

BAB VI

KESIMPULAN & SARAN

6.1. Kesimpulan

Dari hasil analisa perhitungan gedung Apartemen Sahid Jogja Life Style City, diperoleh data sebagai berikut

1. Dimensi Balok

Balok Induk :

- B300x450
- B400X650
- B450X750
- B500X800

Balok Anak :

- B350X600
- B400X700
- B450X750

2. Dimensi Kolom : K500X500, K600X600, K650X650, K700X700, K750X750,
K800X800, K850X850, K900X900

3. Dimensi Pelat

- Tebal pelat lantai = 125 mm
- Tebal pelat atap dak = 100 mm
- Tebal pelat kolam renang = 200 mm

4. Dimensi Tangga

- Tebal pelat tangga = 160 mm
- Dimensi balok bordes = B250X400

5. Hasil Perhitungan

Tabel 6.1. Hasil Perhitungan Kolom

Dimensi kolom	Tulangan	Spasi sepanjang lo	Spasi di luar lo
K500X500	8D25	3D13-100	3D13-150
K600X600	20D25	3D13-100	3D13-150
K650X650	20D25	3D13-100	3D13-150
K700X700	20D25	3D13-100	3D13-150
K750X750	20D25	3D13-100	3D13-150
K800X800	20D25	3D13-100	3D13-150
K850X850	20D25	3D13-100	3D13-150
K900X900	20D25	3D13-100	3D13-150

Tabel 6.2. Hasil Perhitungan Balok

Dimensi balok	Tulangan tumpuan tarik	Tulangan tumpuan tekan	Tulangan lapangan tarik	Tulangan lapangan tekan	Sengkang tumpuan	Sengkang lapangan
B300X450	4D22	3D22	2D22	2D22	2P10-100	2P10-150
B400X650	5D25	3D25	2D25	2D25	2P10-100	2P10-150
B450X750	4D25	3D25	3D25	3D25	2P10-100	2P10-150
B500X800	3D25	3D25	3D25	3D25	2P10-100	2P10-150
BA350X600	5D25	4D25	2D25	2D25	2P10-100	2P10-150
BA400X700	4D25	3D25	2D25	2D25	2P10-100	2P10-150
BA450X750	4D19	4D19	4D19	4D19	2P10-100	2P10-150
BORDES	6D25	3D25	2D25	2D25	2P10-100	2P10-150

Tabel 6.3. Hasil Perhitungan Pelat 1 arah

Tipe pelat	Tebal pelat	Tulangan tumpuan arah x	Tulangan lapangan arah x	Tulangan susut
Pelat lantai	125 mm	P10-100	P10-100	P10-200
Pelat atap	100 mm	P10-100	P10-100	P10-200

Tabel 6.4. Hasil Perhitungan Pelat 2 arah

Tipe pelat	Tebal pelat	Tulangan tumpuan arah x	Tulangan tumpuan arah y	Tulangan lapangan arah x	Tulangan lapangan arah y	Tulangan susut
Pelat lantai	125 mm	P10-100	P10-150	P10-100	P10-150	P10-300
Pelat lantai	200 mm	P10-100	P10-150	P10-100	P10-150	P10-300
Pelat atap	100 mm	P10-100	P10-150	P10-100	P10-150	P10-300
Pelat tangga	160 mm	D13-200	D13-200	D13-100	D13-200	P8-200

6.2. Saran

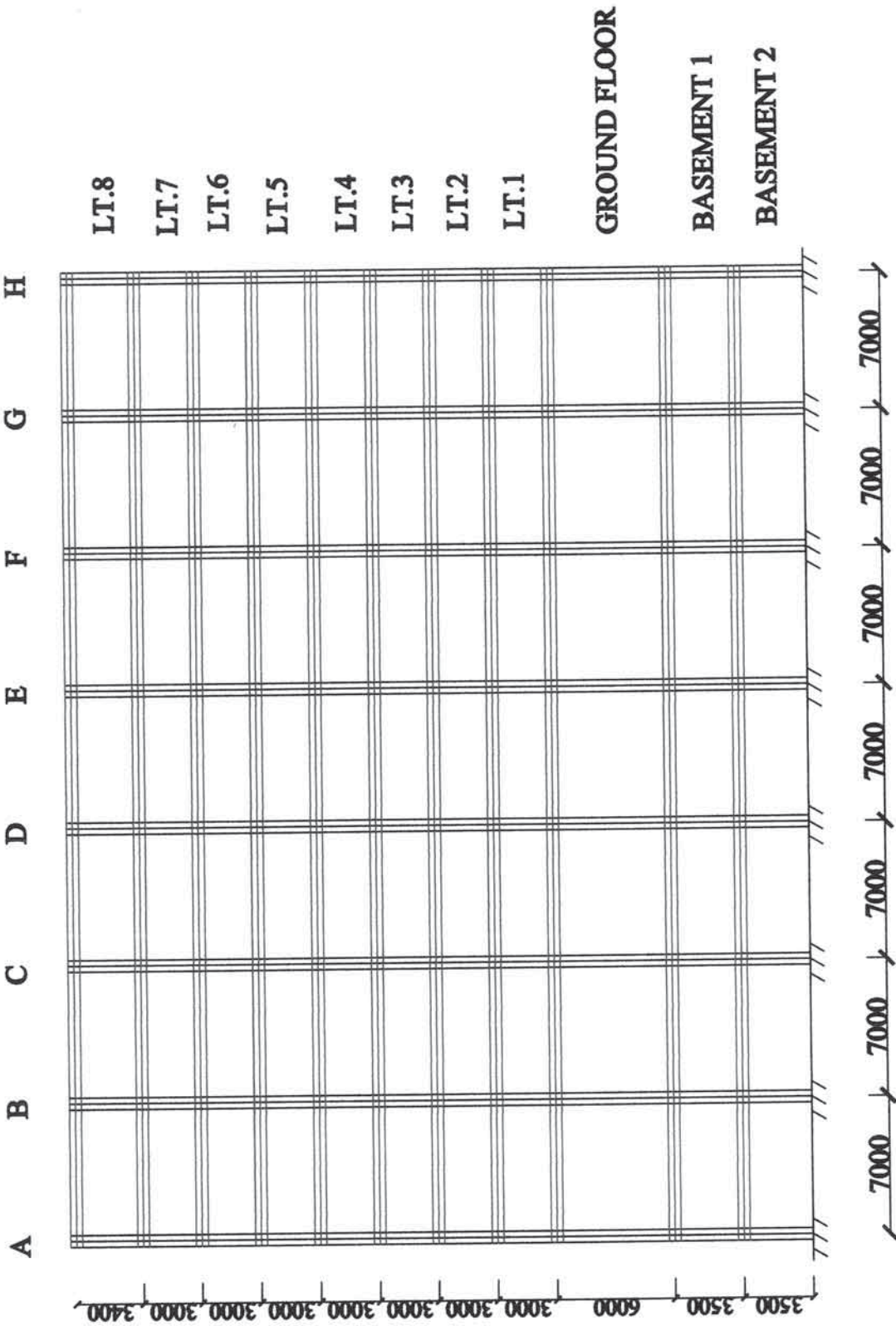
Berikut saran yang dapat diberikan penulis dari hasil penyusunan Tugas

Akhir Perancangan Struktur Gedung Apartemen Sahid Jogja Life Style City, antara lain :

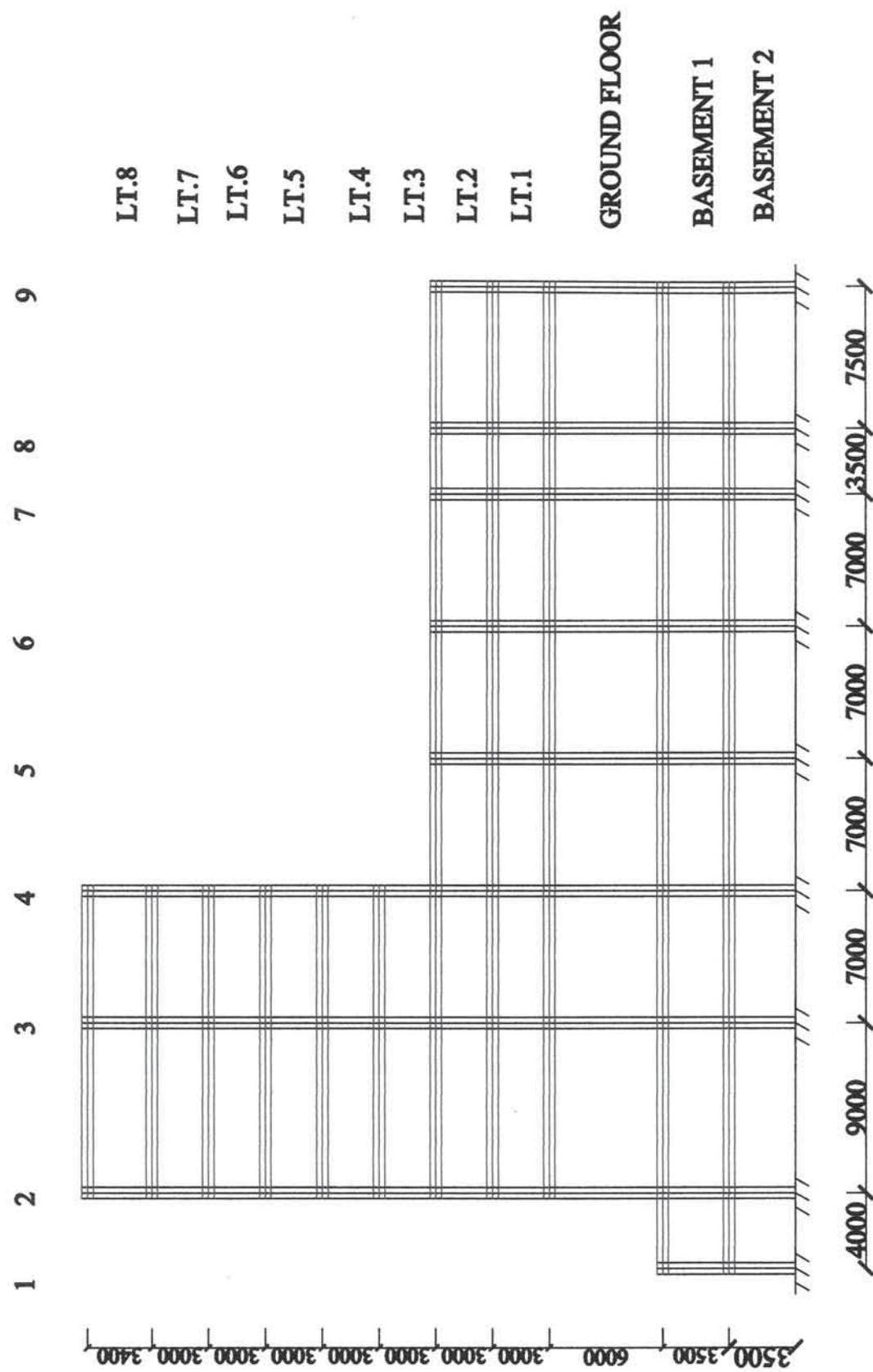
1. Estimasi dimensi perlu dilakukan pertama kali dalam merancang ukuran elemen struktur dan dapat dijadikan pedoman awal untuk menentukan perubahan dimensi bila diperlukan.
2. Dalam melakukan analisis struktur dapat digunakan program (*software*) seperti *ETABS* untuk mempercepat proses analisis dan perhitungan struktur.
3. Perancangan struktur gedung saat ini harus mengikuti peraturan- peraturan terbaru yang ditetapkan pemerintah, yaitu SNI 1726-2012 dan SNI 2847-2013.

DAFTAR PUSTAKA

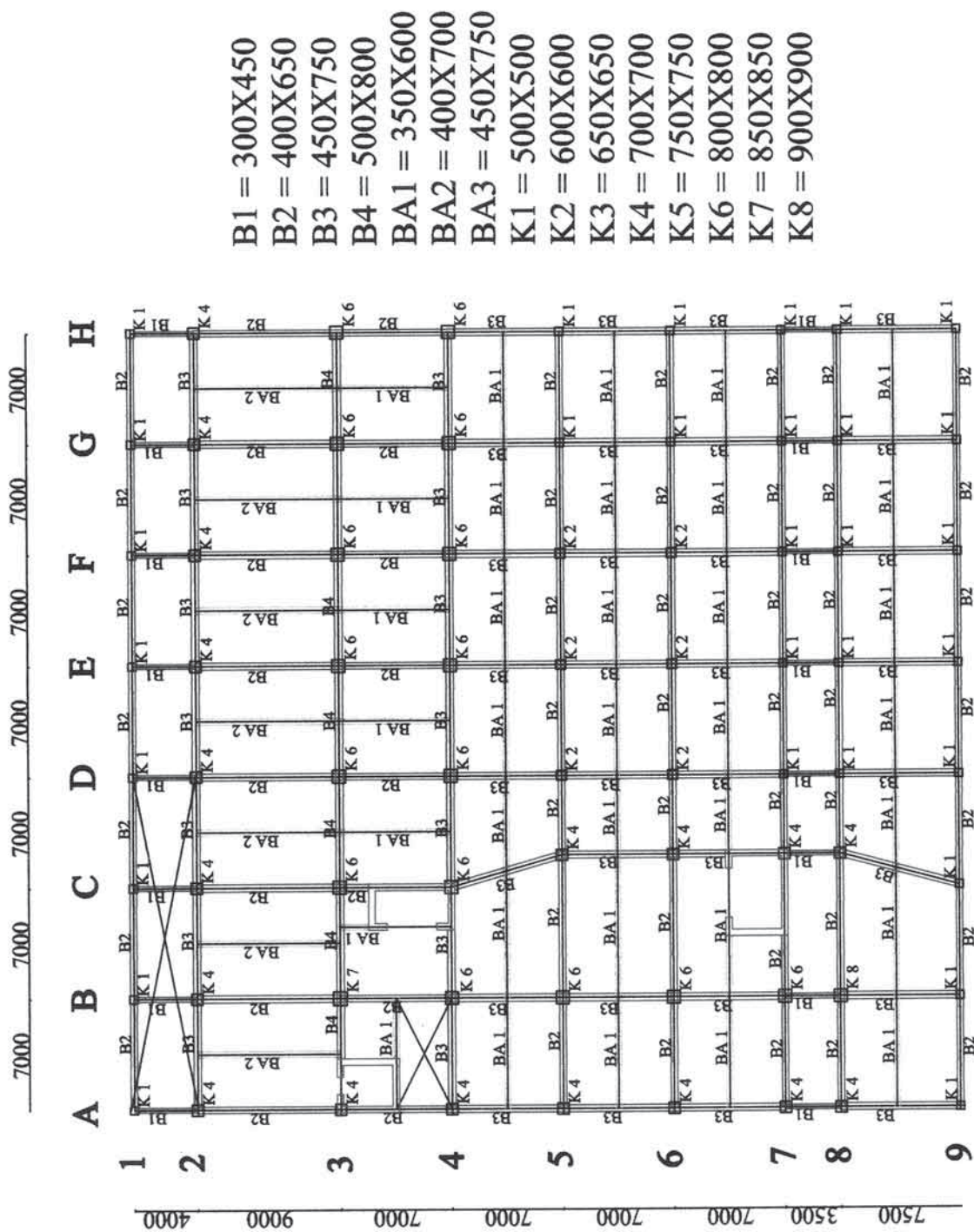
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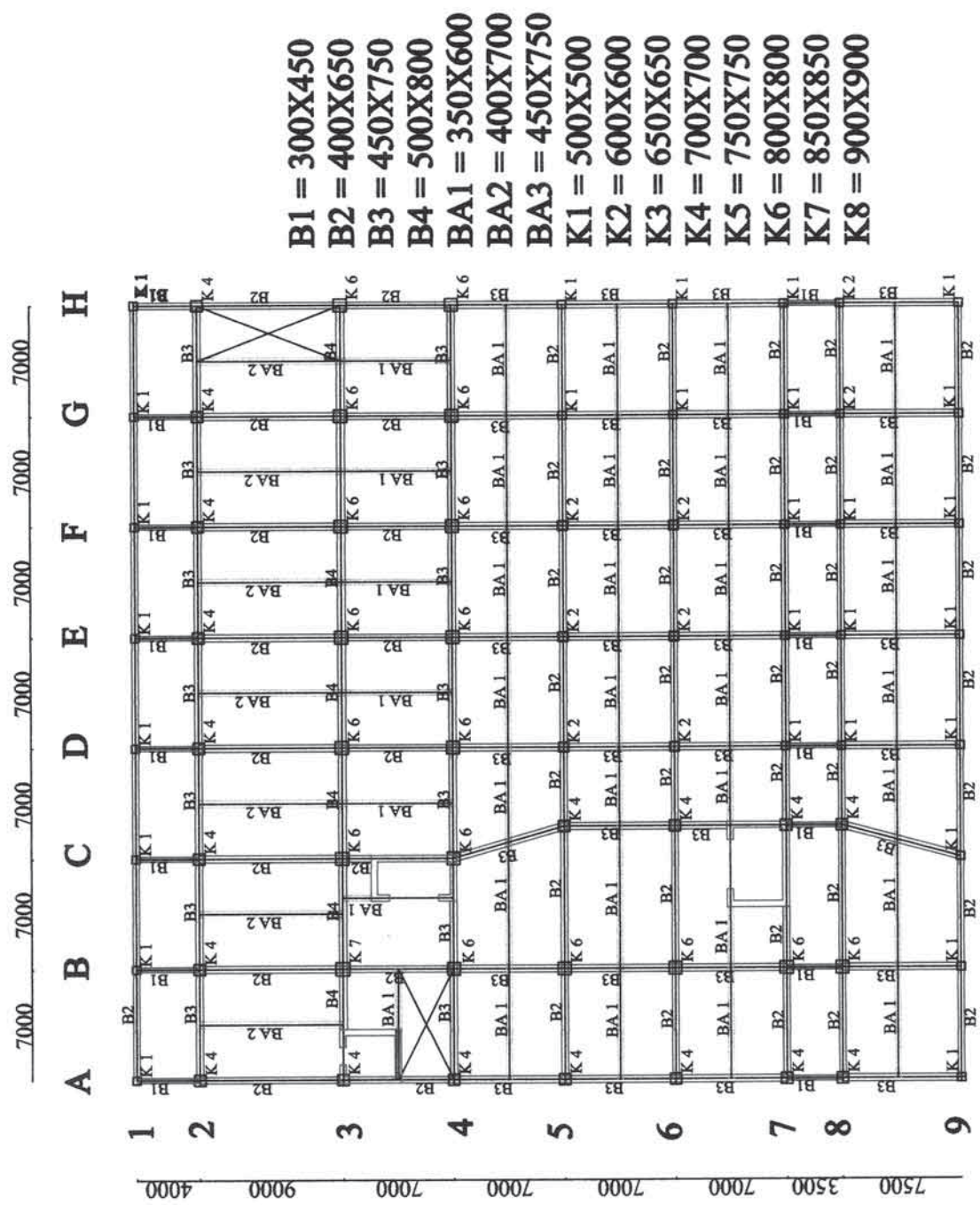
PORTAL AS 3
Satuan dalam mm



