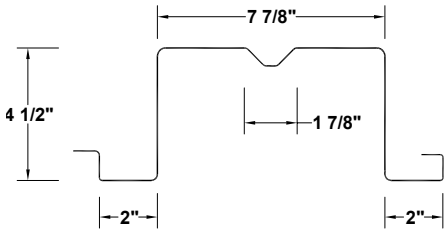
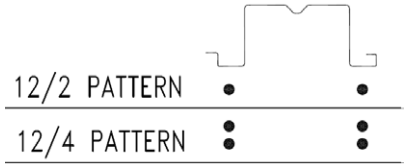
5.1 4.5D-12
Deep Deck





Panel Properties

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties					
					Area	Moment of Inertia	Distance to N.A. from Bottom	Distance to N.A. from Top	Section Modulus	Radius of Gyration
	w	t	F_y	F_u	A_g	I_g	y_b	y_t	S_g	r
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in	in^3/ft	in
20	2.88	0.0359	40	55	0.868	2.817	2.40	2.100	1.174	1.802
18	3.87	0.0478	40	55	1.154	3.727	2.40	2.100	1.553	1.797
16	4.86	0.0598	40	55	1.442	4.634	2.40	2.100	1.931	1.792
14	6.14	0.0750	40	55	1.807	5.767	2.40	2.100	2.403	1.787

Gauge	Effective Section Modulus for Bending at F_y					Effective Moment of Inertia for Deflection at Service Load			
	Area	Section Modulus	Max Distance to N.A. from Extreme Fiber	Section Modulus	Max Distance to N.A. from Extreme Fiber	Moment of Inertia	Moment of Inertia	Uniform Load Only	
								$I_d = (2I_e+I_g)/3$	
	A_e+	S_e+	y_b	S_e-	y_b	I_e+	I_e-	I+	I-
	in^2/ft	in^3/ft	in	in^3/ft	in	in^4/ft	in^4/ft	in^4/ft	in^4/ft
20	0.798	1.108	2.27	1.156	2.42	2.519	2.792	2.618	2.800
18	1.154	1.535	2.34	1.551	2.40	3.591	3.725	3.636	3.726
16	1.442	1.931	2.40	1.931	2.40	4.634	4.634	4.634	4.634
14	1.807	2.403	2.40	2.403	2.40	5.767	5.767	5.767	5.767

Reactions at Supports (plf) Based on Web Crippling

Gauge	Condition	Bearing Length of Webs							
		ASD (Pn/Ω) *(lbs/ft width)*				LRFD (ϕPn) *(lbs/ft width)*			
		1"	2"	4"	8"	1"	2"	4"	8"
20	End	370	458	581	738	567	700	889	1130
	Interior	630	754	929	1151	938	1122	1381	1712
18	End	646	789	991	1276	988	1207	1516	1952
	Interior	1104	1304	1587	1986	1642	1939	2360	2955
16	End	994	1203	1497	1914	1521	1840	2291	2928
	Interior	1706	1996	2406	2985	2538	2969	3578	4440
14	End	1535	1838	2267	2874	2348	2812	3469	4397
	Interior	2646	3066	3659	4499	3936	4560	5443	6692

Inward Allowable (f_b/Ω) and Factored (Φf_b) Distributed Load (lbs/ft²)

