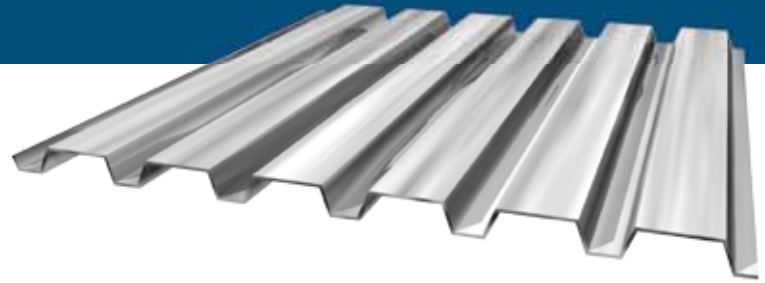




# 1.5" Composite Floor Deck



## Composite Floor Deck brought to you by the Customer Service Leader

Cordeck is a full-service manufacturer and stocking distributor of corrugated steel deck, flashing and trim, and other building construction accessories. Cordeck's mission is to provide excellent customer service. This mission is the foundation for industry wide recognition as service leader for prompt, reliable deliveries, guaranteed quality, and large inventory of gauges and profiles. You can be certain of the product's total, maximum effectiveness, along with our ability to deliver the industry's highest quality, service, value, and customer satisfaction. Please contact us for further information. At Cordeck, we're devoted to our customers. We stand ready to earn, and keep, your full confidence and trust.

## Features and Benefits

**Prompt lead times** are our specialty. All orders are promptly produced and shipped to meet your on-site specifications.

**Project management and engineering services** are offered by Cordeck's full, expert, in-house engineering and detailing services to assure optimal planing and design. Our experienced engineers and technicians provide individual customer service and attention to detail from concept to completion.

**SDI Membership** by the manufacturer guarantees product quality in accordance to the Steel Deck Institute (SDI).

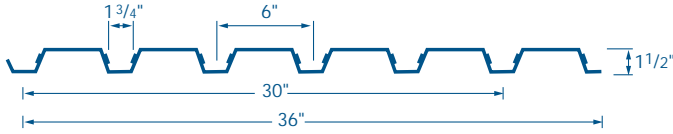
**On-spec, guaranteed quality.** Our production staff are true craftsmen, not just interested in getting the job done, but in doing it perfectly.

**Form spans shown** in the table are maximum unshored clear span lengths based on Load and Resistance Factor Design (LRFD) rationale. Form loading is based upon the SDI form span criteria that allows for the sequence of construction live loading that usually occurs during the construction phase with the placement of wet concrete by construction workers. This form span loading is represented by combinations of uniformly applied dead load and 20 psf construction load or uniformly applied dead load superimposed with 150 lb. mid-span concentrated load.

**Superimposed uniform live loads** shown in the tables are based on the SDI Composite Deck Design Handbook employing LRFD rationale. Composite deck slabs are single span condition with the deck serving as the positive reinforcing for the slab. Research has shown that the presence of shear studs for composite beam design influences the moment capacity of the composite deck system. When the number of shear studs present are of sufficient quantity, the composite deck slab can achieve its full ultimate moment capacity.

**Welded wire fabric** 1" below top surface of slab is recommended. If welded wire fabric is not used, the superimposed live loads in the following tables should be reduced by 10%.

# 1.5" Composite Floor Deck



Gage	t in	Wd psf	Sp in <sup>2</sup> /ft	Sn in <sup>3</sup> /ft	Ip in <sup>4</sup> /ft	In in <sup>4</sup> /ft	Va lbs/ft	Fy ksi
22	0.030	1.78	0.169	0.179	0.143	0.177	2754	50
20	0.036	2.14	0.224	0.231	0.186	0.222	3322	50
19	0.042	2.49	0.271	0.282	0.230	0.260	3857	50
18	0.047	2.82	0.311	0.324	0.272	0.295	4350	50
16	0.060	3.54	0.404	0.411	0.373	0.373	4336	40

