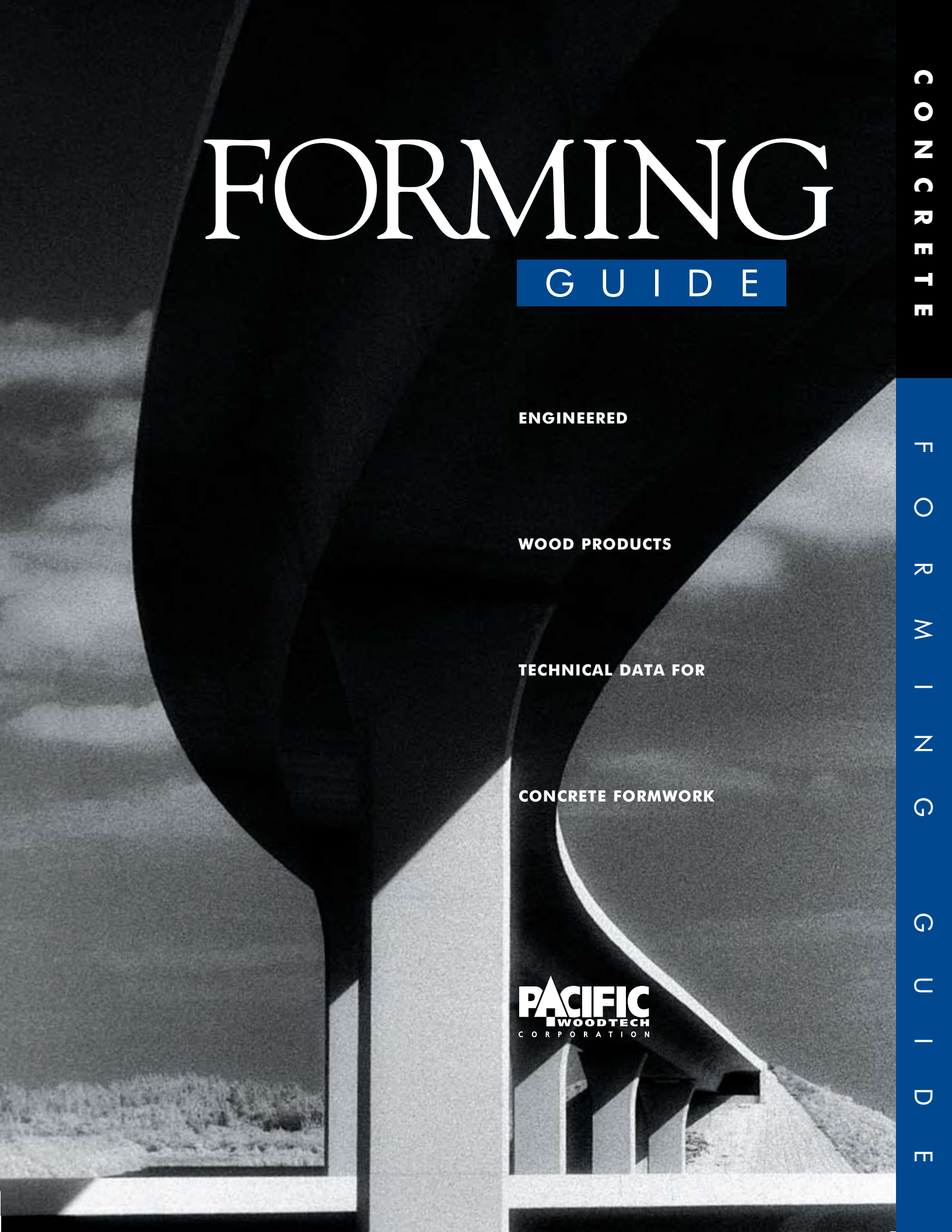

FORMING GUIDE

CONCRETE FORMING GUIDE

ENGINEERED

WOOD PRODUCTS

TECHNICAL DATA FOR

CONCRETE FORMWORK

PACIFIC WOODTECH CORPORATION

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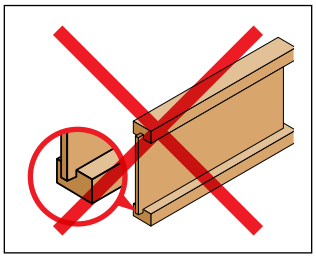
FORMWORK INSPECTION

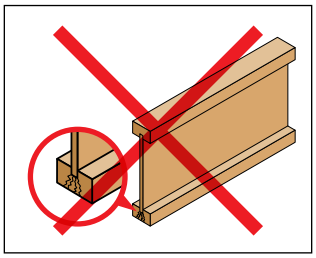
CFI JOIST

Proper inspection of CFI joists used in concrete forming is mandatory. Look for these common types of occurrences (as well as other signs of damage):

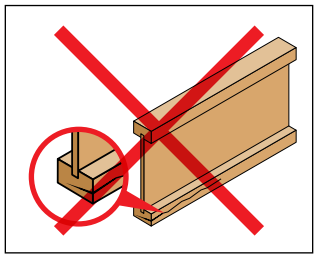
- Web-to-flange separation
- Knifing of web through flange
- Holes in webs
- Split in flange
- Discoloration
- Soft spots in web or flange
- Mold/Fungus
- Taper cuts extending beyond inside face of support
- Notched flange
- Saw kerf in flange
- Buckling of web
- Torn wood fiber in the flange



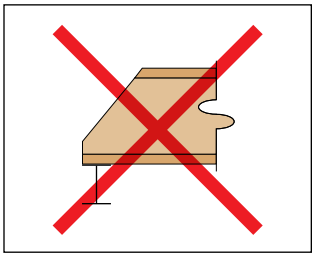
Web-To-Flange Separation
Cut back or remove from service



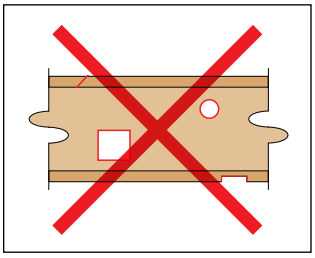
Web Knifing
Cut back or remove from service



Split Flanges
Cut back or remove from service



Do Not Bevel
end of joist beyond inside face of support

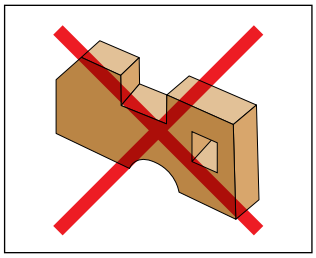


Do Not Cut, Notch, or Drill
Joists with holes in webs, with notches, or saw kerfs should be cut back or removed from service

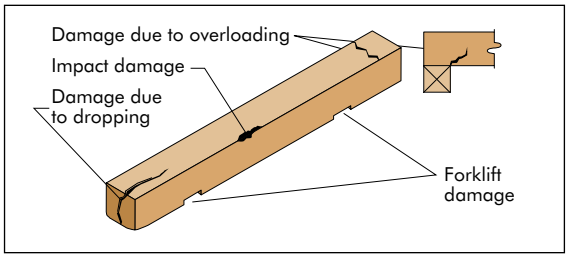
PWLVL LAMINATED VENEER LUMBER

Do not cut, notch, or drill form beams except as shown on the formwork drawings. Proper inspection of all form beams for damage before using them is mandatory. Remove damaged form beams and replace them immediately. Failure to remove and replace damaged form beams may result in collapse of the formwork, serious injury, or death. Look for these common types of occurrences (as well as other signs of damage):

- Damage due to overloading (e.g., crushed bearing areas, stress cracks)
- Damage due to dropping, forklift damage, or other improper handling
- Improper saw cuts, drill holes, or notches
- Signs of decay or insect damage



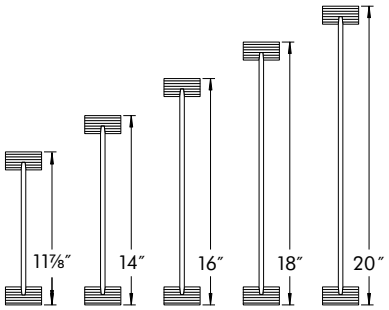
Do Not Cut, Notch, or Drill
LVL form beams with cuts, notches, or drill holes should be removed from service



