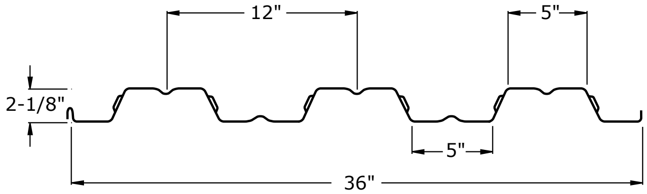
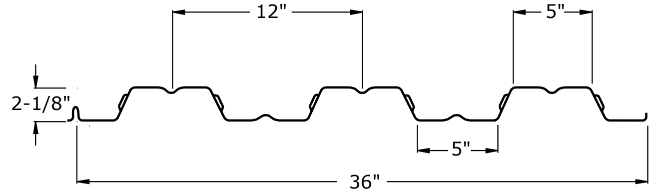
3.1 **2WH-36**

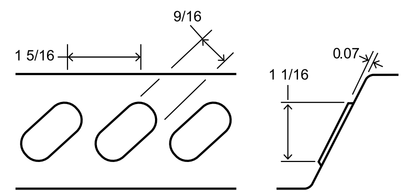


2WH-36 Profile



2WHS-36 Profile

36/4 Attachment Pattern



2W 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	in^2/ft	in^4/ft	in	in^3/ft	in
22	1.60	0.0295	50	65	0.448	0.353	1.04	0.340	0.890
21	1.78	0.0330	50	65	0.509	0.403	1.04	0.385	0.889
20	1.94	0.0359	50	65	0.554	0.437	1.05	0.418	0.888
19	2.25	0.0420	50	65	0.647	0.510	1.05	0.486	0.887
18	2.53	0.0474	50	65	0.728	0.570	1.05	0.545	0.885
16	3.18	0.0598	50	65	0.915	0.713	1.05	0.679	0.883

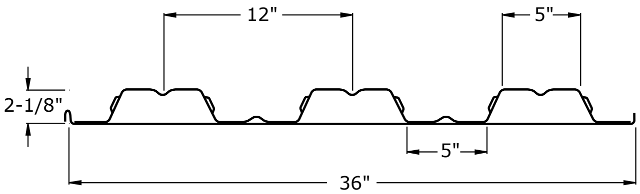
Gage	Effective Section Modulus at F_y					Effective Moment of Inertia for Deflection			
	Compression	Bending							
						Moment of Inertia	Moment of Inertia	Uniform Load Only	
	Area	Section Modulus	Distance to N.A. from Bottom	Section Modulus	Distance to N.A. from Bottom			$I_d = (2I_e+I_g)/3$	
	A_e	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
22	0.301	0.247	0.92	0.252	1.18	0.330	0.327	0.338	0.336
21	0.370	0.298	0.95	0.304	1.15	0.387	0.383	0.392	0.390
20	0.422	0.379	1.01	0.388	1.03	0.420	0.427	0.426	0.430
19	0.537	0.408	0.98	0.419	1.11	0.523	0.517	0.519	0.514
18	0.650	0.472	1.00	0.488	1.10	0.570	0.570	0.570	0.570
16	0.896	0.654	1.05	0.653	1.06	0.713	0.713	0.713	0.713

Reactions at Supports (plf) Based on Web Crippling

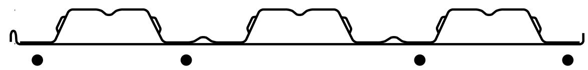
Gage	Condition	Bearing Length of Webs							
		Allowable (R_n/Ω)				Factored (ΦR_n)			
		1"	2"	4"	6"	1"	2"	4"	6"
22	End	316	393	503	588	483	602	770	899
	Interior	528	638	792	911	786	948	1178	1355
21	End	403	499	636	741	616	764	973	1133
	Interior	675	810	1001	1148	1004	1205	1489	1708
20	End	450	556	707	822	688	851	1081	1258
	Interior	755	903	1114	1275	1123	1344	1657	1897
19	End	633	777	980	1137	968	1188	1500	1739
	Interior	1066	1266	1549	1766	1585	1883	2304	2627
18	End	781	954	1199	1387	1195	1460	1835	2122
	Interior	1319	1559	1898	2158	1961	2318	2823	3211
16	End	1194	1445	1800	2072	1827	2211	2754	3170
	Interior	2027	2373	2862	3237	3015	3530	4257	4815

