4.5" Composite Deep-Dek® (4.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in.^{2}/ft)	I_D (in^4/ft)		S_p (in.^{3}/ft)	S_n (in.^{3}/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.09	50	0.909	2.677	2.978	0.928	1.162	41780	52312	2843	2384	1729
18	12	4.09	50	1.202	3.745	3.939	1.414	1.596	63643	71838	6616	4077	2891
16	12	5.16	50	1.516	4.938	4.963	1.947	2.011	87602	90495	11426	6334	4423
14	12	6.44	50	1.891	6.191	6.191	2.480	2.507	111589	112837	17829	9635	6645

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

NORMAL WEIGHT CONCRETE (145 PCF), f'c=4000 PSI

CONSTRUCTION CLEAR SPANS AND UNIFORM SUPERIMPOSED SERVICE LOAD CAPACITY

LRFD

Concrete	Slab Depth (in), Concrete Weight, Concrete Volume, WWF	Deck Gage	Maximum Unshored Clear Spans (ft-in)				Uniform Service Load Capacity, PSF / Spans (ft)														
							Simple Span Conditions								Continuous Span Condition Negative Moment Reinforcement Required						
			Single	Double	Triple	Canti-lever	15	16	17	18	19	20	21	22	20	21	22	23	24	25	26
4000 PSI Normal Weight Concrete (145 PCF)	6 5/8	20	15 - 6	13 - 10	14 - 5	5 - 2	116	102	90	80	67	51			80	72	65	57	49	43	
	43 PSF	18	16 - 9	21 - 2	19 - 11	7 - 0	180	164	129	101	79	61	46		85	74	64	56	49	42	
	1.09 cu.yd/(100sq.ft)	16	17 - 10	22 - 3	20 - 11	7 - 5	234	185	146	115	91	71	55	42	85	73	64	55	48	41	
	6x6 - W1.4 x W1.4	14	18 - 9	23 - 5	22 - 0	7 - 9	264	209	166	132	105	83	65	50	84	72	63	54	47	40	
	7 1/8	20	15 - 0	12 - 7	13 - 2	5 - 0	129	114	101	90	80	67	51		89	80	72	65	59	53	46
	49 PSF	18	16 - 3	20 - 6	19 - 3	6 - 10	202	185	162	129	101	79	61	46	103	90	78	68	60	52	45
	1.25 cu.yd/(100sq.ft)	16	17 - 4	21 - 7	20 - 4	7 - 2	280	230	183	146	116	92	72	55	102	89	78	68	59	51	44
	6x6 - W1.4 x W1.4	14	18 - 3	22 - 9	21 - 4	7 - 7	325	258	206	165	132	105	83	65	101	88	77	67	58	50	43
	7 5/8	20	14 - 7	11 - 7	12 - 1	4 - 10	143	126	111	99	88	79	67	50	98	88	79	72	65	58	53
	55 PSF	18	15 - 10	19 - 2	18 - 9	6 - 5	223	204	188	161	128	101	79	61	123	107	94	82	72	63	55
	1.4 cu.yd/(100sq.ft)	16	16 - 11	21 - 1	19 - 10	7 - 0	309	284	227	182	145	116	92	72	122	107	93	81	71	62	54
	6x6 - W1.4 x W1.4	14	17 - 9	22 - 2	20 - 10	7 - 5	397	317	254	205	165	133	106	84	121	106	92	80	70	61	53
	8 1/8	20	14 - 3	10 - 9	11 - 2	4 - 9	156	137	122	108	96	86	77	66	107	96	87	78	71	64	58
	61 PSF	18	15 - 5	17 - 9	18 - 4	6 - 1	245	224	205	190	159	127	101	79	145	127	111	97	86	75	66
	1.55 cu.yd/(100sq.ft)	16	16 - 6	20 - 7	19 - 4	6 - 10	339	316	277	223	180	145	116	92	144	126	110	97	85	74	65
	6x6 - W2.0 x W2.0	14	17 - 4	21 - 7	20 - 4	7 - 2	452	385	310	251	203	164	133	107	143	125	109	96	84	73	64
	8 5/8	20	13 - 11	10 - 0	10 - 5	4 - 8	169	149	132	117	105	93	84	75	117	105	94	85	77	69	62
	67 PSF	18	15 - 1	16 - 6	17 - 3	5 - 9	266	243	223	206	191	157	126	100	168	148	130	114	100	88	78
	1.71 cu.yd/(100sq.ft)	16	16 - 1	20 - 1	18 - 11	6 - 8	369	344	321	271	220	178	144	116	167	147	129	113	100	88	77
	6x6 - W2.0 x W2.0	14	17 - 0	21 - 2	19 - 11	7 - 1	493	445	374	303	247	201	164	133	166	146	128	112	99	87	76
	8 7/8	20	13 - 9	9 - 8	10 - 0	4 - 5	176	155	137	122	109	97	87	78	121	109	98	88	80	72	65
	70 PSF	18	14 - 11	16 - 0	16 - 8	5 - 7	277	253	232	214	198	173	140	112	181	159	140	123	108	96	84
	1.79 cu.yd/(100sq.ft)	16	15 - 11	19 - 11	18 - 9	6 - 8	384	358	334	297	241	196	159	129	180	158	139	122	108	95	83
	6x6 - W2.0 x W2.0	14	16 - 10	20 - 11	19 - 8	7 - 0	500	483	409	332	271	222	181	147	179	157	138	121	107	94	82
	9 5/8	20	13 - 1	8 - 9	9 - 1	3 - 10	196	173	153	136	121	108	97	87	135	121	109	98	89	80	72
	79 PSF	18	14 - 6	14 - 6	15 - 2	5 - 0	309	282	259	239	221	205	187	152	217	195	172	152	134	119	105
	2.02 cu.yd/(100sq.ft)	16	15 - 6	19 - 3	18 - 2	6 - 5	429	399	373	350	316	259	212	174	220	194	171	151	134	118	105
	6x6 - W2.9 x W2.9	14	16 - 4	20 - 4	19 - 2	6 - 9	500	500	500	430	353	291	239	197	219	193	170	150	133	117	104

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022. The slab weight has been subtracted from the service loads listed above.
6. Uniform superimposed service loads were determined by dividing the superimposed LRFD design loads controlled by strength by the load factor of 1.6.
7. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
8. Long-term deflection has not been taken into consideration.
9. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
10. Negative moment (top) reinforcement is required over supports of continuous spans.
11. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

4.5" Composite Deep-Dek® (4.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in^2/ft)	I_D (in^4/ft)		S_p ($in.^3$/ft)	S_n ($in.^3$/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.09	50	0.909	2.677	2.978	0.928	1.162	41780	52312	2843	2384	1729
18	12	4.09	50	1.202	3.745	3.939	1.414	1.596	63643	71838	6616	4077	2891
16	12	5.16	50	1.516	4.938	4.963	1.947	2.011	87602	90495	11426	6334	4423
14	12	6.44	50	1.891	6.191	6.191	2.480	2.507	111589	112837	17829	9635	6645

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

NORMAL WEIGHT CONCRETE (145 PCF), f'c=4000 PSI

MAXIMUM ALLOWABLE SPANS

LRFD

Total Slab Depth (in)	Service Stage									Construction Stage			
	Simple Spans (ft-in)			Continuous Spans (ft-in)						Maximum Unshored Clear Spans (ft-in)			
	LL=40 psf	LL=55 psf	LL=100 psf	LL=40 psf; SDL=20 psf		LL=55 psf; SDL=10 psf		LL=100 psf; SDL=15 psf					
	SDL=20 psf	SDL=10 psf	SDL=15 psf	Interior	End	Interior	End	Interior	End	Single	Double	Triple	Cantilever
20 GA Deck													
6 5/8	19 - 5	19 - 1	15 - 4	24 - 6	23 - 3	23 - 6	22 - 4	19 - 2	17 - 1	15 - 6	13 - 10	14 - 5	5 - 2
7 1/8	20 - 5	20 - 1	16 - 2	26 - 0	24 - 8	25 - 0	23 - 5	20 - 7	18 - 0	15 - 0	12 - 7	13 - 2	5 - 0
7 5/8	21 - 5	21 - 1	17 - 0	27 - 6	25 - 7	26 - 6	24 - 4	21 - 11	18 - 10	14 - 7	11 - 7	12 - 1	4 - 10
8 1/8	22 - 4	22 - 1	17 - 9	28 - 11	26 - 6	27 - 11	25 - 3	23 - 3	19 - 8	14 - 3	10 - 9	11 - 2	4 - 9
8 5/8	23 - 4	23 - 0	18 - 5	30 - 3	27 - 3	29 - 3	26 - 0	24 - 6	20 - 5	13 - 11	10 - 0	10 - 5	4 - 8
8 7/8	23 - 9	23 - 6	18 - 10	30 - 11	27 - 7	29 - 11	26 - 4	24 - 11	20 - 9	13 - 9	9 - 8	10 - 0	4 - 5
9 5/8	25 - 2	24 - 10	19 - 9	32 - 10	28 - 7	31 - 10	27 - 5	26 - 2	21 - 10	13 - 1	8 - 9	9 - 1	3 - 10
18 GA Deck													
6 5/8	20 - 1	19 - 9	17 - 6	24 - 5	23 - 2	23 - 5	22 - 3	19 - 2	18 - 2	16 - 9	21 - 2	19 - 11	7 - 0
7 1/8	21 - 1	20 - 9	18 - 6	25 - 11	24 - 7	24 - 11	23 - 8	20 - 6	19 - 6	16 - 3	20 - 6	19 - 3	6 - 10
7 5/8	22 - 1	21 - 9	19 - 6	27 - 4	26 - 0	26 - 5	25 - 0	21 - 10	20 - 9	15 - 10	19 - 2	18 - 9	6 - 5
8 1/8	23 - 1	22 - 9	20 - 5	28 - 9	27 - 4	27 - 10	26 - 4	23 - 2	22 - 0	15 - 5	17 - 9	18 - 4	6 - 1
8 5/8	24 - 1	23 - 9	21 - 5	30 - 2	28 - 7	29 - 2	27 - 8	24 - 5	23 - 2	15 - 1	16 - 6	17 - 3	5 - 9
8 7/8	24 - 6	24 - 3	21 - 11	30 - 10	29 - 3	29 - 10	28 - 4	25 - 1	23 - 10	14 - 11	16 - 0	16 - 8	5 - 7
9 5/8	26 - 0	25 - 8	23 - 4	32 - 9	31 - 1	31 - 9	30 - 2	26 - 11	25 - 7	14 - 6	14 - 6	15 - 2	5 - 0
16 GA Deck													
6 5/8	20 - 8	20 - 4	18 - 0	24 - 3	23 - 0	23 - 4	22 - 2	19 - 1	18 - 1	17 - 10	22 - 3	20 - 11	7 - 5
7 1/8	21 - 8	21 - 5	19 - 0	25 - 9	24 - 6	24 - 10	23 - 7	20 - 5	19 - 5	17 - 4	21 - 7	20 - 4	7 - 2
7 5/8	22 - 9	22 - 5	20 - 1	27 - 3	25 - 10	26 - 3	24 - 11	21 - 10	20 - 8	16 - 11	21 - 1	19 - 10	7 - 0
8 1/8	23 - 9	23 - 5	21 - 1	28 - 8	27 - 2	27 - 8	26 - 3	23 - 1	21 - 11	16 - 6	20 - 7	19 - 4	6 - 10
8 5/8	24 - 9	24 - 5	22 - 0	30 - 0	28 - 6	29 - 1	27 - 7	24 - 5	23 - 2	16 - 1	20 - 1	18 - 11	6 - 8
8 7/8	25 - 3	24 - 11	22 - 6	30 - 8	29 - 2	29 - 9	28 - 2	25 - 0	23 - 9	15 - 11	19 - 11	18 - 9	6 - 8
9 5/8	26 - 8	26 - 5	24 - 0	32 - 8	31 - 0	31 - 8	30 - 0	26 - 10	25 - 6	15 - 6	19 - 3	18 - 2	6 - 5
14 GA Deck													
6 5/8	21 - 4	21 - 0	18 - 7	24 - 2	22 - 11	23 - 3	22 - 0	19 - 0	18 - 0	18 - 9	23 - 5	22 - 0	7 - 9
7 1/8	22 - 4	22 - 0	19 - 7	25 - 8	24 - 4	24 - 9	23 - 5	20 - 5	19 - 4	18 - 3	22 - 9	21 - 4	7 - 7
7 5/8	23 - 5	23 - 1	20 - 8	27 - 2	25 - 9	26 - 2	24 - 10	21 - 9	20 - 7	17 - 9	22 - 2	20 - 10	7 - 5
8 1/8	24 - 5	24 - 1	21 - 8	28 - 6	27 - 1	27 - 7	26 - 2	23 - 1	21 - 10	17 - 4	21 - 7	20 - 4	7 - 2
8 5/8	25 - 5	25 - 2	22 - 8	29 - 11	28 - 4	28 - 11	27 - 5	24 - 4	23 - 1	17 - 0	21 - 2	19 - 11	7 - 1
8 7/8	25 - 11	25 - 8	23 - 2	30 - 7	29 - 0	29 - 7	28 - 1	24 - 11	23 - 8	16 - 10	20 - 11	19 - 8	7 - 0
9 5/8	27 - 5	27 - 2	24 - 8	32 - 6	30 - 10	31 - 6	29 - 11	26 - 10	25 - 5	16 - 4	20 - 4	19 - 2	6 - 9

