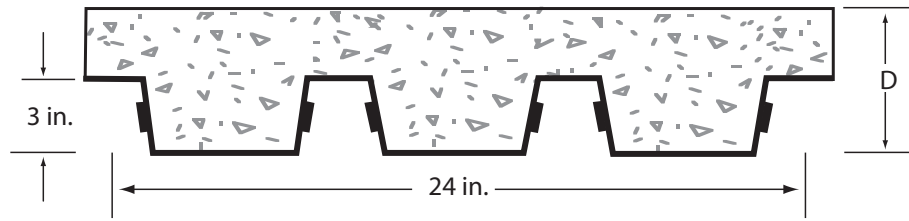




# WF 324 INVERTED COMPOSITE DECK



All dimensions are in inches.

IMPERIAL	STEEL DECK SECTION PROPERTIES (Per foot of width)						COMPOSITE SLAB PROPERTIES (Per foot of width)						
	Base Steel Thickness (in.)	Weight (psf)	Area (in <sup>2</sup> )	Section Modulus (in <sup>3</sup> )		Deflection Inertia (in <sup>4</sup> )	Overall Slab Depth, D (in.)						
				Midspan	Support		5.0	5.5	6.0	6.5	7.0	7.5	8.0
							Slab Weight (psf)						
0.030	2.15	0.615	0.402	0.380	0.829	54.5	60.8	67.0	73.3	79.5	85.8	92.0	
0.036	2.57	0.738	0.508	0.487	1.00	Concrete Volume (yd <sup>3</sup> /100ft <sup>2</sup> )							
0.048	3.40	0.984	0.721	0.670	1.33	1.24	1.40	1.55	1.71	1.86	2.01	2.17	
0.060	4.24	1.23	0.894	0.854	1.66								