Inspect for Damage
due to overloading, impact, dropping, and forklift damage

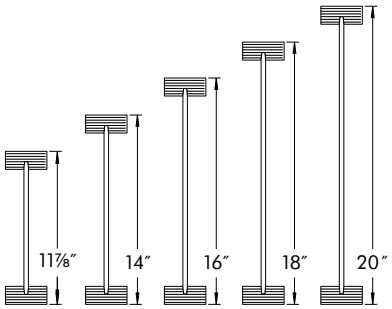
JOIST DIMENSIONS FOR CFI JOISTS

CFI-77



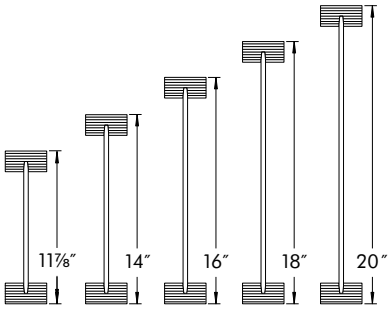
7/16″ OSB Web
2⁵⁄16″ x 1½″ Flange

CFI-90



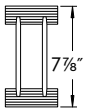
7/16″ OSB Web
3½″ x 1½″ Flange

CFI-H90



7/16″ OSB Web
3½″ x 1¾″ Flange

CFI-H20



2 @ 7/16″ OSB Web
3″ x 1⅜″ Flange

DESIGN PROPERTIES FOR CFI JOISTS

NORMAL CONDITIONS[1]

Joist Series	Joist Depth	EI (10^6 lb-in²)	k (10^6 lb)[3]	M (ft-lb)	V (lb)
CFI-77	11⅞″	442	6.92	6675	1925
	14″	648	8.17	7960	2125
	16″	881	9.35	9120	2330
	18″	1152	10.55	10265	2535
	20″	1463	11.76	11395	2740
CFI-90	11⅞″	661	6.92	10255	1925
	14″	965	8.17	12235	2125
	16″	1306	9.35	14020	2330
	18″	1703	10.55	15780	2535
	20″	2155	11.76	17520	2740
CFI-H90	11⅞″	707	6.81	9789	2080
	14″	1031	7.91	12081	2260
	16″	1394	8.97	14251	2425
	18″	1944	10.05	16269	2590
	20″	2454	11.13	18419	2755
CFI-H20	7⅞″	187	8.06	3870	2923

FORMWORK CONDITIONS[2]

Joist Series	Joist Depth	EI (10^6 lb-in²)	k (10^6 lb)[3]	M (ft-lb)	V (lb)
CFI-77	11⅞″	398	6.23	7509	2166
	14″	583	7.35	8955	2391
	16″	793	8.42	10260	2621
	18″	1037	9.50	11548	2852
	20″	1317	10.58	12819	3083
CFI-90	11⅞″	595	6.23	11537	2166
	14″	869	7.35	13764	2391
	16″	1175	8.42	15773	2621
	18″	1533	9.50	17753	2852
	20″	1940	10.58	19710	3083
CFI-H90	11⅞″	636	6.13	11013	2340
	14″	928	7.12	13591	2543
	16″	1255	8.07	16032	2728
	18″	1750	9.05	18303	2914
	20″	2209	10.02	20721	3099
CFI-H20	7⅞″	168	7.25	4354	3288

1. The tabulated design properties are for normal duration of load. All properties, except EI and k, may be adjusted for other load durations as permitted by the code.
2. Table value have been adjusted for unprotected use (C_M = 0.90) and construction load duration (C_D = 1.25).
3. Coefficient of shear deflection (k). Use Equations 1 or 2 to calculate uniform load or center point load deflections in a simple-span application.

Uniform Load:

(1) $\delta = \frac{5wl^4}{384EI} + \frac{wl^2}{k}$

Center-Point Load:

(2) $\delta = \frac{Pl^3}{48EI} + \frac{2Pl}{k}$

where:

δ = calculated deflection (in)
w = uniform load (lbs/in)
l = design span (in)
P = concentrated load (lbs)
EI = bending stiffness of the joist (lbs-in²)
k = coefficient of shear deflection (lbs)

CFI-77 ALLOWABLE FORMWORK LOADS

Notes:

1. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the joist in addition to its own weight.
2. Table values have been adjusted by a factor of C_M = 0.9 for outside exposure (above ground) and C_D = 1.25 for construction load duration.
3. Span is measured from center of bearing to center of bearing.
4. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
5. Provide at least 3½" of bearing length at end supports and 5¼" at intermediate supports.
6. Provide lateral restraint at supports and along the compression flange of each joist at intervals not to exceed 24".
7. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.
8. Web stiffeners required on all CFI-H90 joists greater than 18" in depth. Web stiffeners required on all CFI-77 and CFI-90 joists greater than 20" in depth.

See *Web Stiffener Requirements* on page 10 for more details.

HOW TO USE THESE TABLES:

1. Calculate the TOTAL LOAD and the CONCRETE LOAD on the joist in pounds per lineal foot (plf). Neglect joist weight. Total Load = DL + LL + CL.
2. Locate under SPAN a span that meets or exceeds the required joist span.
3. Scan from left to right within the SPAN row until you find a cell where both the maximum TOTAL LOAD and the maximum CONCRETE LOAD meet or exceed the required loads.

Span (ft)	Conditions		CFI-77				
			11⅞"	14"	16"	18"	20"
10	Simple	Concrete (plf)	362	405	404	404	404
		Total (plf)	405	405	404	404	404
	Continuous	Concrete (plf)	285	284	284	284	284
		Total (plf)	285	284	284	284	284
11	Simple	Concrete (plf)	256	357	366	366	366
		Total (plf)	367	366	366	366	366
	Continuous	Concrete (plf)	258	258	258	257	257
		Total (plf)	258	258	258	257	257
12	Simple	Concrete (plf)	185	260	335	334	334
		Total (plf)	335	335	335	334	334
	Continuous	Concrete (plf)	236	236	236	235	235
		Total (plf)	236	236	236	235	235
13	Simple	Concrete (plf)	137	194	254	308	307
		Total (plf)	309	308	308	308	307
	Continuous	Concrete (plf)	217	217	217	217	216
		Total (plf)	217	217	217	217	216
14	Simple	Concrete (plf)	103	146	193	245	285
		Total (plf)	286	286	285	285	285
	Continuous	Concrete (plf)	188	201	201	201	201
		Total (plf)	202	201	201	201	201
15	Simple	Concrete (plf)	79	112	149	190	235
		Total (plf)	266	266	266	265	265
	Continuous	Concrete (plf)	149	188	187	187	187
		Total (plf)	188	188	187	187	187
16	Simple	Concrete (plf)	61	88	117	149	185
		Total (plf)	240	249	248	248	248
	Continuous	Concrete (plf)	118	163	175	175	175
		Total (plf)	176	175	175	175	175
17	Simple	Concrete (plf)		69	92	118	148
		Total (plf)		234	233	233	233
	Continuous	Concrete (plf)		132	165	164	164
		Total (plf)		165	165	164	164
18	Simple	Concrete (plf)			74	95	119
		Total (plf)			220	220	219
	Continuous	Concrete (plf)			140	155	155
		Total (plf)			155	155	155
19	Simple	Concrete (plf)				77	96
		Total (plf)				208	208
	Continuous	Concrete (plf)				146	146
		Total (plf)				146	146
20	Simple	Concrete (plf)				63	79
		Total (plf)				197	197
	Continuous	Concrete (plf)				122	139
		Total (plf)				139	139
21	Simple	Concrete (plf)					65
		Total (plf)					187
	Continuous	Concrete (plf)					126
		Total (plf)					132

CFI-90 ALLOWABLE FORMWORK LOADS

Span (ft)	Conditions		CFI-90				
			11⅞″	14″	16″	18″	20″
11	Simple	Concrete (plf)	344	395	395	394	394
		Total (plf)	395	395	395	394	394
	Continuous	Concrete (plf)	315	325	325	324	324
		Total (plf)	315	325	325	324	324
12	Simple	Concrete (plf)	252	348	361	360	360
		Total (plf)	361	361	361	360	360
	Continuous	Concrete (plf)	288	297	297	297	296
		Total (plf)	288	297	297	297	296
13	Simple	Concrete (plf)	189	262	332	332	331
		Total (plf)	332	332	332	332	331
	Continuous	Concrete (plf)	266	274	273	273	273
		Total (plf)	266	274	273	273	273
14	Simple	Concrete (plf)	143	200	260	307	307
		Total (plf)	308	308	307	307	307
	Continuous	Concrete (plf)	241	254	253	253	253
		Total (plf)	246	254	253	253	253
15	Simple	Concrete (plf)	110	155	203	255	286
		Total (plf)	287	286	286	286	286
	Continuous	Concrete (plf)	193	236	236	236	235
		Total (plf)	229	236	236	236	235
16	Simple	Concrete (plf)	86	122	160	203	248
		Total (plf)	268	268	268	267	267
	Continuous	Concrete (plf)	155	210	221	221	220
		Total (plf)	215	221	221	221	220
17	Simple	Concrete (plf)	68	97	128	162	200
		Total (plf)	252	252	251	251	251
	Continuous	Concrete (plf)	126	172	207	207	207
		Total (plf)	202	208	207	207	207
18	Simple	Concrete (plf)		77	103	131	162
		Total (plf)		237	237	237	236
	Continuous	Concrete (plf)		142	181	195	195
		Total (plf)		196	196	195	195
19	Simple	Concrete (plf)		62	83	107	132
		Total (plf)		224	224	224	223
	Continuous	Concrete (plf)		118	151	185	184
		Total (plf)		185	185	185	184
20	Simple	Concrete (plf)			68	88	109
		Total (plf)			212	212	212
	Continuous	Concrete (plf)			127	158	175
		Total (plf)			175	175	175
21	Simple	Concrete (plf)				72	90
		Total (plf)				202	201
	Continuous	Concrete (plf)				134	162
		Total (plf)				166	166
22	Simple	Concrete (plf)				60	75
		Total (plf)				192	192
	Continuous	Concrete (plf)				114	138
		Total (plf)				159	158
23	Simple	Concrete (plf)					63
		Total (plf)					183
	Continuous	Concrete (plf)					119
		Total (plf)					151

Notes:

1. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the joist in addition to its own weight.
2. Table values have been adjusted by a factor of C_M = 0.9 for outside exposure (above ground) and C_D = 1.25 for construction load duration.
3. Span is measured from center of bearing to center of bearing.
4. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
5. Provide at least 3½″ of bearing length at end supports and 5¼″ at intermediate supports.
6. Provide lateral restraint at supports and along the compression flange of each joist at intervals not to exceed 24″.
7. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.
8. Web stiffeners required on all CFI-H90 joists greater than 18″ in depth. Web stiffeners required on all CFI-77 and CFI-90 joists greater than 20″ in depth.

