

## LAMPIRAN

### Lampiran 1. Gambar tipe bangunan rumah tinggal



**Gambar 1.** Bangunan rumah tinggal satu lantai dengan luas  $< 72 m^2$



**Gambar 2.** Bangunan rumah tinggal satu lantai dengan luas  $\geq 72 m^2$



**Gambar 3.** Bangunan rumah tinggal dua lantai

**Lampiran 2. Jumlah kegagalan struktur bangunan rumah tinggal 1 lantai**

Jumlah kegagalan struktur bangunan rumah tinggal satu lantai

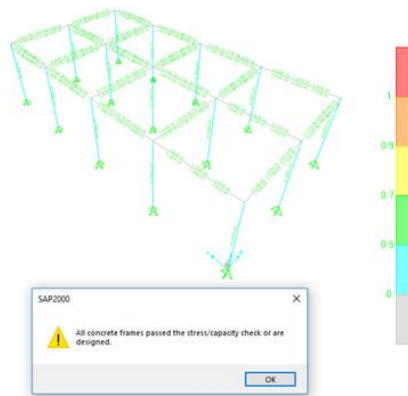
No	Ukuran kolom (cm)	Ukuran balok (cm)	Ketinggian lahar dingin (m)	Jumlah struktur yang mengalami kegagalan
1	20 x 20	15 x 20	0.5	0
2	20 x 20	15 x 20	1	14
3	20 x 20	15 x 20	1.5	35
4	20 x 20	15 x 20	2	37
5	20 x 20	15 x 20	2.5	37
6	20 x 20	15 x 20	3	37
7	25 x 25	20 x 25	0.5	0
8	25 x 25	20 x 25	1	8
9	25 x 25	20 x 25	1.5	34
10	25 x 25	20 x 25	2	37
11	25 x 25	20 x 25	2.5	37
12	25 x 25	20 x 25	3	37
13	30 x 30	25 x 30	0.5	0
14	30 x 30	25 x 30	1	6
15	30 x 30	25 x 30	1.5	27
16	30 x 30	25 x 30	2	36
17	30 x 30	25 x 30	2.5	37
18	30 x 30	25 x 30	3	37
19	35 x 35	30 x 35	0.5	0
20	35 x 35	30 x 35	1	5
21	35 x 35	30 x 35	1.5	21
22	35 x 35	30 x 35	2	36
23	35 x 35	30 x 35	2.5	37
24	35 x 35	30 x 35	3	37

### Lampiran 3. Jumlah kegagalan struktur bangunan rumah tinggal 2 lantai

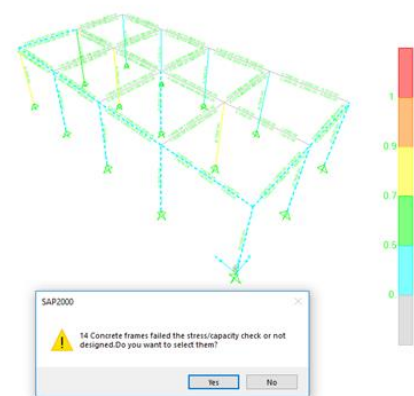
Jumlah kegagalan struktur bangunan rumah tinggal dua lantai

No	Ukuran kolom (cm)	Ukuran balok (cm)	Ketinggian lahar dingin (m)	Jumlah struktur yang mengalami kegagalan
1	20 x 20	15 x 20	0.5	0
2	20 x 20	15 x 20	1	11
3	20 x 20	15 x 20	1.5	24
4	20 x 20	15 x 20	2	51
5	20 x 20	15 x 20	2.5	59
6	20 x 20	15 x 20	3	59
7	25 x 25	20 x 25	0.5	0
8	25 x 25	20 x 25	1	6
9	25 x 25	20 x 25	1.5	18
10	25 x 25	20 x 25	2	41
11	25 x 25	20 x 25	2.5	59
12	25 x 25	20 x 25	3	59
13	30 x 30	25 x 30	0.5	0
14	30 x 30	25 x 30	1	3
15	30 x 30	25 x 30	1.5	17
16	30 x 30	25 x 30	2	30
17	30 x 30	25 x 30	2.5	56
18	30 x 30	25 x 30	3	59
19	35 x 35	30 x 35	0.5	0
20	35 x 35	30 x 35	1	3
21	35 x 35	30 x 35	1.5	16
22	35 x 35	30 x 35	2	27
23	35 x 35	30 x 35	2.5	48
24	35 x 35	30 x 35	3	58

