

## **LAMPIRAN**

### **Pra Desain Balok dan Kolom**

## Preliminary Design

### Balok Induk

Panjang Bentang	$L := 6\text{m}$
Tinggi Balok	$h := \frac{L}{12} = 0.5\text{m}$
Lebar Balok	$b := 0.5 \cdot h = 0.25\text{m}$
Panjang Bentang	$L := 8\text{m}$
Tinggi Balok	$h := \frac{L}{12} = 0.667\text{m}$
Lebar Balok	$b := 0.5 \cdot h = 0.333\text{m}$

### Balok Anak

Panjang Bentang	$L := 6\text{m}$
Tinggi Balok	$h := \frac{L}{16} = 0.375\text{m}$
Lebar Balok	$b := 0.5 \cdot h = 0.188\text{m}$
Panjang Bentang	$L := 8\text{m}$
Tinggi Balok	$h := \frac{L}{16} = 0.5\text{m}$
Lebar Balok	$b := 0.5 \cdot h = 0.25\text{m}$

### Perhitungan Beban pada Kolom

$$\gamma_{\text{beton}} := 24 \frac{\text{kN}}{\text{m}^3} \quad t_{\text{pelat}} := 12.\text{cm}$$

$$\text{beban pelat} \quad DL_{\text{pelat}} := t_{\text{pelat}} \cdot \gamma_{\text{beton}} = 2.88 \cdot \frac{\text{kN}}{\text{m}^2}$$

$$\text{beban mekanikal dan elektrik} \quad DL_{\text{ME}} := 0.2 \frac{\text{kN}}{\text{m}^2}$$

$$\text{beban dinding terdistribusi} \quad DL_{\text{dinding}} := 2.5 \frac{\text{kN}}{\text{m}}$$

$$\text{beban keramik} \quad DL_{\text{keramik}} := 1\text{cm} \cdot 23.6 \frac{\text{kN}}{\text{m}^3} = 0.236 \cdot \frac{\text{kN}}{\text{m}^2}$$

$$\text{beban acian} \quad DL_{\text{acian}} := 0.6 \frac{\text{kN}}{\text{m}^2}$$

$$\begin{aligned} \text{total DL pada lantai tipikal} \quad DL_{\text{tipikal}} &:= DL_{\text{pelat}} + DL_{\text{ME}} + DL_{\text{dinding}} + DL_{\text{keramik}} + DL_{\text{acian}} \\ DL_{\text{tipikal}} &= 6.416 \cdot \frac{\text{kN}}{\text{m}^2} \end{aligned}$$

$$\text{total DL pada lantai atap} \quad DL_{\text{atap}} := DL_{\text{pelat}} + DL_{\text{ME}} + DL_{\text{acian}} = 3.68 \cdot \frac{\text{kN}}{\text{m}^2}$$

### Beban Hidup

$$\text{Beban Hidup pada Atap} \quad LL_{\text{atap}} := 0.96 \frac{\text{kN}}{\text{m}^2}$$

Beban Hidup Lantai Tipikal (dengan tujuan penggunaan gedung hotel)

$$LL_{\text{tipikal}} := 1.92 \frac{\text{kN}}{\text{m}^2}$$

### Beban Terkombinasi Gravitasi Saja

$$\text{Beban Pada Atap} \quad Q_{\text{atap}} := 1.2DL_{\text{atap}} + 1.6LL_{\text{atap}} = 5.952 \cdot \frac{\text{kN}}{\text{m}^2}$$

$$\text{Beban Pada Lantai Tipikal} \quad Q_{\text{tipikal}} := 1.2DL_{\text{tipikal}} + 1.6 \cdot LL_{\text{tipikal}} = 10.771 \cdot \frac{\text{kN}}{\text{m}^2}$$

$$f_c' := 30\text{MPa}$$

$$f_y := 400\text{MPa}$$

### Perhitungan Kolom pada Tengah Bangunan

$$\text{Jumlah Lantai Tipikal} \quad n := 10$$

$$\text{Luasan Beban Pelat yang Dipikul oleh Kolom} \quad x_1 := 8\text{m} \quad y_1 := 8\text{m}$$

$$L_1 := x_1 \cdot y_1 = 64 \text{ m}^2$$

$$K_1 := 2 \cdot (x_1 + y_1) = 32 \text{ m}$$

Dimisalkan Balok yang dipakai berukuran 700 mm x 350 mm

$$P_B := 700 \text{ mm} \cdot 350 \text{ mm} \cdot \gamma_{\text{beton}} \cdot K_1 = 1.882 \times 10^5 \text{ N}$$

Kolom 1 (Kolom Tengah)

$$P_1 := (n \cdot Q_{\text{tipikal}} + Q_{\text{atap}}) \cdot L_1 + P_B = 7.463 \times 10^3 \cdot \text{kN}$$

$$A_1 := \frac{P_1}{0.4 \cdot (f_c' + 0.01 f_y)} = 5.487 \times 10^5 \cdot \text{mm}^2$$

sisi kolom jika bentuknya persegi  $s_1 := \sqrt{A_1} = 740.76 \cdot \text{mm}$

Luasan Beban Pelat yang Dipikul oleh Kolom  $x_2 := 6 \text{ m}$   $y_2 := 8 \text{ m}$

$$L_2 := x_2 \cdot y_2 = 48 \text{ m}^2$$

$$K_2 := 2 \cdot (x_2 + y_2) = 28 \text{ m}$$

Dimisalkan Balok yang dipakai berukuran 700 mm x 350 mm

$$P_B := 700 \text{ mm} \cdot 350 \text{ mm} \cdot \gamma_{\text{beton}} \cdot K_2 = 1.646 \times 10^5 \text{ N}$$

Kolom 2 ( Kolom Pinggir )

$$P_2 := (n \cdot Q_{\text{tipikal}} + Q_{\text{atap}}) \cdot L_2 + P_B = 5.621 \times 10^3 \cdot \text{kN}$$

$$A_2 := \frac{P_2}{0.4 \cdot (f_c' + 0.01 f_y)} = 4.133 \times 10^5 \cdot \text{mm}^2$$

sisi kolom jika bentuknya persegi  $s_2 := \sqrt{A_2} = 642.863 \cdot \text{mm}$

## **LAMPIRAN 2**

### **Menentukan Repons Spektrum Rencana**

## FAKTOR SKALA GEMPA 2012 UNTUK ARAH X

Rumah Kantor

Units: kN dan m

$$I_e := 1.0 \quad R := 8 \quad \text{Tabel 9 SNI 1726 untuk Portal Penahan Momen Khusus}$$

$$M := 11398.1441 \quad \text{kN s}^2/\text{m} \quad w_t := M \cdot 10 = 1.14 \times 10^5 \quad \text{kN}$$

$$z_{\text{total}} := 36.4 \quad \text{meter}$$

$$T_1 := 1.798 \quad \text{second}$$

$$V_{\text{CQC}} := \sqrt{1983.2372^2 + 0.1134^2}$$

$$V_{\text{CQC}} = 1.983 \times 10^3 \quad \text{kN}$$

Jakarta, Tanah Keras

$$\text{Check SNI 1726} \quad S_s := 0.68 \quad S_1 := 0.29$$

$$\begin{aligned} \text{dari ETABS} \quad F_a := 1.128 \quad F_v := 1.51 \quad S_{\text{MS}} := F_a \cdot S_s = 0.767 \quad S_{\text{M1}} := F_v \cdot S_1 = 0.438 \\ S_{\text{DS}} := \frac{2}{3} \cdot S_{\text{MS}} = 0.511 \quad S_{\text{D1}} := \frac{2}{3} \cdot S_{\text{M1}} = 0.292 \end{aligned}$$

$$T_s := \frac{S_{\text{D1}}}{S_{\text{DS}}} = 0.571$$

$$T_o := 0.2 \cdot T_s = 0.114$$

Kategori Desain Seismik D karena  $S_{\text{DS}} > 0.5$  dan  $S_{\text{D1}} > 0.2$

karena KDS adalah C => SMRF

$$R := 8 \quad C_d := 5.5 \quad \Omega_o := 3$$

Faktor Skala untuk Desain

$$C_{s\text{min}}(R, I_e) := \begin{cases} \max \left[ 0.044 \cdot S_{\text{DS}} \cdot I_e, 0.01, 0.5 \cdot \frac{S_1}{\left( \frac{R}{I_e} \right)} \right] & \text{if } S_1 \geq 0.6 \\ \max(0.044 \cdot S_{\text{DS}} \cdot I_e, 0.01) & \text{otherwise} \end{cases}$$

$$C_s(T, R, I_e) := \max \left[ C_{s\text{min}}(R, I_e), \min \left[ \frac{S_{\text{DS}}}{\left( \frac{R}{I_e} \right)}, \frac{S_{\text{D1}}}{T \cdot \frac{R}{I_e}} \right] \right]$$