Web Crippling Constraints h=2.16" r=0.125" θ=64°

2WHF-36 3.2



2WHF-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 in²/ft	I_g in⁴/ft	y_b in	S_g in³/ft	r in
20/20	3.49	0.035 / 0.036	50	65	1.008	0.770	0.65	0.496	0.874
20/18	3.96	0.035 / 0.047	50	65	1.147	0.820	0.58	0.504	0.845
20/16	4.48	0.035 / 0.059	50	65	1.299	0.864	0.53	0.510	0.815
18/20	4.11	0.047 / 0.036	50	65	1.187	0.961	0.72	0.648	0.900
18/18	4.58	0.047 / 0.047	50	65	1.326	1.025	0.66	0.658	0.879
18/16	5.10	0.047 / 0.059	50	65	1.477	1.083	0.61	0.667	0.856
16/20	4.74	0.059 / 0.036	50	65	1.381	1.159	0.79	0.809	0.916
16/18	5.21	0.059 / 0.047	50	65	1.520	1.235	0.73	0.822	0.901
16/16	5.73	0.059 / 0.059	50	65	1.671	1.306	0.68	0.833	0.884

	Effective Section Modulus at F_y					Effective Moment of Inertia for Deflection			
	Compression	Bending						Uniform Load Only $I_d = (2I_e+I_g)/3$	
Gage	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
20/20	0.510	0.391	0.56	0.457	1.00	0.732	0.603	0.745	0.659
20/18	0.591	0.401	0.50	0.476	0.87	0.776	0.690	0.791	0.733
20/16	0.692	0.406	0.46	0.492	0.73	0.816	0.771	0.832	0.802
18/20	0.715	0.590	0.69	0.593	1.07	0.959	0.749	0.960	0.820
18/18	0.796	0.599	0.63	0.616	0.95	1.023	0.849	1.024	0.908
18/16	0.897	0.607	0.57	0.639	0.83	1.081	0.948	1.082	0.993
16/20	0.939	0.779	0.77	0.740	1.10	1.156	0.905	1.157	0.990
16/18	1.020	0.792	0.71	0.766	1.01	1.232	1.017	1.233	1.090
16/16	1.121	0.803	0.66	0.792	0.91	1.303	1.132	1.304	1.190

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.

