

Extruded Hollow Core

PRESTRESSED CONCRETE SLAB

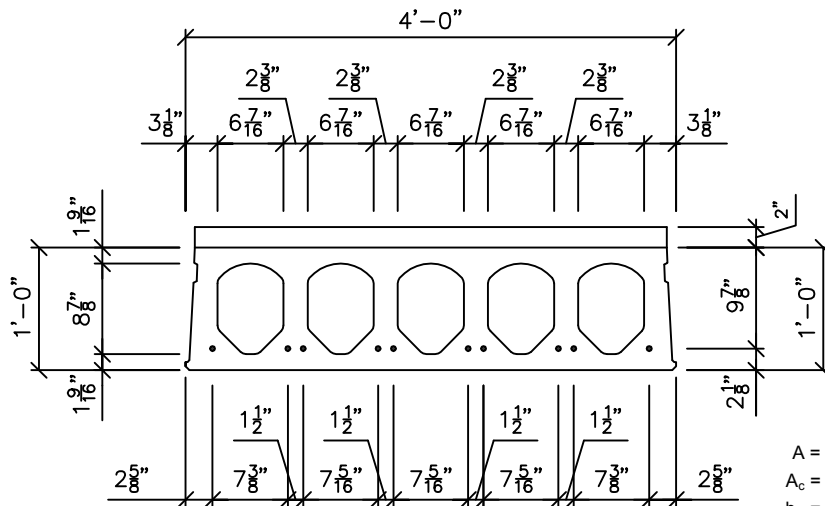
12" X 48" Heavy Section 2" Structural Topping

Safe Load Table

UNIFORMLY DISTRIBUTED SUPERIMPOSED SERVICE LOAD IN PSF

Standard Designation	Strands No. & Size	Strand Area Sq. In.	M Ft.-Kips per Unit	ϕM_n Ft.-Kips Per Unit	Span Length (L) in Ft.																																															
					15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50												
T1248H-217*	10 - 6/10	2.170	273.4	380.2	1328	1240	1162	1093	1031	975	924	878	812	739	674	617	566	520	479	442	408	378	350	325	302	280	261	243	226	211	196	183	171	159	148	138	129	118	107	98												
T1248H-204	8 - 6/10 & 2 - 1/2	2.042	286.1	364.5	1328	1240	1162	1093	1031	975	924	855	775	705	643	588	539	495	455	420	388	359	332	308	286	265	247	229	213	199	185	172	160	149	139	128	117	106	96	87												
T1248H-179	4 - 6/10 & 6 - 1/2	1.786	259.1	331.0	1328	1240	1162	1093	1031	948	852	769	696	632	576	526	481	441	406	373	344	318	294	272	251	233	216	200	186	172	160	148	137	126	114	103	92	83	74	65												
T1248H-148	4 - 6/10 & 4 - 1/2	1.480	226.7	286.8	1328	1240	1154	1020	907	810	727	654	591	536	487	444	406	371	340	312	287	264	243	224	206	190	176	162	149	138	127	115	103	92	82	72	63	55														
T1248H-117	4 - 6/10 & 2 - 1/2	1.174	194.4	237.9	1236	1076	943	832	738	657	588	528	476	430	390	354	322	293	267	244	223	204	187	171	157	143	131	120	109	100	89	78	68	59	50																	
T1248H-92	6 - 1/2	0.918	167.4	193.1	987	857	749	659	583	517	461	413	370	333	300	271	245	222	201	182	165	150	135	123	111	100	90	81	72	65	57																					
T1248H-61	4 - 1/2	0.612	135.1	134.6	662	571	496	433	380	335	295	261	232	206	183	163	145	128	114	101	89	78	68	59	51																											

controlled by: ultimate shear service



$A = 326.95 \text{ in}^2$ $f_c = 9000 \text{ psi}$
 $A_c = 386.81 \text{ in}^2$ $f_{ci} = 3500 \text{ psi}$
 $b_w = 14.38 \text{ in}$ $f_{ct} = 3000 \text{ psi}$
 $I_g = 5578.32 \text{ in}^4$ $f_{pu} = 270 \text{ ksi}$
 $I_{gc} = 8184 \text{ in}^4$
 $y_b = 5.803 \text{ in}$
 $y_{bc} = 6.890 \text{ in}$

* Strand Stressed to 62% of Ultimate

NOTES:

- 1) Grouted weight of topped structural unit is 117 psf or 468 plf based on concrete unit weight of 154 pcf.
- 2) Design is based on ACI Standard, "Building Code Requirements for Reinforced Concrete (ACI318)."
- 3) No shear reinforcement is required for the tabulated loads to the right of the heavy stepped line.
- 4) Tabulated loads are based on $U=1.2D+1.6L$ and with all load superimposed on the structural section considered as live load.
- 5) Tabulated loads in the blue area may be achieved by adding partial concrete corefill.
- 6) Tabulated loads in yellow are controlled by permissible flexural tension at service loads.
- 7) Tabulated loads in bold font have deflections in excess of $L/360$.
- 8) All strand stressed to 70% of ultimate.
- 9) For longer spans and conditions not covered in the load table, consult Molin.



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