"	20'-4"	19'-5"	18'-5"
NJ60H/ AJS 20	9-1/2"	17'-4"	16'-4"	15'-9"	15'-1"	17'-8"	16'-9"	16'-1"	15'-5"
	11-7/8"	19'-9"	18'-4"	17'-7"	16'-10"	20'-4"	18'-11"	18'-1"	17'-4"
	14"	21'-11"	20'-4"	19'-5"	18'-4"	22'-7"	21'-0"	20'-0"	19'-0"
	16"	23'-11"	22'-2"	21'-1"	20'-0"	24'-7"	22'-11"	21'-10"	20'-8"
NJ40U/ AJS 24	9-1/2"	17'-9"	16'-9"	16'-1"	15'-5"	18'-1"	17'-1"	16'-6"	15'-9"
	11-7/8"	20'-5"	18'-11"	18'-1"	17'-4"	21'-0"	19'-5"	18'-7"	17'-8"
	14"	22'-8"	21'-0"	20'-0"	18'-11"	23'-3"	21'-7"	20'-7"	19'-6"
NJ60U/ AJS 25	9-1/2"	18'-4"	17'-3"	16'-7"	15'-11"	18'-10"	17'-7"	16'-11"	16'-3"
	11-7/8"	21'-3"	19'-7"	18'-8"	17'-9"	21'-9"	20'-2"	19'-2"	18'-2"
	14"	23'-7"	21'-9"	20'-9"	19'-7"	24'-2"	22'-4"	21'-4"	20'-2"
	16"	25'-8"	23'-8"	22'-7"	21'-4"	26'-3"	24'-4"	23'-3"	22'-0"

Definitions:

Ceiling

1/2" gypsum board applied to Joist or 1x4 strapping @ 24" o.c.

1 Row Blocking

blocking panel at midspan

1 Row Blocking & 1 Strapping

blocking panel at midspan; 1x4 strapping at midspan

1 Row Blocking & Ceiling

blocking panel at midspan; 1/2" gypsum board applied to Joist

3 Rows Blocking

blocking panels at each 1/4 of the span

3 Rows Blocking & 3 Strapping

blocking panels and 1x4 strapping at each 1/4 of the span

3 Rows Blocking & Ceiling

blocking panels at each 1/4 of the span; 1/2" gypsum board applied to Joist

Values that are shaded have a minimum end bearing of 3-1/2".

For full Notes on Span Charts, see pg 5.

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

Joist series	Joist Depth	1 Row Blocking				1 Row Blocking & 1 Strapping			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
LPI 20Plus	9-1/2"	17'-5"	16'-6"	15'-7"	14'-5"	18'-2"	16'-7"	15'-7"	14'-5"
	11-7/8"	20'-1"	18'-8"	17'-11"	17'-2"	21'-3"	19'-10"	18'-9"	17'-3"
	14"	22'-5"	20'-11"	19'-11"	18'-11"	23'-11"	22'-4"	21'-3"	19'-1"
	16"	24'-7"	22'-11"	21'-10"	19'-8"	26'-3"	24'-6"	22'-11"	19'-8"
AJS 140	9-1/2"	17'-3"	16'-4"	15'-8"		18'-1"	16'-8"	15'-8"	
	11-7/8"	19'-11"	18'-6"	17'-9"		21'-1"	19'-8"	18'-2"	
	14"	22'-3"	20'-9"	19'-9"		23'-8"	21'-11"	20'-0"	
NJ40H/ AJS 150	9-1/2"	17'-7"	16'-8"	16'-1"	14'-10"	18'-5"	17'-1"	16'-1"	14'-10"
	11-7/8"	20'-3"	18'-11"	18'-1"	17'-4"	21'-6"	20'-1"	19'-2"	17'-5"
	14"	22'-8"	21'-1"	20'-2"	19'-2"	24'-1"	22'-6"	21'-6"	19'-0"
NJ60H/ AJS 20	9-1/2"	18'-1"	17'-1"	16'-6"	15'-9"	19'-1"	17'-10"	17'-0"	15'-9"
	11-7/8"	21'-0"	19'-7"	18'-8"	17'-10"	22'-3"	20'-9"	19'-9"	18'-9"
	14"	23'-6"	21'-10"	20'-10"	19'-9"	24'-11"	23'-3"	22'-2"	21'-0"
	16"	25'-8"	23'-11"	22'-10"	21'-7"	27'-5"	25'-6"	24'-4"	22'-6"
NJ40U/ AJS 24	9-1/2"	18'-8"	17'-6"	16'-11"	16'-3"	19'-7"	18'-3"	17'-7"	16'-6"
	11-7/8"	21'-8"	20'-2"	19'-3"	18'-3"	22'-11"	21'-4"	20'-5"	19'-4"
	14"	24'-3"	22'-6"	21'-6"	20'-4"	25'-9"	23'-11"	22'-10"	21'-7"
NJ60U/ AJS 25	9-1/2"	19'-4"	18'-0"	17'-4"	16'-8"	20'-4"	18'-11"	18'-1"	17'-4"
	11-7/8"	22'-6"	20'-11"	19'-11"	18'-11"	23'-9"	22'-1"	21'-1"	19'-11"
	14"	25'-1"	23'-4"	22'-3"	21'-1"	26'-8"	24'-9"	23'-7"	22'-4"
	16"	27'-6"	25'-6"	24'-4"	23'-0"	29'-3"	27'-2"	25'-11"	24'-6"

