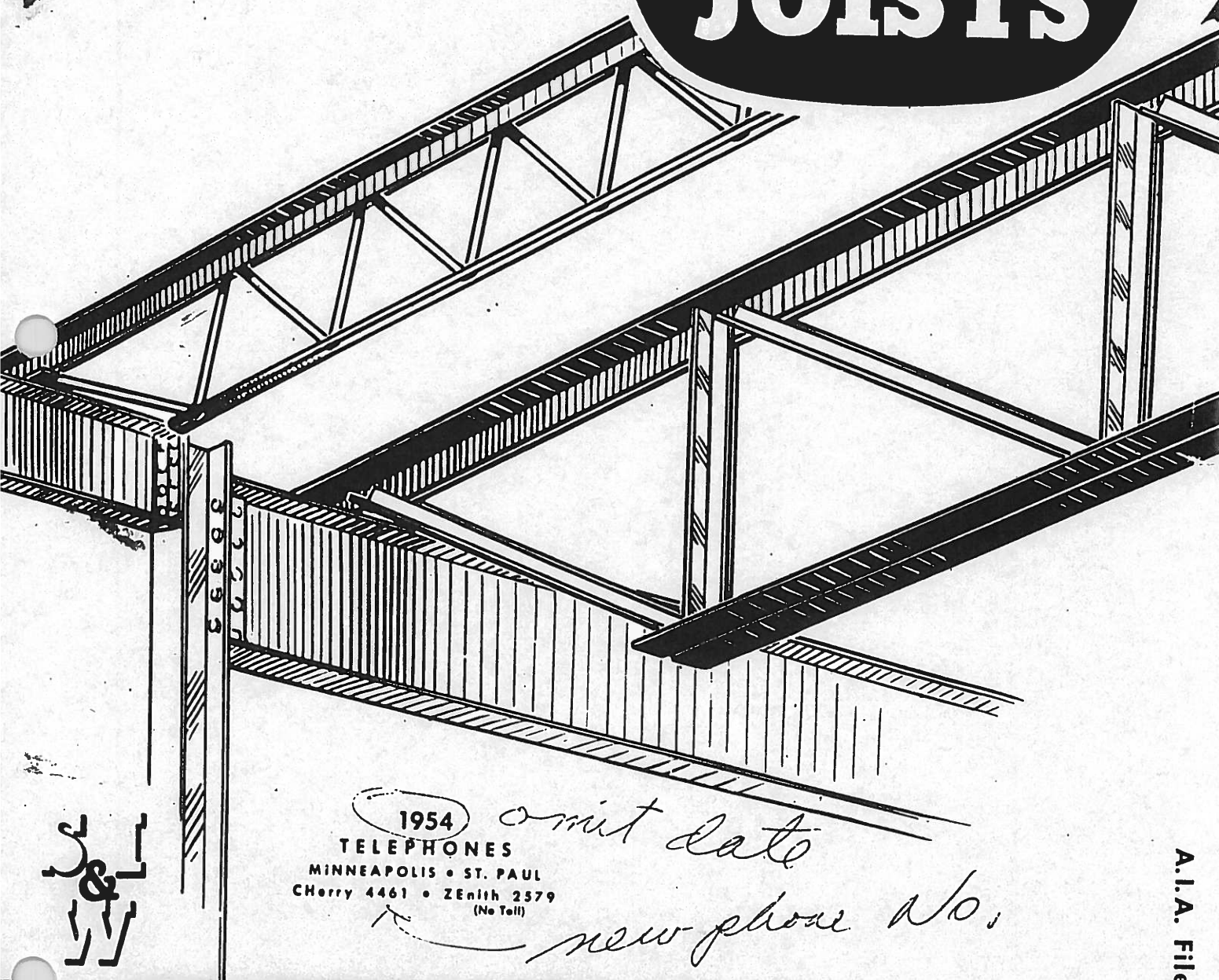


**FOR ECONOMY
AND STRENGTH**

STANDARD and LONG SPAN Steel JOISTS



1954

TELEPHONES

MINNEAPOLIS • ST. PAUL
CHerry 4461 • ZEnith 2579
(No Toll)

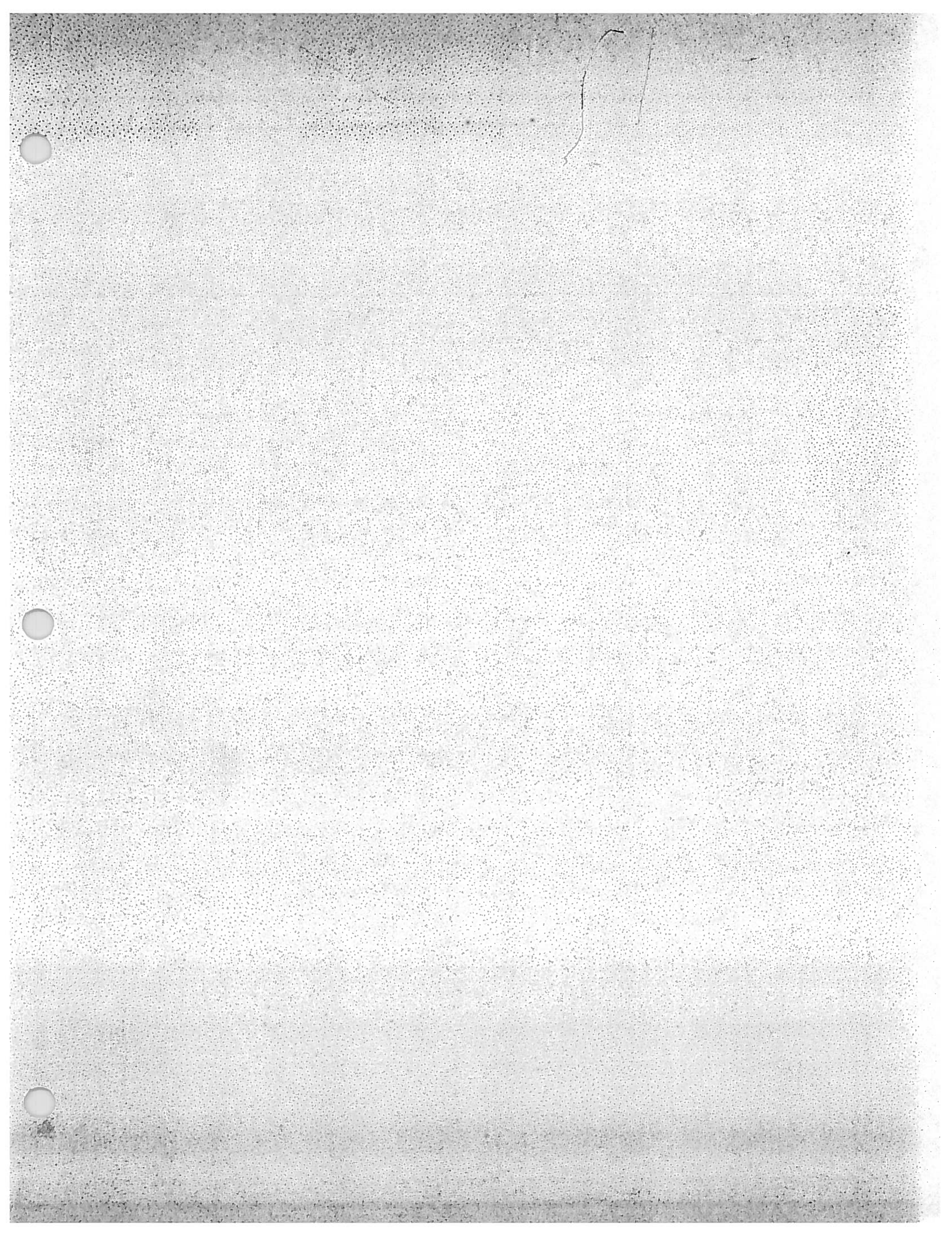
omit date

new phone No.



Standard Iron & Wire Works, inc.

2930 North Second Street • Minneapolis 11, Minnesota



PRODUCTS

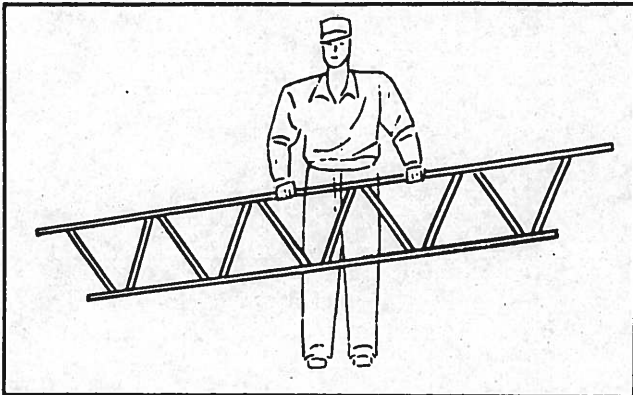
The following is a partial list of products manufactured by Standard Iron and Wire Works, Inc.

Access Doors	Door Grilles	Partitions—wire
Alter Gates and Railings	Entrances	Pipe Columns
Anchors for building construction	Fire Escapes	Pipe Rails
Ash Hoists	Flag Poles	Platform Bumpers
Ash Doors	Folding Gates	Prison Equipment
Balconies	Footscrapers	Railings
Baptistry Gates	Gratings	Rings and Covers
Bar Joists	Guards—machinery	Rungs—ladder
Basketball Backstops	Handrail Brackets	Safety Treads
Beams—structural	Hollow Metal Doors and Frames	Ship Ladders
Bearing Plates	Jail Equipment	Sidewalk Doors
Bleacher Seat Supports	Joist Anchors	Skylight Guards
Brackets—ash hoist	Joist Hangers	Stack Cleanouts
Bridge Railings	Ladders	Stairs—steel
Bulletin Boards	Ladder Rungs	Stair Railings
Canopies	Lintels	Steel Joists
Check Desks	Lobby Desks	Stirrups—joist
Chimney Caps	Long Span Joists	Store Fronts
Chimney Cleanouts	Manhole Covers and Frames	Structural Steel
Clear Span Joists	Marquises	Swimming Pool Ladders
Coal Chutes	Mat Frames	Tablets
Coal Hole Rings and Covers	Memorial Tablets	Thresholds—metal
Collapsible Gates	Nosings—stairs	Tool Boxes
Curb Angles	Observation Units	Trench Covers and Frames
Directory Boards	Partitions—metal	Trusses
Door Frames		Wier Plates
Door Buffers		Window Guards
Door Kick Plates		

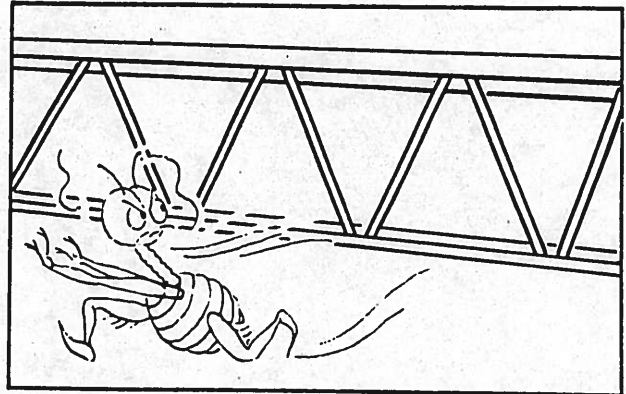


ADVANTAGES OF Standard Iron & Wire Works

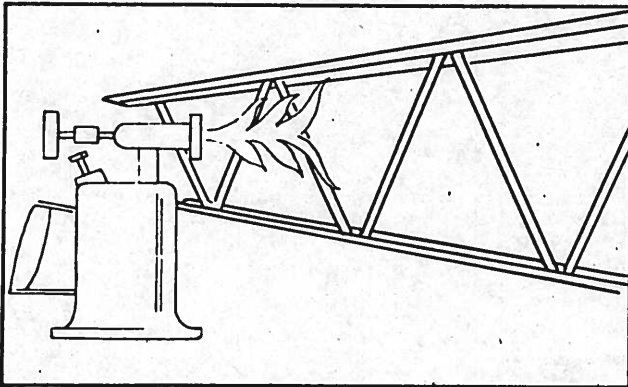
STANDARD STEEL JOISTS...



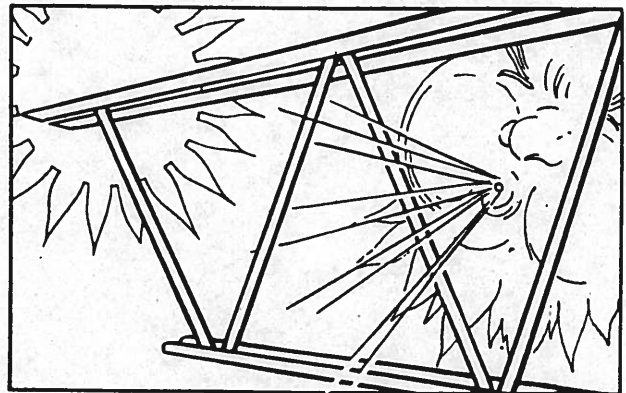
LIGHTWEIGHT. The low weight of steel joists is reflected in a more economical building frame. The relatively lightweight of steel joists reduces the dead load, thus permitting considerable saving in design of supporting structural members. In most cases joists are light enough to be placed by hand.



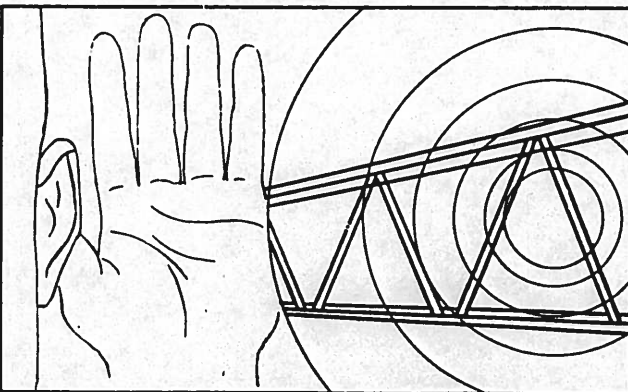
VERMIN RESISTANT. Steel joists are fabricated from steel shapes and therefore cannot be damaged by rodents, termites or any other insect.



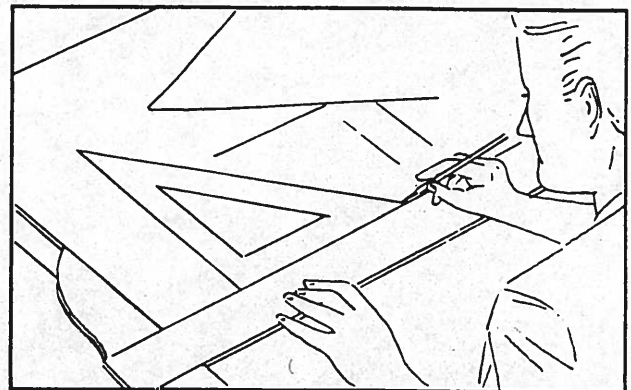
FIRE RESISTANT. Steel joists used with a concrete top slab and metal lath and plaster ceiling is a standard type of fire-resistant construction. See page 3 for fire-resistant ratings.



ALL CLIMATE MATERIAL. Steel joists may be erected without delay regardless of the season or weather condition. Steel joist will not warp, crack, sag or shrink.



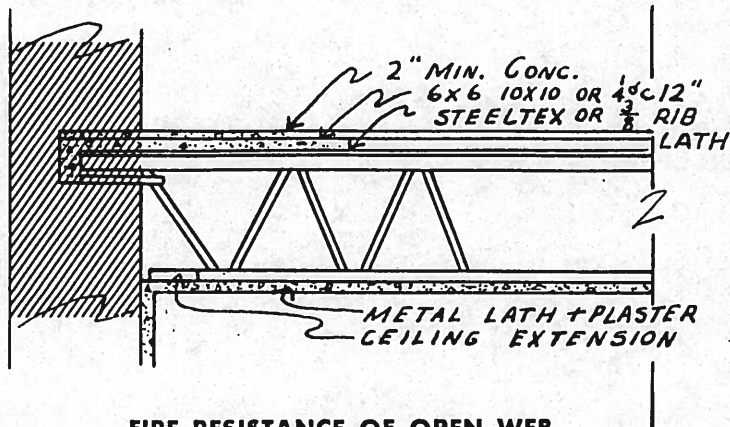
SOUND RESISTANT. Transmission of sound is effectively reduced by dead-air space and minimum contact between floor slab and ceiling.



AID TO ARCHITECTURAL DESIGN. Steel joists of open-web construction afford a simple and economical means of solving the problems of locating and concealing all ducts, conduits and pipe systems.

TYPES OF CONSTRUCTION...

FIRE RESISTANT



**FIRE RESISTANCE OF OPEN WEB
STEEL JOIST CONSTRUCTION**

As a result of fire test determinations, made at the National Bureau of Standards, it is possible to express with a reasonable degree of accuracy the severity of fire hazard represented by a given weight of combustible material in terms of the equivalent fire exposure according to standard fire test specifications. The Bureau performed burnt-out tests with various concentrations of combustible materials having a calorific value in the range of wood and paper, so assembled as to represent building occupancies. The tests show that the relation between the amount of combustibles present and the severity of the fire is approximately as follows:

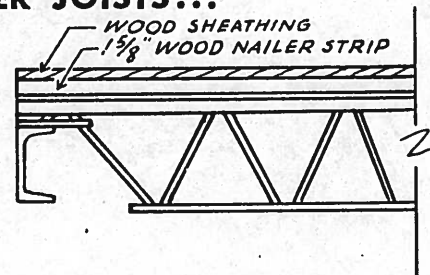
Average Weight of Combustibles Lbs. per Sq. Ft. of Floor Area	Fire Severity
5	1/2 hr.
7 1/2	3/4 hr.
10	1 hr.
15	1 1/2 hrs.
20	2 hrs.
30	3 hrs.
40	4 1/2 hrs.
50	6 hrs.
60	7 1/2 hrs.

In buildings such as apartments, hotels, schools, hospitals, offices, residences and similar structures having incombustible walls, partitions and floor construction, the total weight of wood floor finish, trim, doors, windows and furnishings varies from an average of from 5 to 10 pounds per square foot in apartments to 10 to 15 pounds per square foot in offices.

Grouping all such buildings in the class of light occupancies, it is evident that adequate protection against fire hazard is provided when the construction will safely undergo a standard one-and-one-half hour fire test.

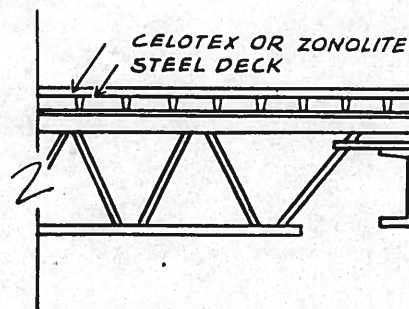
Tests prove that floor and roof construction composed of Open Web Steel Joists, a 2" concrete slab and metal lath and plaster ceiling attached directly to the underside of steel joists will safely withstand a fire as serious in its effect as is developed during a standard one-and-one-half hour fire test. This combination of materials, therefore, makes available all adequate fire-resistive construction for use in light occupancy buildings at a cost considerably less than that of other standard types of fire resistant construction.

NAILER JOISTS...



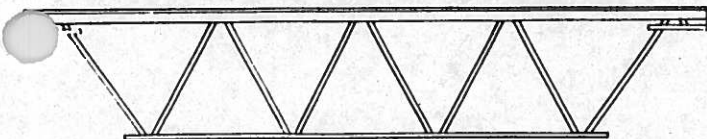
For non-fire proof floor and roof construction, use **Standard Iron & Wire Works** Standard Steel Joists with a minimum 2" x 3" wood nailer strip securely fastened to the top chord of the joists by lag screws not more than 36" c.c. Punching the top chord is unnecessary since lag screws pass between the two angles of the top chord.

PURLINS...



Standard Joists are used economically as purlins with steel or wood deck. Their lightweight in relation to strength permits longer spans without appreciably increasing dead loads. In conjunction with steel deck, joists may be spaced as far apart as 6'-6".

STANDARD



Standard Iron & Wire Works Standard Joists are made by welding the individual members into a form of Warren truss—which results in an efficient load carrying structural member. The manufacturing process consists of placing the accurately cut and formed individual members in the make-up frames which space and hold each piece in proper position until welded. This insures accurate and uniform joists correctly made for each job. All joists have bearing plates welded to each end to furnish required bearing area.