Total Slab Depth D Wt. Conc. Area Conc.	Gage	Maximum Unshored Clear Spans			Superimposed Live Loads - PSF: NO STUDS														
		Single Span	Double Span	Triple Span	Span - Feet and Inches														
					5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
3-1/2" 33 PSF 30 in <sup>2</sup>	22	5'-10"	7'-10"	7'-10"	314	279	230	206	186	169	154	141	130	120	111	100	87	76	67
	20	7'-0"	9'-4"	9'-6"	345	306	275	249	227	187	171	157	144	133	124	108	94	82	73
	19	7'-11"	10'-3"	10'-8"	372	330	296	268	244	224	186	171	157	145	134	116	101	88	78
	18	8'-8"	11'-0"	11'-2"	395	351	315	285	260	238	220	204	168	156	142	123	107	94	82
4" 39 PSF 36.0 in <sup>2</sup>	22	5'-6"	7'-5"	7'-5"	366	325	267	239	216	196	179	164	151	139	129	119	111	103	96
	20	6'-7"	8'-10"	8'-11"	400	356	319	289	239	217	198	182	167	155	143	133	124	115	108
	19	7'-5"	9'-9"	10'-1"	400	383	344	311	283	235	215	197	182	168	156	145	135	126	115
	18	8'-1"	10'-5"	10'-7"	400	400	365	330	301	276	254	211	194	180	167	156	145	136	122
4-1/2" 45 PSF 42 in <sup>2</sup>	22	5'-3"	7'-1"	7'-1"	400	345	307	275	248	225	205	188	173	159	147	136	127	118	109
	20	6'-3"	8'-5"	8'-6"	400	400	366	303	274	249	227	208	192	177	164	152	142	132	123
	19	7'-1"	9'-3"	9'-7"	400	400	393	356	325	269	246	226	208	192	179	166	155	144	135
	18	7'-8"	9'-11"	10'-1"	400	400	400	378	344	316	262	241	222	206	191	178	166	155	145
5" 51 PSF 48 in <sup>2</sup>	22	5'-0"	6'-9"	6'-9"	400	391	347	311	280	254	232	213	195	180	167	154	143	133	124
	20	6'-0"	8'-1"	8'-2"	400	400	400	343	310	281	257	236	217	200	186	172	160	149	139
	19	6'-9"	8'-11"	9'-2"	400	400	400	400	335	304	278	255	235	218	202	188	175	163	153
	18	7'-3"	9'-6"	9'-8"	400	400	400	400	389	324	297	272	251	233	216	201	187	175	164
5-1/2" 57 PSF 54 in <sup>2</sup>	22	4'-10"	6'-6"	6'-6"	400	400	388	348	314	285	260	238	219	202	186	173	160	149	138
	20	5'-9"	7'-9"	7'-10"	400	400	400	383	346	314	287	263	243	224	208	193	179	167	156
	19	6'-5"	8'-6"	8'-9"	400	400	400	400	374	340	311	286	263	243	226	210	196	183	171
	18	7'-0"	9'-1"	9'-4"	400	400	400	400	400	363	331	305	281	260	241	225	210	196	183
6" 63 PSF 60 in <sup>2</sup>	22	4'-8"	6'-4"	6'-4"	400	400	400	385	347	315	288	263	242	223	206	191	178	165	153
	20	5'-6"	7'-5"	7'-6"	400	400	400	400	383	348	318	292	269	248	230	213	199	185	173
	19	6'-2"	8'-2"	8'-5"	400	400	400	400	400	377	344	316	291	270	250	232	217	202	189
	18	6'-8"	8'-9"	9'-0"	400	400	400	400	400	400	367	337	311	288	267	249	232	217	203
16	6'-10"	8'-10"	9'-1"	400	400	400	400	400	399	365	335	309	286	266	248	231	216	202	

## Product Information Design

1. Cordeck certifies that our composite floor deck has been evaluated in accordance with the applicable SDI standards and property values for the Uniform Load Tables and meets or exceeds SDI requirements.
2. The rib width limitations shown are taken at the theoretical intersection points of the flange and web projections. Depending on the radius used, the load table could vary from that shown.

