

BAB VI

KESIMPULAN dan SARAN

6.1. KESIMPULAN

Setelah melakukan analisis dan perancangan pada struktur atas gedung di Bandung dengan menggunakan denah Gedung Lippo Centre yang telah dimodifikasi, dapat diambil kesimpulan sebagai berikut;

1. Pelat tangga digunakan tebal 120 mm pada penulangan lapangan digunakan tulangan utama D13 – 300 dan penulangan tumpuan juga digunakan tulangan utama D13 – 300.
2. Pelat lantai digunakan tebal 120 mm dengan tulangan lapangan utama P10 – 200 pada arah X dan tulangan lapangan utama P10 – 200 pada arah Y, pada tumpuan digunakan tulangan utama P10 – 200 pada arah X dan pada tumpuan digunakan tulangan utama P10 – 200 pada arah Y, serta menggunakan tulangan P8 – 150 sebagai tulangan pembagi.
3. Balok induk yang ditinjau berupa balok 21 dengan dimensi balok 400/800 mm dengan menggunakan tulangan pokok 6D25 pada daerah tumpuan dan menggunakan tulangan pokok 4D25 pada daerah lapangan, sedangkan pada daerah sendi plastis digunakan sengkang 4P10-125 dan pada daerah diluar sendi plastis digunakan sengkang 2P10-100.
4. Kolom yang ditinjau menggunakan dimensi 800/800 mm dengan menggunakan jumlah tulangan utama 28D25, pada daerah sendi plastis digunakan sengkang tertutup 4P10-50 dan diluar sendi plastis digunakan

sengkang 6P10 – 100, serta pada daerah sambungan balok kolom digunakan sengkang 5 lapis 2P10.

5. Dinding geser dengan bentuk simetris dengan tebal 400 mm dan panjang 8000 mm menggunakan tulangan 60D16.

6.2. SARAN

Saran saran yang dapat diberikan oleh penulis dari pengerjaan Tugas Akhir yang telah disusun;

1. Sebelum merencanakan struktur sebaiknya dilakukan estimasi yang benar dari awal pada ukuran elemen struktur, sehingga dapat menghindari terjadinya kekeliruan penentuan elemen struktur yang berulang ulang.
2. Penentuan elemen struktur pada tangga, pelat, balok dan kolom sebaiknya menggunakan ukuran yang seragam sehingga dapat lebih memudahkan dalam pengerjaan dilapangan.
3. Perangkat lunak yang digunakan dalam pengerjaan analisis memerlukan beberapa macam sehingga dirasa kurang optimal, dimasa mendatang diharapkan ada perangkat lunak yang dapat memenuhi seluruh kebutuhan analisis

