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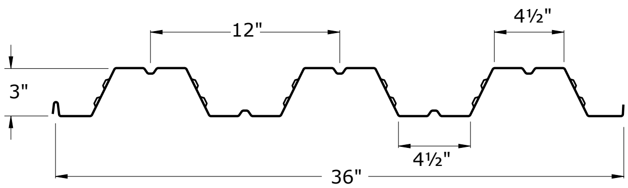
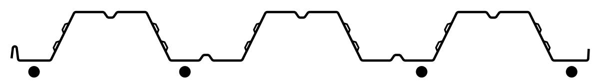
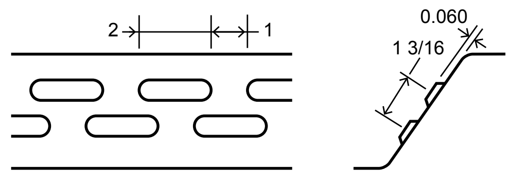
2.1 **3WxH-36**



3WxH-36 Profile



36/4 Attachment Pattern



3Wx Series Embossment

Panel Properties

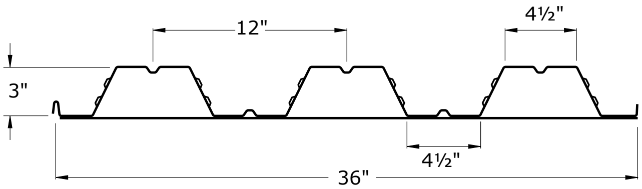
Gage	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties: Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Radius of Gyration
	w	t	F_y	F_u	A_g	I_g	y_b	S_g	r
	psf	in	ksi	ksi	in²/ft	in⁴/ft	in	in³/ft	in
22	1.70	0.0290	50	65	0.504	0.770	1.48	0.497	1.236
21	1.92	0.0330	50	65	0.556	0.850	1.48	0.548	1.236
20	2.09	0.0359	50	65	0.605	0.927	1.48	0.595	1.236
19	2.43	0.0420	50	65	0.708	1.083	1.48	0.695	1.236
18	2.76	0.0478	50	65	0.806	1.233	1.49	0.789	1.236
16	3.43	0.0598	50	65	1.008	1.540	1.49	0.984	1.236

Gage	Effective Section Modulus at F_y: Compression	Bending				Effective Moment of Inertia for Deflection		Uniform Load Only: $I_d = (2I_e+I_g)/3$	
	Area	Section Modulus	Distance to N.A. from Bottom	Section Modulus	Distance to N.A. from Bottom	Moment of Inertia	Moment of Inertia		
	A_e in²/ft	S_e+ in³/ft	y_b in	S_e- in³/ft	y_b in	I_e+ in⁴/ft	I_e- in⁴/ft	I+ in⁴/ft	I- in⁴/ft
22	0.309	0.392	1.33	0.404	1.63	0.727	0.720	0.741	0.737
21	0.362	0.452	1.36	0.465	1.61	0.823	0.813	0.832	0.826
20	0.414	0.510	1.39	0.524	1.59	0.910	0.900	0.916	0.909
19	0.532	0.636	1.43	0.654	1.55	1.083	1.073	1.083	1.077
18	0.651	0.761	1.46	0.781	1.52	1.233	1.230	1.233	1.231
16	0.887	0.984	1.49	0.982	1.50	1.540	1.540	1.540	1.540

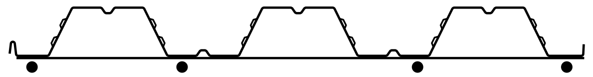
Reactions at Supports (plf) Based on Web Crippling

Gage	Condition	Bearing Length of Webs — Allowable (R_n/Ω): 1"	2"	4"	6"	Factored (ΦR_n): 1"	2"	4"	6"
22	End	296	368	471	550	452	564	721	842
	Interior	522	630	783	900	776	937	1164	1338
21	End	379	470	598	697	580	719	915	1066
	Interior	667	801	990	1135	993	1191	1472	1688
20	End	424	524	666	775	649	802	1020	1186
	Interior	746	893	1101	1261	1110	1329	1638	1876
19	End	600	737	930	1078	918	1127	1423	1650
	Interior	1054	1252	1532	1747	1568	1863	2280	2599
18	End	743	908	1141	1320	1137	1389	1746	2020
	Interior	1305	1542	1878	2136	1941	2294	2794	3178
16	End	1143	1383	1723	1983	1749	2116	2636	3034
	Interior	2008	2350	2834	3206	2986	3495	4216	4768

