TUGAS AKHIR

STUDI "SOFT STOREY EFFECT" PADA GEDUNG BERTINGKAT AKIBAT BEBAN GEMPA

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JURUSAN TEKNIK SIPIL
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA
YOGYAKARTA

1996

TUGAS AKHIR
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Diajukan kepada Universitas Islam Indonesia
untuk memenuhi sebagian persyaratan memperoleh
derajat Sarjana Teknik Sipil

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Bismillahirrohmaanirrohiim

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Yazhidatul Asror

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ABSTRAK

Secara geografi Indonesia termasuk daerah potensial gempa yaitu terletak pada pertemuan Sirkum Pasifik dan Sirkum Mediterania. Mengingat besarnya-kerugian-kerugian yang ditimbulkan akibat gempa, maka sebaiknya benar-benar diperhatikan dalam perencanaan struktur. Dinding/*infill wall* biasanya kurang diperhatikan dalam pelaksanaan konstruksi karena hanya dipakai untuk pembatas ruangan atau sebagai partisi pengisi yang menahan gangguan dari angin dan cuaca. *Infill wall* merupakan non-struktural yang pada saat terjadi gempa akan sangat bervariasi perilakunya. Pada beberapa paper, gempa yang terjadi di Peru dan Mexico menunjukkan bahwa *infill wall* mempengaruhi kekakuan struktur lebih baik dan sekaligus lebih buruk/*soft storey effect*. Oleh karena itu dengan menganalisa retak-retak yang terjadi maka beberapa teori mengasumsikan *infill wall* sebagai *diagonal strut* dengan lebar effektif tergantung dari luasan dinding. Dengan menggunakan *Strukture Analysis Program 90* dianalisa kombinasi penempatan *infill wall* dari 3 model portal yang bervariasi baik tinggi tingkat maupun zone yang berbeda menurut Peraturan Gempa di Indonesia 1987. *Out program* berupa momen, gaya geser, dan defleksi baik pada kolom maupun balok ditabelkan dan dibuat grafik. Analisa secara umum menghasilkan beberapa kesimpulan salah satunya yaitu *infill wall* teryata dapat berfungsi sebagai pengaku portal sehingga struktur akan dapat menahan gaya horisontal lebih baik karena sebagian gaya tersebut ditahan oleh *diagonal strut*. *Infill wall* akan berperilaku cukup baik apabila penempatannya menerus. Oleh karena itu ini merupakan salah satu alternatif yang baik dalam menerapkan konsep bangunan tahan gempa. Mengingat harga batu bata yang /batako yang relatif murah maka *infill wall* harus mulai diperhatikan dalam pelaksanaannya.

BAB I

PENDAHULUAN

1.1 Umum

Secara geografis Indonesia termasuk daerah potensial gempa yaitu terletak pada pertemuan Sirkum Pasifik dan Sirkum Mediterania. Mengingat besarnya kerugian-kerugian baik harta maupun jiwa yang terjadi akibat gempa, maka pengaruh beban gempa harus benar-benar diperhatikan dalam perencanaan struktur. Saat terjadi gempa pada struktur bangunan, getaran gempa dari lapisan tanah di bawah bangunan akan menggetarkan bangunan di atasnya dalam berbagai arah. Dua hal penting yang perlu dibahas dalam perencanaan struktur tahan gempa yaitu perilaku material dan struktur bangunan maupun komponen dari struktur bangunan itu sendiri.

Berbagai peraturan perencanaan bangunan terhadap beban gempa, termasuk pedoman perencanaan yang berlaku di Indonesia telah menetapkan suatu taraf pembeban gempa. Yaitu rencana pembebanan yang menjamin suatu struktur agar struktur tidak rusak apabila terjadi gempa kecil dan sedang, tetapi disaat terjadi gempa besar struktur tersebut masih mampu berperilaku daktil dengan memancarkan energi gempa sekaligus membatasi

beban gempa yang masuk dalam struktur. Dalam perencanaan bangunan tahan gempa, terbentuknya sendi-sendi plastis yang mampu memancarkan energi gempa dan membatasi beban gempa yang masuk dalam struktur, harus dikendalikan sedemikian rupa agar struktur berperilaku baik dan tidak runtuh saat terjadi gempa kuat. Pengendalian terbentuknya sendi-sendi plastis pada lokasi-lokasi tertentu harus direncanakan terlebih dahulu secara pasti terlepas dari kekuatan dan karakteristik gempa. Filosofi perencanaan seperti ini dikenal sebagai konsep Desain Kapasitas.

Dengan konsep desain kapasitas, untuk menghadapi gempa kuat yang mungkin terjadi pada periode tertentu, maka mekanisme keruntuhan suatu portal bangunan tingkat tinggi dapat dipilih sedemikian rupa, sehingga pemancaran energi gempa yang terjadi dapat berperilaku baik dan keruntuhan dapat dihindarkan.

1.2 LATAR BELAKANG MASALAH

Dalam perencanaan bangunan gedung tahan gempa, pada dasarnya akan dipengaruhi hal-hal sebagai berikut ini.

1. Tingkat kesulitan dalam perencanaan atau analisa.

   Semakin tidak teraturnya bentuk dari suatu bangunan maka semakin sulit juga perencanaannya karena:

   a. tidak teraturnya bentuk sehingga diperlukan analisa dinamis,

b. timbul kesulitan-kesulitan dalam perilakunya atau menentukan anggapan-anggapan yang diperlukan dalam analisa dinamis,

c. keterbatasan kita dalam melakukan perhitungan sehingga memerlukan bantuan komputer untuk menyelesaikannya,

d. pada pendetailan dari elemen-elemen strukturnya harus dibutuhkan perhatian yang khusus dalam perencanaan.

Tetapi kesemuanya itu belum bisa menjamin bahwa strukturnya akan berperilaku baik sewaktu terjadi gempa.

2. Perilaku bangunan sewaktu terjadi gempa, bentuk simetris dan sederhana cenderung mempunyai ketahanan lebih baik daripada struktur yang tidak simetris. Gaya puntir pada bentuk simetris relatif lebih kecil dibandingkan dengan bentuk yang tidak teratur, selain itu juga perlu diperhatikan elemen-elemen struktur dan non struktur.

Akibat beban gempa, *Soft storey* bisa terjadi karena kekakuan tingkat portal tidak seragam. Hal ini mungkin diakibatkan oleh perbedaan dimensi kolom atau akibat penempatan elemen-elemen non struktur seperti tembok pengisi yang penempatannya pada tingkat tertentu sehingga menimbulkan perbedaan kekakuan struktur. Pola keruntuhan struktur pada kolom dapat mengakibatkan *coloum sway mechanism* yang sangat membahayakan dan tidak diharapkan terjadi pada struktur. Tingkat dimana kekakuan relatif kecil

tersebut biasa disebut *soft storey*. Sendi plastis yang mungkin terjadi pada kolom akan mengakibatkan kegagalan pada struktur.

1.3 POKOK MASALAH

Bangunan yang baik adalah bangunan yang kekakuannya relatif merata mulai dari tingkat bawah sampai tingkat atas. Apabila ada salah satu tingkat yang kekakuannya lemah maka kemungkinan pada tingkat itulah yang akan mengalami keruntuhan akibat gempa. *soft storey* dapat disebabkan oleh:

1. ukuran kolom dari lantai bawah sampai lantai atas berubah secara drastis,
2. tinggi tingkat yang berlebihan terhadap tinggi tingkat yang relatif sama,
3. dinding tidak menerus dari tingkat atas sampai tingkat bawah,
4. dinding kantilever yang terputus dalam satu tingkat,
5. adanya balok yang tidak menerus/terpotong.

Banyak desain bangunan bertingkat seringkali mengabaikan faktor-faktor yang mempengaruhi *soft storey efect* karena hanya mengutamakan keindahan dan seni. Sebenarnya apabila faktor tersebut diabaikan maka bangunan tersebut akan mengalami keruntuhan/rusak pada waktu terjadi gempa.

1.4 RUMUSAN MASALAH

Bagaimana pengaruh *infill wall* pada gedung bertingkat terhadap struktur akibat beban gempa ?

1.5 BATASAN MASALAH

Mengingat banyaknya masalah yang ditimbulkan akibat beban gempa yang terjadi, maka tugas akhir ini membatasi permasalahan *soft storey efect* hanya pada permasalahan ke 3 yaitu dinding yang tidak menerus/mengalami pemutusan dari lantai atas sampai bawah.

Perhitungan Mekanika menggunakan *Structure Analisys Program 90* dua dimensi. Pada pembahasan diberikan gambaran seberapa jauh perilaku portal akibat penempatan *infill frame* yang dikombinasi. Hasil program berupa momen, gaya geser dan defleksi yang sedemikian banyak akan disederhanakan dalam bentuk tabel dan grafik.

Tinjauan Portal diambil dari proyek berikut ini.

1. Laboratorium Teknologi X ITB, Bandung (4 lantai).
2. Gedung Kampus Universitas Islam As-Syafi'iyah, Jakarta (8 lantai).
3. Graha Pangeran Building (BNI) , Surabaya (13 lantai).

1.6 TUJUAN DAN MANFAAT

Penulisan tugas akhir ini bertujuan untuk menerapkan konsep dasar perencanaan struktur tahan gempa pada gedung bertingkat yang aman bagi bangunan dan isinya. Dengan demikian hasil dari penulisan Tugas Akhir ini dapat diambil manfaatnya diantaranya:

1. bahan masukan dan dapat digunakan untuk merencanakan bangunan bertingkat,
2. memberikan gambaran perencanaan bagi pembaca yang sedang atau akan mempelajari ilmu yang berhubungan dengan gempa khususnya *soft storey efect.*

1.7 LINGKUP BAHASAN

Lingkup Pembahasan Tugas Akhir ini mengenai perilaku Portal akibat beban gempa dan non struktur yang mempengaruhinya (bata/batako) yang mana bata/batako diasumsikan sebagai *diagonal strut* yang lebar efektifnya tergantung dari perbandingan tinggi tingkat dengan bentang panel. Perhitungan mekanika digunakan *Structure Analisys Program 90* dua dimensi dengan beban-beban yang bekerja meliputi beban mati, beban hidup dan beban gempa. Hasil/kesimpulan dari penyusunan mengacu pada *output* program dan pembahasan.

BAB II

TINJAUAN PUSTAKA

2.1 Umum

Suatu struktur harus menjamin keamanan penghuninya, termasuk keamanan terhadap gempa. Tetapi perlu disadari juga bahwa tidaklah ekonomis jika suatu struktur dirancang untuk tahan terhadap gempa tanpa sedikitpun mengalami kerusakan. Oleh karena itu *Aplied Technology Council (ATC)* di Amerika Serikat pada tahun 1978 menyarankan agar struktur harus dapat:

1. menahan gempa kecil tanpa mengalami kerusakan,
2. menahan gempa sedang tanpa mengalami kerusakan konstruksi, walaupun kerusakan pada bagian non-struktur masih diperbolehkan,
3. menahan gempa besar tanpa runtuh, walaupun kerusakan konstruksi tidak dapat dihindari. Yang terpenting adalah tidak ada korban jiwa.

Gempa bumi mengguncang struktur dalam segala arah, tetapi dalam analisis biasanya diasumsikan menjadi gaya arah horisontal dan vertikal[1].

[1] K.Muto, Analisis Perencanaan Gedung Tahan Gempa,1997

Akibat gempa terjadi gaya inersia (internal) pada titik-titik massa struktur. Struktur jarang sekali mengalami keruntuhan akibat gaya gempa pada arah vertikal. Hal ini disebabkan karena gaya gempa pada arah vertikal hanya memberikan pengaruh kecil terhadap gaya gravitasi yang bekerja pada struktur, dan pada umumnya struktur dirancang sudah memiliki faktor keamanan yang memadai terhadap gaya vertikal. Yang perlu mendapat perhatian disini adalah gaya gempa pada arah horisontal, karena pada titik-titik lemah struktur yang kekakuannya tidak memadai kemungkinan besar akan mengalami keruntuhan pada bangunan.

Untuk meningkatkan daya tahan struktur tingkat banyak terhadap bahaya gempa (terutama daya tahan horisontal), Ada tiga sistem struktur yang dapat digunakan yaitu:

1. portal terbuka (*open frames*),
2. portal dinding (*walled frames*),
3. dinding geser (*shear walls*) dan portal dengan penyokong diagonal (*diagonally braced frames*)

Portal terbuka segi empat yang terdiri dari kolom dan balok dengan hubungan monolit membentuk ruangan yang besar dan memberikan daya tahan horisontal pada kerangka keseluruhan. Oleh karena itu sistem seperti ini diperlukan pada konstruksi gedung yang bertingkat banyak. Pada struktur beton bertulang dan yang sejenis, kekuatan batang tidak begitu besar sehingga

daya tahan terbatas. Pada gedung bertingkat banyak pemakaian gabungan portal terbuka dan dinding geser umumnya banyak digunakan untuk mengatasi deformasi yang besar pada tingkat-tingkat bawah tetapi dinding geser sendiri biasanya akan menimbulkan masalah pada tingkat-tingkat atas. Namun kekuatan dapat ditingkatkan dengan menggunakan portal terbuka konstruksi baja struktural murni kuat. Dengan adanya baja yang berkekuatan tinggi, perencanaan gedung bertingkat banyak terutama gedung pencakar langit dapat hanya dengan portal terbuka.

Portal dinding, balok tinggi (biasanya bagian bawah jendela dianggap sebagai balok). Struktur seperti ini akan menunjukan daya tahan dan ketegaran yang beberapa kali lebih tinggi daripada portal terbuka biasa. Portal dinding merupakan sistem penahan gempa yang rasional tetapi perencana tidak menyukai karena struktur ini dapat menimbulkan *short coloum dan beam effect*[2]. Hal ini juga tidak disukai para arsitek karena bidang kolom dan balok yang besar membatasi tampak gedung sehingga segi artistiknya kurang baik.

Portal dengan penyokong diagonal dan dinding geser, dinding geser dengan lebar yang besar akan menghasilkan daya tahan lentur dan geser yang sangat tinggi dan merupakan sistem struktur yang paling rasional dengan memanfaatkan sifat-sifat beton bertulang. Pada konstruksi baja struktural,

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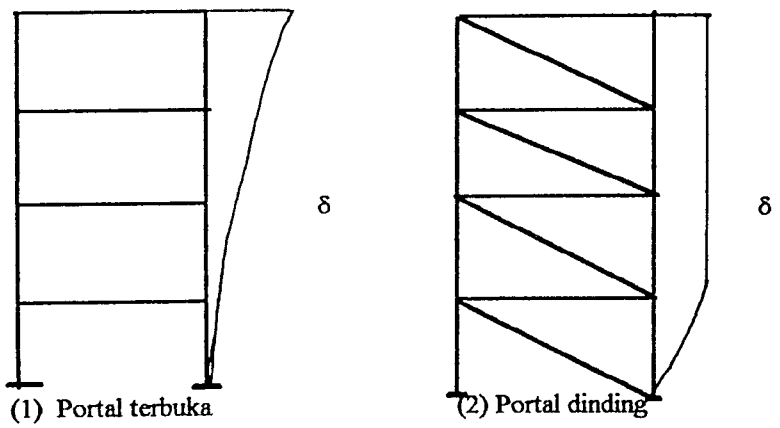
[2] Eigot WCEE, Non struktural elements, San Fransisco journal 1984

portal-portal dengan penyokong (*bracing*) merupakan sistem struktur yang efektif dan kuat.

Portal dengan dinding penuh akan menambah kekakuan struktur cukup besar dan relatif mampu menahan gaya horisontal. Kemampuan menahan gaya horisontal tergantung pada luasan dinding dan Modulus Elastis dinding/batako yang mendukungnya. Terhadap beban horisontal dinding dapat menahan gaya sampai pada tahap tertentu. Dinding dimodel sebagai *diagonal strut* yang dapat berfungsi sebagai *brace* pada portal[3]. Deformasi antara portal terbuka dan *infiil wall* akan berlainan karena *brace frame* mampu menahan gaya horisontal (gambar 2.1). Terlihat bahwa *deflected shape* pada *infill wall* lebih kecil dibanding portal terbuka.



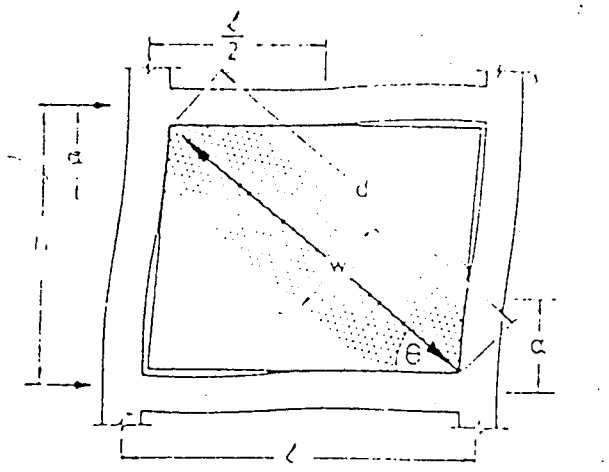
Gambar 2.1 Deformasi Portal Terbuka dan Portal Dinding[1]

[3] T.Paulay &MJN Priestley,Seismic Assessment and Retrofit of Concrete Structure

2.2 Tinjauan Analisa Portal Dinding

Dinding merupakan non struktur yang biasanya dikategorikan sebagai beban sama seperti partisi-partisi yang lain. Dinding sebenarnya mampu sebagai penambah kekuatan apabila penempatannya secara penuh pada seluruh portal dan dipasang menempel dengan balok maupun kolom. Balok pada dinding yang biasanya di bawah jendela sebenarnya menambah kekakuan, tetapi untuk mempermudah analisa diasumsikan sebagai dinding kosong.

Infill wall diasumsikan sebagai *diagonal strut* yang mampu menahan gaya horisontal, dengan lebar efektif (w) dan panjang (d) yaitu sepanjang ujung portal dengan ujung diagonal portal. Tebal *diagonal strut* tergantung ukuran bata/batako yang dipergunakan[4]. Untuk lebih jelasnya dapat dilihat pada gambar 2.2.



Gambar 2.2 *Diagonal Strut* Pada *Infiil Wall*[4]

[4] M.J. Nigel Priestley, Towards a Capacity-Design Assessment Prosedure for Reiforced Concrete Frames, Seminar May 1992, NZCC.

Lebih lanjut M.J. Nigel Priestley mengulas pengaruh-pengaruh kemungkinan struktur akan mengalami perubahan *displacement* pada struktur portal dengan dinding penuh. *Diagonal strut* akan diselidiki kemampuannya terhadap respon gaya gempa. Perubahan momen, gaya geser, defleksi dapat dilihat akibat adanya *diagonal strut* dan perilaku yang ditimbulkan terhadap kekakuan kolom. *Soft storey* ditinjau akibat kombinasi *infill wall* diubah-ubah penempatannya. Untuk lebih jelasnya masalah ini bisa dilihat pada Tinjauan Teoritis dan Pembahasan.

BAB III

TINJAUAN TEORITIS STRUKTUR TAHAN GEMPA DI INDONESIA

3.1 Umum

Gempa merupakan gejala alam yang tidak mungkin kita hindari, tetapi tetap harus diusahakan sedemikian rupa agar gempa yang terjadi tidak diterjemahkan sebagai suatu bencana yang tidak akan ditanggulangi. Oleh karena itu dalam disain bangunan, diharapkan bangunan yang bersangkutan tidak mengalami kerusakan apabila terjadi gempa kecil. Apabila terjadi gempa sedang maka bangunan tersebut diharapkan hanya terjadi kerusakan non struktur dan apabila terjadi gempa besar maka bangunan yang direncanakan boleh terjadi kerusakan struktur tetapi tidak terjadi keruntuhan.

Indonesia telah menetapkan suatu peraturan yang dapat dipakai pegangan dalam perencanaan bangunan tahan gempa yaitu Peraturan Perencanaa Tahan Gempa Indonesia Untuk Gedung 1987 (PPTGIUG 87). Pada perencanaan portal, beban-beban yang bekerja meliputi beban mati, beban hidup, beban gempa. Beban-beban tersebut harus benar-benar

diperhatikan sehingga struktur yang direncanakan aman. Dinding merupakan non-struktur yang biasanya dianggap beban pada portal. Dinding sebenarnya mampu memberikan tambahan kekakuan pada portal apabila penempatannya diperhatikan, tetapi perilaku portal akan berubah apabila tidak benar dalam penempatannya. Batu bata/Batako dengan lebar effektif (w), seperti disebut di depan pada kenyataannya mampu memberikan tambahan kekuatan dalam menahan gaya lateral. Kekakuan portal harus lebih besar daripada kekakuan dinding. Apabila kekakuan portal lebih kecil daripada kekakuan dinding pengisi/*infill frame* maka pola keruntuhan dapat membahayakan struktur.

3.2 Tinjauan Teoritis Struktur Tahan Gempa

3.2.1 Prinsip Dasar Gaya Gempa

Dalam perencanaan struktur beton di daerah gempa, dikenal suatu konsep pembebanan yakni struktur beton selama masa layanannya akan dibebani berkali-kali oleh gempa kecil sampai sedang, yang mempunyai waktu ulang 20 tahun sampai 50 tahun. Struktur beton selama masa layanannya harus dapat menahan beban gempa yang besar, yang pada waktu ulangnya dapat terjadi sekali dalam 200 tahun. Gempa kecil atau sedang adalah beban gempa yang tercantum dalam Peraturan Perencanaan Tahan Gempa Indonesia Untuk Gedung 1987 (PPTGIUG), yang mana Indonesia

dibagi dalam enan zona. Besarnya beban gempa ini tergantung dari waktu getar struktur beban tersebut. Besarnya gaya gempa dinyatakan dalam:

$$V = C * I * K * Wt \quad (3.1)$$

Yangmana:

V = beban geser dasar akibat gempa

C = koefisien gempa dasar

I = faktor keutamaan

K = faktor jenis struktur

Wt = kombinasi beban dalam arah vertikal

Beban gempa besar adalah gempa dengan waktu ulang 200 tahunan. Sehingga disyaratkan agar struktur beton selain mempunyai kekuatan dan kekakuan yang cukup, juga mempunyai daktilitas yang besar, yang dinyatakan dalam nilai m (tingkat daktilitas struktur = m).

3.2.2 Bentuk Dan Konfigurasi

Suatu konstruksi yang ideal sulit untuk direncanakan apabila memenuhi semua syarat-syarat yang diijinkan. Tetapi beberapa pedoman dasar dapat dipakai dalam merencanakan konfigurasi, yaitu:

1. bangunan sebaiknya mempunyai bentuk yang simetris,
2. bangunan sebaiknya mempunyai bentuk yang sederhana,

3. bangunan tidak terlalu langsing, baik pada denah maupun potongan-nya,
4. distribusi kekuatan sepanjang tinggi bangunan seragam dan menerus,
5. kekakuan yang cukup,
6. terbentuknya sendi plastis harus terjadi pada eleman-eleman horisontal lebih dahulu dibanding dengan eleman vertikal,
7. perlu detail yang daktil pada sendi-sendi plastis.

Dari pengalaman kerusakan struktur akibat gempa, telah terbukti bahwa struktur yang mempunyai bentuk sederhana dan simetris lebih tahan terhadap gempa, hal ini disebabkan karena:

1. apabila terjadi ketidaksimetrisan struktur pada kedua arah x dan y, akan dapat mengakibatkan ketidaksamaan respon struktur dalam arah-arah tersebut. Keadaan yang demikian dapat mengakibatkan torsi yang sulit diperkirakan sehingga dapat merusak struktur bila terjadi gempa,
2. struktur yang sederhana dan simetris lebik mudah diketahui perilakunya daripada yang rumit.

3.2.3 Distribusi Kekuatan Sepanjang Tinggi Bangunan

Stuktur bangunan akan mempunyai ketahanan terhadap gempa bila dipengaruhi syarat-syarat dibawah ini:

1. distribusi kekuatan secara seragam,

2. semua kolom dan dinding menerus tanpa adanya pemutusan mulai dari atap sampai pondasi.

Disamping itu, sebaiknya harus dipertimbangkan pula beberapa hal agar bangunan tahan terhadap gempa, yaitu:

1. semua balok berhubungan secara menerus,
2. penampang-penampang penahan beban gempa tidak boleh berubah secara tiba-tiba,
3. struktur beton harus menerus baik pada kolom maupun balok dan harus sedapat-dapatnya monolit pada sambungan.

Bila syarat-syarat tersebut diikuti maka struktur akan lebih baik perilakunya. Konsentrasi tegangan-tegangan yang tidak dikehendaki dapat dihindari, dan momen torsi yang besar dapat pula dihindari.

Masalah yang amat penting untuk diselesaikan dalam perencanaan struktur adalah terputusnya eleman vertikal penahan beban gempa. Bila ini terjadi maka bagian struktur yang kekakuannya relatif tidak sama pada tingkat tertentu dapat mengakibatkan keruntuhan yang disebut *soft storey*. Dengan mengikuti syarat-syarat ini maka pendetailannya akan lebih mudah dan penerusan gaya-gaya dari balok ke kolom lewat pertemuannya lebih sederhana .

3.3 Taraf Pembebanan Gempa dan Peta Wilayah Gempa di Indonesia

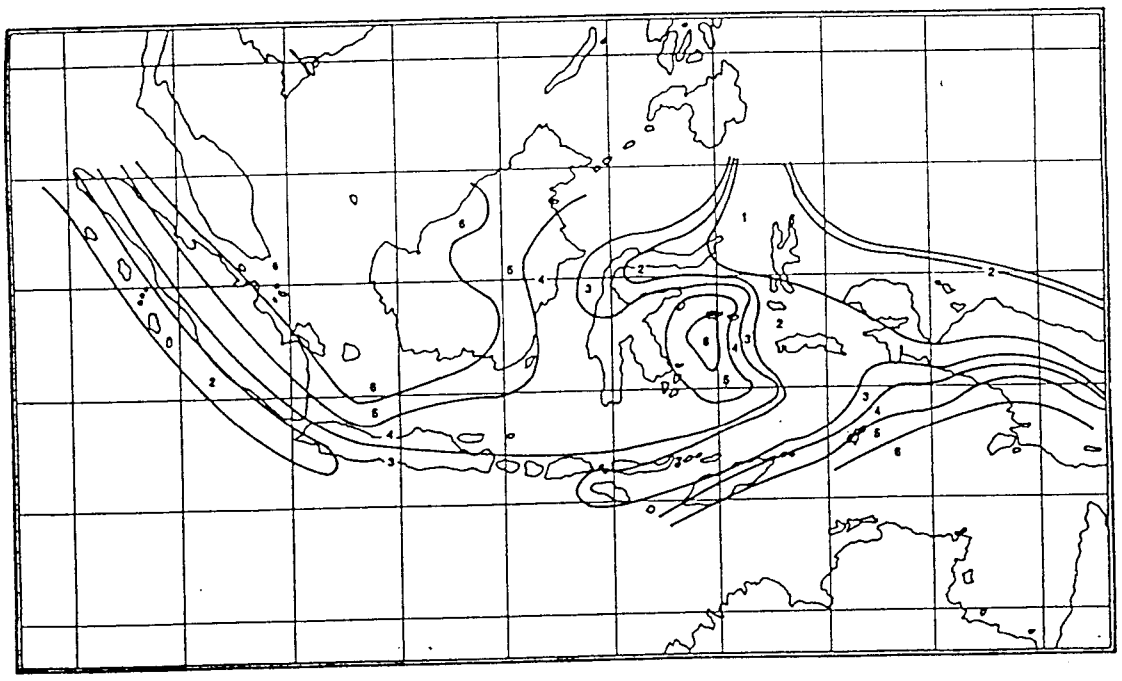
3.3.1 Taraf Pembebanan Gempa

Dengan berpedoman pada konsep perencanaan yang dapat menjamin struktur tidak runtuh walaupun mengalami deformasi in-elastis yang cukup besar pada saat terjadi gempa, maka struktur tidak lagi perlu direncanakan agar tetap dalam batas elastis. Suatu taraf pembebanan gempa yang sekian kali lebih kecil dari beban gempa maksimum dinyatakan sebagai beban gempa rencana. Dengan beban rencana seperti itu struktur dapat didisain lebih ekonomis. Besarnya taraf pembebanan tidak sama di wilayah Indonesia, melainkan bervariasi dari satu wilayah ke wilayah yang lain. Perbedaan ini dikarenakan kondisi seismotektonik, geografi, dan geologis setempat. Dalam wilayah Indonesia terdapat beberapa daerah dengan perbedaan tingkat resiko gempa yang cukup berarti. Tentu saja hal ini menyebabkan perlunya penentuan taraf pembebanan gempa yang berbeda-beda pula.

3.3.2 Peta Wilayah Gempa di Indonesia

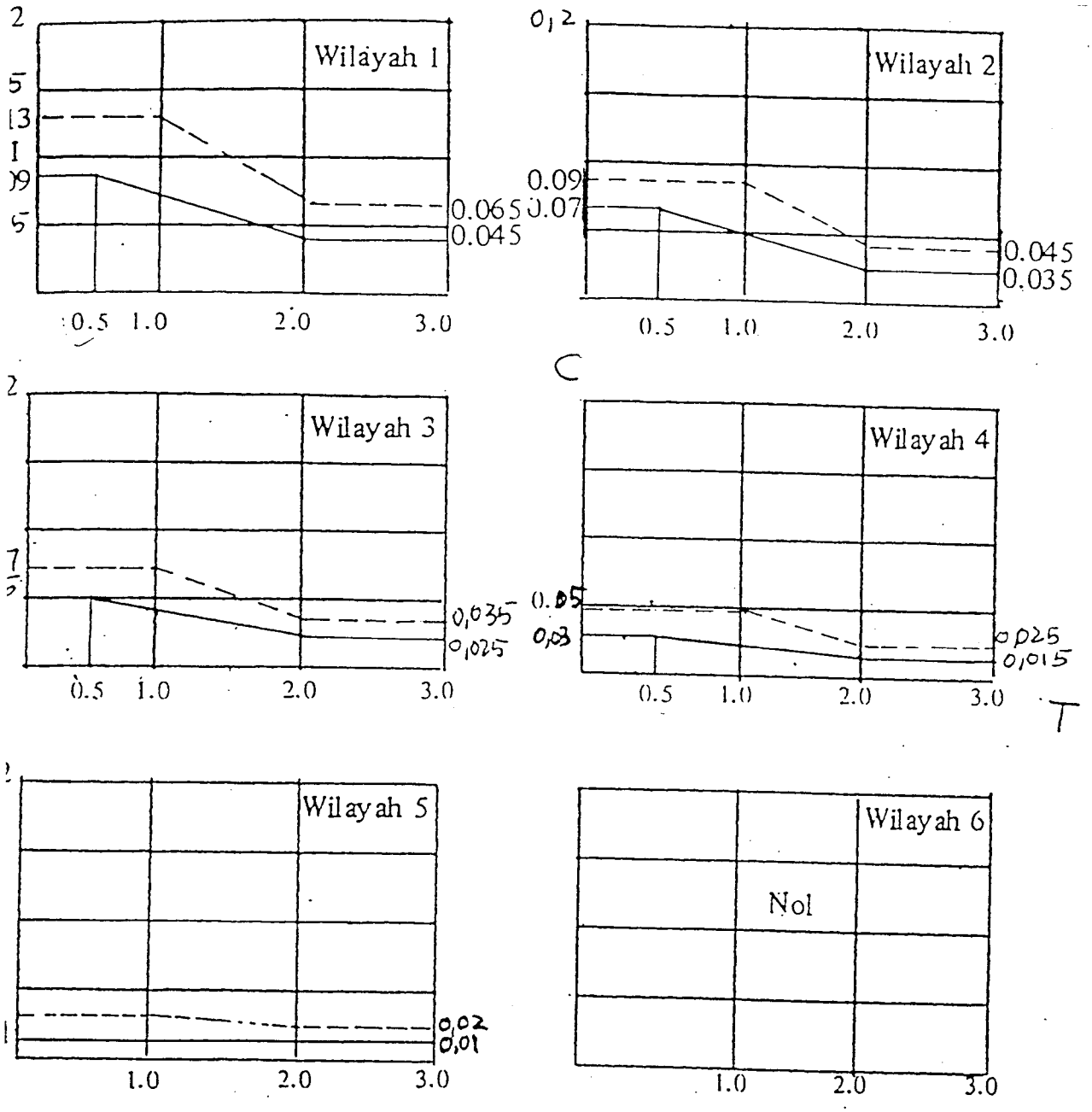
Untuk keperluan perencanaan, dirasakan lebih praktis untuk menggunakan suatu peta wilayah gempa di Indonesia. Gempa dibagi menjadi 6 wilayah seperti pada gambar 3.1. Suatu lokasi gedung terletak dekat pada batas wilayah sehingga kepastian wilayahnya tidak jelas, maka gedung tersebut harus dianggab terletak di dalam yang mensyaratkan nilai koefisien

gempa dasar yang lebih besar. Koefisien gempa dasar (C) ditentukan pada gambar 3.2 dengan waktu getar (T). Dua jenis tanah bawah harus dibedakan dalam memilih nilai C, yaitu tanah keras dan tanah lunak.



Gambar 3.1 Peta Wilayah Gempa Di Indonesia[5]

[5] Peraturan Perencanaan Tahan Gempa Indonesia Untuk Gedung 1997, PU.



Waktu getar alami(det)

Waktu getar alami (det)

keterangan

..... **Struktur diatas tanah lunak**

_____ **Struktur diatas tanah keras**

Gambar 3.2 Grafik Koefisien Gempa Dasar[5]

[5] PPTUGUG 1987,PU.

3.4 Perencanaan Struktur dengan Daktilitas Penuh

3.4.1 Konsep Daktilitas Struktur

Daktilitas adalah kemampuan suatu struktur gedung atau unsur struktur gedung untuk mengalami simpangan-simpangan plastis secara berulang-ulang dan bolak-balik diatas titik leleh pertama sambil mempertahankan kemampuan awalnya dalam memikul beban. Dewasa ini telah disepakati secara umum, bahwa tidaklah ekonomis dalam merencanakan struktur bangunan untuk berperilaku elastis bila mengalami gempa yang sangat kuat (gempa maksimum) yang diharapkan akan terjadi di lokasi struktur tersebut.

Pada umumnya dewasa ini dianut prinsip perencanaan bangunan tahan gempa, bertujuan menghasilkan kekuatan struktur yang memenuhi dua kriteria sebagai berikut ini.

1. Struktur bangunan harus didisain dengan kekuatan dan kekakuan cukup sedemikian rupa, sehingga akibat gempa dengan kekuatan sedang hanya akan mengalami kerusakan ringan yang masih dapat diperbaiki.
2. Kekuatan dan kekakuan struktur yang direncanakan untuk memenuhi kondisi diatas adalah juga cukup untuk memberikan kemampuan kepada struktur bangunan untuk melakukan deformasi (simpangan) yang bersifat in-elastik tanpa runtuh, bila mengalami gempa yang

kuat (gempa maksimum) yang dapat diharapkan akan terjadi di lokasi struktur tersebut.

Struktur bangunan yang memiliki kemampuan untuk melakukan simpangan yang bersifat in-elastik tanpa runtuh, deformasi secara berkelanjutan tanpa mengalami penurunan kekuatan saat simpangan awal dikatakan memiliki daktilitas yang tinggi.

Agar struktur-struktur gedung tinggi memiliki daktilitas yang tinggi sendi-sendi plastis yang terjadi akibat beban gempa yang sangat kuat, harus terjadi di dalam balok dan tidak terjadi pada kolom. Hal ini hanya tercapai bila kapasitas (momen leleh) kolom adalah lebih tinggi dari kapasitas (momen leleh) balok. Konsep struktur yang memiliki karakteristik kapasitas unsur-unsurnya seperti ini disebut konsep kolom kuat-balok lemah.

3.4.2 Tingkat Daktilitas Struktur

Ketentuan untuk merencanakan tahan gempa diklasifikan sebagai berikut ini.

1. Tingkat Daktilitas 1

   Struktur beton diproporsikan sedemikian hingga ketentuan tambahan atas penyelesaian detail struktur sangat sedikit. Struktur sepenuhnya berperilaku elastis, maka daktilitas simpangan (μ) = 1. Beban gempa rencana harus dihitung berdasarkan faktor K = 4

2. Tingkat Daktilitas 2

Struktur beton diproporsikan berdasarkan suatu ketentuan penyelesaian detail khusus yang memungkinkan struktur memberikan respon in-elastis terhadap beban siklis yang bekerja tanpa mengalami keruntuhan getas, maka daktilitas simpangan (μ) = 2. Kondisi ini dinamakan juga kondisi daktilitas terbatas. Dalam hal ini beban gempa rencana harus diperhitungkan dengan menggunakan nilai K minimum = 2.

3. Tingkat Daktilitas 3

Struktur beton diporposikan berdasarkan suatu ketentuan penyelesaian detail khusus yang memungkinkan struktur memberikan respon in-elastik terhadap beban siklis yang bekerja tanpa mengalami keruntuhan getas, maka daktilitas simpangan (μ) = 3 Kondisi ini dinamakan juga kondisi daktilitas penuh dalam hal ini beban gempa rencana harus diperhitungkan dengan menggunakan nilai faktor K minimum =1

3.5 Kekakuan Struktur Rangka Terbuka

Untuk menyatakan kekakuan suatu portal secara sederhana dapat diperoleh dengan menyederhanakan persoalan yaitu portal mempunyai balok

kaku tak terhingga, sehingga kekakuan portal dinyatakan sebagai jumlah dari kekakuan tiap-tiap kolomnya.

$$\text{Kekakuan kolom} = \frac{12*Ec*I}{H^3} \qquad (3.2)$$

yangmana: Ec = Modulus elastisitas dari beton

I = Momen inertia dari penampang kolom

H = Tinggi bersih dari kolom

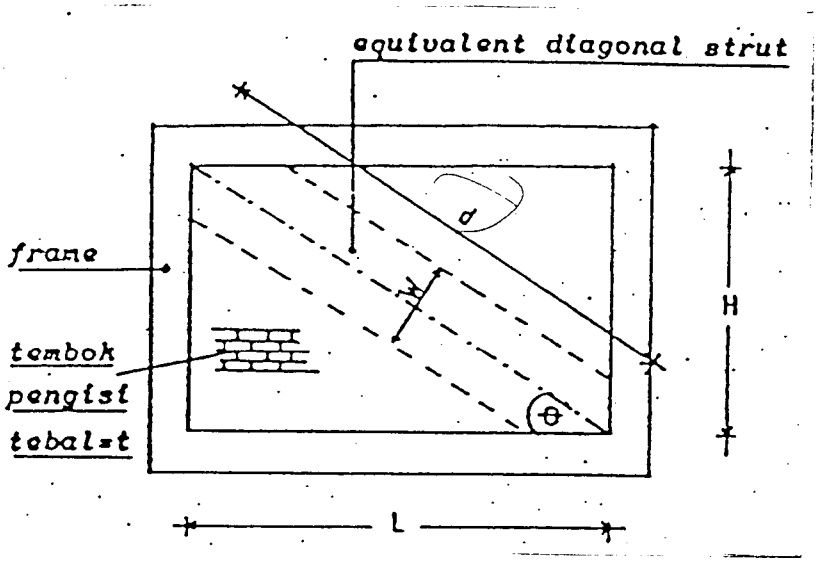
Akibat pengaruh retak pada beton kekakuan dari kolom dapat berkurang, menurut penyelidikan akibat retak pada beton kekakuan kolom dapat berkurang menjadi 33% sampai 75%. Karena dengan menganggap balok beton kaku tak terhitung, maka anggapan kekakuan struktur agak *overestime*, oleh karena itu kekakuan kolom direduksi menjadi 33%[6].

3.5.1 Kekakuan dinding pengisi bata merah

Dinding pengisi untuk suatu struktur secara teoritis dapat dilihat pada gambar 3.3. Gaya horisontal (Fj) yang bekerja pada dinding pengisi akan mengakibatkan simpangan (Δ). Pada rumus 3.3 diuraikan besar simpangan yang terjadi[6].

---

[6] Beca Carter Hollings and Ferner Ltd. (INDONESIAN EARTQUAKE STUDY) vol.7



Gambar 3.3 Gambar *Equifalent Diagonal Strut*

$$\Delta = \frac{Fj}{\cos\theta} * \frac{d}{w*t} * \frac{1}{Ebata} * \frac{1}{\cos\theta} \qquad (3.3)$$

Lebar *Diagonal Strut* (w)

Menurut penyelidikan lebar *diagonal strut* tergantung pada besarnya perbandingan tinggi portal terhadap bentang panel atau perbandingan kekakuan rangka/kekakuan dinding. Tetapi untuk dinding yang dibuat dari batu-bata di Indonesia perbandingan beban terhadap beban runtuh dinding adalah sangat rendah, jadi harga λH (perbandingan kekakuan rangka/kekakuan dinding) dapat diambil sebesar 2, sehingga harga w dapat ditentukan dari tabel dibawah ini:

Tabel 3.1 Perbandingan nilai pada *infill wall*[7]

L/H	1,0	1,5	2,0	2,5
w/d	0,45	0,40	0,34	0,30

catatan : - nilai w/d dalam tabel tersebut ditentukan dari grafik

- w/d dinyatakan dengan β

dan pada saat terjadi sendi Plastis w bisa diambil 0.25 d[8]

Parameter lainnya yang diperlukan dalam perhitungan kekakuan dinding adalah "tebal efektif dinding". Karena plesteran dan batu-bata mempunyai modulus elastisitas yang tidak sama, maka tebal efektif dari kedua bahan ini harus dihitung.

Dalam praktek tebal plesteran diambil sebesar 15% dari tebal tembok, sehingga tebal dinding efektif terhadap tebal dinding dapat dinyatakan sebagai berikut[9] :

$$t + 0{,}15t * \frac{\text{E plesteran}}{\text{E bata}} = 3{,}25\,t \approx 3t \qquad (3.4)$$

[7] Stafford Smith, B and Carter, "A Method of Analysis for Infilled Frame" Inst. of Civil Eng.,1969.
[8] Paulay T, 1988,"Seismic Design of Reinforced Concrete and Masonry Building", The State of the Art in New Zealand.
[9] Gideon Kusuma dkk, "Perencanaan Struktur Tahan Gempa Jenis A,B2,D",1984

Perubahan bentuk horisontal dari dinding akibat beban horisontal Fj selanjutnya dapat ditulis sebagai berikut:

$$\Delta = \frac{Fj}{\cos\theta} * \frac{d}{\beta\, d \times 3t} * \frac{1}{E\ bata} * \frac{1}{\cos\theta} \qquad (3.5)$$

karena $\cos\theta = L/D$ dan $d = \sqrt{(H^2 + L^2)}$

jadi kekakuan dinding bata merah $= E\ bata * \beta * 3t \dfrac{L^2}{(H^2 + L^2)}$ (3.6)

3.5.2 Kekakuan dinding Pengisi Batako

Dengan cara yang sama seperti digunakan pada penurunan rumus kekakuan untuk dinding pengisi bata merah, kecuali tebal efektif dinding diambil = t (karena tidak ada plesteran) maka kekakuan dinding pengisi batako adalah sebagai berikut:

$$E\ batako * \beta * t * \frac{L^2}{(H^2 + L^2)} \qquad (4.7)$$

3.5.3 Pola Keruntuhan /*Knee Braced Frame*

Bila suatu *infilled frame* dibebani dengan beban horisontal maka pada bagian dari dinding tersebut terlihat terpisah dari rangkanya (lihat gambar 3.6(a)). Bagian-bagian yang masih mempunyai bidang kontak dengan rangkanya terlihat dengan ujung-ujung *diagonal compression strut* (lihat

gambar 3.6(a)). Dengan perilaku seperti itu maka *infilled frame* (struktur rangka dengan dinding pengisi) dapat diidealisasikan sebagai rangka kosong dengan diagonal desak/*compression strut* (lihat gambar 3.6(b)). Apabila beban horisontal diperbesar maka beberapa *mode of failure* (pola keruntuhan) yang mungkin terjadi sebagai berikut ini.

1. Jika kekuatan rangka (*frame*) > kekuatan dinding (*infill*).

   Pada keadaan ini pola keruntuhan yang terjadi adalah sebagai berikut:

   a. *diagonal tensile Cracking* (retak tarik diagonal) lihat gambar 3.4,

   b. *diagonal Shear Cracking* (retak geser diagonal) lihat gambar 3.4,

   c. *compressive Colapse* pada ujung-ujung sudut yang dibebani terlihat pada gambar 3.4.

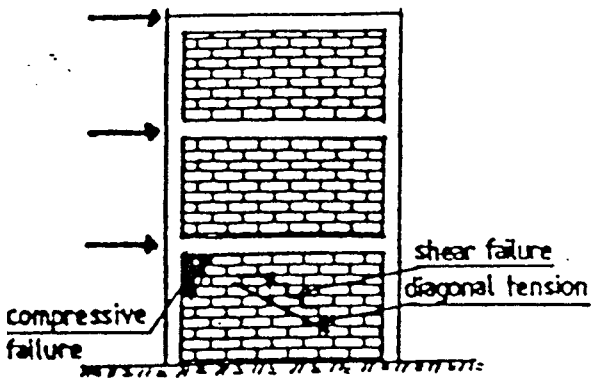
2. Jika kekuatan dinding (*infill*) > Kekuatan rangka (*frame*)

   Untuk keadaan ini pola keruntuhan yang terjadi adalah sebagai berikut:

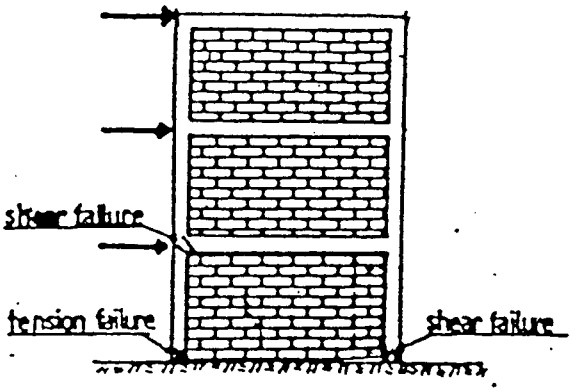
   a. keruntuhan tarik pada ujung bawah kolom tingkat dasar (lihat gambar 3.5),

   b. keruntuhan geser pada kolom atau pada balok dengan sambungannya terhadap kolom (lihat gambar 3.5),

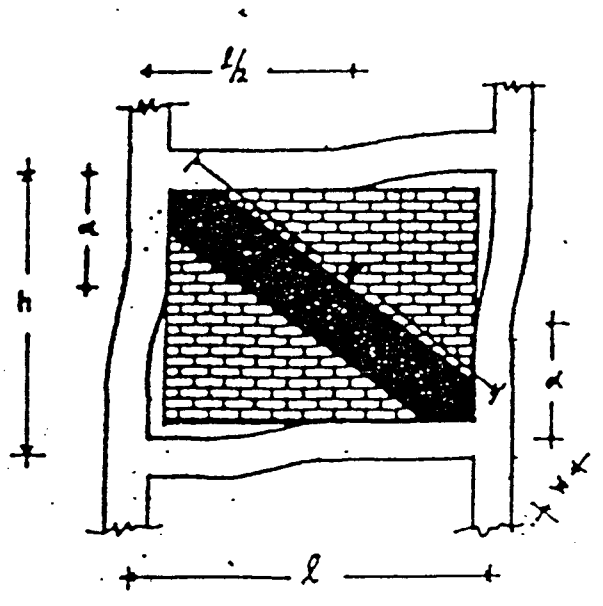
   c. keruntuhan lentur atau geser masing-masing pada tengah kolom dan 1/4 tinggi kolom, akibat *knee braced frame concept for sliding shear failure* lihat gambar 3.7.



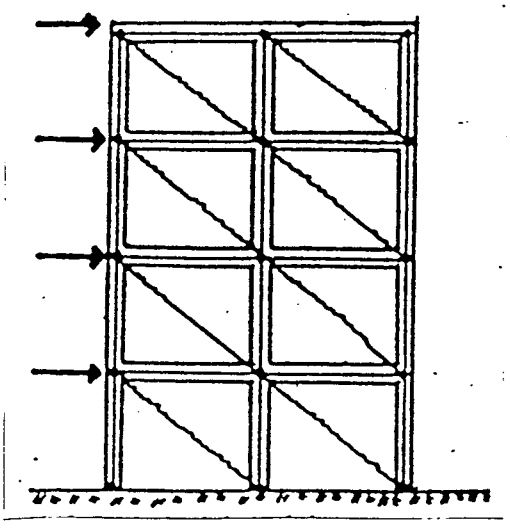
Gb. 3.4 *Modes of Infill Frame*



Gb. 3.5 *Modes off frame failure*

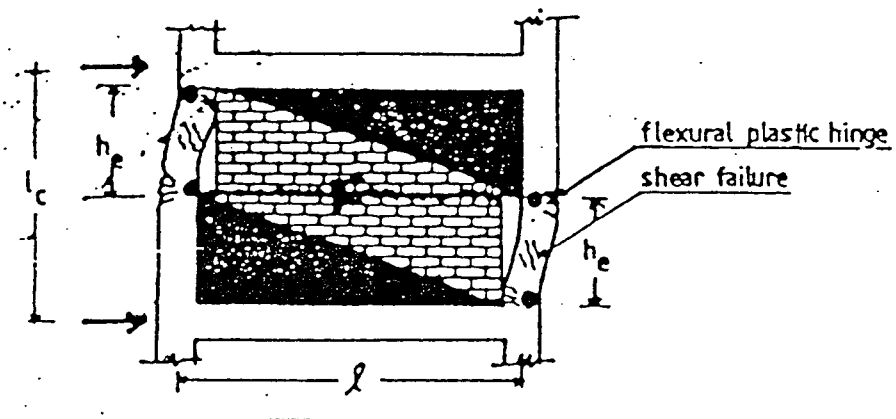


a. *Deformation under shear load*



b. *Equivalent braced frame*

Gb. 3.6 *Infill Wall Concept*



Gb. 3.7 *Knee Braced Frame Concept For Sliding Shear Failure*[9]

BAB IV

MODEL KAJIAN

4.1 Umum

Pada perhitungan mekanika, untuk memperoleh data yang akurat diambil contoh 3 portal 2 dimensi. Perencanaan pembebanan meliputi beban mati, beban hidup dan beban gempa. Berat sendiri meliputi berat balok, berat pelat, tembok, spesi, plafon dan yang melengkapinya dikategorikan sebagai beban mati. Beban berguna dan air hujan dikategorikan sebagai beban hidup. Seluruh pembebanan diambil dari "Tata Cara Perencanaan Pembebanan untuk rumah dan Gedung 1987". Gaya geser horisontal akibat beban gempa dipengaruhi oleh berat total portal yang juga meliputi pengaruh waktu getar bangunan (T), koefisien gempa dasar, faktor keutamaan (I), faktor jenis struktur (K), gaya geser horisontal total akibat gempa dan distribusi gaya geser pada portal. Peraturan yang digunakan "Peraturan Perencanaan Tahan Gempa Indonesia untuk Gedung 1987 (PPTGIUG 87).

Perhitungan mekanika digunakan *Structure Analisys Program 90* dengan 2 dimensi. *Input program* meliputi koordinat join, penempatan frame, dimensi balok/kolom, jumlah pembebanan beban hidup dan mati, beban gempa, *type restraint*, modulus Elastis Beton, kombinasi pembebanan dan instrumen lain yang melengkapinya. *Output* program berupa gambar diambil dari Saplot dan hasil perhitungan berupa momen, gaya geser, deffleksi diambil dari file.f3f dan file.sol.

Infill frame dibuat bervariasi penempatannya mulai dari portal penuh sampai portal terbuka. Tembok dimodel sebagai *diagonal strut* dengan dimensi menurut Tabel 3.1.

Karena perhitungan pembebanan relatif sama maka dalam bab ini hanya diambil contoh pada model kajian 2 sedang perhitungan model kajian lain dapat dilihat pada lampiran.

Model Kajian gedung yang kami ambil sebagai berikut ini.

1. Gedung Laboratorium Teknologi ITB, bertingkat 4.
2. Gedung Kampus As-syafiiah Jakarta, bertingkat 8.
3. Gedung BNI Surabaya, bertingkat 13.

Ketiga gedung ini diambil portal yang simetris untuk mempermudah dalam menganalisa hasil yang diperolehnya.

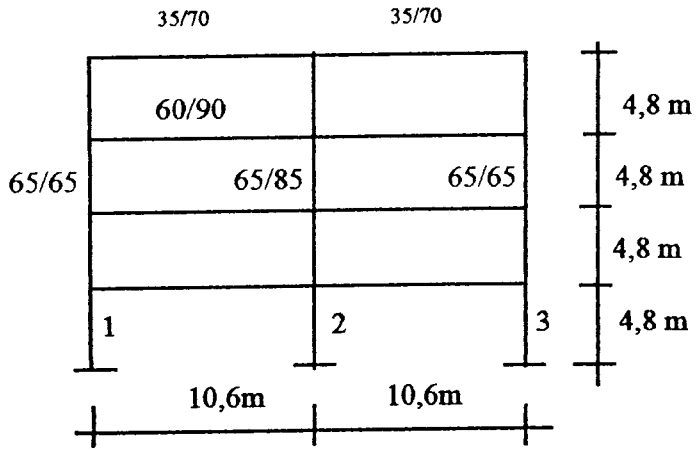
4.2 Perhitungan Pembebanan

4.2.1 Gedung Laboratorium Teknologi X ITB

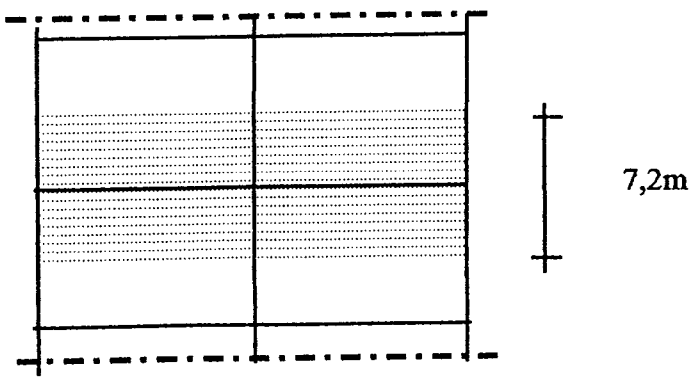
Gedung bertingkat 4 di daerah bandung dengan wilayah gempa 3

Tingkat	1	2	3	4
Kolom 1&3	65/65	65/65	65/65	65/65
Kolom 2	65/85	65/85	65/85	65/85
Balok Atap	35/70	35/70	35/70	35/70
Balok Lantai	60/90	60/90	60/90	60/90

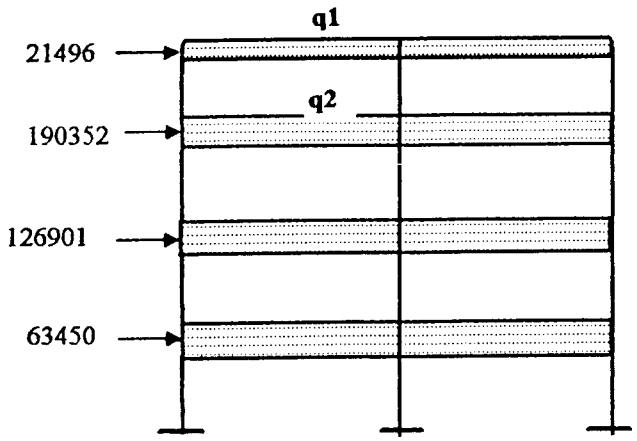
Model Portal



Denah Portal



Pembebanan pada portal penuh (I-P)



Gambar 4.1 Model Kajian 1

Mutu balok : k 250 ; Mutu kolom : k 250

q_{ekiv} = (q mati + q hidup)

$q_{ekiv.1}$ = 1550 kg/m + 490 kg/m = 2040 kg/m

$q_{ekiv.2}$ = 3646 kg/m + 900 kg/m = 4546 kg/m

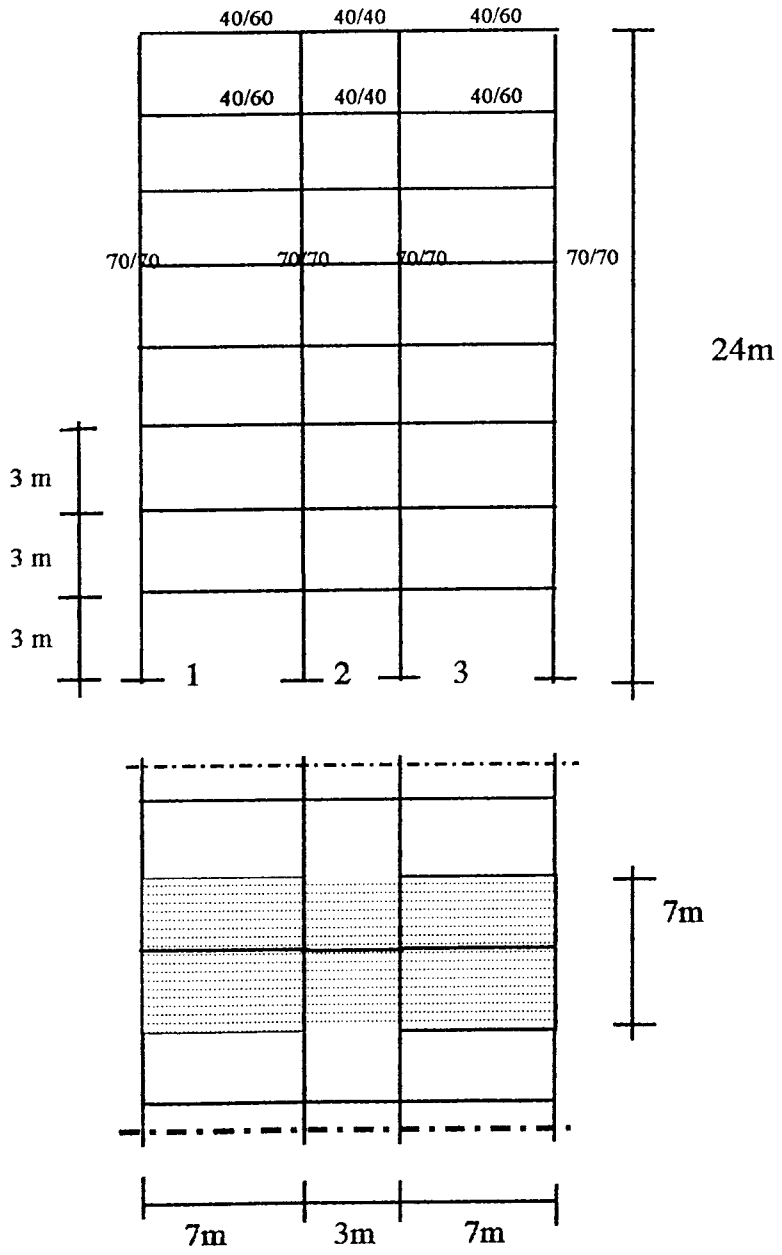
E balok = $6400\sqrt{250} = 1{,}01.\ 10^5\ kg/cm^2 = 1{,}01.\ 10^9\ kg/m^2$

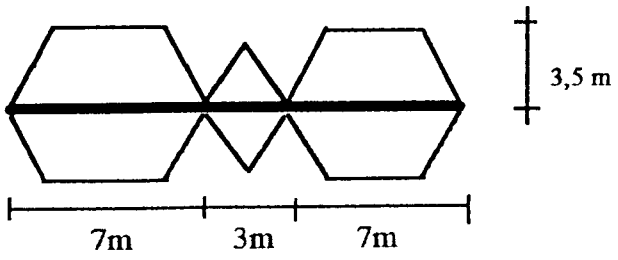
E kolom = $6400\sqrt{250} = 1{,}01.10^5\ kg/cm^2 = 1{,}01.\ 10^9\ kg/m^2$

4.2.2 Gedung Kampus As-syafi'iyah Jakarta

Gedung bertingkat 8 di daerah Jakarta dengan wilayah gempa 4

Tingkat	1	2	3	4	5	6	7	8
Kolom	70/70	70/70	70/70	70/70	70/70	70/70	70/70	70/70
Balok 1&3	40/60	40/60	40/60	40/60	40/60	40/60	40/60	40/60
Balok 2	40/40	40/40	40/40	40/40	40/40	40/40	40/40	40/40





Gambar 4.2 Model Kajian 2

***Pada Pelat Atap**

Beban mati

Berat sendiri	: 0,1 * 2400	=	240 kg/m^2
Spesi	: 2 * 21	=	42 kg/m^2
Plafon & penggantung	: 11 + 7	=	18 kg/m^2
		=	300 kg/m^2

Beban hidup

Beban berguna	=	100 kg/m^2
Air hujan	=	40 kg/m^2
	=	140 kg/m^2

***Pelat Lantai**

Beban mati

Berat sendiri	: 0,12 * 2400	=	288 kg/m^2
Spesi	: 2 * 21	=	42 kg/m^2
Plafon & penggantung	: 11 + 7	=	18 kg/m^2

Tegel : 3 * 24 = 72 kg/m^2

420 kg/m^2

Beban hidup

Beban berguna = 250 kg/m^2

***Berat sendiri balok**

a. Berat balok atap (1&3) : 0,4 * (0,6 - 0,10) * 2400 = 480 kg/m'

b. Berat balok atap (2) : 0,4 * (0,4 - 0,10) * 2400 = 288 kg/m'

a. Berat balok lantai (1&3) : 0,4 * (0,6 - 0,12) * 2400 = 460,8 kg/m'

Tembok : 250 * 2,4 = 600 kg/m'

1060,8 kg/m'

b. Berat balok lantai (2) : 0,4 * (0,4 - 0,12) * 2400 = 268,8 kg/m'

Tembok : 250 * 2,6 = 650 kg/m'

918,8 kg/m'

***Berat sendiri kolom**

0,7 * 0,7 * 2400 = 1176 kg/m'

***Beban Ekivalen**

Beban mati

Balok atap

M =0,0208* q pelat * lx * (3 * ly^2 - lx^2) .....(balok 1&3)

M = 0,0208 * 300 * 3,5 * (3 * 7^2 - 3,5^2) = 2942,94 kgm

$M = 1/8 * q * l^2$

q = 480,48 * 2 = 960,96 kg/m'

q balok = 480 kg/m'

$q_{eqiv.(1\&3)}$ = 1440,96 kg/m' ≈ 1450 kg/m'

M = 0,0417 * q pelat * lx^3 .....(balok 2)

M = 0,0417 *300* 3^3 = 337,77 kg.m

q = 300,24 * 2 = 600,48 kg/m'

q balok = 288 kg/m'

$q_{ekiv.\ 2}$ = 888,48 kg/m' ≈ 890 kg/m'

Balok lantai

M = 0,0208 * 420 * 3,5* (3 * 7^2 - $3,5^2$) = 4120,116 kg.m (balok 1&3)

q = 672,672 * 2 = 1345,344 kg/m'

q balok = 1060,8 kg/m'

$q_{ekiv.\ 1\&3}$ = 2406,144 kg/m' ≈ 2410 kg/m'

M = 0,0417 * 420 3^3 = 472,878 kg.m (balok 2)

q = 420,336 * 2 = 840,672

q balok = 1018,8

$q_{ekiv.\ 2}$ = 1759,47 kg/m' ≈ 1760 kg/m'

Beban hidup

Balok atap

M = 0,0208 * 140 * 3,5 * (3 * 7^2 - $3,5^2$) = 1373,372 kg.m (balok 1&3)

$q_{ekiv.1\&3}$ = 224,224 * 2 = 488,488 kg/m' ≈ 490 kg/m

M = 0,0417 * 140 * 3^3 = 157,626 kg.m (balok 2)

$q_{ekiv.2}$ = 140,112* 2 = 280,224 kg/m' ≈ 300 kg/m

Balok lantai

M = 0,0208 * 250 * 3,5 (3 * 7^2 - $3,5^2$) = 2452,45 kg.m (balok 1&3)

$q_{ekiv.1\&3}$ = 400,4 * 2 = 800,8 kg/m' ≈ 810 kg/m

M = 0,0417 * 250 * 3^3 = 281,475 kg.m (balok2)

$q_{ekiv.2}$ = 250,2 * 2 = 500,4 kg/m' ≈ 510 kg/m

***Berat Atap**

Beban mati

Pelat	: 300 * 17 * 7	= 35700 Kg
Balok Bujur	: 0,4 * 0,6 * 2 * 7* 2400	= 8064 Kg
	0,4 * 0,3 * 1 * 3 * 2400	= 1152 Kg
Balok Anak	: 0,3 * 0,4 * 4 * 7 *2400	= 8064 Kg
Balok melintang	: 0,4 * 0,5 * 4 * 7 * 2400	= 13440 Kg
Kolom	: 0,7 * 0,7 * 4 * 1,5 *2400	= 7056 Kg
Tembok	: 4 * 7 * 1,5 * 250	= 10500 Kg
	17 * 1,5 * 250	= 6375 Kg
		90351Kg

Beban hidup

q = **140 kg/m²**

Faktor reduksi = 0,3

W atap = 17 * 7 * 140 * 0,3 = 4998 Kg

W total atap = 90351 + 4998 = 95349 Kg

Berat lantai

Beban Mati

Pelat	: 670 * 17 * 7	= 79730 Kg
Balok bujur	: 0,4 * 0,60 * 2 *7 *2400	= 8064 Kg
	0,4 * 0,60 * 3 * 2400	= 1728 Kg
Balok anak	: 0,3 * 0,50 * 4 *7* 2400	= 10080 Kg
Balok melintang	: 0,4 * 0,60 *4 * 7 *2400	= 16128 Kg
Kolom	: 0,7 * 0,7 * 4 * 3 * 2400	= 14112 Kg
Tembok	: 4 * 7 * 3 * 250	= 31000 Kg
	17 * 3 * 250	= 12750 Kg
		163592 Kg

Beban hidup

q = 250 kg/m²

Faktor reduksi = 0,3

W lantai (h) = 17 * 7 * 250 * 0,3 = 8925 Kg

W total lantai = 163592 + 8925 = 172517 Kg

W total atap & lantai = 95349 + 7* (172517) = 1302968 Kg

***Waktu getar bangunan (T)**

dengan rumus empiris

$T = 0{,}06\ H^{3/4}$

H = 8 * 3,0 = 24 m

$T = 0{,}06 * (24)^{3/4}$

= 0,6506 detik

***Koefisien gempa dasar (C)**

C diperoleh dari gambar (struktur diatas tanah lunak)

C = 0,05

***Faktor Keutamaan (I) dan Faktor jenis struktur (K)**

I = 1,5 K = 1,0 untuk bangunan kampus yang menggunakan struktur rangka beton bertulang dengan daktilitas penuh

***Gaya geser horisontal total akibat gempa**

V = C * I * K * W1

= 0,05 * 1,5 * 1,0 * 1302968 Kg

= 97722,6

***Distribusi gaya geser horisontal total akibat gempa sepanjang tinggi gedung**

H/A = 24/17 = 1,4117 < 3

hi (m)	wi (t)	wi hi (tm)	Fi (t)
24	90351	2168424	12719
21	172517	3622857	21251
18	172517	3105306	18215
15	172517	2587755	15179
12	172517	2070204	12143
9	172517	1552653	9107
6	172517	1035102	6071
3	172517	517551	3036
		16659812	

Data dimensi balok : 40/60 (balok 1&3)

40/40 (balok2)

kolom : 70/70

Mutu bahan

kolom = k 300 ; balok = k 250

Beban Merata Atap = (Beban mati + hidup)

$q_{ekiv\ 1\&3}$ = 1450 kg/m + 490 kg/m = 1940 kg/m

$q_{ekiv.\ 2}$ = 890 kg/m + 300 kg/m = 1190 kg/m

Beban Merata Lantai = (Beban mati +Beban Hidup)

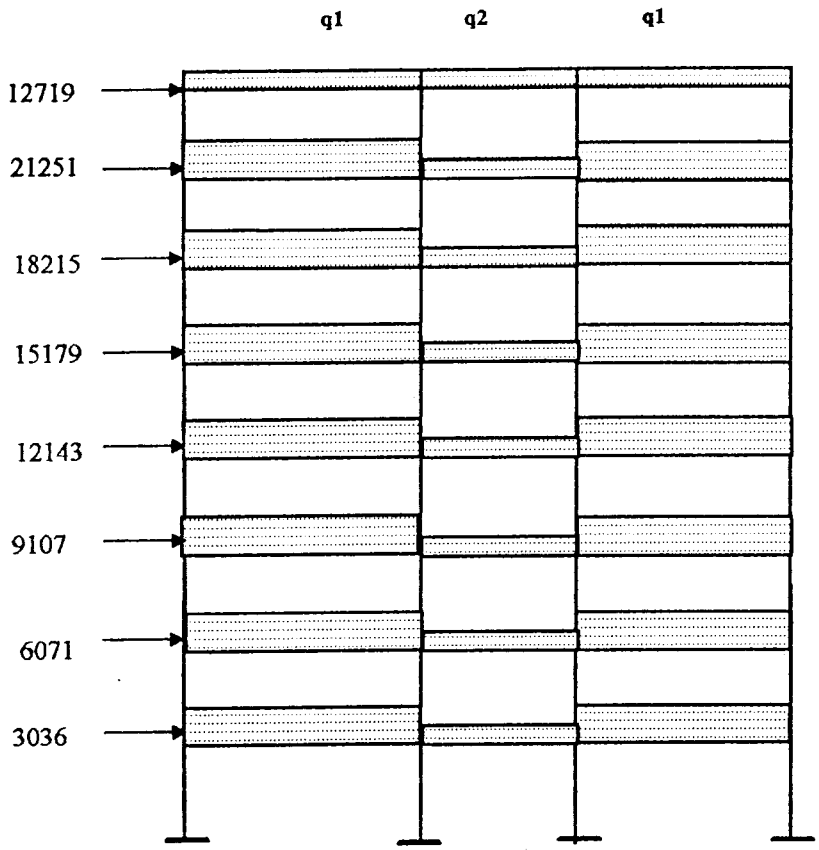
$q_{ekiv.\ 1\&3}$ = 2410 kg/m + 810 kg/m = 3220 kg/m

$q_{ekiv.2}$ = 1760 kg/m + 510 kg/m = 2270 kg/m

E kolom = 6400 $\sqrt{300}$ = 1,1 10^5 kg/cm^2 = 1,1 10^9 kg/m^2

E balok = 6400 $\sqrt{250}$ = 1,01 10^5 kg/cm^2 = 1,01.10^9 kg/m^2

Pembebanan pada portal penuh (A-P)



Pengurangan *Infill Wall*

$q_{ekiv.1\&3}$ (akibat pengurangan) = $q_{ekiv.\ 1\&3}$ - berat tembok

=3220 - 600 = 3214 kg/m

$q_{ekiv.\ 2}$ (akibat pengurangan) = $q_{ekiv.\ 2}$ - berat tembok

= 2270 - 650 = 1620 kg/m

Tabel 4.1 Distribusi Gaya Horisontal Akibat Pengurangan Infill Wall

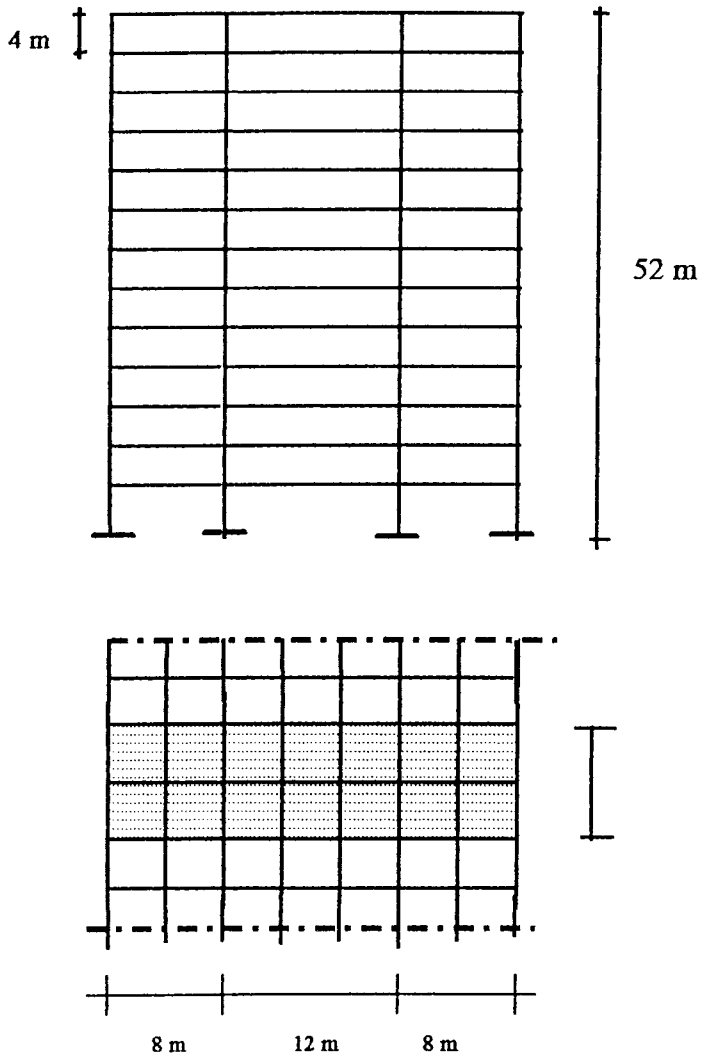
	hi	wi (A-1)	wi (A-2)	wi (A-3)	wi (A-4)	wi (A-5)	wi (A-6)	wi (A-7)	wi (A-K)
wi	24	90351	90351	90351	90351	90351	90351	90351	83976
	21	172517	172517	172517	172517	172517	172517	159767	159767
	18	172517	172517	172517	172517	172517	159767	159767	159767
	15	172517	172517	172517	172517	159767	159767	159767	159767
	12	172517	172517	172517	159767	159767	159767	159767	159767
	9	172517	172517	159767	159767	159767	159767	159767	159767
	6	172517	159767	159767	159767	159767	159767	159767	159767
	3	159767	159767	159767	159767	159767	159767	159767	159767
Wi.hi	24	2168424	2168424	2168424	2168424	2168424	2168424	2168424	2015424
	21	3622857	3622857	3622857	3622857	3622857	3622857	3355107	3355107
	18	3105306	3105306	3105306	3105306	3105306	2875806	2875806	2875806
	15	2587755	2587755	2587755	2587755	2396505	2396505	2396505	2396505
	12	2070204	2070204	2070204	1917204	1917204	1917204	1917204	1917204
	9	1552653	1552653	1437903	1437903	1437903	1437903	1437903	1437903
	6	1035102	958602	958602	958602	958602	958602	958602	958602
	3	479301	479301	479301	479301	479301	479301	479301	479301
		16621602	16545102	16430352	16277352	16086102	15856602	15588852	15435852
V (Kg)		96766.35	95810.1	94853.85	93897.6	92941.35	91985.1	91028.85	90072.6
Fi(Kg)	24	12623.962	12557.005	12518.5	12508.78	12528.595	12579.158	12662.199	11760.574
	21	21091.267	20979.399	20915.068	20898.828	20931.934	21016.411	19591.663	19578.006
	18	18078.229	17982.342	17927.201	17913.281	17941.657	16682.723	16792.854	16781.148
	15	15065.191	14985.285	14939.335	14927.734	13846.388	13902.269	13994.045	13984.29
	12	12052.153	11988.228	11951.468	11059.591	11077.11	11121.815	11195.236	11187.432
	9	9039.1145	8991.1709	8301.139	8294.6932	8307.8328	8341.3616	8396.4269	8390.5742
	6	6026.0763	5551.1144	5534.0927	5529.7955	5538.5552	5560.9077	5597.6179	5593.7161
	3	2790.3573	2775.5572	2767.0463	2764.8977	2769.2776	2780.4539	2798.809	2796.8581

4.2.3 Gedung BNI

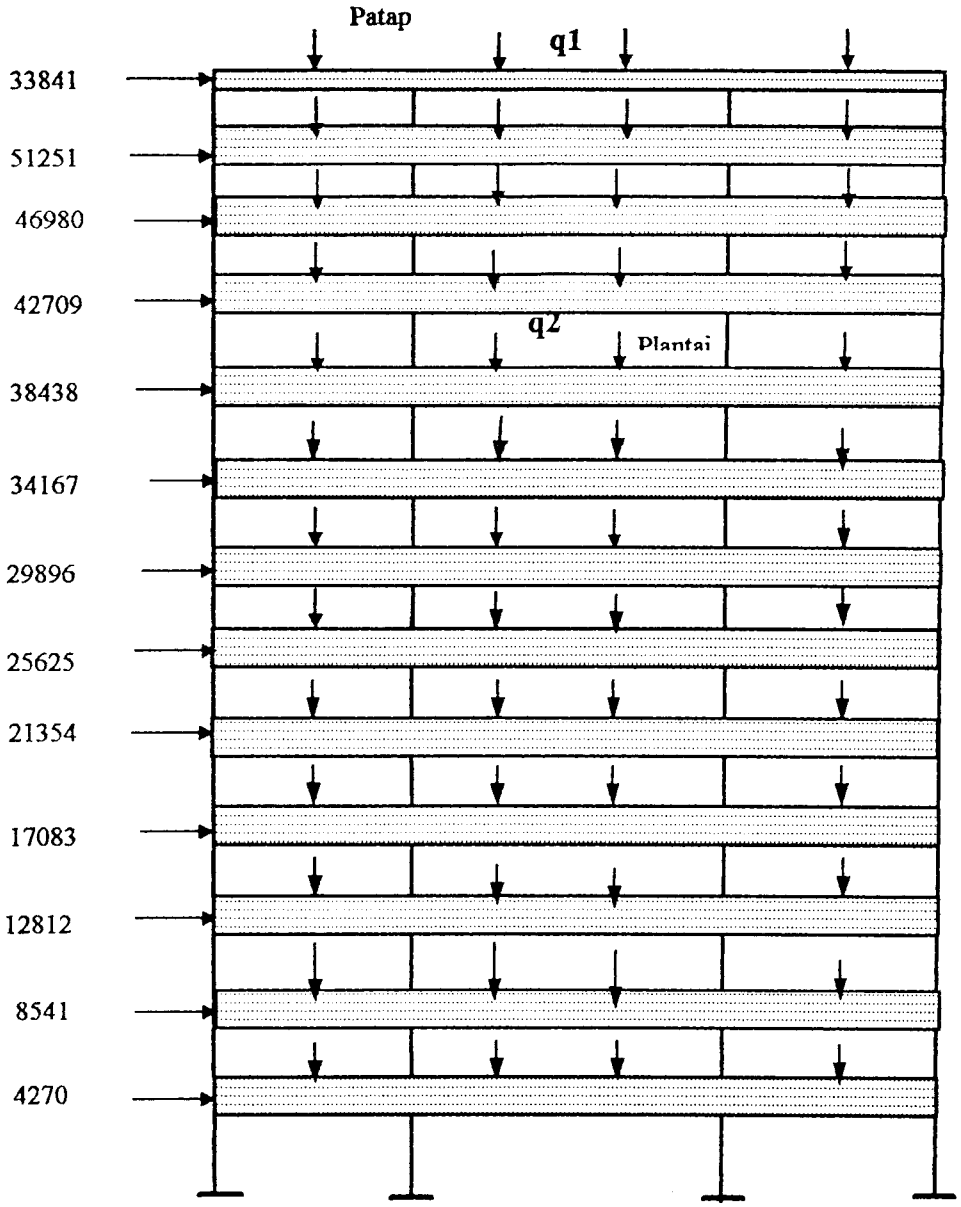
Gedung bertingkat 13 terletak di Surabaya dengan wilayah gempa 4

Tingkat	1	2	3	4	5	6	7	8	9	10	11	12	13
Kolom	90/90	90/90	90/90	90/90	90/90	90/90	90/90	90/90	90/90	90/90	90/90	90/90	90/90
Balok	60/80	60/80	60/80	60/80	60/80	60/80	60/80	60/80	60/80	60/80	60/80	60/80	60/80
Balok Anak	60/30	60/30	60/30	60/30	60/30	60/30	60/30	60/30	60/30	60/30	60/30	60/30	60/30

Model Portal



Pembebanan pada portal penuh (B-P)



Gambar 4.3 Model Kajian 3

P atap : 3520 kg

P lantai : 5360 kg

$q_{ekiv.1}$: 1900 + 400 = 2300 kg/m

$q_{ekiv.2}$: 3100 + 700 = 3800 kg/m

E balok : $6400\sqrt{300} = 1{,}1 .10^5$ kg/cm^2 = 1,1 10^9 kg/m^2

E kolom $6400\sqrt{350} = 1{,}2 .10^5$ kg/cm^2 =1,2 10^9 kg/m^2

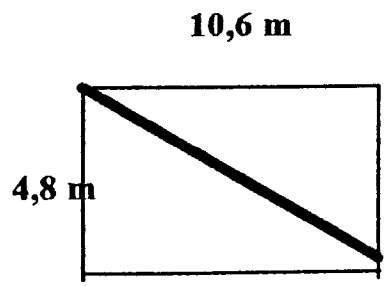
4.3 *Infill frame*

Batu bata dikonversikan sebagai *diagonal strut* yaitu batang diagonal yang diasumsikan mampu mendukung gaya horisontal yang disebabkan akibat beban gempa. Modulus Elastis bata + plesteran diambil sebagai beton non struktural yaitu Bo dengan kesalahan pembuatan campuran untuk plesteran 0,5 maka diambil k50 baik pada batu bata maupun batako.