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

Joist series	Joist Depth	1 Row Blocking & Ceiling				3 Rows Blocking			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
LPI 20Plus	9-1/2"	18'-5"	16'-7"	15'-7"	14'-5"	17'-11"	16'-7"	15'-7"	14'-5"
	11-7/8"	21'-11"	20'-0"	18'-9"	17'-3"	20'-10"	19'-5"	18'-6"	17'-3"
	14"	24'-7"	22'-10"	21'-4"	19'-1"	23'-4"	21'-9"	20'-9"	19'-1"
	16"	27'-1"	25'-1"	22'-11"	19'-8"	25'-7"	23'-11"	22'-9"	19'-8"
AJS 140	9-1/2"	18'-5"	16'-8"	15'-8"		17'-2"	16'-3"	15'-8"	
	11-7/8"	19'-11"	18'-6"	18'-2"		19'-9"	18'-5"	17'-8"	
	14"	24'-5"	21'-11"	20'-0"		22'-1"	20'-7"	19'-8"	
NJ40H/ AJS 150	9-1/2"	18'-0"	17'-1"	16'-1"	14'-10"	18'-1"	17'-1"	16'-1"	14'-10"
	11-7/8"	20'-11"	19'-6"	18'-8"	17'-5"	21'-0"	19'-7"	18'-9"	17'-5"
	14"	23'-4"	21'-10"	20'-11"	19'-0"	23'-7"	22'-0"	21'-0"	19'-0"
	16"	25'-7"	23'-11"	22'-10"	20'-5"	25'-10"	24'-1"	23'-0"	20'-5"
NJ60H/ AJS 20	9-1/2"	18'-7"	17'-6"	16'-11"	15'-9"	18'-8"	17'-7"	16'-11"	15'-9"
	11-7/8"	21'-7"	20'-2"	19'-3"	18'-3"	21'-9"	20'-3"	19'-4"	18'-4"
	14"	24'-1"	22'-6"	21'-6"	20'-5"	24'-5"	22'-9"	21'-8"	20'-6"
	16"	26'-5"	24'-8"	23'-7"	22'-4"	26'-9"	24'-11"	23'-9"	22'-6"
NJ40U/ AJS 24	9-1/2"	19'-1"	17'-10"	17'-3"	16'-6"	19'-3"	18'-0"	17'-4"	16'-6"
	11-7/8"	22'-3"	20'-9"	19'-9"	18'-9"	22'-6"	20'-11"	19'-11"	18'-11"
	14"	24'-10"	23'-2"	22'-1"	21'-0"	25'-2"	23'-5"	22'-4"	21'-2"
	16"	27'-1"	25'-4"	24'-2"	22'-11"	27'-6"	25'-7"	24'-5"	23'-1"
NJ60U/ AJS 25	9-1/2"	19'-9"	18'-5"	17'-8"	17'-0"	20'-0"	18'-7"	17'-10"	17'-1"
	11-7/8"	23'-0"	21'-5"	20'-5"	19'-5"	23'-3"	21'-8"	20'-8"	19'-7"
	14"	25'-8"	23'-11"	22'-10"	21'-8"	26'-1"	24'-3"	23'-1"	21'-10"
	16"	28'-1"	26'-2"	25'-0"	23'-8"	28'-7"	26'-7"	25'-4"	23'-11"

