

ACCESSORIES / DETAILS

ADDED MEMBERS

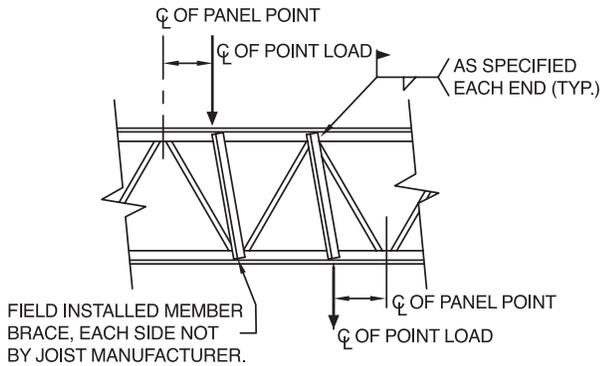


FIG. 1 - TYPICAL JOIST REINFORCEMENT AT CONCENTRATED LOADS

Standard joists, including CJ-Series, are not designed for localized bending from point loads. Concentrated loads must be applied at joist panel points or field strut members must be utilized as shown.

Joist manufacturers can provide a specially designed joist with the capability to take point loads without the added members if this requirement and the exact location and magnitude of the loads are clearly shown on the contract drawings. Also, the manufacturer can consider the worst case for both the shear and bending moment for a traveling load with no specific location. When a traveling load is specified, the contract drawings should indicate whether the load is to be applied at the top or bottom chord, and at any panel point, or at any point with the local bending effects considered.

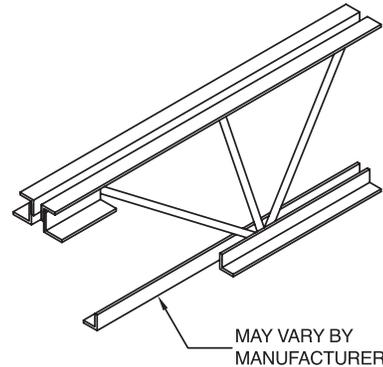


FIG. 2 - CEILING EXTENSION

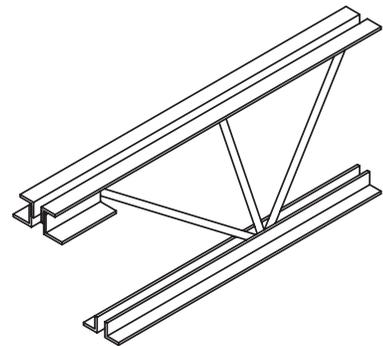


FIG. 3 - BOTTOM CHORD EXTENSION

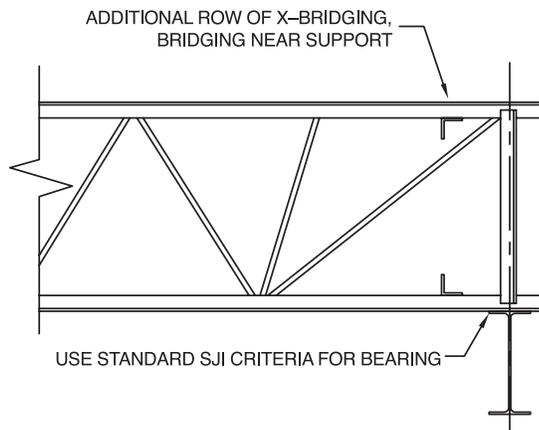


FIG. 4 - SQUARE ENDED, BOTTOM BEARING

Whenever joists are bottom chord bearing, diagonal bridging should be installed from joist to joist at or near the bearing location to provide additional lateral erection stability.

Note: Joist configuration and member sizes may vary.