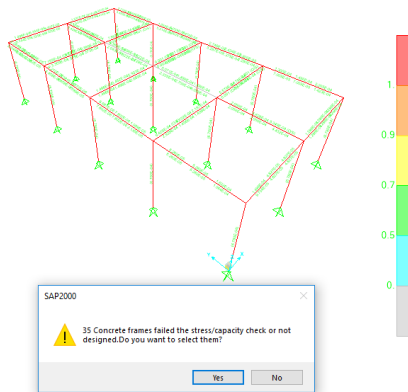
#### Lampiran 4. Hasil analisis kegagalan struktur bangunan rumah tinggal 1 lantai



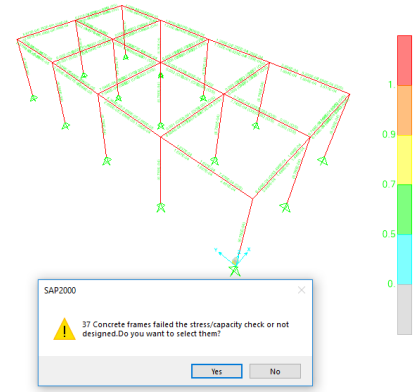
Gambar 1 Kolom 20 x 20 cm dan ketinggian banjir 0,5 m



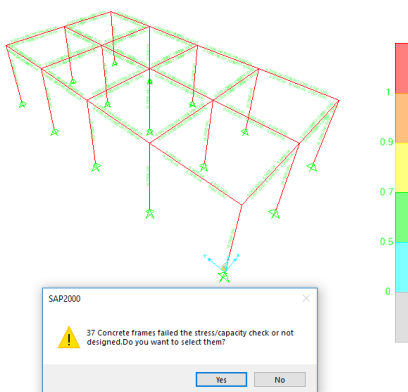
Gambar 2 Kolom 20 x 20 cm dan ketinggian banjir 1 m



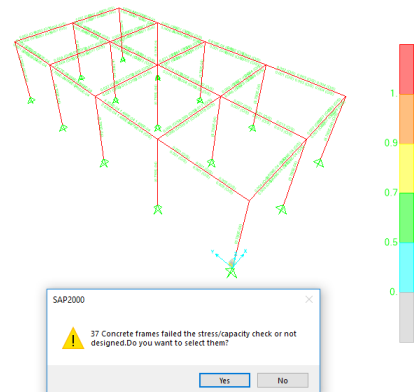
Gambar 3 Kolom 20 x 20 cm dan ketinggian banjir 1,5 m



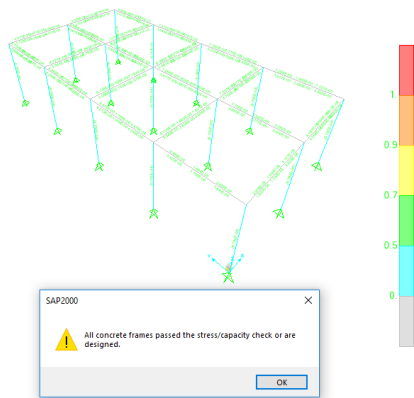
Gambar 4 Kolom 20 x 20 cm dan ketinggian banjir 2 m



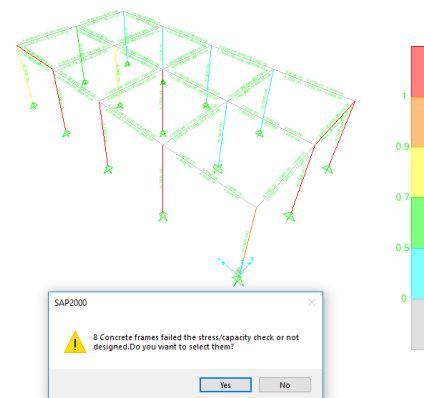
Gambar 5 Kolom 20 x 20 cm dan ketinggian banjir 2,5 m



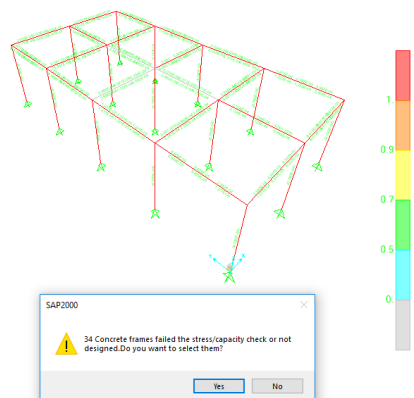
Gambar 6 Kolom 20 x 20 cm dan ketinggian banjir 3 m



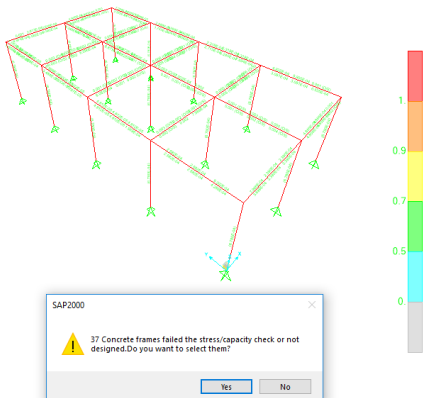
Gambar 7 Kolom 25 x 25 cm dan ketinggian banjir 0,5 m