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022.
6. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
7. Long-term deflection has not been taken into consideration.
8. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
9. Negative moment (top) reinforcement is required over supports of continuous spans.
10. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

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4.5" Composite Deep-Dek® (4.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in.^{2}/ft)	I_D (in^4/ft)		S_p (in.^{3}/ft)	S_n (in.^{3}/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.09	50	0.909	2.677	2.978	0.928	1.162	41780	52312	2843	2384	1729
18	12	4.09	50	1.202	3.745	3.939	1.414	1.596	63643	71838	6616	4077	2891
16	12	5.16	50	1.516	4.938	4.963	1.947	2.011	87602	90495	11426	6334	4423
14	12	6.44	50	1.891	6.191	6.191	2.480	2.507	111589	112837	17829	9635	6645

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

LIGHTWEIGHT CONCRETE (110 PCF), f'c=4000 PSI

CONSTRUCTION CLEAR SPANS AND UNIFORM SUPERIMPOSED SERVICE LOAD CAPACITY

LRFD

Concrete	Slab Depth (in), Concrete Weight, Concrete Volume, WWF	Deck Gage	Maximum Unshored Clear Spans (ft-in)				Uniform Service Load Capacity, PSF / Spans (ft)														
							Simple Span Conditions								Continuous Span Condition Negative Moment Reinforcement Required						
			Single	Double	Triple	Canti-lever	15	16	17	18	19	20	21	22	20	21	22	23	24	25	26
4000 PSI Lightweight Concrete (110 PCF)	6 5/8	20	16 - 6	16 - 7	17 - 3	5 - 9	123	110	87	68	52				88	79	71	58	47		
	32 PSF	18	17 - 10	22 - 6	21 - 2	7 - 6	167	131	103	81	64	49			93	82	72	64	56	46	
	1.09 cu.yd/(100sq.ft)	16	19 - 0	23 - 8	22 - 3	7 - 11	191	151	120	95	75	59	46		92	81	71	63	55	49	43
	6x6 - W1.4 x W1.4	14	19 - 11	24 - 9	23 - 4	8 - 3	221	175	139	111	89	71	56	43	91	80	70	62	55	48	42
	7 1/8	20	16 - 0	15 - 3	15 - 10	5 - 4	138	122	109	87	68	52			98	89	81	74	61	49	
	37 PSF	18	17 - 4	21 - 10	20 - 6	7 - 3	206	163	129	102	81	63	49		112	99	87	77	68	60	48
	1.25 cu.yd/(100sq.ft)	16	18 - 5	23 - 0	21 - 7	7 - 8	233	184	147	117	93	74	58	45	111	98	86	76	68	60	53
	6x6 - W1.4 x W1.4	14	19 - 4	24 - 1	22 - 8	8 - 0	264	210	168	134	108	86	68	54	110	97	85	75	67	59	52
	7 5/8	20	15 - 7	14 - 1	14 - 8	5 - 2	152	135	121	109	86	67	52		108	98	89	82	75	63	51
	42 PSF	18	16 - 10	21 - 3	20 - 0	7 - 1	233	200	159	127	101	80	63	49	133	117	104	92	82	73	63
	1.4 cu.yd/(100sq.ft)	16	18 - 0	22 - 5	21 - 1	7 - 6	285	226	181	145	116	93	74	58	132	117	103	91	81	72	64
	6x6 - W1.4 x W1.4	14	18 - 11	23 - 6	22 - 1	7 - 10	319	255	204	165	133	107	86	68	131	116	102	90	80	71	63
	8 1/8	20	15 - 3	13 - 1	13 - 8	5 - 1	167	148	133	119	107	85	66	51	118	107	98	89	82	75	66
	46 PSF	18	16 - 6	20 - 9	19 - 6	6 - 11	256	235	195	156	125	100	80	63	156	138	122	108	97	86	77
	1.55 cu.yd/(100sq.ft)	16	17 - 7	21 - 11	20 - 7	7 - 3	344	275	220	178	143	116	93	74	155	137	121	108	96	85	76
	6x6 - W2.0 x W2.0	14	18 - 5	23 - 0	21 - 7	7 - 8	359	308	248	201	163	132	107	86	154	136	120	107	95	84	75
	8 5/8	20	14 - 11	12 - 3	12 - 9	5 - 0	182	161	144	129	117	105	83	66	129	117	106	97	89	81	75
	51 PSF	18	16 - 1	20 - 3	19 - 1	6 - 9	278	255	236	190	153	124	99	79	180	160	142	126	113	101	90
	1.71 cu.yd/(100sq.ft)	16	17 - 2	21 - 5	20 - 2	7 - 2	381	330	266	215	174	142	115	93	179	159	141	125	112	100	89
	6x6 - W2.0 x W2.0	14	18 - 1	22 - 6	21 - 2	7 - 6	383	356	298	242	198	161	131	107	178	158	140	125	111	99	88
	8 7/8	20	14 - 9	11 - 10	12 - 4	4 - 11	189	168	150	135	121	110	93	73	134	121	111	101	92	85	78
	53 PSF	18	15 - 11	19 - 8	18 - 11	6 - 7	289	266	245	209	169	137	110	88	193	171	152	136	121	108	97
	1.79 cu.yd/(100sq.ft)	16	17 - 0	21 - 3	19 - 11	7 - 1	396	360	291	236	192	156	127	103	192	171	152	135	120	107	96
	6x6 - W2.0 x W2.0	14	17 - 11	22 - 3	21 - 0	7 - 5	395	367	326	265	217	177	145	118	192	170	151	134	119	107	95
	9 5/8	20	14 - 4	10 - 10	11 - 4	4 - 9	211	187	167	150	135	122	111	101	149	135	123	112	103	94	86
	60 PSF	18	15 - 6	18 - 0	18 - 5	6 - 2	323	297	274	253	221	181	147	120	232	209	186	166	149	133	120
	2.02 cu.yd/(100sq.ft)	16	16 - 6	20 - 7	19 - 5	6 - 10	432	402	375	306	250	205	168	138	234	208	185	165	148	132	119
	6x6 - W2.9 x W2.9	14	17 - 5	21 - 8	20 - 5	7 - 3	431	401	374	343	281	232	191	158	233	207	184	164	147	132	118

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022. The slab weight has been subtracted from the service loads listed above.
6. Uniform superimposed service loads were determined by dividing the superimposed LRFD design loads controlled by strength by the load factor of 1.6.
7. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
8. Long-term deflection has not been taken into consideration.
9. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
10. Negative moment (top) reinforcement is required over supports of continuous spans.
11. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

4.5" Composite Deep-Dek® (4.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in^2/ft)	I_D (in^4/ft)		S_p ($in.^3$/ft)	S_n ($in.^3$/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.09	50	0.909	2.677	2.978	0.928	1.162	41780	52312	2843	2384	1729
18	12	4.09	50	1.202	3.745	3.939	1.414	1.596	63643	71838	6616	4077	2891
16	12	5.16	50	1.516	4.938	4.963	1.947	2.011	87602	90495	11426	6334	4423
14	12	6.44	50	1.891	6.191	6.191	2.480	2.507	111589	112837	17829	9635	6645