Beberapa macam variasi yang digunakan untuk mendapatkan hasil yaitu sebagai berikut ini.

1. Portal Terbuka.
2. *Infill Frame* penuh.
3. Pengurangan tembok secara bertahap

4.3.1 *Infill frame* pada kampus ITB Bandung



L/H = 10,6/4,8 = 2,208 m

D = $\sqrt{(10{,}6^2 + 4{,}8^2)}$ = 11,636 m

Interpolasi diperoleh W/D (Tabel 3.1)

$$0,3 + \frac{(0,34 - 0,3)\,(2,208 - 2)}{(2,5 - 2)}$$

W = 0,3166 D

= 0,3166 * 11,636 = 3,6844m

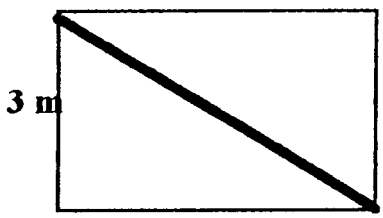
Dimensi tembok ½ bata

diambil tebal bata & plesteran = 12 cm

dimensi lebar efektif bata = 368,4 * 12 cm

4.3.2 *Infill frame* gedung kampus As-syafi'iah Jakarta

7 m



L/H = 7/3 = 2,33

D = 7,616 m

Interpolasi diperoleh W/D (Tabel 3.1)

$$0,3 + \frac{(0,34 - 0,3)\,(2,33 - 2)}{(2,5 - 2)}$$

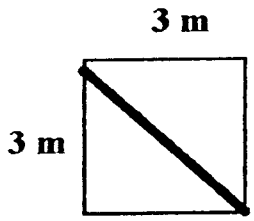
= 0,326

W = 0,326* 7,616 = 2,483

dimensi tembok ½ bata

diambil tebal bata & plesteran = 12 cm

dimensi lebar efektif bata = 248,3 * 12 cm



L/H = 1

D = 4,243

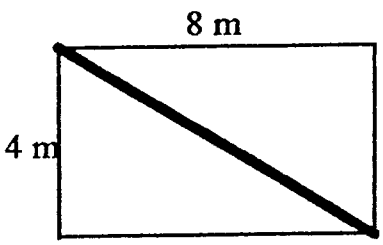
W/D = 0,45

W = 0,45 * 4,243 = 1,909 m

diambil tebal bata & pelesteran = 12 cm

dimensi lebar efektif bata = 190,9 * 12 cm

4.3.3 *Infill frime* pada gedung BNI Surabaya



L/H = 2

D = $\sqrt{8^2 + 4^2}$ = 8,944 m

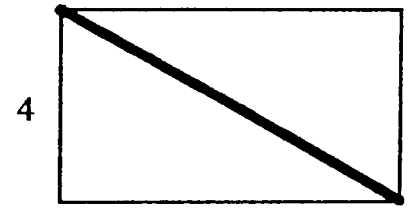
W/D= 0,34

W = 0,34 * 8,994 = 3,041 m

diambil tebal bata & plesteran = 12 cm

dimensi lebar efektif bata = 304,1 * 12 cm

12



4

L/H = 3

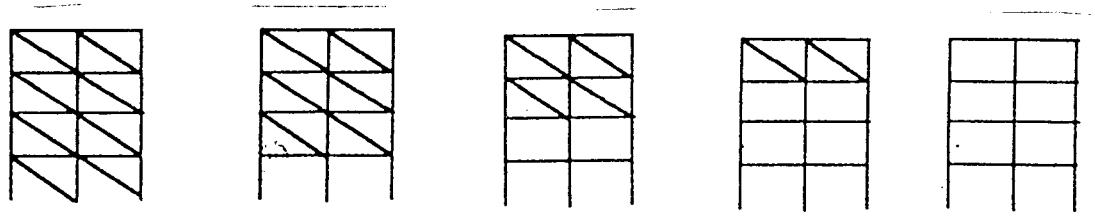
D = $\sqrt{12^2 + 4^2}$ = 12,649

W/D = 0,3

W = 0,3 * 12,649 = 3,795 m

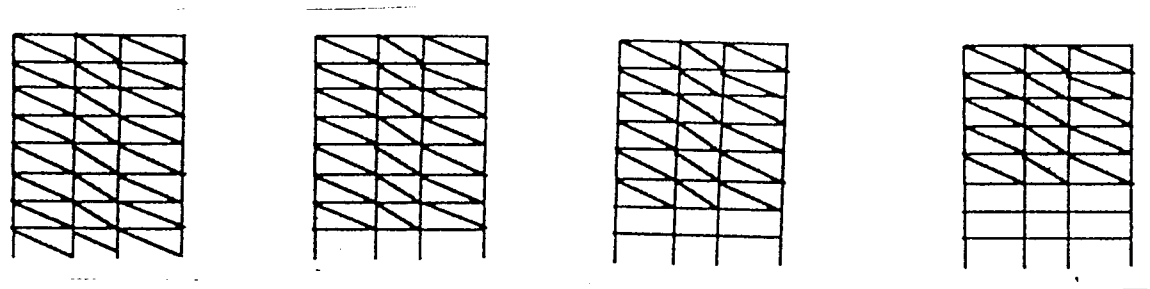
diambil tebal bata & plesteran = 12 cm

dimensi lebar efektif bata = 379,5 * 12 cm

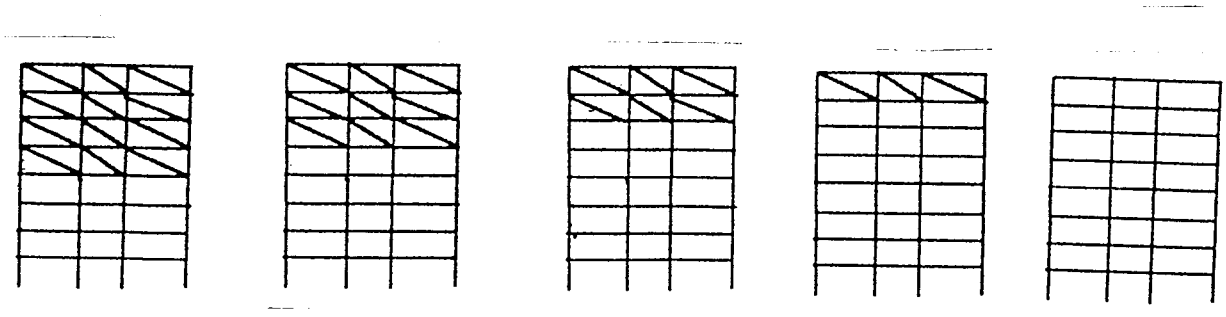


I-P I-1 I-2 I-3 I-K

Gambar 5.1a Kombinasi Model 1

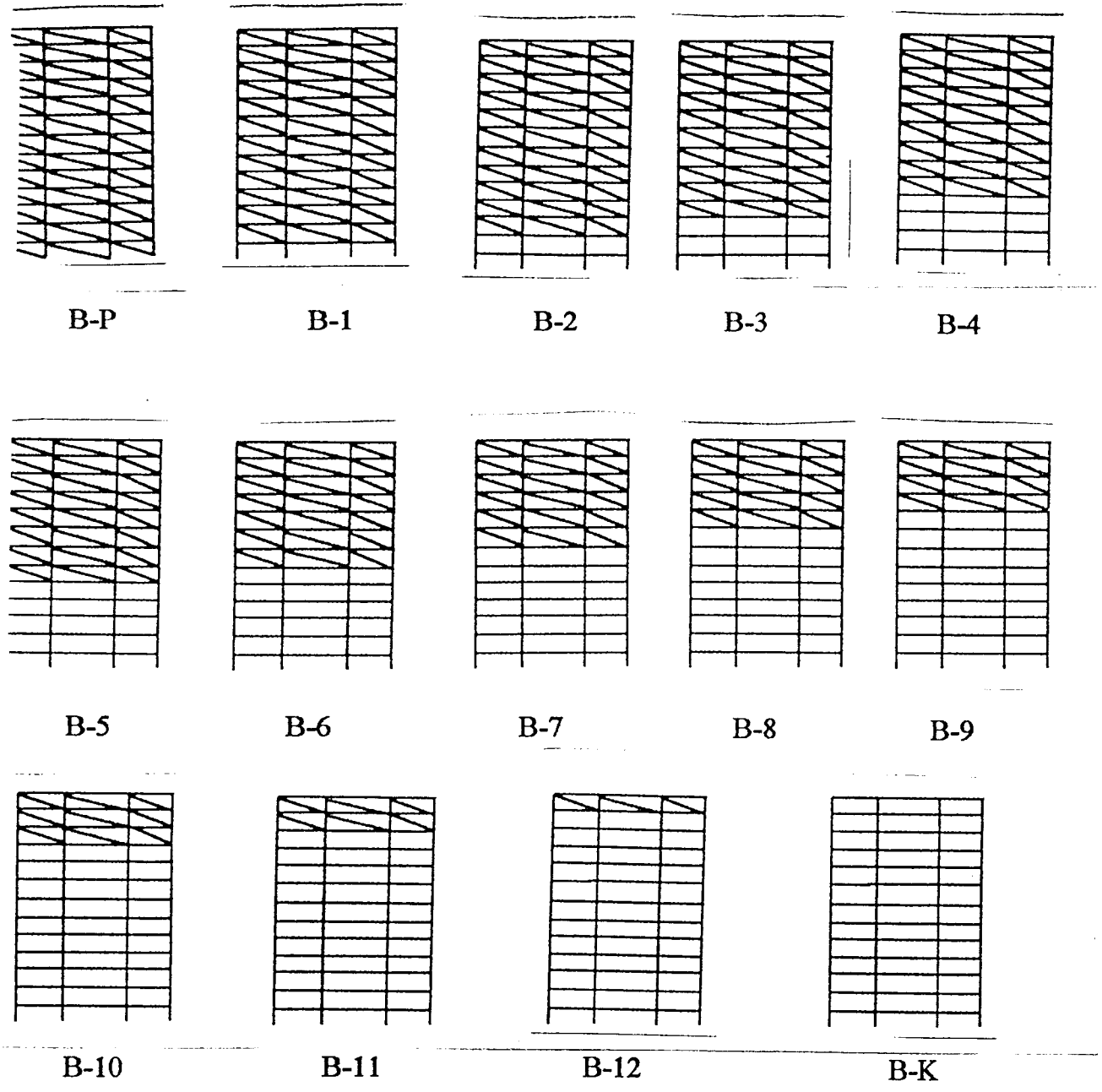


A-P A-1 A-2 A-3



A-4 A-5 A-6 A-7 A-K

Gambar 5.1b Kombinasi Model 2



Gambar 5.1c Kombinasi Model 3

5.3 Hasil /*Out put* Program dan Pembahasan

Tabel dan grafik disajikan menurut penempatan *infill wall* tiap tingkat dalam berbagai kombinasi.

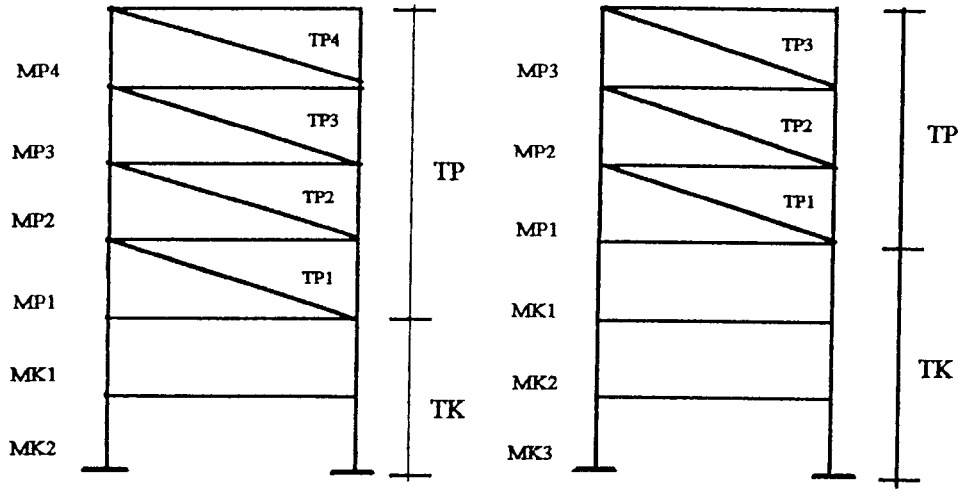
5.3.1 Kolom

5.3.1.a Momen

Momen kolom pada tiap tingkat pada berbagai kombinasi disajikan pada gambar 5.4, 5.5, 5.6. Pengaruh *infil wall* terhadap struktur secara umum adalah sebagai berikut ini.

1. Momen ujung bawah kolom pada tingkat ke-1 pada setiap kombinasi akan bertambah besar secara bertahap dari kondisi portal penuh (I-P) ke portal terbuka (I-K) atau tanpa dinding, seperti dapat dilihat pada gambar 5.4, 5.5, 5.6. Hal ini disebabkan karena adanya simpangan horisontal pada kondisi yang sama juga bertambah besar, ini juga berlaku pada model 2 dan 3 (lampiran *output program SAP 90*)
2. Pada kondisi kombinasi, struktur dapat dibedakan menjadi dua bagian yaitu tingkat-tingkat yang kosong (tidak ada dinding) dinotasikan TK dan tingkat-tingkat yang penuh (ada dinding) dinotasikan TP. Momen kolom pada tingkat yang penuh didefinisikan sebagai momen bawah (MP), sedangkan momen-momen kolom pada tingkat yang kosong didefinisikan sebagai momen kosong (MK), untuk lebih jelasnya bisa bisa dilihat pada gambar 5.2 . Jika n adalah bilangan cacah, MK yang terdiri atas tingkat-tingkat dapat didefinisikan MK n+1 (dalam arah

ke bawah) dan pada MP yang terdiri dari tingkat-tingkat pada satu portal dapat didefinisikan MP n+1 (arah ke atas).

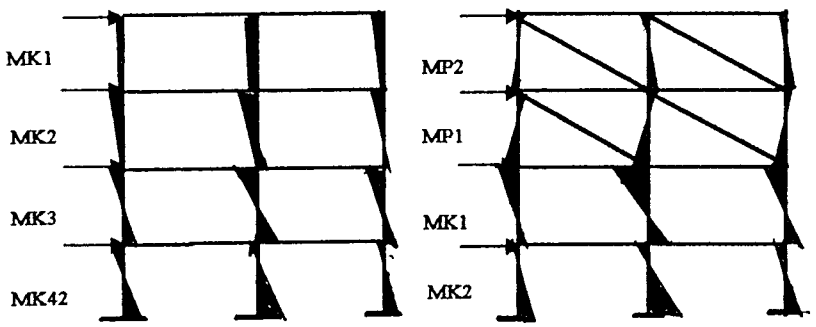


Gambar. 5.2 Pembagian Kombinasi Portal

3. Dari gambar 5.4, 5.5, 5.6. Dapat dilihat bahwa MK1 akan lebih besar daripada momen-momen yang lain kecuali pada momen kolom tingkat 1. Perubahan MK1 yang lebih besar terhadap momen-momen lain ini disebabkan karena *diagonal strut* pada tingkat diatasnya (MP1) memberikan konstribusi kekuatan kearah yang berlawanan terhadap gaya gempa. Sebagian gaya tersebut dilimpahkan ke bawahnya karena kekakuan (MK1) lebih kecil maka momen yang terjadi akan semakin besar, lihat gambar 5.3. Gaya horisontal yang

harus ditahan oleh *infill wall* dan mengakibatkan perubahan pola momen kolom pada arah gempa datang serta tingkat dibawahnya.

4. Kekakuan portal pada TP1 lebih besar dari kekakuan pada tingkat yang kosong. MK2 pada kenyataanya dipengaruhi oleh MK1, hal ini dikarenakan reduksi dan induksi pada portal sangat berpengaruh pada tingkat tersebut dan selanjutnya MK3, MK4 dan seterusnya akan relatif sama pada kondisi portal kosong. Dengan demikian maka *diagonal strut* akan mempengaruhi momen pada tingkat yang bersangkutan dan 2 tingkat dibawahnya.



(a). Portal Kosong (b). Kombinasi

Gambar 5.3 Analisa Perilaku Momen Kolom Akibat *Diagonal Strut*

5. Diantara semua kombinasi, nilai MK1 yang paling besar adalah pada tingkat-tingkat bawah dimana pada kondisi portal penuh/portal

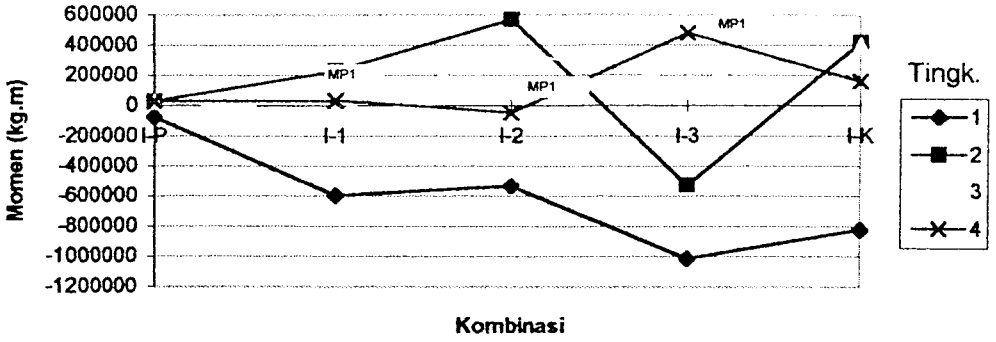
kosong defleksi pada tingkat tersebut mulai linear sampai tingkat paling tinggi , (lampiran *output program SAP 90*)

6. Secara keseluruhan perilaku statik portal penuh relatif lebih baik dari pada portal kosong karena *infill wall* ternyata mampu memberikan tambahan kekuatan terhadap gaya horisontal. Momen pada portal penuh mempunyai kecenderungan yang sama pada setiap tingkat sehingga memudahkan dalam perencanaan struktur.

Kombinasi dan perilaku tingkat lainnya disajikan dalam gambar-gambar sebagai berikut ini, (5.4, 5.5, 5.6).

Tabel 5.1 Momen Kolom (Model 1)

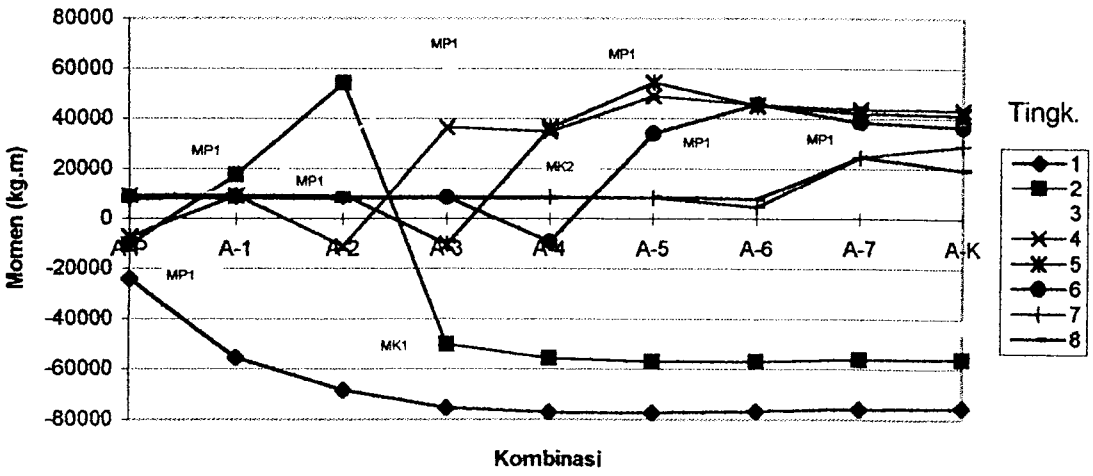
Tingk.	I-P	I-1	I-2	I-3	I-K
1	-74632	-596737	-533348	-1014260	-820929
2	28674	228642	568199	-526530	417595
3	26425	-37024	355951	157245	397132
4	30149	34341	-47238	478531	163534



Gambar 5.4 Grafik Momen Kolom (Model 1)

Tabel 5.2 Momen Kolom (Model 2)

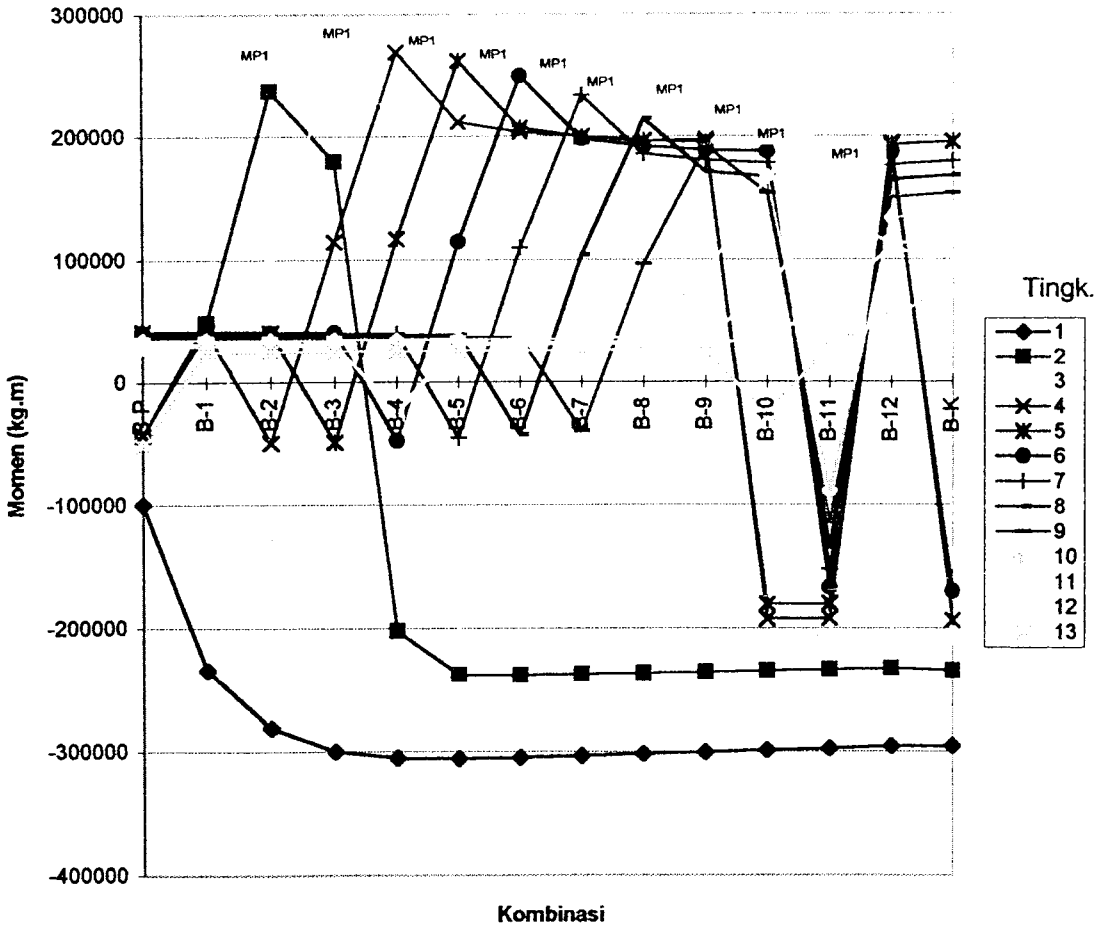
Tingk	A-P	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-K
1	-23961	-55364	-68330	-75266	-77065	-77149	-76615	-75782	-75312
2	-10650	17570	54059	-50075	-55557	-56879	-56876	-56170	-56011
3	9254	10513	31836	61025	44090	44862	-43618	-43247	-43142
4	9260	9288	-10897	36722	34884	49086	45562	43847	43442
5	-7403	9157	9226	-10347	36327	54263	45154	42116	41240
6	8778	8773	8766	8361	-9297	34107	45720	38550	36599
7	7652	8621	8631	8635	8722	8225	4649	24657	29108
8	8045	8046	8049	8077	8132	8505	7836	24680	19623



Gambar 5.5 Grafik Momen Kolom (Model 2)

Tabel 5.3 Momen Kolom (Model 3)

Tingk.	B-P	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-K
1	-99476	-234293	-261039	-300086	-305405	-305749	-304751	-303385	-301916	-300417	-298906	-297402	-295918	-295551
2	-43788	48642	237164	179749	-201863	-237491	-237902	-237244	-236310	-235277	-234232	-233196	-232193	-234036
3	-42800	-48022	99374	265670	207947	-203919	-206018	-206495	-207489	-207225	-206395	-205568	-204351	-207039
4	-42105	41789	-49512	114380	268562	211999	203804	200142	196381	197333	-192177	-191475	185010	-193439
5	41675	41922	40942	-49190	116949	261497	207183	199878	196551	194966	-180282	-179702	192648	195398
6	41082	41312	40784	40670	-47664	114650	249323	196051	191742	188803	187424	-166931	188052	-169733
7	40061	40294	39731	40329	39941	-45581	110009	233490	185939	180738	178234	-152148	176518	179797
8	38621	38861	38308	38846	38976	38672	-43033	103789	214438	171224	167266	-134865	164477	167939
9	36766	37014	36482	36999	37074	37267	37060	-40100	96211	192302	154004	-114283	150100	153607
10	34531	34790	34285	34780	34848	34984	35243	35145	37620	87336	167195	-88670	133589	136739
11	31898	31966	31487	31967	-26186	32152	32346	32667	32682	35038	77194	138810	111905	117113
12	30084	30423	29928	30485	-22833	30720	30968	31325	31851	32185	34642	66424	110498	92927
13	-51643	25618	25207	25683	25773	25917	26133	26438	26859	24715	-26007	29792	53284	77080



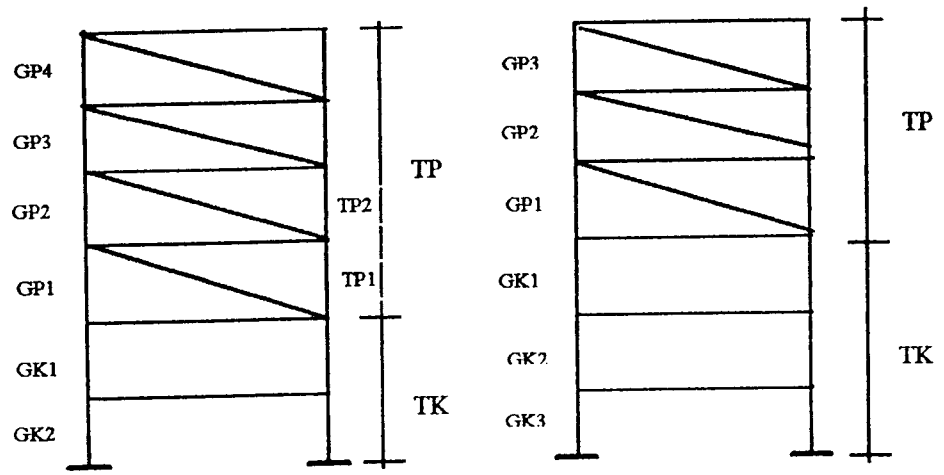
Gambar 5.6 Grafik Momen Kolom (Model 3)

5.3.1.b Gaya Geser

Melihat perubahan perilaku momen kolom akibat *diagonal strut* maka perubahan ini juga akan mempengaruhi gaya geser kolom. Gambar 5.9, 5.10, 5.11, menunjukkan gaya geser kolom pada tiap tingkat dan berbagai kombinasi. Secara umum pengaruh *infill wall* terhadap struktur adalah sebagai berikut ini.

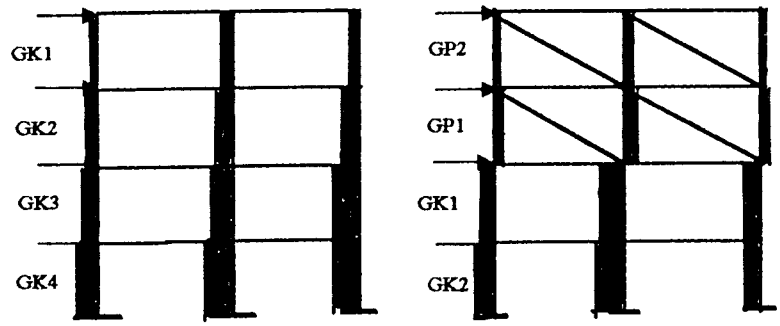
1. Gaya geser kolom pada tingkat yang penuh didefinisikan sebagai geser penuh (GP), sedangkan gaya geser kolom pada tingkat yang kosong didefinisikan sebagai geser kosong (GK), gambar 5.7. Jika n adalah bilangan cacah, GK yang terdiri atas tingkat-tingkat dapat didefinisikan GK n+1(arah bawah) dan pada GP yang terdiri dari tingkat-tingkat pada satu portal dapat didefinisikan GP n+1(arah atas).
2. Karena MK1 besar maka dapat dilihat juga bahwa GK1 akan besar. GK1 akan lebih besar dari tingkat yang lain seperti terlihat pada gambar 5.9, 5.10, 5.11. Hal ini disebabkan karena gaya geser merupakan fungsi dari momen, yaitu jumlah kedua momen ujung pada MBK1 (bawah) dan MAK1 (atas) dibagi tinggi tingkat. Perubahan GK1 yang lebih besar ini disebabkan juga karena *diagonal strut* pada tingkat diatasnya memberikan konstribusi kekuatan kearah yang berlawanan terhadap gaya gempa lihat gambar 5.8. Sehingga

diasumsikan gaya gempa yang bekerja pada struktur di tingkat tersebut menjadi kecil (sebagian gaya horisontal ditahan oleh "strut"). Gaya horisontal yang harus ditahan oleh *infill wall* mengakibatkan perubahan pola gaya geser kolom pada arah gempa datang.



Gambar. 5.7 Pembagian Kombinasi Portal

3. TP1 mempunyai kekakuan tingkat yang lebih besar dari kekakuan pada tingkat kosong yang lain. Seperti halnya pada momen kolom GP1 akan mempengaruhi GK1 dan GK2 tetapi tidak mempengaruhi GK3, GK4 dan seterusnya. GK3, GK4 dan seterusnya berperilaku sama pada kondisi portal kosong. Dengan demikian gaya geser pada tingkat bersangkutan dan 2 tingkat dibawahnya akan dipengaruhi oleh *diagonal strut* tersebut.



(a). Portal Kosong (b). Kombinasi

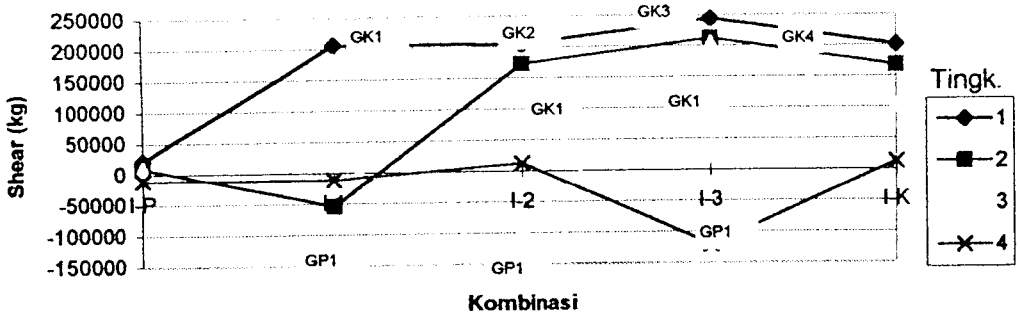
Gambar 5.8 Analisa Perilaku Gaya Geser Kolom Akibat *Diagonal Strut*

4. Nilai GK1 yang paling besar pada semua kombinasi yaitu dimana pada kondisi portal kosong gaya geser akan mengalami perubahan tanda (dari nilai positif (+) ke negatif (-) atau sebaliknya), lihat lampiran SAP 90.
5. Gaya geser pada portal penuh mempunyai kecenderungan yang sama pada setiap tingkat sehingga memudahkan dalam perencanaan struktur. Maka secara analisa mekanika pada kondisi portal penuh boleh dianggap struktur relatif mampudalam menahan gaya gempa.

Kombinasi dan perilaku tingkat lainnya disajikan dalam gambar-gambar sebagai berikut ini.

Tabel 5.4 Shear Kolom-1 (Model 1)

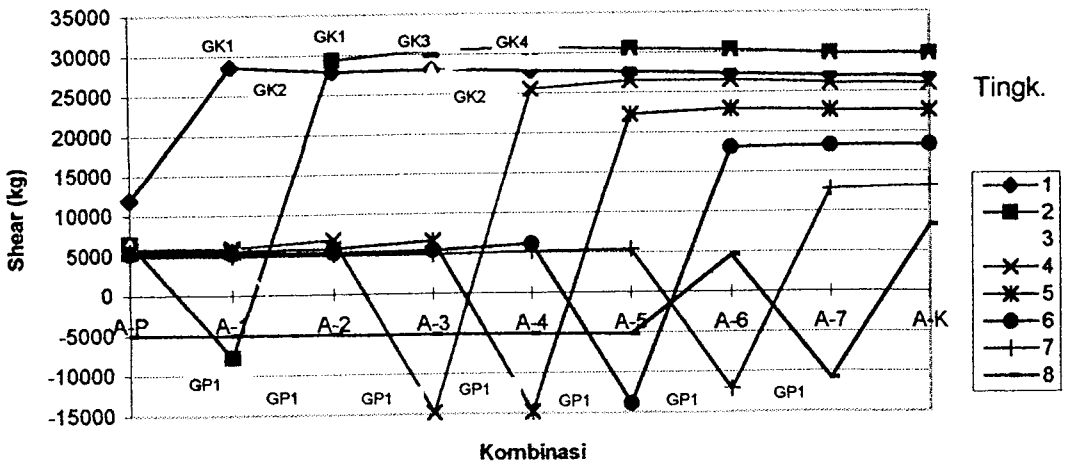
Tingk.	I-P	I-1	I-2	I-3	I-K
1	21531	206086	204625	244303	201948
2	9194	-54460	172209	212148	168481
3	9590	13419	-88421	203442	103424
4	-10110	-11250	12934	-120636	13351



Gambar 5.9 Grafik Shear Kolom (Model 1)

Tabel 5.5 Shear Kolom (Model 2)

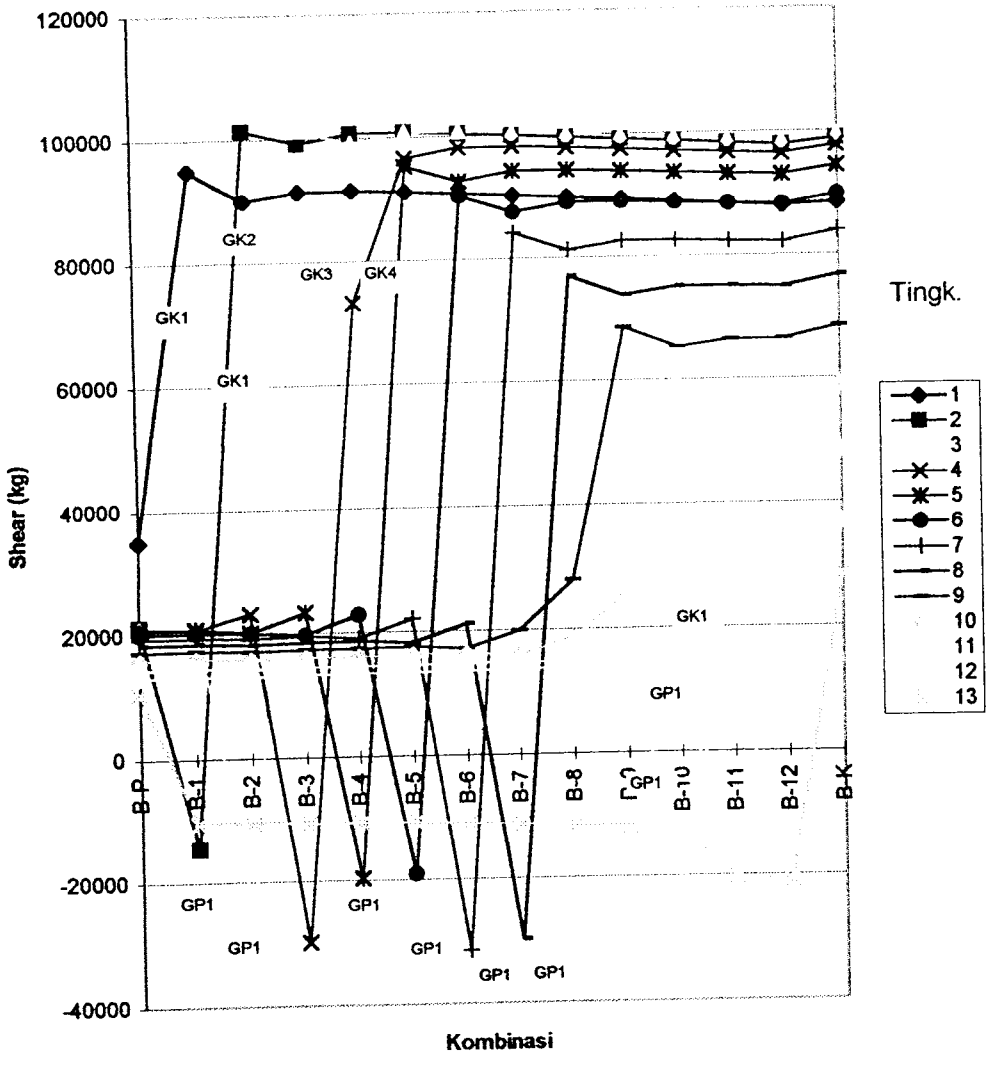
Tingk.	A-P	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-K
1	11964	28591	27897	28075	27845	27628	27380	27022	26858
2	6487	-7794	29377	30499	30722	30517	30277	29832	29711
3	6125	6660	-13077	27835	28965	29155	28926	28491	28365
4	5776	5883	6849	-14824	25520	26485	26586	26143	26036
5	5523	5511	5729	6605	-14812	22241	22950	22743	22654
6	5163	5166	5143	5402	6112	-13860	18114	18320	18401
7	4931	4939	4948	4925	5180	5375	-12145	12845	13237
8	-5019	-5029	-5040	-5059	-5083	-5200	4557	-10862	8229



Gambar 5.10 Grafik Shear Kolom (Model 2)

Tabel 5.6 Shear Kolom (Model 3)

Tingk	B-P	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-K
1	34953	94997	89997	91381	91450	91062	90835	90200	89761	89323	88884	88449	88020	88420
2	21266	-14579	101330	99236	100792	100620	100443	100013	99572	99126	98684	98247	97824	98771
3	21047	22795	-25551	101363	99101	100724	100766	100412	100008	99594	99178	98773	98389	99495
4	20973	20786	23238	-29823	73214	98588	98202	96245	97918	97545	97166	96798	96457	97727
5	20958	20818	20112	23301	-19856	95258	92610	94178	94216	93915	93576	93248	92949	94371
6	20996	20209	20085	19711	22804	-19062	90255	87437	88928	88654	88681	88390	88135	89703
7	19337	19458	19235	19543	18999	22050	-31429	84124	81147	82536	82545	82314	82096	83805
8	18384	18509	18284	18497	18634	18138	21086	-29833	76901	73763	75032	75034	74876	76713
9	17241	17370	17151	17367	17396	17561	17129	19932	27904	68804	65290	66442	66486	66446
10	15922	16057	15843	16060	16093	16151	16344	15986	18613	25685	59277	55760	56836	59014
11	14370	14511	14302	14521	14554	14614	14701	14921	14646	17069	-23258	48849	45041	48472
12	13116	13260	13071	13305	13348	13419	13526	13674	13961	13837	16096	-21423	38293	36706
13	10501	-10527	-10341	-10578	-10645	-10754	-10914	-11137	-11453	-11785	-12470	-20313	-20835	28355



Gambar 5.11 Grafik Shear Kolom (Model 3)

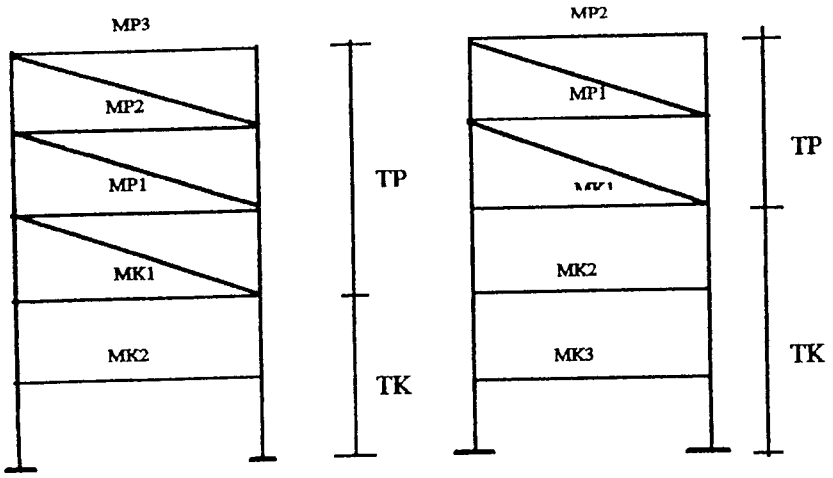
5.3.2 Balok

5.3.2a Momen

Setelah melihat *output* program teryata *infill wall* juga mempengaruhi balok. Gambar 5.14, 5.15, 5.16 menunjukkan momen balok pada tiap tingkat untuk berbagai kombinasi. Pengaruh *Infill Wall* pada balok secara umum diuraikan sebagai berikut ini.

1. Momen balok pada tingkat paling atas akan relatif berperilaku sama pada setiap kombinasi dari kondisi portal penuh ke portal terbuka, kecuali pada kombinasi (portal kosong) I-K/A-K/B-K. Pada keadaan ini momen balok mengalami penurunan, hal ini disebabkan karena pengaruh beban merata yang ditahan oleh tingkat tersebut (balok atap) semakin kecil dan *diagonal strut* tidak secara langsung mempengaruhi tingkat atas.
2. Momen balok pada tingkat yang penuh didefinisikan sebagai (MP), sedangkan momen-momen balok pada tingkat yang kosong didefinisikan sebagai (MK), seperti dapat dilihat pada gambar 5.7. Jika n adalah bilangan cacah, MK yang terdiri dari atas tingkat-tingkat dapat didefinisikan MK n+1 (arah bawah) dan pada MP yang

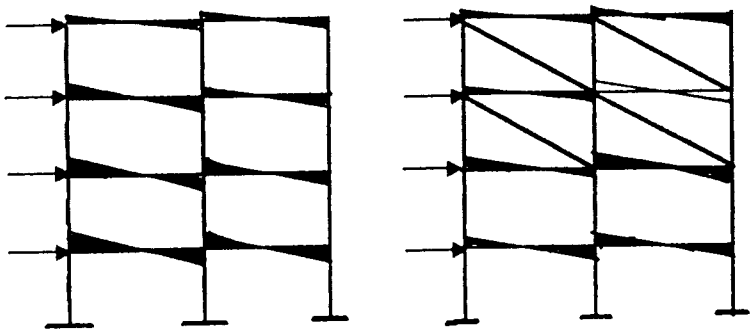
terdiri atas tingkat-tingkat pada satu portal dapat didefinisikan MP n+1 (arah atas).



Gambar 5.12 Pembagian Kombinasi Portal

3. Dari gambar 5.14, 5.15, 5.16 dapat dilihat bahwa MP1 relatif konstan seperti pada kondisi portal penuh. Momen akan mulai naik pada kondisi pengurangan *infill wall*. MK1 naik dan MK2, MK3 juga akan dipengaruhi besarannya (mengalami kenaikan), hal ini disebabkan karena faktor distribusi momen. MK4, MK5 dan seterusnya akan relatif konstan sama seperti pada kondisi portal kosong, hal ini dikarenakan simpangan pada kondisi tersebut juga berperilaku sama.
4. Pada TP *diagonal strut* memberikan tambahan kekuatan dalam menahan gaya gempa. Gambar 5.13, menunjukan arah *diagonal strut*

yang berlawanan terhadap gaya gempa. MK1 pada balok berubah lebih besar daripada MP1 sehingga pada kondisi tingkat dimana *infill* dikurangi akan dapat mengakibatkan *beam sway mechanism*.



(a). Portal Kosong (b). Kombinasi

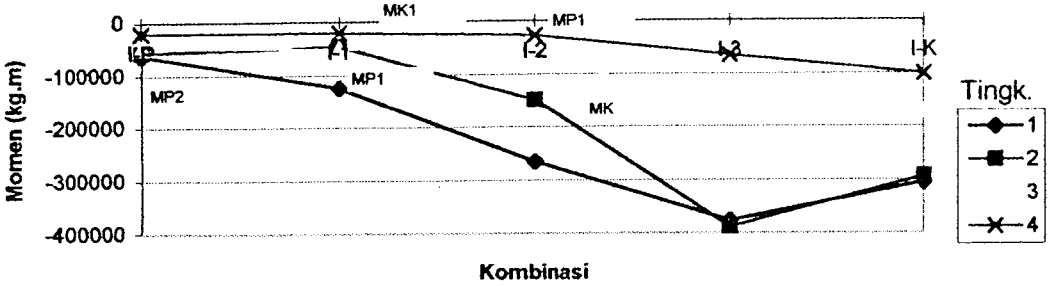
Gambar 5.13 Analisa Perilaku Momen Balok Akibat *Diagonal Strut*

5. Perilaku portal penuh secara keseluruhan relatif lebih baik daripada portal terbuka. *Infill Wall* teryata memberikan tambahan kekuatan terhadap gaya horisontal sehingga balok relatif aman terhadap gaya horisontal. Portal penuh mempunyai kecenderungan yang sama pada setiap tingkat sehingga memudahkan dalam perencanaan struktur.

Kombinasi dan perilaku tingkat lainnya disajikan dalam gambar-gambar 5.14, 5.15, 5.16 berikut ini.

Tabel 5.7 Momen Balok (Model 1)

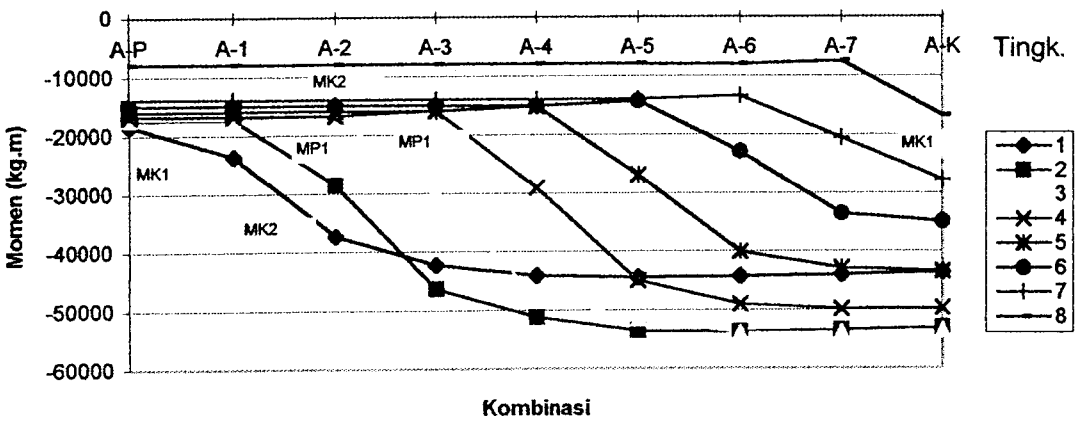
Tingk.	I-P	I-1	I-2	I-3	I-K
1	-62320	-124915	-265044	-377205	-304974
2	-57153	-46671	-149034	-388798	-293185
3	-48198	-50078	-55165	-182663	-171687
4	-19716	-20222	-27601	-65034	-100141



Gambar 5.14 Grafik Momen Balok (Model 1)

Tabel 5.8 Momen Balok (Model 2)

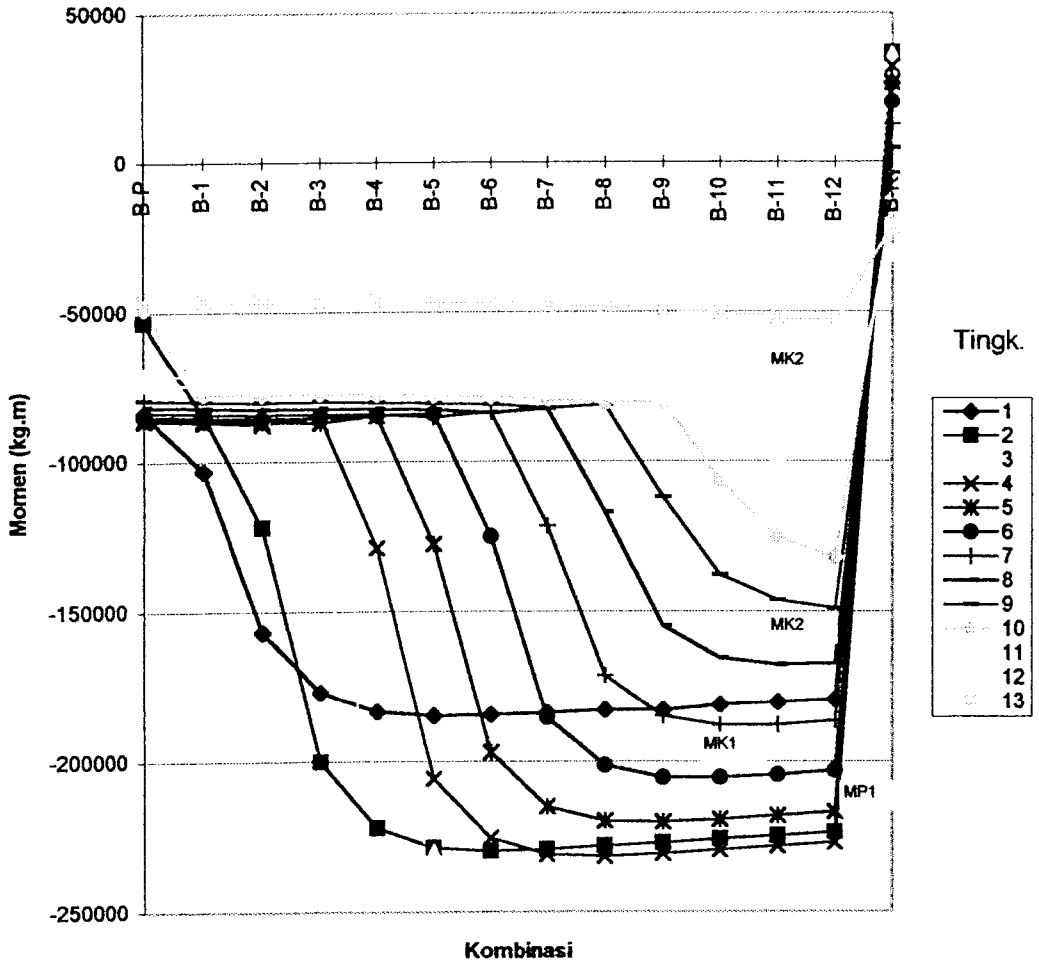
Tingk.	A-P	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-K
1	-18332	-23612	-37332	-42306	-44090	-44455	-44309	-44010	-43598
2	-17488	-17268	-28593	-46433	-51265	-53652	-53830	-53522	-53027
3	-17267	-17254	-16579	-29902	-47679	-51643	-53941	-53900	-53474
4	-16712	-16647	-16749	-15899	-29052	-45031	-49054	-49824	-49656
5	-15953	-15894	-15853	-16004	-15151	-26973	-40122	-42912	-43425
6	-15021	-14970	-14952	-14966	-15065	-14340	-22886	-33591	-34943
7	-13913	-13926	-13936	-13944	-13954	-13941	-13442	-20592	-27806
8	-7928	-7910	-7917	-7922	-7924	-7936	-8056	-7468	-16802



Gambar 5.15 Grafik Momen Balok (Model 2)

Tabel 5.9 Momen Balok (Model 3)

Tingk.	B-P	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-K
1	-83805	-103315	-156797	-178980	-183505	-184671	-184556	-183798	-182928	-182928	-181133	-180243	-179358	26178
2	-53395	-64768	-122098	-200225	-222140	-228718	-229861	-229266	-228227	-227061	-225915	-224760	-223607	36803
3	-86358	-87064	-84970	-128001	-209070	-230201	-236299	-237190	-236452	-235309	-234075	-232839	-231600	36290
4	-86401	-86851	-87534	-84844	-128896	-205663	-225383	-230683	-231536	-230699	-229503	-228246	-226967	32158
5	-85915	-86399	-86639	-87004	-84683	-127579	-197085	-215044	-219857	-220253	-219320	-218094	-216789	26503
6	-84920	-85406	-85749	-85474	-84533	-84225	-124995	-185423	-201321	-205346	-205453	-204425	-203120	19976
7	-83475	-83969	-84338	-84074	-84284	-85259	-83467	-121454	-171276	-184814	-187942	-187735	-186541	12637
8	-81622	-82125	-82524	-82206	-82454	-82804	-83906	-82443	-117091	-154800	-165665	-167795	-167163	4683
9	-79410	-79923	-80348	-79997	-80211	-80588	-81061	-82305	-81213	-112008	-137973	-146263	-149072	-3712
10	-48834	-77409	-77855	-77483	-77680	-78016	-78527	-79171	-80525	-79865	-106323	-125511	-131989	-12646
11	-74142	-74880	-75146	-74762	-74949	-75265	-75734	-76394	-77212	-78729	-78563	-100264	-112187	-21998
12	-70963	-71505	-72004	-71595	-71774	-72070	-72508	-73114	-73928	-74935	-76642	-77104	-93805	-30509
13	-46069	-46042	-46559	-46129	-46292	-46560	-46954	-47498	-48221	-49171	-50323	-51984	-52940	-21435

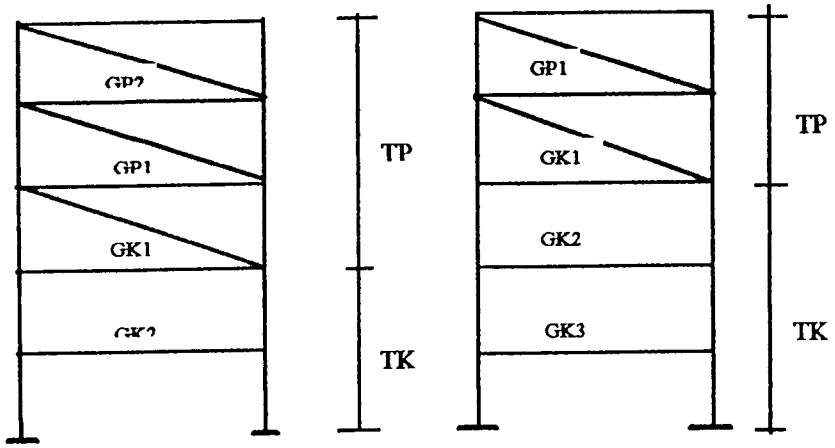


Gambar 5.16 Grafik Momen Balok (Model 3)

5.3.2b Gaya Geser

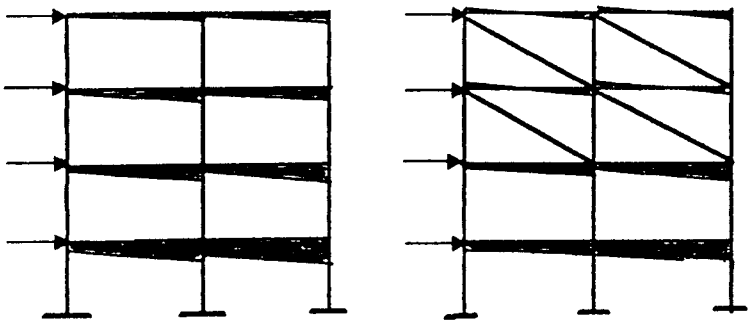
Dari hasil momen balok maka dapat juga disajikan hasil gaya geser, karena momen mempengaruhi besar kecilnya gaya geser. Pada gambar 5.19, 5.20, 5.21 menunjukan gaya geser balok pada tiap tingkat untuk berbagai kombinasi. Berikut ini diuraikan pengaruh *infill wall* secara umum.

1. Dari kondisi portal penuh (I-P) Ke portal kosong (I-K), pada tingkat paling atas gaya geser akan relatif berperilaku sama kecuali pada portal kosong, kombinasi I-3/A-7/B-12. Pada kombinasi tersebut gaya geser balok akan mengalami kenaikan karena adanya pengaruh *diagonal strut* pada tingkat atas ikut menahan gaya horisontal.
2. Seperti halnya pada momen balok maka gaya geser balok dapat juga didefinisikan pada tiap-tiap tingkat. Gaya geser balok pada tingkat-tingkat yang penuh didefinisikan sebagai gaya geser penuh (GP), sedangkan gaya geser balok pada tingkat yang kosong didefinisikan sebagai geser kosong (GK). Hal ini dapat dilihat pada gambar 5.17. Jika n adalah bilangan cacah, GK yang terdiri atas tingkat-tingkat dapat didefinisikan GK n+1 dan pada GP yang terdiri atas tingkat-tingkat pada satu portal dapat definisikan GP n+1.



Gambar 5.17 Pembagian Kombinasi Portal

3. Pada GP2, GP3 dan seterusnya gaya geser relatif konstan seperti pada gaya geser pada portal penuh. Pada GK1, GK2 dan seterusnya gaya geser akan berubah relatif besar bertahap hingga sama dengan gaya geser pada portal terbuka, lihat pada gambar 5.19, 5.20, 5.21. Hal ini disebabkan karena simpangan yang terjadi sama seperti keadaan diatas.
4. Pada gambar 5.18, menunjukan arah *diagonal strut* yang berlawanan terhadap gaya gempa. Perubahan GK1, GK2, dan seterusnya pada model 1 dan 2 relatif kecil. Sedangkan pada model 3 perubahan gaya geser balok akan besar karena gaya horisontal yang ditahan oleh struktur juga besar.



(a). Portal Kosong (b). Kombinasi

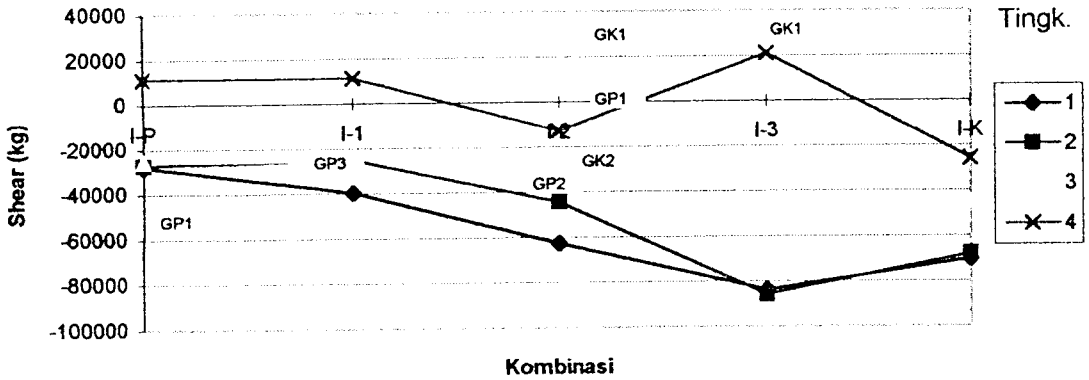
Gambar 5.18 Analisa Perilaku Gaya geser Balok Akibat *Diagonal Strut*

5. Seperti halnya pada gaya geser kolom ternyata gaya geser balok pada portal penuh juga memberikan perilaku yang lebih baik daripada portal kosong. Ternyata *Infill Wall* mampu memberikan tambahan kekuatan terhadap gaya horisontal. Gaya geser balok relatif sama pada setiap tingkat sehingga memudahkan dalam perencanaan.

Kombinasi dan perilaku tingkat lainnya disajikan dalam gambar-gambar berikut ini.

Tabel 5.10 Shear Balok (Model 1)

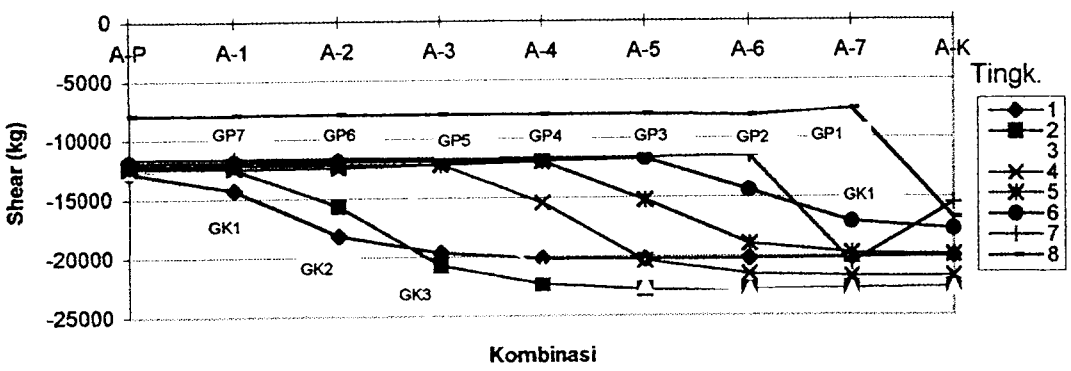
Tingk.	I-P	I-1	I-2	I-3	I-K
1	-27972	-39775	-62580	-83717	-70176
2	-27177	-25162	-44335	-85805	-67912
3	-25420	-25793	26749	-50728	-44881
4	11380	11455	-12662	21077	-25796



Gambar 5.19 Grafik Shear Balok (Model 1)

Tabel 5.11 Shear Balok (Model 2)

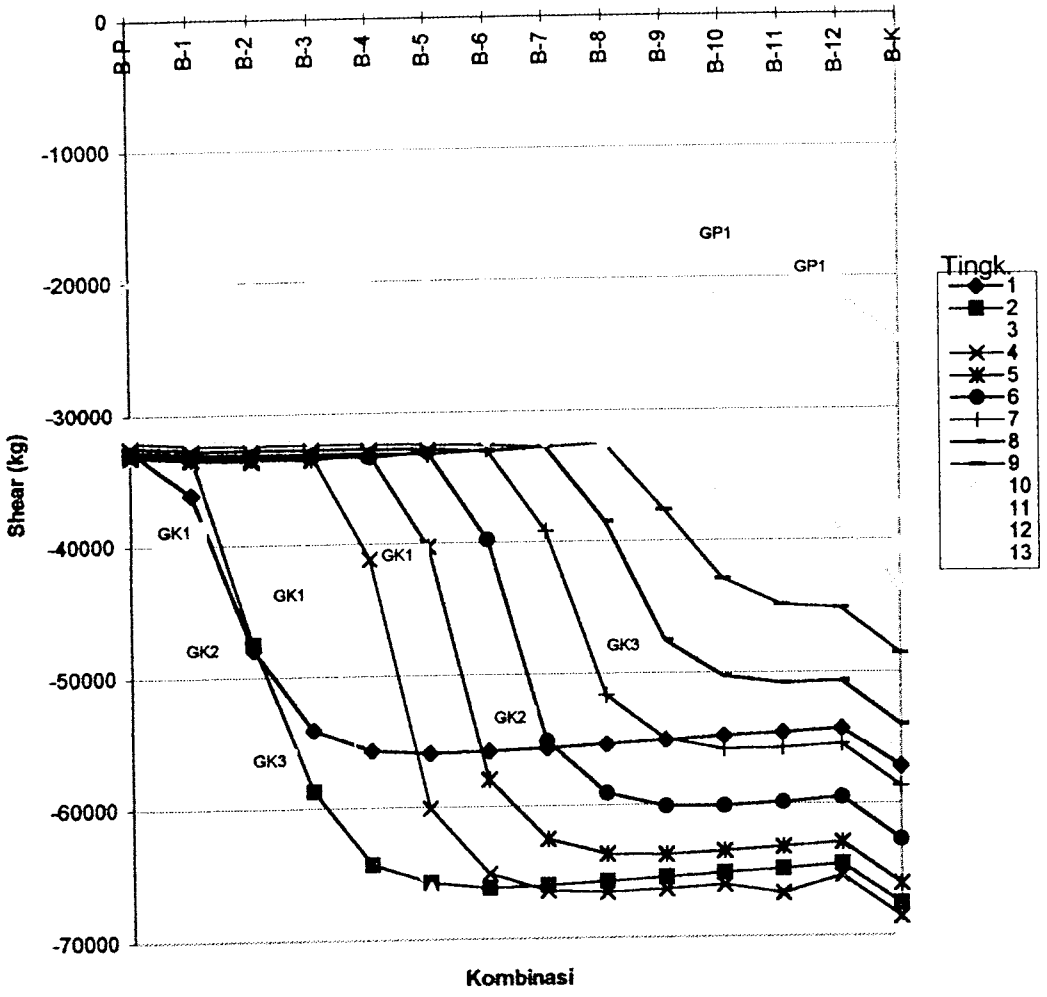
Tingk.	A-P	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-K
1	-12792	-14281	-18185	-19645	-20153	-20250	-20213	-20131	-20019
2	-12600	-12520	-15684	-20745	-22339	-22819	-22869	-22780	-22642
3	-12558	-12554	-12339	-16063	-21107	-22543	-22906	-22893	-22774
4	-12403	-12384	-12415	-12153	-15430	-20363	-21523	-21740	-21695
5	-12187	-12170	-12159	-12204	-11946	-15251	-18979	-19783	-19931
6	-11922	-11908	-11895	-11892	-11893	-11717	-14444	-17131	-17758
7	-11597	-11601	-11603	-11606	-11606	-11606	-11463	-20592	-15510
8	-7928	-7910	-7917	-7922	-7924	-7936	-8056	-7468	-16802



Gambar 5.20 Grafik Shear Balok (Model 2)

Tabel 5.12 Shear Balok (Model 3)

Tingk.	B-P	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-K
1	-32677	-36132	-47957	-54059	-55675	-55920	-55809	-55590	-55339	-55077	-54810	-54530	-54251	-57168
2	-33039	-33108	-47549	-58725	-64267	-65691	-66146	-65998	-65740	-65456	-65167	-64880	-64564	-67565
3	-33195	-33518	-33153	-41273	-60916	-66226	-67740	-67956	-67772	-67487	-67180	-66873	-66564	-69606
4	-33211	-33492	-33605	-33146	-41151	-60080	-65035	-66400	-66556	-66346	-66048	-66734	-65415	-68523
5	-32978	-33421	-33461	-33530	-33129	-40253	-57967	-62478	-63673	-63765	-63531	-63224	-62897	-66063
6	-32832	-33262	-33315	-33278	-33422	-33061	-39770	-55094	-59087	-60067	-60106	-59847	-59510	-62735
7	-32743	-33028	-33086	-33046	-33086	-33254	-32943	-39189	-51609	-55010	-55787	-55727	-55425	-58686
8	-32439	-32726	-32788	-32740	-32782	-32845	-33035	-32780	-38472	-47551	-50280	-50809	-50642	-53961
9	-32074	-32363	-32430	-32376	-32412	-32476	-32563	-32773	-32583	-37635	-42925	-44901	-45130	-48578
10	-31657	-31947	-32018	-31960	-31994	-32051	-32137	-32249	-32481	-32366	-36698	-37725	-38826	-43362
11	-31200	-31492	-31566	-31506	-31538	-31591	-31671	-31782	-31924	-32183	-32158	-35699	-34445	-40515
12	-30690	-30985	-31062	-31000	-31031	-31082	-31157	-31261	-31400	-31576	-31872	-31956	-34674	-37753
13	-20044	-20040	-20115	-20056	-20085	-20133	-20203	-20299	-20427	-20596	-20807	-21174	-21288	-24778



Gambar 5.21 Grafik Shear Balok (Model 3)

5.3.3 Defleksi pada Join

Defleksi join pada tiap tingkat untuk berbagai kombinasi disajikan pada gambar 5.22, 5.23, 5.24, 5.25, 5.26, 5.27. Pengaruh *Infill wall* secara umum diuraikan sebagai berikut ini.

1. Arah X (Horisontal)

   Defleksi join akan mulai berubah apabila pada tingkat tersebut tidak terisi tembok. Defleksi akan bertambah secara bertahap pada kombinasi mulai dari portal penuh ke portal terbuka (Gambar 5.22.1). Secara keseluruhan defleksi pada portal penuh sangat kecil dibanding dengan portal terbuka.