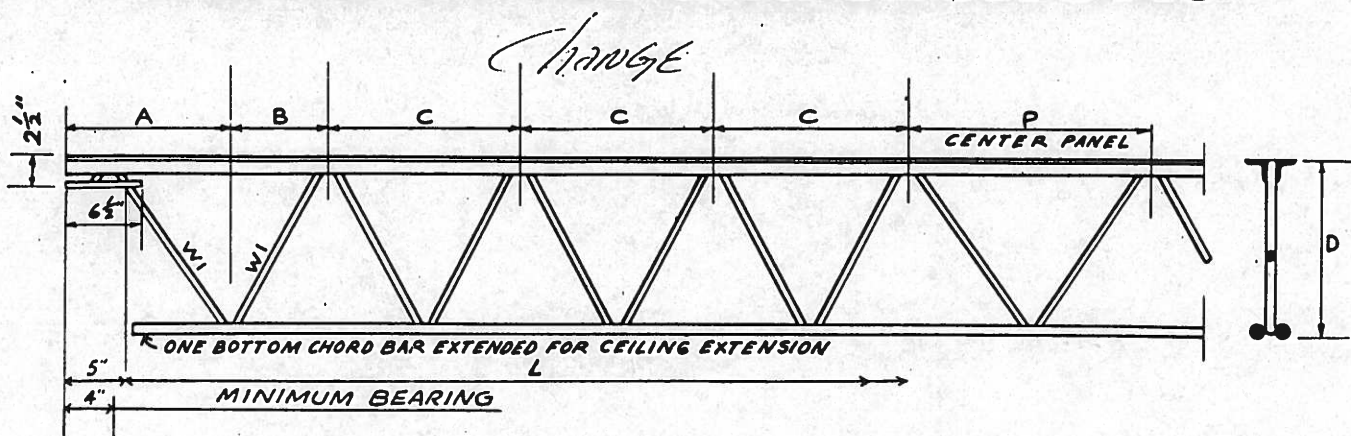
The top chord, made of two angles, gives plenty of bearing surface for all types of floors and roofs. It also insures ample lateral rigidity for handling joists at the jobsite.

The bottom chord, made of two round bars, gives the minimum contact of joists with ceilings, thus tending to eliminate shadows and discoloration in the finished plaster ceiling. Both chords permit lath or other material to be easily attached with tie wire or by other means.

All **STANDARD** Steel Joists receive a coat of black asphalt base paint, applied by dipping or spraying after welding. This type of paint provides the practical protective coating. If additional coats of different types of paint are to be used, this paint will bleed through; therefore, in such cases a different primer can be applied at additional cost.

*Should be
with spec
sheet #16*

DIMENSIONS and SECTIONS



DIMENSIONS AND SECTIONS

Standard Iron & Wire Works Nailer Joists Are Standard Joists With Wood Nailing Strips Attached

Joist Designation	D Nominal Depth	Effective Depth Inches	Top Chord Section No.	Bottom Chord Two Rd. Bars		Web Member W1 One Rd. Bar		Other Web Members One Rd. Bar		P Varies with SPAN		A	B	C	Est. Wt. Lbs. Per Ft.	Resisting Moment Inch Pounds
	Diam.			Area	Diam.	Area	Diam.	Area	Min. Max.							
									Ins.	Ins.						
81	8	7.513	1	.375	.221	.438	.150	.375	.111	6.0	18.0	11	6	12	3.4	29,500
82	8	7.450	2	.500	.393	.438	.150	.438	.150	6.0	18.0	11	6	12	4.2	52,500
102	10	9.450	2	.500	.393	.500	.196	.438	.150	6.0	18.0	13	6	12	4.3	63,000
103	10	9.360	3	.563	.497	.500	.196	.438	.150	7.5	22.5	13	7.5	15	4.9	82,000
104	10	9.268	5	.625	.614	.500	.196	.500	.196	7.5	22.5	13	7.5	15	6.0	100,000
123	12	11.360	4	.563	.497	.563	.249	.500	.196	9.0	27.0	15	9	18	5.2	92,000
124	12	11.268	5	.625	.614	.563	.249	.500	.196	9.0	27.0	15	9	18	6.0	115,000
125	12	11.176	6	.688	.742	.563	.249	.500	.196	9.0	27.0	15	9	18	6.9	142,000
126	12	11.185	8	.750	.884	.563	.249	.563	.249	9.0	27.0	15	9	18	8.3	175,000
145	14	13.176	7	.688	.742	.625	.307	.563	.249	9.0	27.0	17	9	18	7.3	156,000
146	14	13.185	8	.750	.884	.625	.307	.563	.249	9.0	27.0	17	9	18	8.4	205,000
147	14	13.081	9	.813	1.037	.625	.307	.625	.307	9.0	27.0	17	9	18	10.0	246,000
166	16	15.185	10	.750	.884	.625	.307	.625	.307	9.0	27.0	19	9	18	9.0	232,000
167	16	15.084	9	.813	1.037	.688	.371	.625	.307	9.0	27.0	19	9	18	10.2	281,000
186	18	17.185	10	.750	.884	.688	.371	.625	.307	10.0	30.0	21	10	20	10.0	255,000
187	18	17.084	11	.813	1.037	.688	.371	.688	.371	10.0	30.0	21	10	20	11.1	310,000
207	20	19.084	11	.813	1.037	.750	.442	.688	.371	11.0	33.0	23	11	22	11.2	340,000

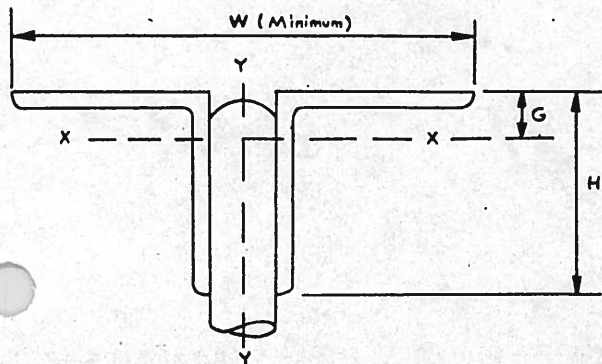
End bearing plates are 4"x1 1/4"x6 1/2" for all joists except joists 147 and 167 which have 4 1/2"x1 1/4"x6 1/2" plates and joists 186, 187 and 207 which have 4 1/2"x1 1/4"x6 1/2" plates.

All dimensions subject to slight mill and manufacturing tolerances.

Nominal depth of joists shown in table is for standard joists; nailer joists are 1 1/2" deeper.

Estimated weight per foot shown in table is for standard joists; nailer joists are 2 pounds heavier.

TOP CHORD - DIMENSIONS AND PROPERTIES



SECTION PROPERTIES

Sec. No.	Material Two Angles Inches	Total Area In. ²	G In.	H In.	W Min. In.	About Axis XX		About Axis YY	
						I In. ⁴	r In.	I In. ⁴	r In.
1	1 x1 x.125	.46	.30	1.00	2.375	.04	.30	.15	.57
2	1 x1 x.130	.46	.30	1.00	2.438	.04	.30	.15	.57
3	1 1/4 x1 1/4 x.125	.60	.36	1.25	2.938	.08	.38	.28	.68
4	1 1/4 x1 1/4 x.125	.60	.36	1.25	3.000	.08	.38	.30	.71
5	1 1/4 x1 1/4 x.125	.72	.42	1.50	3.500	.16	.47	.48	.82
6	1 1/4 x1 1/4 x.125	.84	.48	1.75	4.000	.26	.55	.71	.92
7	1 1/4 x1 1/4 x.125	.84	.48	1.75	4.063	.26	.55	.76	.95
8	1 1/4 x1 1/4 x.188	1.06	.44	1.50	3.563	.22	.46	.77	.85
9	1 1/4 x1 1/4 x.190	1.24	.51	1.75	4.125	.36	.54	1.19	.98
10	1 1/4 x1 1/4 x.188	1.06	.44	1.50	3.625	.22	.46	.82	.88
11	1 1/4 x1 1/4 x.188	1.24	.51	1.75	4.188	.36	.54	1.27	1.01

ADDITIONAL DATA WILL BE PROVIDED BY MANUFACTURER UPON REQUEST.

STANDARD IRON & WIRE WORKS, INC., MINNEAPOLIS, MINNESOTA

LOAD TABLE for STEEL JOISTS

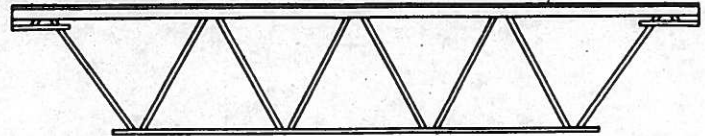
FOR STANDARD, NAILER, PURLIN OR SPECIAL JOISTS USED IN FLOOR OR ROOF CONSTRUCTION: The following table gives the total safe uniformly-distributed load carrying capacity of Standard Iron & Wire Works STEEL JOISTS.

THE WEIGHT OF DEAD LOADS must be deducted in all cases to determine the safe live load carrying capacities of the joists. Nailer joists (those marked with suffix W) should not be spaced farther apart than the safe span of deck material used over them.

SPACINGS SHOWN TO RIGHT OF HEAVY VERTICAL LINE ARE INTENDED FOR ROOF CONSTRUCTION ONLY

Clear span	Joist Type SJ-	Total Safe Load l.b.s.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
4'-0"	81- 81W	3200	800	685	600	533	480	436	400	369	343	320	300	266	228	200	178	160	145	133	120	107
	82- 82W	3800	950	814	712	633	570	518	475	438	407	380	356	318	271	237	211	190	173	158	142	127
4'-6"	81- 81W	3200	711	610	533	474	427	388	355	328	305	288	267	237	203	178	158	142	129	119	107	95
	82- 82W	3800	844	723	633	563	506	460	422	390	362	338	316	281	241	211	188	169	153	141	127	113
5'-0"	81- 81W	3200	640	549	480	427	384	349	320	295	274	256	240	213	183	160	142	128	116	107	96	85
	82- 82W	3800	760	651	570	507	456	415	380	351	326	304	285	253	217	190	169	152	138	127	114	101
5'-6"	81- 81W	3200	582	498	436	388	349	317	291	268	249	233	218	194	166	145	129	116	106	97	87	78
	82- 82W	3800	691	592	518	461	415	377	345	319	296	276	259	230	197	173	154	138	126	115	104	92
6'-0"	81- 81W	3200	530	457	400	356	320	291	267	246	229	213	200	178	153	134	119	106	97	89	80	71
	82- 82W	3800	633	543	475	422	380	345	316	292	271	253	237	211	181	158	141	127	115	105	95	84
6'-6"	81- 81W	3020	464	398	348	310	278	253	232	214	199	186	174	155	133	116	103	93	84	77	70	62
	82- 82W	3800	585	501	439	390	351	319	292	270	251	234	219	195	167	146	130	117	106	97	88	78
7'-0"	81- 81W	2810	402	344	301	268	241	219	202	185	172	160	151	134	115	101	89	80	73	67	60	54
	82- 82W	3800	543	465	407	362	326	296	271	251	233	217	204	181	155	136	121	109	99	90	81	72
7'-6"	81- 81W	2620	349	299	262	233	209	190	174	161	150	140	131	116	100	87	78	70	63	58	52	47
	82- 82W	3800	507	435	380	338	304	277	253	234	217	203	190	169	145	127	113	101	92	84	76	68
8'-0"	81- 81W	2460	308	264	231	205	184	168	154	142	132	123	116	103	88	77	68	61	56	51	46	41
	82- 82W	3800	475	407	356	316	285	259	238	219	204	190	178	158	136	119	106	95	86	79	71	63
8'-6"	81- 81W	2310	272	233	204	181	163	148	136	125	116	109	102	91	78	68	60	54	49	45	41	36
	82- 82W	3800	447	383	336	298	268	244	223	206	192	179	168	149	128	112	99	89	81	75	67	60
9'-0"	81- 81W	2180	243	208	182	162	145	132	121	112	104	97	91	81	69	61	54	48	44	40	36	32
	82- 82W	3800	422	362	316	282	254	230	211	195	181	169	158	141	121	106	94	84	77	70	63	56
9'-6"	81- 81W	2070	218	187	163	145	131	119	109	101	93	87	82	73	62	54	48	44	40	36	33	29
	82- 82W	3690	388	332	291	259	233	212	194	179	166	155	146	129	111	97	86	78	71	65	58	52
10'-0"	81- 81W	1970	197	169	148	131	118	108	99	91	85	79	74	66	57	50	44	39	36	33	30	27
	82- 82W	3500	350	300	263	233	210	191	175	162	150	140	131	117	100	88	78	70	64	58	52	47
	102-102W	3800	380	326	285	253	228	207	190	175	163	152	143	127	109	95	84	76	69	63	57	51
	103-103W	3900	390	334	292	260	234	213	195	180	167	156	146	130	112	98	87	78	71	65	59	52
	104-104W	4400	440	377	330	293	264	240	220	203	189	176	165	147	126	110	98	88	80	73	66	59
10'-6"	81- 81W	1860	177	152	133	118	106	96	88	82	76	71	66	59	51	44	39	35	32	30	27	24
	82- 82W	3335	317	272	238	212	190	173	158	146	136	127	119	106	91	79	71	64	58	53	48	42
	102-102W	3800	362	310	271	241	217	197	181	167	155	145	136	121	103	90	80	72	66	60	54	48
	103-103W	3900	371	318	278	248	223	203	186	171	159	149	139	124	106	93	83	74	68	62	56	49
	104-104W	4400	419	359	314	280	252	229	210	193	180	168	157	140	120	105	93	84	76	70	63	56
11'-0"	81- 81W	1780	162	139	121	108	97	89	81	75	70	65	61	54	46	41	36	32	29	27	24	21
	82- 82W	3180	289	248	217	193	174	158	145	134	124	116	108	97	83	73	64	58	53	48	43	39
	102-102W	3890	346	297	259	230	208	189	173	160	148	138	130	115	99	87	77	69	63	57	52	46
	103-103W	3900	355	304	266	236	213	194	178	164	152	142	133	118	101	89	79	71	64	59	53	47
	104-104W	4400	400	343	300	267	240	218	200	185	172	160	150	134	114	100	89	80	73	67	60	53
11'-6"	81- 81W	1700	148	127	111	99	89	80	74	68	63	59	56	49	42	37	33	30	27	24	21	18
	82- 82W	3040	264	227	198	176	159	144	123	122	113	106	99	88	76	66	59	53	48	44	40	35
	102-102W	3650	317	272	238	211	191	173	159	147	136	127	119	106	91	79	71	64	58	53	48	42
	103-103W	3900	339	291	254	226	203	185	170	157	145	136	127	113	97	85	75	68	62	57	51	45
	104-104W	4400	383	328	287	255	230	209	192	177	164	153	144	128	109	96	85	77	70	64	57	51
12'-0"	81- 81W	1635	137	117	102	91	82	74	68	63	58	55	51	46	39	34	30	28	25	22	20	17
	82- 82W	2920	213	208	183	162	146	133	122	112	104	98	91	81	70	61	54	49	44	40	36	32
	102-102W	3500	292	250	219	194	175	159	146	135	125	117	110	97	84	73	65	58	53	48	44	39
	103-103W	3900	325	279	244	217	195	177	163	150	139	130	122	109	93	82	72	65	59	54	49	43
	104-104W	4400	367	314	275	244	220	200	183	169	157	147	138	122	105	92	81	73	67	61	55	49
	123-123W	4400	367	314	275	244	220	200	183	169	157	147	138	122	105	92	81	73	67	61	55	49
	124-124W	4600	384	329	288	256	230	209	192	177	164	153	144	128	110	96	85	76	70	64	58	51
	125-125W	5000	417	358	312	278	250	228	208	192	179	167	156	139	119	104	93	83	76	69	63	56
12'-6"	81- 81W	1570	126	108	94	84	75	68	63	58	54	50	47	42	36	31	27	24	21	18	16	13
	82- 82W	2800	224	192	168	149	134	122	112	103	96	90	84	75	64	56	50	45	41	37	34	30
	102-102W	3360	269	231	202	179	161	147	134	124	115	108	101	90	77	67	60	54	49	45	40	36
	103-103W	3900	312	268	234	208	187	170	156	144	134	125	117	104	89	78	69	62	57	52	47	42
	104-104W	4400	352	302	264	235	211	192	176	162	151	141	132	117	100	88	78	70	64	59	53	47
	123-123W	4400	352	302	264	235	211	192	176	162	151	141	132	117	100	88	78	70	64	59	53	47
	124-124W	4600	368	316	276	246	221	201	184	170	158	147	138	123	105	92	82	74	67	61	55	49
	125-125W	5000	400	343	300	267	240	218	200	185	172	160	150	133								

STANDARD



Clear Span	Joist Type SJ-	Total Safe Load Lbs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
13'-0"	81- 81W	1510	116	100	87	78	70	63	58	54	50	46	43	39	33	29	..	..	..	..	..	..
	82- 82W	2690	207	177	155	138	124	113	103	96	89	83	78	69	59	52	46	41	38	34	31	..
	102-102W	3230	248	213	187	166	149	136	124	115	107	99	93	83	71	62	55	49	45	41	37	23
	103-103W	3900	300	257	225	200	180	164	150	138	129	120	112	100	86	75	67	60	55	50	45	40
	104-104W	4400	338	290	254	225	203	184	169	156	145	135	127	113	97	85	75	67	62	56	51	45
	123-123W	4400	338	290	254	225	203	184	169	156	145	135	127	113	97	85	75	67	62	56	51	45
	124-124W	4600	354	303	265	236	212	193	177	163	152	142	133	118	101	89	79	71	64	59	53	47
	125-125W	5000	384	330	288	256	231	210	192	177	165	154	144	129	110	96	85	77	70	64	58	51
126-126W	5400	415	356	312	277	249	226	208	192	177	166	155	139	119	104	92	83	76	69	62	55	
13'-6"	81- 81W	1450	107	92	81	72	64	59	51	50	46	43	40	36	31	..	..	..	..	..	..	..
	82- 82W	2590	192	164	144	128	115	105	96	89	82	77	72	64	55	48	43	38	35	32	29	..
	102-102W	3110	230	197	173	154	138	126	115	106	99	92	86	77	66	58	51	46	42	38	34	30
	103-103W	3900	289	248	217	193	173	158	145	133	124	116	108	96	83	72	64	58	53	48	43	38
	104-104W	4400	326	280	244	217	197	178	163	150	140	130	122	109	93	82	72	65	59	54	49	43
	123-123W	4400	326	280	244	217	196	178	163	150	140	130	122	109	93	82	72	65	59	54	49	43
	124-124W	4600	341	292	256	227	204	186	170	157	146	136	128	114	97	85	76	68	62	57	51	45
	125-125W	5000	371	318	278	247	222	202	186	171	159	148	139	123	106	93	82	74	67	62	56	49
126-126W	5400	400	343	300	267	240	218	200	185	171	160	150	133	114	100	89	80	73	67	60	53	
14'-0"	81- 81W	1400	100	86	75	67	60	55	50	46	43	40	37	34	29	..	..	..	..	..	..	..
	82- 82W	2500	178	153	134	119	107	98	89	82	77	71	67	60	51	45	40	35	32	30	..	..
	102-102W	3000	214	184	161	143	129	117	107	99	92	86	80	72	62	54	48	43	39	36	32	..
	103-103W	3900	278	239	209	186	167	152	139	129	119	111	104	93	80	70	62	55	51	46	42	37
	104-104W	4400	314	270	236	210	189	172	157	145	135	126	118	105	90	79	70	63	57	52	47	42
	123-123W	4380	313	268	235	209	188	171	156	144	134	125	117	105	90	78	70	62	57	52	47	42
	124-124W	4600	328	282	246	219	197	179	164	152	141	131	123	110	94	82	73	65	60	55	49	44
	125-125W	5000	357	306	268	238	214	195	179	165	153	143	134	119	102	90	79	71	65	59	53	47
	126-126W	5400	386	331	289	257	232	210	193	178	165	154	145	129	110	97	86	77	70	64	58	51
	145-145W	5800	414	355	311	276	248	226	207	191	178	166	155	138	119	104	92	83	75	69	62	55
146-146W	6200	443	380	332	296	266	242	222	204	190	177	166	148	127	111	98	88	81	74	66	59	
147-147W	6800	486	416	364	324	292	265	243	224	208	194	182	162	139	122	108	97	88	81	73	65	
14'-6"	81- 81W	1350	93	80	70	62	56	51	47	43	40	37	35	31	..	..	..	..	..	..	..	..
	82- 82W	2420	167	143	125	111	100	91	84	77	72	67	63	56	48	42	37	33	30	..	..	..
	102-102W	2900	200	171	150	133	120	109	100	92	86	80	75	67	57	50	44	40	36	33	30	..
	103-103W	3790	261	224	196	174	157	142	131	121	112	104	98	87	75	65	58	52	48	44	39	35
	104-104W	4400	304	260	228	202	182	166	152	140	130	121	114	101	87	76	67	61	55	51	45	40
	123-123W	4230	292	250	219	195	175	159	146	135	125	117	109	97	83	73	65	58	53	49	44	39
	124-124W	4600	317	272	238	212	190	173	159	147	136	127	119	106	91	79	71	63	58	53	47	42
	125-125W	5000	345	296	259	230	207	188	172	159	148	138	129	115	99	86	77	69	63	57	52	46
	126-126W	5400	372	319	279	248	224	203	186	172	160	149	139	124	106	93	82	75	68	62	56	50
	145-145W	5800	400	343	300	267	240	218	200	185	171	160	150	133	114	100	89	80	73	67	60	53
146-146W	6200	428	367	321	285	257	233	214	198	183	171	160	143	122	107	95	86	78	71	64	57	
147-147W	6800	469	402	352	313	282	256	234	216	201	188	176	156	134	117	104	94	85	78	70	62	
15'-0"	81- 81W	1310	87	75	66	58	52	48	44	40	37	35	33	29	..	..	..	..	..	..	..	..
	82- 82W	2330	155	133	116	104	93	85	78	72	67	62	58	52	44	39	35	31	..	..	..	..
	102-102W	2810	187	161	141	125	112	102	94	87	80	75	70	63	54	47	42	38	34	31	..	..
	103-103W	3640	243	208	182	162	146	133	122	112	104	97	91	81	69	61	54	49	44	41	36	32
	104-104W	4400	293	252	220	196	176	160	147	135	126	117	110	98	84	73	65	59	53	49	44	39
	123-123W	4090	272	234	204	182	163	148	136	126	117	109	102	91	78	68	61	55	50	46	41	36
	124-124W	4600	307	263	230	204	184	167	153	142	132	123	115	102	88	77	68	61	56	51	46	41
	125-125W	5000	333	286	250	222	200	182	167	154	143	133	125	111	96	84	74	67	61	56	50	44
	126-126W	5400	360	308	270	240	216	196	180	166	154	144	135	120	103	90	80	72	66	60	54	48
	145-145W	5800	387	332	290	258	232	211	193	179	166	155	145	129	111	97	86	78	70	64	58	51
146-146W	6200	413	354	310	276	248	225	207	191	177	165	155	138	118	104	92	83	75	69	62	55	
147-147W	6800	454	389	340	302	272	248	227	209	194	181	170	151	130	114	101	91	82	75	68	60	

LOAD TABLE for STEEL JOISTS

FOR STANDARD, NAILER, PURLIN OR SPECIAL JOISTS USED IN FLOOR OR ROOF CONSTRUCTION: The following table gives the total safe uniformly-distributed load carrying capacity of Standard Iron & Wire Works STEEL JOISTS.