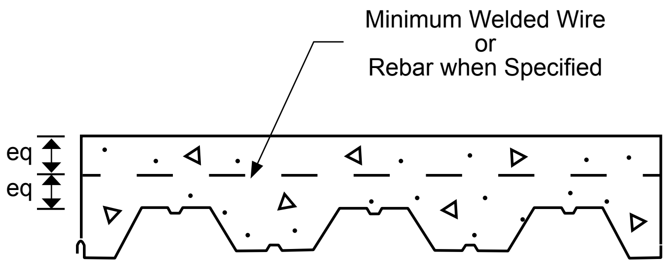


Figure 1.17.1: **TYPICAL PLACEMENT OF TEMPERATURE & SHRINKAGE REINFORCEMENT**

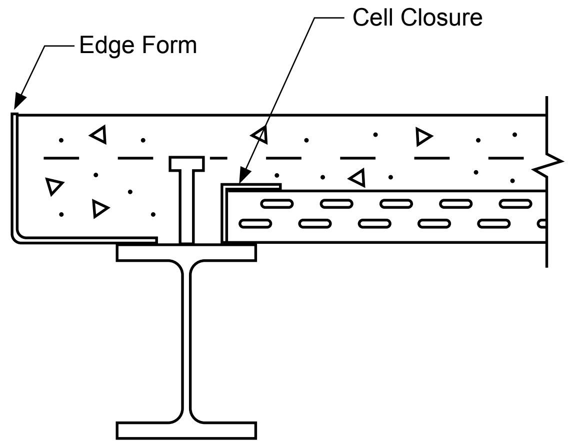


Figure 1.17.3: **SINGLE PIECE EDGE FROM PERPENDICULAR TO DECK ON WIDE FLANGE BEAM**

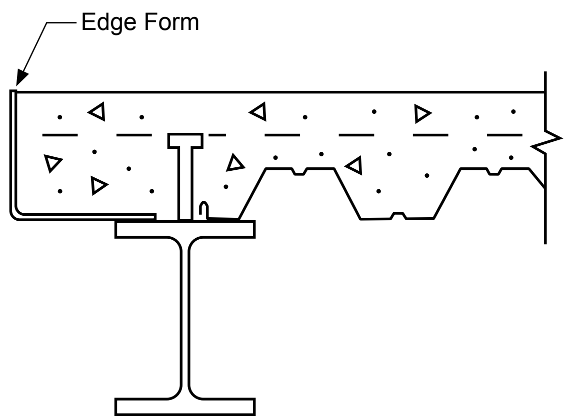


Figure 1.17.2: **SINGLE PIECE EDGE FROM PARALLEL TO DECK ON WIDE FLANGE BEAM**

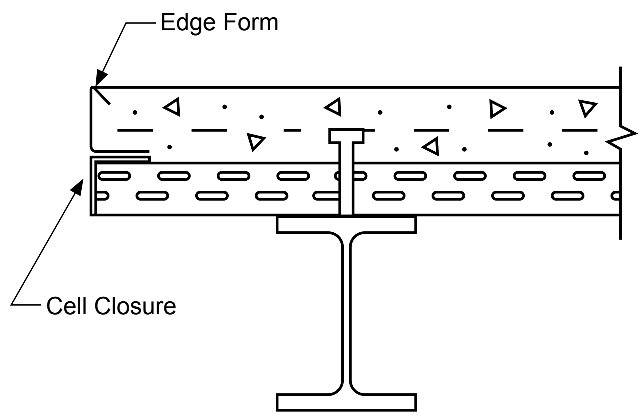


Figure 1.17.4: **TWO PIECE EDGE FORM WITH DECK CANTILEVER ON WIDE FLANGE BEAM**

1.17 **Typical Details**

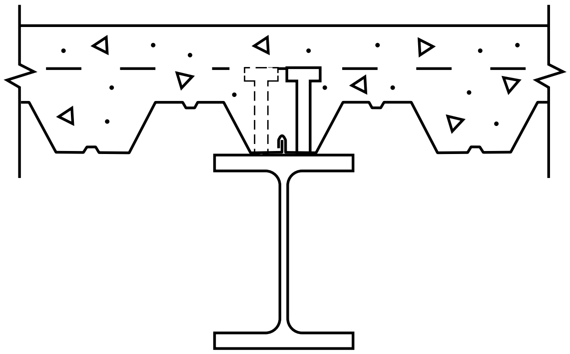


Figure 1.17.5: **DECK PARALLEL TO WIDE FLANGE BEAM**

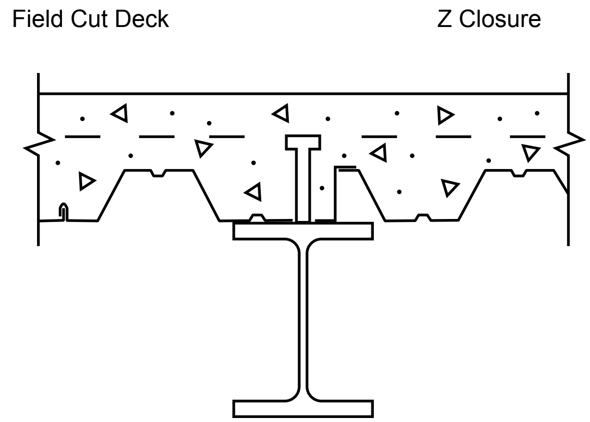