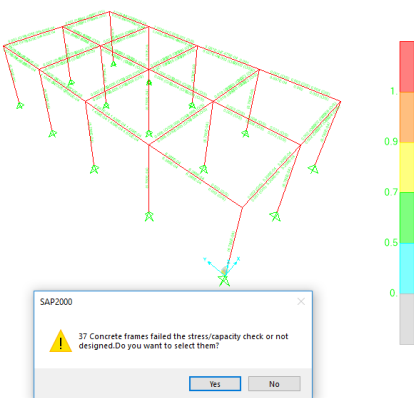
Gambar 8 Kolom 25 x 25 cm dan ketinggian banjir 1 m



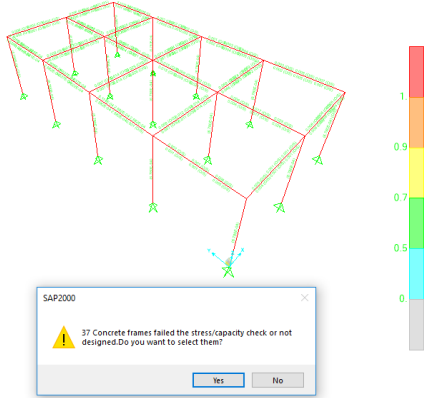
Gambar 9 Kolom 25 x 25 cm dan ketinggian banjir 1,5 m



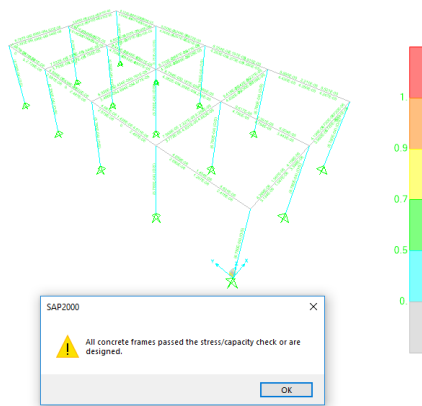
Gambar 10 Kolom 25 x 25 cm dan ketinggian banjir 2 m



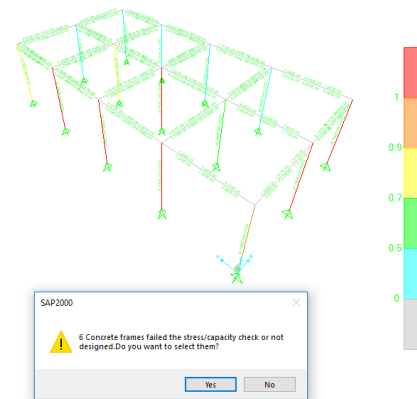
Gambar 11 Kolom 25 x 25 cm dan ketinggian banjir 2,5 m



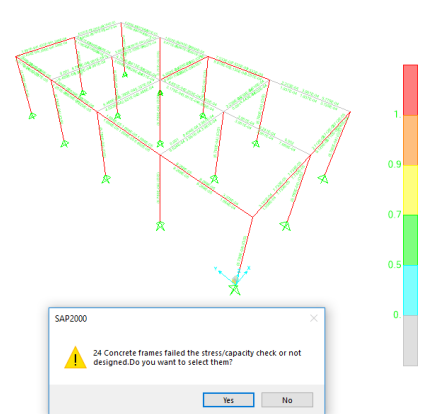
Gambar 12 Kolom 25 x 25 cm dan ketinggian banjir 3 m



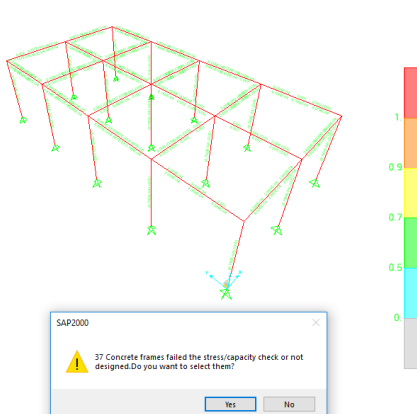
Gambar 13 Kolom 30 x 30 cm dan ketinggian banjir 0,5 m



