	3/4 L	177.165	-0.55	-36.66					3/4 L	265.7475	242.204	98.707			
	Tepi Kanan	236.22	-798.26	-676.14					Tepi Kanan	354.33	-1743.335	-1448.992			
11	Tepi kiri	0	-656.69	-400.26	796.59	2.68	2.30	11	Tepi kiri	0	-1544.975	-960.37	1705.14	2.53	2.30
	1/4 L	59.055	69.20	100.78					1/4 L	88.5825	346.144	346.098			
	1/2 L	118.11	461.26	321.69					1/2 L	177.165	955.053	702.656			
	3/4 L	177.165	-0.76	-42.94					3/4 L	265.7475	266.061	100.328			
	Tepi Kanan	236.22	-796.59	-687.68					Tepi Kanan	354.33	-1705.14	-1451.91			
10	Tepi kiri	0	-648.71	-416.19	782.13	2.70	2.30	10	Tepi kiri	0	-1532.283	-937.209	1818.99	2.73	2.30
	1/4 L	59.055	78.80	93.33					1/4 L	88.5825	327.2	339.807			
	1/2 L	118.11	472.47	322.73					1/2 L	177.165	904.474	666.914			
	3/4 L	177.165	12.08	-33.42					3/4 L	265.7475	183.847	35.134			
	Tepi Kanan	236.22	-782.13	-669.68					Tepi Kanan	354.33	-1818.99	-1546.555			
9	Tepi kiri	0	-646.53	-380.56	775.411	2.60	2.30	9	Tepi kiri	0	-1538.795	-932.663	1846.28	2.79	2.30
	1/4 L	59.055	82.11	116.73					1/4 L	88.5825	315.495	335.791			
	1/2 L	118.11	476.92	333.90					1/2 L	177.165	887.575	654.336			
	3/4 L	177.165	17.67	-34.47					3/4 L	265.7475	161.754	13.994			
	Tepi Kanan	236.22	-775.41	-682.96					Tepi Kanan	354.33	-1846.276	-1576.257			
8	Tepi kiri	0	-652.04	-376.60	771.234	2.59	2.30	8	Tepi kiri	0	-1558.231	-926.772	1819.53	2.76	2.30
	1/4 L	59.055	79.02	118.46					1/4 L	88.5825	307.604	339.999			
	1/2 L	118.11	476.26	333.39					1/2 L	177.165	891.229	656.861			
	3/4 L	177.165	19.42	-37.22					3/4 L	265.7475	176.953	14.836			
	Tepi Kanan	236.22	-771.23	-687.94					Tepi Kanan	354.33	-1819.532	-1577.098			
7	Tepi kiri	0	-658.90	-374.95	764.626	2.57	2.30	7	Tepi kiri	0	-1577.231	-925.012	1801.96	2.75	2.30
	1/4 L	88.5825	75.53	119.33					1/4 L	88.5825	297.746	340.569			
	1/2 L	177.165	476.13	333.49					1/2 L	177.165	890.513	656.241			

	3/4 L	265.7475	22.66	-37.89					3/4 L	265.7475	185.38	13.026			
	Tepi Kanan	354.33	-764.63	-689.40					Tepi Kanan	354.33	-1801.963	-1580.099			
6	Tepi kiri	0	-666.33	-375.70	758.102	2.56	2.30	6	Tepi kiri	0	-1597.819	-929.119	1779.67	2.73	2.30
	1/4 L	59.055	71.58	118.94					1/4 L	88.5825	287.878	338.731			
	1/2 L	118.11	475.68	333.46					1/2 L	177.165	891.366	656.671			
	3/4 L	177.165	25.70	-37.57					3/4 L	265.7475	196.954	15.725			
	Tepi Kanan	236.22	-758.10	-688.71					Tepi Kanan	354.33	-1779.669	-1575.13			
5	Tepi kiri	0	-672.98	-389.38	749.339	2.58	2.30	5	Tepi kiri	0	-1622.914	-944.211	1759.81	2.72	2.30
	1/4 L	59.055	68.79	111.29					1/4 L	88.5825	274.021	330.484			
	1/2 L	118.11	476.73	331.84					1/2 L	177.165	888.747	655.27			
	3/4 L	177.165	30.61	-33.15					3/4 L	265.7475	205.572	21.168			
	Tepi Kanan	236.22	-749.34	-678.26					Tepi Kanan	354.33	-1759.813	-1562.842			
4	Tepi kiri	0	-680.65	-385.22	740.295	2.55	2.30	4	Tepi kiri	0	-1643.987	-958.8	1743.27	2.72	2.30
	1/4 L	59.055	65.30	115.00					1/4 L	88.5825	262.351	322.512			
	1/2 L	118.11	477.42	335.09					1/2 L	177.165	886.48	653.915			
	3/4 L	177.165	35.47	-30.36					3/4 L	265.7475	212.708	26.431			
	Tepi Kanan	236.22	-740.30	-675.93					Tepi Kanan	354.33	-1743.273	-1550.962			
3	Tepi kiri	0	-689.75	-392.38	731.918	2.55	2.30	3	Tepi kiri	0	-1664.654	-972.519	1720.91	2.70	2.30
	1/4 L	59.055	60.57	111.36					1/4 L	88.5825	252.442	315.933			
	1/2 L	118.11	477.06	334.98					1/2 L	177.165	887.327	654.476			
	3/4 L	177.165	39.48	-26.95					3/4 L	265.7475	224.312	34.132			
	Tepi Kanan	236.22	-731.92	-668.99					Tepi Kanan	354.33	-1720.912	-1536.121			
2	Tepi kiri	0	-700.60	-401.72	721.02	2.55	2.30	2	Tepi kiri	0	-1687.773	-989.022	1700.29	2.69	2.30
	1/4 L	59.055	55.16	106.73					1/4 L	88.5825	240.258	307.244			
	1/2 L	118.11	477.08	335.05					1/2 L	177.165	886.079	653.601			

	3/4 L	177.165	44.94	-22.16					3/4 L	265.7475	234	41.071			
	Tepi Kanan	236.22	-721.02	-659.50					Tepi Kanan	354.33	-1700.289	-1521.368			
1	Tepi kiri	0	-711.15	-416.67	712.729	2.57	2.30	1	Tepi kiri	0	-1713.945	-1045.746	1713.95	2.68	2.30
	1/4 L	59.055	49.31	100.37					1/4 L	88.5825	230.34	281.19			
	1/2 L	118.11	475.95	337.28					1/2 L	177.165	892.415	658.216			
	3/4 L	177.165	48.52	-11.34					3/4 L	265.7475	256.59	76.356			
	Tepi Kanan	236.22	-712.73	-640.09					Tepi Kanan	354.33	-1661.445	-1455.414			

Tabel Desain Lentur Balok Struktur 3 Tangga

Balok B1

Lantai	Profil	Lb		Lp	X1	X2	Lr	Mp	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mu,b	Cek Kapasita	Rasio	Cek Lendutan		
		(m)	(in)	Ksi	Ksi	(in)	(K-in)	(in)	bentang		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)			in	max	Cek
15	W12x26	9	354.33	75.19	1812.65	0.013	213.875	1339.2	Lb>Lr	2.30	Kompak	Kompak	869.51	3392.0726	1339.2	1205	511.647	Aman	0.425	0.7473	1.476	Aman
14	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1748.401	Aman	0.491	0.5875	0.984	Aman
13	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1761.369	Aman	0.494	0.5829	0.984	Aman
12	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1743.335	Aman	0.489	0.5832	0.984	Aman
11	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1705.14	Aman	0.478	0.5867	0.984	Aman
10	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1818.99	Aman	0.51	0.5681	0.984	Aman
9	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1846.276	Aman	0.518	0.5619	0.984	Aman
8	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1819.532	Aman	0.511	0.5633	0.984	Aman
7	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1801.963	Aman	0.506	0.563	0.984	Aman
6	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1779.669	Aman	0.499	0.5633	0.984	Aman
5	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1759.813	Aman	0.494	0.5623	0.984	Aman
4	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1743.273	Aman	0.489	0.5615	0.984	Aman
3	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1720.912	Aman	0.483	0.5618	0.984	Aman
2	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1700.289	Aman	0.477	0.5614	0.984	Aman
1	W21x50	9	354.33	65.075	1731.3	0.021	192.55	3960	Lb>Lr	2.30	Kompak	Kompak	2460	14728.091	3960	3564	1713.945	Aman	0.481	0.5637	0.984	Aman

Balok B2

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mu,b	Cek Kapasita	Rasio	Cek Lendutan		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)			in	max	Cek
15	W12x26	1339.2	6	236.22	75.19	1813	0.01331	213.88	Lb>Lr	2.30	Kompak	Kompak	869.51	5918.7535	1339.2	1205	195.934	Aman	0.163	0.1813	0.984	Aman
14	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	729.999	Aman	0.51	0.4021	0.656	Aman
13	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	730.773	Aman	0.51	0.404	0.656	Aman
12	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	802.281	Aman	0.56	0.4038	0.656	Aman
11	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	874.28	Aman	0.61	0.4022	0.656	Aman
10	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	931.125	Aman	0.65	0.4094	0.656	Aman
9	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	965.19	Aman	0.674	0.4121	0.656	Aman
8	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1009.076	Aman	0.705	0.4114	0.656	Aman
7	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1048.657	Aman	0.732	0.4115	0.656	Aman
6	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1082.28	Aman	0.756	0.4112	0.656	Aman
5	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1109.506	Aman	0.775	0.4118	0.656	Aman
4	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1121.694	Aman	0.783	0.4124	0.656	Aman
3	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1112.462	Aman	0.777	0.4121	0.656	Aman
2	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	1059.576	Aman	0.74	0.4123	0.656	Aman
1	W16X26	1591.2	6	236.22	55.875	1480	0.03798	157.98	Lb>Lr	2.30	Kompak	Kompak	996.94	6799.142	1591.2	1432	911.221	Aman	0.636	0.411	0.656	Aman

Balok B3

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Ket	Cb	Cek Profil		Mr	Mn	Mn pakai	ϕMn	Mu,b	Cek	Rasio	Kontrol Δ		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas		in	max	Cek
15	W12x19	889.2	6	236.22	41.08	1880.0634	0.015	123.75	Lb>Lr	2.3	Kompak	Kompak	554.1	3062.899	889.2	800.3	102.026	Aman	0.1275	0.117	0.984	Aman
14	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	514.893	Aman	0.2177	0.145	0.656	Aman
13	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	513.81	Aman	0.2172	0.145	0.656	Aman
12	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	512.822	Aman	0.2168	0.145	0.656	Aman
11	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	512.129	Aman	0.2165	0.144	0.656	Aman
10	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	510.055	Aman	0.2156	0.143	0.656	Aman
9	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	507.64	Aman	0.2146	0.143	0.656	Aman
8	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	507.821	Aman	0.2147	0.143	0.656	Aman
7	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	507.582	Aman	0.2146	0.142	0.656	Aman
6	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	507.424	Aman	0.2145	0.142	0.656	Aman
5	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	506.555	Aman	0.2142	0.142	0.656	Aman
4	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	506.407	Aman	0.2141	0.142	0.656	Aman
3	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	507.406	Aman	0.2145	0.142	0.656	Aman
2	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	508.715	Aman	0.2151	0.142	0.656	Aman
1	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	508.856	Aman	0.2151	0.141	0.656	Aman

Balok B4

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Ket	Cb	Cek Profil		Mr	Mn	Mn pakai	ϕMn	Mu,b	Cek	Rasio	Kontrol Δ		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas		in	max	Cek
15	W12x45	2311	9	354.33	97.685	2826.3075	0.0022	340.87	Lb>Lr	2.3	Kompak	Kompak	1496	8655.21541	2311.2	2080	969.041	Aman	0.4659	0.886	1.476	Aman
14	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2683.718	Aman	0.6136	0.704	0.984	Aman
13	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2696.305	Aman	0.6164	0.7	0.984	Aman
12	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2669.554	Aman	0.6103	0.7	0.984	Aman
11	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2609.247	Aman	0.5965	0.705	0.984	Aman
10	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2763.708	Aman	0.6318	0.677	0.984	Aman
9	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2834.906	Aman	0.6481	0.667	0.984	Aman
8	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2803.659	Aman	0.641	0.669	0.984	Aman
7	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2792.528	Aman	0.6384	0.669	0.984	Aman
6	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2770.966	Aman	0.6335	0.669	0.984	Aman
5	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2776.996	Aman	0.6349	0.667	0.984	Aman
4	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2771.474	Aman	0.6336	0.665	0.984	Aman
3	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2739.441	Aman	0.6263	0.666	0.984	Aman
2	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2756.83	Aman	0.6303	0.665	0.984	Aman
1	W24x55	4860	9	354.33	66.805	1560.8837	0.0346	195.49	Lb>Lr	2.3	Kompak	Kompak	2997	19075.6596	4860	4374	2792.655	Aman	0.6385	0.669	0.984	Aman

Balok B5

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Ket	Cb	Cek Profil		Mr	Mn	Mn pakai	ϕMn	Mu,b	Cek	Rasio	Kontrol Δ		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas		in	max	Cek
15	W12x26	1339	6	236.22	75.19	1812.6501	0.0133	213.88	Lb>Lr	2.3	Kompak	Kompak	869.5	5918.75353	1339.2	1205	384.965	Aman	0.3194	0.351	0.984	Aman
14	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1207.957	Aman	0.5107	0.388	0.656	Aman
13	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1208.609	Aman	0.511	0.39	0.656	Aman
12	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1214.171	Aman	0.5133	0.39	0.656	Aman
11	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1227.14	Aman	0.5188	0.387	0.656	Aman
10	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1176.745	Aman	0.4975	0.4	0.656	Aman
9	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1160.469	Aman	0.4906	0.405	0.656	Aman
8	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1166.792	Aman	0.4933	0.404	0.656	Aman
7	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1167.91	Aman	0.4938	0.404	0.656	Aman
6	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1170.336	Aman	0.4948	0.404	0.656	Aman
5	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1169.201	Aman	0.4943	0.404	0.656	Aman
4	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1168.807	Aman	0.4942	0.404	0.656	Aman
3	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1171.653	Aman	0.4954	0.404	0.656	Aman
2	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1172.556	Aman	0.4958	0.404	0.656	Aman
1	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	1183.866	Aman	0.5005	0.403	0.656	Aman

Balok B6

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Ket	Cb	Cek Profil		Mr	Mn	Mn pakai	ϕMn	Mu,b	Cek	Rasio	Kontrol Δ		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas		in	max	Cek
15	W12x26	1339	6	236.22	75.19	1812.6501	0.0133	213.88	Lb>Lr	2.3	Kompak	Kompak	869.5	5918.75353	1339.2	1205	226.985	Aman	0.1883	0.144	0.984	Aman
14	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	807.212	Aman	0.3413	0.207	0.656	Aman
13	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	805.163	Aman	0.3404	0.206	0.656	Aman
12	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	804.192	Aman	0.34	0.207	0.656	Aman
11	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	801.998	Aman	0.3391	0.207	0.656	Aman
10	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	791.701	Aman	0.3347	0.206	0.656	Aman
9	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	786.957	Aman	0.3327	0.206	0.656	Aman
8	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	784.434	Aman	0.3317	0.206	0.656	Aman
7	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	781.034	Aman	0.3302	0.206	0.656	Aman
6	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	777.03	Aman	0.3285	0.206	0.656	Aman
5	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	772.054	Aman	0.3264	0.207	0.656	Aman
4	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	766.772	Aman	0.3242	0.207	0.656	Aman
3	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	761.032	Aman	0.3218	0.207	0.656	Aman
2	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	754.007	Aman	0.3188	0.207	0.656	Aman
1	W16X40	2628	6	236.22	78.25	1891.6211	0.0122	229.04	Lb>Lr	2.3	Kompak	Kompak	1684	15649.3112	2628	2365	745.907	Aman	0.3154	0.207	0.656	Aman

TABEL RENCANA GAYA GESER BALOK STRUKTUR 3TANGGA

Balok B1

Lantai	Profil	L' (in)	Geser Balok (Kips)			Mpb	Geser Rencana		Vu pakai
			VD	VL	VE	(K-in)	Pers (1)	Pers (2)	(Kips)
15	W12x26	340.031	1.91	2.27	0.27	1473.12	12.09162	4.507	4.507
14	W24x55	340.031	12.65	5.73	0.81	5346	49.48919	21.285	21.285
13	W24x55	340.031	12.67	5.72	0.63	5346	49.50819	20.584	20.584
12	W24x55	340.031	12.63	5.7	0.87	5346	49.45019	21.486	21.486
11	W24x55	340.031	12.57	5.67	1.04	5346	49.36319	22.079	22.079
10	W24x55	337.581	12.67	5.74	1.11	5346	49.7464	22.514	22.514
9	W24x55	337.581	12.7	5.76	1.16	5346	49.7924	22.76	22.76
8	W24x55	337.581	12.64	5.73	1.27	5346	49.7054	23.113	23.113
7	W24x55	337.581	12.6	5.71	1.37	5346	49.6474	23.455	23.455
6	W24x55	337.581	12.56	5.68	1.43	5346	49.5844	23.632	23.632
5	W24x55	337.031	12.5	5.65	1.45	5346	49.54908	23.625	23.625
4	W24x55	337.031	12.46	5.63	1.46	5346	49.49108	23.607	23.607
3	W24x55	337.031	12.41	5.6	1.47	5346	49.41608	23.572	23.572
2	W24x55	337.031	12.37	5.57	1.48	5346	49.35308	23.549	23.549
1	W24x55	337.031	12.42	5.6	1.27	5346	49.42808	22.784	22.784

Balok B2

Lantai	Profil	L' (in)	Geser Balok (Kips)			Mpb	Geser Rencana		Vu pakai
			VD	VL	VE	(K-in)	Pers (1)	Pers (2)	(Kips)
15	W12x26	221.92	1.17	1.33	0.7	1473.12	15.34514	4.869	4.869
14	W16X26	221.92	7.97	3.25	0.47	1750.32	26.96333	13.069	13.069
13	W16X26	221.92	7.94	3.24	0.53	1750.32	26.92233	13.268	13.268
12	W16X26	221.92	7.93	3.23	0.65	1750.32	26.90533	13.731	13.731
11	W16X26	221.92	7.92	3.22	0.77	1750.32	26.88833	14.194	14.194
10	W16X26	219.82	7.85	3.21	0.65	1750.32	26.95003	13.625	13.625
9	W16X26	219.82	7.84	3.21	0.87	1750.32	26.93803	14.493	14.493
8	W16X26	219.82	7.83	3.2	0.94	1750.32	26.92103	14.756	14.756
7	W16X26	219.82	7.81	3.19	0.99	1750.32	26.89203	14.927	14.927
6	W16X26	219.82	7.79	3.17	1.03	1750.32	26.85803	15.053	15.053
5	W16X26	219.12	7.74	3.16	0.98	1750.32	26.8439	14.788	14.788
4	W16X26	219.12	7.72	3.14	1.04	1750.32	26.8099	14.994	14.994
3	W16X26	219.12	7.69	3.13	1.04	1750.32	26.7689	14.953	14.953
2	W16X26	219.12	7.66	3.11	1.03	1750.32	26.7229	14.867	14.867
1	W16X26	219.12	7.63	3.09	0.94	1750.32	26.6769	14.461	14.461

