0.6" Form Deck (0.6FD, 0.6FDV)

LIGHTWEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
28	0.0149	35	0.75
26	0.0179		0.90
24	0.0238		1.19
22	0.0295		1.48

ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
28	60	0.011	0.011	0.011	0.011	0.033	0.034	1190	1236	1534	583	910
26	60	0.013	0.013	0.013	0.013	0.042	0.044	1517	1576	1839	811	1278
24	60	0.018	0.018	0.018	0.018	0.060	0.060	2144	2144	2435	1352	2160
22	60	0.022	0.022	0.022	0.022	0.073	0.073	2631	2631	3006	1984	3201

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in)				Conc. Volume (ft^3/ft^2)
			Single	Double	Triple	Cantilever	
2 1/2	28	20	2 - 3	2 - 9	2 - 9	0 - 7	0.185
	26		2 - 9	3 - 4	3 - 5	0 - 9	
	24		3 - 9	4 - 5	4 - 6	1 - 1	
	22		4 - 5	5 - 3	5 - 4	1 - 3	
3	28	25	2 - 2	2 - 8	2 - 8	0 - 7	0.227
	26		2 - 8	3 - 3	3 - 3	0 - 9	
	24		3 - 7	4 - 3	4 - 4	1 - 1	
	22		4 - 1	5 - 0	5 - 1	1 - 3	
3 1/2	28	30	2 - 2	2 - 7	2 - 7	0 - 7	0.269
	26		2 - 7	3 - 2	3 - 2	0 - 9	
	24		3 - 6	4 - 2	4 - 2	1 - 0	
	22		3 - 11	4 - 10	4 - 10	1 - 3	
4	28	34	2 - 1	2 - 6	2 - 6	0 - 7	0.310
	26		2 - 7	3 - 1	3 - 1	0 - 9	
	24		3 - 4	4 - 0	4 - 1	1 - 0	
	22		3 - 9	4 - 8	4 - 7	1 - 3	
4 1/2	28	39	2 - 0	2 - 5	2 - 6	0 - 7	0.352
	26		2 - 6	3 - 0	3 - 0	0 - 9	
	24		3 - 3	3 - 11	3 - 11	1 - 0	
	22		3 - 7	4 - 6	4 - 5	1 - 3	
5	28	43	2 - 0	2 - 5	2 - 5	0 - 7	0.394
	26		2 - 5	2 - 11	2 - 11	0 - 9	
	24		3 - 2	3 - 9	3 - 10	1 - 0	
	22		3 - 5	4 - 5	4 - 3	1 - 2	

Lightweight Concrete (110 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in)								
			2 - 0	2 - 6	2 - 9	3 - 0	3 - 3	3 - 6	4 - 0	4 - 6	5 - 0
2 1/2	6x6 - W2.9xW2.9	0.058	400	264	218	183	156	135	103	81	66
	4x4 - W2.0xW2.0	0.060	400	272	225	189	161	139	106	84	68
	6x6 - W4.0xW4.0	0.080	400	355	294	247	210	181	139	110	89
3	4x4 - W2.0xW2.0	0.060	400	346	286	241	205	177	135	107	87
	6x6 - W4.0xW4.0	0.080	400	400	375	315	269	232	177	140	114
	4x4 - W2.9xW2.9	0.087	400	400	400	341	290	250	192	152	123
3 1/2	6x6 - W4.0xW4.0	0.080	400	400	400	400	400	400	370	292	237
	4x4 - W2.9xW2.9	0.087	400	400	400	400	400	400	400	323	261
	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	376	338
4	4x4 - W2.9xW2.9	0.087	400	400	400	400	400	400	400	395	320
	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	400
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	400	400	400
4 1/2	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	400
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	400	400	400
	#4 @ 12" o.c.	0.196	400	400	400	400	400	400	400	400	400
5	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	400
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	400	400	400
	#4 @ 12" o.c.	0.196	400	400	400	400	400	400	400	400	400

LWC (yc = 110 pcf, f'c = 3000 psi, n = 14, Fys = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

0.6" Form Deck (0.6FD, 0.6FDV)

NORMAL-WEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
28	0.0149	35	0.75
26	0.0179		0.90
24	0.0238		1.19
22	0.0295		1.48

ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
28	60	0.011	0.011	0.011	0.011	0.033	0.034	1190	1236	1534	583	910
26	60	0.013	0.013	0.013	0.013	0.042	0.044	1517	1576	1839	811	1278
24	60	0.018	0.018	0.018	0.018	0.060	0.060	2144	2144	2435	1352	2160
22	60	0.022	0.022	0.022	0.022	0.073	0.073	2631	2631	3006	1984	3201

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
2 1/2	28	27	2 - 2	2 - 7	2 - 8	0 - 7	0.185
	26		2 - 8	3 - 2	3 - 3	0 - 9	
	24		3 - 6	4 - 3	4 - 3	1 - 0	
	22		4 - 0	4 - 11	5 - 0	1 - 3	
3	28	33	2 - 1	2 - 6	2 - 7	0 - 7	0.227
	26		2 - 7	3 - 1	3 - 1	0 - 9	
	24		3 - 5	4 - 0	4 - 1	1 - 0	
	22		3 - 9	4 - 9	4 - 8	1 - 3	
3 1/2	28	39	2 - 0	2 - 5	2 - 6	0 - 7	0.269
	26		2 - 6	3 - 0	3 - 0	0 - 9	
	24		3 - 3	3 - 11	3 - 11	1 - 0	
	22		3 - 7	4 - 6	4 - 5	1 - 3	
4	28	45	2 - 0	2 - 5	2 - 5	0 - 7	0.310
	26		2 - 5	2 - 11	2 - 11	0 - 9	
	24		3 - 2	3 - 9	3 - 9	1 - 0	
	22		3 - 5	4 - 4	4 - 3	1 - 2	
4 1/2	28	51	1 - 11	2 - 4	2 - 4	0 - 7	0.352
	26		2 - 4	2 - 10	2 - 10	0 - 9	
	24		3 - 1	3 - 7	3 - 8	1 - 0	
	22		3 - 3	4 - 2	4 - 1	1 - 2	
5	28	57	1 - 11	2 - 3	2 - 3	0 - 7	0.394
	26		2 - 3	2 - 9	2 - 9	0 - 9	
	24		2 - 11	3 - 6	3 - 7	0 - 11	
	22		3 - 2	4 - 1	3 - 11	1 - 2	

Normal-Weight Concrete (145 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 2 - 0	2 - 6	2 - 9	3 - 0	3 - 3	3 - 6	4 - 0	4 - 6	5 - 0
2 1/2	6x6 - W2.9xW2.9	0.058	400	264	218	183	156	135	103	81	66
	4x4 - W2.0xW2.0	0.060	400	272	225	189	161	139	106	84	68
	6x6 - W4.0xW4.0	0.080	400	355	294	247	210	181	139	110	89
3	4x4 - W2.0xW2.0	0.060	400	346	286	241	205	177	135	107	87
	6x6 - W4.0xW4.0	0.080	400	400	375	315	269	232	177	140	114
	4x4 - W2.9xW2.9	0.087	400	400	400	341	290	250	192	152	123
3 1/2	6x6 - W4.0xW4.0	0.080	400	400	400	400	400	400	370	292	237
	4x4 - W2.9xW2.9	0.087	400	400	400	400	400	400	400	323	261
	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	342
4	4x4 - W2.9xW2.9	0.087	400	400	400	400	400	400	400	395	320
	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	400
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	400	400	400
4 1/2	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	400
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	400	400	400
	#4 @ 12" o.c.	0.196	400	400	400	400	400	400	400	400	400
5	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	400	400	400	400
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	400	400	400
	#4 @ 12" o.c.	0.196	400	400	400	400	400	400	400	400	400