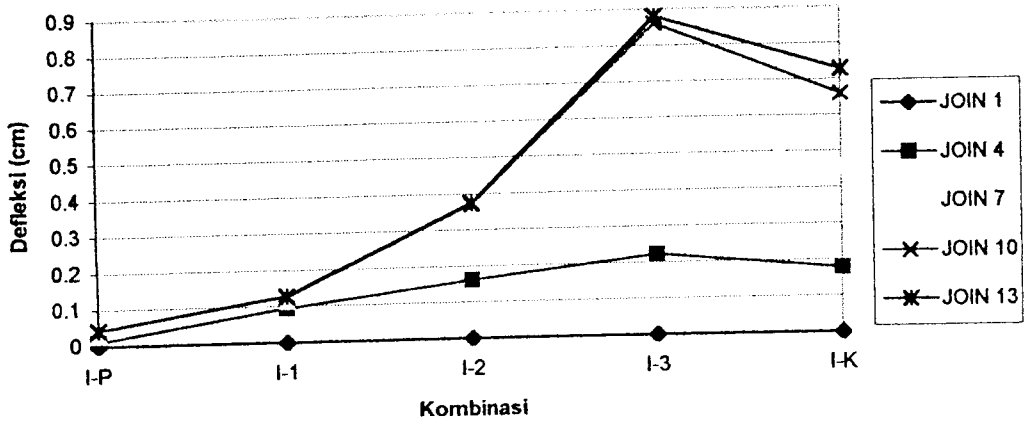
2. Arah Y (Vertikal)

   Infill wall akan mempengaruhi pada arah vertikal tetapi perubahan ini relatif dan perubahan ini tidak secara langsung akibat pengurangan i*nfill wall.*

Kombinasi dan perilaku tingkat lainnya disajikan dalam gambar 5.22, 5.23, 5.24,5.25, 5.26, 5.27 berikut ini.

Tabel 5.13 Defleksi Arah X (Model 1)

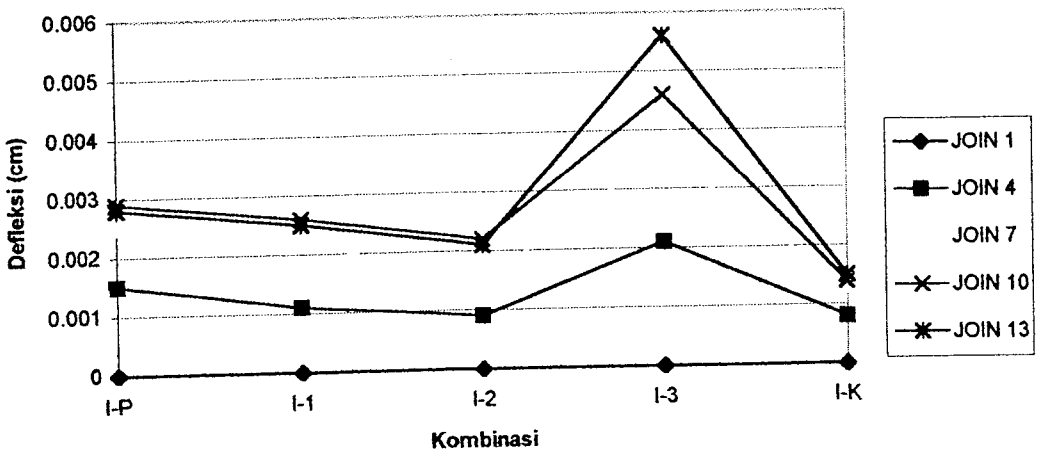
JOIN	I-P	I-1	I-2	I-3	I-K
JOIN 1	0	0	0	0	0
JOIN 4	0.0109	0.0944	0.1619	0.222	0.178
JOIN 7	0.0287	0.1145	0.3566	0.584	0.457
JOIN 10	0.0422	0.1279	0.3729	0.8594	0.6603
JOIN 13	0.0428	0.1287	0.374	0.8786	0.7282



Gambar 5.22 Grafik Defleksi Arah X (Model 1)

Tabel 5.14 Defleksi Arah Y (Model 1)

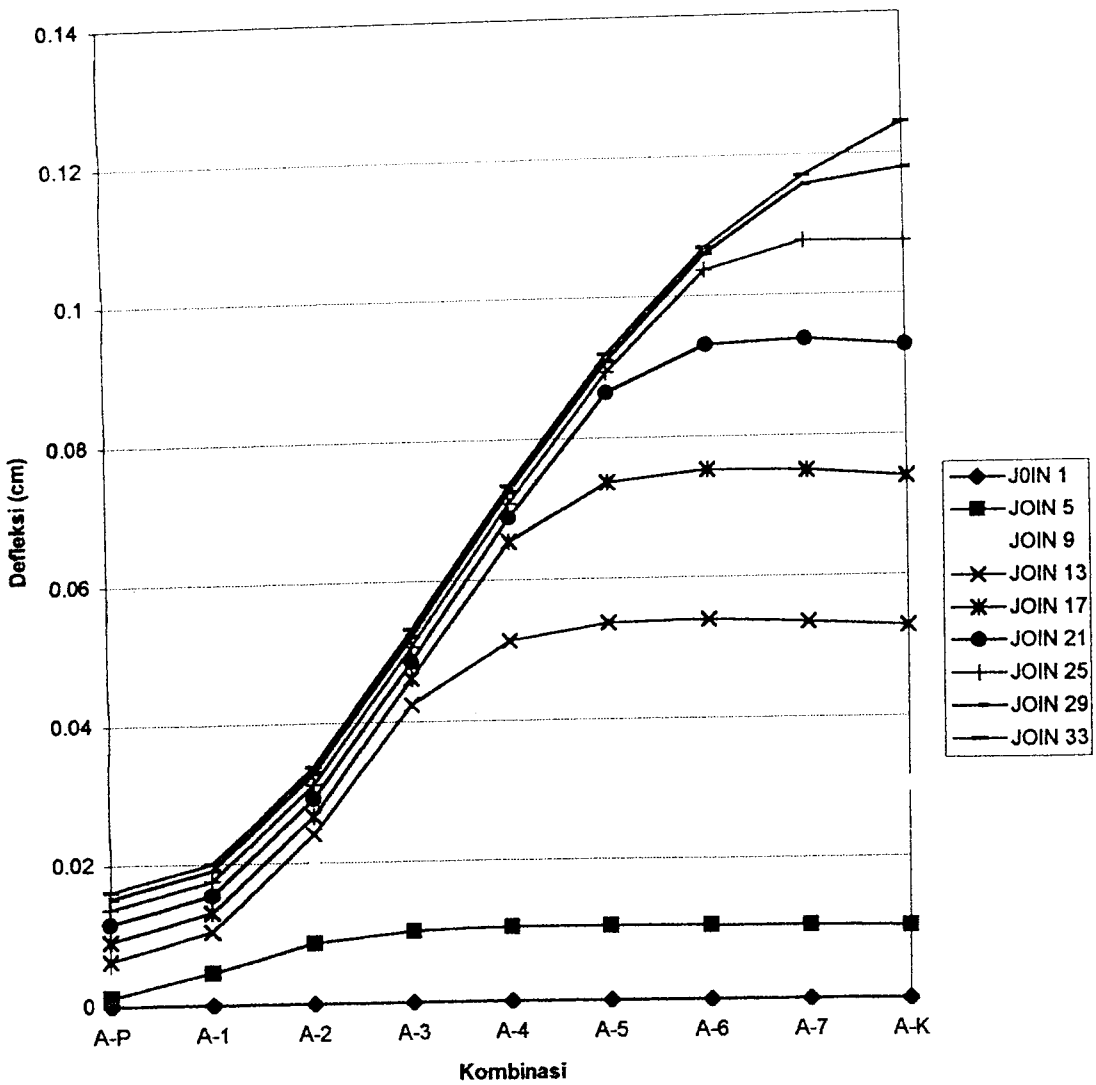
JOIN	I-P	I-1	I-2	I-3	I-K
JOIN 1	0	0	0	0	0
JOIN 4	0.0015	0.0011	0.0009	0.0021	0.0008
JOIN 7	0.0025	0.0022	0.0015	0.0036	0.0013
JOIN 10	0.0029	0.0026	0.0022	0.0046	0.0014
JOIN 13	0.0028	0.0025	0.0021	0.0056	0.0015



Gambar 5.23 Grafik Defleksi Arah Y (Model 1)

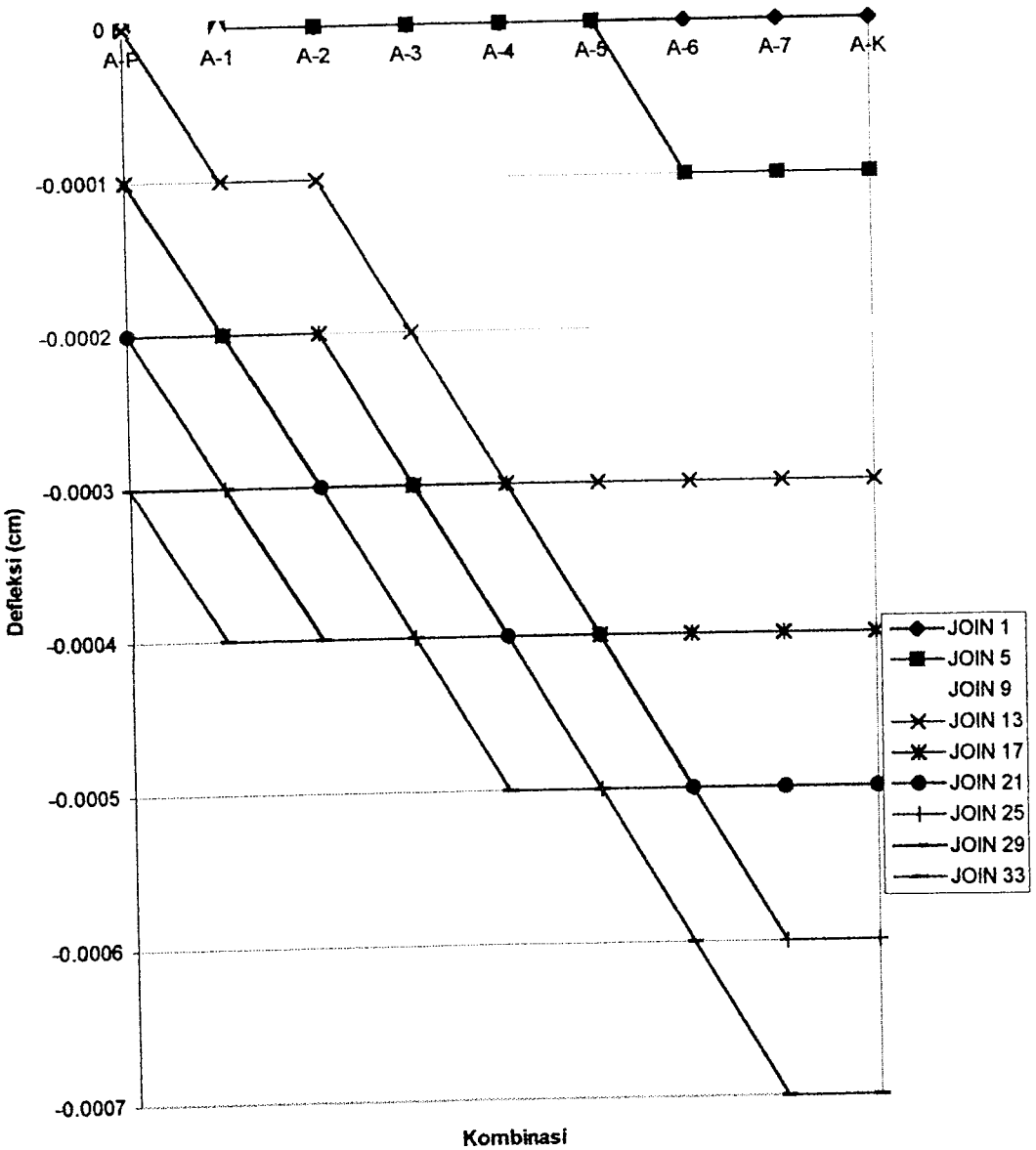
Tabel 5.15 Defleksi Arah X (Model 2)

JOIN	A-P	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-K
JOIN 1	0	0	0	0	0	0	0	0	0
JOIN 5	0.0012	0.0046	0.0086	0.0101	0.0105	0.0105	0.0105	0.0104	0.0102
JOIN 9	0.0036	0.0076	0.0204	0.0282	0.0307	0.0312	0.0311	0.0309	0.0304
JOIN 13	0.0064	0.0104	0.0241	0.0424	0.0513	0.0537	0.054	0.0535	0.0528
JOIN 17	0.0091	0.0131	0.0267	0.0461	0.0654	0.0737	0.0753	0.0751	0.0741
JOIN 21	0.0116	0.0155	0.0292	0.0485	0.0688	0.0865	0.093	0.0937	0.0927
JOIN 25	0.0137	0.0176	0.0312	0.0506	0.0709	0.0894	0.1037	0.1077	0.1075
JOIN 29	0.0152	0.0191	0.0328	0.0521	0.0725	0.0909	0.106	0.1157	0.1179
JOIN 33	0.0162	0.02	0.0337	0.0531	0.0734	0.0919	0.1069	0.117	0.1244



Tabel 5.16 Defleksi Arah Y (Model 2)

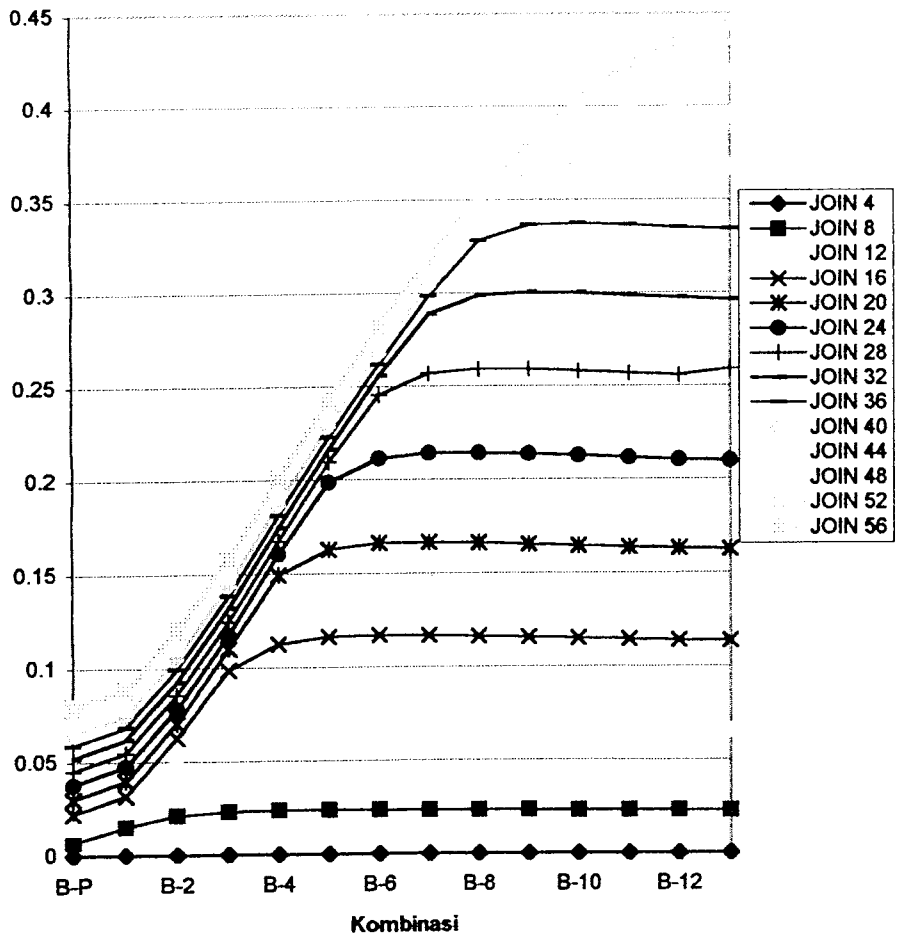
JOIN	A-P	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-K
JOIN 1	0	0	0	0	0	0	0	0	0
JOIN 5	0	0	0	0	0	0	-0.0001	-0.0001	-0.0001
JOIN 9	0	0	-0.0001	-0.0001	-0.0001	-0.0002	-0.0002	-0.0002	-0.0002
JOIN 13	0	-0.0001	-0.0001	-0.0002	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003
JOIN 17	-0.0001	-0.0002	-0.0002	-0.0003	-0.0003	-0.0004	-0.0004	-0.0004	-0.0004
JOIN 21	-0.0002	-0.0002	-0.0003	-0.0003	-0.0004	-0.0004	-0.0005	-0.0005	-0.0005
JOIN 25	-0.0002	-0.0003	-0.0003	-0.0004	-0.0004	-0.0005	-0.0005	-0.0006	-0.0006
JOIN 29	-0.0003	-0.0003	-0.0004	-0.0004	-0.0005	-0.0005	-0.0006	-0.0007	-0.0007
JOIN 33	-0.0003	-0.0004	-0.0004	-0.0004	-0.0005	-0.0005	-0.0006	-0.0007	-0.0007



Gambar 5.25 Grafik Defleksi Arah Y (Model 2)

Tabel 5.17 Defleksi Arah X (Model 3)

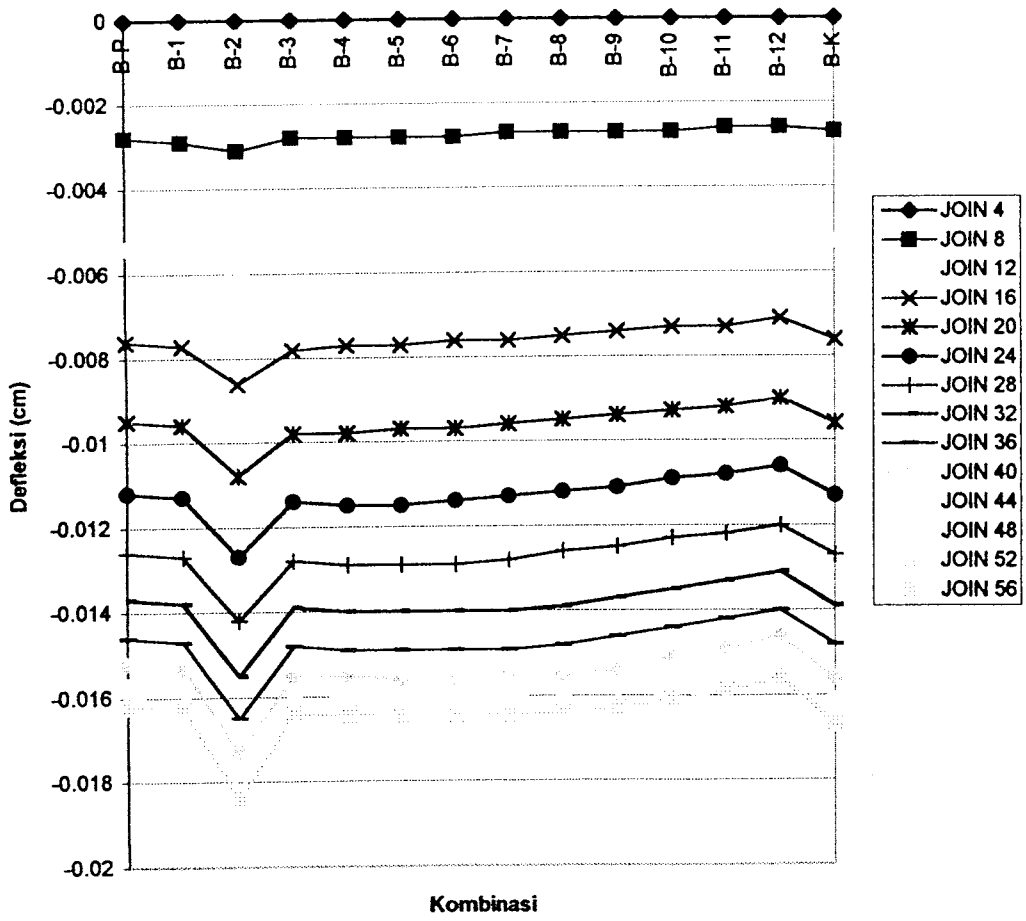
JOIN	B-P	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-K
JOIN 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOIN 8	0.0068	0.0149	0.0208	0.0229	0.0234	0.0235	0.0234	0.0233	0.0233	0.0232	0.023	0.0229	0.0228	0.0227
JOIN 12	0.0146	0.0245	0.0515	0.0633	0.0667	0.0676	0.0676	0.0673	0.0671	0.0667	0.0664	0.0661	0.0658	0.0654
JOIN 16	0.0222	0.0319	0.0625	0.0989	0.1126	0.1163	0.1171	0.1168	0.1164	0.1158	0.1153	0.1147	0.1142	0.1137
JOIN 20	0.0299	0.0396	0.0701	0.1103	0.1492	0.1627	0.1661	0.1665	0.1661	0.1654	0.1646	0.1638	0.1631	0.1624
JOIN 24	0.0376	0.0472	0.0777	0.1175	0.1605	0.1985	0.2112	0.2141	0.2142	0.2135	0.2126	0.2116	0.2105	0.2098
JOIN 28	0.045	0.0546	0.0853	0.1248	0.1675	0.2095	0.2454	0.2568	0.2592	0.259	0.258	0.2568	0.2556	0.259
JOIN 32	0.052	0.0616	0.0926	0.1319	0.1745	0.2162	0.2558	0.2888	0.2989	0.3005	0.3	0.2987	0.2974	0.2965
JOIN 36	0.0586	0.0682	0.0994	0.1384	0.1811	0.2227	0.2621	0.2986	0.3283	0.3366	0.3375	0.3366	0.3352	0.3343
JOIN 40	0.0645	0.0741	0.1056	0.1443	0.1869	0.2286	0.2681	0.3044	0.3372	0.3629	0.3694	0.3695	0.3683	0.3675
JOIN 44	0.0697	0.0793	0.1111	0.1494	0.1921	0.2338	0.2733	0.3096	0.3423	0.3708	0.392	0.3965	0.396	0.3955
JOIN 48	0.074	0.0835	0.1157	0.1537	0.1964	0.2382	0.2777	0.3141	0.3468	0.3752	0.3989	0.4151	0.4175	0.4178
JOIN 52	0.0773	0.0868	0.1193	0.1569	0.1996	0.2415	0.2811	0.3175	0.3503	0.3787	0.4023	0.4206	0.4316	0.4341
JOIN 56	0.0794	0.0888	0.1218	0.1589	0.2016	0.2435	0.2831	0.3196	0.3524	0.3809	0.4046	0.4228	0.4352	0.4448



Gambar 5.26 Grafik Defleksi Arah X (Model 3)

Tabel 5.18 Defleksi Arah Y (Model 3)

JOIN	B-P	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-K
JOIN 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JOIN 8	-0.0028	-0.0029	-0.0031	-0.0028	-0.0028	-0.0028	-0.0028	-0.0027	-0.0027	-0.0027	-0.0027	-0.0028	-0.0026	-0.0027
JOIN 12	-0.0054	-0.0054	-0.0061	-0.0054	-0.0054	-0.0054	-0.0053	-0.0053	-0.0052	-0.0052	-0.0051	-0.0051	-0.005	-0.0053
JOIN 16	-0.0076	-0.0077	-0.0086	-0.0078	-0.0077	-0.0077	-0.0076	-0.0076	-0.0075	-0.0074	-0.0073	-0.0073	-0.0071	-0.0076
JOIN 20	-0.0095	-0.0096	-0.0108	-0.0098	-0.0096	-0.0097	-0.0097	-0.0096	-0.0095	-0.0094	-0.0093	-0.0092	-0.009	-0.0096
JOIN 24	-0.0112	-0.0113	-0.0127	-0.0114	-0.0115	-0.0115	-0.0114	-0.0113	-0.0112	-0.0111	-0.0109	-0.0108	-0.0106	-0.0113
JOIN 28	-0.0126	-0.0127	-0.0142	-0.0128	-0.0129	-0.0129	-0.0129	-0.0128	-0.0126	-0.0125	-0.0123	-0.0122	-0.012	-0.0127
JOIN 32	-0.0137	-0.0138	-0.0155	-0.0139	-0.014	-0.014	-0.014	-0.014	-0.0139	-0.0137	-0.0135	-0.0133	-0.0131	-0.0139
JOIN 36	-0.0146	-0.0147	-0.0165	-0.0148	-0.0149	-0.0149	-0.0149	-0.0149	-0.0148	-0.0146	-0.0144	-0.0142	-0.014	-0.0148
JOIN 40	-0.0152	-0.0153	-0.0173	-0.0155	-0.0155	-0.0156	-0.0156	-0.0155	-0.0155	-0.0154	-0.0151	-0.0149	-0.0146	-0.0156
JOIN 44	-0.0157	-0.0158	-0.0178	-0.0159	-0.016	-0.016	-0.016	-0.016	-0.0159	-0.0158	-0.0157	-0.0154	-0.0151	-0.0161
JOIN 48	-0.016	-0.0161	-0.0182	-0.0162	-0.0163	-0.0163	-0.0163	-0.0163	-0.0162	-0.0161	-0.016	-0.0157	-0.0154	-0.0164
JOIN 52	-0.0162	-0.0163	-0.0184	-0.0164	-0.0164	-0.0165	-0.0165	-0.0164	-0.0164	-0.0163	-0.0161	-0.0159	-0.0156	-0.0166
JOIN 56	-0.0162	-0.0163	-0.0184	-0.0164	-0.0165	-0.0165	-0.0165	-0.0165	-0.0164	-0.0163	-0.0161	-0.0159	-0.0156	-0.0167



Gambar 5.27 Grafik Defleksi Arah Y (Model 3)

BAB VI

KESIMPULAN DAN SARAN

6.1 Kesimpulan

Berdasarkan uraian dari bab-bab terdahulu, maka dapat diambil beberapa kesimpulan seperti diuraikan berikut ini.

1. Dinding batu-bata/batako teryata dapat berfungsi sebagai pengaku portal sehingga struktur akan dapat menahan gaya gempa lebih baik, karena dinding mampu menahan gaya horisontal. Gaya horisontal yang bekerja pada struktur juga ikut ditahan oleh dinding dalam bentuk *diagonal bracing* yang berlawanan arah terhadap gaya gempa.
2. Dinding akan berperilaku baik, apabila penempatannya menerus. Menerus adalah dinding/*infill wall* tidak mengalami pemutusan dari lantai bawah sampai lantai atas.
3. Dinding yang tidak menerus atau mengalami pemutusan akan sangat berpengaruh pada kolom sehingga akan mengakibatkan *soft storey efect.* Apabila pada perencanaan tanpa memperhitungkan dinding, momen, gaya geser pada kolom maupun balok akan berubah drastis

(berbanding terbalik) dengan perencanaan semula, sehingga akan berakibat fatal jika terjadi gempa.

4. Modulus elastis, ketinggian bangunan berpengaruh terhadap kemampuan *infill wall* menahan gaya horisontal.

6.2. Saran

1. Karena banyaknya manfaat dari *infill wall* sebaiknya mulai diperhatikan dalam perencanaan struktur. Hal ini perlu dipertimbangkan sebagai suatu alternatif struktur tahan gempa dengan biaya relatif murah.
2. Pelaksanaan pada struktur *infill wall* sebaiknya dilakukan menempel dengan kolom dan balok, karena akan sangat berpengaruh terhadap kekuatan dinding dalam menahan gaya gempa.
3. Untuk portal tidak menerus, sebaiknya *infill wall* benar-benar dipisahkan dari portal sehingga apabila terjadi gempa, struktur tidak akan mengalami perubahan momen, gaya geser, defleksi yang berlebihan dan struktur akan relatif aman sesuai perencanaan.
4. Dalam pelaksanaan sebaiknya mulai diperhitungkan mutu dari campuran untuk dinding batu-bata/batako karena akan mempengaruhi kekakuan struktur.

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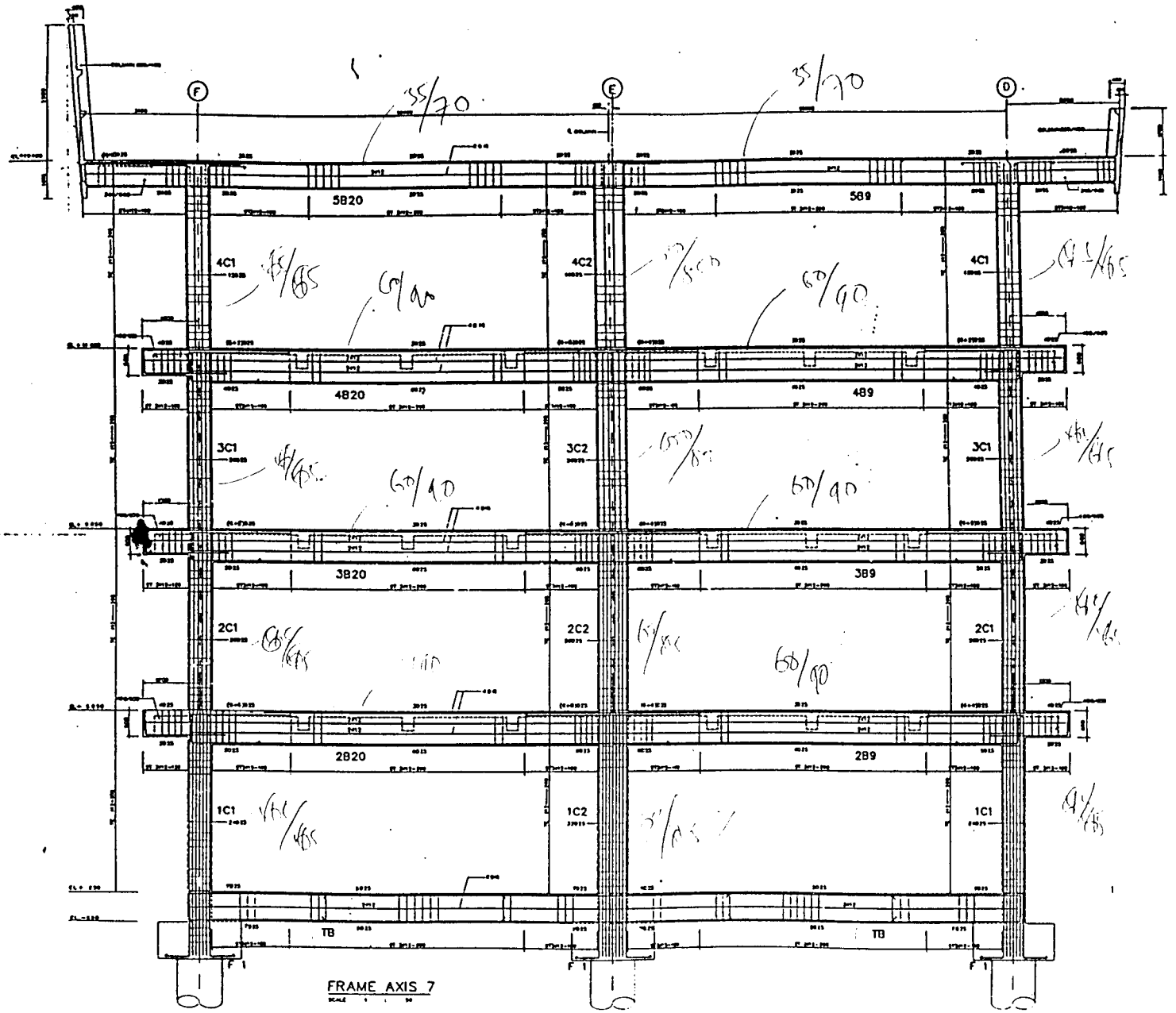
11 Departemen Pekerjaan Umum, 1983, "Buku Pedoman Perencanaan Untuk Struktur Beton Bertulang Biasa dan Struktur Tembok Bertulang untuk Gedung", Bandung

LAMPIRAN



FRAME AXIS 7

PROYEK PENGEMBANGAN PERGURUAN TINGGI

INSTITUT TEKNOLOGI BANDUNG

PROJECT NAME
INSTITUT TEKNOLOGI BANDUNG
DEVELOPMENT PROJECT

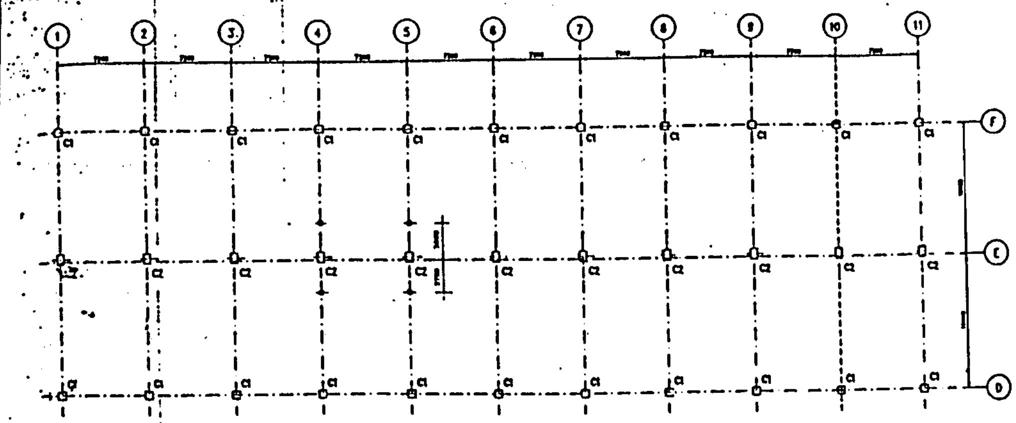
PROJECT
LAB–TEK X

TITLE
FRAME AXIS 7

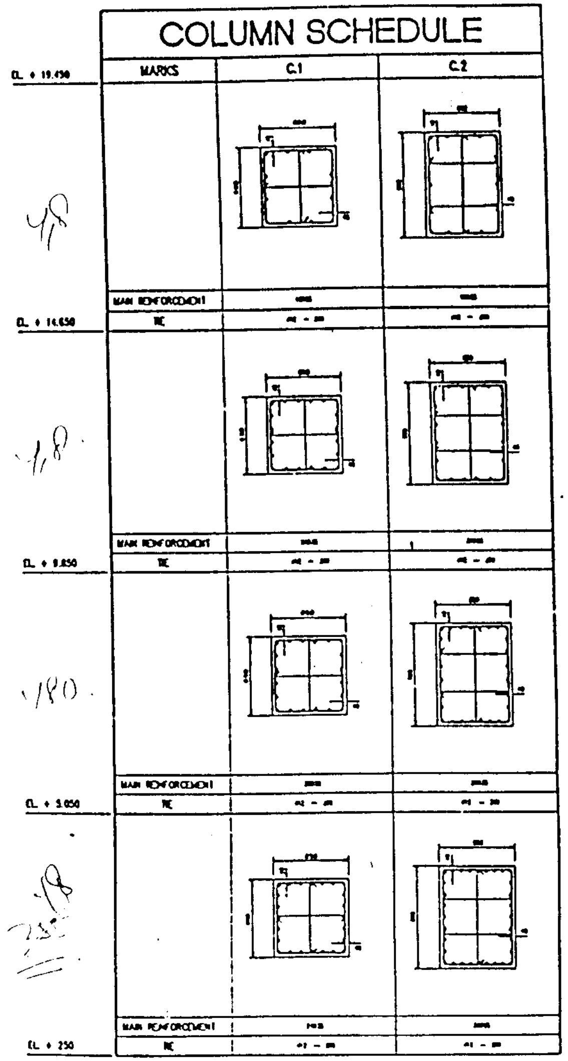
CONSULTING ENGINEERS & ARCHITECTS
PACIFIC CONSULTANTS INTERNATIONAL
in association with
NIKKEKEN ARCHITECTS & ENGINEERS
YAMASHITA SEKKEI
PT. WIRATMAN & ASSOCIATES
PT. BITA EKARCON ENGINEERING

SCALE
1 : 50

DRAWING NUMBER
S–410



KEY PLAN COLUMN LABTEK X



PROYEK PENINGKATAN PERGURUAN TINGGI

INSTITUT TEKNOLOGI BANDUNG

PROJECT NAME
INSTITUT TEKNOLOGI BANDUNG
DEVELOPMENT PROJECT

PACKAGE
LABTEK X

TITLE
COLUMN SCHEDULE

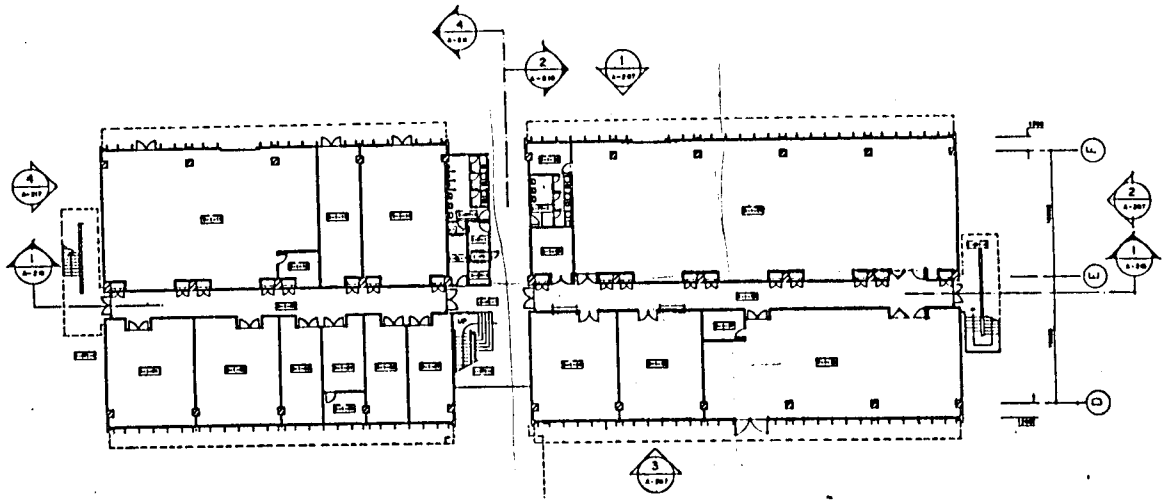
CONSULTING ENGINEERS & ARCHITECTS
PACIFIC CONSULTANTS INTERNATIONAL
in association with
NISSOKEN ARCHITECTS & ENGINEERS
YAMASHITA SEKKEI
PT. WIRATMAN & ASSOCIATES
PT. BIA CHAPCON ENGINEERING

DRAWING NUMBER
S – 307

LEGEND

LABTEK X

NUMBER	ROOM NAME
X-1-01	MECHANICAL TEST LAB.
X-1-02	FURNACE LAB
X-1-03	COMPOSITE LAB
X-1-04	HOT
X-1-05	X-RAY ROOM
X-1-06	POWDER METALLURGY
X-1-07	DISPLAY ROOM
X-1-08	CORRIDOR - A
X-1-11	MECHANICAL WORKSHOP
X-1-12	TECHNICIAN
X-1-13	GLASS WORKSHOP
X-1-14	EQUIPMENT STORAGE
X-1-21	INSTRUCTIONAL LAB. CHEMICAL TECHNOLOGY
X-1-22	ASSISTANT ROOM
X-1-23	GLASS STORAGE
X-1-24	MATERIAL STORAGE
X-1-25	CHEMICAL STORAGE
X-1-26	INSTRUCTIONAL LAB. GAS TECHNOLOGY
X-1-27	ASSISTANT ROOM
X-1-28	CORRIDOR - B
X-ST-A	STAIRCASE A
X-ST-B	STAIRCASE B
X-ST-C	STAIRCASE C
X-WL-1	WALL A
X-FT-1	FEMALE TOILET
X-MT-1	MALE TOILET
X-EL-1	ELECTRICAL ROOM
X-P-1	PANTRY
X-EV-1	ELEVATOR
X-J-1	JANITOR
X-PS-1	PIPE SPACE



FIRST FLOOR

SCALE 1 : 200

PROYEK PENINGKATAN PERGURUAN TINGGI

INSTITUT TEKNOLOGI BANDUNG

PROJECT NAME

INSTITUT TEKNOLOGI BANDUNG DEVELOPMENT PROJECT

PACKAGE

LABTEK X

TITLE

FIRST FLOOR PLAN

CONSULTING ENGINEERS & ARCHITECTS

PACIFIC CONSULTANTS INTERNATIONAL

in association with

NISSOKEN ARCHITECTS & ENGINEERS
TANAHTINTA SEKTEI
PT. WIRATMAN & ASSOCIATES
PT. BINA ENGRACON ENGINEERING

DATE	SUBMITTED BY	POSITION	SIGNATURE
DATE	DRAWN BY	CHECKED BY	SIGNATURE

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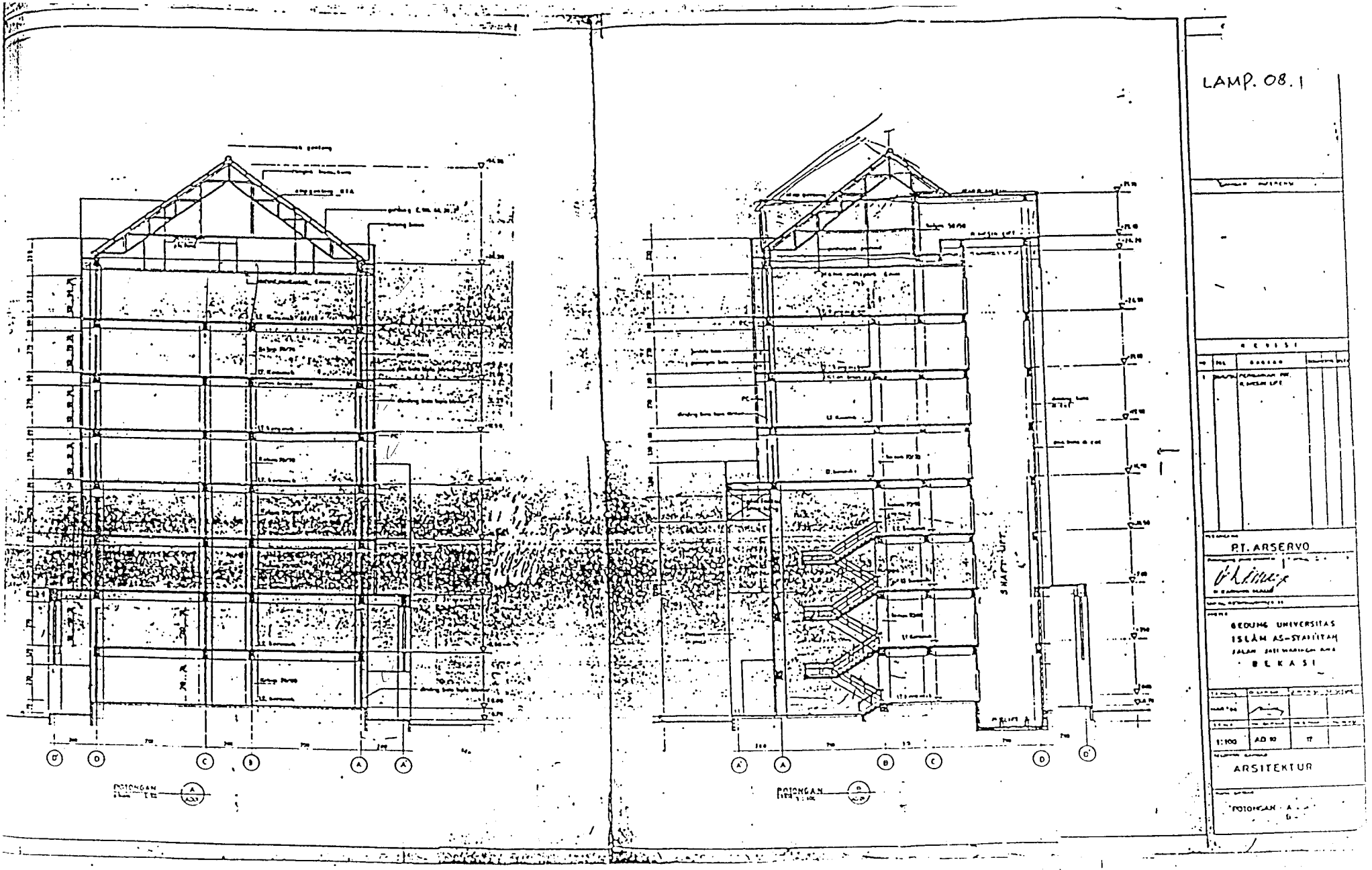
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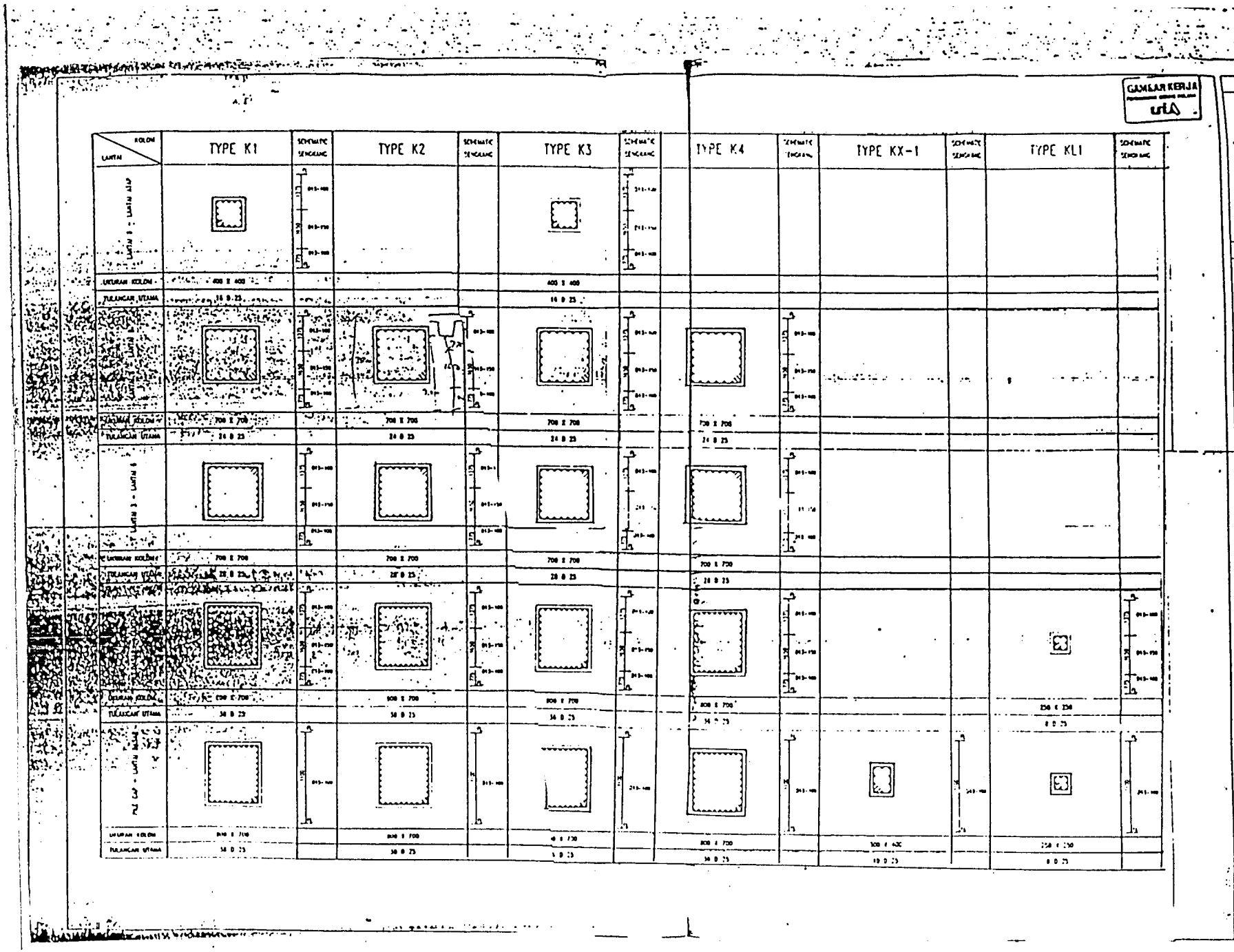
ARSITEKTUR
POTONGAN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PT. DECIMAL
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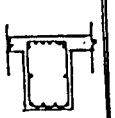
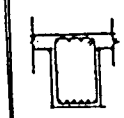
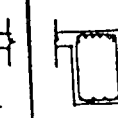
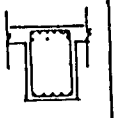
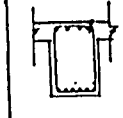
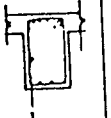
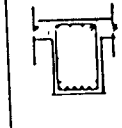
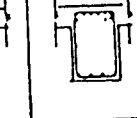
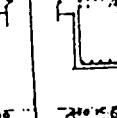
JALAN JATI WARINGIN RAYA
BEKASI
1:20
S4-01
STRUKTUR
TABEL KOLOM I
KOLOM
LANTAI
TYPE K1
TYPE K2
TYPE K3
TYPE K4
TYPE KX-1
TYPE KL1
SCHEMATIC SENGKANG
UKURAN KOLOM
TULANGAN UTAMA
400 X 400
16 D 25
700 X 700
24 D 25
800 X 700
36 D 25
250 X 250
8 D 25

GAMBAR KERJA

LAMP. 10

NAMA POTONGAN	TYPE : B1-1			TYPE : B1-2			TYPE : B1-3			TYPE : B1-4		
LETAK	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN
POTONGAN												
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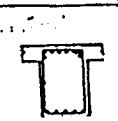
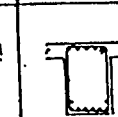
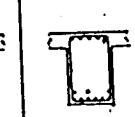
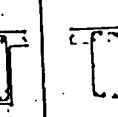
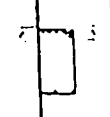
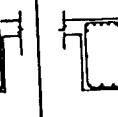
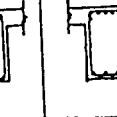
TULANGAN ATAS	6 - D25	4 - D25	6 - D25	5 - D25	3 - D25	5 - D25	6 - D25	4 - D25	5 - D25	6 - D25	4 - D25	5 - D25
TULANGAN BAWAH	4 - D25	4 - D25	4 - D25	3 - D25	3 - D25	3 - D25	4 - D25	4 - D25	4 - D25	5 - D25	3 - D25	4 - D25
SENGKANG	D13-100	D13-150	D13-100	D13-150	D13-150	D13-100	D13-150	D13-150	D13-150	D13-150	D13-150	D13-100
PENGGANG	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12

NAMA POTONGAN	TYPE : B1-5			TYPE : B1-6			TYPE : B1-7			TYPE : B1-8		
LETAK	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN
POTONGAN												
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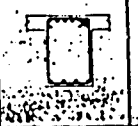
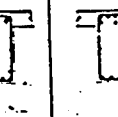
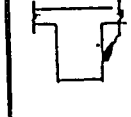
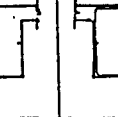
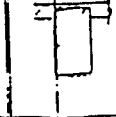
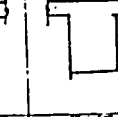
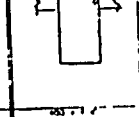
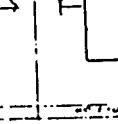
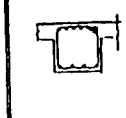
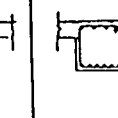
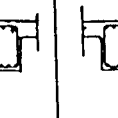
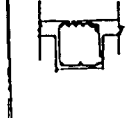
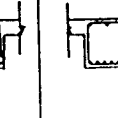
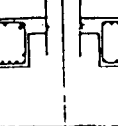
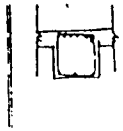
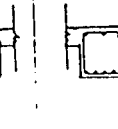
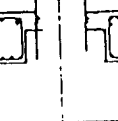
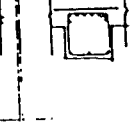
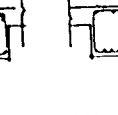
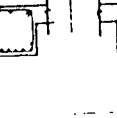
TULANGAN ATAS	6 - D25	5 - D25	5 - D25	5 - D25	3 - D25	4 - D25	5 - D25	3 - D25	4 - D25	5 - D25	3 - D25	4 - D25
TULANGAN BAWAH	5 - D25	5 - D25	5 - D25	4 - D25	4 - D25	4 - D25	5 - D25	4 - D25	4 - D25	5 - D25	4 - D25	4 - D25
SENGKANG	D13-100	D13-150	D13-100	D13-150	D13-150	D13-150	D13-150	D13-150	D13-150	D13-150	D13-150	D13-100
PENGGANG	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12	1 - d12

NAMA POTONGAN	TYPE : B1-9											
LETAK	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN
POTONGAN												
LEBAR	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600	400 X 600
TULANGAN ATAS	5 - D25	4 - D25	5 - D25									
TULANGAN BAWAH	4 - D25	3 - D25	3 - D25									
SENGKANG	D13-100	D13-150	D13-100									
PENGGANG	1 - d12	1 - d12	1 - d12									

NAMA POTONGAN	TYPE : B2-1			TYPE : B2-2			TYPE : B2-3					
LETAK	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN	TUMPUAN KIRI	LAPANGAN	TUMPUAN KANAN			
POTONGAN												
LEBAR												
TULANGAN ATAS												
TULANGAN BAWAH												
SENGKANG												
PENGGANG												

CATATAN

GAMBAR REFERENSI

REVISI

PT. ARSERVO

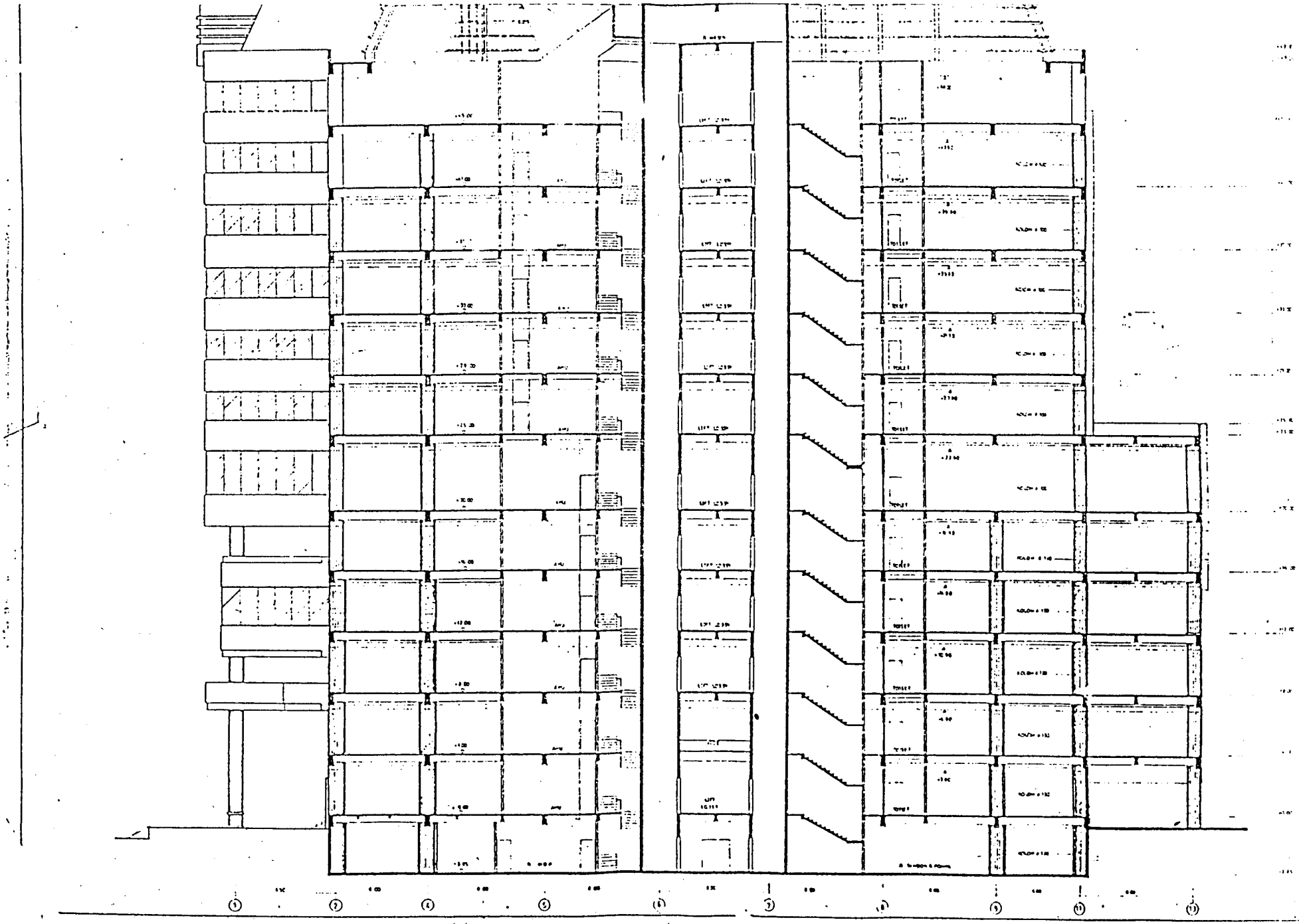
PT. DECIMAL

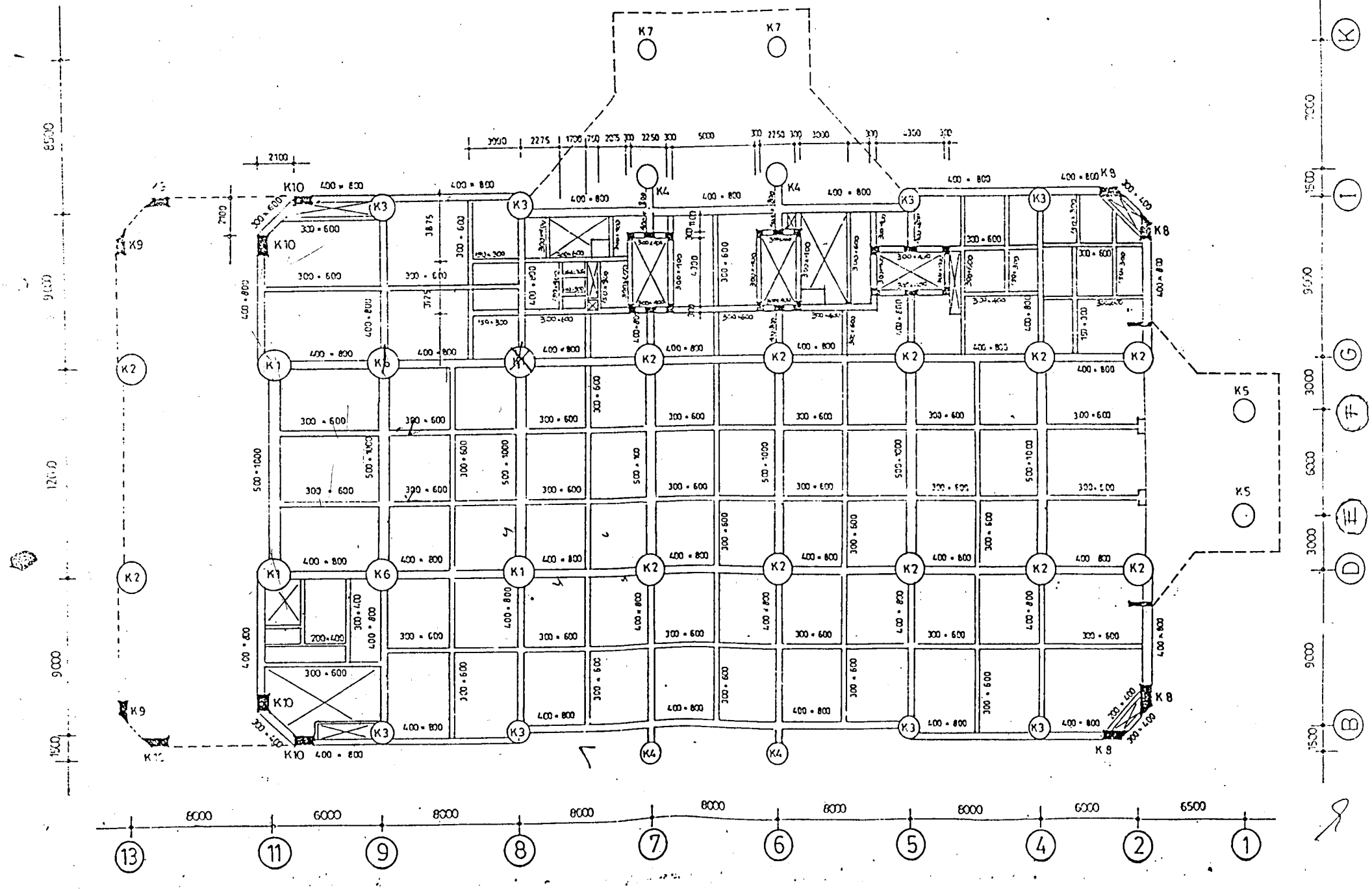
GEDUNG UNIVERSITAS ISLAM AS-SYAFI'IYAH
JALAN JATI WARINGIN RAYA
BEKASI

1:20	S3-01		01

STRUKTUR

TABEL BALOK I

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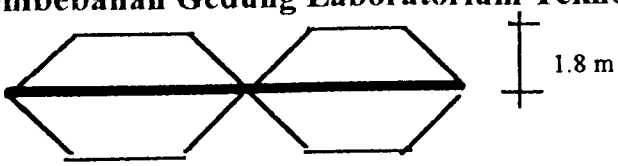
Perhitungan Pembebanan Gedung Laboratorium Teknologi X ITB



*** Pada Pelat Atap**

Beban mati

Berat sendiri	0,1 * 2400	= 240 kg/m²
Spesi	2 * 21	= 42 kg/m²
Plafon & penggantung	11 + 7	= 18 kg/m²
		300 kg/m²

Beban hidup

Beban bergunan	= 100 kg/m²
Air hujan	= 40 kg/m²
	140 kg/m²

***Pelat Lantai**

Beban mati

Berat sendiri	0,12 *2400	= 288 kg/m²
Spesi	2 * 21	= 42 kg/m²
Plafon & penggantung	11 + 7	= 18 kg/m²
Tegel	3 * 24	= 72 kg/m²
		420 kg/m²

Beban hidup = 250 kg/m²

*** Berat sendiri balok**

a. Berat balok atap 0,35* (0,7 - 0,1) * 2400 = 504 kg/m'

b. Berat balok lantai dan tembok

0,6 * (0,9 - 0,12) * 2400 + 250 * 4,1 = 2148,2 kg/m'

***Berat sendiri kolom**

0,65 * 0,65 * 2400 = 1014 kg/m' .....(kolom 1&3)

0,65 * 0,85 * 2400 = 1326 kg/m' .....(kolom 2)

***Beban ekivalen**

Beban mati

Balok atap

$M = 0{,}0208 * q * lx * (3ly - lx)$

$M = 0{,}0208 * 300 * 3{,}6 * (3 * 10{,}6^2 - 3{,}6^2) = 7281{,}0317$ kg.m

$q = 8 \frac{M}{ly^2} = 518{,}4074$

518,4074 * 2 = 1036,814

q balok = 504

$q_{ekiv.}$ 1540,814 kg/m ≈ 1550 kg/m

Balok lantai

M = 0,0208 * 420 * 3,6* (3 *10,6² - 3,6²) = 10487,81 kg m

q = 746,729 * 2 = 1497,45

q balok = 2148,2

$q_{ekiv.\ lantai}$ = 3645,65 kg/m ≈ 3646 kg/m

Beban hidup

Balok atap

M = 0,0208 *140 * 3,6 (3 * 10,6² - 3,6²) = 3397,81 kgm

$q_{ekiv.\ atap}$ = 241,923 * 2 = 483,846 kg/m ≈ 490 kg/m

Balok lantai

M = 0,0208 * 250 * 3,6 (3 * 10,6² - 3,6²) = 6067,526 kgm

$q_{ekiv.}$ = 432,006 * 2 = 864,0123 kg/m ≈ 900 kg/m

*** Pembebanan Gempa**

***Berat atap**

Beban mati

Pelat	:	21,2 * 7,2 * 300	= 45792 kg
Balok bujur	:	0,35 * 0,7 * 21,2 *1 * 2400	= 12465 kg
Balok melintang	:	0,35 * 0,7 * 7,2 * 3 * 2400	= 12700 kg
Kolom	:	0,65 * 0,65 *2 * 2,4 * 2400	= 4867 kg
		0,65 * 0,85 * 2,4 * 1 * 2400	= 3182 kg
Tembok	:	21,2 * 2,4 * 250	= 12720 kg
		3 * 7,2 * 2,4 * 250	= 12960 kg
			104686 kg

Beban hidup

q = 140 kg/m²

Faktor Reduksi = 0,3

W atap(h) = 21,2 * 7,2 * 140 * 0,3 = 6410,8 kg

W total atap = 104686 + 6410,8 = 111096,8 kg

***Berat lantai**

Beban mati

Pelat	:	670 * 21,2 * 7,2	= 1022688 kg
Balok Bujur	:	0,6 * 0,9 *21,2*1 * 2400	= 127475,2 kg
Balok melintang	:	0,6 * 0,9 * 7,2*3 * 2400	= 27993,6 kg
Kolom	:	0,65 * 0,65 * 2 *4,8*2400	= 9734,4 kg
		0,65 *0,85*1* 4,8* 2400	= 6364,8 kg
Tembok	:	21,2 * 250* 3,9	= 20670 kg
		7,2 * 3 * 250 * 3,9	= 21060 kg
			1235986 kg

Beban hidup

q = 250 kg/m²

Faktor reduksi = 0,3

W lantai = 21,2* 2,4 * 250 * 0,3 = 3816 kg

W lantai = 1235986 + 3816 = 1239802 kg

W atap & lantai total = 3(1239802) + 111096,8 = 3830502 kg

***Waktu getar bangunan (T)**

Dengan rumus Empiris

$T = 0,06 * H^{3/4}$

H = 4 * 4,8 = 19,2

$T = 0,06 * (19,2)^{3/4} = 0,550335$ detik

***Koefisien gempa dasar (C)**

C diperoleh dari gambar (struktur diatas tanah lunak)

C = 0,07

***Faktor keutamaan I dan faktor jenis struktur K**

I = 1,5 K = 1,0 untuk bangunan kampus yang menggunakan struktur rangka beton bertulang dengan daktilitas penuh.