# 1.5" Composite Floor Deck

1.5" Composite Floor Deck Normal Weight Concrete (145 PCF)																			
Total Slab Depth D Wt. Conc. Area Conc.	Gage	Maximum Unshored Clear Spans			Superimposed Live Loads - Studs @ 1'-0" o.c.														
		Single Span	Double Span	Triple Span	Span - Feet and Inches														
					5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4" 39 PSF 20.6 in <sup>2</sup>	22	5'-6"	7'-5"	7'-5"	400	400	400	400	400	380	330	279	235	200	172	148	129	113	99
	20	6'-7"	8'-10"	8'-11"	400	400	400	400	400	400	363	303	255	217	186	161	140	122	108
	19	7'-5"	9'-9"	10'-1"	400	399	396	393	391	387	386	324	273	232	199	172	149	131	115
	18	8'-1"	10'-5"	10'-7"	400	400	393	387	382	377	373	342	289	245	210	182	158	138	122
	16	8'-3"	10'-5"	10'-9"	400	400	393	386	381	376	372	337	299	267	234	202	176	154	136
4-1/2" 45 PSF 24.8 in <sup>2</sup>	22	5'-3"	7'-1"	7'-1"	400	400	400	400	400	400	392	343	302	267	237	210	183	160	141
	20	6'-3"	8'-5"	8'-6"	400	400	400	400	400	400	400	400	361	307	263	227	198	173	152
	19	7'-1"	9'-3"	9'-7"	400	400	399	397	394	390	388	387	385	328	281	243	211	185	163
	18	7'-8"	9'-11"	10'-1"	400	400	400	396	390	384	374	370	367	346	297	257	223	195	172
	16	7'-10"	9'-11"	10'-3"	400	400	400	396	389	384	373	369	356	318	285	256	232	210	191
5" 51 PSF 29.3 in <sup>2</sup>	22	5'-0"	6'-9"	6'-9"	400	400	400	400	400	400	400	397	350	309	275	245	219	197	177
	20	6'-0"	8'-1"	8'-2"	400	400	400	400	400	400	400	400	400	376	335	300	269	236	208
	19	6'-9"	8'-10"	9'-2"	400	400	400	400	395	393	391	389	387	386	375	331	288	252	222
	18	7'-3"	9'-6"	9'-8"	400	400	400	400	398	386	381	376	372	369	366	349	304	266	234
	16	7'-5"	9'-6"	9'-10"	400	400	400	400	398	385	380	375	371	367	330	297	269	244	221
5-1/2" 57 PSF 34.1 in <sup>2</sup>	22	4'-10"	6'-6"	6'-6"	400	400	400	400	400	400	400	400	397	352	313	279	250	224	201
	20	5'-9"	7'-9"	7'-10"	400	400	400	400	400	400	400	400	400	400	382	342	307	277	250
	19	6'-5"	8'-6"	8'-9"	400	400	400	400	398	395	393	391	389	388	387	385	347	314	285
	18	7'-0"	9'-1"	9'-4"	400	400	400	400	400	393	387	382	378	374	370	367	365	336	306
	16	7'-1"	9'-2"	9'-5"	400	400	400	400	400	392	386	381	377	373	369	338	306	277	252
6" 63 PSF 39.4 in <sup>2</sup>	22	4'-8"	6'-4"	6'-4"	400	400	400	400	400	400	400	400	400	394	350	313	280	251	225
	20	5'-6"	7'-5"	7'-6"	400	400	400	400	400	400	400	400	400	400	400	384	345	311	281
	19	6'-2"	8'-2"	8'-5"	400	400	400	400	400	398	396	394	392	390	388	387	386	353	320
	18	6'-8"	8'-9"	9'-0"	400	400	400	400	400	400	394	388	383	379	375	372	369	366	345
	16	6'-10"	8'-10"	9'-1"	400	400	400	400	400	400	393	388	382	378	374	370	343	311	383

## Material

All steel to be used in Cordeck composite floor deck will be galvanized, prime painted, or a combination of the two.