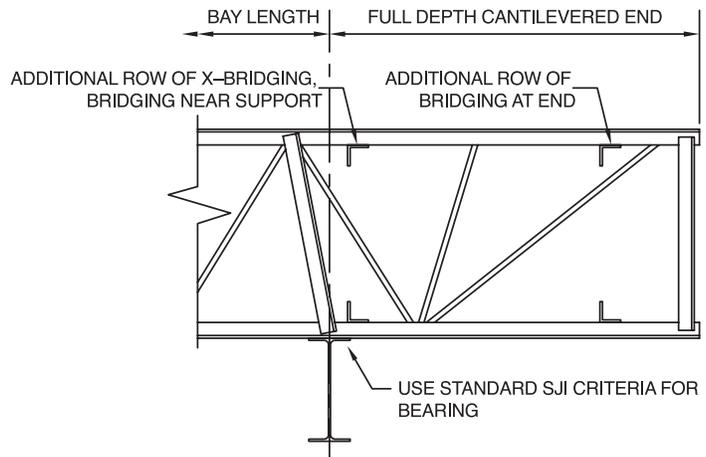


FIG. 5 - CANTILEVERED, BOTTOM BEARING, SQUARE END

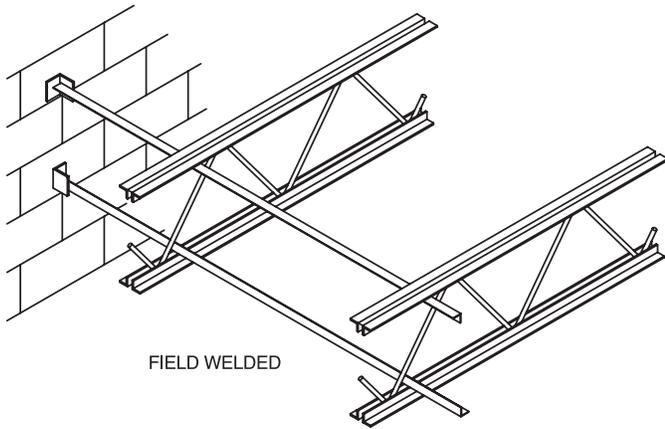
The weight of walls, signage, fascia, etc. supported at the end of a cantilever square end must be shown on the contract drawings to be properly considered in the joist design.

Note: Joist configuration and member sizes may vary.



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CJ-SERIES BRIDGING DETAILS



**FIG. 6 - HORIZONTAL BRIDGING
SEE SJI SPECIFICATIONS**

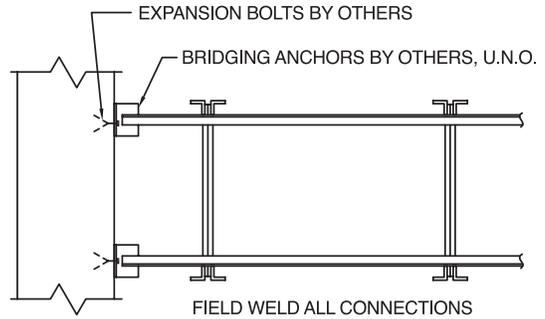
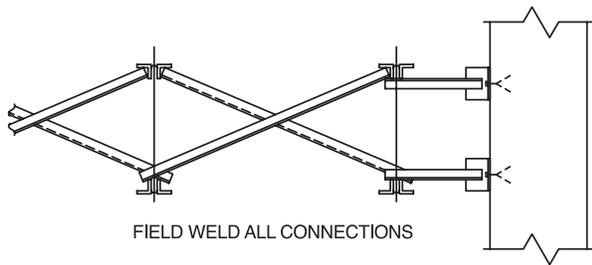


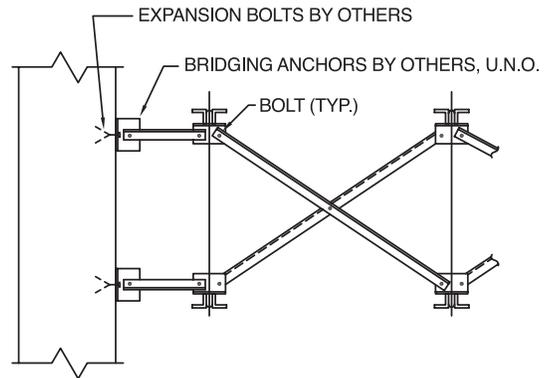
FIG. 6 - HORIZONTAL BRIDGING ANCHORAGE

NOTE: DO NOT WELD BRIDGING TO JOIST WEB MEMBERS. DO NOT HANG ANY MECHANICAL, ELECTRICAL, ETC. FROM BRIDGING.



**FIG. 7 - WELDED CROSS BRIDGING
SEE SJI SPECIFICATIONS**

HORIZONTAL BRIDGING SHALL BE USED IN SPACE ADJACENT TO THE WALL TO ALLOW FOR PROPER DEFLECTION OF THE JOIST NEAREST THE WALL.