NWC (γc = 145 pcf, $f'c$ = 3000 psi, n = 9, Fys = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

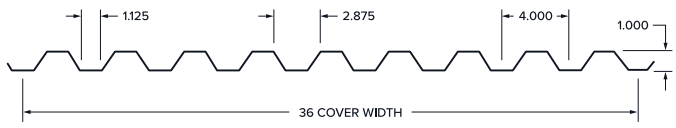
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

1" Form Deck (1.0FD, 1.0FDV)

LIGHTWEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
26	0.0179	36	0.94
24	0.0238		1.24
22	0.0295		1.54
20	0.0358		1.87



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
26	60	0.042	0.042	0.041	0.041	0.068	0.071	2428	2547	1663	466	828
24	60	0.056	0.056	0.056	0.056	0.098	0.105	3518	3782	2739	789	1422
22	60	0.070	0.070	0.070	0.070	0.129	0.132	4631	4744	3388	1169	2126
20	60	0.085	0.085	0.085	0.085	0.160	0.160	5749	5749	4101	1665	3047

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
2 1/2	26	18	4 - 2	5 - 0	5 - 1	1 - 3	0.167
	24		5 - 8	6 - 9	6 - 10	1 - 10	
	22		6 - 8	7 - 10	8 - 1	2 - 3	
	20		7 - 1	8 - 7	8 - 10	2 - 8	
3	26	23	4 - 0	4 - 10	4 - 11	1 - 3	0.209
	24		5 - 5	6 - 5	6 - 6	1 - 9	
	22		6 - 3	7 - 10	7 - 9	2 - 2	
	20		6 - 8	8 - 7	8 - 3	2 - 7	
3 1/2	26	28	3 - 11	4 - 8	4 - 8	1 - 3	0.250
	24		5 - 2	6 - 2	6 - 3	1 - 9	
	22		5 - 11	7 - 6	7 - 4	2 - 2	
	20		6 - 3	8 - 5	7 - 9	2 - 6	
4	26	32	3 - 9	4 - 6	4 - 6	1 - 2	0.292
	24		5 - 0	5 - 11	6 - 0	1 - 9	
	22		5 - 7	7 - 2	6 - 11	2 - 1	
	20		6 - 0	8 - 0	7 - 5	2 - 5	
4 1/2	26	37	3 - 8	4 - 4	4 - 5	1 - 2	0.334
	24		4 - 10	5 - 8	5 - 9	1 - 8	
	22		5 - 5	6 - 11	6 - 8	2 - 0	
	20		5 - 9	7 - 8	7 - 1	2 - 5	
5	26	41	3 - 7	4 - 2	4 - 3	1 - 2	0.375
	24		4 - 8	5 - 6	5 - 7	1 - 8	
	22		5 - 2	6 - 8	6 - 5	2 - 0	
	20		5 - 6	7 - 5	6 - 10	2 - 4	

Lightweight Concrete (110 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 3 - 0	4 - 0	4 - 6	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	8 - 0
2 1/2	6x6 - W2.9xW2.9	0.058	139	78	62	50	41	35	30	26	20
	4x4 - W2.0xW2.0	0.060	144	81	64	52	43	36	31	26	20
	6x6 - W4.0xW4.0	0.080	186	105	83	67	55	47	40	34	26
3	6x6 - W2.9xW2.9	0.058	189	106	84	68	56	47	40	35	27
	4x4 - W2.0xW2.0	0.060	195	110	87	70	58	49	42	36	27
	6x6 - W4.0xW4.0	0.080	255	143	113	92	76	64	54	47	36
3 1/2	6x6 - W4.0xW4.0	0.080	400	359	284	230	190	160	136	117	90
	4x4 - W2.9xW2.9	0.087	400	392	310	251	207	174	148	128	98
	4x4 - W4.0xW4.0	0.120	400	391	347	313	275	231	197	169	130
4	6x6 - W4.0xW4.0	0.080	400	400	345	279	231	194	165	142	109
	4x4 - W2.9xW2.9	0.087	400	400	376	305	252	212	180	155	119
	4x4 - W4.0xW4.0	0.120	400	400	400	391	341	287	244	211	161
4 1/2	4x4 - W2.9xW2.9	0.087	400	400	400	359	296	249	212	183	140
	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	338	288	249	190
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	343	296	226
5	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	390	332	287	219
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	397	342	262
	#4 @ 12" o.c.	0.196	400	400	400	400	400	400	400	400	339

LWC (γc = 110 pcf, f'c = 3000 psi, n = 14, Fys = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

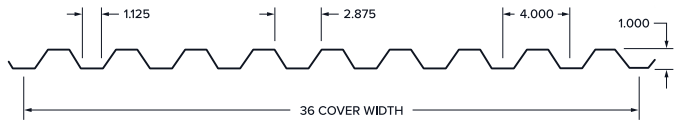
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

1" Form Deck (1.0FD, 1.0FDV)

NORMAL-WEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
26	0.0179	36	0.94
24	0.0238		1.24
22	0.0295		1.54
20	0.0358		1.87



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
26	60	0.042	0.042	0.041	0.041	0.068	0.071	2428	2547	1663	466	828
24	60	0.056	0.056	0.056	0.056	0.098	0.105	3518	3782	2739	789	1422
22	60	0.070	0.070	0.070	0.070	0.129	0.132	4631	4744	3388	1169	2126
20	60	0.085	0.085	0.085	0.085	0.160	0.160	5749	5749	4101	1665	3047

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in)				Conc. Volume (ft^3/ft^2)
			Single	Double	Triple	Cantilever	
2 1/2	26	24	4 - 0	4 - 9	4 - 10	1 - 3	0.167
	24		5 - 4	6 - 4	6 - 5	1 - 9	
	22		6 - 2	7 - 9	7 - 7	2 - 2	
	20		6 - 6	8 - 7	8 - 1	2 - 7	
3	26	30	3 - 10	4 - 7	4 - 7	1 - 3	0.209
	24		5 - 1	6 - 0	6 - 1	1 - 9	
	22		5 - 9	7 - 3	7 - 1	2 - 1	
	20		6 - 1	8 - 2	7 - 6	2 - 6	
3 1/2	26	36	3 - 8	4 - 4	4 - 5	1 - 2	0.250
	24		4 - 10	5 - 8	5 - 9	1 - 8	
	22		5 - 5	6 - 11	6 - 8	2 - 1	
	20		5 - 9	7 - 9	7 - 1	2 - 5	
4	26	42	3 - 6	4 - 2	4 - 3	1 - 2	0.292
	24		4 - 7	5 - 5	5 - 6	1 - 8	
	22		5 - 2	6 - 7	6 - 4	2 - 0	
	20		5 - 6	7 - 4	6 - 9	2 - 4	
4 1/2	26	48	3 - 5	4 - 0	4 - 1	1 - 2	0.334
	24		4 - 5	5 - 3	5 - 4	1 - 7	
	22		4 - 11	6 - 4	6 - 1	1 - 11	
	20		5 - 3	7 - 1	6 - 6	2 - 3	
5	26	54	3 - 4	3 - 11	3 - 11	1 - 1	0.375
	24		4 - 3	5 - 1	5 - 1	1 - 7	
	22		4 - 9	6 - 1	5 - 10	1 - 11	
	20		5 - 1	6 - 9	6 - 3	2 - 2	