PORTAL ASE
Satuan dalam mm

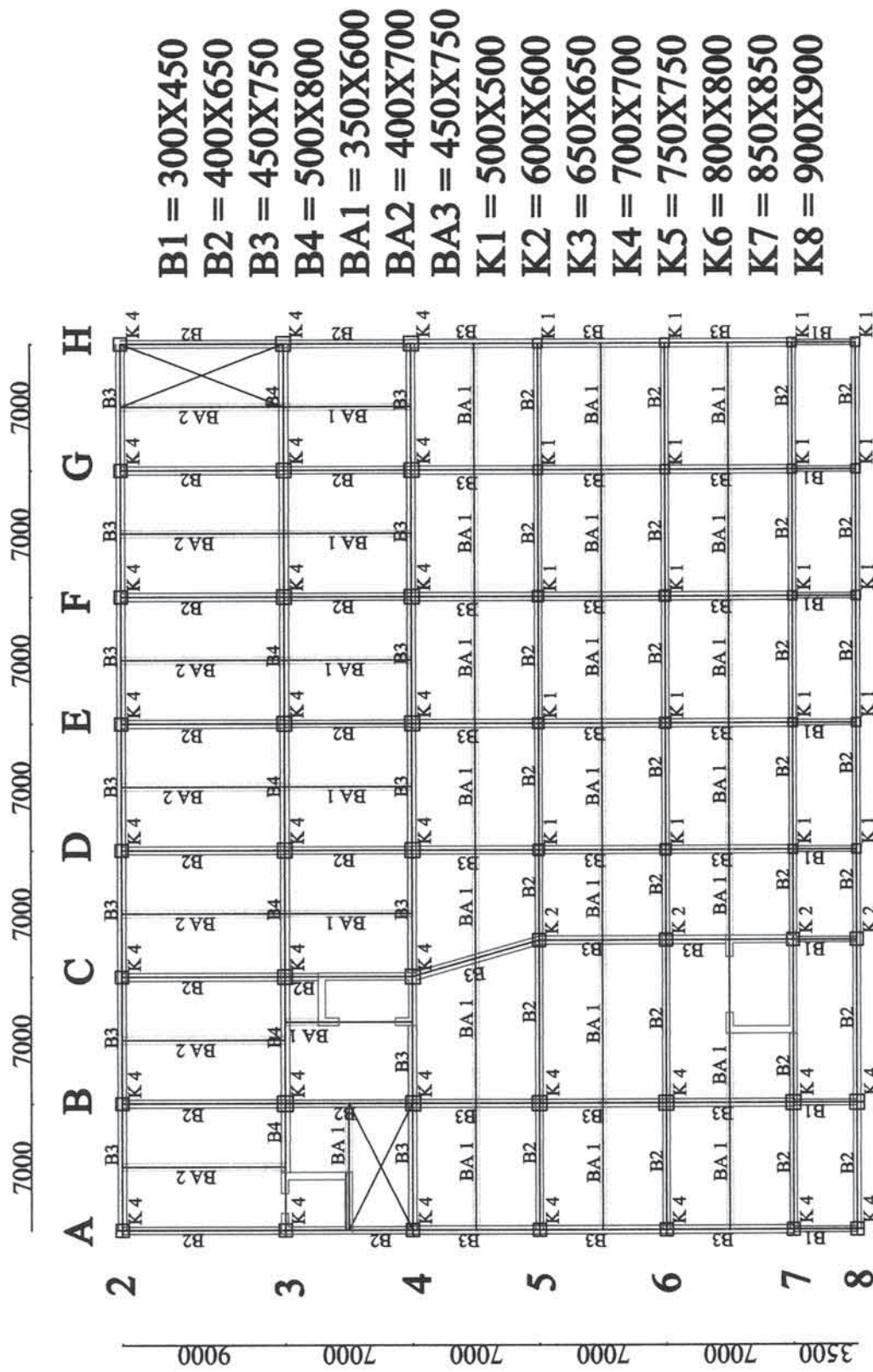


Denah Balok Kolom Basement 1
Satuan dalam mm

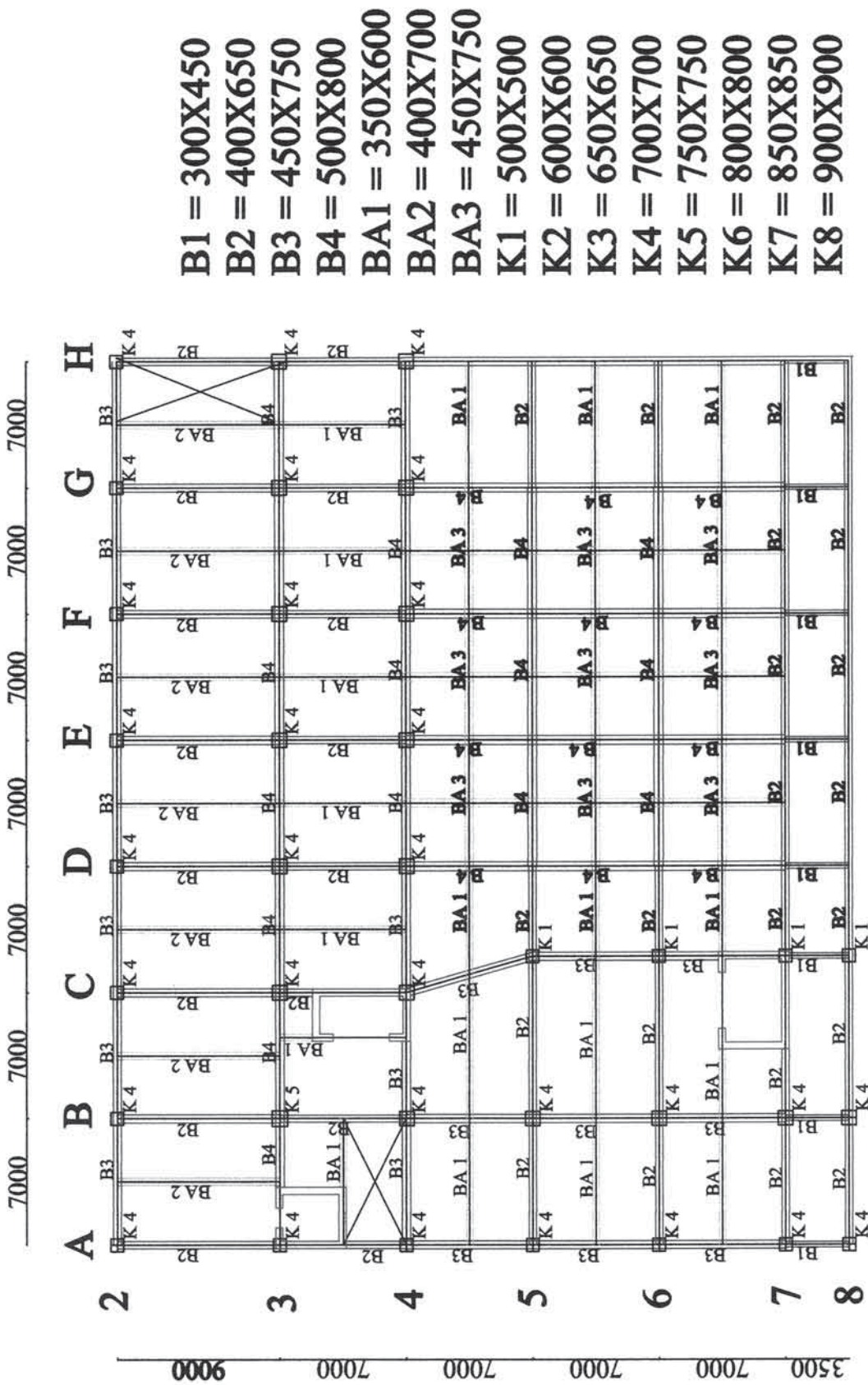


Denah Balok Kolom Ground Floor

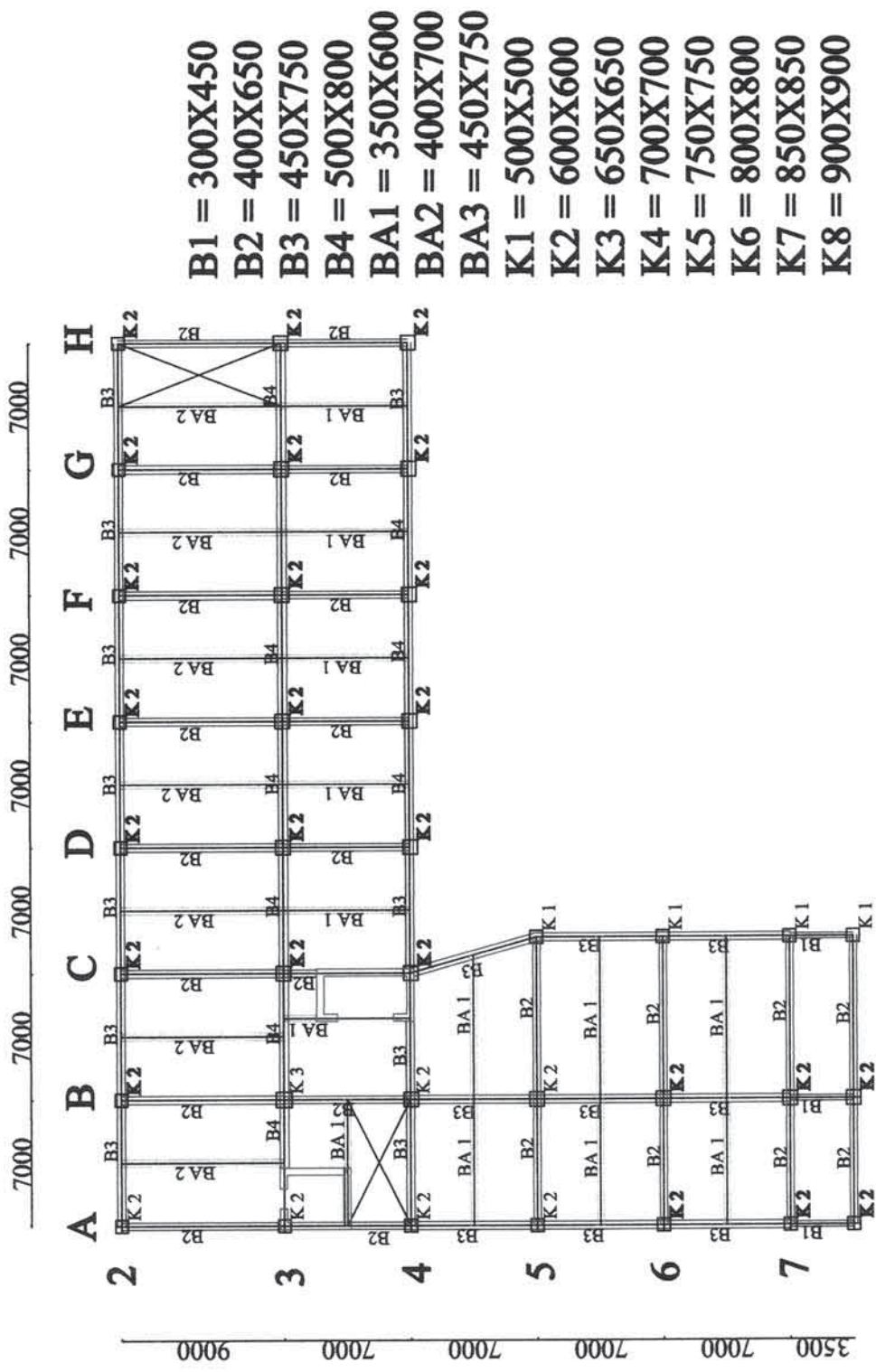
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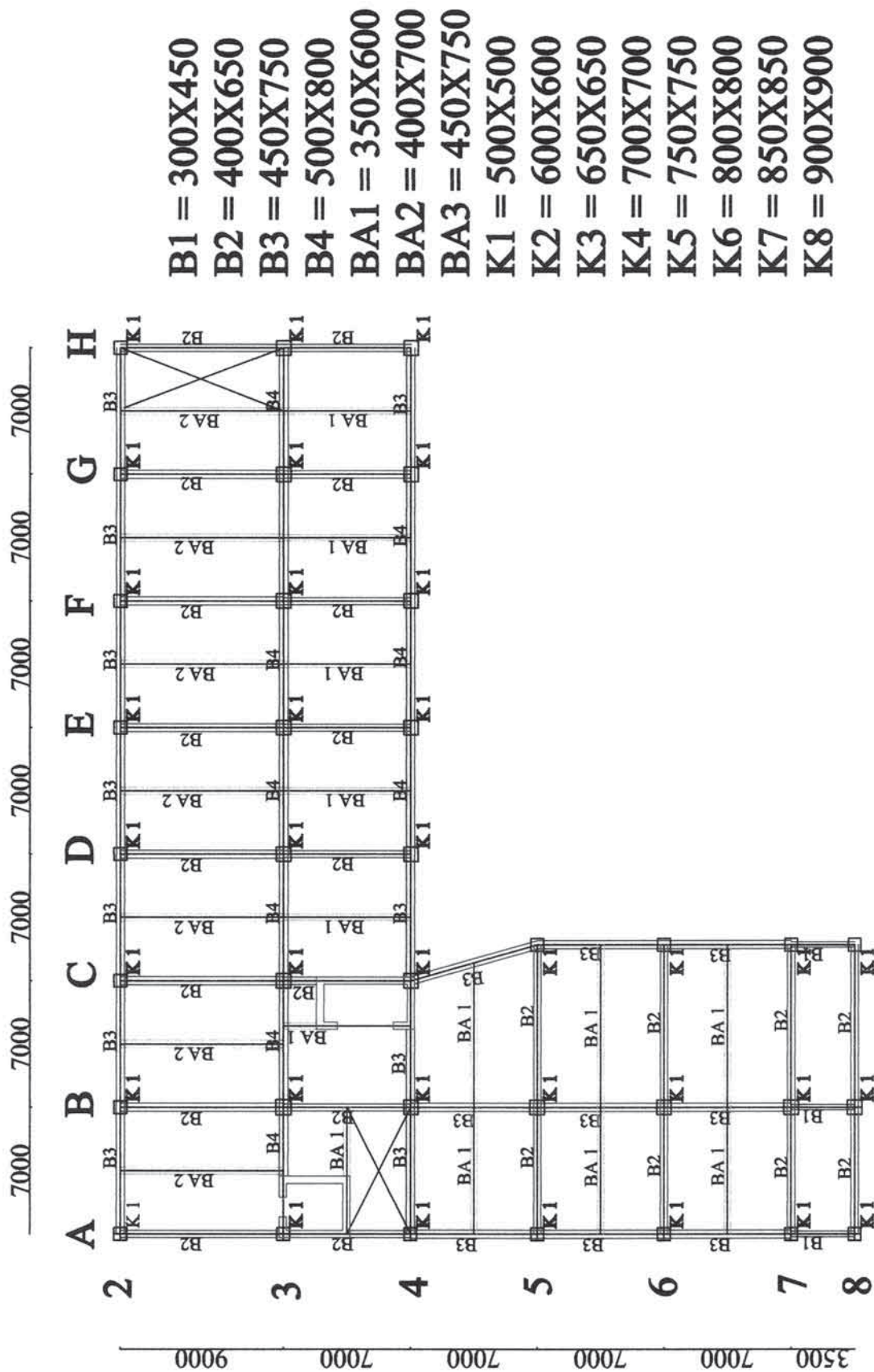
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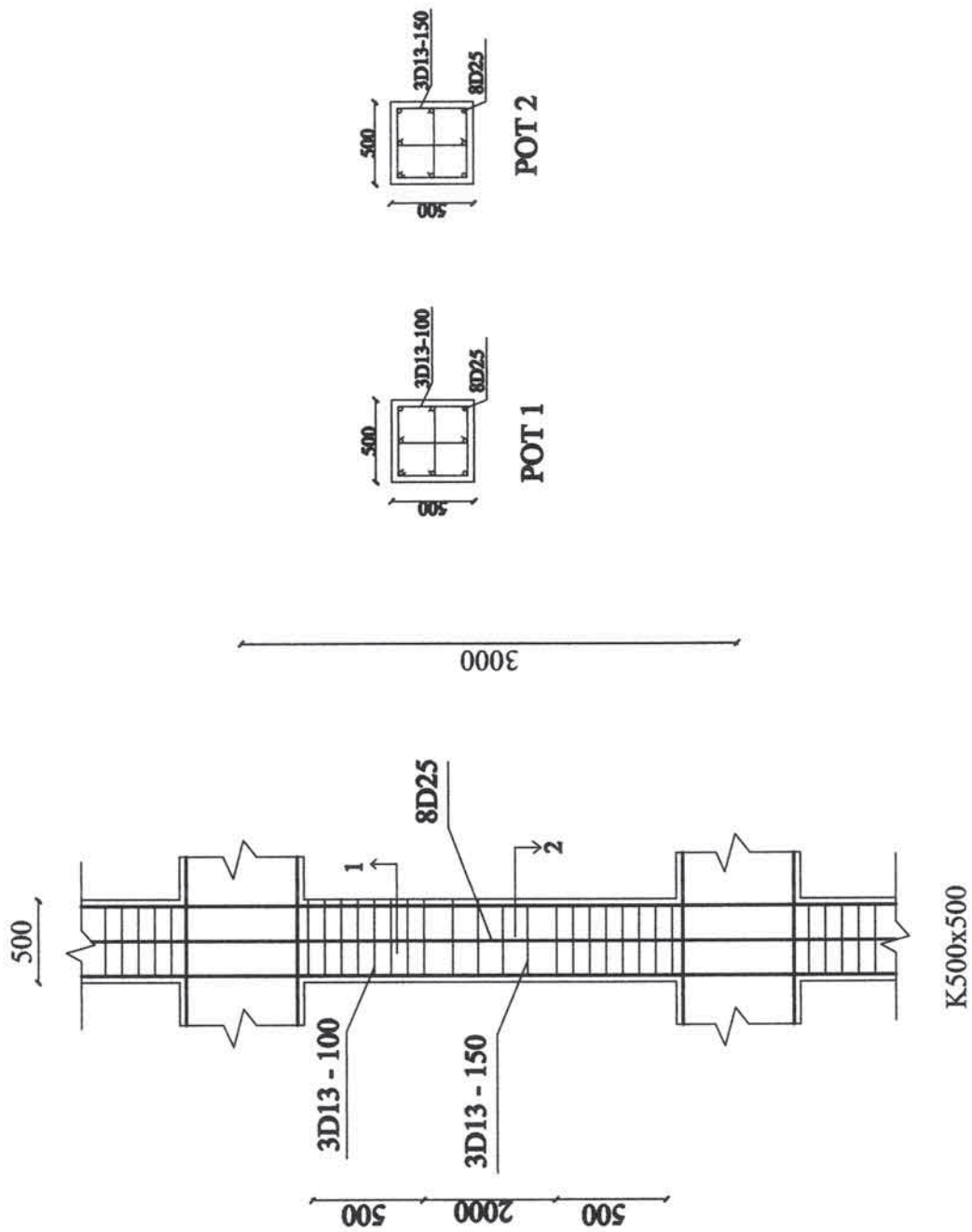
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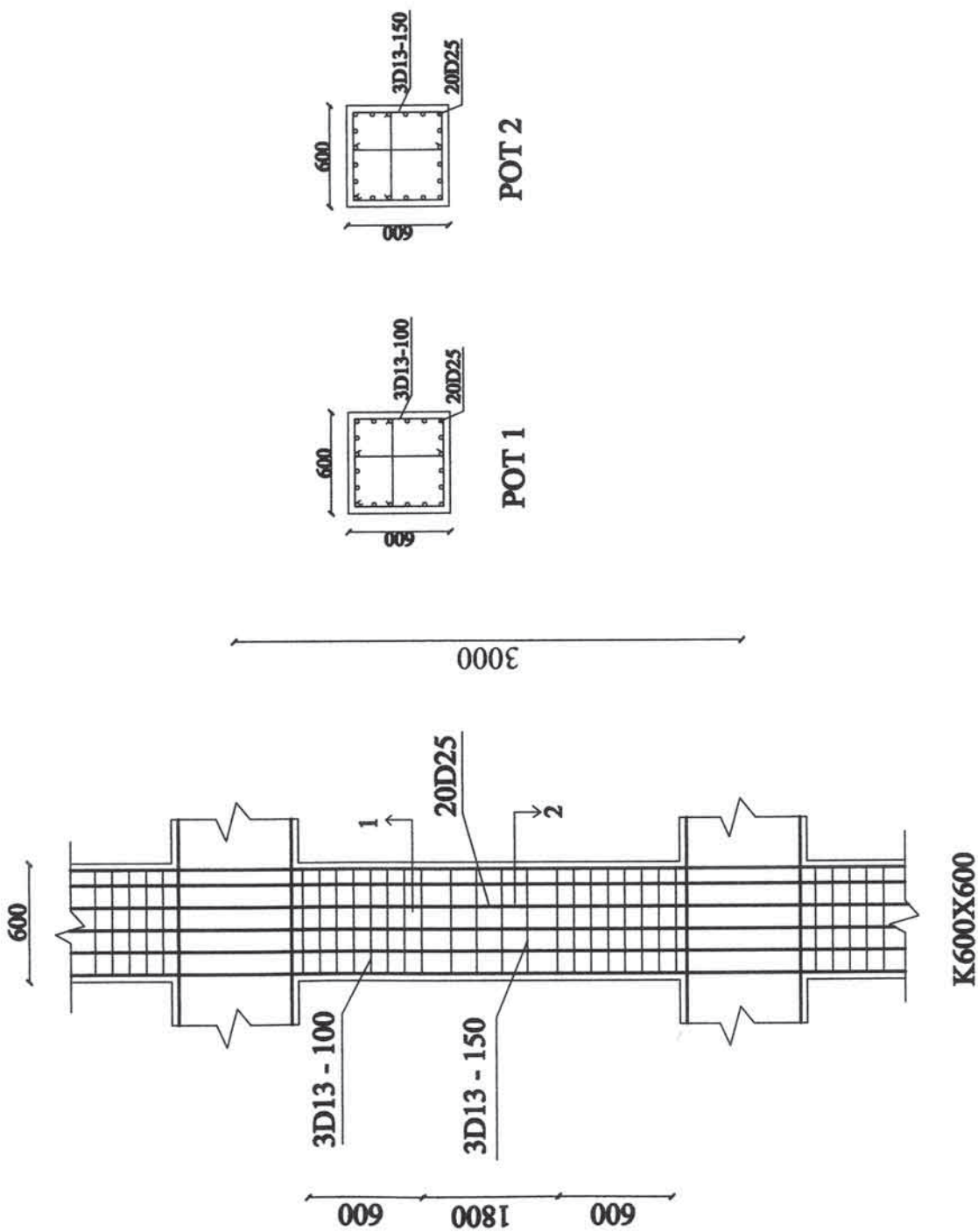
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Satuan dalam mm