THE WEIGHT OF DEAD LOADS must be deducted in all cases to determine the safe live load carrying capacities of the joists. Nailer joists (those marked with suffix W) should not be spaced farther apart than the safe span of deck material used over them.

SPACINGS SHOWN TO RIGHT OF HEAVY VERTICAL LINE ARE INTENDED FOR ROOF CONSTRUCTION ONLY

Clear Span	Joist Type SJ-	Total Safe Load Lbs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
15'-6"	81- 81W	1270	82	70	62	55	49	45	41	38	35	33	31	..	..	..	32	29	..	..	..	..
	82- 82W	2260	146	125	109	97	88	80	73	67	63	58	55	49	42	36	32	29	..	..	..	..
	102-102W	2710	175	150	131	117	105	96	88	81	75	70	65	58	50	44	39	35	32	29	..	..
	103-103W	3530	228	195	171	152	137	124	114	105	98	91	85	76	65	57	51	46	41	38	34	30
	104-104W	4300	278	238	208	185	167	152	139	128	119	111	104	92	79	69	62	56	50	46	41	37
	123-123W	3960	256	219	192	170	153	139	128	118	109	102	96	85	73	64	57	51	46	43	38	34
	124-124W	4600	297	254	223	198	178	162	148	137	127	119	111	99	85	74	66	59	54	49	44	39
	125-125W	5000	323	276	242	215	193	176	161	149	138	129	121	108	92	81	72	65	59	54	48	43
	126-126W	5400	349	299	262	233	210	190	174	161	149	139	131	116	100	87	77	70	63	58	52	46
	145-145W	5800	374	321	281	250	224	204	187	173	160	150	140	125	107	94	83	75	68	62	56	49
	146-146W	6200	400	343	300	267	240	218	200	184	171	160	150	133	114	100	89	80	73	67	60	53
147-147W	6800	439	376	329	292	263	239	219	202	188	175	164	146	125	110	98	88	80	73	66	58	
16'-0"	81- 81W	1230	77	66	58	51	46	42	38	35	33	31	29	..	..	..	34	30	..	..	..	..
	82- 82W	2190	137	117	103	91	82	75	68	63	59	55	51	46	39	34	30	..	..	..	..	..
	102-102W	2630	164	141	123	110	99	90	82	76	70	66	61	55	47	41	36	33	30	..	..	..
	103-103W	3420	213	182	160	142	128	116	106	98	91	85	80	71	61	53	47	43	39	35	32	..
	104-104W	4170	260	223	195	173	156	142	130	120	112	104	97	87	74	65	58	52	47	43	39	34
	123-123W	3840	240	206	180	160	144	131	120	111	103	96	90	80	69	60	53	48	44	40	36	32
	124-124W	4600	287	246	216	192	172	157	144	133	123	115	107	96	82	72	64	58	52	48	43	38
	125-125W	5000	312	268	234	208	187	170	156	144	134	125	117	104	89	78	69	63	57	52	47	41
	126-126W	5400	337	289	253	225	202	184	169	156	145	135	126	113	97	85	75	68	61	57	50	45
	145-145W	5800	363	311	272	242	218	198	182	167	156	145	136	121	104	91	81	73	66	61	54	48
	146-146W	6200	388	332	290	258	233	212	194	179	166	155	145	129	111	97	86	78	71	64	58	51
147-147W	6800	425	364	319	283	255	232	213	196	182	170	159	142	122	107	94	85	77	71	64	56	
166-166W	6400	400	343	300	266	240	218	200	185	171	160	150	133	114	100	89	80	73	67	60	53	
167-167W	7200	450	386	338	300	270	246	225	208	193	180	169	150	129	113	100	90	82	75	67	60	
16'-6"	102-102W	2540	154	132	116	103	93	84	77	71	66	62	58	51	44	39	34	31	..	..	..	..
	103-103W	3310	201	172	151	134	120	109	100	93	86	80	75	67	57	50	45	40	36	33	30	..
	104-104W	4040	245	210	184	164	147	134	123	113	105	98	92	82	70	61	54	49	45	41	37	32
	123-123W	3720	226	193	169	150	135	123	113	104	97	90	85	75	64	56	50	45	41	38	34	30
	124-124W	4600	279	239	209	186	167	152	140	129	120	111	104	93	80	70	62	56	51	47	42	37
	125-125W	5000	303	260	227	202	182	166	152	140	130	121	113	101	87	76	67	61	55	51	45	40
	126-126W	5400	328	280	246	219	197	179	164	151	140	131	123	109	94	82	73	65	60	55	49	44
	145-145W	5800	352	302	264	235	211	192	176	163	151	141	132	117	100	88	78	70	64	59	53	47
	146-146W	6200	376	322	282	250	226	205	188	174	161	150	141	125	107	94	84	75	68	63	56	50
	147-147W	6800	412	353	309	275	247	225	206	190	177	165	154	137	118	103	92	82	75	69	62	55
	166-166W	6400	388	332	291	259	233	212	194	179	166	155	145	129	111	97	86	78	71	65	58	52
167-167W	7200	437	374	328	291	262	238	218	201	187	175	164	145	125	109	97	87	79	73	65	58	
17'-0"	102-102W	2470	145	125	109	97	87	79	73	67	62	58	54	48	42	36	32	29	..	..	..	..
	103-103W	3220	189	162	142	126	114	103	95	87	81	76	71	63	54	47	42	38	34	32	..	..
	104-104W	3920	230	197	173	153	138	126	115	106	99	92	86	77	66	58	51	46	42	38	34	30
	123-123W	3610	212	182	159	142	127	116	106	98	91	85	79	71	61	53	47	43	39	35	32	..
	124-124W	4510	265	227	199	177	159	145	133	122	114	106	99	88	76	66	59	53	48	44	40	35
	125-125W	5000	294	252	220	196	177	161	147	136	126	118	110	98	84	74	65	59	54	49	44	39
	126-126W	5400	318	272	238	212	191	173	159	147	136	127	119	106	91	80	71	64	58	53	47	42
	145-145W	5800	342	292	256	228	205	186	171	158	146	137	128	114	98	86	76	69	62	57	51	45
	146-146W	6200	365	313	273	243	219	199	183	169	157	146	137	122	105	92	81	73	66	61	55	48
	147-147W	6800	400	343	300	267	240	219	200	185	172	160	150	134	115	100	89	80	73	67	60	53
	166-166W	6400	376	323	282	251	226	205	188	174	162	151	141	126	108	94	84	76	68	63	56	50
167-167W	7200	424	363	318	283	255	231	212	196	182	170	159	142	121	106	94	85	77	71	63	56	
17'-6"	102-102W	2400	137	118	103	92	82	75	69	63	59	55	51	46	39	34	..	..	..	..	..	..
	103-103W	3120	178	153	134	119	107	97	89	82	76	71	67	59	51	45	40	36	32	30	..	..
	104-104W	3810	218	187	163	145	131	119	109	100	93	87	82	73	62	54	48	44	40	36	32	29
	123-123W	3500	200	172	150	133	120	109	100	92	86	80	75	67	57	50	44	40	36	33	30	..
	124-124W	4380	250	214	188	167	150	137	125	115	107	100	94	83	72	63	56	50	46	42	37	33
	125-125W	5000	286	245	215	191	172	156	143	132	122	114	107	95	82	71	63	57	52	48	43	38
	126-126W	5400	309	265	232	206	185	169	154	143	133	124	116	103	88	77	69	62	56	51	46	41
	145-145W	5800	331	284	249	221	199	181	166	153	142	133	124	116	100	95	83	74	66	60	55	49
	146-146W	6200	354	304	266	236	213	194	177	164	152	142	133	118	101	89	79	71	64	59	53	47
	147-147W	6800	389	333	292	259	233	212	195	180	167	156	146	130	111	97	86	78	71	66	58	52
	166-166W	6400	366	314	275	244	220	200	183	169	157	147	137	122	104	91	81	73	67	61	55	49
167-167W	7200	411	353	308	274	247	225	206	190	176	165	154	137	118	103	91	82	75	69	61	55	

STANDARD

Clear Span	Joist Type SJ-	Total Safe Load Lbs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
18'-0"	102-102W	2330	129	111	97	86	78	71	65	60	56	52	48	43	37	32	29	..	..	..	..	..
	103-103W	3040	169	145	127	113	101	92	85	78	73	68	63	56	48	42	38	34	31	..	..	..
	104-104W	3710	205	177	155	138	124	113	103	95	88	83	77	69	59	52	46	41	37	34	30	..
	123-123W	3410	189	163	142	126	114	103	95	88	81	76	71	63	54	47	42	38	34	32	..	..
	124-124W	4260	236	203	178	158	142	129	119	109	101	95	88	79	68	59	53	47	43	40	35	31
	125-125W	5900	278	238	208	185	167	152	139	128	119	111	104	93	79	70	62	56	51	46	41	37
	126-126W	5400	300	257	225	200	180	164	150	139	129	120	112	100	86	75	67	60	55	50	45	40
	145-145W	5780	321	275	240	214	193	175	161	148	138	129	120	107	92	81	71	65	58	54	48	43
	146-146W	6200	344	295	259	230	207	188	172	159	148	138	129	115	99	86	77	69	63	58	51	46
	147-147W	6800	378	324	284	252	227	206	189	175	162	151	142	126	108	95	84	76	69	63	56	50
	166-166W	6400	356	305	267	237	213	194	178	164	153	143	133	119	102	89	79	72	65	60	53	47
	167-167W	7200	400	343	300	267	240	219	200	185	172	160	150	134	115	100	89	80	73	67	60	53
186-186W	7200	400	343	300	267	240	219	200	185	172	160	150	134	115	100	89	80	73	67	60	53	
187-187W	7600	422	362	316	281	253	230	211	195	181	169	158	141	121	105	94	84	77	70	63	56	
18'-6"	102-102W	2270	123	105	92	82	74	67	61	57	53	49	46	41	35	31	..	..	..	..	..	..
	103-103W	2960	160	137	120	107	96	88	80	74	69	64	60	53	46	40	36	32	29	..	..	..
	104-104W	3600	195	167	146	130	117	106	98	90	84	78	73	65	56	49	43	39	35	32	29	..
	123-123W	3320	180	154	135	120	108	98	90	83	77	72	67	60	51	45	40	36	33	30	..	..
	124-124W	4150	225	193	169	150	135	122	112	104	96	90	84	75	64	56	50	45	41	37	33	30
	125-125W	5000	270	232	203	181	162	148	135	125	116	108	101	90	77	68	60	54	49	45	40	36
	126-126W	5400	292	250	219	195	175	159	146	135	125	117	109	97	83	73	65	58	53	49	44	39
	145-145W	5630	305	261	229	203	183	166	153	141	131	122	114	102	87	76	68	61	55	51	46	40
	146-146W	6200	335	287	251	224	201	183	168	155	144	134	125	112	96	84	74	67	61	56	50	44
	147-147W	6800	367	315	276	245	221	201	184	170	158	147	138	123	105	92	82	74	67	61	55	49
	166-166W	6400	346	297	269	231	208	189	173	160	148	138	130	115	99	87	77	69	63	58	52	46
	167-167W	7200	389	334	292	260	234	212	195	180	167	156	146	130	111	97	87	78	71	65	58	52
186-186W	7200	389	334	292	260	234	212	195	180	167	156	146	130	111	97	87	78	71	65	58	52	
187-187W	7600	411	352	308	274	247	224	205	190	176	164	154	137	117	103	91	82	75	68	62	55	
19'-0"	102-102W	2210	116	100	87	78	70	63	58	54	50	47	43	39	33	29	..	..	..	..	..	..
	103-103W	2880	151	130	114	101	91	83	76	70	65	61	56	51	43	38	34	30	..	..	..	..
	104-104W	3510	184	159	139	123	111	101	93	85	79	74	69	62	53	46	41	37	34	31	..	..
	123-123W	3230	170	146	128	113	102	93	85	79	73	68	64	57	49	42	38	34	31	28	..	..
	124-124W	4040	212	183	160	142	128	116	106	98	91	85	79	71	61	53	47	43	39	35	32	..
	125-125W	4990	263	225	197	175	158	143	131	121	113	105	98	88	75	66	58	53	48	44	39	35
	126-126W	5400	284	244	214	190	171	155	142	131	122	114	106	95	81	71	63	57	52	47	42	38
	145-145W	5480	288	247	217	193	173	158	145	134	124	115	108	96	83	72	64	58	53	48	43	38
	146-146W	6200	326	280	245	218	196	178	163	151	140	131	122	109	93	82	73	65	59	55	49	43
	147-147W	6800	358	307	269	239	215	195	179	165	154	143	134	120	102	90	80	72	66	60	53	48
	166-166W	6400	337	289	253	225	202	184	168	156	145	135	126	112	97	84	75	68	61	56	50	45
	167-167W	7200	379	325	284	253	227	207	190	175	163	152	142	127	108	95	84	76	69	64	57	50
186-186W	7200	379	325	284	253	227	207	190	175	163	152	142	127	108	95	84	76	69	64	57	50	
187-187W	7600	400	343	300	267	240	218	200	185	171	160	150	133	114	100	89	80	73	67	60	53	
19'-6"	102-102W	2150	110	95	83	74	66	60	55	51	47	44	41	37	32	..	..	..	..	..	..	..
	103-103W	2810	144	124	108	96	87	79	72	67	62	53	54	48	41	36	32	29	..	..	..	..
	104-104W	3420	176	151	132	117	105	96	88	81	75	70	66	58	50	44	39	35	32	29	..	..
	123-123W	3140	161	138	121	107	97	88	80	74	69	64	60	54	46	40	36	32	29	..	..	..
	124-124W	3930	202	173	151	134	121	110	101	93	86	81	76	67	58	50	45	40	37	34	30	..
	125-125W	4850	249	213	187	166	149	136	124	115	107	99	93	83	71	62	55	50	45	41	37	33
	126-126W	5400	277	238	208	185	167	151	139	128	119	111	104	92	79	69	62	55	50	46	41	37
	145-145W	5340	274	235	206	183	165	150	137	126	117	109	103	91	87	68	61	55	50	46	41	36
	146-146W	6200	318	273	239	212	191	174	159	147	136	127	119	106	91	80	71	64	58	53	47	42
	147-147W	6800	349	299	262	233	210	191	175	161	150	140	131	116	100	87	77	70	63	58	52	46
	166-166W	6400	328	282	247	219	197	179	164	152	141	131	123	109	94	82	73	66	60	55	49	44
	167-167W	7200	369	317	277	246	222	202	185	171	159	148	138	123	105	92	82	74	67	62	55	49
186-186W	7200	369	317	277	246	222	202	185	171	159	148	138	123	105	92	82	74	67	62	55	49	
187-187W	7600	390	334	292	260	234	213	195	180	167	156	146	130	111	97	87	78	71	65	58	52	
20'-0"	102-102W	2100	105	90	79	70	63	57	53	49	45	42	39	35	30	..	..	..	..	..	..	..
	103-103W	2730	137	117	102	91	82	75	68	63	59	55	51	46	39	34	30	..	..	..	..	..
	104-104W	3340	167	143	125	111	100	91	84	77	72	67	62	56	48	42	37	33	30	..	..	..
	123-123W	3060	153	131	115	102	92	84	77	71	66	61	57	51	44	38	34</					

LOAD TABLE for STEEL JOISTS

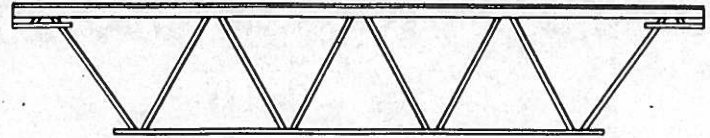
FOR STANDARD, NAILER, PURLIN OR SPECIAL JOISTS USED IN FLOOR OR ROOF CONSTRUCTION: The following table gives the total safe uniformly-distributed load carrying capacity of Standard Iron & Wire Works STEEL JOISTS.

THE WEIGHT OF DEAD LOADS must be deducted in all cases to determine the safe live load carrying capacities of the joists. Nailer joists (those marked with suffix W) should not be spaced farther apart than the safe span of deck material used over them.