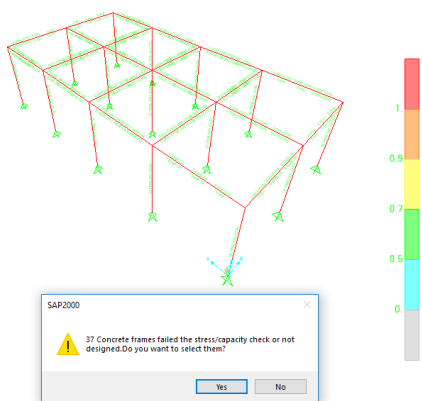
Gambar 14 Kolom 30 x 30 cm dan ketinggian banjir 1 m



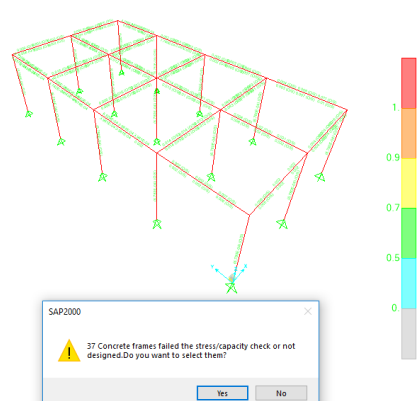
Gambar 15 Kolom 30 x 30 cm dan ketinggian banjir 1,5 m



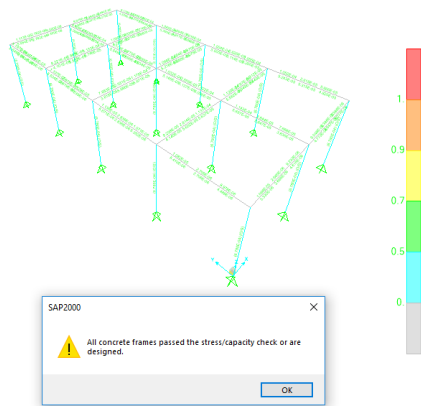
Gambar 16 Kolom 30 x 30 cm dan ketinggian banjir 2 m



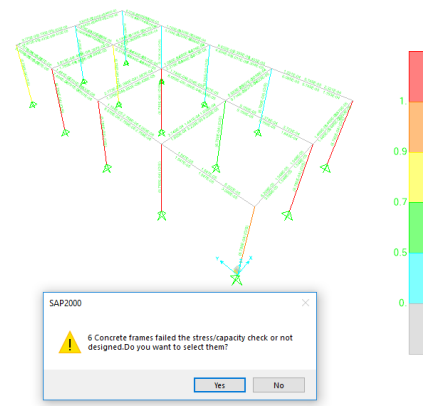
Gambar 17 Kolom 30 x 30 cm dan ketinggian banjir 2,5 m



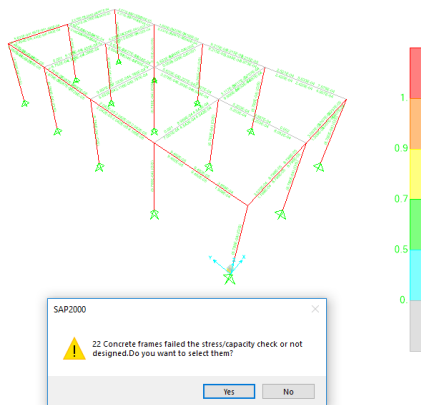
Gambar 18 Kolom 30 x 30 cm dan ketinggian banjir 3 m



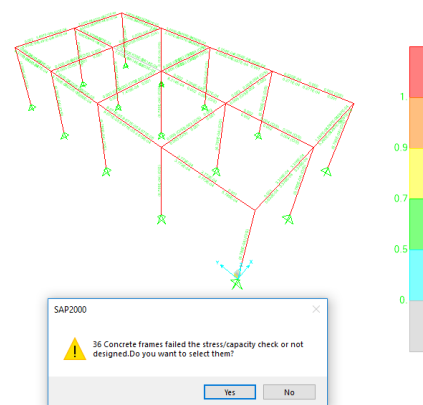
Gambar 19 Kolom 35 x 35 cm dan ketinggian banjir 0,5 m



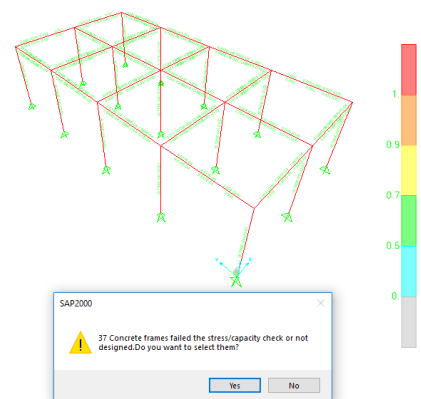
Gambar 20 Kolom 35 x 35 cm dan ketinggian banjir 1 m