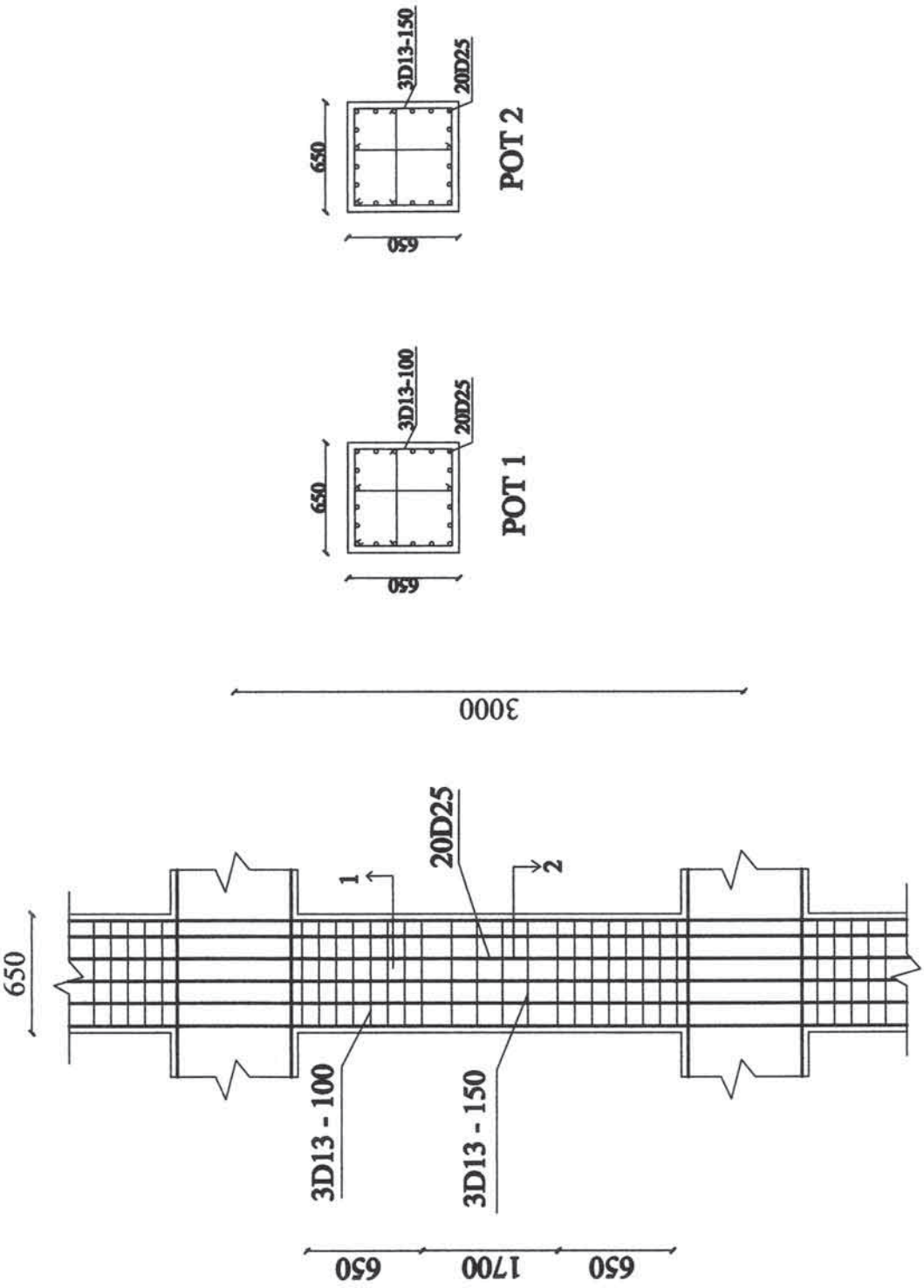
Denah Balok Kolom Lantai 7 - 8
Satuan dalam mm