***Gaya geser harisontal total akibat gempa**

vi = C * I * K * W

= 0,07 * 1,5 *1,0 * 3830502 = 402202

Gaya geser horisontal total akibat gempa kesepanjang tinggi gedung

H/A = 19,2/21,2 = 0,9056 < 3

hi (m)	wi (kg)	wi hi (kgm)	fi xi
19,2	104686	2009971	21496
14,4	1235986	17798198	190352
9,6	1235986	11865465	126901
4,8	1235986	5932732	63450
		37606366	

Pengurangan akibat *Infill Wall*

$q_{ekiv.\ lantai}$ (akibat pengurangan) $= q_{ekiv.\ lantai} - q_{tembok}$

$= 20670 - 1035 = 3521 kg/m$

Perhitungan Pembebanan Gedung BNI Surabaya

***Pelat Atap**

Beban Mati = 300 kg/m

Beban hidup= 140 kg/m^2

***Pelat lantai**

Beban mati = 420 kg/m'

Beban hidup

Beban berguna = 250 kg/m^2

***Berat sendiri balok**

Berat balok atap = 0,6 * (0,8 - 0,1) * 2400 = 1008 kg/m'

Berat balok lantai = 0,6 * (0,8 - 0,12) * 2400 = 979,2 kg/m'

Tembok = 250 * 3,2 = 800 kg/m'

1779,2 kg/m'

Balok anak atap = 0.6 * (0,3 -0,1) * 2400 = 288 kg/m

Balok anak lantai = 0,6 * (0,3- 0,12) * 2400 = 259,2 kg/m

***Berat sendiri kolom**

0,9 * 0,9 * 2400 = 1944 kg/m'

***Beban Ekivalen**

Beban akibat gravitasi

Beban Mati

Balok Atap

M = 0,0417 * 300 * 4^3 = 400,32 kg m

q = 400,32 * 2 = 800,64 kg/m

q balok + tembok = 1008 kg/m

$q_{ekiv.}$ = 1808,64 kg/m ≈ 1810 kg/m

Balok lantai

M = 0,0417 * 420 * 4^3 = 1120,896 kg.m

q = 560,448 * 2 = 1120,896

q balok = 1779,2

$q_{ekiv.}$ 2900,1 kg/m

Beban hidup

Balok atap

M = 0,0417 *140 * 4^3 = 373,632 kg.m

$q_{ekiv.}$ = 186,816 * 2 = 373,632 ≈ 380 kg/m

Balok lantai

M = 0,0417 * 250* 4^3 = 667,2 kgm

$q_{ekiv.}$ = 333,6 * 2 = 667,2 ≈ 670 kg/m

Distribusi Gaya Horisontal Akibat Pengurangan Infill Wall

hi	wi (I-1)	wi (I-2)	wi (I-3)	wi (I-K)
wi 19.2	104686	104686	104686	91966
14.4	1235986	1235986	1215316	1215316
9.6	1235986	1215316	1215316	1215316
4.8	1215316	1215316	1215316	1215316

Wi.hi 19.2	2014158.6	2014158.6	2014158.6	1769425.8
14.4	17798198	17798198	17500550	17500550
9.6	11865466	11667034	11667034	11667034
4.8	5833516.8	5833516.8	5833516.8	5833516.8
Jumlah	37511339	37312907	37015259	36770527

V (Kg)	400032	397862	395691	393521

Fi(Kg) 19.2	21479.582	21476.675	21531.24	18936.531
14.4	189805.24	189779.55	187079.88	187292.23
9.6	126536.83	124403.85	124719.92	124861.49
4.8	62210.346	62201.925	62359.96	62430.745

***Beban titik**

Atap

q = q pelat(mati +hidup) + berat balok anak

= (800,64 + 380) + 288 = 1468, 64 kg/m

P = q * L = 1468,64 * 4 = 5880 kg

Lantai

q = (1120,896 + 670) + 259,2 = 2050,096 kg/m

P = q * L = 2050,096 * 4 = 8200 kg

***Pembebanan Gempa**

Berat atap

Beban mati

Pelat	: 300 * 28 * 8	= 67200 kg
Balok bujur	: 0,6 * 0,8 * 28 * 2400	= 32256 kg
Balok anak	: 0,6 * 0,3 * 8 * 4* 2400	= 13824 kg
	: 0,6 * 0,3 * 2 * 12 * 2400	= 10368 kg
Balok lintang	: 0,6 * 0,8 * 4 * 8 * 2400	= 36864 kg
Kolom	: 0,9 * 0,9 * 4 * 2 * 2400	= 15552 kg
Tembok	: 28 * 2 * 250	= 14000 kg
	8 * 4 * 250 * 2	= 16000 kg
		206064 kg

Beban hidup

q = 140 kg/m²

Faktor reduksi = 0,3

W atap = 28 * 8 * 140 * 0,3 = 9408 kg

W total atap = 206064 + 9408 = 215472 kg

Berat lantai

Beban mati

Pelat	: 670 * 28 * 8	= 150080 kg
Balok bujur	: 0,6 * 0,8 * 1 * 28 * 2400	= 32256 kg
Balok anak	: 0.3 * 0,6 * 8 * 4 * 2400	= 13824 kg
	: 0,3 * 0,6 * 2 * 12 * 2400	= 10368 kg
Balok melintang	: 0,6 * 0,8 * 4 * 8* 2400	= 36864 kg
Kolom	: 0,9 * 0,9 * 4 * 4 * 2400	= 31104 kg
Tembok	: 28 * 3,2 * 250	= 22400 kg
	8 * 4 * 3,2 * 250	= 25600 kg
		322496 kg

Beban hidup

q = 250 kg/m²

Faktor reduksi = 0,3

W lantai = 28 * 8 * 250 * 0,3 = 16800 kg

W total lantai = 322496 + 16800 = 339296 kg
W total lantai + atap = 12(339296) + 215472 = 4287024 kg

***Waktu getar bangunan(T)**

T = 0,06 H¾

H = 4 * 13 = 52 m

T = 0,06 (52)¾ = 1,162 detik

***Koefisien gempa dasar (C)**

C = 0,05 (struktur diatas tanah lunak)

***Faktor keutamaan (I) dan Faktor jenis struktur (K)**

I = 1,5 K = 1,0 untuk bangunan gedung perkantoran yang menggunakan struktur rangka beton bertulang dengan daktilitas penuh

***Gaya horisontal total akibat gempa**

V = CIK *Wi

= 0,05 * 1,5 * 1,0 * 4287024

= 321526,8

***Distibusi Gaya geser horisontal total akibat gempa kesepanjang tinggi gedung**

H/A = 52/28

= 1,8571 < 3

hi (m)	wi (kg)	wi hi (kgm)	Fixi y (kg)
52	206064	10725728	29548
48	339296	16286208	44911
44	339296	14929024	41168
40	339296	13571840	37425
36	339296	12214656	33683
32	339296	10867472	29940
28	339296	9500288	26198
24	339296	8143104	22455
20	339296	6785920	18712
16	339296	5428736	14970
12	339296	4071552	11227
8	339296	2714368	7485
4	339296	1357184	3742
		116596080	

$q_{ekiv.}$ (akibat pengurangan) =3570 - 800 = 2770 kg/m

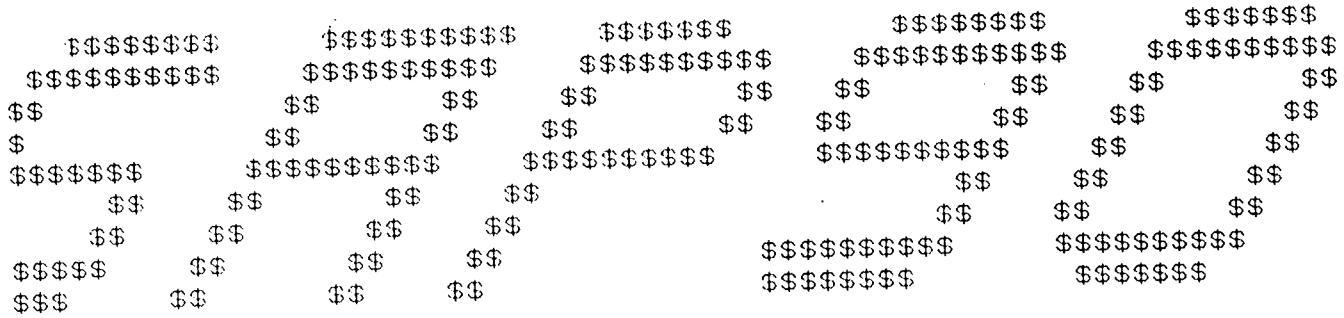
Disitrbusi Gaya Horisontal Akibat Pengurangan *Infill Wall*

hi	wi (B-1)	wi (B-2)	wi (B-3)	wi (B-4)	wi (B-5)	wi (B-6)	wi (B-7)	wi (B-8)	wi (B-9)	wi (B-10)	wi (B-11)	wi (B-12)	wi (B-K)
Wi 52	206064	206064	206064	206064	206064	206064	206064	206064	206064	206064	206064	206064	192264
48	339296	339296	339296	339296	339296	339296	339296	339296	339296	339296	339296	316896	316896
44	339296	339296	339296	339296	339296	339296	339296	339296	339296	339296	316896	316896	316896
40	339296	339296	339296	339296	339296	339296	339296	339296	339296	316896	316896	316896	316896
36	339296	339296	339296	339296	339296	339296	339296	339296	316896	316896	316896	316896	316896
32	339296	339296	339296	339296	339296	339296	339296	316896	316896	316896	316896	316896	316896
28	339296	339296	339296	339296	339296	339296	316896	316896	316896	316896	316896	316896	316896
24	339296	339296	339296	339296	339296	316896	316896	316896	316896	316896	316896	316896	316896
20	339296	339296	339296	339296	316896	316896	316896	316896	316896	316896	316896	316896	316896
16	339296	339296	339296	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896
12	339296	339296	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896
8	339296	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896
4	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896	316896

Wi hi	52	10715328	10715328	10715328	10715328	10715328	10715328	10715328	10715328	10715328	10715328	10715328	10715328	9997728
	48	16286208	16286208	16286208	16286208	16286208	16286208	16286208	16286208	16286208	16286208	16286208	15211008	15211008
	44	14929024	14929024	14929024	14929024	14929024	14929024	14929024	14929024	14929024	14929024	13943424	13943424	13943424
	40	13571840	13571840	13571840	13571840	13571840	13571840	13571840	13571840	13571840	12675840	12675840	12675840	12675840
	36	12214656	12214656	12214656	12214656	12214656	12214656	12214656	12214656	11408256	11408256	11408256	11408256	11408256
	32	10857472	10857472	10857472	10857472	10857472	10857472	10857472	10140672	10140672	10140672	10140672	10140672	10140672
	28	9500288	9500288	9500288	9500288	9500288	9500288	8873088	8873088	8873088	8873088	8873088	8873088	8873088
	24	8143104	8143104	8143104	8143104	8143104	7605504	7605504	7605504	7605504	7605504	7605504	7605504	7605504
	20	6785920	6785920	6785920	6785920	6337920	6337920	6337920	6337920	6337920	6337920	6337920	6337920	6337920
	16	5428736	5428736	5428736	5070336	5070336	5070336	5070336	5070336	5070336	5070336	5070336	5070336	5070336
	12	4071552	4071552	3802752	3802752	3802752	3802752	3802752	3802752	3802752	3802752	3802752	3802752	3802752
	8	2714368	2535168	2535168	2535168	2535168	2535168	2535168	2535168	2535168	2535168	2535168	2535168	2535168
	4	1267584	1267584	1267584	1267584	1267584	1267584	1267584	1267584	1267584	1267584	1267584	1267584	1267584
		116486080	116306880	116038080	115679680	115231680	114694080	114066880	113350080	112543680	111647680	110662080	109586880	108869280

V(kg)	319846.8	318166	316486.8	314806	313126.8	311446.8	309766.8	308086.8	306406.8	304726.8	303046.8	301366.8	299686.8

Fi	52	29422.085	29312.566	29225.405	29160.26	29117.482	29097.008	29099.182	29124.383	29173.112	29245.996	29343.799	29467.434	27520.96
	48	44718.575	44552.116	44419.641	44320.627	44255.609	44224.491	44227.795	44266.098	44340.161	44450.938	44599.588	41830.672	41871.668
	44	40992.027	40839.44	40718.004	40627.242	40567.642	40539.117	40542.145	40577.256	40645.147	40746.693	38183.902	38344.782	38382.362
	40	37265.479	37126.764	37016.367	36933.856	36879.674	36853.743	36856.495	36888.415	36950.134	34596.941	34712.638	34858.893	34893.056
	36	33538.931	33414.087	33314.731	33240.471	33191.707	33168.369	33170.846	33199.573	31059.649	31137.247	31241.374	31373.004	31403.751
	32	29812.383	29701.411	29613.094	29547.085	29503.739	29482.994	29485.196	27562.461	27608.577	27677.553	27770.111	27887.115	27914.445
	28	26085.835	25988.735	25911.457	25853.699	25815.772	25797.62	24096.285	24117.154	24157.505	24217.858	24298.847	24401.225	24425.139
	24	22359.288	22276.058	22209.82	22160.314	22127.805	20652.416	20653.959	20671.846	20706.433	20758.164	20827.583	20915.336	20935.834
	20	18632.74	18563.382	18508.184	18466.928	17222.457	17210.347	17211.632	17226.538	17255.361	17298.47	17356.319	17429.447	17446.528
	16	14906.192	14850.705	14806.547	13798.207	13777.965	13768.278	13769.306	13781.231	13804.289	13838.776	13885.055	13943.557	13957.223
	12	11179.644	11138.029	10371.775	10348.655	10333.474	10326.208	10326.979	10335.923	10353.216	10379.082	10413.791	10457.668	10467.917
	8	7453.0958	6935.138	6914.5164	6899.1036	6888.9826	6884.1388	6884.6529	6890.6153	6902.1443	6919.3881	6942.5276	6971.7786	6978.6113
	4	3480.5248	3467.569	3457.2582	3449.5518	3444.4913	3442.0694	3442.3265	3445.3077	3451.0721	3459.6941	3471.2638	3485.8893	3489.3056



STRUCTURAL ANALYSIS PROGRAMS

VERSION 5.20

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1135851.88						
		.0	931.94	-15689.92			
		1.2	931.94	-14571.59			
		2.4	931.94	-13453.26			
		3.6	931.94	-12334.93			
		4.8	931.94	-11216.60			
	1 90328.04						
		.0	-3930.65	9700.73			
		1.2	-3930.65	4983.95			
		2.4	-3930.65	267.17			
		3.6	-3930.65	-4449.62			
		4.8	-3930.65	-9166.40			
	1 30422.92						
		.0	-3892.51	14904.18			
		1.2	-3892.51	10233.17			
		2.4	-3892.51	5562.16			
		3.6	-3892.51	891.15			
		4.8	-3892.51	-3779.86			
	1 -5795.70						
		.0	-10110.76	30149.55			
		1.2	-10110.76	18016.64			
		2.4	-10110.76	5883.73			
		3.6	-10110.76	-6249.18			
		4.8	-10110.76	-18382.09			
	1*********						
		.0	21014.28	-74632.20			
		1.2	21014.28	-49415.07			
		2.4	21014.28	-24197.94			
		3.6	21014.28	1019.19			
		4.8	21014.28	26236.32			
5	1-78248.41						
		.0	7969.68	-11507.85			
		1.2	7969.68	-1944.23			
		2.4	7969.68	7619.39			
		3.6	7969.68	17183.01			
		4.8	7969.68	26746.62			
3	1-35993.24						
		.0	3001.91	2601.64			
		1.2	3001.91	6203.93			
		2.4	3001.91	9806.22			
		3.6	3001.91	13408.50			
		4.8	3001.91	17010.79			
1	1-14578.94						
		.0	-2249.89	9575.36			

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.2	-2249.89	6875.48			
		2.4	-2249.89	4175.61			
		3.6	-2249.89	1475.74			
		4.8	-2249.89	-1224.13			
1**********							
		.0	21531.18	-60060.99			
		1.2	21531.18	-34223.58			
		2.4	21531.18	-8386.17			
		3.6	21531.18	17451.24			
		4.8	21531.18	43288.65			
1**********							
		.0	9194.45	-15458.94			
		1.2	9194.45	-4425.59			
		2.4	9194.45	6607.75			
		3.6	9194.45	17641.09			
		4.8	9194.45	28674.43			
1-42012.47							
		.0	9590.69	-19610.17			
		1.2	9590.69	-8101.35			
		2.4	9590.69	3407.48			
		3.6	9590.69	14916.31			
		4.8	9590.69	26425.13			
1-10243.31							
		.0	5965.55	-14945.98			
		1.2	5965.55	-7787.32			
		2.4	5965.55	-628.67			
		3.6	5965.55	6529.99			
		4.8	5965.55	13688.64			
1 86502.16							
		.0	20215.23	-21207.60			
		2.7	8168.33	16400.61			
		5.3	-3878.57	22084.53			
		7.9	-15925.47	-4155.84			
		10.6	-27972.37	-62320.49			
1 51591.11							
		.0	21009.77	-24462.42			
		2.7	8962.87	15251.34			
		5.3	-3084.03	23040.81			
		7.9	-15130.93	-1094.01			
		10.6	-27177.83	-57153.10			
1-53958.58							
		.0	22766.95	-34133.91			
		2.7	10720.05	10236.37			
		5.3	-1326.85	22682.36			
		7.9	-13373.75	3204.07			

sa Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		10.6	-25420.65	-48198.51			
	1134648.54						
		.0	20950.77	-25166.21			
		2.7	8903.87	14391.20			
		5.3	-3143.03	22024.32			
		7.9	-15189.93	-2266.85			
		10.6	-27236.83	-58482.30			
	1 73368.99						
		.0	22699.99	-33462.41			
		2.7	10653.09	10730.44			
		5.3	-1393.81	22999.00			
		7.9	-13440.71	3343.27			
		10.6	-25487.61	-48236.74			
	1 13223.76						
		.0	24041.63	-40870.83			
		2.7	11994.73	6877.35			
		5.3	-52.17	22701.26			
		7.9	-12099.07	6600.87			
		10.6	-24145.97	-41423.80			
	1-20564.55						
		.0	10802.56	-18408.71			
		2.7	5396.56	3055.12			
		5.3	-9.44	10193.05			
		7.9	-5415.44	3005.08			
		10.6	-10821.44	-18508.79			
	1 -5965.55						
		.0	11380.69	-19716.81			
		2.7	5974.69	3279.08			
		5.3	568.69	11949.07			
		7.9	-4837.31	6293.16			
		10.6	-10243.31	-13688.64			

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	97301.62						
		.0	88712.58	-261095.01			
		1.2	88712.58	-154639.92			
		2.4	88712.58	-48184.82			
		3.6	88712.58	58270.28			
		4.8	88712.58	164725.38			
	1105713.29						
		.0	-34257.06	123409.97			
		1.2	-34257.06	82301.50			
		2.4	-34257.06	41193.03			
		3.6	-34257.06	84.55			
		4.8	-34257.06	-41023.92			
1	27795.26						
		.0	1832.57	-6348.19			
		1.2	1832.57	-4149.10			
		2.4	1832.57	-1950.02			
		3.6	1832.57	249.07			
		4.8	1832.57	2448.15			
1	-5839.12						
		.0	-11250.77	34341.70			
		1.2	-11250.77	20840.77			
		2.4	-11250.77	7339.85			
		3.6	-11250.77	-6161.08			
		4.8	-11250.77	-19662.01			
1	*********						
		.0	206086.73	-596737.03			
		1.2	206086.73	-349432.96			
		2.4	206086.73	-102128.88			
		3.6	206086.73	145175.20			
		4.8	206086.73	392479.28			
5	1-46470.48						
		.0	-54460.36	228642.28			
		1.2	-54460.36	163289.85			
		2.4	-54460.36	97937.41			
		3.6	-54460.36	32584.98			
		4.8	-54460.36	-32767.46			
3	1-41031.65						
		.0	13419.98	-37024.83			
		1.2	13419.98	-20920.85			
		2.4	13419.98	-4816.87			
		3.6	13419.98	11287.11			
		4.8	13419.98	27391.10			
1	1-13106.74						
		.0	-4061.57	16475.82			

Sa Statis Portal (4 lantai) Kg/m

M E F L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.2	-4061.57	11601.94			
		2.4	-4061.57	6728.05			
		3.6	-4061.57	1854.17			
		4.8	-4061.57	-3019.71			
1*********							
		.0	105230.69	-295680.71			
		1.2	105230.69	-169403.88			
		2.4	105230.69	-43127.06			
		3.6	105230.69	83149.77			
		4.8	105230.69	209426.59			
1	-94076.98						
		.0	-16979.00	87015.60			
		1.2	-16979.00	66640.79			
		2.4	-16979.00	46265.99			
		3.6	-16979.00	25891.18			
		4.8	-16979.00	5516.37			
1	-43520.46						
		.0	13078.69	-33471.27			
		1.2	13078.69	-17776.84			
		2.4	13078.69	-2082.42			
		3.6	13078.69	13612.00			
		4.8	13078.69	29306.43			
1	-10168.54						
		.0	5589.58	-13428.18			
		1.2	5589.58	-6720.69			
		2.4	5589.58	-13.20			
		3.6	5589.58	6694.30			
		4.8	5589.58	13401.79			
3	60759.64						
		.0	8411.67	41315.41			
		2.7	-3635.23	47644.19			
		5.3	-15682.13	22048.69			
		7.9	-27729.03	-35471.09			
		10.6	-39775.93	-124915.16			
5	59906.74						
		.0	23025.04	-35342.82			
		2.7	10978.14	9711.39			
		5.3	-1068.76	22841.32			
		7.9	-13115.66	4046.97			
		10.6	-25162.56	-46671.67			
7	-53042.56						
		.0	22393.93	-32060.07			
		2.7	10347.03	11321.71			
		5.3	-1699.87	22779.20			
		7.9	-13746.77	2312.41			

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		10.6	-25793.67	-50078.67			
1	98774.37						
		.0	9086.45	37747.71			
		2.7	-2960.45	45864.65			
		5.3	-15007.35	22057.31			
		7.9	-27054.25	-33674.32			
		10.6	-39101.15	-121330.23			
1	89331.35						
		.0	24469.12	-43028.16			
		2.7	12422.22	5852.86			
		5.3	375.32	22809.60			
		7.9	-11671.58	7842.05			
		10.6	-23718.48	-39049.79			
1	12234.63						
		.0	23762.36	-39260.54			
		2.7	11715.46	7747.57			
		5.3	-331.44	22831.40			
		7.9	-12378.34	5990.94			
		10.6	-24425.24	-42773.80			
1-2	1251.75						
		.0	11046.04	-19695.53			
		2.7	5640.04	2413.52			
		5.3	234.04	10196.68			
		7.9	-5171.96	3653.93			
		10.6	-10577.96	-17214.71			
1	-5589.58						
		.0	11455.46	-20222.45			
		2.7	6049.46	2971.57			
		5.3	643.46	11839.68			
		7.9	-4762.54	6381.90			
		10.6	-10168.54	-13401.79			

sa Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	80761.55						
		.0	94914.21	-358771.65			
		1.2	94914.21	-244874.60			
		2.4	94914.21	-130977.55			
		3.6	94914.21	-17080.50			
		4.8	94914.21	96816.55			
1	55503.93						
		.0	71903.58	-103679.61			
		1.2	71903.58	-17395.32			
		2.4	71903.58	68888.97			
		3.6	71903.58	155173.26			
		4.8	71903.58	241457.55			
1	59356.51						
		.0	-47019.09	175935.42			
		1.2	-47019.09	119512.51			
		2.4	-47019.09	63089.60			
		3.6	-47019.09	6666.69			
		4.8	-47019.09	-49756.22			
1	-7498.49						
		.0	-1434.59	-1130.30			
		1.2	-1434.59	-2851.82			
		2.4	-1434.59	-4573.33			
		3.6	-1434.59	-6294.85			
		4.8	-1434.59	-8016.36			
1	**********						
		.0	204625.30	-778899.17			
		1.2	204625.30	-533348.81			
		2.4	204625.30	-287798.45			
		3.6	204625.30	-42248.09			
		4.8	204625.30	203302.26			
1	**********						
		.0	172209.38	-258405.17			
		1.2	172209.38	-51753.91			
		2.4	172209.38	154897.35			
		3.6	172209.38	361548.60			
		4.8	172209.38	568199.86			
1	3409.90						
		.0	-88421.87	355951.34			
		1.2	-88421.87	249845.10			
		2.4	-88421.87	143738.86			
		3.6	-88421.87	37632.62			
		4.8	-88421.87	-68473.62			
1	-25268.27						
		.0	12934.88	-47238.59			

sa Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.2	12934.88	-31716.73			
		2.4	12934.88	-16194.88			
		3.6	12934.88	-673.02			
		4.8	12934.88	14848.83			
1*********		.0	98318.49	-361494.75			
		1.2	98318.49	-243512.55			
		2.4	98318.49	-125530.36			
		3.6	98318.49	-7548.17			
		4.8	98318.49	110434.02			
1*********		.0	91544.04	-150236.35			
		1.2	91544.04	-40383.50			
		2.4	91544.04	69469.36			
		3.6	91544.04	179322.21			
		4.8	91544.04	289175.06			
1	-30455.80	.0	-32173.61	142972.59			
		1.2	-32173.61	104364.25			
		2.4	-32173.61	65755.92			
		3.6	-32173.61	27147.58			
		4.8	-32173.61	-11460.75			
2	1-11455.68	.0	12026.74	-38234.24			
		1.2	12026.74	-23802.15			
		2.4	12026.74	-9370.06			
		3.6	12026.74	5062.03			
		4.8	12026.74	19494.12			
3	1-39190.37	.0	-25257.61	200496.16			
		2.7	-34588.26	121200.38			
		5.3	-43918.91	17178.37			
		7.9	-53249.56	-111569.87			
		10.6	-62580.21	-265044.32			
4	1 -6774.45	.0	-24483.37	196663.11			
		2.7	-33814.02	119419.07			
		5.3	-43144.67	17448.82			
		7.9	-52475.32	-109247.67			
		10.6	-61805.97	-260670.37			
5	1 -5480.33	.0	3852.58	65522.13			
		2.7	-8194.32	59769.33			
		5.3	-20241.22	22092.24			
		7.9	-32288.12	-47509.13			

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		10.6	-44335.02	-149034.78			
1	-31669.22						
		.0	25577.61	-49258.81			
		2.7	13530.71	2559.71			
		5.3	1483.81	22453.94			
		7.9	-10563.09	10423.88			
		10.6	-22609.99	-33530.45			
1	51457.64						
		.0	4597.93	61788.66			
		2.7	-7448.97	58011.03			
		5.3	-19495.87	22309.11			
		7.9	-31542.77	-45317.10			
		10.6	-43589.67	-144867.59			
1	38883.66						
		.0	26749.65	-55165.14			
		2.7	14702.75	-240.72			
		5.3	2655.85	22759.41			
		7.9	-9391.05	13835.26			
		10.6	-21437.95	-27013.18			
1	-19644.93						
		.0	8961.88	-7989.91			
		2.7	3555.88	8596.12			
		5.3	-1850.12	10856.26			
		7.9	-7256.12	-1209.51			
		10.6	-12662.12	-27601.17			
1	-12026.74						
		.0	10168.32	-12671.13			
		2.7	4762.32	7111.97			
		5.3	-643.68	12569.17			
		7.9	-6049.68	3700.48			
		10.6	-11455.68	-19494.12			

Ga Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1184738.99						
		.0	114069.09	-466968.85			
		1.2	114069.09	-330085.94			
		2.4	114069.09	-193203.03			
		3.6	114069.09	-56320.13			
		4.8	114069.09	80562.78			
	1138344.13						
		.0	94078.68	-231826.84			
		1.2	94078.68	-118932.43			
		2.4	94078.68	-6038.01			
		3.6	94078.68	106856.40			
		4.8	94078.68	219750.81			
1	89861.48						
		.0	91696.63	-103176.98			
		1.2	91696.63	6858.97			
		2.4	91696.63	116894.93			
		3.6	91696.63	226930.88			
		4.8	91696.63	336966.83			
1	87320.73						
		.0	-62830.88	237304.08			
		1.2	-62830.88	161907.03			
		2.4	-62830.88	86509.97			
		3.6	-62830.88	11112.92			
		4.8	-62830.88	-64284.13			
1	*********						
		.0	244303.16	-1014260.02			
		1.2	244303.16	-721096.22			
		2.4	244303.16	-427932.43			
		3.6	244303.16	-134768.63			
		4.8	244303.16	158395.17			
1	*********						
		.0	212148.97	-526530.60			
		1.2	212148.97	-271951.84			
		2.4	212148.97	-17373.08			
		3.6	212148.97	237205.68			
		4.8	212148.97	491784.44			
1	-82783.65						
		.0	203442.74	-219279.39			
		1.2	203442.74	24851.90			
		2.4	203442.74	268983.19			
		3.6	203442.74	513114.48			
		4.8	203442.74	757245.77			
1	73621.77						
		.0	-120636.48	478531.11			

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.2	-120636.48	333767.34			
		2.4	-120636.48	189003.57			
		3.6	-120636.48	44239.80			
		4.8	-120636.48	-100523.97			
1*********							
		.0	118963.75	-471638.59			
		1.2	118963.75	-328882.09			
		2.4	118963.75	-186125.60			
		3.6	118963.75	-43369.10			
		4.8	118963.75	99387.40			
1*********							
		.0	108749.36	-271079.21			
		1.2	108749.36	-140579.98			
		2.4	108749.36	-10080.75			
		3.6	108749.36	120418.48			
		4.8	108749.36	250917.70			
1*********							
		.0	107358.63	-135502.63			
		1.2	107358.63	-6672.27			
		2.4	107358.63	122158.08			
		3.6	107358.63	250988.44			
		4.8	107358.63	379818.79			
1 -546.32							
		.0	-49881.69	201658.35			
		1.2	-49881.69	141800.32			
		2.4	-49881.69	81942.29			
		3.6	-49881.69	22084.26			
		4.8	-49881.69	-37773.77			
1-42368.59							
		.0	-46394.85	312389.62			
		2.7	-55725.50	177080.14			
		5.3	-65056.15	17044.44			
		7.9	-74386.80	-167717.48			
		10.6	-83717.45	-377205.62			
1-10096.95							
		.0	-48482.65	322927.80			
		2.7	-57813.30	182085.67			
		5.3	-67143.95	16517.32			
		7.9	-76474.60	-173777.26			
		10.6	-85805.25	-388798.06			
1-10214.39							
		.0	-45318.58	307720.15			
		2.7	-54649.23	175262.79			
		5.3	-63979.88	18079.22			
		7.9	-73310.53	-163830.58			

;a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		10.6	-82641.18	-370466.60			
1	-1390.73						
		.0	-48195.88	322265.77			
		2.7	-57526.53	182183.58			
		5.3	-66857.18	17375.17			
		7.9	-76187.83	-172159.47			
		10.6	-85518.48	-386420.33			
1	-32651.49						
		.0	-2540.76	99662.76			
		2.7	-14587.66	76967.61			
		5.3	-26634.56	22348.18			
		7.9	-38681.46	-64195.53			
		10.6	-50728.36	-182663.53			
1	55421.73						
		.0	-1437.72	94213.06			
		2.7	-13484.62	74440.95			
		5.3	-25531.52	22744.56			
		7.9	-37578.42	-60876.12			
		10.6	-49625.32	-176421.08			
1	-42143.88						
		.0	19794.06	-65034.01			
		2.7	14388.06	-19742.70			
		5.3	8982.06	11222.71			
		7.9	3576.06	27862.22			
		10.6	-1829.94	30175.83			
1	49881.69						
		.0	21077.68	-71042.49			
		2.7	15671.68	-22349.58			
		5.3	10265.68	12017.44			
		7.9	4859.68	32058.55			
		10.6	-546.32	37773.77			

a Statis Portal (4 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	75131.81						
		.0	92713.25	-376251.70			
		1.2	92713.25	-264995.79			
		2.4	92713.25	-153739.89			
		3.6	92713.25	-42483.99			
		4.8	92713.25	68771.91			
1	42277.42						
		.0	74557.07	-172320.39			
		1.2	74557.07	-82851.91			
		2.4	74557.07	6616.57			
		3.6	74557.07	96085.05			
		4.8	74557.07	185553.54			
1	11687.36						
		.0	46574.10	-43325.72			
		1.2	46574.10	12563.20			
		2.4	46574.10	68452.12			
		3.6	46574.10	124341.03			
		4.8	46574.10	180229.95			
1	4128.28						
		.0	-3282.45	73981.42			
		1.2	-3282.45	70042.48			
		2.4	-3282.45	66103.54			
		3.6	-3282.45	62164.60			
		4.8	-3282.45	58225.66			
1	*********						
		.0	201948.41	-820929.69			
		1.2	201948.41	-578591.60			
		2.4	201948.41	-336253.50			
		3.6	201948.41	-93915.40			
		4.8	201948.41	148422.70			
1	-97767.70						
		.0	168481.76	-391117.03			
		1.2	168481.76	-188938.92			
		2.4	168481.76	13239.19			
		3.6	168481.76	215417.30			
		4.8	168481.76	417595.41			
1	-59361.73						
		.0	103424.38	-99304.51			
		1.2	103424.38	24804.75			
		2.4	103424.38	148914.01			
		3.6	103424.38	273023.26			
		4.8	103424.38	397132.52			
1	-21579.36						
		.0	8866.87	120973.86			

a Statis Portal (4 lantai) Kg/m

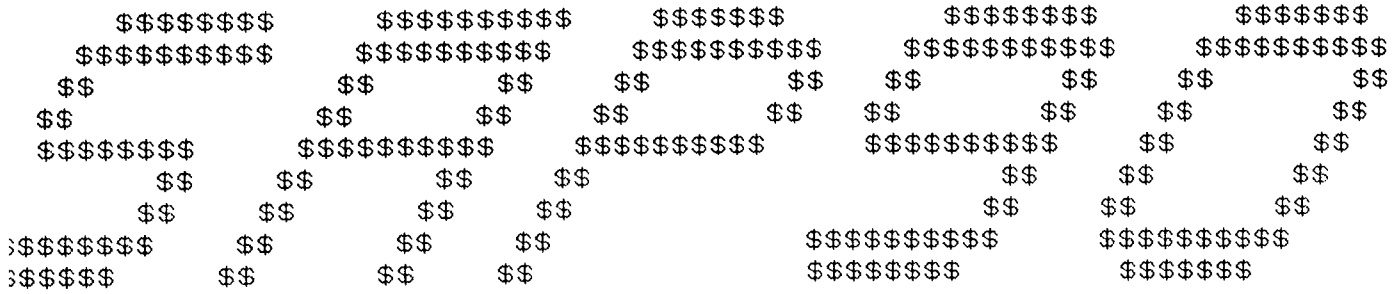
M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.2	8866.87	131614.11			
		2.4	8866.87	142254.36			
		3.6	8866.87	152894.61			
		4.8	8866.87	163534.86			
1*********							
		.0	98857.33	-382723.77			
		1.2	98857.33	-264094.97			
		2.4	98857.33	-145466.17			
		3.6	98857.33	-26837.37			
		4.8	98857.33	91791.43			
1*********							
		.0	88050.17	-205726.38			
		1.2	88050.17	-100066.17			
		2.4	88050.17	5594.04			
		3.6	88050.17	111254.25			
		4.8	88050.17	216914.45			
1-70218.83							
		.0	56229.52	-69951.25			
		1.2	56229.52	-2475.83			
		2.4	56229.52	64999.60			
		3.6	56229.52	132475.02			
		4.8	56229.52	199950.44			
1-25796.91							
		.0	13351.58	31358.93			
		1.2	13351.58	47380.82			
		2.4	13351.58	63402.71			
		3.6	13351.58	79424.60			
		4.8	13351.58	95446.50			
1-44273.82							
		.0	-32854.39	241092.30			
		2.7	-42185.04	141665.05			
		5.3	-51515.69	17511.58			
		7.9	-60846.34	-131368.11			
		10.6	-70176.99	-304974.02			
1-96878.03							
		.0	-30590.05	228879.26			
		2.7	-39920.70	135452.51			
		5.3	-49251.35	17299.55			
		7.9	-58582.00	-125579.64			
		10.6	-67912.65	-293185.06			
1*********							
		.0	-7559.09	106248.53			
		2.7	-16889.74	73853.84			
		5.3	-26220.39	16732.92			
		7.9	-35551.04	-65114.23			

sa Statis Portal (4 lantai) Kg/m

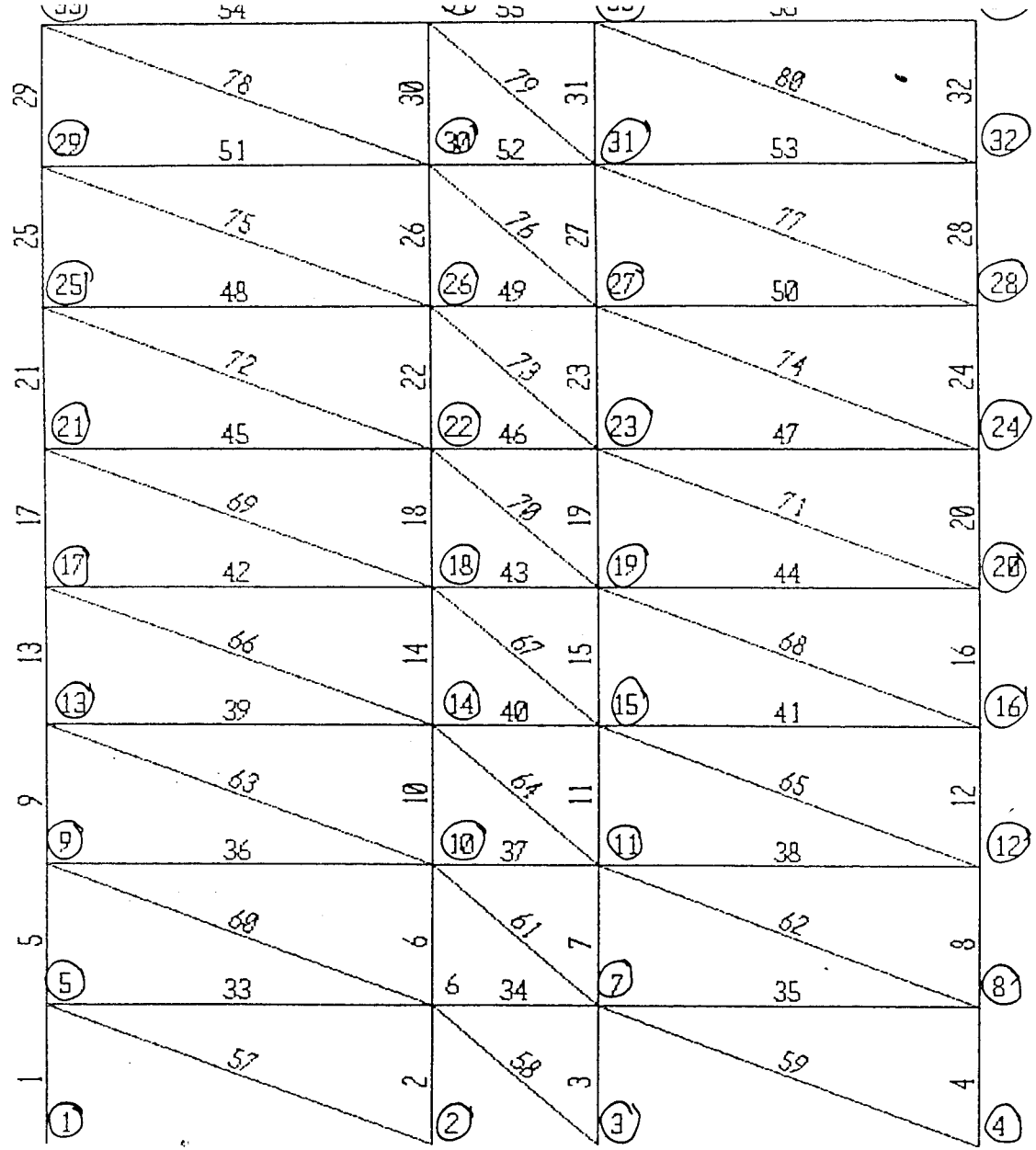
M E E L E M E N T F O R C E S

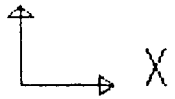
LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		10.6	-44881.69	-171687.59			
1-10807.16							
		.0	-31535.26	234565.70			
		2.7	-40865.91	138634.16			
		5.3	-50196.56	17976.39			
		7.9	-59527.21	-127407.60			
		10.6	-68857.86	-297517.81			
1-31820.65							
		.0	-29506.68	223714.87			
		2.7	-38837.33	133159.06			
		5.3	-48167.98	17877.03			
		7.9	-57498.63	-122131.23			
		10.6	-66829.28	-286865.70			
1-42877.94							
		.0	-7099.32	104471.07			
		2.7	-16429.97	73294.76			
		5.3	-25760.62	17392.23			
		7.9	-35091.27	-63236.53			
		10.6	-44421.92	-168591.51			
1-22218.45							
		.0	-4128.28	58225.66			
		2.7	-9534.28	40122.78			
		5.3	-14940.28	7694.00			
		7.9	-20346.28	-39060.68			
		10.6	-25752.28	-100141.26			
1-13351.58							
		.0	-4172.91	63393.60			
		2.7	-9578.91	45172.42			
		5.3	-14984.91	12625.35			
		7.9	-20390.91	-34247.62			
		10.6	-25796.91	-95446.50			



STRUCTURAL ANALYSIS PROGRAMS

VERSION 5.20





αs-2

UNDEFORMED SHAPE

OPTIONS

JOINT IDS
ELEMENT IDS
WIRE FRAME

SAP90

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	-6568.34						
		.0	-405.19	-5427.48			
		.8	-405.19	-5731.37			
		1.5	-405.19	-6035.26			
		2.3	-405.19	-6339.15			
		3.0	-405.19	-6643.04			
1	-4092.36						
		.0	-2345.70	2212.45			
		.8	-2345.70	453.18			
		1.5	-2345.70	-1306.10			
		2.3	-2345.70	-3065.37			
		3.0	-2345.70	-4824.64			
1	-6086.59						
		.0	-2342.34	3248.48			
		.8	-2342.34	1491.72			
		1.5	-2342.34	-265.03			
		2.3	-2342.34	-2021.79			
		3.0	-2342.34	-3778.55			
1	-8505.37						
		.0	-2656.73	4375.04			
		.8	-2656.73	2382.49			
		1.5	-2656.73	389.94			
		2.3	-2656.73	-1602.60			
		3.0	-2656.73	-3595.15			
1	-10034.84						
		.0	-2923.04	5097.90			
		.8	-2923.04	2905.61			
		1.5	-2923.04	713.33			
		2.3	-2923.04	-1478.95			
		3.0	-2923.04	-3671.23			
1	-10032.56						
		.0	-3210.11	5784.29			
		.8	-3210.11	3376.71			
		1.5	-3210.11	969.13			
		2.3	-3210.11	-1438.45			
		3.0	-3210.11	-3846.03			
1	-8005.07						
		.0	-3377.55	6548.92			
		.8	-3377.55	4015.76			
		1.5	-3377.55	1482.60			
		2.3	-3377.55	-1050.56			
		3.0	-3377.55	-3583.72			
1	-3280.91						
		.0	-5019.61	8045.82			

a Statis Portal (8 lantai) Kg/m

M E ELEMENT FORCES

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-5019.61	4281.11			
		1.5	-5019.61	516.41			
		2.3	-5019.61	-3248.30			
		3.0	-5019.61	-7013.00			
	1-52809.32						
		.0	7129.79	-14690.53			
		.8	7129.79	-9343.18			
		1.5	7129.79	-3995.84			
		2.3	7129.79	1351.51			
		3.0	7129.79	6698.85			
	1-50563.96						
		.0	6487.81	-10650.40			
		.8	6487.81	-5784.54			
		1.5	6487.81	-918.69			
		2.3	6487.81	3947.17			
		3.0	6487.81	8813.03			
	1-50101.75						
		.0	6125.19	-9121.35			
		.8	6125.19	-4527.46			
		1.5	6125.19	66.43			
		2.3	6125.19	4660.33			
		3.0	6125.19	9254.22			
	1-46501.64						
		.0	5762.13	-8168.55			
		.8	5762.13	-3846.95			
		1.5	5762.13	474.65			
		2.3	5762.13	4796.25			
		3.0	5762.13	9117.85			
3	1-40515.89						
		.0	5386.52	-7333.42			
		.8	5386.52	-3293.53			
		1.5	5386.52	746.36			
		2.3	5386.52	4786.26			
		3.0	5386.52	8826.15			
2	1-32343.69						
		.0	4933.04	-6395.06			
		.8	4933.04	-2695.28			
		1.5	4933.04	1004.50			
		2.3	4933.04	4704.28			
		3.0	4933.04	8404.06			
5	1-21976.03						
		.0	4326.10	-5325.87			
		.8	4326.10	-2081.30			
		1.5	4326.10	1163.27			
		2.3	4326.10	4407.84			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	4326.10	7652.41			
1	-9102.75						
		.0	3577.48	-4333.15			
		.8	3577.48	-1650.04			
		1.5	3577.48	1033.07			
		2.3	3577.48	3716.18			
		3.0	3577.48	6399.29			
1	*********						
		.0	3997.66	-13046.47			
		.8	3997.66	-10048.22			
		1.5	3997.66	-7049.98			
		2.3	3997.66	-4051.73			
		3.0	3997.66	-1053.49			
1	*********						
		.0	-1276.33	2004.54			
		.8	-1276.33	1047.29			
		1.5	-1276.33	90.04			
		2.3	-1276.33	-867.20			
		3.0	-1276.33	-1824.45			
1	-83976.31						
		.0	-1218.65	2018.11			
		.8	-1218.65	1104.12			
		1.5	-1218.65	190.13			
		2.3	-1218.65	-723.86			
		3.0	-1218.65	-1637.85			
5							
1	-62384.07						
		.0	-1561.26	2857.67			
		.8	-1561.26	1686.73			
		1.5	-1561.26	515.79			
		2.3	-1561.26	-655.15			
		3.0	-1561.26	-1826.09			
9							
1	-43610.61						
		.0	-1904.67	3622.78			
		.8	-1904.67	2194.27			
		1.5	-1904.67	765.77			
		2.3	-1904.67	-662.74			
		3.0	-1904.67	-2091.25			
3							
1	-27682.22						
		.0	-2374.42	4564.68			
		.8	-2374.42	2783.86			
		1.5	-2374.42	1003.05			
		2.3	-2374.42	-777.77			
		3.0	-2374.42	-2558.59			
27							
1	-14969.28						

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-2927.51	5542.72			
		.8	-2927.51	3347.09			
		1.5	-2927.51	1151.45			
		2.3	-2927.51	-1044.18			
		3.0	-2927.51	-3239.82			
1	-5525.92						
		.0	-4178.67	6488.53			
		.8	-4178.67	3354.52			
		1.5	-4178.67	220.52			
		2.3	-4178.67	-2913.49			
		3.0	-4178.67	-6047.49			
1**********							
		.0	11964.71	-23961.24			
		.8	11964.71	-14987.71			
		1.5	11964.71	-6014.17			
		2.3	11964.71	2959.36			
		3.0	11964.71	11932.90			
1**********							
		.0	5200.79	-6502.98			
		.8	5200.79	-2602.39			
		1.5	5200.79	1298.21			
		2.3	5200.79	5198.80			
		3.0	5200.79	9099.40			
1**********							
		.0	5878.66	-8474.08			
		.8	5878.66	-4065.08			
		1.5	5878.66	343.91			
		2.3	5878.66	4752.91			
		3.0	5878.66	9161.90			
1	-78958.20						
		.0	5776.13	-8068.03			
		.8	5776.13	-3735.94			
		1.5	5776.13	596.16			
		2.3	5776.13	4928.25			
		3.0	5776.13	9260.35			
1	-57191.86						
		.0	5523.86	-7403.05			
		.8	5523.86	-3260.16			
		1.5	5523.86	882.73			
		2.3	5523.86	5025.63			
		3.0	5523.86	9168.52			
1	-37807.39						
		.0	5163.19	-6711.23			
		.8	5163.19	-2838.83			
		1.5	5163.19	1033.56			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	5163.19	4905.96			
		3.0	5163.19	8778.35			
1-21202.12							
		.0	4931.55	-6184.00			
		.8	4931.55	-2485.34			
		1.5	4931.55	1213.32			
		2.3	4931.55	4911.99			
		3.0	4931.55	8610.65			
1	-6936.03						
		.0	4405.48	-5315.96			
		.8	4405.48	-2011.85			
		1.5	4405.48	1292.26			
		2.3	4405.48	4596.36			
		3.0	4405.48	7900.47			
1	16766.10						
		.0	10143.78	-8917.76			
		1.8	4508.78	3903.22			
		3.5	-1126.22	6862.96			
		5.3	-6761.22	-38.56			
		7.0	-12396.22	-16801.32			
1	21727.57						
		.0	9944.13	-8164.13			
		1.8	4309.13	4307.47			
		3.5	-1325.87	6917.81			
		5.3	-6960.87	-333.09			
		7.0	-12595.87	-17445.24			
1	20083.61						
		.0	9981.49	-8247.97			
		1.8	4346.49	4289.01			
		3.5	-1288.51	6964.75			
		5.3	-6923.51	-220.76			
		7.0	-12558.51	-17267.52			
1	15291.48						
		.0	10136.68	-8779.13			
		1.8	4501.68	4029.43			
		3.5	-1133.32	6976.75			
		5.3	-6768.32	62.81			
		7.0	-12403.32	-16712.38			
1	9213.12						
		.0	10352.07	-9528.33			
		1.8	4717.07	3657.17			
		3.5	-917.93	6981.42			
		5.3	-6552.93	444.43			
		7.0	-12187.93	-15953.82			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	1961.22						
		.0	10617.14	-10451.05			
		1.8	4982.14	3198.31			
		3.5	-652.86	6986.43			
		5.3	-6287.86	913.30			
		7.0	-11922.86	-15021.08			
1	-5100.42						
		.0	10950.42	-11662.77			
		1.8	5315.42	2569.85			
		3.5	-319.58	6941.21			
		5.3	-5954.58	1451.33			
		7.0	-11589.58	-13899.81			
1	13459.18						
		.0	1768.80	452.80			
		.8	66.30	1140.96			
		1.5	-1636.20	552.25			
		2.3	-3338.70	-1313.33			
		3.0	-5041.20	-4455.79			
1	19605.25						
		.0	1903.32	349.77			
		.8	200.82	1138.83			
		1.5	-1501.68	651.01			
		2.3	-3204.18	-1113.69			
		3.0	-4906.68	-4155.26			
1	15986.83						
		.0	2121.98	33.89			
		.8	419.48	986.94			
		1.5	-1283.02	663.12			
		2.3	-2985.52	-937.58			
		3.0	-4688.02	-3815.16			
1	10684.75						
		.0	2385.92	-357.99			
		.8	683.42	793.02			
		1.5	-1019.08	667.14			
		2.3	-2721.58	-735.60			
		3.0	-4424.08	-3415.22			
1	4923.26						
		.0	2682.06	-800.30			
		.8	979.56	572.81			
		1.5	-722.94	669.04			
		2.3	-2425.44	-511.60			
		3.0	-4127.94	-2969.11			
1	-1140.63						
		.0	3030.94	-1323.76			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	1328.44	311.01			
		1.5	-374.06	668.90			
		2.3	-2076.56	-250.08			
		3.0	-3779.06	-2445.94			
1	-6711.38						
		.0	3424.95	-1915.93			
		.8	1722.45	14.34			
		1.5	19.95	667.74			
		2.3	-1682.55	44.27			
		3.0	-3385.05	-1856.08			
1	25661.29						
		.0	9747.04	-7671.30			
		1.8	4112.04	4455.40			
		3.5	-1522.96	6720.84			
		5.3	-7157.96	-874.97			
		7.0	-12792.96	-18332.02			
1	29264.46						
		.0	9939.21	-8172.81			
		1.8	4304.21	4290.18			
		3.5	-1330.79	6891.92			
		5.3	-6965.79	-367.59			
		7.0	-12600.79	-17488.35			
1	25793.30						
		.0	10028.34	-8463.01			
		1.8	4393.34	4155.97			
		3.5	-1241.66	6913.70			
		5.3	-6876.66	-189.83			
		7.0	-12511.66	-17154.60			
1	21658.57						
		.0	10183.23	-8993.71			
		1.8	4548.23	3896.31			
		3.5	-1086.77	6925.08			
		5.3	-6721.77	92.60			
		7.0	-12356.77	-16601.14			
1	16504.13						
		.0	10397.63	-9727.56			
		1.8	4762.63	3537.67			
		3.5	-872.37	6941.64			
		5.3	-6507.37	484.36			
		7.0	-12142.37	-15834.16			
1	10757.26						
		.0	10653.30	-10618.08			
		1.8	5018.30	3094.57			
		3.5	-616.70	6945.96			
		5.3	-6251.70	936.10			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-11886.70	-14935.00			
1	5687.51						
		.0	10942.52	-11621.58			
		1.8	5307.52	2597.19			
		3.5	-327.48	6954.72			
		5.3	-5962.48	1451.00			
		7.0	-11597.48	-13913.97			
1	-9859.04						
		.0	6662.33	-7034.63			
		1.8	3267.33	1653.83			
		3.5	-127.67	4401.04			
		5.3	-3522.67	1207.00			
		7.0	-6917.67	-7928.29			
1	-6440.39						
		.0	2019.44	-1507.21			
		.8	1126.94	-327.32			
		1.5	234.44	183.20			
		2.3	-658.06	24.34			
		3.0	-1550.56	-803.89			
1	-4405.48						
		.0	6643.97	-6878.23			
		1.8	3248.97	1778.09			
		3.5	-146.03	4493.15			
		5.3	-3541.03	1266.96			
		7.0	-6936.03	-7900.47			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-11507.42						
		.0	17270.03	-38371.40			
		.8	17270.03	-25418.88			
		1.5	17270.03	-12466.36			
		2.3	17270.03	486.16			
		3.0	17270.03	13438.68			
	1 -2817.15						
		.0	-7794.74	17207.34			
		.8	-7794.74	11361.28			
		1.5	-7794.74	5515.23			
		2.3	-7794.74	-330.83			
		3.0	-7794.74	-6176.88			
	1 -7152.89						
		.0	-1980.90	2289.37			
		.8	-1980.90	803.69			
		1.5	-1980.90	-681.99			
		2.3	-1980.90	-2167.66			
		3.0	-1980.90	-3653.34			
	1 -9227.04						
		.0	-2716.48	4521.48			
		.8	-2716.48	2484.12			
		1.5	-2716.48	446.76			
		2.3	-2716.48	-1590.60			
		3.0	-2716.48	-3627.96			
	1-10614.60						
		.0	-2943.95	5130.15			
		.8	-2943.95	2922.19			
		1.5	-2943.95	714.22			
		2.3	-2943.95	-1493.74			
		3.0	-2943.95	-3701.71			
L	1-10429.52						
		.0	-3233.19	5814.95			
		.8	-3233.19	3390.05			
		1.5	-3233.19	965.16			
		2.3	-3233.19	-1459.74			
		3.0	-3233.19	-3884.64			
5	1 -8241.25						
		.0	-3395.91	6563.60			
		.8	-3395.91	4016.67			
		1.5	-3395.91	1469.74			
		2.3	-3395.91	-1077.19			
		3.0	-3395.91	-3624.12			
9	1 -3381.10						
		.0	-5029.84	8046.77			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-5029.84	4274.39			
		1.5	-5029.84	502.01			
		2.3	-5029.84	-3270.37			
		3.0	-5029.84	-7042.75			
	1-72799.24						
		.0	26881.74	-50312.84			
		.8	26881.74	-30151.53			
		1.5	26881.74	-9990.23			
		2.3	26881.74	10171.08			
		3.0	26881.74	30332.38			
	1-45016.73						
		.0	712.34	4553.09			
		.8	712.34	5087.35			
		1.5	712.34	5621.61			
		2.3	712.34	6155.87			
		3.0	712.34	6690.13			
	1-49586.93						
		.0	6660.40	-10513.57			
		.8	6660.40	-5518.27			
		1.5	6660.40	-522.97			
		2.3	6660.40	4472.34			
		3.0	6660.40	9467.64			
	1-46052.60						
		.0	5691.76	-7988.12			
		.8	5691.76	-3719.30			
		1.5	5691.76	549.52			
		2.3	5691.76	4818.34			
		3.0	5691.76	9087.16			
	1-40192.55						
		.0	5358.16	-7292.10			
		.8	5358.16	-3273.48			
		1.5	5358.16	745.14			
		2.3	5358.16	4763.75			
		3.0	5358.16	8782.37			
	1-32095.41						
		.0	4913.76	-6374.94			
		.8	4913.76	-2689.62			
		1.5	4913.76	995.71			
		2.3	4913.76	4681.03			
		3.0	4913.76	8366.35			
	1-21826.48						
		.0	4310.48	-5312.24			
		.8	4310.48	-2079.38			
		1.5	4310.48	1153.47			
		2.3	4310.48	4386.33			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	4310.48	7619.19			
1	-9048.77						
		.0	3569.02	-4330.05			
		.8	3569.02	-1653.29			
		1.5	3569.02	1023.47			
		2.3	3569.02	3700.24			
		3.0	3569.02	6377.00			
	1*********						
		.0	24020.29	-49048.59			
		.8	24020.29	-31033.37			
		1.5	24020.29	-13018.15			
		2.3	24020.29	4997.07			
		3.0	24020.29	23012.29			
7	1*********						
		.0	-7278.21	17570.39			
		.8	-7278.21	12111.73			
		1.5	-7278.21	6653.08			
		2.3	-7278.21	1194.42			
		3.0	-7278.21	-4264.23			
1	1-84334.53						
		.0	-458.42	201.32			
		.8	-458.42	-142.49			
		1.5	-458.42	-486.30			
		2.3	-458.42	-830.11			
		3.0	-458.42	-1173.93			
5	1-62236.39						
		.0	-1711.46	3227.47			
		.8	-1711.46	1943.88			
		1.5	-1711.46	660.29			
		2.3	-1711.46	-623.31			
		3.0	-1711.46	-1906.90			
9	1-43517.60						
		.0	-1888.45	3567.47			
		.8	-1888.45	2151.14			
		1.5	-1888.45	734.80			
		2.3	-1888.45	-681.53			
		3.0	-1888.45	-2097.86			
3	1-27637.02						
		.0	-2374.42	4557.84			
		.8	-2374.42	2777.02			
		1.5	-2374.42	996.21			
		2.3	-2374.42	-784.60			
		3.0	-2374.42	-2565.41			
7	1-14948.31						

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-2921.51	5527.16			
		.8	-2921.51	3336.02			
		1.5	-2921.51	1144.89			
		2.3	-2921.51	-1046.25			
		3.0	-2921.51	-3237.39			
1	-5491.80						
		.0	-4169.00	6474.92			
		.8	-4169.00	3348.17			
		1.5	-4169.00	221.43			
		2.3	-4169.00	-2905.32			
		3.0	-4169.00	-6032.07			
1	**********						
		.0	28591.94	-55364.01			
		.8	28591.94	-33920.06			
		1.5	28591.94	-12476.10			
		2.3	28591.94	8967.85			
		3.0	28591.94	30411.81			
1	**********						
		.0	860.05	6628.11			
		.8	860.05	7273.15			
		1.5	860.05	7918.18			
		2.3	860.05	8563.22			
		3.0	860.05	9208.25			
1	**********						
		.0	5658.94	-8144.81			
		.8	5658.94	-3900.61			
		1.5	5658.94	343.60			
		2.3	5658.94	4587.80			
		3.0	5658.94	8832.01			
1	-79045.07						
		.0	5883.68	-8362.97			
		.8	5883.68	-3950.21			
		1.5	5883.68	462.55			
		2.3	5883.68	4875.30			
		3.0	5883.68	9288.06			
1	-57275.70						
		.0	5511.14	-7375.76			
		.8	5511.14	-3242.40			
		1.5	5511.14	890.95			
		2.3	5511.14	5024.31			
		3.0	5511.14	9157.67			
1	-37878.85						
		.0	5166.43	-6725.46			
		.8	5166.43	-2850.64			
		1.5	5166.43	1024.18			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	5166.43	4899.00			
		3.0	5166.43	8773.83			
1	-21243.61						
		.0	4939.97	-6198.56			
		.8	4939.97	-2493.58			
		1.5	4939.97	1211.40			
		2.3	4939.97	4916.38			
		3.0	4939.97	8621.36			
1	-6939.05						
		.0	4409.36	-5317.85			
		.8	4409.36	-2010.83			
		1.5	4409.36	1296.20			
		2.3	4409.36	4603.22			
		3.0	4409.36	7910.24			
1	22274.76						
		.0	8690.27	-3768.66			
		1.8	3055.27	6508.69			
		3.5	-2579.73	6924.80			
		5.3	-8214.73	-2520.35			
		7.0	-13849.73	-21826.75			
1	21690.14						
		.0	10070.12	-8583.08			
		1.8	4435.12	4109.02			
		3.5	-1199.88	6939.86			
		5.3	-6834.88	-90.55			
		7.0	-12469.88	-16982.20			
1	19782.32						
		.0	9985.89	-8265.75			
		1.8	4350.89	4278.94			
		3.5	-1284.11	6962.38			
		5.3	-6919.11	-215.44			
		7.0	-12554.11	-17254.50			
1	15055.86						
		.0	10155.08	-8843.37			
		1.8	4520.08	3997.41			
		3.5	-1114.92	6976.93			
		5.3	-6749.92	95.20			
		7.0	-12384.92	-16647.78			
1	8943.46						
		.0	10369.19	-9588.35			
		1.8	4734.19	3627.10			
		3.5	-900.81	6981.31			
		5.3	-6535.81	474.26			
		7.0	-12170.81	-15894.04			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	1753.33						
		.0	10631.85	-10503.33			
		1.8	4996.85	3171.78			
		3.5	-638.15	6985.63			
		5.3	-6273.15	938.24			
		7.0	-11908.15	-14970.41			
1	-5238.49						
		.0	10961.91	-11703.33			
		1.8	5326.91	2549.38			
		3.5	-308.09	6940.85			
		5.3	-5943.09	1471.06			
		7.0	-11578.09	-13859.98			
1	14914.18						
		.0	-473.09	3818.20			
		.8	-2175.59	2824.95			
		1.5	-3878.09	554.82			
		2.3	-5580.59	-2992.18			
		3.0	-7283.09	-7816.06			
1	18773.65						
		.0	2098.37	61.99			
		.8	395.87	997.33			
		1.5	-1306.63	655.80			
		2.3	-3009.13	-962.61			
		3.0	-4711.63	-3857.89			
1	16485.04						
		.0	2086.62	83.21			
		.8	384.12	1009.74			
		1.5	-1318.38	659.39			
		2.3	-3020.88	-967.83			
		3.0	-4723.38	-3871.93			
1	10740.52						
		.0	2392.77	-365.18			
		.8	690.27	790.97			
		1.5	-1012.23	670.23			
		2.3	-2714.73	-727.37			
		3.0	-4417.23	-3401.86			
1	4898.81						
		.0	2684.11	-803.19			
		.8	981.61	571.46			
		1.5	-720.89	669.22			
		2.3	-2423.39	-509.89			
		3.0	-4125.89	-2965.87			
1	-1102.52						
		.0	3031.11	-1323.64			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	1328.61	311.25			
		1.5	-373.89	669.27			
		2.3	-2076.39	-249.59			
		3.0	-3778.89	-2445.32			
1	-6652.84						
		.0	3422.74	-1911.92			
		.8	1720.24	16.69			
		1.5	17.74	668.43			
		2.3	-1684.76	43.30			
		3.0	-3387.26	-1858.72			
1	15095.37						
		.0	8258.20	-2530.28			
		1.8	2623.20	6990.94			
		3.5	-3011.80	6650.92			
		5.3	-8646.80	-3550.35			
		7.0	-14281.80	-23612.87			
1	32166.66						
		.0	10019.82	-8516.79			
		1.8	4384.82	4087.26			
		3.5	-1250.18	6830.07			
		5.3	-6885.18	-288.38			
		7.0	-12520.18	-17268.08			
1	26035.57						
		.0	10028.22	-8428.71			
		1.8	4393.22	4190.06			
		3.5	-1241.78	6947.58			
		5.3	-6876.78	-156.15			
		7.0	-12511.78	-17121.13			
1	21548.78						
		.0	10184.72	-9004.45			
		1.8	4549.72	3888.19			
		3.5	-1085.28	6919.58			
		5.3	-6720.28	89.72			
		7.0	-12355.28	-16601.39			
1	16546.65						
		.0	10396.67	-9724.16			
		1.8	4761.67	3539.39			
		3.5	-873.33	6941.69			
		5.3	-6508.33	482.74			
		7.0	-12143.33	-15837.46			
1	10825.92						
		.0	10650.58	-10608.87			
		1.8	5015.58	3099.02			
		3.5	-619.42	6945.65			
		5.3	-6254.42	931.04			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-11889.42	-14944.83			
1	5764.10						
		.0	10938.88	-11608.49			
		1.8	5303.88	2603.91			
		3.5	-331.12	6955.07			
		5.3	-5966.12	1444.98			
		7.0	-11601.12	-13926.36			
1	-9987.01						
		.0	6670.76	-7063.80			
		1.8	3275.76	1639.40			
		3.5	-119.24	4401.35			
		5.3	-3514.24	1222.06			
		7.0	-6909.24	-7898.49			
1	-6535.08						
		.0	2015.71	-1499.91			
		.8	1123.21	-322.81			
		1.5	230.71	184.91			
		2.3	-661.79	23.26			
		3.0	-1554.29	-807.77			
1	-4409.36						
		.0	6640.95	-6866.90			
		1.8	3245.95	1784.14			
		3.5	-149.05	4493.93			
		5.3	-3544.05	1262.47			
		7.0	-6939.05	-7910.24			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-14718.33						
		.0	20566.63	-61144.56			
		.8	20566.63	-45719.58			
		1.5	20566.63	-30294.60			
		2.3	20566.63	-14869.63			
		3.0	20566.63	555.35			
	1-10119.08						
		.0	14409.96	-10134.53			
		.8	14409.96	672.94			
		1.5	14409.96	11480.40			
		2.3	14409.96	22287.87			
		3.0	14409.96	33095.34			
	1 -2871.39						
		.0	-13077.93	31836.54			
		.8	-13077.93	22028.10			
		1.5	-13077.93	12219.65			
		2.3	-13077.93	2411.21			
		3.0	-13077.93	-7397.24			
;	1 -9990.21						
		.0	-1602.21	1627.05			
		.8	-1602.21	425.39			
		1.5	-1602.21	-776.26			
		2.3	-1602.21	-1977.91			
		3.0	-1602.21	-3179.57			
7	1-10989.84						
		.0	-3052.06	5473.61			
		.8	-3052.06	3184.56			
		1.5	-3052.06	895.51			
		2.3	-3052.06	-1393.54			
		3.0	-3052.06	-3682.59			
1	1-10787.22						
		.0	-3255.60	5869.22			
		.8	-3255.60	3427.52			
		1.5	-3255.60	985.82			
		2.3	-3255.60	-1455.88			
		3.0	-3255.60	-3897.58			
5	1 -8456.99						
		.0	-3419.07	6596.31			
		.8	-3419.07	4032.01			
		1.5	-3419.07	1467.70			
		2.3	-3419.07	-1096.60			
		3.0	-3419.07	-3660.91			
9	1 -3474.40						
		.0	-5040.54	8049.64			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-5040.54	4269.24			
		1.5	-5040.54	488.84			
		2.3	-5040.54	-3291.57			
		3.0	-5040.54	-7071.97			
	1-77781.98						
		.0	27897.48	-68330.40			
		.8	27897.48	-47407.29			
		1.5	27897.48	-26484.17			
		2.3	27897.48	-5561.06			
		3.0	27897.48	15362.05			
	1-67513.09						
		.0	29377.24	-34072.18			
		.8	29377.24	-12039.25			
		1.5	29377.24	9993.68			
		2.3	29377.24	32026.60			
		3.0	29377.24	54059.53			
	1-37359.79						
		.0	-4944.81	20030.43			
		.8	-4944.81	16321.82			
		1.5	-4944.81	12613.22			
		2.3	-4944.81	8904.61			
		3.0	-4944.81	5196.01			
	1-45453.85						
		.0	6849.55	-10897.81			
		.8	6849.55	-5760.65			
		1.5	6849.55	-623.48			
		2.3	6849.55	4513.68			
		3.0	6849.55	9650.85			
	1-39646.72						
		.0	5246.05	-6948.81			
		.8	5246.05	-3014.28			
		1.5	5246.05	920.26			
		2.3	5246.05	4854.79			
		3.0	5246.05	8789.33			
	1-31728.19						
		.0	4888.30	-6331.36			
		.8	4888.30	-2665.13			
		1.5	4888.30	1001.10			
		2.3	4888.30	4667.32			
		3.0	4888.30	8333.55			
	1-21583.42						
		.0	4299.83	-5305.79			
		.8	4299.83	-2080.91			
		1.5	4299.83	1143.96			
		2.3	4299.83	4368.83			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	4299.83	7593.70			
1	-8957.19						
		.0	3561.83	-4326.54			
		.8	3561.83	-1655.17			
		1.5	3561.83	1016.21			
		2.3	3561.83	3687.58			
		3.0	3561.83	6358.95			
1	*********						
		.0	22971.77	-63995.73			
		.8	22971.77	-46766.90			
		1.5	22971.77	-29538.08			
		2.3	22971.77	-12309.25			
		3.0	22971.77	4919.58			
1	*********						
		.0	22462.43	-22904.53			
		.8	22462.43	-6057.71			
		1.5	22462.43	10789.11			
		2.3	22462.43	27635.93			
		3.0	22462.43	44482.75			
1	-76753.20						
		.0	-12210.41	31178.06			
		.8	-12210.41	22020.25			
		1.5	-12210.41	12862.45			
		2.3	-12210.41	3704.64			
		3.0	-12210.41	-5453.17			
1	-63665.05						
		.0	-370.91	65.48			
		.8	-370.91	-212.71			
		1.5	-370.91	-490.89			
		2.3	-370.91	-769.08			
		3.0	-370.91	-1047.27			
1	-43618.55						
		.0	-2159.40	4235.80			
		.8	-2159.40	2616.25			
		1.5	-2159.40	996.70			
		2.3	-2159.40	-622.85			
		3.0	-2159.40	-2242.40			
1	-27699.23						
		.0	-2332.00	4438.72			
		.8	-2332.00	2689.72			
		1.5	-2332.00	940.73			
		2.3	-2332.00	-808.27			
		3.0	-2332.00	-2557.27			
1	-14983.64						

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-2915.76	5517.69			
		.8	-2915.76	3330.87			
		1.5	-2915.76	1144.04			
		2.3	-2915.76	-1042.78			
		3.0	-2915.76	-3229.60			
1	-5469.47						
		.0	-4160.15	6464.14			
		.8	-4160.15	3344.03			
		1.5	-4160.15	223.91			
		2.3	-4160.15	-2896.20			
		3.0	-4160.15	-6016.31			
1	*********						
		.0	24372.11	-65617.71			
		.8	24372.11	-47338.62			
		1.5	24372.11	-29059.53			
		2.3	24372.11	-10780.45			
		3.0	24372.11	7498.64			
3	*********						
		.0	26783.38	-29833.85			
		.8	26783.38	-9746.31			
		1.5	26783.38	10341.22			
		2.3	26783.38	30428.76			
		3.0	26783.38	50516.29			
2	*********						
		.0	-4434.49	21689.36			
		.8	-4434.49	18363.50			
		1.5	-4434.49	15037.63			
		2.3	-4434.49	11711.76			
		3.0	-4434.49	8385.89			
6	1-79080.07						
		.0	5632.72	-8264.35			
		.8	5632.72	-4039.81			
		1.5	5632.72	184.73			
		2.3	5632.72	4409.27			
		3.0	5632.72	8633.81			
0	1-57356.55						
		.0	5729.53	-7962.32			
		.8	5729.53	-3665.17			
		1.5	5729.53	631.98			
		2.3	5729.53	4929.13			
		3.0	5729.53	9226.28			
4	1-37935.00						
		.0	5143.98	-6665.02			
		.8	5143.98	-2807.04			
		1.5	5143.98	1050.94			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	5143.98	4908.93			
		3.0	5143.98	8766.91			
1	-21275.10						
		.0	4948.28	-6213.65			
		.8	4948.28	-2502.45			
		1.5	4948.28	1208.76			
		2.3	4948.28	4919.97			
		3.0	4948.28	8631.18			
1	-6941.16						
		.0	4411.73	-5317.94			
		.8	4411.73	-2009.14			
		1.5	4411.73	1299.66			
		2.3	4411.73	4608.46			
		3.0	4411.73	7917.25			
1	3381.68						
		.0	4599.25	10689.88			
		1.8	-1025.25	13817.12			
		3.5	-6649.75	7101.49			
		5.3	-12274.25	-9457.02			
		7.0	-17898.75	-35858.41			
1	1901.92						
		.0	-7629.86	13575.82			
		.8	-8844.86	7397.80			
		1.5	-10059.86	308.53			
		2.3	-11274.86	-7691.99			
		3.0	-12489.86	-16603.77			
1	2411.26						
		.0	4312.88	11220.34			
		1.8	-1311.62	13846.45			
		3.5	-6936.12	6629.68			
		5.3	-12560.62	-10429.96			
		7.0	-18185.12	-37332.48			
1	21936.88						
		.0	7247.69	1258.79			
		1.8	1612.69	9011.63			
		3.5	-4022.31	6903.21			
		5.3	-9657.31	-5066.46			
		7.0	-15292.31	-26897.37			
1	19928.68						
		.0	10241.96	-9165.43			
		1.8	4606.96	3827.38			
		3.5	-1028.04	6958.94			
		5.3	-6663.04	229.25			
		7.0	-12298.04	-16361.69			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	15371.86	.0	10124.97	-8734.32			
		1.8	4489.97	4053.75			
		3.5	-1145.03	6980.58			
		5.3	-6780.03	46.15			
		7.0	-12415.03	-16749.53			
1	8921.80	.0	10380.09	-9623.73			
		1.8	4745.09	3610.80			
		3.5	-889.91	6984.08			
		5.3	-6524.91	496.11			
		7.0	-12159.91	-15853.11			
1	1549.69	.0	10644.83	-10548.17			
		1.8	5009.83	3149.66			
		3.5	-625.17	6986.24			
		5.3	-6260.17	961.58			
		7.0	-11895.17	-14924.34			
1	-5398.51	.0	10972.89	-11742.21			
		1.8	5337.89	2529.72			
		3.5	-297.11	6940.40			
		5.3	-5932.11	1489.83			
		7.0	-11567.11	-13821.99			
7 1	15863.52	.0	-2499.79	6933.59			
		.8	-4202.29	4420.31			
		1.5	-5904.79	630.15			
		2.3	-7607.29	-4436.88			
		3.0	-9309.79	-10780.79			
0 1	16059.74	.0	2425.07	-429.31			
		.8	722.57	751.06			
		1.5	-979.93	654.55			
		2.3	-2682.43	-718.84			
		3.0	-4384.93	-3369.09			
3 1	12341.59	.0	2310.31	-244.19			
		.8	607.81	850.11			
		1.5	-1094.69	667.53			
		2.3	-2797.19	-791.93			
		3.0	-4499.69	-3528.25			
6 1	5129.55	.0	2685.98	-800.21			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	983.48	575.84			
		1.5	-719.02	675.01			
		2.3	-2421.52	-502.69			
		3.0	-4124.02	-2957.27			
1	-1066.77						
		.0	3025.86	-1315.93			
		.8	1323.36	315.02			
		1.5	-379.14	669.10			
		2.3	-2081.64	-253.69			
		3.0	-3784.14	-2453.36			
2	-6568.82						
		.0	3416.97	-1902.60			
		.8	1714.47	21.69			
		1.5	11.97	669.11			
		2.3	-1690.53	39.65			
		3.0	-3393.03	-1866.68			
8	16700.94						
		.0	6855.92	2305.27			
		1.8	1220.92	9372.52			
		3.5	-4414.08	6578.51			
		5.3	-10049.08	-6076.75			
		7.0	-15684.08	-28593.26			
1	33069.56						
		.0	10200.37	-9092.28			
		1.8	4565.37	3827.74			
		3.5	-1069.63	6886.52			
		5.3	-6704.63	84.05			
		7.0	-12339.63	-16579.67			
4	21914.21						
		.0	10185.38	-8944.15			
		1.8	4550.38	3949.64			
		3.5	-1084.62	6982.19			
		5.3	-6719.62	153.49			
		7.0	-12354.62	-16536.47			
7	16365.46						
		.0	10397.65	-9738.74			
		1.8	4762.65	3526.53			
		3.5	-872.35	6930.55			
		5.3	-6507.35	473.31			
		7.0	-12142.35	-15845.17			
0	10908.42						
		.0	10648.14	-10599.84			
		1.8	5013.14	3103.78			
		3.5	-621.86	6946.15			
		5.3	-6256.86	927.28			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-11891.86	-14952.85			
1	5819.95						
		.0	10936.02	-11598.26			
		1.8	5301.02	2609.15			
		3.5	-333.98	6955.32			
		5.3	-5968.98	1440.23			
		7.0	-11603.98	-13936.11			
1-10129.63							
		.0	6679.06	-7092.46			
		1.8	3284.06	1625.27			
		3.5	-110.94	4401.74			
		5.3	-3505.94	1236.97			
		7.0	-6900.94	-7869.05			
1	-6608.08						
		.0	2009.41	-1488.82			
		.8	1116.91	-316.45			
		1.5	224.41	186.55			
		2.3	-668.09	20.17			
		3.0	-1560.59	-815.59			
1	-4411.73						
		.0	6638.84	-6859.12			
		1.8	3243.84	1788.22			
		3.5	-151.16	4494.31			
		5.3	-3546.16	1259.15			
		7.0	-6941.16	-7917.25			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-16223.18						
		.0	19094.80	-66999.57			
		.8	19094.80	-52678.47			
		1.5	19094.80	-38357.37			
		2.3	19094.80	-24036.27			
		3.0	19094.80	-9715.17			
	1-13370.94						
		.0	15981.76	-26716.96			
		.8	15981.76	-14730.65			
		1.5	15981.76	-2744.33			
		2.3	15981.76	9241.99			
		3.0	15981.76	21228.30			
	1-11278.78						
		.0	12471.35	1790.31			
		.8	12471.35	11143.82			
		1.5	12471.35	20497.33			
		2.3	12471.35	29850.85			
		3.0	12471.35	39204.36			
	1 -4377.50						
		.0	-14824.08	36722.81			
		.8	-14824.08	25604.74			
		1.5	-14824.08	14486.68			
		2.3	-14824.08	3368.62			
		3.0	-14824.08	-7749.45			
	1-11497.49						
		.0	-1667.53	1893.85			
		.8	-1667.53	643.20			
		1.5	-1667.53	-607.45			
		2.3	-1667.53	-1858.10			
		3.0	-1667.53	-3108.75			
	1-10922.26						
		.0	-3379.32	6282.75			
		.8	-3379.32	3748.27			
		1.5	-3379.32	1213.78			
		2.3	-3379.32	-1320.71			
		3.0	-3379.32	-3855.19			
	1 -8645.32						
		.0	-3439.93	6654.47			
		.8	-3439.93	4074.52			
		1.5	-3439.93	1494.57			
		2.3	-3439.93	-1085.38			
		3.0	-3439.93	-3665.33			
	1 -3559.12						
		.0	-5059.48	8077.59			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-5059.48	4282.98			
		1.5	-5059.48	488.36			
		2.3	-5059.48	-3306.25			
		3.0	-5059.48	-7100.86			
	1-79978.25						
		.0	28075.82	-75266.68			
		.8	28075.82	-54209.81			
		1.5	28075.82	-33152.95			
		2.3	28075.82	-12096.09			
		3.0	28075.82	8960.78			
	1-70392.24						
		.0	30499.23	-50075.57			
		.8	30499.23	-27201.15			
		1.5	30499.23	-4326.73			
		2.3	30499.23	18547.69			
		3.0	30499.23	41422.11			
	1-61355.48						
		.0	27835.84	-22481.84			
		.8	27835.84	-1604.96			
		1.5	27835.84	19271.92			
		2.3	27835.84	40148.80			
		3.0	27835.84	61025.68			
	1-31177.37						
		.0	-6780.26	25033.65			
		.8	-6780.26	19948.45			
		1.5	-6780.26	14863.26			
		2.3	-6780.26	9778.07			
		3.0	-6780.26	4692.87			
	1-39186.69						
		.0	6605.78	-10347.84			
		.8	6605.78	-5393.50			
		1.5	6605.78	-439.17			
		2.3	6605.78	4515.17			
		3.0	6605.78	9469.50			
	1-31284.42						
		.0	4768.88	-5945.04			
		.8	4768.88	-2368.38			
		1.5	4768.88	1208.28			
		2.3	4768.88	4784.94			
		3.0	4768.88	8361.60			
	1-21328.01						
		.0	4277.74	-5263.50			
		.8	4277.74	-2055.19			
		1.5	4277.74	1153.12			
		2.3	4277.74	4361.43			

A Statis Portal (8 lantai) Kg/m

1 E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	4277.74	7569.73			
1	-8834.33						
		.0	3557.45	-4328.16			
		.8	3557.45	-1660.07			
		1.5	3557.45	1008.02			
		2.3	3557.45	3676.11			
		3.0	3557.45	6344.20			
1**********							
		.0	23233.66	-70647.16			
		.8	23233.66	-53221.92			
		1.5	23233.66	-35796.67			
		2.3	23233.66	-18371.42			
		3.0	23233.66	-946.18			
1**********							
		.0	22217.96	-37456.93			
		.8	22217.96	-20793.46			
		1.5	22217.96	-4129.99			
		2.3	22217.96	12533.47			
		3.0	22217.96	29196.94			
1**********							
		.0	21615.68	-13000.00			
		.8	21615.68	3211.76			
		1.5	21615.68	19423.52			
		2.3	21615.68	35635.28			
		3.0	21615.68	51847.04			
1	-54916.88						
		.0	-14134.88	36421.41			
		.8	-14134.88	25820.25			
		1.5	-14134.88	15219.09			
		2.3	-14134.88	4617.93			
		3.0	-14134.88	-5983.23			
1	-45348.16						
		.0	-609.40	585.44			
		.8	-609.40	128.39			
		1.5	-609.40	-328.66			
		2.3	-609.40	-785.72			
		3.0	-609.40	-1242.77			
1	-27835.17						
		.0	-2641.86	5207.61			
		.8	-2641.86	3226.21			
		1.5	-2641.86	1244.81			
		2.3	-2641.86	-736.59			
		3.0	-2641.86	-2717.98			
1	-15043.52						