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

LIGHTWEIGHT CONCRETE (110 PCF), f'c=4000 PSI

MAXIMUM ALLOWABLE SPANS

LRFD

Total Slab Depth (in)	Service Stage									Construction Stage			
	Simple Spans (ft-in)			Continuous Spans (ft-in)						Maximum Unshored Clear Spans (ft-in)			
	LL=40 psf	LL=55 psf	LL=100 psf	LL=40 psf; SDL=20 psf		LL=55 psf; SDL=10 psf		LL=100 psf; SDL=15 psf					
	SDL=20 psf	SDL=10 psf	SDL=15 psf	Interior	End	Interior	End	Interior	End	Single	Double	Triple	Cantilever
20 GA Deck													
6 5/8	18 - 6	18 - 2	15 - 10	25 - 7	22 - 10	24 - 6	22 - 5	19 - 8	17 - 8	16 - 6	16 - 7	17 - 3	5 - 9
7 1/8	19 - 6	19 - 2	16 - 10	27 - 4	24 - 1	26 - 2	23 - 8	21 - 2	18 - 9	16 - 0	15 - 3	15 - 10	5 - 4
7 5/8	20 - 5	20 - 2	17 - 9	29 - 0	25 - 3	27 - 10	24 - 10	22 - 8	19 - 9	15 - 7	14 - 1	14 - 8	5 - 2
8 1/8	21 - 5	21 - 1	18 - 8	30 - 7	26 - 5	29 - 5	26 - 1	24 - 1	20 - 8	15 - 3	13 - 1	13 - 8	5 - 1
8 5/8	22 - 4	22 - 0	19 - 6	32 - 1	27 - 7	30 - 11	27 - 3	25 - 6	21 - 6	14 - 11	12 - 3	12 - 9	5 - 0
8 7/8	22 - 10	22 - 6	19 - 10	32 - 11	28 - 2	31 - 8	27 - 10	26 - 2	21 - 11	14 - 9	11 - 10	12 - 4	4 - 11
9 5/8	24 - 2	23 - 11	21 - 0	35 - 1	29 - 11	33 - 10	29 - 6	27 - 9	23 - 1	14 - 4	10 - 10	11 - 4	4 - 9
18 GA Deck													
6 5/8	19 - 3	18 - 11	16 - 7	25 - 6	23 - 9	24 - 5	23 - 2	19 - 8	18 - 8	17 - 10	22 - 6	21 - 2	7 - 6
7 1/8	20 - 3	19 - 11	17 - 6	27 - 2	25 - 0	26 - 1	24 - 7	21 - 2	20 - 1	17 - 4	21 - 10	20 - 6	7 - 3
7 5/8	21 - 2	20 - 11	18 - 5	28 - 10	26 - 2	27 - 8	25 - 10	22 - 7	21 - 5	16 - 10	21 - 3	20 - 0	7 - 1
8 1/8	22 - 2	21 - 10	19 - 5	30 - 5	27 - 5	29 - 3	27 - 0	24 - 0	22 - 9	16 - 6	20 - 9	19 - 6	6 - 11
8 5/8	23 - 2	22 - 10	20 - 4	32 - 0	28 - 8	30 - 10	28 - 3	25 - 5	24 - 1	16 - 1	20 - 3	19 - 1	6 - 9
8 7/8	23 - 8	23 - 4	20 - 10	32 - 9	29 - 3	31 - 7	28 - 10	26 - 1	24 - 9	15 - 11	19 - 8	18 - 11	6 - 7
9 5/8	25 - 1	24 - 9	22 - 2	35 - 0	31 - 0	33 - 9	30 - 7	28 - 1	26 - 8	15 - 6	18 - 0	18 - 5	6 - 2
16 GA Deck													
6 5/8	19 - 11	19 - 7	17 - 2	25 - 4	24 - 1	24 - 4	23 - 1	19 - 7	18 - 7	19 - 0	23 - 8	22 - 3	7 - 11
7 1/8	20 - 10	20 - 6	18 - 1	27 - 1	25 - 8	26 - 0	24 - 8	21 - 1	20 - 0	18 - 5	23 - 0	21 - 7	7 - 8
7 5/8	21 - 11	21 - 7	19 - 1	28 - 9	27 - 0	27 - 7	26 - 2	22 - 6	21 - 5	18 - 0	22 - 5	21 - 1	7 - 6
8 1/8	22 - 11	22 - 7	20 - 0	30 - 4	28 - 3	29 - 2	27 - 8	23 - 11	22 - 9	17 - 7	21 - 11	20 - 7	7 - 3
8 5/8	23 - 11	23 - 7	21 - 0	31 - 10	29 - 6	30 - 8	29 - 1	25 - 4	24 - 1	17 - 2	21 - 5	20 - 2	7 - 2
8 7/8	24 - 5	24 - 1	21 - 6	32 - 7	30 - 2	31 - 5	29 - 9	26 - 0	24 - 8	17 - 0	21 - 3	19 - 11	7 - 1
9 5/8	25 - 10	25 - 6	22 - 11	34 - 10	31 - 11	33 - 8	31 - 6	28 - 1	26 - 7	16 - 6	20 - 7	19 - 5	6 - 10
14 GA Deck													
6 5/8	20 - 8	20 - 4	17 - 10	25 - 3	23 - 11	24 - 2	22 - 11	19 - 6	18 - 6	19 - 11	24 - 9	23 - 4	8 - 3
7 1/8	21 - 7	21 - 3	18 - 8	26 - 11	25 - 7	25 - 10	24 - 6	21 - 0	19 - 11	19 - 4	24 - 1	22 - 8	8 - 0
7 5/8	22 - 7	22 - 3	19 - 8	28 - 7	27 - 1	27 - 6	26 - 1	22 - 6	21 - 4	18 - 11	23 - 6	22 - 1	7 - 10
8 1/8	23 - 7	23 - 3	20 - 8	30 - 2	28 - 7	29 - 0	27 - 6	23 - 11	22 - 8	18 - 5	23 - 0	21 - 7	7 - 8
8 5/8	24 - 7	24 - 3	21 - 8	31 - 8	30 - 1	30 - 7	29 - 0	25 - 3	24 - 0	18 - 1	22 - 6	21 - 2	7 - 6
8 7/8	25 - 1	24 - 9	22 - 2	32 - 6	30 - 10	31 - 4	29 - 8	25 - 11	24 - 7	17 - 11	22 - 3	21 - 0	7 - 5
9 5/8	26 - 8	26 - 3	23 - 7	34 - 8	32 - 11	33 - 6	31 - 9	28 - 0	26 - 6	17 - 5	21 - 8	20 - 5	7 - 3

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022.
6. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
7. Long-term deflection has not been taken into consideration.
8. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
9. Negative moment (top) reinforcement is required over supports of continuous spans.
10. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

6" Composite Deep-Dek® (6.0CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in.^{2}/ft)	I_D (in^4/ft) single	I_D (in^4/ft) multi	S_p (in.^{3}/ft)	S_n (in.^{3}/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
20	12	3.44	50	1.011	5.199	5.668	1.240	1.667	55808	75007	2115	2239	1716
18	12	4.55	50	1.338	7.237	7.601	2.068	2.358	93065	106121	4918	3872	2873
16	12	5.74	50	1.687	9.522	9.579	2.878	2.971	129519	133692	9895	6059	4398
14	12	7.16	50	2.105	11.950	11.950	3.675	3.705	165356	166719	17829	9272	6611

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

NORMAL WEIGHT CONCRETE (145 PCF), f'c=4000 PSI

CONSTRUCTION CLEAR SPANS AND UNIFORM SUPERIMPOSED SERVICE LOAD CAPACITY

LRFD

Concrete	Slab Depth (in), Concrete Weight, Concrete Volume, WWF	Deck Gage	Maximum Unshored Clear Spans (ft-in)				Uniform Service Load Capacity, PSF / Spans (ft)														
							Simple Span Conditions								Continuous Span Condition Negative Moment Reinforcement Required						
			Single	Double	Triple	Canti-lever	17	18	19	20	21	22	23	24	22	23	24	25	26	27	28
4000 PSI Normal Weight Concrete (145 PCF)	8 1/8	20	17 - 9	12 - 7	13 - 1	5 - 10	163	141	123	107	94	75	59	46	118	105	93	83	74	65	58
	48 PSF	18	19 - 2	20 - 9	21 - 7	7 - 2	212	185	162	135	110	89	71	56	117	104	92	82	73	65	57
	1.23 cu.yd/(100sq.ft)	16	20 - 5	25 - 6	23 - 11	8 - 6	262	229	190	155	127	103	84	67	116	103	91	81	72	64	56
	6x6 - W1.4 x W1.4	14	21 - 6	26 - 9	25 - 2	8 - 11	319	266	217	179	147	120	98	80	115	102	90	80	71	63	55
	8 5/8	20	17 - 3	11 - 6	12 - 0	5 - 1	224	208	176	142	115	93	74	58	136	121	108	96	85	76	68
	54 PSF	18	18 - 8	19 - 1	19 - 11	6 - 8	240	209	183	161	133	108	87	70	136	120	107	95	85	75	67
	1.39 cu.yd/(100sq.ft)	16	19 - 11	24 - 9	23 - 4	8 - 3	292	256	225	185	151	124	101	82	135	119	106	94	84	74	66
	6x6 - W1.4 x W1.4	14	20 - 11	26 - 1	24 - 6	8 - 8	353	310	254	209	172	142	116	95	134	118	105	93	83	73	65
	9 1/8	20	16 - 10	10 - 8	11 - 1	4 - 4	245	227	211	171	139	113	91	72	156	139	124	110	98	88	78
	60 PSF	18	18 - 2	17 - 8	18 - 5	6 - 2	313	291	239	196	160	131	107	86	155	138	123	109	97	87	77
	1.54 cu.yd/(100sq.ft)	16	19 - 5	24 - 3	22 - 9	8 - 1	328	287	252	220	181	149	122	100	154	137	122	108	97	86	76
	6x6 - W1.4 x W1.4	14	20 - 5	25 - 5	23 - 11	8 - 6	391	343	300	248	205	169	140	115	153	136	121	107	95	85	75
	9 5/8	20	16 - 5	9 - 11	10 - 4	3 - 9	265	245	228	204	167	136	110	89	178	158	141	126	112	100	90
	66 PSF	18	17 - 10	16 - 5	17 - 2	5 - 11	339	315	283	233	191	157	129	105	177	157	140	125	111	99	89
	1.7 cu.yd/(100sq.ft)	16	19 - 0	23 - 8	22 - 3	7 - 11	368	322	284	251	215	178	147	120	176	156	139	124	111	99	88
	6x6 - W2.0 x W2.0	14	20 - 0	24 - 11	23 - 5	8 - 4	435	382	337	292	242	201	167	138	175	155	138	123	109	97	87
	10 1/8	20	15 - 10	9 - 3	9 - 8	3 - 4	285	264	245	225	198	162	132	107	200	179	159	142	127	114	102
	72 PSF	18	17 - 5	15 - 5	16 - 0	5 - 10	365	340	317	274	226	186	154	126	200	178	159	142	127	113	101
	1.85 cu.yd/(100sq.ft)	16	18 - 7	23 - 3	21 - 10	7 - 9	451	421	370	306	254	210	174	144	199	177	158	141	126	112	100
	6x6 - W2.0 x W2.0	14	19 - 7	24 - 5	23 - 0	8 - 2	483	424	375	332	284	237	197	164	198	176	157	140	125	111	99
	10 3/8	20	15 - 7	9 - 0	9 - 4	3 - 1	295	273	254	234	206	176	145	118	213	189	169	151	135	121	109
	76 PSF	18	17 - 3	14 - 11	15 - 6	5 - 9	378	352	329	296	245	202	167	137	212	189	168	150	135	120	108
	1.93 cu.yd/(100sq.ft)	16	18 - 5	22 - 7	21 - 8	7 - 6	467	436	399	330	274	228	189	157	211	188	167	149	134	119	107
	6x6 - W2.0 x W2.0	14	19 - 5	24 - 2	22 - 9	8 - 1	500	447	395	351	307	256	214	179	210	187	166	148	133	118	106
	11 1/8	20	14 - 11	8 - 2	8 - 6	2 - 7	325	301	280	260	230	203	181	153	239	224	200	179	161	144	130
	85 PSF	18	16 - 10	13 - 7	14 - 2	5 - 7	417	388	363	340	308	256	213	177	250	223	199	179	160	144	129
	2.16 cu.yd/(100sq.ft)	16	17 - 11	20 - 8	21 - 1	7 - 0	500	481	450	412	344	287	240	200	249	222	199	178	159	143	128
	6x6 - W2.9 x W2.9	14	18 - 11	23 - 7	22 - 2	7 - 10	500	500	500	458	384	322	270	227	248	221	198	177	158	142	127