DETAIL PENULANGAN KOLOM
Satuan dalam mm

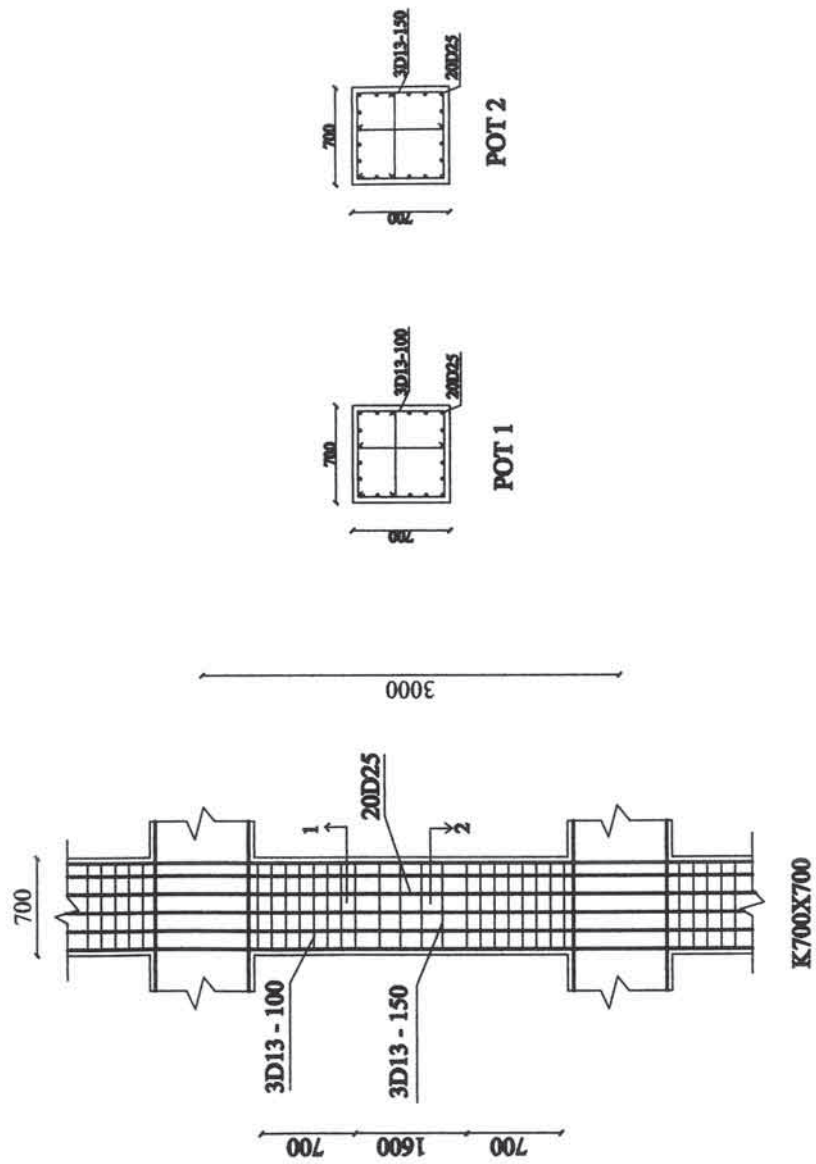


DETAIL PENULANGAN KOLOM
Satuan dalam mm

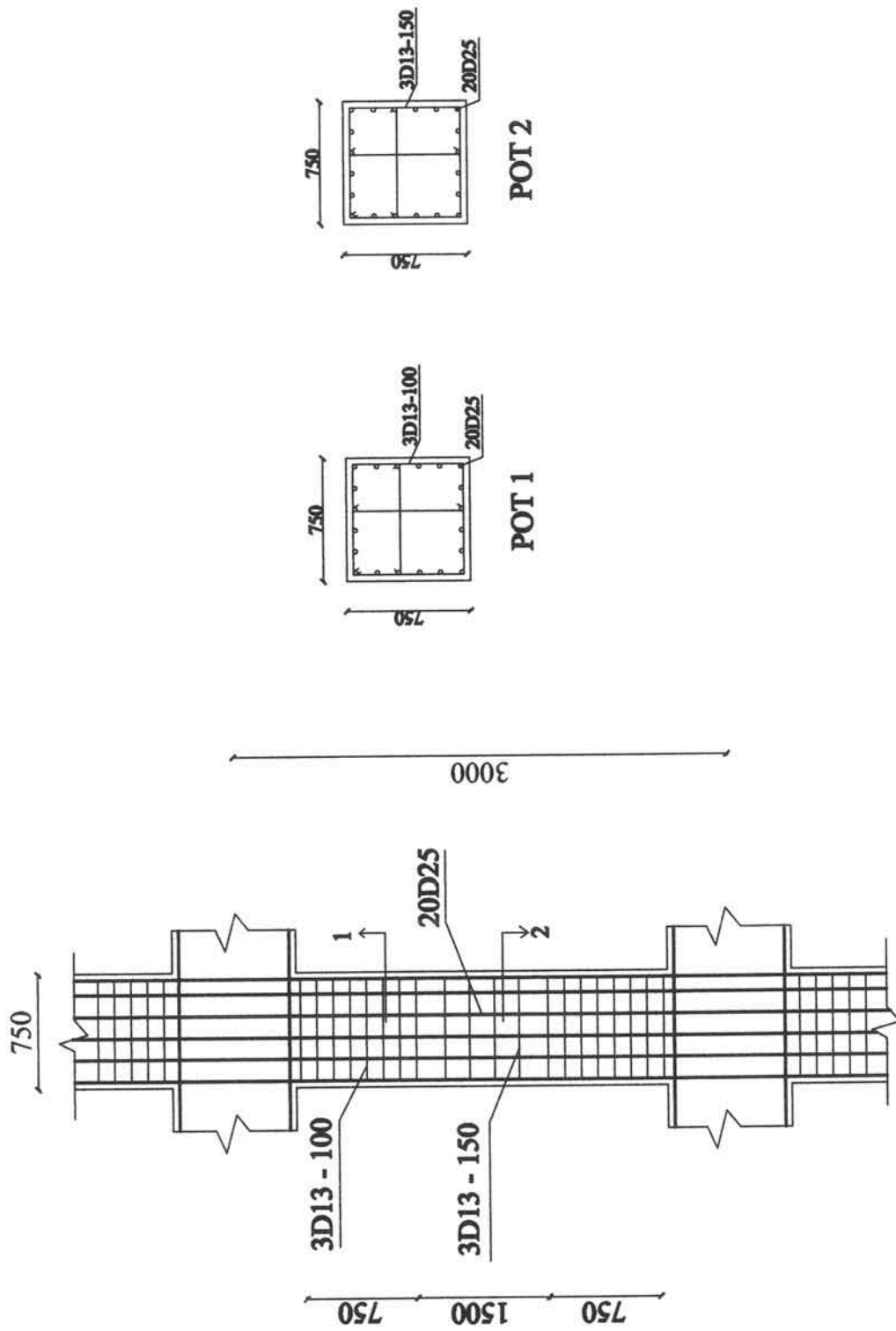


K650X650

DETAIL PENULANGAN KOLOM
Satuan dalam mm

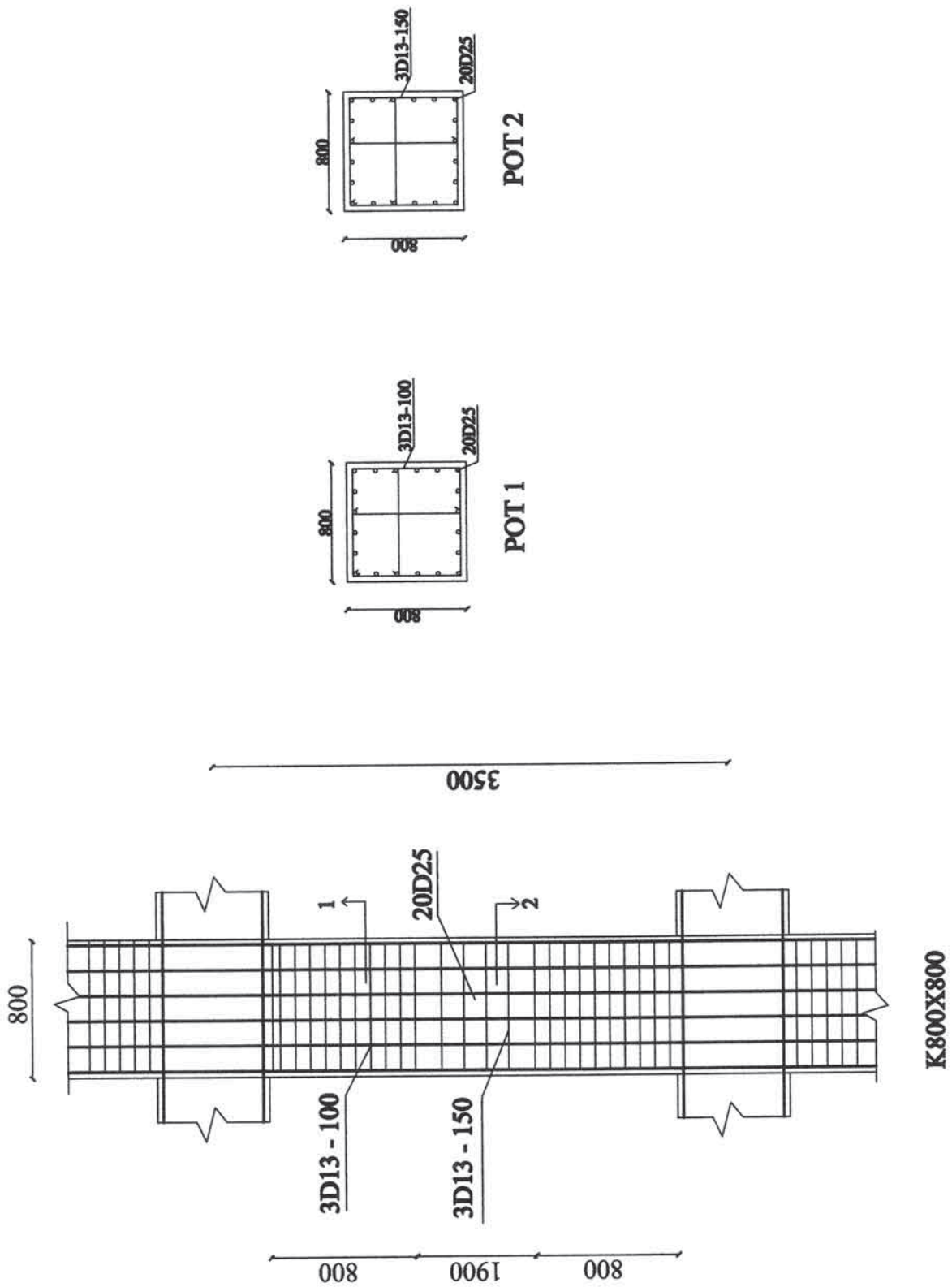


DETAIL PENULANGAN KOLOM
Satuan dalam mm

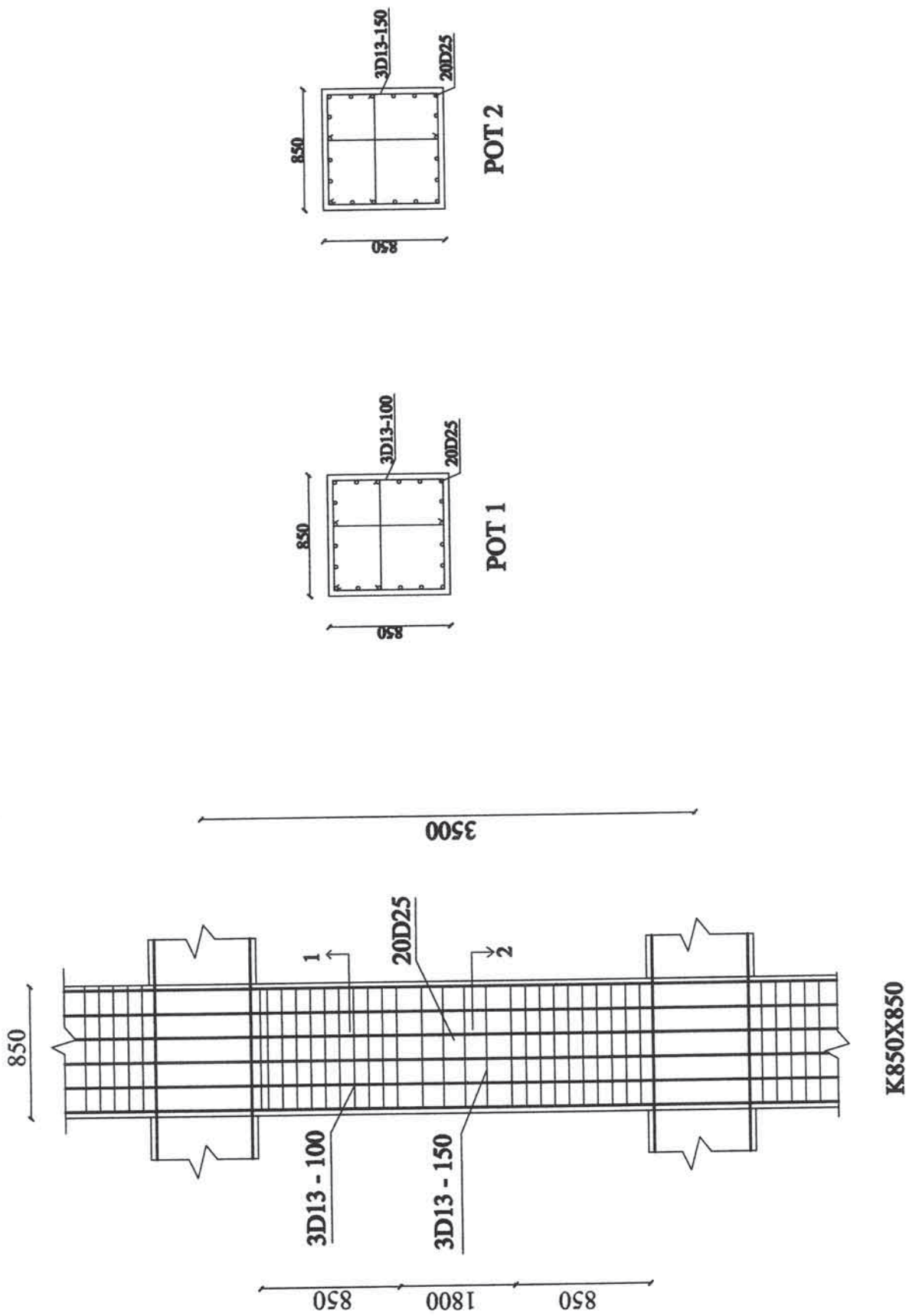


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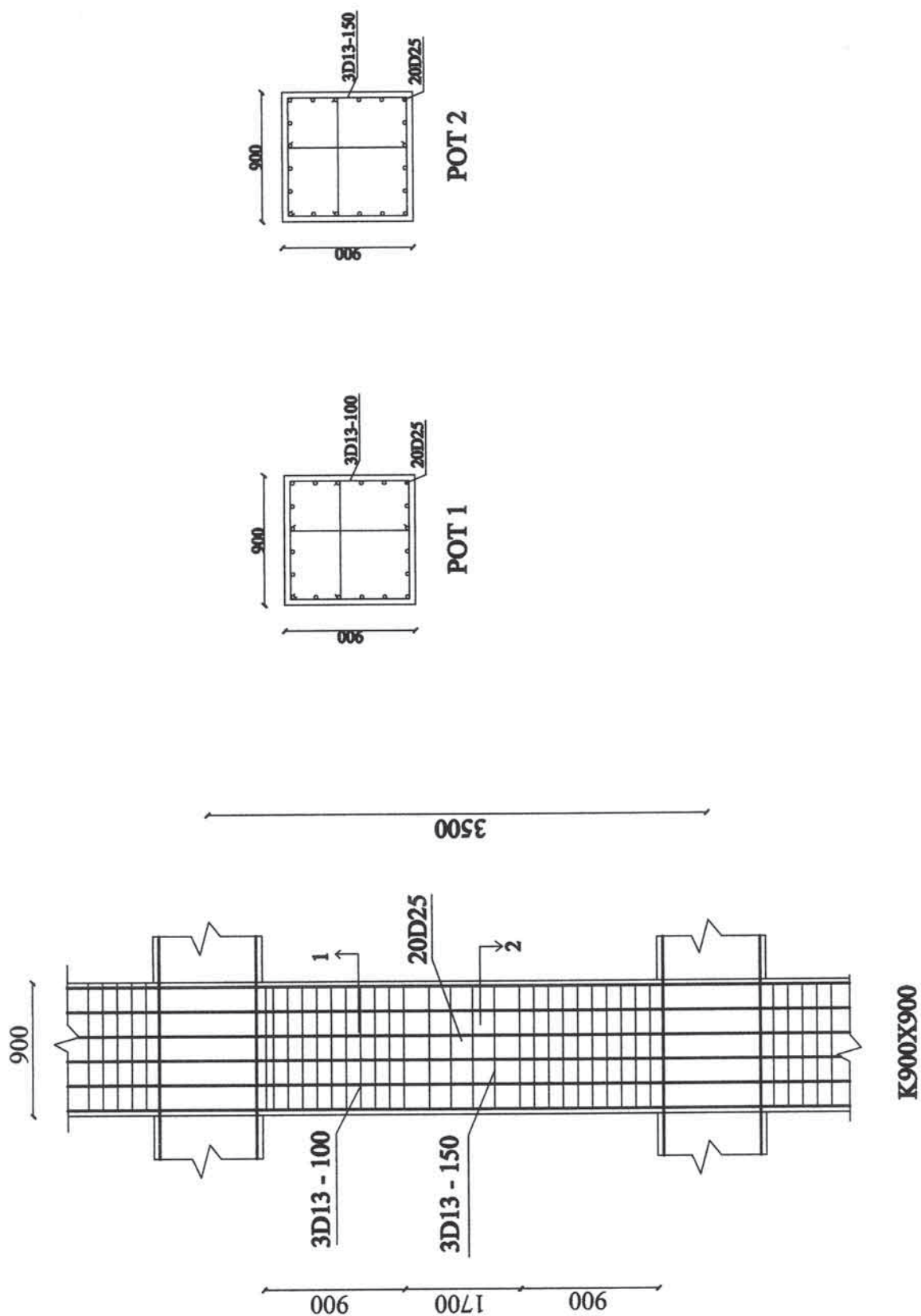
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 Satuan dalam mm



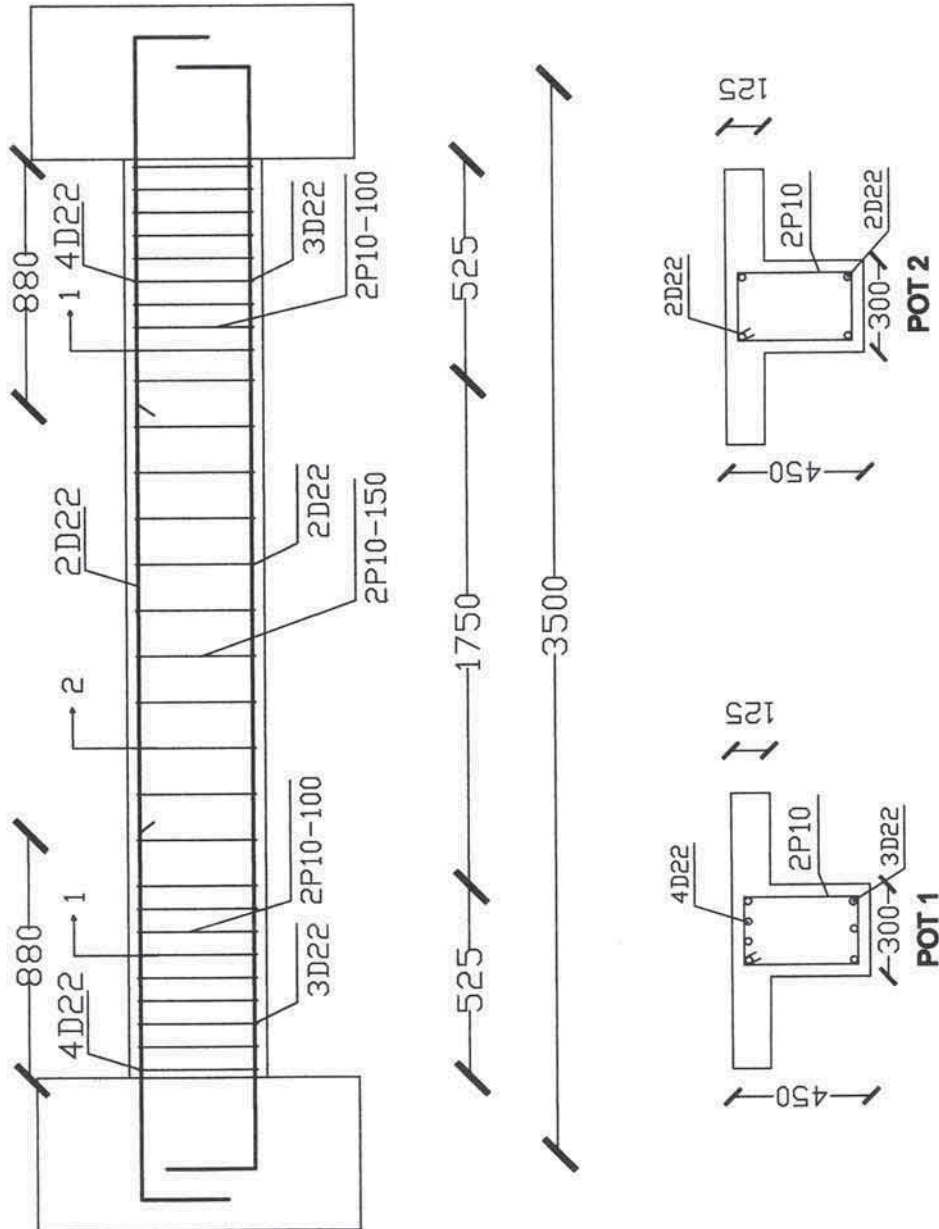
DETAIL PENULANGAN KOLOM
Satuan dalam mm



DETAIL PENULANGAN KOLOM
Satuan dalam mm



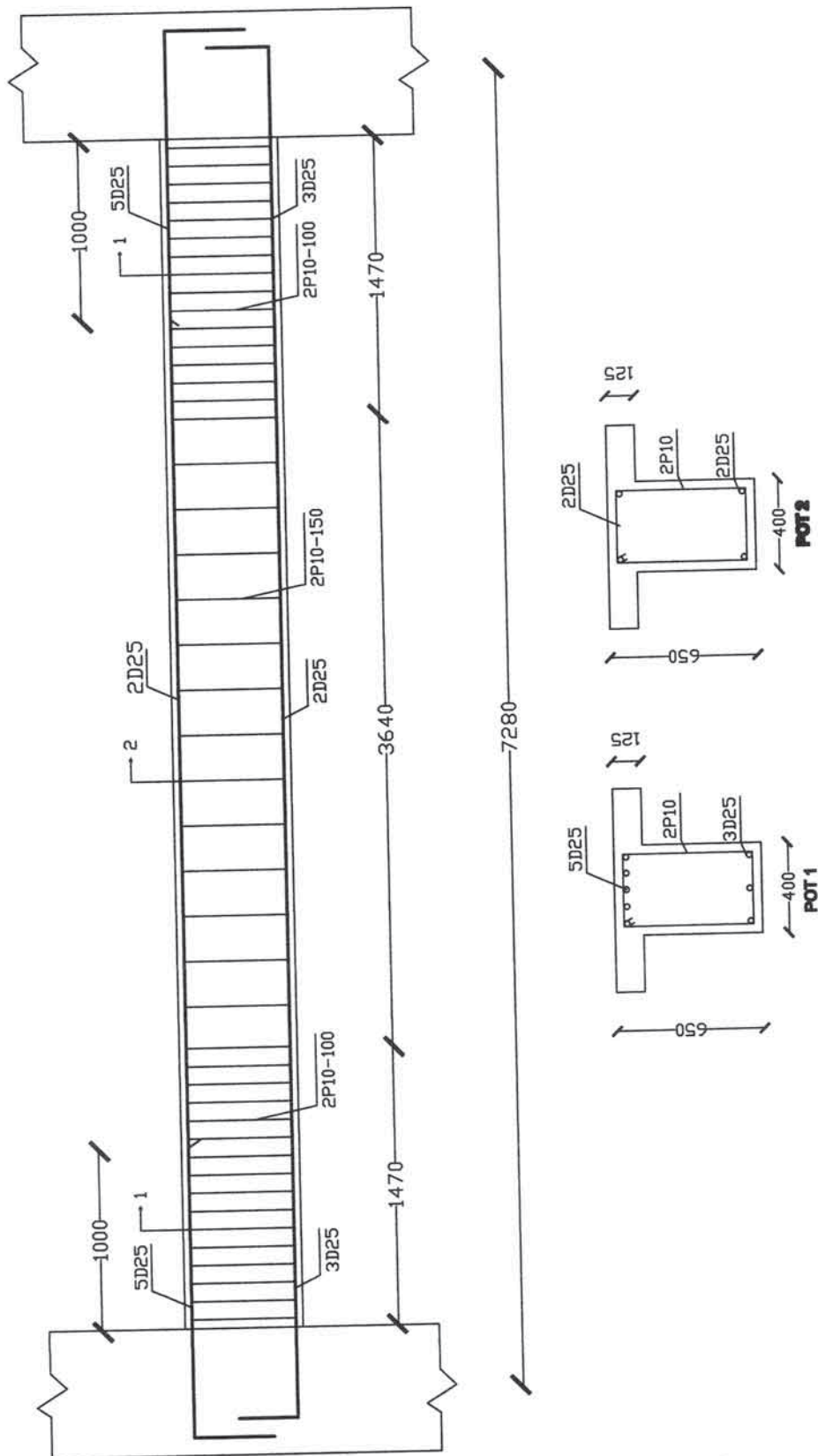
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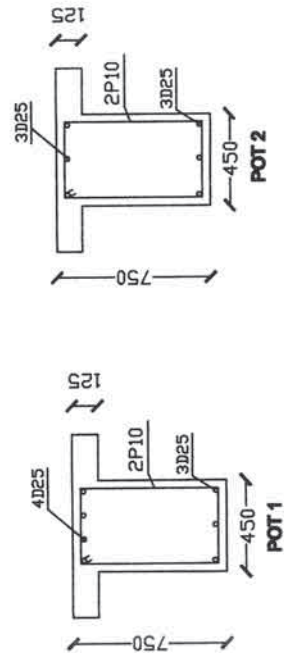
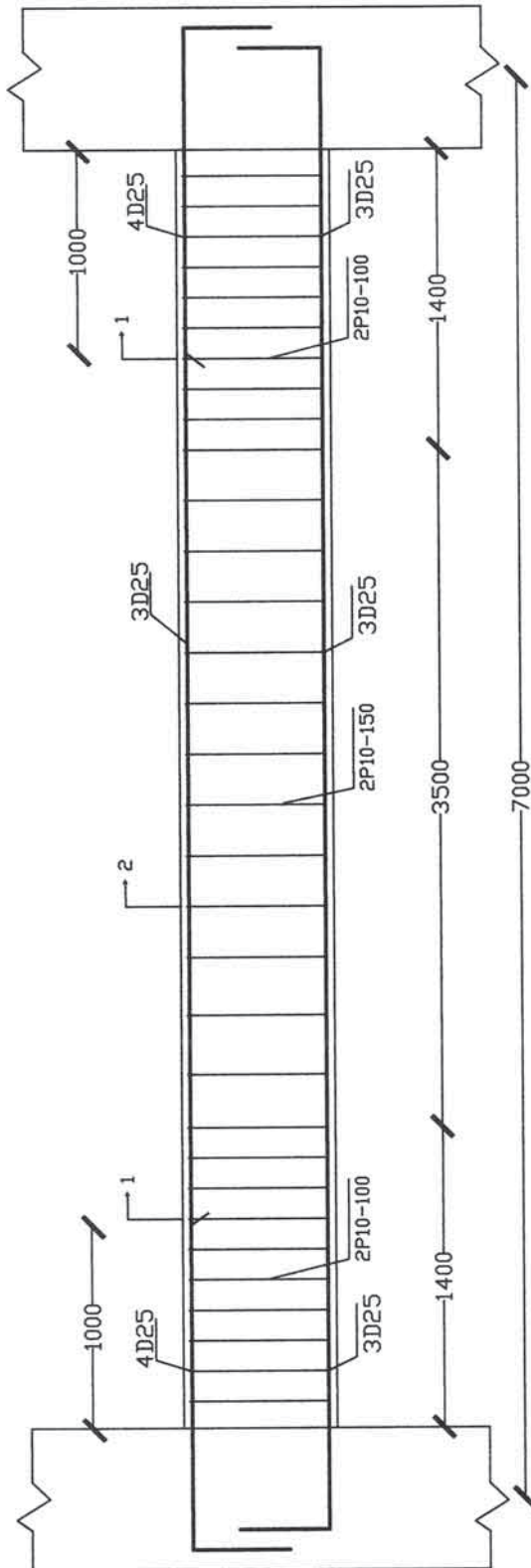