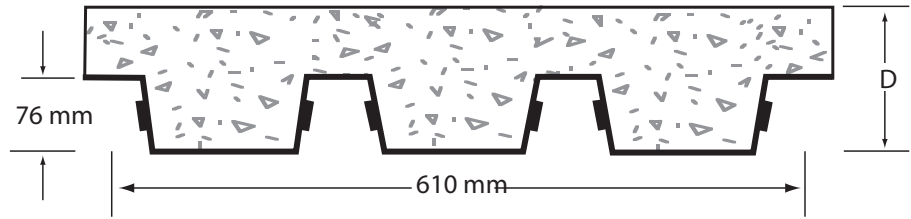
MAXIMUM SPECIFIED UNIFORMLY DISTRIBUTED LOADS (psf)																						
SLAB DEPTH, D (in.)		5.0			5.5			6.0			6.5			7.0			7.5			8.0		
BASE STEEL (in.)	SLAB SPAN (ft)	Deck Span			Deck Span			Deck Span			Deck Span			Deck Span			Deck Span					
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
0.030	9'0"	109	109	109	123	123	123	137	137	137	152	152	152	166	166	166	180	180	180	195	195	195
	9'6"	95	95	95	107	107	107	119	119	119	132	132	132	144	144	144	157	157	157	169	169	169
	10'0"	83	83	83	93	93	93	104	104	104	115	115	115	126	126	126	137	137	137	148	148	148
	10'6"	72	72	72	82	82	82	91	91	91	101	101	101	110	110	110	120	120	120	129	129	129
	11'0"	64	64	64	72	72	72	80	80	80	89	89	89	97	97	97	106	106	106	114	114	114
	11'6"	56	56	56	64	64	64	71	71	71	78	78	78	86	86	86	93	93	93	100	100	100
12'0"	50	50	50	56	56	56	63	63	63	69	69	69	76	76	76	82	82	82	89	89	89	
0.036	10'0"	96	96	96	109	109	109	121	121	121	134	134	134	147	147	147	159	159	159	172	172	172
	10'6"	85	85	85	96	96	96	108	108	108	119	119	119	130	130	130	141	141	141	152	152	152
	11'0"	76	76	76	86	86	86	96	96	96	106	106	106	116	116	116	126	126	126	135	135	135
	11'6"	68	68	68	76	76	76	85	85	85	94	94	94	103	103	103	112	112	112	121	121	121
	12'0"	61	61	61	68	68	68	76	76	76	84	84	84	92	92	92	100	100	100	108	108	108
	12'6"	54	54	54	61	61	61	69	69	69	76	76	76	83	83	83	90	90	90	97	97	97
13'0"	49	49	49	55	55	55	62	62	62	68	68	68	75	75	75	81	81	81	87	87	87	
0.048	10'6"	129	129	129	145	145	145	162	162	162	179	179	179	196	196	196	213	213	213	230	230	230
	11'0"	117	117	117	132	132	132	147	147	147	163	163	163	178	178	178	193	193	193	209	209	209
	11'6"	106	106	106	120	120	120	134	134	134	148	148	148	162	162	162	176	176	176	190	190	190
	12'0"	97	97	97	110	110	110	123	123	123	136	136	136	149	149	149	161	161	161	174	174	174
	12'6"	89	89	89	101	101	101	113	113	113	125	125	125	136	136	136	148	148	148	160	160	160
	13'0"	82	82	82	93	93	93	104	104	104	115	115	115	126	126	126	136	136	136	147	147	147
	13'6"	76	76	76	86	86	86	96	96	96	106	106	106	116	116	116	126	126	126	136	136	136
	14'0"	70	70	70	80	80	80	89	89	89	98	98	98	107	107	107	117	117	117	126	126	126
	14'6"	65	65	65	74	74	74	83	83	83	91	91	91	100	100	100	108	108	108	117	117	117
15'0"	61	61	61	69	69	69	77	77	77	85	85	85	93	93	93	101	101	101	109	109	109	
0.060	11'0"	132	132	132	149	149	149	166	166	166	184	184	184	201	201	201	219	219	219	236	236	236
	11'6"	121	121	121	137	137	137	152	152	152	168	168	168	184	184	184	200	200	200	216	216	216
	12'0"	111	111	111	125	125	125	140	140	140	155	155	155	169	169	169	184	184	184	198	198	198
	12'6"	102	102	102	116	116	116	129	129	129	143	143	143	156	156	156	170	170	170	183	183	183
	13'0"	95	95	95	107	107	107	119	119	119	132	132	132	144	144	144	157	157	157	169	169	169
	13'6"	88	88	88	99	99	99	111	111	111	122	122	122	134	134	134	146	146	146	157	157	157
	14'0"	82	82	82	92	92	92	103	103	103	114	114	114	124	124	124	135	135	135	146	146	146
	14'6"	76	76	76	86	86	86	96	96	96	106	106	106	116	116	116	126	126	126	136	136	136
	15'0"	71	71	71	81	81	81	90	90	90	99	99	99	109	109	109	118	118	118	127	127	127
15'6"	67	67	67	76	76	76	84	84	84	93	93	93	102	102	102	111	111	111	119	119	119	

- NOTES:
1. One shore support required at midspan in shaded areas.
  2. Slab weight includes steel deck and concrete slab, which has been accounted for in load tables.
  3. See Composite slab notes and design example.
  4. Prepared by Dr. R.M. Schuster, P.Eng. Distinguished Professor Emeritus, University of Waterloo.



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# WF 324 INVERTED COMPOSITE DECK



All dimensions are in millimeters.

STEEL DECK SECTION PROPERTIES (Per metre of width)							COMPOSITE SLAB PROPERTIES (Per metre of width)						
METRIC	Base Steel Thickness (mm)	Mass (kg/m <sup>2</sup> )	Area (mm <sup>2</sup> )	Section Modulus (x 10 <sup>3</sup> mm <sup>3</sup> )		Deflection Inertia (x10 <sup>6</sup> mm <sup>4</sup> )	Overall Slab Depth, D (mm)						
				Midspan	Support		130	140	150	160	170	180	190
							Slab Weight (kPa)						
				Concrete Volume (m <sup>3</sup> /10m <sup>2</sup> )									
	0.762	10.5	1300	21.6	20.4	1.13	2.58	2.80	3.03	3.25	3.48	3.70	3.93
	0.914	12.5	1560	27.2	26.2	1.37							
	1.22	16.6	2081	38.7	36.0	1.82	1.05	1.15	1.25	1.35	1.45	1.55	1.65
	1.52	20.7	2601	48.1	45.9	2.27							