See *Web Stiffener Requirements* on page 10 for more details.

HOW TO USE THESE TABLES:

1. Calculate the TOTAL LOAD and the CONCRETE LOAD on the joist in pounds per lineal foot (plf). Neglect joist weight. Total Load = DL + LL + CL.
2. Locate under SPAN a span that meets or exceeds the required joist span.
3. Scan from left to right within the SPAN row until you find a cell where both the maximum TOTAL LOAD and the maximum CONCRETE LOAD meet or exceed the required loads.

CFI-H90 ALLOWABLE FORMWORK LOADS

Notes:

1. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the joist in addition to its own weight.
2. Table values have been adjusted by a factor of C_M = 0.9 for outside exposure (above ground) and C_D = 1.25 for construction load duration.
3. Span is measured from center of bearing to center of bearing.
4. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
5. Provide at least 3½" of bearing length at end supports and 5¼" at intermediate supports.
6. Provide lateral restraint at supports and along the compression flange of each joist at intervals not to exceed 24".
7. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.
8. Web stiffeners required on all CFI-H90 joists greater than 18" in depth. Web stiffeners required on all CFI-77 and CFI-90 joists greater than 20" in depth.

See *Web Stiffener Requirements* on page 10 for more details.

HOW TO USE THESE TABLES:

1. Calculate the TOTAL LOAD and the CONCRETE LOAD on the joist in pounds per lineal foot (plf). Neglect joist weight. Total Load = DL + LL + CL.
2. Locate under SPAN a span that meets or exceeds the required joist span.
3. Scan from left to right within the SPAN row until you find a cell where both the maximum TOTAL LOAD and the maximum CONCRETE LOAD meet or exceed the required loads.

Span (ft)	Conditions		CFI-H90				
			11⅞"	14"	16"	18"	20"
11	Simple	Concrete (plf)	307	311	314	317	574
		Total (plf)	307	311	314	317	574
	Continuous*	Concrete (plf)					
		Total (plf)					
12	Simple	Concrete (plf)	264	284	287	289	524
		Total (plf)	280	284	287	289	524
	Continuous*	Concrete (plf)					
		Total (plf)					
13	Simple	Concrete (plf)	198	261	264	266	483
		Total (plf)	258	261	264	266	483
	Continuous*	Concrete (plf)					
		Total (plf)					
14	Simple	Concrete (plf)	151	209	244	246	422
		Total (plf)	239	242	244	246	447
	Continuous*	Concrete (plf)					
		Total (plf)					
15	Simple	Concrete (plf)	116	162	211	229	335
		Total (plf)	222	225	227	229	416
	Continuous*	Concrete (plf)					
		Total (plf)					
16	Simple	Concrete (plf)	91	128	167	214	268
		Total (plf)	208	211	212	214	390
	Continuous*	Concrete (plf)					
		Total (plf)					
17	Simple	Concrete (plf)	72	102	133	177	216
		Total (plf)	195	198	199	201	366
	Continuous*	Concrete (plf)					
		Total (plf)					
18	Simple	Concrete (plf)		82	108	144	176
		Total (plf)		186	188	190	345
	Continuous*	Concrete (plf)					
		Total (plf)					
19	Simple	Concrete (plf)		66	87	118	145
		Total (plf)		176	178	179	326
	Continuous*	Concrete (plf)					
		Total (plf)					
20	Simple	Concrete (plf)			72	97	120
		Total (plf)			168	170	309
	Continuous*	Concrete (plf)					
		Total (plf)					
21	Simple	Concrete (plf)				80	100
		Total (plf)				161	294
	Continuous*	Concrete (plf)					
		Total (plf)					
22	Simple	Concrete (plf)				67	83
		Total (plf)				154	280
	Continuous*	Concrete (plf)					
		Total (plf)					
23	Simple	Concrete (plf)					70
		Total (plf)					268
	Continuous*	Concrete (plf)					
		Total (plf)					

*Contact Pacific Woodtech for guidance on continuous-span conditions.

CFI-90 CAMBERED I-JOIST ALLOWABLE FORMWORK LOADS

Span (ft)	Conditions		CFI-90 Cambered I-Joist				
			11⅞″	14″	16″	18″	20″
10	Simple	Concrete (plf)	436	436	436	435	435
		Total (plf)	436	436	436	435	435
11	Simple	Concrete (plf)	395	395	395	394	394
		Total (plf)	395	395	395	394	394
12	Simple	Concrete (plf)	346	361	361	360	360
		Total (plf)	361	361	361	360	360
13	Simple	Concrete (plf)	272	332	332	332	331
		Total (plf)	332	332	332	332	331
14	Simple	Concrete (plf)	217	303	307	307	307
		Total (plf)	308	308	307	307	307
15	Simple	Concrete (plf)	176	248	286	286	286
		Total (plf)	287	286	286	286	286
16	Simple	Concrete (plf)	145	205	268	267	267
		Total (plf)	268	268	268	267	267
17	Simple	Concrete (plf)	121	172	226	251	251
		Total (plf)	252	252	251	251	251
18	Simple	Concrete (plf)	102	146	192	237	236
		Total (plf)	237	237	237	237	236
19	Simple	Concrete (plf)	87	125	165	211	223
		Total (plf)	224	224	224	224	223
20	Simple	Concrete (plf)	75	108	143	183	212
		Total (plf)	213	213	212	212	212
21	Simple	Concrete (plf)	65	94	125	160	199
		Total (plf)	202	202	202	202	201
22	Simple	Concrete (plf)		82	110	141	176
		Total (plf)		193	192	192	192
23	Simple	Concrete (plf)		72	97	126	157
		Total (plf)		184	184	183	183
24	Simple	Concrete (plf)		64	87	112	140
		Total (plf)		176	176	175	175
25	Simple	Concrete (plf)			77	100	126
		Total (plf)			168	168	168
26	Simple	Concrete (plf)			70	90	114
		Total (plf)			162	161	161

Notes:

1. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the joist in addition to its own weight.
2. Table values have been adjusted by a factor of C_M = 0.9 for outside exposure (above ground) and C_D = 1.25 for construction load duration.
3. Cambered joists are manufactured with a radius of 2250′.
4. Span is measured from center of bearing to center of bearing.
5. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
6. Provide at least 3½″ of bearing length at end supports.
7. Provide lateral restraint at supports and along the compression flange of each joist at intervals not to exceed 24″.
8. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads).
9. Web stiffeners required on CFI-90 joists greater than 20″ in depth.

See *Web Stiffener Requirements* on page 10 for more details.

HOW TO USE THESE TABLES:

1. Calculate the TOTAL LOAD and the CONCRETE LOAD on the joist in pounds per lineal foot (plf). Neglect joist weight. Total Load = DL + LL + CL.
2. Locate under SPAN a span that meets or exceeds the required joist span.
3. Scan from left to right within the SPAN row until you find a cell where both the maximum TOTAL LOAD and the maximum CONCRETE LOAD meet or exceed the required loads.