Web Crippling Constraints h=3.2" r=0.125" θ=63.5°



3WxHF-36 Profile



36/4 Attachment Pattern

Panel Properties

Gage	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties: Area	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Radius of Gyration
	w psf	t in	F_y ksi	F_u ksi	A_g in^2/ft	I_g in^4/ft	y_b in	S_g in^3/ft	r in
20/20	3.69	0.035 / 0.036	50	65	1.054	1.542	0.91	0.712	1.209
20/18	4.16	0.035 / 0.047	50	65	1.193	1.640	0.81	0.723	1.172
20/16	4.68	0.035 / 0.059	50	65	1.344	1.727	0.74	0.732	1.133
18/20	4.35	0.047 / 0.036	50	65	1.253	1.932	1.02	0.934	1.242
18/18	4.83	0.047 / 0.047	50	65	1.392	2.058	0.93	0.949	1.216
18/16	5.35	0.047 / 0.059	50	65	1.543	2.172	0.85	0.962	1.186
16/20	5.03	0.059 / 0.036	50	65	1.45	2.309	1.1	1.155	1.262
16/18	5.51	0.059 / 0.047	50	65	1.593	2.457	1.01	1.174	1.242
16/16	6.03	0.059 / 0.059	50	65	1.744	2.595	0.94	1.191	1.220

Gage	Effective Section Modulus at F_y					Effective Moment of Inertia for Deflection			
	Compression	Bending						Uniform Load Only	
	Area	Section Modulus	Distance to N.A. from Bottom	Section Modulus	Distance to N.A. from Bottom	Moment of Inertia	Moment of Inertia	$I_d = (2I_e+I_g)/3$	
	A_e in^2/ft	S_e+ in^3/ft	y_b in	S_e- in^3/ft	y_b in	I_e+ in^4/ft	I_e- in^4/ft	I+ in^4/ft	I- in^4/ft
20/20	0.481	0.538	0.75	0.645	1.42	1.506	1.186	1.518	1.305
20/18	0.551	0.540	0.66	0.674	1.23	1.582	1.363	1.601	1.455
20/16	0.650	0.562	0.61	0.701	1.04	1.640	1.512	1.669	1.584
18/20	0.691	0.875	0.98	0.844	1.49	1.930	1.484	1.931	1.633
18/18	0.761	0.878	0.88	0.879	1.34	2.056	1.693	2.057	1.815
18/16	0.860	0.875	0.80	0.910	1.19	2.170	1.868	2.171	1.969
16/20	0.923	1.175	1.11	1.047	1.53	2.306	1.790	2.307	1.963
16/18	0.997	1.194	1.02	1.084	1.40	2.454	2.012	2.455	2.160
16/16	1.095	1.211	0.95	1.119	1.28	2.592	2.214	2.593	2.341

Typical Details 1.17

Details
Composite deck-slab systems are not complete without edge form and flashings to contain the concrete during the pour. These common details are an important part of the system. Edge forms provide both concrete containment and establish one point of depth control for the concrete.