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022. The slab weight has been subtracted from the service loads listed above.
6. Uniform superimposed service loads were determined by dividing the superimposed LRFD design loads controlled by strength by the load factor of 1.6.
7. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
8. Long-term deflection has not been taken into consideration.
9. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
10. Negative moment (top) reinforcement is required over supports of continuous spans.
11. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

6" Composite Deep-Dek® (6.0CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in^2/ft)	I_D (in^4/ft)		S_p ($in.^3$/ft)	S_n ($in.^3$/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.44	50	1.011	5.199	5.668	1.240	1.667	55808	75007	2115	2239	1716
18	12	4.55	50	1.338	7.237	7.601	2.068	2.358	93065	106121	4918	3872	2873
16	12	5.74	50	1.687	9.522	9.579	2.878	2.971	129519	133692	9895	6059	4398
14	12	7.16	50	2.105	11.950	11.950	3.675	3.705	165356	166719	17829	9272	6611

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

NORMAL WEIGHT CONCRETE (145 PCF), f'c=4000 PSI

MAXIMUM ALLOWABLE SPANS

LRFD

Total Slab Depth (in)	Service Stage									Construction Stage			
	Simple Spans (ft-in)			Continuous Spans (ft-in)						Maximum Unshored Clear Spans (ft-in)			
	LL=40 psf	LL=55 psf	LL=100 psf	LL=40 psf; SDL=20 psf		LL=55 psf; SDL=10 psf		LL=100 psf; SDL=15 psf					
	SDL=20 psf	SDL=10 psf	SDL=15 psf	Interior	End	Interior	End	Interior	End	Single	Double	Triple	Cantilever
20 GA Deck													
8 1/8	22 - 11	22 - 7	19 - 9	30 - 0	28 - 4	28 - 10	27 - 5	23 - 9	22 - 6	17 - 9	12 - 7	13 - 1	5 - 10
8 5/8	23 - 10	23 - 6	21 - 0	31 - 4	29 - 6	30 - 3	28 - 8	25 - 0	23 - 9	17 - 3	11 - 6	12 - 0	5 - 1
9 1/8	24 - 9	24 - 5	21 - 11	32 - 8	30 - 7	31 - 6	29 - 11	26 - 3	24 - 11	16 - 10	10 - 8	11 - 1	4 - 4
9 5/8	25 - 8	25 - 4	22 - 10	33 - 11	31 - 8	32 - 10	31 - 1	27 - 6	26 - 1	16 - 5	9 - 11	10 - 4	3 - 9
10 1/8	26 - 6	26 - 2	23 - 8	35 - 2	32 - 9	34 - 1	32 - 4	28 - 8	27 - 3	15 - 10	9 - 3	9 - 8	3 - 4
10 3/8	26 - 11	26 - 8	24 - 1	35 - 9	33 - 4	34 - 8	32 - 10	29 - 3	27 - 9	15 - 7	9 - 0	9 - 4	3 - 1
11 1/8	28 - 3	27 - 11	25 - 5	37 - 6	34 - 10	36 - 5	34 - 6	31 - 0	29 - 5	14 - 11	8 - 2	8 - 6	2 - 7
18 GA Deck													
8 1/8	23 - 9	23 - 5	20 - 9	29 - 10	28 - 4	28 - 9	27 - 3	23 - 8	22 - 5	19 - 2	20 - 9	21 - 7	7 - 2
8 5/8	24 - 8	24 - 4	21 - 9	31 - 3	29 - 7	30 - 1	28 - 7	24 - 11	23 - 8	18 - 8	19 - 1	19 - 11	6 - 8
9 1/8	25 - 7	25 - 3	22 - 8	32 - 6	30 - 10	31 - 5	29 - 10	26 - 2	24 - 10	18 - 2	17 - 8	18 - 5	6 - 2
9 5/8	26 - 6	26 - 2	23 - 7	33 - 10	32 - 1	32 - 8	31 - 0	27 - 5	26 - 0	17 - 10	16 - 5	17 - 2	5 - 11
10 1/8	27 - 4	27 - 0	24 - 5	35 - 0	33 - 3	33 - 11	32 - 2	28 - 7	27 - 2	17 - 5	15 - 5	16 - 0	5 - 10
10 3/8	27 - 10	27 - 6	24 - 11	35 - 8	33 - 10	34 - 6	32 - 9	29 - 2	27 - 9	17 - 3	14 - 11	15 - 6	5 - 9
11 1/8	29 - 1	28 - 9	26 - 2	37 - 5	35 - 6	36 - 4	34 - 5	30 - 11	29 - 4	16 - 10	13 - 7	14 - 2	5 - 7
16 GA Deck													
8 1/8	24 - 6	24 - 2	21 - 6	29 - 9	28 - 2	28 - 7	27 - 2	23 - 7	22 - 4	20 - 5	25 - 6	23 - 11	8 - 6
8 5/8	25 - 4	25 - 0	22 - 4	31 - 1	29 - 6	30 - 0	28 - 5	24 - 10	23 - 7	19 - 11	24 - 9	23 - 4	8 - 3
9 1/8	26 - 3	25 - 11	23 - 4	32 - 5	30 - 9	31 - 3	29 - 8	26 - 1	24 - 9	19 - 5	24 - 3	22 - 9	8 - 1
9 5/8	27 - 3	26 - 11	24 - 3	33 - 8	31 - 11	32 - 7	30 - 11	27 - 4	25 - 11	19 - 0	23 - 8	22 - 3	7 - 11
10 1/8	28 - 1	27 - 9	25 - 2	34 - 11	33 - 1	33 - 10	32 - 1	28 - 7	27 - 1	18 - 7	23 - 3	21 - 10	7 - 9
10 3/8	28 - 7	28 - 3	25 - 7	35 - 6	33 - 8	34 - 5	32 - 8	29 - 2	27 - 8	18 - 5	22 - 7	21 - 8	7 - 6
11 1/8	29 - 11	29 - 7	26 - 11	37 - 3	35 - 4	36 - 2	34 - 4	30 - 10	29 - 3	17 - 11	20 - 8	21 - 1	7 - 0
14 GA Deck													
8 1/8	25 - 4	24 - 11	22 - 3	29 - 7	28 - 0	28 - 6	27 - 0	23 - 6	22 - 4	21 - 6	26 - 9	25 - 2	8 - 11
8 5/8	26 - 1	25 - 9	23 - 1	30 - 11	29 - 4	29 - 10	28 - 4	24 - 9	23 - 6	20 - 11	26 - 1	24 - 6	8 - 8
9 1/8	27 - 0	26 - 8	24 - 0	32 - 3	30 - 7	31 - 2	29 - 7	26 - 0	24 - 8	20 - 5	25 - 5	23 - 11	8 - 6
9 5/8	28 - 0	27 - 8	24 - 11	33 - 6	31 - 9	32 - 5	30 - 9	27 - 3	25 - 10	20 - 0	24 - 11	23 - 5	8 - 4
10 1/8	28 - 11	28 - 7	25 - 10	34 - 9	32 - 11	33 - 8	31 - 11	28 - 5	27 - 0	19 - 7	24 - 5	23 - 0	8 - 2
10 3/8	29 - 4	29 - 0	26 - 4	35 - 4	33 - 6	34 - 3	32 - 6	29 - 1	27 - 7	19 - 5	24 - 2	22 - 9	8 - 1
11 1/8	30 - 9	30 - 5	27 - 9	37 - 1	35 - 2	36 - 0	34 - 2	30 - 9	29 - 2	18 - 11	23 - 7	22 - 2	7 - 10

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022.
6. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
7. Long-term deflection has not been taken into consideration.
8. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
9. Negative moment (top) reinforcement is required over supports of continuous spans.
10. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

6" Composite Deep-Dek® (6.0CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in.^{2}/ft)	I_D (in^4/ft)		S_p (in.^{3}/ft)	S_n (in.^{3}/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.44	50	1.011	5.199	5.668	1.240	1.667	55808	75007	2115	2239	1716
18	12	4.55	50	1.338	7.237	7.601	2.068	2.358	93065	106121	4918	3872	2873
16	12	5.74	50	1.687	9.522	9.579	2.878	2.971	129519	133692	9895	6059	4398
14	12	7.16	50	2.105	11.950	11.950	3.675	3.705	165356	166719	17829	9272	6611