Figure 1.17.8: **DECK PARALLEL TO WIDE FLANGE BEAM CUT WITH ZEE FLASHING TO ACCOMMODATE DECK MODULE**

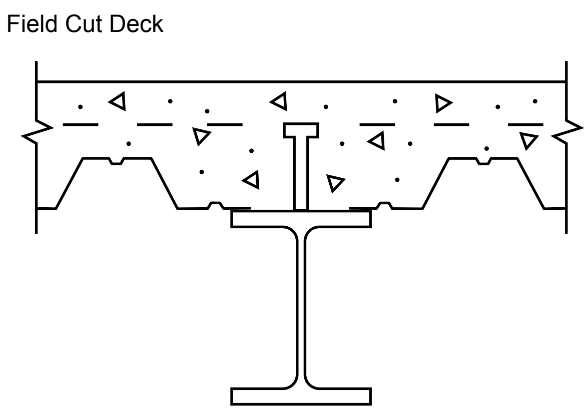


Figure 1.17.6: **DECK PARALLEL TO WIDE FLANGE BEAM CUT TO ACCOMMODATE DECK MODULE**

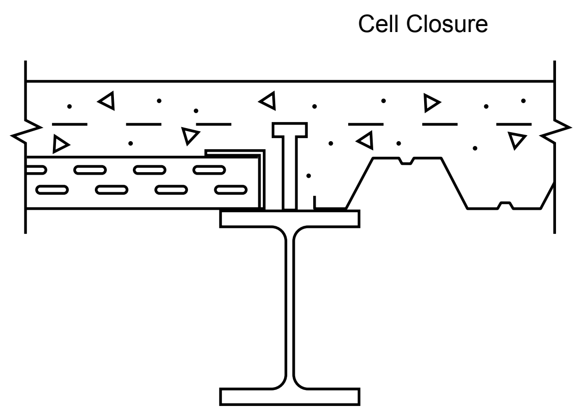


Figure 1.17.9: **DECK TRANSITION ON WIDE FLANGE BEAM**

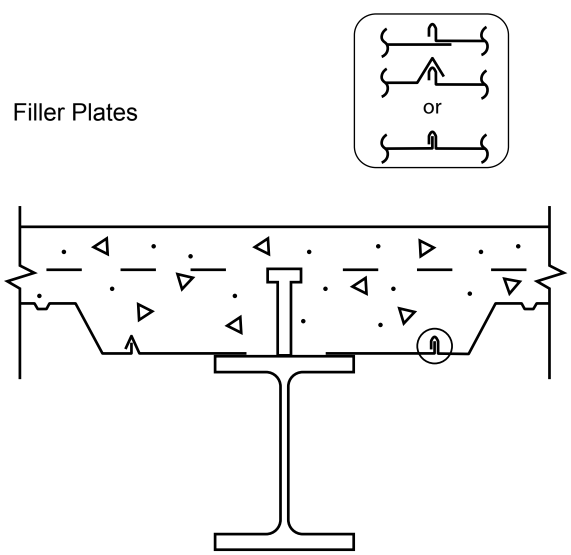


Figure 1.17.7: **DECK PARALLEL TO WIDE FLANGE BEAM WITH FILLER PLATES**

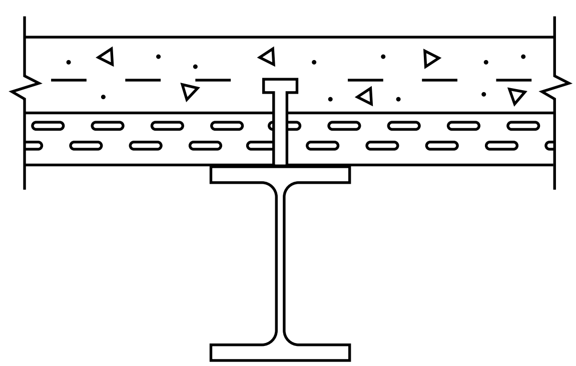


Figure 1.17.10: **DECK PERPENDICULAR TO WIDE FLANGE BEAM**

Typical Details 1.17

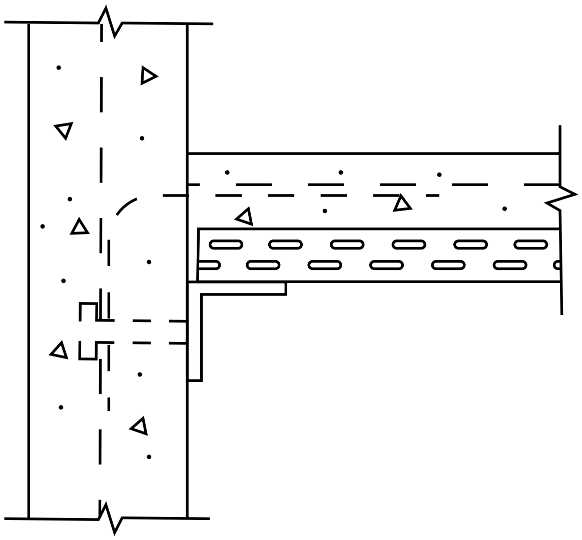


Figure 1.17.11: **CONCRETE OR CMU WALL LEGER DECK PERPENDICULAR**