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-2861.64	5377.28			
		.8	-2861.64	3231.05			
		1.5	-2861.64	1084.82			
		2.3	-2861.64	-1061.42			
		3.0	-2861.64	-3207.65			
1	-5455.58						
		.0	-4154.20	6462.62			
		.8	-4154.20	3346.97			
		1.5	-4154.20	231.32			
		2.3	-4154.20	-2884.34			
		3.0	-4154.20	-5999.99			
1	*********						
		.0	24447.72	-71608.16			
		.8	24447.72	-53272.37			
		1.5	24447.72	-34936.58			
		2.3	24447.72	-16600.79			
		3.0	24447.72	1735.00			
1	*********						
		.0	23386.06	-40571.38			
		.8	23386.06	-23031.84			
		1.5	23386.06	-5492.29			
		2.3	23386.06	12047.25			
		3.0	23386.06	29586.80			
1	*********						
		.0	24628.13	-16846.87			
		.8	24628.13	1624.22			
		1.5	24628.13	20095.32			
		2.3	24628.13	38566.42			
		3.0	24628.13	57037.52			
1	-77497.90						
		.0	-6279.61	26888.99			
		.8	-6279.61	22179.28			
		1.5	-6279.61	17469.57			
		2.3	-6279.61	12759.86			
		3.0	-6279.61	8050.14			
1	-57383.17						
		.0	5457.19	-7905.09			
		.8	5457.19	-3812.20			
		1.5	5457.19	280.69			
		2.3	5457.19	4373.58			
		3.0	5457.19	8466.47			
1	-37998.36						
		.0	5402.18	-7351.46			
		.8	5402.18	-3299.83			
		1.5	5402.18	751.80			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	5402.18	4803.43			
		3.0	5402.18	8855.06			
1	-21299.51						
		.0	4925.00	-6139.56			
		.8	4925.00	-2445.81			
		1.5	4925.00	1247.95			
		2.3	4925.00	4941.70			
		3.0	4925.00	8635.45			
1	-6942.78						
		.0	4414.85	-5321.81			
		.8	4414.85	-2010.67			
		1.5	4414.85	1300.47			
		2.3	4414.85	4611.60			
		3.0	4414.85	7922.74			
1	346.04						
		.0	2852.24	17001.79			
		1.8	-2772.26	17071.77			
		3.5	-8396.76	7298.88			
		5.3	-14021.26	-12316.89			
		7.0	-19645.76	-41775.53			
1	-2023.59						
		.0	2092.16	19437.99			
		1.8	-3532.34	18177.84			
		3.5	-9156.84	7074.81			
		5.3	-14781.34	-13871.10			
		7.0	-20405.84	-44659.88			
1	-2077.36						
		.0	-10059.76	17260.82			
		.8	-11274.76	9260.38			
		1.5	-12489.76	348.68			
		2.3	-13704.76	-9474.26			
		3.0	-14919.76	-20208.45			
1	639.79						
		.0	-11369.08	19244.06			
		.8	-12584.08	10261.63			
		1.5	-13799.08	367.94			
		2.3	-15014.08	-10436.99			
		3.0	-16229.08	-22153.17			
1	-1061.66						
		.0	2876.33	16302.30			
		1.8	-2748.17	16414.44			
		3.5	-8372.67	6683.71			
		5.3	-13997.17	-12889.90			
		7.0	-19621.67	-42306.38			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	1242.07						
		.0	1752.22	20043.78			
		1.8	-3872.28	18188.73			
		3.5	-9496.78	6490.80			
		5.3	-15121.28	-15050.00			
		7.0	-20745.78	-46433.67			
1	18994.43						
		.0	6901.28	2481.55			
		1.8	1266.28	9628.17			
		3.5	-4368.72	6913.53			
		5.3	-10003.72	-5662.35			
		7.0	-15638.72	-28099.48			
1	15704.32						
		.0	10420.88	-9783.72			
		1.8	4785.88	3522.19			
		3.5	-849.12	6966.86			
		5.3	-6484.12	550.28			
		7.0	-12119.12	-15727.56			
1	9506.88						
		.0	10335.03	-9459.40			
		1.8	4700.03	3696.27			
		3.5	-934.97	6990.69			
		5.3	-6569.97	423.86			
		7.0	-12204.97	-16004.22			
1	1638.77						
		.0	10650.60	-10564.69			
		1.8	5015.60	3143.23			
		3.5	-619.40	6989.91			
		5.3	-6254.40	975.34			
		7.0	-11889.40	-14900.49			
1	-5555.82						
		.0	10982.32	-11774.05			
		1.8	5347.32	2514.38			
		3.5	-287.68	6941.56			
		5.3	-5922.68	1507.49			
		7.0	-11557.68	-13787.83			
1	12798.66						
		.0	-3001.47	7682.50			
		.8	-4703.97	4792.95			
		1.5	-6406.47	626.53			
		2.3	-8108.97	-4816.76			
		3.0	-9811.47	-11536.93			
1	12060.56						
		.0	2698.92	-833.25			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	996.42	552.50			
		1.5	-706.08	661.37			
		2.3	-2408.58	-506.63			
		3.0	-4111.08	-2951.51			
5							
1	7084.80						
		.0	2587.59	-655.45			
		.8	885.09	646.81			
		1.5	-817.41	672.19			
		2.3	-2519.91	-579.31			
		3.0	-4222.41	-3107.67			
9							
1	-770.17						
		.0	3025.24	-1308.35			
		.8	1322.74	322.15			
		1.5	-379.76	675.76			
		2.3	-2082.26	-247.49			
		3.0	-3784.76	-2447.62			
2							
1	-6527.11						
		.0	3408.66	-1890.16			
		.8	1706.16	27.90			
		1.5	3.66	669.08			
		2.3	-1698.84	33.38			
		3.0	-3401.34	-1879.18			
1							
1	16072.84						
		.0	6476.10	3654.34			
		1.8	841.10	10056.88			
		3.5	-4793.90	6598.18			
		5.3	-10428.90	-6721.77			
		7.0	-16063.90	-29902.97			
14							
1	30269.50						
		.0	10386.01	-9711.68			
		1.8	4751.01	3533.21			
		3.5	-883.99	6916.86			
		5.3	-6518.99	439.25			
		7.0	-12153.99	-15899.60			
47							
1	16810.41						
		.0	10396.98	-9663.78			
		1.8	4761.98	3600.31			
		3.5	-873.02	7003.14			
		5.3	-6508.02	544.73			
		7.0	-12143.02	-15774.93			
50							
1	10717.06						
		.0	10647.95	-10612.01			
		1.8	5012.95	3091.29			
		3.5	-622.05	6933.33			
		5.3	-6257.05	914.13			

sa Statis Portal (8 lantai) Kg/m

ME ELEMENT FORCES

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-11892.05	-14966.33			
1	5893.34						
		.0	10933.41	-11587.99			
		1.8	5298.41	2614.84			
		3.5	-336.59	6956.43			
		5.3	-5971.59	1436.77			
		7.0	-11606.59	-13944.14			
1	-10287.94						
		.0	6687.17	-7120.79			
		1.8	3292.17	1611.14			
		3.5	-102.83	4401.81			
		5.3	-3497.83	1251.24			
		7.0	-6892.83	-7840.59			
1	-6664.14						
		.0	2001.50	-1475.47			
		.8	1109.00	-309.03			
		1.5	216.50	188.04			
		2.3	-676.00	15.73			
		3.0	-1568.50	-825.96			
1	-4414.85						
		.0	6637.22	-6853.27			
		1.8	3242.22	1791.24			
		3.5	-152.78	4494.49			
		5.3	-3547.78	1256.50			
		7.0	-6942.78	-7922.74			

Sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-17058.26						
		.0	18656.23	-68474.22			
		.8	18656.23	-54482.04			
		1.5	18656.23	-40489.87			
		2.3	18656.23	-26497.70			
		3.0	18656.23	-12505.52			
	1-14713.64						
		.0	14599.04	-31282.30			
		.8	14599.04	-20333.02			
		1.5	14599.04	-9383.75			
		2.3	14599.04	1565.53			
		3.0	14599.04	12514.81			
	1-14528.06						
		.0	13893.68	-13805.86			
		.8	13893.68	-3385.60			
		1.5	13893.68	7034.66			
		2.3	13893.68	17454.91			
		3.0	13893.68	27875.17			
	1-12770.87						
		.0	10408.95	7252.14			
		.8	10408.95	15058.85			
		1.5	10408.95	22865.57			
		2.3	10408.95	30672.28			
		3.0	10408.95	38479.00			
	1 -5658.87						
		.0	-14812.57	36727.60			
		.8	-14812.57	25618.18			
		1.5	-14812.57	14508.75			
		2.3	-14812.57	3399.33			
		3.0	-14812.57	-7710.10			
	1-11213.31						
		.0	-1975.37	2657.14			
		.8	-1975.37	1175.62			
		1.5	-1975.37	-305.91			
		2.3	-1975.37	-1787.44			
		3.0	-1975.37	-3268.97			
	1 -8612.68						
		.0	-3558.83	7063.84			
		.8	-3558.83	4394.72			
		1.5	-3558.83	1725.60			
		2.3	-3558.83	-943.53			
		3.0	-3558.83	-3612.65			
	1 -3620.71						
		.0	-5083.32	8132.31			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-5083.32	4319.82			
		1.5	-5083.32	507.33			
		2.3	-5083.32	-3305.16			
		3.0	-5083.32	-7117.64			
	1-80702.88						
		.0	27845.71	-77065.86			
		.8	27845.71	-56181.57			
		1.5	27845.71	-35297.28			
		2.3	27845.71	-14413.00			
		3.0	27845.71	6471.29			
)	1-71416.51						
		.0	30722.50	-55557.58			
		.8	30722.50	-32515.70			
		1.5	30722.50	-9473.82			
		2.3	30722.50	13568.05			
		3.0	30722.50	36609.93			
)	1-63145.98						
		.0	28965.08	-37804.24			
		.8	28965.08	-16080.43			
		1.5	28965.08	5643.38			
		2.3	28965.08	27367.19			
		3.0	28965.08	49090.99			
4	1-54246.97						
		.0	25520.98	-16678.40			
		.8	25520.98	2462.33			
		1.5	25520.98	21603.07			
		2.3	25520.98	40743.80			
		3.0	25520.98	59884.53			
.8	1-25300.91						
		.0	-6853.47	25151.75			
		.8	-6853.47	20011.65			
		1.5	-6853.47	14871.56			
		2.3	-6853.47	9731.46			
		3.0	-6853.47	4591.36			
22	1-31044.66						
		.0	6112.62	-9297.65			
		.8	6112.62	-4713.19			
		1.5	6112.62	-128.72			
		2.3	6112.62	4455.74			
		3.0	6112.62	9040.20			
26	1-21076.66						
		.0	4166.21	-4892.05			
		.8	4166.21	-1767.40			
		1.5	4166.21	1357.26			
		2.3	4166.21	4481.91			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	4166.21	7606.57			
1	-8750.17						
		.0	3542.64	-4292.50			
		.8	3542.64	-1635.52			
		1.5	3542.64	1021.46			
		2.3	3542.64	3678.44			
		3.0	3542.64	6335.42			
1	**********						
		.0	23137.81	-72614.02			
		.8	23137.81	-55260.67			
		1.5	23137.81	-37907.31			
		2.3	23137.81	-20553.95			
		3.0	23137.81	-3200.60			
1	**********						
		.0	22503.87	-42682.31			
		.8	22503.87	-25804.41			
		1.5	22503.87	-8926.51			
		2.3	22503.87	7951.39			
		3.0	22503.87	24829.29			
1	-99588.87						
		.0	21460.03	-26965.64			
		.8	21460.03	-10870.62			
		1.5	21460.03	5224.40			
		2.3	21460.03	21319.42			
		3.0	21460.03	37414.44			
5							
1	-81496.57						
		.0	19111.04	-6780.79			
		.8	19111.04	7552.49			
		1.5	19111.04	21885.77			
		2.3	19111.04	36219.05			
		3.0	19111.04	50552.32			
9							
1	-36686.96						
		.0	-14177.33	36441.23			
		.8	-14177.33	25808.23			
		1.5	-14177.33	15175.24			
		2.3	-14177.33	4542.24			
		3.0	-14177.33	-6090.76			
3							
1	-29506.66						
		.0	-1116.97	1619.48			
		.8	-1116.97	781.75			
		1.5	-1116.97	-55.98			
		2.3	-1116.97	-893.70			
		3.0	-1116.97	-1731.43			
7							
1	-15128.87						

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3163.30	6133.60			
		.8	-3163.30	3761.12			
		1.5	-3163.30	1388.65			
		2.3	-3163.30	-983.83			
		3.0	-3163.30	-3356.31			
1	-5434.59						
		.0	-4105.41	6334.71			
		.8	-4105.41	3255.65			
		1.5	-4105.41	176.60			
		2.3	-4105.41	-2902.46			
		3.0	-4105.41	-5981.52			
1*********							
		.0	24252.25	-73499.68			
		.8	24252.25	-55310.49			
		1.5	24252.25	-37121.31			
		2.3	24252.25	-18932.12			
		3.0	24252.25	-742.94			
1*********							
		.0	23302.59	-44833.69			
		.8	23302.59	-27356.74			
		1.5	23302.59	-9879.80			
		2.3	23302.59	7597.15			
		3.0	23302.59	25074.09			
1*********							
		.0	21280.22	-26891.12			
		.8	21280.22	-10930.96			
		1.5	21280.22	5029.21			
		2.3	21280.22	20989.37			
		3.0	21280.22	36949.54			
1	-89775.60						
		.0	22264.03	-10730.36			
		.8	22264.03	5967.66			
		1.5	22264.03	22665.68			
		2.3	22264.03	39363.70			
		3.0	22264.03	56061.72			
1	-55800.61						
		.0	-6295.85	26781.25			
		.8	-6295.85	22059.37			
		1.5	-6295.85	17337.48			
		2.3	-6295.85	12615.59			
		3.0	-6295.85	7893.71			
1	-37994.33						
		.0	5135.71	-7296.42			
		.8	5135.71	-3444.63			
		1.5	5135.71	407.15			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	5135.71	4258.93			
		3.0	5135.71	8110.72			
1	-21328.99						
		.0	5180.59	-6813.00			
		.8	5180.59	-2927.56			
		1.5	5180.59	957.88			
		2.3	5180.59	4843.32			
		3.0	5180.59	8728.75			
1	-6943.80						
		.0	4388.28	-5239.84			
		.8	4388.28	-1948.63			
		1.5	4388.28	1342.58			
		2.3	4388.28	4633.78			
		3.0	4388.28	7924.99			
1	1293.19						
		.0	2344.62	18776.78			
		1.8	-3279.88	17958.43			
		3.5	-8904.38	7297.20			
		5.3	-14528.88	-13206.90			
		7.0	-20153.38	-43553.87			
1	-4823.64						
		.0	185.58	26320.67			
		1.8	-5438.92	21723.99			
		3.5	-11063.42	7284.45			
		5.3	-16687.92	-16997.97			
		7.0	-22312.42	-51123.27			
1	-4809.28						
		.0	1757.19	20623.03			
		1.8	-3867.31	18776.67			
		3.5	-9491.81	7087.44			
		5.3	-15116.31	-14444.67			
		7.0	-20740.81	-45819.65			
1	-1583.59						
		.0	-10867.01	18474.99			
		.8	-12082.01	9869.11			
		1.5	-13297.01	351.98			
		2.3	-14512.01	-10076.40			
		3.0	-15727.01	-21416.03			
1	-3066.21						
		.0	-14041.89	23290.90			
		.8	-15256.89	12303.85			
		1.5	-16471.89	405.56			
		2.3	-17686.89	-12403.98			
		3.0	-18901.89	-26124.77			

Statis Portal (8 lantai) Kg/m

1 E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	-1365.18						
		.0	-11841.80	19949.74			
		.8	-13056.80	10612.77			
		1.5	-14271.80	364.55			
		2.3	-15486.80	-10794.93			
		3.0	-16701.80	-22865.65			
1	-949.65						
		.0	2369.51	18065.69			
		1.8	-3254.99	17290.89			
		3.5	-8879.49	6673.22			
		5.3	-14503.99	-13787.33			
		7.0	-20128.49	-44090.75			
1	-2022.37						
		.0	158.23	25670.17			
		1.8	-5466.27	21025.64			
		3.5	-11090.77	6538.23			
		5.3	-16715.27	-17792.05			
		7.0	-22339.77	-51965.21			
1	983.81						
		.0	1390.50	21329.58			
		1.8	-4234.00	18841.52			
		3.5	-9858.50	6510.59			
		5.3	-15483.00	-15663.22			
		7.0	-21107.50	-47679.90			
1	14162.52						
		.0	7112.00	1751.40			
		1.8	1477.00	9266.78			
		3.5	-4158.00	6920.91			
		5.3	-9793.00	-5286.20			
		7.0	-15428.00	-27354.57			
1	9881.03						
		.0	10625.30	-10493.76			
		1.8	4990.30	3169.89			
		3.5	-644.70	6972.29			
		5.3	-6279.70	913.44			
		7.0	-11914.70	-15006.67			
1	2310.11						
		.0	10601.18	-10384.25			
		1.8	4966.18	3237.19			
		3.5	-668.82	6997.38			
		5.3	-6303.82	896.32			
		7.0	-11938.82	-15065.99			
1	-5410.56						
		.0	10984.23	-11777.08			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.8	5349.23	2514.70			
		3.5	-285.77	6945.22			
		5.3	-5920.77	1514.49			
		7.0	-11555.77	-13777.48			
1	8891.73						
		.0	-2661.68	7182.23			
		.8	-4364.18	4547.54			
		1.5	-6066.68	635.97			
		2.3	-7769.18	-4552.47			
		3.0	-9471.68	-11017.79			
1	6802.81						
		.0	2969.73	-1235.15			
		.8	1267.23	353.71			
		1.5	-435.27	665.70			
		2.3	-2137.77	-299.18			
		3.0	-3840.27	-2540.95			
1	1175.40						
		.0	2927.70	-1164.98			
		.8	1225.20	392.36			
		1.5	-477.30	672.82			
		2.3	-2179.80	-323.59			
		3.0	-3882.30	-2596.87			
1	-6242.67						
		.0	3407.06	-1880.94			
		.8	1704.56	35.92			
		1.5	2.06	675.90			
		2.3	-1700.44	39.00			
		3.0	-3402.94	-1874.77			
1	13652.59						
		.0	6709.19	2873.61			
		1.8	1074.19	9684.07			
		3.5	-4560.81	6633.28			
		5.3	-10195.81	-6278.77			
		7.0	-15830.81	-29052.06			
1	25073.09						
		.0	10593.43	-10415.04			
		1.8	4958.43	3192.84			
		3.5	-676.57	6939.46			
		5.3	-6311.57	824.83			
		7.0	-11946.57	-15151.05			
1	11159.99						
		.0	10646.84	-10536.42			
		1.8	5011.84	3164.94			
		3.5	-623.16	7005.04			
		5.3	-6258.16	983.89			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-11893.16	-14898.51			
1	5678.38						
		.0	10933.85	-11601.94			
		1.8	5298.85	2601.67			
		3.5	-336.15	6944.04			
		5.3	-5971.15	1425.16			
		7.0	-11606.15	-13954.98			
1	-10432.36						
		.0	6692.73	-7137.35			
		1.8	3297.73	1604.29			
		3.5	-97.27	4404.69			
		5.3	-3492.27	1263.84			
		7.0	-6887.27	-7818.27			
1	-6753.55						
		.0	1992.56	-1461.90			
		.8	1100.06	-302.17			
		1.5	207.56	188.19			
		2.3	-684.94	9.17			
		3.0	-1577.44	-839.22			
1	-4388.28						
		.0	6636.20	-6848.38			
		1.8	3241.20	1794.34			
		3.5	-153.80	4495.81			
		5.3	-3548.80	1256.04			
		7.0	-6943.80	-7924.99			

Ba Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-17835.77						
		.0	18425.18	-68525.10			
		.8	18425.18	-54706.22			
		1.5	18425.18	-40887.33			
		2.3	18425.18	-27068.44			
		3.0	18425.18	-13249.56			
	1-15588.18						
		.0	14220.83	-32364.27			
		.8	14220.83	-21698.65			
		1.5	14220.83	-11033.02			
		2.3	14220.83	-367.40			
		3.0	14220.83	10298.23			
	1-15890.10						
		.0	12616.59	-17729.72			
		.8	12616.59	-8267.28			
		1.5	12616.59	1195.16			
		2.3	12616.59	10657.60			
		3.0	12616.59	20120.04			
	1-15850.67						
		.0	11629.35	-6703.71			
		.8	11629.35	2018.30			
		1.5	11629.35	10740.32			
		2.3	11629.35	19462.33			
		3.0	11629.35	28184.34			
	1-13372.05						
		.0	7973.82	10093.42			
		.8	7973.82	16073.79			
		1.5	7973.82	22054.15			
		2.3	7973.82	28034.52			
		3.0	7973.82	34014.89			
	1 -5730.73						
		.0	-13860.83	34107.68			
		.8	-13860.83	23712.06			
		1.5	-13860.83	13316.43			
		2.3	-13860.83	2920.81			
		3.0	-13860.83	-7474.82			
	1 -8725.01						
		.0	-2264.54	3729.67			
		.8	-2264.54	2031.26			
		1.5	-2264.54	332.86			
		2.3	-2264.54	-1365.55			
		3.0	-2264.54	-3063.96			
	1 -3486.43						
		.0	-5200.35	8505.29			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-5200.35	4605.02			
		1.5	-5200.35	704.76			
		2.3	-5200.35	-3195.51			
		3.0	-5200.35	-7095.78			
	1-80536.02						
		.0	27628.77	-77149.73			
		.8	27628.77	-56428.15			
		1.5	27628.77	-35706.57			
		2.3	27628.77	-14985.00			
		3.0	27628.77	5736.58			
;	1-71318.04						
		.0	30517.08	-56879.61			
		.8	30517.08	-33991.80			
		1.5	30517.08	-11103.99			
		2.3	30517.08	11783.82			
		3.0	30517.08	34671.62			
)	1-63329.42						
		.0	29155.88	-42605.61			
		.8	29155.88	-20738.70			
		1.5	29155.88	1128.20			
		2.3	29155.88	22995.11			
		3.0	29155.88	44862.02			
4	1-55116.73						
		.0	26485.24	-30369.14			
		.8	26485.24	-10505.21			
		1.5	26485.24	9358.72			
		2.3	26485.24	29222.65			
		3.0	26485.24	49086.58			
8	1-45797.08						
		.0	22241.59	-12461.53			
		.8	22241.59	4219.66			
		1.5	22241.59	20900.85			
		2.3	22241.59	37582.04			
		3.0	22241.59	54263.23			
2	1-18890.00						
		.0	-5989.54	22636.33			
		.8	-5989.54	18144.18			
		1.5	-5989.54	13652.03			
		2.3	-5989.54	9159.88			
		3.0	-5989.54	4667.73			
6	1-21113.57						
		.0	5375.37	-7901.09			
		.8	5375.37	-3869.56			
		1.5	5375.37	161.96			
		2.3	5375.37	4193.49			

. Statis Portal (8 lantai) Kg/m

1 E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	5375.37	8225.01			
1	-8692.38						
		.0	3436.92	-3959.69			
		.8	3436.92	-1382.00			
		1.5	3436.92	1195.69			
		2.3	3436.92	3773.38			
		3.0	3436.92	6351.06			
1	**********						
		.0	22904.25	-72694.56			
		.8	22904.25	-55516.37			
		1.5	22904.25	-38338.18			
		2.3	22904.25	-21159.99			
		3.0	22904.25	-3981.80			
1	**********						
		.0	22383.02	-44071.54			
		.8	22383.02	-27284.28			
		1.5	22383.02	-10497.02			
		2.3	22383.02	6290.25			
		3.0	22383.02	23077.51			
1	-97173.69						
		.0	21689.20	-31535.31			
		.8	21689.20	-15268.41			
		1.5	21689.20	998.50			
		2.3	21689.20	17265.40			
		3.0	21689.20	33532.30			
1	-78113.58						
		.0	18958.46	-19306.56			
		.8	18958.46	-5087.71			
		1.5	18958.46	9131.13			
		2.3	18958.46	23349.98			
		3.0	18958.46	37568.82			
1	-60419.27						
		.0	15679.22	-2343.01			
		.8	15679.22	9416.40			
		1.5	15679.22	21175.82			
		2.3	15679.22	32935.23			
		3.0	15679.22	44694.64			
1	-21599.85						
		.0	-13299.93	33824.64			
		.8	-13299.93	23849.69			
		1.5	-13299.93	13874.74			
		2.3	-13299.93	3899.79			
		3.0	-13299.93	-6075.15			
1	-16555.27						

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-1803.02	2924.44			
		.8	-1803.02	1572.17			
		1.5	-1803.02	219.91			
		2.3	-1803.02	-1132.36			
		3.0	-1803.02	-2484.63			
1	-5468.38						
		.0	-4344.03	7003.45			
		.8	-4344.03	3745.43			
		1.5	-4344.03	487.41			
		2.3	-4344.03	-2770.61			
		3.0	-4344.03	-6028.63			
4	1*********						
		.0	23978.80	-73546.24			
		.8	23978.80	-55562.14			
		1.5	23978.80	-37578.05			
		2.3	23978.80	-19593.95			
		3.0	23978.80	-1609.85			
8	1*********						
		.0	23047.07	-46065.70			
		.8	23047.07	-28780.40			
		1.5	23047.07	-11495.09			
		2.3	23047.07	5790.21			
		3.0	23047.07	23075.52			
2	1*********						
		.0	21168.34	-30577.19			
		.8	21168.34	-14700.94			
		1.5	21168.34	1175.31			
		2.3	21168.34	17051.56			
		3.0	21168.34	32927.82			
6	1-87175.03						
		.0	19249.95	-19736.31			
		.8	19249.95	-5298.85			
		1.5	19249.95	9138.62			
		2.3	19249.95	23576.08			
		3.0	19249.95	38013.55			
0	1-66811.60						
		.0	19351.38	-7018.36			
		.8	19351.38	7495.17			
		1.5	19351.38	22008.70			
		2.3	19351.38	36522.23			
		3.0	19351.38	51035.77			
4	1-36539.10						
		.0	-5421.08	23868.00			
		.8	-5421.08	19802.19			
		1.5	-5421.08	15736.38			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	-5421.08	11670.57			
		3.0	-5421.08	7604.75			
	1-21289.74						
		.0	4943.35	-6757.13			
		.8	4943.35	-3049.62			
		1.5	4943.35	657.90			
		2.3	4943.35	4365.41			
		3.0	4943.35	8072.93			
	1 -6941.71						
		.0	4588.25	-5828.29			
		.8	4588.25	-2387.11			
		1.5	4588.25	1054.08			
		2.3	4588.25	4495.26			
		3.0	4588.25	7936.45			
3	1 1435.35						
		.0	2247.59	19114.72			
		1.8	-3376.91	18126.56			
		3.5	-9001.41	7295.53			
		5.3	-14625.91	-13378.38			
		7.0	-20250.41	-43895.16			
5	1 -3933.75						
		.0	-301.92	28027.95			
		1.8	-5926.42	22578.15			
		3.5	-11550.92	7285.48			
		5.3	-17175.42	-17850.07			
		7.0	-22799.92	-52828.49			
9	1 -7319.76						
		.0	39.43	26823.75			
		1.8	-5585.07	21971.31			
		3.5	-11209.57	7276.00			
		5.3	-16834.07	-17262.19			
		7.0	-22458.57	-51643.25			
2	1 -7421.47						
		.0	2478.63	18090.92			
		1.8	-3145.87	17507.08			
		3.5	-8770.37	7080.36			
		5.3	-14394.87	-13189.23			
		7.0	-20019.37	-43301.70			
4	1 -1452.96						
		.0	-11032.44	18721.02			
		.8	-12247.44	9991.07			
		1.5	-13462.44	349.87			
		2.3	-14677.44	-10202.58			
		3.0	-15892.44	-21666.28			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	-2572.55						
		.0	-14811.30	24448.75			
		.8	-16026.30	12884.64			
		1.5	-17241.30	409.29			
		2.3	-18456.30	-12977.31			
		3.0	-19671.30	-27275.16			
1	-4649.13						
		.0	-14245.87	23587.90			
		.8	-15460.87	12447.87			
		1.5	-16675.87	396.59			
		2.3	-17890.87	-12565.93			
		3.0	-19105.87	-26439.71			
1	-3177.82						
		.0	-10699.73	18246.41			
		.8	-11914.73	9765.98			
		1.5	-13129.73	374.31			
		2.3	-14344.73	-9928.61			
		3.0	-15559.73	-21142.78			
1	-931.72						
		.0	2266.24	18423.46			
		1.8	-3358.26	17467.94			
		3.5	-8982.76	6669.55			
		5.3	-14607.26	-13971.71			
		7.0	-20231.76	-44455.85			
1	-1878.74						
		.0	-321.05	27337.65			
		1.8	-5945.55	21854.38			
		3.5	-11570.05	6528.22			
		5.3	-17194.55	-18640.81			
		7.0	-22819.05	-53652.71			
1	-1918.38						
		.0	-45.75	26399.15			
		1.8	-5670.25	21397.64			
		3.5	-11294.75	6553.26			
		5.3	-16919.25	-18134.00			
		7.0	-22543.75	-52664.13			
1	101.42						
		.0	2134.58	18769.05			
		1.8	-3489.92	17583.12			
		3.5	-9114.42	6554.32			
		5.3	-14738.92	-14317.36			
		7.0	-20363.42	-45031.91			
1	7988.66						
		.0	7641.31	-92.80			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.8	2006.31	8348.88			
		3.5	-3628.69	6929.30			
		5.3	-9263.69	-4351.53			
		7.0	-14898.69	-25493.61			
1	2697.80						
		.0	10859.46	-11308.78			
		1.8	5224.46	2764.64			
		3.5	-410.54	6976.82			
		5.3	-6045.54	1327.75			
		7.0	-11680.54	-14182.58			
1	-4717.48						
		.0	10935.32	-11598.50			
		1.8	5300.32	2607.69			
		3.5	-334.68	6952.62			
		5.3	-5969.68	1436.31			
		7.0	-11604.68	-13941.26			
1	3984.68						
		.0	-1845.34	5966.74			
		.8	-3547.84	3944.30			
		1.5	-5250.34	644.98			
		2.3	-6952.84	-3931.21			
		3.0	-8655.34	-9784.28			
1	847.01						
		.0	3274.77	-1691.62			
		.8	1572.27	126.02			
		1.5	-130.23	666.78			
		2.3	-1832.73	-69.32			
		3.0	-3535.23	-2082.31			
1	-4531.25						
		.0	3322.59	-1757.68			
		.8	1620.09	95.83			
		1.5	-82.41	672.46			
		2.3	-1784.91	-27.79			
		3.0	-3487.41	-2004.90			
1	10172.01						
		.0	7288.46	897.40			
		1.8	1653.46	8721.58			
		3.5	-3981.54	6684.51			
		5.3	-9616.54	-5213.81			
		7.0	-15251.54	-26973.38			
1	18586.62						
		.0	10822.63	-11208.59			
		1.8	5187.63	2800.39			
		3.5	-447.37	6948.12			
		5.3	-6082.37	1234.61			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-11717.37	-14340.16			
1	6029.41						
		.0	10933.34	-11534.05			
		1.8	5298.34	2668.67			
		3.5	-336.66	7010.15			
		5.3	-5971.66	1490.37			
		7.0	-11606.66	-13890.66			
1	-10268.18						
		.0	6688.02	-7116.77			
		1.8	3293.02	1616.64			
		3.5	-101.98	4408.81			
		5.3	-3496.98	1259.72			
		7.0	-6891.98	-7830.62			
1	-6628.73						
		.0	1998.54	-1460.94			
		.8	1106.04	-296.72			
		1.5	213.54	198.12			
		2.3	-678.96	23.58			
		3.0	-1571.46	-820.32			
1	-4588.25						
		.0	6638.29	-6874.44			
		1.8	3243.29	1771.93			
		3.5	-151.71	4477.05			
		5.3	-3546.71	1240.93			
		7.0	-6941.71	-7936.45			

Statis Portal (8 lantai) Kg/m

1 E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-18936.49						
		.0	18203.08	-68016.90			
		.8	18203.08	-54364.59			
		1.5	18203.08	-40712.28			
		2.3	18203.08	-27059.97			
		3.0	18203.08	-13407.65			
	1-16651.74						
		.0	14002.49	-32390.45			
		.8	14002.49	-21888.58			
		1.5	14002.49	-11386.72			
		2.3	14002.49	-884.85			
		3.0	14002.49	9617.01			
	1-17003.52						
		.0	12273.57	-18583.21			
		.8	12273.57	-9378.04			
		1.5	12273.57	-172.86			
		2.3	12273.57	9032.31			
		3.0	12273.57	18237.48			
	1-17340.03						
		.0	10538.56	-9901.49			
		.8	10538.56	-1997.57			
		1.5	10538.56	5906.35			
		2.3	10538.56	13810.26			
		3.0	10538.56	21714.18			
	1-16257.27						
		.0	8904.02	-1417.18			
		.8	8904.02	5260.83			
		1.5	8904.02	11938.85			
		2.3	8904.02	18616.86			
		3.0	8904.02	25294.87			
	1-12444.20						
		.0	5088.39	11890.91			
		.8	5088.39	15707.20			
		1.5	5088.39	19523.49			
		2.3	5088.39	23339.79			
		3.0	5088.39	27156.08			
5	1 -4060.67						
		.0	-12145.12	29837.66			
		.8	-12145.12	20728.82			
		1.5	-12145.12	11619.99			
		2.3	-12145.12	2511.15			
		3.0	-12145.12	-6597.69			
9	1 -3553.73						
		.0	-4176.47	5681.86			

Statis Portal (8 lantai) Kg/m

E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-4176.47	2549.51			
		1.5	-4176.47	-582.85			
		2.3	-4176.47	-3715.20			
		3.0	-4176.47	-6847.55			
1	-79602.23						
		.0	27380.52	-76615.52			
		.8	27380.52	-56080.12			
		1.5	27380.52	-35544.73			
		2.3	27380.52	-15009.34			
		3.0	27380.52	5526.05			
1	-70364.67						
		.0	30277.78	-56876.77			
		.8	30277.78	-34168.44			
		1.5	30277.78	-11460.10			
		2.3	30277.78	11248.23			
		3.0	30277.78	33956.57			
1	-62408.18						
		.0	28926.77	-43618.40			
		.8	28926.77	-21923.32			
		1.5	28926.77	-228.24			
		2.3	28926.77	21466.84			
		3.0	28926.77	43161.91			
1	-54398.60						
		.0	26586.62	-34257.27			
		.8	26586.62	-14317.30			
		1.5	26586.62	5622.67			
		2.3	26586.62	25562.63			
		3.0	26586.62	45502.60			
1	-45613.16						
		.0	22950.10	-23695.76			
		.8	22950.10	-6483.18			
		1.5	22950.10	10729.39			
		2.3	22950.10	27941.97			
		3.0	22950.10	45154.54			
1	-35543.59						
		.0	18114.26	-8622.42			
		.8	18114.26	4963.28			
		1.5	18114.26	18548.97			
		2.3	18114.26	32134.67			
		3.0	18114.26	45720.37			
1	-11435.32						
		.0	-4608.31	18474.09			
		.8	-4608.31	15017.86			
		1.5	-4608.31	11561.63			
		2.3	-4608.31	8105.40			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	-4608.31	4649.17			
1	-8785.88						
		.0	4369.59	-6404.35			
		.8	4369.59	-3127.16			
		1.5	4369.59	150.03			
		2.3	4369.59	3427.22			
		3.0	4369.59	6704.41			
1	*********						
		.0	22651.28	-72153.86			
		.8	22651.28	-55165.41			
		1.5	22651.28	-38176.95			
		2.3	22651.28	-21188.49			
		3.0	22651.28	-4200.03			
1	*********						
		.0	22126.51	-44062.27			
		.8	22126.51	-27467.39			
		1.5	22126.51	-10872.52			
		2.3	22126.51	5722.36			
		3.0	22126.51	22317.24			
1	-95591.89						
		.0	21524.68	-32593.59			
		.8	21524.68	-16450.08			
		1.5	21524.68	-306.57			
		2.3	21524.68	15836.93			
		3.0	21524.68	31980.44			
1	-76315.47						
		.0	19066.68	-22986.27			
		.8	19066.68	-8686.26			
		1.5	19066.68	5613.75			
		2.3	19066.68	19913.77			
		3.0	19066.68	34213.78			
1	-57850.86						
		.0	15494.75	-12664.29			
		.8	15494.75	-1043.23			
		1.5	15494.75	10577.83			
		2.3	15494.75	22198.90			
		3.0	15494.75	33819.96			
1	-40856.85						
		.0	11315.65	1823.31			
		.8	11315.65	10310.05			
		1.5	11315.65	18796.78			
		2.3	11315.65	27283.52			
		3.0	11315.65	35770.25			
1	-9825.54						

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-11819.16	29461.19			
		.8	-11819.16	20596.81			
		1.5	-11819.16	11732.44			
		2.3	-11819.16	2868.07			
		3.0	-11819.16	-5996.30			
	1 -6583.99						
		.0	-3409.83	4459.96			
		.8	-3409.83	1902.59			
		1.5	-3409.83	-654.78			
		2.3	-3409.83	-3212.15			
		3.0	-3409.83	-5769.52			
1	1**********						
		.0	23746.12	-73021.27			
		.8	23746.12	-55211.68			
		1.5	23746.12	-37402.09			
		2.3	23746.12	-19592.51			
		3.0	23746.12	-1782.92			
3	1**********						
		.0	22794.23	-46092.15			
		.8	22794.23	-28996.48			
		1.5	22794.23	-11900.81			
		2.3	22794.23	5194.86			
		3.0	22794.23	22290.53			
2	1**********						
		.0	20915.99	-31539.65			
		.8	20915.99	-15852.66			
		1.5	20915.99	-165.67			
		2.3	20915.99	15521.32			
		3.0	20915.99	31208.31			
6	1-86167.91						
		.0	19108.14	-22732.71			
		.8	19108.14	-8401.61			
		1.5	19108.14	5929.49			
		2.3	19108.14	20260.60			
		3.0	19108.14	34591.70			
0	1-64644.70						
		.0	16830.13	-14463.07			
		.8	16830.13	-1840.47			
		1.5	16830.13	10782.13			
		2.3	16830.13	23404.73			
		3.0	16830.13	36027.33			
4	1-45665.36						
		.0	15758.70	-4095.01			
		.8	15758.70	7724.01			
		1.5	15758.70	19543.04			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	15758.70	31362.06			
		3.0	15758.70	43181.09			
1	-20126.28						
		.0	-3773.87	18935.63			
		.8	-3773.87	16105.22			
		1.5	-3773.87	13274.82			
		2.3	-3773.87	10444.41			
		3.0	-3773.87	7614.01			
1	-6941.61						
		.0	4557.76	-5837.04			
		.8	4557.76	-2418.72			
		1.5	4557.76	999.60			
		2.3	4557.76	4417.92			
		3.0	4557.76	7836.24			
1	1420.60						
		.0	2284.75	18982.79			
		1.8	-3339.75	18059.66			
		3.5	-8964.25	7293.66			
		5.3	-14588.75	-13315.22			
		7.0	-20213.25	-43766.98			
1	-3831.08						
		.0	-351.77	28200.23			
		1.8	-5976.27	22663.18			
		3.5	-11600.77	7283.27			
		5.3	-17225.27	-17939.53			
		7.0	-22849.77	-53005.19			
1	-6605.99						
		.0	-336.51	28138.97			
		1.8	-5961.01	22628.64			
		3.5	-11585.51	7275.43			
		5.3	-17210.01	-17920.66			
		7.0	-22834.51	-52959.62			
1	-9486.46						
		.0	1082.75	23131.36			
		1.8	-4541.75	20104.75			
		3.5	-10166.25	7235.26			
		5.3	-15790.75	-15477.11			
		7.0	-21415.25	-48032.35			
1	-10086.37						
		.0	3813.08	13403.96			
		1.8	-1811.42	15155.42			
		3.5	-7435.92	7063.99			
		5.3	-13060.42	-10870.31			
		7.0	-18684.92	-38647.48			

a Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	-1476.66						
		.0	-10975.69	18635.85			
		.8	-12190.69	9948.45			
		1.5	-13405.69	349.81			
		2.3	-14620.69	-10160.08			
		3.0	-15835.69	-21581.23			
1	-2480.07						
		.0	-14893.29	24569.77			
		.8	-16108.29	12944.18			
		1.5	-17323.29	407.33			
		2.3	-18538.29	-13040.76			
		3.0	-19753.29	-27400.10			
1	-4265.84						
		.0	-14824.93	24459.56			
		.8	-16039.93	12885.24			
		1.5	-17254.93	399.67			
		2.3	-18469.93	-12997.16			
		3.0	-19684.93	-27305.23			
1	-5849.94						
		.0	-12629.81	21166.00			
		.8	-13844.81	11238.02			
		1.5	-15059.81	398.79			
		2.3	-16274.81	-11351.69			
		3.0	-17489.81	-24013.42			
1	-5250.54						
		.0	-8615.35	15129.48			
		.8	-9830.35	8212.34			
		1.5	-11045.35	383.96			
		2.3	-12260.35	-8355.68			
		3.0	-13475.35	-18006.57			
1	-951.89						
		.0	2307.54	18281.01			
		1.8	-3316.96	17397.76			
		3.5	-8941.46	6671.64			
		5.3	-14565.96	-13897.36			
		7.0	-20190.46	-44309.24			
1	-1878.24						
		.0	-371.13	27510.73			
		1.8	-5995.63	21939.82			
		3.5	-11620.13	6526.03			
		5.3	-17244.63	-18730.64			
		7.0	-22869.13	-53830.18			
1	-1807.85						
		.0	-408.50	27661.48			

ja Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.8	-6033.00	22025.17			
		3.5	-11657.50	6545.98			
		5.3	-17282.00	-18776.08			
		7.0	-22906.50	-53941.02			
1	-2278.01						
		.0	974.80	22864.65			
		1.8	-4649.70	19649.11			
		3.5	-10274.20	6590.69			
		5.3	-15898.70	-16310.60			
		7.0	-21523.20	-49054.77			
1	-1071.43						
		.0	3518.66	13990.07			
		1.8	-2105.84	15226.28			
		3.5	-7730.34	6619.62			
		5.3	-13354.84	-11829.92			
		7.0	-18979.34	-40122.34			
1	551.51						
		.0	8383.52	-2681.58			
		1.8	2748.52	7058.96			
		3.5	-2886.48	6938.25			
		5.3	-8521.48	-3043.71			
		7.0	-14156.48	-22886.92			
1	-4230.20						
		.0	11144.33	-12352.68			
		1.8	5509.33	2219.28			
		3.5	-125.67	6929.98			
		5.3	-5760.67	1779.44			
		7.0	-11395.67	-13232.35			
1	-1480.37						
		.0	-685.60	4234.11			
		.8	-2388.10	3081.47			
		1.5	-4090.60	651.97			
		2.3	-5793.10	-3054.42			
		3.0	-7495.60	-8037.68			
1	-4976.47						
		.0	3627.51	-2218.82			
		.8	1925.01	-136.63			
		1.5	222.51	668.69			
		2.3	-1479.99	197.13			
		3.0	-3182.49	-1551.30			
1	6275.26						
		.0	8095.50	-1874.21			
		1.8	2460.50	7362.29			
		3.5	-3174.50	6737.54			
		5.3	-8809.50	-3748.46			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		7.0	-14444.50	-24095.70			
1	12336.44						
		.0	11076.98	-12091.00			
		1.8	5441.98	2363.10			
		3.5	-193.02	6955.95			
		5.3	-5828.02	1687.54			
		7.0	-11463.02	-13442.11			
1	-9607.91						
		.0	6620.22	-6867.85			
		1.8	3225.22	1746.92			
		3.5	-169.78	4420.43			
		5.3	-3564.78	1152.69			
		7.0	-6959.78	-8056.30			
1	-5152.74						
		.0	1902.75	-1330.48			
		.8	1010.25	-238.10			
		1.5	117.75	184.90			
		2.3	-774.75	-61.48			
		3.0	-1667.25	-977.23			
1	-4557.76						
		.0	6638.39	-6775.00			
		1.8	3243.39	1871.57			
		3.5	-151.61	4576.88			
		5.3	-3546.61	1340.94			
		7.0	-6941.61	-7836.24			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-21068.33						
		.0	17982.50	-67314.40			
		.8	17982.50	-53827.53			
		1.5	17982.50	-40340.65			
		2.3	17982.50	-26853.78			
		3.0	17982.50	-13366.91			
	1-18702.00						
		.0	13797.56	-32053.46			
		.8	13797.56	-21705.29			
		1.5	13797.56	-11357.12			
		2.3	13797.56	-1008.95			
		3.0	13797.56	9339.23			
	1-18963.06						
		.0	12054.16	-18534.04			
		.8	12054.16	-9493.42			
		1.5	12054.16	-452.80			
		2.3	12054.16	8587.82			
		3.0	12054.16	17628.44			
	1-19275.83						
		.0	10218.60	-10417.62			
		.8	10218.60	-2753.66			
		1.5	10218.60	4910.29			
		2.3	10218.60	12574.24			
		3.0	10218.60	20238.20			
	1-18406.68						
		.0	8027.68	-3631.70			
		.8	8027.68	2389.06			
		1.5	8027.68	8409.82			
		2.3	8027.68	14430.59			
		3.0	8027.68	20451.35			
	1-15552.69						
		.0	5625.13	3586.23			
		.8	5625.13	7805.08			
		1.5	5625.13	12023.93			
		2.3	5625.13	16242.77			
		3.0	5625.13	20461.62			
	1 -9931.85						
		.0	1731.49	13415.64			
		.8	1731.49	14714.25			
		1.5	1731.49	16012.87			
		2.3	1731.49	17311.49			
		3.0	1731.49	18610.10			
	1 -589.54						
		.0	-10862.60	24680.29			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-10862.60	16533.34			
		1.5	-10862.60	8386.39			
		2.3	-10862.60	239.44			
		3.0	-10862.60	-7907.51			
	1-83441.01						
		.0	27022.56	-75782.55			
		.8	27022.56	-55515.63			
		1.5	27022.56	-35248.71			
		2.3	27022.56	-14981.78			
		3.0	27022.56	5285.14			
	1-73179.29						
		.0	29832.26	-56170.01			
		.8	29832.26	-33795.81			
		1.5	29832.26	-11421.61			
		2.3	29832.26	10952.58			
		3.0	29832.26	33326.78			
	1-64195.95						
		.0	28491.32	-43247.73			
		.8	28491.32	-21879.24			
		1.5	28491.32	-510.75			
		2.3	28491.32	20857.74			
		3.0	28491.32	42226.23			
	1-55197.76						
		.0	26143.77	-34584.07			
		.8	26143.77	-14976.25			
		1.5	26143.77	4631.58			
		2.3	26143.77	24239.40			
		3.0	26143.77	43847.22			
	1-45544.73						
		.0	22743.62	-26113.90			
		.8	22743.62	-9056.19			
		1.5	22743.62	8001.53			
		2.3	22743.62	25059.24			
		3.0	22743.62	42116.96			
	1-34848.56						
		.0	18320.63	-16411.39			
		.8	18320.63	-2670.92			
		1.5	18320.63	11069.55			
		2.3	18320.63	24810.03			
		3.0	18320.63	38550.50			
	1-22799.52						
		.0	12845.22	-4243.92			
		.8	12845.22	5389.99			
		1.5	12845.22	15023.91			
		2.3	12845.22	24657.82			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	12845.22	34291.73			
	1 -2518.24						
		.0	-2471.31	12579.64			
		.8	-2471.31	10726.15			
		1.5	-2471.31	8872.67			
		2.3	-2471.31	7019.18			
		3.0	-2471.31	5165.69			
	1*********						
		.0	22489.84	-71505.62			
		.8	22489.84	-54638.25			
		1.5	22489.84	-37770.87			
		2.3	22489.84	-20903.49			
		3.0	22489.84	-4036.11			
	1*********						
		.0	22012.28	-43870.92			
		.8	22012.28	-27361.71			
		1.5	22012.28	-10852.50			
		2.3	22012.28	5656.71			
		3.0	22012.28	22165.92			
	1-97677.66						
		.0	21398.07	-32696.46			
		.8	21398.07	-16647.90			
		1.5	21398.07	-599.35			
		2.3	21398.07	15449.21			
		3.0	21398.07	31497.76			
	1-77450.18						
		.0	19002.18	-23839.44			
		.8	19002.18	-9587.81			
		1.5	19002.18	4663.83			
		2.3	19002.18	18915.46			
		3.0	19002.18	33167.10			
	1-57906.55						
		.0	15601.41	-15417.46			
		.8	15601.41	-3716.40			
		1.5	15601.41	7984.66			
		2.3	15601.41	19685.72			
		3.0	15601.41	31386.78			
	1-39434.19						
		.0	11257.05	-5872.12			
		.8	11257.05	2570.67			
		1.5	11257.05	11013.46			
		2.3	11257.05	19456.25			
		3.0	11257.05	27899.04			
	1-22429.11						

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	6034.10	6059.97			
		.8	6034.10	10585.54			
		1.5	6034.10	15111.12			
		2.3	6034.10	19636.70			
		3.0	6034.10	24162.28			
1	-847.30						
		.0	-10133.39	23441.94			
		.8	-10133.39	15841.90			
		1.5	-10133.39	8241.86			
		2.3	-10133.39	641.81			
		3.0	-10133.39	-6958.23			
4	1**********						
		.0	23530.10	-72324.03			
		.8	23530.10	-54676.46			
		1.5	23530.10	-37028.88			
		2.3	23530.10	-19381.31			
		3.0	23530.10	-1733.73			
8	1**********						
		.0	22584.90	-45744.24			
		.8	22584.90	-28805.57			
		1.5	22584.90	-11866.90			
		2.3	22584.90	5071.78			
		3.0	22584.90	22010.45			
2	1**********						
		.0	20686.45	-31511.96			
		.8	20686.45	-15997.12			
		1.5	20686.45	-482.29			
		2.3	20686.45	15032.55			
		3.0	20686.45	30547.38			
6	1-86114.24						
		.0	18869.45	-23352.75			
		.8	18869.45	-9200.66			
		1.5	18869.45	4951.43			
		2.3	18869.45	19103.52			
		3.0	18869.45	33255.61			
0	1-64374.04						
		.0	16666.29	-16568.70			
		.8	16666.29	-4068.98			
		1.5	16666.29	8430.73			
		2.3	16666.29	20930.45			
		3.0	16666.29	33430.16			
4	1-44590.55						
		.0	13842.19	-9482.49			
		.8	13842.19	899.15			
		1.5	13842.19	11280.79			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	13842.19	21662.43			
		3.0	13842.19	32044.07			
	1-27459.52						
		.0	11642.19	-1547.14			
		.8	11642.19	7184.50			
		1.5	11642.19	15916.15			
		2.3	11642.19	24647.79			
		3.0	11642.19	33379.44			
	1 -6801.59						
		.0	-1739.60	12687.29			
		.8	-1739.60	11382.59			
		1.5	-1739.60	10077.89			
		2.3	-1739.60	8773.19			
		3.0	-1739.60	7468.49			
	1 1386.93						
		.0	2366.33	18686.55			
		1.8	-3258.17	17906.19			
		3.5	-8882.67	7282.95			
		5.3	-14507.17	-13183.16			
		7.0	-20131.67	-43492.14			
	1 -3853.60						
		.0	-261.06	27873.26			
		1.8	-5885.56	22494.98			
		3.5	-11510.06	7273.82			
		5.3	-17134.56	-17790.21			
		7.0	-22759.06	-52697.12			
	1 -6560.45						
		.0	-312.77	28046.05			
		1.8	-5937.27	22577.27			
		3.5	-11561.77	7265.62			
		5.3	-17186.27	-17888.92			
		7.0	-22810.77	-52886.32			
	1 -9004.08						
		.0	869.14	23869.90			
		1.8	-4755.36	20469.46			
		3.5	-10379.86	7226.15			
		5.3	-16004.36	-15860.04			
		7.0	-21628.86	-48789.10			
	1-11591.45						
		.0	2853.99	16865.12			
		1.8	-2770.51	16938.16			
		3.5	-8395.01	7168.33			
		5.3	-14019.51	-12444.37			
		7.0	-19644.01	-41899.95			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	-12898.36						
		.0	5620.85	7045.98			
		1.8	-3.65	11961.02			
		3.5	-5628.15	7033.19			
		5.3	-11252.65	-7737.52			
		7.0	-16877.15	-32351.10			
1	-1422.76						
		.0	-9869.95	17963.00			
		.8	-11572.45	9922.11			
		1.5	-13274.95	604.33			
		2.3	-14977.45	-9990.31			
		3.0	-16679.95	-21861.84			
1	-2512.65						
		.0	-13775.72	23877.38			
		.8	-15478.22	12907.15			
		1.5	-17180.72	660.05			
		2.3	-18883.22	-12863.93			
		3.0	-20585.72	-27664.78			
1	-4212.89						
		.0	-13812.57	23923.98			
		.8	-15515.07	12926.12			
		1.5	-17217.57	651.38			
		2.3	-18920.07	-12900.24			
		3.0	-20622.57	-27728.73			
1	-5603.93						
		.0	-11975.83	21172.03			
		.8	-13678.33	11551.72			
		1.5	-15380.83	654.53			
		2.3	-17083.33	-11519.53			
		3.0	-18785.83	-24970.46			
1	-7168.46						
		.0	-8947.84	16628.40			
		.8	-10650.34	9279.08			
		1.5	-12352.84	652.88			
		2.3	-14055.34	-9250.19			
		3.0	-15757.84	-20430.13			
1	-7422.94						
		.0	-4828.12	10443.31			
		.8	-6530.62	6183.79			
		1.5	-8233.12	647.39			
		2.3	-9935.62	-6165.88			
		3.0	-11638.12	-14256.03			
1	-945.21						
		.0	2394.22	17972.98			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.8	-3230.28	17241.42			
		3.5	-8854.78	6666.98			
		5.3	-14479.28	-13750.33			
		7.0	-20103.78	-44010.51			
3							
	1 -1898.45						
		.0	-282.43	27197.59			
		1.8	-5906.93	21781.91			
		3.5	-11531.43	6523.34			
		5.3	-17155.93	-18578.10			
		7.0	-22780.43	-53522.41			
1							
	1 -1817.00						
		.0	-395.09	27608.47			
		1.8	-6019.59	21995.63			
		3.5	-11644.09	6539.92			
		5.3	-17268.59	-18758.67			
		7.0	-22893.09	-53900.13			
4							
	1 -2203.17						
		.0	757.80	23614.09			
		1.8	-4866.70	20018.81			
		3.5	-10491.20	6580.64			
		5.3	-16115.70	-16700.39			
		7.0	-21740.20	-49824.30			
7							
	1 -2824.10						
		.0	2714.51	16828.76			
		1.8	-2909.99	16657.72			
		3.5	-8534.49	6643.81			
		5.3	-14158.99	-13212.98			
		7.0	-19783.49	-42912.65			
0							
	1 -2199.99						
		.0	5366.96	7583.04			
		1.8	-257.54	12053.79			
		3.5	-5882.04	6681.66			
		5.3	-11506.54	-8533.34			
		7.0	-17131.04	-33591.21			
1							
	1 -6996.91						
		.0	9342.31	-6070.18			
		1.8	3707.31	5348.23			
		3.5	-1927.69	6905.40			
		5.3	-7562.69	-1398.68			
		7.0	-13197.69	-19564.02			
2							
	1 -6393.80						
		.0	760.29	2069.24			
		.8	-942.21	2001.02			
		1.5	-2644.71	655.93			
		2.3	-4347.21	-1966.04			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	-6049.71	-5864.88			
1	3350.99						
		.0	9076.45	-5237.17			
		1.8	3441.45	5716.00			
		3.5	-2193.55	6807.91			
		5.3	-7828.55	-1961.43			
		7.0	-13463.55	-20592.02			
1	-8811.18						
		.0	6912.84	-7951.52			
		1.8	3517.84	1175.33			
		3.5	122.84	4360.92			
		5.3	-3272.16	1605.27			
		7.0	-6667.16	-7091.63			
5	-4859.79						
		.0	2306.73	-1932.17			
		.8	1414.23	-536.81			
		1.5	521.73	189.17			
		2.3	-370.77	245.78			
		3.0	-1263.27	-366.98			
6	1739.60						
		.0	6778.41	-7387.38			
		1.8	3383.41	1504.22			
		3.5	-11.59	4454.56			
		5.3	-3406.59	1463.66			
		7.0	-6801.59	-7468.49			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-21982.90						
		.0	17775.25	-66826.86			
		.8	17775.25	-53495.42			
		1.5	17775.25	-40163.98			
		2.3	17775.25	-26832.54			
		3.0	17775.25	-13501.10			
5							
	1-19504.31						
		.0	13619.80	-31792.07			
		.8	13619.80	-21577.22			
		1.5	13619.80	-11362.37			
		2.3	13619.80	-1147.52			
		3.0	13619.80	9067.33			
9							
	1-19643.75						
		.0	11890.85	-18375.36			
		.8	11890.85	-9457.22			
		1.5	11890.85	-539.09			
		2.3	11890.85	8379.05			
		3.0	11890.85	17297.19			
3							
	1-19864.31						
		.0	10057.51	-10421.55			
		.8	10057.51	-2878.41			
		1.5	10057.51	4664.72			
		2.3	10057.51	12207.85			
		3.0	10057.51	19750.98			
7							
	1-18979.69						
		.0	7813.28	-4060.75			
		.8	7813.28	1799.21			
		1.5	7813.28	7659.17			
		2.3	7813.28	13519.13			
		3.0	7813.28	19379.09			
21							
	1-16311.07						
		.0	5075.73	1867.56			
		.8	5075.73	5674.36			
		1.5	5075.73	9481.15			
		2.3	5075.73	13287.95			
		3.0	5075.73	17094.74			
25							
	1-11449.44						
		.0	1866.45	7326.53			
		.8	1866.45	8726.37			
		1.5	1866.45	10126.20			
		2.3	1866.45	11526.04			
		3.0	1866.45	12925.88			
29							
	1 -4297.42						
		.0	-3315.55	11296.68			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.8	-3315.55	8810.01			
		1.5	-3315.55	6323.35			
		2.3	-3315.55	3836.68			
		3.0	-3315.55	1350.02			
	1-75234.55						
		.0	26858.10	-75332.02			
		.8	26858.10	-55188.45			
		1.5	26858.10	-35044.87			
		2.3	26858.10	-14901.29			
		3.0	26858.10	5242.28			
	1-65866.46						
		.0	29711.79	-56011.06			
		.8	29711.79	-33727.22			
		1.5	29711.79	-11443.37			
		2.3	29711.79	10840.47			
		3.0	29711.79	33124.31			
	1-57735.41						
		.0	28365.12	-43142.87			
		.8	28365.12	-21869.03			
		1.5	28365.12	-595.18			
		2.3	28365.12	20678.66			
		3.0	28365.12	41952.50			
	1-49570.11						
		.0	26036.87	-34667.66			
		.8	26036.87	-15140.01			
		1.5	26036.87	4387.64			
		2.3	26036.87	23915.29			
		3.0	26036.87	43442.94			
	1-40758.58						
		.0	22654.42	-26722.91			
		.8	22654.42	-9732.10			
		1.5	22654.42	7258.72			
		2.3	22654.42	24249.53			
		3.0	22654.42	41240.34			
	1-30974.37						
		.0	18401.16	-18603.64			
		.8	18401.16	-4802.77			
		1.5	18401.16	8998.10			
		2.3	18401.16	22798.97			
		3.0	18401.16	36599.84			
	1-20028.99						
		.0	13237.63	-10604.22			
		.8	13237.63	-676.00			
		1.5	13237.63	9252.22			
		2.3	13237.63	19180.43			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	13237.63	29108.65			
1	-7949.62						
		.0	8229.77	-5066.08			
		.8	8229.77	1106.25			
		1.5	8229.77	7278.58			
		2.3	8229.77	13450.91			
		3.0	8229.77	19623.23			
1	**********						
		.0	22120.23	-70859.65			
		.8	22120.23	-54269.48			
		1.5	22120.23	-37679.31			
		2.3	22120.23	-21089.13			
		3.0	22120.23	-4498.96			
1	**********						
		.0	21544.77	-43175.08			
		.8	21544.77	-27016.50			
		1.5	21544.77	-10857.92			
		2.3	21544.77	5300.66			
		3.0	21544.77	21459.24			
1	-95547.46						
		.0	20930.60	-32085.05			
		.8	20930.60	-16387.10			
		1.5	20930.60	-689.16			
		2.3	20930.60	15008.79			
		3.0	20930.60	30706.74			
1	-76410.95						
		.0	18537.15	-23396.98			
		.8	18537.15	-9494.12			
		1.5	18537.15	4408.74			
		2.3	18537.15	18311.60			
		3.0	18537.15	32214.46			
1	-57946.10						
		.0	15191.94	-15519.26			
		.8	15191.94	-4125.31			
		1.5	15191.94	7268.65			
		2.3	15191.94	18662.60			
		3.0	15191.94	30056.56			
1	-40474.05						
		.0	10942.53	-7425.02			
		.8	10942.53	781.88			
		1.5	10942.53	8988.78			
		2.3	10942.53	17195.68			
		3.0	10942.53	25402.58			
1	-24183.10						

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	5847.89	490.14			
		.8	5847.89	4876.05			
		1.5	5847.89	9261.97			
		2.3	5847.89	13647.88			
		3.0	5847.89	18033.80			
	1 -9069.22						
		.0	449.83	6043.12			
		.8	449.83	6380.49			
		1.5	449.83	6717.87			
		2.3	449.83	7055.24			
		3.0	449.83	7392.61			
1	1**********						
		.0	23315.41	-71822.38			
		.8	23315.41	-54335.81			
		1.5	23315.41	-36849.25			
		2.3	23315.41	-19362.69			
		3.0	23315.41	-1876.13			
3	1**********						
		.0	22396.64	-45474.39			
		.8	22396.64	-28676.91			
		1.5	22396.64	-11879.44			
		2.3	22396.64	4918.04			
		3.0	22396.64	21715.52			
2	1**********						
		.0	20493.43	-31311.81			
		.8	20493.43	-15941.74			
		1.5	20493.43	-571.67			
		2.3	20493.43	14798.41			
		3.0	20493.43	30168.48			
6	1-84308.63						
		.0	18658.48	-23305.87			
		.8	18658.48	-9312.01			
		1.5	18658.48	4681.85			
		2.3	18658.48	18675.71			
		3.0	18658.48	32669.57			
0	1-62613.63						
		.0	16443.36	-16987.31			
		.8	16443.36	-4654.79			
		1.5	16443.36	7677.73			
		2.3	16443.36	20010.25			
		3.0	16443.36	32342.77			
4	1-42682.51						
		.0	13699.58	-11083.12			
		.8	13699.58	-808.44			
		1.5	13699.58	9466.25			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.3	13699.58	19740.94			
		3.0	13699.58	30015.62			
1	-24924.47						
		.0	10386.04	-5737.51			
		.8	10386.04	2052.02			
		1.5	10386.04	9841.55			
		2.3	10386.04	17631.07			
		3.0	10386.04	25420.60			
3	-9413.74						
		.0	6395.95	-2385.61			
		.8	6395.95	2411.36			
		1.5	6395.95	7208.32			
		2.3	6395.95	12005.29			
		3.0	6395.95	16802.25			
3	1359.45						
		.0	2478.58	18290.98			
		1.8	-3145.92	17707.06			
		3.5	-8770.42	7280.27			
		5.3	-14394.92	-12989.40			
		7.0	-20019.42	-43101.94			
6	-3864.05						
		.0	-139.44	27442.69			
		1.8	-5763.94	22277.23			
		3.5	-11388.44	7268.90			
		5.3	-17012.94	-17582.30			
		7.0	-22637.44	-52276.39			
9	-6556.66						
		.0	-220.56	27718.73			
		1.8	-5845.06	22411.32			
		3.5	-11469.56	7261.03			
		5.3	-17094.06	-17732.13			
		7.0	-22718.56	-52568.17			
2	-8942.77						
		.0	884.62	23811.73			
		1.8	-4739.88	20438.38			
		3.5	-10364.38	7222.15			
		5.3	-15988.88	-15836.96			
		7.0	-21613.38	-48738.94			
5	-11246.45						
		.0	2668.62	17511.52			
		1.8	-2955.88	17260.18			
		3.5	-8580.38	7165.95			
		5.3	-14204.88	-12771.14			
		7.0	-19829.38	-42551.12			

sa Statis Portal (8 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
3							
	1-13571.73						
		.0	4861.63	9768.21			
		1.8	-762.87	13354.63			
		3.5	-6387.37	7098.17			
		5.3	-12011.87	-9001.17			
		7.0	-17636.37	-34943.38			
1							
	1-14395.99						
		.0	7152.02	1629.20			
		1.8	1527.52	9223.80			
		3.5	-4096.98	6975.52			
		5.3	-9721.48	-5115.63			
		7.0	-15345.98	-27049.66			
4							
	1 -1494.23						
		.0	-10651.33	18151.40			
		.8	-11866.33	9707.28			
		1.5	-13081.33	351.92			
		2.3	-14296.33	-9914.70			
		3.0	-15511.33	-21092.57			
7							
	1 -2517.38						
		.0	-14506.38	23990.79			
		.8	-15721.38	12655.38			
		1.5	-16936.38	408.71			
		2.3	-18151.38	-12749.20			
		3.0	-19366.38	-26818.36			
0							
	1 -4228.40						
		.0	-14553.26	24051.99			
		.8	-15768.26	12681.42			
		1.5	-16983.26	399.60			
		2.3	-18198.26	-12793.48			
		3.0	-19413.26	-26897.80			
3							
	1 -5560.32						
		.0	-12801.85	21426.91			
		.8	-14016.85	11369.90			
		1.5	-15231.85	401.65			
		2.3	-16446.85	-11477.86			
		3.0	-17661.85	-24268.62			
6							
	1 -6993.19						
		.0	-10045.17	17292.87			
		.8	-11260.17	9303.36			
		1.5	-12475.17	402.61			
		2.3	-13690.17	-9409.40			
		3.0	-14905.17	-20132.65			
9							
	1 -8408.19						
		.0	-6690.99	12260.69			

.sa Statis Portal (8 lantai) Kg/m

Y M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
O COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		.8	-7905.99	6786.82			
		1.5	-9120.99	401.70			
		2.3	-10335.99	-6894.66			
		3.0	-11550.99	-15102.28			
2							
	1 -9388.14						
		.0	-3266.62	7125.07			
		.8	-4481.62	4219.49			
		1.5	-5696.62	402.65			
		2.3	-6911.62	-4325.44			
		3.0	-8126.62	-9964.77			
5							
	1 -918.78						
		.0	2508.74	17583.55			
		1.8	-3115.76	17052.41			
		3.5	-8740.26	6678.40			
		5.3	-14364.76	-13538.49			
		7.0	-19989.26	-43598.26			
8							
	1 -1903.21						
		.0	-144.32	26725.93			
		1.8	-5768.82	21551.93			
		3.5	-11393.32	6535.05			
		5.3	-17017.82	-18324.70			
		7.0	-22642.32	-53027.33			
1							
	1 -1834.95						
		.0	-276.75	27205.92			
		1.8	-5901.25	21800.16			
		3.5	-11525.75	6551.54			
		5.3	-17150.25	-18539.97			
		7.0	-22774.75	-53474.35			
4							
	1 -2215.12						
		.0	803.00	23465.10			
		1.8	-4821.50	19948.92			
		3.5	-10446.00	6589.86			
		5.3	-16070.50	-16612.07			
		7.0	-21695.00	-49656.88			
7							
	1 -2743.78						
		.0	2566.88	17348.92			
		1.8	-3057.62	16919.53			
		3.5	-8682.12	6647.27			
		5.3	-14306.62	-13467.88			
		7.0	-19931.12	-43425.89			
0							
	1 -3313.54						
		.0	4739.96	9810.17			
		1.8	-884.54	13183.66			
		3.5	-6509.04	6714.27			
		5.3	-12133.54	-9598.00			

Isa Statis Portal (8 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			7.0	-17758.04	-35753.13			
3								
	1	-3990.09						
			.0	6987.27	2025.90			
			1.8	1362.77	9332.19			
			3.5	-4261.73	6795.60			
			5.3	-9886.23	-5583.87			
			7.0	-15510.73	-27806.21			
4								
	1	-15075.55						
			.0	4297.42	1350.02			
			1.8	902.42	5899.88			
			3.5	-2492.58	4508.48			
			5.3	-5887.58	-2824.16			
			7.0	-9282.58	-16098.05			
5								
	1	-6845.78						
			.0	-1332.96	3525.19			
			.8	-2225.46	2190.78			
			1.5	-3117.96	187.00			
			2.3	-4010.46	-2486.15			
			3.0	-4902.96	-5828.68			
6								
	1	-6395.95						
			.0	4166.26	1563.93			
			1.8	771.26	5884.26			
			3.5	-2623.74	4263.34			
			5.3	-6018.74	-3298.83			
			7.0	-9413.74	-16802.25			

sa Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.001186	-.000037	-.000823
6	.001670	-.000294	-.000545
7	.001920	-.000749	-.000961
8	.002661	-.000858	-.000820
9	.003640	-.000059	-.001001
0	.004267	-.000575	-.000670
1	.004631	-.001348	-.000949
2	.005476	-.001568	-.000643
3	.006416	-.000093	-.001037
4	.006996	-.000854	-.000661
5	.007293	-.001816	-.000923
6	.008038	-.002139	-.000596
7	.009129	-.000141	-.000984
8	.009571	-.001113	-.000596
9	.009769	-.002163	-.000852
0	.010394	-.002578	-.000515
1	.011585	-.000196	-.000886
2	.011851	-.001339	-.000494
3	.011942	-.002405	-.000748
4	.012419	-.002896	-.000394
5	.013662	-.000252	-.000754
6	.013718	-.001519	-.000357
7	.013697	-.002560	-.000611
8	.014008	-.003107	-.000253
9	.015218	-.000297	-.000552
0	.015070	-.001641	-.000199
1	.014946	-.002643	-.000454
2	.015110	-.003225	-.000088
3	.016168	-.000315	-.000482
4	.015884	-.001692	-.000058
5	.015764	-.002674	-.000424
6	.015637	-.003264	.000088

sa Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.004614	-.000064	-.001699
6	.005258	-.000405	-.001362
7	.005534	-.000835	-.001774
8	.005970	-.000888	-.001701
9	.007652	-.000080	-.000947
0	.008279	-.000656	-.000595
1	.008627	-.001410	-.000868
2	.009556	-.001595	-.000621
3	.010397	-.000120	-.001040
4	.010968	-.000932	-.000667
5	.011274	-.001880	-.000934
6	.012026	-.002166	-.000574
7	.013102	-.000171	-.000980
8	.013537	-.001188	-.000592
9	.013736	-.002226	-.000844
0	.014359	-.002606	-.000511
1	.015543	-.000230	-.000882
2	.015801	-.001412	-.000490
3	.015892	-.002468	-.000744
4	.016370	-.002925	-.000390
5	.017605	-.000288	-.000751
6	.017656	-.001590	-.000355
7	.017636	-.002622	-.000608
8	.017948	-.003136	-.000250
9	.019151	-.000334	-.000550
0	.018999	-.001712	-.000197
1	.018876	-.002705	-.000452
2	.019042	-.003254	-.000085
3	.020097	-.000353	-.000482
4	.019809	-.001762	-.000058
5	.019688	-.002736	-.000422
6	.019560	-.003292	.000091