**FIG. 8 - BOLTED CROSS BRIDGING
SEE SJI SPECIFICATIONS**

(a) HORIZONTAL BRIDGING UNITS SHALL BE USED IN THE SPACE ADJACENT TO THE WALL TO ALLOW FOR PROPER DEFLECTION OF THE JOIST NEAREST THE WALL.

(b) CLIP CONFIGURATION MAY VARY FROM THAT SHOWN.

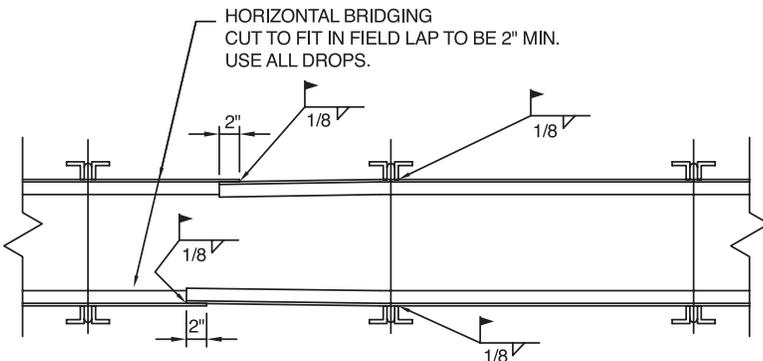


FIG. 9 - HORIZONTAL BRIDGING LAP JOINTS AND ATTACHMENT TO JOISTS



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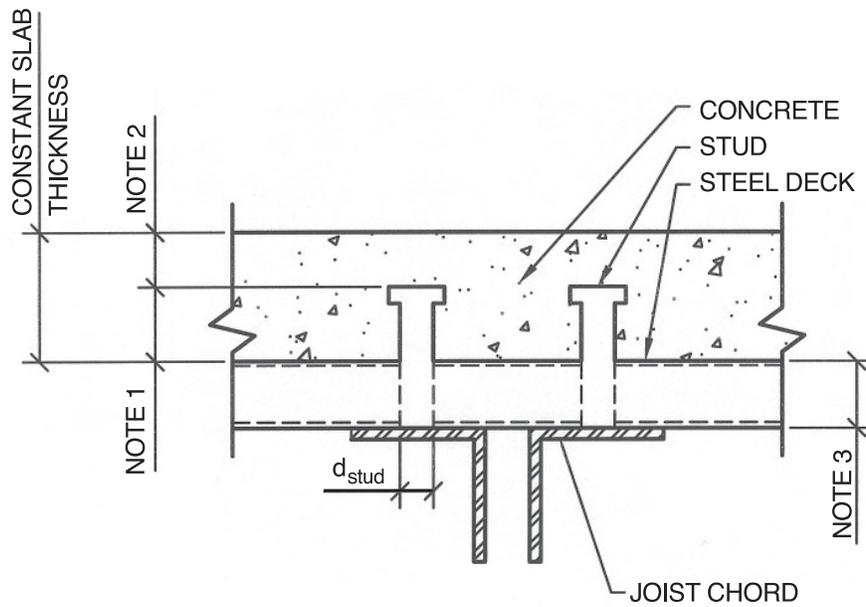


FIG. 10 - MINIMUM SHEAR STUD HEIGHT, MINIMUM CONCRETE COVER AND MAXIMUM DECK HEIGHT

NOTES:

- 1) THE TOP OF THE SHEAR STUD HEAD SHALL BE A MINIMUM OF 1 – 1/2 in. (38 mm) ABOVE THE TOP OF THE DECK RIB.
- 2) THE TOP COVERING OF CONCRETE OVER THE HEAD OF THE STUD SHALL BE A MINIMUM OF 1/2 in. (13 mm).
- 3) MAXIMUM DECK HEIGHT = 3 in. (76 mm);
MINIMUM DECK HEIGHT = 1 in. (25 mm).