Desain Geser Balok B4

Lantai	Profil	Ln (In)	db (In)	tw (in)	db/tw	Cek Rasio db/tw	Vu Rencana (Kips)	Vn (Kips)	ΦVn (Kips)	Cek Geser	Ratio	Vub Kg	ΦVn Kg
15	W12x26	340.031	12.2	0.23	53.04	ok	8.535	60.61	54.55	aman	0.16	3879.5455	24794.836
14	W24x55	340.031	23.6	0.395	59.75	ok	30.088	201.36	181.22	aman	0.17	13676.364	82372.582
13	W24x55	340.031	23.6	0.395	59.75	ok	29.307	201.36	181.22	aman	0.16	13321.364	82372.582
12	W24x55	340.031	23.6	0.395	59.75	ok	30.203	201.36	181.22	aman	0.17	13728.636	82372.582
11	W24x55	340.031	23.6	0.395	59.75	ok	30.740	201.36	181.22	aman	0.17	13972.727	82372.582
10	W24x55	337.581	23.6	0.395	59.75	ok	31.339	201.36	181.22	aman	0.17	14245	82372.582
9	W24x55	337.581	23.6	0.395	59.75	ok	31.808	201.36	181.22	aman	0.18	14458.182	82372.582
8	W24x55	337.581	23.6	0.395	59.75	ok	32.208	201.36	181.22	aman	0.18	14640	82372.582
7	W24x55	337.581	23.6	0.395	59.75	ok	32.574	201.36	181.22	aman	0.18	14806.364	82372.582
6	W24x55	337.581	23.6	0.395	59.75	ok	32.786	201.36	181.22	aman	0.18	14902.727	82372.582
5	W24x55	337.031	23.6	0.395	59.75	ok	32.430	201.36	181.22	aman	0.18	14740.909	82372.582
4	W24x55	337.031	23.6	0.395	59.75	ok	32.751	201.36	181.22	aman	0.18	14886.818	82372.582
3	W24x55	337.031	23.6	0.395	59.75	ok	32.649	201.36	181.22	aman	0.18	14840.455	82372.582
2	W24x55	337.031	23.6	0.395	59.75	ok	32.630	201.36	181.22	aman	0.18	14831.818	82372.582
1	W24x55	337.031	23.6	0.395	59.75	ok	31.790	201.36	181.22	aman	0.18	14450	82372.582

Desain Geser Balok B5

Lantai	Profil	Ln (in)	db (in)	tw (in)	db/tw	Cek Rasio db/tw	Vu Rencana (Kips)	Vn (Kips)	ΦVn (Kips)	Cek Geser	Ratio	Vub Kg	ΦVn Kg
15	W12x26	221.920	12.2	0.23	53.04	ok	5.675	60.61	54.55	aman	0.10	2579.5455	24794.836
14	W16X40	221.920	16	0.305	52.46	ok	18.227	105.41	94.87	aman	0.19	8285	43121.455
13	W16X40	221.920	16	0.305	52.46	ok	17.656	105.41	94.87	aman	0.19	8025.4545	43121.455
12	W16X40	221.920	16	0.305	52.46	ok	18.445	105.41	94.87	aman	0.19	8384.0909	43121.455
11	W16X40	221.920	16	0.305	52.46	ok	19.017	105.41	94.87	aman	0.20	8644.0909	43121.455
10	W16X40	219.120	16	0.305	52.46	ok	19.527	105.41	94.87	aman	0.21	8875.9091	43121.455

9	W16X40	219.120	16	0.305	52.46	ok	19.927	105.41	94.87	aman	0.21	9057.7273	43121.455
8	W16X40	219.120	16	0.305	52.46	ok	20.287	105.41	94.87	aman	0.21	9221.3636	43121.455
7	W16X40	219.120	16	0.305	52.46	ok	20.664	105.41	94.87	aman	0.22	9392.7273	43121.455
6	W16X40	219.120	16	0.305	52.46	ok	20.904	105.41	94.87	aman	0.22	9501.8182	43121.455
5	W16X40	218.720	16	0.305	52.46	ok	20.932	105.41	94.87	aman	0.22	9514.5455	43121.455
4	W16X40	218.720	16	0.305	52.46	ok	20.932	105.41	94.87	aman	0.22	9514.5455	43121.455
3	W16X40	218.720	16	0.305	52.46	ok	20.944	105.41	94.87	aman	0.22	9520	43121.455
2	W16X40	218.720	16	0.305	52.46	ok	20.944	105.41	94.87	aman	0.22	9520	43121.455
1	W16X40	218.720	16	0.305	52.46	ok	20.121	105.41	94.87	aman	0.21	9145.9091	43121.455

Desain Geser Balok B6

Lantai	Profil	Ln	db	tw	db/tw	Cek Rasio db/tw	Vu Rencana (Kips)	Vn	ΦVn	Cek Geser	Ratio	Vub	ΦVn
		(in)	(in)	(in)				(Kips)	(Kips)			Kg	Kg
15	W12x26	221.620	12.2	0.23	53.04	ok	3.729	60.61	54.55	aman	0.07	1695	24794.836
14	W16X40	221.620	16	0.305	52.46	ok	15.207	105.41	94.87	aman	0.16	6912.2727	43121.455
13	W16X40	221.620	16	0.305	52.46	ok	15.344	105.41	94.87	aman	0.16	6974.5455	43121.455
12	W16X40	221.620	16	0.305	52.46	ok	15.459	105.41	94.87	aman	0.16	7026.8182	43121.455
11	W16X40	221.620	16	0.305	52.46	ok	15.447	105.41	94.87	aman	0.16	7021.3636	43121.455
10	W16X40	220.020	16	0.305	52.46	ok	15.496	105.41	94.87	aman	0.16	7043.6364	43121.455
9	W16X40	220.020	16	0.305	52.46	ok	15.668	105.41	94.87	aman	0.17	7121.8182	43121.455
8	W16X40	220.020	16	0.305	52.46	ok	15.576	105.41	94.87	aman	0.16	7080	43121.455
7	W16X40	220.020	16	0.305	52.46	ok	15.451	105.41	94.87	aman	0.16	7023.1818	43121.455
6	W16X40	220.020	16	0.305	52.46	ok	15.239	105.41	94.87	aman	0.16	6926.8182	43121.455
5	W16X40	219.820	16	0.305	52.46	ok	14.954	105.41	94.87	aman	0.16	6797.2727	43121.455
4	W16X40	219.820	16	0.305	52.46	ok	14.594	105.41	94.87	aman	0.15	6633.6364	43121.455
3	W16X40	219.820	16	0.305	52.46	ok	14.166	105.41	94.87	aman	0.15	6439.0909	43121.455
2	W16X40	219.820	16	0.305	52.46	ok	13.646	105.41	94.87	aman	0.14	6202.7273	43121.455
1	W16X40	219.820	16	0.305	52.46	ok	12.886	105.41	94.87	aman	0.14	5857.2727	43121.455

LAMPIRAN C
KOLOM

Gaya Aksial Kolom (K1) < Tanpa Tangga >

Arah X

Lantai	Stasion	Balok			(K1)			(K3)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B3	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x19	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	889.2	2.82	2.82	3.18	3.18	12.5026	453.6955
	0													2.82		3.18			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	23.45	23.45	11.24	11.24	63.539	1265.092
	0													23.45		11.24			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	44.21	44.21	19.32	19.32	107.213	1247.092
	0													44.21		19.32			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	64.9	64.9	27.36	27.36	136.061	1247.092
	0													64.9		27.36			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	85.43	85.43	35.31	35.31	164.672	1247.092
	0													85.43		35.31			
10	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	106.33	106.33	43.41	43.41	193.802	1261.014
	0													106.33		43.41			
9	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	127.32	127.32	51.53	51.53	223.05	1261.014
	0													127.32		51.53			
8	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	148.17	148.17	59.58	59.58	252.095	1261.014
	0													148.17		59.58			
7	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	168.91	168.91	67.57	67.57	280.978	1261.014
	0													168.91		67.57			
6	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	189.51	189.51	75.48	75.48	309.653	1261.014
	0													189.51		75.48			
5	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	209.97	209.97	83.31	83.31	338.12	1264.182
	0													209.97		83.31			
4	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	230.32	230.32	91.07	91.07	366.42	1264.182
	0													230.32		91.07			
3	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	250.52	250.52	98.74	98.74	394.495	1264.182
	0													250.52		98.74			
2	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	270.59	270.59	106.33	106.33	422.374	1264.182
	0													270.59		106.33			
1	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	290.45	290.45	113.82	113.82	449.951	1264.182
	0													290.45		113.82			

Gaya Aksial Kolom (K1)

Arah y

Lantai	Stasion	Balok			(K1)			(K2)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	2.82	2.82	3.18	3.18	12.533	668.9305
	0													2.82		3.18			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	23.45	23.45	11.24	11.24	63.671	1832.678
	0													23.45		11.24			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	44.21	44.21	19.32	19.32	107.416	1772.585
	0													44.21		19.32			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	64.9	64.9	27.36	27.36	136.264	1772.585
	0													64.9		27.36			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	85.43	85.43	35.31	35.31	164.875	1772.585
	0													85.43		35.31			
10	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	106.33	106.33	43.41	43.41	194.005	1785.449
	0													106.33		43.41			
9	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	127.32	127.32	51.53	51.53	223.253	1785.449
	0													127.32		51.53			
8	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	148.17	148.17	59.58	59.58	252.298	1785.449
	0													148.17		59.58			
7	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	168.91	168.91	67.57	67.57	281.181	1785.449
	0													168.91		67.57			
6	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	189.51	189.51	75.48	75.48	309.856	1785.449
	0													189.51		75.48			
5	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	209.97	209.97	83.31	83.31	338.323	1788.363
	0													209.97		83.31			
4	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	230.32	230.32	91.07	91.07	366.623	1788.363
	0													230.32		91.07			
3	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	250.52	250.52	98.74	98.74	394.698	1788.363
	0													250.52		98.74			
2	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	270.59	270.59	106.33	106.33	422.577	1788.363
	0													270.59		106.33			
1	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	290.45	290.45	113.82	113.82	450.154	1788.363
	0													290.45		113.82			

Gaya Aksial Kolom (K2)

Arah X

Lantai	Stasion	Balok			(K2)			(K4)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B6	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	1339.2	4.22	4.22	5.15	5.15	18.9776	683.2985
	0													4.22		5.15			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	33.58	33.58	17.86	17.86	82.815	1265.092
	0													33.58		17.86			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	62.95	62.95	30.55	30.55	135.316	1247.092
	0													62.95		30.55			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	92.29	92.29	43.22	43.22	176.859	1247.092
	0													92.29		43.22			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	121.57	121.57	55.83	55.83	218.3	1247.092
	0													121.57		55.83			
10	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	150.89	150.89	68.46	68.46	259.799	1261.014
	0													150.89		68.46			
9	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	180.29	180.29	81.14	81.14	301.419	1261.014
	0													180.29		81.14			
8	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	209.67	209.67	93.79	93.79	343	1261.014
	0													209.67		93.79			
7	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	239.06	239.06	106.42	106.42	384.583	1261.014
	0													239.06		106.42			
6	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	268.43	268.43	119.02	119.02	426.127	1261.014
	0													268.43		119.02			
5	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	297.84	297.84	131.61	131.61	467.714	1264.182
	0													297.84		131.61			
4	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	327.24	327.24	144.17	144.17	509.274	1264.182
	0													327.24		144.17			
3	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	356.6	356.6	156.68	156.68	550.761	1264.182
	0													356.6		156.68			
2	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	385.94	385.94	169.15	169.15	592.204	1264.182
	0													385.94		169.15			
1	3.75	W16X40	6	236 22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	415.21	415.21	181.55	181.55	633.528	1264.182
	0													415.21		181.55			

Gaya Aksial Kolom (K2)

Arah y

Lantai	Stasion	Balok			(K2)			(K1)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	4.22	4.22	5.15	5.15	15.198	668.9305
	0													4.22		5.15			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	33.58	33.58	17.86	17.86	79.137	1832.678
	0													33.58		17.86			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	62.95	62.95	30.55	30.55	135.519	1772.585
	0													62.95		30.55			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	92.29	92.29	43.22	43.22	177.062	1772.585
	0													92.29		43.22			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	121.57	121.57	55.83	55.83	218.503	1772.585
	0													121.57		55.83			
10	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	150.89	150.89	68.46	68.46	260.002	1785.449
	0													150.89		68.46			
9	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	180.29	180.29	81.14	81.14	301.622	1785.449
	0													180.29		81.14			
8	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	209.67	209.67	93.79	93.79	343.203	1785.449
	0													209.67		93.79			
7	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	239.06	239.06	106.42	106.42	384.786	1785.449
	0													239.06		106.42			
6	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	268.43	268.43	119.02	119.02	426.33	1785.449
	0													268.43		119.02			
5	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	297.84	297.84	131.61	131.61	467.917	1788.363
	0													297.84		131.61			
4	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	327.24	327.24	144.17	144.17	509.477	1788.363
	0													327.24		144.17			
3	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	356.6	356.6	156.68	156.68	550.964	1788.363
	0													356.6		156.68			
2	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	385.94	385.94	169.15	169.15	592.407	1788.363
	0													385.94		169.15			
1	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	415.21	415.21	181.55	181.55	633.731	1788.363
	0													415.21		181.55			

Faktor Panjang Efektif Kolom (K1) < Tanpa Tangga >

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B3	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x19	130	6	236.22	0.55	15	15.262	15	15.262	7.66023	3.1
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	2.7
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	2.7
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	2.7
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	17.2046	3.2
10	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	10	17.205	10	17.205	26.749	3.9
9	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	9	26.749	9	26.749	26.749	4.5
8	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	8	26.749	8	26.749	26.749	4.5
7	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	7	26.749	7	26.749	26.749	4.5
6	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	6	26.749	6	26.749	28.5097	4.62
5	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	5	28.51	5	28.51	30.2703	5
4	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	4	30.27	4	30.27	30.2703	5.03
3	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	3	30.27	3	30.27	30.2703	5.03
2	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	2	30.27	2	30.27	30.2703	5.03
1	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	1	30.27	1	30.27	1	2.2

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	5.2588	15	5.2588	2.18049	1.91
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	2.1805	14	2.1805	2.18049	1.6
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	2.1805	13	2.1805	2.18049	1.6
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	2.1805	12	2.1805	2.18049	1.6
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	2.1805	11	2.1805	5.01707	1.89
10	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	10	5.0171	10	5.0171	7.85366	2.57
9	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	9	7.8537	9	7.8537	7.85366	2.78
8	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	8	7.8537	8	7.8537	7.85366	2.78
7	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	7	7.8537	7	7.8537	7.85366	2.78
6	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	6	7.8537	6	7.8537	8.34146	2.8
5	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	5	8.3415	5	8.3415	8.82927	2.84
4	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	4	8.8293	4	8.8293	8.82927	2.86
3	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	3	8.8293	3	8.8293	8.82927	2.86
2	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	2	8.8293	2	8.8293	8.82927	2.86
1	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	1	8.8293	1	8.8293	1	1.88

Faktor Panjang Efektif Kolom (K2)

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B6	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x26	204	6	236.22	0.864	15	9.7255	15	9.7255	7.66023	2.82
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	2.75
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	2.75
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	2.75
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	14.332	3
10	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	10	14.332	10	14.332	21.0039	3.6
9	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	9	21.004	9	21.004	21.0039	4.25
8	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	8	21.004	8	21.004	21.0039	4.25
7	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	7	21.004	7	21.004	21.0039	4.25
6	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	6	21.004	6	21.004	23.8764	4.4
5	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	5	23.876	5	23.876	26.749	4.5
4	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	4	26.749	4	26.749	26.749	4.6
3	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	3	26.749	3	26.749	26.749	4.6
2	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	2	26.749	2	26.749	26.749	4.6
1	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	1	26.749	1	26.749	1	1.99

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	2.6294	15	2.6294	1.09024	1.52
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	1.0902	14	1.0902	1.09024	1.31
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	1.0902	13	1.0902	1.09024	1.31
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	1.0902	12	1.0902	1.09024	1.31
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	1.0902	11	1.0902	2.11829	1.45
10	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	10	2.1183	10	2.1183	3.14634	1.71
9	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	9	3.1463	9	3.1463	3.14634	1.82
8	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	8	3.1463	8	3.1463	3.14634	1.82
7	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	7	3.1463	7	3.1463	3.14634	1.82
6	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	6	3.1463	6	3.1463	3.53659	1.89
5	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	5	3.5366	5	3.5366	3.92683	1.98
4	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	4	3.9268	4	3.9268	3.92683	2.05
3	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	3	3.9268	3	3.9268	3.92683	2.05
2	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	2	3.9268	2	3.9268	3.92683	2.05
1	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	1	3.9268	1	3.9268	1	1.6

GAYA GESER RENCANA (kolom Tanpa Tangga)

(K1) **VU = 1.05*VD+VL+μVE**

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	3.42	-1.34	2.49	-0.78	0.22	-0.02	6.961	2.267
14	6.06	-2.48	2.9	-0.95	1.82	0.03	16.543	3.674
13	5.5	-2.23	2.79	-0.89	3.07	0.11	20.845	3.6715
12	5.83	-2.33	2.91	-0.91	4.1	0.18	25.4315	4.0765
11	4.38	-1.76	2.2	-0.68	5.63	0.25	29.319	3.528
10	7.19	-3.04	3.59	-1.17	4.95	0.29	30.9395	5.522
9	5.62	-2.35	2.81	-0.89	6.78	0.36	35.831	4.7975
8	5.88	-2.43	2.94	-0.91	7.39	0.41	38.674	5.1015
7	5.8	-2.35	2.9	-0.86	8.01	0.46	41.03	5.1675
6	5.59	-2.22	2.79	-0.8	8.95	0.52	44.4595	5.211
5	5.8	-2.26	2.9	-0.8	8.85	0.54	44.39	5.333
4	5.61	-2.14	2.8	-0.74	9.73	0.58	47.6105	5.307
3	5.48	-2.03	2.73	-0.68	10.38	0.61	50.004	5.2515
2	5.94	-2.15	2.96	-0.69	11.56	0.61	55.437	5.3875
1	3.29	-1.19	1.64	-0.37	14.47	0.65	62.9745	4.2195

K2

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	-1.41	-1.72	-1.17	-1.36	1.06	-0.02	6.8905	3.246
14	-2.63	-2.74	-1.28	-1.53	2.76	0	15.0815	4.407
13	-2.37	-2.49	-1.25	-1.46	4.49	0.02	21.6985	4.1545
12	-2.57	-2.57	-1.33	-1.48	6.03	0.03	28.1485	4.2985
11	-2.04	-2.01	-1.06	-1.15	7.65	0.06	33.802	3.5005
10	-3.01	-3.19	-1.57	-1.81	8.31	0.06	37.9705	5.3995
9	-2.49	-2.59	-1.31	-1.46	9.62	0.08	42.4045	4.4995
8	-2.65	-2.68	-1.39	-1.5	10.61	0.09	46.6125	4.674
7	-2.71	-2.65	-1.42	-1.46	11.55	0.11	50.4655	4.6825
6	-2.62	-2.49	-1.37	-1.36	12.1	0.12	52.521	4.4545
5	-2.95	-2.68	-1.54	-1.44	13.08	0.13	56.9575	4.774
4	-2.86	-2.51	-1.5	-1.32	13.45	0.14	58.303	4.5155
3	-2.89	-2.42	-1.51	-1.25	13.89	0.15	60.1045	4.391
2	-3.25	-2.59	-1.7	-1.31	14.22	0.15	61.9925	4.6295
1	-1.84	-1.44	-0.96	-0.72	14.57	0.15	61.172	2.832

Desain Lentur (K1) < TanpaTangga >

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	453.6955	Aman	0.0729
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.2227
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.6102
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633

Desain Lentur (K2)

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	683.2985	Aman	0.1098
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.2227
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.6102
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816