Ja Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.008654	-.000082	-.004129
	.008751	-.000433	-.003610
	.008787	-.000800	-.004026
	.008856	-.000867	-.003961
	.020418	-.000138	-.002565
	.021051	-.000809	-.002248
	.021346	-.001506	-.002556
	.021828	-.001633	-.002551
	.024049	-.000154	-.000899
	.024624	-.001017	-.000528
	.024923	-.001933	-.000802
	.025878	-.002197	-.000502
	.026713	-.000210	-.001005
3	.027157	-.001270	-.000613
9	.027386	-.002287	-.000869
)	.028019	-.002637	-.000477
	.029179	-.000271	-.000883
2	.029436	-.001490	-.000488
3	.029531	-.002530	-.000733
4	.030004	-.002956	-.000390
5	.031236	-.000331	-.000748
6	.031280	-.001667	-.000352
7	.031261	-.002684	-.000605
8	.031576	-.003167	-.000247
9	.032771	-.000378	-.000548
0	.032615	-.001787	-.000196
1	.032494	-.002768	-.000449
2	.032662	-.003285	-.000082
3	.033713	-.000397	-.000482
4	.033421	-.001837	-.000057
5	.033298	-.002798	-.000419
6	.033171	-.003324	.000095

sa Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.010126	-.000090	-.005228
	.010136	-.000445	-.004519
	.010098	-.000777	-.004879
3	.010067	-.000858	-.004762
)	.028284	-.000165	-.005602
)	.028225	-.000837	-.005109
	.028237	-.001455	-.005442
2	.028273	-.001606	-.005511
3	.042392	-.000227	-.002809
4	.042940	-.001178	-.002482
5	.043178	-.002032	-.002795
5	.043642	-.002240	-.002772
7	.046082	-.000252	-.000834
3	.046536	-.001352	-.000456
9	.046760	-.002338	-.000720
0	.047634	-.002671	-.000390
1	.048509	-.000316	-.000917
2	.048783	-.001570	-.000516
3	.048915	-.002590	-.000765
4	.049400	-.002990	-.000352
5	.050607	-.000377	-.000751
6	.050654	-.001744	-.000351
7	.050640	-.002745	-.000595
8	.050949	-.003202	-.000250
9	.052143	-.000425	-.000548
0	.051983	-.001863	-.000194
1	.051862	-.002829	-.000448
2	.052032	-.003320	-.000080
3	.053081	-.000445	-.000481
4	.052784	-.001912	-.000056
5	.052660	-.002859	-.000416
6	.052533	-.003359	.000098

sa Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
?	.000000	.000000	.000000
;	.000000	.000000	.000000
.	.000000	.000000	.000000
5	.010510	-.000095	-.005519
,	.010547	-.000449	-.004811
'	.010518	-.000761	-.005167
3	.010490	-.000854	-.005060
9	.030731	-.000177	-.006798
)	.030592	-.000847	-.006103
1	.030535	-.001421	-.006384
2	.030477	-.001595	-.006407
3	.051349	-.000258	-.005839
4	.051210	-.001198	-.005333
5	.051185	-.001976	-.005672
6	.051213	-.002212	-.005721
7	.065437	-.000329	-.002723
8	.065846	-.001500	-.002389
9	.066011	-.002429	-.002688
0	.066405	-.002712	-.002632
1	.068866	-.000360	-.000745
2	.069152	-.001641	-.000362
3	.069278	-.002634	-.000620
4	.070002	-.003022	-.000268
5	.070927	-.000423	-.000787
6	.070994	-.001814	-.000379
7	.071016	-.002798	-.000628
8	.071338	-.003234	-.000213
9	.072508	-.000471	-.000551
0	.072352	-.001931	-.000194
1	.072236	-.002882	-.000438
2	.072400	-.003353	-.000082
3	.073451	-.000491	-.000482
4	.073149	-.001980	-.000055
5	.073024	-.002912	-.000414
6	.072897	-.003391	.000101

sa Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.010563	-.000099	-.005573
	.010605	-.000448	-.004867
	.010578	-.000750	-.005226
8	.010551	-.000850	-.005122
9	.031240	-.000186	-.007077
0	.031126	-.000845	-.006381
	.031078	-.001398	-.006657
2	.031024	-.001588	-.006689
3	.053735	-.000274	-.006914
4	.053524	-.001198	-.006227
5	.053438	-.001939	-.006520
6	.053382	-.002199	-.006529
7	.073673	-.000363	-.005450
8	.073459	-.001504	-.004951
9	.073400	-.002374	-.005276
0	.073403	-.002684	-.005283
1	.086468	-.000437	-.002444
2	.086699	-.001759	-.002102
3	.086773	-.002710	-.002389
4	.087066	-.003056	-.002283
5	.089420	-.000469	-.000629
6	.089498	-.001864	-.000241
7	.089513	-.002830	-.000498
8	.090050	-.003259	-.000138
9	.090968	-.000518	-.000584
0	.090832	-.001982	-.000219
1	.090747	-.002922	-.000468
2	.090922	-.003378	-.000049
3	.091953	-.000537	-.000488
4	.091656	-.002030	-.000056
5	.091533	-.002953	-.000402
6	.091400	-.003416	.000095

ia Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

OMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.010501	-.000105	-.005549
	.010542	-.000443	-.004845
	.010515	-.000741	-.005204
	.010487	-.000847	-.005098
	.031152	-.000198	-.007101
	.031041	-.000835	-.006407
	.030995	-.001381	-.006686
2	.030941	-.001581	-.006720
5	.053959	-.000293	-.007125
4	.053769	-.001182	-.006438
5	.053690	-.001913	-.006728
6	.053637	-.002188	-.006743
7	.075387	-.000389	-.006320
8	.075113	-.001485	-.005672
9	.075005	-.002338	-.005962
0	.074939	-.002668	-.005935
1	.092971	-.000480	-.004693
2	.092680	-.001739	-.004209
3	.092582	-.002660	-.004521
4	.092551	-.003028	-.004465
5	.103665	-.000549	-.002031
6	.103681	-.001937	-.001681
7	.103654	-.002887	-.001958
8	.103835	-.003282	-.001801
9	.105931	-.000572	-.000448
0	.105809	-.002000	-.000105
1	.105717	-.002942	-.000359
2	.106073	-.003394	.000008
3	.106894	-.000591	-.000527
4	.106616	-.002049	-.000085
5	.106520	-.002978	-.000448
6	.106389	-.003432	.000145

a Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

OMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

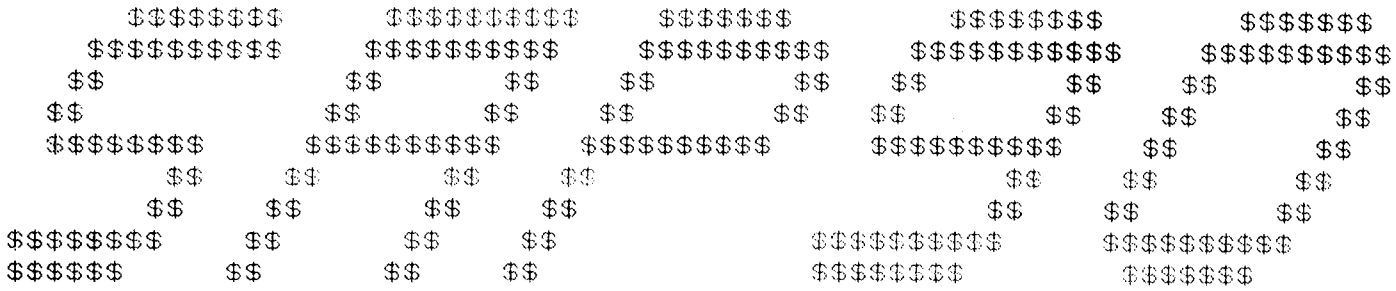
	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.010399	-.000117	-.005499
	.010439	-.000464	-.004805
	.010412	-.000763	-.005148
	.010385	-.000845	-.005047
	.030867	-.000221	-.007047
	.030756	-.000872	-.006361
	.030709	-.001419	-.006628
	.030654	-.001579	-.006665
	.053542	-.000327	-.007108
	.053352	-.001229	-.006431
	.053274	-.001963	-.006709
	.053221	-.002186	-.006731
	.075085	-.000434	-.006439
	.074825	-.001536	-.005800
	.074721	-.002394	-.006074
	.074657	-.002665	-.006056
1	.093643	-.000537	-.005293
2	.093308	-.001790	-.004709
3	.093175	-.002717	-.004985
4	.093094	-.003023	-.004906
5	.107736	-.000623	-.003654
6	.107364	-.001984	-.003200
7	.107226	-.002936	-.003484
8	.107162	-.003271	-.003369
9	.115631	-.000678	-.001471
0	.115429	-.002111	-.001152
1	.115310	-.003061	-.001424
2	.115407	-.003424	-.001199
3	.117031	-.000682	-.000328
4	.116776	-.002125	.000057
5	.116686	-.003066	-.000301
6	.116736	-.003462	.000174

a Statis Portal (8 lantai) Kg/m

N T D I S P L A C E M E N T S

OMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.010245	-.000121	-.005425
	.010284	-.000415	-.004734
	.010256	-.000732	-.005090
	.010230	-.000826	-.004978
	.030437	-.000229	-.006960
	.030325	-.000778	-.006280
	.030279	-.001365	-.006556
	.030224	-.001541	-.006582
	.052836	-.000337	-.007033
	.052647	-.001097	-.006360
	.052568	-.001892	-.006649
	.052515	-.002132	-.006659
	.074182	-.000447	-.006403
3	.073923	-.001370	-.005767
)	.073820	-.002314	-.006054
)	.073756	-.002597	-.006027
	.092764	-.000551	-.005368
2	.092439	-.001595	-.004787
5	.092310	-.002634	-.005072
4	.092230	-.002942	-.004990
5	.107549	-.000641	-.004088
5	.107157	-.001766	-.003571
7	.107001	-.002857	-.003858
3	.106906	-.003178	-.003711
9	.117981	-.000705	-.002720
)	.117566	-.001876	-.002322
1	.117391	-.002990	-.002607
2	.117276	-.003315	-.002382
3	.124466	-.000728	-.001866
4	.124031	-.001920	-.001338
5	.123904	-.003040	-.001699
5	.123719	-.003367	-.001408



STRUCTURAL ANALYSIS PROGRAMS

VERSION 5.20

sa Statis Portal (4 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.010920	.001528	-.004298
	.014625	-.000958	-.003457
	.020393	-.002187	-.002679
	.028797	.002544	-.004213
3	.031007	-.001631	-.002369
9	.034150	-.003318	-.000568
)	.042229	.002886	-.002436
1	.039917	-.001940	-.000968
2	.040484	-.003790	.000520
3	.042852	.002821	-.000556
4	.042452	-.002066	-.000371
5	.042336	-.003906	.000320

sa Statis Portal (4 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

	U(X)	U(Y)	R(Z)
	.000000	.000000	.000000
	.000000	.000000	.000000
	.000000	.000000	.000000
	.094476	.001094	-.015394
	.097079	-.001688	-.014591
	.101310	-.002625	-.013778
	.114568	.002284	-.002234
8	.117134	-.002088	-.000599
9	.120961	-.003684	.001003
0	.127974	.002596	-.002857
1	.125701	-.002441	-.001287
2	.126225	-.004173	.000338
3	.128762	.002531	-.000512
4	.128349	-.002554	-.000326
5	.128240	-.004288	.000333

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

U(X)	U(Y)	R(Z)
.000000	.000000	.000000
.000000	.000000	.000000
.000000	.000000	.000000
.161980	.000908	-.041845
.160302	-.001514	-.041117
.160011	-.002422	-.040105
.356645	.001533	-.019836
.356410	-.002701	-.018987
.358615	-.004150	-.017911
.372993	.002200	.000320
.371636	-.002672	.001548
.373302	-.004492	.003097
.374034	.002116	-.001141
.373652	-.002889	-.000765
.373418	-.004621	.000104

a Statis Portal (4 lantai) Kg/m

N T D I S P L A C E M E N T S

:OMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

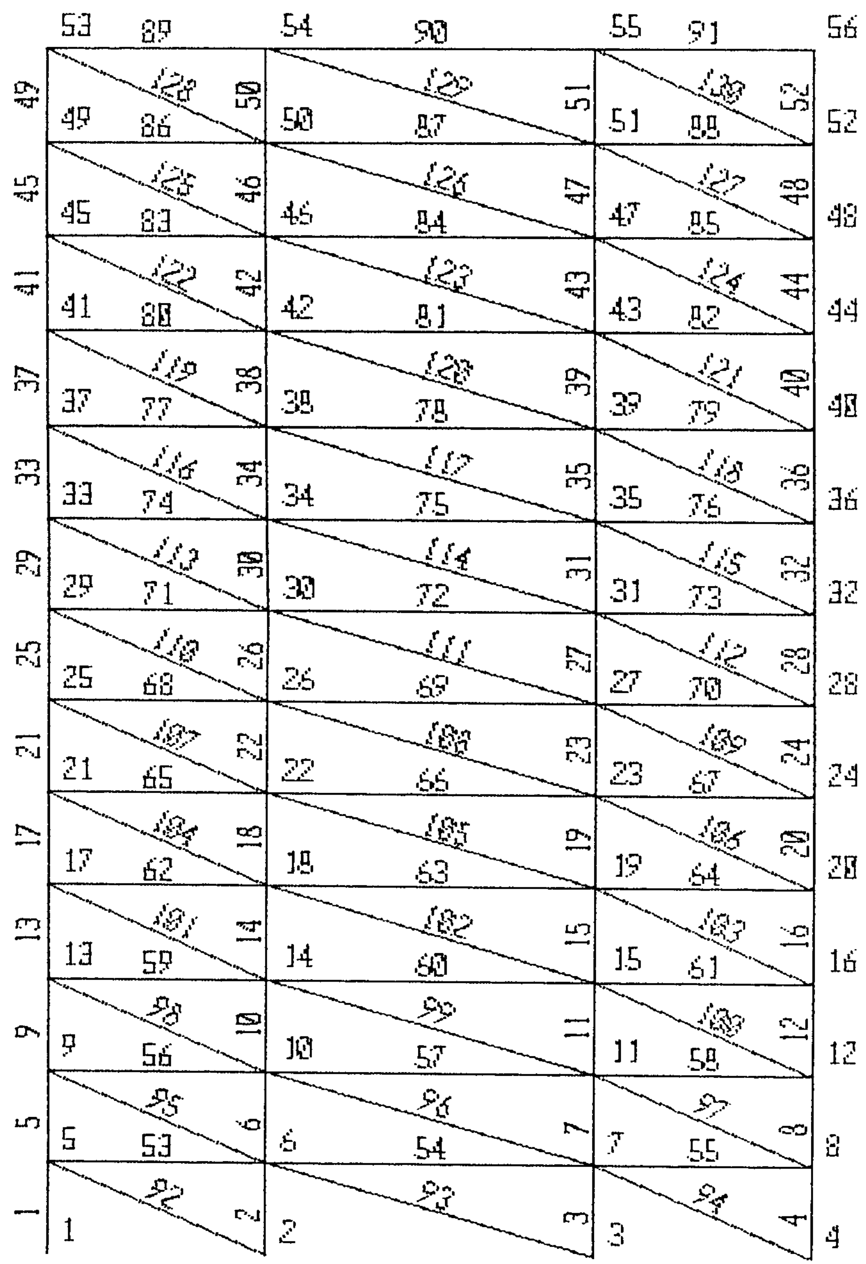
U(X)	U(Y)	R(Z)
.000000	.000000	.000000
.000000	.000000	.000000
.000000	.000000	.000000
.222114	.002078	-.061725
.220299	-.001366	-.061137
.219862	-.003542	-.059464
.584035	.003634	-.063654
.583602	-.002401	-.063619
.583542	-.006154	-.062685
.859410	.004645	-.026308
.858011	-.003114	-.025191
.860385	-.007804	-.023657
.878611	.005627	.001330
.877791	-.002480	.001812
.878761	-.007810	.002522

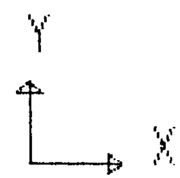
sa Statis Portal (4 lantai) Kg/m

N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

U(X)	U(Y)	R(Z)
.000000	.000000	.000000
.000000	.000000	.000000
.000000	.000000	.000000
.178006	.000845	-.049117
.176110	-.001173	-.048039
.175647	-.002316	-.046474
.457046	.001321	-.047003
.452896	-.002014	-.046148
.451533	-.003858	-.044687
.660380	.001452	-.025134
.654492	-.002525	-.024873
.652656	-.004648	-.023920
.728209	.001499	-.004015
.727777	-.002711	-.004550
.727518	-.004938	-.003664





B-P

UNDEFORMED
SHAPE

OPTIONS

JOINT IDS
ELEMENT IDS
WIRE FRAME

SAP90

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	56984.77						
		.0	5450.63	-34238.32			
		1.0	5450.63	-28787.69			
		2.0	5450.63	-23337.06			
		3.0	5450.63	-17886.42			
		4.0	5450.63	-12435.79			
1	42781.04						
		.0	1313.76	-9415.44			
		1.0	1313.76	-8101.68			
		2.0	1313.76	-6787.93			
		3.0	1313.76	-5474.17			
		4.0	1313.76	-4160.41			
1	16843.36						
		.0	501.47	-3503.39			
		1.0	501.47	-3001.93			
		2.0	501.47	-2500.46			
		3.0	501.47	-1999.00			
		4.0	501.47	-1497.53			
1	-8036.64						
		.0	-522.11	359.57			
		1.0	-522.11	-162.54			
		2.0	-522.11	-684.65			
		3.0	-522.11	-1206.76			
		4.0	-522.11	-1728.87			
1	-29193.87						
		.0	-1271.10	2637.13			
		1.0	-1271.10	1366.03			
		2.0	-1271.10	94.93			
		3.0	-1271.10	-1176.16			
		4.0	-1271.10	-2447.26			
1	-46074.70						
		.0	-1963.20	4613.65			
		1.0	-1963.20	2650.45			
		2.0	-1963.20	687.25			
		3.0	-1963.20	-1275.95			
		4.0	-1963.20	-3239.15			
1	-58499.81						
		.0	-2683.68	6615.48			
		1.0	-2683.68	3931.80			
		2.0	-2683.68	1248.11			
		3.0	-2683.68	-1435.57			
		4.0	-2683.68	-4119.26			
1	-66216.19						
		.0	-3448.58	8674.16			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-3448.58	5225.57			
		2.0	-3448.58	1776.99			
		3.0	-3448.58	-1671.59			
		4.0	-3448.58	-5120.18			
	1-68897.62						
		.0	-4265.75	10799.85			
		1.0	-4265.75	6534.10			
		2.0	-4265.75	2268.35			
		3.0	-4265.75	-1997.41			
		4.0	-4265.75	-6263.16			
	1-66151.45						
		.0	-5143.80	13009.38			
		1.0	-5143.80	7865.58			
		2.0	-5143.80	2721.78			
		3.0	-5143.80	-2422.02			
		4.0	-5143.80	-7565.82			
	1-57518.56						
		.0	-6088.47	15325.73			
		1.0	-6088.47	9237.26			
		2.0	-6088.47	3148.79			
		3.0	-6088.47	-2939.68			
		4.0	-6088.47	-9028.15			
	1-42451.65						
		.0	-7059.86	17814.51			
		1.0	-7059.86	10754.65			
		2.0	-7059.86	3694.79			
		3.0	-7059.86	-3365.07			
		4.0	-7059.86	-10424.93			
	1-20226.74						
		.0	-10501.64	20746.29			
		1.0	-10501.64	10244.65			
		2.0	-10501.64	-256.98			
		3.0	-10501.64	-10758.62			
		4.0	-10501.64	-21260.25			
	1*********						
		.0	11797.85	-48654.21			
		1.0	11797.85	-36856.36			
		2.0	11797.85	-25058.50			
		3.0	11797.85	-13260.65			
		4.0	11797.85	-1462.79			
	1*********						
		.0	3289.83	-10329.15			
		1.0	3289.83	-7039.31			
		2.0	3289.83	-3749.48			
		3.0	3289.83	-459.64			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	3289.83	2830.19			
	1*********						
		.0	3850.16	-9630.17			
		1.0	3850.16	-5780.01			
		2.0	3850.16	-1929.85			
		3.0	3850.16	1920.31			
		4.0	3850.16	5770.48			
	1*********						
		.0	2936.11	-6395.96			
		1.0	2936.11	-3459.85			
		2.0	2936.11	-523.73			
		3.0	2936.11	2412.38			
		4.0	2936.11	5348.49			
	1*********						
		.0	2226.88	-4387.73			
		1.0	2226.88	-2160.85			
		2.0	2226.88	66.04			
		3.0	2226.88	2292.92			
		4.0	2226.88	4519.80			
	1*********						
		.0	1374.04	-2127.55			
		1.0	1374.04	-753.52			
		2.0	1374.04	620.52			
		3.0	1374.04	1994.56			
		4.0	1374.04	3368.60			
	1*********						
		.0	370.11	408.12			
		1.0	370.11	778.23			
		2.0	370.11	1148.35			
		3.0	370.11	1518.46			
		4.0	370.11	1888.57			
	1*********						
		.0	-783.84	3212.83			
		1.0	-783.84	2428.99			
		2.0	-783.84	1645.15			
		3.0	-783.84	861.30			
		4.0	-783.84	77.46			
	1*********						
		.0	-2085.96	6280.72			
		1.0	-2085.96	4194.76			
		2.0	-2085.96	2108.80			
		3.0	-2085.96	22.85			
		4.0	-2085.96	-2063.11			
	1-92060.27						

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3532.80	9604.83			
		1.0	-3532.80	6072.04			
		2.0	-3532.80	2539.24			
		3.0	-3532.80	-993.56			
		4.0	-3532.80	-4526.35			
2							
	1-64373.96						
		.0	-5113.27	13187.59			
		1.0	-5113.27	8074.32			
		2.0	-5113.27	2961.04			
		3.0	-5113.27	-2152.23			
		4.0	-5113.27	-7265.51			
6							
	1-39727.02						
		.0	-7041.53	17086.48			
		1.0	-7041.53	10044.95			
		2.0	-7041.53	3003.42			
		3.0	-7041.53	-4038.11			
		4.0	-7041.53	-11079.63			
4							
	1-16446.49						
		.0	-10102.15	20252.63			
		1.0	-10102.15	10150.48			
		2.0	-10102.15	48.33			
		3.0	-10102.15	-10053.82			
		4.0	-10102.15	-20155.96			
3							
	1*********						
		.0	31420.11	-84796.92			
		1.0	31420.11	-53376.82			
		2.0	31420.11	-21956.71			
		3.0	31420.11	9463.39			
		4.0	31420.11	40883.50			
7							
	1*********						
		.0	21266.33	-43788.15			
		1.0	21266.33	-22521.82			
		2.0	21266.33	-1255.49			
		3.0	21266.33	20010.84			
		4.0	21266.33	41277.16			
1							
	1*********						
		.0	21047.99	-42600.84			
		1.0	21047.99	-21552.84			
		2.0	21047.99	-504.85			
		3.0	21047.99	20543.15			
		4.0	21047.99	41591.14			
5							
	1*********						
		.0	20973.82	-42105.22			
		1.0	20973.82	-21131.41			
		2.0	20973.82	-157.59			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	20973.82	20816.22			
		4.0	20973.82	41790.04			
)							
	1*********						
		.0	20658.19	-40957.53			
		1.0	20658.19	-20299.34			
		2.0	20658.19	358.85			
		3.0	20658.19	21017.04			
		4.0	20658.19	41675.23			
3							
	1*********						
		.0	20096.03	-39301.32			
		1.0	20096.03	-19205.29			
		2.0	20096.03	890.74			
		3.0	20096.03	20986.77			
		4.0	20096.03	41082.80			
7							
	1*********						
		.0	19337.94	-37290.15			
		1.0	19337.94	-17952.21			
		2.0	19337.94	1385.73			
		3.0	19337.94	20723.68			
		4.0	19337.94	40061.62			
1							
	1*********						
		.0	18384.65	-34917.29			
		1.0	18384.65	-16532.65			
		2.0	18384.65	1852.00			
		3.0	18384.65	20236.65			
		4.0	18384.65	38621.30			
5							
	1*********						
		.0	17241.30	-32198.66			
		1.0	17241.30	-14957.35			
		2.0	17241.30	2283.95			
		3.0	17241.30	19525.25			
		4.0	17241.30	36766.56			
9							
	1*********						
		.0	15922.13	-29157.20			
		1.0	15922.13	-13235.07			
		2.0	15922.13	2687.06			
		3.0	15922.13	18609.19			
		4.0	15922.13	34531.32			
3							
	1*********						
		.0	14370.08	-25781.85			
		1.0	14370.08	-11411.77			
		2.0	14370.08	2958.30			
		3.0	14370.08	17328.38			
		4.0	14370.08	31698.45			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-72460.85						
		.0	13116.53	-22381.35			
		1.0	13116.53	-9264.82			
		2.0	13116.53	3851.71			
		3.0	13116.53	16968.25			
		4.0	13116.53	30084.78			
1							
	1-26291.49						
		.0	10402.59	-16061.06			
		1.0	10402.59	-5658.47			
		2.0	10402.59	4744.11			
		3.0	10402.59	15146.70			
		4.0	10402.59	25549.28			
4							
	1*********						
		.0	34953.18	-99476.17			
		1.0	34953.18	-64522.99			
		2.0	34953.18	-29569.81			
		3.0	34953.18	5383.37			
		4.0	34953.18	40336.54			
8							
	1*********						
		.0	11041.29	-18176.96			
		1.0	11041.29	-7135.66			
		2.0	11041.29	3905.63			
		3.0	11041.29	14946.92			
		4.0	11041.29	25988.21			
2							
	1*********						
		.0	13419.73	-27581.70			
		1.0	13419.73	-14161.98			
		2.0	13419.73	-742.25			
		3.0	13419.73	12677.48			
		4.0	13419.73	26097.21			
6							
	1*********						
		.0	13257.46	-26670.28			
		1.0	13257.46	-13412.82			
		2.0	13257.46	-155.37			
		3.0	13257.46	13102.09			
		4.0	13257.46	26359.55			
0							
	1*********						
		.0	12945.66	-25418.21			
		1.0	12945.66	-12472.55			
		2.0	12945.66	473.11			
		3.0	12945.66	13418.77			
		4.0	12945.66	26364.43			
4							
	1*********						
		.0	12565.87	-24088.04			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	12565.87	-11522.16			
		2.0	12565.87	1043.71			
		3.0	12565.87	13609.58			
		4.0	12565.87	26175.45			
	1*********						
		.0	12097.69	-22610.80			
		1.0	12097.69	-10513.11			
		2.0	12097.69	1584.59			
		3.0	12097.69	13682.28			
		4.0	12097.69	25779.97			
	1*********						
		.0	11539.14	-20986.49			
		1.0	11539.14	-9447.35			
		2.0	11539.14	2091.79			
		3.0	11539.14	13630.93			
		4.0	11539.14	25170.07			
	1*********						
		.0	10882.90	-19204.56			
		1.0	10882.90	-8321.67			
		2.0	10882.90	2561.23			
		3.0	10882.90	13444.13			
		4.0	10882.90	24327.02			
	1*********						
		.0	10114.86	-17264.03			
		1.0	10114.86	-7149.17			
		2.0	10114.86	2965.70			
		3.0	10114.86	13080.56			
		4.0	10114.86	23195.42			
	1-70911.98						
		.0	9336.31	-15213.32			
		1.0	9336.31	-5877.02			
		2.0	9336.31	3459.29			
		3.0	9336.31	12795.59			
		4.0	9336.31	22131.90			
	1-36132.72						
		.0	8560.80	-12589.46			
		1.0	8560.80	-4028.65			
		2.0	8560.80	4532.15			
		3.0	8560.80	13092.96			
		4.0	8560.80	21653.76			
	1-11038.74						
		.0	5812.70	-8035.73			
		1.0	5812.70	-2223.03			
		2.0	5812.70	3589.66			
		3.0	5812.70	9402.36			

ɜa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5812.70	15215.06			
1	53285.20						
		.0	12260.52	-3131.51			
		2.0	5120.52	14249.53			
		4.0	-10219.48	17350.58			
		6.0	-17359.48	-10228.38			
		8.0	-24499.48	-52087.34			
1	68816.25						
		.0	11848.96	-833.20			
		2.0	4708.96	15724.71			
		4.0	-10631.04	18002.63			
		6.0	-17771.04	-10399.45			
		8.0	-24911.04	-53081.54			
1	63830.52						
		.0	12177.93	-2026.65			
		2.0	5037.93	15189.22			
		4.0	-10302.07	18125.08			
		6.0	-17442.07	-9619.05			
		8.0	-24582.07	-51643.18			
1	53638.18						
		.0	12810.10	-4520.80			
		2.0	5670.10	13959.41			
		4.0	-9669.90	18159.62			
		6.0	-16809.90	-8320.18			
		8.0	-23949.90	-49079.97			
1	42630.38						
		.0	13477.86	-7198.02			
		2.0	6337.86	12617.70			
		4.0	-9002.14	18153.42			
		6.0	-16142.14	-6990.87			
		8.0	-23282.14	-46415.15			
1	31393.56						
		.0	14168.19	-9973.67			
		2.0	7028.19	11222.72			
		4.0	-8311.81	18139.10			
		6.0	-15451.81	-5624.52			
		8.0	-22591.81	-43668.14			
1	19735.74						
		.0	14892.85	-12893.73			
		2.0	7752.85	9751.98			
		4.0	-7587.15	18117.69			
		6.0	-14727.15	-4196.60			
		8.0	-21867.15	-40790.90			
4	7524.81						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	15662.52	-16000.68			
		2.0	8522.52	8184.36			
		4.0	-6817.48	18089.39			
		6.0	-13957.48	-2685.57			
		8.0	-21097.48	-37740.53			
1	-5353.87						
		.0	16486.87	-19332.33			
		2.0	9346.87	6501.41			
		4.0	-5993.13	18055.15			
		6.0	-13133.13	-1071.10			
		8.0	-20273.13	-34477.36			
1	-19013.21						
		.0	17376.26	-22929.05			
		2.0	10236.26	4683.46			
		4.0	-5103.74	18015.98			
		6.0	-12243.74	668.50			
		8.0	-19383.74	-30958.98			
1	-33642.58						
		.0	18347.95	-26856.10			
		2.0	11207.95	2699.80			
		4.0	-4132.05	17975.69			
		6.0	-11272.05	2571.58			
		8.0	-18412.05	-27112.52			
1	-47141.64						
		.0	19386.24	-31157.62			
		2.0	12246.24	474.85			
		4.0	-3093.76	17827.32			
		6.0	-10233.76	4499.79			
		8.0	-17373.76	-23107.73			
1	64626.87						
		.0	25962.85	-43520.03			
		3.0	15402.85	18528.54			
		6.0	-3357.15	32497.10			
		9.0	-22117.15	-1614.34			
		12.0	-32677.15	-83805.77			
1	92416.09						
		.0	25600.71	-40990.37			
		3.0	15040.71	19971.77			
		6.0	-3719.29	32853.91			
		9.0	-22479.29	-2343.95			
		12.0	-33039.29	-85621.82			
1	95954.88						
		.0	25444.01	-39846.26			
		3.0	14884.01	20645.76			
		6.0	-3875.99	33057.78			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		9.0	-22635.99	-2610.20			
		12.0	-33195.99	-86358.18			
3							
1	93362.56						
		.0	25428.07	-39698.28			
		3.0	14868.07	20745.94			
		6.0	-3891.93	33110.16			
		9.0	-22651.93	-2605.62			
		12.0	-33211.93	-86401.40			
6							
1	88865.08						
		.0	25502.43	-40102.55			
		3.0	14942.43	20564.75			
		6.0	-3817.57	33152.05			
		9.0	-22577.57	-2340.64			
		12.0	-33137.57	-85913.34			
9							
1	82550.83						
		.0	25661.39	-41017.62			
		3.0	15101.39	20126.55			
		6.0	-3658.61	33190.71			
		9.0	-22418.61	-1825.12			
		12.0	-32978.61	-84920.95			
2							
1	74531.47						
		.0	25896.66	-42395.28			
		3.0	15336.66	19454.70			
		6.0	-3423.34	33224.68			
		9.0	-22183.34	-1085.35			
		12.0	-32743.34	-83475.37			
5							
1	64959.78						
		.0	26200.58	-44189.18			
		3.0	15640.58	18572.54			
		6.0	-3119.42	33254.27			
		9.0	-21879.42	-144.00			
		12.0	-32439.42	-81622.28			
8							
1	53996.22						
		.0	26565.09	-46351.21			
		3.0	16005.09	17504.06			
		6.0	-2754.91	33279.33			
		9.0	-21514.91	974.60			
		12.0	-32074.91	-79410.13			
1							
1	41828.65						
		.0	26982.53	-48834.72			
		3.0	16422.53	16272.88			
		6.0	-2337.47	33300.48			
		9.0	-21097.47	2248.07			
		12.0	-31657.47	-76884.33			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	29000.44						
		.0	27439.51	-51576.98			
		3.0	16879.51	14901.55			
		6.0	-1880.49	33300.08			
		9.0	-20640.49	3618.62			
		12.0	-31200.49	-74142.85			
1	14430.20						
		.0	27949.16	-54513.51			
		3.0	17389.16	13493.97			
		6.0	-1370.84	33421.45			
		9.0	-20130.84	5268.93			
		12.0	-30690.84	-70963.59			
1	83215.83						
		.0	11022.35	556.81			
		2.0	3882.35	15461.52			
		4.0	-11457.65	16086.22			
		6.0	-18597.65	-13969.08			
		8.0	-25737.65	-58304.38			
1	1100692.64						
		.0	11972.59	-2136.54			
		2.0	4832.59	14668.63			
		4.0	-10507.41	17193.80			
		6.0	-17647.41	-10961.03			
		8.0	-24787.41	-53395.86			
1	94677.84						
		.0	12184.08	-3033.45			
		2.0	5044.08	14194.70			
		4.0	-10295.92	17142.86			
		6.0	-17435.92	-10588.99			
		8.0	-24575.92	-52600.84			
1	90008.35						
		.0	12429.17	-4013.34			
		2.0	5289.17	13704.99			
		4.0	-10050.83	17143.33			
		6.0	-17190.83	-10098.33			
		8.0	-24330.83	-51619.99			
1	84425.22						
		.0	12751.62	-5278.62			
		2.0	5611.62	13084.62			
		4.0	-9728.38	17167.85			
		6.0	-16868.38	-9428.91			
		8.0	-24008.38	-50305.67			
1	77824.50						
		.0	13156.73	-6866.24			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	6016.73	12307.22			
		4.0	-9323.27	17200.68			
		6.0	-16463.27	-8585.86			
		8.0	-23603.27	-48652.40			
1	70193.50						
		.0	13647.26	-8785.67			
		2.0	6507.26	11368.84			
		4.0	-8832.74	17243.35			
		6.0	-15972.74	-7562.13			
		8.0	-23112.74	-46647.62			
1	61484.81						
		.0	14228.05	-11057.40			
		2.0	7088.05	10258.71			
		4.0	-8251.95	17294.81			
		6.0	-15391.95	-6349.08			
		8.0	-22531.95	-44272.97			
1	51641.03						
		.0	14904.20	-13702.50			
		2.0	7764.20	8965.91			
		4.0	-7575.80	17354.32			
		6.0	-14715.80	-4937.27			
		8.0	-21855.80	-41508.86			
1	40747.43						
		.0	15679.45	-16743.68			
		2.0	8539.45	7475.22			
		4.0	-6800.55	17414.11			
		6.0	-13940.55	-3326.99			
		8.0	-21080.55	-38348.09			
1	28385.10						
		.0	16567.80	-20189.59			
		2.0	9427.80	5806.02			
		4.0	-5912.20	17521.63			
		6.0	-13052.20	-1442.76			
		8.0	-20192.20	-34687.15			
1	9485.00						
		.0	17780.69	-24895.09			
		2.0	10640.69	3526.28			
		4.0	-4699.31	17667.65			
		6.0	-11839.31	1129.02			
		8.0	-18979.31	-29689.61			
1	-55166.00						
		.0	12663.71	-21242.01			
		2.0	8283.71	-294.58			
		4.0	-1976.29	11892.84			
		6.0	-6356.29	3560.27			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10736.29	-13532.31			
1							
1	-5812.70						
		.0	12361.26	-20505.13			
		2.0	7981.26	-162.62			
		4.0	-2278.74	11419.90			
		6.0	-6658.74	2482.42			
		8.0	-11038.74	-15215.06			
0							
1	-28448.39						
		.0	17995.11	-33770.72			
		3.0	11425.11	10359.61			
		6.0	-1024.89	23019.93			
		9.0	-13474.89	4210.25			
		12.0	-20044.89	-46069.43			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	42118.07						
		.0	61816.12	-171863.76			
		1.0	61816.12	-110047.64			
		2.0	61816.12	-48231.52			
		3.0	61816.12	13584.60			
		4.0	61816.12	75400.72			
1	47035.66						
		.0	-14579.05	48642.70			
		1.0	-14579.05	34063.66			
		2.0	-14579.05	19484.61			
		3.0	-14579.05	4905.56			
		4.0	-14579.05	-9673.49			
1	13211.74						
		.0	1532.31	-7106.65			
		1.0	1532.31	-5574.34			
		2.0	1532.31	-4042.03			
		3.0	1532.31	-2509.73			
		4.0	1532.31	-977.42			
1	-11023.57						
		.0	-650.91	835.83			
		1.0	-650.91	184.91			
		2.0	-650.91	-466.00			
		3.0	-650.91	-1116.91			
		4.0	-650.91	-1767.82			
1	-31916.43						
		.0	-1339.23	2808.71			
		1.0	-1339.23	1469.48			
		2.0	-1339.23	130.26			
		3.0	-1339.23	-1208.97			
		4.0	-1339.23	-2548.19			
1	-48390.18						
		.0	-2025.74	4743.44			
		1.0	-2025.74	2717.70			
		2.0	-2025.74	691.96			
		3.0	-2025.74	-1333.77			
		4.0	-2025.74	-3359.51			
1	-60424.34						
		.0	-2736.04	6713.37			
		1.0	-2736.04	3977.33			
		2.0	-2736.04	1241.29			
		3.0	-2736.04	-1494.76			
		4.0	-2736.04	-4230.80			
1	-67777.20						
		.0	-3496.29	8761.26			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-3496.29	5264.97			
		2.0	-3496.29	1768.68			
		3.0	-3496.29	-1727.62			
		4.0	-3496.29	-5223.91			
;							
	1-70122.34						
		.0	-4308.99	10875.91			
		1.0	-4308.99	6566.91			
		2.0	-4308.99	2257.92			
		3.0	-4308.99	-2051.07			
		4.0	-4308.99	-6360.07			
7							
	1-67067.46						
		.0	-5181.78	13073.14			
		1.0	-5181.78	7891.36			
		2.0	-5181.78	2709.57			
		3.0	-5181.78	-2472.21			
		4.0	-5181.78	-7654.00			
1							
	1-58154.58						
		.0	-6122.55	15378.63			
		1.0	-6122.55	9256.07			
		2.0	-6122.55	3133.52			
		3.0	-6122.55	-2989.03			
		4.0	-6122.55	-9111.58			
5							
	1-42837.38						
		.0	-7087.08	17851.65			
		1.0	-7087.08	10764.56			
		2.0	-7087.08	3677.48			
		3.0	-7087.08	-3409.60			
		4.0	-7087.08	-10496.69			
9							
	1-20401.21						
		.0	-10527.84	20764.53			
		1.0	-10527.84	10236.68			
		2.0	-10527.84	-291.16			
		3.0	-10527.84	-10819.01			
		4.0	-10527.84	-21346.85			
2							
	1*********						
		.0	74448.65	-196437.46			
		1.0	74448.65	-121988.81			
		2.0	74448.65	-47540.17			
		3.0	74448.65	26908.48			
		4.0	74448.65	101357.13			
6							
	1*********						
		.0	-12553.70	45303.62			
		1.0	-12553.70	32749.92			
		2.0	-12553.70	20196.22			
		3.0	-12553.70	7642.51			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	-12553.70	-4911.19			
1	1*********						
		.0	4928.23	-13471.32			
		1.0	4928.23	-8543.09			
		2.0	4928.23	-3614.86			
		3.0	4928.23	1313.38			
		4.0	4928.23	6241.61			
1	1*********						
		.0	2624.80	-5541.30			
		1.0	2624.80	-2916.49			
		2.0	2624.80	-291.69			
		3.0	2624.80	2333.11			
		4.0	2624.80	4957.91			
3	1*********						
		.0	1992.29	-3897.98			
		1.0	1992.29	-1905.69			
		2.0	1992.29	86.59			
		3.0	1992.29	2078.88			
		4.0	1992.29	4071.16			
2	1*********						
		.0	1154.03	-1691.22			
		1.0	1154.03	-537.18			
		2.0	1154.03	616.85			
		3.0	1154.03	1770.89			
		4.0	1154.03	2924.92			
6	1*********						
		.0	156.26	830.40			
		1.0	156.26	986.66			
		2.0	156.26	1142.92			
		3.0	156.26	1299.18			
		4.0	156.26	1455.44			
0	1*********						
		.0	-991.33	3620.34			
		1.0	-991.33	2629.01			
		2.0	-991.33	1637.68			
		3.0	-991.33	646.35			
		4.0	-991.33	-344.98			
4	1*********						
		.0	-2286.48	6672.22			
		1.0	-2286.48	4385.74			
		2.0	-2286.48	2099.25			
		3.0	-2286.48	-187.23			
		4.0	-2286.48	-2473.71			
8	1-92554.38						

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3726.00	9979.49			
		1.0	-3726.00	6253.49			
		2.0	-3726.00	2527.49			
		3.0	-3726.00	-1198.51			
		4.0	-3726.00	-4924.51			
;							
	1-64725.99						
		.0	-5296.91	13543.68			
		1.0	-5296.91	8246.77			
		2.0	-5296.91	2949.87			
		3.0	-5296.91	-2347.04			
		4.0	-5296.91	-7643.95			
;							
	1-39918.35						
		.0	-7231.07	17431.67			
		1.0	-7231.07	10200.59			
		2.0	-7231.07	2969.52			
		3.0	-7231.07	-4261.55			
		4.0	-7231.07	-11492.63			
)							
	1-16448.97						
		.0	-10196.45	20507.99			
		1.0	-10196.45	10311.54			
		2.0	-10196.45	115.08			
		3.0	-10196.45	-10081.37			
		4.0	-10196.45	-20277.82			
3							
	1*********						
		.0	94997.89	-234293.18			
		1.0	94997.89	-139295.29			
		2.0	94997.89	-44297.39			
		3.0	94997.89	50700.50			
		4.0	94997.89	145698.39			
7							
	1*********						
		.0	5302.22	12260.65			
		1.0	5302.22	17562.87			
		2.0	5302.22	22865.09			
		3.0	5302.22	28167.32			
		4.0	5302.22	33469.54			
1							
	1*********						
		.0	22795.66	-48022.87			
		1.0	22795.66	-25227.22			
		2.0	22795.66	-2431.56			
		3.0	22795.66	20364.10			
		4.0	22795.66	43159.75			
5							
	1*********						
		.0	20786.99	-41358.67			
		1.0	20786.99	-20571.68			
		2.0	20786.99	215.30			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	20786.99	21002.29			
		4.0	20786.99	41789.28			
1*********							
		.0	20818.27	-41350.96			
		1.0	20818.27	-20532.69			
		2.0	20818.27	285.59			
		3.0	20818.27	21103.86			
		4.0	20818.27	41922.14			
1*********							
		.0	20209.88	-39527.33			
		1.0	20209.88	-19317.45			
		2.0	20209.88	892.43			
		3.0	20209.88	21102.31			
		4.0	20209.88	41312.20			
1*********							
		.0	19458.08	-37537.40			
		1.0	19458.08	-18079.32			
		2.0	19458.08	1378.76			
		3.0	19458.08	20836.84			
		4.0	19458.08	40294.93			
1*********							
		.0	18509.03	-35174.99			
		1.0	18509.03	-16665.96			
		2.0	18509.03	1843.06			
		3.0	18509.03	20352.09			
		4.0	18509.03	38861.12			
1*********							
		.0	17370.73	-32468.28			
		1.0	17370.73	-15097.55			
		2.0	17370.73	2273.19			
		3.0	17370.73	19643.92			
		4.0	17370.73	37014.66			
1*********							
		.0	16057.68	-29440.64			
		1.0	16057.68	-13382.96			
		2.0	16057.68	2674.72			
		3.0	16057.68	18732.40			
		4.0	16057.68	34790.07			
1*********							
		.0	14511.67	-26080.06			
		1.0	14511.67	-11568.40			
		2.0	14511.67	2943.27			
		3.0	14511.67	17454.93			
		4.0	14511.67	31966.60			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-72438.21						
		.0	13280.52	-22698.60			
		1.0	13280.52	-9418.08			
		2.0	13280.52	3862.43			
		3.0	13280.52	17142.95			
		4.0	13280.52	30423.47			
	1-26135.74						
		.0	10479.96	-16301.33			
		1.0	10479.96	-5821.37			
		2.0	10479.96	4658.59			
		3.0	10479.96	15138.55			
		4.0	10479.96	25618.51			
	1*********						
		.0	88578.34	-231790.35			
		1.0	88578.34	-143212.01			
		2.0	88578.34	-54633.67			
		3.0	88578.34	33944.66			
		4.0	88578.34	122523.00			
	1*********						
		.0	-1934.36	33445.44			
		1.0	-1934.36	31511.08			
		2.0	-1934.36	29576.72			
		3.0	-1934.36	27642.36			
		4.0	-1934.36	25708.00			
	1*********						
		.0	12942.29	-26767.24			
		1.0	12942.29	-13824.96			
		2.0	12942.29	-882.67			
		3.0	12942.29	12059.61			
		4.0	12942.29	25001.90			
	1*********						
		.0	13520.91	-27594.10			
		1.0	13520.91	-14073.19			
		2.0	13520.91	-552.28			
		3.0	13520.91	12968.64			
		4.0	13520.91	26489.55			
	1*********						
		.0	12911.54	-25301.16			
		1.0	12911.54	-12389.61			
		2.0	12911.54	521.93			
		3.0	12911.54	13433.48			
		4.0	12911.54	26345.02			
	1*********						
		.0	12570.90	-24109.47			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	12570.90	-11538.57			
		2.0	12570.90	1032.33			
		3.0	12570.90	13603.22			
		4.0	12570.90	26174.12			
3							
	1*********						
		.0	12100.05	-22622.59			
		1.0	12100.05	-10522.54			
		2.0	12100.05	1577.51			
		3.0	12100.05	13677.56			
		4.0	12100.05	25777.60			
2							
	1*********						
		.0	11544.30	-21006.89			
		1.0	11544.30	-9462.59			
		2.0	11544.30	2081.71			
		3.0	11544.30	13626.02			
		4.0	11544.30	25170.32			
6							
	1*********						
		.0	10890.87	-19232.66			
		1.0	10890.87	-8341.79			
		2.0	10890.87	2549.09			
		3.0	10890.87	13439.96			
		4.0	10890.87	24330.83			
0							
	1*********						
		.0	10126.42	-17300.95			
		1.0	10126.42	-7174.54			
		2.0	10126.42	2951.88			
		3.0	10126.42	13078.30			
		4.0	10126.42	23204.72			
4							
	1-71218.05						
		.0	9353.11	-15259.05			
		1.0	9353.11	-5905.94			
		2.0	9353.11	3447.17			
		3.0	9353.11	12800.28			
		4.0	9353.11	22153.38			
8							
	1-36296.71						
		.0	8584.11	-12637.02			
		1.0	8584.11	-4052.91			
		2.0	8584.11	4531.19			
		3.0	8584.11	13115.30			
		4.0	8584.11	21699.41			
2							
	1-11059.89						
		.0	5835.52	-8053.80			
		1.0	5835.52	-2218.29			
		2.0	5835.52	3617.23			
		3.0	5835.52	9452.75			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5835.52	15288.26			
3							
1	72915.17						
		.0	4917.59	26758.02			
		2.0	-2222.41	29453.19			
		4.0	-17562.41	17868.37			
		6.0	-24702.41	-24396.46			
		8.0	-31842.41	-80941.29			
6							
1	68643.41						
		.0	12343.40	-2792.53			
		2.0	5203.40	14754.27			
		4.0	-10136.60	18021.08			
		6.0	-17276.60	-9392.12			
		8.0	-24416.60	-51085.31			
9							
1	63721.90						
		.0	12162.89	-1978.82			
		2.0	5022.89	15206.97			
		4.0	-10317.11	18112.75			
		6.0	-17457.11	-9661.47			
		8.0	-24597.11	-51715.68			
12							
1	53213.10						
		.0	12860.24	-4730.78			
		2.0	5720.24	13849.69			
		4.0	-9619.76	18150.16			
		6.0	-16759.76	-8229.37			
		8.0	-23899.76	-48888.90			
65							
1	41999.61						
		.0	13532.08	-7427.54			
		2.0	6392.08	12496.62			
		4.0	-8947.92	18140.79			
		6.0	-16087.92	-6895.05			
		8.0	-23227.92	-46210.89			
68							
1	30799.35						
		.0	14218.85	-10190.73			
		2.0	7078.85	11106.97			
		4.0	-8261.15	18124.67			
		6.0	-15401.15	-5537.64			
		8.0	-22541.15	-43479.94			
71							
1	19209.25						
		.0	14938.71	-13091.29			
		2.0	7798.71	9646.13			
		4.0	-7541.29	18103.56			
		6.0	-14681.29	-4119.02			
		8.0	-21821.29	-40621.59			
74							
1	7058.63						

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	15703.73	-16179.49			
		2.0	8563.73	8087.98			
		4.0	-6776.27	18075.44			
		6.0	-13916.27	-2617.09			
		8.0	-21056.27	-37589.62			
7							
	1 -5758.11						
		.0	16523.38	-19492.13			
		2.0	9383.38	6414.63			
		4.0	-5956.62	18041.39			
		6.0	-13096.62	-1011.84			
		8.0	-20236.62	-34345.08			
0							
	1-19353.43						
		.0	17407.92	-23069.35			
		2.0	10267.92	4606.49			
		4.0	-5072.08	18002.32			
		6.0	-12212.08	718.15			
		8.0	-19352.08	-30846.01			
3							
	1-33920.16						
		.0	18374.73	-26976.01			
		2.0	11234.73	2633.45			
		4.0	-4105.27	17962.91			
		6.0	-11245.27	2612.36			
		8.0	-18385.27	-27018.18			
6							
	1-47335.38						
		.0	19404.51	-31247.07			
		2.0	12264.51	421.95			
		4.0	-3075.49	17810.98			
		6.0	-10215.49	4520.00			
		8.0	-17355.49	-23050.97			
4							
	1 67709.76						
		.0	23107.81	-25169.57			
		3.0	12397.81	28088.85			
		6.0	-6512.19	32817.27			
		9.0	-25422.19	-10984.31			
		12.0	-36132.19	-103315.89			
7							
	1 92548.57						
		.0	26131.99	-42932.85			
		3.0	15421.99	19398.13			
		6.0	-3488.01	33199.10			
		9.0	-22398.01	-1529.93			
		12.0	-33108.01	-84788.95			
0							
	1 96767.93						
		.0	25721.26	-40299.16			
		3.0	15011.26	20799.62			
		6.0	-3898.74	33368.39			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		9.0	-22808.74	-2592.83			
		12.0	-33518.74	-87084.06			
3							
1	93139.59						
		.0	25747.97	-40386.87			
		3.0	15037.97	20792.03			
		6.0	-3872.03	33440.93			
		9.0	-22782.03	-2440.18			
		12.0	-33492.03	-86851.28			
6							
1	88472.79						
		.0	25818.47	-40781.45			
		3.0	15108.47	20608.97			
		6.0	-3801.53	33469.40			
		9.0	-22711.53	-2200.18			
		12.0	-33421.53	-86399.76			
9							
1	82211.88						
		.0	25977.12	-41693.87			
		3.0	15267.12	20172.47			
		6.0	-3642.88	33508.82			
		9.0	-22552.88	-1684.83			
		12.0	-33262.88	-85408.48			
12							
1	74225.89						
		.0	26211.30	-43065.22			
		3.0	15501.30	19503.67			
		6.0	-3408.70	33542.56			
		9.0	-22318.70	-948.54			
		12.0	-33028.70	-83969.65			
75							
1	64694.96						
		.0	26513.82	-44850.98			
		3.0	15803.82	18625.48			
		6.0	-3106.18	33571.95			
		9.0	-22016.18	-11.59			
		12.0	-32726.18	-82125.13			
78							
1	53778.63						
		.0	26876.66	-47003.13			
		3.0	16166.66	17561.85			
		6.0	-2743.34	33596.83			
		9.0	-21653.34	1101.81			
		12.0	-32363.34	-79923.20			
31							
1	41663.03						
		.0	27292.17	-49475.12			
		3.0	16582.17	16336.39			
		6.0	-2327.83	33617.89			
		9.0	-21237.83	2369.40			
		12.0	-31947.83	-77409.09			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	28896.06						
		.0	27747.09	-52205.58			
		3.0	17037.09	14970.69			
		6.0	-1872.91	33616.95			
		9.0	-20782.91	3733.22			
		12.0	-31492.91	-74680.52			
1	14285.61						
		.0	28254.93	-55124.89			
		3.0	17544.93	13574.90			
		6.0	-1365.07	33744.70			
		9.0	-20275.07	5384.49			
		12.0	-30985.07	-71505.71			
1	43300.64						
		.0	3560.74	29818.85			
		2.0	-3579.26	29800.34			
		4.0	-18919.26	15501.82			
		6.0	-26059.26	-29476.70			
		8.0	-33199.26	-88735.21			
1	1110695.10						
		.0	12308.96	-3733.68			
		2.0	5168.96	13744.23			
		4.0	-10171.04	16942.14			
		6.0	-17311.04	-10539.94			
		8.0	-24451.04	-52302.03			
1	95355.98						
		.0	12193.48	-2939.38			
		2.0	5053.48	14307.58			
		4.0	-10286.52	17274.54			
		6.0	-17426.52	-10438.50			
		8.0	-24566.52	-52431.55			
1	89802.67						
		.0	12434.39	-4067.75			
		2.0	5294.39	13661.03			
		4.0	-10045.61	17109.81			
		6.0	-17185.61	-10121.40			
		8.0	-24325.61	-51632.62			
1	84544.47						
		.0	12752.95	-5291.26			
		2.0	5612.95	13074.64			
		4.0	-9727.05	17160.53			
		6.0	-16867.05	-9433.57			
		8.0	-24007.05	-50307.67			
1	77921.83						
		.0	13156.67	-6876.12			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	6016.67	12297.22			
		4.0	-9323.33	17190.56			
		6.0	-16463.33	-8596.11			
		8.0	-23603.33	-48662.77			
1	70319.34						
		.0	13645.32	-8788.06			
		2.0	6505.32	11362.57			
		4.0	-8834.68	17233.21			
		6.0	-15974.68	-7576.16			
		8.0	-23114.68	-46665.52			
1	61640.31						
		.0	14223.61	-11050.03			
		2.0	7083.61	10257.19			
		4.0	-8256.39	17284.42			
		6.0	-15396.39	-6368.35			
		8.0	-22536.39	-44301.12			
1	51832.57						
		.0	14896.76	-13683.40			
		2.0	7756.76	8970.12			
		4.0	-7583.24	17343.63			
		6.0	-14723.24	-4962.86			
		8.0	-21863.24	-41549.34			
1	40982.15						
		.0	15668.53	-16711.00			
		2.0	8528.53	7486.05			
		4.0	-6811.47	17403.11			
		6.0	-13951.47	-3359.83			
		8.0	-21091.47	-38402.78			
1	28646.45						
		.0	16553.22	-20141.64			
		2.0	9413.22	5824.80			
		4.0	-5926.78	17511.25			
		6.0	-13066.78	-1482.31			
		8.0	-20206.78	-34755.86			
1	9744.77						
		.0	17768.12	-24857.71			
		2.0	10628.12	3538.53			
		4.0	-4711.88	17654.77			
		6.0	-11851.88	1091.00			
		8.0	-18991.88	-29752.76			
1	-55369.23						
		.0	12686.62	-21328.32			
		2.0	8306.62	-335.08			
		4.0	-1953.38	11898.16			
		6.0	-6333.38	3611.40			

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ME ELEMENT FORCES

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10713.38	-13435.36			
1							
1	-5835.52						
		.0	12340.11	-20409.16			
		2.0	7960.11	-108.94			
		4.0	-2299.89	11431.29			
		6.0	-6679.89	2451.51			
		8.0	-11059.89	-15288.26			
0							
1	-28808.84						
		.0	17999.43	-33795.18			
		3.0	11429.43	10348.10			
		6.0	-1020.57	23021.39			
		9.0	-13470.57	4224.68			
		12.0	-20040.57	-46042.03			

RASTA S.H. & YAZID, GONDOLAYU PROJECT

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M E E L E M E N T F O R C E S

T LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	1 51170.92	.0	71696.07	-254019.05			
		1.0	71696.07	-182322.99			
		2.0	71696.07	-110626.92			
3		3.0	71696.07	-38930.85			
		4.0	71696.07	32765.21			
5	1 34350.67	.0	55933.47	-73651.11			
		1.0	55933.47	-17717.64			
		2.0	55933.47	38215.82			
7		3.0	55933.47	94149.29			
		4.0	55933.47	150082.75			
9	1 33382.92	.0	-28430.03	99374.48			
		1.0	-28430.03	70944.44			
		2.0	-28430.03	42514.41			
1		3.0	-28430.03	14084.38			
		4.0	-28430.03	-14345.65			
3	1 -5146.53	.0	1988.81	-8493.65			
		1.0	1988.81	-6504.84			
		2.0	1988.81	-4516.03			
5		3.0	1988.81	-2527.22			
		4.0	1988.81	-538.41			
7	1-25686.16	.0	-1425.33	3299.67			
		1.0	-1425.33	1874.33			
		2.0	-1425.33	449.00			
9		3.0	-1425.33	-976.34			
		4.0	-1425.33	-2401.67			
21	1-42704.38	.0	-1999.78	4647.82			
		1.0	-1999.78	2648.04			
		2.0	-1999.78	648.26			
2		3.0	-1999.78	-1351.52			
		4.0	-1999.78	-3351.30			
25	1-55080.65	.0	-2672.85	6477.51			
		1.0	-2672.85	3804.66			
		2.0	-2672.85	1131.81			
6		3.0	-2672.85	-1541.04			
		4.0	-2672.85	-4213.89			
29	1-62907.26	.0	-3401.49	8459.95			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1								
	1	51170.92						
			.0	71696.07	-254019.05			
			1.0	71696.07	-182322.99			
			2.0	71696.07	-110626.92			
			3.0	71696.07	-38930.85			
			4.0	71696.07	32765.21			
5								
	1	34350.67						
			.0	55933.47	-73651.11			
			1.0	55933.47	-17717.64			
			2.0	55933.47	38215.82			
			3.0	55933.47	94149.29			
			4.0	55933.47	150082.75			
9								
	1	33382.92						
			.0	-28430.03	99374.48			
			1.0	-28430.03	70944.44			
			2.0	-28430.03	42514.41			
			3.0	-28430.03	14084.38			
			4.0	-28430.03	-14345.65			
13								
	1	-5146.53						
			.0	1988.81	-8493.65			
			1.0	1988.81	-6504.84			
			2.0	1988.81	-4516.03			
			3.0	1988.81	-2527.22			
			4.0	1988.81	-538.41			
17								
	1	-25686.16						
			.0	-1425.33	3299.67			
			1.0	-1425.33	1874.33			
			2.0	-1425.33	449.00			
			3.0	-1425.33	-976.34			
			4.0	-1425.33	-2401.67			
21								
	1	-42704.38						
			.0	-1999.78	4647.82			
			1.0	-1999.78	2648.04			
			2.0	-1999.78	648.26			
			3.0	-1999.78	-1351.52			
			4.0	-1999.78	-3351.30			
25								
	1	-55080.65						
			.0	-2672.85	6477.51			
			1.0	-2672.85	3804.66			
			2.0	-2672.85	1131.81			
			3.0	-2672.85	-1541.04			
			4.0	-2672.85	-4213.89			
29								
	1	-62907.26						
			.0	-3401.49	8459.95			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-3401.49	5058.46			
		2.0	-3401.49	1656.97			
		3.0	-3401.49	-1744.52			
		4.0	-3401.49	-5146.01			
3							
	1-65858.76						
		.0	-4197.96	10560.17			
		1.0	-4197.96	6362.21			
		2.0	-4197.96	2164.24			
		3.0	-4197.96	-2033.72			
		4.0	-4197.96	-6231.68			
7							
	1-63522.24						
		.0	-5056.93	12745.77			
		1.0	-5056.93	7688.85			
		2.0	-5056.93	2631.92			
		3.0	-5056.93	-2425.01			
		4.0	-5056.93	-7481.94			
1							
	1-55422.77						
		.0	-5986.66	15042.32			
		1.0	-5986.66	9055.66			
		2.0	-5986.66	3068.99			
		3.0	-5986.66	-2917.67			
		4.0	-5986.66	-8904.33			
5							
	1-41002.65						
		.0	-6928.39	17503.22			
		1.0	-6928.39	10574.83			
		2.0	-6928.39	3646.44			
		3.0	-6928.39	-3281.96			
		4.0	-6928.39	-10210.35			
9							
	1-19529.09						
		.0	-10341.83	20472.19			
		1.0	-10341.83	10130.37			
		2.0	-10341.83	-211.46			
		3.0	-10341.83	-10553.29			
		4.0	-10341.83	-20895.12			
2							
	1*********						
		.0	82057.61	-268271.24			
		1.0	82057.61	-186213.63			
		2.0	82057.61	-104156.02			
		3.0	82057.61	-22098.41			
		4.0	82057.61	59959.20			
6							
	1*********						
		.0	78163.91	-121986.13			
		1.0	78163.91	-43822.22			
		2.0	78163.91	34341.69			
		3.0	78163.91	112505.60			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	78163.91	190669.51			
	1*********						
		.0	-25551.36	92599.34			
		1.0	-25551.36	67047.97			
		2.0	-25551.36	41496.61			
		3.0	-25551.36	15945.25			
		4.0	-25551.36	-9606.11			
1							
	1*********						
		.0	5541.88	-15171.71			
		1.0	5541.88	-9629.83			
		2.0	5541.88	-4087.95			
		3.0	5541.88	1453.93			
		4.0	5541.88	6995.80			
3							
	1*********						
		.0	1879.65	-3283.12			
		1.0	1879.65	-1403.48			
		2.0	1879.65	476.17			
		3.0	1879.65	2355.82			
		4.0	1879.65	4235.47			
2							
	1*********						
		.0	1254.76	-1985.55			
		1.0	1254.76	-730.79			
		2.0	1254.76	523.97			
		3.0	1254.76	1778.73			
		4.0	1254.76	3033.50			
6							
	1*********						
		.0	306.44	408.78			
		1.0	306.44	715.23			
		2.0	306.44	1021.67			
		3.0	306.44	1328.11			
		4.0	306.44	1634.55			
0							
	1*********						
		.0	-813.95	3160.63			
		1.0	-813.95	2346.68			
		2.0	-813.95	1532.73			
		3.0	-813.95	718.78			
		4.0	-813.95	-95.17			
4							
	1*********						
		.0	-2086.42	6182.70			
		1.0	-2086.42	4096.28			
		2.0	-2086.42	2009.86			
		3.0	-2086.42	-76.56			
		4.0	-2086.42	-2162.98			
8							
	1-93116.94						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3506.44	9466.14			
		1.0	-3506.44	5959.70			
		2.0	-3506.44	2453.27			
		3.0	-3506.44	-1053.17			
		4.0	-3506.44	-4559.60			
2							
	1-64976.15						
		.0	-5060.81	13012.18			
		1.0	-5060.81	7951.37			
		2.0	-5060.81	2890.56			
		3.0	-5060.81	-2170.24			
		4.0	-5060.81	-7231.05			
6							
	1-39804.44						
		.0	-6975.46	16884.00			
		1.0	-6975.46	9908.54			
		2.0	-6975.46	2933.07			
		3.0	-6975.46	-4042.39			
		4.0	-6975.46	-11017.86			
10							
	1-16037.37						
		.0	-9863.53	19976.00			
		1.0	-9863.53	10112.48			
		2.0	-9863.53	248.95			
		3.0	-9863.53	-9614.58			
		4.0	-9863.53	-19478.10			
3							
	1*********						
		.0	89997.73	-281039.53			
		1.0	89997.73	-191041.80			
		2.0	89997.73	-101044.07			
		3.0	89997.73	-11046.34			
		4.0	89997.73	78951.38			
7							
	1*********						
		.0	101330.46	-168157.84			
		1.0	101330.46	-66827.38			
		2.0	101330.46	34503.08			
		3.0	101330.46	135833.54			
		4.0	101330.46	237164.00			
11							
	1*********						
		.0	-7730.70	60214.07			
		1.0	-7730.70	52483.37			
		2.0	-7730.70	44752.67			
		3.0	-7730.70	37021.97			
		4.0	-7730.70	29291.27			
15							
	1*********						
		.0	23238.94	-49512.73			
		1.0	23238.94	-26273.79			
		2.0	23238.94	-3034.85			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	23238.94	20204.09			
		4.0	23238.94	43443.02			
1*********							
		.0	20112.95	-39509.82			
		1.0	20112.95	-19396.87			
		2.0	20112.95	716.09			
		3.0	20112.95	20829.04			
		4.0	20112.95	40942.00			
1*********							
		.0	20085.83	-39558.57			
		1.0	20085.83	-19472.74			
		2.0	20085.83	613.09			
		3.0	20085.83	20698.92			
		4.0	20085.83	40784.75			
1*********							
		.0	19235.73	-37210.97			
		1.0	19235.73	-17975.23			
		2.0	19235.73	1260.50			
		3.0	19235.73	20496.24			
		4.0	19235.73	39731.97			
1*********							
		.0	18289.35	-34848.43			
		1.0	18289.35	-16559.08			
		2.0	18289.35	1730.28			
		3.0	18289.35	20019.63			
		4.0	18289.35	38308.99			
1*********							
		.0	17151.95	-32125.66			
		1.0	17151.95	-14973.71			
		2.0	17151.95	2178.23			
		3.0	17151.95	19330.18			
		4.0	17151.95	36482.12			
1*********							
		.0	15843.67	-29089.02			
		1.0	15843.67	-13245.35			
		2.0	15843.67	2598.33			
		3.0	15843.67	18442.00			
		4.0	15843.67	34285.67			
1*********							
		.0	14302.60	-25723.32			
		1.0	14302.60	-11420.71			
		2.0	14302.60	2881.89			
		3.0	14302.60	17184.49			
		4.0	14302.60	31487.10			

Sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-76753.27						
		.0	13071.13	-22356.46			
		1.0	13071.13	-9285.33			
		2.0	13071.13	3785.80			
		3.0	13071.13	16856.93			
		4.0	13071.13	29928.07			
	1-27975.85						
		.0	10333.33	-16125.95			
		1.0	10333.33	-5792.61			
		2.0	10333.33	4540.72			
		3.0	10333.33	14874.06			
		4.0	10333.33	25207.39			
4	1*********						
		.0	74409.60	-262500.27			
		1.0	74409.60	-188090.67			
		2.0	74409.60	-113681.07			
		3.0	74409.60	-39271.48			
		4.0	74409.60	35138.12			
8	1*********						
		.0	79266.16	-121659.04			
		1.0	79266.16	-42392.88			
		2.0	79266.16	36873.29			
		3.0	79266.16	116139.45			
		4.0	79266.16	195405.62			
2	1*********						
		.0	-14851.79	81635.75			
		1.0	-14851.79	66783.95			
		2.0	-14851.79	51932.16			
		3.0	-14851.79	37080.36			
		4.0	-14851.79	22228.57			
6	1*********						
		.0	12714.62	-27088.17			
		1.0	12714.62	-14373.54			
		2.0	12714.62	-1658.92			
		3.0	12714.62	11055.70			
		4.0	12714.62	23770.32			
20	1*********						
		.0	13131.53	-26652.10			
		1.0	13131.53	-13520.56			
		2.0	13131.53	-389.03			
		3.0	13131.53	12742.51			
		4.0	13131.53	25874.04			
24	1*********						
		.0	12224.69	-23481.60			

sa Statis Portal (13 lantai) Kg/m

. M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	12224.69	-11256.91			
		2.0	12224.69	967.78			
		3.0	12224.69	13192.46			
		4.0	12224.69	25417.15			
3							
	1*********						
		.0	11803.82	-22177.53			
		1.0	11803.82	-10373.71			
		2.0	11803.82	1430.11			
		3.0	11803.82	13233.92			
		4.0	11803.82	25037.74			
2							
	1*********						
		.0	11229.36	-20494.14			
		1.0	11229.36	-9264.79			
		2.0	11229.36	1964.57			
		3.0	11229.36	13193.93			
		4.0	11229.36	24423.29			
6							
	1*********						
		.0	10571.24	-18693.54			
		1.0	10571.24	-8122.30			
		2.0	10571.24	2448.94			
		3.0	10571.24	13020.18			
		4.0	10571.24	23591.42			
0							
	1*********						
		.0	9805.81	-16741.09			
		1.0	9805.81	-6935.28			
		2.0	9805.81	2870.53			
		3.0	9805.81	12676.34			
		4.0	9805.81	22482.15			
4							
	1-83581.21						
		.0	9034.90	-14685.82			
		1.0	9034.90	-5650.92			
		2.0	9034.90	3383.98			
		3.0	9034.90	12418.87			
		4.0	9034.90	21453.77			
8							
	1-42447.55						
		.0	8206.74	-12061.59			
		1.0	8206.74	-3854.85			
		2.0	8206.74	4351.89			
		3.0	8206.74	12558.63			
		4.0	8206.74	20765.36			
2							
	1-10846.82						
		.0	5595.63	-7876.28			
		1.0	5595.63	-2280.65			
		2.0	5595.63	3314.98			
		3.0	5595.63	8910.60			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5595.63	14506.23			
3							
	1 12295.60						
		.0	-16820.25	106416.32			
		2.0	-22360.25	67235.82			
		4.0	-36100.25	16975.33			
		6.0	-41640.25	-60765.16			
		8.0	-47180.25	-149585.66			
4							
	1 16189.30						
		.0	10316.48	32359.68			
		3.0	2006.48	50844.11			
		6.0	-14503.52	27998.55			
		9.0	-31013.52	-36177.01			
		12.0	-39323.52	-141682.57			
5							
	1 4856.57						
		.0	-17597.98	105426.65			
		2.0	-23137.98	64690.70			
		4.0	-36877.98	12874.75			
		6.0	-42417.98	-66421.21			
		8.0	-47957.98	-156797.16			
6							
	1 77428.50						
		.0	-967.75	50708.28			
		2.0	-8107.75	41632.77			
		4.0	-23447.75	18277.27			
		6.0	-30587.75	-35758.24			
		8.0	-37727.75	-104073.74			
9							
	1 61707.70						
		.0	13181.69	-6107.90			
		2.0	6041.69	13115.48			
		4.0	-9298.31	18058.85			
		6.0	-16438.31	-7677.78			
		8.0	-23578.31	-47694.41			
2							
	1 54922.33						
		.0	12674.42	-3986.95			
		2.0	5534.42	14221.88			
		4.0	-9805.58	18150.71			
		6.0	-16945.58	-8600.45			
		8.0	-24085.58	-49631.62			
5							
	1 42932.07						
		.0	13476.12	-7187.92			
		2.0	6336.12	12624.31			
		4.0	-9003.88	18156.55			
		6.0	-16143.88	-6991.22			
		8.0	-23283.88	-46418.98			
8							
	1 31409.99						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	14159.45	-9947.95			
		2.0	7019.45	11230.96			
		4.0	-8320.55	18129.87			
		6.0	-15460.55	-5651.22			
		8.0	-22600.55	-43712.31			
1							
	1 20064.49						
		.0	14860.24	-12774.71			
		2.0	7720.24	9805.76			
		4.0	-7619.76	18106.24			
		6.0	-14759.76	-4273.29			
		8.0	-21899.76	-40932.81			
4							
	1 8171.45						
		.0	15606.88	-15787.96			
		2.0	8466.88	8285.81			
		4.0	-6873.12	18079.58			
		6.0	-14013.12	-2806.66			
		8.0	-21153.12	-37972.89			
7							
	1 -4436.49						
		.0	16411.33	-19038.87			
		2.0	9271.33	6643.79			
		4.0	-6068.67	18046.45			
		6.0	-13208.67	-1230.90			
		8.0	-20348.67	-34788.24			
0							
	1-17849.85						
		.0	17282.98	-22563.81			
		2.0	10142.98	4862.15			
		4.0	-5197.02	18008.11			
		6.0	-12337.02	474.07			
		8.0	-19477.02	-31339.98			
3							
	1-32270.12						
		.0	18238.32	-26423.45			
		2.0	11098.32	2913.18			
		4.0	-4241.68	17969.82			
		6.0	-11381.68	2346.45			
		8.0	-18521.68	-27556.92			
6							
	1-45557.90						
		.0	19262.10	-30671.67			
		2.0	12122.10	712.53			
		4.0	-3217.90	17816.73			
		6.0	-10357.90	4240.93			
		8.0	-17497.90	-23614.87			
7							
	1 77879.23						
		.0	19976.71	-6378.61			
		3.0	9266.71	37486.52			
		6.0	-9643.29	32821.64			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		9.0	-28553.29	-20373.23			
		12.0	-39263.29	-122098.11			
)							
	1 99093.75						
		.0	26086.94	-42574.14			
		3.0	15376.94	19621.67			
		6.0	-3533.06	33287.48			
		9.0	-22443.06	-1576.71			
		12.0	-33153.06	-84970.90			
3							
	1 96677.57						
		.0	25634.51	-39708.91			
		3.0	14924.51	21129.62			
		6.0	-3985.49	33438.14			
		9.0	-22895.49	-2783.33			
		12.0	-33605.49	-87534.80			
6							
	1 89545.27						
		.0	25778.08	-40535.98			
		3.0	15068.08	20733.24			
		6.0	-3841.92	33472.47			
		9.0	-22751.92	-2318.31			
		12.0	-33461.92	-86639.08			
9							
	1 83123.40						
		.0	25924.18	-41399.88			
		3.0	15214.18	20307.67			
		6.0	-3695.82	33485.22			
		9.0	-22605.82	-1867.23			
		12.0	-33315.82	-85749.68			
'2							
	1 75348.85						
		.0	26153.65	-42742.54			
		3.0	15443.65	19653.42			
		6.0	-3466.35	33519.39			
		9.0	-22376.35	-1144.65			
		12.0	-33086.35	-84338.69			
'5							
	1 65953.79						
		.0	26451.34	-44500.42			
		3.0	15741.34	18788.62			
		6.0	-3168.66	33547.65			
		9.0	-22078.66	-223.32			
		12.0	-32788.66	-82524.28			
'8							
	1 55154.93						
		.0	26809.99	-46628.23			
		3.0	16099.99	17736.76			
		6.0	-2810.01	33571.74			
		9.0	-21720.01	876.72			
		12.0	-32430.01	-80348.30			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
1							
1	43137.32						
		.0	27221.94	-49079.14			
		3.0	16511.94	16521.68			
		6.0	-2398.06	33592.49			
		9.0	-21308.06	2133.31			
		12.0	-32018.06	-77855.88			
34							
1	30443.09						
		.0	27673.63	-51790.55			
		3.0	16963.63	15165.35			
		6.0	-1946.37	33591.25			
		9.0	-20856.37	3487.15			
		12.0	-31566.37	-75146.95			
37							
1	16049.96						
		.0	28177.01	-54688.84			
		3.0	17467.01	13777.21			
		6.0	-1442.99	33713.25			
		9.0	-20352.99	5119.29			
		12.0	-31062.99	-72004.67			
58							
1	52102.91						
		.0	-2589.94	54436.49			
		2.0	-9729.94	42116.61			
		4.0	-25069.94	15516.73			
		6.0	-32209.94	-41763.15			
		8.0	-47549.94	-113323.03			
61							
	1115331.34						
		.0	13065.37	-6644.01			
		2.0	5925.37	12346.73			
		4.0	-9414.63	17057.46			
		6.0	-16554.63	-8911.81			
		8.0	-31894.63	-49161.07			
64							
1	88567.26						
		.0	12713.63	-4941.77			
		2.0	5573.63	13345.48			
		4.0	-9766.37	17352.74			
		6.0	-16906.37	-9320.01			
		8.0	-32246.37	-50272.76			
67							
1	81633.79						
		.0	13037.76	-6475.44			
		2.0	5897.76	12460.07			
		4.0	-9442.24	17115.58			
		6.0	-16582.24	-8908.91			
		8.0	-31922.24	-49213.40			
70							
1	75274.19						
		.0	13455.45	-8070.11			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	6315.45	11700.79			
		4.0	-9024.55	17191.69			
		6.0	-16164.55	-7997.40			
		8.0	-31504.55	-47466.50			
3							
	1 67361.87						
		.0	13958.20	-10044.71			
		2.0	6818.20	10731.69			
		4.0	-8521.80	17228.09			
		6.0	-15661.80	-6955.51			
		8.0	-31001.80	-45419.11			
6							
	1 58509.71						
		.0	14545.02	-12341.71			
		2.0	7405.02	9608.33			
		4.0	-7934.98	17278.37			
		6.0	-15074.98	-5731.59			
		8.0	-30414.98	-43021.55			
9							
	1 48571.09						
		.0	15221.65	-14990.15			
		2.0	8081.65	8313.16			
		4.0	-7258.35	17336.47			
		6.0	-14398.35	-4320.23			
		8.0	-29738.35	-40256.92			
12							
	1 37635.69						
		.0	15992.78	-18016.23			
		2.0	8852.78	6829.33			
		4.0	-6487.22	17394.88			
		6.0	-13627.22	-2719.56			
		8.0	-28967.22	-37114.01			
35							
	1 25253.73						
		.0	16872.38	-21426.89			
		2.0	9732.38	5177.87			
		4.0	-5607.62	17502.63			
		6.0	-12747.62	-852.61			
		8.0	-28087.62	-33487.85			
38							
	1 6781.19						
		.0	18052.16	-26024.54			
		2.0	10912.16	2939.78			
		4.0	-4427.84	17624.11			
		6.0	-11567.84	1628.44			
		8.0	-26907.84	-28647.23			
39							
	1-53546.20						
		.0	12578.75	-20879.48			
		2.0	8198.75	-101.98			
		4.0	-2061.25	11915.53			
		6.0	-6441.25	3413.04			

sasa Statis Portal (13 lantai) Kg/m

M M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10821.25	-13849.45			
1	-5595.63						
		.0	12553.18	-21331.64			
		2.0	8173.18	-605.29			
		4.0	-2086.82	11361.06			
		6.0	-6466.82	2807.42			
		8.0	-10846.82	-14506.23			
0	1-25321.27						
		.0	17924.43	-33412.64			
		3.0	11354.43	10505.65			
		6.0	-1095.57	22953.93			
		9.0	-13545.57	3932.21			
		12.0	-20115.57	-46559.50			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-3614.61	5401.17			
		2.0	-3614.61	1786.56			
		3.0	-3614.61	-1828.06			
		4.0	-3614.61	-5442.67			
	1-72398.57						
		.0	-4400.03	11050.70			
		1.0	-4400.03	6650.67			
		2.0	-4400.03	2250.63			
		3.0	-4400.03	-2149.40			
		4.0	-4400.03	-6549.44			
	1-68735.66						
		.0	-5261.08	13221.32			
		1.0	-5261.08	7960.24			
		2.0	-5261.08	2699.16			
		3.0	-5261.08	-2561.92			
		4.0	-5261.08	-7823.00			
	1-59294.81						
		.0	-6190.74	15499.55			
		1.0	-6190.74	9308.81			
		2.0	-6190.74	3118.07			
		3.0	-6190.74	-3072.67			
		4.0	-6190.74	-9263.41			
	1-43520.87						
		.0	-7148.03	17947.27			
		1.0	-7148.03	10799.25			
		2.0	-7148.03	3651.22			
		3.0	-7148.03	-3496.80			
		4.0	-7148.03	-10644.83			
	1-20697.35						
		.0	-10578.13	20818.16			
		1.0	-10578.13	10240.04			
		2.0	-10578.13	-338.09			
		3.0	-10578.13	-10916.21			
		4.0	-10578.13	-21494.34			
	1*********						
		.0	82274.06	-288751.15			
		1.0	82274.06	-206477.09			
		2.0	82274.06	-124203.03			
		3.0	82274.06	-41928.97			
		4.0	82274.06	40345.09			
	1*********						
		.0	85193.49	-184362.92			
		1.0	85193.49	-99169.43			
		2.0	85193.49	-13975.93			
		3.0	85193.49	71217.56			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	85193.49	156411.05			
1	1*********						
		.0	77285.87	-92936.80			
		1.0	77285.87	-15650.93			
		2.0	77285.87	61634.94			
		3.0	77285.87	138920.82			
		4.0	77285.87	216206.69			
4	1*********						
		.0	-29823.46	107921.48			
		1.0	-29823.46	78098.02			
		2.0	-29823.46	48274.57			
		3.0	-29823.46	18451.11			
		4.0	-29823.46	-11372.35			
8	1*********						
		.0	5060.67	-13718.48			
		1.0	5060.67	-8657.82			
		2.0	5060.67	-3597.15			
		3.0	5060.67	1463.52			
		4.0	5060.67	6524.18			
12	1*********						
		.0	795.61	-278.45			
		1.0	795.61	517.16			
		2.0	795.61	1312.77			
		3.0	795.61	2108.38			
		4.0	795.61	2903.99			
26	1*********						
		.0	44.32	1106.45			
		1.0	44.32	1150.76			
		2.0	44.32	1195.08			
		3.0	44.32	1239.40			
		4.0	44.32	1283.72			
30	1*********						
		.0	-1073.28	3784.05			
		1.0	-1073.28	2710.77			
		2.0	-1073.28	1637.49			
		3.0	-1073.28	564.21			
		4.0	-1073.28	-509.08			
34	1*********						
		.0	-2356.96	6808.65			
		1.0	-2356.96	4451.68			
		2.0	-2356.96	2094.72			
		3.0	-2356.96	-262.24			
		4.0	-2356.96	-2619.21			
38	1-90927.88						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3785.31	10088.66			
		1.0	-3785.31	6303.35			
		2.0	-3785.31	2518.03			
		3.0	-3785.31	-1267.28			
		4.0	-3785.31	-5052.59			
2							
	1-63645.88						
		.0	-5344.20	13624.04			
		1.0	-5344.20	8279.83			
		2.0	-5344.20	2935.63			
		3.0	-5344.20	-2408.57			
		4.0	-5344.20	-7752.78			
6							
	1-39323.21						
		.0	-7268.83	17483.02			
		1.0	-7268.83	10214.19			
		2.0	-7268.83	2945.36			
		3.0	-7268.83	-4323.47			
		4.0	-7268.83	-11592.30			
10							
	1-16266.76						
		.0	-10209.75	20511.31			
		1.0	-10209.75	10301.56			
		2.0	-10209.75	91.81			
		3.0	-10209.75	-10117.93			
		4.0	-10209.75	-20327.68			
3							
	1*********						
		.0	91381.99	-300086.77			
		1.0	91381.99	-208704.77			
		2.0	91381.99	-117322.78			
		3.0	91381.99	-25940.79			
		4.0	91381.99	65441.21			
7							
	1*********						
		.0	99236.56	-217196.86			
		1.0	99236.56	-117960.30			
		2.0	99236.56	-18723.74			
		3.0	99236.56	80512.81			
		4.0	99236.56	179749.37			
11							
	1*********						
		.0	101363.53	-139783.72			
		1.0	101363.53	-38420.19			
		2.0	101363.53	62943.34			
		3.0	101363.53	164306.86			
		4.0	101363.53	265670.39			
15							
	1*********						
		.0	-11590.38	75155.12			
		1.0	-11590.38	63564.75			
		2.0	-11590.38	51974.37			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	-11590.38	40383.99			
		4.0	-11590.38	28793.62			
	1*********						
		.0	23301.88	-49190.27			
		1.0	23301.88	-25888.39			
		2.0	23301.88	-2586.50			
		3.0	23301.88	20715.38			
		4.0	23301.88	44017.26			
3	1*********						
		.0	19711.97	-37977.52			
		1.0	19711.97	-18265.56			
		2.0	19711.97	1446.41			
		3.0	19711.97	21158.38			
		4.0	19711.97	40870.34			
7	1*********						
		.0	19543.84	-37845.72			
		1.0	19543.84	-18301.88			
		2.0	19543.84	1241.96			
		3.0	19543.84	20785.79			
		4.0	19543.84	40329.63			
1	1*********						
		.0	18497.01	-35142.03			
		1.0	18497.01	-16645.02			
		2.0	18497.01	1851.99			
		3.0	18497.01	20349.00			
		4.0	18497.01	38846.00			
5	1*********						
		.0	17367.92	-32472.59			
		1.0	17367.92	-15104.67			
		2.0	17367.92	2263.25			
		3.0	17367.92	19631.17			
		4.0	17367.92	36999.10			
9	1*********						
		.0	16060.05	-29459.34			
		1.0	16060.05	-13399.29			
		2.0	16060.05	2660.75			
		3.0	16060.05	18720.80			
		4.0	16060.05	34780.85			
3	1*********						
		.0	14521.25	-26117.02			
		1.0	14521.25	-11595.77			
		2.0	14521.25	2925.48			
		3.0	14521.25	17446.74			
		4.0	14521.25	31967.99			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-72624.64						
		.0	13305.85	-22757.60			
		1.0	13305.85	-9451.75			
		2.0	13305.85	3854.10			
		3.0	13305.85	17159.96			
		4.0	13305.85	30465.81			
	1-26167.12						
		.0	10505.63	-16338.53			
		1.0	10505.63	-5832.90			
		2.0	10505.63	4672.73			
		3.0	10505.63	15178.36			
		4.0	10505.63	25683.99			
	1*********						
		.0	74802.26	-278850.80			
		1.0	74802.26	-204048.54			
		2.0	74802.26	-129246.27			
		3.0	74802.26	-54444.01			
		4.0	74802.26	20358.25			
	1*********						
		.0	67756.59	-156621.87			
		1.0	67756.59	-88865.28			
		2.0	67756.59	-21108.68			
		3.0	67756.59	46647.91			
		4.0	67756.59	114404.50			
	1*********						
		.0	76246.28	-85820.66			
		1.0	76246.28	-9574.37			
		2.0	76246.28	66671.91			
		3.0	76246.28	142918.20			
		4.0	76246.28	219164.48			
	1*********						
		.0	-18948.41	97602.49			
		1.0	-18948.41	78654.09			
		2.0	-18948.41	59705.68			
		3.0	-18948.41	40757.27			
		4.0	-18948.41	21808.87			
	1*********						
		.0	12713.66	-26699.92			
		1.0	12713.66	-13986.26			
		2.0	12713.66	-1272.60			
		3.0	12713.66	11441.06			
		4.0	12713.66	24154.72			
	1*********						
		.0	13032.01	-25774.25			