**Menentukan Periode Getar Struktur****SNI 1726 Tabel 15 untuk Portal Beton Penahan Momen**

$$C_t := 0.0466 \quad x := 0.9 \quad C_u := 1.4 \quad T_a := C_t \cdot z_{\text{total}}^x = 1.184 \quad \text{second}$$

$$T_1 = 1.798 \quad \text{second}$$

**T yang digunakan**

$$C_u \cdot T_a = 1.658$$

$$T := \begin{cases} \text{return } T_a & \text{if } T_1 \leq T_a \\ \text{return } T_1 & \text{if } T_a < T_1 < C_u \cdot T_a \\ \text{return } (C_u \cdot T_a) & \text{if } T_1 \geq C_u \cdot T_a \end{cases}$$

**T yang digunakan**

$$T = 1.658 \quad \text{second}$$

**Faktor Skala untuk Desain:**

$$R = 8 \quad I_e = 1 \quad C_{s1} := C_s(T, R, I_e) \quad V_{s1} := C_{s1} \cdot w_t \quad V_{s1} = 2.565 \times 10^3 \quad \text{kN}$$

$$f_{D1} := \max\left(1, \frac{0.85 \cdot V_{s1}}{V_{CQC}}\right) = 1.099$$

**Faktor Skala Gempa SNI 1729-2012 Arah Y****Hotel**

Units : kN dan m

$$I_e := 1.0 \quad R := 8 \quad \text{Tabel 9 SNI 1726 untuk Portal Penahan Momen Khusus}$$

$$M := 11398.1441 \quad \text{kN s}^2/\text{m}$$

$$w_t := M \cdot 10 = 1.14 \times 10^5 \quad \text{kN}$$

$$z_{\text{total}} := 36.4 \quad \text{meter}$$

$$T_1 := 1.776 \quad \text{second}$$

$$V_{CQC} := \sqrt{0.1136^2 + 2007.8525^2}$$

$$V_{CQC} = 2.008 \times 10^3 \quad \text{kN}$$

**Jakarta , Tanah Keras (Site Class C):**

**Check SNI 1726**  $S_s := 0.68$   $S_1 := 0.29$

**dari ETABS**  $F_a := 1.128$   $F_v := 1.51$   $S_{MS} := F_a \cdot S_s = 0.767$   $S_{M1} := F_v \cdot S_1 = 0.438$   
 $S_{DS} := \frac{2}{3} \cdot S_{MS} = 0.511$   $S_{D1} := \frac{2}{3} \cdot S_{M1} = 0.292$

$$T_s := \frac{S_{D1}}{S_{DS}} = 0.571 \quad T_o := 0.2 \cdot T_s = 0.114$$

**Kategori Desain Seismik** D karena  $S_{DS} > 0.5$  dan  $S_{D1} > 0.2$

**karena KDS adalah C => SMRF**

$R := 8$   $C_d := 5.5$   $\Omega_o := 3$

**Faktor Skala untuk Desain**

$$C_{smin}(R, I_e) := \begin{cases} \max \left[ 0.044 \cdot S_{DS} \cdot I_e, 0.01, 0.5 \cdot \frac{S_1}{\left( \frac{R}{I_e} \right)} \right] & \text{if } S_1 \geq 0.6 \\ \max(0.044 \cdot S_{DS} \cdot I_e, 0.01) & \text{otherwise} \end{cases}$$

$$C_s(T, R, I_e) := \max \left[ C_{smin}(R, I_e), \min \left[ \frac{S_{DS}}{\left( \frac{R}{I_e} \right)}, \frac{S_{D1}}{T \cdot \frac{R}{I_e}} \right] \right]$$

**Menentukan Periode Getar Struktur**

**SNI 1726 Tabel 15 untuk Portal Beton Penahan Momen**

$C_t := 0.0466$   $x := 0.9$   $C_u := 1.4$   $T_a := C_t \cdot z_{total}^x = 1.184$  second

$T_1 = 1.776$  second

**T yang digunakan**

$$T := \begin{cases} \text{return } T_a & \text{if } T_1 \leq T_a \\ \text{return } T_1 & \text{if } T_a < T_1 < C_u \cdot T_a \\ \text{return } (C_u \cdot T_a) & \text{if } T_1 \geq C_u \cdot T_a \end{cases}$$

**T yang digunakan**

$T = 1.658$  second



**Faktor Skala untuk Desain:**

$$R = 8 \quad I_e = 1 \quad C_{s1} := C_s(T, R, I_e) \quad V_{s1} := C_{s1} \cdot w_t \quad V_{s1} = 2.565 \times 10^3 \quad \text{kN}$$

$$f_{D1} := \max\left(1, \frac{0.85 \cdot V_{s1}}{V_{CQC}}\right) = 1.086$$

**Faktor Skala Gempa SNI 03-1726-2002****HOTEL 10 LANTAI**

$$\text{SRPMK} \quad r := 8.5 \quad \mu_m := 5.2 \quad f := 2.8 \quad I := 1$$

$$n := 10 \quad \text{lantai}$$

$$T_{1x} := 1.009 \quad \text{detik}$$

$$T_{1y} := 1.019 \quad \text{detik}$$

$$\zeta := 0.18 \quad \text{wiaya gempa 3}$$

$$M := 11410.3807 \quad \text{kN s}^2/\text{m}$$

$$W_t := M \cdot 9.81 = 1.119 \times 10^5 \quad \text{KN}$$

gaya geser akibat beban gempa arah x

$$F_{1x} := 1490.4609 \quad \text{KN}$$

$$F_{2x} := 0.0207 \quad \text{KN}$$

$$T_x := \begin{cases} T_{1x} & \text{if } T_{1x} < \zeta \cdot n \\ (\zeta \cdot n) & \text{otherwise} \end{cases} \quad T_x = 1.009 \text{ detik}$$

$$T_y := \begin{cases} T_{1y} & \text{if } T_{1y} < \zeta \cdot n \\ (\zeta \cdot n) & \text{otherwise} \end{cases} \quad T_y = 1.019 \text{ detik}$$

$$C_{1x} := \frac{0.23}{T_x} = 0.228$$

$$V_{1x} := \frac{C_{1x} \cdot I \cdot W_t}{r} = 3.002 \times 10^3 \quad \text{KN}$$

gaya geser akibat beban gempa arah y

$$F_{1y} := 0.0206 \quad \text{KN}$$

$$F_{2y} := 1508.8024 \quad \text{KN}$$

$$C_{1y} := \frac{0.23}{T_y} = 0.226$$

$$V_{1y} := \frac{C_{1y} \cdot I \cdot W_t}{r} = 2.972 \times 10^3 \quad \text{KN}$$