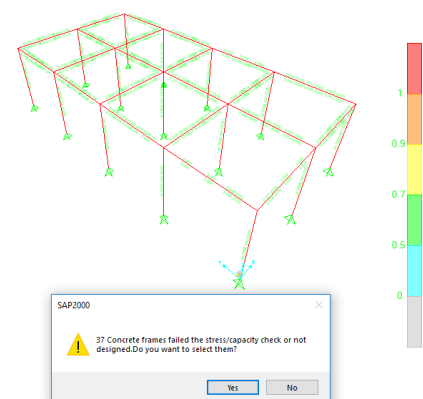
Gambar 21 Kolom 35 x 35 cm dan ketinggian banjir 1,5 m



Gambar 22 Kolom 35 x 35 cm dan ketinggian banjir 2 m



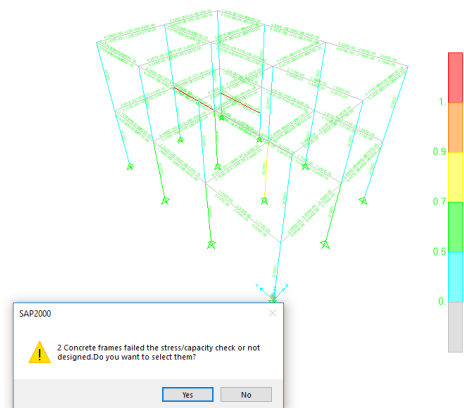
Gambar 23 Kolom 35 x 35 cm dan ketinggian banjir 2,5 m



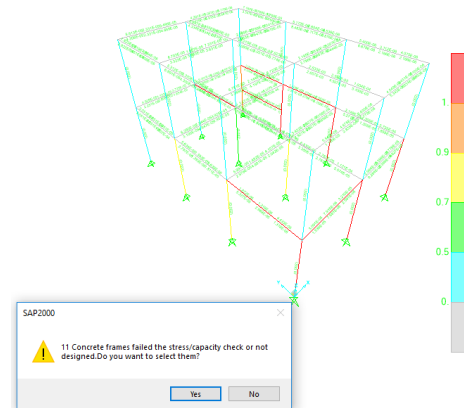
Gambar 24 Kolom 35 x 35 cm dan ketinggian banjir 3 m



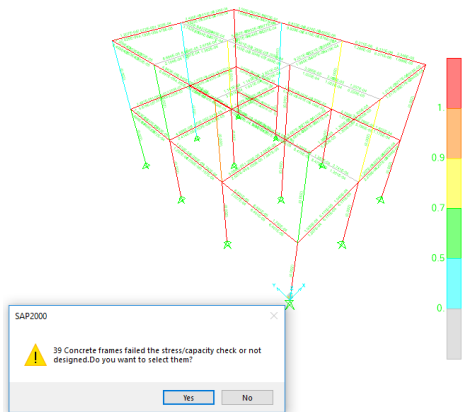
## Lampiran 5. Hasil analisis kegagalan struktur bangunan rumah tinggal 2 lantai



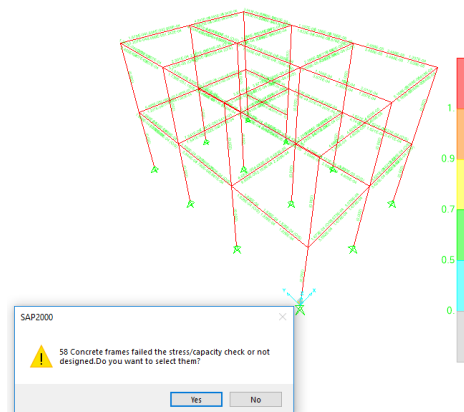
Gambar 1 Kolom 20 x 20 cm dan ketinggian banjir 0,5 m



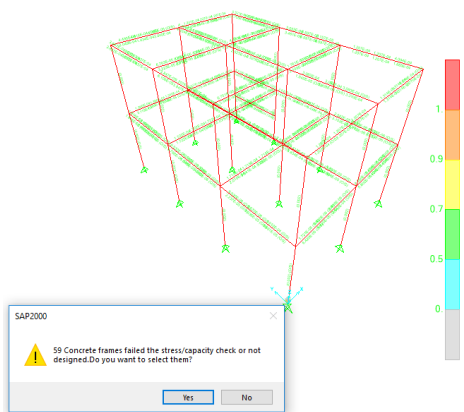
Gambar 2 Kolom 20 x 20 cm dan ketinggian banjir 1 m