M E M E E L E M E N T F O R C E S

LOA COM	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			4.0	5830.53	15276.34			
	1	3728.33						
			.0	-23699.66	134806.86			
			2.0	-29239.66	81867.53			
5			4.0	-42979.66	17848.20			
			6.0	-48519.66	-73651.13			
			8.0	-54059.66	-176230.46			
	1	2709.04						
			.0	-26415.62	145209.76			
			2.0	-31955.62	86838.52			
8			4.0	-45695.62	17387.28			
			6.0	-51235.62	-79543.96			
			8.0	-56775.62	-187555.20			
	1	808.89						
			.0	7720.02	48477.55			
			3.0	-589.98	59172.61			
1			6.0	-17099.98	28537.67			
			9.0	-33609.98	-43427.27			
			12.0	-41919.98	-156722.21			
	1	10616.66						
			.0	5387.63	61792.65			
			3.0	-2922.37	65490.53			
4			6.0	-19432.37	27858.42			
			9.0	-35942.37	-51103.70			
			12.0	-44252.37	-171395.82			
	1	-7045.67						
			.0	-22682.00	125915.86			
			2.0	-28222.00	75011.86			
7			4.0	-41962.00	13027.87			
			6.0	-47502.00	-76436.13			
			8.0	-53042.00	-176980.12			
	1	8489.69						
			.0	-28365.30	148137.27			
			2.0	-33905.30	85866.66			
30			4.0	-47645.30	12516.06			
			6.0	-53185.30	-88314.55			
			8.0	-58725.30	-200225.16			
	1	73333.89						
			.0	-2049.62	55113.68			
			2.0	-9189.62	43874.44			
33			4.0	-24529.62	18355.21			
			6.0	-31669.62	-37844.02			
			8.0	-38809.62	-108323.26			
	1	51313.66						

M E E L F M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		6.0	-11183.83	2735.11			
		8.0	-18323.83	-26772.54			
5							
	1-47720.68						
		.0	19454.72	-31447.60			
		2.0	12314.72	321.84			
		4.0	-3025.28	17811.29			
		6.0	-10165.28	4620.73			
		8.0	-17305.28	-22849.83			
0							
	1 80436.57						
		.0	18988.78	-427.09			
		3.0	8278.78	40474.26			
		6.0	-10631.22	32845.60			
		9.0	-29541.22	-23313.05			
		12.0	-40251.22	-128001.70			
3							
	1 99181.30						
		.0	26093.37	-42525.28			
		3.0	15383.37	19689.82			
		6.0	-3526.63	33374.93			
		9.0	-22436.63	-1469.97			
		12.0	-33146.63	-84844.86			
6							
	1 92688.00						
		.0	25709.32	-40076.38			
		3.0	14999.32	20986.57			
		6.0	-3910.68	33519.52			
		9.0	-22820.68	-2477.54			
		12.0	-33530.68	-87004.59			
9							
	1 82851.76						
		.0	25961.15	-41568.26			
		3.0	15251.15	20250.19			
		6.0	-3658.85	33538.64			
		9.0	-22568.85	-1702.92			
		12.0	-33278.85	-85474.47			
2							
	1 74462.34						
		.0	26193.34	-42954.69			
		3.0	15483.34	19560.32			
		6.0	-3426.66	33545.34			
		9.0	-22336.66	-999.64			
		12.0	-33046.66	-84074.62			
5							
	1 64963.73						
		.0	26499.60	-44761.56			
		3.0	15789.60	18672.24			
		6.0	-3120.40	33576.03			
		9.0	-22030.40	-50.18			
		12.0	-32740.40	-82206.38			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1	54050.42						
			.0	26863.77	-46922.47			
			3.0	16153.77	17603.83			
			6.0	-2756.23	33600.14			
			9.0	-21666.23	1066.45			
			12.0	-32376.23	-79997.24			
1								
	1	41966.19						
			.0	27279.32	-49395.37			
			3.0	16569.32	16377.60			
			6.0	-2340.68	33620.56			
			9.0	-21250.68	2333.52			
			12.0	-31960.68	-77483.51			
4								
	1	29253.94						
			.0	27733.11	-52119.53			
			3.0	17023.11	15014.79			
			6.0	-1886.89	33619.11			
			9.0	-20796.89	3693.43			
			12.0	-31506.89	-74762.26			
37								
	1	14658.02						
			.0	28239.28	-55026.55			
			3.0	17529.28	13626.29			
			6.0	-1380.72	33749.12			
			9.0	-20290.72	5341.96			
			12.0	-31000.72	-71595.21			
51								
	1	52740.13						
			.0	-4513.82	62064.82			
			2.0	-11653.82	45897.18			
			4.0	-26993.82	15449.55			
			6.0	-34133.82	-45678.09			
			8.0	-41273.82	-121085.72			
54								
	1	1115094.58						
			.0	13252.32	-7340.57			
			2.0	6112.32	12024.06			
			4.0	-9227.68	17108.70			
			6.0	-16367.68	-8486.67			
			8.0	-23507.68	-48362.03			
67								
	1	84589.80						
			.0	12825.56	-5351.58			
			2.0	5685.56	13159.54			
			4.0	-9654.44	17390.66			
			6.0	-16794.44	-9058.21			
			8.0	-23934.44	-49787.09			
70								
	1	77099.26						
			.0	13193.74	-7072.51			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
		2.0	6053.74	12174.97			
		4.0	-9286.26	17142.45			
		6.0	-16426.26	-8570.07			
		8.0	-23566.26	-48562.59			
3							
	1 70119.96						
		.0	13671.77	-8891.72			
		2.0	6531.77	11311.83			
		4.0	-8808.23	17235.37			
		6.0	-15948.23	-7521.08			
		8.0	-23088.23	-46557.54			
6							
	1 61420.82						
		.0	14245.95	-11142.12			
		2.0	7105.95	10209.78			
		4.0	-8234.05	17281.69			
		6.0	-15374.05	-6326.41			
		8.0	-22514.05	-44214.51			
9							
	1 51684.19						
		.0	14913.94	-13754.46			
		2.0	7773.94	8933.43			
		4.0	-7566.06	17341.32			
		6.0	-14706.06	-4930.79			
		8.0	-21846.06	-41482.90			
32							
	1 40905.99						
		.0	15679.66	-16758.01			
		2.0	8539.66	7461.31			
		4.0	-6800.34	17400.62			
		6.0	-13940.34	-3340.06			
		8.0	-21080.34	-38360.74			
35							
	1 28637.50						
		.0	16558.21	-20163.57			
		2.0	9418.21	5812.86			
		4.0	-5921.79	17509.29			
		6.0	-13061.79	-1474.28			
		8.0	-20201.79	-34737.85			
88							
	1 9715.17						
		.0	17770.47	-24868.40			
		2.0	10630.47	3532.55			
		4.0	-4709.53	17653.49			
		6.0	-11849.53	1094.43			
		8.0	-18989.53	-29744.62			
89							
	1-55738.31						
		.0	12724.61	-21474.91			
		2.0	8344.61	-405.68			
		4.0	-1915.39	11903.54			
		6.0	-6295.39	3692.77			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
		8.0	-10675.39	-13278.00			
1	-5830.53						
		.0	12344.27	-20430.54			
		2.0	7964.27	-121.99			
		4.0	-2295.73	11426.56			
		6.0	-6675.73	2455.11			
		8.0	-11055.73	-15276.34			
1	-28807.39						
		.0	17983.30	-33688.64			
		3.0	11413.30	10406.27			
		6.0	-1036.70	23031.17			
		9.0	-13486.70	4186.07			
		12.0	-20056.70	-46129.03			

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M E   E L E M E N T   F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1							
1	63182.77						
		.0	66991.69	-274112.14			
		1.0	66991.69	-207120.45			
		2.0	66991.69	-140128.76			
		3.0	66991.69	-73137.07			
		4.0	66991.69	-6145.38			
5							
1	37867.46						
		.0	57206.58	-147424.71			
		1.0	57206.58	-90218.12			
		2.0	57206.58	-33011.54			
		3.0	57206.58	24195.05			
		4.0	57206.58	81401.63			
9							
1	3959.80						
		.0	56268.07	-94726.45			
		1.0	56268.07	-38458.38			
		2.0	56268.07	17809.69			
		3.0	56268.07	74077.76			
		4.0	56268.07	130345.84			
13							
1	-23936.27						
		.0	47637.57	-20846.70			
		1.0	47637.57	26790.87			
		2.0	47637.57	74428.44			
		3.0	47637.57	122066.01			
		4.0	47637.57	169703.57			
17							
1	-25378.58						
		.0	-33210.05	116949.05			
		1.0	-33210.05	83739.00			
		2.0	-33210.05	50528.95			
		3.0	-33210.05	17318.91			
		4.0	-33210.05	-15891.14			
21							
1	-56703.18						
		.0	506.43	-3959.10			
		1.0	506.43	-3452.67			
		2.0	506.43	-2946.24			
		3.0	506.43	-2439.81			
		4.0	506.43	-1933.38			
25							
1	-67204.37						
		.0	-3116.24	8155.85			
		1.0	-3116.24	5039.61			
		2.0	-3116.24	1923.37			
		3.0	-3116.24	-1192.87			
		4.0	-3116.24	-4309.11			
29							
1	-73541.12						
		.0	-3741.48	9402.33			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-3741.48	5660.84			
		2.0	-3741.48	1919.36			
		3.0	-3741.48	-1822.12			
		4.0	-3741.48	-5563.61			
;							
	1-74588.57						
		.0	-4497.25	11273.62			
		1.0	-4497.25	6776.37			
		2.0	-4497.25	2279.12			
		3.0	-4497.25	-2218.13			
		4.0	-4497.25	-6715.38			
7							
	1-70377.64						
		.0	-5334.56	13370.93			
		1.0	-5334.56	8036.38			
		2.0	-5334.56	2701.82			
		3.0	-5334.56	-2632.74			
		4.0	-5334.56	-7967.29			
1							
	1-60452.09						
		.0	-6257.34	15633.43			
		1.0	-6257.34	9376.09			
		2.0	-6257.34	3118.74			
		3.0	-6257.34	-3138.60			
		4.0	-6257.34	-9395.94			
5							
	1-44243.10						
		.0	-7210.24	18065.35			
		1.0	-7210.24	10855.11			
		2.0	-7210.24	3644.87			
		3.0	-7210.24	-3565.37			
		4.0	-7210.24	-10775.61			
9							
	1-21026.68						
		.0	-10645.86	20911.39			
		1.0	-10645.86	10265.53			
		2.0	-10645.86	-380.33			
		3.0	-10645.86	-11026.19			
		4.0	-10645.86	-21672.05			
2							
	1*********						
		.0	81722.62	-292989.55			
		1.0	81722.62	-211266.93			
		2.0	81722.62	-129544.31			
		3.0	81722.62	-47821.69			
		4.0	81722.62	33900.93			
6							
	1*********						
		.0	85542.73	-201863.35			
		1.0	85542.73	-116320.62			
		2.0	85542.73	-30777.89			
		3.0	85542.73	54764.85			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	85542.73	140307.58			
)							
	1**********						
		.0	84792.41	-155918.73			
		1.0	84792.41	-71126.33			
		2.0	84792.41	13666.08			
		3.0	84792.41	98458.49			
		4.0	84792.41	183250.89			
4							
	1**********						
		.0	74201.17	-79361.76			
		1.0	74201.17	-5160.60			
		2.0	74201.17	69040.57			
		3.0	74201.17	143241.74			
		4.0	74201.17	217442.91			
8							
	1**********						
		.0	-30722.49	110712.68			
		1.0	-30722.49	79990.19			
		2.0	-30722.49	49267.70			
		3.0	-30722.49	18545.21			
		4.0	-30722.49	-12177.28			
12							
	1**********						
		.0	4229.20	-11476.61			
		1.0	4229.20	-7247.41			
		2.0	4229.20	-3018.22			
		3.0	4229.20	1210.98			
		4.0	4229.20	5440.18			
26							
	1**********						
		.0	-243.53	2363.62			
		1.0	-243.53	2120.10			
		2.0	-243.53	1876.57			
		3.0	-243.53	1633.05			
		4.0	-243.53	1389.52			
30							
	1**********						
		.0	-1121.63	3937.97			
		1.0	-1121.63	2816.34			
		2.0	-1121.63	1694.71			
		3.0	-1121.63	573.07			
		4.0	-1121.63	-548.56			
34							
	1**********						
		.0	-2384.19	6870.96			
		1.0	-2384.19	4486.77			
		2.0	-2384.19	2102.58			
		3.0	-2384.19	-281.61			
		4.0	-2384.19	-2665.80			
38							
	1-88664.31						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3807.50	10137.44			
		1.0	-3807.50	6329.94			
		2.0	-3807.50	2522.44			
		3.0	-3807.50	-1285.06			
		4.0	-3807.50	-5092.57			
2							
	1-62094.15						
		.0	-5362.30	13661.73			
		1.0	-5362.30	8299.42			
		2.0	-5362.30	2937.12			
		3.0	-5362.30	-2425.18			
		4.0	-5362.30	-7787.49			
6							
	1-38423.52						
		.0	-7287.18	17509.92			
		1.0	-7287.18	10222.74			
		2.0	-7287.18	2935.56			
		3.0	-7287.18	-4351.62			
		4.0	-7287.18	-11638.80			
0							
	1-15952.70						
		.0	-10209.45	20501.55			
		1.0	-10209.45	10292.10			
		2.0	-10209.45	82.65			
		3.0	-10209.45	-10126.81			
		4.0	-10209.45	-20336.26			
3							
	1*********						
		.0	91450.85	-305405.10			
		1.0	91450.85	-213954.25			
		2.0	91450.85	-122503.40			
		3.0	91450.85	-31052.55			
		4.0	91450.85	60398.29			
7							
	1*********						
		.0	100792.55	-233232.36			
		1.0	100792.55	-132439.81			
		2.0	100792.55	-31647.25			
		3.0	100792.55	69145.30			
		4.0	100792.55	169937.86			
11							
	1*********						
		.0	99101.72	-188459.25			
		1.0	99101.72	-89357.53			
		2.0	99101.72	9744.18			
		3.0	99101.72	108845.90			
		4.0	99101.72	207947.61			
15							
	1*********						
		.0	99051.03	-127641.58			
		1.0	99051.03	-28590.55			
		2.0	99051.03	70460.48			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	99051.03	169511.51			
		4.0	99051.03	268562.53			
9							
1**********							
		.0	-12229.86	77599.53			
		1.0	-12229.86	65369.67			
		2.0	-12229.86	53139.81			
		3.0	-12229.86	40909.95			
		4.0	-12229.86	28680.09			
3							
1**********							
		.0	22804.61	-47684.16			
		1.0	22804.61	-24879.55			
		2.0	22804.61	-2074.93			
		3.0	22804.61	20729.68			
		4.0	22804.61	43534.29			
27							
1**********							
		.0	18999.32	-36055.61			
		1.0	18999.32	-17056.29			
		2.0	18999.32	1943.03			
		3.0	18999.32	20942.35			
		4.0	18999.32	39941.67			
31							
1**********							
		.0	18634.45	-35561.28			
		1.0	18634.45	-16926.83			
		2.0	18634.45	1707.63			
		3.0	18634.45	20342.08			
		4.0	18634.45	38976.54			
35							
1**********							
		.0	17396.77	-32512.62			
		1.0	17396.77	-15115.85			
		2.0	17396.77	2280.93			
		3.0	17396.77	19677.70			
		4.0	17396.77	37074.48			
39							
1**********							
		.0	16093.85	-29526.60			
		1.0	16093.85	-13432.75			
		2.0	16093.85	2661.11			
		3.0	16093.85	18754.96			
		4.0	16093.85	34848.81			
43							
1**********							
		.0	14554.45	-26186.60			
		1.0	14554.45	-11632.15			
		2.0	14554.45	2922.29			
		3.0	14554.45	17476.74			
		4.0	14554.45	32031.19			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-73074.63						
		.0	13348.20	-22833.74			
		1.0	13348.20	-9485.55			
		2.0	13348.20	3862.65			
		3.0	13348.20	17210.85			
		4.0	13348.20	30559.05			
1							
	1-26289.53						
		.0	10536.15	-16371.31			
		1.0	10536.15	-5835.16			
		2.0	10536.15	4700.99			
		3.0	10536.15	15237.15			
		4.0	10536.15	25773.30			
4							
	1*********						
		.0	74634.84	-283906.31			
		1.0	74634.84	-209271.47			
		2.0	74634.84	-134636.62			
		3.0	74634.84	-60001.78			
		4.0	74634.84	14633.06			
8							
	1*********						
		.0	67809.13	-168872.03			
		1.0	67809.13	-101062.90			
		2.0	67809.13	-33253.77			
		3.0	67809.13	34555.36			
		4.0	67809.13	102364.48			
2							
	1*********						
		.0	64289.81	-119775.86			
		1.0	64289.81	-55486.05			
		2.0	64289.81	8803.75			
		3.0	64289.81	73093.56			
		4.0	64289.81	137383.37			
6							
	1*********						
		.0	73214.24	-71687.06			
		1.0	73214.24	1527.18			
		2.0	73214.24	74741.42			
		3.0	73214.24	147955.65			
		4.0	73214.24	221169.89			
20							
	1*********						
		.0	-19656.09	100142.92			
		1.0	-19656.09	80486.83			
		2.0	-19656.09	60830.74			
		3.0	-19656.09	41174.65			
		4.0	-19656.09	21518.56			
24							
	1*********						
		.0	12348.18	-25474.59			

ASTA S.H. & YAZID, GONDOLAYU PROJECT

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

M	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			1.0	12348.18	-13126.40			
			2.0	12348.18	-778.22			
			3.0	12348.18	11569.96			
			4.0	12348.18	23918.14			
8								
	1	*********						
			.0	12546.59	-24258.68			
			1.0	12546.59	-11712.09			
			2.0	12546.59	834.49			
			3.0	12546.59	13381.08			
			4.0	12546.59	25927.67			
12								
	1	*********						
			.0	11434.52	-20683.85			
			1.0	11434.52	-9249.34			
			2.0	11434.52	2185.18			
			3.0	11434.52	13619.70			
			4.0	11434.52	25054.21			
36								
	1	*********						
			.0	10858.57	-19181.75			
			1.0	10858.57	-8323.18			
			2.0	10858.57	2535.39			
			3.0	10858.57	13393.96			
			4.0	10858.57	24252.53			
40								
	1	*********						
			.0	10094.86	-17249.18			
			1.0	10094.86	-7154.32			
			2.0	10094.86	2940.55			
			3.0	10094.86	13035.41			
			4.0	10094.86	23130.27			
44								
	1	-71023.26						
			.0	9336.73	-15239.06			
			1.0	9336.73	-5902.33			
			2.0	9336.73	3434.39			
			3.0	9336.73	12771.12			
			4.0	9336.73	22107.84			
48								
	1	-36172.99						
			.0	8577.77	-12621.20			
			1.0	8577.77	-4043.42			
			2.0	8577.77	4534.35			
			3.0	8577.77	13112.12			
			4.0	8577.77	21689.90			
52								
	1	-11040.02						
			.0	5807.84	-8007.12			
			1.0	5807.84	-2199.28			
			2.0	5807.84	3608.56			
			3.0	5807.84	9416.40			

3a Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5807.84	15224.24			
1	6336.11						
		.0	-25315.31	141279.33			
		2.0	-30855.31	85108.72			
		4.0	-44595.31	17858.11			
		6.0	-50135.31	-76872.51			
		8.0	-55675.31	-182683.12			
5							
1	-5960.49						
		.0	-33907.66	176128.08			
		2.0	-39447.66	102772.77			
		4.0	-53187.66	18337.45			
		6.0	-58727.66	-93577.87			
		8.0	-64267.66	-216573.18			
9							
1	-1717.50						
		.0	-27896.08	151192.54			
		2.0	-33436.08	89860.38			
		4.0	-47176.08	17448.23			
		6.0	-52716.08	-82443.93			
		8.0	-58256.08	-193416.09			
4							
1	2515.99						
		.0	6956.58	53081.17			
		3.0	-1353.42	61485.91			
		6.0	-17863.42	28560.66			
		9.0	-34373.42	-45694.59			
		12.0	-42683.42	-161279.85			
7							
1	-5210.16						
		.0	2507.19	79653.13			
		3.0	-5802.81	74709.70			
		6.0	-22312.81	28436.28			
		9.0	-38822.81	-59167.14			
		12.0	-47132.81	-188100.57			
0							
1	8873.74						
		.0	4156.44	69196.57			
		3.0	-4153.56	69200.88			
		6.0	-20663.56	27875.18			
		9.0	-37173.56	-54780.51			
		12.0	-45483.56	-178766.20			
5							
1	-6825.71						
		.0	-24301.99	132350.81			
		2.0	-29841.99	78206.83			
		4.0	-43581.99	12982.86			
		6.0	-49121.99	-79721.11			
		8.0	-54661.99	-183505.09			
8							
1	-3519.32						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-33874.61	170296.54			
		2.0	-39414.61	97007.32			
		4.0	-53154.61	12638.10			
		6.0	-58694.61	-99211.12			
		8.0	-64234.61	-222140.35			
1							
1	8924.43						
		.0	-30556.68	156822.99			
		2.0	-36096.68	90169.63			
		4.0	-49836.68	12436.28			
		6.0	-55376.68	-92777.07			
		8.0	-60916.68	-209070.42			
2							
1	67049.61						
		.0	-1442.30	52754.53			
		2.0	-8582.30	42729.92			
		4.0	-23922.30	18425.31			
		6.0	-31062.30	-36559.29			
		8.0	-38202.30	-105823.90			
5							
1	39754.83						
		.0	14719.73	-12164.27			
		2.0	7579.73	10135.19			
		4.0	-7760.27	18154.65			
		6.0	-14900.27	-4505.89			
		8.0	-22040.27	-41446.43			
8							
1	30862.97						
		.0	14224.01	-10196.83			
		2.0	7084.01	11111.19			
		4.0	-8255.99	18139.20			
		6.0	-15395.99	-5512.79			
		8.0	-22535.99	-43444.77			
71							
1	17646.06						
		.0	15124.24	-13807.82			
		2.0	7984.24	9300.67			
		4.0	-7355.76	18129.16			
		6.0	-14495.76	-3722.35			
		8.0	-21635.76	-39853.87			
74							
1	5042.75						
		.0	15888.31	-16912.30			
		2.0	8748.31	7724.33			
		4.0	-6591.69	18080.95			
		6.0	-13731.69	-2242.43			
		8.0	-20871.69	-36845.81			
77							
1	-7480.31						
		.0	16686.04	-20141.08			
		2.0	9546.04	6090.99			
		4.0	-5793.96	18043.06			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		6.0	-12933.96	-684.87			
		8.0	-20073.96	-33692.80			
)							
	1-20779.57						
		.0	17549.61	-23633.87			
		2.0	10409.61	4325.35			
		4.0	-4930.39	18004.57			
		6.0	-12070.39	1003.78			
		8.0	-19210.39	-30277.00			
3							
	1-35099.98						
		.0	18499.14	-27470.98			
		2.0	11359.14	2387.31			
		4.0	-3980.86	17965.59			
		6.0	-11120.86	2863.87			
		8.0	-18260.86	-26517.85			
6							
	1-48288.90						
		.0	19510.90	-31670.21			
		2.0	12370.90	211.58			
		4.0	-2969.10	17813.37			
		6.0	-10109.10	4735.16			
		8.0	-17249.10	-22623.05			
3							
	1 80035.97						
		.0	18834.21	533.08			
		3.0	8124.21	40970.70			
		6.0	-10785.79	32878.33			
		9.0	-29695.79	-23744.05			
		12.0	-40405.79	-128896.43			
6							
	1 96477.04						
		.0	26110.69	-42571.81			
		3.0	15400.69	19695.24			
		6.0	-3509.31	33432.30			
		9.0	-22419.31	-1360.64			
		12.0	-33129.31	-84683.59			
9							
	1 87426.21						
		.0	25817.49	-40677.66			
		3.0	15107.49	20709.80			
		6.0	-3802.51	33567.25			
		9.0	-22712.51	-2105.29			
		12.0	-33422.51	-86307.83			
72							
	1 75722.33						
		.0	26153.05	-42681.54			
		3.0	15443.05	19712.61			
		6.0	-3466.95	33576.76			
		9.0	-22376.95	-1089.09			
		12.0	-33086.95	-84284.93			

ia Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	65718.24	.0	26457.78	-44508.07			
		3.0	15747.78	18800.27			
		6.0	-3162.22	33578.61			
		9.0	-22072.22	-173.05			
		12.0	-32782.22	-82454.71			
3							
1	54790.97	.0	26827.36	-46700.02			
		3.0	16117.36	17717.05			
		6.0	-2792.64	33604.13			
		9.0	-21702.64	961.20			
		12.0	-32412.64	-80211.73			
1							
1	42661.49	.0	27245.92	-49191.54			
		3.0	16535.92	16481.21			
		6.0	-2374.08	33623.97			
		9.0	-21284.08	2236.72			
		12.0	-31994.08	-77680.53			
4							
1	29931.35	.0	27701.42	-51926.68			
		3.0	16991.42	15112.58			
		6.0	-1918.58	33621.85			
		9.0	-20828.58	3601.11			
		12.0	-31538.58	-74949.63			
7							
1	15283.14	.0	28208.58	-54836.97			
		3.0	17498.58	13723.75			
		6.0	-1411.42	33754.48			
		9.0	-20321.42	5255.21			
		12.0	-31031.42	-71774.06			
4							
1	50242.65	.0	-4391.55	61614.52			
		2.0	-11531.55	45691.42			
		4.0	-26871.55	15488.31			
		6.0	-34011.55	-45394.80			
		8.0	-41151.55	-120557.90			
7							
	1109591.21	.0	13620.72	-8784.09			
		2.0	6480.72	11317.35			
		4.0	-8859.28	17138.79			
		6.0	-15999.28	-7719.76			
		8.0	-23139.28	-46858.32			
70							
1	77786.30	.0	13253.66	-7037.58			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	6113.66	12329.74			
		4.0	-9226.34	17417.07			
		6.0	-16366.34	-8175.60			
		8.0	-23506.34	-48048.28			
1	69339.77						
		.0	13701.96	-9068.66			
		2.0	6561.96	11195.26			
		4.0	-8778.04	17179.18			
		6.0	-15918.04	-7516.91			
		8.0	-23058.04	-46492.99			
5							
1	61329.16						
		.0	14265.84	-11221.70			
		2.0	7125.84	10169.98			
		4.0	-8214.16	17281.66			
		6.0	-15354.16	-6286.66			
		8.0	-22494.16	-44134.98			
9							
1	51538.61						
		.0	14930.96	-13827.56			
		2.0	7790.96	8894.35			
		4.0	-7549.04	17336.27			
		6.0	-14689.04	-4901.82			
		8.0	-21829.04	-41419.90			
2							
1	40801.28						
		.0	15693.75	-16818.75			
		2.0	8553.75	7428.74			
		4.0	-6786.25	17396.24			
		6.0	-13926.25	-3316.27			
		8.0	-21066.25	-38308.78			
5							
1	28547.62						
		.0	16569.76	-20212.90			
		2.0	9429.76	5786.62			
		4.0	-5910.24	17506.13			
		6.0	-13050.24	-1454.35			
		8.0	-20190.24	-34694.83			
8							
1	9546.11						
		.0	17783.18	-24922.44			
		2.0	10643.18	3503.92			
		4.0	-4696.82	17650.28			
		6.0	-11836.82	1116.64			
		8.0	-18976.82	-29697.00			
9							
1	-56306.23						
		.0	12771.07	-21651.55			
		2.0	8391.07	-489.41			
		4.0	-1868.93	11912.72			
		6.0	-6248.93	3794.86			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10628.93	-13083.00			
1	-5807.84						
		.0	12359.98	-20504.08			
		2.0	7979.98	-164.12			
		4.0	-2280.02	11415.84			
		6.0	-6660.02	2475.80			
		8.0	-11040.02	-15224.24			
1	-28660.04						
		.0	17954.29	-33503.87			
		3.0	11384.29	10504.01			
		6.0	-1065.71	23041.89			
		9.0	-13515.71	4109.76			
		12.0	-20085.71	-46292.36			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	96588.46	115410.99			
		4.0	96588.46	211999.45			
)							
	1*********						
		.0	95258.93	-119538.64			
		1.0	95258.93	-24279.71			
		2.0	95258.93	70979.23			
		3.0	95258.93	166238.16			
		4.0	95258.93	261497.10			
3							
	1*********						
		.0	-11671.21	75371.99			
		1.0	-11671.21	63700.78			
		2.0	-11671.21	52029.56			
		3.0	-11671.21	40358.35			
		4.0	-11671.21	28687.14			
:7							
	1*********						
		.0	22050.18	-45581.01			
		1.0	22050.18	-23530.82			
		2.0	22050.18	-1480.64			
		3.0	22050.18	20569.54			
		4.0	22050.18	42619.73			
:1							
	1*********						
		.0	18138.99	-33883.31			
		1.0	18138.99	-15744.31			
		2.0	18138.99	2394.68			
		3.0	18138.99	20533.68			
		4.0	18138.99	38672.67			
;5							
	1*********						
		.0	17561.68	-32979.02			
		1.0	17561.68	-15417.34			
		2.0	17561.68	2144.33			
		3.0	17561.68	19706.01			
		4.0	17561.68	37267.69			
;9							
	1*********						
		.0	16151.79	-29622.33			
		1.0	16151.79	-13470.54			
		2.0	16151.79	2681.24			
		3.0	16151.79	18833.03			
		4.0	16151.79	34984.81			
-3							
	1*********						
		.0	14614.30	-26305.11			
		1.0	14614.30	-11690.81			
		2.0	14614.30	2923.49			
		3.0	14614.30	17537.79			
		4.0	14614.30	32152.09			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	85120.54	134918.13			
	1**********						
		.0	85087.84	-172662.62			
		1.0	85087.84	-87574.78			
		2.0	85087.84	-2486.94			
		3.0	85087.84	82600.90			
		4.0	85087.84	167688.73			
4	1**********						
		.0	81692.41	-140631.99			
		1.0	81692.41	-58939.58			
		2.0	81692.41	22752.83			
		3.0	81692.41	104445.24			
		4.0	81692.41	186137.64			
8	1**********						
		.0	69824.49	-70162.47			
		1.0	69824.49	-337.98			
		2.0	69824.49	69486.50			
		3.0	69824.49	139310.99			
		4.0	69824.49	209135.48			
2	1**********						
		.0	-30412.47	108911.74			
		1.0	-30412.47	78499.26			
		2.0	-30412.47	48086.79			
		3.0	-30412.47	17674.31			
		4.0	-30412.47	-12738.16			
6	1**********						
		.0	3132.05	-8610.01			
		1.0	3132.05	-5477.96			
		2.0	3132.05	-2345.91			
		3.0	3132.05	786.13			
		4.0	3132.05	3918.18			
0	1**********						
		.0	-1407.19	5191.00			
		1.0	-1407.19	3783.81			
		2.0	-1407.19	2376.63			
		3.0	-1407.19	969.44			
		4.0	-1407.19	-437.75			
4	1**********						
		.0	-2423.08	7006.59			
		1.0	-2423.08	4583.51			
		2.0	-2423.08	2160.42			
		3.0	-2423.08	-262.66			
		4.0	-2423.08	-2685.74			
8	1-85049.64						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	76121.94						
		.0	66562.71	-274236.61			
		1.0	66562.71	-207673.90			
		2.0	66562.71	-141111.18			
		3.0	66562.71	-74548.47			
		4.0	66562.71	-7985.76			
5							
1	50561.44						
		.0	56272.08	-150243.72			
		1.0	56272.08	-93971.63			
		2.0	56272.08	-37699.55			
		3.0	56272.08	18572.53			
		4.0	56272.08	74844.62			
9							
1	15029.67						
		.0	52640.81	-107808.42			
		1.0	52640.81	-55167.61			
		2.0	52640.81	-2526.80			
		3.0	52640.81	50114.01			
		4.0	52640.81	102754.82			
3							
1	-20130.07						
		.0	52758.54	-78418.68			
		1.0	52758.54	-25660.13			
		2.0	52758.54	27098.41			
		3.0	52758.54	79856.95			
		4.0	52758.54	132615.50			
7							
1	-46623.05						
		.0	43801.08	-12958.40			
		1.0	43801.08	30842.69			
		2.0	43801.08	74643.77			
		3.0	43801.08	118444.85			
		4.0	43801.08	162245.94			
1							
1	-46764.87						
		.0	-32626.19	114650.11			
		1.0	-32626.19	82023.92			
		2.0	-32626.19	49397.73			
		3.0	-32626.19	16771.53			
		4.0	-32626.19	-15854.66			
5							
1	-72143.80						
		.0	-553.76	-916.27			
		1.0	-553.76	-1470.03			
		2.0	-553.76	-2023.80			
		3.0	-553.76	-2577.56			
		4.0	-553.76	-3131.32			
9							
1	-77201.96						
		.0	-3972.63	10376.03			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-19062.55	78536.11			
		2.0	-19062.55	59473.56			
		3.0	-19062.55	40411.02			
		4.0	-19062.55	21348.47			
3							
	1**********						
		.0	11882.09	-23961.02			
		1.0	11882.09	-12078.93			
		2.0	11882.09	-196.84			
		3.0	11882.09	11685.25			
		4.0	11882.09	23567.34			
2							
	1**********						
		.0	11953.57	-22530.82			
		1.0	11953.57	-10577.25			
		2.0	11953.57	1376.32			
		3.0	11953.57	13329.89			
		4.0	11953.57	25283.47			
6							
	1**********						
		.0	10767.51	-18880.92			
		1.0	10767.51	-8113.41			
		2.0	10767.51	2654.11			
		3.0	10767.51	13421.62			
		4.0	10767.51	24189.14			
0							
	1**********						
		.0	10082.42	-17226.69			
		1.0	10082.42	-7144.27			
		2.0	10082.42	2938.15			
		3.0	10082.42	13020.56			
		4.0	10082.42	23102.98			
4							
	1-70759.25						
		.0	9322.05	-15196.99			
		1.0	9322.05	-5874.93			
		2.0	9322.05	3447.12			
		3.0	9322.05	12769.18			
		4.0	9322.05	22091.23			
8							
	1-35995.67						
		.0	8563.04	-12573.15			
		1.0	8563.04	-4010.12			
		2.0	8563.04	4552.92			
		3.0	8563.04	13115.96			
		4.0	8563.04	21678.99			
2							
	1-11013.74						
		.0	5769.03	-7939.25			
		1.0	5769.03	-2170.23			
		2.0	5769.03	3598.80			
		3.0	5769.03	9367.82			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-73813.53						
		.0	13419.30	-22956.37			
		1.0	13419.30	-9537.07			
		2.0	13419.30	3882.24			
		3.0	13419.30	17301.54			
		4.0	13419.30	30720.85			
1							
	1-26493.50						
		.0	10584.32	-16419.33			
		1.0	10584.32	-5835.01			
		2.0	10584.32	4749.31			
		3.0	10584.32	15333.64			
		4.0	10584.32	25917.96			
4							
	1*********						
		.0	74129.83	-284127.08			
		1.0	74129.83	-209997.25			
		2.0	74129.83	-135867.43			
		3.0	74129.83	-61737.60			
		4.0	74129.83	12392.22			
8							
	1*********						
		.0	67460.61	-172479.05			
		1.0	67460.61	-105018.44			
		2.0	67460.61	-37557.83			
		3.0	67460.61	29902.79			
		4.0	67460.61	97363.40			
2							
	1*********						
		.0	64332.99	-131355.59			
		1.0	64332.99	-67022.59			
		2.0	64332.99	-2689.60			
		3.0	64332.99	61643.40			
		4.0	64332.99	125976.39			
6							
	1*********						
		.0	61413.59	-104225.10			
		1.0	61413.59	-42811.51			
		2.0	61413.59	18602.08			
		3.0	61413.59	80015.67			
		4.0	61413.59	141429.26			
20							
	1*********						
		.0	69791.49	-64234.62			
		1.0	69791.49	5556.88			
		2.0	69791.49	75348.37			
		3.0	69791.49	145139.86			
		4.0	69791.49	214931.36			
24							
	1*********						
		.0	-19062.55	97598.66			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3829.03	10192.67			
		1.0	-3829.03	6363.64			
		2.0	-3829.03	2534.61			
		3.0	-3829.03	-1294.43			
		4.0	-3829.03	-5123.46			
2							
	1-59607.94						
		.0	-5379.13	13703.42			
		1.0	-5379.13	8324.30			
		2.0	-5379.13	2945.17			
		3.0	-5379.13	-2433.96			
		4.0	-5379.13	-7813.08			
6							
	1-36971.49						
		.0	-7308.59	17544.06			
		1.0	-7308.59	10235.47			
		2.0	-7308.59	2926.87			
		3.0	-7308.59	-4381.72			
		4.0	-7308.59	-11690.31			
0							
	1-15438.41						
		.0	-10206.02	20485.64			
		1.0	-10206.02	10279.62			
		2.0	-10206.02	73.60			
		3.0	-10206.02	-10132.41			
		4.0	-10206.02	-20338.43			
3							
	1*********						
		.0	91062.59	-305749.81			
		1.0	91062.59	-214687.21			
		2.0	91062.59	-123624.62			
		3.0	91062.59	-32562.03			
		4.0	91062.59	58500.56			
7							
	1*********						
		.0	100820.76	-237491.95			
		1.0	100820.76	-136671.20			
		2.0	100820.76	-35850.44			
		3.0	100820.76	64970.32			
		4.0	100820.76	165791.08			
1							
	1*********						
		.0	100724.36	-203919.92			
		1.0	100724.36	-103195.56			
		2.0	100724.36	-2471.20			
		3.0	100724.36	98253.15			
		4.0	100724.36	198977.51			
5							
	1*********						
		.0	96588.46	-174354.38			
		1.0	96588.46	-77765.92			
		2.0	96588.46	18822.54			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-3972.63	6403.39			
		2.0	-3972.63	2430.76			
		3.0	-3972.63	-1541.88			
		4.0	-3972.63	-5514.51			
,							
	1-77807.45						
		.0	-4650.09	11714.61			
		1.0	-4650.09	7064.52			
		2.0	-4650.09	2414.44			
		3.0	-4650.09	-2235.65			
		4.0	-4650.09	-6885.74			
7							
	1-72827.30						
		.0	-5456.43	13646.71			
		1.0	-5456.43	8190.28			
		2.0	-5456.43	2733.85			
		3.0	-5456.43	-2722.59			
		4.0	-5456.43	-8179.02			
1							
	1-62193.25						
		.0	-6355.80	15835.66			
		1.0	-6355.80	9479.86			
		2.0	-6355.80	3124.06			
		3.0	-6355.80	-3231.74			
		4.0	-6355.80	-9587.54			
5							
	1-45341.31						
		.0	-7303.78	18250.65			
		1.0	-7303.78	10946.87			
		2.0	-7303.78	3643.09			
		3.0	-7303.78	-3660.69			
		4.0	-7303.78	-10964.48			
19							
	1-21533.79						
		.0	-10754.44	21067.28			
		1.0	-10754.44	10312.84			
		2.0	-10754.44	-441.59			
		3.0	-10754.44	-11196.03			
		4.0	-10754.44	-21950.46			
2							
	1*********						
		.0	81362.87	-293262.47			
		1.0	81362.87	-211899.60			
		2.0	81362.87	-130536.73			
		3.0	81362.87	-49173.86			
		4.0	81362.87	32189.01			
6							
	1*********						
		.0	85120.54	-205564.04			
		1.0	85120.54	-120443.50			
		2.0	85120.54	-35322.96			
		3.0	85120.54	49797.59			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10556.00	-12776.34			
1	-5769.03						
		.0	12386.26	-20626.95			
		2.0	8006.26	-234.43			
		4.0	-2253.74	11398.10			
		6.0	-6633.74	2510.62			
		8.0	-11013.74	-15136.85			
1	-28409.38						
		.0	17906.79	-33202.11			
		3.0	11336.79	10663.25			
		6.0	-1113.21	23058.61			
		9.0	-13563.21	3983.96			
		12.0	-20133.21	-46560.68			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	6891.24	10524.73			
		4.0	-8448.76	17167.21			
		6.0	-15588.76	-6870.31			
		8.0	-22728.76	-45187.83			
3							
	1 70001.98						
		.0	13763.12	-9049.79			
		2.0	6623.12	11336.46			
		4.0	-8716.88	17442.71			
		6.0	-15856.88	-7131.04			
		8.0	-22996.88	-45984.79			
6							
	1 60567.38						
		.0	14298.14	-11408.39			
		2.0	7158.14	10047.89			
		4.0	-8181.86	17224.17			
		6.0	-15321.86	-6279.55			
		8.0	-22461.86	-44063.28			
9							
	1 51443.90						
		.0	14952.99	-13918.39			
		2.0	7812.99	8847.59			
		4.0	-7527.01	17333.57			
		6.0	-14667.01	-4860.46			
		8.0	-21807.01	-41334.48			
32							
	1 40653.29						
		.0	15712.89	-16902.84			
		2.0	8572.89	7382.93			
		4.0	-6767.11	17388.70			
		6.0	-13907.11	-3285.53			
		8.0	-21047.11	-38239.76			
35							
	1 28409.08						
		.0	16587.09	-20287.27			
		2.0	9447.09	5746.90			
		4.0	-5892.91	17501.07			
		6.0	-13032.91	-1424.75			
		8.0	-20172.91	-34630.58			
88							
	1 9262.03						
		.0	17804.05	-25011.20			
		2.0	10664.05	3456.90			
		4.0	-4675.95	17645.00			
		6.0	-11815.95	1153.10			
		8.0	-18955.95	-29618.80			
89							
	1-57239.27						
		.0	12844.00	-21928.31			
		2.0	8464.00	-620.32			
		4.0	-1796.00	11927.67			
		6.0	-6176.00	3955.66			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1	80703.28						
			.0	25985.38	-41644.15			
			3.0	15275.38	20247.01			
			6.0	-3634.62	33608.16			
			9.0	-22544.62	-1560.69			
			12.0	-33254.62	-85259.54			
5								
	1	67447.65						
			.0	26394.07	-44093.69			
			3.0	15684.07	19023.53			
			6.0	-3225.93	33610.74			
			9.0	-22135.93	-332.05			
			12.0	-32845.93	-82804.83			
78								
	1	55997.88						
			.0	26763.81	-46314.44			
			3.0	16053.81	17912.00			
			6.0	-2856.19	33608.44			
			9.0	-21766.19	774.88			
			12.0	-32476.19	-80588.68			
31								
	1	43831.43						
			.0	27188.94	-48844.25			
			3.0	16478.94	16657.58			
			6.0	-2431.06	33629.42			
			9.0	-21341.06	2071.25			
			12.0	-32051.06	-78016.92			
34								
	1	31046.82						
			.0	27648.06	-51602.07			
			3.0	16938.06	15277.12			
			6.0	-1971.94	33626.32			
			9.0	-20881.94	3445.51			
			12.0	-31591.94	-75265.30			
87								
	1	16294.86						
			.0	28157.73	-54523.37			
			3.0	17447.73	13884.81			
			6.0	-1462.27	33763.00			
			9.0	-20372.27	5111.18			
			12.0	-31082.27	-72070.64			
67								
	1	46595.31						
			.0	-3493.75	58104.72			
			2.0	-10633.75	43977.22			
			4.0	-25973.75	15569.71			
			6.0	-33113.75	-43517.79			
			8.0	-40253.75	-116885.30			
70								
	1102042.58							
			.0	14031.24	-10397.75			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		6.0	-14552.14	-3846.19			
		8.0	-21692.14	-40090.46			
1	4332.79						
		.0	15992.43	-17303.26			
		2.0	8852.43	7541.60			
		4.0	-6487.57	18106.47			
		6.0	-13627.57	-2008.66			
		8.0	-20767.57	-36403.80			
7							
1	-8773.20						
		.0	16799.10	-20584.44			
		2.0	9659.10	5873.76			
		4.0	-5680.90	18051.96			
		6.0	-12820.90	-449.84			
		8.0	-19960.90	-33231.64			
0							
1	-21956.68						
		.0	17653.60	-24045.19			
		2.0	10513.60	4122.01			
		4.0	-4826.40	18009.20			
		6.0	-11966.40	1216.40			
		8.0	-19106.40	-29856.40			
3							
1	-36139.73						
		.0	18594.08	-27845.52			
		2.0	11454.08	2202.65			
		4.0	-3885.92	17970.81			
		6.0	-11025.92	3058.98			
		8.0	-18165.92	-26132.86			
6							
1	-49216.80						
		.0	19597.49	-32012.83			
		2.0	12457.49	42.14			
		4.0	-2882.51	17817.11			
		6.0	-10022.51	4912.08			
		8.0	-17162.51	-22272.95			
6							
1	77875.83						
		.0	19046.77	-700.32			
		3.0	8336.77	40374.98			
		6.0	-10573.23	32920.28			
		9.0	-29483.23	-23064.42			
		12.0	-40193.23	-127579.12			
9							
1	91820.95						
		.0	26178.32	-42925.57			
		3.0	15468.32	19544.40			
		6.0	-3441.68	33484.36			
		9.0	-22351.68	-1105.67			
		12.0	-33061.68	-84225.70			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	4279.43	68490.15			
		3.0	-4030.57	68863.44			
		6.0	-20540.57	27906.72			
		9.0	-37050.57	-54379.99			
		12.0	-45360.57	-177996.71			
5							
	1 -6669.21						
		.0	-24637.65	133669.96			
		2.0	-30177.65	78854.65			
		4.0	-43917.65	12959.34			
		6.0	-49457.65	-80415.97			
		8.0	-54997.65	-184871.28			
58							
	1 -3127.62						
		.0	-35507.98	176784.86			
		2.0	-41047.98	100228.90			
		4.0	-54787.98	12592.93			
		6.0	-60327.98	-102523.03			
		8.0	-65867.98	-228718.99			
61							
	1 -2919.41						
		.0	-35866.89	178173.62			
		2.0	-41406.89	100899.85			
		4.0	-55146.89	12546.07			
		6.0	-60686.89	-103287.71			
		8.0	-66226.89	-230201.49			
64							
	1 8377.90						
		.0	-29720.66	153541.38			
		2.0	-35260.66	88560.07			
		4.0	-49000.66	12498.76			
		6.0	-54540.66	-91042.56			
		8.0	-60080.66	-205663.87			
65							
	1 59205.28						
		.0	-141.82	47595.83			
		2.0	-7281.82	40172.19			
		4.0	-22621.82	18468.54			
		6.0	-29761.82	-33915.10			
		8.0	-36901.82	-100578.74			
68							
	1 27366.98						
		.0	15473.47	-15146.67			
		2.0	8333.47	8660.27			
		4.0	-7006.53	18187.21			
		6.0	-14146.53	-2965.84			
		8.0	-21286.53	-38398.90			
71							
	1 17816.05						
		.0	15067.86	-13593.36			
		2.0	7927.86	9402.36			
		4.0	-7412.14	18118.09			

ɜa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5769.03	15136.85			
1	6846.63						
		.0	-25560.50	142257.96			
		2.0	-31100.50	85596.96			
		4.0	-44840.50	17855.96			
		6.0	-50380.50	-77365.04			
		8.0	-55920.50	-183666.04			
1	-3256.73						
		.0	-35531.76	182653.04			
		2.0	-41071.76	106049.51			
		4.0	-54811.76	18365.98			
		6.0	-60351.76	-96797.55			
		8.0	-65891.76	-223041.08			
1	-10450.73						
		.0	-35159.74	181173.49			
		2.0	-40699.74	105314.01			
		4.0	-54439.74	18374.53			
		6.0	-59979.74	-96044.94			
		8.0	-65519.74	-221544.42			
1	-4819.54						
		.0	-26492.98	145573.90			
		2.0	-32032.98	87047.93			
		4.0	-45772.98	17441.97			
		6.0	-51312.98	-79644.00			
		8.0	-56852.98	-187809.96			
1	3088.96						
		.0	6785.87	54087.02			
		3.0	-1524.13	61979.62			
		6.0	-18034.13	28542.23			
		9.0	-34544.13	-46225.16			
		12.0	-42854.13	-162322.55			
1	-3224.02						
		.0	1697.85	84539.68			
		3.0	-6612.15	77168.22			
		6.0	-23122.15	28466.77			
		9.0	-39632.15	-61564.69			
		12.0	-47942.15	-192926.14			
1	-7055.30						
		.0	1325.45	86776.30			
		3.0	-6984.55	78287.66			
		6.0	-23494.55	28469.02			
		9.0	-40004.55	-62679.62			
		12.0	-48314.55	-195158.26			
1	7048.38						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1	89320.55						
		.0	66156.58	-273263.22			
		1.0	66156.58	-207106.64			
		2.0	66156.58	-140950.06			
		3.0	66156.58	-74793.48			
		4.0	66156.58	-8636.90			
1	63870.74						
		.0	55836.09	-150447.37			
		1.0	55836.09	-94611.28			
		2.0	55836.09	-38775.18			
		3.0	55836.09	17060.91			
		4.0	55836.09	72897.00			
1	28182.34						
		.0	51685.56	-110383.44			
		1.0	51685.56	-58697.88			
		2.0	51685.56	-7012.32			
		3.0	51685.56	44673.24			
		4.0	51685.56	96358.80			
1	-8446.69						
		.0	49241.58	-90725.03			
		1.0	49241.58	-41483.45			
		2.0	49241.58	7758.13			
		3.0	49241.58	56999.71			
		4.0	49241.58	106241.29			
1	-41772.00						
		.0	48900.42	-67541.88			
		1.0	48900.42	-18641.47			
		2.0	48900.42	30258.95			
		3.0	48900.42	79159.37			
		4.0	48900.42	128059.78			
1	-65651.13						
		.0	39495.94	-6998.02			
		1.0	39495.94	32497.92			
		2.0	39495.94	71993.85			
		3.0	39495.94	111489.79			
		4.0	39495.94	150985.72			
1	-64131.13						
		.0	-31429.82	110009.12			
		1.0	-31429.82	78579.31			
		2.0	-31429.82	47149.49			
		3.0	-31429.82	15719.67			
		4.0	-31429.82	-15710.15			
1	-82799.98						
		.0	-1733.52	2398.77			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-1733.52	665.25			
		2.0	-1733.52	-1068.27			
		3.0	-1733.52	-2801.79			
		4.0	-1733.52	-4535.31			
;							
	1-81952.42						
		.0	-4897.81	12679.43			
		1.0	-4897.81	7781.62			
		2.0	-4897.81	2883.81			
		3.0	-4897.81	-2014.01			
		4.0	-4897.81	-6911.82			
7							
	1-76293.35						
		.0	-5639.64	14147.11			
		1.0	-5639.64	8507.47			
		2.0	-5639.64	2867.84			
		3.0	-5639.64	-2771.80			
		4.0	-5639.64	-8411.43			
1							
	1-64685.39						
		.0	-6509.06	16175.09			
		1.0	-6509.06	9666.03			
		2.0	-6509.06	3156.97			
		3.0	-6509.06	-3352.09			
		4.0	-6509.06	-9861.15			
5							
	1-46921.59						
		.0	-7437.12	18518.31			
		1.0	-7437.12	11081.19			
		2.0	-7437.12	3644.07			
		3.0	-7437.12	-3793.05			
		4.0	-7437.12	-11230.17			
9							
	1-22267.87						
		.0	-10914.36	21300.79			
		1.0	-10914.36	10386.43			
		2.0	-10914.36	-527.93			
		3.0	-10914.36	-11442.28			
		4.0	-10914.36	-22356.64			
2							
	1*********						
		.0	80933.52	-292264.53			
		1.0	80933.52	-211331.01			
		2.0	80933.52	-130397.48			
		3.0	80933.52	-49463.96			
		4.0	80933.52	31469.56			
6							
	1*********						
		.0	84740.44	-205853.63			
		1.0	84740.44	-121113.19			
		2.0	84740.44	-36372.74			
		3.0	84740.44	48367.70			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			4.0	84740.44	133108.14			
	1*********							
			.0	84667.19	-176156.25			
			1.0	84667.19	-91489.05			
			2.0	84667.19	-6821.86			
			3.0	84667.19	77845.33			
			4.0	84667.19	162512.53			
4	1*********							
			.0	81888.51	-156418.49			
			1.0	81888.51	-74529.98			
			2.0	81888.51	7358.53			
			3.0	81888.51	89247.04			
			4.0	81888.51	171135.55			
8	1*********							
			.0	77148.80	-128422.10			
			1.0	77148.80	-51273.30			
			2.0	77148.80	25875.50			
			3.0	77148.80	103024.29			
			4.0	77148.80	180173.09			
2	1*********							
			.0	64365.37	-61480.36			
			1.0	64365.37	2885.01			
			2.0	64365.37	67250.38			
			3.0	64365.37	131615.74			
			4.0	64365.37	195981.11			
6	1*********							
			.0	-29563.44	104955.26			
			1.0	-29563.44	75391.82			
			2.0	-29563.44	45828.38			
			3.0	-29563.44	16264.94			
			4.0	-29563.44	-13298.51			
0	1*********							
			.0	1825.60	-5284.00			
			1.0	1825.60	-3458.40			
			2.0	1825.60	-1632.81			
			3.0	1825.60	192.79			
			4.0	1825.60	2018.39			
4	1*********							
			.0	-2704.78	8236.87			
			1.0	-2704.78	5532.09			
			2.0	-2704.78	2827.31			
			3.0	-2704.78	122.54			
			4.0	-2704.78	-2582.24			
8	1-79791.50							

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-3862.58	10316.23			
		1.0	-3862.58	6453.64			
		2.0	-3862.58	2591.06			
		3.0	-3862.58	-1271.52			
		4.0	-3862.58	-5134.10			
	1-55959.58						
		.0	-5398.95	13759.38			
		1.0	-5398.95	8360.44			
		2.0	-5398.95	2961.49			
		3.0	-5398.95	-2437.45			
		4.0	-5398.95	-7836.40			
	1-34838.99						
		.0	-7335.89	17590.15			
		1.0	-7335.89	10254.26			
		2.0	-7335.89	2918.36			
		3.0	-7335.89	-4417.53			
		4.0	-7335.89	-11753.42			
	1-14680.33						
		.0	-10201.07	20465.48			
		1.0	-10201.07	10264.41			
		2.0	-10201.07	63.34			
		3.0	-10201.07	-10137.73			
		4.0	-10201.07	-20338.80			
	1*********						
		.0	90635.35	-304751.21			
		1.0	90635.35	-214115.86			
		2.0	90635.35	-123480.52			
		3.0	90635.35	-32845.17			
		4.0	90635.35	57790.18			
	1*********						
		.0	100443.39	-237902.94			
		1.0	100443.39	-137459.56			
		2.0	100443.39	-37016.17			
		3.0	100443.39	63427.21			
		4.0	100443.39	163870.60			
	1*********						
		.0	100766.53	-208018.48			
		1.0	100766.53	-107251.95			
		2.0	100766.53	-6485.41			
		3.0	100766.53	94281.12			
		4.0	100766.53	195047.65			
	1*********						
		.0	98202.34	-189004.40			
		1.0	98202.34	-90802.06			
		2.0	98202.34	7400.28			

ASTA S.H. & YAZID, GONDOLAYU PROJECT

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	98202.34	105602.61			
		4.0	98202.34	203804.95			
)							
	1*********	.0	92610.94	-163260.65			
		1.0	92610.94	-70649.70			
		2.0	92610.94	21961.24			
		3.0	92610.94	114572.18			
		4.0	92610.94	207183.13			
3							
	1*********	.0	90255.68	-111699.70			
		1.0	90255.68	-21444.02			
		2.0	90255.68	68811.65			
		3.0	90255.68	159067.33			
		4.0	90255.68	249323.01			
27							
	1*********	.0	-10599.61	70980.69			
		1.0	-10599.61	60381.08			
		2.0	-10599.61	49781.47			
		3.0	-10599.61	39181.86			
		4.0	-10599.61	28582.25			
31							
	1*********	.0	21086.57	-43033.37			
		1.0	21086.57	-21946.80			
		2.0	21086.57	-860.23			
		3.0	21086.57	20226.34			
		4.0	21086.57	41312.91			
35							
	1*********	.0	17129.01	-31455.99			
		1.0	17129.01	-14326.98			
		2.0	17129.01	2802.03			
		3.0	17129.01	19931.05			
		4.0	17129.01	37060.06			
39							
	1*********	.0	16344.34	-30133.43			
		1.0	16344.34	-13789.09			
		2.0	16344.34	2555.25			
		3.0	16344.34	18899.59			
		4.0	16344.34	35243.93			
43							
	1*********	.0	14701.95	-26461.30			
		1.0	14701.95	-11759.35			
		2.0	14701.95	2942.61			
		3.0	14701.95	17644.56			
		4.0	14701.95	32346.52			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-74879.10						
		.0	13526.67	-23138.06			
		1.0	13526.67	-9611.39			
		2.0	13526.67	3915.28			
		3.0	13526.67	17441.96			
		4.0	13526.67	30968.63			
1							
	1-26785.85						
		.0	10655.44	-16488.21			
		1.0	10655.44	-5832.76			
		2.0	10655.44	4822.68			
		3.0	10655.44	15478.12			
		4.0	10655.44	26133.56			
4							
	1*********						
		.0	73716.55	-283137.28			
		1.0	73716.55	-209420.73			
		2.0	73716.55	-135704.18			
		3.0	73716.55	-61987.63			
		4.0	73716.55	11728.91			
8							
	1*********						
		.0	66980.08	-172827.92			
		1.0	66980.08	-105847.84			
		2.0	66980.08	-38867.76			
		3.0	66980.08	28112.33			
		4.0	66980.08	95092.41			
12							
	1*********						
		.0	63996.71	-134768.61			
		1.0	63996.71	-70771.90			
		2.0	63996.71	-6775.18			
		3.0	63996.71	57221.53			
		4.0	63996.71	121218.24			
16							
	1*********						
		.0	61457.57	-115081.40			
		1.0	61457.57	-53623.82			
		2.0	61457.57	7833.75			
		3.0	61457.57	69291.32			
		4.0	61457.57	130748.89			
20							
	1*********						
		.0	58361.84	-94634.42			
		1.0	58361.84	-36272.58			
		2.0	58361.84	22089.27			
		3.0	58361.84	80451.11			
		4.0	58361.84	138812.96			
24							
	1*********						
		.0	65695.02	-58272.86			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	65695.02	7422.16			
		2.0	65695.02	73117.18			
		3.0	65695.02	138812.20			
		4.0	65695.02	204507.21			
3							
	1*********						
		.0	-17874.72	92607.90			
		1.0	-17874.72	74733.18			
		2.0	-17874.72	56858.46			
		3.0	-17874.72	38983.74			
		4.0	-17874.72	21109.03			
2							
	1*********						
		.0	11327.46	-22255.78			
		1.0	11327.46	-10928.33			
		2.0	11327.46	399.13			
		3.0	11327.46	11726.59			
		4.0	11327.46	23054.04			
6							
	1*********						
		.0	11257.20	-20620.17			
		1.0	11257.20	-9362.97			
		2.0	11257.20	1894.23			
		3.0	11257.20	13151.42			
		4.0	11257.20	24408.62			
0							
	1*********						
		.0	9993.74	-16933.26			
		1.0	9993.74	-6939.52			
		2.0	9993.74	3054.23			
		3.0	9993.74	13047.97			
		4.0	9993.74	23041.72			
14							
	1-70398.17						
		.0	9313.45	-15169.90			
		1.0	9313.45	-5856.45			
		2.0	9313.45	3457.01			
		3.0	9313.45	12770.46			
		4.0	9313.45	22083.92			
48							
	1-35743.97						
		.0	8542.51	-12498.70			
		1.0	8542.51	-3956.19			
		2.0	8542.51	4586.31			
		3.0	8542.51	13128.82			
		4.0	8542.51	21671.33			
52							
	1-10975.86						
		.0	5712.11	-7837.19			
		1.0	5712.11	-2125.08			
		2.0	5712.11	3587.02			
		3.0	5712.11	9299.13			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5712.11	15011.23			
1	6878.49						
		.0	-25449.80	141810.47			
		2.0	-30989.80	85370.87			
		4.0	-44729.80	17851.26			
		6.0	-50269.80	-77148.34			
		8.0	-55809.80	-183227.94			
1	-2733.47						
		.0	-35688.40	183280.44			
		2.0	-41228.40	106363.63			
		4.0	-54968.40	18366.83			
		6.0	-60508.40	-97109.97			
		8.0	-66048.40	-223666.78			
1	-7882.02						
		.0	-36629.03	187083.83			
		2.0	-42169.03	108285.77			
		4.0	-55909.03	18407.70			
		6.0	-61449.03	-98950.36			
		8.0	-66989.03	-227388.43			
1	-13426.84						
		.0	-33325.31	173783.17			
		2.0	-38865.31	101592.56			
		4.0	-52605.31	18321.95			
		6.0	-58145.31	-92428.66			
		8.0	-63685.31	-214259.27			
1	-7805.52						
		.0	-23879.14	135057.81			
		2.0	-29419.14	81759.53			
		4.0	-43159.14	17381.25			
		6.0	-48699.14	-74477.02			
		8.0	-54239.14	-177415.30			
1	3071.57						
		.0	6784.61	54095.24			
		3.0	-1525.39	61984.09			
		6.0	-18035.39	28542.93			
		9.0	-34545.39	-46228.23			
		12.0	-42855.39	-162329.39			
1	-2660.22						
		.0	1518.88	85597.61			
		3.0	-6791.12	77689.24			
		6.0	-23301.12	28450.87			
		9.0	-39811.12	-62117.49			
		12.0	-48121.12	-194015.86			
1	-5103.34						

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	536.07	91542.59			
		3.0	-7773.93	80685.80			
		6.0	-24283.93	28499.01			
		9.0	-40793.93	-65017.78			
		12.0	-49103.93	-199864.58			
3							
	1 -8687.12						
		.0	1577.77	85298.37			
		3.0	-6732.23	77566.68			
		6.0	-23242.23	28504.98			
		9.0	-39752.23	-61886.71			
		12.0	-48062.23	-193608.41			
56							
	1 4977.91						
		.0	4994.47	64238.15			
		3.0	-3315.53	66756.56			
		6.0	-19825.53	27944.98			
		9.0	-36335.53	-52196.61			
		12.0	-44645.53	-173668.19			
55							
	1 -6736.47						
		.0	-24560.07	133363.74			
		2.0	-30100.07	78703.59			
		4.0	-43840.07	12963.45			
		6.0	-49380.07	-80256.69			
		8.0	-54920.07	-184556.84			
58							
	1 -2983.37						
		.0	-35786.78	177873.21			
		2.0	-41326.78	100759.66			
		4.0	-55066.78	12566.10			
		6.0	-60606.78	-103107.46			
		8.0	-66146.78	-229861.02			
61							
	1 -2539.14						
		.0	-37380.89	184187.47			
		2.0	-42920.89	103885.69			
		4.0	-56660.89	12503.91			
		6.0	-62200.89	-106357.86			
		8.0	-67740.89	-236299.64			
64							
	1 -3095.73						
		.0	-34675.06	173457.19			
		2.0	-40215.06	98567.06			
		4.0	-53955.06	12596.94			
		6.0	-59495.06	-100853.19			
		8.0	-65035.06	-225383.32			
67							
	1 7333.17						
		.0	-27607.56	145214.64			
		2.0	-33147.56	84459.52			
		4.0	-46887.56	12624.41			

isa Statis Portal (13 lantai) Kg/m

ME ELEMENT FORCES

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		6.0	-52427.56	-86690.70			
		8.0	-57967.56	-197085.81			
3							
1	50273.75						
		.0	1520.01	40976.60			
		2.0	-5619.99	36876.62			
		4.0	-20959.99	18496.63			
		6.0	-28099.99	-30563.36			
		8.0	-35239.99	-93903.34			
1							
1	14252.94						
		.0	16265.73	-18289.80			
		2.0	9125.73	7101.66			
		4.0	-6214.27	18213.12			
		6.0	-13354.27	-1355.42			
		8.0	-20494.27	-35203.96			
74							
1	3923.05						
		.0	15982.44	-17277.81			
		2.0	8842.44	7547.08			
		4.0	-6497.56	18091.97			
		6.0	-13637.56	-2043.14			
		8.0	-20777.56	-36458.25			
77							
1	-9895.79						
		.0	16937.23	-21109.09			
		2.0	9797.23	5625.38			
		4.0	-5542.77	18079.84			
		6.0	-12682.77	-145.69			
		8.0	-19822.77	-32651.22			
30							
1	-23616.90						
		.0	17798.48	-24613.47			
		2.0	10658.48	3843.49			
		4.0	-4681.52	18020.45			
		6.0	-11821.52	1517.41			
		8.0	-18961.52	-29265.63			
33							
1	-37680.86						
		.0	18730.48	-28383.40			
		2.0	11590.48	1937.55			
		4.0	-3749.52	17978.50			
		6.0	-10889.52	3339.45			
		8.0	-18029.52	-25579.60			
36							
1	-50599.18						
		.0	19722.92	-32508.94			
		2.0	12582.92	-203.09			
		4.0	-2757.08	17822.76			
		6.0	-9897.08	5168.61			
		8.0	-17037.08	-21765.54			