DAFTAR PUSTAKA

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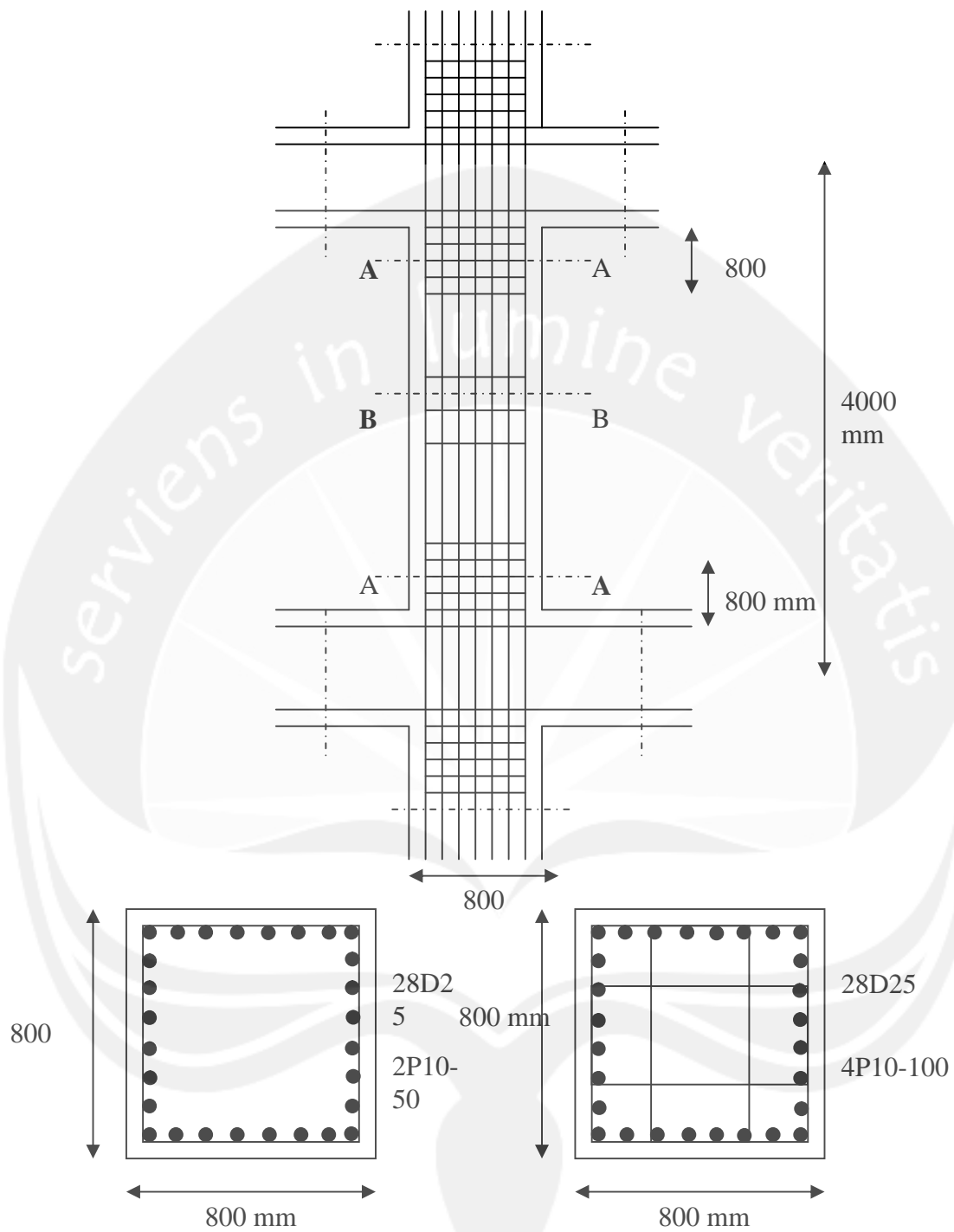
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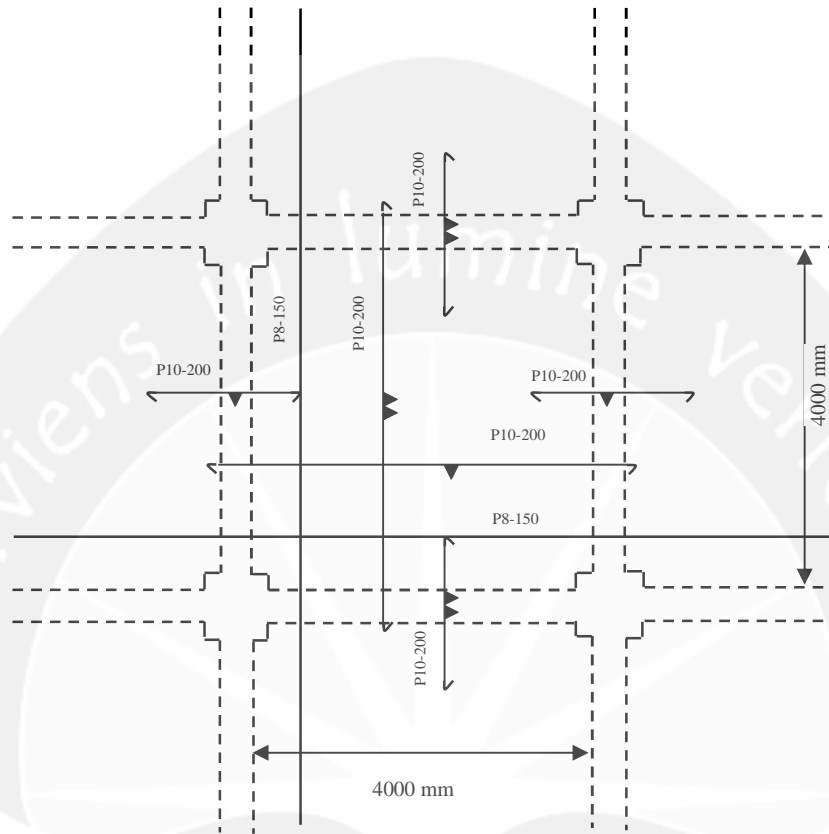
Tjahjono J. B., 2000. *Etabs Tutorial*, Exact Computer Course, Yogyakarta.