Normal-Weight Concrete (145 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in)								
			3 - 0	4 - 0	4 - 6	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	8 - 0
2 1/2	6x6 - W2.9xW2.9	0.058	139	78	62	50	41	35	30	26	20
	4x4 - W2.0xW2.0	0.060	144	81	64	52	43	36	31	26	20
	6x6 - W4.0xW4.0	0.080	186	105	83	67	55	47	40	34	26
3	6x6 - W2.9xW2.9	0.058	189	106	84	68	56	47	40	35	27
	4x4 - W2.0xW2.0	0.060	195	110	87	70	58	49	42	36	27
	6x6 - W4.0xW4.0	0.080	255	143	113	92	76	64	54	47	36
3 1/2	6x6 - W4.0xW4.0	0.080	400	359	284	230	190	160	136	117	90
	4x4 - W2.9xW2.9	0.087	400	392	310	251	207	174	148	128	98
	4x4 - W4.0xW4.0	0.120	400	400	400	332	275	231	197	169	130
4	6x6 - W4.0xW4.0	0.080	400	400	345	279	231	194	165	142	109
	4x4 - W2.9xW2.9	0.087	400	400	376	305	252	212	180	155	119
	4x4 - W4.0xW4.0	0.120	400	400	400	400	341	287	244	211	161
4 1/2	4x4 - W2.9xW2.9	0.087	400	400	400	359	296	249	212	183	140
	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	338	288	249	190
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	343	296	226
5	4x4 - W4.0xW4.0	0.120	400	400	400	400	400	390	332	287	219
	#3 @ 9" o.c.	0.147	400	400	400	400	400	400	397	342	262
	#4 @ 12" o.c.	0.196	400	400	400	400	400	400	400	400	339

NWC (γc = 145 pcf, f'c = 3000 psi, n = 9, Fys = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

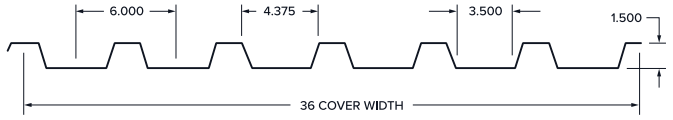
- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

1.5" Form Deck (1.5FD)

LIGHTWEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.63
20	0.0358		1.98
18	0.0474		2.62
16	0.0598		3.30



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.175	0.175	0.175	0.157	0.183	0.176	4391	4215	2009	654	1181
20	40	0.213	0.213	0.213	0.201	0.235	0.224	5624	5375	2428	932	1696
18	40	0.281	0.281	0.281	0.279	0.315	0.304	7553	7291	3192	1557	2858
16	40	0.355	0.355	0.355	0.355	0.395	0.390	9454	9332	3996	2381	4396

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
3 1/2	22	27	6 - 1	7 - 2	7 - 3	1 - 11	0.250
	20		7 - 3	8 - 3	8 - 7	2 - 4	
	18		8 - 10	9 - 7	9 - 11	3 - 1	
	16		10 - 0	10 - 9	11 - 2	3 - 8	
4	22	32	5 - 10	6 - 11	7 - 0	1 - 11	0.291
	20		6 - 11	8 - 1	8 - 3	2 - 4	
	18		8 - 5	9 - 5	9 - 9	3 - 0	
	16		9 - 6	10 - 7	10 - 11	3 - 7	
4 1/2	22	37	5 - 7	6 - 8	6 - 8	1 - 10	0.333
	20		6 - 8	7 - 9	7 - 11	2 - 3	
	18		8 - 1	9 - 0	9 - 4	2 - 11	
	16		9 - 2	10 - 2	10 - 6	3 - 6	
5	22	41	5 - 5	6 - 5	6 - 6	1 - 10	0.375
	20		6 - 5	7 - 6	7 - 8	2 - 3	
	18		7 - 9	8 - 8	9 - 0	2 - 10	
	16		8 - 10	9 - 9	10 - 1	3 - 4	
5 1/2	22	46	5 - 3	6 - 2	6 - 3	1 - 9	0.416
	20		6 - 3	7 - 3	7 - 4	2 - 2	
	18		7 - 6	8 - 5	8 - 8	2 - 9	
	16		8 - 6	9 - 5	9 - 9	3 - 3	
6	22	50	5 - 1	6 - 0	6 - 1	1 - 9	0.458
	20		6 - 0	7 - 0	7 - 2	2 - 2	
	18		7 - 3	8 - 1	8 - 5	2 - 8	
	16		8 - 3	9 - 2	9 - 6	3 - 2	

Lightweight Concrete (110 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 4 - 0	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	7 - 6	8 - 0	9 - 0
3 1/2	6x6 - W4.0xW4.0	0.080	214	137	113	95	81	70	61	53	42
	4x4 - W2.9xW2.9	0.087	234	150	124	104	89	77	67	59	46
	4x4 - W4.0xW4.0	0.120	284	182	150	126	108	93	81	71	56
4	6x6 - W4.0xW4.0	0.080	305	195	161	136	116	100	87	76	60
	4x4 - W2.9xW2.9	0.087	325	208	172	145	123	106	93	81	64
	4x4 - W4.0xW4.0	0.120	376	240	199	167	142	123	107	94	74
4 1/2	4x4 - W2.9xW2.9	0.087	400	283	234	196	167	144	126	110	87
	4x4 - W4.0xW4.0	0.120	400	310	257	216	184	158	138	121	96
	#3 @ 9" o.c.	0.147	400	371	307	258	220	189	165	145	115
5	4x4 - W4.0xW4.0	0.120	400	400	336	282	241	208	181	159	126
	#3 @ 9" o.c.	0.147	400	400	392	330	281	242	211	186	147
	#4 @ 12" o.c.	0.196	400	400	400	376	320	276	241	212	167
5 1/2	4x4 - W4.0xW4.0	0.120	400	400	400	357	305	263	229	201	159
	#3 @ 9" o.c.	0.147	400	400	400	400	353	305	265	233	184
	#4 @ 12" o.c.	0.196	400	400	400	400	386	332	290	255	201
6	4x4 - W4.0xW4.0	0.120	400	400	400	400	375	324	282	248	196
	#4 @ 18" o.c.	0.131	400	400	400	400	400	345	301	264	209
	#3 @ 9" o.c.	0.147	400	400	400	400	400	373	325	286	226

LWC (γ_c = 110 pcf, f'_c = 3000 psi, n = 14, F_{ys} = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