Gaya geser nominal dari ETABS

$$V_{cqc x} := \sqrt{F_{1x}^2 + F_{2x}^2} = 1.49 \times 10^3 \quad \text{KN}$$

$$V_{cqc y} := \sqrt{F_{1y}^2 + F_{2y}^2} = 1.509 \times 10^3 \quad \text{KN}$$

Faktor skala

$$F_{dx} := \max\left(1, \frac{0.8 \cdot V_{1x}}{V_{cqc x}}\right) = 1.611$$

$$F_{dy} := \max\left(1, \frac{0.8 \cdot V_{1y}}{V_{cqc y}}\right) = 1.576$$

## **LAMPIRAN 3**

### **Persen Perbedaan Luas Tulangan Balok**

Berikut merupakan perbedaan kebutuhan luas tulangan pada Story 2

Label	Section	Location	As Top (2012)	As Bot (2012)	As Top (2002)	As Bot (2002)	% perbedaan As top	% perbedaan As Bot
			mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>		
B1	BL400/800	End-I	1593.968	1013.529	1439.004	928.671	9.72	8.37
B1	BL400/800	Middle	514.016	1178.419	465.591	1178.419	9.42	0.00
B1	BL400/800	End-J	1542.236	992.901	1392.696	899.753	9.70	9.38
B2	BL400/800	End-I	1569.170	1009.606	1418.415	915.822	9.61	9.29
B2	BL400/800	Middle	506.290	1167.061	459.132	1167.061	9.31	0.00
B2	BL400/800	End-J	1561.400	1004.789	1411.071	911.236	9.63	9.31
B3	BL400/800	End-I	1570.537	1010.453	1419.652	916.594	9.61	9.29
B3	BL400/800	Middle	506.716	1166.729	459.520	1166.729	9.31	0.00
B3	BL400/800	End-J	1561.793	1005.032	1411.422	911.455	9.63	9.31
B4	BL400/800	End-I	1569.587	1009.864	1418.786	916.054	9.61	9.29
B4	BL400/800	Middle	506.419	1167.235	459.249	1167.235	9.31	0.00
B4	BL400/800	End-J	1560.280	1004.094	1410.040	910.591	9.63	9.31
B5	BL400/800	End-I	1538.322	990.472	1388.930	897.399	9.71	9.40
B5	BL400/800	Middle	502.169	1148.212	454.494	1148.209	9.49	0.00
B5	BL400/800	End-J	1555.955	1001.412	1403.644	906.595	9.79	9.47
B6	BL400/800	End-I	1291.134	836.104	1145.319	744.174	11.29	11.00
B6	BL400/800	Middle	419.068	878.016	372.890	878.016	11.02	0.00
B6	BL400/800	End-J	1207.011	783.146	1069.717	696.258	11.37	11.09
B10	BT350/650	End-I	1504.012	711.672	1356.777	705.851	9.79	0.82
B10	BT350/650	Middle	482.241	1183.315	437.265	1183.315	9.33	0.00
B10	BT350/650	End-J	1514.549	716.371	1366.885	705.851	9.75	1.47
B14	BT350/650	End-I	1458.720	705.851	1314.261	705.851	9.90	0.00
B14	BT350/650	Middle	478.408	1183.914	433.482	1183.914	9.39	0.00
B14	BT350/650	End-J	1501.906	710.733	1354.532	705.851	9.81	0.69
B18	BT350/650	End-I	1459.413	705.851	1314.911	705.851	9.90	0.00
B18	BT350/650	Middle	478.195	1183.915	433.280	1183.915	9.39	0.00
B18	BT350/650	End-J	1501.202	710.419	1353.874	705.851	9.81	0.64
B22	BT350/650	End-I	1506.450	712.760	1359.060	705.851	9.78	0.97
B22	BT350/650	Middle	481.498	1183.319	436.564	1183.319	9.33	0.00
B22	BT350/650	End-J	1512.095	715.277	1364.595	705.851	9.75	1.32
B26	BL400/800	End-I	1338.529	865.845	1189.998	772.410	11.10	10.79
B26	BL400/800	Middle	434.013	981.144	387.071	981.150	10.82	0.00
B26	BL400/800	End-J	1248.983	809.595	1109.191	721.297	11.19	10.91
B27	BT350/650	End-I	2107.049	974.096	1922.308	895.111	8.77	8.11
B27	BT350/650	Middle	667.105	2041.405	612.756	2041.405	8.15	0.00
B27	BT350/650	End-J	2138.069	987.236	1951.839	907.820	8.71	8.04

Label	Section	Location	As Top (2012)	As Bot (2012)	As Top (2002)	As Bot (2002)	% perbedaan As top	% perbedaan As Bot
			mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>		
B27	BT350/650	End-I	2107.049	974.096	1922.308	895.111	8.77	8.11
B27	BT350/650	Middle	667.105	2041.405	612.756	2041.405	8.15	0.00
B27	BT350/650	End-J	2138.069	987.236	1951.839	907.820	8.71	8.04
B28	BT350/650	End-I	2095.503	969.196	1911.811	890.585	8.77	8.11
B28	BT350/650	Middle	660.621	1996.169	606.447	1996.169	8.20	0.00
B28	BT350/650	End-J	2115.717	977.771	1930.387	898.591	8.76	8.10
B29	BT350/650	End-I	2104.896	973.183	1920.620	894.383	8.75	8.10
B29	BT350/650	Middle	657.478	1997.923	603.572	1997.923	8.20	0.00
B29	BT350/650	End-J	2098.424	970.436	1914.600	891.788	8.76	8.10
B30	BT350/650	End-I	2122.008	980.437	1936.242	901.112	8.75	8.09
B30	BT350/650	Middle	662.447	1996.279	608.170	1996.279	8.19	0.00
B30	BT350/650	End-J	2088.713	966.313	1905.498	887.862	8.77	8.12
B31	BT350/650	End-I	2132.409	984.841	1946.394	905.479	8.72	8.06
B31	BT350/650	Middle	665.464	2022.936	611.155	2022.934	8.16	0.00
B31	BT350/650	End-J	2052.976	951.107	1872.500	873.602	8.79	8.15
B32	BL400/800	End-I	1052.321	848.949	1013.529	669.368	3.69	21.15
B32	BL400/800	Middle	353.173	610.669	307.673	534.452	12.88	12.48
B32	BL400/800	End-J	1083.340	811.415	1013.529	630.097	6.44	22.35
B36	BT300/600	End-I	928.924	427.161	824.298	364.010	11.26	14.78
B36	BT300/600	Middle	160.173	665.077	105.497	665.077	34.14	0.00
B36	BT300/600	End-J	982.945	403.886	873.919	339.793	11.09	15.87
B40	BT300/600	End-I	880.866	439.383	778.211	374.378	11.65	14.79
B40	BT300/600	Middle	163.008	666.641	108.015	666.641	33.74	0.00
B40	BT300/600	End-J	1002.255	380.475	889.687	312.017	11.23	17.99
B44	BT300/600	End-I	881.494	438.907	778.802	373.926	11.65	14.81
B44	BT300/600	Middle	162.870	666.647	107.862	666.647	33.77	0.00
B44	BT300/600	End-J	1001.577	380.721	889.052	312.476	11.23	17.93
B48	BT300/600	End-I	931.368	425.262	826.597	362.218	11.25	14.82
B48	BT300/600	Middle	159.614	665.087	104.878	665.087	34.29	0.00
B48	BT300/600	End-J	980.308	404.846	871.455	341.539	11.10	15.64
B52	BL400/800	End-I	1059.023	845.656	1013.529	665.687	4.30	21.28
B52	BL400/800	Middle	351.681	606.365	306.257	530.361	12.92	12.53
B52	BL400/800	End-J	1078.658	813.424	1013.529	632.389	6.04	22.26

Label	Section	Location	As Top (2012)	As Bot (2012)	As Top (2002)	As Bot (2002)	% perbedaan As top	% perbedaan As Bot
			mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>		
B53	BT350/650	End-I	1880.981	877.271	1710.215	802.896	9.08	8.48
B53	BT350/650	Middle	598.482	1779.072	547.717	1779.072	8.48	0.00
B53	BT350/650	End-J	1903.346	886.933	1732.238	812.547	8.99	8.39
B54	BT350/650	End-I	1880.459	877.045	1707.823	801.846	9.18	8.57
B54	BT350/650	Middle	614.435	1725.902	561.310	1725.902	8.65	0.00
B54	BT350/650	End-J	1957.555	910.277	1777.851	832.481	9.18	8.55
B55	BT350/650	End-I	1922.710	895.284	1745.149	818.197	9.23	8.61
B55	BT350/650	Middle	604.187	1736.208	551.569	1736.208	8.71	0.00
B55	BT350/650	End-J	1916.719	892.702	1739.572	815.757	9.24	8.62
B56	BT350/650	End-I	1963.487	912.825	1783.373	834.889	9.17	8.54
B56	BT350/650	Middle	616.177	1725.854	562.953	1725.854	8.64	0.00
B56	BT350/650	End-J	1874.728	874.566	1702.483	799.503	9.19	8.58
B57	BT350/650	End-I	1908.650	889.222	1737.183	814.712	8.98	8.38
B57	BT350/650	Middle	600.045	1779.048	549.193	1779.048	8.47	0.00
B57	BT350/650	End-J	1875.613	874.949	1705.210	800.700	9.09	8.49
B58	BL400/800	End-I	1013.529	879.237	1013.529	705.058	0.00	19.81
B58	BL400/800	Middle	342.858	547.382	283.944	476.672	17.18	12.92
B58	BL400/800	End-J	1013.529	881.472	1013.529	707.573	0.00	19.73
B62	BT300/600	End-I	959.562	417.863	851.885	354.618	11.22	15.14
B62	BT300/600	Middle	154.383	662.992	99.782	662.992	35.37	0.00
B62	BT300/600	End-J	961.378	416.494	853.595	353.321	11.21	15.17
B66	BT300/600	End-I	957.431	405.588	847.352	341.436	11.50	15.82
B66	BT300/600	Middle	154.565	658.368	99.493	658.368	35.63	0.00
B66	BT300/600	End-J	958.039	405.138	847.924	341.010	11.49	15.83
B70	BT300/600	End-I	958.075	405.098	847.958	340.973	11.49	15.83
B70	BT300/600	Middle	154.571	658.368	99.501	658.368	35.63	0.00
B70	BT300/600	End-J	957.374	405.612	847.300	341.460	11.50	15.82
B74	BT300/600	End-I	961.400	416.458	853.618	353.288	11.21	15.17
B74	BT300/600	Middle	154.391	662.997	99.791	662.997	35.36	0.00
B74	BT300/600	End-J	959.449	417.861	851.786	354.622	11.22	15.13
B78	BL400/800	End-I	1013.529	881.387	1013.529	707.514	0.00	19.73
B78	BL400/800	Middle	342.826	547.366	283.936	476.662	17.18	12.92
B78	BL400/800	End-J	1013.529	879.076	1013.529	704.913	0.00	19.81