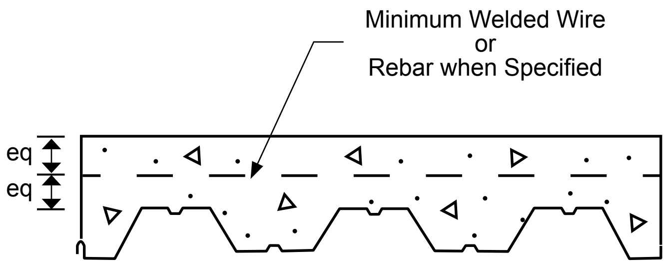


Figure 1.17.1: **TYPICAL PLACEMENT OF TEMPERATURE & SHRINKAGE REINFORCEMENT**

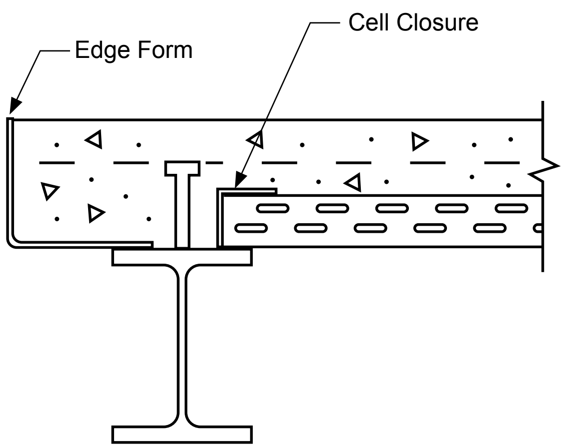


Figure 1.17.3: **SINGLE PIECE EDGE FROM PERPENDICULAR TO DECK ON WIDE FLANGE BEAM**

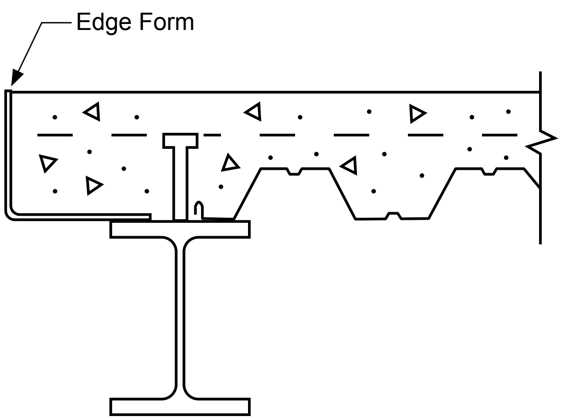


Figure 1.17.2: **SINGLE PIECE EDGE FROM PARALLEL TO DECK ON WIDE FLANGE BEAM**

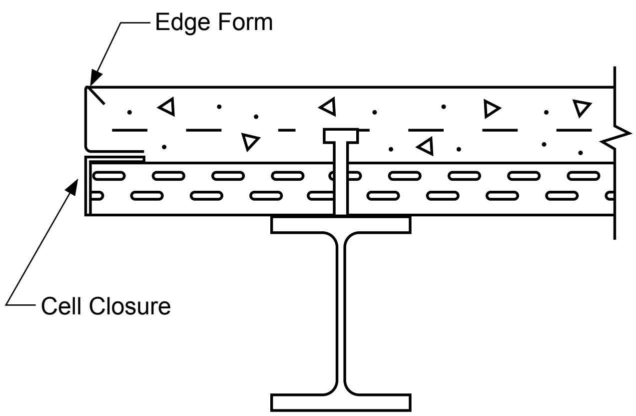


Figure 1.17.4: **TWO PIECE EDGE FORM WITH DECK CANTILEVER ON WIDE FLANGE BEAM**

1.17 **Typical Details**

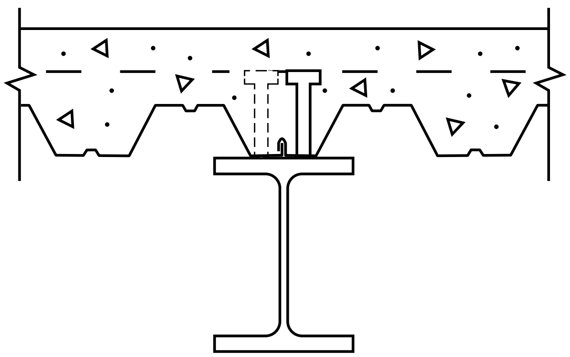


Figure 1.17.5: **DECK PARALLEL TO WIDE FLANGE BEAM**

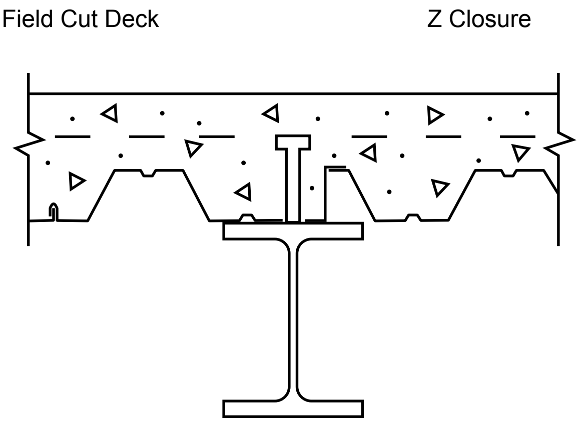