Gambar potongan A - A

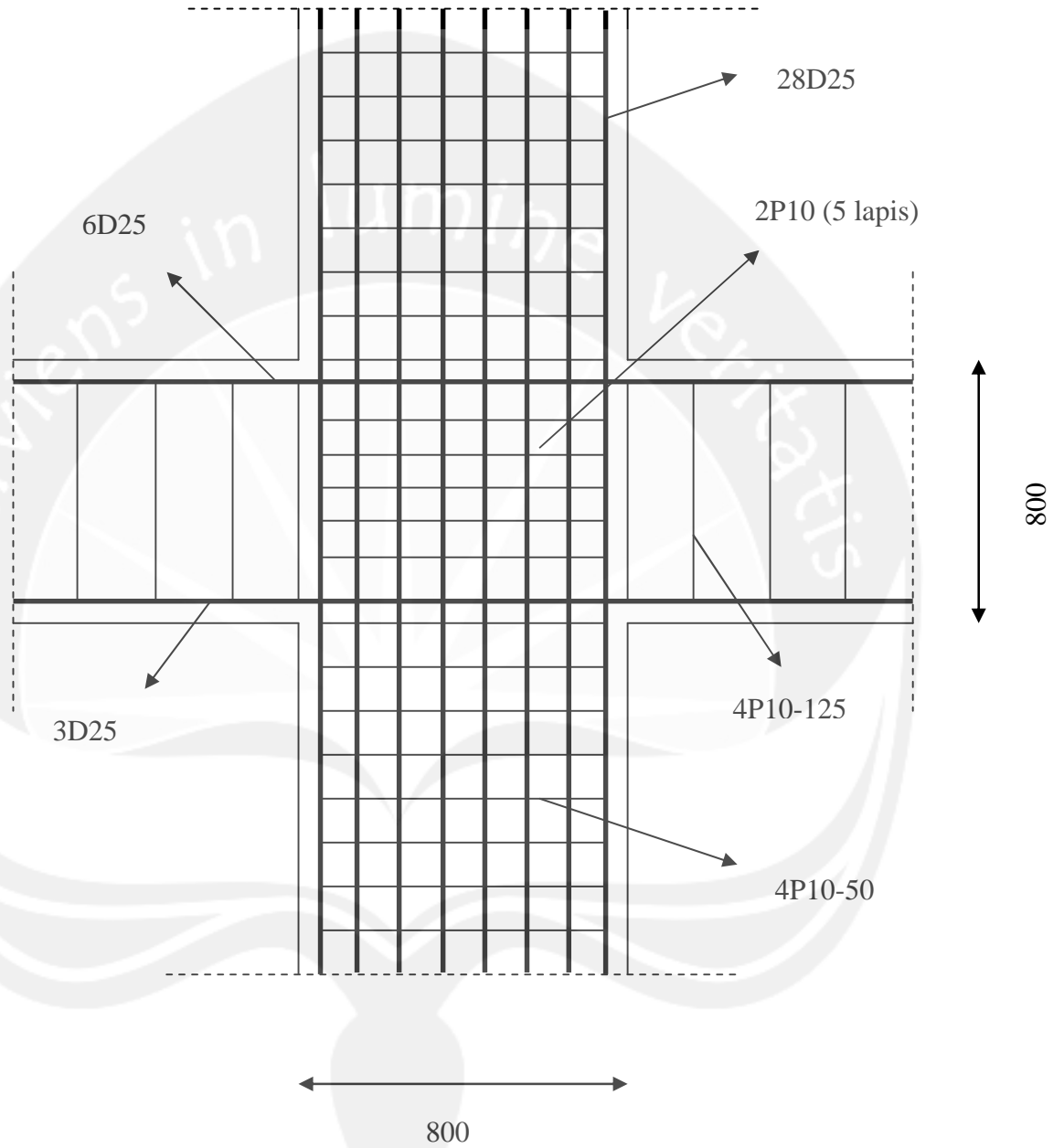
Gambar potongan B - B

Gambar Penulangan kolom



GAMBAR PELAT LANTAI

Skala 1 : 20



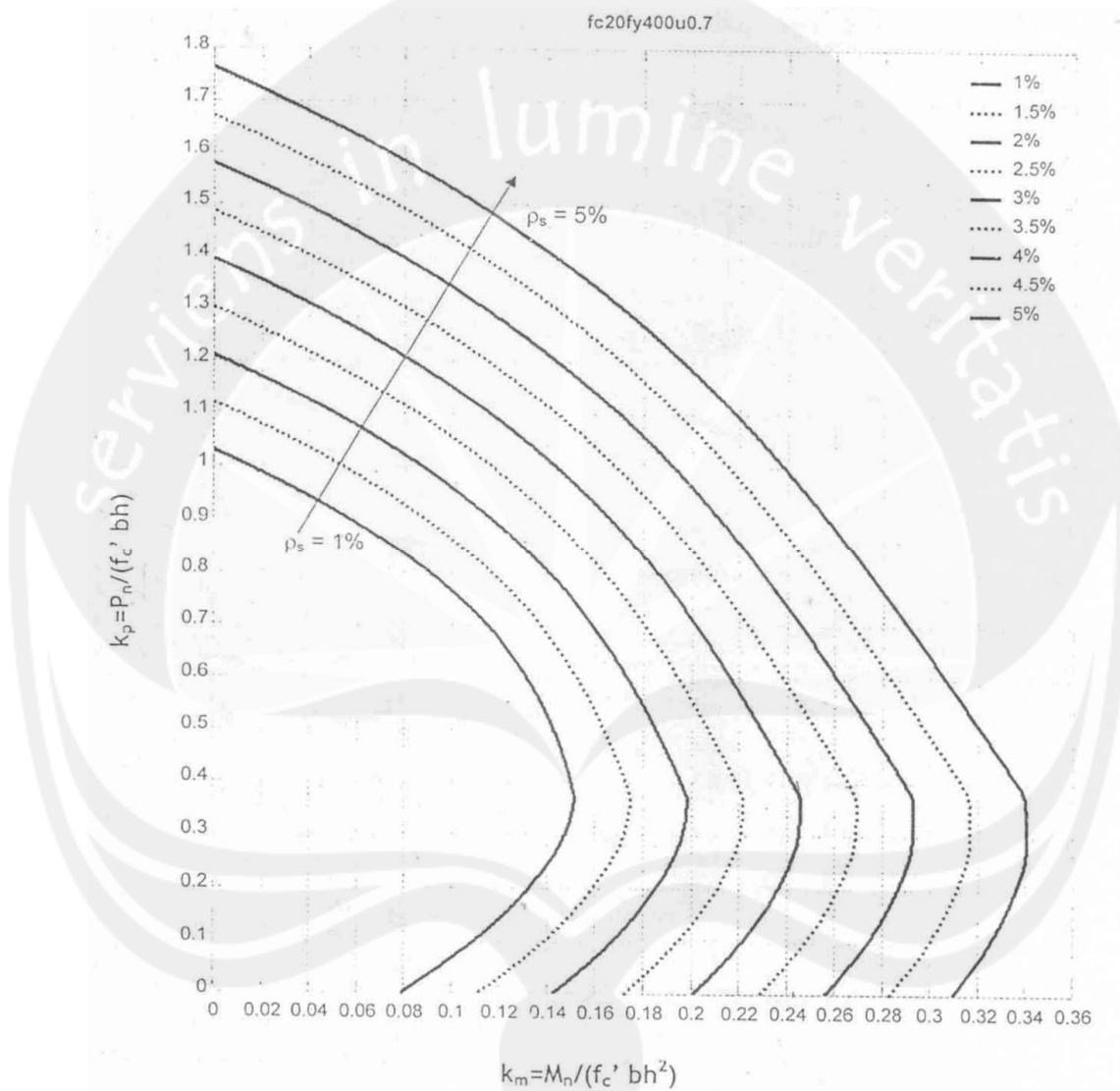
GAMBAR PERTEMUAN BALOK DAN KOLOM

SKALA 1 : 20

Grafik Interaksi Kolom

Sesuai SNI – 2002

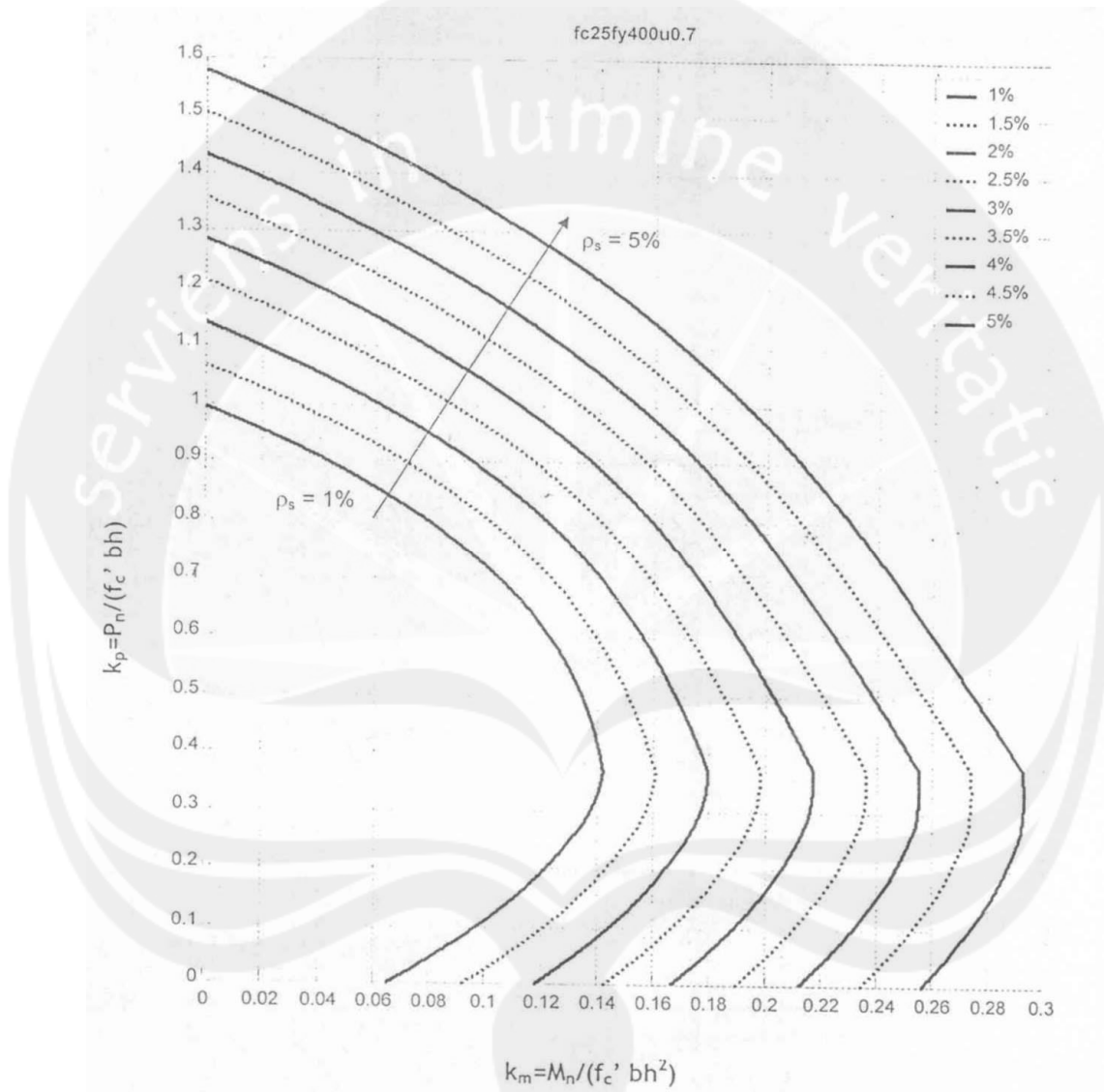
Oleh : Yoyong Arfiadi



Grafik Interaksi Kolom

Sesuai SNI – 2002

Oleh : Yoyong Arfiadi



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COMB1	ADD	DEAD	Static	1.4000
COMB2	ADD	DEAD	Static	1.2000
		LIVE	Static	1.6000
		RAIN	Static	0.5000
COMB3	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	1.0000
		EY	Spectra	0.3000
COMB4	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-1.0000
		EY	Spectra	0.3000
COMB5	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	1.0000
		EY	Spectra	-0.3000
COMB6	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-1.0000
		EY	Spectra	-0.3000
COMB7	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	0.3000
		EY	Spectra	1.0000
COMB8	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-0.3000
		EY	Spectra	1.0000
COMB9	ADD	DEAD	Static	1.2000
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COMB10	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-0.3000
		EY	Spectra	-1.0000
COMB11	ADD	DEAD	Static	0.9000
		EX	Spectra	1.0000
		EY	Spectra	0.3000
COMB12	ADD	DEAD	Static	0.9000
		EX	Spectra	-1.0000
		EY	Spectra	0.3000
COMB13	ADD	DEAD	Static	0.9000
		EX	Spectra	1.0000
		EY	Spectra	-0.3000
COMB14	ADD	DEAD	Static	0.9000
		EX	Spectra	-1.0000
		EY	Spectra	-0.3000