Cek Strong Coloumn Weak Beam < TanpaTangga >

Kolom K1

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	3.1	1.91	3.75	147.638	0.825	0.8466	0.84659	26.67	725.4237	12.5026	12.53304	12.533	0.0172769	0.304	Aman
14	W14x109	2.7	1.6	3.75	147.638	0.7185	0.7092	0.71854	29.0036	788.8987	63.539	63.67104	63.671	0.0807088	0.854	Aman
13	W14x109	2.7	1.6	3.75	147.638	0.7185	0.7092	0.71854	29.0036	788.8987	107.213	107.416	107.416	0.1361594	0.859	Aman
12	W14x109	2.7	1.6	3.75	147.638	0.7185	0.7092	0.71854	29.0036	788.8987	136.061	136.264	136.264	0.1727269	0.877	Aman
11	W14x109	3.2	1.89	3.75	147.638	0.8516	0.8377	0.8516	26.5751	722.8421	164.672	164.875	164.875	0.2280927	0.931	Aman
10	W14x311	3.9	2.57	3.75	147.638	0.9367	1.0144	1.01441	23.4019	1818.094	193.802	194.005	194.005	0.1067079	0.299	Aman
9	W14x311	4.5	2.78	3.75	147.638	1.0831	1.0973	1.0973	21.7487	1689.658	223.05	223.253	223.253	0.1321291	0.312	Aman
8	W14x311	4.5	2.78	3.75	147.638	1.0831	1.0973	1.0973	21.7487	1689.658	252.095	252.298	252.298	0.149319	0.320	Aman
7	W14x311	4.5	2.78	3.75	147.638	1.0831	1.0973	1.0973	21.7487	1689.658	280.978	281.181	281.181	0.166413	0.329	Aman
6	W14x311	4.62	2.8	3.75	147.638	1.112	1.1052	1.11196	21.4558	1666.904	309.653	309.856	309.856	0.1858871	0.339	Aman
5	W14x342	5	2.84	3.75	147.638	1.1892	1.1114	1.18919	19.9179	1709.952	338.12	338.323	338.323	0.1978553	0.320	Aman
4	W14x342	5.03	2.86	3.75	147.638	1.1963	1.1192	1.19632	19.7765	1697.813	366.42	366.623	366.623	0.2159384	0.413	Aman
3	W14x342	5.03	2.86	3.75	147.638	1.1963	1.1192	1.19632	19.7765	1697.813	394.495	394.698	394.698	0.2324743	0.429	Aman
2	W14x342	5.03	2.86	3.75	147.638	1.1963	1.1192	1.19632	19.7765	1697.813	422.374	422.577	422.577	0.2488949	0.446	Aman
1	W14x342	2.2	1.88	3.75	147.638	0.5232	0.7357	0.7357	28.7023	2464.096	449.951	450.154	450.154	0.1826853	0.313	Aman

Vu pakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
6.961	2.267	21.7	145.95	406.815	Aman	Aman	0.0477	0.00557
16.543	3.674	21.7	145.95	406.815	Aman	Aman	0.11335	0.00903
20.845	3.6715	21.7	145.95	406.815	Aman	Aman	0.14283	0.00902
25.4315	4.0765	21.7	145.95	406.815	Aman	Aman	0.17425	0.01002
29.319	3.528	21.7	145.95	406.815	Aman	Aman	0.20089	0.00867
30.9395	5.522	8.1	468.72	1186.23	Aman	Aman	0.06601	0.00466
35.831	4.7975	8.1	468.72	1186.23	Aman	Aman	0.07644	0.00404
38.674	5.1015	8.1	468.72	1186.23	Aman	Aman	0.08251	0.0043
41.03	5.1675	8.1	468.72	1186.23	Aman	Aman	0.08754	0.00436
44.4595	5.211	8.1	468.72	1186.23	Aman	Aman	0.09485	0.00439
44.39	5.333	7.4	523.91	1312.46	Aman	Aman	0.08473	0.00406
47.6105	5.307	7.4	523.91	1312.46	Aman	Aman	0.09088	0.00404
50.004	5.2515	7.4	523.91	1312.46	Aman	Aman	0.09544	0.004
55.437	5.3875	7.4	523.91	1312.46	Aman	Aman	0.10581	0.0041
62.9745	4.2195	7.4	523.91	1312.46	Aman	Aman	0.1202	0.00321

Kolom K1 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B3	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x19	12.53304	6836.80176	3300.89335	7.15	6.961	1125.70315	355.8852	6.07336113	ok	9.27516331	ok
14	W14x109	W21x50	W16x40	63.67104	13366.7755	6453.64631	7.15	16.543	3298.16245	531.432	4.05279477	ok	12.1438798	ok
13	W14x109	W21x50	W16x40	107.416	12797.4778	6178.78223	7.15	20.845	3328.92175	531.432	3.8443312	ok	11.6266657	ok
12	W14x109	W21x50	W16x40	136.264	12361.92	5968.4895	7.15	25.4315	3361.71523	531.432	3.67726567	ok	11.2309562	ok
11	W14x109	W21x50	W16x40	164.875	12017.166	5802.03796	7.15	29.319	3389.51085	531.432	3.5453983	ok	10.9177429	ok
10	W14x311	W21x50	W16x40	194.005	26350.8264	13158.3095	8.55	30.9395	3444.41273	531.432	7.65031038	ok	24.7601	ok
9	W14x311	W21x50	W16x40	223.253	40663.1928	20500.1835	8.55	35.831	3486.23505	531.432	11.6639275	ok	38.5753652	ok
8	W14x311	W21x50	W16x40	252.298	40278.6121	20306.2986	8.55	38.674	3510.5427	531.432	11.4736141	ok	38.2105305	ok
7	W14x311	W21x50	W16x40	281.181	39896.4394	20113.6278	8.55	41.03	3530.6865	531.432	11.2999099	ok	37.8479802	ok
6	W14x311	W21x50	W16x40	309.856	39516.7078	19922.1877	8.55	44.4595	3560.00873	531.432	11.1001716	ok	37.4877457	ok
5	W14x342	W21x50	W16x40	338.323	41604.7437	20949.1971	8.75	44.39	3568.2925	531.432	11.6595665	ok	39.4202778	ok
4	W14x342	W21x50	W16x40	366.623	43693.6662	21976.8738	8.75	47.6105	3596.47188	531.432	12.149036	ok	41.3540656	ok
3	W14x342	W21x50	W16x40	394.698	43318.577	21788.2129	8.75	50.004	3617.415	531.432	11.975009	ok	40.9990608	ok
2	W14x342	W21x50	W16x40	422.577	42946.289	21600.9609	8.75	55.437	3664.95375	531.432	11.7180985	ok	40.6467072	ok
1	W14x342	W21x50	W16x40	450.154	42577.3145	21415.3755	8.75	62.9745	3730.90688	531.432	11.412055	ok	40.2974895	ok

Cek Strong Coloumn Weak Beam

Kolom K2

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	2.82	1.52	3.75	147.638	0.7505	0.6737	0.75048	28.4397	773.5593	18.9776	15.19804	18.9776	0.025	0.345	Aman
14	W14x109	2.75	1.31	3.75	147.638	0.7318	0.5806	0.73185	28.7703	782.5518	82.815	79.13704	82.815	0.106	0.866	Aman
13	W14x109	2.75	1.31	3.75	147.638	0.7318	0.5806	0.73185	28.7703	782.5518	135.316	135.519	135.519	0.173	0.877	Aman
12	W14x109	2.75	1.31	3.75	147.638	0.7318	0.5806	0.73185	28.7703	782.5518	176.859	177.062	177.062	0.226	0.929	Aman
11	W14x109	3	1.45	3.75	147.638	0.7984	0.6427	0.79838	27.5701	749.9063	218.3	218.503	218.503	0.291	0.994	Aman
10	W14x257	3.6	1.71	3.75	147.638	0.8893	0.6858	0.8893	25.8551	1661.452	259.799	260.002	260.002	0.156	0.382	Aman
9	W14x257	4.25	1.82	3.75	147.638	1.0499	0.7299	1.04986	22.696	1458.443	301.419	301.622	301.622	0.207	0.477	Aman
8	W14x257	4.25	1.82	3.75	147.638	1.0499	0.7299	1.04986	22.696	1458.443	343	343.203	343.203	0.235	0.505	Aman
7	W14x257	4.25	1.82	3.75	147.638	1.0499	0.7299	1.04986	22.696	1458.443	384.583	384.786	384.786	0.264	0.534	Aman
6	W14x257	4.4	1.89	3.75	147.638	1.0869	0.758	1.08692	21.9562	1410.904	426.127	426.33	426.33	0.302	0.572	Aman
5	W14x311	4.5	1.98	3.75	147.638	1.0831	0.7815	1.08308	22.0328	1711.727	467.714	467.917	467.917	0.273	0.492	Aman
4	W14x311	4.6	2.05	3.75	147.638	1.1072	0.8092	1.10715	21.552	1674.373	509.274	509.477	509.477	0.304	0.523	Aman
3	W14x311	4.6	2.05	3.75	147.638	1.1072	0.8092	1.10715	21.552	1674.373	550.761	550.964	550.964	0.329	0.548	Aman
2	W14x311	4.6	2.05	3.75	147.638	1.1072	0.8092	1.10715	21.552	1674.373	592.204	592.407	592.407	0.354	0.573	Aman
1	W14x311	1.99	1.6	3.75	147.638	0.479	0.6315	0.63154	30.4651	2366.836	633.528	633.731	633.731	0.268	0.487	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
6.8905	3.246	21.7	145.95	406.815	Aman	Aman	0.04721	0.00798
15.0815	4.407	21.7	145.95	406.815	Aman	Aman	0.10334	0.01083
21.6985	4.1545	21.7	145.95	406.815	Aman	Aman	0.14868	0.01021
28.1485	4.2985	21.7	145.95	406.815	Aman	Aman	0.19287	0.01057
33.802	3.5005	21.7	145.95	406.815	Aman	Aman	0.23161	0.0086
37.9705	5.3995	9.7	376.2	979.776	Aman	Aman	0.10093	0.00551
42.4045	4.4995	9.7	376.2	979.776	Aman	Aman	0.11272	0.00459
46.6125	4.674	9.7	376.2	979.776	Aman	Aman	0.1239	0.00477
50.4655	4.6825	9.7	376.2	979.776	Aman	Aman	0.13414	0.00478
52.521	4.4545	9.7	376.2	979.776	Aman	Aman	0.13961	0.00455
56.9575	4.774	8.1	468.72	1186.23	Aman	Aman	0.12152	0.00402
58.303	4.5155	8.1	468.72	1186.23	Aman	Aman	0.12439	0.00381
60.1045	4.391	8.1	468.72	1186.23	Aman	Aman	0.12823	0.0037
61.9925	4.6295	8.1	468.72	1186.23	Aman	Aman	0.13226	0.0039
61.172	2.832	8.1	468.72	1186.23	Aman	Aman	0.13051	0.00239

Kolom K2 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B6	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x26	18.97756	6798.13464	3282.22438	7.15	6.8905	1669.69908	711.7704	4.07147296	ok	4.61135274	ok
14	W14x109	W21x50	W16x40	82.81496	13213.2449	6379.51979	7.15	15.0815	3287.71273	1062.864	4.01897793	ok	6.00219764	ok
13	W14x109	W21x50	W16x40	135.519	12513.9962	6041.91381	7.15	21.6985	3335.02428	1062.864	3.7522954	ok	5.68455965	ok
12	W14x109	W21x50	W16x40	177.062	11948.514	5768.89192	7.15	28.1485	3381.14178	1062.864	3.53386956	ok	5.42768587	ok
11	W14x109	W21x50	W16x40	218.503	11450.61	5528.49764	7.15	33.802	3421.5643	1062.864	3.34660085	ok	5.20150992	ok
10	W14x257	W21x50	W16x40	260.002	21456.1014	10714.1859	8.2	37.9705	3491.2381	1062.864	6.14627269	ok	10.0804862	ok
9	W14x257	W21x50	W16x40	301.622	31446.1311	15884.4933	8.2	42.4045	3527.5969	1062.864	8.914321	ok	14.9449914	ok
8	W14x257	W21x50	W16x40	343.203	30910.167	15613.7599	8.2	46.6125	3562.1025	1062.864	8.67750633	ok	14.6902707	ok
7	W14x257	W21x50	W16x40	384.786	30374.4412	15343.1469	8.2	50.4655	3593.6971	1062.864	8.45214284	ok	14.4356634	ok
6	W14x257	W21x50	W16x40	426.33	29838.9538	15072.6543	8.2	52.521	3610.5522	1062.864	8.26437402	ok	14.1811693	ok
5	W14x311	W21x50	W16x40	467.917	33406.6443	16856.4253	8.55	56.9575	3666.86663	1062.864	9.11040617	ok	15.8594377	ok
4	W14x311	W21x50	W16x40	509.477	36967.7661	18637.1491	8.55	58.303	3678.37065	1062.864	10.0500383	ok	17.5348389	ok
3	W14x311	W21x50	W16x40	550.964	36419.8739	18360.9315	8.55	60.1045	3693.77348	1062.864	9.85980168	ok	17.2749585	ok
2	W14x311	W21x50	W16x40	592.407	35872.7537	18085.103	8.55	61.9925	3709.91588	1062.864	9.6694251	ok	17.0154441	ok
1	W14x311	W21x50	W16x40	633.731	35326.7088	17809.8167	8.55	61.172	3702.9006	1062.864	9.54028008	ok	16.7564399	ok

Gaya Aksial Kolom (K1) < 1Tangga >

Arah X

Lantai	Stasion	Balok			(K1)			(K3)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B3	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x19	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	889.2	2.82	2.82	3.18	3.18	12.5026	453.6955
	0													2.82		3.18			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	23.44	23.44	11.23	11.23	63.522	1265.092
	0													23.44		11.23			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	44.17	44.17	19.29	19.29	107.15	1247.092
	0													44.17		19.29			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	64.83	64.83	27.31	27.31	135.952	1247.092
	0													64.83		27.31			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	85.33	85.33	35.24	35.24	164.517	1247.092
	0													85.33		35.24			
10	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	106.21	106.21	43.33	43.33	193.618	1261.014
	0													106.21		43.33			
9	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	127.18	127.18	51.45	51.45	222.842	1261.014
	0													127.18		51.45			
8	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	148.01	148.01	59.48	59.48	251.853	1261.014
	0													148.01		59.48			
7	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	168.73	168.73	67.46	67.46	280.707	1261.014
	0													168.73		67.46			
6	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	189.3	189.3	75.35	75.35	309.336	1261.014
	0													189.3		75.35			
5	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	209.73	209.73	83.16	83.16	337.757	1264.182
	0													209.73		83.16			
4	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	230.05	230.05	90.9	90.9	366.011	1264.182
	0													230.05		90.9			
3	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	250.22	250.22	98.56	98.56	394.045	1264.182
	0													250.22		98.56			
2	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	270.24	270.24	106.13	106.13	421.854	1264.182
	0													270.24		106.13			
1	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	290.07	290.07	113.59	113.59	449.38	1264.182
	0													290.07		113.59			

Gaya Aksial Kolom (K1)

Arah y

Lantai	Stasion	Balok			(K1)			(K2)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	2.82	2.82	3.18	3.18	12.533	668.9305
	0													2.82		3.18			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	23.44	23.44	11.23	11.23	63.654	1832.678
	0													23.44		11.23			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	44.17	44.17	19.29	19.29	107.353	1772.585
	0													44.17		19.29			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	64.83	64.83	27.31	27.31	136.155	1772.585
	0													64.83		27.31			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	85.33	85.33	35.24	35.24	164.72	1772.585
	0													85.33		35.24			
10	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	106.21	106.21	43.33	43.33	193.821	1785.449
	0													106.21		43.33			
9	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	127.18	127.18	51.45	51.45	223.045	1785.449
	0													127.18		51.45			
8	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	148.01	148.01	59.48	59.48	252.056	1785.449
	0													148.01		59.48			
7	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	168.73	168.73	67.46	67.46	280.91	1785.449
	0													168.73		67.46			
6	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	189.3	189.3	75.35	75.35	309.539	1785.449
	0													189.3		75.35			
5	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	209.73	209.73	83.16	83.16	337.96	1788.363
	0													209.73		83.16			
4	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	230.05	230.05	90.9	90.9	366.214	1788.363
	0													230.05		90.9			
3	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	250.22	250.22	98.56	98.56	394.248	1788.363
	0													250.22		98.56			
2	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	270.24	270.24	106.13	106.13	422.057	1788.363
	0													270.24		106.13			
1	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	290.07	290.07	113.59	113.59	449.583	1788.363
	0													290.07		113.59			

Gaya Aksial Kolom (K2)

Arah X

Lantai	Stasion	Balok			(K2)			(K4)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B6	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	1339.2	4.22	4.22	5.15	5.15	18.9776	683.2985
	0													4.22		5.15			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	33.58	33.58	17.86	17.86	82.815	1265.092
	0													33.58		17.86			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	62.96	62.96	30.56	30.56	135.333	1247.092
	0													62.96		30.56			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	92.31	92.31	43.23	43.23	176.888	1247.092
	0													92.31		43.23			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	121.6	121.6	55.84	55.84	218.341	1247.092
	0													121.6		55.84			
10	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	150.92	150.92	68.48	68.48	259.845	1261.014
	0													150.92		68.48			
9	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	180.32	180.32	81.16	81.16	301.465	1261.014
	0													180.32		81.16			
8	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	209.7	209.7	93.81	93.81	343.046	1261.014
	0													209.7		93.81			
7	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	239.08	239.08	106.44	106.44	384.617	1261.014
	0													239.08		106.44			
6	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	268.47	268.47	119.04	119.04	426.185	1261.014
	0													268.47		119.04			
5	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	297.87	297.87	131.63	131.63	467.76	1264.182
	0													297.87		131.63			
4	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	327.28	327.28	144.19	144.19	509.332	1264.182
	0													327.28		144.19			
3	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	356.64	356.64	156.71	156.71	550.824	1264.182
	0													356.64		156.71			
2	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	385.98	385.98	169.18	169.18	592.267	1264.182
	0													385.98		169.18			
1	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	415.26	415.26	181.58	181.58	633.603	1264.182
	0													415.26		181.58			

Gaya Aksial Kolom (K2)

Arah y

Lantai	Stasion	Balok			(K2)			(K1)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	4.22	4.22	5.15	5.15	15.198	668.9305
	0													4.22		5.15			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	33.58	33.58	17.86	17.86	79.137	1832.678
	0													33.58		17.86			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	62.96	62.96	30.56	30.56	135.536	1772.585
	0													62.96		30.56			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	92.31	92.31	43.23	43.23	177.091	1772.585
	0													92.31		43.23			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	121.6	121.6	55.84	55.84	218.544	1772.585
	0													121.6		55.84			
10	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	150.92	150.92	68.48	68.48	260.048	1785.449
	0													150.92		68.48			
9	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	180.32	180.32	81.16	81.16	301.668	1785.449
	0													180.32		81.16			
8	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	209.7	209.7	93.81	93.81	343.249	1785.449
	0													209.7		93.81			
7	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	239.08	239.08	106.44	106.44	384.82	1785.449
	0													239.08		106.44			
6	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	268.47	268.47	119.04	119.04	426.388	1785.449
	0													268.47		119.04			
5	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	297.87	297.87	131.63	131.63	467.963	1788.363
	0													297.87		131.63			
4	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	327.28	327.28	144.19	144.19	509.535	1788.363
	0													327.28		144.19			
3	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	356.64	356.64	156.71	156.71	551.027	1788.363
	0													356.64		156.71			
2	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	385.98	385.98	169.18	169.18	592.47	1788.363
	0													385.98		169.18			
1	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	415.26	415.26	181.58	181.58	633.806	1788.363
	0													415.26		181.58			