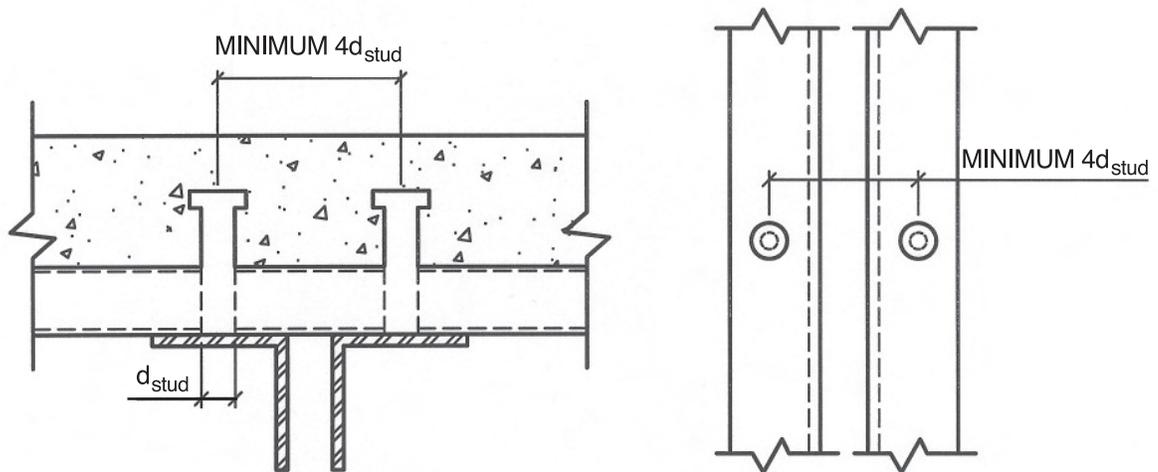


FIG. 11 - MINIMUM TRANSVERSE SHEAR STUD SPACING

THE STUDS SHALL BE TRANSVERSELY SPACED A MINIMUM OF 4 STUD DIAMETERS WHEN SHEAR STUD PAIRS ARE PLACED WITHIN ONE DECK RIB.



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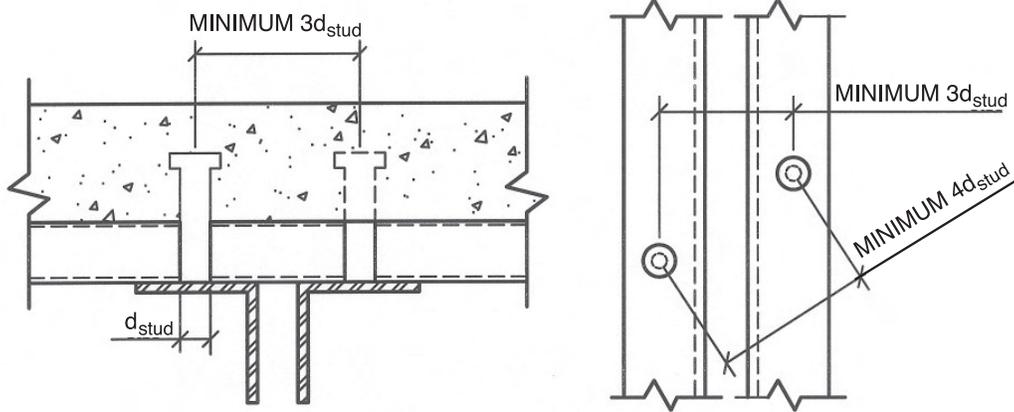


FIG. 12 - MINIMUM TRANSVERSE SHEAR STUD SPACING

THE STUDS SHALL BE TRANSVERSELY SPACED A MINIMUM OF 3 STUD DIAMETERS WHEN SHEAR STUDS ARE STAGGERED WITHIN ONE DECK RIB.