COMB15	ADD	DEAD	Static	0.9000
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		EY	Spectra	1.0000
COMB16	ADD	DEAD	Static	0.9000
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		EY	Spectra	1.0000
COMB17	ADD	DEAD	Static	0.9000
		EX	Spectra	0.3000
		EY	Spectra	-1.0000
COMB18	ADD	DEAD	Static	0.9000
		EX	Spectra	-0.3000
		EY	Spectra	-1.0000

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C O L U M N F O R C E E N V E L O P E S

STORY T	COLUMN M2	ITEM M3	P	V2	V3
STORY8 0.217	C8 -238.296	Min Value -160.668	-497.64	29.03	-126.77
COMB14	COMB10	Min Case COMB6	COMB2	COMB14	COMB10
0.514	167.366	Max Value 214.923	-293.76	117.22	-18.07
COMB6	COMB10	Max Case COMB6	COMB18	COMB6	COMB18
STORY7 0.166	C8 -180.908	Min Value -135.675	-1177.66	3.75	-94.58
COMB14	COMB10	Min Case COMB6	COMB2	COMB14	COMB10
0.464	121.738	Max Value 189.257	-646.39	101.15	-13.37
COMB6	COMB10	Max Case COMB6	COMB18	COMB6	COMB18
STORY6 0.169	C8 -252.736	Min Value -190.855	-1869.01	3.44	-131.88
COMB14	COMB10	Min Case COMB6	COMB2	COMB14	COMB10
0.628	169.306	Max Value 262.701	-994.97	140.84	-17.38
COMB6	COMB10	Max Case COMB6	COMB18	COMB6	COMB18
STORY5 0.064	C8 -237.866	Min Value -168.554	-2566.07	-6.62	-116.59
COMB14	COMB10	Min Case COMB6	COMB2	COMB14	COMB10
0.456	135.289	Max Value 275.049	-1352.88	137.42	-16.09
COMB6	COMB10	Max Case COMB6	COMB18	COMB6	COMB18
STORY4 0.055	C8 -200.162	Min Value -179.276	-3278.01	-14.38	-102.94
COMB14	COMB10	Min Case COMB6	COMB2	COMB14	COMB10
0.275	129.341	Max Value 260.959	-1718.35	136.27	-15.15

COMB6	COMB10	Max Case COMB6	COMB18	COMB6	COMB18	
STORY3 0.362	C8 -237.217	Min Value -202.614	-4021.60	-12.20	-121.28	-
COMB6	COMB10	Min Case COMB6	COMB2	COMB14	COMB10	
0.258	151.032	Max Value 326.769	-2092.95	163.76	-21.26	
COMB14	COMB10	Max Case COMB6	COMB18	COMB6	COMB18	
STORY2 0.528	C8 -242.515	Min Value -157.109	-4782.28	1.03	-108.92	-
COMB6	COMB10	Min Case COMB6	COMB2	COMB14	COMB10	
0.064	110.661	Max Value 353.459	-2486.26	157.87	-29.68	
COMB14	COMB2	Max Case COMB6	COMB18	COMB6	COMB18	
STORY1 0.434	C8 -108.812	Min Value -197.666	-5582.26	-34.67	-46.83	-
COMB6	COMB10	Min Case COMB14	COMB2	COMB14	COMB10	
0.064	102.097	Max Value 290.946	-2890.76	94.96	-6.05	-
COMB14	COMB2	Max Case COMB6	COMB18	COMB6	COMB18	

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COMB4	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-1.0000
		EY	Spectra	0.3000
COMB6	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-1.0000
		EY	Spectra	-0.3000
COMB12	ADD	DEAD	Static	0.9000
		EX	Spectra	-1.0000
		EY	Spectra	0.3000
COMB14	ADD	DEAD	Static	0.9000
		EX	Spectra	-1.0000
		EY	Spectra	-0.3000

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C O L U M N F O R C E E N V E L O P E S