Faktor Panjang Efektif Kolom (K1) < 1Tangga >

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B3	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x19	130	6	236.22	0.55	15	15.262	15	15.262	7.66023	0.95
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	0.935
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	0.935
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	0.935
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	17.2046	0.955
10	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	10	17.205	10	17.205	26.749	0.96
9	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	9	26.749	9	26.749	26.749	0.97
8	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	8	26.749	8	26.749	26.749	0.97
7	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	7	26.749	7	26.749	26.749	0.97
6	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	6	26.749	6	26.749	28.5097	0.975
5	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	5	28.51	5	28.51	30.2703	0.98
4	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	4	30.27	4	30.27	30.2703	0.985
3	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	3	30.27	3	30.27	30.2703	0.985
2	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	2	30.27	2	30.27	30.2703	0.985
1	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	1	30.27	1	30.27	1	0.855

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	5.2588	15	5.2588	2.18049	0.88
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	2.1805	14	2.1805	2.18049	0.851
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	2.1805	13	2.1805	2.18049	0.851
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	2.1805	12	2.1805	2.18049	0.851
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	2.1805	11	2.1805	5.01707	0.885
10	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	10	5.0171	10	5.0171	7.85366	0.945
9	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	9	7.8537	9	7.8537	7.85366	0.95
8	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	8	7.8537	8	7.8537	7.85366	0.95
7	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	7	7.8537	7	7.8537	7.85366	0.95
6	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	6	7.8537	6	7.8537	8.34146	0.952
5	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	5	8.3415	5	8.3415	8.82927	0.954
4	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	4	8.8293	4	8.8293	8.82927	0.958
3	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	3	8.8293	3	8.8293	8.82927	0.958
2	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	2	8.8293	2	8.8293	8.82927	0.958
1	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	1	8.8293	1	8.8293	1	0.85

Faktor Panjang Efektif Kolom (K2)

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B6	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x26	204	6	236.22	0.864	15	9.7255	15	9.7255	7.66023	0.94
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	0.935
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	0.935
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	0.935
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	14.332	0.951
10	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	10	14.332	10	14.332	21.0039	0.958
9	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	9	21.004	9	21.004	21.0039	0.961
8	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	8	21.004	8	21.004	21.0039	0.961
7	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	7	21.004	7	21.004	21.0039	0.961
6	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	6	21.004	6	21.004	23.8764	0.965
5	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	5	23.876	5	23.876	26.749	0.97
4	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	4	26.749	4	26.749	26.749	0.976
3	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	3	26.749	3	26.749	26.749	0.976
2	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	2	26.749	2	26.749	26.749	0.976
1	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	1	26.749	1	26.749	1	0.853

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	2.6294	15	2.6294	1.09024	0.775
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	1.0902	14	1.0902	1.09024	0.69
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	1.0902	13	1.0902	1.09024	0.69
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	1.0902	12	1.0902	1.09024	0.69
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	1.0902	11	1.0902	2.11829	0.751
10	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	10	2.1183	10	2.1183	3.14634	0.82
9	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	9	3.1463	9	3.1463	3.14634	0.82
8	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	8	3.1463	8	3.1463	3.14634	0.82
7	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	7	3.1463	7	3.1463	3.14634	0.82
6	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	6	3.1463	6	3.1463	3.53659	0.84
5	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	5	3.5366	5	3.5366	3.92683	0.85
4	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	4	3.9268	4	3.9268	3.92683	0.85
3	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	3	3.9268	3	3.9268	3.92683	0.85
2	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	2	3.9268	2	3.9268	3.92683	0.85
1	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	1	3.9268	1	3.9268	1	0.81

GAYA GESER RENCANA (kolom 1 Tangga)

(K1)

VU = 1.05*VD+VL+μVE

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	3.42	-1.34	2.49	-0.78	1.11	0.05	10.521	2.387
14	6.06	-2.48	2.89	-0.95	2.14	0.27	17.813	4.634
13	5.47	-2.22	2.77	-0.89	3.79	0.6	23.6735	5.621
12	5.78	-2.32	2.88	-0.91	5.05	0.91	29.149	6.986
11	4.34	-1.75	2.17	-0.67	6.82	1.21	34.007	7.3475
10	7.25	-3.03	3.63	-1.16	4.65	1.27	29.8425	9.4215
9	5.6	-2.33	2.79	-0.89	6.76	1.56	35.71	9.5765
8	5.87	-2.42	2.93	-0.91	7.44	1.76	38.8535	10.491
7	5.78	-2.34	2.88	-0.86	8.1	1.95	41.349	11.117
6	5.57	-2.21	2.78	-0.79	8.99	2.19	44.5885	11.8705
5	5.8	-2.24	2.89	-0.79	8.44	2.24	42.74	12.102
4	5.59	-2.13	2.79	-0.73	9.39	2.43	46.2195	12.6865
3	5.45	-2.02	2.72	-0.67	10.03	2.57	48.5625	13.071
2	5.91	-2.14	2.94	-0.69	12.79	2.53	60.3055	13.057
1	3.07	-1.15	1.53	-0.35	18.67	2.86	79.4335	12.9975

K2

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	-1.41	-1.72	-1.17	-1.36	2.47	0.01	12.5305	3.206
14	-2.65	-2.74	-1.29	-1.53	3.34	0.03	17.4325	4.527
13	-2.41	-2.5	-1.28	-1.46	5.51	0.13	25.8505	4.605
12	-2.64	-2.57	-1.37	-1.48	7.34	0.21	33.502	5.0185
11	-2.09	-2.01	-1.09	-1.15	9.03	0.35	39.4045	4.6605
10	-2.95	-3.19	-1.54	-1.81	8.11	0.37	37.0775	6.6395
9	-2.52	-2.59	-1.32	-1.46	9.7	0.49	42.766	6.1395
8	-2.67	-2.68	-1.4	-1.5	10.7	0.55	47.0035	6.514
7	-2.73	-2.65	-1.43	-1.46	11.65	0.62	50.8965	6.7225
6	-2.65	-2.49	-1.39	-1.35	12.13	0.69	52.6925	6.7245
5	-2.97	-2.68	-1.55	-1.44	12.68	0.75	55.3885	7.254
4	-2.89	-2.51	-1.51	-1.32	13.13	0.8	57.0645	7.1555
3	-2.92	-2.41	-1.53	-1.25	13.68	0.86	59.316	7.2205
2	-3.3	-2.59	-1.73	-1.31	15.64	0.79	67.755	7.1895
1	-2.04	-1.42	-1.07	-0.71	18.53	0.96	77.332	6.041

Desair Lentur (K1) < 1 Tangga >

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	453.6955	Aman	0.0729
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.2227
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.6102
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633

Cek Strong Coloumn Weak Beam < 1 Tangga >

Kolom K1

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	0.95	0.88	3.75	147.638	0.2528	0.3901	0.39005	33.779	918.7901	12.5026	12.53304	12.533	0.0136408	0.302	Aman
14	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	63.522	63.65404	63.654	0.0689949	0.848	Aman
13	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	107.15	107.353	107.353	0.1163604	0.849	Aman
12	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	135.952	136.155	136.155	0.147579	0.864	Aman
11	W14x109	0.955	0.885	3.75	147.638	0.2542	0.3923	0.39227	33.7545	918.1236	164.517	164.72	164.72	0.1794094	0.88	Aman
10	W14x311	0.96	0.945	3.75	147.638	0.2511	0.373	0.373	33.9635	2638.621	193.618	193.821	193.821	0.0734554	0.283	Aman
9	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	222.842	223.045	223.045	0.0845831	0.288	Aman
8	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	251.853	252.056	252.056	0.0955847	0.294	Aman
7	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	280.707	280.91	280.91	0.1065267	0.299	Aman
6	W14x311	0.975	0.952	3.75	147.638	0.2347	0.3758	0.37577	33.9341	2636.338	309.336	309.539	309.539	0.1174125	0.305	Aman
5	W14X342	0.98	0.954	3.75	147.638	0.2331	0.3733	0.37333	33.96	2915.469	337.757	337.96	337.96	0.1159196	0.279	Aman
4	W14X342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	366.011	366.214	366.214	0.1256723	0.284	Aman
3	W14X342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	394.045	394.248	394.248	0.1352926	0.289	Aman
2	W14X342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	421.854	422.057	422.057	0.1448357	0.294	Aman
1	W14X342	0.855	0.85	3.75	147.638	0.2034	0.3326	0.33263	34.3709	2950.74	449.38	449.583	449.583	0.1523628	0.298	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
10.521	2.387	21.7	145.95	406.815	Aman	Aman	0.07209	0.00587
17.813	4.634	21.7	145.95	406.815	Aman	Aman	0.12205	0.01139
23.6735	5.621	21.7	145.95	406.815	Aman	Aman	0.16221	0.01382
29.149	6.986	21.7	145.95	406.815	Aman	Aman	0.19972	0.01717
34.007	7.3475	21.7	145.95	406.815	Aman	Aman	0.23301	0.01806
29.8425	9.4215	8.1	468.72	1186.23	Aman	Aman	0.06367	0.00794
35.71	9.5765	8.1	468.72	1186.23	Aman	Aman	0.07619	0.00807
38.8535	10.491	8.1	468.72	1186.23	Aman	Aman	0.08289	0.00884
41.349	11.117	8.1	468.72	1186.23	Aman	Aman	0.08822	0.00937
44.5885	11.8705	8.1	468.72	1186.23	Aman	Aman	0.09513	0.01001
42.74	12.102	7.4	523.91	1312.46	Aman	Aman	0.08158	0.00922
46.2195	12.6865	7.4	523.91	1312.46	Aman	Aman	0.08822	0.00967
48.5625	13.071	7.4	523.91	1312.46	Aman	Aman	0.09269	0.00996
60.3055	13.057	7.4	523.91	1312.46	Aman	Aman	0.11511	0.00995
79.4335	12.9975	7.4	523.91	1312.46	Aman	Aman	0.15162	0.0099

Kolom K1 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B3	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x19	12.5330	6836.80176	3300.89335	7.15	10.521	1151.15715	355.8852	5.93906901	ok	9.27516331	ok
14	W14x109	W21x50	W16x40	53.6540	13365.8775	6453.69555	7.15	17.813	3307.24295	531.432	4.04169809	ok	12.1439724	ok
13	W14x109	W21x50	W16x40	107.353	12797.9578	6179.01398	7.15	23.6735	3349.14553	531.432	3.82126058	ok	11.6271018	ok
12	W14x109	W21x50	W16x40	136.155	12362.952	5968.98776	7.15	29.149	3388.29535	531.432	3.64872324	ok	11.2318938	ok
11	W14x109	W21x50	W16x40	164.72	12018.75	5802.80273	7.15	34.007	3423.03005	531.432	3.51114358	ok	10.919182	ok
10	W14x311	W21x50	W16x40	193.821	26352.9703	13159.3705	8.55	29.8425	3435.03338	531.432	7.67182367	ok	24.7620965	ok
9	W14x311	W21x50	W16x40	223.045	40665.779	20501.4873	8.55	35.71	3485.2005	531.432	11.6681319	ok	38.5778185	ok
8	W14x311	W21x50	W16x40	252.056	40287.5809	20307.7954	8.55	38.8535	3512.07743	531.432	11.4694456	ok	38.2133469	ok
7	W14x311	W21x50	W16x40	280.91	39899.8239	20115.3341	8.55	41.349	3533.41395	531.432	11.2921453	ok	37.8511909	ok
6	W14x311	W21x50	W16x40	309.539	39520.587	19924.1434	8.55	44.5885	3561.11168	531.432	11.097823	ok	37.4914258	ok
5	W14X342	W21x50	W16x40	337.96	41609.2502	20951.4662	8.75	42.74	3553.855	531.432	11.7082014	ok	39.4245477	ok
4	W14X342	W21x50	W16x40	366.214	43698.8027	21979.4573	8.75	46.2195	3584.30063	531.432	12.1917236	ok	41.358927	ok
3	W14X342	W21x50	W16x40	394.245	43324.2924	21791.0876	8.75	48.5625	3604.80188	531.432	12.0184948	ok	41.0044701	ok
2	W14X342	W21x50	W16x40	422.057	42952.743	21604.207	8.75	60.3055	3707.55313	531.432	11.585199	ok	40.6528155	ok
1	W14X342	W21x50	W16x40	449.583	42584.5735	21419.0265	8.75	79.4335	3874.92313	531.432	10.9897854	ok	40.3043598	ok

Desain Lentur (K2)

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	683.2985	Aman	0.1098
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.2227
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.6102
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816

Cek Strong Coloumn Weak Beam

Kolom K2

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	0.94	0.775	3.75	147.638	0.2502	0.3435	0.34351	34.2652	932.0133	18.9776	15.19804	18.9776	0.0203619	0.343	Aman
14	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	82.815	79.13704	82.815	0.0879508	0.858	Aman
13	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	135.333	135.536	135.536	0.1439414	0.863	Aman
12	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	176.888	177.091	177.091	0.1880734	0.885	Aman
11	W14x109	0.951	0.751	3.75	147.638	0.2531	0.3329	0.33287	34.3685	934.8243	218.341	218.544	218.544	0.2337808	0.937	Aman
10	W14x257	0.958	0.82	3.75	147.638	0.2367	0.3289	0.32885	34.4068	2210.984	259.845	260.048	260.048	0.1176164	0.363	Aman
9	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	301.465	301.668	301.668	0.1364406	0.372	Aman
8	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	343.046	343.249	343.249	0.1552472	0.382	Aman
7	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	384.617	384.82	384.82	0.1740492	0.391	Aman
6	W14x257	0.965	0.84	3.75	147.638	0.2384	0.3369	0.33687	34.33	2206.048	426.185	426.388	426.388	0.1932814	0.401	Aman
5	W14x311	0.97	0.85	3.75	147.638	0.2335	0.3355	0.33551	34.3432	2668.126	467.76	467.963	467.963	0.1753901	0.334	Aman
4	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	509.332	509.535	509.535	0.1909711	0.342	Aman
3	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	550.824	551.027	551.027	0.2065221	0.425	Aman
2	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	592.267	592.47	592.47	0.2220547	0.441	Aman
1	W14x311	0.853	0.81	3.75	147.638	0.2053	0.3197	0.31972	34.4923	2679.704	633.603	633.806	633.806	0.2365209	0.455	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
12.5305	3.206	21.7	145.95	406.815	Aman	Aman	0.08586	0.00788
17.4325	4.527	21.7	145.95	406.815	Aman	Aman	0.11945	0.01113
25.8505	4.605	21.7	145.95	406.815	Aman	Aman	0.17712	0.01132
33.502	5.0185	21.7	145.95	406.815	Aman	Aman	0.22955	0.01234
39.4045	4.6605	21.7	145.95	406.815	Aman	Aman	0.26999	0.01146
37.0775	6.6395	9.7	376.2	979.776	Aman	Aman	0.09856	0.00678
42.766	6.1395	9.7	376.2	979.776	Aman	Aman	0.11368	0.00627
47.0035	6.514	9.7	376.2	979.776	Aman	Aman	0.12494	0.00665
50.8965	6.7225	9.7	376.2	979.776	Aman	Aman	0.13529	0.00686
52.6925	6.7245	9.7	376.2	979.776	Aman	Aman	0.14006	0.00686
55.3885	7.254	8.1	468.72	1186.23	Aman	Aman	0.11817	0.00612
57.0645	7.1555	8.1	468.72	1186.23	Aman	Aman	0.12175	0.00603
59.316	7.2205	8.1	468.72	1186.23	Aman	Aman	0.12655	0.00609
67.755	7.1895	8.1	468.72	1186.23	Aman	Aman	0.14455	0.00606
77.332	6.041	8.1	468.72	1186.23	Aman	Aman	0.16499	0.00509

Kolom K2 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B6	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x26	18.97756	6796.13464	3282.22438	7.15	12.5305	1710.02508	711.7704	3.97545904	ok	4.61135274	ok
14	W14x109	W21x50	W16x40	82.81496	13213.2449	6379.51979	7.15	17.4325	4916.24238	1106.424	2.68767157	ok	5.76589065	ok
13	W14x109	W21x50	W16x40	135.536	12513.8942	6041.86456	7.15	25.8505	4976.43108	1106.424	2.51463228	ok	5.46071358	ok
12	W14x109	W21x50	W16x40	177.091	11948.238	5768.75866	7.15	33.502	5031.1393	1106.424	2.37485732	ok	5.21387701	ok
11	W14x109	W21x50	W16x40	218.544	11450.19	5528.29486	7.15	39.4045	5073.34218	1106.424	2.25693233	ok	4.99654279	ok
10	W14x257	W21x50	W16x40	260.048	21457.5591	10713.9174	8.2	37.0775	5095.6355	1106.424	4.2109682	ok	9.68337402	ok
9	W14x257	W21x50	W16x40	301.668	31445.5385	15884.194	8.2	42.766	5142.2812	1106.424	6.11509508	ok	14.3563353	ok
8	W14x257	W21x50	W16x40	343.249	30909.5744	15613.4606	8.2	47.0035	5177.0287	1106.424	5.97052405	ok	14.1116431	ok
7	W14x257	W21x50	W16x40	384.82	30373.9259	15342.8866	8.2	50.8965	5208.9513	1106.424	5.83110191	ok	13.8670949	ok
6	W14x257	W21x50	W16x40	426.388	29838.3612	15072.3549	8.2	52.6925	5223.6785	1106.424	5.71213584	ok	13.6225849	ok
5	W14x311	W21x50	W16x40	467.963	33405.9672	16856.0836	8.55	55.3885	5265.17168	1106.424	6.34470617	ok	15.2347415	ok
4	W14x311	W21x50	W16x40	509.535	36967.0799	18636.8032	8.55	57.0645	5279.50148	1106.424	7.00200201	ok	16.8441783	ok
3	W14x311	W21x50	W16x40	551.027	36419.0756	18360.529	8.55	59.316	5298.7518	1106.424	6.8731424	ok	16.5944783	ok
2	W14x311	W21x50	W16x40	592.47	35871.9224	18084.6839	8.55	67.755	5370.90525	1106.424	6.67893414	ok	16.345166	ok
1	W14x311	W21x50	W16x40	633.806	35325.7984	17809.3577	8.55	77.332	5452.7886	1106.424	6.47848302	ok	16.0963227	ok

Gaya Aksial Kolom (K1) < 2Tangga >

Arah X

Lantai	Stasion	Balok			(K1)			(K3)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B3	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x19	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	889.2	2.8	2.8	3.17	3.17	12.4736	453.6955
	0													2.8		3.17			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	23.35	23.35	11.21	11.21	63.404	1265.092
	0													23.35		11.21			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	44.01	44.01	19.25	19.25	106.938	1247.092
	0													44.01		19.25			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	64.59	64.59	27.25	27.25	135.634	1247.092
	0													64.59		27.25			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	85.01	85.01	35.16	35.16	164.093	1247.092
	0													85.01		35.16			
10	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	105.82	105.82	43.23	43.23	193.1	1261.014
	0													105.82		43.23			
9	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	126.73	126.73	51.33	51.33	222.242	1261.014
	0													126.73		51.33			
8	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	147.5	147.5	59.35	59.35	251.176	1261.014
	0													147.5		59.35			
7	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	168.15	168.15	67.31	67.31	279.936	1261.014
	0													168.15		67.31			
6	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	188.67	188.67	75.19	75.19	308.5	1261.014
	0													188.67		75.19			
5	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	209.06	209.06	82.99	82.99	336.868	1264.182
	0													209.06		82.99			
4	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	229.33	229.33	90.71	90.71	365.052	1264.182
	0													229.33		90.71			
3	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	249.47	249.47	98.36	98.36	393.045	1264.182
	0													249.47		98.36			
2	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	269.47	269.47	105.93	105.93	420.83	1264.182
	0													269.47		105.93			
1	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	289.27	289.27	113.38	113.38	448.315	1264.182
	0													289.27		113.38			