CFI-H20 ALLOWABLE FORMWORK LOADS

Span (ft)	Conditions		CFI-H20 7⅛"
4	Simple	Concrete (plf)	1852
		Total (plf)	1852
	Continuous	Concrete (plf)	1054
		Total (plf)	1054
5	Simple	Concrete (plf)	1458
		Total (plf)	1458
	Continuous	Concrete (plf)	836
		Total (plf)	836
6	Simple	Concrete (plf)	968
		Total (plf)	1066
	Continuous	Concrete (plf)	693
		Total (plf)	693
7	Simple	Concrete (plf)	645
		Total (plf)	771
	Continuous	Concrete (plf)	591
		Total (plf)	591
8	Simple	Concrete (plf)	435
		Total (plf)	583
	Continuous	Concrete (plf)	516
		Total (plf)	516
9	Simple	Concrete (plf)	276
		Total (plf)	456
	Continuous	Concrete (plf)	441
		Total (plf)	441
10	Simple	Concrete (plf)	183
		Total (plf)	366
	Continuous	Concrete (plf)	347
		Total (plf)	356
11	Simple	Concrete (plf)	125
		Total (plf)	301
	Continuous	Concrete (plf)	246
		Total (plf)	293
12	Simple	Concrete (plf)	88
		Total (plf)	251
	Continuous	Concrete (plf)	179
		Total (plf)	245

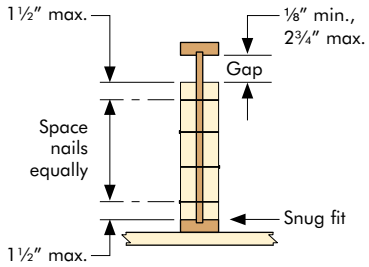
Notes:

1. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the joist in addition to its own weight.
2. Table values have been adjusted by a factor of C_M = 0.9 for outside exposure (above ground) and C_D = 1.25 for construction load duration.
3. Span is measured from center of bearing to center of bearing.
4. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
5. Provide at least 3½" of bearing length at end supports and 5¼" at intermediate supports.
6. Provide lateral restraint at supports and along the compression flange of each joist at intervals not to exceed 24".
7. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.
8. Web stiffeners required on all CFI-H90 joists greater than 18" in depth. Web stiffeners required on all CFI-77 and CFI-90 joists greater than 20" in depth.

See *Web Stiffener Requirements* on page 10 for more details.

WEB STIFFENERS

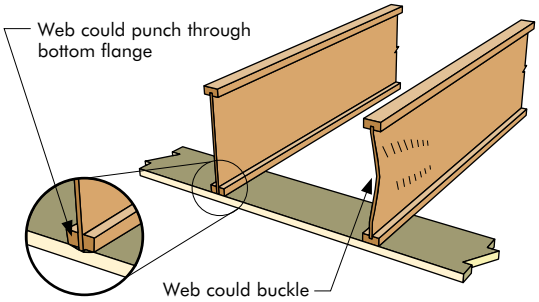
If web stiffeners are required, follow the procedures below:



NAIL QUANTITIES FOR WEB STIFFENER ATTACHMENT

Joist Depth	CFI-77	CFI-90
	Min. 0.131" x 2½" Nails	Min. 0.131" x 3½" Nails
	End or Intermediate	End or Intermediate
11⅞"	4	4
14"	4	4
16"	4	4
18"	8	8
20"	8	8

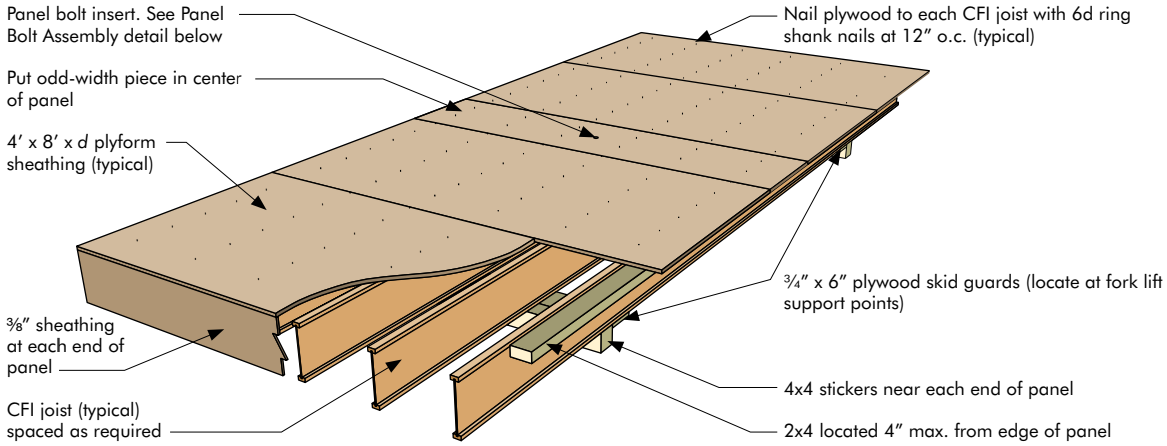
When required, web stiffeners must be properly installed or the following problems may occur:



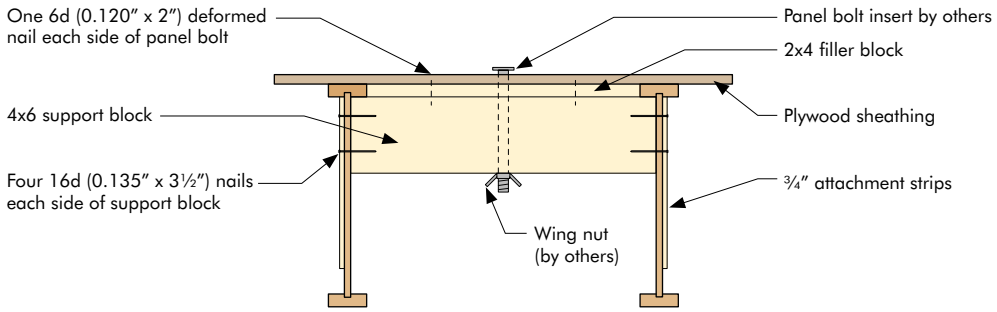
Web stiffeners for CFI-77 joists must be ⅞" x 2⅝" sheathing (with face grain vertical). Web stiffeners for CFI-90 and CFI-H90 joists shall be 2x4 material of construction grade or better.

Web stiffener requirements will vary based on joist series and depth; they are always required at bearing on joists 20" in depth or greater. See plan or details for requirements specific to the joists being used on this project.

PANEL ASSEMBLY

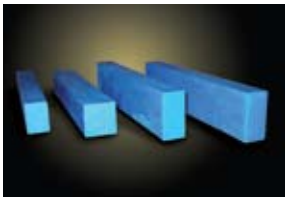


PANEL BOLT ASSEMBLY



2.0E PWLVL

DESIGN PROPERTIES



SUSTAINABLE FORESTRY INITIATIVE

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2.0E PWLVL Design Properties	Normal[1]	Formwork[2]
Modulus of Elasticity, E	2000000 psi	1800000 psi[3]
Bending, F_b	3100 psi[4]	3488 psi[3][4][5]
Compression Parallel to Grain, F_c	2750 psi	3094 psi[3][5]
Compression Perpendicular to Grain, $F_{c\perp}$ (beam)[6]	850 psi	765 psi[3]
Horizontal Shear, F_v (beam)[6]	285 psi	321 psi[3][5]
Compression Perpendicular to Grain, $F_{c\perp}$ (plank)[7]	450 psi	405 psi[3]
Horizontal Shear, F_v (plank)[7]	150 psi	169 psi[3][5]

DESIGN PROPERTIES[8][9]

Depth	Width (in)															
	1½				1¾				2½				3½			
	Moment (ft-lbs)	Shear (lbs)	EI x 10^6 (lbs-in²)	Weight (plf)	Moment (ft-lbs)	Shear (lbs)	EI x 10^6 (lbs-in²)	Weight (plf)	Moment (ft-lbs)	Shear (lbs)	EI x 10^6 (lbs-in²)	Weight (plf)	Moment (ft-lbs)	Shear (lbs)	EI x 10^6 (lbs-in²)	Weight (plf)
3½″	1139	1122	10	1.4	1329	1309	11	1.6	1898	1870	16	2.3	2657	2618	23	3.2
4″	1448	1283	14	1.6	1690	1496	17	1.8	2414	2138	24	2.6	3379	2993	34	3.6
5″	2164	1603	28	1.9	2525	1870	33	2.3	3607	2672	47	3.2	5049	3741	66	4.5
5½″	2569	1763	37	2.1	2997	2057	44	2.5	4282	2939	62	3.6	5994	4115	87	5.0
6″	3005	1924	49	2.3	3505	2244	57	2.7	5008	3206	81	3.9	7011	4489	113	5.5
6½″	3470	2084	62	2.5	4049	2431	72	3.0	5784	3473	103	4.2	8097	4863	144	5.9
7¼″	4224	2325	86	2.8	4928	2712	100	3.3	7040	3874	143	4.7	9856	5424	200	6.6
7½″	4490	2405	95	2.9	5238	2805	111	3.4	7483	4008	158	4.9	10476	5611	221	6.8
8″	5043	2565	115	3.1	5883	2993	134	3.6	8405	4275	192	5.2	11767	5985	269	7.3
8½″	5624	2725	138	3.3	6562	3180	161	3.9	9374	4542	230	5.5	13123	6359	322	7.7
9¼″	6549	2966	178	3.6	7640	3460	208	4.2	10915	4943	297	6.0	15281	6920	416	8.4
10″	7535	3206	225	3.9	8791	3741	263	4.5	12559	5344	375	6.5	17583	7481	525	9.1
11¼″	9315	3607	320	4.4	10868	4208	374	5.1	15525	6012	534	7.3	21735	8416	748	10.2
12″	10463	3848	389	4.7	12206	4489	454	5.5	17438	6413	648	7.8	24413	8978	907	10.9