STORY T	COLUMN M2	ITEM M3	P	V2	V3
STORY8 0.217	C8 -193.706	Min Value -160.668	-465.95	29.03	-101.92

COMB14	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.514	132.454	Max Value 214.923	-294.54	117.22	-42.92	
COMB6	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY7	C8	Min Value	-1072.72	3.75	-77.43	
0.166	-147.520	-135.675				
COMB14	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.464	100.261	Max Value 189.257	-650.65	101.15	-30.51	
COMB6	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY6	C8	Min Value	-1693.24	3.44	-107.14	
0.169	-204.940	-190.855				
COMB14	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.628	137.928	Max Value 262.701	-1005.98	140.84	-42.12	
COMB6	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY5	C8	Min Value	-2319.93	-6.62	-95.16	
0.064	-192.679	-168.554				
COMB14	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.456	111.841	Max Value 275.049	-1372.43	137.42	-37.52	
COMB6	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY4	C8	Min Value	-2959.55	-14.38	-84.46	-
0.055	-161.752	-179.276				
COMB14	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.275	108.538	Max Value 260.959	-1745.72	136.27	-33.64	
COMB6	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY3	C8	Min Value	-3629.23	-12.20	-101.14	-
0.362	-192.196	-202.614				
COMB6	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.258	131.516	Max Value 326.769	-2128.33	163.76	-41.40	
COMB14	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY2	C8	Min Value	-4312.87	1.03	-95.45	-
0.528	-206.231	-157.109				
COMB6	COMB6	Min Case COMB6	COMB6	COMB14	COMB6	
0.064	99.366	Max Value 353.459	-2529.35	157.87	-43.15	
COMB14	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	
STORY1	C8	Min Value	-5030.93	-34.67	-37.96	-
0.434	-70.995	-197.666				
COMB6	COMB6	Min Case COMB14	COMB6	COMB14	COMB6	
0.064	89.583	Max Value 290.946	-2939.53	94.96	-14.91	-
COMB14	COMB6	Max Case COMB6	COMB14	COMB6	COMB14	

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COMB3	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	1.0000
		EY	Spectra	0.3000
COMB5	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	1.0000
		EY	Spectra	-0.3000
COMB11	ADD	DEAD	Static	0.9000
		EX	Spectra	1.0000
		EY	Spectra	0.3000
COMB13	ADD	DEAD	Static	0.9000
		EX	Spectra	1.0000
		EY	Spectra	-0.3000

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C O L U M N F O R C E E N V E L O P E S

STORY T	COLUMN M2	ITEM M3	P	V2	V3
STORY8 0.217	C8 -193.706	Min Value -160.668	-465.95	29.03	-101.92
COMB13	COMB5	Min Case COMB5	COMB5	COMB13	COMB5
0.514	132.454	Max Value 214.923	-294.54	117.22	-42.92
COMB5	COMB5	Max Case COMB5	COMB13	COMB5	COMB13
STORY7 0.166	C8 -147.520	Min Value -135.675	-1072.72	3.75	-77.43
COMB13	COMB5	Min Case COMB5	COMB5	COMB13	COMB5
0.464	100.261	Max Value 189.257	-650.65	101.15	-30.51
COMB5	COMB5	Max Case COMB5	COMB13	COMB5	COMB13
STORY6 0.169	C8 -204.940	Min Value -190.855	-1693.24	3.44	-107.14
COMB13	COMB5	Min Case COMB5	COMB5	COMB13	COMB5
0.628	137.928	Max Value 262.701	-1005.98	140.84	-42.12
COMB5	COMB5	Max Case COMB5	COMB13	COMB5	COMB13
STORY5 0.064	C8 -192.679	Min Value -168.554	-2319.93	-6.62	-95.16
COMB13	COMB5	Min Case COMB5	COMB5	COMB13	COMB5
0.456	111.841	Max Value 275.049	-1372.43	137.42	-37.52

COMB5	COMB5	Max Case COMB5	COMB13	COMB5	COMB13	
STORY4 0.055	C8 -161.752	Min Value -179.276	-2959.55	-14.38	-84.46	-
COMB13	COMB5	Min Case COMB5	COMB5	COMB13	COMB5	
0.275	108.538	Max Value 260.959	-1745.72	136.27	-33.64	
COMB5	COMB5	Max Case COMB5	COMB13	COMB5	COMB13	
STORY3 0.362	C8 -192.196	Min Value -202.614	-3629.23	-12.20	-101.14	-
COMB5	COMB5	Min Case COMB5	COMB5	COMB13	COMB5	
0.258	131.516	Max Value 326.769	-2128.33	163.76	-41.40	
COMB13	COMB5	Max Case COMB5	COMB13	COMB5	COMB13	
STORY2 0.528	C8 -206.231	Min Value -157.109	-4312.87	1.03	-95.45	-
COMB5	COMB5	Min Case COMB5	COMB5	COMB13	COMB5	
0.064	99.366	Max Value 353.459	-2529.35	157.87	-43.15	
COMB13	COMB5	Max Case COMB5	COMB13	COMB5	COMB13	
STORY1 0.434	C8 -70.995	Min Value -197.666	-5030.93	-34.67	-37.96	-
COMB5	COMB5	Min Case COMB13	COMB5	COMB13	COMB5	
0.064	89.583	Max Value 290.946	-2939.53	94.96	-14.91	-
COMB13	COMB5	Max Case COMB5	COMB13	COMB5	COMB13	

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COMB9	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	0.3000
		EY	Spectra	-1.0000
COMB10	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-0.3000
		EY	Spectra	-1.0000
COMB17	ADD	DEAD	Static	0.9000
		EX	Spectra	0.3000
		EY	Spectra	-1.0000
COMB18	ADD	DEAD	Static	0.9000
		EX	Spectra	-0.3000
		EY	Spectra	-1.0000

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C O L U M N F O R C E E N V E L O P E S