### 1. Prime Painted

- Composite deck shall receive one coat of standard gray primer paint over cleaned and pretreated steel.
- The primer coat is intended to protect the steel for only a reasonably short period of exposure, in normal atmospheric conditions, and shall be considered an impermanent and provisional coating.
- Field painting of prime painted material is recommended especially where the deck is exposed.

### 2. Galvanized

- All steel shall be coated to conform to ASTM A924 G-60 or G-90 or to Federal Specification QQ-S-775.
- Galvanized finish in G-60 or G-90 coating is desirable in high moisture atmospheric conditions.
- Cordeck shall not be responsible for the cleaning of the underside of steel deck to ensure bond of fireproofing. Adherence of fireproofing material is dependent on many variables. The adhesion ability of fireproofing materials is the responsibility of the fireproofing applicator.

### 3. Accessories

- Cordeck can supply end and side closures, pour stops, deck plates, rubber cell closures, screws, and other accessories needed to complete the project.

# 1.5" Composite Floor Deck

1.5" Composite Floor Deck Lightweight Concrete (110 PCF)																				
Total Slab Depth D Wt. Conc. Area Conc.	Gage	Maximum Unshored Clear Spans			Superimposed Live Loads - PSF: NO STUDS															
		Single Span	Double Span	Triple Span	Span - Feet and Inches															
					5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
3-1/2" 26 PSF 30 in <sup>2</sup>	22	6'-4"	8'-5"	8'-6"	278	247	222	185	167	152	139	124	105	89	76	66	57	50	44	
	20	7'-8"	9'-7"	9'-11"	305	271	243	220	201	184	154	135	114	97	83	72	62	54	48	
	19	8'-8"	10'-7"	11'-0"	329	292	262	239	216	198	173	145	122	104	89	77	67	58	51	
	18	9'-6"	11'-4"	11'-9"	350	311	279	252	230	211	184	153	129	110	94	81	71	62	54	
4" 30 PSF 36 in <sup>2</sup>	22	6'-0"	8'-1"	8'-1"	324	288	258	215	194	177	161	148	136	126	113	98	85	75	66	
	20	7'-3"	9'-7"	9'-9"	355	315	283	256	233	195	178	164	151	140	123	106	92	81	71	
	19	8'-2"	10'-7"	10'-11"	382	339	304	275	251	230	212	178	164	152	131	113	99	86	76	
	18	8'-11"	11'-4"	11'-5"	400	360	323	292	266	244	225	209	175	162	139	120	104	91	80	
4-1/2" 35 PSF 42 in <sup>2</sup>	22	5'-9"	7'-8"	7'-8"	372	330	275	246	223	202	185	170	156	145	134	125	116	106	93	
	20	6'-11"	9'-2"	9'-4"	400	361	324	293	246	223	204	188	173	160	149	139	129	114	101	
	19	7'-9"	10'-1"	10'-5"	400	388	348	315	287	264	221	203	188	174	162	151	140	122	107	
	18	8'-6"	10'-10"	11'-0"	400	400	369	334	305	279	258	239	200	186	173	161	147	129	114	
4-3/4" 37 PSF 45 in <sup>2</sup>	22	5'-7"	7'-7"	7'-7"	396	352	293	263	237	216	197	181	167	154	143	133	124	115	108	
	20	6'-9"	9'-0"	9'-1"	400	385	345	312	262	238	218	200	184	171	159	148	138	129	118	
	19	7'-7"	9'-11"	10'-3"	400	400	371	336	306	281	235	216	200	185	172	160	150	140	126	
	18	8'-3"	10'-7"	10'-9"	400	400	393	356	324	298	274	231	213	198	184	171	160	150	133	
5" 39 PSF 48 in <sup>2</sup>	22	5'-6"	7'-5"	7'-5"	400	374	311	279	252	229	209	192	177	164	152	141	131	123	115	
	20	6'-7"	8'-10"	8'-11"	400	400	367	332	278	253	231	212	196	181	168	157	146	137	128	
	19	7'-5"	9'-9"	10'-1"	400	400	394	356	325	273	250	230	212	197	183	170	159	149	140	
	18	8'-1"	10'-5"	10'-7"	400	400	400	378	344	316	291	245	226	210	195	182	170	159	149	
5-3/4" 46 PSF 57 in <sup>2</sup>	22	5'-2"	7'-0"	7'-0"	400	400	367	329	297	270	247	227	209	193	179	166	155	145	135	
	20	6'-2"	8'-4"	8'-5"	400	400	400	362	327	298	272	250	231	214	199	185	172	161	151	
	19	7'-0"	9'-2"	9'-6"	400	400	400	400	383	322	295	271	250	232	215	201	187	175	165	
	18	7'-7"	9'-10"	10'-0"	400	400	400	400	400	372	314	289	267	247	230	214	200	188	176	
16	7'-9"	9'-10"	10'-2"	400	400	400	400	400	371	312	287	265	246	229	213	199	187	175		