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

LIGHTWEIGHT CONCRETE (110 PCF), f'c=4000 PSI

CONSTRUCTION CLEAR SPANS AND UNIFORM SUPERIMPOSED SERVICE LOAD CAPACITY

LRFD

Concrete	Slab Depth (in), Concrete Weight, Concrete Volume, WWF	Deck Gage	Maximum Unshored Clear Spans (ft-in)				Uniform Service Load Capacity, PSF / Spans (ft)														
							Simple Span Conditions								Continuous Span Condition Negative Moment Reinforcement Required						
			Single	Double	Triple	Canti-lever	17	18	19	20	21	22	23	24	22	23	24	25	26	27	28
4000 PSI Lightweight Concrete (110 PCF)	8 1/8	20	18 - 11	15 - 2	15 - 9	6 - 4	172	141	114	92	74	59	47		127	114	102	88	73	61	51
	37 PSF	18	20 - 5	24 - 11	24 - 2	8 - 4	206	167	136	110	90	73	58	47	126	113	101	91	81	73	63
	1.23 cu.yd/(100sq.ft)	16	21 - 8	27 - 1	25 - 5	9 - 0	238	194	158	130	106	87	71	57	125	112	100	90	81	72	65
	6x6 - W1.4 x W1.4	14	22 - 9	28 - 4	26 - 8	9 - 5	276	226	185	153	126	104	85	70	124	111	99	89	80	71	64
	8 5/8	20	18 - 5	14 - 0	14 - 7	6 - 2	208	168	136	111	89	72	57	45	146	131	118	105	89	74	62
	41 PSF	18	19 - 10	23 - 1	23 - 7	7 - 10	240	195	159	130	106	86	70	56	145	130	117	105	94	85	75
	1.39 cu.yd/(100sq.ft)	16	21 - 2	26 - 4	24 - 10	8 - 9	274	223	183	150	123	101	83	67	145	129	116	104	93	84	76
	6x6 - W1.4 x W1.4	14	22 - 3	27 - 8	26 - 0	9 - 3	314	257	211	174	144	119	98	80	143	128	115	103	92	83	75
	9 1/8	20	18 - 0	13 - 0	13 - 7	6 - 0	247	200	163	133	108	87	70	56	167	150	135	121	107	90	76
	46 PSF	18	19 - 5	21 - 6	22 - 5	7 - 6	283	231	189	154	127	104	84	68	166	149	134	120	108	98	88
	1.54 cu.yd/(100sq.ft)	16	20 - 8	25 - 9	24 - 3	8 - 7	319	260	214	176	145	119	98	80	165	148	133	119	107	97	87
	6x6 - W1.4 x W1.4	14	21 - 9	27 - 0	25 - 5	9 - 0	347	295	243	201	166	138	114	94	164	147	132	118	106	96	86
	9 5/8	20	17 - 7	12 - 2	12 - 8	5 - 7	277	236	193	158	129	105	85	69	190	170	153	138	124	108	92
	50 PSF	18	19 - 0	20 - 2	21 - 0	7 - 0	332	271	222	183	150	124	101	83	189	169	152	137	123	111	101
	1.7 cu.yd/(100sq.ft)	16	20 - 3	25 - 3	23 - 9	8 - 5	369	305	251	207	171	142	117	96	188	168	151	136	123	111	100
	6x6 - W2.0 x W2.0	14	21 - 3	26 - 6	24 - 11	8 - 10	367	343	283	234	194	162	134	111	187	167	150	135	121	110	99
	10 1/8	20	17 - 3	11 - 5	11 - 11	5 - 0	298	276	226	186	152	125	102	83	196	186	172	156	140	127	109
	55 PSF	18	18 - 7	18 - 11	19 - 9	6 - 7	378	316	260	214	177	146	121	99	213	191	172	155	140	126	114
	1.85 cu.yd/(100sq.ft)	16	19 - 10	24 - 9	23 - 3	8 - 3	390	355	293	242	201	167	139	115	212	190	171	154	139	125	113
	6x6 - W2.0 x W2.0	14	20 - 10	26 - 0	24 - 5	8 - 8	388	364	329	273	228	190	158	132	211	189	170	153	138	124	112
	10 3/8	20	17 - 0	11 - 1	11 - 7	4 - 8	309	287	244	201	165	136	111	91	199	188	178	165	149	135	119
	57 PSF	18	18 - 5	18 - 4	19 - 2	6 - 5	392	341	280	232	192	159	131	108	225	202	182	164	148	134	121
	1.93 cu.yd/(100sq.ft)	16	19 - 8	24 - 6	23 - 1	8 - 2	400	375	316	262	217	181	150	125	224	201	181	163	147	133	120
	6x6 - W2.0 x W2.0	14	20 - 8	25 - 9	24 - 3	8 - 7	398	373	351	294	246	205	172	143	223	200	180	162	146	132	119
	11 1/8	20	16 - 7	10 - 2	10 - 7	4 - 0	331	310	291	252	208	172	142	117	206	195	184	175	166	158	145
	64 PSF	18	17 - 11	16 - 11	17 - 7	6 - 0	432	404	349	289	240	200	167	138	265	238	215	194	175	159	144
	2.16 cu.yd/(100sq.ft)	16	19 - 2	23 - 11	22 - 6	8 - 0	431	404	380	325	272	227	190	159	265	238	214	193	174	158	143
	6x6 - W2.9 x W2.9	14	20 - 2	25 - 1	23 - 7	8 - 4	429	402	378	357	306	257	216	181	263	236	213	192	173	157	142

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022. The slab weight has been subtracted from the service loads listed above.
6. Uniform superimposed service loads were determined by dividing the superimposed LRFD design loads controlled by strength by the load factor of 1.6.
7. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
8. Long-term deflection has not been taken into consideration.
9. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
10. Negative moment (top) reinforcement is required over supports of continuous spans.
11. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

6" Composite Deep-Dek® (6.0CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in^2/ft)	I_D (in^4/ft)		S_p ($in.^3$/ft)	S_n ($in.^3$/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.44	50	1.011	5.199	5.668	1.240	1.667	55808	75007	2115	2239	1716
18	12	4.55	50	1.338	7.237	7.601	2.068	2.358	93065	106121	4918	3872	2873
16	12	5.74	50	1.687	9.522	9.579	2.878	2.971	129519	133692	9895	6059	4398
14	12	7.16	50	2.105	11.950	11.950	3.675	3.705	165356	166719	17829	9272	6611

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

LIGHTWEIGHT CONCRETE (110 PCF), f'c=4000 PSI

MAXIMUM ALLOWABLE SPANS

LRFD

Total Slab Depth (in)	Service Stage									Construction Stage			
	Simple Spans (ft-in)			Continuous Spans (ft-in)						Maximum Unshored Clear Spans (ft-in)			
	LL=40 psf	LL=55 psf	LL=100 psf	LL=40 psf; SDL=20 psf		LL=55 psf; SDL=10 psf		LL=100 psf; SDL=15 psf					
	SDL=20 psf	SDL=10 psf	SDL=15 psf	Interior	End	Interior	End	Interior	End	Single	Double	Triple	Cantilever
20 GA Deck													
8 1/8	21 - 11	21 - 7	19 - 0	31 - 6	27 - 1	30 - 2	26 - 8	24 - 5	23 - 2	18 - 11	15 - 2	15 - 9	6 - 4
8 5/8	22 - 10	22 - 5	19 - 10	33 - 1	28 - 2	31 - 9	27 - 9	25 - 10	24 - 6	18 - 5	14 - 0	14 - 7	6 - 2
9 1/8	23 - 8	23 - 4	20 - 8	34 - 7	29 - 4	33 - 3	28 - 10	27 - 3	25 - 7	18 - 0	13 - 0	13 - 7	6 - 0
9 5/8	24 - 7	24 - 3	21 - 7	36 - 0	30 - 5	34 - 8	29 - 11	28 - 7	26 - 8	17 - 7	12 - 2	12 - 8	5 - 7
10 1/8	25 - 5	25 - 1	22 - 5	37 - 5	31 - 5	36 - 1	31 - 0	29 - 11	27 - 8	17 - 3	11 - 5	11 - 11	5 - 0
10 3/8	25 - 11	25 - 6	22 - 10	38 - 1	32 - 0	36 - 9	31 - 7	30 - 6	28 - 3	17 - 0	11 - 1	11 - 7	4 - 8
11 1/8	27 - 2	26 - 10	24 - 1	40 - 2	33 - 7	38 - 10	33 - 2	32 - 5	29 - 9	16 - 7	10 - 2	10 - 7	4 - 0
18 GA Deck													
8 1/8	22 - 11	22 - 6	19 - 10	31 - 4	28 - 3	30 - 1	27 - 10	24 - 4	23 - 1	20 - 5	24 - 11	24 - 2	8 - 4
8 5/8	23 - 8	23 - 4	20 - 7	32 - 11	29 - 3	31 - 7	28 - 10	25 - 9	24 - 5	19 - 10	23 - 1	23 - 7	7 - 10
9 1/8	24 - 7	24 - 3	21 - 6	34 - 5	30 - 4	33 - 1	29 - 11	27 - 2	25 - 9	19 - 5	21 - 6	22 - 5	7 - 6
9 5/8	25 - 6	25 - 1	22 - 4	35 - 10	31 - 6	34 - 6	31 - 0	28 - 6	27 - 0	19 - 0	20 - 2	21 - 0	7 - 0
10 1/8	26 - 4	26 - 0	23 - 3	37 - 3	32 - 7	35 - 11	32 - 2	29 - 10	28 - 3	18 - 7	18 - 11	19 - 9	6 - 7
10 3/8	26 - 10	26 - 5	23 - 8	38 - 0	33 - 2	36 - 8	32 - 8	30 - 5	28 - 11	18 - 5	18 - 4	19 - 2	6 - 5
11 1/8	28 - 1	27 - 9	25 - 0	40 - 0	34 - 9	38 - 8	34 - 4	32 - 4	30 - 8	17 - 11	16 - 11	17 - 7	6 - 0
16 GA Deck													
8 1/8	23 - 9	23 - 5	20 - 7	31 - 2	29 - 5	29 - 11	28 - 5	24 - 3	23 - 1	21 - 8	27 - 1	25 - 5	9 - 0
8 5/8	24 - 6	24 - 2	21 - 4	32 - 9	30 - 4	31 - 5	29 - 10	25 - 8	24 - 4	21 - 2	26 - 4	24 - 10	8 - 9
9 1/8	25 - 4	25 - 0	22 - 2	34 - 3	31 - 4	32 - 11	30 - 11	27 - 1	25 - 8	20 - 8	25 - 9	24 - 3	8 - 7
9 5/8	26 - 3	25 - 11	23 - 1	35 - 8	32 - 6	34 - 5	32 - 0	28 - 5	26 - 11	20 - 3	25 - 3	23 - 9	8 - 5
10 1/8	27 - 2	26 - 10	24 - 0	37 - 1	33 - 7	35 - 10	33 - 2	29 - 9	28 - 2	19 - 10	24 - 9	23 - 3	8 - 3
10 3/8	27 - 8	27 - 3	24 - 5	37 - 10	34 - 2	36 - 6	33 - 8	30 - 4	28 - 10	19 - 8	24 - 6	23 - 1	8 - 2
11 1/8	29 - 0	28 - 7	25 - 9	39 - 10	35 - 10	38 - 6	35 - 4	32 - 3	30 - 7	19 - 2	23 - 11	22 - 6	8 - 0
14 GA Deck													
8 1/8	24 - 9	24 - 4	21 - 6	31 - 0	29 - 5	29 - 9	28 - 3	24 - 2	23 - 0	22 - 9	28 - 4	26 - 8	9 - 5
8 5/8	25 - 5	25 - 0	22 - 2	32 - 6	30 - 10	31 - 3	29 - 8	25 - 7	24 - 3	22 - 3	27 - 8	26 - 0	9 - 3
9 1/8	26 - 2	25 - 10	22 - 11	34 - 0	32 - 3	32 - 9	31 - 1	27 - 0	25 - 7	21 - 9	27 - 0	25 - 5	9 - 0
9 5/8	27 - 1	26 - 8	23 - 10	35 - 6	33 - 6	34 - 3	32 - 5	28 - 4	26 - 10	21 - 3	26 - 6	24 - 11	8 - 10
10 1/8	28 - 0	27 - 8	24 - 9	36 - 11	34 - 7	35 - 7	33 - 10	29 - 7	28 - 1	20 - 10	26 - 0	24 - 5	8 - 8
10 3/8	28 - 6	28 - 1	25 - 2	37 - 7	35 - 2	36 - 4	34 - 5	30 - 3	28 - 8	20 - 8	25 - 9	24 - 3	8 - 7
11 1/8	29 - 10	29 - 6	26 - 7	39 - 8	36 - 11	38 - 4	36 - 4	32 - 2	30 - 6	20 - 2	25 - 1	23 - 7	8 - 4