Label	Section	Location	As Top (2012)	As Bot (2012)	As Top (2002)	As Bot (2002)	% perbedaan As top	% perbedaan As Bot
			mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>		
B79	BT350/650	End-I	1880.744	877.168	1709.976	802.791	9.08	8.48
B79	BT350/650	Middle	598.712	1779.069	547.929	1779.069	8.48	0.00
B79	BT350/650	End-J	1904.128	887.271	1732.949	812.859	8.99	8.39
B80	BT350/650	End-I	1880.201	876.934	1707.563	801.732	9.18	8.58
B80	BT350/650	Middle	614.690	1725.898	561.545	1725.898	8.65	0.00
B80	BT350/650	End-J	1958.425	910.651	1778.642	832.826	9.18	8.55
B81	BT350/650	End-I	1922.439	895.167	1744.877	818.078	9.24	8.61
B81	BT350/650	Middle	604.108	1736.208	551.488	1736.208	8.71	0.00
B81	BT350/650	End-J	1917.589	893.077	1740.362	816.103	9.24	8.62
B82	BT350/650	End-I	1963.234	912.716	1783.117	834.777	9.17	8.54
B82	BT350/650	Middle	616.102	1725.858	562.877	1725.858	8.64	0.00
B82	BT350/650	End-J	1875.544	874.920	1703.226	799.829	9.19	8.58
B83	BT350/650	End-I	1908.400	889.114	1736.932	814.602	8.98	8.38
B83	BT350/650	Middle	599.972	1779.048	549.118	1779.048	8.48	0.00
B83	BT350/650	End-J	1876.446	875.310	1705.967	801.032	9.09	8.49
B84	BL400/800	End-I	1078.888	813.626	1013.529	632.578	6.06	22.25
B84	BL400/800	Middle	351.754	608.329	306.327	532.234	12.91	12.51
B84	BL400/800	End-J	1056.799	846.699	1013.529	666.847	4.09	21.24
B88	BT300/600	End-I	981.250	404.742	872.306	341.184	11.10	15.70
B88	BT300/600	Middle	159.893	665.085	105.158	665.085	34.23	0.00
B88	BT300/600	End-J	930.888	425.943	826.126	362.840	11.25	14.82
B92	BT300/600	End-I	1001.704	380.767	889.162	312.483	11.24	17.93
B92	BT300/600	Middle	162.919	666.646	107.907	666.646	33.77	0.00
B92	BT300/600	End-J	881.513	438.996	778.813	374.004	11.65	14.80
B96	BT300/600	End-I	1002.345	380.503	889.766	312.016	11.23	18.00
B96	BT300/600	Middle	163.042	666.640	108.047	666.640	33.73	0.00
B96	BT300/600	End-J	880.874	439.447	778.212	374.433	11.65	14.79
B100	BT300/600	End-I	983.029	404.012	873.984	339.881	11.09	15.87
B100	BT300/600	Middle	160.222	665.076	105.534	665.076	34.13	0.00
B100	BT300/600	End-J	929.064	427.220	824.415	364.056	11.26	14.78
B104	BL400/800	End-I	1083.317	811.282	1013.529	629.976	6.44	22.35
B104	BL400/800	Middle	353.165	610.618	307.669	534.413	12.88	12.48
B104	BL400/800	End-J	1052.135	848.824	1013.529	669.275	3.67	21.15

Label	Section	Location	As Top (2012)	As Bot (2012)	As Top (2002)	As Bot (2002)	% perbedaan As top	% perbedaan As Bot
			mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>		
B105	BT350/650	End-I	2106.195	973.734	1921.443	894.738	8.77	8.11
B105	BT350/650	Middle	667.787	2041.402	613.377	2041.402	8.15	0.00
B105	BT350/650	End-J	2140.421	988.231	1953.955	908.730	8.71	8.04
B106	BT350/650	End-I	2094.679	968.846	1910.976	890.225	8.77	8.11
B106	BT350/650	Middle	661.299	1996.168	607.065	1996.168	8.20	0.00
B106	BT350/650	End-J	2118.050	978.760	1932.487	899.495	8.76	8.10
B107	BT350/650	End-I	2104.086	972.839	1919.799	894.029	8.76	8.10
B107	BT350/650	Middle	657.243	1997.922	603.330	1997.922	8.20	0.00
B107	BT350/650	End-J	2100.724	971.413	1916.671	892.681	8.76	8.10
B108	BT350/650	End-I	2121.397	980.178	1935.600	900.836	8.76	8.09
B108	BT350/650	Middle	662.270	1996.170	607.981	1996.170	8.20	0.00
B108	BT350/650	End-J	2091.313	967.417	1907.847	888.876	8.77	8.12
B109	BT350/650	End-I	2143.608	989.579	1956.922	910.005	8.71	8.04
B109	BT350/650	Middle	668.711	2041.395	614.249	2041.395	8.14	0.00
B109	BT350/650	End-J	2102.925	972.347	1918.402	893.428	8.77	8.12
B110	BL400/800	End-I	1203.676	781.042	1066.527	694.232	11.39	11.11
B110	BL400/800	Middle	420.438	878.010	374.175	878.010	11.00	0.00
B110	BL400/800	End-J	1295.476	838.831	1149.361	746.731	11.28	10.98
B114	BT350/650	End-I	1512.592	715.499	1365.048	705.851	9.75	1.35
B114	BT350/650	Middle	481.648	1183.319	436.702	1183.319	9.33	0.00
B114	BT350/650	End-J	1506.098	712.603	1358.725	705.851	9.79	0.95
B118	BT350/650	End-I	1501.276	710.452	1353.942	705.851	9.81	0.65
B118	BT350/650	Middle	478.217	1183.915	433.301	1183.915	9.39	0.00
B118	BT350/650	End-J	1459.360	705.851	1314.860	705.851	9.90	0.00
B122	BT350/650	End-I	1501.934	710.745	1354.560	705.851	9.81	0.69
B122	BT350/650	Middle	478.417	1183.914	433.490	1183.914	9.39	0.00
B122	BT350/650	End-J	1458.665	705.851	1314.211	705.851	9.90	0.00
B126	BT350/650	End-I	1514.579	716.385	1366.914	705.851	9.75	1.47
B126	BT350/650	Middle	482.251	1183.315	437.274	1183.315	9.33	0.00
B126	BT350/650	End-J	1503.979	711.658	1356.746	705.851	9.79	0.82
B130	BL400/800	End-I	1207.312	783.336	1069.965	696.415	11.38	11.10
B130	BL400/800	Middle	419.174	878.017	372.979	878.017	11.02	0.00
B130	BL400/800	End-J	1291.470	836.315	1145.597	744.350	11.30	11.00



Label	Section	Location	As Top (2012)	As Bot (2012)	As Top (2002)	As Bot (2002)	% perbedaan As top	% perbedaan As Bot
			mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>		
B131	BL400/800	End-I	1592.019	1013.529	1437.014	927.429	9.74	8.50
B131	BL400/800	Middle	513.409	1178.450	464.967	1178.450	9.44	0.00
B131	BL400/800	End-J	1547.012	995.864	1397.041	902.470	9.69	9.38
B132	BL400/800	End-I	1567.277	1008.432	1416.486	914.617	9.62	9.30
B132	BL400/800	Middle	505.699	1167.060	458.526	1167.060	9.33	0.00
B132	BL400/800	End-J	1566.137	1007.725	1415.381	913.928	9.63	9.31
B133	BL400/800	End-I	1568.663	1009.291	1417.740	915.400	9.62	9.30
B133	BL400/800	Middle	506.131	1166.722	458.920	1166.722	9.33	0.00
B133	BL400/800	End-J	1566.528	1007.968	1415.731	914.146	9.63	9.31
B134	BL400/800	End-I	1568.261	1009.042	1417.382	915.177	9.62	9.30
B134	BL400/800	Middle	506.006	1167.061	458.808	1167.061	9.33	0.00
B134	BL400/800	End-J	1565.156	1007.117	1414.488	913.370	9.63	9.31
B135	BL400/800	End-I	1549.048	997.128	1398.962	903.670	9.69	9.37