# 1.5" Composite Floor Deck

1.5" Composite Floor Deck Lightweight Concrete (110 PCF)																				
Total Slab Depth D Wt. Conc. Area Conc.	Gage	Maximum Unshored Clear Spans			Superimposed Live Loads - PSF: Studs @1'-0" o.c.															
		Single Span	Double Span	Triple Span	Span - Feet and Inches															
					5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	
4" 30 PSF 20.6 in <sup>2</sup>	22	6'-0"	8'-1"	8'-1"	400	400	400	400	331	269	221	185	156	132	113	98	85	75	66	
	20	7'-3"	9'-7"	9'-9"	400	400	400	400	358	291	240	200	168	143	123	106	92	81	71	
	19	8'-2"	10'-7"	10'-11"	398	392	387	383	379	311	257	214	180	153	131	113	99	86	76	
	18	8'-11"	11'-4"	11'-5"	400	390	381	374	368	329	271	226	191	162	139	120	104	91	80	
4-1/2" 35 PSF 24.8 in <sup>2</sup>	22	5'-9"	7'-8"	7'-8"	400	400	400	400	400	382	314	262	221	188	161	139	121	106	93	
	20	6'-11"	9'-2"	9'-4"	400	400	400	400	400	340	283	239	203	174	150	131	114	101		
	19	7'-9"	10'-1"	10'-5"	400	398	393	388	384	381	363	302	255	217	186	160	140	122	107	
	18	8'-6"	10'-10"	11'-0"	400	400	393	384	377	371	366	320	269	229	196	170	147	129	114	
	16	8'-7"	10'-10"	11'-2"	400	400	392	384	376	370	365	355	299	254	218	188	164	143	126	
4-3/4" 37 PSF 27.0 in <sup>2</sup>	22	5'-7"	7'-7"	7'-7"	400	400	400	400	400	400	369	308	259	221	189	163	142	124	109	
	20	6'-9"	9'-0"	9'-1"	400	400	400	400	400	399	332	280	238	204	176	153	134	118		
	19	7'-7"	9'-11"	10'-3"	400	400	396	391	387	384	377	354	299	254	218	188	164	143	126	
	18	8'-3"	10'-7"	10'-9"	400	400	398	389	382	375	370	359	315	268	230	199	173	151	133	
	16	8'-5"	10'-7"	11'-0"	400	400	398	389	381	375	369	358	350	298	255	221	192	168	148	
5" 39 PSF 34.1 in <sup>2</sup>	22	5'-6"	7'-5"	7'-5"	400	400	400	400	400	400	400	359	302	257	220	190	166	145	127	
	20	6'-7"	8'-10"	8'-11"	400	400	400	400	400	400	400	387	326	277	238	205	178	156	137	
	19	7'-5"	9'-9"	10'-0"	400	400	399	394	390	383	379	377	347	295	253	219	190	166	146	
	18	8'-1"	10'-5"	10'-7"	400	400	400	395	387	380	374	363	358	312	267	231	201	176	155	
	16	8'-3"	10'-5"	10'-9"	400	400	400	394	386	379	373	361	357	346	296	256	223	195	171	
5-3/4" 46 PSF 36.7 in <sup>2</sup>	22	5'-2"	7'-0"	7'-0"	400	400	400	400	400	400	400	400	400	384	334	288	251	220	193	
	20	6'-2"	8'-4"	8'-5"	400	400	400	400	400	400	400	400	400	400	359	310	270	236	208	
	19	7'-0"	9'-2"	9'-6"	400	400	400	400	398	389	385	382	379	377	375	329	287	251	221	
	18	7'-7"	9'-10"	10'-0"	400	400	400	400	400	393	379	373	368	363	359	347	302	264	233	
	16	7'-9"	9'-10"	10'-2"	400	400	400	400	400	393	378	372	367	362	358	353	321	292	257	