SPACINGS SHOWN TO RIGHT OF HEAVY VERTICAL LINE ARE INTENDED FOR ROOF CONSTRUCTION ONLY

Clear Span	Joist Type SJ-	Total Safe Load Lbs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
20'-6"	123-123W	2990	146	135	110	97	88	80	73	67	63	58	55	49	42	36	32	29	...	...	...	...
	124-124W	3740	182	136	137	122	109	99	91	84	78	73	68	61	52	46	41	36	33	30	...	...
	125-125W	4620	225	193	169	150	135	123	112	104	97	90	84	75	64	56	50	45	41	38	34	30
	126-126W	5400	264	226	198	176	158	144	132	122	113	106	99	88	75	66	59	53	48	44	39	35
	145-145W	5070	247	212	186	165	148	135	124	114	106	99	92	82	71	62	55	49	45	41	37	33
	146-146W	6200	302	239	227	201	182	165	151	140	130	121	113	101	86	76	67	60	55	50	45	40
	147-147W	6800	332	234	249	221	199	181	166	153	142	133	124	111	95	83	74	66	60	55	50	44
	166-166W	6400	312	268	234	208	187	170	156	144	134	125	117	104	89	78	69	62	57	52	47	41
	167-167W	7200	351	301	263	234	211	192	176	162	151	140	131	117	100	88	78	70	64	59	52	47
	186-186W	7200	351	301	263	234	211	192	176	162	151	140	131	117	100	88	78	70	64	59	52	47
	187-187W	7600	371	317	279	248	222	203	186	171	159	148	139	124	106	93	82	74	67	62	55	49
	207-207W	7800	380	325	286	254	228	208	190	175	163	152	142	127	109	95	84	76	69	63	57	50
21'-0"	123-123W	2920	139	119	104	93	83	76	70	64	60	56	52	46	40	35	31	...	...	...	...	...
	124-124W	3650	174	149	130	116	104	95	87	80	75	70	65	58	50	43	39	35	32	29	...	...
	125-125W	4510	215	184	161	143	129	117	107	99	92	86	80	72	61	54	48	43	39	36	32	...
	126-126W	5400	257	220	193	172	154	140	129	119	110	103	96	86	73	64	57	52	47	43	38	34
	145-145W	4950	236	202	177	157	142	129	118	109	101	94	88	79	67	59	52	47	43	39	35	31
	146-146W	6200	295	253	222	197	177	161	148	136	127	118	110	99	84	74	66	59	54	49	44	39
	147-147W	6800	324	277	243	216	194	177	162	149	139	129	121	108	93	81	72	65	59	54	48	43
	166-166W	6400	305	261	229	203	183	166	153	141	131	122	114	102	87	76	68	61	55	51	46	40
	167-167W	7200	343	294	257	229	206	187	172	158	147	137	128	115	98	86	76	69	62	58	51	46
	186-186W	7200	343	294	257	229	206	187	172	158	147	137	128	114	98	86	76	69	62	57	51	46
	187-187W	7600	362	310	272	241	217	198	181	167	155	145	136	121	103	90	80	73	66	60	54	48
	207-207W	7800	371	319	279	248	223	203	186	171	159	148	139	124	106	93	82	74	67	62	55	49
21'-6"	123-123W	2850	133	114	100	88	80	72	66	61	57	53	50	44	38	33	29	...	...	...	...	...
	124-124W	3560	165	142	124	110	99	90	83	76	71	66	62	55	47	41	37	33	30	...	...	...
	125-125W	4400	204	175	153	136	123	112	102	95	88	82	76	68	58	51	45	41	37	34	30	...
	126-126W	5400	251	215	188	167	150	137	125	116	107	100	94	84	72	63	56	50	46	42	37	33
	145-145W	4840	225	193	169	150	135	123	113	104	97	90	84	75	64	56	50	45	41	38	34	30
	146-146W	6200	288	247	216	192	173	157	144	133	123	115	108	96	82	72	64	58	52	48	43	38
	147-147W	6800	316	271	237	211	190	172	158	146	135	126	118	105	90	79	70	63	57	53	47	42
	166-166W	6400	298	255	223	199	178	162	149	137	128	119	112	99	85	74	66	59	54	50	45	40
	167-167W	7200	335	287	251	223	201	183	167	154	143	134	125	112	96	84	74	67	61	56	50	45
	186-186W	7200	335	287	251	223	201	183	167	154	143	134	125	112	96	84	74	67	61	56	50	45
	187-187W	7600	353	304	266	236	213	193	177	163	151	141	132	118	101	88	78	71	64	59	53	47
	207-207W	7800	363	311	272	243	219	199	182	168	156	145	136	121	104	91	81	73	66	61	54	48
22'-0"	123-123W	2790	127	109	95	85	76	69	63	59	54	51	47	42	36	32	...	...	...	...	...	...
	124-124W	3480	158	136	119	105	95	86	79	73	68	63	59	53	45	40	35	32	29	...	...	...
	125-125W	4300	196	168	147	130	117	107	98	90	84	78	73	65	56	49	43	39	35	32	29	...
	126-126W	5300	241	207	181	161	145	132	121	111	103	97	90	80	69	60	54	48	44	40	36	32
	145-145W	4730	215	185	162	144	129	117	108	100	92	86	80	72	61	54	48	43	39	36	32	...
	146-146W	6200	282	242	212	188	169	154	141	130	121	111	106	94	80	70	63	56	51	47	42	37
	147-147W	6800	309	265	232	206	185	168	154	143	132	123	116	103	88	77	69	62	56	52	46	41
	166-166W	6400	291	250	218	194	175	159	146	134	125	116	109	97	83	73	65	58	53	48	43	39
	167-167W	7200	327	280	245	218	196	178	164	151	140	131	122	109	93	82	73	65	60	54	49	43
	186-186W	7200	327	280	245	218	196	178	164	151	140	131	122	109	93	82	73	65	59	54	49	43
	187-187W	7600	345	296	260	231	208	189	173	159	148	138	129	115	99	86	77	69	63	58	51	46
	207-207W	7800	355	304	267	237	213	194	177	164	152	142	133	118	101	88	79	71	64	59	53	47
22'-6"	123-123W	2730	121	104	91	81	73	66	61	56	52	48	45	40	35	30	...	...	...	...	...	...
	124-124W	3410	152	130	114	101	91	83	76	70	65	61	57	51	43	38	34	30	...	...	...	...
	125-125W	4210	187	160	140	125	112	102	94	86	80	75	70	62	53	47	42	37	34	31	...	...
	126-126W	5180	230	197	173	154	138	126	115	106	99	92	86	77	66	58	51	46	42	38	34	30
	145-145W	4620	205	176	154	137	123	112	103	95	88	82	77	68	59	51	46	41	37	34	31	...
	146-146W	6060	269	231	202	180	162	147	135	124	115	108	101	90	77	67	60	54	49	45	40	36
	147-147W	6800	302	259	227	202	181	165	151	140	130	121	113	101	86	76	67	60	55	50	45	40
	166-166W	6400	284	244	214	190	171	155	142	131	122	114	106	95	81	71	63	57	52	47	42	38
	167-167W	7200	320	274	240	214	192	175	160	148	137	128	120	107	91	80	71	64	58	53	48	42
	186-186W	7200	320	274	240	214	192	175	160	148	137	128	120	107	91	80	71	64	58	53	48	42
	187-187W	7600	338	290	254	226	203	185	169	156	145	135	127	113	97	84	75	68	61	56	50	45
	207-207W	7800	347	297	261	232	209	190	174	160	149	139	130	116	99	87	77	70	63	58	52	46

STANDARD



Clear Span	Joist Type SJ-	Total Safe Load l.bs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
23'-0"	123-123W	2670	116	100	87	77	70	63	58	54	50	46	43	39	33	29	..	..	..	..	..	..
	124-124W	3330	145	124	109	97	87	79	72	67	62	58	54	48	41	36	32	29	..	..	..	..
	125-125W	4120	179	154	134	119	107	98	90	83	77	72	67	60	51	45	40	36	33	30	..	..
	126-126W	5060	221	189	165	147	132	120	110	102	94	88	83	74	63	55	49	44	40	37	33	29
	145-145W	4520	197	169	147	131	118	107	98	91	84	79	74	66	56	49	44	39	36	33	29	..
	146-146W	5940	258	221	194	172	155	141	129	119	111	103	97	86	74	65	57	52	47	43	38	34
	147-147W	6800	296	254	222	197	178	161	148	137	127	118	111	99	84	74	66	59	54	49	44	39
	166-166W	6400	278	238	209	186	167	152	139	128	119	111	104	93	80	70	62	56	51	46	41	37
	167-167W	7200	313	268	235	209	188	171	157	144	134	125	117	104	90	79	70	62	57	53	47	42
	186-186W	7200	313	268	235	209	188	171	157	144	134	125	117	104	90	79	69	62	57	53	47	42
187-187W	7600	330	283	248	220	198	180	165	153	142	132	124	110	94	82	73	66	60	55	49	44	
207-207W	7800	339	290	254	226	203	185	170	157	145	136	127	113	97	85	75	68	61	57	51	45	
23'-6"	123-123W	2610	111	95	83	74	67	61	56	51	48	44	41	37	32	..	..	..	..	..	..	..
	124-124W	3260	139	119	104	93	83	76	70	64	59	56	52	46	40	35	31	..	..	..	..	..
	125-125W	4040	172	147	129	115	103	94	86	80	74	69	64	57	49	43	38	34	31	..	..	..
	126-126W	4960	211	181	158	141	127	115	106	97	90	84	79	70	60	53	47	42	38	35	31	..
	145-145W	4430	189	162	141	126	113	103	94	87	81	76	71	63	54	47	42	38	34	31	..	..
	146-146W	5800	247	212	185	165	148	135	123	114	106	99	92	82	71	62	55	49	45	41	37	33
	147-147W	6800	290	248	217	193	174	158	145	134	124	116	109	96	83	72	64	58	53	48	43	38
	166-166W	6400	272	234	204	182	164	149	136	126	117	109	102	91	78	68	61	54	50	45	40	36
	167-167W	7200	306	263	230	204	184	167	153	142	131	123	115	102	88	77	68	61	56	51	46	41
	186-186W	7200	306	263	230	204	184	167	153	142	131	123	115	102	88	77	68	61	56	51	46	41
187-187W	7600	323	277	242	215	194	176	162	149	139	129	121	108	92	81	72	65	59	54	48	43	
207-207W	7800	332	284	249	221	199	181	166	153	142	133	124	111	95	83	74	67	60	55	50	44	
24'-0"	123-123W	2560	106	91	80	71	64	58	53	49	46	42	40	35	30	..	..	..	..	..	..	..
	124-124W	3190	133	114	100	89	80	73	67	61	57	53	50	44	38	33	30	..	..	..	..	..
	125-125W	3950	164	141	124	110	99	90	82	76	71	66	61	55	47	41	37	33	30	..	..	..
	126-126W	4860	202	174	152	135	121	110	101	93	87	81	76	68	58	51	45	41	37	34	30	..
	145-145W	4340	180	155	135	120	108	99	90	83	77	72	67	60	52	45	40	36	33	30	..	..
	146-146W	5690	237	203	178	158	142	129	119	110	102	95	89	79	68	59	53	47	43	40	35	31
	147-147W	6800	283	242	212	189	170	155	142	131	121	113	106	94	81	71	63	57	52	47	42	38
	166-166W	6400	267	228	200	178	160	145	133	123	114	107	101	89	76	67	59	53	48	44	40	35
	167-167W	7200	300	257	225	200	180	164	150	138	129	120	112	100	85	75	67	60	55	50	45	40
	186-186W	7080	295	253	221	197	177	161	148	136	127	118	110	98	84	74	65	59	53	49	44	39
187-187W	7600	317	272	238	212	190	173	159	147	136	127	119	106	91	79	70	64	57	53	47	42	
207-207W	7800	325	278	244	216	195	177	163	150	139	130	122	108	93	81	72	65	59	54	49	43	
24'-6"	145-145W	4250	174	149	130	116	104	95	87	80	74	69	65	58	50	43	39	35	32	29	..	..
	146-146W	5570	227	195	170	151	136	124	114	105	98	91	85	76	65	57	51	45	41	38	34	30
	147-147W	6690	273	234	205	182	163	149	136	126	117	109	102	91	78	68	61	55	50	46	41	36
	166-166W	6310	258	221	193	172	155	141	129	119	110	103	97	86	74	64	57	52	47	43	39	34
	167-167W	7200	294	252	221	196	176	160	147	136	126	117	110	98	84	74	65	59	53	49	44	39
	186-186W	6930	283	242	212	188	170	154	142	131	121	113	106	94	81	71	63	57	51	47	42	38
	187-187W	7600	310	265	233	207	186	169	155	143	133	124	116	103	88	77	69	62	56	52	46	41
	207-207W	7800	318	272	239	212	191	174	159	147	136	127	119	106	91	79	71	64	58	43	47	42
25'-0"	145-145W	4160	166	142	125	111	100	91	83	77	71	66	62	56	48	42	37	33	30	..	..	..
	146-146W	5450	218	187	163	145	131	119	109	101	93	87	82	73	62	55	49	44	40	36	32	29
	147-147W	6560	262	225	197	175	157	143	131	121	112	105	98	88	75	66	58	53	48	44	39	35
	166-166W	6180	247	212	186	165	148	135	124	114	106	99	92	82	71	62	55	49	45	41	37	33
	167-167W	7200	288	247	216	192	173	157	144	133	123	115	108	96	82	72	64	58	52	48	43	38
	186-186W	6800	272	233	204	181	163	148	136	126	117	109	102	91	78	68	60	55	49	45	40	36
	187-187W	7600	304	260	228	203	182	166	152	140	130	122	114	101	87	76	67	61	55	51	45	40
	207-207W	7800	312	267	234	208	187	170	156	144	134	125	117	104	89	78	69	63	57	52	47	41
25'-6"	145-145W	4080	160	137	120	107	96	87	80	74	69	64	60	53	46	40	36	32	29	..	..	..
	146-146W	5350	210	180	158	140	126	114	105	97	90	84	79	70	60	52	47	42	38	35	31	..
	147-147W	6430	252	216	189	168	151	137	126	116	108	101	94	84	72	63	56	50	46	42	38	33
	166-166W	6060	238	204	178	159	143	130	119	110	102	95	89	79	68	59	53	48	43	40	35	31
	167-167W	7200	282	242	212	188	170	154	141	130	121	113	106	94	81	71	63	56	51	47	42	37
	186-186W	6660	261	224	196	174	157	142	131	121	112	105	98	87	75	65	58	52	47	44	39	35
	187-187W	7600	298	255	224	198	179	163	149	137	128	119	112	99	85	74	66	60	54	50	44	40
	207-207W	7800	306	262	230	204	184	167	153	141	131	123	115	102	87	76	68	61	55	51	46	41

LOAD TABLE for STEEL JOISTS

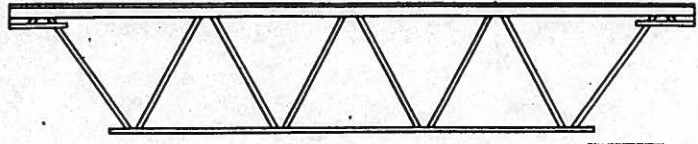
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THE WEIGHT OF DEAD LOADS must be deducted in all cases to determine the safe live load carrying capacities of the joists. Nailer joists (those marked with suffix W) should not be spaced farther apart than the safe span of deck material used over them.

SPACINGS SHOWN TO RIGHT OF HEAVY VERTICAL LINE ARE INTENDED FOR ROOF CONSTRUCTION ONLY

Clear Span	Joist Type SJ-	Total Safe Load Lbs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
26'-0"	145-145W	4000	154	132	115	102	92	84	77	71	66	61	58	51	44	38	34	31	28	25	22	20
	146-146W	5250	202	173	152	135	121	110	101	93	87	81	76	67	58	51	45	40	37	34	30	28
	147-147W	6300	243	208	182	162	146	132	121	112	104	97	91	81	69	61	54	49	44	41	36	32
	166-166W	5950	229	196	172	153	137	125	115	106	98	92	86	76	65	57	51	46	42	38	34	30
	167-167W	7200	277	237	208	184	166	151	139	128	119	111	104	92	79	69	62	55	50	46	41	37
	186-186W	6540	251	215	188	167	151	137	126	116	108	101	94	84	72	63	56	50	45	42	37	33
	187-187W	7600	292	250	219	195	175	159	146	135	125	117	109	97	83	73	65	59	53	49	44	39
207-207W	7800	300	257	225	200	180	164	150	138	129	120	112	100	86	75	67	60	54	50	45	40	
26'-6"	145-145W	3920	148	127	111	99	89	81	74	68	63	59	55	49	42	37	33	30	27	24	21	19
	146-146W	5150	194	167	146	130	117	106	97	90	83	78	73	65	56	49	43	39	35	32	29	26
	147-147W	6180	234	200	175	156	140	127	117	108	100	93	88	78	67	58	52	47	42	39	35	31
	166-166W	5840	220	189	165	147	132	120	110	102	94	88	82	73	63	55	49	44	40	37	33	29
	167-167W	7060	267	229	200	178	160	146	133	123	114	107	100	89	76	67	59	53	48	44	40	35
	186-186W	6410	242	207	182	161	145	132	121	112	104	97	91	81	69	60	54	48	44	40	36	32
	187-187W	7600	287	246	215	191	172	157	144	133	123	115	107	96	82	72	64	58	52	48	43	38
207-207W	7800	294	252	221	196	176	160	147	136	126	118	110	98	84	73	65	59	53	49	44	39	
27'-0"	145-145W	3850	143	122	107	95	86	78	71	66	61	57	53	48	41	36	32	29	26	23	20	18
	146-146W	5050	187	160	140	125	112	102	94	86	80	75	70	62	53	47	42	37	34	31	27	24
	147-147W	6070	225	193	169	150	135	123	112	104	96	90	84	75	64	56	50	45	41	37	33	30
	166-166W	5730	212	182	159	141	127	116	106	98	91	85	79	71	61	53	47	43	39	35	31	28
	167-167W	6940	257	220	193	171	154	140	128	119	110	103	96	86	74	64	57	51	47	43	38	34
	186-186W	6300	233	200	175	155	140	127	117	108	100	93	87	78	67	58	52	47	42	39	35	31
	187-187W	7600	281	241	211	187	169	153	141	130	121	113	105	94	80	70	62	56	51	47	42	37
207-207W	7800	289	248	217	193	173	158	145	133	124	116	108	96	83	72	64	58	52	48	43	38	
27'-6"	145-145W	3780	137	118	103	92	83	75	69	63	59	55	51	46	39	34	31	28	25	22	20	18
	146-146W	4960	180	154	135	120	108	98	90	83	77	72	67	60	52	45	40	36	33	30	27	24
	147-147W	5960	217	186	162	144	130	118	108	100	93	86	81	72	62	54	48	43	39	36	32	29
	166-166W	5630	204	175	154	136	123	112	102	94	88	82	76	68	58	51	45	41	37	34	30	27
	167-167W	6810	248	212	186	165	149	135	124	114	106	99	93	83	71	62	55	50	45	41	37	33
	186-186W	6190	225	193	169	150	135	123	113	104	97	90	84	75	64	56	50	45	41	38	33	30
	187-187W	7500	273	234	205	182	164	149	137	126	117	109	102	91	78	68	61	55	49	46	41	36
207-207W	7800	284	243	213	189	170	155	142	131	122	114	106	95	81	71	63	57	51	47	42	38	
28'-0"	145-145W	3720	133	114	100	89	80	72	66	61	57	53	50	44	38	33	30	27	24	21	19	17
	146-146W	4880	174	149	131	116	105	95	87	81	75	70	65	58	50	44	39	35	32	29	26	23
	147-147W	5850	209	179	157	139	125	114	105	96	90	84	78	70	60	52	46	42	38	35	31	28
	166-166W	5520	197	169	148	131	118	107	99	91	84	79	74	66	56	49	44	39	36	33	29	26
	167-167W	6690	239	205	179	159	143	130	119	110	102	96	89	80	68	60	53	48	43	40	36	32
	186-186W	6070	217	186	163	145	130	118	109	100	93	87	81	72	62	54	48	43	39	36	32	29
	187-187W	7380	264	226	198	176	158	144	132	122	113	106	99	88	75	66	59	53	48	44	39	35
207-207W	7800	279	239	209	186	167	152	140	129	120	112	104	93	80	70	62	56	51	47	42	37	
28'-6"	166-166W	5430	191	163	143	127	114	104	96	88	82	76	71	64	54	48	42	38	35	32	29	26
	167-167W	6570	230	197	173	153	138	126	115	106	98	92	86	77	66	58	51	46	42	38	34	30
	186-186W	5960	209	178	157	140	125	114	105	97	89	84	78	70	60	52	46	42	38	35	31	28
	187-187W	7240	254	218	191	169	152	139	127	117	109	102	95	85	73	63	56	51	46	42	38	34
	207-207W	7800	274	235	206	183	164	150	137	127	118	110	103	91	78	68	61	55	50	46	41	36
29'-0"	166-166W	5340	184	158	138	123	111	100	92	85	79	74	69	61	53	46	41	37	33	31	27	24
	167-167W	6460	223	191	167	148	134	122	111	103	96	89	83	74	64	56	50	45	41	37	33	30
	186-186W	5860	202	173	152	135	121	110	101	93	87	81	76	67	58	50	45	41	37	34	30	27
	187-187W	7130	246	211	185	164	148	134	123	114	106	99	92	82	70	61	55	49	45	41	37	33
	207-207W	7800	269	231	202	179	161	147	135	124	115	108	101	90	77	67	60	54	49	45	40	36
29'-6"	166-166W	5240	178	152	133	118	107	97	89	82	76	71	67	59	51	44	39	36	32	30	26	23
	167-167W	6350	215	184	162	143	129	117	108	99	92	86	80	72	61	54	48	43	39	36	32	28
	186-186W	5750	195	167	146	130	117	106	98	90	84	78	73	65	56	49	43	39	35	33	29	26
	187-187W	6990	237	203	178	158	142	129	119	109	102	95	89	79	68	59	53	47	43	40	35	31
	207-207W	7700	261	224	196	174	157	142	131	121	112	105	98	87	75	65	58	52	47	44	39	35
30'-0"	166-166W	5150	172	147	129	114	103	94	86	79	74	69	54	57	49	43	38	34	31	27	24	21
	167-167W	6240	208	178	156	139	125	113	104	96	89	83	78	69	59	52	46	42	38	35	31	28
	186-186W	5670	189	162	142	126	113	103	95	87	81	76	71	63	54	47	42	38	34	32	28	25
	187-187W	6890	230	196	172	153	137	125	115	106	98	92	86	76	65	57	51	46	41	38	34	30
	207-207W	7560	252	216	189	168	151	137	126	116	108	101	94	84	72	63	56	51	46	42	38	33