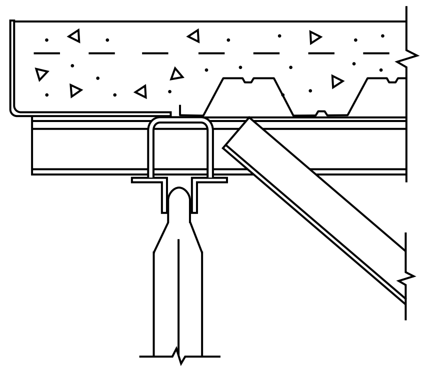


Figure 1.17.14: **SINGLE PIECE EDGE FROM PARALLEL TO DECK ON OPEN WEB JOIST GIRDER**

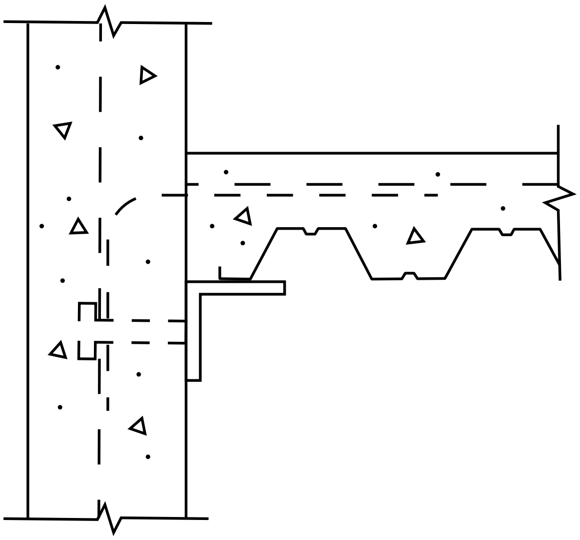


Figure 1.17.12: **CONCRETE OR CMU WALL LEGER DECK PARALLEL**

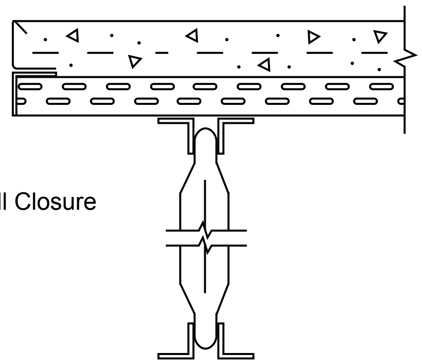


Figure 1.17.15: **TWO PIECE EDGE FORM WITH DECK CANTILEVER ON WIDE FLANGE BEAM**

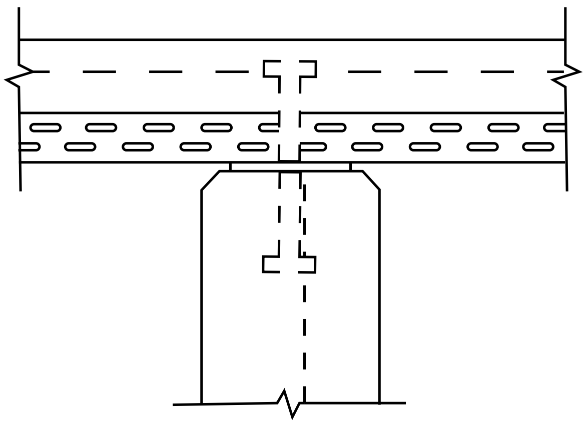


Figure 1.17.13: **CONCRETE OR CMU WALL WITH EMBED PERPENDICULAR**

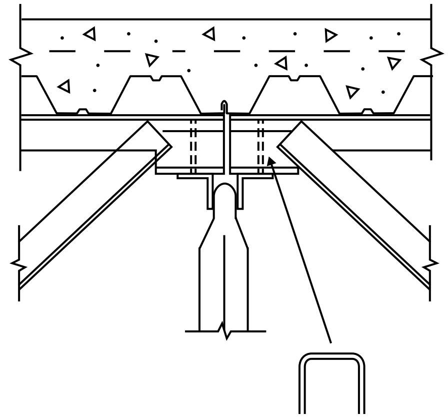


Figure 1.17.16: **DECK ON OPEN WEB STEEL JOISTS AND OPEN WEB STEEL JOIST GIRDER**

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.