## **LAMPIRAN 4**

### **Peralihan Horizontal Berdasarkan Analisis Time History**





**LAMPIRAN 5****Rasio P-M-M**

<b>Label</b>	<b>Story</b>	<b>Section</b>	<b>PMM Ratio or Rebar % (2002)</b>	<b>PMM Ratio or Rebar % (2012)</b>
C1	STORY10	CR900/600	0.187	0.224
C1	STORY10	CR900/600	0.22	0.248
C2	STORY10	CR900/600	0.148	0.18
C2	STORY10	CR900/600	0.14	0.159
C3	STORY10	CR900/600	0.13	0.162
C3	STORY10	CR900/600	0.125	0.14
C4	STORY10	CR900/600	0.131	0.162
C4	STORY10	CR900/600	0.125	0.14
C5	STORY10	CR900/600	0.147	0.18
C5	STORY10	CR900/600	0.141	0.159
C6	STORY10	CR900/600	0.2	0.238
C6	STORY10	CR900/600	0.235	0.265
C7	STORY10	CR600/900	0.257	0.29
C7	STORY10	CR600/900	0.27	0.286
C8	STORY10	CR700	0.164	0.2
C8	STORY10	CR700	0.15	0.17
C9	STORY10	CR700	0.138	0.169
C9	STORY10	CR700	0.127	0.144
C10	STORY10	CR700	0.14	0.171
C10	STORY10	CR700	0.128	0.145
C11	STORY10	CR700	0.163	0.199
C11	STORY10	CR700	0.149	0.169
C12	STORY10	CR600/900	0.272	0.306
C12	STORY10	CR600/900	0.29	0.306
C13	STORY10	CR600/900	0.22	0.252
C13	STORY10	CR600/900	0.216	0.238
C14	STORY10	CR700	0.222	0.247
C14	STORY10	CR700	0.184	0.2
C17	STORY10	CR700	0.223	0.248
C17	STORY10	CR700	0.186	0.201
C18	STORY10	CR600/900	0.218	0.25
C18	STORY10	CR600/900	0.214	0.236
C19	STORY10	CR600/900	0.219	0.252
C19	STORY10	CR600/900	0.216	0.237
C20	STORY10	CR700	0.222	0.247
C20	STORY10	CR700	0.184	0.2
C23	STORY10	CR700	0.223	0.248
C23	STORY10	CR700	0.186	0.201
C24	STORY10	CR600/900	0.218	0.25
C24	STORY10	CR600/900	0.215	0.236
C25	STORY10	CR600/900	0.256	0.289

C25	STORY10	CR600/900	0.269	0.286
C26	STORY10	CR700	0.164	0.2
C26	STORY10	CR700	0.15	0.17
C27	STORY10	CR700	0.139	0.17
C27	STORY10	CR700	0.127	0.144
C28	STORY10	CR700	0.14	0.171
C28	STORY10	CR700	0.128	0.145
C29	STORY10	CR700	0.165	0.201
C29	STORY10	CR700	0.151	0.172
C30	STORY10	CR600/900	0.256	0.289
C30	STORY10	CR600/900	0.268	0.285
C31	STORY10	CR900/600	0.187	0.224
C31	STORY10	CR900/600	0.22	0.248
C32	STORY10	CR900/600	0.147	0.18
C32	STORY10	CR900/600	0.14	0.158
C33	STORY10	CR900/600	0.13	0.161
C33	STORY10	CR900/600	0.125	0.14
C34	STORY10	CR900/600	0.13	0.162
C34	STORY10	CR900/600	0.125	0.14
C35	STORY10	CR900/600	0.146	0.179
C35	STORY10	CR900/600	0.139	0.157
C36	STORY10	CR900/600	0.186	0.223
C36	STORY10	CR900/600	0.219	0.247
C1	STORY9	CR900/600	0.14	0.18
C1	STORY9	CR900/600	0.2	0.23
C2	STORY9	CR900/600	0.12	0.148
C2	STORY9	CR900/600	0.15	0.176
C3	STORY9	CR900/600	0.115	0.141
C3	STORY9	CR900/600	0.139	0.162
C4	STORY9	CR900/600	0.115	0.141
C4	STORY9	CR900/600	0.14	0.162
C5	STORY9	CR900/600	0.12	0.148
C5	STORY9	CR900/600	0.15	0.176
C6	STORY9	CR900/600	0.146	0.185
C6	STORY9	CR900/600	0.211	0.241
C7	STORY9	CR600/900	0.142	0.182
C7	STORY9	CR600/900	0.215	0.247
C8	STORY9	CR700	0.135	0.167
C8	STORY9	CR700	0.162	0.195
C9	STORY9	CR700	0.115	0.142
C9	STORY9	CR700	0.138	0.159
C10	STORY9	CR700	0.115	0.143
C10	STORY9	CR700	0.138	0.16
C11	STORY9	CR700	0.135	0.166
C11	STORY9	CR700	0.161	0.194

C12	STORY9	CR600/900	0.147	0.187
C12	STORY9	CR600/900	0.225	0.257
C13	STORY9	CR600/900	0.13	0.167
C13	STORY9	CR600/900	0.19	0.222
C14	STORY9	CR700	0.123	0.156
C14	STORY9	CR700	0.161	0.184
C17	STORY9	CR700	0.123	0.157
C17	STORY9	CR700	0.162	0.184
C18	STORY9	CR600/900	0.129	0.167
C18	STORY9	CR600/900	0.189	0.221
C19	STORY9	CR600/900	0.129	0.167
C19	STORY9	CR600/900	0.19	0.221
C20	STORY9	CR700	0.123	0.156
C20	STORY9	CR700	0.161	0.184
C23	STORY9	CR700	0.123	0.157
C23	STORY9	CR700	0.162	0.185
C24	STORY9	CR600/900	0.129	0.167
C24	STORY9	CR600/900	0.19	0.221
C25	STORY9	CR600/900	0.142	0.181
C25	STORY9	CR600/900	0.214	0.246
C26	STORY9	CR700	0.135	0.167
C26	STORY9	CR700	0.162	0.195
C27	STORY9	CR700	0.115	0.142
C27	STORY9	CR700	0.138	0.159
C28	STORY9	CR700	0.115	0.143
C28	STORY9	CR700	0.138	0.16
C29	STORY9	CR700	0.136	0.167
C29	STORY9	CR700	0.163	0.196
C30	STORY9	CR600/900	0.142	0.181
C30	STORY9	CR600/900	0.214	0.246
C31	STORY9	CR900/600	0.141	0.18
C31	STORY9	CR900/600	0.2	0.23
C32	STORY9	CR900/600	0.12	0.148
C32	STORY9	CR900/600	0.149	0.176
C33	STORY9	CR900/600	0.115	0.141
C33	STORY9	CR900/600	0.14	0.161
C34	STORY9	CR900/600	0.115	0.141
C34	STORY9	CR900/600	0.139	0.161
C35	STORY9	CR900/600	0.12	0.147
C35	STORY9	CR900/600	0.149	0.175
C36	STORY9	CR900/600	0.14	0.179
C36	STORY9	CR900/600	0.199	0.229
C1	STORY8	CR900/600	0.16	0.205
C1	STORY8	CR900/600	0.23	0.271
C2	STORY8	CR900/600	0.164	0.197



C2	STORY8	CR900/600	0.195	0.23
C3	STORY8	CR900/600	0.163	0.192
C3	STORY8	CR900/600	0.186	0.221
C4	STORY8	CR900/600	0.163	0.192
C4	STORY8	CR900/600	0.186	0.221
C5	STORY8	CR900/600	0.163	0.197
C5	STORY8	CR900/600	0.195	0.23
C6	STORY8	CR900/600	0.167	0.212
C6	STORY8	CR900/600	0.242	0.284
C7	STORY8	CR600/900	0.181	0.223
C7	STORY8	CR600/900	0.255	0.303
C8	STORY8	CR700	0.185	0.225
C8	STORY8	CR700	0.216	0.256
C9	STORY8	CR700	0.16	0.188
C9	STORY8	CR700	0.181	0.21
C10	STORY8	CR700	0.16	0.189
C10	STORY8	CR700	0.181	0.211
C11	STORY8	CR700	0.184	0.224
C11	STORY8	CR700	0.215	0.255
C12	STORY8	CR600/900	0.185	0.23
C12	STORY8	CR600/900	0.265	0.315
C13	STORY8	CR600/900	0.161	0.206
C13	STORY8	CR600/900	0.228	0.277
C14	STORY8	CR700	0.16	0.192
C14	STORY8	CR700	0.192	0.224
C17	STORY8	CR700	0.16	0.192
C17	STORY8	CR700	0.193	0.225
C18	STORY8	CR600/900	0.161	0.205
C18	STORY8	CR600/900	0.227	0.276
C19	STORY8	CR600/900	0.161	0.205
C19	STORY8	CR600/900	0.228	0.276
C20	STORY8	CR700	0.16	0.192
C20	STORY8	CR700	0.192	0.224
C23	STORY8	CR700	0.16	0.193
C23	STORY8	CR700	0.193	0.225
C24	STORY8	CR600/900	0.161	0.205
C24	STORY8	CR600/900	0.228	0.276
C25	STORY8	CR600/900	0.18	0.222
C25	STORY8	CR600/900	0.254	0.302
C26	STORY8	CR700	0.185	0.225
C26	STORY8	CR700	0.216	0.256
C27	STORY8	CR700	0.16	0.188
C27	STORY8	CR700	0.181	0.21
C28	STORY8	CR700	0.16	0.189
C28	STORY8	CR700	0.181	0.211