B300x450

DETAIL PENULANGAN BALOK

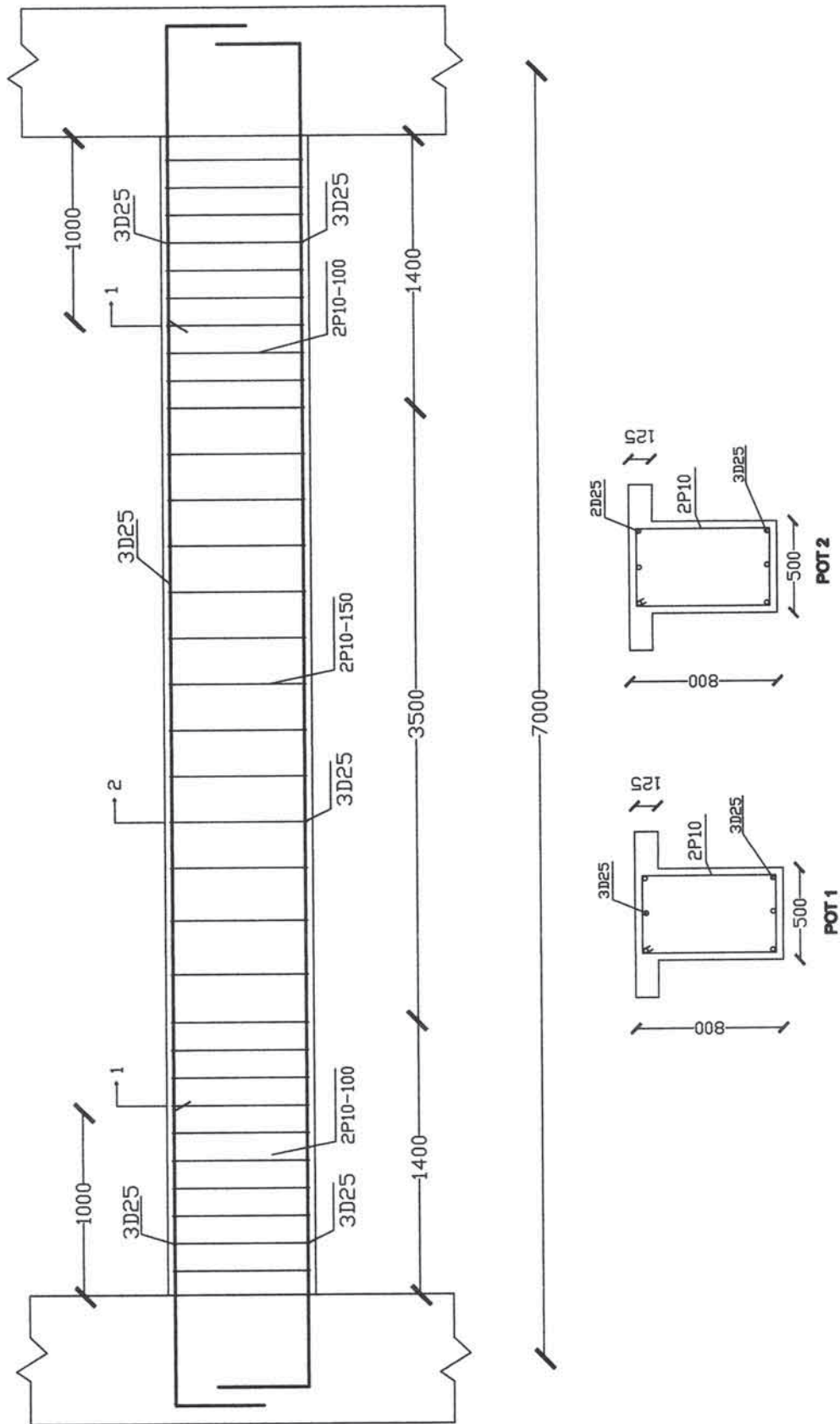
Satuan dalam mm





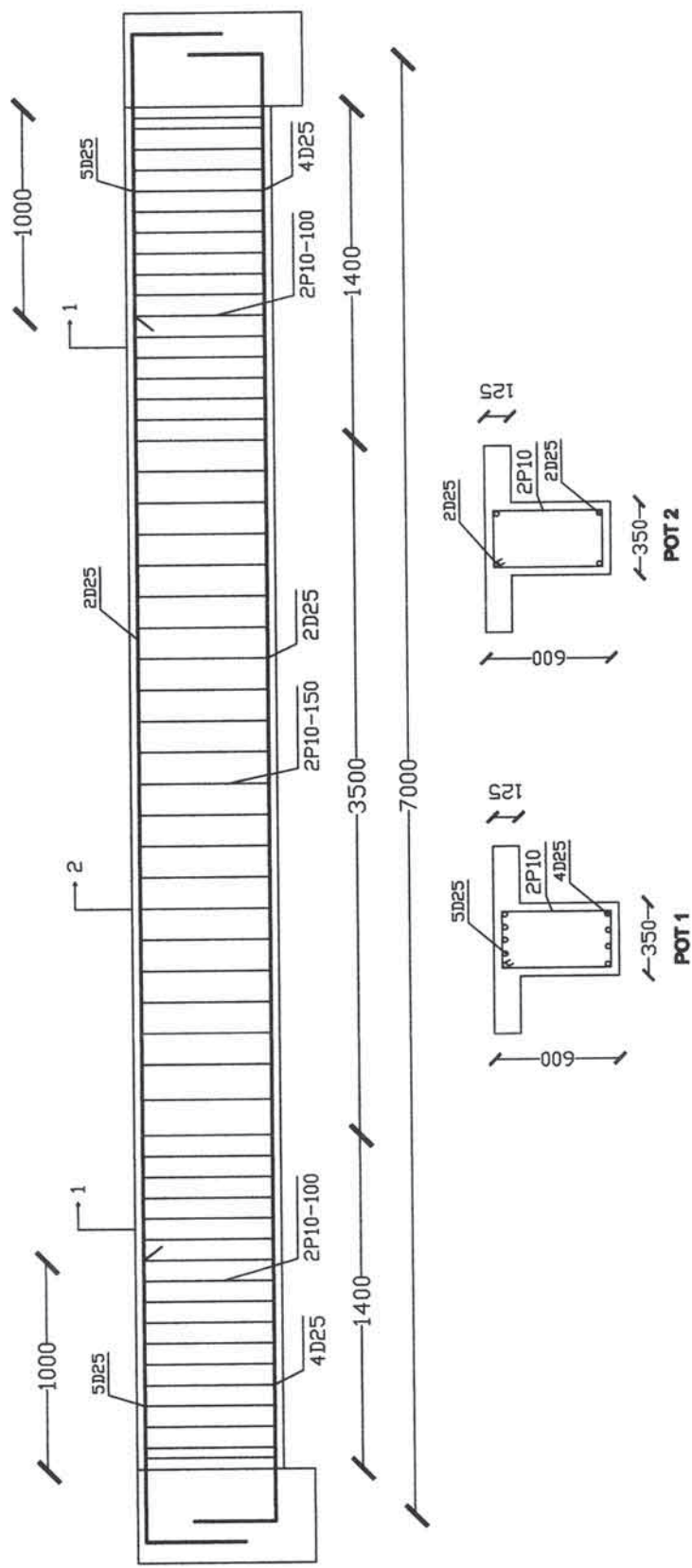
B450X750

DETAIL PENULANGAN BALOK
Satuan dalam mm



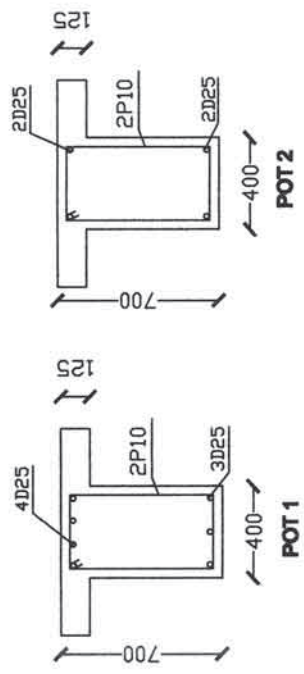
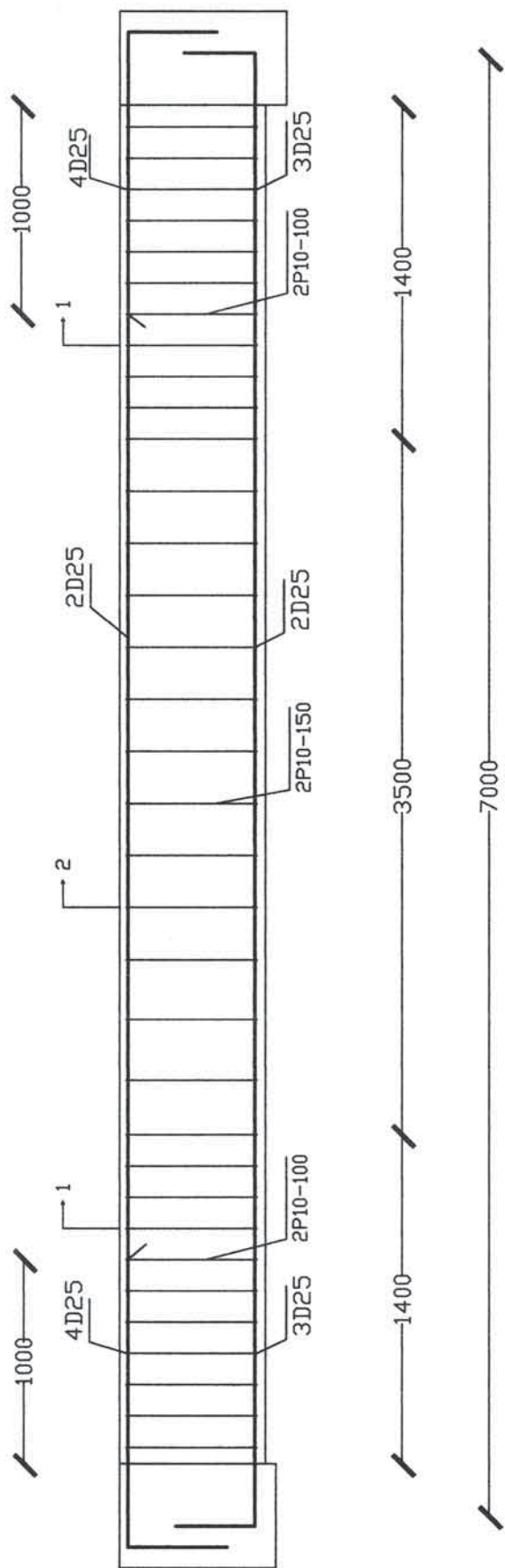
B500X800

DETAIL PENULANGAN BALOK
Satuan dalam mm

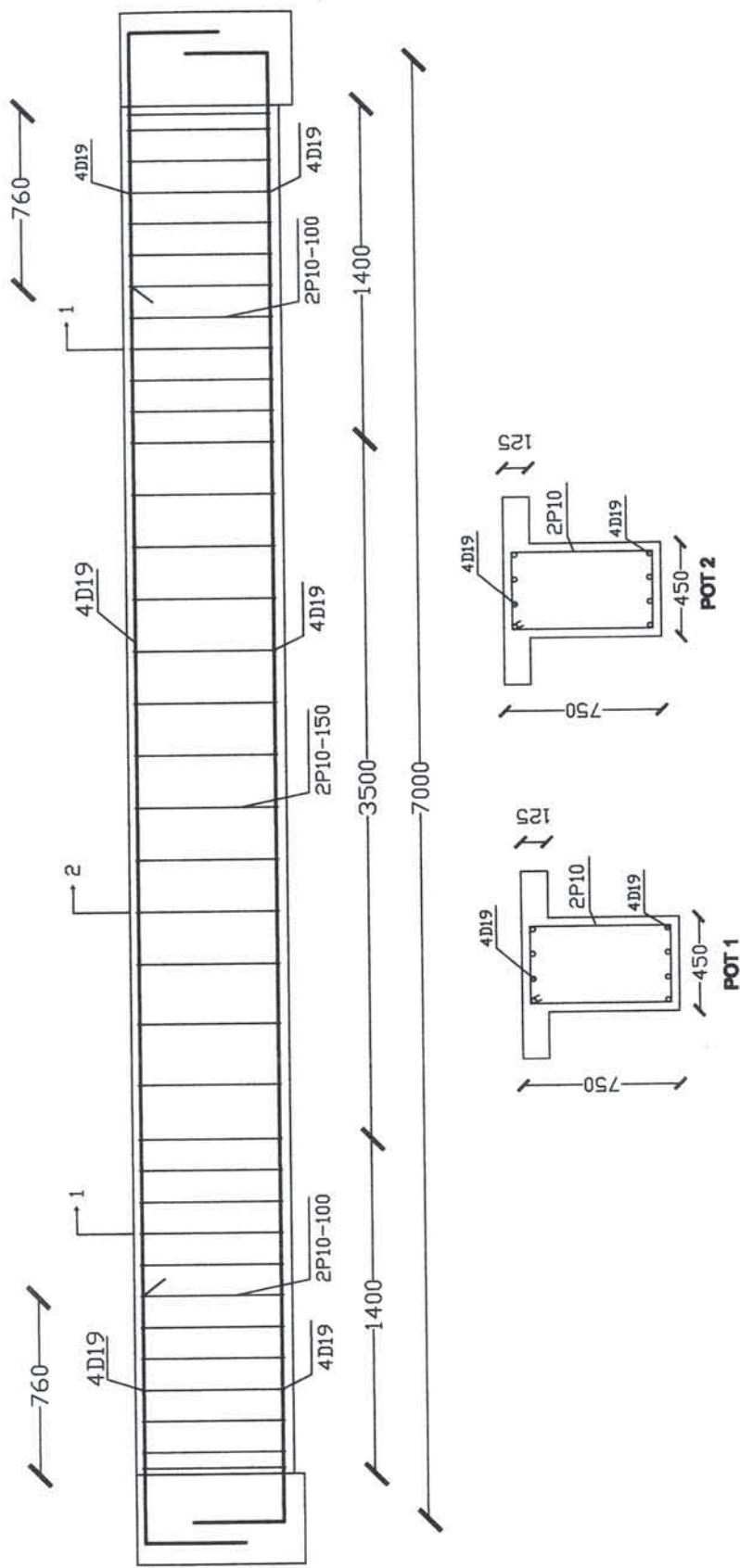


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DETAIL PENULANGAN BALOK
Satuan dalam mm