Figure 1.17.8: **DECK PARALLEL TO WIDE FLANGE BEAM CUT WITH ZEE FLASHING TO ACCOMMODATE DECK MODULE**

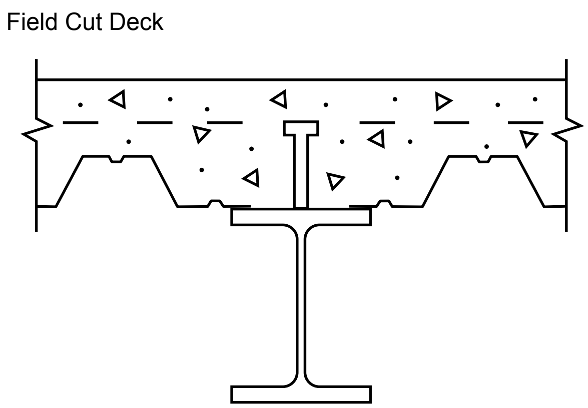


Figure 1.17.6: **DECK PARALLEL TO WIDE FLANGE BEAM CUT TO ACCOMMODATE DECK MODULE**

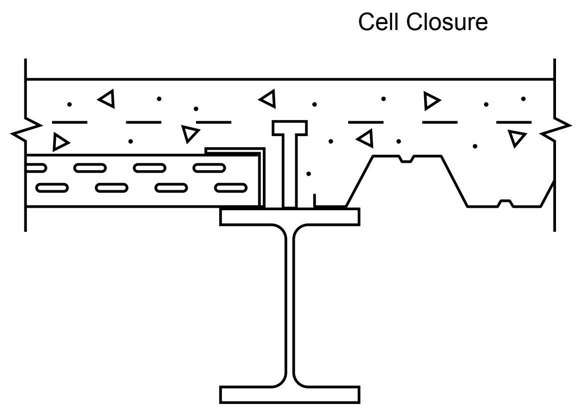


Figure 1.17.9: **DECK TRANSITION ON WIDE FLANGE BEAM**

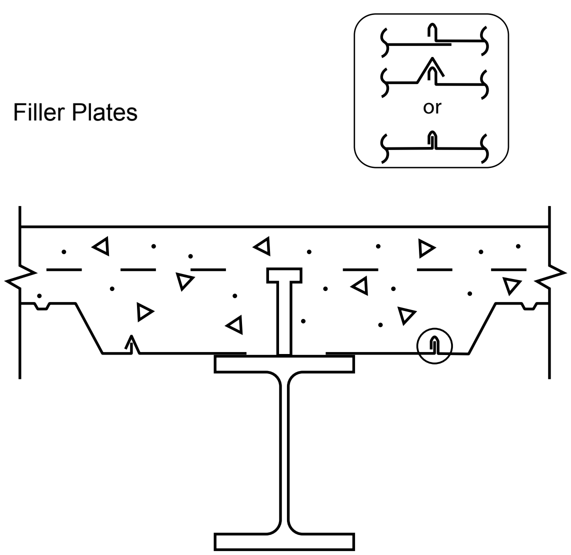


Figure 1.17.7: **DECK PARALLEL TO WIDE FLANGE BEAM WITH FILLER PLATES**

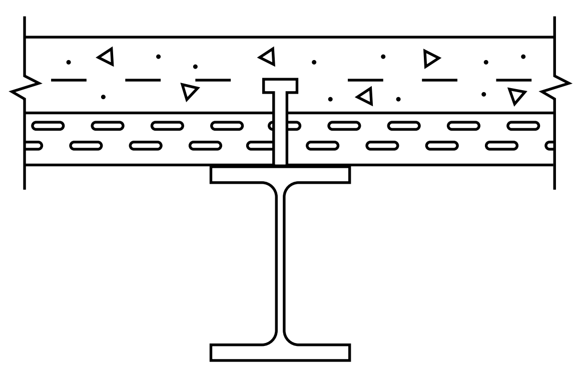


Figure 1.17.10: **DECK PERPENDICULAR TO WIDE FLANGE BEAM**

Typical Details 1.17

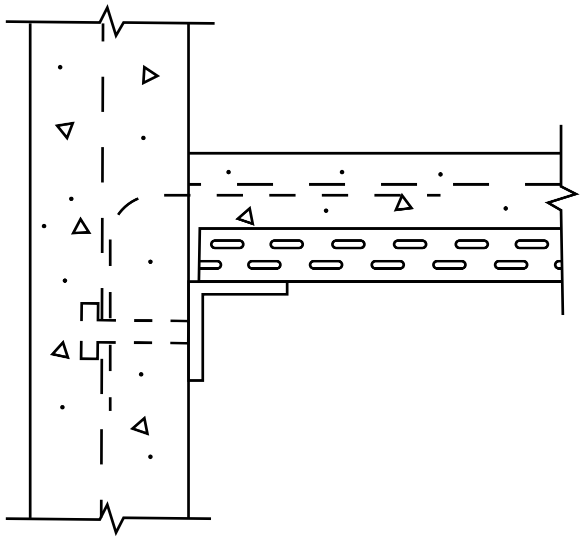