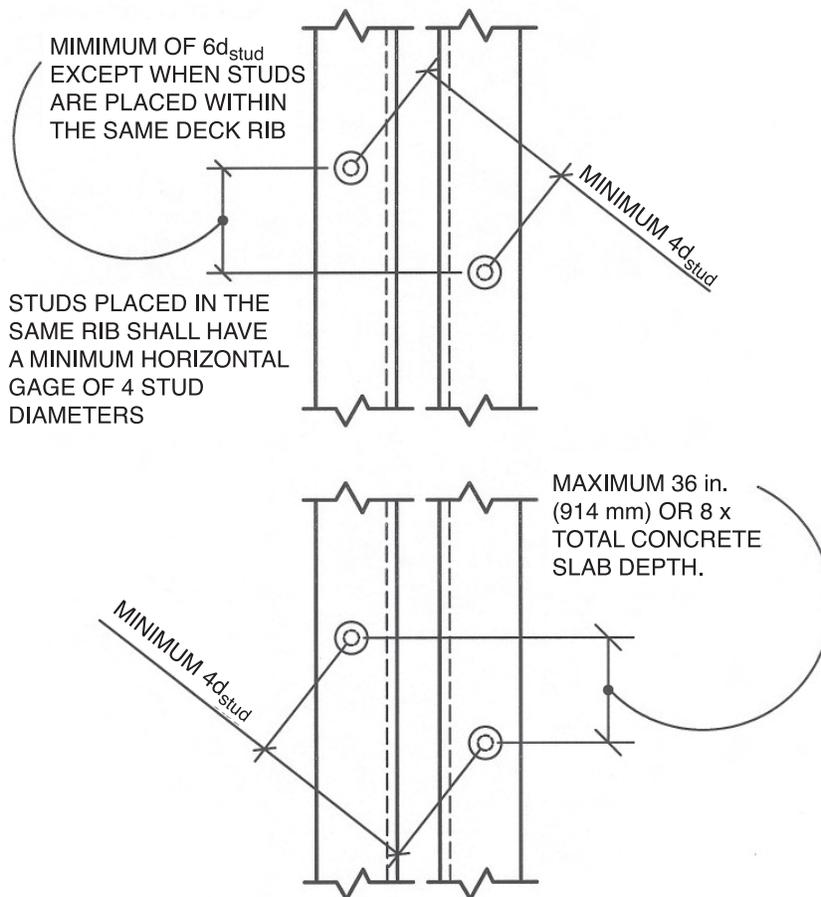


FIG. 13 - MINIMUM AND MAXIMUM LONGITUDINAL SHEAR STUD SPACING



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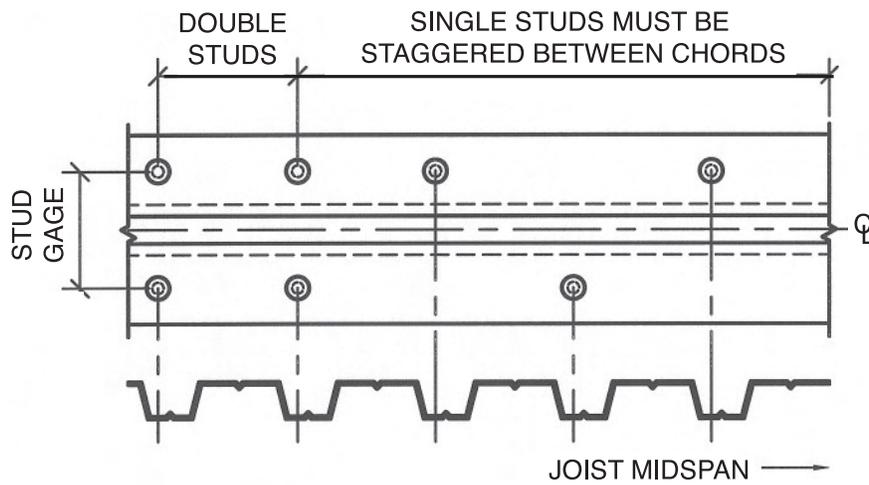