Gauge	Span	Limit Condition	Panel Span (Support Spacing)										
			10' - 0"	12' - 0"	14' - 0"	16' - 0"	18' - 0"	20' - 0"	22' - 0"	24' - 0"	26' - 0"	28' - 0"	30' - 0"
20	SS	f_b/Ω	177	123	90	69	55	44	37	31	26	23	20
		Φf_b	281	195	143	110	87	70	58	49	42	36	31
		L/360	114	66	42	28	20	14	11	8	7	5	4
		L/240	172	99	63	42	29	21	16	12	10	8	6
		L/180	-	-	83	56	39	29	21	17	13	10	8
		L/120	-	-	-	-	-	43	32	25	20	16	13
	DS	f_b/Ω	185	128	94	72	57	46	38	32	27	24	21
		Φf_b	293	203	149	114	90	73	61	51	43	37	33
		L/360	-	-	-	72	51	37	28	21	17	13	11
		L/240	-	-	-	-	-	-	-	32	25	20	16
		L/180	-	-	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-	-	-
	TS	f_b/Ω	231	160	118	90	71	58	48	40	34	29	26
		Φf_b	366	254	187	143	113	92	76	64	54	47	41
		L/360	-	156	98	66	46	34	25	20	15	12	10
		L/240	-	-	-	-	69	51	38	29	23	18	15
		L/180	-	-	-	-	-	-	-	39	31	25	20
		L/120	-	-	-	-	-	-	-	-	-	-	-
18	SS	f_b/Ω	245	170	125	96	76	61	51	43	36	31	27
		Φf_b	389	270	198	152	120	97	80	67	58	50	43
		L/360	159	92	58	39	27	20	15	11	9	7	6
		L/240	238	138	87	58	41	30	22	17	14	11	9
		L/180	-	-	116	78	54	40	30	23	18	14	12
		L/120	-	-	-	-	-	60	45	34	27	22	18
	DS	f_b/Ω	248	172	126	97	76	62	51	43	37	32	28
		Φf_b	393	273	201	154	121	98	81	68	58	50	44
		L/360	-	-	-	96	67	49	37	28	22	18	15
		L/240	-	-	-	-	-	-	-	43	33	27	22
		L/180	-	-	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-	-	-
	TS	f_b/Ω	310	215	158	121	96	77	64	54	46	39	34
		Φf_b	491	341	251	192	152	123	102	85	73	63	55
		L/360	-	208	131	88	62	45	34	26	20	16	13
		L/240	-	-	-	-	92	67	51	39	31	25	20
		L/180	-	-	-	-	-	-	-	52	41	33	27
		L/120	-	-	-	-	-	-	-	-	-	-	-
16	SS	f_b/Ω	308	214	157	120	95	77	64	54	46	39	34
		Φf_b	489	340	250	191	151	122	101	85	72	62	54
		L/360	203	117	74	49	35	25	19	15	12	9	8
		L/240	304	176	111	74	52	38	29	22	17	14	11
		L/180	-	-	148	99	69	51	38	29	23	18	15
		L/120	-	-	-	-	-	76	57	44	35	28	23
	DS	f_b/Ω	308	214	157	120	95	77	64	54	46	39	34
		Φf_b	489	340	250	191	151	122	101	85	72	62	54
		L/360	-	-	-	119	84	61	46	35	28	22	18
		L/240	-	-	-	-	-	-	-	53	42	33	27
		L/180	-	-	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-	-	-
	TS	f_b/Ω	385	268	197	151	119	96	80	67	57	49	43
		Φf_b	611	425	312	239	189	153	126	106	90	78	68
		L/360	-	259	163	109	77	56	42	32	25	20	17
		L/240	-	-	-	-	115	84	63	48	38	31	25
		L/180	-	-	-	-	-	-	-	65	51	41	33
		L/120	-	-	-	-	-	-	-	-	-	-	-
14	SS	f_b/Ω	384	266	196	150	118	96	79	67	57	49	43
		Φf_b	609	423	311	238	188	152	126	106	90	78	68
		L/360	252	146	92	62	43	32	24	18	14	11	9
		L/240	378	219	138	92	65	47	36	27	22	17	14
		L/180	-	-	184	123	86	63	47	36	29	23	19
		L/120	-	-	-	-	-	95	71	55	43	34	28
	DS	f_b/Ω	384	266	196	150	118	96	79	67	57	49	43
		Φf_b	609	423	311	238	188	152	126	106	90	78	68
		L/360	-	-	-	148	104	76	57	44	35	28	22
		L/240	-	-	-	-	-	-	-	66	52	41	34
		L/180	-	-	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-	-	-
	TS	f_b/Ω	480	333	245	187	148	120	99	83	71	61	53
		Φf_b	761	528	388	297	235	190	157	132	113	97	85
		L/360	-	322	203	136	95	70	52	40	32	25	21
		L/240	-	-	-	-	143	104	78	60	47	38	31
		L/180	-	-	-	-	-	-	-	80	63	51	41
		L/120	-	-	-	-	-	-	-	-	-	-	-