1. Dry use (C_M = 1.0), normal load duration (C_D = 1.0)
2. These properties include adjustments typically used in formwork application.
3. Adjusted by a factor of C_M = 0.9 for outside exposure (above ground).
4. Multiply by $(12/d)^{0.200}$ for depths, d, other than 12 inches.
5. Adjusted by a factor of C_D = 1.25 for construction load duration.
6. Beam values apply to members loaded and supported on the member faces showing the narrow edge of all veneers, which are typically the narrow face of the member.
7. Plank values apply to members loaded and supported on the member faces showing the face of one veneer, which are typically the wide faces of the member.
8. Table values have been adjusted by a factor of C_M = 0.9 for outside exposure (above ground). Moment and Shear values have been further adjusted by a factor of C_D = 1.25 for construction load duration.
9. Table values apply only to members loaded and supported on the member faces showing the narrow edge of all veneers (beam orientation).

ALLOWABLE FORMWORK LOADS AND REQUIRED BEARING LENGTHS

1½" 2.0E PWLVL

Span (ft)	Thickness (in)		1½									
	Depth (in)		3½	4	5½	6	7¼	8	9¼	10	11¼	11⅞
2	Concrete (plf)	Simple	1293	1552	2515	2918	3958					
		Continuous	1293	1552	2515	2918	3958					
	Total Load (plf)		1293	1552	2515	2918	3958					
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5					
	Min. Int. Bearing (in)		5.25	5.25	5.25	6	8					
3	Concrete (plf)	Simple	751	883	1328	1496	1968	2293	2569			
		Continuous	751	883	1328	1496	1968	2293	2569			
	Total Load (plf)		751	883	1328	1496	1968	2293	2569			
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5			
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	6.25	7.25	8			
4	Concrete (plf)	Simple	357	533	902	1005	1285	1469	1807	1902		
		Continuous	416	616	902	1005	1285	1469	1807	1902		
	Total Load (plf)		529	616	902	1005	1285	1469	1807	1902		
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.5	6.25	7.5	8		
5	Concrete (plf)	Simple	165	246	642	757	954	1080	1307	1453	1509	
		Continuous	213	319	683	757	954	1080	1307	1453	1509	
	Total Load (plf)		385	473	683	757	954	1080	1307	1453	1509	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.75	7	7.75	8	
6	Concrete (plf)	Simple	89	133	347	451	758	854	1023	1131	1250	
		Continuous	123	184	481	607	758	854	1023	1131	1250	
	Total Load (plf)		264	336	549	607	758	854	1023	1131	1250	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.5	6.5	7.25	8	
7	Concrete (plf)	Simple		79	208	270	478	643	841	925	1067	
		Continuous	77	116	302	393	629	706	841	925	1067	
	Total Load (plf)		193	245	435	506	629	706	841	925	1067	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6.25	7	8	
8	Concrete (plf)	Simple			134	174	309	415	643	783	904	930
		Continuous		77	202	263	465	602	713	783	904	930
	Total Load (plf)			186	331	387	537	602	713	783	904	930
	Min. End Bearing (in)			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)			5.25	5.25	5.25	5.25	5.25	6.25	6.75	7.75	8
9	Concrete (plf)	Simple			81	105	187	252	391	494	705	825
		Continuous			126	164	290	390	604	678	780	825
	Total Load (plf)				260	304	428	511	619	678	780	825
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	6	6.5	7.5	8
10	Concrete (plf)	Simple				66	118	160	248	314	448	528
		Continuous			81	106	188	253	393	497	686	732
	Total Load (plf)				210	245	345	412	536	598	686	732
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.75	6.5	7.5	8
11	Concrete (plf)	Simple					78	106	164	208	298	351
		Continuous				71	127	171	266	336	480	565
	Total Load (plf)					202	284	339	441	508	613	652
	Min. End Bearing (in)					3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)					5.25	5.25	5.25	5.25	6	7.25	7.75
12	Concrete (plf)	Simple						72	113	143	205	242
		Continuous					88	119	186	235	336	396
	Total Load (plf)						238	284	369	425	526	580
	Min. End Bearing (in)						3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)						5.25	5.25	5.25	5.5	6.75	7.5

Notes:

1. Table values apply to joists loaded and supported on the member faces showing the narrow edge of all veneers (beam orientation).
2. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the beam in addition to its own weight.
3. Table values have been adjusted by a factor of $C_M = 0.9$ for outside exposure (above ground) and $C_D = 1.25$ for construction load duration.
4. Span is measured from center of bearing to center of bearing.
5. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
6. Provide lateral restraint at supports and along the compression edge of each beam at intervals not to exceed 24".
7. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads) or for multiple spans if the length of any span is less than half the length of an adjacent span.

HOW TO USE THESE TABLES:

1. Calculate the TOTAL LOAD and the CONCRETE LOAD on the beam in pounds per lineal foot (plf). Neglect self weight. Total Load = DL + LL + CL.
2. Select a column header that matches the width of the beams under consideration.
3. Locate under SPAN a span that meets or exceeds the required span.
4. Scan from left to right within the SPAN row until you find a cell where both the maximum TOTAL LOAD and the maximum CONCRETE LOAD meet or exceed the required loads. Use the CONCRETE LOAD value that corresponds to the intended span condition – simple or continuous.
5. Check the bearing length requirements.
6. Select the beam depth at the top of the column.

ALLOWABLE FORMWORK LOADS AND REQUIRED BEARING LENGTHS

1¾" 2.0E PWLVL

Span (ft)	Thickness (in)		1¾									
	Depth (in)		3½	4	5½	6	7¼	8	9¼	10	11¼	11⅞
2	Concrete (plf)	Simple	1508	1811	2934	3404	4618					
		Continuous	1508	1811	2934	3404	4618					
	Total Load (plf)		1508	1811	2934	3404	4618					
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5					
	Min. Int. Bearing (in)		5.25	5.25	5.25	6	8					
3	Concrete (plf)	Simple	876	1030	1550	1745	2296	2675	2998			
		Continuous	876	1030	1550	1745	2296	2675	2998			
	Total Load (plf)		876	1030	1550	1745	2296	2675	2998			
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5			
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	6.25	7.25	8			
4	Concrete (plf)	Simple	416	622	1052	1173	1499	1714	2108	2218		
		Continuous	486	719	1052	1173	1499	1714	2108	2218		
	Total Load (plf)		617	719	1052	1173	1499	1714	2108	2218		
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.5	6.25	7.5	8		
5	Concrete (plf)	Simple	192	287	748	883	1113	1261	1525	1695	1760	
		Continuous	249	372	796	883	1113	1261	1525	1695	1760	
	Total Load (plf)		449	552	796	883	1113	1261	1525	1695	1760	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.75	7	7.75	8	
6	Concrete (plf)	Simple	103	155	405	526	885	996	1194	1319	1458	
		Continuous	144	215	561	708	885	996	1194	1319	1458	
	Total Load (plf)		309	393	640	708	885	996	1194	1319	1458	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.5	6.5	7.25	8	
7	Concrete (plf)	Simple	62	92	242	315	558	750	981	1080	1245	
		Continuous	90	135	353	458	734	824	981	1080	1245	
	Total Load (plf)		225	286	508	590	734	824	981	1080	1245	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6.25	7	8	
8	Concrete (plf)	Simple			156	203	360	484	750	913	1055	1085
		Continuous		90	236	306	542	702	832	913	1055	1085
	Total Load (plf)			217	386	452	627	702	832	913	1055	1085
	Min. End Bearing (in)			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)			5.25	5.25	5.25	5.25	5.25	6.25	6.75	7.75	8
9	Concrete (plf)	Simple			94	123	218	294	456	577	822	962
		Continuous			147	191	338	455	705	791	910	962
	Total Load (plf)				303	355	500	597	722	791	910	962
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	6	6.5	7.5	8
10	Concrete (plf)	Simple				77	138	186	289	366	523	616
		Continuous			95	123	219	295	458	579	801	854
	Total Load (plf)				244	286	403	481	625	698	801	854
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.75	6.5	7.5	8
11	Concrete (plf)	Simple					91	123	192	243	348	409
		Continuous			64	83	148	199	310	392	560	659
	Total Load (plf)				201	235	331	396	515	592	715	761
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.25	6	7.25	7.75
12	Concrete (plf)	Simple					62	84	132	167	239	282
		Continuous					103	139	217	274	392	462
	Total Load (plf)						277	331	431	496	614	677
	Min. End Bearing (in)						3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)						5.25	5.25	5.25	5.5	6.75	7.5