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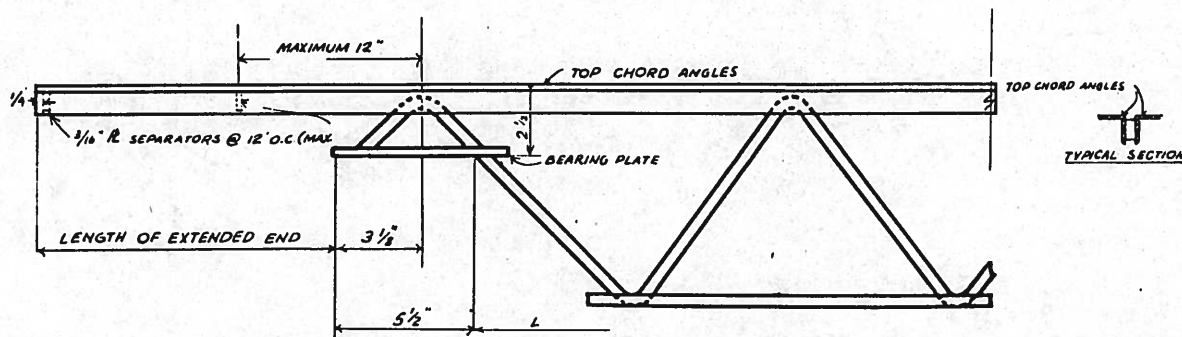


Clear Span	Joist Type SJ-	Total Safe Load Lbs.	Total Safe Loads in Pounds Per Square Foot for Joist Spacings Shown																			
			12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"	54"	60"	66"	72"	80"	90"
30'-6"	166-166W	5070	166	142	125	111	100	91	83	78	71	67	62	55	47	42	37	33	30	30	30	..
	167-167W	6140	201	172	151	134	121	110	100	93	86	81	75	67	58	50	45	40	37	34	30	..
	186-186W	5550	182	156	137	121	109	99	91	84	78	73	68	61	52	45	40	36	33	30	..	
	187-187W	6770	222	190	167	148	133	121	111	103	95	89	83	74	63	55	49	44	40	37	33	29
	207-207W	7440	244	209	183	163	146	133	122	113	105	98	91	81	70	61	54	49	44	41	36	32
31'-0"	166-166W	4990	161	138	121	107	97	88	81	74	69	64	60	54	46	40	36	32	29	29	..	..
	167-167W	6050	195	167	146	130	117	106	98	90	84	78	73	65	56	49	43	39	35	32	30	..
	186-186W	5480	177	153	133	118	106	97	89	82	76	71	66	59	51	44	39	35	32	30	..	
	187-187W	6670	215	184	161	143	129	117	108	99	92	86	80	72	61	54	48	43	39	36	32	..
	207-207W	7310	236	202	177	157	142	129	118	109	101	95	88	79	67	59	52	47	43	39	35	31
31'-6"	166-166W	4910	156	134	117	104	94	85	78	72	67	62	58	52	45	39	35	31	..	..	..	..
	167-167W	5950	189	162	142	126	113	103	95	87	81	76	71	63	54	47	42	38	34	32	..	..
	186-186W	5390	171	147	128	114	102	93	86	79	74	69	64	57	49	43	38	34	31	29	..	..
	187-187W	6550	208	178	156	139	125	113	104	96	89	83	78	69	59	52	46	42	38	35	31	..
	207-207W	7210	229	196	172	153	137	125	115	106	98	92	86	76	65	57	51	46	41	38	34	30
32'-0"	166-166W	4840	151	130	113	101	91	82	76	70	65	60	56	50	43	38	34	30	..	..	..	..
	167-167W	5860	183	157	137	122	110	100	92	85	79	73	68	61	52	46	41	37	33	31	..	..
	186-186W	5310	166	142	125	111	100	91	83	77	71	67	62	55	47	41	37	33	30	..	..	..
	187-187W	6460	202	173	151	135	121	110	101	93	87	81	76	67	58	50	45	40	37	34	30	..
	207-207W	7080	221	189	166	147	133	121	111	102	95	89	83	74	63	55	49	44	40	37	33	29
32'-6"	186-186W	5230	161	138	121	107	97	88	81	74	69	65	60	54	46	40	36	32	..	..	..	..
	187-187W	6370	196	168	147	131	118	107	98	91	84	79	73	65	56	49	44	39	36	33	29	..
	207-207W	6990	215	184	161	143	129	118	108	99	92	86	80	72	61	54	48	43	39	36	32	..
33'-0"	186-186W	5150	156	134	117	104	94	86	78	72	67	63	58	52	45	39	35	31	..	..	..	..
	187-187W	6260	190	163	142	127	114	104	95	88	82	76	71	63	54	47	42	38	34	32	..	..
	207-207W	6870	208	178	156	139	125	114	104	96	89	83	78	69	59	52	46	42	38	35	31	..
33'-6"	186-186W	5090	152	130	114	101	91	83	76	70	65	61	57	51	43	38	34	30	..	..	..	..
	187-187W	6160	184	158	138	123	110	100	92	85	79	74	69	61	53	46	41	37	33	31	..	..
	207-207W	6770	202	173	151	135	121	110	101	93	87	81	76	67	58	50	45	40	37	34	30	..
34'-0"	186-186W	5000	147	126	110	98	88	80	74	68	63	59	55	49	42	37	33	..	..	..	..	..
	187-187W	6080	179	152	134	119	107	97	89	82	76	71	67	59	51	44	40	36	32	30	..	..
	207-207W	6670	196	168	147	131	118	107	98	91	84	79	73	65	56	49	44	39	36	33	29	..
34'-6"	186-186W	4930	143	122	107	95	86	78	72	66	61	57	53	48	41	36	32	..	..	..	..	..
	187-187W	5970	173	148	130	115	104	95	87	80	74	69	65	58	49	43	38	35	31	..	..	..
	207-207W	6560	190	163	143	127	114	104	95	88	82	76	71	63	54	47	42	38	34	32	..	..
35'-0"	186-186W	4860	139	119	104	93	83	76	70	64	60	56	52	46	40	35	31	..	..	..	..	..
	187-187W	5900	169	144	126	112	101	92	84	78	72	67	63	56	48	42	37	34	31	..	..	..
	207-207W	6480	185	158	139	123	111	101	93	86	79	74	69	62	53	46	41	37	34	31	..	..
35'-6"	186-186W	4790	135	116	101	90	81	74	68	63	58	54	50	45	39	34	30	..	..	..	..	..
	187-187W	5820	164	140	123	109	98	90	82	76	70	66	61	55	47	41	36	33	30	..	..	..
	207-207W	6390	180	154	135	120	108	98	90	83	77	72	67	60	51	45	40	36	33	30	..	..
36'-0"	186-186W	4720	131	112	98	87	79	72	66	61	56	53	49	44	37	33	..	..	..	..	..	..
	187-187W	5740	159	137	120	107	96	87	79	74	69	64	60	53	46	40	36	32	..	..	..	..
	207-207W	6300	175	150	131	117	105	96	88	81	75	70	65	58	50	44	39	35	32	..	..	..
36'-6"	207-207W	6210	170	146	128	113	102	95	85	79	73	68	64	57	49	42	38	34	31	..	..	..
37'-0"	207-207W	6130	166	141	124	110	99	90	83	76	71	66	62	55	47	41	37	33	30	..	..	..
37'-6"	207-207W	6040	161	138	121	107	97	88	82	74	69	65	60	54	46	40	36	32	..	..	..	..
38'-0"	207-207W	5960	157	135	118	105	94	86	79	73	68	63	59	52	45	39	35	31	..	..	..	..
38'-6"	207-207W	5890	153	131	115	102	92	84	77	71	66	61	57	51	44	38	34	31	..	..	..	..
39'-0"	207-207W	5810	149	128	112	99	89	81	75	69	64	60	56	50	43	37	33	30	..	..	..	..
39'-6"	207-207W	5730	145	124	109	97	87	79	73	67	62	58	54	48	41	36	32	..	..	..	..	..
40'-0"	207-207W	5670	142	121	106	94	85	77	71	65	61	57	53	47	40	35	31	..	..	..	..	..

STANDARD JOISTS EXTENDED ENDS

The modern architectural trend has increased the demand for steel joists with extended ends. In order to fill this demand, **Standard Iron & Wire Works** has adopted a standard design for extended ends that is safe, efficient and economical to manufacture. These ends are fabricated as an integral part of the joists, and are manufactured as one of three types shown. The type of the extended end furnished depends upon the length of extension and the load to be carried.

The load carrying capacities and properties of the three types of **STANDARD EXTENDED ENDS** furnished on **Standard Iron & Wire Works STEEL JOISTS** are given below.

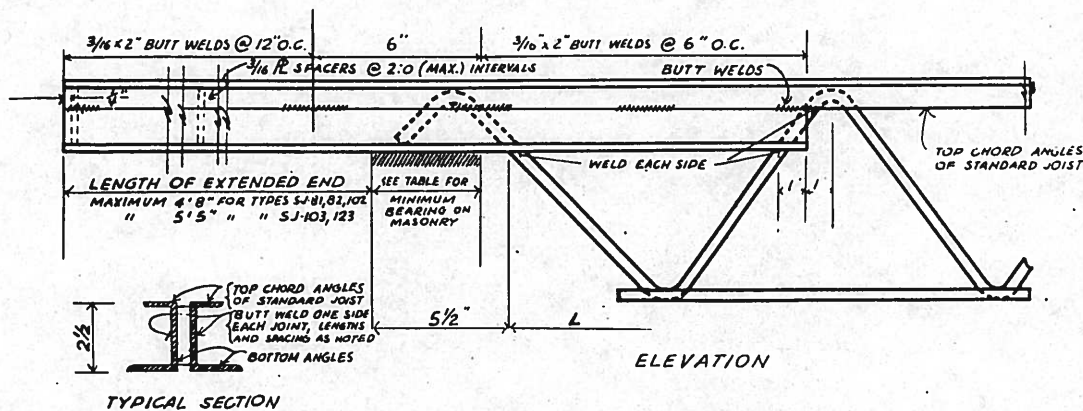


EXTENDED ENDS OF STANDARD JOISTS

TYPE 1

Joist Types SJ-	Top Chord Angles	Section Modulus	7"	†Allowable Loads—Lbs. Per Lin. Ft. on Length of Extended Ends Shown					
				9"	1'-1"	1'-5"	1'-9"	2'-2"	2'-7"
81, 82, 102	2-LS 1 x 1 x 1/8	.06	250	180	101	—	—	—	—
103, 123	2-LS 1 1/4 x 1 1/4 x 1/8	.10	250	250	169	108	—	—	—
104, 124	2-LS 1 1/2 x 1 1/2 x 1/8	.14	250	250	236	151	105	—	—
125, 145	2-LS 1 3/4 x 1 3/4 x 1/8	.20	250	250	250	216	150	103	—
126, 146, 166, 186	2-LS 1 1/2 x 1 1/2 x 3/16	.20	250	250	250	216	150	103	—
147, 167, 187, 207	2-LS 1 3/4 x 1 3/4 x 3/16	.28	250	250	250	250	210	144	105

†Not to exceed extreme fiber stress of 18,000 per sq. in. or 250 pounds per lin. ft. on extended end.



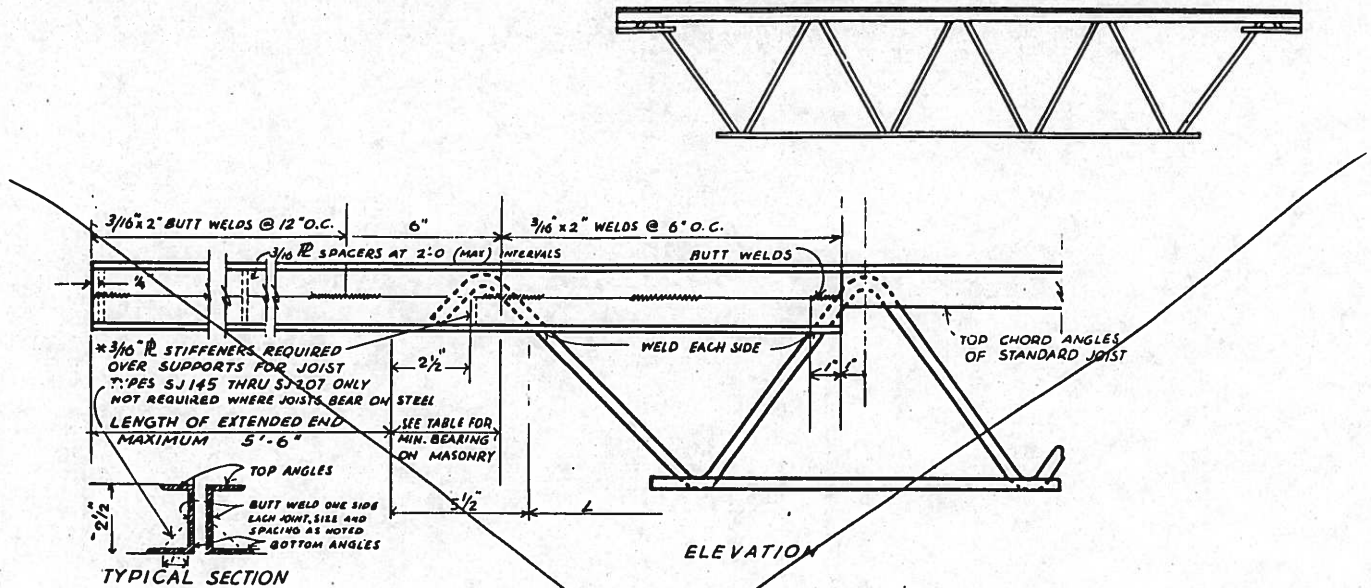
EXTENDED ENDS FOR STANDARD JOISTS

TYPE 2

Joist Types	Extended End Materials and Properties					†Allowable Loads—Lbs. Per Lin. Ft. on Lengths of Extended Ends Shown								Design No.
	Top Chord Angles	Bottom Angles	Section Modulus	Minimum Bearing on Weight Masonry Per Ft.										
						2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	4'-11"	5'-5"		
SJ81, SJ82, SJ102	2-LS 1 x1 x1⁄8	2-LS 1½x1½x3⁄16	.821	3½"		5.20	250	250	201	154	122	102	—	1
SJ103, SJ123	2-LS 1¼x1¼x1⁄8	2-LS 1¾x1¼x3⁄16	.974	4"		5.62	250	250	239	183	144	121	100	2

†Not to exceed extreme fiber stress of 18,000 lbs. per sq. in. or uniform load of 250 lbs. per lin. ft.

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EXTENDED ENDS FOR STANDARD JOISTS

TYPE 3

Joist Types SJ-	Extended End Materials and Properties						Allowable Loads—Lbs. Per Lin. Ft. Design										No.
	Bottom Angles	Top Angles	Section† Modulus	Minimum Bearing on Masonry	Weight Per Ft. lb.	on Lengths of Extended Ends Shown											
						2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"					
81, 82, 102	2-LS 1½x1½x⅜	2-LS 1 x1 x⅜	.821	3½"	5.20	250	250	201	154	122	—	—	—	—	1		
		2-LS 1 x1 x⅜	1.112	3½"	5.92	250	250	250	209	165	133	110	—	2			
		2-LS 1 x1 x¼	1.347	3½"	6.58	250	250	250	234	185	150	123	—	3			
103, 104, 123 124, 125, 126	2-LS 1¾x1¼x⅜	2-LS 1¼x1¼x⅜	.974	4"	5.62	250	250	239	183	144	117	—	—	4			
		2-LS 1¼x1¼x⅜	1.301	4¼"	6.56	250	250	250	234	186	150	123	—	5			
145, 146, 147 166, 167, 186	2-LS 1¾x1¼x⅜*	2-LS 1¼x1¼x⅜	.974	5"	5.62	250	250	239	183	144	117	—	—	4			
		2-LS 1¼x1¼x⅜	1.301	5¼"	6.56	250	250	250	234	185	150	123	—	5			
189, 207 187	2-LS 1¾x1¼x⅜*	2-LS 1¼x1¼x⅜	.974	5½"	5.62	250	250	239	183	144	117	—	—	4			
		2-LS 1¼x1¼x⅜	1.301	5½"	6.56	250	250	250	234	185	150	123	—	5			

† Not to exceed extreme fiber stress of 18,000 PSI, or 250 lb. per lin. ft. on extended end. ‡ Maximum section Modulus used—1.25

CENTERING

Steel Rib Lath is frequently used as centering over steel joists for pouring concrete floor or roof slab. The following table gives the recommended signs and weights for different joist spacings:

	RIB LATH	JOIST SPACING
3/8"	3.4 lbs. per Sq. Yd.	19" and less
5/8"	4.0 lbs. per Sq. Yd.	19" to 24"
3/8"	0.6 lb. per Sq. Ft.	24" to 30"

Steel Rib Lath affords an excellent centering material for concrete slabs over steel joists. All centering materials should be attached to tops of joists by means of clips or wire ties. Temporary blocking should be placed between joists to prevent lateral bending of joists if the centering material transmits an excessive lateral pull on the joists. Floor lath should be lapped over joists with the ends of adjacent sheets securely wired together.

STANDARD SPECIFICATIONS...

*Finish should be under std. spec's
Not in front of Book.*

1. General—Where steel joists are shown on plans they shall be fabricated from hot rolled steel shapes in the form of a Warren truss as manufactured by **Standard Iron & Wire Works, Inc.**

2. Materials—All steel used in Steel Joists construction shall conform to the American Society for Testing Materials (ASTM) standard specification for Steel for Bridges and Buildings, Designation A7 of welding quality, except that parts made of Strip or sheet steel shall conform to Grade C of ASTM A-245, "Specification for Heavy Gauge Structural Quality Flat Hot Rolled Carbon Steel Sheets" or Grade C of ASTM A-246 specification for light Gauge Structural Quality Flat Hot Rolled Carbon Steel Sheets" or Grade C of ASTM A-303, specification for Hot Rolled Carbon steel strip of Structural Quality. ASTM specification number herein referred to shall be of latest adoption.

3. Design—All Standard Steel Joists are designed as a truss and Deck or top slab construction is not assumed to carry any part of the compression stress in the steel joist.

4. Spacing—It is recommended that Standard Steel Joists shall be spaced not over 24 inches on centers for floor construction and 30 inches on centers for roof construction.

Joists at end walls shall be spaced not more than 4 inches from the bearing walls and these steel joists shall be anchored to the walls with anchors in line with the bridging.

Where a partition is parallel to the steel joists an additional joist shall be placed under the partition or if necessary for passage of pipes, etc. double joists spaced the desired distance apart shall be used. (See figure page 18.) Where partitions are at right angles to the joists the additional weight of the partition shall be included in the dead load computations.

5. Bridging—As soon as steel joists are in place and before any materials are attached to them bridging rows shall be applied as follows.

Clear span up to 14 feet—

One row near center

Clear span 14 to 21 feet—

Two rows at third points

Clear span 21 to 32 feet—

Three rows at quarter points

Clear span 32 to 40 feet—

Four rows

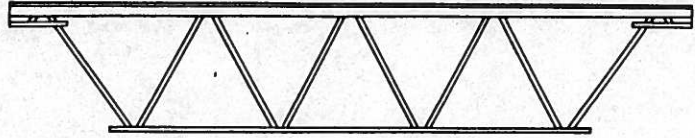
6. Span—The span of Standard Steel Joists shall not exceed 24 times the depth of the Steel Joist.

7. Anchorage—The ends of Steel Joists shall extend at least $2\frac{1}{2}$ inches onto structural supports and shall be welded to the structural supports by at least two welds each one inch long. (See figure page 21.) Masonry walls the bearing of the Steel Joists shall be at least 4 inches and every third joist shall have the ends anchored with a $\frac{3}{8}$ inch round wall anchor. (See figure page 19.)

8. Ceilings—Where plastered ceiling occurs ceiling extensions shall be provided at ends of steel joists. (See figure page 20.)

9. Floor Decks & Floor Slabs—Decks or top slabs over steel joists may be of concrete or gypsum poured on metal lath centering or equally suitable permanent centering, or on

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removable centering, provided the top chords or flanges of the steel joists are stayed laterally by the top slab.

Pre-cast concrete top slabs, pre-cast gypsum top slabs, wood decks or steel decks may be used over steel joists provided they are securely anchored to the top chords or flanges of the joists.