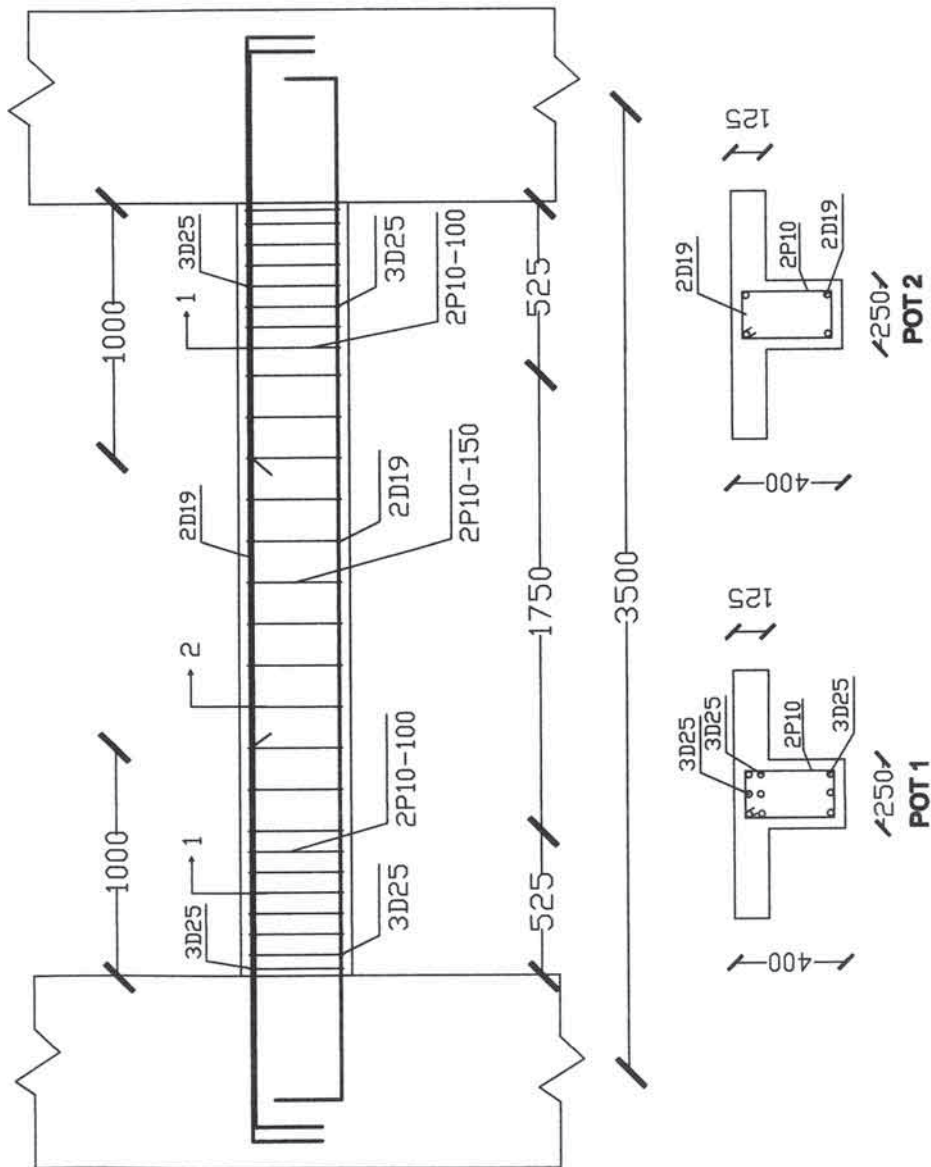


BA400X700
DETAIL PENULANGAN BALOK
 Satuan dalam mm



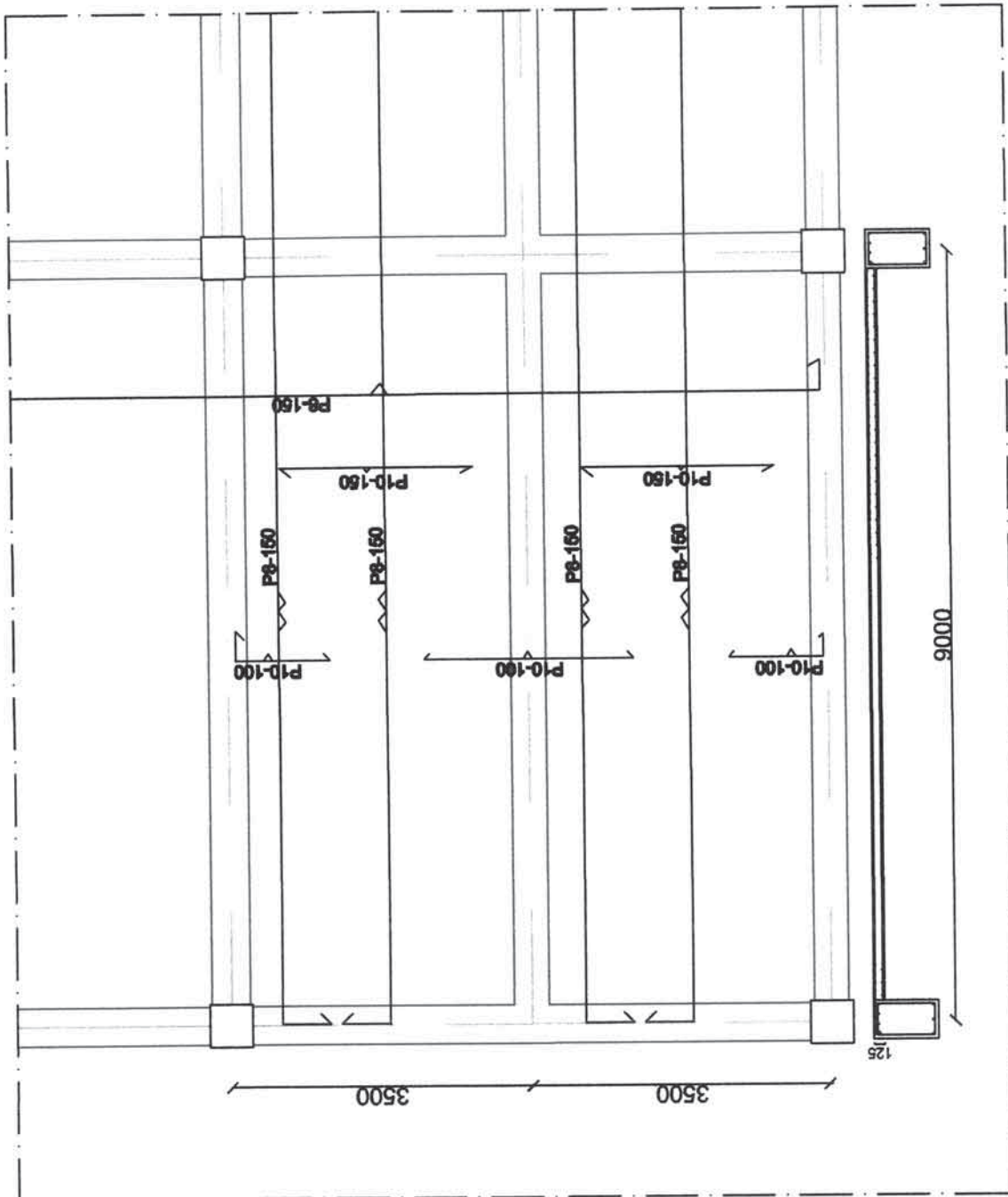
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DETAIL PENULANGAN BALOK
Satuan dalam mm