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 1.5" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022.
6. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
7. Long-term deflection has not been taken into consideration.
8. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
9. Negative moment (top) reinforcement is required over supports of continuous spans.
10. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**

7.5" Composite Deep-Dek® (7.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in.^{2}/ft)	I_D (in^4/ft)		S_p (in.^{3}/ft)	S_n (in.^{3}/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.79	50	1.113	8.505	9.285	1.558	2.101	70108	94546	1683	784	1245
18	12	5.01	50	1.473	12.109	12.510	2.631	2.994	118399	134710	3913	1554	2857
16	12	6.32	50	1.857	15.895	15.992	3.884	4.009	174794	180426	7871	2426	4376
14	12	7.89	50	2.318	19.952	19.952	4.965	5.000	223447	225015	15371	3699	6582

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

NORMAL WEIGHT CONCRETE (145 PCF), f'c=4000 PSI

CONSTRUCTION CLEAR SPANS AND UNIFORM SUPERIMPOSED SERVICE LOAD CAPACITY

LRFD

Concrete	Slab Depth (in), Concrete Weight, Concrete Volume, WWF	Deck Gage	Maximum Unshored Clear Spans (ft-in)				Uniform Service Load Capacity, PSF / Spans (ft)													
							Simple Span Conditions								Continuous Span Condition Negative Moment Reinforcement Required					
			Single	Double	Triple	Canti-lever	19	20	21	22	23	24	25	26	24	25	26	27	28	29	30
4000 PSI Normal Weight Concrete (145 PCF)	9 5/8	20	12 - 9	8 - 5	8 - 9	3 - 8	161	141	124	109	96	85	75	64	132	119	107	96	86	78	70
	54 PSF	18	21 - 3	19 - 1	19 - 10	7 - 1	213	188	167	148	132	115	95	78	145	130	117	106	95	86	77
	1.37 cu.yd/(100sq.ft)	16	22 - 7	28 - 2	26 - 6	9 - 5	267	236	210	187	160	134	111	92	144	130	116	105	94	85	76
	6x6 - W1.4 x W1.4	14	23 - 9	29 - 7	27 - 10	9 - 10	313	278	248	221	185	156	131	109	143	128	115	103	93	84	75
	10 1/8	20	11 - 6	7 - 9	8 - 1	3 - 6	184	168	154	141	130	116	95	78	143	132	122	113	105	98	88
	60 PSF	18	20 - 9	17 - 8	18 - 5	6 - 11	235	208	184	163	145	129	111	92	163	147	132	119	107	97	87
	1.52 cu.yd/(100sq.ft)	16	22 - 1	26 - 9	25 - 11	8 - 11	290	258	229	205	183	154	128	107	162	146	131	118	106	96	86
	6x6 - W1.4 x W1.4	14	23 - 3	28 - 11	27 - 3	9 - 8	355	316	282	250	210	177	149	125	161	145	130	117	105	94	85
	10 5/8	20	10 - 6	7 - 3	7 - 6	3 - 3	199	181	166	152	140	129	113	93	154	142	132	122	113	105	98
	66 PSF	18	20 - 3	16 - 5	17 - 1	6 - 9	254	230	204	181	161	144	128	109	183	164	148	133	120	108	98
	1.68 cu.yd/(100sq.ft)	16	21 - 7	24 - 11	25 - 4	8 - 5	313	283	252	225	201	178	150	125	182	163	147	132	119	107	97
	6x6 - W1.4 x W1.4	14	22 - 9	28 - 4	26 - 8	9 - 5	384	344	307	274	240	202	171	144	181	162	146	131	118	106	96
	11 1/8	20	9 - 7	6 - 9	7 - 0	3 - 2	213	194	178	163	150	138	128	110	165	152	141	131	121	113	105
	72 PSF	18	19 - 10	15 - 4	16 - 0	6 - 7	273	252	234	217	203	184	154	128	203	183	165	149	134	121	109
	1.83 cu.yd/(100sq.ft)	16	21 - 2	23 - 3	24 - 3	8 - 1	336	312	277	248	222	199	174	146	202	182	164	148	133	120	108
	6x6 - W2.0 x W2.0	14	22 - 3	27 - 9	26 - 1	9 - 3	413	375	335	300	269	233	197	167	201	181	163	146	132	119	107
	11 5/8	20	8 - 11	6 - 4	6 - 7	3 - 0	227	207	190	174	160	147	136	126	176	162	150	139	129	120	112
	78 PSF	18	19 - 6	14 - 5	15 - 0	6 - 6	291	269	250	232	216	202	178	149	224	203	183	165	149	135	122
	1.99 cu.yd/(100sq.ft)	16	20 - 9	21 - 10	22 - 9	7 - 7	360	335	306	273	245	219	197	170	224	202	182	164	148	134	121
	6x6 - W2.0 x W2.0	14	21 - 11	27 - 3	25 - 8	9 - 1	442	410	366	328	294	265	227	193	223	200	181	163	147	133	120
	11 7/8	20	8 - 7	6 - 2	6 - 5	2 - 10	235	214	195	179	165	152	140	130	181	167	155	143	133	124	115
	81 PSF	18	19 - 0	14 - 0	14 - 7	6 - 4	301	278	258	239	223	209	192	161	231	213	192	173	157	142	128
	2.06 cu.yd/(100sq.ft)	16	20 - 7	21 - 3	22 - 1	7 - 4	371	346	324	304	286	256	216	183	236	212	191	172	156	141	127
	6x6 - W2.0 x W2.0	14	21 - 8	27 - 0	25 - 5	9 - 0	456	428	383	343	308	277	244	207	234	211	190	171	155	140	126
	12 5/8	20	7 - 9	5 - 7	5 - 10	2 - 7	256	233	213	196	180	166	153	141	198	183	169	156	145	135	125
	90 PSF	18	17 - 6	12 - 10	13 - 5	5 - 10	329	304	281	262	244	228	213	199	253	236	221	201	181	164	149
	2.3 cu.yd/(100sq.ft)	16	20 - 1	19 - 6	20 - 4	6 - 9	406	378	354	332	312	294	265	225	272	245	221	200	181	163	148
	6x6 - W2.9 x W2.9	14	21 - 2	26 - 5	24 - 10	8 - 9	499	469	438	392	353	318	287	254	271	244	220	198	179	162	147

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 3" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022. The slab weight has been subtracted from the service loads listed above.
6. Uniform superimposed service loads were determined by dividing the superimposed LRFD design loads controlled by strength by the load factor of 1.6.
7. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
8. Long-term deflection has not been taken into consideration.
9. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
10. Negative moment (top) reinforcement is required over supports of continuous spans.
11. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

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7.5" Composite Deep-Dek® (7.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in^2/ft)	I_D (in^4/ft)		S_p ($in.^3$/ft)	S_n ($in.^3$/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.79	50	1.113	8.505	9.285	1.558	2.101	70108	94546	1683	784	1245
18	12	5.01	50	1.473	12.109	12.510	2.631	2.994	118399	134710	3913	1554	2857
16	12	6.32	50	1.857	15.895	15.992	3.884	4.009	174794	180426	7871	2426	4376
14	12	7.89	50	2.318	19.952	19.952	4.965	5.000	223447	225015	15371	3699	6582