FIG. 14 - SINGLE AND DOUBLE SHEAR STUD POSITIONS ON TOP CHORD

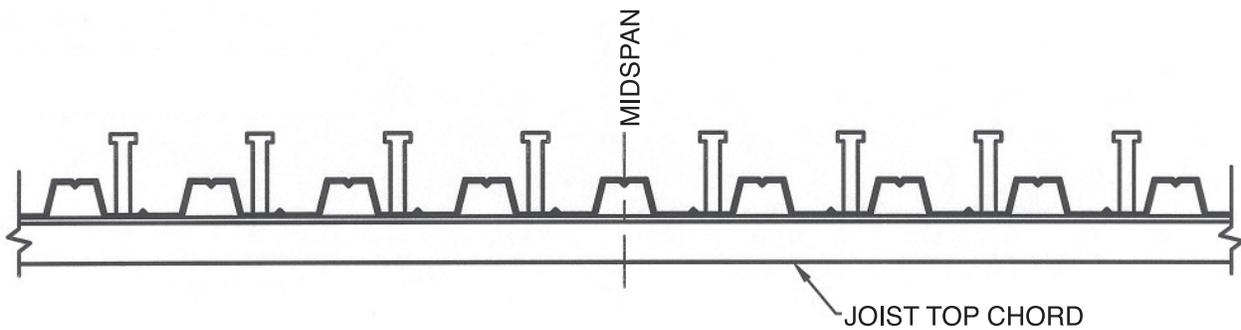


FIG. 15 - SHEAR STUD LAYOUT IN "STRONG" POSITION

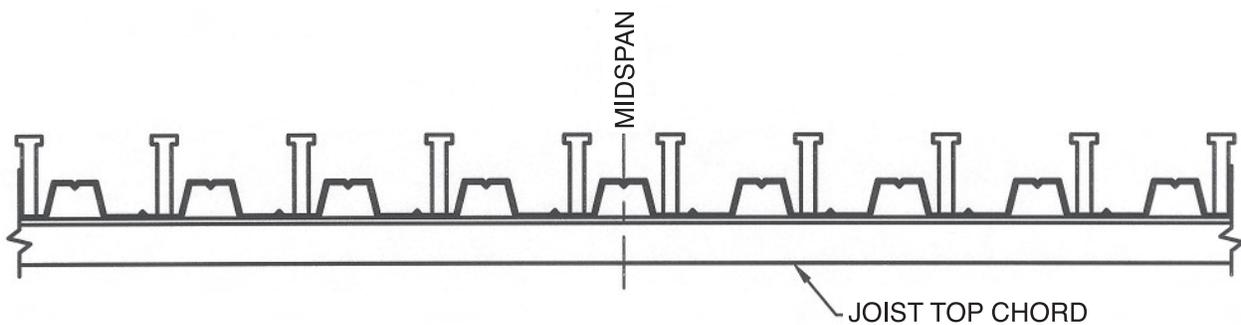


FIG. 16 - SHEAR STUD LAYOUT IN "WEAK" POSITION



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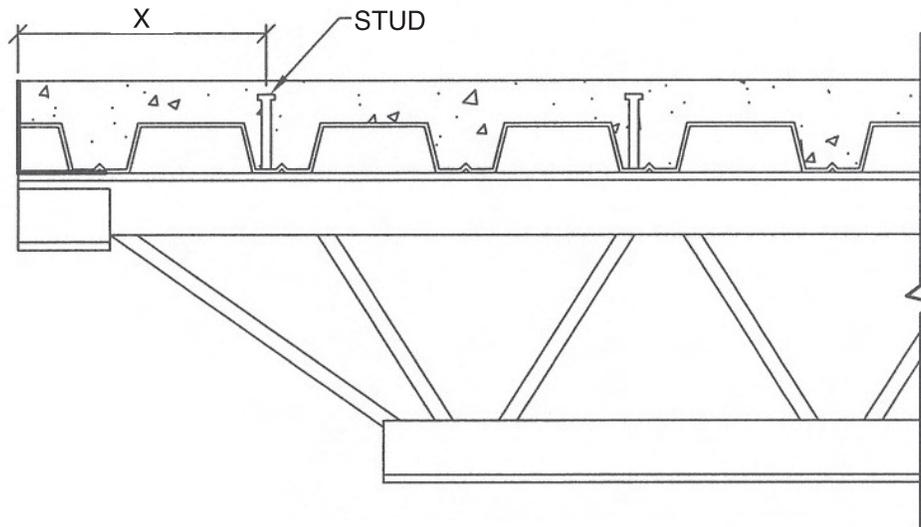