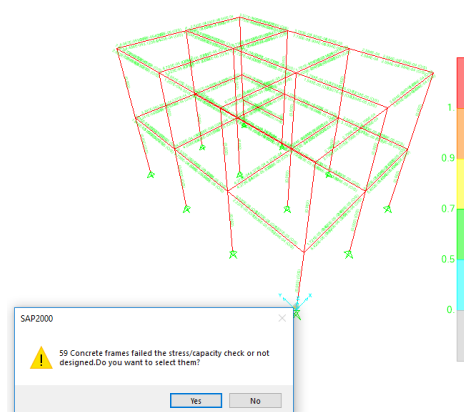
Gambar 3 Kolom 20 x 20 cm dan ketinggian banjir 1,5 m



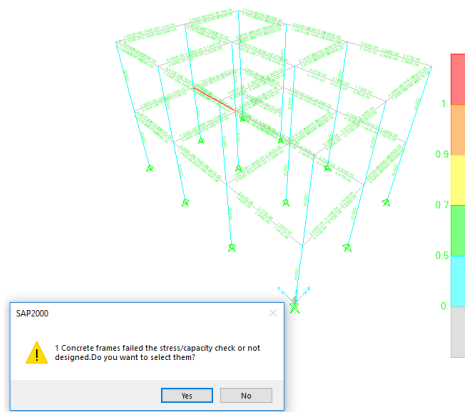
Gambar 4 Kolom 20 x 20 cm dan ketinggian banjir 2 m



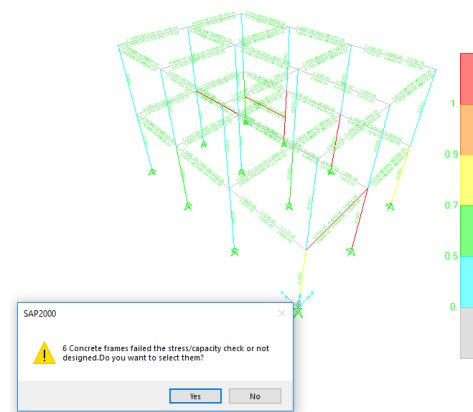
Gambar 5 Kolom 20 x 25 cm dan ketinggian banjir 2,5 m



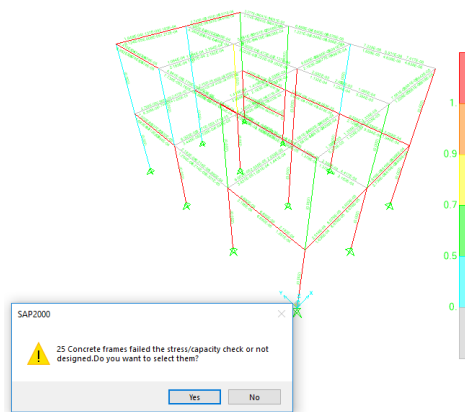
Gambar 6 Kolom 20 x 20 cm dan ketinggian banjir 3 m



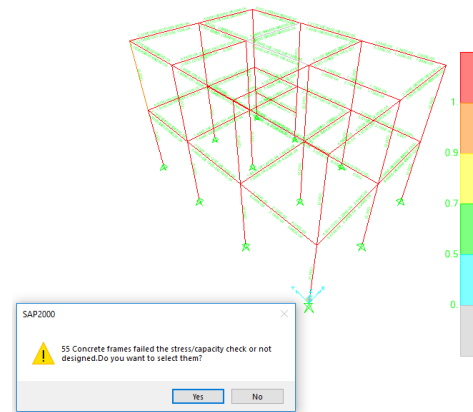
Gambar 7 Kolom 25 x 25 cm dan ketinggian banjir 0,5 m



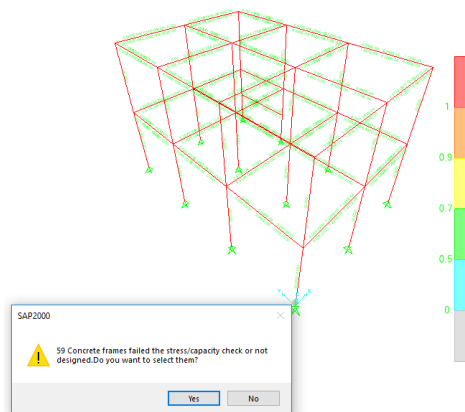
Gambar 8 Kolom 25 x 25 cm dan ketinggian banjir 1 m



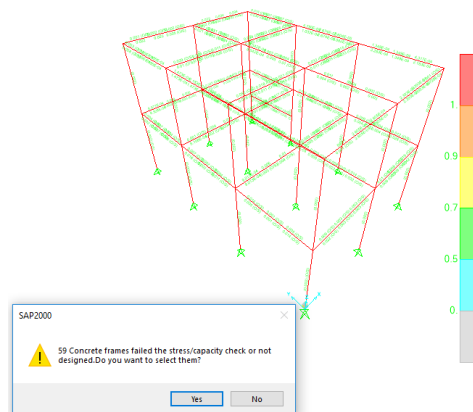
Gambar 9 Kolom 25 x 25 cm dan ketinggian banjir 1,5 m