C29	STORY8	CR700	0.186	0.225
C29	STORY8	CR700	0.217	0.257
C30	STORY8	CR600/900	0.18	0.222
C30	STORY8	CR600/900	0.254	0.302
C31	STORY8	CR900/600	0.161	0.205
C31	STORY8	CR900/600	0.231	0.272
C32	STORY8	CR900/600	0.164	0.197
C32	STORY8	CR900/600	0.195	0.23
C33	STORY8	CR900/600	0.163	0.191
C33	STORY8	CR900/600	0.186	0.221
C34	STORY8	CR900/600	0.163	0.191
C34	STORY8	CR900/600	0.186	0.221
C35	STORY8	CR900/600	0.164	0.197
C35	STORY8	CR900/600	0.194	0.23
C36	STORY8	CR900/600	0.16	0.205
C36	STORY8	CR900/600	0.23	0.271
C1	STORY7	CR900/600	0.183	0.22
C1	STORY7	CR900/600	0.25	0.302
C2	STORY7	CR900/600	0.214	0.236
C2	STORY7	CR900/600	0.236	0.282
C3	STORY7	CR900/600	0.216	0.235
C3	STORY7	CR900/600	0.233	0.273
C4	STORY7	CR900/600	0.216	0.234
C4	STORY7	CR900/600	0.233	0.273
C5	STORY7	CR900/600	0.213	0.235
C5	STORY7	CR900/600	0.235	0.281
C6	STORY7	CR900/600	0.188	0.225
C6	STORY7	CR900/600	0.262	0.315
C7	STORY7	CR600/900	0.209	0.249
C7	STORY7	CR600/900	0.276	0.338
C8	STORY7	CR700	0.242	0.264
C8	STORY7	CR700	0.261	0.313
C9	STORY7	CR700	0.199	0.221
C9	STORY7	CR700	0.22	0.256
C10	STORY7	CR700	0.199	0.221
C10	STORY7	CR700	0.22	0.257
C11	STORY7	CR700	0.241	0.263
C11	STORY7	CR700	0.26	0.312
C12	STORY7	CR600/900	0.214	0.254
C12	STORY7	CR600/900	0.287	0.35
C13	STORY7	CR600/900	0.186	0.225
C13	STORY7	CR600/900	0.251	0.313
C14	STORY7	CR700	0.183	0.21
C14	STORY7	CR700	0.22	0.253
C17	STORY7	CR700	0.183	0.21

C17	STORY7	CR700	0.221	0.253
C18	STORY7	CR600/900	0.185	0.224
C18	STORY7	CR600/900	0.25	0.311
C19	STORY7	CR600/900	0.185	0.224
C19	STORY7	CR600/900	0.25	0.312
C20	STORY7	CR700	0.183	0.21
C20	STORY7	CR700	0.22	0.253
C23	STORY7	CR700	0.183	0.211
C23	STORY7	CR700	0.221	0.254
C24	STORY7	CR600/900	0.185	0.224
C24	STORY7	CR600/900	0.251	0.312
C25	STORY7	CR600/900	0.209	0.249
C25	STORY7	CR600/900	0.275	0.337
C26	STORY7	CR700	0.242	0.264
C26	STORY7	CR700	0.261	0.313
C27	STORY7	CR700	0.199	0.221
C27	STORY7	CR700	0.22	0.257
C28	STORY7	CR700	0.199	0.221
C28	STORY7	CR700	0.22	0.257
C29	STORY7	CR700	0.242	0.264
C29	STORY7	CR700	0.262	0.314
C30	STORY7	CR600/900	0.209	0.249
C30	STORY7	CR600/900	0.275	0.337
C31	STORY7	CR900/600	0.184	0.22
C31	STORY7	CR900/600	0.251	0.303
C32	STORY7	CR900/600	0.214	0.236
C32	STORY7	CR900/600	0.236	0.282
C33	STORY7	CR900/600	0.216	0.235
C33	STORY7	CR900/600	0.233	0.273
C34	STORY7	CR900/600	0.216	0.234
C34	STORY7	CR900/600	0.232	0.273
C35	STORY7	CR900/600	0.214	0.236
C35	STORY7	CR900/600	0.235	0.281
C36	STORY7	CR900/600	0.183	0.22
C36	STORY7	CR900/600	0.25	0.302
C1	STORY6	CR900/600	0.212	0.249
C1	STORY6	CR900/600	0.274	0.328
C2	STORY6	CR900/600	0.272	0.29
C2	STORY6	CR900/600	0.285	0.33
C3	STORY6	CR900/600	0.274	0.289
C3	STORY6	CR900/600	0.284	0.322
C4	STORY6	CR900/600	0.274	0.289
C4	STORY6	CR900/600	0.284	0.322
C5	STORY6	CR900/600	0.27	0.288
C5	STORY6	CR900/600	0.284	0.329

C6	STORY6	CR900/600	0.215	0.255
C6	STORY6	CR900/600	0.282	0.34
C7	STORY6	CR600/900	0.251	0.285
C7	STORY6	CR600/900	0.312	0.369
C8	STORY6	CR700	0.305	0.32
C8	STORY6	CR700	0.311	0.361
C9	STORY6	CR700	0.245	0.268
C9	STORY6	CR700	0.264	0.298
C10	STORY6	CR700	0.245	0.268
C10	STORY6	CR700	0.263	0.299
C11	STORY6	CR700	0.304	0.319
C11	STORY6	CR700	0.31	0.36
C12	STORY6	CR600/900	0.254	0.29
C12	STORY6	CR600/900	0.32	0.381
C13	STORY6	CR600/900	0.218	0.256
C13	STORY6	CR600/900	0.277	0.341
C14	STORY6	CR700	0.212	0.237
C14	STORY6	CR700	0.245	0.279
C17	STORY6	CR700	0.213	0.238
C17	STORY6	CR700	0.246	0.279
C18	STORY6	CR600/900	0.218	0.256
C18	STORY6	CR600/900	0.276	0.339
C19	STORY6	CR600/900	0.218	0.256
C19	STORY6	CR600/900	0.276	0.34
C20	STORY6	CR700	0.212	0.237
C20	STORY6	CR700	0.245	0.279
C23	STORY6	CR700	0.213	0.238
C23	STORY6	CR700	0.246	0.28
C24	STORY6	CR600/900	0.218	0.256
C24	STORY6	CR600/900	0.277	0.34
C25	STORY6	CR600/900	0.251	0.284
C25	STORY6	CR600/900	0.312	0.369
C26	STORY6	CR700	0.305	0.32
C26	STORY6	CR700	0.311	0.361
C27	STORY6	CR700	0.245	0.268
C27	STORY6	CR700	0.264	0.298
C28	STORY6	CR700	0.245	0.269
C28	STORY6	CR700	0.264	0.299
C29	STORY6	CR700	0.305	0.321
C29	STORY6	CR700	0.311	0.362
C30	STORY6	CR600/900	0.251	0.284
C30	STORY6	CR600/900	0.311	0.369
C31	STORY6	CR900/600	0.212	0.249
C31	STORY6	CR900/600	0.274	0.328
C32	STORY6	CR900/600	0.272	0.29