Gaya Aksial Kolom (K1)

Arah y

Lantai	Stasion	Balok			(K1)			(K2)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	2.8	2.8	3.17	3.17	12.504	668.9305
	0													2.8		3.17			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	23.35	23.35	11.21	11.21	63.536	1832.678
	0													23.35		11.21			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	44.01	44.01	19.25	19.25	107.141	1772.585
	0													44.01		19.25			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	64.59	64.59	27.25	27.25	135.837	1772.585
	0													64.59		27.25			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	85.01	85.01	35.16	35.16	164.296	1772.585
	0													85.01		35.16			
10	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	105.82	105.82	43.23	43.23	193.303	1785.449
	0													105.82		43.23			
9	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	126.73	126.73	51.33	51.33	222.445	1785.449
	0													126.73		51.33			
8	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	147.5	147.5	59.35	59.35	251.379	1785.449
	0													147.5		59.35			
7	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	168.15	168.15	67.31	67.31	280.139	1785.449
	0													168.15		67.31			
6	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	188.67	188.67	75.19	75.19	308.703	1785.449
	0													188.67		75.19			
5	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	209.06	209.06	82.99	82.99	337.071	1788.363
	0													209.06		82.99			
4	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	229.33	229.33	90.71	90.71	365.255	1788.363
	0													229.33		90.71			
3	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	249.47	249.47	98.36	98.36	393.248	1788.363
	0													249.47		98.36			
2	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	269.47	269.47	105.93	105.93	421.033	1788.363
	0													269.47		105.93			
1	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	289.27	289.27	113.38	113.38	448.518	1788.363
	0													289.27		113.38			

Gaya Aksial Kolom (K2)
Arah X

Lantai	Stasion	Balok			(K2)			(K4)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B6	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	1339.2	4.41	4.41	5.25	5.25	19.2556	683.2985
	0													4.41		5.25			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	33.05	33.05	18.08	18.08	82.289	1265.092
	0													33.05		18.08			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	61.56	61.56	30.8	30.8	133.773	1247.092
	0													61.56		30.8			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	89.73	89.73	43.35	43.35	173.852	1247.092
	0													89.73		43.35			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	117.54	117.54	55.66	55.66	213.379	1247.092
	0													117.54		55.66			
10	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	145.61	145.61	68.1	68.1	253.283	1261.014
	0													145.61		68.1			
9	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	173.68	173.68	80.55	80.55	293.192	1261.014
	0													173.68		80.55			
8	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	201.47	201.47	92.82	92.82	332.675	1261.014
	0													201.47		92.82			
7	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	229.02	229.02	104.93	104.93	371.79	1261.014
	0													229.02		104.93			
6	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	256.28	256.28	116.85	116.85	410.462	1261.014
	0													256.28		116.85			
5	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	283.36	283.36	128.62	128.62	448.843	1264.182
	0													283.36		128.62			
4	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	310.13	310.13	140.2	140.2	486.757	1264.182
	0													310.13		140.2			
3	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	336.52	336.52	151.53	151.53	524.09	1264.182
	0													336.52		151.53			
2	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	362.47	362.47	162.58	162.58	560.755	1264.182
	0													362.47		162.58			
1	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	387.84	387.84	173.25	173.25	596.534	1264.182
	0													387.84		173.25			

Gaya Aksial Kolom (K2)
Arah y

Lantai	Stasion	Balok			(K2)			(K1)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	4.41	4.41	5.25	5.25	15.476	668.9305
	0													4.41		5.25			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	33.05	33.05	18.08	18.08	78.611	1832.678
	0													33.05		18.08			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	61.56	61.56	30.8	30.8	133.976	1772.585
	0													61.56		30.8			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	89.73	89.73	43.35	43.35	174.055	1772.585
	0													89.73		43.35			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	117.54	117.54	55.66	55.66	213.582	1772.585
	0													117.54		55.66			
10	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	145.61	145.61	68.1	68.1	253.486	1785.449
	0													145.61		68.1			
9	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	173.68	173.68	80.55	80.55	293.395	1785.449
	0													173.68		80.55			
8	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	201.47	201.47	92.82	92.82	332.878	1785.449
	0													201.47		92.82			
7	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	229.02	229.02	104.93	104.93	371.993	1785.449
	0													229.02		104.93			
6	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	256.28	256.28	116.85	116.85	410.665	1785.449
	0													256.28		116.85			
5	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	283.36	283.36	128.62	128.62	449.046	1788.363
	0													283.36		128.62			
4	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	310.13	310.13	140.2	140.2	486.96	1788.363
	0													310.13		140.2			
3	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	336.52	336.52	151.53	151.53	524.293	1788.363
	0													336.52		151.53			
2	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	362.47	362.47	162.58	162.58	560.958	1788.363
	0													362.47		162.58			
1	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	387.84	387.84	173.25	173.25	596.737	1788.363
	0													387.84		173.25			

Faktor Panjang Efektif Kolom (K1) < 2Tangga >

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B3	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x19	130	6	236.22	0.55	15	15.262	15	15.262	7.66023	0.95
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	0.935
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	0.935
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	0.935
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	17.2046	0.955
10	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	10	17.205	10	17.205	26.749	0.96
9	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	9	26.749	9	26.749	26.749	0.97
8	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	8	26.749	8	26.749	26.749	0.97
7	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	7	26.749	7	26.749	26.749	0.97
6	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	6	26.749	6	26.749	28.5097	0.975
5	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	5	28.51	5	28.51	30.2703	0.98
4	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	4	30.27	4	30.27	30.2703	0.985
3	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	3	30.27	3	30.27	30.2703	0.985
2	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	2	30.27	2	30.27	30.2703	0.985
1	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	1	30.27	1	30.27	1	0.855

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	5.2588	15	5.2588	2.18049	0.88
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	2.1805	14	2.1805	2.18049	0.851
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	2.1805	13	2.1805	2.18049	0.851
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	2.1805	12	2.1805	2.18049	0.851
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	2.1805	11	2.1805	5.01707	0.885
10	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	10	5.0171	10	5.0171	7.85366	0.945
9	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	9	7.8537	9	7.8537	7.85366	0.95
8	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	8	7.8537	8	7.8537	7.85366	0.95
7	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	7	7.8537	7	7.8537	7.85366	0.95
6	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	6	7.8537	6	7.8537	8.34146	0.952
5	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	5	8.3415	5	8.3415	8.82927	0.954
4	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	4	8.8293	4	8.8293	8.82927	0.958
3	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	3	8.8293	3	8.8293	8.82927	0.958
2	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	2	8.8293	2	8.8293	8.82927	0.958
1	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	1	8.8293	1	8.8293	1	0.85

Faktor Panjang Efektif Kolom (K2)

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B6	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x26	204	6	236.22	0.864	15	9.7255	15	9.7255	7.66023	0.94
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	0.935
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	0.935
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	0.935
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	14.332	0.951
10	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	10	14.332	10	14.332	21.0039	0.958
9	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	9	21.004	9	21.004	21.0039	0.961
8	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	8	21.004	8	21.004	21.0039	0.961
7	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	7	21.004	7	21.004	21.0039	0.961
6	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	6	21.004	6	21.004	23.8764	0.965
5	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	5	23.876	5	23.876	26.749	0.97
4	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	4	26.749	4	26.749	26.749	0.976
3	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	3	26.749	3	26.749	26.749	0.976
2	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	2	26.749	2	26.749	26.749	0.976
1	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	1	26.749	1	26.749	1	0.853

Arah y

Lantai	Profil	Iy	L		I / L	Profi	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	2.6294	15	2.6294	1.09024	0.775
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	1.0902	14	1.0902	1.09024	0.69
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	1.0902	13	1.0902	1.09024	0.69
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	1.0902	12	1.0902	1.09024	0.69
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	1.0902	11	1.0902	2.11829	0.751
10	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	10	2.1183	10	2.1183	3.14634	0.82
9	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	9	3.1463	9	3.1463	3.14634	0.82
8	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	8	3.1463	8	3.1463	3.14634	0.82
7	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	7	3.1463	7	3.1463	3.14634	0.82
6	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	6	3.1463	6	3.1463	3.53659	0.84
5	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	5	3.5366	5	3.5366	3.92683	0.85
4	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	4	3.9268	4	3.9268	3.92683	0.85
3	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	3	3.9268	3	3.9268	3.92683	0.85
2	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	2	3.9268	2	3.9268	3.92683	0.85
1	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	1	3.9268	1	3.9268	1	0.81

GAYA GESER RENCANA (kolom 2 Tangga)

(K1)

$VU = 1.05*VD+VL+\mu VE$

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	3.36	-1.34	2.47	-0.77	1.34	0.06	11.358	2.417
14	5.97	-2.48	2.88	-0.95	0.36	-0.1	10.5885	3.954
13	5.38	-2.23	2.75	-0.89	1.28	-0.04	13.519	3.3915
12	5.68	-2.34	2.86	-0.91	1.55	-0.03	15.024	3.487
11	4.23	-1.76	2.13	-0.68	2.01	0.04	14.6115	2.688
10	7.17	-3.04	3.62	-1.16	1.34	-0.04	16.5085	4.512
9	5.5	-2.34	2.77	-0.89	2.09	0.05	16.905	3.547
8	5.79	-2.43	2.91	-0.91	2.21	0.05	17.8295	3.6615
7	5.69	-2.35	2.86	-0.86	2.39	0.07	18.3945	3.6075
6	5.49	-2.22	2.75	-0.8	2.62	0.11	18.9945	3.571
5	5.73	-2.26	2.87	-0.8	2.16	0.09	17.5265	3.533
4	5.52	-2.15	2.76	-0.74	2.48	0.12	18.476	3.4775
3	5.39	-2.03	2.69	-0.68	2.37	0.14	17.8295	3.3715
2	5.88	-2.17	2.93	-0.7	3.82	0.15	24.384	3.5785
1	2.89	-1.18	1.41	-0.37	7.19	0.5	33.2045	3.609

K2

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	-1.23	-1.55	-1.05	-1.31	2.23	-0.03	11.2615	3.0575
14	-2.53	-2.18	-1.18	-1.37	0.77	0.85	6.9165	7.059
13	-2.31	-1.95	-1.18	-1.29	1.89	0.26	11.1655	4.3775
12	-2.54	-1.88	-1.28	-1.24	2.3	0.24	13.147	4.174
11	-2.06	-1.47	-1.05	-0.96	2.66	0.04	13.853	2.6635
10	-2.84	-2.45	-1.44	-1.57	2.33	-0.08	13.742	4.4625
9	-2.46	-1.91	-1.26	-1.22	3.01	0.13	15.883	3.7455
8	-2.6	-1.9	-1.33	-1.21	3.2	0.02	16.86	3.285
7	-2.69	-1.79	-1.38	-1.13	3.45	-0.07	18.0045	3.2895
6	-2.62	-1.61	-1.35	-1.01	3.51	-0.17	18.141	3.3805
5	-2.94	-1.66	-1.52	-1.03	3.36	-0.28	18.047	3.893
4	-2.89	-1.43	-1.5	-0.87	3.54	-0.32	18.6945	3.6515
3	-2.93	-1.27	-1.52	-0.76	3.45	-0.43	18.3965	3.8135
2	-3.3	-1.14	-1.72	-0.66	4.73	-0.72	24.105	4.737
1	-2.2	-0.53	-1.16	-0.31	7.05	-0.23	31.67	1.7865

Desain Lentur (K1) < 2 Tangga >

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	453.6955	Aman	0.0729
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.2227
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.6102
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.1813
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.1633

Cek Strong Coloumn Weak Beam < 2 Tangga >

Kolom K1

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	0.95	0.88	3.75	147.638	0.2528	0.3901	0.39005	33.779	918.7901	12.4736	12.50404	12.504	0.0136092	0.302	Aman
14	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	63.404	63.53604	63.536	0.068867	0.848	Aman
13	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	106.938	107.141	107.141	0.1161306	0.849	Aman
12	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	135.634	135.837	135.837	0.1472343	0.864	Aman
11	W14x109	0.955	0.885	3.75	147.638	0.2542	0.3923	0.39227	33.7545	918.1236	164.093	164.296	164.296	0.1789476	0.88	Aman
10	W14x311	0.96	0.945	3.75	147.638	0.2311	0.373	0.373	33.9635	2638.621	193.1	193.303	193.303	0.0732591	0.282	Aman
9	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	222.242	222.445	222.445	0.0843556	0.288	Aman
8	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	251.176	251.379	251.379	0.0953279	0.293	Aman
7	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	279.936	280.139	280.139	0.1062343	0.299	Aman
6	W14x311	0.975	0.952	3.75	147.638	0.2347	0.3758	0.37577	33.9341	2636.338	308.5	308.703	308.703	0.1170954	0.304	Aman
5	W14X342	0.98	0.954	3.75	147.638	0.2331	0.3733	0.37333	33.96	2915.469	336.868	337.071	337.071	0.1156147	0.279	Aman
4	W14X342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	365.052	365.255	365.255	0.1253432	0.284	Aman
3	W14X342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	393.045	393.248	393.248	0.1349494	0.289	Aman
2	W14X342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	420.83	421.033	421.033	0.1444843	0.294	Aman
1	W14X342	0.855	0.85	3.75	147.638	0.2034	0.3326	0.33263	34.3709	2950.74	448.315	448.518	448.518	0.1520019	0.297	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
11.358	2.417	21.7	145.95	406.815	Aman	Aman	0.07782	0.00594
10.5885	3.954	21.7	145.95	406.815	Aman	Aman	0.07255	0.00972
13.519	3.3915	21.7	145.95	406.815	Aman	Aman	0.09263	0.00834
15.024	3.487	21.7	145.95	406.815	Aman	Aman	0.10294	0.00857
14.6115	2.688	21.7	145.95	406.815	Aman	Aman	0.10012	0.00661
16.5085	4.512	8.1	468.72	1186.23	Aman	Aman	0.03522	0.0038
16.905	3.547	8.1	468.72	1186.23	Aman	Aman	0.03607	0.00299
17.8295	3.6615	8.1	468.72	1186.23	Aman	Aman	0.03804	0.00309
18.3945	3.6075	8.1	468.72	1186.23	Aman	Aman	0.03924	0.00304
18.9945	3.571	8.1	468.72	1186.23	Aman	Aman	0.04052	0.00301
17.5265	3.533	7.4	523.91	1312.46	Aman	Aman	0.03345	0.00269
18.476	3.4775	7.4	523.91	1312.46	Aman	Aman	0.03527	0.00265
17.8295	3.3715	7.4	523.91	1312.46	Aman	Aman	0.03403	0.00257
24.384	3.5785	7.4	523.91	1312.46	Aman	Aman	0.04654	0.00273
33.2045	3.609	7.4	523.91	1312.46	Aman	Aman	0.06338	0.00275

Kolom K1 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B3	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x19	12.50404	6836.97576	3300.97736	7.15	11.358	1157.1417	355.8852	5.90850348	ok	9.27539937	ok
14	W14x109	W21x50	W16x40	63.53604	13367.7595	6454.12139	7.15	10.5885	3255.58778	531.432	4.1060971	ok	12.1447737	ok
13	W14x109	W21x50	W16x40	107.141	12799.9378	6179.96995	7.15	13.519	3276.54085	531.432	3.90653996	ok	11.6289007	ok
12	W14x109	W21x50	W16x40	135.837	12366.132	5970.52311	7.15	15.024	3287.3016	531.432	3.76178809	ok	11.2347828	ok
11	W14x109	W21x50	W16x40	164.296	12023.202	5804.95222	7.15	14.6115	3284.35223	531.432	3.66075292	ok	10.9232267	ok
10	W14x311	W21x50	W16x40	193.303	26358.9318	13162.3216	8.55	16.5085	3321.02768	531.432	7.93698046	ok	24.7676497	ok
9	W14x311	W21x50	W16x40	222.445	40573.1549	20505.2058	8.55	16.905	3324.41775	531.432	12.2346702	ok	38.5848157	ok
8	W14x311	W21x50	W16x40	251.379	40290.0058	20312.0427	8.55	17.8295	3332.32223	531.432	12.0906692	ok	38.2213392	ok
7	W14x311	W21x50	W16x40	280.139	39909.3769	20120.1502	8.55	18.3945	3337.15298	531.432	11.9591092	ok	37.8602534	ok
6	W14x311	W21x50	W16x40	308.703	39531.189	19929.4883	8.55	18.9945	3342.28298	531.432	11.8276009	ok	37.5014834	ok
5	W14X342	W21x50	W16x40	337.071	41620.6806	20957.2219	8.75	17.5265	3333.23688	531.432	12.4865655	ok	39.4353781	ok
4	W14X342	W21x50	W16x40	365.256	43711.0983	21985.6417	8.75	18.476	3341.545	531.432	13.0811042	ok	41.3705643	ok
3	W14X342	W21x50	W16x40	393.248	43337.3266	21797.6434	8.75	17.8295	3335.88813	531.432	12.991241	ok	41.0168063	ok
2	W14X342	W21x50	W16x40	421.033	42966.2096	21610.9804	8.75	24.384	3393.24	531.432	12.6622961	ok	40.665561	ok
1	W14X342	W21x50	W16x40	448.518	42598.4726	21426.0174	8.75	33.2045	3470.41938	531.432	12.2747334	ok	40.3175147	ok

Desain Lentur (K2)

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ϕMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	683.2985	Aman	0.1098
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ϕMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.2227
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.6102
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.5902
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	8856	8856	7970.4	1785.449	Aman	0.224
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1788.363	Aman	0.1816

Cek Strong Coloumn Weak Beam
Kolom K2

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	0.94	0.775	3.75	147.638	0.2502	0.3435	0.34351	34.2652	932.0133	19.2556	15.47604	19.2556	0.0206602	0.343	Aman
14	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	82.289	78.61104	82.289	0.0873922	0.857	Aman
13	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	133.773	133.976	133.976	0.1422846	0.862	Aman
12	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	173.852	174.055	174.055	0.1848491	0.883	Aman
11	W14x109	0.951	0.751	3.75	147.638	0.2531	0.3329	0.33287	34.3685	934.8243	213.379	213.582	213.582	0.2284729	0.931	Aman
10	W14x257	0.958	0.82	3.75	147.638	0.2367	0.3289	0.32885	34.4068	2210.984	253.283	253.486	253.486	0.1146485	0.361	Aman
9	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	293.192	293.395	293.395	0.1326988	0.37	Aman
8	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	332.675	332.878	332.878	0.1505565	0.379	Aman
7	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	371.79	371.993	371.993	0.1682477	0.388	Aman
6	W14x257	0.965	0.84	3.75	147.638	0.2384	0.3369	0.33687	34.33	2206.048	410.462	410.665	410.665	0.1861542	0.397	Aman
5	W14x311	0.97	0.85	3.75	147.638	0.2335	0.3355	0.33551	34.3432	2668.126	448.843	449.046	449.046	0.1683001	0.33	Aman
4	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	486.757	486.96	486.96	0.1825101	0.338	Aman
3	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	524.09	524.293	524.293	0.1965023	0.345	Aman
2	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	560.755	560.958	560.958	0.2102442	0.429	Aman
1	W14x311	0.853	0.81	3.75	147.638	0.2053	0.3197	0.31972	34.4923	2679.704	596.534	596.737	596.737	0.2226877	0.442	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
11.2615	3.0575	21.7	145.95	406.815	Aman	Aman	0.07716	0.00752
6.9165	7.059	21.7	145.95	406.815	Aman	Aman	0.04739	0.01735
11.1655	4.3775	21.7	145.95	406.815	Aman	Aman	0.0765	0.01076
13.147	4.174	21.7	145.95	406.815	Aman	Aman	0.09008	0.01026
13.853	2.6635	21.7	145.95	406.815	Aman	Aman	0.09492	0.00655
13.742	4.4625	9.7	376.2	979.776	Aman	Aman	0.03653	0.00455
15.883	3.7455	9.7	376.2	979.776	Aman	Aman	0.04222	0.00382
16.86	3.285	9.7	376.2	979.776	Aman	Aman	0.04482	0.00335
18.0045	3.2895	9.7	376.2	979.776	Aman	Aman	0.04786	0.00336
18.141	3.3805	9.7	376.2	979.776	Aman	Aman	0.04822	0.00345
18.047	3.893	8.1	468.72	1186.23	Aman	Aman	0.0385	0.00328
18.6945	3.6515	8.1	468.72	1186.23	Aman	Aman	0.03988	0.00308
18.3965	3.8135	8.1	468.72	1186.23	Aman	Aman	0.03925	0.00321
24.105	4.737	8.1	468.72	1186.23	Aman	Aman	0.05143	0.00399
31.67	1.7865	8.1	468.72	1186.23	Aman	Aman	0.06757	0.00151