Figure 1.17.11: **CONCRETE OR CMU WALL LEGER DECK PERPENDICULAR**

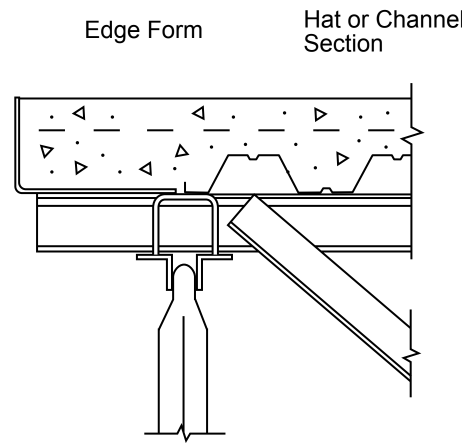


Figure 1.17.14: **SINGLE PIECE EDGE FROM PARALLEL TO DECK ON OPEN WEB JOIST GIRDER**

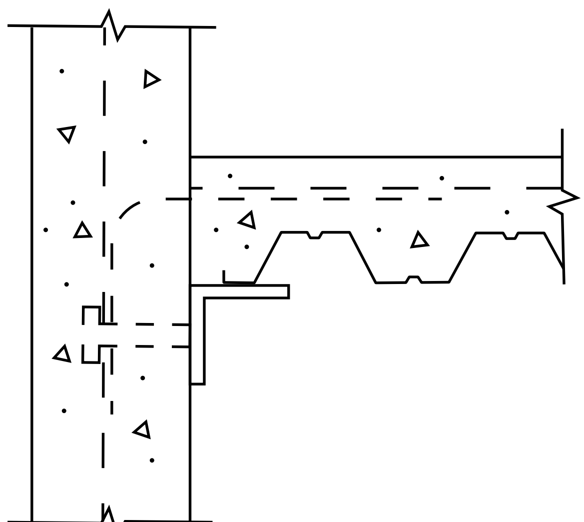


Figure 1.17.12: **CONCRETE OR CMU WALL LEGER DECK PARALLEL**

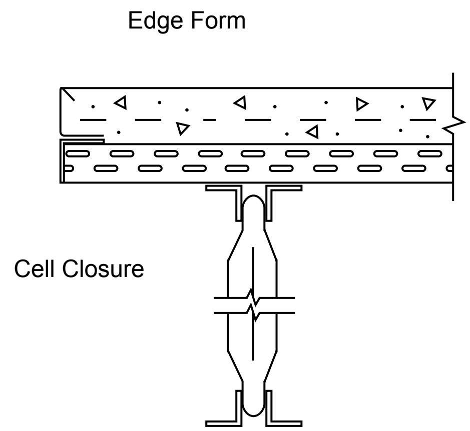


Figure 1.17.15: **TWO PIECE EDGE FORM WITH DECK CANTILEVER ON WIDE FLANGE BEAM**

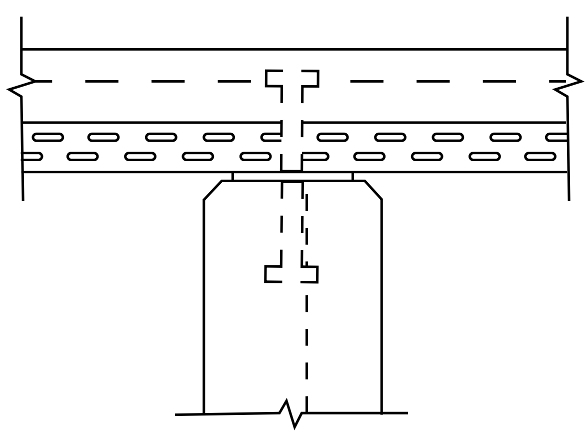


Figure 1.17.13: **CONCRETE OR CMU WALL WITH EMBED PERPENDICULAR**

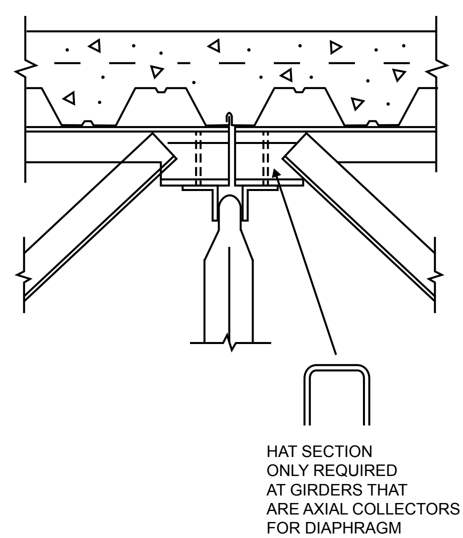


Figure 1.17.16: **DECK ON OPEN WEB STEEL JOISTS AND OPEN WEB STEEL JOIST GIRDER**

1.17 **Typical Details**

Column Flashings

Columns may require deck support angles depending on web support. Smaller columns often do not require deck support angles because there are no unsupported webs as shown in Figure 1.17.17. Large columns will create a condition in which one or more webs are unsupported, as shown in Figure 1.17.18. When the webs are unsupported, deck support angles are required to limit localized deflections during concrete placement. The Detail in Figure 1.17.18 is a common example of how deck may be supported when required. Using the thinnest support angles practical, when installed as shown, makes fitting and attaching the deck easier.