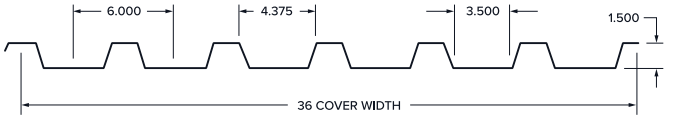
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

1.5" Form Deck (1.5FD)

NORMAL-WEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.63
20	0.0358		1.98
18	0.0474		2.62
16	0.0598		3.30



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.175	0.175	0.175	0.157	0.183	0.176	4391	4215	2009	654	1181
20	40	0.213	0.213	0.213	0.201	0.235	0.224	5624	5375	2428	932	1696
18	40	0.281	0.281	0.281	0.279	0.315	0.304	7553	7291	3192	1557	2858
16	40	0.355	0.355	0.355	0.355	0.395	0.390	9454	9332	3996	2381	4396

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)		Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
3 1/2	22	Normal-Weight Concrete (145 psf)	36	5 - 8	6 - 8	6 - 9	1 - 10	0.250
	20			6 - 8	7 - 10	7 - 11	2 - 3	
	18			8 - 1	9 - 1	9 - 4	2 - 11	
	16			9 - 2	10 - 2	10 - 7	3 - 6	
4	22		42	5 - 5	6 - 4	6 - 5	1 - 10	0.291
	20			6 - 5	7 - 5	7 - 7	2 - 2	
	18			7 - 9	8 - 7	8 - 11	2 - 10	
	16			8 - 9	9 - 8	10 - 1	3 - 4	
4 1/2	22		48	5 - 2	6 - 1	6 - 2	1 - 9	0.333
	20			6 - 1	7 - 1	7 - 3	2 - 2	
	18			7 - 5	8 - 3	8 - 6	2 - 9	
	16			8 - 5	9 - 3	9 - 7	3 - 2	
5	22		54	5 - 0	5 - 10	5 - 11	1 - 9	0.375
	20			5 - 11	6 - 10	6 - 11	2 - 1	
	18			7 - 1	7 - 11	8 - 2	2 - 8	
	16			8 - 1	8 - 11	9 - 3	3 - 1	
5 1/2	22		60	4 - 10	5 - 8	5 - 9	1 - 8	0.416
	20			5 - 8	6 - 7	6 - 8	2 - 1	
	18			6 - 10	7 - 7	7 - 11	2 - 7	
	16			7 - 10	8 - 7	8 - 11	2 - 11	
6	22		66	4 - 8	5 - 6	5 - 6	1 - 8	0.458
	20			5 - 6	6 - 4	6 - 6	2 - 0	
	18			6 - 7	7 - 4	7 - 7	2 - 6	
	16			7 - 7	8 - 3	8 - 7	2 - 10	

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	NWC (γ_c = 145 pcf, f'_c = 3000 psi, n = 9, Fys = 60000 psi)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 4 - 0	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	7 - 6	8 - 0	9 - 0
3 1/2	6x6 - W4.0xW4.0	0.080		214	137	113	95	81	70	61	53	42
	4x4 - W2.9xW2.9	0.087		234	150	124	104	89	77	67	59	46
	4x4 - W4.0xW4.0	0.120		284	182	150	126	108	93	81	71	56
4	6x6 - W4.0xW4.0	0.080		305	195	161	136	116	100	87	76	60
	4x4 - W2.9xW2.9	0.087		325	208	172	145	123	106	93	81	64
	4x4 - W4.0xW4.0	0.120		376	240	199	167	142	123	107	94	74
4 1/2	4x4 - W2.9xW2.9	0.087		400	283	234	196	167	144	126	110	87
	4x4 - W4.0xW4.0	0.120		400	310	257	216	184	158	138	121	96
	#3 @ 9" o.c.	0.147		400	371	307	258	220	189	165	145	115
5	4x4 - W4.0xW4.0	0.120		400	400	336	282	241	208	181	159	126
	#3 @ 9" o.c.	0.147		400	400	392	330	281	242	211	186	147
	#4 @ 12" o.c.	0.196		400	400	400	376	320	276	241	212	167
5 1/2	4x4 - W4.0xW4.0	0.120		400	400	400	357	305	263	229	201	159
	#3 @ 9" o.c.	0.147		400	400	400	400	353	305	265	233	184
	#4 @ 12" o.c.	0.196		400	400	400	400	386	332	290	255	201
6	4x4 - W4.0xW4.0	0.120		400	400	400	400	375	324	282	248	196
	#4 @ 18" o.c.	0.131		400	400	400	400	400	345	301	264	209
	#3 @ 9" o.c.	0.147		400	400	400	400	400	373	325	286	226

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

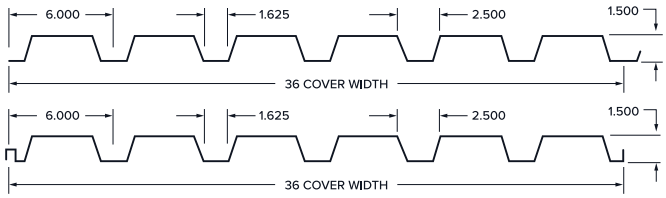
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

1.5" Form Deck Reversed (1.5FDR, 1.5FDI, 1.5FDV, 1.5FDIV)

LIGHTWEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.63
20	0.0358		1.98
18	0.0474		2.62
16	0.0598		3.30



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES — DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.163	0.175	0.157	0.175	0.176	0.183	4215	4391	2009	654	1181
20	40	0.205	0.213	0.201	0.213	0.224	0.235	5375	5624	2428	932	1696
18	40	0.280	0.281	0.279	0.281	0.304	0.315	7291	7553	3192	1557	2858
16	40	0.355	0.355	0.355	0.355	0.390	0.395	9332	9454	3996	2381	4396

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
3 1/2	22	23	6 - 2	7 - 3	7 - 4	2 - 0	0.213
	20		7 - 4	8 - 5	8 - 9	2 - 6	
	18		9 - 0	9 - 9	10 - 1	3 - 3	
	16		10 - 6	10 - 10	11 - 3	3 - 9	
4	22	28	5 - 10	6 - 11	7 - 0	2 - 0	0.255
	20		7 - 0	8 - 3	8 - 4	2 - 5	
	18		8 - 7	9 - 9	10 - 1	3 - 2	
	16		9 - 11	10 - 10	11 - 3	3 - 9	
4 1/2	22	33	5 - 8	6 - 8	6 - 9	1 - 11	0.297
	20		6 - 8	7 - 10	7 - 11	2 - 5	
	18		8 - 2	9 - 6	9 - 9	3 - 0	
	16		9 - 6	10 - 7	10 - 11	3 - 7	
5	22	37	5 - 5	6 - 5	6 - 6	1 - 11	0.338
	20		6 - 5	7 - 7	7 - 8	2 - 4	
	18		7 - 10	9 - 2	9 - 4	3 - 0	
	16		9 - 1	10 - 2	10 - 6	3 - 6	
5 1/2	22	42	5 - 3	6 - 2	6 - 3	1 - 10	0.380
	20		6 - 2	7 - 3	7 - 4	2 - 3	
	18		7 - 7	8 - 10	8 - 11	2 - 11	
	16		8 - 9	9 - 10	10 - 2	3 - 4	
6	22	46	5 - 1	6 - 0	6 - 1	1 - 10	0.422
	20		6 - 0	7 - 0	7 - 1	2 - 3	
	18		7 - 4	8 - 6	8 - 8	2 - 10	
	16		8 - 6	9 - 6	9 - 10	3 - 3	