MAXIMUM SPECIFIED UNIFORMLY DISTRIBUTED LOADS (kPa)																						
SLAB DEPTH, D (mm)		130			140			150			160			170			180			190		
BASE STEEL (mm)	SLAB SPAN (m)	Deck Span			Deck Span			Deck Span			Deck Span			Deck Span			Deck Span					
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
0.762	2.5	6.8	6.8	6.8	7.5	7.5	7.5	8.2	8.2	8.2	8.9	8.9	8.9	9.5	9.5	9.5	10.2	10.2	10.2	10.9	10.9	10.9
	2.6	6.2	6.2	6.2	6.8	6.8	6.8	7.4	7.4	7.4	8.0	8.0	8.0	8.7	8.7	8.7	9.3	9.3	9.3	9.9	9.9	9.9
	2.8	5.1	5.1	5.1	5.6	5.6	5.6	6.1	6.1	6.1	6.7	6.7	6.7	7.2	7.2	7.2	7.7	7.7	7.7	8.2	8.2	8.2
	3.0	4.3	4.3	4.3	4.7	4.7	4.7	5.1	5.1	5.1	5.6	5.6	5.6	6.0	6.0	6.0	6.4	6.4	6.4	6.8	6.8	6.8
	3.2	3.6	3.6	3.6	4.0	4.0	4.0	4.3	4.3	4.3	4.7	4.7	4.7	5.0	5.0	5.0	5.4	5.4	5.4	5.8	5.8	5.8
	3.4	3.0	3.0	3.0	3.3	3.3	3.3	3.6	3.6	3.6	4.0	4.0	4.0	4.3	4.3	4.3	4.6	4.6	4.6	4.9	4.9	4.9
	3.5	2.8	2.8	2.8	3.1	3.1	3.1	3.4	3.4	3.4	3.6	3.6	3.6	3.9	3.9	3.9	4.2	4.2	4.2	4.5	4.5	4.5
0.914	2.6	7.0	7.0	7.0	7.7	7.7	7.7	8.4	8.4	8.4	9.1	9.1	9.1	9.8	9.8	9.8	10.5	10.5	10.5	11.2	11.2	11.2
	2.8	5.8	5.8	5.8	6.4	6.4	6.4	7.0	7.0	7.0	7.6	7.6	7.6	8.2	8.2	8.2	8.8	8.8	8.8	9.3	9.3	9.3
	3.0	4.9	4.9	4.9	5.4	5.4	5.4	5.9	5.9	5.9	6.4	6.4	6.4	6.9	6.9	6.9	7.4	7.4	7.4	7.9	7.9	7.9
	3.2	4.2	4.2	4.2	4.6	4.6	4.6	5.0	5.0	5.0	5.5	5.5	5.5	5.9	5.9	5.9	6.3	6.3	6.3	6.7	6.7	6.7
	3.4	3.6	3.6	3.6	4.0	4.0	4.0	4.3	4.3	4.3	4.7	4.7	4.7	5.1	5.1	5.1	5.4	5.4	5.4	5.8	5.8	5.8
	3.5	3.3	3.3	3.3	3.7	3.7	3.7	4.0	4.0	4.0	4.4	4.4	4.4	4.7	4.7	4.7	5.0	5.0	5.0	5.4	5.4	5.4
	3.6	3.1	3.1	3.1	3.4	3.4	3.4	3.7	3.7	3.7	4.0	4.0	4.0	4.4	4.4	4.4	4.7	4.7	4.7	5.0	5.0	5.0
1.22	2.8	8.3	8.3	8.3	9.1	9.1	9.1	10.0	10.0	10.0	10.8	10.8	10.8	11.7	11.7	11.7	12.5	12.5	12.5	13.3	13.3	13.3
	3.0	7.2	7.2	7.2	7.9	7.9	7.9	8.7	8.7	8.7	9.4	9.4	9.4	10.1	10.1	10.1	10.8	10.8	10.8	11.5	11.5	11.5