Kolom K2 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B6	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x26	19.25556	6796.46664	3281.41905	7.15	11.2615	1700.95173	711.7704	3.99568462	ok	4.61022129	ok
14	W14x109	W21x50	W16x40	32.28896	13214.7329	6380.23822	7.15	6.9165	3229.33298	1062.864	4.09209363	ok	6.00287357	ok
13	W14x109	W21x50	W16x40	133.976	12526.4102	6047.90744	7.15	11.1655	3259.71333	1062.864	3.84279505	ok	5.69019879	ok
12	W14x109	W21x50	W16x40	174.055	11975.814	5782.0727	7.15	13.147	3273.88105	1062.864	3.6579869	ok	5.44008706	ok
11	W14x109	W21x50	W16x40	213.582	11498.178	5551.46407	7.15	13.853	3278.92895	1062.864	3.50668715	ok	5.22311798	ok
10	W14x257	W21x50	W16x40	253.486	21529.6022	10749.6442	8.2	13.742	3292.5644	1062.864	6.53885529	ok	10.1138473	ok
9	W14x257	W21x50	W16x40	293.395	31541.1026	15932.4666	8.2	15.883	3310.1206	1062.864	9.52868683	ok	14.9901272	ok
8	W14x257	W21x50	W16x40	332.878	31029.6753	15674.1275	8.2	16.86	3318.132	1062.864	9.35154938	ok	14.7470679	ok
7	W14x257	W21x50	W16x40	371.993	30523.3627	15418.3721	8.2	18.0045	3327.5169	1062.864	9.17301509	ok	14.5064393	ok
6	W14x257	W21x50	W16x40	410.665	30022.2745	15165.2557	8.2	18.141	3328.6362	1062.864	9.01939194	ok	14.2682937	ok
5	W14x311	W21x50	W16x40	449.046	33632.0542	16970.1644	8.55	18.047	3334.18185	1062.864	10.0870485	ok	15.9664496	ok
4	W14x311	W21x50	W16x40	486.96	37240.8182	18774.8072	8.55	18.6945	3339.71798	1062.864	11.1508871	ok	17.6643552	ok
3	W14x311	W21x50	W16x40	524.293	36744.3856	18524.5327	8.55	18.3965	3337.17008	1062.864	11.0106422	ok	17.4288834	ok
2	W14x311	W21x50	W16x40	560.958	36256.193	18278.4124	8.55	24.105	3385.97775	1062.864	10.707747	ok	17.1973201	ok
1	W14x311	W21x50	W16x40	596.737	35778.2529	18037.4608	8.55	31.67	3450.6585	1062.864	10.3685291	ok	16.9706198	ok

Gaya Aksial Kolom (K1) < 3Tangga >

Arah X

Lantai	Stasion	Balok			(K1)			(K3)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B3	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x19	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	889.2	2.8	2.8	3.17	3.17	12.4736	453.6955
	0													2.8		3.17			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	23.35	23.35	11.21	11.21	63.404	1265.092
	0													23.35		11.21			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	44.01	44.01	19.25	19.25	106.938	1247.092
	0													44.01		19.25			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	64.58	64.58	27.25	27.25	135.622	1247.092
	0													64.58		27.25			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	85	85	35.16	35.16	164.081	1247.092
	0													85		35.16			
10	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	105.82	105.82	43.22	43.22	193.095	1261.014
	0													105.82		43.22			
9	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	126.72	126.72	51.32	51.32	222.225	1261.014
	0													126.72		51.32			
8	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	147.49	147.49	59.34	59.34	251.159	1261.014
	0													147.49		59.34			
7	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	168.14	168.14	67.3	67.3	279.919	1261.014
	0													168.14		67.3			
6	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x257	3.75	147.638	219.47	131.638	2628	188.66	188.66	75.17	75.17	308.478	1261.014
	0													188.66		75.17			
5	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	209.04	209.04	82.97	82.97	336.834	1264.182
	0													209.04		82.97			
4	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	229.31	229.31	90.7	90.7	365.023	1264.182
	0													229.31		90.7			
3	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	249.45	249.45	98.34	98.34	393.011	1264.182
	0													249.45		98.34			
2	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	269.45	269.45	105.9	105.9	420.791	1264.182
	0													269.45		105.9			
1	3.75	W16X40	6	236.22	W14x342	3.75	147.638	W14x311	3.75	147.638	218.92	131.638	2628	289.24	289.24	113.35	113.35	448.264	1264.182
	0													289.24		113.35			

Gaya Aksial Kolom (K1)
Arah y

Lantai	Stasion	Balok			(K1)			(K2)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	2.8	2.8	3.17	3.17	12.504	668.9305
	0													2.8		3.17			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	23.35	23.35	11.21	11.21	63.536	1832.678
	0													23.35		11.21			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	44.01	44.01	19.25	19.25	107.141	1772.585
	0													44.01		19.25			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	64.58	64.58	27.25	27.25	135.825	1772.585
	0													64.58		27.25			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	85	85	35.16	35.16	164.284	1772.585
	0													85		35.16			
10	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	105.82	105.82	43.22	43.22	193.298	1785.449
	0													105.82		43.22			
9	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	126.72	126.72	51.32	51.32	222.428	1785.449
	0													126.72		51.32			
8	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	147.49	147.49	59.34	59.34	251.362	1785.449
	0													147.49		59.34			
7	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	168.14	168.14	67.3	67.3	280.122	1785.449
	0													168.14		67.3			
6	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x257	3.75	147.638	337.581	126.838	3960	188.66	188.66	75.17	75.17	308.681	1785.449
	0													188.66		75.17			
5	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	209.04	209.04	82.97	82.97	337.037	1788.363
	0													209.04		82.97			
4	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	229.31	229.31	90.7	90.7	365.226	1788.363
	0													229.31		90.7			
3	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	249.45	249.45	98.34	98.34	393.214	1788.363
	0													249.45		98.34			
2	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	269.45	269.45	105.9	105.9	420.994	1788.363
	0													269.45		105.9			
1	3.75	W21x50	9	354.331	W14x342	3.75	147.638	W14x311	3.75	147.638	337.031	126.838	3960	289.24	289.24	113.35	113.35	448.467	1788.363
	0													289.24		113.35			

Gaya Aksial Kolom (K2)

Arah X

Lantai	Stasion	Balok			(K2)			(K4)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B6	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	141.538	1339.2	4.41	4.41	5.25	5.25	19.2556	683.2985
	0													4.41		5.25			
14	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	133.538	2628	33.05	33.05	18.08	18.08	82.289	1265.092
	0													33.05		18.08			
13	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	61.57	61.57	30.81	30.81	133.79	1247.092
	0													61.57		30.81			
12	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	89.75	89.75	43.36	43.36	173.881	1247.092
	0													89.75		43.36			
11	3.75	W16X40	6	236.22	W14x109	3.75	147.638	W14x109	3.75	147.638	221.92	131.638	2628	117.56	117.56	55.67	55.67	213.408	1247.092
	0													117.56		55.67			
10	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	145.63	145.63	68.12	68.12	253.317	1261.014
	0													145.63		68.12			
9	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	173.7	173.7	80.57	80.57	293.226	1261.014
	0													173.7		80.57			
8	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	201.49	201.49	92.84	92.84	332.709	1261.014
	0													201.49		92.84			
7	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	229.04	229.04	104.95	104.95	371.824	1261.014
	0													229.04		104.95			
6	3.75	W16X40	6	236.22	W14x257	3.75	147.638	W14x311	3.75	147.638	219.47	131.638	2628	256.3	256.3	116.87	116.87	410.496	1261.014
	0													256.3		116.87			
5	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	283.39	283.39	128.65	128.65	448.894	1264.182
	0													283.39		128.65			
4	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	310.16	310.16	140.23	140.23	486.808	1264.182
	0													310.16		140.23			
3	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	336.55	336.55	151.56	151.56	524.141	1264.182
	0													336.55		151.56			
2	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	362.51	362.51	162.61	162.61	560.818	1264.182
	0													362.51		162.61			
1	3.75	W16X40	6	236.22	W14x311	3.75	147.638	W14x342	3.75	147.638	218.92	131.638	2628	387.88	387.88	173.29	173.29	596.602	1264.182
	0													387.88		173.29			

Gaya Aksial Kolom (K2)

Arah y

Lantai	Stasion	Balok			(K2)			(K1)			L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu	Mu
		Balok B1	L blk (m)	L blk (in)	Profil	h (m)	h (in)	Profil	h (m)	h (in)			(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(K-In)
15	3.75	W12x26	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	141.538	1339.2	4.41	4.41	5.25	5.25	15.476	668.9305
	0													4.41		5.25			
14	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	131.138	3960	33.05	33.05	18.08	18.08	78.611	1832.678
	0													33.05		18.08			
13	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	61.57	61.57	30.81	30.81	133.993	1772.585
	0													61.57		30.81			
12	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	89.75	89.75	43.36	43.36	174.084	1772.585
	0													89.75		43.36			
11	3.75	W21x50	9	354.331	W14x109	3.75	147.638	W14x109	3.75	147.638	340.031	126.838	3960	117.56	117.56	55.67	55.67	213.611	1772.585
	0													117.56		55.67			
10	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	145.63	145.63	68.12	68.12	253.52	1785.449
	0													145.63		68.12			
9	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	173.7	173.7	80.57	80.57	293.429	1785.449
	0													173.7		80.57			
8	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	201.49	201.49	92.84	92.84	332.912	1785.449
	0													201.49		92.84			
7	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	229.04	229.04	104.95	104.95	372.027	1785.449
	0													229.04		104.95			
6	3.75	W21x50	9	354.331	W14x257	3.75	147.638	W14x311	3.75	147.638	337.581	126.838	3960	256.3	256.3	116.87	116.87	410.699	1785.449
	0													256.3		116.87			
5	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	283.39	283.39	128.65	128.65	449.097	1788.363
	0													283.39		128.65			
4	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	310.16	310.16	140.23	140.23	487.011	1788.363
	0													310.16		140.23			
3	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	336.55	336.55	151.56	151.56	524.344	1788.363
	0													336.55		151.56			
2	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	362.51	362.51	162.61	162.61	561.021	1788.363
	0													362.51		162.61			
1	3.75	W21x50	9	354.331	W14x311	3.75	147.638	W14x342	3.75	147.638	337.031	126.838	3960	387.88	387.88	173.29	173.29	596.805	1788.363
	0													387.88		173.29			

Faktor Panjang Efektif Kolom (K1) < 3Tangga >

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B3	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x19	130	6	236.22	0.55	15	15.262	15	15.262	7.66023	0.95
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	0.935
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	0.935
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	0.935
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	17.2046	0.955
10	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	10	17.205	10	17.205	26.749	0.96
9	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	9	26.749	9	26.749	26.749	0.97
8	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	8	26.749	8	26.749	26.749	0.97
7	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	7	26.749	7	26.749	26.749	0.97
6	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	6	26.749	6	26.749	28.5097	0.975
5	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	5	28.51	5	28.51	30.2703	0.98
4	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	4	30.27	4	30.27	30.2703	0.985
3	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	3	30.27	3	30.27	30.2703	0.985
2	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	2	30.27	2	30.27	30.2703	0.985
1	W14x342	4900	3.75	147.638	33.189	W16X40	518	6	236.22	2.193	1	30.27	1	30.27	1	0.855

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	5.2588	15	5.2588	2.18049	0.88
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	2.1805	14	2.1805	2.18049	0.851
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	2.1805	13	2.1805	2.18049	0.851
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	2.1805	12	2.1805	2.18049	0.851
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	2.1805	11	2.1805	5.01707	0.885
10	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	10	5.0171	10	5.0171	7.85366	0.945
9	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	9	7.8537	9	7.8537	7.85366	0.95
8	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	8	7.8537	8	7.8537	7.85366	0.95
7	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	7	7.8537	7	7.8537	7.85366	0.95
6	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	6	7.8537	6	7.8537	8.34146	0.952
5	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	5	8.3415	5	8.3415	8.82927	0.954
4	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	4	8.8293	4	8.8293	8.82927	0.958
3	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	3	8.8293	3	8.8293	8.82927	0.958
2	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	2	8.8293	2	8.8293	8.82927	0.958
1	W14x342	1810	3.75	147.638	12.26	W21X50	984	9	354.331	2.777	1	8.8293	1	8.8293	1	0.85

Faktor Panjang Efektif Kolom (K2)

Arah X

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B6	In4	m	in	In3						
15	W14x109	1240	3.75	147.638	8.3989	W12x26	204	6	236.22	0.864	15	9.7255	15	9.7255	7.66023	0.94
14	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	14	7.6602	14	7.6602	7.66023	0.935
13	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	13	7.6602	13	7.6602	7.66023	0.935
12	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	12	7.6602	12	7.6602	7.66023	0.935
11	W14x109	1240	3.75	147.638	8.3989	W16X40	518	6	236.22	2.193	11	7.6602	11	7.6602	14.332	0.951
10	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	10	14.332	10	14.332	21.0039	0.958
9	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	9	21.004	9	21.004	21.0039	0.961
8	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	8	21.004	8	21.004	21.0039	0.961
7	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	7	21.004	7	21.004	21.0039	0.961
6	W14x257	3400	3.75	147.638	23.029	W16X40	518	6	236.22	2.193	6	21.004	6	21.004	23.8764	0.965
5	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	5	23.876	5	23.876	26.749	0.97
4	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	4	26.749	4	26.749	26.749	0.976
3	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	3	26.749	3	26.749	26.749	0.976
2	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	2	26.749	2	26.749	26.749	0.976
1	W14x311	4330	3.75	147.638	29.329	W16X40	518	6	236.22	2.193	1	26.749	1	26.749	1	0.853

Arah y

Lantai	Profil	Iy	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	B1	In4	m	in	In3						
15	W14x109	447	3.75	147.638	3.0277	W12x26	204	9	354.331	0.576	15	2.6294	15	2.6294	1.09024	0.775
14	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	14	1.0902	14	1.0902	1.09024	0.69
13	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	13	1.0902	13	1.0902	1.09024	0.69
12	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	12	1.0902	12	1.0902	1.09024	0.69
11	W14x109	447	3.75	147.638	3.0277	W21X50	984	9	354.331	2.777	11	1.0902	11	1.0902	2.11829	0.751
10	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	10	2.1183	10	2.1183	3.14634	0.82
9	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	9	3.1463	9	3.1463	3.14634	0.82
8	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	8	3.1463	8	3.1463	3.14634	0.82
7	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	7	3.1463	7	3.1463	3.14634	0.82
6	W14x257	1290	3.75	147.638	8.7376	W21X50	984	9	354.331	2.777	6	3.1463	6	3.1463	3.53659	0.84
5	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	5	3.5366	5	3.5366	3.92683	0.85
4	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	4	3.9268	4	3.9268	3.92683	0.85
3	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	3	3.9268	3	3.9268	3.92683	0.85
2	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	2	3.9268	2	3.9268	3.92683	0.85
1	W14x311	1610	3.75	147.638	10.905	W21X50	984	9	354.331	2.777	1	3.9268	1	3.9268	1	0.81

GAYA GESER RENCANA (kolom 3 Tangga)

(K1)

VU = 1.05*VD+VL+μVE

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	3.36	-1.34	2.47	-0.77	1.41	0.08	11.638	2.497
14	5.97	-2.48	2.88	-0.94	0.03	-0.06	9.2685	3.784
13	5.38	-2.23	2.75	-0.89	1.01	0	12.439	3.2315
12	5.67	-2.33	2.86	-0.91	1.17	0.01	13.4935	3.3965
11	4.22	-1.76	2.13	-0.68	1.56	0.07	12.801	2.808
10	7.19	-3.03	3.63	-1.16	0.95	0	14.9795	4.3415
9	5.49	-2.34	2.76	-0.89	1.57	0.09	14.8045	3.707
8	5.79	-2.43	2.91	-0.91	1.64	0.09	15.5495	3.8215
7	5.69	-2.35	2.86	-0.86	1.78	0.11	15.9545	3.7675
6	5.49	-2.22	2.75	-0.8	1.96	0.14	16.3545	3.691
5	5.73	-2.26	2.87	-0.8	1.6	0.12	15.2865	3.653
4	5.52	-2.14	2.76	-0.74	1.86	0.15	15.996	3.587
3	5.39	-2.03	2.69	-0.68	1.73	0.17	15.2695	3.4915
2	5.88	-2.17	2.93	-0.7	2.85	0.17	20.504	3.6585
1	2.85	-1.17	1.39	-0.37	5.64	0.51	26.9425	3.6385

K2

Lantai	VD		VL		VE		VU	VU
	Arah X	Arah Y	Arah X	Arah Y	Arah X	Arah y	Arah x	Arah y
	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
15	-1.23	-1.55	-1.05	-1.31	2.22	-0.01	11.2215	2.9775
14	-2.53	-2.18	-1.18	-1.37	0.35	0.63	5.2365	6.179
13	-2.32	-1.95	-1.18	-1.29	1.47	0.2	9.496	4.1375
12	-2.55	-1.88	-1.29	-1.24	1.75	0.18	10.9675	3.934
11	-2.07	-1.47	-1.06	-0.96	2.05	0.04	11.4335	2.6635
10	-2.82	-2.44	-1.43	-1.57	1.69	-0.06	11.151	4.372
9	-2.47	-1.91	-1.26	-1.22	2.25	0.12	12.8535	3.7055
8	-2.6	-1.9	-1.33	-1.21	2.38	0.03	13.58	3.325
7	-2.69	-1.79	-1.38	-1.13	2.57	-0.03	14.4845	3.1295
6	-2.62	-1.61	-1.35	-1.01	2.62	-0.1	14.581	3.1005
5	-2.94	-1.66	-1.52	-1.03	2.5	-0.18	14.607	3.493
4	-2.89	-1.43	-1.5	-0.87	2.65	-0.21	15.1345	3.2115
3	-2.93	-1.27	-1.53	-0.76	2.54	-0.28	14.7665	3.2135
2	-3.3	-1.14	-1.72	-0.67	3.55	-0.5	19.385	3.867
1	-2.23	-0.53	-1.18	-0.3	5.52	-0.1	25.6015	1.2565

Desain Lentur (K1) < 3 Tangga >

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	453.6955	Aman	0.0729
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1261.014	Aman	0.0645
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	24192	24192	21772.8	1264.182	Aman	0.0581