STORY T	COLUMN M2	ITEM M3	P	V2	V3
STORY8 0.248	C8 -238.296	Min Value -131.024	-466.73	48.01	-126.77
COMB18	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.483	167.366	Max Value 183.475	-293.76	98.23	-18.07
COMB10	COMB10	Max Case COMB10	COMB18	COMB10	COMB18
STORY7 0.202	C8 -180.908	Min Value -101.080	-1076.98	27.42	-94.58
COMB18	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.428	121.738	Max Value 147.244	-646.39	77.48	-13.37
COMB10	COMB10	Max Case COMB10	COMB18	COMB10	COMB18
STORY6 0.230	C8 -252.736	Min Value -141.350	-1704.26	37.76	-131.88
COMB18	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.566	169.306	Max Value 200.356	-994.97	106.51	-17.38
COMB10	COMB10	Max Case COMB10	COMB18	COMB10	COMB18
STORY5 0.122	C8 -237.866	Min Value -116.934	-2339.48	31.15	-116.59
COMB18	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.398	135.289	Max Value 203.096	-1352.88	99.65	-16.09
COMB10	COMB10	Max Case COMB10	COMB18	COMB10	COMB18
STORY4 0.005	C8 -200.162	Min Value -124.631	-2986.92	26.62	-102.94
COMB18	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.214	129.341	Max Value 181.486	-1718.35	95.27	-15.15
COMB10	COMB10	Max Case COMB10	COMB18	COMB10	COMB18
STORY3 0.221	C8 -237.217	Min Value -147.637	-3664.61	34.89	-121.28
COMB10	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.117	151.032	Max Value 227.310	-2092.95	116.67	-21.26
COMB18	COMB10	Max Case COMB10	COMB18	COMB10	COMB18
STORY2 0.414	C8 -242.515	Min Value -122.592	-4355.97	40.59	-108.92
COMB10	COMB10	Min Case COMB10	COMB10	COMB18	COMB10
0.050	106.512	Max Value 257.584	-2486.26	118.30	-29.68
COMB18	COMB10	Max Case COMB10	COMB18	COMB10	COMB18

STORY1	C8	Min Value	-5079.70	4.76	-46.83	-
0.379	-108.812	-105.873				
		Min Case	COMB10	COMB18	COMB10	
COMB10	COMB10	COMB10				
		Max Value	-2890.76	55.53	-6.05	-
0.120	91.535	129.291				
		Max Case	COMB18	COMB10	COMB18	
COMB18	COMB10	COMB10				

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COMB7	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	0.3000
		EY	Spectra	1.0000
COMB8	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-0.3000
		EY	Spectra	1.0000
COMB15	ADD	DEAD	Static	0.9000
		EX	Spectra	0.3000
		EY	Spectra	1.0000
COMB16	ADD	DEAD	Static	0.9000
		EX	Spectra	-0.3000
		EY	Spectra	1.0000

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C O L U M N F O R C E E N V E L O P E S

STORY	COLUMN	ITEM	P	V2	V3
T	M2	M3			
STORY8	C8	Min Value	-466.73	48.01	-126.77
0.248	-238.296	-131.024			
		Min Case	COMB8	COMB16	COMB8
COMB16	COMB8	COMB8			
		Max Value	-293.76	98.23	-18.07
0.483	167.366	183.475			
		Max Case	COMB16	COMB8	COMB16
COMB8	COMB8	COMB8			
STORY7	C8	Min Value	-1076.98	27.42	-94.58
0.202	-180.908	-101.080			
		Min Case	COMB8	COMB16	COMB8
COMB16	COMB8	COMB8			
		Max Value	-646.39	77.48	-13.37
0.428	121.738	147.244			
		Max Case	COMB16	COMB8	COMB16
COMB8	COMB8	COMB8			
STORY6	C8	Min Value	-1704.26	37.76	-131.88
0.230	-252.736	-141.350			
		Min Case	COMB8	COMB16	COMB8
COMB16	COMB8	COMB8			

0.566	169.306	200.356	Max Value	-994.97	106.51	-17.38
COMB8	COMB8	COMB8	Max Case	COMB16	COMB8	COMB16
STORY5	C8	Min Value		-2339.48	31.15	-116.59
0.122	-237.866	-116.934	Min Case	COMB8	COMB16	COMB8
COMB16	COMB8	COMB8	Max Value	-1352.88	99.65	-16.09
0.398	135.289	203.096	Max Case	COMB16	COMB8	COMB16
COMB8	COMB8	COMB8	Min Value	-2986.92	26.62	-102.94
STORY4	C8	Min Case		COMB8	COMB16	COMB8
0.005	-200.162	-124.631	COMB8			
COMB16	COMB8	COMB8	Max Value	-1718.35	95.27	-15.15
0.214	129.341	181.486	Max Case	COMB16	COMB8	COMB16
COMB8	COMB8	COMB8	Min Value	-3664.61	34.89	-121.28
STORY3	C8	Min Case		COMB8	COMB16	COMB8
0.221	-237.217	-147.637	COMB8			
COMB8	COMB8	COMB8	Max Value	-2092.95	116.67	-21.26
0.117	151.032	227.310	Max Case	COMB16	COMB8	COMB16
COMB16	COMB8	COMB8	Min Value	-4355.97	40.59	-108.92
STORY2	C8	Min Case		COMB8	COMB16	COMB8
0.414	-242.515	-122.592	COMB8			
COMB8	COMB8	COMB8	Max Value	-2486.26	118.30	-29.68
0.050	106.512	257.584	Max Case	COMB16	COMB8	COMB16
COMB16	COMB8	COMB8	Min Value	-5079.70	4.76	-46.83
STORY1	C8	Min Case		COMB8	COMB16	COMB8
0.379	-108.812	-105.873	COMB8			
COMB8	COMB8	COMB8	Max Value	-2890.76	55.53	-6.05
0.120	91.535	129.291	Max Case	COMB16	COMB8	COMB16
COMB16	COMB8	COMB8				