Simple Span: 40 PSF LL/15 PSF DL (L/360), 3/4" OSB sheathing, nailed and glued

Joist series	Joist Depth	3 Rows Blocking & 3 Strapping				3 Rows Blocking & Ceiling			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
LPI 20Plus	9-1/2"	18'-5"	16'-7"	15'-7"	14'-5"	18'-5"	16'-7"	15'-7"	14'-5"
	11-7/8"	22'-1"	20'-0"	18'-9"	17'-3"	22'-1"	20'-9"	18'-9"	17'-3"
	14"	25'-3"	22'-10"	21'-4"	19'-1"	25'-3"	22'-10"	21'-4"	19'-1"
	16"	28'-2"	25'-1"	22'-11"	19'-8"	28'-2"	25'-1"	22'-11"	19'-8"
AJS 140	9-1/2"	17'-11"	16'-8"	15'-8"		18'-5"	16'-8"	15'-8"	
	11-7/8"	20'-11"	19'-6"	18'-2"		21'-6"	19'-11"	18'-2"	
	14"	23'-6"	21'-11"	20'-0"		24'-2"	21'-11"	20'-0"	
NJ40H/ AJS 150	9-1/2"	18'-11"	17'-1"	16'-1"	14'-10"	18'-7"	17'-1"	16'-1"	14'-10"
	11-7/8"	22'-8"	20'-6"	19'-3"	17'-5"	21'-8"	20'-3"	19'-3"	17'-5"
	14"	25'-9"	23'-4"	21'-5"	19'-0"	24'-3"	22'-8"	21'-5"	19'-0"
	16"	28'-7"	25'-3"	23'-1"	20'-5"	26'-7"	24'-11"	23'-1"	20'-5"
NJ60H/ AJS 20	9-1/2"	20'-1"	18'-2"	17'-0"	15'-9"	19'-2"	17'-11"	17'-0"	15'-9"
	11-7/8"	23'-9"	21'-8"	20'-4"	18'-10"	22'-4"	20'-11"	19'-11"	18'-10"
	14"	26'-9"	24'-8"	23'-2"	20'-11"	25'-0"	23'-5"	22'-4"	20'-11"
	16"	29'-6"	27'-5"	25'-2"	22'-6"	27'-5"	25'-8"	24'-6"	22'-6"
NJ40U/ AJS 24	9-1/2"	20'-9"	19'-0"	17'-10"	16'-6"	19'-8"	18'-5"	17'-8"	16'-6"
	11-7/8"	24'-5"	22'-9"	21'-5"	19'-9"	23'-0"	21'-6"	20'-6"	19'-5"
	14"	27'-6"	25'-8"	24'-4"	22'-6"	25'-9"	24'-1"	23'-0"	21'-9"
	16"	30'-4"	28'-4"	26'-11"	24'-5"	28'-2"	26'-4"	25'-2"	23'-10"
NJ60U/ AJS 25	9-1/2"	21'-6"	20'-0"	18'-11"	17'-6"	20'-5"	19'-0"	18'-2"	17'-5"
	11-7/8"	25'-3"	23'-7"	22'-5"	20'-11"	23'-9"	22'-2"	21'-2"	20'-1"
	14"	28'-6"	26'-7"	25'-3"	23'-9"	26'-7"	24'-10"	23'-8"	22'-5"
	16"	31'-5"	29'-4"	27'-10"	25'-5"	29'-2"	27'-3"	26'-0"	24'-7"

Notes on Span Charts:

- Contact KOTT for spans or other conditions not shown.
- Maximum spans in the tables have been determined in accordance with NBC 2010, CSA O86 "Engineering Design in Wood" and the vibration criteria outlined by the CCMC.
- Maximum spans in the tables are clear spans, measured between inside surfaces of end bearings.
- Deflection due to live load is limited to L/360.
- Deflection due to total load is limited to L/240.
- Where the subfloor is field-glued to the I-Joists, use an adhesive complying with standard ASTM D3498 "Standard specification for Adhesives for Field-Gluing Plywood to Lumber Framing for Floor Systems".
- Where a blocking panel is specified, it shall consist of an I-Joist block of the same depth as the floor Joists and installed as per details on the Installation Guide.
- Minimum end bearing length is 1-1/2". Values that are shaded have a minimum end bearing length of 3-1/2".
- Lateral support must be provided for the compression edge and also at the bearings to prevent lateral displacement or rotation.

Simple Span for Live Loads up to 40 PSF and Dead Loads up to 15 PSF

Minimum distance from support, listed in the table below, is required for all holes greater than 1-1/2"