See notes on page 12

ALLOWABLE FORMWORK LOADS AND REQUIRED BEARING LENGTHS

2½" 2.0E PWLVL

Span (ft)	Thickness (in)		2½									
	Depth (in)		3½	4	5½	6	7¼	8	9¼	10	11¼	11⅞
2	Concrete (plf)	Simple	2154	2587	4192	4863	6597					
		Continuous	2154	2587	4192	4863	6597					
	Total Load (plf)		2154	2587	4192	4863	6597					
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5					
	Min. Int. Bearing (in)		5.25	5.25	5.25	6	8					
3	Concrete (plf)	Simple	1251	1471	2214	2493	3279	3821	4282			
		Continuous	1251	1471	2214	2493	3279	3821	4282			
	Total Load (plf)		1251	1471	2214	2493	3279	3821	4282			
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5			
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	6.25	7.25	8			
4	Concrete (plf)	Simple	595	889	1503	1676	2142	2449	3012	3169		
		Continuous	694	1027	1503	1676	2142	2449	3012	3169		
	Total Load (plf)		881	1027	1503	1676	2142	2449	3012	3169		
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.5	6.25	7.5	8		
5	Concrete (plf)	Simple	274	410	1069	1261	1590	1801	2178	2422	2514	
		Continuous	355	531	1138	1261	1590	1801	2178	2422	2514	
	Total Load (plf)		642	789	1138	1261	1590	1801	2178	2422	2514	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.75	7	7.75	8	
6	Concrete (plf)	Simple	148	221	578	751	1264	1424	1706	1885	2084	
		Continuous	205	307	801	1011	1264	1424	1706	1885	2084	
	Total Load (plf)		441	561	915	1011	1264	1424	1706	1885	2084	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.5	6.5	7.25	8	
7	Concrete (plf)	Simple	88	132	346	450	797	1071	1401	1542	1778	
		Continuous	128	193	504	655	1048	1177	1401	1542	1778	
	Total Load (plf)		321	408	726	843	1048	1177	1401	1542	1778	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6.25	7	8	
8	Concrete (plf)	Simple		85	223	290	514	692	1072	1305	1506	1551
		Continuous	85	128	337	438	774	1003	1189	1305	1506	1551
	Total Load (plf)		244	310	552	646	895	1003	1189	1305	1506	1551
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6.25	6.75	7.75	8
9	Concrete (plf)	Simple			135	175	312	420	651	824	1175	1375
		Continuous		79	209	273	483	650	1007	1130	1301	1375
	Total Load (plf)			244	433	507	714	852	1032	1130	1301	1375
	Min. End Bearing (in)			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)			5.25	5.25	5.25	5.25	5.25	6	6.5	7.5	8
10	Concrete (plf)	Simple			85	111	197	266	413	523	747	880
		Continuous			135	176	313	422	654	828	1144	1220
	Total Load (plf)				349	409	575	687	893	997	1144	1220
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.75	6.5	7.5	8
11	Concrete (plf)	Simple				73	130	176	274	347	497	585
		Continuous			91	119	211	285	443	560	800	941
	Total Load (plf)				287	336	473	566	735	846	1021	1087
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.25	6	7.25	7.75
12	Concrete (plf)	Simple					89	120	188	239	342	403
		Continuous			63	82	147	199	309	392	560	659
	Total Load (plf)				240	281	396	473	615	708	877	966
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.25	5.5	6.75	7.5

See notes on page 12

ALLOWABLE FORMWORK LOADS AND REQUIRED BEARING LENGTHS

3½" 2.0E PWLVL

Span (ft)	Thickness (in)		3½									
	Depth (in)		3½	4	5½	6	7¼	8	9¼	10	11¼	11⅞
2	Concrete (plf)	Simple	3016	3621	5869	6808	9235					
		Continuous	3016	3621	5869	6808	9235					
	Total Load (plf)		3016	3621	5869	6808	9235					
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5					
	Min. Int. Bearing (in)		5.25	5.25	5.25	6	8					
3	Concrete (plf)	Simple	1752	2059	3099	3491	4591	5350	5995			
		Continuous	1752	2059	3099	3491	4591	5350	5995			
	Total Load (plf)		1752	2059	3099	3491	4591	5350	5995			
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5			
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	6.25	7.25	8			
4	Concrete (plf)	Simple	833	1244	2105	2346	2999	3428	4216	4437		
		Continuous	972	1438	2105	2346	2999	3428	4216	4437		
	Total Load (plf)		1234	1438	2105	2346	2999	3428	4216	4437		
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.5	6.25	7.5	8		
5	Concrete (plf)	Simple	384	574	1497	1766	2226	2521	3050	3391	3520	
		Continuous	498	744	1593	1766	2226	2521	3050	3391	3520	
	Total Load (plf)		899	1104	1593	1766	2226	2521	3050	3391	3520	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.75	7	7.75	8	
6	Concrete (plf)	Simple	207	310	809	1052	1769	1993	2388	2639	2917	
		Continuous	287	430	1122	1416	1769	1993	2388	2639	2917	
	Total Load (plf)		617	785	1281	1416	1769	1993	2388	2639	2917	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.5	6.5	7.25	8	
7	Concrete (plf)	Simple	123	185	485	630	1115	1500	1961	2159	2490	
		Continuous	180	270	705	917	1467	1647	1961	2159	2490	
	Total Load (plf)		449	572	1016	1181	1467	1647	1961	2159	2490	
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6.25	7	8	
8	Concrete (plf)	Simple	79	118	312	406	720	969	1500	1827	2109	2171
		Continuous	120	180	471	613	1084	1404	1664	1827	2109	2171
	Total Load (plf)		341	435	772	904	1253	1404	1664	1827	2109	2171
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6.25	6.75	7.75	8
9	Concrete (plf)	Simple		71	188	246	436	588	912	1153	1645	1925
		Continuous	74	111	293	382	676	910	1410	1582	1821	1925
	Total Load (plf)		268	341	607	710	999	1193	1444	1582	1821	1925
	Min. End Bearing (in)		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)		5.25	5.25	5.25	5.25	5.25	5.25	6	6.5	7.5	8
10	Concrete (plf)	Simple			118	155	276	373	579	733	1046	1232
		Continuous		71	189	247	439	591	916	1159	1602	1708
	Total Load (plf)			275	489	572	805	962	1250	1396	1602	1708
	Min. End Bearing (in)			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)			5.25	5.25	5.25	5.25	5.25	5.75	6.5	7.5	8
11	Concrete (plf)	Simple			77	102	182	246	384	486	695	819
		Continuous			127	166	296	399	620	784	1120	1318
	Total Load (plf)				402	471	663	792	1029	1185	1429	1522
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.25	6	7.25	7.75
12	Concrete (plf)	Simple				69	124	169	263	334	479	564
		Continuous			88	115	206	278	433	549	784	923
	Total Load (plf)				336	394	555	663	862	992	1227	1353
	Min. End Bearing (in)				3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Min. Int. Bearing (in)				5.25	5.25	5.25	5.25	5.25	5.5	6.75	7.5