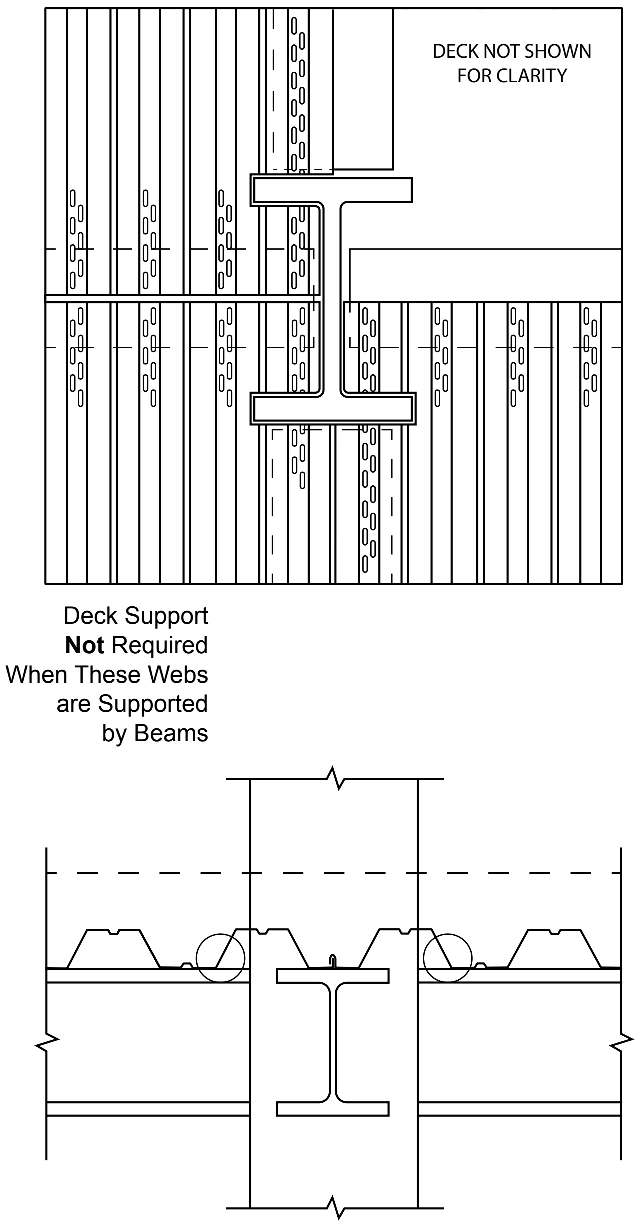


Figure 1.17.17: **COLUMN DETAIL NOT REQUIRING DECK SUPPORT ANGLES**

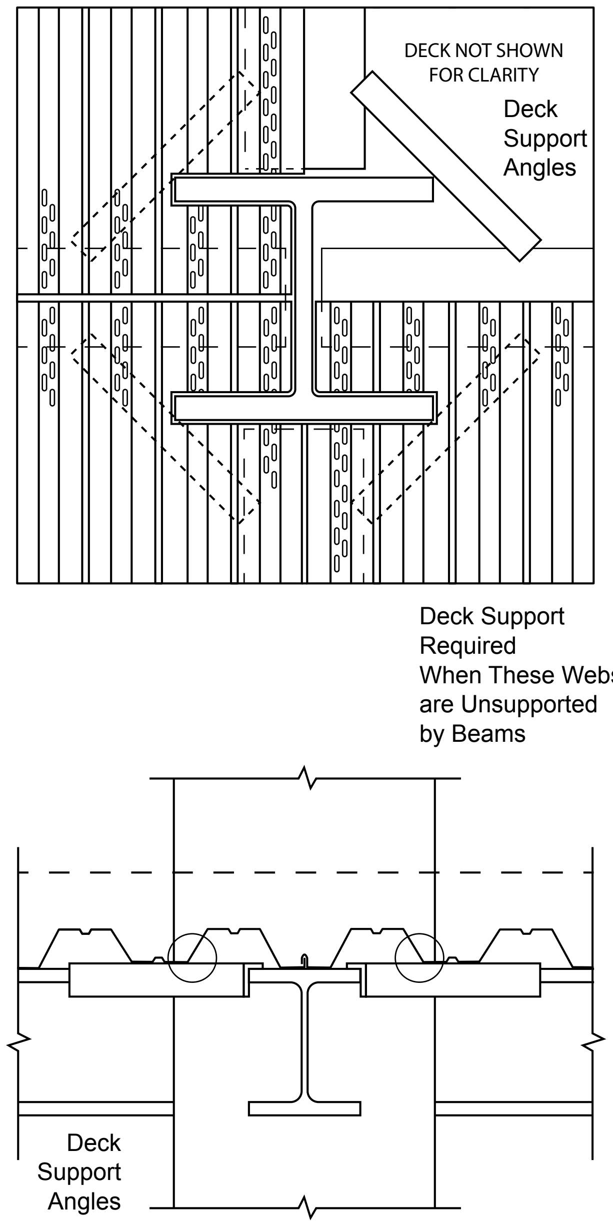


Figure 1.17.18: **COLUMN DETAIL REQUIRING DECK SUPPORT ANGLES**