ROUND HOLES																	
JOIST DEPTH & HOLE SIZE [IN]																	
Span [ft]	9-1/2"				11-7/8"				14"				16"				
	3"	6"			3"	6"			3"	6"	9"			3"	6"	9"	12"
Minimum distance from inside face of any support to the centerline of hole																	
8'	1'-0"	1'-6"			1'-0"	1'-0"			1'-0"	1'-0"	2'-2"			1'-0"	1'-4"	3'-7"	4'-11"
10'	1'-0"	2'-6"			1'-0"	1'-0"			1'-0"	1'-0"	2'-2"			1'-0"	1'-4"	3'-7"	4'-11"
12'	1'-0"	4'-0"			1'-0"	1'-0"			1'-0"	1'-0"	2'-2"			1'-0"	1'-4"	3'-7"	4'-11"
14'	1'-0"	5'-0"			1'-0"	1'-0"			1'-0"	1'-0"	2'-2"			1'-0"	1'-4"	3'-7"	4'-11"
16'	2'-0"	6'-6"			1'-0"	2'-6"			1'-0"	1'-9"	4'-6"			1'-0"	1'-4"	3'-7"	4'-11"
18'	3'-0"	7'-6"			1'-0"	3'-6"			1'-0"	1'-9"	4'-6"			1'-0"	1'-4"	3'-7"	4'-11"
20'	4'-0"	9'-0"			3'-2"	4'-10"			2'-9"	4'-1"	7'-0"			2'-5"	3'-6"	6'-1"	7'-5"
22'	5'-0"	10'-0"			3'-2"	5'-6"			2'-9"	4'-1"	7'-0"			2'-5"	3'-6"	6'-1"	7'-5"
24'	6'-6"	11'-6"			3'-2"	7'-0"			5'-0"	6'-5"	9'-8"			4'-8"	5'-11"	8'-7"	10'-1"
26'					4'-0"	8'-0"			5'-0"	6'-5"	9'-8"			4'-8"	5'-11"	8'-7"	10'-1"
28'					5'-0"	9'-0"			5'-0"	6'-5"	10'-0"			7'-0"	8'-4"	11'-3"	12'-10"
30'									5'-0"	7'-0"	11'-0"			7'-0"	8'-4"	11'-3"	12'-10"
32'									5'-0"	8'-0"	12'-6"			7'-0"	8'-4"	11'-3"	13'-0"
34'														7'-0"	8'-4"	11'-3"	14'-6"

Notes on Hole Charts:

- Contact KOTT for other load conditions, hole sizes, or for allowable rectangular hole locations.
- The maximum size hole permitted to be installed in the webs shall leave a minimum of 1/4" of web material between the top and bottom of the hole and the adjacent flange.
- One 1 1/2" diameter round hole can be installed anywhere in the web except directly over a support. When installing multiple holes, the spacing between the edges must be 2.5 times the diameter of the largest hole.
- Do not cut or nick flanges when cutting holes in the web.
- Whenever possible, installed holes shall be centered vertically in the web.
- For spans that are intermediate to those given in the table, select the greater distance of the two adjacent spans.
- Holes larger than 1-1/2" are not permitted in cantilevers.

Joist series	Joist Depth mm (inches)	Factored Moment Resistance (N · m)	Factored Shear Resistance (N)	Bending Stiffness EI x 10 ⁶ (kN · mm ²)	Coefficient of Shear Deflection K (x 10 ⁶ N)	Factored End Reaction (N)*	Factored Intermediate Reaction (N)**
LPI 20Plus	241 (9-½")	6,331	8,852	531	19.11	6,805	15,412
	302 (11-⅞")	8,473	10,431	913	23.38	6,805	16,369
	356 (14")	9,924	11,787	1,360	27.33	6,805	17,236
	406 (16")	11,388	13,122	1,871	31.06	6,805	18,037
AJS 140	241 (9-½")	5,545	8,144	521	23.10	6,670	16,499
	302 (11-⅞")	7,205	10,461	894	29.40	6,705	16,780
	356 (14")	8,670	12,567	1,318	34.70	6,740	17,061
NJ40H/ AJS 150	241 (9-½")	6,370	8,144	556	23.10	6,670	16,499
	302 (11-⅞")	8,275	10,461	954	29.40	6,705	16,780
	356 (14")	9,960	12,567	1,405	34.70	6,740	17,061
	406 (16")	11,525	14,498	1,909	39.60	6,810	17,307
NJ60H/ AJS 20	241 (9-½")	7,685	8,144	664	23.10	6,670	16,499
	302 (11-⅞")	9,985	10,461	1,135	29.40	6,705	16,780
	356 (14")	12,020	12,567	1,667	34.70	6,740	17,061
	406 (16")	13,900	14,498	2,259	39.60	6,810	17,307
NJ40U/ AJS 24	241 (9-½")	9,020	8,144	771	23.60	6,670	18,255
	302 (11-⅞")	11,720	10,461	1,316	29.80	6,705	18,886
	356 (14")	14,115	12,567	1,928	35.10	6,740	19,448
	406 (16")	16,330	14,498	2,609	40.50	6,810	20,010
NJ60U/ AJS 25	241 (9-½")	12,095	8,144	921	23.10	6,670	18,255
	302 (11-⅞")	15,720	10,461	1,569	29.40	6,705	18,886
	356 (14")	18,925	12,567	2,295	34.70	6,740	19,448
	406 (16")	21,895	14,498	3,099	39.60	6,810	20,010

Notes on Design Values:

- Design values were developed in accordance with CSA 086.
- *Minimum end bearing of 38 mm
- **Minimum intermediate bearing of 89 mm

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