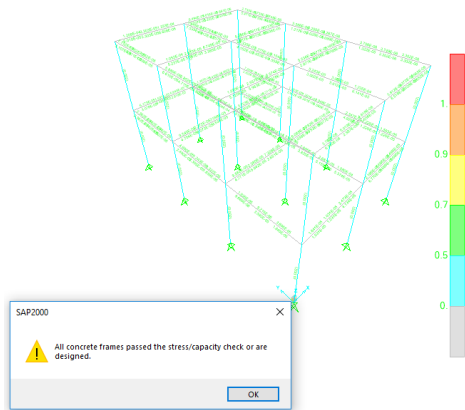
Gambar 10 Kolom 25 x 25 cm dan ketinggian banjir 2 m



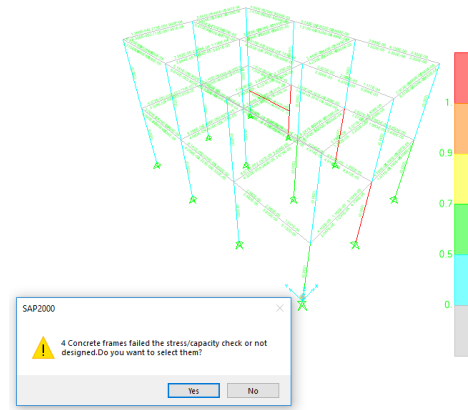
Gambar 11 Kolom 25 x 25 cm dan ketinggian banjir 2,5 m



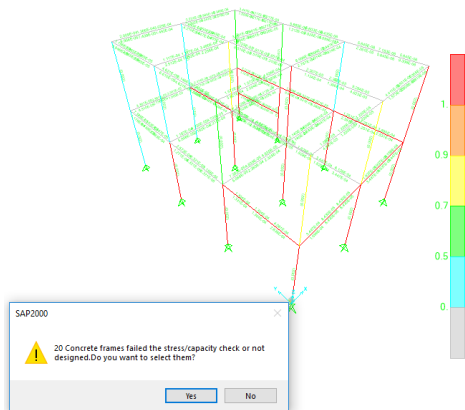
Gambar 12 Kolom 25 x 25 cm dan ketinggian banjir 3 m



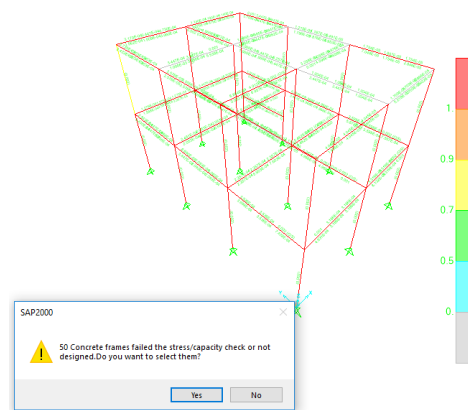
Gambar 13 Kolom 30 x 30 cm dan ketinggian banjir 0,5 m



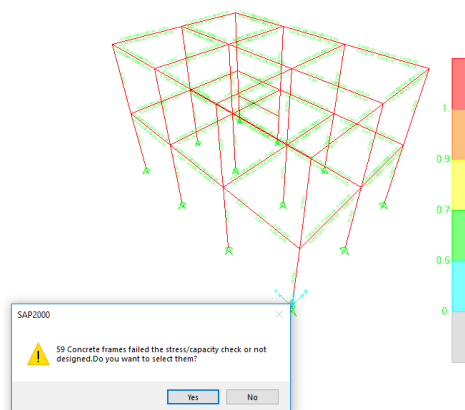
Gambar 14 Kolom 30 x 30 cm dan ketinggian banjir 1 m



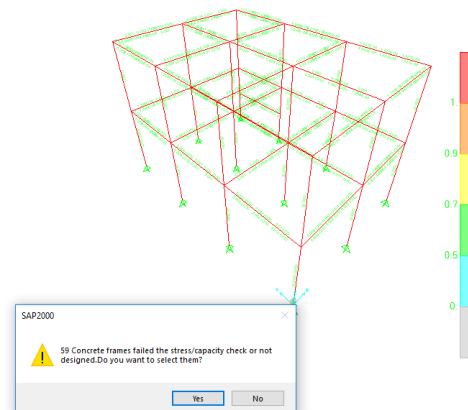
Gambar 15 Kolom 30 x 30 cm dan ketinggian banjir 1,5 m