Arah y

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Muy	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	668.9305	Aman	0.223
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1832.678	Aman	0.610
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.590
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.590
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	3337.2	3337.2	3003.48	1772.585	Aman	0.590
10	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.181
9	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.181
8	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.181
7	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.181
6	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	10944	10944	9849.6	1785.449	Aman	0.181
5	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.163
4	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.163
3	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.163
2	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.163
1	W14x342	24192	3.75	147.638	211.665	9580.878	2.18E-05	2210.15	Lb<=Lp	1	kompak	kompak	14560	12168	12168	10951.2	1788.363	Aman	0.163

Desain Lentur (K2)

Arah X

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mux	Cek	Rasio
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)	Kapasitas	
15	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	683.2985	Aman	0.1098
14	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1265.092	Aman	0.2034
13	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
12	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
11	W14x109	6912	3.75	147.638	186.875	3482.747	0.000873	752.797	Lb<=Lp	1	kompak	kompak	4509.092	6912	6912	6220.8	1247.092	Aman	0.2005
10	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
9	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
8	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
7	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
6	W14x257	17532	3.75	147.638	206.54	7462.884	5.32E-05	1684.26	Lb<=Lp	1	kompak	kompak	10780.49	17532	17532	15778.8	1261.014	Aman	0.0799
5	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
4	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
3	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
2	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647
1	W14x311	21708	3.75	147.638	209.85	8809.342	2.92E-05	2015.98	Lb<=Lp	1	kompak	kompak	13167.25	21708	21708	19537.2	1264.182	Aman	0.0647

Cek Strong Coloumn Weak Beam < 3 Tangga >

Kolom K1

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	0.95	0.88	3.75	147.638	0.2528	0.3901	0.39005	33.779	918.7901	12.4736	12.50404	12.504	0.0136092	0.302	Aman
14	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	63.404	63.53604	63.536	0.068867	0.848	Aman
13	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	106.938	107.141	107.141	0.1161306	0.849	Aman
12	W14x109	0.935	0.851	3.75	147.638	0.2488	0.3772	0.3772	33.9188	922.5905	135.622	135.825	135.825	0.1472213	0.864	Aman
11	W14x109	0.955	0.885	3.75	147.638	0.2542	0.3923	0.39227	33.7545	918.1236	164.081	164.284	164.284	0.1789345	0.880	Aman
10	W14x311	0.96	0.945	3.75	147.638	0.2311	0.373	0.373	33.9635	2638.621	193.095	193.298	193.298	0.0732572	0.282	Aman
9	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	222.225	222.428	222.428	0.0843491	0.288	Aman
8	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	251.159	251.362	251.362	0.0953215	0.293	Aman
7	W14x311	0.97	0.95	3.75	147.638	0.2335	0.375	0.37498	33.9425	2636.992	279.919	280.122	280.122	0.1062279	0.299	Aman
6	W14x311	0.975	0.952	3.75	147.638	0.2347	0.3758	0.37577	33.9341	2636.338	308.478	308.681	308.681	0.1170871	0.304	Aman
5	W14x342	0.98	0.954	3.75	147.638	0.2331	0.3733	0.37333	33.96	2915.469	336.834	337.037	337.037	0.115603	0.279	Aman
4	W14x342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	365.023	365.226	365.226	0.1253332	0.284	Aman
3	W14x342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	393.011	393.214	393.214	0.1349378	0.289	Aman
2	W14x342	0.985	0.958	3.75	147.638	0.2343	0.3749	0.37489	33.9434	2914.04	420.791	420.994	420.994	0.1444709	0.294	Aman
1	W14x342	0.855	0.85	3.75	147.638	0.2034	0.3326	0.33263	34.3709	2950.74	448.264	448.467	448.467	0.1519846	0.297	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
11.638	2.497	21.7	145.95	406.815	Aman	Aman	0.07974	0.00614
9.2685	3.784	21.7	145.95	406.815	Aman	Aman	0.06351	0.0093
12.439	3.2315	21.7	145.95	406.815	Aman	Aman	0.08523	0.00794
13.4935	3.3965	21.7	145.95	406.815	Aman	Aman	0.09246	0.00835
12.801	2.808	21.7	145.95	406.815	Aman	Aman	0.08771	0.0069
14.9795	4.3415	8.1	468.72	1186.23	Aman	Aman	0.03196	0.00366
14.8045	3.707	8.1	468.72	1186.23	Aman	Aman	0.03159	0.00313
15.5495	3.8215	8.1	468.72	1186.23	Aman	Aman	0.03317	0.00322
15.9545	3.7675	8.1	468.72	1186.23	Aman	Aman	0.03404	0.00318
16.3545	3.691	8.1	468.72	1186.23	Aman	Aman	0.03489	0.00311
15.2865	3.653	7.4	523.91	1312.46	Aman	Aman	0.02918	0.00278
15.996	3.587	7.4	523.91	1312.46	Aman	Aman	0.03053	0.00273
15.2695	3.4915	7.4	523.91	1312.46	Aman	Aman	0.02915	0.00266
20.504	3.6585	7.4	523.91	1312.46	Aman	Aman	0.03914	0.00279
26.9425	3.6385	7.4	523.91	1312.46	Aman	Aman	0.05143	0.00277

Kolom K1 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B3	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x19	12.50404	6836.97576	3300.97736	7.15	11.638	1159.1437	355.8852	5.89829868	ok	9.27539937	ok
14	W14x109	W21x50	W16x40	63.53604	13367.7595	6454.12139	7.15	9.2685	3246.14978	531.432	4.11803535	ok	12.1447737	ok
13	W14x109	W21x50	W16x40	107.141	12799.9373	6179.96995	7.15	12.439	3268.81885	531.432	3.91576846	ok	11.6289007	ok
12	W14x109	W21x50	W16x40	135.825	12366.204	5970.55787	7.15	13.4935	3276.35853	531.432	3.77437448	ok	11.2348482	ok
11	W14x109	W21x50	W16x40	164.284	12023.346	5805.02174	7.15	12.801	3271.40715	531.432	3.67528267	ok	10.9233575	ok
10	W14x311	W21x50	W16x40	193.298	26359.0368	13162.373	8.55	14.9795	3307.95473	531.432	7.96837894	ok	24.7677464	ok
9	W14x311	W21x50	W16x40	222.428	40673.3	20505.2789	8.55	14.8045	3306.45848	531.432	12.3011676	ok	38.5849534	ok
8	W14x311	W21x50	W16x40	251.362	40290.2301	20312.1558	8.55	15.5495	3312.82823	531.432	12.1618832	ok	38.221552	ok
7	W14x311	W21x50	W16x40	280.122	39909.6012	20120.2633	8.55	15.9545	3316.29098	531.432	12.0344088	ok	37.8604662	ok
6	W14x311	W21x50	W16x40	308.681	39531.4463	19929.618	8.55	16.3545	3319.71098	531.432	11.9080988	ok	37.5017275	ok
5	W14x342	W21x50	W16x40	337.037	41621.0519	20957.4088	8.75	15.2865	3313.63688	531.432	12.560535	ok	39.4357299	ok
4	W14x342	W21x50	W16x40	365.226	43711.5175	21985.8525	8.75	15.996	3319.845	531.432	13.1667344	ok	41.370961	ok
3	W14x342	W21x50	W16x40	393.214	43337.7457	21797.8543	8.75	15.2695	3313.48813	531.432	13.0791915	ok	41.0172031	ok
2	W14x342	W21x50	W16x40	420.994	42966.6953	21611.2247	8.75	20.504	3359.29	531.432	12.7904097	ok	40.6660207	ok
1	W14x342	W21x50	W16x40	448.467	42599.0714	21426.3186	8.75	26.9425	3415.62688	531.432	12.4718164	ok	40.3180814	ok

Cek Strong Coloumn Weak Beam

Kolom K2

Lantai	Profil	K		Lb		λc			Fcr	ΦcPn	Pu			Pu / ΦcPn	Rasio	Cek Rasio
											Pux	Puy	Pu pakai			
		Kx	Ky	(m)	(in)	λcx	λcy	λc Pakai	(Ksi)	(Kips)	(Kips)					Mu&Pu
15	W14x109	0.94	0.775	3.75	147.638	0.2502	0.3435	0.34351	34.2652	932.0133	19.2556	15.47604	19.2556	0.0206602	0.343	Aman
14	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	82.289	78.61104	82.289	0.0873922	0.857	Aman
13	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	133.79	133.993	133.993	0.1423027	0.862	Aman
12	W14x109	0.935	0.69	3.75	147.638	0.2488	0.3058	0.30584	34.6179	941.6057	173.881	174.084	174.084	0.1848799	0.883	Aman
11	W14x109	0.951	0.751	3.75	147.638	0.2531	0.3329	0.33287	34.3685	934.8243	213.408	213.611	213.611	0.2285039	0.931	Aman
10	W14x257	0.958	0.82	3.75	147.638	0.2367	0.3289	0.32885	34.4068	2210.984	253.317	253.52	253.52	0.1146639	0.361	Aman
9	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	293.226	293.429	293.429	0.1327142	0.370	Aman
8	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	332.709	332.912	332.912	0.1505719	0.379	Aman
7	W14x257	0.961	0.82	3.75	147.638	0.2374	0.3289	0.32885	34.4068	2210.984	371.824	372.027	372.027	0.1682631	0.388	Aman
6	W14x257	0.965	0.84	3.75	147.638	0.2384	0.3369	0.33687	34.33	2206.048	410.496	410.699	410.699	0.1861696	0.397	Aman
5	W14x311	0.97	0.85	3.75	147.638	0.2335	0.3355	0.33551	34.3432	2668.126	448.894	449.097	449.097	0.1683192	0.330	Aman
4	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	486.808	487.011	487.011	0.1825292	0.338	Aman
3	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	524.141	524.344	524.344	0.1965214	0.345	Aman
2	W14x311	0.976	0.85	3.75	147.638	0.2349	0.3355	0.33551	34.3432	2668.126	560.818	561.021	561.021	0.2102678	0.429	Aman
1	W14x311	0.853	0.81	3.75	147.638	0.2053	0.3197	0.31972	34.4923	2679.704	596.602	596.805	596.805	0.222713	0.442	Aman

Vupakai		h / tw	ΦVn		Cek Geser		Rasio	
Arah X	Arah Y		Arah X	Arah Y				
Kips	Kips		Kips	Kips	Arah X	Arah Y	Arah X	Arah Y
11.2215	2.9775	21.7	145.95	406.815	Aman	Aman	0.07689	0.00732
5.2365	6.179	21.7	145.95	406.815	Aman	Aman	0.03588	0.01519
9.496	4.1375	21.7	145.95	406.815	Aman	Aman	0.06507	0.01017
10.9675	3.934	21.7	145.95	406.815	Aman	Aman	0.07515	0.00967
11.4335	2.6635	21.7	145.95	406.815	Aman	Aman	0.07834	0.00655
11.151	4.372	9.7	376.2	979.776	Aman	Aman	0.02964	0.00446
12.8535	3.7055	9.7	376.2	979.776	Aman	Aman	0.03417	0.00378
13.58	3.325	9.7	376.2	979.776	Aman	Aman	0.0361	0.00339
14.4845	3.1295	9.7	376.2	979.776	Aman	Aman	0.0385	0.00319
14.581	3.1005	9.7	376.2	979.776	Aman	Aman	0.03876	0.00316
14.607	3.493	8.1	468.72	1186.23	Aman	Aman	0.03116	0.00294
15.1345	3.2115	8.1	468.72	1186.23	Aman	Aman	0.03229	0.00271
14.7665	3.2135	8.1	468.72	1186.23	Aman	Aman	0.0315	0.00271
19.385	3.867	8.1	468.72	1186.23	Aman	Aman	0.04136	0.00326
25.6015	1.2565	8.1	468.72	1186.23	Aman	Aman	0.05462	0.00106

Kolom K2 (Strong Coloumn Weak Beam)

Lantai	Profil Kolom	Profil Balok		Pu	ΣMpc (K-in)		Xi	Vu pakai	ΣMpb (K-in)		Rasio			
		B1	B6	Kips	Arah X	Arah Y	in	Kips	Arah X	Arah Y	Arah X	Cek	Arah Y	Cek
15	W14x109	W12x26	W12x26	19.25556	6796.46664	3281.41905	7.15	11.2215	1700.66573	711.7704	3.99635657	ok	4.61022129	ok
14	W14x109	W21x50	W16x40	82.28896	13214.7329	6380.23822	7.15	5.2365	3217.32098	1062.864	4.10737162	ok	6.00287357	ok
13	W14x109	W21x50	W16x40	133.993	12526.3082	6047.8582	7.15	9.496	3247.7764	1062.864	3.85688751	ok	5.69015245	ok
12	W14x109	W21x50	W16x40	174.084	11975.538	5781.93944	7.15	10.9675	3258.29763	1062.864	3.67539721	ok	5.43996169	ok
11	W14x109	W21x50	W16x40	213.611	11497.83	5551.29605	7.15	11.4335	3261.62953	1062.864	3.52517964	ok	5.2229599	ok
10	W14x257	W21x50	W16x40	253.52	21529.2091	10749.4496	8.2	11.151	3271.3182	1062.864	6.58120299	ok	10.1136642	ok
9	W14x257	W21x50	W16x40	293.429	31540.6645	15932.2453	8.2	12.8535	3285.2787	1062.864	9.60060543	ok	14.989919	ok
8	W14x257	W21x50	W16x40	332.912	31029.2372	15673.9063	8.2	13.58	3291.236	1062.864	9.4278372	ok	14.7468597	ok
7	W14x257	W21x50	W16x40	372.027	30522.9247	15418.1509	8.2	14.4845	3298.6529	1062.864	9.25314837	ok	14.5062312	ok
6	W14x257	W21x50	W16x40	410.699	30021.8365	15165.0344	8.2	14.581	3299.4442	1062.864	9.09905871	ok	14.2680855	ok
5	W14x311	W21x50	W16x40	449.097	33631.4987	16969.8842	8.55	14.607	3304.76985	1062.864	10.1766538	ok	15.9661859	ok
4	W14x311	W21x50	W16x40	487.011	37240.1453	18774.4679	8.55	15.1345	3309.27998	1062.864	11.2532471	ok	17.664036	ok
3	W14x311	W21x50	W16x40	524.344	36743.7126	18524.1934	8.55	14.7665	3306.13358	1062.864	11.1138016	ok	17.4285642	ok
2	W14x311	W21x50	W16x40	561.021	36255.441	18278.0333	8.55	19.385	3345.92175	1062.864	10.8366826	ok	17.1969634	ok
1	W14x311	W21x50	W16x40	596.805	35777.3886	18037.0251	8.55	25.6015	3398.77283	1062.864	10.5265608	ok	16.9702098	ok

LAMPIRAN D
TANGGA

Perhitungan Perencanaan 3 Tangga

Balok Bordes Blk Topang							
Lantai	Lokasi (in)		Momen Kombinasi		Mub	Cb	Cbpakai
			1,6DL+1,2VL	1,2DL+0,5VL+E			
			Kip-in	Kip-in			
14	Tepi kiri	0	-434.913	-465.642	653.046	1.58	1.58
	1/4 L	59.055	449.338	170.89			
	1/2 L	118.11	653.046	511.051			
	3/4 L	177.165	272.706	323.105			
	Tepi Kanan	236.22	-446.751	-158.271			
13	Tepi kiri	0	-438.352	-506.495	678.139	1.41	1.41
	1/4 L	59.055	454.677	185.999			
	1/2 L	118.11	678.139	639.188			
	3/4 L	177.165	292.239	396.37			
	Tepi Kanan	236.22	-450.202	-232.476			
12	Tepi kiri	0	-450.247	-478.784	704.075	1.46	1.46
	1/4 L	59.055	453.25	126.258			
	1/2 L	118.11	704.075	648.731			
	3/4 L	177.165	314.439	427.002			
	Tepi Kanan	236.22	-463.295	-232.811			
11	Tepi kiri	0	-472.015	-476.086	740.065	1.49	1.49
	1/4 L	59.055	458.93	94.996			
	1/2 L	118.11	740.065	680.386			
	3/4 L	177.165	337.772	457.43			
	Tepi Kanan	236.22	-488.686	-257.34			
10	Tepi kiri	0	-701.05	-859.197	701.05	1.62	1.62
	1/4 L	59.055	297.598	-28.031			
	1/2 L	118.11	578.8	616.411			
	3/4 L	177.165	157.903	367.274			
	Tepi Kanan	236.22	-676.206	-376.355			
9	Tepi kiri	0	-694.399	-752.694	694.399	1.64	1.64
	1/4 L	59.055	288.182	-83.153			
	1/2 L	118.11	569.617	550.613			
	3/4 L	177.165	160.123	364.779			
	Tepi Kanan	236.22	-667.921	-308.481			
8	Tepi kiri	0	-700.834	-694.614	700.834	1.63	1.63
	1/4 L	59.055	284.606	-110.96			
	1/2 L	118.11	578.705	541.876			
	3/4 L	177.165	168.564	370.433			
	Tepi Kanan	236.22	-678.769	-315.358			
7	Tepi kiri	0	-712.416	-645.018	712.416	1.63	1.63
	1/4 L	59.055	282.636	-129.608			
	1/2 L	118.11	592.355	541.563			
	3/4 L	177.165	178.731	375.485			
	Tepi Kanan	236.22	-693.959	-334.339			
6	Tepi kiri	0	-726.278	-601.96	726.278	1.64	1.64
	1/4 L	59.055	280.975	-137.883			
	1/2 L	118.11	607.843	545.43			
	3/4 L	177.165	189.627	377.099			
	Tepi Kanan	236.22	-711.955	-364.051			
5	Tepi kiri	0	-752.499	-581.557	752.499	1.69	1.69
	1/4 L	59.055	267.407	-141.723			
	1/2 L	118.11	608.773	542.341			