Lightweight Concrete (110 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 4 - 0	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	8 - 0	9 - 0	10 - 0
3 1/2	6x6 - W2.9xW2.9	0.058	161	103	85	72	61	53	40	32	26
	4x4 - W2.0xW2.0	0.060	170	109	90	76	64	56	42	34	27
	6x6 - W4.0xW4.0	0.080	197	126	104	87	74	64	49	39	31
4	6x6 - W4.0xW4.0	0.080	257	165	136	114	97	84	64	51	41
	4x4 - W2.9xW2.9	0.087	281	180	149	125	106	92	70	56	45
	4x4 - W4.0xW4.0	0.120	283	221	183	154	131	113	86	68	55
4 1/2	6x6 - W4.0xW4.0	0.080	352	226	187	157	134	115	88	70	56
	4x4 - W2.9xW2.9	0.087	359	241	199	167	143	123	94	74	60
	4x4 - W4.0xW4.0	0.120	352	280	231	194	166	143	109	86	70
5	4x4 - W4.0xW4.0	0.120	400	342	291	245	209	180	138	109	88
	#3 @ 9" o.c.	0.147	400	361	328	290	247	213	163	129	105
	#4 @ 12" o.c.	0.196	400	353	321	294	271	252	197	156	126
5 1/2	4x4 - W4.0xW4.0	0.120	400	400	369	311	265	229	175	138	112
	#3 @ 9" o.c.	0.147	400	400	388	356	310	267	205	162	131
	#4 @ 12" o.c.	0.196	400	400	380	349	322	299	235	185	150
6	4x4 - W4.0xW4.0	0.120	400	400	400	385	328	283	216	171	138
	#4 @ 18" o.c.	0.131	400	400	400	400	353	304	233	184	149
	#3 @ 9" o.c.	0.147	400	400	400	400	381	329	252	199	161

LWC (γc = 110 pcf, f'c = 3000 psi, n = 14, Fys = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

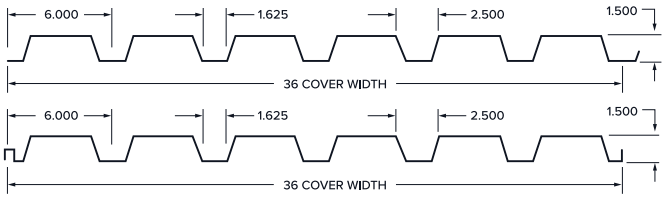
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

1.5" Form Deck Reversed (1.5FDR, 1.5FDI, 1.5FDV, 1.5FDIV)

NORMAL-WEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.63
20	0.0358		1.98
18	0.0474		2.62
16	0.0598		3.30



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.163	0.175	0.157	0.175	0.176	0.183	4215	4391	2009	654	1181
20	40	0.205	0.213	0.201	0.213	0.224	0.235	5375	5624	2428	932	1696
18	40	0.280	0.281	0.279	0.281	0.304	0.315	7291	7553	3192	1557	2858
16	40	0.355	0.355	0.355	0.355	0.390	0.395	9332	9454	3996	2381	4396

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
3 1/2	22	31	5 - 9	6 - 9	6 - 10	2 - 0	0.213
	20		6 - 9	8 - 0	8 - 1	2 - 5	
	18		8 - 4	9 - 8	9 - 11	3 - 1	
	16		9 - 8	10 - 9	11 - 1	3 - 8	
4	22	37	5 - 5	6 - 5	6 - 6	1 - 11	0.255
	20		6 - 5	7 - 7	7 - 8	2 - 4	
	18		7 - 11	9 - 2	9 - 4	3 - 0	
	16		9 - 1	10 - 2	10 - 6	3 - 6	
4 1/2	22	43	5 - 3	6 - 2	6 - 3	1 - 10	0.297
	20		6 - 2	7 - 3	7 - 4	2 - 3	
	18		7 - 6	8 - 9	8 - 10	2 - 10	
	16		8 - 8	9 - 8	10 - 1	3 - 4	
5	22	49	5 - 0	5 - 11	5 - 11	1 - 10	0.338
	20		5 - 11	6 - 11	7 - 0	2 - 3	
	18		7 - 2	8 - 4	8 - 6	2 - 9	
	16		8 - 4	9 - 3	9 - 7	3 - 2	
5 1/2	22	55	4 - 10	5 - 8	5 - 9	1 - 9	0.380
	20		5 - 8	6 - 8	6 - 9	2 - 2	
	18		6 - 11	8 - 0	8 - 2	2 - 8	
	16		8 - 0	8 - 11	9 - 3	3 - 1	
6	22	61	4 - 8	5 - 6	5 - 7	1 - 9	0.422
	20		5 - 6	6 - 5	6 - 6	2 - 1	
	18		6 - 8	7 - 9	7 - 10	2 - 7	
	16		7 - 9	8 - 7	8 - 11	2 - 11	

Normal-Weight Concrete (145 psf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 3" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 4 - 0	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	8 - 0	9 - 0	10 - 0
3 1/2	6x6 - W2.9xW2.9	0.058	161	103	85	72	61	53	40	32	26
	4x4 - W2.0xW2.0	0.060	170	109	90	76	64	56	42	34	27
	6x6 - W4.0xW4.0	0.080	197	126	104	87	74	64	49	39	31
4	6x6 - W4.0xW4.0	0.080	257	165	136	114	97	84	64	51	41
	4x4 - W2.9xW2.9	0.087	281	180	149	125	106	92	70	56	45
	4x4 - W4.0xW4.0	0.120	333	221	183	154	131	113	86	68	55
4 1/2	6x6 - W4.0xW4.0	0.080	353	226	187	157	134	115	88	70	56
	4x4 - W2.9xW2.9	0.087	377	241	199	167	143	123	94	74	60
	4x4 - W4.0xW4.0	0.120	400	280	231	194	166	143	109	86	70
5	4x4 - W4.0xW4.0	0.120	400	353	291	245	209	180	138	109	88
	#3 @ 9" o.c.	0.147	400	400	346	290	247	213	163	129	105
	#4 @ 12" o.c.	0.196	400	400	377	346	299	258	197	156	126
5 1/2	4x4 - W4.0xW4.0	0.120	400	400	370	311	265	229	175	138	112
	#3 @ 9" o.c.	0.147	400	400	400	364	310	267	205	162	131
	#4 @ 12" o.c.	0.196	400	400	400	400	356	307	235	185	150
6	4x4 - W4.0xW4.0	0.120	400	400	400	385	328	283	216	171	138
	#4 @ 18" o.c.	0.131	400	400	400	400	353	304	233	184	149
	#3 @ 9" o.c.	0.147	400	400	400	400	381	329	252	199	161

NWC (γ_c = 145 pcf, f'_c = 3000 psi, n = 9, F_{ys} = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