See notes on page 12

ALLOWABLE FORMWORK LOADS AND REQUIRED BEARING LENGTHS OF DOUBLE-LEDGER 2.0E PWLVL

2.0E PWLVL

Span (ft)	Thickness (in)	Double 1½								Double 1¾								Double 2½							
	Depth (in)	5½	6	7¼	8	9¼	10	11¼	11⅞	5½	6	7¼	8	9¼	10	11¼	11⅞	5½	6	7¼	8	9¼	10	11¼	11⅞
6	Concrete (plf)	514	667	1176	1580	1984	2191	2556	2749	599	778	1372	1844	2314	2556	2982	3208	856	1111	1960	2634	3306	3651	4260	4582
	Total Load (plf)	1067	1179	1472	1658	1984	2191	2556	2749	1245	1376	1718	1934	2314	2556	2982	3208	1779	1965	2454	2763	3306	3651	4260	4582
	Min. End Bearing (in)	1.5	1.5	1.9	2.2	2.6	2.9	3.4	3.6	1.5	1.5	1.9	2.2	2.6	2.9	3.4	3.6	1.5	1.5	1.9	2.2	2.6	2.9	3.4	3.6
7	Concrete (plf)	323	420	741	995	1538	1803	2090	2240	377	490	864	1161	1795	2103	2438	2613	539	700	1234	1659	2564	3005	3483	3733
	Total Load (plf)	835	976	1227	1377	1639	1803	2090	2240	974	1139	1432	1607	1912	2103	2438	2613	1391	1627	2045	2295	2731	3005	3483	3733
	Min. End Bearing (in)	1.5	1.5	1.9	2.1	2.5	2.8	3.2	3.4	1.5	1.5	1.9	2.1	2.5	2.8	3.2	3.4	1.5	1.5	1.9	2.1	2.5	2.8	3.2	3.4
8	Concrete (plf)	203	264	465	625	966	1221	1738	1890	237	308	543	729	1127	1424	2028	2204	338	439	775	1042	1610	2035	2897	3149
	Total Load (plf)	638	746	1050	1178	1395	1531	1767	1890	744	871	1225	1374	1628	1786	2061	2204	1063	1244	1751	1963	2326	2552	2945	3149
	Min. End Bearing (in)	1.5	1.5	1.8	2.1	2.4	2.7	3.1	3.3	1.5	1.5	1.8	2.1	2.4	2.7	3.1	3.3	1.5	1.5	1.8	2.1	2.4	2.7	3.1	3.3
9	Concrete (plf)	127	165	290	390	603	762	1085	1276	148	192	339	455	704	889	1266	1489	211	274	484	650	1005	1270	1808	2127
	Total Load (plf)	503	589	829	990	1215	1330	1530	1633	587	687	967	1155	1417	1552	1785	1906	839	981	1381	1650	2025	2217	2550	2722
	Min. End Bearing (in)	1.5	1.5	1.6	2.0	2.4	2.6	3.0	3.2	1.5	1.5	1.6	2.0	2.4	2.6	3.0	3.2	1.5	1.5	1.6	2.0	2.4	2.6	3.0	3.2
10	Concrete (plf)	83	108	191	256	396	500	712	837	97	126	222	299	462	583	831	977	139	180	318	427	660	833	1187	1395
	Total Load (plf)	407	476	670	801	1041	1176	1349	1438	475	555	782	934	1214	1372	1574	1678	678	793	1117	1334	1734	1960	2249	2397
	Min. End Bearing (in)	1.5	1.5	1.5	1.8	2.3	2.6	3.0	3.2	1.5	1.5	1.5	1.8	2.3	2.6	3.0	3.2	1.5	1.5	1.5	1.8	2.3	2.6	3.0	3.2
11	Concrete (plf)		74	130	175	270	342	486	572	66	86	152	204	315	398	567	667	95	123	217	291	450	569	810	953
	Total Load (plf)		393	553	661	859	989	1206	1285	391	458	645	771	1002	1153	1407	1499	559	654	921	1101	1431	1648	2010	2141
	Min. End Bearing (in)		1.5	1.5	1.6	2.1	2.4	2.9	3.1	1.5	1.5	1.5	1.6	2.1	2.4	2.9	3.1	1.5	1.5	1.5	1.6	2.1	2.4	2.9	3.1
12	Concrete (plf)			92	123	191	241	343	404		61	107	144	223	281	401	471	67	87	153	206	318	402	572	673
	Total Load (plf)			464	554	720	829	1026	1132		384	541	646	841	968	1197	1320	469	549	773	923	1201	1382	1710	1886
	Min. End Bearing (in)			1.5	1.5	1.9	2.2	2.7	3.0		1.5	1.5	1.5	1.9	2.2	2.7	3.0	1.5	1.5	1.5	1.5	1.9	2.2	2.7	3.0
13	Concrete (plf)			67	90	139	175	249	293			78	105	162	204	291	342		63	111	149	231	292	415	489
	Total Load (plf)			394	471	613	706	873	963			460	550	715	823	1019	1123		466	657	785	1021	1176	1455	1605
	Min. End Bearing (in)			1.5	1.5	1.8	2.0	2.5	2.8			1.5	1.5	1.8	2.0	2.5	2.8		1.5	1.5	1.5	1.8	2.0	2.5	2.8
14	Concrete (plf)				67	103	130	185	218				78	120	152	216	254			83	111	172	217	309	363
	Total Load (plf)				405	527	607	752	829				473	615	709	877	967			565	676	879	1012	1253	1381
	Min. End Bearing (in)				1.5	1.6	1.9	2.3	2.6				1.5	1.6	1.9	2.3	2.6			1.5	1.5	1.6	1.9	2.3	2.6
15	Concrete (plf)					78	99	141	165					91	115	164	193			63	84	130	165	234	276
	Total Load (plf)					458	528	654	721					535	616	763	841			491	587	764	880	1089	1201
	Min. End Bearing (in)					1.5	1.8	2.2	2.4					1.5	1.8	2.2	2.4			1.5	1.5	1.5	1.8	2.2	2.4

Notes:

1. Table values apply to joists loaded and supported on the member faces showing the narrow edge of all veneers (beam orientation).
2. Values shown are the maximum uniform loads in pounds per lineal foot (plf), that can be applied to the joist in addition to its own weight.
3. Table values apply to simple spans only.
4. Table values have been adjusted by a factor of $C_M = 0.9$ for outside exposure (above ground) and $C_D = 1.25$ for construction load duration.
5. Table values for CONCRETE LOAD are limited by deflection equal to the lesser of ¼ inch or L/360, where L is the length of the span.
6. Provide lateral restraint at supports and along the compression flange of each joist at intervals not to exceed 24".
7. Contact Pacific Woodtech or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads, multiple span).

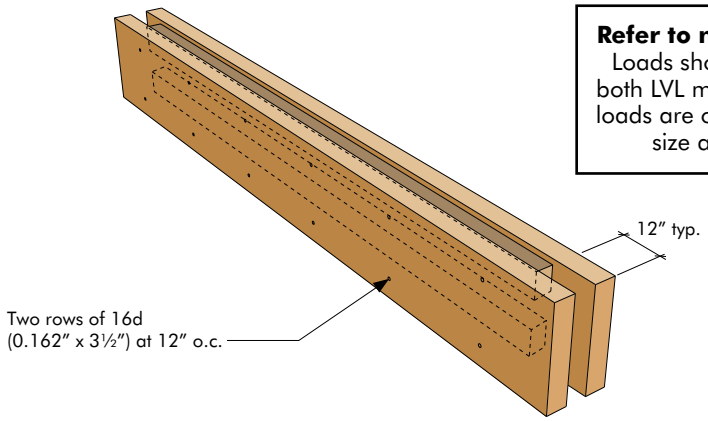
HOW TO USE THESE TABLES:

1. Calculate the TOTAL LOAD and the CONCRETE LOAD on the joist in pounds per lineal foot (plf). Neglect joist weight. Total Load = DL + LL + CL.
2. Select a column header that matches the width of the joists under consideration.
3. Locate under SPAN a span that meets or exceeds the required joist span.
4. Scan from left to right within the SPAN row until you find a cell where both the maximum TOTAL LOAD and the maximum CONCRETE LOAD meet or exceed the required loads.
5. Check the bearing length requirements.
6. Select the joist depth at the top of the column.

BRIDGE DECK FORMS

DOUBLE LVL LEDGER BEAM ASSEMBLY FOR DECK APPLICATIONS

Wood spacer strips: ¾" x 2"
–recessed from the ends of the ledger to accommodate the coil bolts

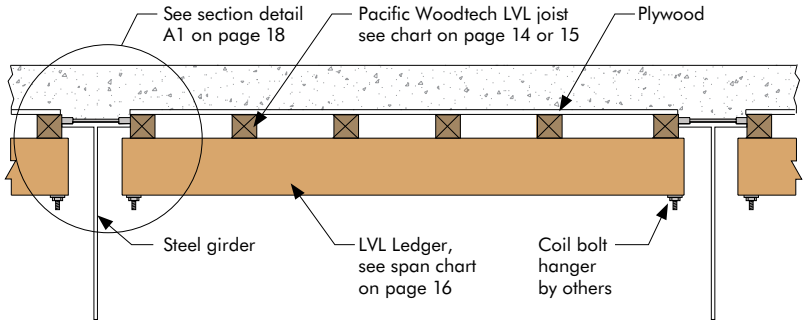


Refer to notes on page 16 for sizing.
Loads should be distributed fully across both LVL members. No side loading. If the loads are on only one of the LVL members size according to pages 12–14.