C32	STORY6	CR900/600	0.286	0.33
C33	STORY6	CR900/600	0.274	0.289
C33	STORY6	CR900/600	0.284	0.322
C34	STORY6	CR900/600	0.274	0.289
C34	STORY6	CR900/600	0.284	0.322
C35	STORY6	CR900/600	0.272	0.289
C35	STORY6	CR900/600	0.285	0.329
C36	STORY6	CR900/600	0.211	0.249
C36	STORY6	CR900/600	0.274	0.327
C1	STORY5	CR900/600	0.248	0.278
C1	STORY5	CR900/600	0.301	0.356
C2	STORY5	CR900/600	0.329	0.343
C2	STORY5	CR900/600	0.336	0.374
C3	STORY5	CR900/600	0.332	0.342
C3	STORY5	CR900/600	0.338	0.373
C4	STORY5	CR900/600	0.332	0.342
C4	STORY5	CR900/600	0.338	0.373
C5	STORY5	CR900/600	0.328	0.341
C5	STORY5	CR900/600	0.334	0.373
C6	STORY5	CR900/600	0.251	0.283
C6	STORY5	CR900/600	0.31	0.365
C7	STORY5	CR600/900	0.295	0.328
C7	STORY5	CR600/900	0.343	0.407
C8	STORY5	CR700	0.368	0.377
C8	STORY5	CR700	0.374	0.424
C9	STORY5	CR700	0.295	0.316
C9	STORY5	CR700	0.311	0.345
C10	STORY5	CR700	0.295	0.316
C10	STORY5	CR700	0.311	0.346
C11	STORY5	CR700	0.366	0.376
C11	STORY5	CR700	0.372	0.423
C12	STORY5	CR600/900	0.298	0.332
C12	STORY5	CR600/900	0.351	0.416
C13	STORY5	CR600/900	0.255	0.285
C13	STORY5	CR600/900	0.308	0.374
C14	STORY5	CR700	0.247	0.27
C14	STORY5	CR700	0.305	0.341
C17	STORY5	CR700	0.247	0.27
C17	STORY5	CR700	0.305	0.342
C18	STORY5	CR600/900	0.255	0.285
C18	STORY5	CR600/900	0.307	0.372
C19	STORY5	CR600/900	0.255	0.285
C19	STORY5	CR600/900	0.308	0.373
C20	STORY5	CR700	0.247	0.27
C20	STORY5	CR700	0.305	0.341

C23	STORY5	CR700	0.247	0.27
C23	STORY5	CR700	0.305	0.342
C24	STORY5	CR600/900	0.255	0.285
C24	STORY5	CR600/900	0.308	0.373
C25	STORY5	CR600/900	0.295	0.328
C25	STORY5	CR600/900	0.342	0.406
C26	STORY5	CR700	0.368	0.377
C26	STORY5	CR700	0.374	0.424
C27	STORY5	CR700	0.295	0.316
C27	STORY5	CR700	0.311	0.345
C28	STORY5	CR700	0.295	0.316
C28	STORY5	CR700	0.312	0.346
C29	STORY5	CR700	0.368	0.377
C29	STORY5	CR700	0.374	0.425
C30	STORY5	CR600/900	0.295	0.328
C30	STORY5	CR600/900	0.342	0.406
C31	STORY5	CR900/600	0.248	0.278
C31	STORY5	CR900/600	0.301	0.356
C32	STORY5	CR900/600	0.33	0.343
C32	STORY5	CR900/600	0.336	0.374
C33	STORY5	CR900/600	0.332	0.342
C33	STORY5	CR900/600	0.338	0.373
C34	STORY5	CR900/600	0.332	0.342
C34	STORY5	CR900/600	0.338	0.373
C35	STORY5	CR900/600	0.329	0.343
C35	STORY5	CR900/600	0.336	0.374
C36	STORY5	CR900/600	0.248	0.278
C36	STORY5	CR900/600	0.3	0.355
C1	STORY4	CR900/600	0.286	0.318
C1	STORY4	CR900/600	0.351	0.416
C2	STORY4	CR900/600	0.387	0.397
C2	STORY4	CR900/600	0.395	0.441
C3	STORY4	CR900/600	0.39	0.399
C3	STORY4	CR900/600	0.396	0.439
C4	STORY4	CR900/600	0.39	0.399
C4	STORY4	CR900/600	0.396	0.439
C5	STORY4	CR900/600	0.385	0.395
C5	STORY4	CR900/600	0.394	0.439
C6	STORY4	CR900/600	0.289	0.322
C6	STORY4	CR900/600	0.359	0.424
C7	STORY4	CR600/900	0.347	0.375
C7	STORY4	CR600/900	0.412	0.487
C8	STORY4	CR700	0.431	0.432
C8	STORY4	CR700	0.437	0.451
C9	STORY4	CR700	0.345	0.365

C9	STORY4	CR700	0.352	0.387
C10	STORY4	CR700	0.345	0.365
C10	STORY4	CR700	0.352	0.387
C11	STORY4	CR700	0.429	0.431
C11	STORY4	CR700	0.435	0.449
C12	STORY4	CR600/900	0.349	0.379
C12	STORY4	CR600/900	0.419	0.495
C13	STORY4	CR600/900	0.296	0.326
C13	STORY4	CR600/900	0.355	0.43
C14	STORY4	CR700	0.278	0.303
C14	STORY4	CR700	0.303	0.384
C17	STORY4	CR700	0.278	0.303
C17	STORY4	CR700	0.303	0.383
C18	STORY4	CR600/900	0.296	0.326
C18	STORY4	CR600/900	0.354	0.428
C19	STORY4	CR600/900	0.296	0.326
C19	STORY4	CR600/900	0.355	0.429
C20	STORY4	CR700	0.278	0.303
C20	STORY4	CR700	0.303	0.384
C23	STORY4	CR700	0.278	0.303
C23	STORY4	CR700	0.303	0.383
C24	STORY4	CR600/900	0.296	0.326
C24	STORY4	CR600/900	0.355	0.429
C25	STORY4	CR600/900	0.347	0.375
C25	STORY4	CR600/900	0.412	0.486
C26	STORY4	CR700	0.431	0.432
C26	STORY4	CR700	0.437	0.451
C27	STORY4	CR700	0.345	0.365
C27	STORY4	CR700	0.352	0.387
C28	STORY4	CR700	0.345	0.365
C28	STORY4	CR700	0.352	0.387
C29	STORY4	CR700	0.431	0.432
C29	STORY4	CR700	0.437	0.45
C30	STORY4	CR600/900	0.347	0.374
C30	STORY4	CR600/900	0.411	0.486
C31	STORY4	CR900/600	0.286	0.319
C31	STORY4	CR900/600	0.351	0.416
C32	STORY4	CR900/600	0.387	0.397
C32	STORY4	CR900/600	0.396	0.441
C33	STORY4	CR900/600	0.39	0.399
C33	STORY4	CR900/600	0.396	0.439
C34	STORY4	CR900/600	0.39	0.399
C34	STORY4	CR900/600	0.396	0.439
C35	STORY4	CR900/600	0.387	0.397
C35	STORY4	CR900/600	0.395	0.441

C36	STORY4	CR900/600	0.285	0.318
C36	STORY4	CR900/600	0.35	0.415
C1	STORY3	CR900/600	0.331	0.368
C1	STORY3	CR900/600	0.366	0.423
C2	STORY3	CR900/600	0.446	0.463
C2	STORY3	CR900/600	0.453	0.491
C3	STORY3	CR900/600	0.448	0.464
C3	STORY3	CR900/600	0.456	0.49
C4	STORY3	CR900/600	0.448	0.464
C4	STORY3	CR900/600	0.455	0.49
C5	STORY3	CR900/600	0.443	0.46
C5	STORY3	CR900/600	0.45	0.489
C6	STORY3	CR900/600	0.334	0.372
C6	STORY3	CR900/600	0.373	0.431
C7	STORY3	CR600/900	0.399	0.437
C7	STORY3	CR600/900	0.439	0.504
C8	STORY3	CR800	0.398	0.404
C8	STORY3	CR800	0.406	0.416
C9	STORY3	CR800	0.338	0.356
C9	STORY3	CR800	0.345	0.369
C10	STORY3	CR800	0.338	0.356
C10	STORY3	CR800	0.345	0.369
C11	STORY3	CR800	0.397	0.403
C11	STORY3	CR800	0.405	0.415
C12	STORY3	CR600/900	0.402	0.441
C12	STORY3	CR600/900	0.443	0.512
C13	STORY3	CR600/900	0.339	0.374
C13	STORY3	CR600/900	0.376	0.444
C14	STORY3	CR800	0.311	0.353
C14	STORY3	CR800	0.308	0.338
C15	STORY3	CR800	0.21	0.318
C15	STORY3	CR800	0.165	0.242
C16	STORY3	CR800	0.211	0.319
C16	STORY3	CR800	0.166	0.243
C17	STORY3	CR800	0.311	0.353
C17	STORY3	CR800	0.308	0.338
C18	STORY3	CR600/900	0.338	0.374
C18	STORY3	CR600/900	0.375	0.443
C19	STORY3	CR600/900	0.339	0.374
C19	STORY3	CR600/900	0.376	0.444
C20	STORY3	CR800	0.311	0.353
C20	STORY3	CR800	0.308	0.338
C21	STORY3	CR800	0.21	0.318
C21	STORY3	CR800	0.165	0.242
C22	STORY3	CR800	0.211	0.319