10. Wood Floors—Wood nailer strips can be provided by the purchaser as they can be securely fastened to the top chord of the joists by lag screws spaced not over 36 inches center to center. Punching of the top chord is not necessary as the lag screws pass between the two angles of the top chord.

11. Roof Decks—Where steel decks are used they shall be welded to the steel joists as recommended by the Steel Deck manufacturer.

Where Pre-Cast concrete or gypsum is used they should be securely attached to the top chord members to prevent any lateral deflection. Shims or plastic material needed to insure a level bearing for precast slabs are not to be furnished by the Steel Joist fabricator.

12. Connections—The joints and connections of all steel joists shall be made by connecting the members directly to one another by fusion welding.

All joints and connections shall be capable of withstanding a load at least three (3) times the designed load.

13. Piling at Job.—Joists, accessories and lath should be stored at job in such a manner that the lower portion of the piles is not affected by ground dampness. Piles should not

be so high as to cause bending in members near the bottom. Piles of materials should be protected from the weather with waterproof covers. In piling material, all shipping tags should be placed at the same end and in an accessible position. Materials required for upper floors or roof should not be placed above that to be used on lower floors.

14. Setting Joists—The first joist in any run should be placed not more than 4 inches clear of the end wall. The other joists should be spaced accurately, measuring from the first joist. Joists should be laid upon supports, and not thrown on. Joists supported on masonry walls should be bedded in mortar. The failure to properly bed joists will often result in excessive vibration in the finished floor. If a system of rigid bridging is used in which the diagonals act in both tension and compression, it shall be installed before wall anchors, beam anchors or other specified means of attachment are applied. If diagonal crossed bridging which will resist only tension or continuous horizontal bridging is used, it shall be installed after joists are permanently anchored to the supports. This should always be done before any other work is performed which requires support from the joists. The safety and success of the work depends largely upon the faithful installation of the bridging in strict accordance with detailed plans.

15. Decking—No temporary decking or run-ways except planks used by workmen in installing bridging should be placed on floors until all bridging is in place. Two-inch nominal planks should then be provided for temporary decks and run-ways. Also spreader boards should be provided for dumping of concrete buggies. This will avoid excessive loss of mortar from concrete, which will result if concrete is dumped directly on lath.

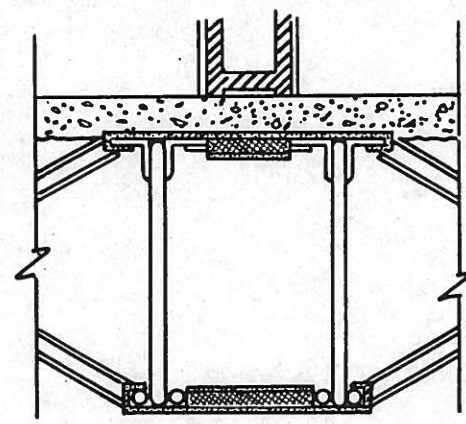
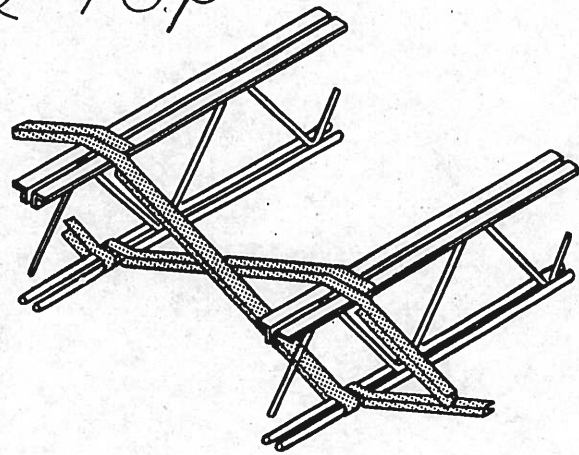
DETAILS and DIMENSIONS — — —

ED
 BRDG FOR CLEAR TOP

STRUT BRIDGING...

Strut bridging is made of $\frac{3}{4}$ ",
 16 gauge channel. Struts are
 cut to length for spacing desired
 which assures accurate spacing
 of joists. Strut bridging is rec-
 ommended where joist spacing
 is less than 4'-0"

check
 Straight rod Bldg?



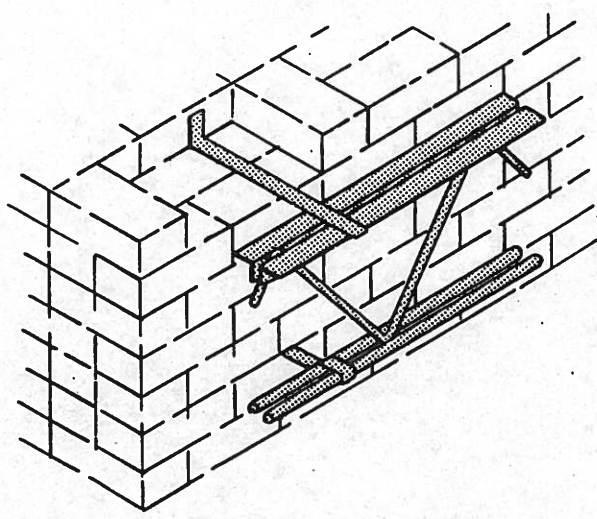
DOUBLE JOIST BRIDGING...

Where double joists are re-
 quired, they are held together
 as indicated.

LATERAL ANCHOR...

Lateral anchors are made of
 1 x $\frac{1}{8}$ flat.

They are placed at the end of
 each row of bridging as shown
 in drawing.



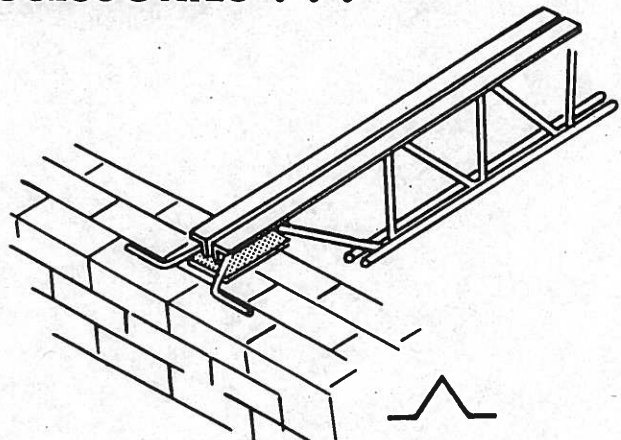
Standard Iron & Wire Works

STANDARD JOIST ACCESSORIES . . .

MASONRY ANCHORS...

Masonry wall anchors are made of $\frac{3}{8}$ inch diameter plain round bars except for joists 187 and 207 which have $\frac{1}{8}$ inch x 1 inch flat bar anchors.

They are used to anchor every third joist end to the masonry wall.

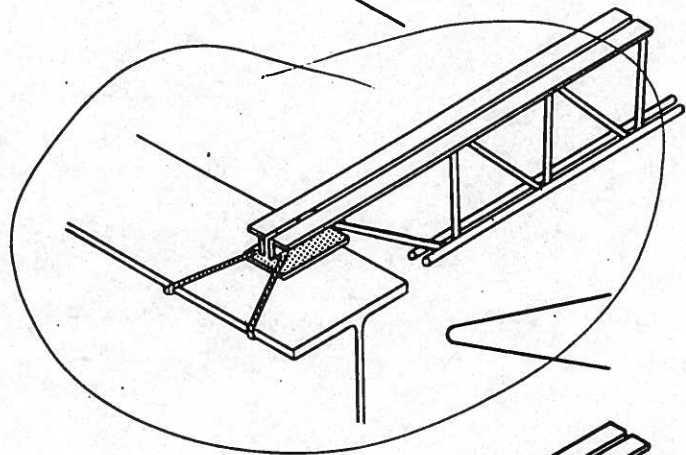


BEAM ANCHOR...

Beam anchors are made of $\frac{1}{4}$ inch diameter plain round bars.

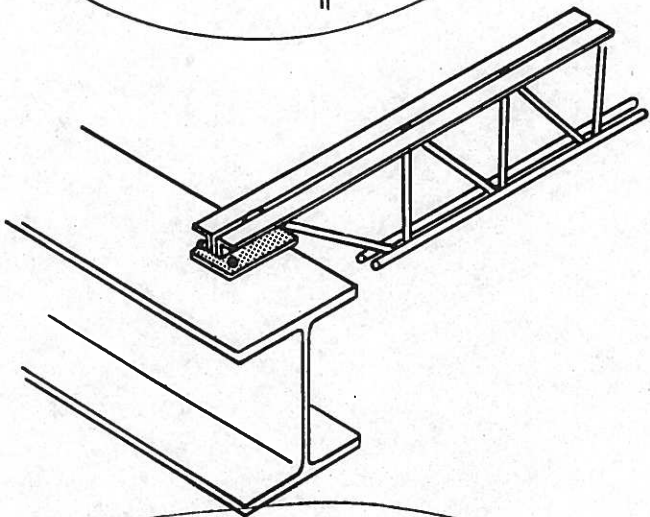
They can be used to secure the joist end to the beam flange when welding is not practical.

Don't use



BOLTED CONNECTIONS...

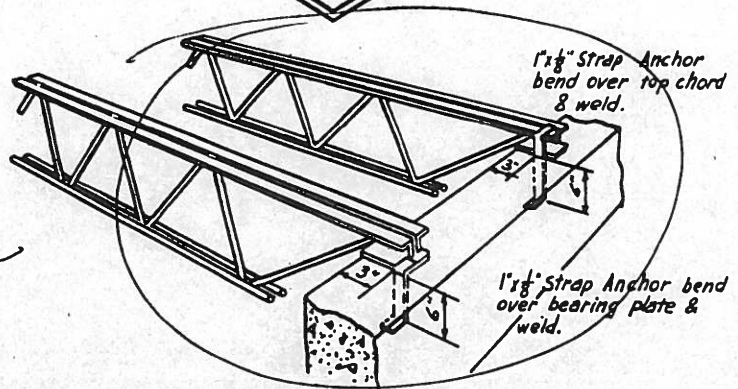
Where bolted connections are used the joist bearing plate is punched with slotted holes as indicated.



CONCRETE BEAM ANCHOR...

Joists can be anchored to concrete beams by placing strap anchors in concrete and bending over bearing plate or top of joist as indicated.

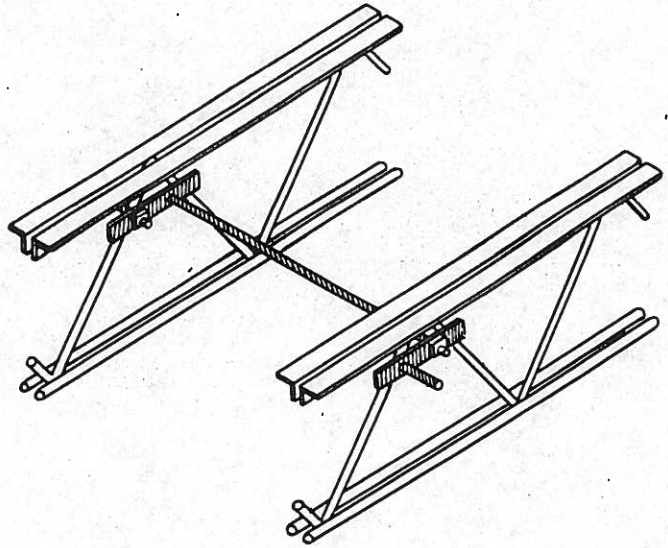
use anchor



DETAILS and DIMENSIONS — — —

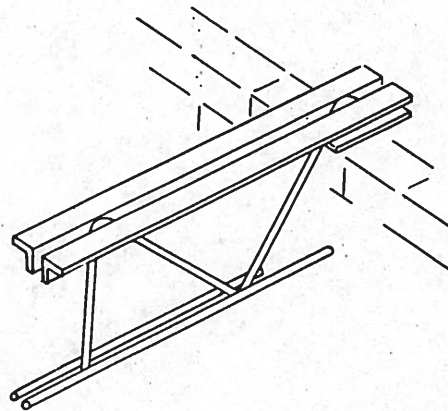
SAG ROD...

When Standard Iron & Wire Works Joists are used as purlins on a sloping roof and are placed at right angles to the slope, sag rods are used. Sag rods are made of $\frac{5}{8}$ inch diameter plain round bars threaded on both ends.



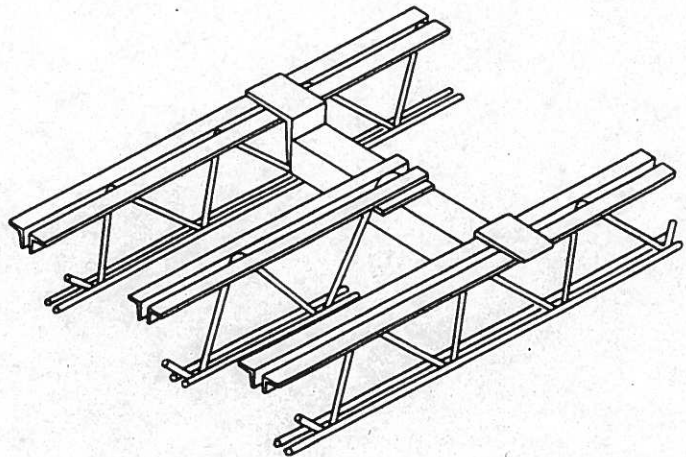
CEILING EXTENSIONS...

When plaster ceilings are to be attached directly to the joists ceiling extensions are furnished.



HEADERS...

Headers are used to frame openings that do not exceed 4'-0". A seat angle $3 \times 2\frac{1}{2} \times \frac{1}{4}$ is welded to header angle $4 \times 3\frac{1}{2} \times \frac{3}{8}$ as indicated in sketch.



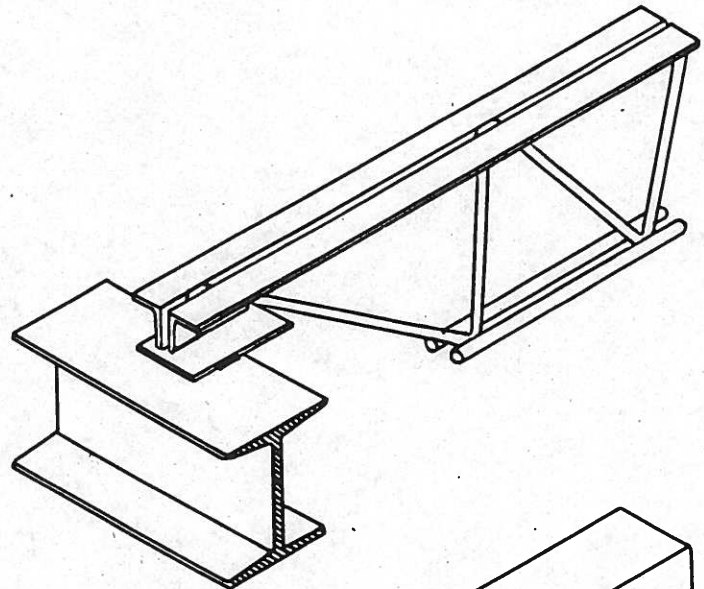
use 4" WF for spans over 4'-0"

Standard Iron & Wire Works

STANDARD JOIST ACCESSORIES . . .

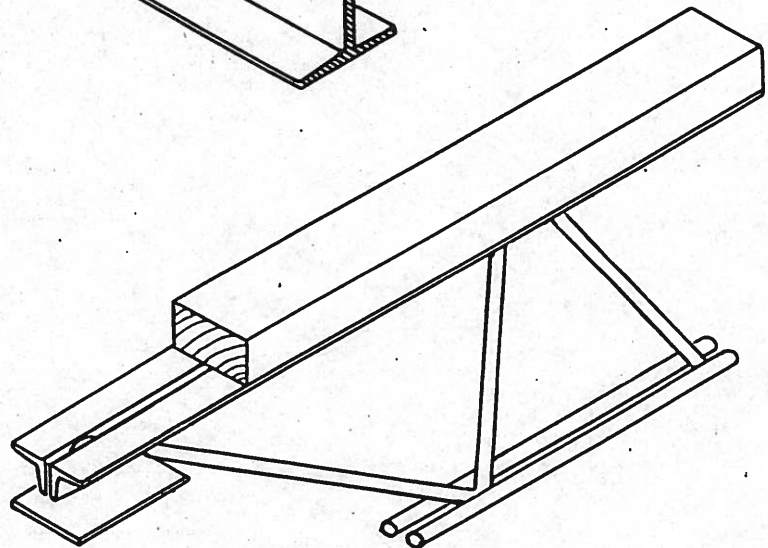
WELDED ANCHORS...

Steel joists bearing on structural steel can be anchored by placing a one inch long weld on each side of bearing plate.



NAILING STRIPS...

Wood nailing strips are attached in the shop with lag screws when specified. It is not necessary to punch top chord members since lag screws are placed between the two top chord angles. Nailing strips can be readily attached in the field by lag screws or bolts. Wood strips are cut out to allow for strut bridging installation.



MINIMUM LINES FOR ANY TYPE BRIDGING

SPAN	NUMBER OF LINES OF BRIDGING
Up to 14 feet	One row near center
14 to 21 feet	Two rows placed at approximately $\frac{1}{4}$ span apart and symmetrically disposed about the center of span.
21 to 32 feet	Three rows placed at approximately $\frac{1}{4}$ points of span.
32 to 40 feet	Four rows symmetrically arranged about the center of span.

LONGSPAN STEEL JOISTS...

Standard Iron & Wire Works fabricate LONGSPAN JOISTS of Pratt type trusses in both top bearing and bottom bearing types. All joists are electrically arc welded. These joists vary in depth from 18" to 48" and are designed to carry light loads on spans from 36'-0" to 96'-0".

The advantages of using LONGSPAN JOISTS are similar to the advantages of using STANDARD STEEL JOISTS. But the principal use is to eliminate interior columns and beams by use of greater spans.



LONGSPAN



PITCHED TOP CHORD...

Standard Iron & Wire Works LONGSPAN JOISTS can be furnished with top chord sloping in one direction or sloping in both directions from the midpoint to provide for roof drainage.

The maximum variations in depth of joist with pitched top chords is shown in table below.

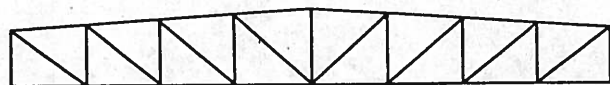


DIAGRAM FOR BOTTOM BEARING
DOUBLE SLOPE JOISTS

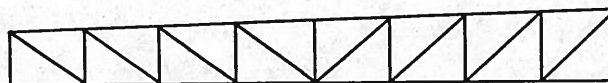


DIAGRAM FOR BOTTOM BEARING
SINGLE SLOPE JOISTS



DIAGRAM FOR TOP BEARING
DOUBLE SLOPE JOISTS



DIAGRAM FOR TOP BEARING
SINGLE SLOPE JOISTS

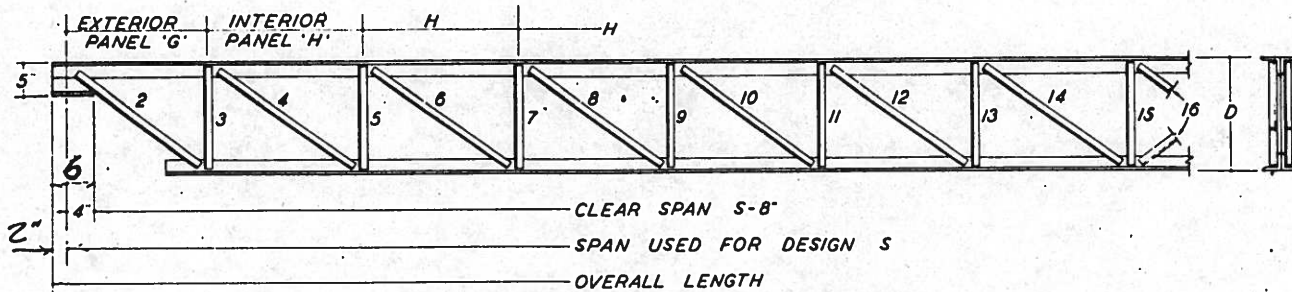
TOP CHORDS PITCHED TWO WAYS			TOP CHORDS PITCHED ONE WAY		
End	Center	End	Shallow	Center	Deep End
15 $\frac{3}{4}$ "	18"	15 $\frac{3}{4}$ "	15 $\frac{3}{4}$ "	18"	20 $\frac{1}{4}$ "
17 $\frac{1}{2}$ "	20"	17 $\frac{1}{2}$ "	17 $\frac{1}{2}$ "	20"	22 $\frac{1}{2}$ "
21"	24"	21"	21"	24"	27"
24 $\frac{1}{2}$ "	28"	24 $\frac{1}{2}$ "	24 $\frac{1}{2}$ "	28"	31 $\frac{1}{2}$ "
28"	32"	28"	28"	32"	36"
31 $\frac{1}{2}$ "	36"	31 $\frac{1}{2}$ "	31 $\frac{1}{2}$ "	36"	40 $\frac{1}{2}$ "
35"	40"	35"	35"	40"	45"
38 $\frac{1}{2}$ "	44"	38 $\frac{1}{2}$ "	38 $\frac{1}{2}$ "	44"	49 $\frac{1}{2}$ "
42"	48"	42"	42"	48"	54"

In figuring size of joists required use depth at center of span.