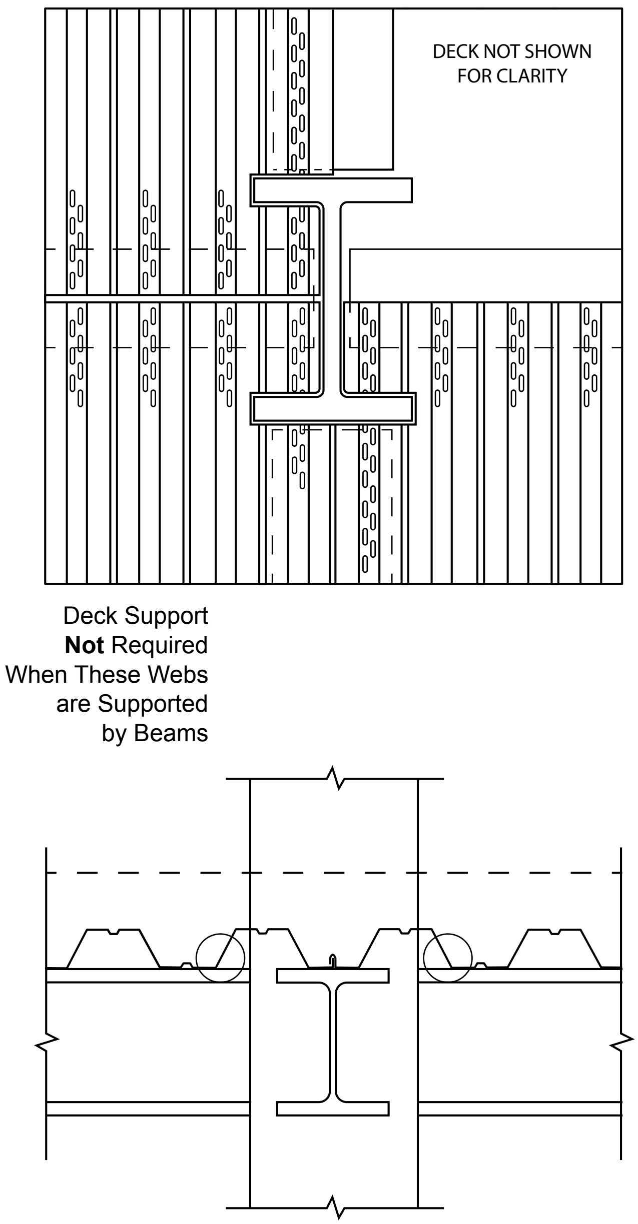


Figure 1.17.17: **COLUMN DETAIL NOT REQUIRING DECK SUPPORT ANGLES**

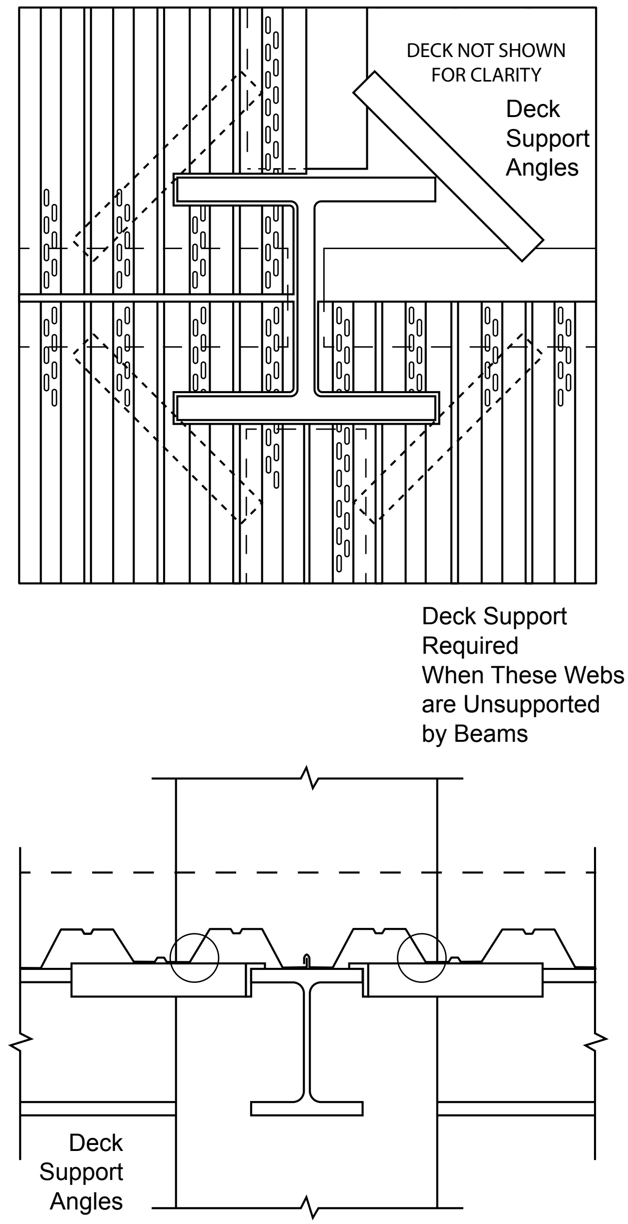


Figure 1.17.18: **COLUMN DETAIL REQUIRING DECK SUPPORT ANGLES**