 25-NEW-169

Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

2" Form Deck (2.0FD)

LIGHTWEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.57
20	0.0358		1.90
18	0.0474		2.52
16	0.0598		3.17

ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.341	0.341	0.337	0.328	0.257	0.261	6153	6263	1474	321	617
20	40	0.419	0.419	0.418	0.410	0.342	0.346	8189	8285	1963	459	882
18	40	0.555	0.555	0.554	0.554	0.506	0.510	12108	12205	2590	769	1477
16	40	0.701	0.701	0.699	0.700	0.650	0.651	15572	15583	3255	1176	2260

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in)				Conc. Volume (ft^3/ft^2)
			Single	Double	Triple	Cantilever	
4	22	27	7 - 9	8 - 11	9 - 3	2 - 8	0.248
	20		9 - 5	10 - 3	10 - 7	3 - 5	
	18		11 - 7	12 - 5	12 - 10	4 - 3	
	16		12 - 3	13 - 11	14 - 4	4 - 9	
4 1/2	22	32	7 - 5	8 - 9	8 - 10	2 - 7	0.289
	20		9 - 0	10 - 1	10 - 5	3 - 4	
	18		11 - 2	12 - 2	12 - 7	4 - 2	
	16		11 - 10	13 - 8	13 - 10	4 - 7	
5	22	36	7 - 2	8 - 4	8 - 6	2 - 7	0.331
	20		8 - 7	9 - 8	10 - 0	3 - 3	
	18		10 - 9	11 - 8	12 - 1	4 - 0	
	16		11 - 5	13 - 2	13 - 5	4 - 5	
5 1/2	22	41	6 - 10	7 - 10	8 - 2	2 - 6	0.373
	20		8 - 3	9 - 3	9 - 7	3 - 1	
	18		10 - 4	11 - 3	11 - 8	3 - 10	
	16		11 - 1	12 - 8	13 - 1	4 - 4	
6	22	46	6 - 8	7 - 4	7 - 10	2 - 5	0.414
	20		8 - 0	9 - 0	9 - 3	3 - 0	
	18		10 - 0	10 - 10	11 - 3	3 - 9	
	16		10 - 9	12 - 3	12 - 8	4 - 2	
6 1/2	22	50	6 - 5	6 - 10	7 - 7	2 - 5	0.456
	20		7 - 9	8 - 8	8 - 11	2 - 11	
	18		9 - 8	10 - 6	10 - 10	3 - 7	
	16		10 - 5	11 - 10	12 - 3	4 - 1	

Lightweight Concrete (110 pcf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 2" for end bearing and 4" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 4" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in)								
			6 - 0	7 - 0	7 - 6	8 - 0	8 - 6	9 - 0	10 - 0	11 - 0	12 - 0
4	6x6 - W4.0xW4.0	0.080	120	88	77	68	60	53	43	36	30
	4x4 - W2.9xW2.9	0.087	131	97	84	74	66	58	47	39	33
	4x4 - W4.0xW4.0	0.120	174	128	111	98	87	77	63	43	36
4 1/2	6x6 - W4.0xW4.0	0.080	155	114	99	87	77	69	56	46	39
	4x4 - W2.9xW2.9	0.087	169	124	108	95	84	75	61	50	42
	4x4 - W4.0xW4.0	0.120	228	167	146	128	114	101	82	59	50
5	4x4 - W2.9xW2.9	0.087	206	152	132	116	103	92	74	61	52
	4x4 - W4.0xW4.0	0.120	279	205	179	157	139	124	101	77	65
	#3 @ 9" o.c.	0.147	330	242	211	186	164	147	119	88	74
5 1/2	4x4 - W4.0xW4.0	0.120	331	243	212	186	165	147	119	97	82
	#3 @ 9" o.c.	0.147	393	289	252	221	196	175	142	111	93
	#4 @ 12" o.c.	0.196	400	351	305	268	238	212	172	118	99
6	4x4 - W4.0xW4.0	0.120	383	281	245	215	191	170	138	114	96
	#4 @ 18" o.c.	0.131	400	294	256	225	200	178	144	119	100
	#3 @ 9" o.c.	0.147	400	335	292	257	228	203	164	136	114
6 1/2	4x4 - W4.0xW4.0	0.120	400	319	278	244	216	193	156	129	109
	#4 @ 18" o.c.	0.131	400	336	292	257	228	203	164	136	114
	#3 @ 9" o.c.	0.147	400	382	333	292	259	231	187	155	130

LWC (γc = 110 pcf, f'c = 3000 psi, n = 14, Fys = 60000 psi)

Notes:

7. Allowable Superimposed Uniform Loads shown are based on the following criteria:
   - Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
   - Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
   - Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
   - End span of three span condition and ACI moment coefficients.
   - Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

2" Form Deck (2.0FD)

NORMAL-WEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.57
20	0.0358		1.90
18	0.0474		2.52
16	0.0598		3.17

ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.341	0.341	0.337	0.328	0.257	0.261	6153	6263	1474	321	617
20	40	0.419	0.419	0.418	0.410	0.342	0.346	8189	8285	1963	459	882
18	40	0.555	0.555	0.554	0.554	0.506	0.510	12108	12205	2590	769	1477
16	40	0.701	0.701	0.699	0.700	0.650	0.651	15572	15583	3255	1176	2260

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in)				Conc. Volume (ft^3/ft^2)
			Single	Double	Triple	Cantilever	
4	22	Normal Weight Concrete (145 pcf) 36	7 - 2	8 - 5	8 - 6	2 - 7	0.248
	20		8 - 8	9 - 8	10 - 0	3 - 3	
	18		10 - 9	11 - 9	12 - 2	4 - 0	
	16		11 - 6	13 - 2	13 - 6	4 - 6	
4 1/2	22	42	6 - 10	7 - 9	8 - 1	2 - 6	0.289
	20		8 - 3	9 - 3	9 - 7	3 - 1	
	18		10 - 3	11 - 2	11 - 7	3 - 10	
	16		11 - 0	12 - 7	13 - 0	4 - 4	
5	22	48	6 - 6	7 - 1	7 - 9	2 - 5	0.331
	20		7 - 10	8 - 9	9 - 1	3 - 0	
	18		9 - 10	10 - 8	11 - 0	3 - 8	
	16		10 - 7	12 - 0	12 - 5	4 - 1	
5 1/2	22	54	6 - 1	6 - 6	7 - 4	2 - 4	0.373
	20		7 - 6	8 - 5	8 - 9	2 - 11	
	18		9 - 6	10 - 3	10 - 7	3 - 6	
	16		10 - 2	11 - 6	11 - 11	3 - 11	
6	22	60	5 - 6	6 - 0	6 - 10	2 - 3	0.414
	20		7 - 3	8 - 1	8 - 5	2 - 9	
	18		9 - 2	9 - 10	10 - 2	3 - 4	
	16		9 - 10	11 - 1	11 - 6	3 - 10	
6 1/2	22	66	5 - 0	5 - 6	6 - 3	2 - 1	0.456
	20		7 - 0	7 - 10	8 - 1	2 - 8	
	18		8 - 10	9 - 6	9 - 10	3 - 3	
	16		9 - 7	10 - 8	11 - 1	3 - 8	

