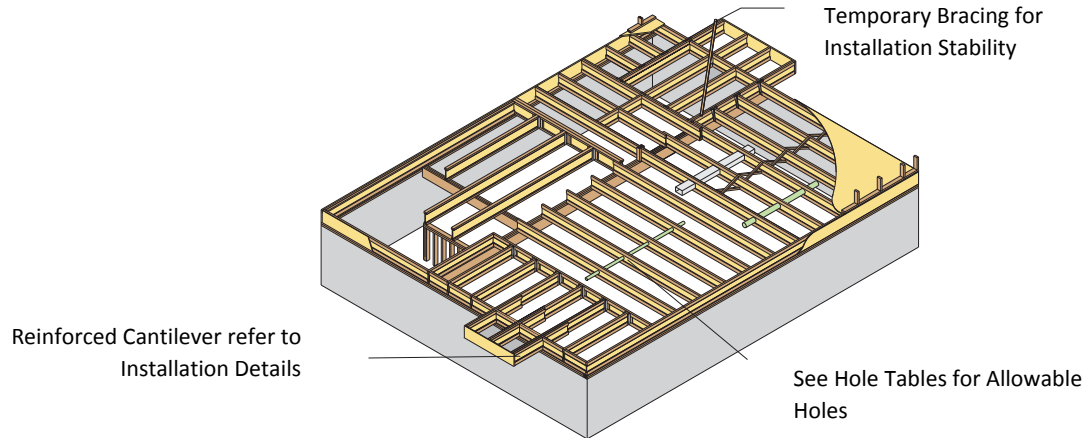


# FLOOR LAYOUT



## PHYSICAL PROPERTIES

DESIGN PROPERTIES FOR NASCOR I-JOISTS												
FACTORED RESISTANCE – STANDARD TERM												
JOIST TYPE	JOIST DEPTH (INCHES)	JOIST WEIGHT (PLF)	MOMENT (LBS – FT)	SHEAR (LBS)	END REACTION (LBS)		INTERMEDIATE REACTION (LBS)				EI X 10 <sup>6</sup> (LBS – IN <sup>2</sup> )	K X 10 <sup>6</sup> (LBS)
					1-1/2" BEARING WEB STIFF.	2-1/2" BEARING WEB STIFF.	3-1/2" BEARING WEB STIFF.		5-1/2" BEARING WEB STIFF.			
							NO	NO	NO	YES		
NJ 10	9-½"	2.20	3,670	1,540	1,575	1,735	3,155	N/A	3,470	N/A	140	4.50
NJ12	11-¾"	2.40	4,510	1,700	1,735	2,050	3,470	N/A	3,785	N/A	250	5.64
NJH10	9-½"	2.30	3,830	1,580	1,575	1,735	3,470	N/A	3,785	N/A	181	4.50
NJH12	11-¾"	2.70	5,390	1,810	1,575	1,735	3,615	N/A	3,960	N/A	308	5.64
NJH14	14"	3.00	7,920	2,140	1,575	1,735	3,745	N/A	4,115	N/A	430	6.65
NJH16	16"	3.30	9,410	2,390	1,575	1,735	3,865	N/A	4,260	N/A	584	7.60

### NOTES

- ABOVE DESIGN PROPERTIES WERE DEVELOPED IN ACCORDANCE WITH CSAO86. THE FACTORED RESISTANCE VALUES INCLUDE THE RESISTANCE FACTOR AND ARE FOR THE STANDARD TERM OF LOAD DURATION.
- EI, IS THE BENDING STIFFNESS OF THE SINGLE I-JOIST.
- K, IS THE SHEAR CONSTANT FOR THE SINGLE I-JOIST.
- THE DEFLECTION OF A SIMPLE SPAN I-JOIST CAN BE CALCULATED AS FOLLOWS:

(1) UNIFORM LOAD WHERE,

$$\Delta = \frac{5\omega L^4}{384EI} + \frac{\omega L^2}{K}$$

(2) CONCENTRATED LOAD AT MID-SPAN

$$\Delta = \frac{PL^3}{48EI} + \frac{2PL}{K}$$

Where,

$\Delta$  = I-JOIST DEFLECTION (INCHES)

EI = I-JOIST BENDING STIFFNESS (POUNDS-SQUARE INCH)

K = I-JOIST SHEAR CONSTANT (POUNDS)

L = I-JOIST CLEAR SPAN (INCHES)

$\omega$  = APPLIED UNIFORM LOAD (POUNDS PER LINEAR INCH)

P = APPLIED CONCENTRATED LOAD (POUNDS)