# 1.5" Composite Floor Deck

## SDI Member

1. All steel deck material is manufactured by SDI members or manufactured in accordance to SDI.
2. Cordeck certifies that all material will be in accordance with the SDI Composite Deck Manual specifications.
3. Cordeck 1.5" Composite Composite Deck conforms to all applicable SDI Composite Deck Manual specifications.

## Installation

1. Cordeck steel deck shall be installed by qualified and experienced workers.
2. Deck installation drawings shall be submitted to the project architect and engineer for approval prior to the manufacture of materials.
3. Deck shall be placed in accordance with approved erection drawings.
4. Deck sheets shall be butted over supports.
5. End bearing: install deck ends over supports with a minimum end bearing of 1-1/2" or as indicated on erection drawings.
6. Each deck unit shall be placed on supporting steel framework and adjusted to final positions before permanently fastened. Do not use unfastened deck as a working platform or storage area.
7. Cutting of openings through the deck and all skew cutting shall be performed in the field. Openings not shown on the erection drawings such as those required for stack, conduits, plumbing, vents, etc., shall be cut, and reinforced if necessary, in accordance with SDI.

## Attachment

1. Floor deck sheets and accessories shall be attached as soon as possible and all sheets and accessories shall be attached at the end of each working day. Electric arc welding is the best and most economical method for attaching composite deck sheets to structural supports. Welder shall follow close to the placement crew.
2. All welds are to be made from the top of the deck down through the bottom flange of the ribs. Welds shall penetrate and attach all thicknesses of material to the structural supports.
3. Deck panels are to be fastened to all supports at 12" on center maximum with no less than 3/4" diameter arc spot welds. At deck butt joints, both sheets are to be fastened. Deck panels with spans greater than five feet shall have side laps and perimeter edges
4. Puddle welds shall be at least 5/8" diameter or elongated puddle welds with an equal perimeter. Fillet welds, when used, shall be at least 1" long.

Attachment must be determined by the designer as part of the overall building design process. Values given in this document are adequate in most cases.

## Storage and Handling

1. Protect steel deck from corrosion, deformation, and other damage during storage, handling, and installation.
2. Deck not promptly erected shall be stored off the ground, with one end elevated to provide drainage. Bundles must be protected against condensation with a ventilated waterproof covering. Deck should always be protected from snow and salt.
3. Bundles must be stacked so there is no danger of shifting or material damage. Bundles must be checked for tightness, and retightened as necessary.
4. Deck bundles on the building frame must always be placed near a main supporting beam, at a column, or a wall. In no situation are the bundles to be placed on unbolted frames or on unattached and unbridged joists. The structural frame must be properly braced to receive the bundles.

"Whatever it takes"



Toll Free: 877.857.6400  
Ph: 262.857.3000  
Fx: 844.857.3533  
www.cordeck.com