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 2'' for end bearing and 4'' for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 4'' minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	NWC (γc = 145 pcf, f'c = 3000 psi, n = 9, Fys = 60000 psi)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in)								
				6 - 0	7 - 0	7 - 6	8 - 0	8 - 6	9 - 0	10 - 0	11 - 0	12 - 0
4	6x6 - W4.0xW4.0	0.080		120	88	77	68	60	53	43	36	30
	4x4 - W2.9xW2.9	0.087		131	97	84	74	66	58	47	39	33
	4x4 - W4.0xW4.0	0.120		174	128	111	98	87	77	63	43	36
4 1/2	6x6 - W4.0xW4.0	0.080		155	114	99	87	77	69	56	46	39
	4x4 - W2.9xW2.9	0.087		169	124	108	95	84	75	61	50	42
	4x4 - W4.0xW4.0	0.120		228	167	146	128	114	101	82	59	50
5	4x4 - W2.9xW2.9	0.087		206	152	132	116	103	92	74	61	52
	4x4 - W4.0xW4.0	0.120		279	205	179	157	139	124	101	77	65
	#3 @ 9'' o.c.	0.147		330	242	211	186	164	147	119	88	74
5 1/2	4x4 - W4.0xW4.0	0.120		331	243	212	186	165	147	119	97	82
	#3 @ 9'' o.c.	0.147		393	289	252	221	196	175	142	111	93
	#4 @ 12'' o.c.	0.196		400	351	305	268	238	212	172	118	99
6	4x4 - W4.0xW4.0	0.120		383	281	245	215	191	170	138	114	96
	#4 @ 18'' o.c.	0.131		400	294	256	225	200	178	144	119	100
	#3 @ 9'' o.c.	0.147		400	335	292	257	228	203	164	136	114
6 1/2	4x4 - W4.0xW4.0	0.120		400	319	278	244	216	193	156	129	109
	#4 @ 18'' o.c.	0.131		400	336	292	257	228	203	164	136	114
	#3 @ 9'' o.c.	0.147		400	382	333	292	259	231	187	155	130

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3''. For h > 3'', mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4''.
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1'' under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

 25-NEW-169

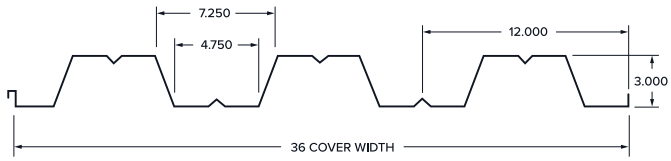
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

3" Form Deck (3.0FD)

LIGHTWEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.71
20	0.0358		2.07
18	0.0474		2.74
16	0.0598		3.45



ICC-ES APPROVED
REFER TO ESR-3818

ASD SECTION PROPERTIES — DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.770	0.770	0.764	0.750	0.407	0.424	9749	10151	1416	336	677
20	40	0.946	0.946	0.945	0.934	0.537	0.556	12871	13319	2227	482	967
18	40	1.253	1.253	1.252	1.253	0.794	0.802	19016	19213	3895	811	1615
16	40	1.580	1.580	1.579	1.579	1.012	1.013	24245	24264	4901	1245	2466

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)		Maximum Construction Clear Span (ft - in) Single	Double	Triple	Cantilever	Conc. Volume (ft^3/ft^2)
5	22	Lightweight Concrete (110 pcf)	32	10 - 1	10 - 0	11 - 5	3 - 9	0.292
	20			12 - 0	12 - 8	13 - 2	4 - 4	
	18			13 - 8	15 - 3	15 - 9	5 - 3	
	16			14 - 5	17 - 0	16 - 11	5 - 8	
5 1/2	22		37	9 - 8	9 - 3	10 - 6	3 - 6	0.333
	20			11 - 6	12 - 2	12 - 7	4 - 2	
	18			13 - 3	14 - 8	15 - 2	5 - 0	
	16			14 - 0	16 - 4	16 - 5	5 - 5	
6	22		41	8 - 7	8 - 7	9 - 9	3 - 3	0.375
	20			11 - 0	11 - 9	12 - 2	4 - 0	
	18			12 - 11	14 - 1	14 - 7	4 - 10	
	16			13 - 7	15 - 9	16 - 0	5 - 4	
6 1/2	22		46	7 - 9	8 - 0	9 - 1	3 - 0	0.417
	20			10 - 7	11 - 4	11 - 8	3 - 10	
	18			12 - 7	13 - 7	14 - 1	4 - 8	
	16			13 - 3	15 - 3	15 - 7	5 - 2	
7	22		50	7 - 1	7 - 6	8 - 6	2 - 10	0.458
	20			10 - 2	10 - 8	11 - 4	3 - 9	
	18			12 - 4	13 - 2	13 - 8	4 - 6	
	16			13 - 0	14 - 9	15 - 3	5 - 1	
7 1/2	22		55	6 - 6	7 - 0	8 - 0	2 - 8	0.500
	20			9 - 10	10 - 0	11 - 0	3 - 8	
	18			12 - 1	12 - 9	13 - 2	4 - 4	
	16			12 - 9	14 - 4	14 - 10	4 - 11	

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 2 1/2" for end bearing and 5" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 5" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	LWC (γc = 110 pcf, f'c = 3000 psi, n = 14, Fys = 60000 psi)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in) 7 - 0	8 - 0	9 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0
5	6x6 - W4.0xW4.0	0.080		91	70	55	45	37	31	26	23	20
	4x4 - W2.9xW2.9	0.087		100	76	60	49	40	34	29	25	22
	4x4 - W4.0xW4.0	0.120		134	103	81	66	54	46	39	34	29
5 1/2	4x4 - W2.9xW2.9	0.087		127	98	77	62	52	43	37	32	28
	4x4 - W4.0xW4.0	0.120		172	132	104	84	70	59	50	43	37
	#3 @ 9" o.c.	0.147		202	154	122	99	82	69	58	50	44
6	4x4 - W4.0xW4.0	0.120		210	161	127	103	85	71	61	52	46
	#4 @ 18" o.c.	0.131		217	166	131	106	88	74	63	54	47
	#3 @ 9" o.c.	0.147		248	190	150	122	100	84	72	62	54
6 1/2	4x4 - W4.0xW4.0	0.120		248	190	150	121	100	84	72	62	54
	#4 @ 18" o.c.	0.131		258	198	156	126	104	88	75	64	56
	#3 @ 9" o.c.	0.147		295	226	178	144	119	100	85	74	64
7	4x4 - W4.0xW4.0	0.120		286	219	173	140	116	97	83	71	62
	#4 @ 18" o.c.	0.131		299	229	181	147	121	102	87	75	65
	#3 @ 9" o.c.	0.147		341	261	206	167	138	116	99	85	74
7 1/2	#4 @ 18" o.c.	0.131		341	261	206	167	138	116	99	85	74
	#3 @ 9" o.c.	0.147		388	297	234	190	157	132	112	97	84
	#4 @ 12" o.c.	0.196		400	385	304	246	204	171	146	126	110