FIG. 17 - MINIMUM LONGITUDINAL EDGE DISTANCE FOR END SHEAR STUDS

NOTE: $X \geq \text{DECK HEIGHT} + 4d_{\text{stud}}$

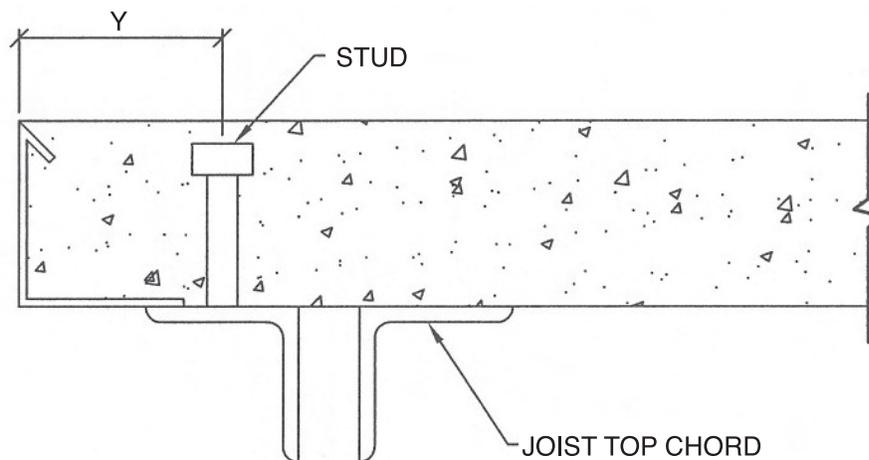


FIG. 18 - MINIMUM TRANSVERSE EDGE DISTANCE FOR END SHEAR STUDS

NOTE: $Y \geq 6 \text{ INCHES}$



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APPROXIMATE DUCT OPENING SIZES

Joist Depth		Round		Square		Rectangle	
10	INCHES	3	INCHES	2	X 2	2	X 3
12	INCHES	3	INCHES	2	X 2	2	X 4
14	INCHES	3	INCHES	2	X 2	2	X 3
16	INCHES	6	INCHES	4	X 4	4	X 6
18	INCHES	7	INCHES	6	X 6	4	X 9
20	INCHES	8	INCHES	7	X 7	5	X 11
22	INCHES	10	INCHES	8	X 8	6	X 13
24	INCHES	12	INCHES	9	X 9	9	X 11
26	INCHES	12	INCHES	10	X 10	7	X 16
28	INCHES	14	INCHES	11	X 11	10	X 13
30	INCHES	15	INCHES	12	X 12	10	X 15
32	INCHES	16	INCHES	13	X 13	11	X 16
34	INCHES	17	INCHES	14	X 14	11	X 19
36	INCHES	19	INCHES	15	X 15	13	X 19
38	INCHES	20	INCHES	16	X 16	14	X 20
40	INCHES	22	INCHES	17	X 17	14	X 23
42	INCHES	23	INCHES	18	X 18	16	X 23
44	INCHES	25	INCHES	20	X 20	16	X 26
46	INCHES	26	INCHES	21	X 21	18	X 26
48	INCHES	28	INCHES	22	X 22	18	X 29
50	INCHES	29	INCHES	23	X 23	20	X 29
52	INCHES	30	INCHES	24	X 24	21	X 29
54	INCHES	31	INCHES	25	X 25	21	X 32
56	INCHES	33	INCHES	26	X 26	23	X 32
58	INCHES	34	INCHES	27	X 27	23	X 35
60	INCHES	36	INCHES	29	X 29	25	X 35
62	INCHES	37	INCHES	30	X 30	24	X 39
64	INCHES	39	INCHES	31	X 31	26	X 39
66	INCHES	40	INCHES	32	X 32	26	X 42
68	INCHES	42	INCHES	33	X 33	28	X 42
70	INCHES	43	INCHES	34	X 34	28	X 45
72	INCHES	45	INCHES	36	X 36	30	X 45
74	INCHES	46	INCHES	37	X 37	30	X 48
76	INCHES	48	INCHES	38	X 38	32	X 48
78	INCHES	49	INCHES	39	X 39	32	X 51
80	INCHES	51	INCHES	40	X 40	34	X 51
82	INCHES	52	INCHES	42	X 42	34	X 54
84	INCHES	54	INCHES	43	X 43	36	X 54
86	INCHES	55	INCHES	44	X 44	36	X 57
88	INCHES	57	INCHES	45	X 45	38	X 57
90	INCHES	58	INCHES	46	X 46	38	x 60
92	INCHES	60	INCHES	48	X 48	40	x 60
94	INCHES	61	INCHES	49	X 49	40	x 63
96	INCHES	63	INCHES	50	X 50	42	x 63

SPECIFYING PROFESSIONAL MUST INDICATE ON STRUCTURAL DRAWINGS SIZE AND LOCATION OF ANY DUCT THAT IS TO PASS THRU JOIST. THIS DOES NOT INCLUDE ANY FIRE PROOFING ATTACHED TO JOIST. THE APPROXIMATE DUCT OPENING SIZES SHOWN IN THE TABLE ARE TO BE UTILIZED ONLY FOR PRELIMINARY ESTIMATING PURPOSES. CONTACT JOIST MANUFACTURER DURING FINAL DESIGN PHASE FOR DUCT SIZES SPECIFIC FOR THE JOIST IN THE PROJECT.