Standard pitch is $\frac{1}{8}$ inch per foot.

If pitch exceeds this amount, load tables do not apply.

DIMENSIONS and DETAILS



TOP BEARING JOISTS

DIMENSIONS - PANEL SPACING AND

Joist Type	Joist Depth in Inches D	PANEL LENGTHS		Interior H	MAXIMUM LENGTH		CHORDS		2 ANGLES			
		Exterior G			Clear Span	No. and Length of Panels		Top 2 Angles	Bottom 2 Angles	2 ANGLES		
		Max.	Min.			Exterior G	Interior H			1	3	5
20L02	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
20L03	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	2 x 2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
18L04	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	2 1/2 x 2 x 3/4	2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
18L05	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	2 x 2 x 3/4	2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
18L06	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	2 1/2 x 2 x 3/4	2 1/2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
18L07	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	2 1/2 x 2 1/2 x 3/4	2 1/2 x 2 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
18L08	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	3 x 2 1/2 x 3/4	2 1/2 x 2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2
18L09	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	3 x 3 x 3/4	2 1/2 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
18L10	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	3 1/2 x 3 x 3/4	3 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
18L11	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	3 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
18L12	18	3' 1 1/4"	1' 10 1/4"	2' 6"	36' 0"	2 @ 2' 1"	13 @ 2' 6"	3 1/2 x 3 x 3/4	3 1/2 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
20L03	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	2 x 2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
20L04	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	2 1/2 x 2 x 3/4	2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
20L05	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	2 x 2 x 3/4	2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
20L06	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	2 1/2 x 2 x 3/4	2 1/2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
20L07	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	2 1/2 x 2 1/2 x 3/4	2 1/2 x 2 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
20L08	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	3 x 2 1/2 x 3/4	2 1/2 x 2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2
20L09	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	3 x 3 x 3/4	2 1/2 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
20L10	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	3 1/2 x 3 x 3/4	3 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
20L11	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	3 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
20L12	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	3 1/2 x 3 x 3/4	3 1/2 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
20L13	20	3' 5 1/4"	2' 0 3/4"	2' 9"	40' 0"	2 @ 2' 5 1/2"	13 @ 2' 9"	3 1/2 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
24L04	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	2 1/2 x 2 x 3/4	2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
24L05	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	2 x 2 x 3/4	2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
24L06	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	2 1/2 x 2 x 3/4	2 1/2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
24L07	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	2 1/2 x 2 1/2 x 3/4	2 1/2 x 2 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
24L08	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	3 x 2 1/2 x 3/4	2 1/2 x 2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2
24L09	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	3 x 3 x 3/4	2 1/2 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
24L10	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	3 1/2 x 3 x 3/4	3 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
24L11	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	3 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
24L12	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	3 1/2 x 3 x 3/4	3 1/2 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
24L13	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	3 1/2 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
24L14	24	4' 0 3/4"	2' 5 1/4"	3' 3"	48' 0"	2 @ 3' 2 1/2"	13 @ 3' 3"	4 x 3 x 3/4	3 1/2 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L06	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	2 1/2 x 2 x 3/4	2 1/2 x 2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
28L07	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	2 1/2 x 2 1/2 x 3/4	2 1/2 x 2 1/2 x 3/4	1 x 1 x 1/2	1 x 1 x 1/2	1 x 1 x 1/2
28L08	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	3 x 2 1/2 x 3/4	2 1/2 x 2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L09	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	3 x 3 x 3/4	2 1/2 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L10	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	3 1/2 x 3 x 3/4	3 x 2 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L11	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	3 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L12	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	3 1/2 x 3 x 3/4	3 1/2 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L13	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	3 1/2 x 3 x 3/4	3 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L14	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	4 x 3 x 3/4	3 1/2 x 3 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2
28L15	28	4' 8 1/4"	2' 9 1/4"	3' 9"	56' 0"	2 @ 3' 11 1/2"	13 @ 3' 9"	4 x 4 x 3/4	3 1/2 x 3 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 1/2 x 1 1/2 x 3/4	1 x 1 x 1/2

- * Top Chord Angles have long legs vertical.
- ** Bottom Chord Angles have short legs vertical.
- † Vertical and Diagonal Angles have long legs back to back.

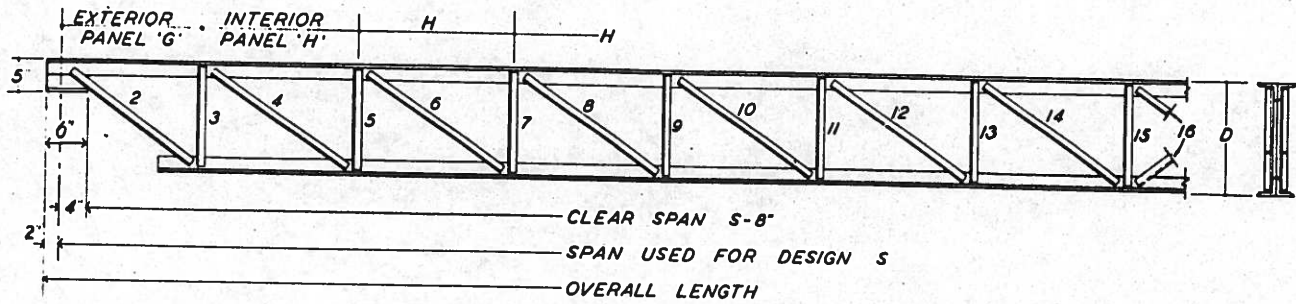
A diagram of a truss structure with 6 panels and 12 members. The truss is supported by a pin support at the left end and a roller support at the right end. It consists of a top chord, a bottom chord, and vertical members connecting them. Diagonal members are present in each of the 6 panels, forming a series of triangles. The total number of members is 12.



WEB MEMBERS

†† Joists with odd number of panels to have diagonal web member X-ed in center panel.

DIMENSIONS and DETAILS



TOP BEARING JOISTS

DIMENSIONS - PANEL SPACING AND

Joist Type	Joist Depth in Inches D	PANEL LENGTHS		MAXIMUM LENGTH		CHORDS		2 ANGLES		
		Exterior G		Interior H	Clear Span	No. and Length of Panels		Top 2 Angles	Bottom 2 Angles	1
		Max.	Min.			Exterior G	Interior H			3
32L07	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	2 1/2 x 2 1/2 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L08	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 x 2 1/2 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L09	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L10	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 1/2 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L11	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L12	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L13	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 1/2 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L14	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	3 1/2 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
32L15	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	4 x 3 x 1/4	3 1/2 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
32L16	32	5' 3 3/4"	3' 2 1/4"	4' 3"	64' 0"	2 @ 4' 8 1/2"	13 @ 4' 3"	4 x 1 x 1/4	3 1/2 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
36L08	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	3 x 2 1/2 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L09	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	3 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L10	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	3 1/2 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L11	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	3 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L12	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	3 1/2 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L13	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	3 1/2 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L14	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	4 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L15	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	4 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L16	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	4 x 4 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
36L17	36	5' 11 1/4"	3' 6 3/4"	4' 9"	72' 0"	2 @ 5' 5 1/2"	13 @ 4' 9"	4 x 4 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L09	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	3 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L10	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	3 1/2 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L11	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	3 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L12	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	3 1/2 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L13	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	3 1/2 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L14	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	4 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L15	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	4 x 3 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L16	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	4 x 4 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L17	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	4 x 4 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
40L18	40	6' 6 3/4"	3' 11 1/4"	5' 3"	80' 0"	2 @ 6' 2 1/2"	13 @ 5' 3"	5 x 5 x 1/4	2 1/2 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L10	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	3 1/2 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L11	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	3 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L12	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	3 1/2 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L13	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	3 1/2 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L14	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	4 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L15	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	4 x 3 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L16	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	4 x 4 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L17	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	4 x 4 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L18	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	5 x 5 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
44L19	44	7' 2 1/4"	4' 3 3/4"	5' 9"	88' 0"	2 @ 6' 11 1/2"	13 @ 5' 9"	5 x 5 x 1/4	3 x 2 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4
48L11	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	3 x 3 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L12	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	3 1/2 x 3 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L13	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	3 1/2 x 3 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L14	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	4 x 3 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L15	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	4 x 3 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L16	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	4 x 4 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L17	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	4 x 4 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L18	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	5 x 5 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4
48L19	48	7' 9 3/4"	4' 8 1/4"	6' 3"	96' 0"	2 @ 7' 8 1/2"	13 @ 6' 3"	5 x 5 x 1/4	3 x 3 x 1/4	1 1/2 x 1 1/2 x 1/4

* Top Chord Angles have long legs vertical.

** Bottom Chord Angles have short legs vertical.

† Vertical and Diagonal Angles have long legs back to back.

STANDARD IRON & WIRE WORKS, INC., MINNEAPOLIS, MINNESOTA

A diagram of a truss structure with 6 panels and 12 members. The truss is supported by a pin support on the left and a roller support on the right. It consists of a top chord, a bottom chord, and vertical members connecting them. Diagonal members are present in each of the 6 panels, forming a series of triangles. The total number of members is 12.



WEB MEMBERS

†† Joists with odd number of panels to have diagonal web members X-ed in center panel.

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TABLE of TOTAL SAFE LOADS

FOR LONGSPAN STEEL JOISTS

These safe loads include both dead and live loads and are to be uniformly distributed along the top chord. Longspan joists must be investigated when not loaded in this manner. When holes are punched in the governing members, the safe load must be reduced accordingly. The floor slab or roof deck is considered adequate to support the top chord laterally. Spans shown to the **right of heavy vertical line** in the table are intended for roof construction only. Loads shown **below heavy horizontal lines** in the table are governed by maximum end reaction.

JOIST DATA			Maxi- mum End Re- action	CLEAR SPAN IN FEET															
Type	Depth In Ins.	App- rox. Wt. Lbs. per Ft.		25	26	27	28	29	30	31	32	33	34	35	36				
18L02	18	12	3632	283	267	251	237	224	211	200	190	180	171	163	155	...	...	...	...
18L03		12	4094	319	300	283	267	253	239	227	215	204	194	185	176	...	...	...	...
18L04		14	4941	385	361	339	319	301	284	268	254	241	229	217	207	...	...	...	...
18L05		15	5364	418	394	372	351	331	313	298	282	268	254	242	231	...	...	...	...
18L06		17	6417	500	469	440	414	391	369	349	330	313	297	282	268	...	...	...	...
18L07		19	6880	536	516	486	458	432	408	386	365	346	329	313	296	...	...	...	...
18L08		21	7482	583	561	541	522	491	463	437	414	392	371	352	335	...	...	...	...
18L09		23	7697	600	577	556	537	519	502	474	449	425	403	383	364	...	...	...	...
18L10		25	8265	644	620	597	577	557	539	522	493	466	442	419	398	...	...	...	...
18L11		27	8753	682	656	633	611	590	571	553	536	520	493	469	445	...	...	...	...
18L12	30	9166	714	687	663	639	618	598	579	561	544	529	514	488	...	...	...	...
				CLEAR SPAN IN FEET															
				25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20L03	20	12	4235	330	312	296	280	266	252	240	228	217	207	197	188	180	172	164	157
20L04		14	5185	404	381	360	340	320	304	288	273	259	247	235	224	213	204	194	186
20L05		15	5557	433	409	387	367	348	331	314	299	285	271	259	247	236	226	216	207
20L06		17	6763	527	496	467	441	417	395	374	355	337	320	305	290	277	264	252	241
20L07		19	7110	554	533	514	486	459	435	412	391	372	354	337	321	306	292	279	267
20L08		21	7832	610	587	566	546	528	499	472	447	425	403	383	365	348	332	317	303
20L09		23	8107	632	608	586	566	547	529	512	485	460	437	416	396	377	360	344	329
20L10		25	8568	668	643	619	598	578	559	541	525	509	483	459	436	415	396	378	361
20L11		27	9095	709	682	657	634	613	593	574	557	540	525	510	485	462	441	421	403
20L12		30	9605	748	720	694	670	647	626	607	588	571	554	539	524	510	486	463	442
20L13	35	10533	821	790	761	735	710	687	665	645	626	608	591	575	559	545	531	518	
				CLEAR SPAN IN FEET															
				33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
24L04	24	14	4798	285	272	260	249	238	228	219	210	201	193	186	179	172	166	160	154
24L05		15	5117	304	292	279	268	257	247	237	228	219	211	203	196	189	182	175	169
24L06		17	6245	371	354	339	324	310	297	284	273	262	251	242	232	224	215	207	200
24L07		19	6868	408	390	373	357	342	328	314	301	289	278	267	257	248	238	230	222
24L08		21	7996	475	453	432	412	394	377	361	346	332	318	306	294	283	272	262	252
24L09		23	8652	514	490	468	447	427	409	391	375	360	345	331	319	306	295	284	274
24L10		25	9345	555	539	524	500	477	456	436	417	400	383	368	353	339	326	314	302
24L11		27	9686	575	559	543	528	514	501	480	460	441	424	407	391	376	362	349	336
24L12		30	10431	619	601	585	569	554	539	526	513	491	471	452	434	417	401	386	371
24L13		35	11479	682	662	644	626	610	594	579	565	551	538	526	514	494	475	457	440
24L14	37	12087	718	697	678	659	642	625	609	594	580	567	554	541	529	518	496	476	
				CLEAR SPAN IN FEET															
				41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
28L06	28	17	5875	282	272	262	253	244	235	227	220	212	205	199	192	186	180	175	170
28L07		19	6479	311	300	289	279	269	260	251	243	235	227	220	213	206	200	194	188
28L08		21	7542	362	348	335	323	312	300	290	280	270	261	252	244	236	229	221	215
28L09		23	8167	392	377	363	350	337	325	314	303	293	283	274	265	256	248	240	233
28L10		25	9208	442	425	408	393	378	365	351	339	327	316	305	295	285	276	267	259
28L11		27	10000	480	463	445	429	414	399	385	372	359	347	336	325	314	304	295	286
28L12		30	10960	520	514	502	483	465	448	432	417	402	388	375	363	351	339	328	318
28L13		35	12202	586	572	559	546	534	523	512	494	477	460	445	430	415	402	389	377
28L14		37	12793	614	600	586	573	561	549	537	526	515	505	488	471	455	440	426	412
28L15		41	13443	645	630	616	602	589	576	564	552	541	531	520	510	501	482	465	449

The approximate weight is in pounds per foot of clear span for bottom bearing joists.

in Pounds Per Foot

LONGSPAN



JOIST DATA				CLEAR SPAN IN FEET															
Type	Depth In Ins.	Ap- prox. Wt., Lbs. per Ft.	Maxi- mum End Re- action	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
32L07	32	19	6150	248	240	233	226	220	213	207	201	196	190	185	180	175	171	166	162
32L08		21	7177	269	260	253	246	240	233	227	221	216	210	205	200	195	191	186	182
32L09		23	7709	314	304	295	285	277	269	260	253	246	239	232	225	219	213	207	202
32L10		25	8791	354	343	332	321	311	302	292	283	275	267	259	252	245	238	231	225
32L11		27	9586	386	374	362	351	340	330	321	311	302	294	285	277	270	262	255	249
32L12		30	10827	436	422	409	396	383	371	360	349	339	329	319	310	301	293	285	277
32L13		35	12697	510	500	485	469	453	440	427	414	401	390	378	367	357	347	338	328
32L14		37	13470	543	532	522	512	502	486	471	457	443	429	417	404	393	382	371	360
32L15		41	14445	582	570	559	549	538	528	519	510	501	484	468	452	438	424	411	398
32L16	48	15720	633	621	609	597	586	575	565	555	546	536	527	519	510	502	487	472	
				CLEAR SPAN IN FEET															
				57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
36L08	36	21	6920	240	234	227	221	216	210	205	199	194	189	185	180	176	172	167	164
36L09		23	7497	260	253	246	240	233	227	221	216	210	205	200	195	191	186	182	177
36L10		25	8506	295	287	279	271	264	257	250	243	237	231	225	219	214	209	204	199
36L11		27	9198	319	310	302	294	286	279	272	265	258	252	246	240	234	228	223	218
36L12		30	10467	363	352	343	333	324	316	307	299	291	284	277	270	263	257	250	244
36L13		35	12398	430	418	406	395	384	374	364	355	346	337	328	320	312	304	297	290
36L14		37	13782	478	464	451	438	426	414	403	392	382	372	362	353	344	336	327	319
36L15		41	15275	530	521	512	497	484	471	458	446	434	423	412	400	389	378	368	357
36L16		48	16482	572	562	552	543	535	526	518	510	502	489	476	464	453	442	431	420
36L17	54	17765	616	606	595	586	576	567	558	549	541	533	525	517	510	497	485	473	
				CLEAR SPAN IN FEET															
				65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40L09	40	23	7223	220	215	210	205	200	196	191	187	183	179	175	171	168	164	161	157
40L10		25	8208	250	244	238	233	227	222	217	212	207	202	198	193	189	185	181	177
40L11		27	8865	270	264	258	252	246	241	235	230	225	220	215	211	206	202	198	193
40L12		30	10113	308	301	294	287	280	273	267	261	255	249	243	238	233	228	223	218
40L13		35	12017	366	357	348	340	332	324	316	309	302	295	289	282	276	270	264	259
40L14		37	13396	408	397	387	378	369	360	351	343	335	327	320	312	305	299	292	286
40L15		41	15136	461	450	439	428	418	408	399	389	380	372	363	355	347	341	332	324
40L16		48	17187	523	516	508	495	483	472	461	450	440	430	420	410	401	392	384	376
40L17		54	18421	561	553	545	537	529	521	514	507	495	484	473	463	452	442	433	423
40L18	61	19981	609	599	591	582	574	566	558	550	542	535	528	521	515	508	496	485	
				CLEAR SPAN IN FEET															
				73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
44L10	44	25	7993	217	212	208	203	199	195	191	187	183	179	176	172	169	165	162	159
44L11		27	8582	233	228	224	219	215	210	206	202	198	194	191	187	183	180	177	173
44L12		30	9835	267	261	256	250	245	240	235	230	225	221	217	212	208	204	200	196
44L13		35	11639	316	310	303	297	290	284	278	273	267	262	257	251	246	242	237	232
44L14		37	13039	354	346	338	331	324	317	310	304	297	291	285	279	274	268	263	258
44L15		41	14733	400	392	383	375	367	359	352	344	337	330	324	317	311	305	299	293
44L16		48	17054	463	453	443	434	424	415	407	398	390	382	374	367	360	352	345	339
44L17		54	19040	517	510	499	489	478	468	458	449	439	430	422	413	405	397	389	382
44L18		61	20743	563	556	548	541	534	527	521	514	508	497	487	477	467	457	448	439
44L19	69	22311	606	598	590	582	575	567	560	553	546	540	533	527	521	515	509	498	
				CLEAR SPAN IN FEET															
				81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
48L11	48	27	8330	204	200	197	193	189	186	183	179	176	173	170	167	164	162	159	156
48L12		30	9596	235	230	226	221	217	213	209	205	201	198	194	191	187	184	181	178
48L13		35	11352	278	273	268	262	257	253	248	243	239	234	230	226	222	218	214	211
48L14		37	12740	312	305	299	294	288	282	277	272	266	261	257	252	247	243	238	234
48L15		41	14373	352	345	338	332	326	319	313	308	302	296	291	285	280	275	270	266
48L16		48	16660	408	400	392	384	377	370	363	356	349	343	337	331	325	319	313	308
48L17		54	18743	459	450	441	433	425	416	409	401	394	386	379	372	366	359	353	346
48L18		61	21336	523	516	510	504	494	485	475	466	457	448	440	432	424	416	408	401
48L19		69	23029	564	557	550	544	538	531	525	519	514	508	498	489	480	471	462	454

The approximate weight is in pounds per foot of clear span for bottom bearing joists.