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

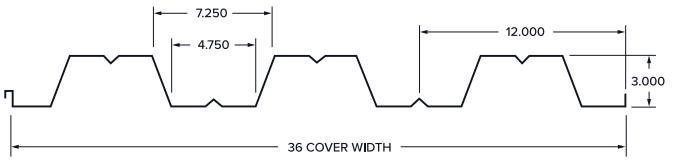
Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools

3" Form Deck (3.0FD)

NORMAL-WEIGHT CONCRETE

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	36	1.71
20	0.0358		2.07
18	0.0474		2.74
16	0.0598		3.45



ICC-ES APPROVED
REFER TO ESR-3818

ASD

SECTION PROPERTIES

DESIGN STRENGTHS (No Concrete Fill)

Gage	F_y (ksi)	I_D 1 Span (in^4/ft)	I_D 2+ Span (in^4/ft)	I_p (in^4/ft)	I_n (in^4/ft)	S_p (in^3/ft)	S_n (in^3/ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.770	0.770	0.764	0.750	0.407	0.424	9749	10151	1416	336	677
20	40	0.946	0.946	0.945	0.934	0.537	0.556	12871	13319	2227	482	967
18	40	1.253	1.253	1.252	1.253	0.794	0.802	19016	19213	3895	811	1615
16	40	1.580	1.580	1.579	1.579	1.012	1.013	24245	24264	4901	1245	2466

CONSTRUCTION CLEAR SPANS

Total Slab Depth (in)	Gage	Concrete Weight (psf)	Maximum Construction Clear Span (ft - in)				Conc. Volume (ft^3/ft^2)
			Single	Double	Triple	Cantilever	
5	22	42	8 - 5	8 - 5	9 - 7	3 - 2	0.292
	20		10 - 11	11 - 7	12 - 0	4 - 0	
	18		12 - 10	14 - 0	14 - 6	4 - 10	
	16		13 - 6	15 - 8	15 - 10	5 - 3	
5 1/2	22	48	7 - 5	7 - 8	8 - 9	2 - 11	0.333
	20		10 - 4	10 - 11	11 - 6	3 - 10	
	18		12 - 5	13 - 4	13 - 10	4 - 7	
	16		13 - 1	15 - 0	15 - 5	5 - 1	
6	22	54	6 - 7	7 - 1	8 - 1	2 - 8	0.375
	20		9 - 11	10 - 1	11 - 0	3 - 8	
	18		12 - 1	12 - 10	13 - 3	4 - 5	
	16		12 - 9	14 - 4	14 - 10	4 - 11	
6 1/2	22	60	5 - 11	6 - 7	7 - 5	2 - 5	0.417
	20		9 - 6	9 - 4	10 - 7	3 - 6	
	18		11 - 9	12 - 4	12 - 9	4 - 3	
	16		12 - 5	13 - 10	14 - 4	4 - 9	
7	22	66	5 - 5	6 - 1	6 - 9	2 - 3	0.458
	20		9 - 2	8 - 8	9 - 11	3 - 3	
	18		11 - 6	11 - 11	12 - 4	4 - 1	
	16		12 - 2	13 - 4	13 - 10	4 - 7	
7 1/2	22	72	5 - 0	5 - 8	6 - 3	2 - 1	0.500
	20		8 - 10	8 - 2	9 - 3	3 - 1	
	18		11 - 1	11 - 6	11 - 11	3 - 11	
	16		11 - 11	12 - 11	13 - 5	4 - 5	

Normal Weight Concrete (145 pcf)

Notes:

1. Section properties are calculated in accordance with the AISI S100-16.
2. Web crippling design strengths* and maximum construction spans are based on 2 1/2" for end bearing and 5" for interior bearing. Check web crippling if minimums are not met.
3. Maximum construction spans are based on ANSI/SDI NC-2017 Standard for Non-Composite Steel Floor Deck and the following construction loading:
   - Deck self-weight and concrete weight plus worst-case of either a 150 lb. concentrated load or a 20 psf uniform load; or
   - Deck self-weight plus a 50 psf uniform construction load, whichever controls.
4. Concrete weights do not include weight of deck.
5. Deck profile has been accounted for in determining concrete volumes. Deck and support deflections have not been included in concrete volumes or weights.
6. Cantilever clear spans assume adjacent clear span is at least 3 times longer than the cantilever clear span and no greater than spans shown. Bearing width at perimeter support assumed to be 5" minimum. Contact New Millennium otherwise.

SLAB DESIGN - ALLOWABLE SUPERIMPOSED UNIFORM LOADS

Total Slab Depth, h (in)	Reinforcement (Mesh or Deformed Bars)	A_s (in^2/ft)	Allowable Superimposed Uniform Load (psf) Clear Span (ft - in)								
			7 - 0	8 - 0	9 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0
5	6x6 - W4.0xW4.0	0.080	91	70	55	45	37	31	26	23	20
	4x4 - W2.9xW2.9	0.087	100	76	60	49	40	34	29	25	22
	4x4 - W4.0xW4.0	0.120	134	103	81	66	54	46	39	34	29
5 1/2	4x4 - W2.9xW2.9	0.087	127	98	77	62	52	43	37	32	28
	4x4 - W4.0xW4.0	0.120	172	132	104	84	70	59	50	43	37
	#3 @ 9" o.c.	0.147	202	154	122	99	82	69	58	50	44
6	4x4 - W4.0xW4.0	0.120	210	161	127	103	85	71	61	52	46
	#4 @ 18" o.c.	0.131	217	166	131	106	88	74	63	54	47
	#3 @ 9" o.c.	0.147	248	190	150	122	100	84	72	62	54
6 1/2	4x4 - W4.0xW4.0	0.120	248	190	150	121	100	84	72	62	54
	#4 @ 18" o.c.	0.131	258	198	156	126	104	88	75	64	56
	#3 @ 9" o.c.	0.147	295	226	178	144	119	100	85	74	64
7	4x4 - W4.0xW4.0	0.120	286	219	173	140	116	97	83	71	62
	#4 @ 18" o.c.	0.131	299	229	181	147	121	102	87	75	65
	#3 @ 9" o.c.	0.147	341	261	206	167	138	116	99	85	74
7 1/2	#4 @ 18" o.c.	0.131	341	261	206	167	138	116	99	85	74
	#3 @ 9" o.c.	0.147	388	297	234	190	157	132	112	97	84
	#4 @ 12" o.c.	0.196	400	385	304	246	204	171	146	126	110

NWC (γ_c = 145 pcf, f'_c = 3000 psi, n = 9, Fys = 60000 psi)

Notes: 7. Allowable Superimposed Uniform Loads shown are based on the following criteria:

- Unfactored service level loads, determined using ACI design method and uniform load factor of 1.6.
- Reinforcement placed at middle of tc for h ≤ 3". For h > 3", mesh is draped over supports or bars are placed for positive and negative bending, where positive steel rests on deck and negative steel cover = 3/4".
- Galvanized deck. If non-galvanized deck or temporary shoring is used, the weight of the slab must be deducted from the uniform loads.
- End span of three span condition and ACI moment coefficients.
- Slab deflection is limited to a minimum of Clear Span/360 or 1" under service level superimposed loading.

NEW MILLENNIUM
A Steel Dynamics Company

Discover the easiest way to specify Steel Roof and Floor Deck:
www.newmill.com/digital-tools