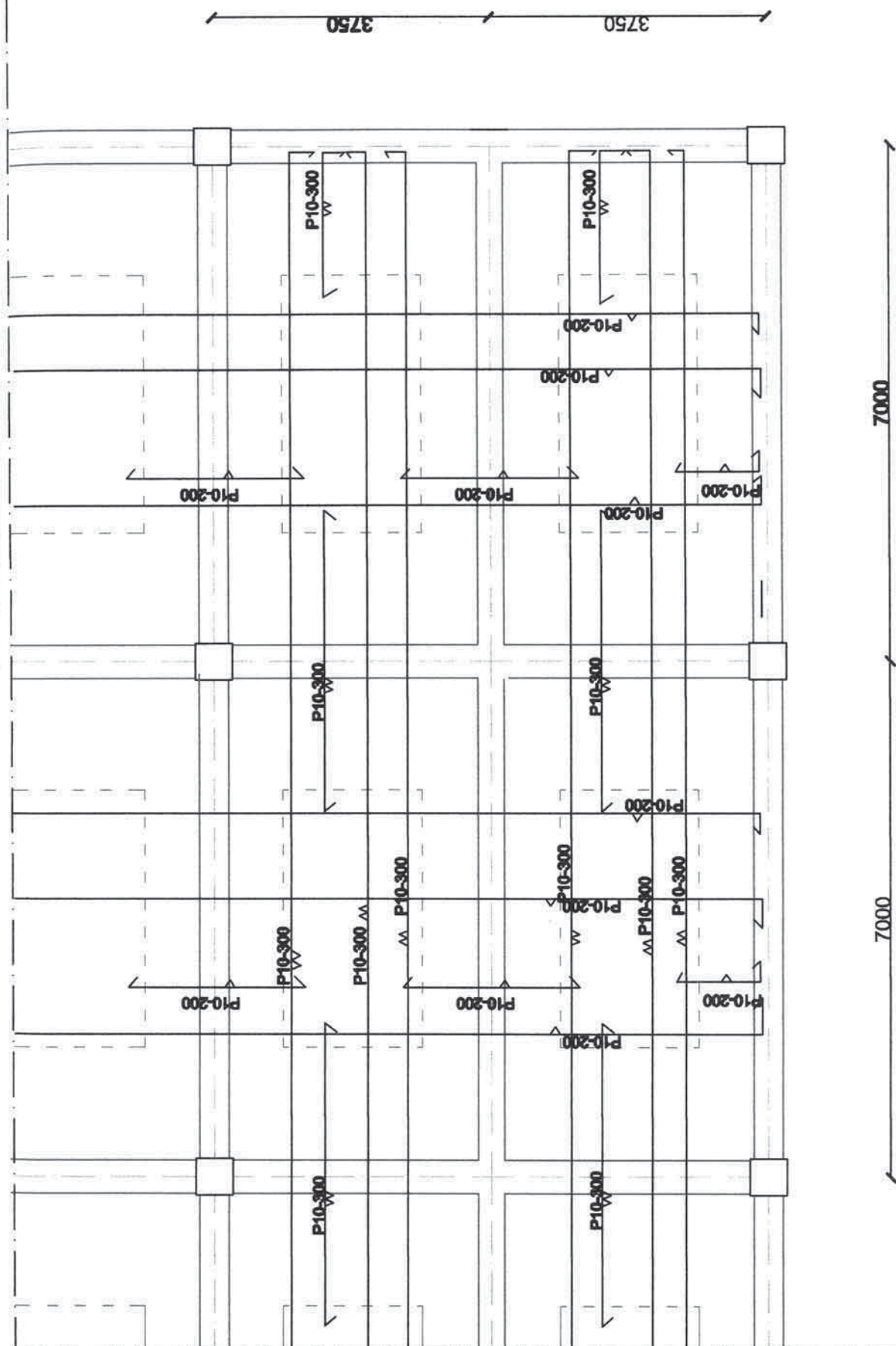
**BORDES
250X400**

DETAIL PENULANGAN BALOK
Satuan dalam mm

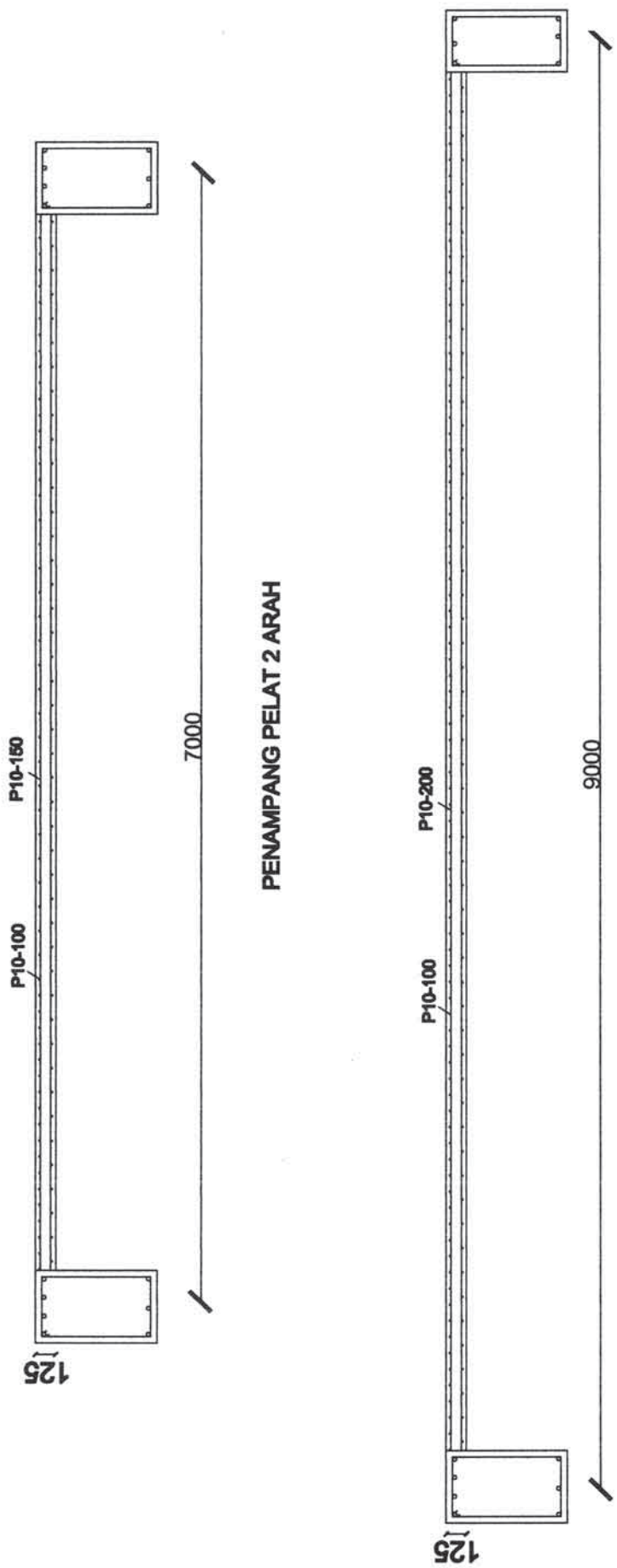


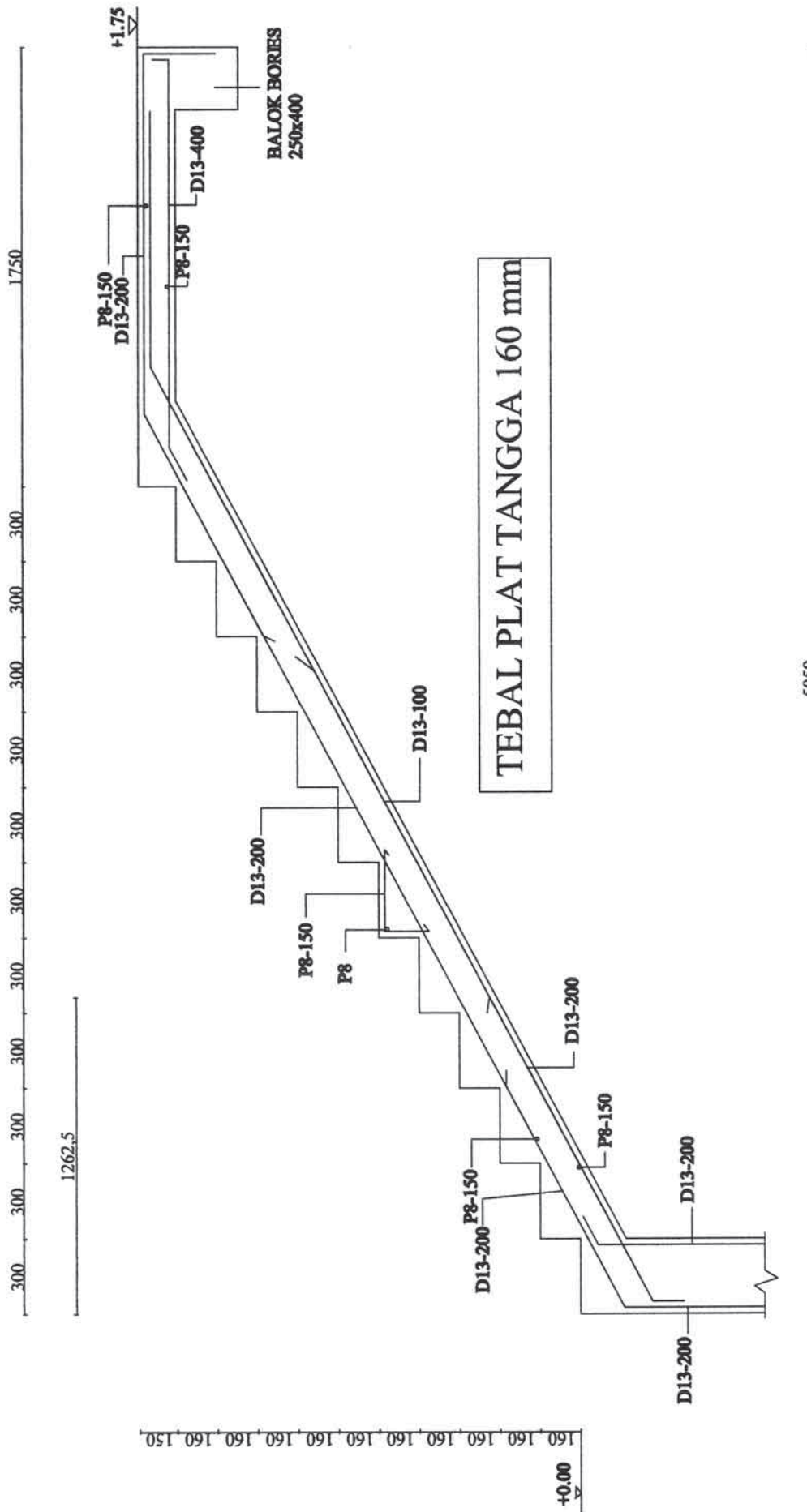
RENCANA PENULANGAN PLAT LANTAI 1 ARAH

Satuan dalam mm

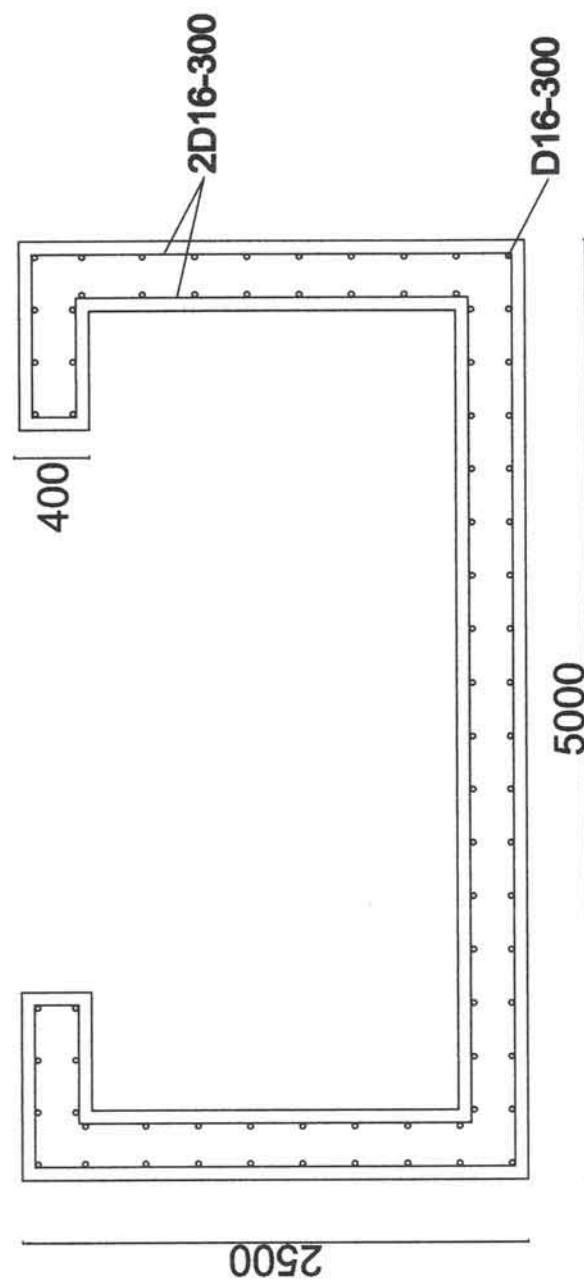


RENCANA PENULANGAN PELAT LANTAI 2 ARAH
 Satuan dalam mm

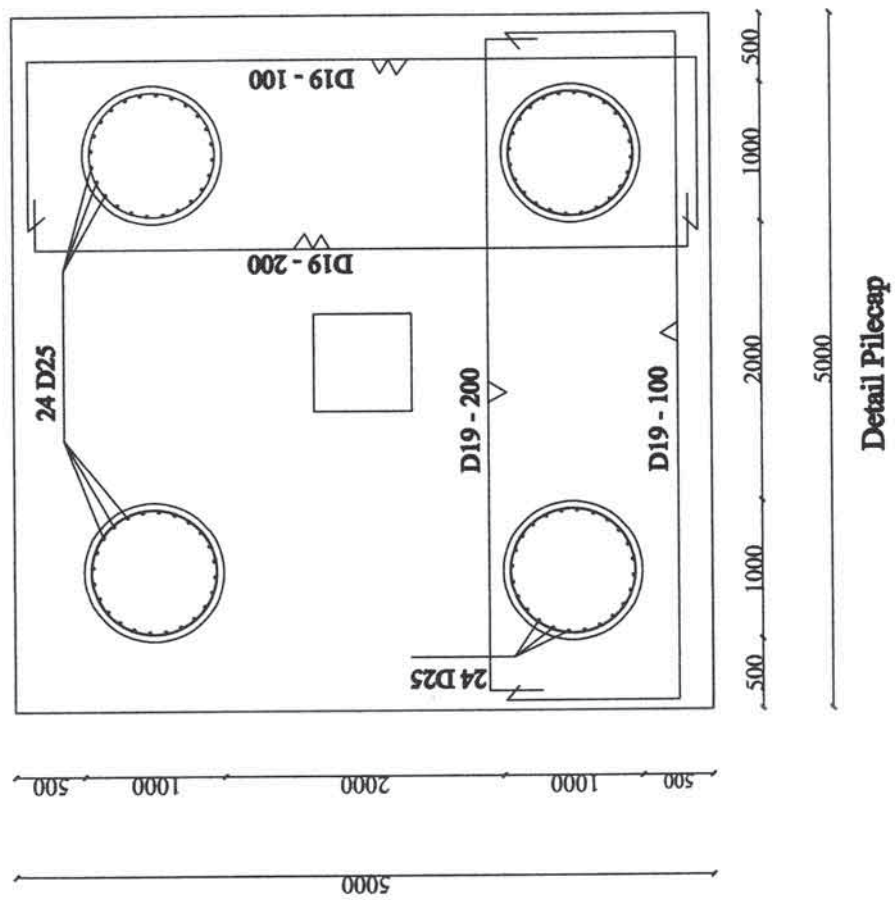




Detail Penulangan Tangga
Satuan dalam mm



PENULANGAN DINDING GESER
Satuan dalam mm



Story	Beam	Load	Loc	P	V2	V3	T	M2	M3
LT 2	B7	COMB19 MAX	0.2	0	-3.69	0	-2.162	0	-11.631
LT 2	B7	COMB19 MAX	0.643	0	-2.65	0	-2.162	0	-10.227
LT 2	B7	COMB19 MAX	1.086	0	-1.62	0	-2.162	0	-9.282
LT 2	B7	COMB19 MAX	1.529	0	-0.58	0	-2.162	0	-8.796
LT 2	B7	COMB19 MAX	1.971	0	0.46	0	-2.162	0	-1.083
LT 2	B7	COMB19 MAX	2.414	0	1.49	0	-2.162	0	37.033
LT 2	B7	COMB19 MAX	2.857	0	2.53	0	-2.162	0	77.45
LT 2	B7	COMB19 MAX	3.3	0	3.56	0	-2.162	0	116.992
LT 2	B7	COMB19 MIN	0.2	0	-102.14	0	-7.403	0	-178.191
LT 2	B7	COMB19 MIN	0.643	0	-100.16	0	-7.403	0	-133.395
LT 2	B7	COMB19 MIN	1.086	0	-98.19	0	-7.403	0	-89.475
LT 2	B7	COMB19 MIN	1.529	0	-96.21	0	-7.403	0	-46.43
LT 2	B7	COMB19 MIN	1.971	0	-94.23	0	-7.403	0	-11.946
LT 2	B7	COMB19 MIN	2.414	0	-92.25	0	-7.403	0	-9.2
LT 2	B7	COMB19 MIN	2.857	0	-90.28	0	-7.403	0	-10.091
LT 2	B7	COMB19 MIN	3.3	0	-88.3	0	-7.403	0	-11.44
ATAP	B212	COMB19 MAX	0.175	0	-67.18	0	91.678	0	-60.886
ATAP	B212	COMB19 MAX	0.67	0	-61.51	0	91.678	0	-28.999
ATAP	B212	COMB19 MAX	1.165	0	-54.97	0	91.678	0	-0.134
ATAP	B212	COMB19 MAX	1.66	0	-47.87	0	91.678	0	25.31
ATAP	B212	COMB19 MAX	2.155	0	-41.2	0	91.678	0	47.333
ATAP	B212	COMB19 MAX	2.65	0	-35.03	0	91.678	0	69.077
ATAP	B212	COMB19 MAX	3.145	0	-29.37	0	91.678	0	114.056
ATAP	B212	COMB19 MAX	3.64	0	-24.21	0	91.678	0	153.921
ATAP	B212	COMB19 MAX	3.64	0	16.58	0	2.447	0	122.886
ATAP	B212	COMB19 MAX	4.135	0	21.93	0	2.447	0	117.41
ATAP	B212	COMB19 MAX	4.63	0	28.21	0	2.447	0	106.461
ATAP	B212	COMB19 MAX	5.125	0	41.64	0	2.447	0	89.341
ATAP	B212	COMB19 MAX	5.62	0	54.7	0	2.447	0	88.265
ATAP	B212	COMB19 MAX	6.115	0	66.81	0	2.447	0	81.901

ATAP	B212	COMB19 MAX	6.61	0	77.96	0	2.447	0	69.781
ATAP	B212	COMB19 MAX	7.105	0	88.15	0	2.447	0	52.381
ATAP	B212	COMB19 MIN	0.175	0	-211.39	0	20.683	0	-492.078
ATAP	B212	COMB19 MIN	0.67	0	-200.58	0	20.683	0	-390.044
ATAP	B212	COMB19 MIN	1.165	0	-188.09	0	20.683	0	-293.778
ATAP	B212	COMB19 MIN	1.66	0	-174.54	0	20.683	0	-204.042
ATAP	B212	COMB19 MIN	2.155	0	-161.81	0	20.683	0	-120.834
ATAP	B212	COMB19 MIN	2.65	0	-150.04	0	20.683	0	-46.584
ATAP	B212	COMB19 MIN	3.145	0	-139.24	0	20.683	0	-4.084
ATAP	B212	COMB19 MIN	3.64	0	-129.38	0	20.683	0	35.736
ATAP	B212	COMB19 MIN	3.64	0	-41.88	0	-13.848	0	11.226
ATAP	B212	COMB19 MIN	4.135	0	-31.67	0	-13.848	0	25.482
ATAP	B212	COMB19 MIN	4.63	0	-19.82	0	-13.848	0	36.871
ATAP	B212	COMB19 MIN	5.125	0	-12.78	0	-13.848	0	44.834
ATAP	B212	COMB19 MIN	5.62	0	-5.94	0	-13.848	0	26.636
ATAP	B212	COMB19 MIN	6.115	0	0.41	0	-13.848	0	4.234
ATAP	B212	COMB19 MIN	6.61	0	6.25	0	-13.848	0	-21.184
ATAP	B212	COMB19 MIN	7.105	0	11.59	0	-13.848	0	-49.369
LT 6	B455	COMB19 MAX	0.25	0	-43.29	0	-2.288	0	66.106
LT 6	B455	COMB19 MAX	0.5	0	-40.47	0	-2.288	0	78.191
LT 6	B455	COMB19 MAX	0.5	0	9.8	0	2.408	0	49.547
LT 6	B455	COMB19 MAX	1	0	15.43	0	2.408	0	43.241
LT 6	B455	COMB19 MAX	1.5	0	21.06	0	2.408	0	34.12
LT 6	B455	COMB19 MAX	2	0	26.69	0	2.408	0	38.228
LT 6	B455	COMB19 MAX	2.5	0	32.32	0	2.408	0	126.273
LT 6	B455	COMB19 MAX	2.5	0	25.42	0	0.799	0	55.724
LT 6	B455	COMB19 MAX	2.908	0	30.02	0	0.799	0	98.318
LT 6	B455	COMB19 MAX	3.317	0	34.62	0	0.799	0	137.327
LT 6	B455	COMB19 MAX	3.725	0	39.22	0	0.799	0	172.752
LT 6	B455	COMB19 MIN	0.25	0	-514.74	0	-33.021	0	-470.837
LT 6	B455	COMB19 MIN	0.5	0	-509.36	0	-33.021	0	-344.438

LT 6	B455	COMB19 MIN	0.5	0	-237.69	0	-1.498	0	-307.196
LT 6	B455	COMB19 MIN	1	0	-226.95	0	-1.498	0	-191.036
LT 6	B455	COMB19 MIN	1.5	0	-216.2	0	-1.498	0	-80.25
LT 6	B455	COMB19 MIN	2	0	-205.45	0	-1.498	0	9.116
LT 6	B455	COMB19 MIN	2.5	0	-194.7	0	-1.498	0	6.356
LT 6	B455	COMB19 MIN	2.5	0	-108.7	0	-4.223	0	10.356
LT 6	B455	COMB19 MIN	2.908	0	-99.92	0	-4.223	0	-0.962
LT 6	B455	COMB19 MIN	3.317	0	-91.14	0	-4.223	0	-14.158
LT 6	B455	COMB19 MIN	3.725	0	-82.37	0	-4.223	0	-29.232
LT 8	B46	COMB19 MAX	0.175	0	-50.07	0	78.675	0	-10.952
LT 8	B46	COMB19 MAX	0.65	0	-44.21	0	78.675	0	11.439
LT 8	B46	COMB19 MAX	1.125	0	-38.34	0	78.675	0	31.044
LT 8	B46	COMB19 MAX	1.6	0	-32.48	0	78.675	0	47.864
LT 8	B46	COMB19 MAX	2.075	0	-26.61	0	78.675	0	62.729
LT 8	B46	COMB19 MAX	2.55	0	-20.75	0	78.675	0	90.813
LT 8	B46	COMB19 MAX	3.025	0	-14.88	0	78.675	0	122.734
LT 8	B46	COMB19 MAX	3.5	0	-9.02	0	78.675	0	149.338
LT 8	B46	COMB19 MAX	3.5	0	43.11	0	76.496	0	141.489
LT 8	B46	COMB19 MAX	3.975	0	54.3	0	76.496	0	118.68
LT 8	B46	COMB19 MAX	4.45	0	65.49	0	76.496	0	92.145
LT 8	B46	COMB19 MAX	4.925	0	76.69	0	76.496	0	75.773
LT 8	B46	COMB19 MAX	5.4	0	87.88	0	76.496	0	60.84
LT 8	B46	COMB19 MAX	5.875	0	99.07	0	76.496	0	40.591
LT 8	B46	COMB19 MAX	6.35	0	110.26	0	76.496	0	26.108
LT 8	B46	COMB19 MAX	6.825	0	121.46	0	76.496	0	14.836
LT 8	B46	COMB19 MIN	0.175	0	-184.11	0	24.501	0	-385.953
LT 8	B46	COMB19 MIN	0.65	0	-172.91	0	24.501	0	-301.161
LT 8	B46	COMB19 MIN	1.125	0	-161.72	0	24.501	0	-221.685
LT 8	B46	COMB19 MIN	1.6	0	-150.53	0	24.501	0	-147.526
LT 8	B46	COMB19 MIN	2.075	0	-139.34	0	24.501	0	-79.514
LT 8	B46	COMB19 MIN	2.55	0	-128.14	0	24.501	0	-32.824

LT 8	B46	COMB19 MIN	3.025	0	-116.95	0	24.501	0	1.927
LT 8	B46	COMB19 MIN	3.5	0	-105.76	0	24.501	0	33.893
LT 8	B46	COMB19 MIN	3.5	0	-14.39	0	23.38	0	32.978
LT 8	B46	COMB19 MIN	3.975	0	-8.52	0	23.38	0	38.095
LT 8	B46	COMB19 MIN	4.45	0	-2.66	0	23.38	0	38.835
LT 8	B46	COMB19 MIN	4.925	0	3.2	0	23.38	0	21.31
LT 8	B46	COMB19 MIN	5.4	0	9.07	0	23.38	0	-5.757
LT 8	B46	COMB19 MIN	5.875	0	14.93	0	23.38	0	-35.609
LT 8	B46	COMB19 MIN	6.35	0	20.8	0	23.38	0	-79.329
LT 8	B46	COMB19 MIN	6.825	0	26.66	0	23.38	0	-134.363
LT 3	B458	COMB19 MAX	0	0	129.85	0	6.216	0	314.447
LT 3	B458	COMB19 MAX	0.5	0	138.49	0	6.216	0	247.362
LT 3	B458	COMB19 MAX	1	0	147.13	0	6.216	0	175.956
LT 3	B458	COMB19 MAX	1.5	0	155.77	0	6.216	0	100.23
LT 3	B458	COMB19 MAX	2	0	164.41	0	6.216	0	32.019
LT 3	B458	COMB19 MAX	2	0	219.1	0	21.076	0	36.141
LT 3	B458	COMB19 MAX	2.438	0	226.66	0	21.076	0	0.686
LT 3	B458	COMB19 MAX	2.875	0	234.22	0	21.076	0	-21.345
LT 3	B458	COMB19 MAX	3.313	0	241.78	0	21.076	0	-44.931
LT 3	B458	COMB19 MAX	3.75	0	249.34	0	21.076	0	-70.249
LT 3	B458	COMB19 MIN	0	0	2.41	0	-9.095	0	41.86
LT 3	B458	COMB19 MIN	0.5	0	6.94	0	-9.095	0	39.522
LT 3	B458	COMB19 MIN	1	0	11.47	0	-9.095	0	34.92
LT 3	B458	COMB19 MIN	1.5	0	15.99	0	-9.095	0	28.055
LT 3	B458	COMB19 MIN	2	0	20.52	0	-9.095	0	7.091
LT 3	B458	COMB19 MIN	2	0	44.01	0	-3.553	0	9.023
LT 3	B458	COMB19 MIN	2.438	0	47.97	0	-3.553	0	-73.152
LT 3	B458	COMB19 MIN	2.875	0	51.93	0	-3.553	0	-173.791
LT 3	B458	COMB19 MIN	3.313	0	55.89	0	-3.553	0	-277.916
LT 3	B458	COMB19 MIN	3.75	0	59.85	0	-3.553	0	-385.348
LT 3	B119	COMB19 MAX	0	0	-69.99	0	27.555	0	-69.137