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

NORMAL WEIGHT CONCRETE (145 PCF), f'c=4000 PSI

MAXIMUM ALLOWABLE SPANS

LRFD

Total Slab Depth (in)	Service Stage									Construction Stage			
	Simple Spans (ft-in)			Continuous Spans (ft-in)						Maximum Unshored Clear Spans (ft-in)			
	LL=40 psf	LL=55 psf	LL=100 psf	LL=40 psf; SDL=20 psf		LL=55 psf; SDL=10 psf		LL=100 psf; SDL=15 psf					
	SDL=20 psf	SDL=10 psf	SDL=15 psf	Interior	End	Interior	End	Interior	End	Single	Double	Triple	Cantilever
20 GA Deck													
9 5/8	26 - 4	25 - 11	21 - 10	35 - 2	32 - 2	33 - 11	31 - 0	28 - 0	25 - 8	12 - 9	8 - 5	8 - 9	3 - 8
10 1/8	27 - 2	26 - 10	24 - 0	36 - 4	33 - 7	35 - 1	33 - 2	29 - 3	27 - 3	11 - 6	7 - 9	8 - 1	3 - 6
10 5/8	28 - 0	27 - 8	24 - 11	37 - 6	34 - 8	36 - 3	34 - 2	30 - 5	28 - 3	10 - 6	7 - 3	7 - 6	3 - 3
11 1/8	28 - 10	28 - 6	25 - 9	38 - 8	35 - 8	37 - 5	35 - 3	31 - 6	29 - 2	9 - 7	6 - 9	7 - 0	3 - 2
11 5/8	29 - 8	29 - 4	26 - 7	39 - 9	36 - 8	38 - 7	36 - 3	32 - 8	30 - 1	8 - 11	6 - 4	6 - 7	3 - 0
11 7/8	30 - 1	29 - 9	27 - 0	40 - 4	37 - 2	39 - 1	36 - 9	33 - 2	30 - 6	8 - 7	6 - 2	6 - 5	2 - 10
12 5/8	31 - 3	30 - 11	28 - 3	41 - 11	38 - 7	40 - 9	38 - 2	34 - 10	31 - 8	7 - 9	5 - 7	5 - 10	2 - 7
18 GA Deck													
9 5/8	27 - 3	26 - 10	24 - 0	35 - 0	33 - 2	33 - 9	32 - 0	27 - 11	26 - 6	21 - 3	19 - 1	19 - 10	7 - 1
10 1/8	28 - 1	27 - 8	24 - 10	36 - 2	34 - 4	34 - 11	33 - 2	29 - 2	27 - 8	20 - 9	17 - 8	18 - 5	6 - 11
10 5/8	28 - 11	28 - 7	25 - 9	37 - 4	35 - 5	36 - 2	34 - 3	30 - 4	28 - 9	20 - 3	16 - 5	17 - 1	6 - 9
11 1/8	29 - 9	29 - 5	26 - 7	38 - 6	36 - 6	37 - 3	35 - 5	31 - 5	29 - 10	19 - 10	15 - 4	16 - 0	6 - 7
11 5/8	30 - 7	30 - 3	27 - 5	39 - 8	37 - 7	38 - 5	36 - 5	32 - 7	30 - 11	19 - 6	14 - 5	15 - 0	6 - 6
11 7/8	31 - 0	30 - 8	27 - 10	40 - 2	38 - 1	39 - 0	37 - 0	33 - 1	31 - 5	19 - 0	14 - 0	14 - 7	6 - 4
12 5/8	32 - 2	31 - 10	29 - 1	41 - 9	39 - 7	40 - 7	38 - 6	34 - 9	32 - 11	17 - 6	12 - 10	13 - 5	5 - 10
16 GA Deck													
9 5/8	28 - 2	27 - 9	24 - 10	34 - 10	33 - 0	33 - 7	31 - 10	27 - 10	26 - 5	22 - 7	28 - 2	26 - 6	9 - 5
10 1/8	28 - 11	28 - 6	25 - 7	36 - 0	34 - 2	34 - 10	33 - 0	29 - 1	27 - 7	22 - 1	26 - 9	25 - 11	8 - 11
10 5/8	29 - 9	29 - 4	26 - 5	37 - 2	35 - 4	36 - 0	34 - 2	30 - 3	28 - 8	21 - 7	24 - 11	25 - 4	8 - 5
11 1/8	30 - 7	30 - 2	27 - 4	38 - 4	36 - 5	37 - 2	35 - 3	31 - 4	29 - 9	21 - 2	23 - 3	24 - 3	8 - 1
11 5/8	31 - 5	31 - 1	28 - 2	39 - 6	37 - 5	38 - 3	36 - 4	32 - 6	30 - 10	20 - 9	21 - 10	22 - 9	7 - 7
11 7/8	31 - 10	31 - 6	28 - 7	40 - 0	37 - 11	38 - 10	36 - 10	33 - 0	31 - 4	20 - 7	21 - 3	22 - 1	7 - 4
12 5/8	33 - 1	32 - 9	29 - 11	41 - 7	39 - 6	40 - 5	38 - 4	34 - 8	32 - 10	20 - 1	19 - 6	20 - 4	6 - 9
14 GA Deck													
9 5/8	29 - 2	28 - 9	25 - 9	34 - 7	32 - 10	33 - 5	31 - 8	27 - 9	26 - 4	23 - 9	29 - 7	27 - 10	9 - 10
10 1/8	29 - 10	29 - 5	26 - 5	35 - 10	34 - 0	34 - 7	32 - 10	28 - 11	27 - 5	23 - 3	28 - 11	27 - 3	9 - 8
10 5/8	30 - 7	30 - 2	27 - 3	37 - 0	35 - 1	35 - 10	34 - 0	30 - 1	28 - 7	22 - 9	28 - 4	26 - 8	9 - 5
11 1/8	31 - 5	31 - 1	28 - 1	38 - 2	36 - 2	37 - 0	35 - 1	31 - 3	29 - 8	22 - 3	27 - 9	26 - 1	9 - 3
11 5/8	32 - 3	31 - 11	29 - 0	39 - 3	37 - 3	38 - 1	36 - 2	32 - 4	30 - 8	21 - 11	27 - 3	25 - 8	9 - 1
11 7/8	32 - 8	32 - 4	29 - 5	39 - 10	37 - 9	38 - 8	36 - 8	32 - 11	31 - 3	21 - 8	27 - 0	25 - 5	9 - 0
12 5/8	33 - 11	33 - 7	30 - 9	41 - 5	39 - 3	40 - 3	38 - 2	34 - 6	32 - 9	21 - 2	26 - 5	24 - 10	8 - 9

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 3" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022.
6. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
7. Long-term deflection has not been taken into consideration.
8. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
9. Negative moment (top) reinforcement is required over supports of continuous spans.
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7.5" Composite Deep-Dek® (7.5CD)

DECK PROPERTIES

LRFD

Gage	Cover (in)	Weight (psf)	F_y (ksi)	A_s (in.^{2}/ft)	I_D (in^4/ft)		S_p (in.^{3}/ft)	S_n (in.^{3}/ft)	$\phi M_{n,p}$ (in-lb/ft)	$\phi M_{n,n}$ (in-lb/ft)	ϕV_n (lb/ft)	ϕR_{be} (lb/ft)	ϕR_{bi} (lb/ft)
					single	multi							
20	12	3.79	50	1.113	8.505	9.285	1.558	2.101	70108	94546	1683	784	1245
18	12	5.01	50	1.473	12.109	12.510	2.631	2.994	118399	134710	3913	1554	2857
16	12	6.32	50	1.857	15.895	15.992	3.884	4.009	174794	180426	7871	2426	4376
14	12	7.89	50	2.318	19.952	19.952	4.965	5.000	223447	225015	15371	3699	6582

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

LIGHTWEIGHT CONCRETE (110 PCF), f'c=4000 PSI

CONSTRUCTION CLEAR SPANS AND UNIFORM SUPERIMPOSED SERVICE LOAD CAPACITY

LRFD

Concrete	Slab Depth (in), Concrete Weight, Concrete Volume, WWF	Deck Gage	Maximum Unshored Clear Spans (ft-in)				Uniform Service Load Capacity, PSF / Spans (ft)														
							Simple Span Conditions								Continuous Span Condition Negative Moment Reinforcement Required						
			Single	Double	Triple	Canti-lever	19	20	21	22	23	24	25	26	24	25	26	27	28	29	30
4000 PSI Lightweight Concrete (110 PCF)	9 5/8	20	16 - 1	10 - 2	10 - 8	4 - 2	171	151	134	114	94	78	64	52	142	129	117	106	96	86	73
	41 PSF	18	22 - 7	23 - 1	24 - 0	8 - 0	223	197	164	137	114	95	79	65	155	140	127	115	105	95	87
	1.37 cu.yd/(100sq.ft)	16	24 - 0	30 - 0	28 - 2	10 - 0	276	230	192	161	135	113	95	79	154	139	126	114	104	94	86
	6x6 - W1.4 x W1.4	14	25 - 3	31 - 5	29 - 7	10 - 6	318	269	226	190	160	135	114	96	153	138	125	113	103	93	85
	10 1/8	20	14 - 11	9 - 6	9 - 11	3 - 11	195	179	159	132	109	90	74	60	154	143	133	124	116	100	85
	45 PSF	18	22 - 1	21 - 6	22 - 4	7 - 6	246	219	186	155	130	108	90	74	174	158	143	130	118	107	98
	1.52 cu.yd/(100sq.ft)	16	23 - 6	29 - 3	27 - 6	9 - 9	301	257	215	181	152	127	107	89	173	157	142	129	117	106	97
	6x6 - W1.4 x W1.4	14	24 - 8	30 - 9	28 - 11	10 - 3	335	297	250	210	177	150	126	106	172	155	141	128	116	105	96
	10 5/8	20	13 - 7	8 - 10	9 - 3	3 - 9	211	193	178	153	127	105	87	72	165	154	143	134	125	117	100
	50 PSF	18	21 - 7	20 - 1	20 - 11	7 - 2	266	242	213	178	149	124	104	86	195	176	160	145	132	120	110
	1.68 cu.yd/(100sq.ft)	16	23 - 0	28 - 8	27 - 0	9 - 7	325	290	243	204	171	144	121	101	194	175	159	144	131	119	109
	6x6 - W1.4 x W1.4	14	24 - 2	30 - 1	28 - 4	10 - 0	352	332	279	235	198	168	142	119	192	174	158	143	130	118	108
	11 1/8	20	12 - 6	8 - 4	8 - 8	3 - 7	226	207	191	176	148	123	102	84	169	160	153	144	134	126	117
	54 PSF	18	21 - 2	18 - 10	19 - 8	7 - 1	286	265	244	205	172	144	121	101	216	196	178	162	147	134	122
	1.83 cu.yd/(100sq.ft)	16	22 - 6	28 - 1	26 - 5	9 - 4	349	325	276	232	196	165	139	117	215	195	177	161	146	133	121
	6x6 - W2.0 x W2.0	14	23 - 8	29 - 6	27 - 9	9 - 10	370	349	313	264	223	189	160	135	214	194	176	159	145	132	120
	11 5/8	20	11 - 7	7 - 10	8 - 2	3 - 6	242	221	204	188	171	143	119	99	173	164	156	148	141	134	126
	59 PSF	18	20 - 9	17 - 9	18 - 6	6 - 11	305	283	264	235	197	166	140	117	238	217	197	179	163	149	136
	1.99 cu.yd/(100sq.ft)	16	22 - 2	26 - 11	26 - 0	9 - 0	374	349	315	265	224	189	160	135	238	216	196	178	162	148	135
	6x6 - W2.0 x W2.0	14	23 - 3	29 - 0	27 - 3	9 - 8	388	366	346	299	253	215	182	155	237	215	195	177	161	147	134
	11 7/8	20	11 - 2	7 - 7	7 - 11	3 - 5	249	228	210	194	179	153	128	106	175	166	158	150	143	136	130
	61 PSF	18	20 - 7	17 - 4	18 - 0	6 - 10	315	292	272	251	211	178	150	126	246	228	207	188	171	156	143
	2.06 cu.yd/(100sq.ft)	16	21 - 11	26 - 2	25 - 9	8 - 9	386	361	336	283	239	203	171	145	250	227	206	187	170	155	142
	6x6 - W2.0 x W2.0	14	23 - 1	28 - 9	27 - 1	9 - 7	397	374	354	319	270	230	195	166	249	225	205	186	169	154	141
	12 5/8	20	10 - 1	7 - 0	7 - 4	3 - 3	272	250	230	212	196	182	158	132	181	171	163	155	147	140	134
	68 PSF	18	20 - 1	16 - 0	16 - 8	6 - 8	345	320	298	278	257	217	184	155	269	253	238	217	198	181	165
	2.3 cu.yd/(100sq.ft)	16	21 - 5	24 - 2	25 - 1	8 - 4	422	395	370	342	290	246	209	178	276	261	237	216	197	180	164
	6x6 - W2.9 x W2.9	14	22 - 7	28 - 1	26 - 5	9 - 4	424	400	378	359	326	278	237	202	274	260	236	215	196	178	163