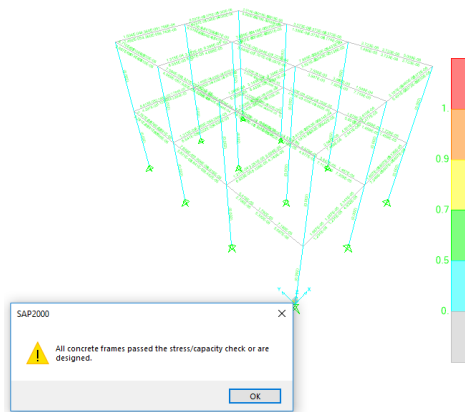
Gambar 16 Kolom 30 x 30 cm dan ketinggian banjir 2 m



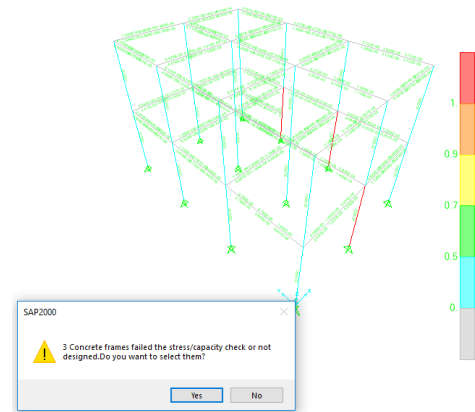
Gambar 17 Kolom 30 x 30 cm dan ketinggian banjir 2,5 m



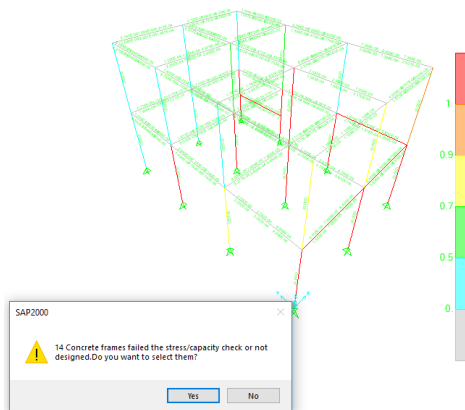
Gambar 18 Kolom 30 x 30 cm dan ketinggian banjir 3 m



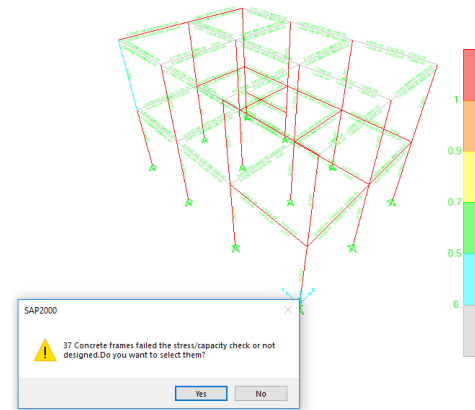
Gambar 19 Kolom 35 x 35 cm dan ketinggian banjir 0,5 m



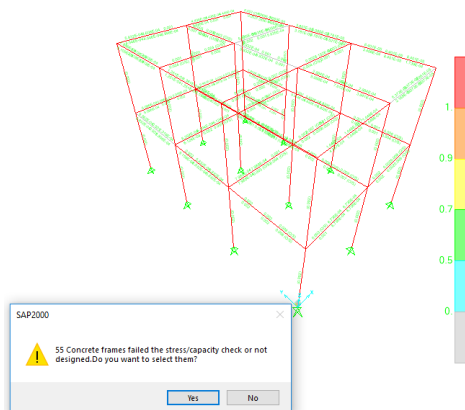
Gambar 20 Kolom 35 x 35 cm dan ketinggian banjir 1 m



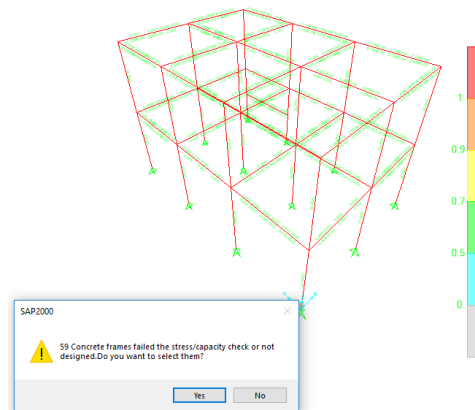
Gambar 21 Kolom 35 x 35 cm dan ketinggian banjir 1,5 m



Gambar 22 Kolom 35 x 35 cm dan ketinggian banjir 2 m



Gambar 23 Kolom 35 x 35 cm dan ketinggian banjir 2,5 m



Gambar 24 Kolom 35 x 35 cm dan ketinggian banjir 3 m

Lampiran 6. Peta bangunan yang beresiko terdampak banjir lahar dingin