C22	STORY3	CR800	0.166	0.243
C23	STORY3	CR800	0.311	0.353
C23	STORY3	CR800	0.308	0.338
C24	STORY3	CR600/900	0.338	0.374
C24	STORY3	CR600/900	0.375	0.444
C25	STORY3	CR600/900	0.399	0.437
C25	STORY3	CR600/900	0.439	0.504
C26	STORY3	CR800	0.398	0.404
C26	STORY3	CR800	0.406	0.416
C27	STORY3	CR800	0.338	0.356
C27	STORY3	CR800	0.345	0.369
C28	STORY3	CR800	0.338	0.356
C28	STORY3	CR800	0.345	0.37
C29	STORY3	CR800	0.398	0.404
C29	STORY3	CR800	0.406	0.416
C30	STORY3	CR600/900	0.398	0.437
C30	STORY3	CR600/900	0.438	0.504
C31	STORY3	CR900/600	0.331	0.368
C31	STORY3	CR900/600	0.366	0.423
C32	STORY3	CR900/600	0.446	0.463
C32	STORY3	CR900/600	0.453	0.491
C33	STORY3	CR900/600	0.449	0.464
C33	STORY3	CR900/600	0.456	0.49
C34	STORY3	CR900/600	0.448	0.464
C34	STORY3	CR900/600	0.456	0.49
C35	STORY3	CR900/600	0.446	0.463
C35	STORY3	CR900/600	0.453	0.491
C36	STORY3	CR900/600	0.331	0.368
C36	STORY3	CR900/600	0.366	0.423
C1	STORY2	CR900/600	0.372	0.404
C1	STORY2	CR900/600	0.435	0.517
C2	STORY2	CR900/600	0.506	0.532
C2	STORY2	CR900/600	0.519	0.574
C3	STORY2	CR900/600	0.508	0.533
C3	STORY2	CR900/600	0.518	0.573
C4	STORY2	CR900/600	0.508	0.533
C4	STORY2	CR900/600	0.518	0.573
C5	STORY2	CR900/600	0.503	0.529
C5	STORY2	CR900/600	0.517	0.572
C6	STORY2	CR900/600	0.375	0.407
C6	STORY2	CR900/600	0.444	0.526
C7	STORY2	CR600/900	0.452	0.484
C7	STORY2	CR600/900	0.519	0.611
C8	STORY2	CR800	0.464	0.474
C8	STORY2	CR800	0.469	0.493

C9	STORY2	CR800	0.403	0.422
C9	STORY2	CR800	0.409	0.446
C10	STORY2	CR800	0.403	0.422
C10	STORY2	CR800	0.409	0.446
C11	STORY2	CR800	0.462	0.472
C11	STORY2	CR800	0.467	0.492
C12	STORY2	CR600/900	0.454	0.487
C12	STORY2	CR600/900	0.526	0.62
C13	STORY2	CR600/900	0.382	0.41
C13	STORY2	CR600/900	0.446	0.539
C14	STORY2	CR800	0.354	0.375
C14	STORY2	CR800	0.361	0.394
C15	STORY2	CR800	0.185	0.19
C15	STORY2	CR800	0.192	0.241
C16	STORY2	CR800	0.185	0.19
C16	STORY2	CR800	0.192	0.241
C17	STORY2	CR800	0.355	0.375
C17	STORY2	CR800	0.361	0.394
C18	STORY2	CR600/900	0.382	0.41
C18	STORY2	CR600/900	0.444	0.537
C19	STORY2	CR600/900	0.382	0.41
C19	STORY2	CR600/900	0.445	0.538
C20	STORY2	CR800	0.354	0.375
C20	STORY2	CR800	0.361	0.394
C21	STORY2	CR800	0.185	0.19
C21	STORY2	CR800	0.192	0.241
C22	STORY2	CR800	0.185	0.19
C22	STORY2	CR800	0.192	0.241
C23	STORY2	CR800	0.355	0.375
C23	STORY2	CR800	0.361	0.394
C24	STORY2	CR600/900	0.382	0.41
C24	STORY2	CR600/900	0.445	0.538
C25	STORY2	CR600/900	0.452	0.484
C25	STORY2	CR600/900	0.518	0.61
C26	STORY2	CR800	0.464	0.474
C26	STORY2	CR800	0.469	0.493
C27	STORY2	CR800	0.403	0.422
C27	STORY2	CR800	0.409	0.446
C28	STORY2	CR800	0.403	0.422
C28	STORY2	CR800	0.409	0.446
C29	STORY2	CR800	0.464	0.474
C29	STORY2	CR800	0.469	0.494
C30	STORY2	CR600/900	0.451	0.483
C30	STORY2	CR600/900	0.518	0.61
C31	STORY2	CR900/600	0.372	0.404

C31	STORY2	CR900/600	0.436	0.517
C32	STORY2	CR900/600	0.506	0.532
C32	STORY2	CR900/600	0.519	0.574
C33	STORY2	CR900/600	0.508	0.533
C33	STORY2	CR900/600	0.518	0.573
C34	STORY2	CR900/600	0.508	0.533
C34	STORY2	CR900/600	0.518	0.573
C35	STORY2	CR900/600	0.506	0.532
C35	STORY2	CR900/600	0.519	0.574
C36	STORY2	CR900/600	0.371	0.404
C36	STORY2	CR900/600	0.435	0.516
C1	STORY1	CR900/600	0.415	0.453
C1	STORY1	CR900/600	0.458	0.551
C2	STORY1	CR900/600	0.565	0.598
C2	STORY1	CR900/600	0.571	0.64
C3	STORY1	CR900/600	0.567	0.599
C3	STORY1	CR900/600	0.573	0.639
C4	STORY1	CR900/600	0.567	0.599
C4	STORY1	CR900/600	0.573	0.639
C5	STORY1	CR900/600	0.562	0.595
C5	STORY1	CR900/600	0.568	0.637
C6	STORY1	CR900/600	0.418	0.457
C6	STORY1	CR900/600	0.46	0.554
C7	STORY1	CR600/900	0.504	0.543
C7	STORY1	CR600/900	0.534	0.617
C8	STORY1	CR800	0.534	0.542
C8	STORY1	CR800	0.539	0.584
C9	STORY1	CR800	0.473	0.489
C9	STORY1	CR800	0.478	0.535
C10	STORY1	CR800	0.473	0.489
C10	STORY1	CR800	0.478	0.535
C11	STORY1	CR800	0.532	0.54
C11	STORY1	CR800	0.537	0.583
C12	STORY1	CR600/900	0.506	0.545
C12	STORY1	CR600/900	0.536	0.62
C13	STORY1	CR600/900	0.425	0.455
C13	STORY1	CR600/900	0.45	0.554
C14	STORY1	CR800	0.413	0.434
C14	STORY1	CR800	0.424	0.495
C15	STORY1	CR800	0.244	0.248
C15	STORY1	CR800	0.279	0.388
C16	STORY1	CR800	0.244	0.248
C16	STORY1	CR800	0.279	0.389
C17	STORY1	CR800	0.414	0.434
C17	STORY1	CR800	0.424	0.495

C18	STORY1	CR600/900	0.425	0.455
C18	STORY1	CR600/900	0.449	0.552
C19	STORY1	CR600/900	0.425	0.455
C19	STORY1	CR600/900	0.45	0.553
C20	STORY1	CR800	0.413	0.434
C20	STORY1	CR800	0.424	0.495
C21	STORY1	CR800	0.244	0.248
C21	STORY1	CR800	0.279	0.388
C22	STORY1	CR800	0.244	0.248
C22	STORY1	CR800	0.279	0.389
C23	STORY1	CR800	0.414	0.434
C23	STORY1	CR800	0.424	0.495
C24	STORY1	CR600/900	0.425	0.455
C24	STORY1	CR600/900	0.45	0.553
C25	STORY1	CR600/900	0.504	0.543
C25	STORY1	CR600/900	0.534	0.616
C26	STORY1	CR800	0.534	0.542
C26	STORY1	CR800	0.539	0.584
C27	STORY1	CR800	0.473	0.489
C27	STORY1	CR800	0.478	0.535
C28	STORY1	CR800	0.473	0.489
C28	STORY1	CR800	0.478	0.535
C29	STORY1	CR800	0.534	0.542
C29	STORY1	CR800	0.539	0.585
C30	STORY1	CR600/900	0.504	0.543
C30	STORY1	CR600/900	0.534	0.616
C31	STORY1	CR900/600	0.415	0.453
C31	STORY1	CR900/600	0.458	0.551
C32	STORY1	CR900/600	0.565	0.598
C32	STORY1	CR900/600	0.571	0.64
C33	STORY1	CR900/600	0.567	0.599
C33	STORY1	CR900/600	0.573	0.639
C34	STORY1	CR900/600	0.567	0.599
C34	STORY1	CR900/600	0.573	0.639
C35	STORY1	CR900/600	0.565	0.598
C35	STORY1	CR900/600	0.571	0.64
C36	STORY1	CR900/600	0.415	0.453
C36	STORY1	CR900/600	0.457	0.55