Notes:

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6. Uniform superimposed service loads were determined by dividing the superimposed LRFD design loads controlled by strength by the load factor of 1.6.
7. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
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					single	multi							
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16	12	6.32	50	1.857	15.895	15.992	3.884	4.009	174794	180426	7871	2426	4376
14	12	7.89	50	2.318	19.952	19.952	4.965	5.000	223447	225015	15371	3699	6582

F_y is steel yield stress; A_s is area of deck; I_D is deck moment of inertia for deflection calculations; S_p and S_n are deck section moduli in positive and negative bending; $\phi M_{n,p}$ and $\phi M_{n,n}$ are design moment capacities of deck in positive and negative bending; ϕV_n is design shear strength of deck; ϕR_{be} and ϕR_{bi} are design web crippling strengths of deck for end and interior bearing.

LIGHTWEIGHT CONCRETE (110 PCF), f'c=4000 PSI

MAXIMUM ALLOWABLE SPANS

LRFD

Total Slab Depth (in)	Service Stage									Construction Stage			
	Simple Spans (ft-in)			Continuous Spans (ft-in)						Maximum Unshored Clear Spans (ft-in)			
	LL=40 psf	LL=55 psf	LL=100 psf	LL=40 psf; SDL=20 psf		LL=55 psf; SDL=10 psf		LL=100 psf; SDL=15 psf					
	SDL=20 psf	SDL=10 psf	SDL=15 psf	Interior	End	Interior	End	Interior	End	Single	Double	Triple	Cantilever
20 GA Deck													
9 5/8	25 - 3	24 - 11	21 - 11	37 - 0	31 - 3	35 - 7	30 - 9	28 - 11	26 - 6	16 - 1	10 - 2	10 - 8	4 - 2
10 1/8	26 - 0	25 - 8	22 - 9	38 - 5	32 - 2	36 - 11	31 - 8	30 - 3	28 - 1	14 - 11	9 - 6	9 - 11	3 - 11
10 5/8	26 - 10	26 - 6	23 - 6	39 - 10	33 - 2	38 - 4	32 - 8	31 - 7	29 - 1	13 - 7	8 - 10	9 - 3	3 - 9
11 1/8	27 - 8	27 - 4	24 - 4	41 - 0	34 - 2	39 - 8	33 - 9	32 - 10	30 - 1	12 - 6	8 - 4	8 - 8	3 - 7
11 5/8	28 - 6	28 - 1	25 - 2	42 - 3	35 - 2	40 - 11	34 - 9	34 - 1	31 - 1	11 - 7	7 - 10	8 - 2	3 - 6
11 7/8	28 - 11	28 - 6	25 - 7	42 - 10	35 - 8	41 - 7	35 - 3	34 - 8	31 - 7	11 - 2	7 - 7	7 - 11	3 - 5
12 5/8	30 - 1	29 - 8	26 - 9	44 - 7	37 - 2	43 - 6	36 - 8	36 - 6	33 - 1	10 - 1	7 - 0	7 - 4	3 - 3
18 GA Deck													
9 5/8	26 - 5	26 - 0	23 - 0	36 - 10	32 - 7	35 - 5	32 - 2	28 - 10	27 - 4	22 - 7	23 - 1	24 - 0	8 - 0
10 1/8	27 - 1	26 - 8	23 - 8	38 - 3	33 - 6	36 - 9	33 - 0	30 - 2	28 - 7	22 - 1	21 - 6	22 - 4	7 - 6
10 5/8	27 - 10	27 - 5	24 - 5	39 - 7	34 - 5	38 - 2	33 - 11	31 - 6	29 - 10	21 - 7	20 - 1	20 - 11	7 - 2
11 1/8	28 - 8	28 - 3	25 - 3	40 - 11	35 - 5	39 - 6	34 - 11	32 - 9	31 - 1	21 - 2	18 - 10	19 - 8	7 - 1
11 5/8	29 - 6	29 - 1	26 - 1	42 - 3	36 - 5	40 - 9	36 - 0	34 - 0	32 - 3	20 - 9	17 - 9	18 - 6	6 - 11
11 7/8	29 - 11	29 - 6	26 - 6	42 - 11	36 - 11	41 - 5	36 - 6	34 - 7	32 - 9	20 - 7	17 - 4	18 - 0	6 - 10
12 5/8	31 - 1	30 - 9	27 - 9	44 - 9	38 - 6	43 - 4	38 - 0	36 - 5	34 - 3	20 - 1	16 - 0	16 - 8	6 - 8
16 GA Deck													
9 5/8	27 - 6	27 - 1	23 - 11	36 - 8	33 - 11	35 - 2	33 - 5	28 - 9	27 - 3	24 - 0	30 - 0	28 - 2	10 - 0
10 1/8	28 - 1	27 - 8	24 - 7	38 - 1	34 - 8	36 - 7	34 - 2	30 - 1	28 - 6	23 - 6	29 - 3	27 - 6	9 - 9
10 5/8	28 - 9	28 - 5	25 - 4	39 - 5	35 - 7	38 - 0	35 - 1	31 - 4	29 - 9	23 - 0	28 - 8	27 - 0	9 - 7
11 1/8	29 - 7	29 - 2	26 - 1	40 - 9	36 - 6	39 - 4	36 - 0	32 - 8	30 - 11	22 - 6	28 - 1	26 - 5	9 - 4
11 5/8	30 - 5	30 - 0	26 - 11	42 - 1	37 - 7	40 - 7	37 - 1	33 - 10	32 - 2	22 - 2	26 - 11	26 - 0	9 - 0
11 7/8	30 - 10	30 - 5	27 - 4	42 - 8	38 - 1	41 - 3	37 - 7	34 - 6	32 - 9	21 - 11	26 - 2	25 - 9	8 - 9
12 5/8	32 - 1	31 - 8	28 - 7	44 - 7	39 - 7	43 - 1	39 - 2	36 - 3	34 - 5	21 - 5	24 - 2	25 - 1	8 - 4
14 GA Deck													
9 5/8	28 - 7	28 - 2	24 - 11	36 - 5	34 - 6	35 - 0	33 - 2	28 - 8	27 - 2	25 - 3	31 - 5	29 - 7	10 - 6
10 1/8	29 - 2	28 - 9	25 - 7	37 - 10	35 - 10	36 - 5	34 - 6	29 - 11	28 - 5	24 - 8	30 - 9	28 - 11	10 - 3
10 5/8	29 - 10	29 - 5	26 - 3	39 - 2	36 - 10	37 - 9	35 - 10	31 - 3	29 - 8	24 - 2	30 - 1	28 - 4	10 - 0
11 1/8	30 - 6	30 - 1	27 - 0	40 - 6	37 - 9	39 - 1	37 - 1	32 - 6	30 - 10	23 - 8	29 - 6	27 - 9	9 - 10
11 5/8	31 - 4	30 - 11	27 - 9	41 - 10	38 - 8	40 - 5	38 - 2	33 - 9	32 - 0	23 - 3	29 - 0	27 - 3	9 - 8
11 7/8	31 - 9	31 - 4	28 - 2	42 - 5	39 - 3	41 - 0	38 - 9	34 - 4	32 - 7	23 - 1	28 - 9	27 - 1	9 - 7
12 5/8	33 - 0	32 - 7	29 - 6	44 - 4	40 - 10	42 - 11	40 - 4	36 - 2	34 - 4	22 - 7	28 - 1	26 - 5	9 - 4

Notes:

1. Deck section properties are calculated in accordance with AISI S100-16 (2020) w/S2-20.
2. Maximum clear spans without shoring and design web crippling strengths are based on deck bearing of 3" at end supports and 3" at interior supports.
3. Maximum construction clear spans are based on ANSI/SDI SD-2022 Standard for Steel Deck and the following construction loading and deflection limits:
   - Deck and concrete weights plus worst-case influence of either a 150 lb/ft concentrated live load or a 20 psf uniform live load; or deck weight plus a 50 psf uniform live load, whichever controls.
   - Deck deflection under deck and concrete weights is limited to the lesser of L/180 and 0.75".
4. Maximum cantilever clear spans assume that the adjacent span is at least 3 times longer than the cantilever and no greater than the maximum construction span for single, double, and triple spans. Deck bearing at the perimeter support is assumed to be equal to the deck bearing at interior supports shown above.
5. Composite slab service stage calculations are based on ANSI/SDI SD-2022.
6. The service stage spans are based on the instanteneous deflection limits of L/360 and L/360 under live load and total load, respectively.
7. Long-term deflection has not been taken into consideration.
8. Temperature and shrinkage reinforcement in accordance with ANSI/SDI SD-2022 shall be provided in the slab.
9. Negative moment (top) reinforcement is required over supports of continuous spans.
10. Continuous spans should be approximately equal with the span length difference not exceeding 20%.

For construction or service stage designs utilizing different criteria, go to: **tools.newmill.com/deck-tools/**