	3/4 L	177.165	187.368	365.753			
	Tepi Kanan	236.22	-737.567	-404.946			
4	Tepi kiri	0	-766.702	-500.781	766.702	1.73	1.73
	1/4 L	59.055	265.408	147.781			
	1/2 L	118.11	623.747	526.822			
	3/4 L	177.165	198.456	356.156			
	Tepi Kanan	236.22	-756.542	-429.672			
3	Tepi kiri	0	-781.596	-414.875	781.596	1.78	1.78
	1/4 L	59.055	263.873	-145.643			
	1/2 L	118.11	640.779	516.969			
	3/4 L	177.165	210.635	342.701			
	Tepi Kanan	236.22	-778.398	-473.178			
2	Tepi kiri	0	-786.352	-320.592	792.574	1.84	1.84
	1/4 L	59.055	249.306	-140.401			
	1/2 L	118.11	648.894	503.112			
	3/4 L	177.165	224.421	324.032			
	Tepi Kanan	236.22	-792.574	-524.271			
1	Tepi kiri	0	-570.62	-113.978	675.939	1.73	1.73
	1/4 L	59.055	87.096	-225.7			
	1/2 L	118.11	524.241	396.632			
	3/4 L	177.165	241.713	306.535			
	Tepi Kanan	236.22	-675.939	-481.911			

dipakai Balok Bordes B90							
Lantai	Lokasi (in)		Momen Kombinasi		Mub	Cb	Cbpakai
			1,6DL+1,2VL	1,2DL+0,5VL+E			
			Kip-in	Kip-in			
14	Tepi kiri	0	0.00	0.00	449.276	1.22	1.22
	1/4 L	14.764	105.76	122.65			
	1/2 L	29.528	227.90	348.28			
	3/4 L	44.291	342.40	566.95			
	Tepi Kanan	59.055	449.28	778.65			
13	Tepi kiri	0	0.00	0.00	501.94	1.01	1.01
	1/4 L	14.764	104.67	152.37			
	1/2 L	29.528	244.73	495.08			
	3/4 L	44.291	377.15	830.82			
	Tepi Kanan	59.055	501.94	1159.59			
12	Tepi kiri	0	0.00	0.00	558.188	1.00	1.00
	1/4 L	14.764	104.23	159.04			
	1/2 L	29.528	263.18	560.72			
	3/4 L	44.291	414.50	955.44			
	Tepi Kanan	59.055	558.19	1343.19			
11	Tepi kiri	0	0.00	0.00	621.121	1.00	1.00
	1/4 L	14.764	110.17	171.35			
	1/2 L	29.528	288.12	625.24			
	3/4 L	44.291	458.44	1072.16			
	Tepi Kanan	59.055	621.12	1512.12			
10	Tepi kiri	0	0.00	0.00	1574.089	1.87	1.87
	1/4 L	14.764	126.27	196.09			
	1/2 L	29.528	299.54	662.39			
	3/4 L	44.291	465.17	1121.72			
	Tepi Kanan	59.055	623.18	1574.09			
9	Tepi kiri	0	0.00	0.00	599.136	0.97	0.97
	1/4 L	14.764	121.33	178.78			
	1/2 L	29.528	288.23	626.14			
	3/4 L	44.291	447.50	1066.54			
	Tepi Kanan	59.055	599.14	1499.98			
8	Tepi kiri	0	0.00	0.00	618.636	0.97	0.97
	1/4 L	14.764	121.14	176.80			
	1/2 L	29.528	294.60	643.10			
	3/4 L	44.291	460.44	1102.44			
	Tepi Kanan	59.055	618.64	1554.81			
7	Tepi kiri	0	0.00	0.00	646.695	0.98	0.98
	1/4 L	14.764	122.08	176.13			
	1/2 L	29.528	304.58	661.80			
	3/4 L	44.291	479.46	1140.52			
	Tepi Kanan	59.055	646.70	1612.27			
6	Tepi kiri	0	0.00	0.00	676.806	1.00	1.00
	1/4 L	14.764	123.97	175.42			
	1/2 L	29.528	315.88	674.80			
	3/4 L	44.291	500.16	1167.21			
	Tepi Kanan	59.055	676.81	1652.66			
5	Tepi kiri	0	0.00	0.00	700.135	1.03	1.03
	1/4 L	14.764	126.30	173.49			
	1/2 L	29.528	325.21	675.47			
	3/4 L	44.291	516.49	1170.48			

	Tepi Kanan	59.055	700.14	1658.54			
4	Tepi kiri	0	0.00	0.00	726.701	1.08	1.08
	1/4 L	14.764	127.51	165.00			
	1/2 L	29.528	334.87	662.55			
	3/4 L	44.291	534.60	1153.15			
	Tepi Kanan	59.055	726.70	1636.78			
3	Tepi kiri	0	0.00	0.00	757.151	1.13	1.13
	1/4 L	14.764	128.94	156.91			
	1/2 L	29.528	345.98	651.27			
	3/4 L	44.291	555.38	1138.67			
	Tepi Kanan	59.055	757.15	1619.11			
2	Tepi kiri	0	0.00	0.00	792.623	1.20	1.20
	1/4 L	14.764	126.13	144.63			
	1/2 L	29.528	355.93	631.17			
	3/4 L	44.291	578.09	1110.75			
	Tepi Kanan	59.055	792.62	1583.37			
1	Tepi kiri	0	0.00	0,00	856.303	1.39	1.39
	1/4 L	14.764	73.71	68.58			
	1/2 L	29.528	342.20	560.55			
	3/4 L	44.291	603.07	1045.57			
	Tepi Kanan	59.055	856.30	1523.63			

Balok Penopang Bordes

Lantai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mu,b	Cek Kapasitas	Rasio	Kontrol Δ		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)			in	max	Cek
14	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.58	Kompak	Kompak	10171.07	26994	17316	15584.4	653.046	Aman	0.042	0.0478	0.984	Aman
13	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.41	Kompak	Kompak	10171.07	24105	17316	15584.4	678.139	Aman	0.044	0.0494	0.656	Aman
12	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.45	Kompak	Kompak	10171.07	24961	17316	15584.4	704.075	Aman	0.045	0.0513	0.656	Aman
11	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.49	Kompak	Kompak	10171.07	25336	17316	15584.4	740.065	Aman	0.047	0.0539	0.656	Aman
10	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.62	Kompak	Kompak	10171.07	27663	17316	15584.4	701.05	Aman	0.045	0.0462	0.656	Aman
9	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.64	Kompak	Kompak	10171.07	28033	17316	15584.4	694.399	Aman	0.045	0.0455	0.656	Aman
8	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.63	Kompak	Kompak	10171.07	27863	17316	15584.4	700.834	Aman	0.045	0.0462	0.656	Aman
7	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.63	Kompak	Kompak	10171.07	27811	17316	15584.4	712.416	Aman	0.046	0.0472	0.656	Aman
6	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.64	Kompak	Kompak	10171.07	27944	17316	15584.4	726.278	Aman	0.047	0.0484	0.656	Aman
5	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.69	Kompak	Kompak	10171.07	28793	17316	15584.4	752.499	Aman	0.048	0.0488	0.656	Aman
4	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.73	Kompak	Kompak	10171.07	29534	17316	15584.4	766.702	Aman	0.049	0.05	0.656	Aman
3	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.78	Kompak	Kompak	10171.07	30376	17316	15584.4	781.596	Aman	0.05	0.0514	0.656	Aman
2	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.84	Kompak	Kompak	10171.07	31373	17316	15584.4	792.574	Aman	0.051	0.052	0.656	Aman
1	W12x279	17316	6	236.22	169.12	11069.789	1E-05	2038.94	Lp<Lb<Lr	1.73	Kompak	Kompak	10171.07	29579	17316	15584.4	675.939	Aman	0.043	0.0418	0.656	Aman

ok Bordes B90

itai	Profil	Mp	Lb		Lp	X1	X2	Lr	Keterangan	Cb	Cek Profil		Mr	Mn	Mn pakai	ΦMn	Mu,b	Cek Kapasitas	Rasio	Kontrol Δ		
		(K-in)	(m)	in	(in)	Ksi	Ksi	(in)	(bentang)		Sayap	Badan	(K-in)	(K-in)	(K-in)	(K-in)	(K-in)			in	max	Cek
4	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.22	Kompak	Kompak	10171.07	17316	17316	15584.4	449.28	Aman	0.029	0.0007	0.246	Aman
3	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.01	Kompak	Kompak	10171.07	17316	17316	15584.4	501.94	Aman	0.032	0.0008	0.164	Aman
2	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.00	Kompak	Kompak	10171.07	17316	17316	15584.4	558.19	Aman	0.036	0.0008	0.164	Aman
1	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.00	Kompak	Kompak	10171.07	17316	17316	15584.4	621.12	Aman	0.04	0.0009	0.164	Aman
0	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.87	Kompak	Kompak	10171.07	17316	17316	15584.4	1574.09	Aman	0.101	0.001	0.164	Aman
9	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	0.97	Kompak	Kompak	10171.07	17316	17316	15584.4	599.14	Aman	0.038	0.0009	0.164	Aman
8	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	0.97	Kompak	Kompak	10171.07	17316	17316	15584.4	618.64	Aman	0.04	0.0009	0.164	Aman
7	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	0.98	Kompak	Kompak	10171.07	17316	17316	15584.4	646.70	Aman	0.041	0.001	0.164	Aman
6	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.00	Kompak	Kompak	10171.07	17316	17316	15584.4	676.81	Aman	0.043	0.001	0.164	Aman
5	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.03	Kompak	Kompak	10171.07	17316	17316	15584.4	700.14	Aman	0.045	0.001	0.164	Aman
4	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.08	Kompak	Kompak	10171.07	17316	17316	15584.4	726.70	Aman	0.047	0.0011	0.164	Aman
3	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.13	Kompak	Kompak	10171.07	17316	17316	15584.4	757.15	Aman	0.049	0.0011	0.164	Aman
2	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.20	Kompak	Kompak	10171.07	17316	17316	15584.4	792.62	Aman	0.051	0.0011	0.164	Aman
	W12x279	17316	1.5	59.0551	169.12	11069.789	1E-05	2038.94	Lb<Lp	1.39	Kompak	Kompak	10171.07	17316	17316	15584.4	856.30	Aman	0.055	0.001	0.164	Aman

Balok Topang

antai	Profil	L' (in)	Geser Balok (Kips)			Mpb	Geser Rencana Balok (Kips)		Vu pakai
			VD	VL	VE	(K-in)	Pers (1)	Pers (2)	(Kips)
14	W12x279	236.22	2.11	1.4	2.49	19047.6	164.502	13.192	13.192
13	W12x279	236.22	2.16	1.46	6.21	19047.6	164.592	28.162	28.162
12	W12x279	236.22	2.4	1.6	13.39	19047.6	164.95	57.24	57.24
11	W12x279	236.22	2.79	1.81	18.81	19047.6	165.523	79.493	79.493
10	W12x279	236.22	2.7	1.76	11.63	19047.6	165.39	50.64	50.64
9	W12x279	236.22	2.77	1.77	17.59	19047.6	165.479	74.569	74.569
8	W12x279	236.22	2.9	1.84	22.72	19047.6	165.67	95.28	95.28
7	W12x279	236.22	3.09	1.94	27.43	19047.6	165.948	114.398	114.398
6	W12x279	236.22	3.3	2.05	31.37	19047.6	166.255	130.465	130.465
5	W12x279	236.22	3.46	2.14	33.6	19047.6	166.492	139.622	139.622
4	W12x279	236.22	3.69	2.25	38.33	19047.6	166.823	158.873	158.873
3	W12x279	236.22	3.94	2.38	43.3	19047.6	167.188	179.118	167.188
2	W12x279	236.22	4.17	2.5	47.72	19047.6	167.524	197.134	167.524
1	W12x279	236.22	3.89	2.3	42.44	19047.6	167.088	175.578	167.088

Bordes B90

antai	Profil	L' (in)	Geser Balok (Kips)			Mpb	Geser Rencana Balok (Kips)		Vu pakai
			VD	VL	VE	(K-in)	Pers (1)	Pers (2)	(Kips)
14	W12x279	59.055	2.63	1.61	8.72	19047.6	649.041	38.841	38.841
13	W12x279	59.055	2.75	1.78	15.62	19047.6	649.27	66.67	66.67
12	W12x279	59.055	3.24	2.08	18.66	19047.6	650.008	79.568	79.568
11	W12x279	59.055	3.7	2.36	21.21	19047.6	650.7	90.46	90.46
10	W12x279	59.055	3.5	2.21	22.22	19047.6	650.385	94.185	94.185
9	W12x279	59.055	3.46	2.15	21.29	19047.6	650.307	90.387	90.387
8	W12x279	59.055	3.63	2.24	22.23	19047.6	650.556	94.396	94.396
7	W12x279	59.055	3.88	2.38	23.08	19047.6	650.926	98.166	98.166
6	W12x279	59.055	4.14	2.52	23.53	19047.6	651.308	100.348	100.348
5	W12x279	59.055	4.32	2.62	23.34	19047.6	651.574	99.854	99.854
4	W12x279	59.055	4.56	2.75	22.61	19047.6	651.927	97.287	97.287
3	W12x279	59.055	4.83	2.89	21.89	19047.6	652.321	94.801	94.801
2	W12x279	59.055	5.16	3.07	20.7	19047.6	652.807	90.527	90.527
1	W12x279	59.055	5.89	3.51	18.93	19047.6	653.903	84.543	84.543

Balok Bordes 90

Lantai	Profil	Ln	db	tw	db/tw	Cek	Vu Rencana	Vn	ΦVn	Cek Geser	Ratio	Vub	ΦVn
		(in)	(in)	(in)		Rasio	(Kips)	(Kips)	(Kips)			Kg	Kg
14	W12x279	59.055	15.9	1.53	10.39	ok	38.841	525.46	472.92	aman	0.08	17655	214962.2
13	W12x279	59.055	15.9	1.53	10.39	ok	66.670	525.46	472.92	aman	0.14	30304.5	214962.2
12	W12x279	59.055	15.9	1.53	10.39	ok	79.568	525.46	472.92	aman	0.17	36167.3	214962.2
11	W12x279	59.055	15.9	1.53	10.39	ok	90.460	525.46	472.92	aman	0.19	41118.2	214962.2
10	W12x279	59.055	15.9	1.53	10.39	ok	94.185	525.46	472.92	aman	0.20	42811.4	214962.2
9	W12x279	59.055	15.9	1.53	10.39	ok	90.387	525.46	472.92	aman	0.19	41085	214962.2
8	W12x279	59.055	15.9	1.53	10.39	ok	94.396	525.46	472.92	aman	0.20	42907.3	214962.2
7	W12x279	59.055	15.9	1.53	10.39	ok	98.166	525.46	472.92	aman	0.21	44620.9	214962.2
6	W12x279	59.055	15.9	1.53	10.39	ok	100.348	525.46	472.92	aman	0.21	45612.7	214962.2
5	W12x279	59.055	15.9	1.53	10.39	ok	99.854	525.46	472.92	aman	0.21	45388.2	214962.2
4	W12x279	59.055	15.9	1.53	10.39	ok	97.287	525.46	472.92	aman	0.21	44221.4	214962.2
3	W12x279	59.055	15.9	1.53	10.39	ok	94.801	525.46	472.92	aman	0.20	43091.4	214962.2
2	W12x279	59.055	15.9	1.53	10.39	ok	90.527	525.46	472.92	aman	0.19	41148.6	214962.2
1	W12x279	59.055	15.9	1.53	10.39	ok	84.543	525.46	472.92	aman	0.18	38428.6	214962.2

Balok Penopang Bordes

Lantai	Profil	Ln	db	tw	db/tw	Cek	Vu Rencana	Vn	ΦVn	Cek Geser	Ratio	Vub	ΦVn
		(in)	(in)	(in)		Rasio	(Kips)	(Kips)	(Kips)			Kg	Kg
14	W12x279	236.220	15.9	1.53	10.39	ok	13.192	525.46	472.92	aman	0.03	5996.36	214962.2
13	W12x279	236.220	15.9	1.53	10.39	ok	28.162	525.46	472.92	aman	0.06	12800.9	214962.2
12	W12x279	236.220	15.9	1.53	10.39	ok	57.240	525.46	472.92	aman	0.12	26018.2	214962.2
11	W12x279	236.220	15.9	1.53	10.39	ok	79.493	525.46	472.92	aman	0.17	36133.2	214962.2
10	W12x279	236.220	15.9	1.53	10.39	ok	50.640	525.46	472.92	aman	0.11	23018.2	214962.2
9	W12x279	236.220	15.9	1.53	10.39	ok	74.569	525.46	472.92	aman	0.16	33895	214962.2
8	W12x279	236.220	15.9	1.53	10.39	ok	95.280	525.46	472.92	aman	0.20	43309.1	214962.2
7	W12x279	236.220	15.9	1.53	10.39	ok	114.398	525.46	472.92	aman	0.24	51999.1	214962.2
6	W12x279	236.220	15.9	1.53	10.39	ok	130.465	525.46	472.92	aman	0.28	59302.3	214962.2
5	W12x279	236.220	15.9	1.53	10.39	ok	139.622	525.46	472.92	aman	0.30	63464.5	214962.2
4	W12x279	236.220	15.9	1.53	10.39	ok	158.873	525.46	472.92	aman	0.34	72215	214962.2
3	W12x279	236.220	15.9	1.53	10.39	ok	167.188	525.46	472.92	aman	0.35	75994.5	214962.2
2	W12x279	236.220	15.9	1.53	10.39	ok	167.524	525.46	472.92	aman	0.35	76147.3	214962.2
1	W12x279	236.220	15.9	1.53	10.39	ok	167.088	525.46	472.92	aman	0.35	75949.1	214962.2

Gaya Aksial Pada Profil Miring Tangga

Lantai	Stasion	Balok	L blk (m)	L blk (in)	Bracing (D2)	h (m)	h (in)	L' (in)	h' (in)	Mp	PD	PD Pakai	PL	PL Pakai	Pu
		Balok B3			Profil					(k.in)	(Kips)	(Kips)	(Kips)	(Kips)	(Kips)
14	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	7.71	7.71	4.2	4.2	597.79
	3.75										7.54		4		
13	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	8.07	8.07	4.72	4.72	598.48
	3.75										7.9		4.52		
12	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	9.6	9.6	5.66	5.66	600.79
	3.75										9.44		5.45		
11	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	11.1	11.1	6.55	6.55	603.03
	3.75										10.94		6.34		
10	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	10.52	10.52	6.14	6.14	602.13
	3.75										10.35		5.94		
9	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	10.38	10.38	5.92	5.92	601.85
	3.75										10.21		5.71		
8	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	10.92	10.92	6.2	6.2	602.64
	3.75										10.76		5.99		
7	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	11.72	11.72	6.64	6.64	603.82
	3.75										11.55		6.43		
6	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	12.54	12.54	7.09	7.09	605.03
	3.75										12.37		6.89		
5	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	13.13	13.13	7.41	7.41	605.9
	3.75										12.96		7.21		
4	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	13.9	13.9	7.82	7.82	607.03
	3.75										13.73		7.61		
3	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	14.75	14.75	8.28	8.28	608.28
	3.75										14.58		8.07		
2	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	15.81	15.81	8.85	8.85	609.83
	3.75										15.64		8.65		
1	0	W12x279	1.5	59.0551	W12x279	4.875	191.93	51.105	183.979	17316	17.96	17.96	10.14	10.14	613.06
	3.75										17.79		9.94		

Cek Tekan Aksial Pada Tangga

Lantai	Profil	K	Lb		λc	Fcr	ΦcPn	Pu	Pu / ΦcPn	Cek
			(m)	(in)	λc Pakai	(Ksi)	(Kips)	(Kips)		
14	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	597.7872	0.282639	Aman
13	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	598.4792	0.282966	Aman
12	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	600.7852	0.284056	Aman
11	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	603.0302	0.285117	Aman
10	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	602.1292	0.284691	Aman
9	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	601.8512	0.28456	Aman
8	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	602.6392	0.284933	Aman
7	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	603.8192	0.285491	Aman
6	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	605.0282	0.286062	Aman
5	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	605.8962	0.286473	Aman
4	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	607.0252	0.287006	Aman
3	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	608.2752	0.287597	Aman
2	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	609.8322	0.288334	Aman
1	W12X279	1	4.875	191.9291	0.636705	30.38172	2115.024	613.0572	0.289858	Aman

Faktor Panjang Efektif

Lantai	Profil	Ix	L		I / L	Profil	Ix	L		I / L	Join Lantai	G	Kolom Lantai	GA	GB	K
		In4	m	in	In3	Bordes	In4	m	in	In3						
14	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	14	0.308	14	0.30769	0.615385	1
13	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	13	0.615	13	0.61538	0.615385	1
12	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	12	0.615	12	0.61538	0.615385	1
11	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	11	0.615	11	0.61538	0.615385	1
10	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	10	0.615	10	0.61538	0.615385	1
9	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	9	0.615	9	0.61538	0.615385	1
8	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	8	0.615	8	0.61538	0.615385	1
7	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	7	0.615	7	0.61538	0.615385	1
6	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	6	0.615	6	0.61538	0.615385	1
5	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	5	0.615	5	0.61538	0.615385	1
4	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	4	0.615	4	0.61538	0.615385	1
3	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	3	0.615	3	0.61538	0.615385	1
2	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	2	0.615	2	0.61538	0.615385	1
1	W12x279	3110	4.875	191.93	16.204	W12x279	3110	1.5	59.055	52.6627	1	0.615	1	0.61538	0	1