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COMB1	ADD	DEAD	Static	1.4000
COMB2	ADD	DEAD	Static	1.2000
		LIVE	Static	1.6000
		RAIN	Static	0.5000
COMB3	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	1.0000
		EY	Spectra	0.3000
COMB4	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-1.0000
		EY	Spectra	0.3000

COMB5	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	1.0000
		EY	Spectra	-0.3000
COMB6	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-1.0000
		EY	Spectra	-0.3000
COMB7	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	0.3000
		EY	Spectra	1.0000
COMB8	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-0.3000
		EY	Spectra	1.0000
COMB9	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	0.3000
		EY	Spectra	-1.0000
COMB10	ADD	DEAD	Static	1.2000
		LIVE	Static	1.0000
		EX	Spectra	-0.3000
		EY	Spectra	-1.0000
COMB11	ADD	DEAD	Static	0.9000
		EX	Spectra	1.0000
		EY	Spectra	0.3000
COMB12	ADD	DEAD	Static	0.9000
		EX	Spectra	-1.0000
		EY	Spectra	0.3000
COMB13	ADD	DEAD	Static	0.9000
		EX	Spectra	1.0000
		EY	Spectra	-0.3000
COMB14	ADD	DEAD	Static	0.9000
		EX	Spectra	-1.0000
		EY	Spectra	-0.3000
COMB15	ADD	DEAD	Static	0.9000
		EX	Spectra	0.3000
		EY	Spectra	1.0000
COMB16	ADD	DEAD	Static	0.9000
		EX	Spectra	-0.3000
		EY	Spectra	1.0000
COMB17	ADD	DEAD	Static	0.9000
		EX	Spectra	0.3000
		EY	Spectra	-1.0000
COMB18	ADD	DEAD	Static	0.9000
		EX	Spectra	-0.3000
		EY	Spectra	-1.0000

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P I E R F O R C E E N V E L O P E S

STORY T	PIER M2	ITEM M3	P	V2	V3
STORY9 28.410	P2 -270.550	Min Value -450.351	-1179.54	-134.46	48.97
COMB18	COMB6	Min Case COMB10	COMB1	COMB10	COMB14
66.919	569.216	Max Value 258.322	-458.94	81.12	209.18
COMB10	COMB6	Max Case COMB18	COMB14	COMB18	COMB6
STORY8 44.684	P2 -729.167	Min Value -998.574	-2807.96	-411.40	167.49
COMB18	COMB6	Min Case COMB10	COMB1	COMB10	COMB14
136.007	671.035	Max Value 783.981	-1501.92	123.88	343.52
COMB10	COMB2	Max Case COMB18	COMB14	COMB18	COMB2
STORY7 28.243	P2 -733.229	Min Value -2275.981	-4416.15	-710.35	74.35
COMB18	COMB6	Min Case COMB10	COMB2	COMB10	COMB14
100.206	652.943	Max Value 2175.562	-2449.78	467.34	344.21
COMB10	COMB6	Max Case COMB18	COMB14	COMB18	COMB6
STORY6 24.959	P2 -615.575	Min Value -3542.056	-5731.10	-869.91	78.44
COMB18	COMB6	Min Case COMB10	COMB2	COMB10	COMB14
84.110	554.578	Max Value 3371.832	-3191.36	596.16	288.88
COMB10	COMB6	Max Case COMB18	COMB14	COMB18	COMB6
STORY5 24.132	P2 -597.548	Min Value -5296.310	-7295.60	-1061.05	57.86
COMB18	COMB6	Min Case COMB10	COMB2	COMB10	COMB14
77.388	576.024	Max Value 5147.203	-4088.66	792.29	289.53
COMB10	COMB6	Max Case COMB18	COMB14	COMB18	COMB6
STORY4 20.385	P2 -604.552	Min Value -7381.446	-8859.57	-1236.25	37.20
COMB18	COMB6	Min Case COMB10	COMB2	COMB10	COMB14
64.273	560.802	Max Value 7215.796	-4985.53	957.84	288.05
COMB10	COMB6	Max Case COMB18	COMB14	COMB18	COMB6
STORY3 28.447	P2 -468.826	Min Value -8632.136	-9753.95	-1309.81	41.43
COMB18	COMB6	Min Case COMB10	COMB2	COMB10	COMB14
69.588	485.445	Max Value 8511.949	-5491.90	1056.76	236.09
COMB10	COMB6	Max Case COMB18	COMB14	COMB18	COMB6
STORY2 32.276	P2 -449.645	Min Value -11112.554	-11095.59	-1400.51	59.32
COMB18	COMB6	Min Case COMB10	COMB2	COMB10	COMB14

		Max Value	-6280.94	1165.09	243.41
72.013	531.546	10536.431			
		Max Case	COMB14	COMB18	COMB6
COMB2	COMB6	COMB18			
		Min Value	-12642.93	-1467.32	-28.11
STORY1	P2	-14468.956			
6.357	-274.818				
		Min Case	COMB2	COMB10	COMB14
COMB18	COMB6	COMB10			
		Max Value	-7121.65	1291.44	136.33
14.044	410.597	14032.281			
		Max Case	COMB14	COMB18	COMB6
COMB10	COMB6	COMB18			