	3.2	6.3	6.3	6.3	6.9	6.9	6.9	7.6	7.6	7.6	8.2	8.2	8.2	8.8	8.8	8.8	9.5	9.5	9.5	10.1	10.1	10.1
	3.4	5.5	5.5	5.5	6.1	6.1	6.1	6.7	6.7	6.7	7.2	7.2	7.2	7.8	7.8	7.8	8.3	8.3	8.3	8.9	8.9	8.9
	3.5	5.2	5.2	5.2	5.7	5.7	5.7	6.3	6.3	6.3	6.8	6.8	6.8	7.3	7.3	7.3	7.8	7.8	7.8	8.4	8.4	8.4
	3.6	4.9	4.9	4.9	5.4	5.4	5.4	5.9	5.9	5.9	6.4	6.4	6.4	6.9	6.9	6.9	7.4	7.4	7.4	7.9	7.9	7.9
	3.8	4.4	4.4	4.4	4.8	4.8	4.8	5.3	5.3	5.3	5.7	5.7	5.7	6.2	6.2	6.2	6.6	6.6	6.6	7.0	7.0	7.0
	4.0	3.9	3.9	3.9	4.3	4.3	4.3	4.7	4.7	4.7	5.1	5.1	5.1	5.5	5.5	5.5	5.9	5.9	5.9	6.3	6.3	6.3
1.52	3.4	6.3	6.3	6.3	6.9	6.9	6.9	7.6	7.6	7.6	8.2	8.2	8.2	8.8	8.8	8.8	9.5	9.5	9.5	10.1	10.1	10.1
	3.5	6.0	6.0	6.0	6.6	6.6	6.6	7.2	7.2	7.2	7.8	7.8	7.8	8.4	8.4	8.4	9.0	9.0	9.0	9.6	9.6	9.6
	3.6	5.6	5.6	5.6	6.2	6.2	6.2	6.8	6.8	6.8	7.3	7.3	7.3	7.9	7.9	7.9	8.5	8.5	8.5	9.0	9.0	9.0
	3.8	5.1	5.1	5.1	5.6	5.6	5.6	6.1	6.1	6.1	6.6	6.6	6.6	7.1	7.1	7.1	7.6	7.6	7.6	8.1	8.1	8.1
	4.0	4.6	4.6	4.6	5.0	5.0	5.0	5.5	5.5	5.5	5.9	5.9	5.9	6.4	6.4	6.4	6.9	6.9	6.9	7.3	7.3	7.3
	4.2	4.1	4.1	4.1	4.6	4.6	4.6	5.0	5.0	5.0	5.4	5.4	5.4	5.8	5.8	5.8	6.2	6.2	6.2	6.7	6.7	6.7
	4.4	3.8	3.8	3.8	4.2	4.2	4.2	4.5	4.5	4.5	4.9	4.9	4.9	5.3	5.3	5.3	5.7	5.7	5.7	6.1	6.1	6.1
	4.5	3.6	3.6	3.6	4.0	4.0	4.0	4.3	4.3	4.3	4.7	4.7	4.7	5.1	5.1	5.1	5.4	5.4	5.4	5.8	5.8	5.8
	4.6	3.5	3.5	3.5	3.8	3.8	3.8	4.2	4.2	4.2	4.5	4.5	4.5	4.9	4.9	4.9	5.2	5.2	5.2	5.6	5.6	5.6
4.8	3.2	3.2	3.2	3.5	3.5	3.5	3.8	3.8	3.8	4.1	4.1	4.1	4.5	4.5	4.5	4.8	4.8	4.8	5.1	5.1	5.1	

- NOTES:
- One shore support required at midspan in shaded areas.
  - Slab weight includes steel deck and concrete slab, which has been accounted for in load tables.
  - See Composite slab notes and design example.
  - Prepared by Dr. R.M. Schuster, P.Eng. Distinguished Professor Emeritus, University of Waterloo.



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