LT 3	B119	COMB19 MAX	0.5	0	-64.86	0	27.555	0	-35.423
LT 3	B119	COMB19 MAX	1	0	-59.73	0	27.555	0	-4.275
LT 3	B119	COMB19 MAX	1.5	0	-54.59	0	27.555	0	24.305
LT 3	B119	COMB19 MAX	2	0	-49.46	0	27.555	0	50.319
LT 3	B119	COMB19 MAX	2	0	-34.25	0	34.383	0	50.302
LT 3	B119	COMB19 MAX	2.425	0	-29.89	0	34.383	0	72.144
LT 3	B119	COMB19 MAX	2.85	0	-25.53	0	34.383	0	105.231
LT 3	B119	COMB19 MAX	3.275	0	-21.16	0	34.383	0	134.779
LT 3	B119	COMB19 MAX	3.7	0	-16.8	0	34.383	0	160.787
LT 3	B119	COMB19 MAX	4.125	0	-12.44	0	34.383	0	185.061
LT 3	B119	COMB19 MAX	4.55	0	-8.07	0	34.383	0	211.788
LT 3	B119	COMB19 MAX	4.55	0	54.93	0	14.397	0	215.442
LT 3	B119	COMB19 MAX	5.044	0	64.62	0	14.397	0	209.288
LT 3	B119	COMB19 MAX	5.539	0	74.31	0	14.397	0	199.355
LT 3	B119	COMB19 MAX	6.033	0	84	0	14.397	0	184.631
LT 3	B119	COMB19 MAX	6.528	0	93.69	0	14.397	0	165.117
LT 3	B119	COMB19 MAX	7.022	0	103.38	0	14.397	0	140.812
LT 3	B119	COMB19 MAX	7.517	0	113.07	0	14.397	0	111.717
LT 3	B119	COMB19 MAX	8.011	0	122.75	0	14.397	0	77.832
LT 3	B119	COMB19 MAX	8.506	0	132.44	0	14.397	0	61.958
LT 3	B119	COMB19 MAX	9	0	142.13	0	14.397	0	44.102
LT 3	B119	COMB19 MIN	0	0	-203.7	0	10.992	0	-439.866
LT 3	B119	COMB19 MIN	0.5	0	-193.9	0	10.992	0	-340.466
LT 3	B119	COMB19 MIN	1	0	-184.1	0	10.992	0	-245.966
LT 3	B119	COMB19 MIN	1.5	0	-174.3	0	10.992	0	-156.364
LT 3	B119	COMB19 MIN	2	0	-164.51	0	10.992	0	-141.662
LT 3	B119	COMB19 MIN	2	0	-135.51	0	13.149	0	-141.227
LT 3	B119	COMB19 MIN	2.425	0	-127.19	0	13.149	0	-73.614
LT 3	B119	COMB19 MIN	2.85	0	-118.86	0	13.149	0	7.361
LT 3	B119	COMB19 MIN	3.275	0	-110.53	0	13.149	0	36.481
LT 3	B119	COMB19 MIN	3.7	0	-102.2	0	13.149	0	63.746

LT 3	B119	COMB19 MIN	4.125	0	-93.87	0	13.149	0	87.352
LT 3	B119	COMB19 MIN	4.55	0	-85.55	0	13.149	0	103.111
LT 3	B119	COMB19 MIN	4.55	0	-7.04	0	1.595	0	104.27
LT 3	B119	COMB19 MIN	5.044	0	-1.96	0	1.595	0	83.091
LT 3	B119	COMB19 MIN	5.539	0	3.12	0	1.595	0	58.39
LT 3	B119	COMB19 MIN	6.033	0	8.19	0	1.595	0	31.18
LT 3	B119	COMB19 MIN	6.528	0	13.27	0	1.595	0	1.46
LT 3	B119	COMB19 MIN	7.022	0	18.35	0	1.595	0	-30.771
LT 3	B119	COMB19 MIN	7.517	0	23.42	0	1.595	0	-65.511
LT 3	B119	COMB19 MIN	8.011	0	28.5	0	1.595	0	-102.761
LT 3	B119	COMB19 MIN	8.506	0	33.57	0	1.595	0	-165.324
LT 3	B119	COMB19 MIN	9	0	38.65	0	1.595	0	-233.206
LT 3	B137	COMB19 MAX	0	2.01	-25.98	0.1	0.123	0.1	-39.917
LT 3	B137	COMB19 MAX	0.5	2.01	-23.06	0.1	0.123	0.048	-27.657
LT 3	B137	COMB19 MAX	1	2.01	-20.13	0.1	0.123	0.005	-16.859
LT 3	B137	COMB19 MAX	1.5	2.01	-17.21	0.1	0.123	0.053	-7.523
LT 3	B137	COMB19 MAX	2	2.01	-14.29	0.1	0.123	0.101	0.352
LT 3	B137	COMB19 MAX	2.5	2.01	-11.36	0.1	0.123	0.15	8.989
LT 3	B137	COMB19 MAX	3	2.01	-8.44	0.1	0.123	0.199	22.625
LT 3	B137	COMB19 MAX	3.5	2.01	-5.51	0.1	0.123	0.248	33.425
LT 3	B137	COMB19 MAX	3.5	1.41	1.54	0.57	0.969	0.905	28.543
LT 3	B137	COMB19 MAX	4	1.41	7.21	0.57	0.969	0.62	26.356
LT 3	B137	COMB19 MAX	4.5	1.41	12.88	0.57	0.969	0.335	21.334
LT 3	B137	COMB19 MAX	5	1.41	18.55	0.57	0.969	0.051	13.477
LT 3	B137	COMB19 MAX	5.5	1.41	24.22	0.57	0.969	0.245	5.198
LT 3	B137	COMB19 MAX	6	1.41	29.89	0.57	0.969	0.541	-1.875
LT 3	B137	COMB19 MAX	6.5	1.41	35.56	0.57	0.969	0.837	-10.411
LT 3	B137	COMB19 MAX	7	1.41	41.23	0.57	0.969	1.132	-20.409
LT 3	B137	COMB19 MIN	0	-2.3	-65.5	-0.1	-0.768	-0.094	-153.393
LT 3	B137	COMB19 MIN	0.5	-2.3	-59.91	-0.1	-0.768	-0.045	-125.493
LT 3	B137	COMB19 MIN	1	-2.3	-54.33	-0.1	-0.768	-0.005	-101.05

LT 3	B137	COMB19 MIN	1.5	-2.3	-48.75	-0.1	-0.768	-0.056	-79.037
LT 3	B137	COMB19 MIN	2	-2.3	-43.17	-0.1	-0.768	-0.107	-59.454
LT 3	B137	COMB19 MIN	2.5	-2.3	-37.59	-0.1	-0.768	-0.159	-42.301
LT 3	B137	COMB19 MIN	3	-2.3	-32.01	-0.1	-0.768	-0.21	-27.579
LT 3	B137	COMB19 MIN	3.5	-2.3	-26.43	-0.1	-0.768	-0.262	-15.286
LT 3	B137	COMB19 MIN	3.5	-1.59	-13.03	-0.59	-1.125	-0.938	-16.821
LT 3	B137	COMB19 MIN	4	-1.59	-8.17	-0.59	-1.125	-0.642	-11.523
LT 3	B137	COMB19 MIN	4.5	-1.59	-3.31	-0.59	-1.125	-0.346	-8.655
LT 3	B137	COMB19 MIN	5	-1.59	1.55	-0.59	-1.125	-0.051	-8.218
LT 3	B137	COMB19 MIN	5.5	-1.59	6.41	-0.59	-1.125	-0.234	-10.21
LT 3	B137	COMB19 MIN	6	-1.59	11.27	-0.59	-1.125	-0.519	-17.629
LT 3	B137	COMB19 MIN	6.5	-1.59	16.13	-0.59	-1.125	-0.804	-29.154
LT 3	B137	COMB19 MIN	7	-1.59	20.99	-0.59	-1.125	-1.089	-46.302
ATAP	B436	COMB19 MIN	3.5	-41.37	81.33	-0.16	-0.016	-3.159	-244.099
ATAP	B436	COMB19 MIN	3	-41.37	67.11	-0.16	-0.016	-2.357	-150.391
ATAP	B436	COMB19 MAX	3.5	-10.37	200.98	1.6	2.162	0.317	-83.922
ATAP	B436	COMB19 MIN	2.5	-41.37	52.9	-0.16	-0.016	-1.555	-70.25
ATAP	B436	COMB19 MAX	3	-10.37	173.85	1.6	2.162	0.237	-46.812
ATAP	B436	COMB19 MAX	2.5	-10.37	146.72	1.6	2.162	0.156	-16.81
ATAP	B436	COMB19 MIN	2	-41.37	38.68	-0.16	-0.016	-0.753	-3.675
ATAP	B436	COMB19 MAX	2	-10.37	119.58	1.6	2.162	0.076	6.084
ATAP	B436	COMB19 MIN	1.5	-41.37	24.46	-0.16	-0.016	-0.005	21.869
ATAP	B436	COMB19 MIN	0	-41.37	-18.19	-0.16	-0.016	-0.246	26.578
ATAP	B436	COMB19 MIN	1	-41.37	10.25	-0.16	-0.016	-0.085	30.547
ATAP	B436	COMB19 MIN	0.5	-41.37	-3.97	-0.16	-0.016	-0.166	32.116
ATAP	B436	COMB19 MAX	1.5	-10.37	92.45	1.6	2.162	0.048	49.333
ATAP	B436	COMB19 MAX	1	-10.37	65.32	1.6	2.162	0.85	88.775
ATAP	B436	COMB19 MAX	0.5	-10.37	38.18	1.6	2.162	1.652	114.65
ATAP	B436	COMB19 MAX	0	-10.37	11.05	1.6	2.162	2.454	126.959

Story	Column	Load	Loc	P	V2	V3	T	M2	M3
LT 1	C123	COMB19 MIN	0	-5699.13	-26.77	-139.77	-12.408	-394.984	-92.362
LT 1	C123	COMB19 MIN	2.6	-5644.1	-26.77	-139.77	-12.408	-31.577	-22.76
LT 1	C123	COMB19 MIN	5.2	-5589.07	-26.77	-139.77	-12.408	-45.509	-90.686
LT 1	C123	COMB19 MAX	0	-2370.88	46.6	22.73	11.391	72.7	151.654
LT 1	C123	COMB19 MAX	2.6	-2342.04	46.6	22.73	11.391	13.595	30.484
LT 1	C123	COMB19 MAX	5.2	-2313.21	46.6	22.73	11.391	331.83	46.841
GF	C113	COMB19 MIN	0	-5131.04	-26.06	-88.08	-8.24	-181.168	-55.357
GF	C113	COMB19 MIN	1.35	-5102.46	-26.06	-88.08	-8.24	-62.441	-20.182
GF	C113	COMB19 MIN	2.7	-5073.89	-26.06	-88.08	-8.24	11.377	1.273
GF	C113	COMB19 MAX	0	-1179.38	103.58	-5.62	7.45	-3.794	289.29
GF	C113	COMB19 MAX	1.35	-1164.41	103.58	-5.62	7.45	3.968	149.462
GF	C113	COMB19 MAX	2.7	-1149.44	103.58	-5.62	7.45	56.64	23.354
BASE 1	C119	COMB19 MIN	0	-7766.28	-33.61	-63.31	-3.913	-155.348	-115.299
BASE 1	C119	COMB19 MIN	1.35	-7737.71	-33.61	-63.31	-3.913	-72.683	-69.979
BASE 1	C119	COMB19 MIN	2.7	-7709.13	-33.61	-63.31	-3.913	-0.19	-24.659
BASE 1	C119	COMB19 MAX	0	-3727.41	33.48	32.23	3.549	121.773	119.37
BASE 1	C119	COMB19 MAX	1.35	-3712.44	33.48	32.23	3.549	81.074	74.222
BASE 1	C119	COMB19 MAX	2.7	-3697.47	33.48	32.23	3.549	50.546	29.074
LT 2	C123	COMB19 MAX	0	-2088.39	102.2	65.08	7.01	102.834	163.335
LT 2	C123	COMB19 MAX	1.1	-2079.05	102.2	65.08	7.01	31.241	54.071
LT 2	C123	COMB19 MAX	2.2	-2069.71	102.2	65.08	7.01	163.341	51.948
LT 2	C123	COMB19 MIN	1.1	-4981.67	-70.79	-294.23	-7.722	-160.309	-29.084
LT 2	C123	COMB19 MIN	2.2	-4963.85	-70.79	-294.23	-7.722	-40.352	-61.515
LT 2	C123	COMB19 MIN	0	-4999.5	-70.79	-294.23	-7.722	-483.96	-103.795
LT 3	C101	COMB19 MAX	0	-1746.43	267.33	10.13	7.017	15.625	346.578
LT 3	C101	COMB19 MAX	1.125	-1736.87	267.33	10.13	7.017	4.23	45.835
LT 3	C101	COMB19 MIN	0	-3878.12	2.49	-53.97	-7.747	-85.141	-9.019
LT 3	C101	COMB19 MIN	1.125	-3859.89	2.49	-53.97	-7.747	-24.427	-11.819
LT 3	C101	COMB19 MAX	2.25	-1727.32	267.33	10.13	7.017	36.288	-14.619
LT 3	C101	COMB19 MIN	2.25	-3841.65	2.49	-53.97	-7.747	-7.165	-254.908
LT 2	C121	COMB19 MAX	0	-3150.72	75.5	32.52	7.01	53.801	125.137

LT 2	C121	COMB19 MAX	2.2	-3132.04	75.5	32.52	7.01	121.478	42.787
LT 2	C121	COMB19 MAX	1.1	-3141.38	75.5	32.52	7.01	18.03	42.089
LT 2	C121	COMB19 MIN	1.1	-6680.05	-72.83	-188.7	-7.722	-86.093	-37.649
LT 2	C121	COMB19 MIN	2.2	-6662.22	-72.83	-188.7	-7.722	-17.741	-41.284
LT 2	C121	COMB19 MIN	0	-6697.87	-72.83	-188.7	-7.722	-293.664	-117.762
LT 5	C123	COMB19 MIN	0	-2996.69	21.71	-336.39	-3.788	-526.93	29.298
LT 5	C123	COMB19 MIN	1.125	-2983.29	21.71	-336.39	-3.788	-148.492	4.874
LT 5	C123	COMB19 MIN	2.25	-2969.9	21.71	-336.39	-3.788	29.219	-139.808
LT 5	C123	COMB19 MAX	0	-1215.04	195.44	20.25	4.496	74.775	299.931
LT 5	C123	COMB19 MAX	1.125	-1208.03	195.44	20.25	4.496	51.997	80.061
LT 5	C123	COMB19 MAX	2.25	-1201.01	195.44	20.25	4.496	229.947	-19.549
LT 5	C105	COMB19 MIN	0	-3417.76	-300.29	-62.14	-5.217	-90.161	-434.139
LT 5	C105	COMB19 MIN	1.1	-3402.39	-300.29	-62.14	-5.217	-21.805	-103.815
LT 5	C105	COMB19 MIN	2.2	-3387.02	-300.29	-62.14	-5.217	-10.293	-82.893
LT 5	C105	COMB19 MAX	0	-1052.78	116.71	18.66	6.192	30.754	173.861
LT 5	C105	COMB19 MAX	1.1	-1044.73	116.71	18.66	6.192	10.231	45.484
LT 5	C105	COMB19 MAX	2.2	-1036.67	116.71	18.66	6.192	46.55	226.509
LT 5	C121	COMB19 MIN	0	-4253.73	-87.11	-260.46	-3.788	-413.569	-136.149
LT 5	C121	COMB19 MIN	1.125	-4240.34	-87.11	-260.46	-3.788	-120.549	-38.155
LT 5	C121	COMB19 MIN	2.25	-4226.94	-87.11	-260.46	-3.788	7.51	-55.672
LT 5	C121	COMB19 MAX	0	-1909.64	81.27	41.21	4.496	100.23	127.192
LT 5	C121	COMB19 MAX	1.125	-1902.63	81.27	41.21	4.496	53.87	35.76
LT 5	C121	COMB19 MAX	2.25	-1895.61	81.27	41.21	4.496	172.47	59.839
ATAP	C123	COMB19 MIN	0	-348.23	11.12	-84.24	-0.956	-148.414	18.525
ATAP	C123	COMB19 MIN	1.3	-342.97	11.12	-84.24	-0.956	-38.903	4.063
ATAP	C123	COMB19 MIN	2.6	-337.7	11.12	-84.24	-0.956	-25.167	-73.096
ATAP	C123	COMB19 MAX	1.3	-165.75	78.35	24.42	0.819	6.585	28.765
ATAP	C123	COMB19 MAX	0	-168.51	78.35	24.42	0.819	38.338	130.625
ATAP	C123	COMB19 MAX	2.6	-162.99	78.35	24.42	0.819	70.609	-10.399
LT 8	C111	COMB19 MIN	2.25	-1116.32	-175.82	-10.51	-0.873	-60.296	-34.914
LT 8	C111	COMB19 MIN	0	-1326.11	-159.17	-10.51	-0.836	-17.84	-113.776
LT 8	C111	COMB19 MIN	1.125	-1321.55	-159.17	-10.51	-0.836	-6.022	31.11

LT 8	C111	COMB19 MIN	1.5	-1320.04	-159.17	-10.51	-0.836	-3.684	34.114
LT 8	C111	COMB19 MIN	1.5	-1119.35	-175.82	-10.51	-0.873	-2.926	-131.848
LT 8	C111	COMB19 MAX	1.5	-496.01	-16.17	76.5	0.756	-1.43	-39.251
LT 8	C111	COMB19 MAX	1.5	-589.43	-8.01	76.5	0.768	-1.094	124.978
LT 8	C111	COMB19 MAX	2.25	-494.41	-16.17	76.5	0.756	6.451	7.812
LT 8	C111	COMB19 MAX	1.125	-590.23	-8.01	76.5	0.768	25.993	65.289
LT 8	C111	COMB19 MAX	0	-592.62	-8.01	76.5	0.768	112.06	22.099
LT 8	C121	COMB19 MIN	0	-1744.15	-29	-76.84	-0.855	-110.574	-41.109
LT 8	C121	COMB19 MIN	1.1	-1739.69	-29	-76.84	-0.855	-26.045	-9.391
LT 8	C121	COMB19 MIN	2.2	-1735.23	-29	-76.84	-0.855	-16.422	-18.261
LT 8	C121	COMB19 MAX	1.1	-815.47	25	23.12	0.762	9.014	9.422
LT 8	C121	COMB19 MAX	0	-817.81	25	23.12	0.762	34.449	36.734
LT 8	C121	COMB19 MAX	2.2	-813.14	25	23.12	0.762	58.483	22.698

$$f'_c = 30 \text{ MPa}, f_y = 400 \text{ MPa}, \mu = 0,7$$