TYPICAL BRIDGE DECK FORMWORK SYSTEMS

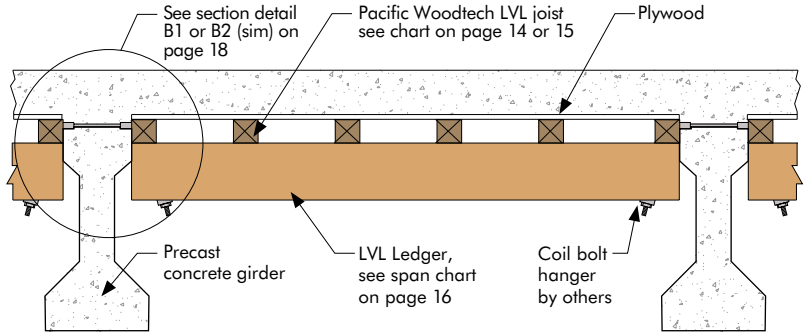
SYSTEM A

LVL joists and double LVL ledger suspended from steel bridge girders by coil bolt hangers



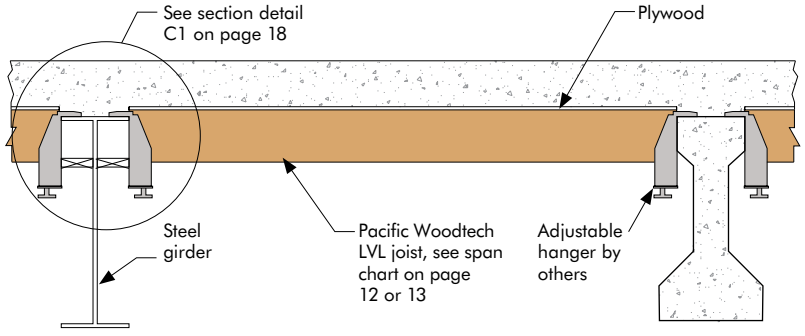
SYSTEM B

LVL joists and double LVL ledger suspended from pre-cast concrete bridge girders by coil bolt hangers



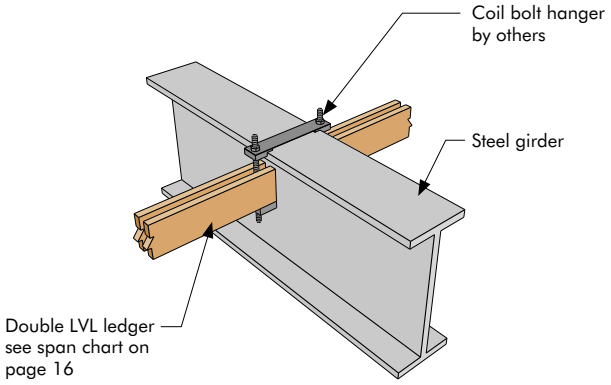
SYSTEM C

LVL joists suspended from steel or pre-cast concrete bridge girders by adjustable hangers

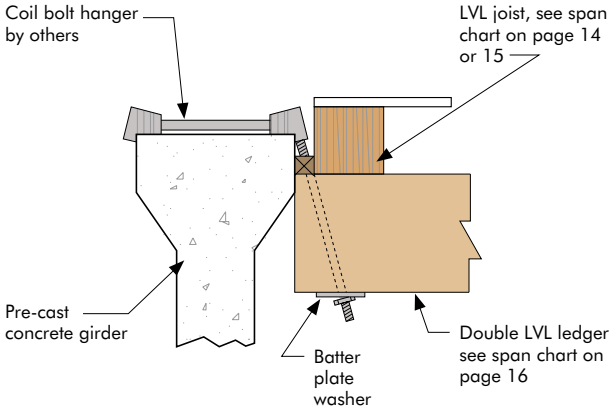


BRIDGE FORMWORK DETAILS

A1



B1



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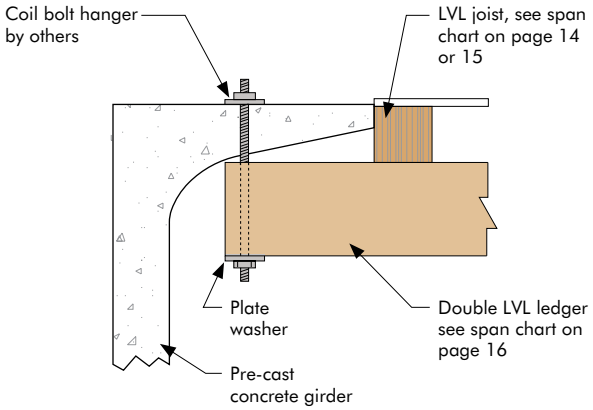
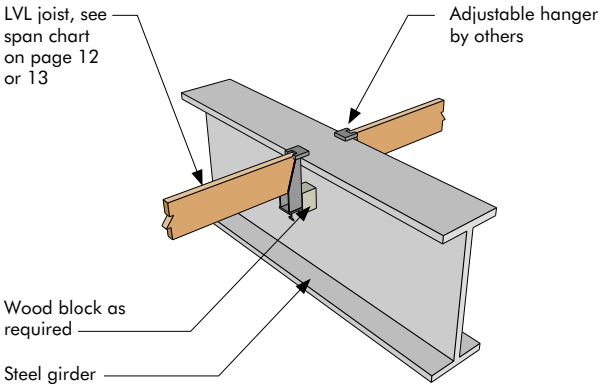
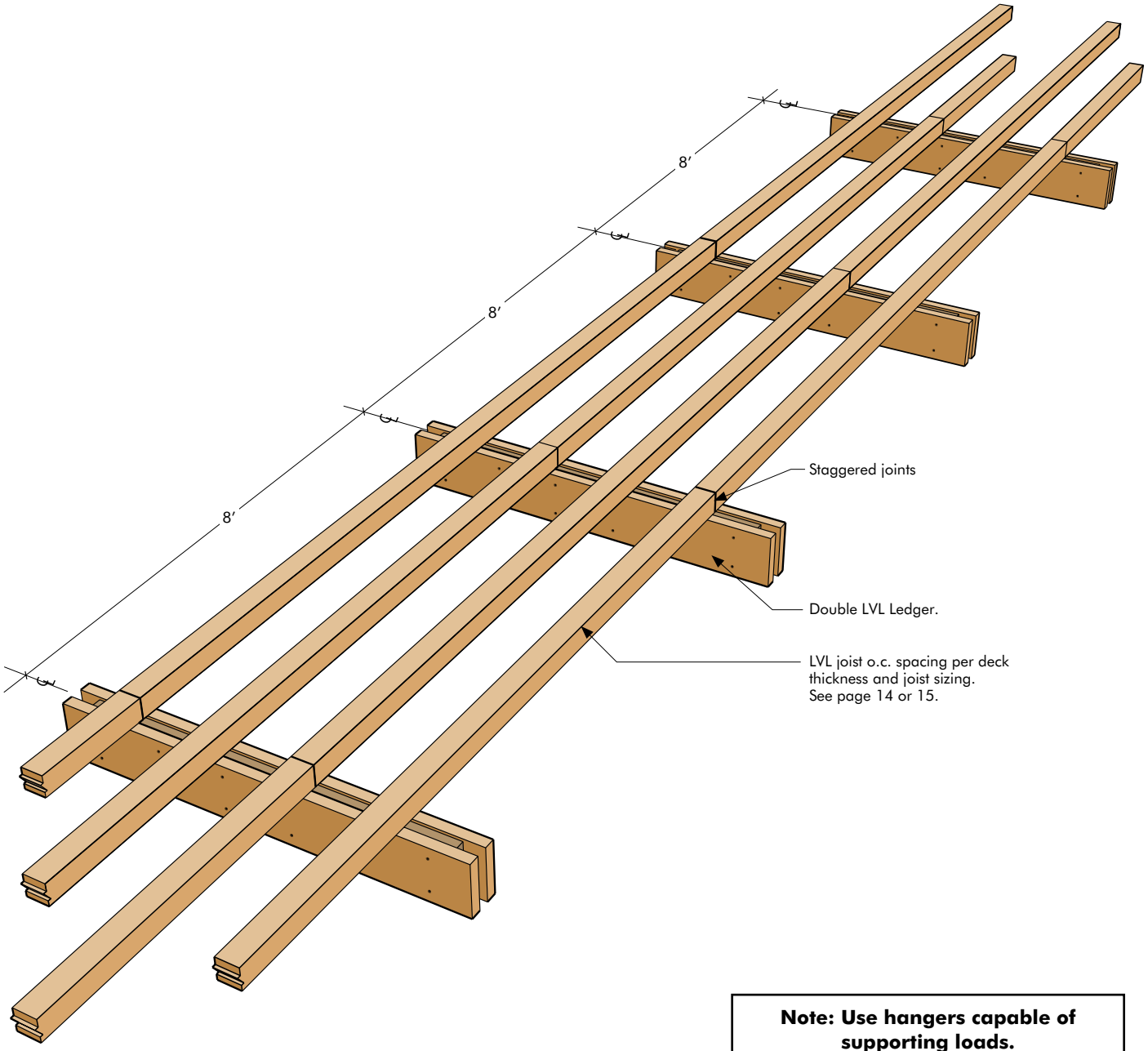


C1



TYPICAL BRIDGE DECK FALSEWORK

Plywood not shown for clarity



Note: Use hangers capable of supporting loads.
Refer to hanger manufacturer.

OUR PRODUCT WARRANTY

Pacific Woodtech Corporation warrants that its products will be free from manufacturing errors or defects in workmanship and material.

In addition, provided the product is correctly installed and used, Pacific Woodtech Corporation warrants the adequacy of its design for the normal and expected life of the structure.

This warranty is backed by the full resources of Pacific Woodtech Corporation and by underwritten product liability insurance.

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mailing: PO Box 465 Burlington, Washington 98233
shipping: 1850 Park Lane Burlington, Washington 98233
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