STANDARD IRON & WIRE WORKS, INC., MINNEAPOLIS, MINNESOTA

TENTATIVE

SPECIFICATIONS for LONGSPAN

Bearing for L.S. Not listed for L.S. Joists.



1. General—Where Longspan steel joists are shown on the plans they shall be fabricated from hot rolled steel shapes and shall be designed as structural trusses in accordance with the American Institute of Steel Construction "Specifications for design, fabrication and erection of structural steel buildings."

2. Materials—All steel used in Longspan Steel Joist construction shall conform to the American Society for Testing Materials Standard Specification for steel for Bridges and Buildings, Designation A7, of latest adoption.

3. Connections—All joints of Longspan Steel Joists shall be made by welding, bolting, riveting or other approved methods. Connections at ends of members shall be proportioned to develop the actual design stress but not less than 50% of the allowable design strength of the members.

4. Spacing—The spacing of Longspan Steel Joists shall not exceed the safe span of the floor slab or roof deck construction.

5. Span—The clear span of Longspan Steel Joists shall not exceed 24 times the depth for roofs and 20 times the depth for floors.

6. Anchorage—Where Longspan joists are supported by Masonry or concrete walls the ends of the Longspan joists shall be anchored with a $\frac{3}{4}$ inch round bar not less than 12 inches long. (See figure page 33.)

Where Longspan joists rest on steel supports they shall be fastened with not less than two $\frac{3}{4}$ inch bolts or by welds of equal strength. (See figure page 33.)

7. Wood Floors—Where wood nailers are required at the top chord of the Longspan joists the top chord is separated by a $\frac{3}{8}$ inch filler. The nailers are secured by a $\frac{1}{4}$ inch lag screw or carriage bolt passed thru the space between the chords. (See figure page 33.)

8. Approximate Camber—All Longspan Steel Joists shall have approximate cambers in accordance with the following:

Top Chord Length	Camber
30' 0"	$\frac{3}{8}$ "
40' 0"	$\frac{5}{8}$ "
50' 0"	$1\frac{1}{8}$ "
60' 0"	$1\frac{1}{2}$ "
70' 0"	$2\frac{1}{8}$ "
80' 0"	$2\frac{3}{4}$ "
90' 0"	$3\frac{1}{2}$ "
96' 0"	4"

1" why not use graph

9. Inspection—All Longspan Joists shall be thoroughly inspected before shipment to make certain that materials and workmanship conform to the requirements of these specifications.

10. Erection—Longspan Steel Joists should be hoisted into place by hooking to the top chord of joists at approximately the third points. Hoisting facilities shall not be released during erection procedure until the line of bridging nearest mid-span is installed, and in the case of bottom chord bearing longspan joists the ends of the top chords shall be restrained laterally. Care shall be exercised at all times to avoid damage through careless handling. As soon as longspan joists are erected they shall be permanently fastened in place and all bridging completely installed before the application of loads.

STEEL JOISTS

LONGSPAN



18 L 02

11. Bridging—As soon as Longspan Joists are in place and before any materials are attached to them bridging rows shall be applied as follows:

Joist Type	Maximum Spacing of lines of bridging
#1 to #8 incl.	10 feet 0 inch
#9 to #16 incl.	12 feet 0 inch
#17 to #19 incl.	16 feet 0 inch

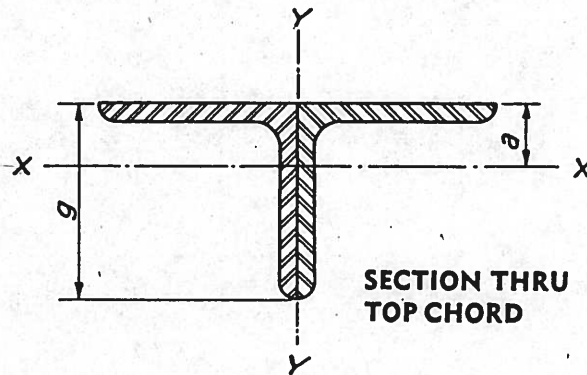
These two figures in longspan tables indicate the joist types referred to below.

Bridging shall consist of cross bracing having an l/r ratio of not more than 200.

l = length of bracing from center to center of holes, except that where the cross bracing is connected at their point of intersection the above distance shall be the distance from the center of the bolt at the intersection to the center of the bolt on the joist.

r = joist radius of gyration of the bracing member.

TOP CHORD — SECTION PROPERTIES — LONGSPAN JOISTS

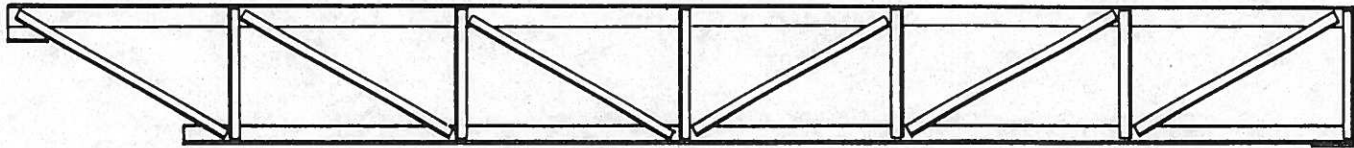


TYPE	Size Two Angles Inches	Weight Per Ft., Lbs.	Area Inches ²	a Inches	AXIS X—X				AXIS Y—Y	
					I Inches ⁴	S_1 Top Fiber = $\frac{Ix}{a}$ Inches ³	S_2 Bottom Fiber = $\frac{Ix}{a-a}$ Inches ³	r Inches	I Inches ⁴	r Inches
L02	2 x 1 1/2 x 3/16	4.24	1.24	0.64	0.50	0.78	0.37	0.63	0.43	0.59
L03	2 x 2 x 3/16	4.88	1.42	0.57	0.54	0.95	0.38	0.62	1.0	0.84
L04	2 1/2 x 2 x 3/16	5.50	1.62	0.76	1.0	1.3	0.6	0.79	1.0	0.79
L05	2 x 2 x 1/4	6.38	1.88	0.59	0.7	1.2	0.5	0.61	1.4	0.85
L06	2 1/2 x 2 x 1/4	7.24	2.12	0.79	1.3	1.6	0.8	0.78	1.4	0.80
L07	2 1/2 x 2 1/2 x 1/4	8.20	2.38	0.72	1.4	1.9	0.8	0.77	2.6	1.05
L08	3 x 2 1/2 x 1/4	9.00	2.62	0.91	2.3	2.5	1.1	0.95	2.6	1.00
L09	3 x 3 x 1/4	9.80	2.88	0.81	2.5	3.0	1.2	0.93	4.5	1.25
L10	3 1/2 x 3 x 1/4	10.80	3.12	1.04	3.8	3.7	1.6	1.11	4.6	1.21
L11	3 x 3 x 3/16	12.20	3.50	0.87	3.0	3.4	1.4	0.92	5.7	1.26
L12	3 1/2 x 3 x 3/16	13.20	3.86	1.06	4.7	4.4	1.9	1.10	5.7	1.22
L13	3 1/2 x 3 x 3/8	15.80	4.60	1.08	5.4	5.0	2.3	1.09	6.8	1.22
L14	4 x 3 x 3/8	17.00	4.96	1.28	7.9	6.2	2.9	1.26	6.9	1.16
L15	4 x 4 x 3/8	19.60	5.72	1.14	8.7	7.6	3.0	1.23	16.1	1.68
L16	4 x 4 x 1/2	22.60	6.62	1.16	9.9	8.5	3.5	1.23	18.9	1.60
L17	4 x 4 x 1/2	25.60	7.50	1.18	11.2	9.5	3.9	1.22	21.7	1.70
L18	5 x 5 x 3/8	28.60	8.36	1.41	20.0	14.2	5.6	1.55	36.4	2.00
L19	5 x 5 x 1/2	32.40	9.50	1.43	22.5	15.7	6.3	1.54	41.9	2.10

JOIST DEPTH VARIES FROM 18" TO 48"—SEE SCHEDULE

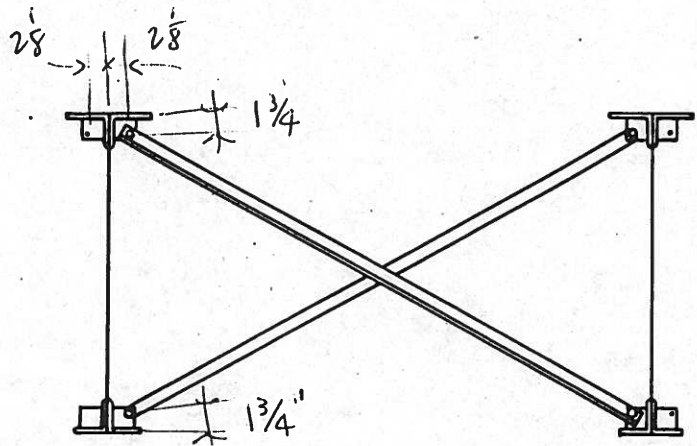
DETAILS and DIMENSIONS

COMPOSITE JOIST...



STRUT BRIDGING...

Strut bridging of Standard Iron & Wire Works Joists is made from hot-rolled angles of the sizes shown in the bridging table below. This bridging is bolted to plates which are welded to the chords of the joists.



LONGSPAN JOIST BRIDGING TABLE

Joist Depth	Use Angle Sizes Shown Below When Joist Spacing Does Not Exceed			
	3'-0"	7'-0"	9'-0"	11'-0"
18"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ *	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
20"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ *	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
24"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ *	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
28"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ *	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
32"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ *	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
36"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ *	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
40"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
44"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †
48"	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{4}$ x1 $\frac{1}{4}$ x $\frac{1}{8}$ †	1 $\frac{1}{2}$ x1 $\frac{1}{2}$ x $\frac{1}{8}$ †	1 $\frac{3}{4}$ x1 $\frac{3}{4}$ x $\frac{1}{8}$ †

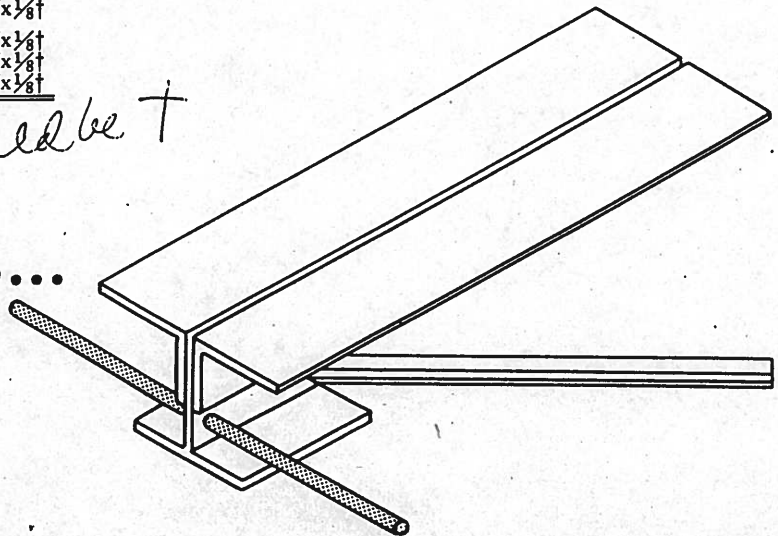
*Bridging angles not bolted at center.

†Bridging angles bolted at center.

should be t

MASONRY WALL ANCHORS...

Where longspan joists are anchored to a masonry wall, use $\frac{3}{4}$ inch diameter plain round bar 1'-0" long inserted through the vertical plate at the end of the joist.

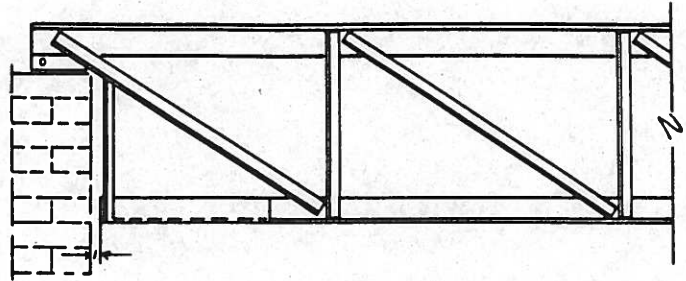


LONGSPAN



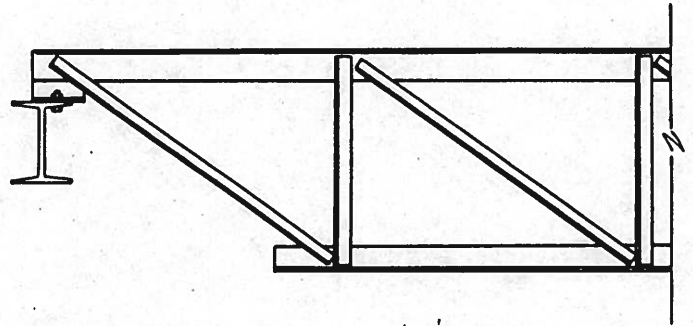
CEILING EXTENSION...

When contact ceilings are required with underslung longspan joists, extend one angle of the bottom chord to within one inch of the wall.



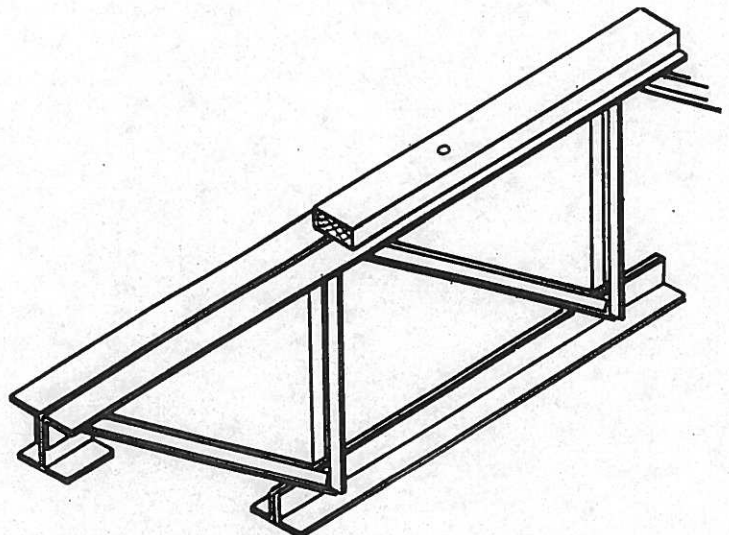
WELDED OR BOLTED CONNECTIONS...

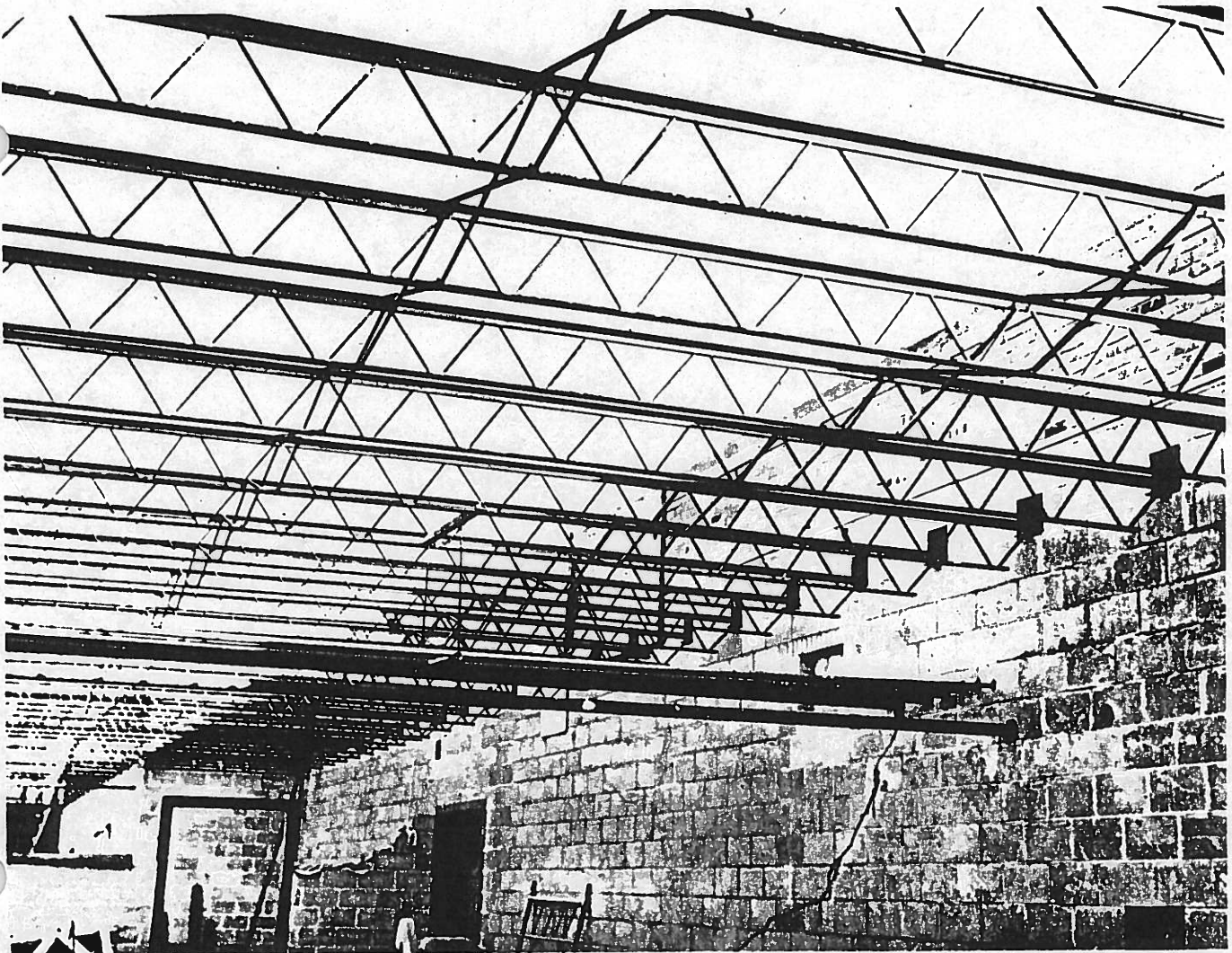
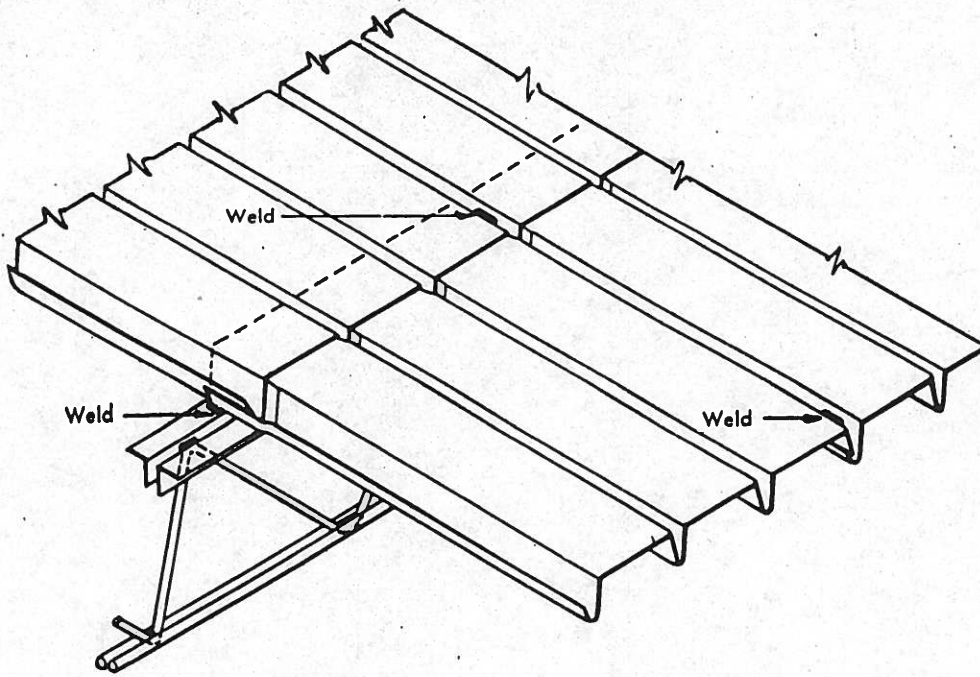
When longspan joists are supported on steel sections, they shall be connected with not less than two $\frac{3}{4}$ -inch bolts or welds of equal strength.



NAILER ATTACHMENT...

Where it is desired to attach wood nailers to the top chord of longspan joist, the top chords are separated by a $\frac{3}{8}$ " filler. The nailers are secured to the top chord by a $\frac{1}{4}$ " carriage bolt passed between the angles of the top chord.





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NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.