M E E L E M E N T F O R C E S

	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1	74456.33						
			.0	19469.44	-3188.31			
			3.0	8759.44	39155.02			
			6.0	-10150.56	32968.35			
			9.0	-29060.56	-21748.33			
			12.0	-39770.56	-124995.00			
2								
	1	85663.06						
			.0	26296.35	-43584.21			
			3.0	15586.35	19239.85			
			6.0	-3323.65	33533.91			
			9.0	-22233.65	-702.04			
			12.0	-32943.65	-83467.98			
'5								
	1	72747.06						
			.0	26204.83	-42924.52			
			3.0	15494.83	19624.96			
			6.0	-3415.17	33644.44			
			9.0	-22325.17	-866.09			
			12.0	-33035.17	-83906.61			
'8								
	1	58194.18						
			.0	26676.34	-45757.23			
			3.0	15966.34	18206.80			
			6.0	-2943.66	33640.82			
			9.0	-21853.66	544.84			
			12.0	-32563.66	-81081.13			
31								
	1	45514.45						
			.0	27102.77	-48320.94			
			3.0	16392.77	16922.38			
			6.0	-2517.23	33635.70			
			9.0	-21427.23	1819.01			
			12.0	-32137.23	-78527.67			
34								
	1	32689.05						
			.0	27568.72	-51119.31			
			3.0	16858.72	15521.84			
			6.0	-2051.28	33632.99			
			9.0	-20961.28	3214.14			
			12.0	-31671.28	-75734.70			
37								
	1	17770.97						
			.0	28082.65	-54060.28			
			3.0	17372.65	14122.67			
			6.0	-1537.35	33775.62			
			9.0	-20447.35	4898.57			
			12.0	-31157.35	-72508.48			
70								
	1	42271.70						
			.0	-2170.87	52925.21			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	-9310.87	41443.46			
		4.0	-24650.87	15681.72			
		6.0	-31790.87	-40760.03			
		8.0	-38930.87	-111481.78			
5							
	1 92994.30						
		.0	14505.39	-12261.10			
		2.0	7365.39	9609.67			
		4.0	-7974.61	17200.45			
		6.0	-15114.61	-5888.77			
		8.0	-22254.61	-43258.00			
6							
	1 61197.89						
		.0	14357.82	-11400.58			
		2.0	7217.82	10175.07			
		4.0	-8122.18	17470.71			
		6.0	-15262.18	-5913.64			
		8.0	-22402.18	-43578.00			
9							
	1 50721.94						
		.0	14985.92	-14107.78			
		2.0	7845.92	8724.06			
		4.0	-7494.08	17275.89			
		6.0	-14634.08	-4852.27			
		8.0	-21774.08	-41260.44			
2							
	1 40561.68						
		.0	15736.29	-17002.17			
		2.0	8596.29	7330.40			
		4.0	-6743.71	17382.97			
		6.0	-13883.71	-3244.45			
		8.0	-21023.71	-38151.88			
5							
	1 28223.17						
		.0	16609.32	-20383.93			
		2.0	9469.32	5694.72			
		4.0	-5870.68	17493.37			
		6.0	-13010.68	-1387.99			
		8.0	-20150.68	-34549.34			
8							
	1 8856.77						
		.0	17833.19	-25135.38			
		2.0	10693.19	3390.99			
		4.0	-4646.81	17637.37			
		6.0	-11786.81	1203.74			
		8.0	-18926.81	-29509.88			
9							
	1-58633.20						
		.0	12950.43	-22332.06			
		2.0	8570.43	-811.21			
		4.0	-1689.57	11949.65			
		6.0	-6069.57	4190.50			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10449.57	-12328.65			
1	-5712.11						
		.0	12424.14	-20804.38			
		2.0	8044.14	-336.09			
		4.0	-2215.86	11372.20			
		6.0	-6595.86	2560.48			
		8.0	-10975.86	-15011.23			
0							
1	-28054.71						
		.0	17836.99	-32758.77			
		3.0	11266.99	10897.21			
		6.0	-1183.01	23083.19			
		9.0	-13633.01	3799.18			
		12.0	-20203.01	-46954.84			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1102507.65						
		.0	65748.65	-271929.07			
		1.0	65748.65	-206180.42			
		2.0	65748.65	-140431.76			
		3.0	65748.65	-74683.11			
		4.0	65748.65	-8934.45			
5							
	1 77277.33						
		.0	55428.06	-149859.05			
		1.0	55428.06	-94430.99			
		2.0	55428.06	-39002.93			
		3.0	55428.06	16425.13			
		4.0	55428.06	71853.19			
9							
	1 41805.35						
		.0	51222.17	-110558.45			
		1.0	51222.17	-59336.28			
		2.0	51222.17	-8114.11			
		3.0	51222.17	43108.05			
		4.0	51222.17	94330.22			
3							
	1 5118.26						
		.0	48269.50	-92987.99			
		1.0	48269.50	-44718.49			
		2.0	48269.50	3551.01			
		3.0	48269.50	51820.52			
		4.0	48269.50	100090.02			
7							
	1-29487.09						
		.0	45536.57	-78850.53			
		1.0	45536.57	-33313.96			
		2.0	45536.57	12222.61			
		3.0	45536.57	57759.17			
		4.0	45536.57	103295.74			
21							
	1-59646.90						
		.0	44496.18	-57703.73			
		1.0	44496.18	-13207.55			
		2.0	44496.18	31288.63			
		3.0	44496.18	75784.81			
		4.0	44496.18	120280.99			
25							
	1-80203.02						
		.0	34609.81	-1391.02			
		1.0	34609.81	33218.79			
		2.0	34609.81	67828.60			
		3.0	34609.81	102438.42			
		4.0	34609.81	137048.23			
29							
	1-76749.43						
		.0	-29833.81	103789.14			

sa Statis Portal (13 lantai) Kg/m

ME ELEMENT FORCES

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	-29833.81	73955.33			
		2.0	-29833.81	44121.52			
		3.0	-29833.81	14287.71			
		4.0	-29833.81	-15546.10			
3							
	1-87993.21						
		.0	-3031.28	5963.68			
		1.0	-3031.28	2932.41			
		2.0	-3031.28	-98.87			
		3.0	-3031.28	-3130.15			
		4.0	-3031.28	-6161.42			
57							
	1-80682.73						
		.0	-5909.41	15106.13			
		1.0	-5909.41	9196.72			
		2.0	-5909.41	3287.30			
		3.0	-5909.41	-2622.11			
		4.0	-5909.41	-8531.53			
41							
	1-68110.11						
		.0	-6730.93	16746.78			
		1.0	-6730.93	10015.85			
		2.0	-6730.93	3284.93			
		3.0	-6730.93	-3446.00			
		4.0	-6730.93	-10176.93			
45							
	1-49113.63						
		.0	-7633.97	18936.34			
		1.0	-7633.97	11302.37			
		2.0	-7633.97	3668.40			
		3.0	-7633.97	-3965.57			
		4.0	-7633.97	-11599.54			
49							
	1-23289.24						
		.0	-11137.92	21627.86			
		1.0	-11137.92	10489.94			
		2.0	-11137.92	-647.98			
		3.0	-11137.92	-11785.90			
		4.0	-11137.92	-22923.81			
2							
	1*********						
		.0	80477.58	-290871.42			
		1.0	80477.58	-210393.84			
		2.0	80477.58	-129916.27			
		3.0	80477.58	-49438.69			
		4.0	80477.58	31038.88			
6							
	1*********						
		.0	84274.57	-205126.98			
		1.0	84274.57	-120852.41			
		2.0	84274.57	-36577.84			
		3.0	84274.57	47696.73			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
		4.0	84274.57	131971.31			
1	1*********						
		.0	84270.98	-176441.22			
		1.0	84270.98	-92170.24			
		2.0	84270.98	-7899.26			
		3.0	84270.98	76371.71			
		4.0	84270.98	160642.69			
4	1*********						
		.0	81456.83	-159598.86			
		1.0	81456.83	-78142.03			
		2.0	81456.83	3314.79			
		3.0	81456.83	84771.62			
		4.0	81456.83	166228.44			
18	1*********						
		.0	77221.58	-142961.18			
		1.0	77221.58	-65739.60			
		2.0	77221.58	11481.99			
		3.0	77221.58	88703.57			
		4.0	77221.58	165925.15			
22	1*********						
		.0	71408.99	-115782.25			
		1.0	71408.99	-44373.26			
		2.0	71408.99	27035.74			
		3.0	71408.99	98444.73			
		4.0	71408.99	169853.72			
26	1*********						
		.0	57894.03	-52187.74			
		1.0	57894.03	5706.29			
		2.0	57894.03	63600.32			
		3.0	57894.03	121494.35			
		4.0	57894.03	179388.38			
30	1*********						
		.0	-28382.37	99585.54			
		1.0	-28382.37	71203.17			
		2.0	-28382.37	42820.81			
		3.0	-28382.37	14438.44			
		4.0	-28382.37	-13943.93			
34	1-97182.28						
		.0	325.16	-1548.89			
		1.0	325.16	-1223.74			
		2.0	325.16	-898.58			
		3.0	325.16	-573.43			
		4.0	325.16	-248.27			
38	1-72583.80						

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-4141.68	11514.62			
		1.0	-4141.68	7372.94			
		2.0	-4141.68	3231.26			
		3.0	-4141.68	-910.42			
		4.0	-4141.68	-5052.11			
2							
	1-50914.78						
		.0	-5431.53	13878.90			
		1.0	-5431.53	8447.37			
		2.0	-5431.53	3015.83			
		3.0	-5431.53	-2415.70			
		4.0	-5431.53	-7847.23			
46							
	1-31868.95						
		.0	-7375.23	17661.05			
		1.0	-7375.23	10285.82			
		2.0	-7375.23	2910.59			
		3.0	-7375.23	-4464.64			
		4.0	-7375.23	-11839.87			
50							
	1-13628.00						
		.0	-10196.81	20442.86			
		1.0	-10196.81	10246.05			
		2.0	-10196.81	49.24			
		3.0	-10196.81	-10147.57			
		4.0	-10196.81	-20344.38			
3							
	1*********						
		.0	90200.26	-303385.59			
		1.0	90200.26	-213185.33			
		2.0	90200.26	-122985.06			
		3.0	90200.26	-32784.80			
		4.0	90200.26	57415.47			
7							
	1*********						
		.0	100013.51	-237244.44			
		1.0	100013.51	-137230.93			
		2.0	100013.51	-37217.42			
		3.0	100013.51	62796.09			
		4.0	100013.51	162809.59			
11							
	1*********						
		.0	100412.45	-208495.44			
		1.0	100412.45	-108082.99			
		2.0	100412.45	-7670.55			
		3.0	100412.45	92741.90			
		4.0	100412.45	193154.35			
15							
	1*********						
		.0	98245.35	-192838.58			
		1.0	98245.35	-94593.23			
		2.0	98245.35	3652.12			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	98245.35	101897.47			
		4.0	98245.35	200142.82			
1**********							
		.0	94178.21	-176836.77			
		1.0	94178.21	-82658.57			
		2.0	94178.21	11519.64			
		3.0	94178.21	105697.85			
		4.0	94178.21	199876.05			
1**********							
		.0	87437.93	-151699.88			
		1.0	87437.93	-64261.95			
		2.0	87437.93	23175.99			
		3.0	87437.93	110613.92			
		4.0	87437.93	198051.85			
1**********							
		.0	84124.92	-103009.17			
		1.0	84124.92	-18884.26			
		2.0	84124.92	65240.66			
		3.0	84124.92	149365.57			
		4.0	84124.92	233490.49			
1**********							
		.0	-9213.37	65157.95			
		1.0	-9213.37	55944.58			
		2.0	-9213.37	46731.22			
		3.0	-9213.37	37517.85			
		4.0	-9213.37	28304.48			
1**********							
		.0	19932.22	-40100.63			
		1.0	19932.22	-20168.41			
		2.0	19932.22	-236.19			
		3.0	19932.22	19696.02			
		4.0	19932.22	39628.24			
1**********							
		.0	15986.03	-28798.86			
		1.0	15986.03	-12812.83			
		2.0	15986.03	3173.21			
		3.0	15986.03	19159.24			
		4.0	15986.03	35145.27			
1**********							
		.0	14921.43	-27017.93			
		1.0	14921.43	-12096.50			
		2.0	14921.43	2824.93			
		3.0	14921.43	17746.36			
		4.0	14921.43	32667.79			

ME ELEMENT FORCES

	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1	-76311.38						
			.0	13674.29	-23371.96			
			1.0	13674.29	-9697.67			
			2.0	13674.29	3976.62			
			3.0	13674.29	17650.90			
			4.0	13674.29	31325.19			
1								
	1	-27171.29						
			.0	10755.59	-16583.72			
			1.0	10755.59	-5828.13			
			2.0	10755.59	4927.47			
			3.0	10755.59	15683.06			
			4.0	10755.59	26438.66			
4								
	1	**********						
			.0	73333.50	-281836.17			
			1.0	73333.50	-208502.66			
			2.0	73333.50	-135169.16			
			3.0	73333.50	-61835.65			
			4.0	73333.50	11497.85			
8								
	1	**********						
			.0	66601.86	-172300.21			
			1.0	66601.86	-105698.34			
			2.0	66601.86	-39096.48			
			3.0	66601.86	27505.38			
			4.0	66601.86	94107.24			
12								
	1	**********						
			.0	63528.41	-135158.97			
			1.0	63528.41	-71630.56			
			2.0	63528.41	-8102.16			
			3.0	63528.41	55426.25			
			4.0	63528.41	118954.65			
16								
	1	**********						
			.0	61136.32	-118235.48			
			1.0	61136.32	-57099.16			
			2.0	61136.32	4037.16			
			3.0	61136.32	65173.48			
			4.0	61136.32	126309.81			
20								
	1	**********						
			.0	58402.65	-104573.89			
			1.0	58402.65	-46171.25			
			2.0	58402.65	12231.40			
			3.0	58402.65	70634.04			
			4.0	58402.65	129036.69			
24								
	1	**********						
			.0	54784.90	-86007.67			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	54784.90	-31222.77			
		2.0	54784.90	23562.12			
		3.0	54784.90	78347.02			
		4.0	54784.90	133131.92			
8							
	1**********						
		.0	60846.24	-52291.23			
		1.0	60846.24	8555.01			
		2.0	60846.24	69401.25			
		3.0	60846.24	130247.49			
		4.0	60846.24	191093.73			
32							
	1**********						
		.0	-16303.63	85952.42			
		1.0	-16303.63	69648.79			
		2.0	-16303.63	53345.15			
		3.0	-16303.63	37041.52			
		4.0	-16303.63	20737.89			
36							
	1**********						
		.0	10682.47	-20382.73			
		1.0	10682.47	-9700.27			
		2.0	10682.47	982.20			
		3.0	10682.47	11664.66			
		4.0	10682.47	22347.13			
40							
	1**********						
		.0	10446.88	-18540.11			
		1.0	10446.88	-8093.24			
		2.0	10446.88	2353.64			
		3.0	10446.88	12800.51			
		4.0	10446.88	23247.39			
44							
	1-69947.69						
		.0	9236.48	-14891.91			
		1.0	9236.48	-5655.42			
		2.0	9236.48	3581.06			
		3.0	9236.48	12817.55			
		4.0	9236.48	22054.03			
48							
	1-35418.08						
		.0	8527.10	-12429.70			
		1.0	8527.10	-3902.60			
		2.0	8527.10	4624.51			
		3.0	8527.10	13151.61			
		4.0	8527.10	21678.72			
52							
	1-10925.43						
		.0	5634.20	-7691.90			
		1.0	5634.20	-2057.71			
		2.0	5634.20	3576.49			
		3.0	5634.20	9210.69			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5634.20	14844.88			
1	6878.60						
		.0	-25230.32	140924.59			
		2.0	-30770.32	84923.95			
		4.0	-44510.32	17843.31			
		6.0	-50050.32	-76717.34			
		8.0	-55590.32	-182357.98			
1	-2678.11						
		.0	-35471.98	182411.64			
		2.0	-41011.98	105927.69			
		4.0	-54751.98	18363.73			
		6.0	-60291.98	-96680.22			
		8.0	-65831.98	-222804.17			
1	-7373.33						
		.0	-36687.09	187318.21			
		2.0	-42227.09	108404.03			
		4.0	-55967.09	18409.84			
		6.0	-61507.09	-99064.34			
		8.0	-67047.09	-227618.53			
1	-11036.06						
		.0	-34605.35	178940.55			
		2.0	-40145.35	104189.85			
		4.0	-53885.35	18359.15			
		6.0	-59425.35	-94951.55			
		8.0	-64965.35	-219342.25			
1	-16170.61						
		.0	-30159.81	160999.47			
		2.0	-35699.81	95139.84			
		4.0	-49439.81	18200.21			
		6.0	-54979.81	-86219.42			
		8.0	-60519.81	-201719.05			
1	-10766.63						
		.0	-20556.12	121672.01			
		2.0	-26096.12	75019.77			
		4.0	-39836.12	17287.53			
		6.0	-45376.12	-67924.71			
		8.0	-50916.12	-164216.94			
1	3081.60						
		.0	6832.85	53807.88			
		3.0	-1477.15	61841.42			
		6.0	-17987.15	28544.96			
		9.0	-34497.15	-46081.50			
		12.0	-42807.15	-162037.96			
1	-2674.52						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	1517.52	85608.36			
		3.0	-6792.48	77695.91			
		6.0	-23302.48	28453.46			
		9.0	-39812.48	-62118.99			
		12.0	-48122.48	-194021.43			
)							
	1 -4559.18						
		.0	353.86	92623.02			
		3.0	-7956.14	81219.60			
		6.0	-24466.14	28486.18			
		9.0	-40976.14	-65577.24			
		12.0	-49286.14	-200970.66			
3							
	1 -6800.82						
		.0	824.51	89847.37			
		3.0	-7485.49	79855.91			
		6.0	-23995.49	28534.44			
		9.0	-40505.49	-64117.02			
		12.0	-48815.49	-198098.49			
6							
	1-10358.02						
		.0	2468.58	79988.35			
		3.0	-5841.42	74929.09			
		6.0	-22351.42	28539.83			
		9.0	-38861.42	-59179.43			
		12.0	-47171.42	-188228.69			
9							
	1 2748.33						
		.0	6070.52	57824.51			
		3.0	-2239.48	63571.07			
		6.0	-18749.48	27987.63			
		9.0	-35259.48	-48925.82			
		12.0	-43569.48	-167169.26			
5							
	1 -6731.64						
		.0	-24372.50	132621.95			
		2.0	-29912.50	78336.94			
		4.0	-43652.50	12971.94			
		6.0	-49192.50	-79873.06			
		8.0	-54732.50	-183798.06			
8							
	1 -3073.46						
		.0	-35638.73	177283.60			
		2.0	-41178.73	100466.15			
		4.0	-54918.73	12568.69			
		6.0	-60458.73	-102808.76			
		8.0	-65998.73	-229266.21			
1							
	1 -2392.08						
		.0	-37596.55	185022.28			
		2.0	-43136.55	104289.17			
		4.0	-56876.55	12476.07			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		6.0	-62416.55	-106817.03			
		8.0	-67956.55	-237190.14			
1	-2733.68						
		.0	-36040.60	178881.10			
		2.0	-41580.60	101259.90			
		4.0	-55320.60	12558.70			
		6.0	-60860.60	-103622.50			
		8.0	-66400.60	-230883.70			
7							
1	-3617.75						
		.0	-32118.95	163347.25			
		2.0	-37658.95	93569.35			
		4.0	-51398.95	12711.44			
		6.0	-56938.95	-95626.46			
		8.0	-62478.95	-215044.36			
0							
1	6061.34						
		.0	-24734.36	133891.76			
		2.0	-30274.36	78883.04			
		4.0	-44014.36	12794.31			
		6.0	-49554.36	-80774.42			
		8.0	-55094.36	-185423.14			
1							
1	40347.62						
		.0	3453.60	33259.09			
		2.0	-3686.40	33026.28			
		4.0	-19026.40	18513.47			
		6.0	-26166.40	-26679.34			
		8.0	-33306.40	-86152.15			
4							
1	321.93						
		.0	17113.65	-21660.28			
		2.0	9973.65	5427.03			
		4.0	-5366.35	18234.33			
		6.0	-12506.35	361.64			
		8.0	-19646.35	-31791.05			
7							
1	-10965.82						
		.0	16982.17	-21305.98			
		2.0	9842.17	5518.37			
		4.0	-5497.83	18062.72			
		6.0	-12637.83	-72.94			
		8.0	-19777.83	-32488.59			
30							
1	-25236.50						
		.0	17978.27	-25302.38			
		2.0	10838.27	3514.15			
		4.0	-4501.73	18050.69			
		6.0	-11641.73	1907.22			
		8.0	-18781.73	-28516.24			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-39800.12						
		.0	18916.41	-29112.69			
		2.0	11776.41	1580.12			
		4.0	-3563.59	17992.94			
		6.0	-10703.59	3725.76			
		8.0	-17843.59	-24821.43			
6							
	1-52564.76						
		.0	19897.84	-33201.07			
		2.0	12757.84	-545.38			
		4.0	-2582.16	17830.31			
		6.0	-9722.16	5526.00			
		8.0	-16862.16	-21058.31			
2							
	1 70014.56						
		.0	20050.46	-6620.46			
		3.0	9340.46	37465.92			
		6.0	-9569.54	33022.30			
		9.0	-28479.54	-19951.31			
		12.0	-39189.54	-121454.93			
5							
	1 78253.15						
		.0	26459.15	-44513.15			
		3.0	15749.15	18799.30			
		6.0	-3160.85	33581.76			
		9.0	-22070.85	-165.79			
		12.0	-32780.85	-82443.34			
8							
	1 63772.78						
		.0	26466.37	-44461.70			
		3.0	15756.37	18872.41			
		6.0	-3153.63	33676.52			
		9.0	-22063.63	-49.37			
		12.0	-32773.63	-82305.26			
31							
	1 48206.47						
		.0	26990.11	-47612.42			
		3.0	16280.11	17292.90			
		6.0	-2629.89	33668.22			
		9.0	-21539.89	1513.54			
		12.0	-32249.89	-79171.15			
34							
	1 34908.72						
		.0	27457.49	-50444.05			
		3.0	16747.49	15863.43			
		6.0	-2162.51	33640.91			
		9.0	-21072.51	2888.38			
		12.0	-31782.51	-76394.14			
37							
	1 19800.82						
		.0	27978.70	-53418.77			

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ME E L E M E N T F O R C E S

ME	LOAD COMB	AXIAL FORCE	DIST END	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			3.0	17268.70	14452.32			
			6.0	-1641.30	33793.42			
			9.0	-20551.30	4604.52			
			12.0	-31261.30	-73114.39			
3								
	1	37388.06						
			.0	-525.14	46481.06			
			2.0	-7665.14	38290.78			
			4.0	-23005.14	15820.51			
			6.0	-30145.14	-37329.76			
			8.0	-37285.14	-104760.03			
76								
	1	82575.74						
			.0	15052.40	-14409.72			
			2.0	7912.40	8555.08			
			4.0	-7427.60	17239.87			
			6.0	-14567.60	-4755.33			
			8.0	-21707.60	-41030.54			
79								
	1	51316.66						
			.0	15042.07	-14106.96			
			2.0	7902.07	8837.19			
			4.0	-7437.93	17501.34			
			6.0	-14577.93	-4514.51			
			8.0	-21717.93	-40810.36			
32								
	1	39899.88						
			.0	15768.76	-17189.58			
			2.0	8628.76	7207.94			
			4.0	-6711.24	17325.46			
			6.0	-13851.24	-3237.02			
			8.0	-20991.24	-38079.50			
35								
	1	28087.88						
			.0	16635.28	-20493.40			
			2.0	9495.28	5637.17			
			4.0	-5844.72	17487.73			
			6.0	-12984.72	-1341.71			
			8.0	-20124.72	-34451.15			
88								
	1	8317.70						
			.0	17870.05	-25293.43			
			2.0	10730.05	3306.67			
			4.0	-4609.95	17626.77			
			6.0	-11749.95	1266.86			
			8.0	-18889.95	-29373.04			
89								
	1	-60602.66						
			.0	13098.95	-22895.85			
			2.0	8718.95	-1077.96			
			4.0	-1541.05	11979.94			
			6.0	-5921.05	4517.83			

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A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10301.05	-11704.27			
'1							
	1 -5634.20						
		.0	12474.57	-21041.43			
		2.0	8094.57	-472.29			
		4.0	-2165.43	11336.85			
		6.0	-6545.43	2625.98			
		8.0	-10925.43	-14844.88			
90							
	1-27600.40						
		.0	17740.58	-32145.49			
		3.0	11170.58	11221.25			
		6.0	-1279.42	23118.00			
		9.0	-13729.42	3544.75			
		12.0	-20299.42	-47498.50			

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ME E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1115638.95						
		.0	65345.98	-270499.56			
		1.0	65345.98	-205153.58			
		2.0	65345.98	-139807.60			
		3.0	65345.98	-74461.62			
		4.0	65345.98	-9115.64			
5							
	1 90659.85						
		.0	55026.73	-149025.92			
		1.0	55026.73	-93999.19			
		2.0	55026.73	-38972.45			
		3.0	55026.73	16054.28			
		4.0	55026.73	71081.01			
9							
	1 55515.05						
		.0	50784.37	-110015.32			
		1.0	50784.37	-59230.95			
		2.0	50784.37	-8446.59			
		3.0	50784.37	42337.78			
		4.0	50784.37	93122.15			
13							
	1 19121.51						
		.0	47770.63	-93020.97			
		1.0	47770.63	-45250.34			
		2.0	47770.63	2520.28			
		3.0	47770.63	50290.91			
		4.0	47770.63	98061.53			
17							
	1-15441.33						
		.0	44546.40	-80712.42			
		1.0	44546.40	-36166.02			
		2.0	44546.40	8380.38			
		3.0	44546.40	52926.78			
		4.0	44546.40	97473.18			
21							
	1-46662.56						
		.0	41319.41	-67812.78			
		1.0	41319.41	-26493.37			
		2.0	41319.41	14826.04			
		3.0	41319.41	56145.45			
		4.0	41319.41	97464.86			
25							
	1-72842.09						
		.0	39444.20	-47446.22			
		1.0	39444.20	-8002.02			
		2.0	39444.20	31442.18			
		3.0	39444.20	70886.39			
		4.0	39444.20	110330.59			
29							
	1-89499.47						
		.0	29081.31	4374.40			

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M E E L E M E N T F O R C E S

LOAD / COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	29081.31	33455.71			
		2.0	29081.31	62537.03			
		3.0	29081.31	91618.34			
		4.0	29081.31	120699.65			
3							
	1-83850.96						
		.0	-27904.91	96211.42			
		1.0	-27904.91	68306.50			
		2.0	-27904.91	40401.59			
		3.0	-27904.91	12496.68			
		4.0	-27904.91	-15408.23			
37							
	1-86864.31						
		.0	-4464.56	9812.07			
		1.0	-4464.56	5347.51			
		2.0	-4464.56	882.95			
		3.0	-4464.56	-3581.60			
		4.0	-4464.56	-8046.16			
41							
	1-72390.84						
		.0	-7033.85	17712.91			
		1.0	-7033.85	10679.06			
		2.0	-7033.85	3645.21			
		3.0	-7033.85	-3388.63			
		4.0	-7033.85	-10422.48			
45							
	1-52065.40						
		.0	-7910.43	19597.65			
		1.0	-7910.43	11687.22			
		2.0	-7910.43	3776.78			
		3.0	-7910.43	-4133.65			
		4.0	-7910.43	-12044.08			
49							
	1-24676.12						
		.0	-11453.16	22115.26			
		1.0	-11453.16	10662.10			
		2.0	-11453.16	-791.07			
		3.0	-11453.16	-12244.23			
		4.0	-11453.16	-23697.39			
2							
	1*********						
		.0	80017.32	-289370.65			
		1.0	80017.32	-209353.33			
		2.0	80017.32	-129336.02			
		3.0	80017.32	-49318.70			
		4.0	80017.32	30698.61			
6							
	1*********						
		.0	83782.03	-204098.34			
		1.0	83782.03	-120316.31			
		2.0	83782.03	-36534.28			
		3.0	83782.03	47247.75			

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A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
) COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
7							
	1-78138.42						
		.0	13961.53	-23994.61			
		1.0	13961.53	-10033.08			
		2.0	13961.53	3928.45			
		3.0	13961.53	17889.98			
		4.0	13961.53	31851.52			
1							
	1-27654.76						
		.0	10888.22	-16693.79			
		1.0	10888.22	-5805.57			
		2.0	10888.22	5082.65			
		3.0	10888.22	15970.87			
		4.0	10888.22	26859.08			
4							
	1*********						
		.0	72955.74	-280445.68			
		1.0	72955.74	-207489.94			
		2.0	72955.74	-134534.19			
		3.0	72955.74	-61578.45			
		4.0	72955.74	11377.30			
8							
	1*********						
		.0	66254.42	-171551.08			
		1.0	66254.42	-105296.66			
		2.0	66254.42	-39042.24			
		3.0	66254.42	27212.18			
		4.0	66254.42	93466.60			
12							
	1*********						
		.0	63161.86	-134760.67			
		1.0	63161.86	-71598.81			
		2.0	63161.86	-8436.95			
		3.0	63161.86	54724.90			
		4.0	63161.86	117886.76			
16							
	1*********						
		.0	60679.43	-118565.96			
		1.0	60679.43	-57886.53			
		2.0	60679.43	2792.90			
		3.0	60679.43	63472.33			
		4.0	60679.43	124151.76			
20							
	1*********						
		.0	58096.34	-107385.23			
		1.0	58096.34	-49288.89			
		2.0	58096.34	8807.45			
		3.0	58096.34	66903.79			
		4.0	58096.34	125000.12			
24							
	1*********						
		.0	54819.24	-94857.48			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD) COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-1367.40	2582.81			
		1.0	-1367.40	1215.42			
		2.0	-1367.40	-151.98			
		3.0	-1367.40	-1519.37			
		4.0	-1367.40	-2886.77			
2							
	1-44203.29						
		.0	-5710.13	15041.32			
		1.0	-5710.13	9331.19			
		2.0	-5710.13	3621.06			
		3.0	-5710.13	-2089.06			
		4.0	-5710.13	-7799.19			
46							
	1-27893.87						
		.0	-7434.52	17793.32			
		1.0	-7434.52	10358.80			
		2.0	-7434.52	2924.28			
		3.0	-7434.52	-4510.24			
		4.0	-7434.52	-11944.76			
50							
	1-12212.01						
		.0	-10198.90	20428.24			
		1.0	-10198.90	10229.34			
		2.0	-10198.90	30.45			
		3.0	-10198.90	-10168.45			
		4.0	-10198.90	-20367.34			
3							
	1*********						
		.0	89761.96	-301916.99			
		1.0	89761.96	-212155.03			
		2.0	89761.96	-122393.07			
		3.0	89761.96	-32631.11			
		4.0	89761.96	57130.85			
7							
	1*********						
		.0	99572.82	-236301.00			
		1.0	99572.82	-136728.18			
		2.0	99572.82	-37155.36			
		3.0	99572.82	62417.45			
		4.0	99572.82	161990.27			
11							
	1*********						
		.0	100008.29	-207989.50			
		1.0	100008.29	-107981.20			
		2.0	100008.29	-7972.91			
		3.0	100008.29	92035.38			
		4.0	100008.29	192043.68			
15							
	1*********						
		.0	97918.68	-193293.59			
		1.0	97918.68	-95374.91			
		2.0	97918.68	2543.77			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD) COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	83782.03	131029.78			
)							
	1**********						
		.0	83791.48	-175787.91			
		1.0	83791.48	-91996.43			
		2.0	83791.48	-8204.95			
		3.0	83791.48	75586.53			
		4.0	83791.48	159378.01			
4							
	1**********						
		.0	81042.26	-159780.37			
		1.0	81042.26	-78738.11			
		2.0	81042.26	2304.16			
		3.0	81042.26	83346.42			
		4.0	81042.26	164388.68			
18							
	1**********						
		.0	76771.08	-145728.18			
		1.0	76771.08	-68957.10			
		2.0	76771.08	7813.97			
		3.0	76771.08	84585.05			
		4.0	76771.08	161356.13			
22							
	1**********						
		.0	71336.35	-128816.24			
		1.0	71336.35	-57479.89			
		2.0	71336.35	13856.47			
		3.0	71336.35	85192.82			
		4.0	71336.35	156529.17			
26							
	1**********						
		.0	64559.76	-101714.01			
		1.0	64559.76	-37154.25			
		2.0	64559.76	27405.51			
		3.0	64559.76	91965.27			
		4.0	64559.76	156525.03			
30							
	1**********						
		.0	50411.66	-41910.60			
		1.0	50411.66	8501.07			
		2.0	50411.66	58912.73			
		3.0	50411.66	109324.39			
		4.0	50411.66	159736.05			
34							
	1-73457.22						
		.0	-26930.27	93011.26			
		1.0	-26930.27	66081.00			
		2.0	-26930.27	39150.73			
		3.0	-26930.27	12220.46			
		4.0	-26930.27	-14709.81			
38							
	1-63604.29						

ASTA S.H. & YAZID, GONDOLAYU PROJECT

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	54819.24	-40038.24			
		2.0	54819.24	14781.00			
		3.0	54819.24	69600.24			
		4.0	54819.24	124419.48			
3							
	1**********						
		.0	50581.35	-76902.25			
		1.0	50581.35	-26320.90			
		2.0	50581.35	24260.45			
		3.0	50581.35	74841.80			
		4.0	50581.35	125423.16			
2							
	1**********						
		.0	55221.90	-45853.47			
		1.0	55221.90	9368.43			
		2.0	55221.90	64590.33			
		3.0	55221.90	119812.23			
		4.0	55221.90	175034.13			
36							
	1**********						
		.0	-14416.21	77864.46			
		1.0	-14416.21	63448.25			
		2.0	-14416.21	49032.03			
		3.0	-14416.21	34615.82			
		4.0	-14416.21	20199.61			
0							
	1**********						
		.0	9934.99	-18354.99			
		1.0	9934.99	-8420.00			
		2.0	9934.99	1514.99			
		3.0	9934.99	11449.98			
		4.0	9934.99	21384.98			
4							
	1-69440.92						
		.0	9657.59	-16347.86			
		1.0	9657.59	-6690.27			
		2.0	9657.59	2967.32			
		3.0	9657.59	12624.91			
		4.0	9657.59	22282.50			
18							
	1-35019.32						
		.0	8449.94	-12121.37			
		1.0	8449.94	-3671.43			
		2.0	8449.94	4778.51			
		3.0	8449.94	13228.46			
		4.0	8449.94	21678.40			
52							
	1-10862.07						
		.0	5540.85	-7525.22			
		1.0	5540.85	-1984.37			
		2.0	5540.85	3556.49			
		3.0	5540.85	9097.34			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	97918.68	100462.45			
		4.0	97918.68	198381.13			
1							
	1**********						
		.0	94216.18	-180313.66			
		1.0	94216.18	-86097.47			
		2.0	94216.18	8118.71			
		3.0	94216.18	102334.90			
		4.0	94216.18	196551.08			
3							
	1**********						
		.0	88928.99	-163973.13			
		1.0	88928.99	-75044.13			
		2.0	88928.99	13884.86			
		3.0	88928.99	102813.85			
		4.0	88928.99	191742.85			
27							
	1**********						
		.0	81147.69	-138651.54			
		1.0	81147.69	-57503.86			
		2.0	81147.69	23643.83			
		3.0	81147.69	104791.52			
		4.0	81147.69	185939.20			
31							
	1**********						
		.0	76901.12	-93165.87			
		1.0	76901.12	-16264.75			
		2.0	76901.12	60636.38			
		3.0	76901.12	137537.50			
		4.0	76901.12	214438.63			
35							
	1**********						
		.0	-7564.93	58101.62			
		1.0	-7564.93	50536.69			
		2.0	-7564.93	42971.76			
		3.0	-7564.93	35406.83			
		4.0	-7564.93	27841.90			
39							
	1**********						
		.0	18613.72	-36834.07			
		1.0	18613.72	-18220.35			
		2.0	18613.72	393.37			
		3.0	18613.72	19007.10			
		4.0	18613.72	37620.82			
43							
	1**********						
		.0	14646.88	-25904.86			
		1.0	14646.88	-11257.98			
		2.0	14646.88	3388.89			
		3.0	14646.88	18035.77			
		4.0	14646.88	32682.65			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-10098.83	-10855.43			
1	-5540.85						
		.0	12537.93	-21341.60			
		2.0	8157.93	-645.75			
		4.0	-2102.07	11290.10			
		6.0	-6482.07	2705.96			
		8.0	-10862.07	-14638.19			
10	-27057.10						
		.0	17612.16	-31327.03			
		3.0	11042.16	11654.46			
		6.0	-1407.84	23165.96			
		9.0	-13857.84	3207.45			
		12.0	-20427.84	-48221.05			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5540.85	14638.19			
6							
1	6874.25						
		.0	-24979.10	139910.28			
		2.0	-30519.10	84412.08			
		4.0	-44259.10	17833.88			
		6.0	-49799.10	-76224.32			
		8.0	-55339.10	-181362.51			
6							
1	-2647.64						
		.0	-35144.80	181096.33			
		2.0	-40684.80	105266.73			
		4.0	-54424.80	18357.12			
		6.0	-59964.80	-96032.49			
		8.0	-65504.80	-221502.10			
59							
1	-7321.36						
		.0	-36393.54	186143.12			
		2.0	-41933.54	107816.05			
		4.0	-55673.54	18408.97			
		6.0	-61213.54	-98478.10			
		8.0	-66753.54	-226445.17			
62							
1	-10556.78						
		.0	-34562.84	178773.96			
		2.0	-40102.84	104108.27			
		4.0	-53842.84	18362.59			
		6.0	-59382.84	-94863.09			
		8.0	-64922.84	-219168.77			
65							
1	-13999.01						
		.0	-31221.23	165285.96			
		2.0	-36761.23	97303.50			
		4.0	-50501.23	18241.04			
		6.0	-56041.23	-88301.42			
		8.0	-61581.23	-205923.88			
68							
1	-18795.79						
		.0	-26179.53	144911.08			
		2.0	-31719.53	87012.02			
		4.0	-45459.53	18032.97			
		6.0	-50999.53	-78426.09			
		8.0	-56539.53	-185965.14			
71							
1	-13754.11						
		.0	-16657.37	105956.19			
		2.0	-22197.37	67101.44			
		4.0	-35937.37	17166.69			
		6.0	-41477.37	-60248.06			
		8.0	-47017.37	-148742.80			
54							
1	3109.53						

... Status Portal (13 lantai) kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-14622.96						
		.0	18037.76	-25337.23			
		2.0	10897.76	3598.29			
		4.0	-4442.24	18253.81			
		6.0	-11582.24	2229.33			
		8.0	-18722.24	-28075.16			
3							
	1-27089.07						
		.0	18090.59	-25770.63			
		2.0	10950.59	3270.54			
		4.0	-4389.41	18031.71			
		6.0	-11529.41	2112.89			
		8.0	-18669.41	-28085.94			
33							
	1-42049.60						
		.0	19150.47	-30019.37			
		2.0	12010.47	1145.58			
		4.0	-3329.53	18026.53			
		6.0	-10469.53	4227.48			
		8.0	-17609.53	-23851.57			
36							
	1-55222.12						
		.0	20132.72	-34127.30			
		2.0	12992.72	-1001.86			
		4.0	-2347.28	17843.58			
		6.0	-9487.28	6009.02			
		8.0	-16627.28	-20105.54			
75							
	1 64749.77						
		.0	20767.78	-10865.32			
		3.0	10057.78	35373.01			
		6.0	-8852.22	33081.35			
		9.0	-27762.22	-17740.32			
		12.0	-38472.22	-117091.98			
78							
	1 69852.65						
		.0	26656.41	-45650.43			
		3.0	15946.41	18253.79			
		6.0	-2963.59	33628.02			
		9.0	-21873.59	472.24			
		12.0	-32583.59	-81213.54			
31							
	1 54080.07						
		.0	26758.04	-46182.18			
		3.0	16048.04	18026.93			
		6.0	-2861.96	33706.04			
		9.0	-21771.96	855.15			
		12.0	-32481.96	-80525.74			
34							
	1 38184.07						
		.0	27315.77	-49561.81			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		6.0	-48977.38	-79433.61			
		8.0	-54517.38	-182928.37			
1	-3092.56						
		.0	-35380.88	176259.75			
		2.0	-40920.88	99957.99			
		4.0	-54660.88	12576.24			
		6.0	-60200.88	-102285.52			
		8.0	-65740.88	-228227.27			
1	-2482.43						
		.0	-37412.34	184286.03			
		2.0	-42952.34	103921.34			
		4.0	-56692.34	12476.65			
		6.0	-62232.34	-106448.03			
		8.0	-67772.34	-236452.72			
4	-2583.09						
		.0	-36196.78	179477.22			
		2.0	-41736.78	101543.67			
		4.0	-55476.78	12530.12			
		6.0	-61016.78	-103963.43			
		8.0	-66556.78	-231536.99			
7	-3277.09						
		.0	-33313.88	168093.45			
		2.0	-38853.88	95925.69			
		4.0	-52593.88	12677.92			
		6.0	-58133.88	-98049.84			
		8.0	-63673.88	-219857.61			
0	-4237.89						
		.0	-28727.99	149942.21			
		2.0	-34267.99	86946.22			
		4.0	-48007.99	12870.24			
		6.0	-53547.99	-88685.75			
		8.0	-59087.99	-201321.74			
3	4640.55						
		.0	-21249.80	120161.75			
		2.0	-26789.80	72122.16			
		4.0	-40529.80	13002.56			
		6.0	-46069.80	-73597.03			
		8.0	-51609.80	-171276.63			
74	29424.23						
		.0	5648.50	24488.24			
		2.0	-1491.50	28645.24			
		4.0	-16831.50	18522.25			
		6.0	-23971.50	-22280.75			
		8.0	-31111.50	-77363.75			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

E LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
) COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		3.0	16605.77	16320.51			
		6.0	-2304.23	33672.82			
		9.0	-21214.23	2495.14			
		12.0	-31924.23	-77212.55			
7							
	1 22449.58						
		.0	27839.15	-52558.42			
		3.0	17129.15	14894.03			
		6.0	-1780.85	33816.49			
		9.0	-20690.85	4208.94			
		12.0	-31400.85	-73928.61			
76							
	1 31947.70						
		.0	1416.25	38879.42			
		2.0	-5723.75	34571.92			
		4.0	-21063.75	15984.42			
		6.0	-28203.75	-33283.08			
		8.0	-35343.75	-96830.58			
79							
	1 70782.58						
		.0	15677.93	-16866.76			
		2.0	8537.93	7349.10			
		4.0	-6802.07	17284.96			
		6.0	-13942.07	-3459.17			
		8.0	-21082.07	-38483.31			
82							
	1 40467.87						
		.0	15819.30	-17191.52			
		2.0	8679.30	7307.07			
		4.0	-6660.70	17525.67			
		6.0	-13800.70	-2935.74			
		8.0	-20940.70	-37677.15			
85							
	1 27439.94						
		.0	16668.32	-20678.10			
		2.0	9528.32	5518.55			
		4.0	-5811.68	17435.19			
		6.0	-12951.68	-1328.16			
		8.0	-20091.68	-34371.51			
88							
	1 7718.94						
		.0	17913.75	-25477.37			
		2.0	10773.75	3210.12			
		4.0	-4566.25	17617.62			
		6.0	-11706.25	1345.12			
		8.0	-18846.25	-29207.39			
89							
	1-63309.74						
		.0	13301.17	-23664.81			
		2.0	8921.17	-1442.47			
		4.0	-1338.83	12019.88			
		6.0	-5718.83	4962.22			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	6895.37	53434.44			
		3.0	-1414.63	61655.54			
		6.0	-17924.63	28546.64			
		9.0	-34434.63	-45892.25			
		12.0	-42744.63	-161661.15			
1	-2657.09						
		.0	1567.03	85315.60			
		3.0	-6742.97	77551.69			
		6.0	-23252.97	28457.79			
		9.0	-39762.97	-61966.12			
		12.0	-48072.97	-193720.02			
1	-4572.04						
		.0	339.63	92713.21			
		3.0	-7970.37	81267.10			
		6.0	-24480.37	28490.99			
		9.0	-40990.37	-65615.13			
		12.0	-49300.37	-201051.24			
1	-6285.59						
		.0	639.53	90948.09			
		3.0	-7670.47	80401.68			
		6.0	-24180.47	28525.27			
		9.0	-40690.47	-64681.15			
		12.0	-49000.47	-199217.56			
1	-8564.28						
		.0	1763.40	84248.48			
		3.0	-6546.60	77073.67			
		6.0	-23056.60	28568.86			
		9.0	-39566.60	-61265.95			
		12.0	-47876.60	-192430.76			
1	-12019.20						
		.0	3759.15	72278.03			
		3.0	-4550.85	71090.48			
		6.0	-21060.85	28572.93			
		9.0	-37570.85	-55274.63			
		12.0	-45880.85	-180452.18			
1	393.98						
		.0	7433.65	49692.82			
		3.0	-876.35	59528.79			
		6.0	-17386.35	28034.75			
		9.0	-33896.35	-44789.29			
		12.0	-42206.35	-158943.32			
1	-6701.32						
		.0	-24157.38	131770.70			
		2.0	-29697.38	77915.93			
		4.0	-43437.38	12981.16			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST END	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-12196.15	87965.84			
		2.0	-17736.15	58033.53			
		4.0	-31476.15	17021.22			
		6.0	-37016.15	-51471.09			
		8.0	-42556.15	-131043.39			
1	3138.53						
		.0	6962.17	53035.44			
		3.0	-1347.83	61456.95			
		6.0	-17857.83	28548.46			
		9.0	-34367.83	-45690.03			
		12.0	-42677.83	-161258.53			
7							
1	-2622.47						
		.0	1631.30	84934.26			
		3.0	-6678.70	77363.15			
		6.0	-23188.70	28462.04			
		9.0	-39698.70	-61769.08			
		12.0	-48008.70	-193330.19			
0							
1	-4556.42						
		.0	372.79	92521.03			
		3.0	-7937.21	81174.42			
		6.0	-24447.21	28497.80			
		9.0	-40957.21	-65508.81			
		12.0	-49267.21	-200845.43			
3							
1	-6297.41						
		.0	608.69	91140.61			
		3.0	-7701.31	80501.69			
		6.0	-24211.31	28532.77			
		9.0	-40721.31	-64766.15			
		12.0	-49031.31	-199395.07			
6							
1	-8084.38						
		.0	1577.96	85356.35			
		3.0	-6732.04	77625.24			
		6.0	-23242.04	28564.13			
		9.0	-39752.04	-61826.98			
		12.0	-48062.04	-193548.09			
,9							
1	-10340.34						
		.0	3113.11	76183.18			
		3.0	-5196.89	73057.52			
		6.0	-21706.89	28601.86			
		9.0	-38216.89	-57183.80			
		12.0	-46526.89	-184299.46			
72							
1	-13663.72						
		.0	5372.68	62630.07			
		3.0	-2937.32	66283.10			
		6.0	-19447.32	28606.13			

sa Statis Portal (15 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5372.67	14380.85			
1	6864.65						
		.0	-24717.85	138855.51			
		2.0	-30257.85	83879.81			
		4.0	-43997.85	17824.11			
		6.0	-49537.85	-75711.59			
		8.0	-55077.85	-180327.29			
1	-2622.00						
		.0	-34782.83	179640.23			
		2.0	-40322.83	104534.58			
		4.0	-54062.83	18348.93			
		6.0	-59602.83	-95316.72			
		8.0	-65142.83	-220062.37			
1	-7292.27						
		.0	-35993.27	184537.86			
		2.0	-41533.27	107011.33			
		4.0	-55273.27	18404.80			
		6.0	-60813.27	-97681.74			
		8.0	-66353.27	-224848.27			
1	-10516.30						
		.0	-34193.19	177296.96			
		2.0	-39733.19	103370.57			
		4.0	-53473.19	18364.19			
		6.0	-59013.19	-94122.20			
		8.0	-64553.19	-217688.59			
1	-13558.32						
		.0	-31063.38	164659.18			
		2.0	-36603.38	96992.43			
		4.0	-50343.38	18245.68			
		6.0	-55883.38	-87981.07			
		8.0	-61423.38	-205287.83			
1	-16880.96						
		.0	-26985.02	148177.31			
		2.0	-32525.02	88667.27			
		4.0	-46265.02	18077.24			
		6.0	-51805.02	-79992.79			
		8.0	-57345.02	-189142.82			
1	-21366.89						
		.0	-21514.96	126046.67			
		2.0	-27054.96	77476.75			
		4.0	-40794.96	17826.82			
		6.0	-46334.96	-69303.10			
		8.0	-51874.96	-167513.03			
1	-16774.27						

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	54527.00	-42731.57			
		2.0	54527.00	11795.42			
		3.0	54527.00	66322.42			
		4.0	54527.00	120849.42			
3							
	1*********						
		.0	50604.71	-84496.67			
		1.0	50604.71	-33891.96			
		2.0	50604.71	16712.75			
		3.0	50604.71	67317.47			
		4.0	50604.71	117922.18			
32							
	1*********						
		.0	45714.19	-66891.94			
		1.0	45714.19	-21177.75			
		2.0	45714.19	24536.44			
		3.0	45714.19	70250.64			
		4.0	45714.19	115964.83			
36							
	1*********						
		.0	48809.63	-38835.45			
		1.0	48809.63	9974.18			
		2.0	48809.63	58783.82			
		3.0	48809.63	107593.45			
		4.0	48809.63	156403.09			
40							
	1*********						
		.0	-12242.04	68398.58			
		1.0	-12242.04	56156.54			
		2.0	-12242.04	43914.50			
		3.0	-12242.04	31672.46			
		4.0	-12242.04	19430.42			
44							
	1-68780.71						
		.0	9233.86	-16232.65			
		1.0	9233.86	-6998.80			
		2.0	9233.86	2235.06			
		3.0	9233.86	11468.92			
		4.0	9233.86	20702.77			
48							
	1-34567.14						
		.0	8817.26	-13338.84			
		1.0	8817.26	-4521.58			
		2.0	8817.26	4295.68			
		3.0	8817.26	13112.93			
		4.0	8817.26	21930.19			
52							
	1-10784.42						
		.0	5372.67	-7109.83			
		1.0	5372.67	-1737.16			
		2.0	5372.67	3635.51			
		3.0	5372.67	9008.18			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-80502.53						
		.0	13837.02	-23162.46			
		1.0	13837.02	-9325.43			
		2.0	13837.02	4511.59			
		3.0	13837.02	18348.61			
		4.0	13837.02	32185.64			
	1-28222.46						
		.0	11137.35	-17105.77			
		1.0	11137.35	-5968.42			
		2.0	11137.35	5168.93			
		3.0	11137.35	16306.28			
		4.0	11137.35	27443.63			
	1*********						
		.0	72580.24	-279028.57			
		1.0	72580.24	-206448.33			
		2.0	72580.24	-133868.09			
		3.0	72580.24	-61287.84			
		4.0	72580.24	11292.40			
	1*********						
		.0	65913.68	-170740.32			
		1.0	65913.68	-104826.64			
		2.0	65913.68	-38912.95			
		3.0	65913.68	27000.73			
		4.0	65913.68	92914.42			
	1*********						
		.0	62825.38	-134167.56			
		1.0	62825.38	-71342.18			
		2.0	62825.38	-8516.80			
		3.0	62825.38	54308.58			
		4.0	62825.38	117133.95			
	1*********						
		.0	60317.77	-118175.53			
		1.0	60317.77	-57857.77			
		2.0	60317.77	2460.00			
		3.0	60317.77	62777.77			
		4.0	60317.77	123095.54			
	1*********						
		.0	57649.78	-107603.71			
		1.0	57649.78	-49953.93			
		2.0	57649.78	7695.85			
		3.0	57649.78	65345.63			
		4.0	57649.78	122995.40			
	1*********						
		.0	54527.00	-97258.57			

Isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		.0	-25225.78	85281.63			
		1.0	-25225.78	60055.85			
		2.0	-25225.78	34830.07			
		3.0	-25225.78	9604.29			
		4.0	-25225.78	-15621.49			
2							
	1-35937.94						
		.0	-3241.56	7121.11			
		1.0	-3241.56	3879.55			
		2.0	-3241.56	637.99			
		3.0	-3241.56	-2603.57			
		4.0	-3241.56	-5845.13			
16							
	1-22704.11						
		.0	-7747.82	18931.90			
		1.0	-7747.82	11184.07			
		2.0	-7747.82	3436.25			
		3.0	-7747.82	-4311.58			
		4.0	-7747.82	-12059.40			
50							
	1-10371.56						
		.0	-10210.79	20437.36			
		1.0	-10210.79	10226.57			
		2.0	-10210.79	15.78			
		3.0	-10210.79	-10195.00			
		4.0	-10210.79	-20405.79			
3							
	1**********						
		.0	89323.24	-300417.92			
		1.0	89323.24	-211094.69			
		2.0	89323.24	-121771.45			
		3.0	89323.24	-32448.21			
		4.0	89323.24	56875.02			
7							
	1**********						
		.0	99128.33	-235277.64			
		1.0	99128.33	-136149.32			
		2.0	99128.33	-37020.99			
		3.0	99128.33	62107.34			
		4.0	99128.33	161235.66			
11							
	1**********						
		.0	99594.16	-207225.89			
		1.0	99594.16	-107631.73			
		2.0	99594.16	-8037.57			
		3.0	99594.16	91556.60			
		4.0	99594.16	191150.76			
15							
	1**********						
		.0	97545.35	-192847.85			
		1.0	97545.35	-95302.50			
		2.0	97545.35	2242.86			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		3.0	97545.35	99788.21			
		4.0	97545.35	197333.56			
1							
		.0	93915.93	-180697.65			
		1.0	93915.93	-86781.72			
		2.0	93915.93	7134.21			
		3.0	93915.93	101050.14			
		4.0	93915.93	194966.07			
3							
		.0	88954.33	-167013.94			
		1.0	88954.33	-78059.61			
		2.0	88954.33	10894.72			
		3.0	88954.33	99849.05			
		4.0	88954.33	188803.38			
27							
		.0	82536.27	-149406.70			
		1.0	82536.27	-66870.43			
		2.0	82536.27	15665.84			
		3.0	82536.27	98202.11			
		4.0	82536.27	180738.38			
31							
		.0	73763.06	-123827.42			
		1.0	73763.06	-50064.35			
		2.0	73763.06	23698.71			
		3.0	73763.06	97461.78			
		4.0	73763.06	171224.84			
35							
		.0	68604.94	-82116.79			
		1.0	68604.94	-13511.85			
		2.0	68604.94	55093.09			
		3.0	68604.94	123698.02			
		4.0	68604.94	192302.96			
39							
		.0	-5643.66	49826.48			
		1.0	-5643.66	44182.82			
		2.0	-5643.66	38539.15			
		3.0	-5643.66	32895.49			
		4.0	-5643.66	27251.83			
43							
		.0	17069.49	-33239.38			
		1.0	17069.49	-16169.89			
		2.0	17069.49	899.60			
		3.0	17069.49	17969.09			
		4.0	17069.49	35038.58			

.sa Statis Portal (13 lantai) Kg/m

A M E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	33688.46	-2598.16			
		2.0	33688.46	31090.30			
		3.0	33688.46	64778.75			
		4.0	33688.46	98467.21			
3							
	1-92631.10						
		.0	22854.73	10501.37			
		1.0	22854.73	33356.09			
		2.0	22854.73	56210.82			
		3.0	22854.73	79065.55			
		4.0	22854.73	101920.28			
37							
	1-84505.15						
		.0	-25665.98	87336.83			
		1.0	-25665.98	61670.84			
		2.0	-25665.98	36004.86			
		3.0	-25665.98	10338.87			
		4.0	-25665.98	-15327.11			
41							
	1-78293.49						
		.0	-6073.58	14032.61			
		1.0	-6073.58	7959.03			
		2.0	-6073.58	1885.45			
		3.0	-6073.58	-4188.13			
		4.0	-6073.58	-10261.71			
45							
	1-55715.85						
		.0	-8268.10	20592.85			
		1.0	-8268.10	12324.75			
		2.0	-8268.10	4056.64			
		3.0	-8268.10	-4211.46			
		4.0	-8268.10	-12479.56			
49							
	1-26518.27						
		.0	-11893.35	22857.98			
		1.0	-11893.35	10964.63			
		2.0	-11893.35	-928.72			
		3.0	-11893.35	-12822.07			
		4.0	-11893.35	-24715.42			
2							
	1*********						
		.0	79555.16	-287837.41			
		1.0	79555.16	-208282.24			
		2.0	79555.16	-128727.08			
		3.0	79555.16	-49171.91			
		4.0	79555.16	30383.25			
6							
	1*********						
		.0	83281.27	-202979.49			
		1.0	83281.27	-119698.21			
		2.0	83281.27	-36416.94			
		3.0	83281.27	46864.34			

sa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	83281.27	130145.61			
)							
	1*********						
		.0	83281.74	-174851.02			
		1.0	83281.74	-91569.28			
		2.0	83281.74	-8287.54			
		3.0	83281.74	74994.20			
		4.0	83281.74	158275.94			
4							
	1**********						
		.0	80545.89	-159093.36			
		1.0	80545.89	-78547.47			
		2.0	80545.89	1998.43			
		3.0	80545.89	82544.32			
		4.0	80545.89	163090.22			
8							
	1**********						
		.0	76327.00	-145738.98			
		1.0	76327.00	-69411.98			
		2.0	76327.00	6915.02			
		3.0	76327.00	83242.02			
		4.0	76327.00	159569.03			
22							
	1**********						
		.0	70853.07	-131075.15			
		1.0	70853.07	-60222.08			
		2.0	70853.07	10630.98			
		3.0	70853.07	81484.05			
		4.0	70853.07	152337.11			
26							
	1**********						
		.0	64312.45	-112988.89			
		1.0	64312.45	-48676.44			
		2.0	64312.45	15636.01			
		3.0	64312.45	79948.45			
		4.0	64312.45	144260.90			
30							
	1**********						
		.0	56609.28	-85882.19			
		1.0	56609.28	-29272.91			
		2.0	56609.28	27336.38			
		3.0	56609.28	83945.66			
		4.0	56609.28	140554.94			
34							
	1**********						
		.0	41897.70	-30507.76			
		1.0	41897.70	11389.94			
		2.0	41897.70	53287.64			
		3.0	41897.70	95185.35			
		4.0	41897.70	137083.05			
38							
	1-41470.52						

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
1	1128815.55						
		.0	64944.36	-269041.84			
		1.0	64944.36	-204097.48			
		2.0	64944.36	-139153.12			
		3.0	64944.36	-74208.76			
		4.0	64944.36	-9264.40			
5	1104097.69						
		.0	54628.71	-148119.92			
		1.0	54628.71	-93491.21			
		2.0	54628.71	-38862.49			
		3.0	54628.71	15766.22			
		4.0	54628.71	70394.93			
9	1 69314.87						
		.0	50348.72	-109245.30			
		1.0	50348.72	-58896.58			
		2.0	50348.72	-8547.87			
		3.0	50348.72	41800.85			
		4.0	50348.72	92149.56			
13	1 33321.60						
		.0	47287.98	-92388.30			
		1.0	47287.98	-45100.32			
		2.0	47287.98	2187.67			
		3.0	47287.98	49475.65			
		4.0	47287.98	96763.64			
17	1 -871.59						
		.0	44000.29	-80533.33			
		1.0	44000.29	-36533.04			
		2.0	44000.29	7467.25			
		3.0	44000.29	51467.54			
		4.0	44000.29	95467.83			
21	1-31934.97						
		.0	40303.61	-69191.35			
		1.0	40303.61	-28887.74			
		2.0	40303.61	11415.86			
		3.0	40303.61	51719.47			
		4.0	40303.61	92023.08			
25	1-58919.98						
		.0	36478.57	-56154.23			
		1.0	36478.57	-19675.66			
		2.0	36478.57	16802.91			
		3.0	36478.57	53281.48			
		4.0	36478.57	89760.05			
29	1-80434.95						
		.0	33688.46	-36286.62			

A M E E L E M E N T F O R C E S

T LOAD O COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
1		8.0	-9831.55	-9729.24			
	1 -5372.67						
		.0	12615.58	-21705.50			
		2.0	8235.58	-854.34			
		4.0	-2024.42	11236.83			
		6.0	-6404.42	2807.99			
		8.0	-10784.42	-14380.85			
20							
	1-26496.88						
		.0	17443.10	-30248.76			
		3.0	10873.10	12225.54			
		6.0	-1576.90	23229.84			
		9.0	-14026.90	2764.13			
		12.0	-20596.90	-49171.57			

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIA
O	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TOR
			3.0	16163.37	17649.54			
			6.0	-2746.63	33674.65			
			9.0	-21656.63	1169.75			
			12.0	32366.63	-79865.15			
4								
	1	44456.48						
			.0	27056.48	-47966.80			
			3.0	16346.48	17137.64			
			6.0	-2563.52	33712.08			
			9.0	-21473.52	1756.51			
			12.0	-32183.52	-78729.05			
37								
	1	26178.01						
			.0	27663.12	-51452.80			
			3.0	16953.12	15471.56			
			6.0	-1956.88	33865.92			
			9.0	-20866.88	3730.28			
			12.0	-31576.88	-74935.36			
79								
	1	25913.18						
			.0	3648.59	30137.73			
			2.0	-3491.41	30294.91			
			4.0	-18831.41	16172.09			
			6.0	-25971.41	-28630.73			
			8.0	-33111.41	-87713.56			
82								
	1	57756.27						
			.0	16385.50	-19656.37			
			2.0	9245.50	5974.64			
			4.0	-6094.50	17325.64			
			6.0	-13234.50	-2003.35			
			8.0	-20374.50	-35612.34			
85								
	1	27907.36						
			.0	16713.64	-20682.33			
			2.0	9573.64	5604.95			
			4.0	-5766.36	17612.24			
			6.0	-12906.36	-1060.48			
			8.0	-20046.36	-34013.20			
88								
	1	6542.28						
			.0	17967.30	-25743.31			
			2.0	10827.30	3051.30			
			4.0	-4512.70	17565.90			
			6.0	-11652.70	1400.50			
			8.0	-18792.70	-29044.89			
89								
	1	-66945.47						
			.0	13568.45	-24676.81			
			2.0	9188.45	-1919.91			
			4.0	-1071.55	12076.98			
			6.0	-5451.55	5553.87			

E L E M E N T F O R C E S

LOAD / COMB	AXIAL FORCE	DIST END	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
3							
	1 -4890.52						
		.0	-24650.26	133828.00			
		2.0	-30190.26	78987.47			
		4.0	-43930.26	13066.94			
		6.0	-49470.26	-80333.59			
		8.0	-55010.26	-184814.12			
6							
	1 3095.44						
		.0	-17191.75	104173.71			
		2.0	-22731.75	64250.21			
		4.0	-36471.75	13246.72			
		6.0	-42011.75	-65236.78			
		8.0	-47551.75	-154800.28			
77							
	1 17461.71						
		.0	8125.95	14583.45			
		2.0	985.95	23695.35			
		4.0	-14354.05	18527.24			
		6.0	-21494.05	-17320.87			
		8.0	-28634.05	-67448.97			
80							
	1-30892.36						
		.0	19068.61	-29439.31			
		2.0	11928.61	1557.91			
		4.0	-3411.39	18275.13			
		6.0	-10551.39	4312.35			
		8.0	-17691.39	-23930.43			
33							
	1-44894.25						
		.0	19350.91	-30836.23			
		2.0	12210.91	725.59			
		4.0	-3129.09	18007.42			
		6.0	-10269.09	4609.25			
		8.0	-17409.09	-23068.92			
36							
	1-58226.03						
		.0	20433.47	-35299.58			
		2.0	13293.47	-1572.65			
		4.0	-2046.53	17874.28			
		6.0	-9186.53	6641.22			
		8.0	-16326.53	-18871.85			
78							
	1 58935.15						
		.0	21604.56	-15823.38			
		3.0	10894.56	32925.31			
		6.0	-8015.44	33144.00			
		9.0	-26925.44	-15167.31			
		12.0	-37635.44	-112008.62			
31							
	1 60837.77						
		.0	26873.37	-46905.56			

M E E L E M E N T F O R C E S

	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
			9.0	-35957.32	-50400.84			
			12.0	-44267.32	-170737.81			
	1	-2062.69						
			.0	9054.40	40019.31			
			3.0	744.40	54717.50			
			6.0	-15765.60	28085.70			
			9.0	-32275.60	-39876.11			
5			12.0	-40585.60	-149167.91			
	1	-6666.56						
			.0	-23935.86	130894.14			
			2.0	-29475.86	77482.43			
			4.0	-43215.86	12990.71			
			6.0	-48755.86	-78981.00			
68			8.0	-54295.86	-182032.72			
	1	-3088.31						
			.0	-35096.67	175131.37			
			2.0	-40636.67	99398.03			
			4.0	-54376.67	12584.69			
			6.0	-59916.67	-101708.64			
71			8.0	-65456.67	-227081.98			
	1	-2507.61						
			.0	-37127.83	183153.18			
			2.0	-42667.83	103357.52			
			4.0	-56407.83	12481.85			
			6.0	-61947.83	-105873.82			
74			8.0	-67487.83	-235309.49			
	1	-2667.99						
			.0	-35986.92	178636.14			
			2.0	-41526.92	101122.29			
			4.0	-55266.92	12528.45			
			6.0	-60806.92	-103545.40			
57			8.0	-66346.92	-230699.25			
	1	-3122.78						
			.0	-33405.74	168431.93			
			2.0	-38945.74	96080.45			
			4.0	-52685.74	12648.98			
			6.0	-58225.74	-98262.50			
70			8.0	-63765.74	-220253.98			
	1	-3922.29						
			.0	-29727.09	153910.62			
			2.0	-35267.09	88916.44			
			4.0	-49007.09	12842.27			
			6.0	-54547.09	-90711.91			
			8.0	-60087.09	-205346.08			

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA TOR
	1142314.33						
		.0	64539.87	-267567.87			
		1.0	64539.87	-203028.00			
		2.0	64539.87	-138488.12			
		3.0	64539.87	-73948.25			
5		4.0	64539.87	-9408.37			
	1117864.01						
		.0	54226.58	-147183.90			
		1.0	54226.58	-92957.32			
		2.0	54226.58	-38730.75			
		3.0	54226.58	15495.83			
9		4.0	54226.58	69722.41			
	1 83459.18						
		.0	49908.57	-108397.37			
		1.0	49908.57	-58488.80			
		2.0	49908.57	-8580.23			
		3.0	49908.57	41328.33			
13		4.0	49908.57	91236.90			
	1 47906.15						
		.0	46797.04	-91534.54			
		1.0	46797.04	-44737.50			
		2.0	46797.04	2059.54			
		3.0	46797.04	48856.57			
17		4.0	46797.04	95653.61			
	1 14188.68						
		.0	43454.83	-79739.30			
		1.0	43454.83	-36284.46			
		2.0	43454.83	7170.37			
		3.0	43454.83	50625.20			
21		4.0	43454.83	94080.03			
	1-16412.78						
		.0	39690.95	-68735.87			
		1.0	39690.95	-29044.91			
		2.0	39690.95	10646.04			
		3.0	39690.95	50337.00			
25		4.0	39690.95	90027.95			
	1-43097.66						
		.0	35419.10	-56954.76			
		1.0	35419.10	-21535.65			
		2.0	35419.10	13883.45			
		3.0	35419.10	49302.56			
29		4.0	35419.10	84721.66			
	1-65113.68						
		.0	30946.24	-43377.38			

?ME E L E M E N T   F O R C E S

?	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIA? TOR?
			1.0	30946.24	-12431.14			
			2.0	30946.24	18515.10			
			3.0	30946.24	49461.34			
			4.0	30946.24	80407.58			
3	1	61283.16						
			.0	27179.10	-24015.13			
			1.0	27179.10	3163.97			
			2.0	27179.10	30343.08			
			3.0	27179.10	57522.18			
			4.0	27179.10	84701.29			
7	1	83419.14						
			.0	15854.16	17144.06			
			1.0	15854.16	32998.22			
			2.0	15854.16	48852.38			
			3.0	15854.16	64706.54			
			4.0	15854.16	80560.71			
11	1	77487.34						
			.0	-23138.58	77194.11			
			1.0	-23138.58	54055.53			
			2.0	-23138.58	30916.95			
			3.0	-23138.58	7778.37			
			4.0	-23138.58	-15360.22			
15	1	-60718.57						
			.0	-7881.50	18774.24			
			1.0	-7881.50	10892.74			
			2.0	-7881.50	3011.24			
			3.0	-7881.50	-4870.26			
			4.0	-7881.50	-12751.76			
19	1	-28751.57						
			.0	-12470.94	23876.47			
			1.0	-12470.94	11405.53			
			2.0	-12470.94	-1065.41			
			3.0	-12470.94	-13536.36			
			4.0	-12470.94	-26007.30			
2	1	*********						
			.0	79089.55	-286287.09			
			1.0	79089.55	-207197.53			
			2.0	79089.55	-128107.98			
			3.0	79089.55	-49018.42			
			4.0	79089.55	30071.13			
6	1	*********						
			.0	82773.49	-201825.82			
			1.0	82773.49	-119052.33			
			2.0	82773.49	-36278.84			
			3.0	82773.49	46494.65			

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M E   E L E M E N T   F O R C E S

T	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			4.0	82773.49	129268.14			
)								
	1	*********						
			.0	82757.96	-173821.75			
			1.0	82757.96	-91063.79			
			2.0	82757.96	-8305.83			
			3.0	82757.96	74452.13			
			4.0	82757.96	157210.09			
4								
	1	*********						
			.0	80014.21	-158130.09			
			1.0	80014.21	-78123.88			
			2.0	80014.21	1890.34			
			3.0	80014.21	81904.55			
			4.0	80014.21	161918.76			
18								
	1	*********						
			.0	75801.58	-144959.15			
			1.0	75801.58	-69157.56			
			2.0	75801.58	6644.02			
			3.0	75801.58	82445.60			
			4.0	75801.58	158247.19			
22								
	1	*********						
			.0	70362.41	-130856.43			
			1.0	70362.41	-60494.02			
			2.0	70362.41	9868.39			
			3.0	70362.41	80230.81			
			4.0	70362.41	150593.22			
26								
	1	*********						
			.0	63777.03	-114640.91			
			1.0	63777.03	-50863.88			
			2.0	63777.03	12913.15			
			3.0	63777.03	76690.17			
			4.0	63777.03	140467.20			
30								
	1	*********						
			.0	56149.71	-95136.34			
			1.0	56149.71	-38986.64			
			2.0	56149.71	17163.07			
			3.0	56149.71	73312.78			
			4.0	56149.71	129462.48			
34								
	1	*********						
			.0	47545.82	-68157.19			
			1.0	47545.82	-20611.36			
			2.0	47545.82	26934.46			
			3.0	47545.82	74480.28			
			4.0	47545.82	122026.11			
38								
	1	-68391.16						

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A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	END1	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	32309.09	-17875.97			
			1.0	32309.09	14433.12			
			2.0	32309.09	46742.20			
			3.0	32309.09	79051.29			
			4.0	32309.09	111360.38			
2								
	1	-16529.72						
			.0	-23258.17	76399.04			
			1.0	-23258.17	53140.86			
			2.0	-23258.17	29882.69			
			3.0	-23258.17	6624.52			
			4.0	-23258.17	-16633.65			
16								
	1	-16336.60						
			.0	-5675.64	12192.34			
			1.0	-5675.64	6516.70			
			2.0	-5675.64	841.06			
			3.0	-5675.64	-4834.58			
			4.0	-5675.64	-10510.22			
50								
	1	-7988.10						
			.0	-10463.73	21365.97			
			1.0	-10463.73	10902.24			
			2.0	-10463.73	438.52			
			3.0	-10463.73	-10025.21			
			4.0	-10463.73	-20488.93			
3								
	1	**********						
			.0	88884.20	-298906.17			
			1.0	88884.20	-210021.97			
			2.0	88884.20	-121137.77			
			3.0	88884.20	-32253.58			
			4.0	88884.20	56630.62			
7								
	1	**********						
			.0	98684.03	-234232.07			
			1.0	98684.03	-135548.04			
			2.0	98684.03	-36864.00			
			3.0	98684.03	61820.03			
			4.0	98684.03	160504.06			
11								
	1	**********						
			.0	99178.37	-206395.37			
			1.0	99178.37	-107217.00			
			2.0	99178.37	-8038.64			
			3.0	99178.37	91139.73			
			4.0	99178.37	190318.10			
15								
	1	**********						
			.0	97166.24	-192177.88			
			1.0	97166.24	-95011.64			
			2.0	97166.24	2154.60			

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A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		3.0	97166.24	99320.84			
		4.0	97166.24	196487.08			
9							
	1**********						
		.0	93576.79	-180282.99			
		1.0	93576.79	-86706.20			
		2.0	93576.79	6870.58			
		3.0	93576.79	100447.37			
		4.0	93576.79	194024.16			
23							
	1**********						
		.0	88681.97	-167303.00			
		1.0	88681.97	-78621.03			
		2.0	88681.97	10060.94			
		3.0	88681.97	98742.90			
		4.0	88681.97	187424.87			
27							
	1**********						
		.0	82545.30	-151947.14			
		1.0	82545.30	-69401.83			
		2.0	82545.30	13143.47			
		3.0	82545.30	95688.77			
		4.0	82545.30	178234.07			
31							
	1**********						
		.0	75032.16	-132862.05			
		1.0	75032.16	-57829.89			
		2.0	75032.16	17202.27			
		3.0	75032.16	92234.44			
		4.0	75032.16	167266.60			
35							
	1**********						
		.0	65290.91	-107159.13			
		1.0	65290.91	-41868.21			
		2.0	65290.91	23422.70			
		3.0	65290.91	88713.62			
		4.0	65290.91	154004.53			
39							
	1**********						
		.0	59277.97	-69916.46			
		1.0	59277.97	-10638.49			
		2.0	59277.97	48639.48			
		3.0	59277.97	107917.44			
		4.0	59277.97	167195.41			
43							
	1**********						
		.0	-3515.64	40336.49			
		1.0	-3515.64	36820.85			
		2.0	-3515.64	33305.21			
		3.0	-3515.64	29789.57			
		4.0	-3515.64	26273.93			

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M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-85321.47						
		.0	16096.76	-29744.72			
		1.0	16096.76	-13647.97			
		2.0	16096.76	2448.79			
		3.0	16096.76	18545.55			
		4.0	16096.76	34642.31			
1							
	1-28973.38						
		.0	11084.29	-16255.69			
		1.0	11084.29	-5171.40			
		2.0	11084.29	5912.89			
		3.0	11084.29	16997.18			
		4.0	11084.29	28081.47			
4							
	1**********						
		.0	72205.37	-277600.23			
		1.0	72205.37	-205394.86			
		2.0	72205.37	-133189.48			
		3.0	72205.37	-60984.11			
		4.0	72205.37	11221.27			
8							
	1**********						
		.0	65575.90	-169911.86			
		1.0	65575.90	-104335.96			
		2.0	65575.90	-38760.05			
		3.0	65575.90	26815.85			
		4.0	65575.90	92391.75			
12							
	1**********						
		.0	62496.11	-133523.42			
		1.0	62496.11	-71027.32			
		2.0	62496.11	-8531.21			
		3.0	62496.11	53964.89			
		4.0	62496.11	116461.00			
16							
	1**********						
		.0	59984.51	-117614.18			
		1.0	59984.51	-57629.67			
		2.0	59984.51	2354.84			
		3.0	59984.51	62339.34			
		4.0	59984.51	122323.85			
20							
	1**********						
		.0	57290.80	-107179.46			
		1.0	57290.80	-49888.67			
		2.0	57290.80	7402.13			
		3.0	57290.80	64692.93			
		4.0	57290.80	121983.73			
24							
	1**********						
		.0	54090.67	-97336.55			

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M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	54090.67	-43245.88			
		2.0	54090.67	10844.79			
		3.0	54090.67	64935.46			
		4.0	54090.67	119026.12			
3							
	1**********						
		.0	50326.57	-86427.73			
		1.0	50326.57	-36101.17			
		2.0	50326.57	14225.40			
		3.0	50326.57	64551.97			
		4.0	50326.57	114878.54			
32							
	1**********						
		.0	45722.89	-73064.34			
		1.0	45722.89	-27341.45			
		2.0	45722.89	18381.45			
		3.0	45722.89	64104.34			
		4.0	45722.89	109827.23			
36							
	1**********						
		.0	40158.16	-55838.20			
		1.0	40158.16	-15680.05			
		2.0	40158.16	24478.11			
		3.0	40158.16	64636.27			
		4.0	40158.16	104794.43			
40							
	1**********						
		.0	41595.78	-31223.54			
		1.0	41595.78	10372.24			
		2.0	41595.78	51968.02			
		3.0	41595.78	93563.81			
		4.0	41595.78	135159.59			
44							
	1-65807.75						
		.0	-9616.57	57502.48			
		1.0	-9616.57	47885.91			
		2.0	-9616.57	38269.35			
		3.0	-9616.57	28652.78			
		4.0	-9616.57	19036.22			
48							
	1-33961.01						
		.0	8481.80	-13222.04			
		1.0	8481.80	-4740.24			
		2.0	8481.80	3741.56			
		3.0	8481.80	12223.36			
		4.0	8481.80	20705.15			
52							
	1-10688.30						
		.0	5510.01	-7918.60			
		1.0	5510.01	-2408.59			
		2.0	5510.01	3101.42			
		3.0	5510.01	8611.43			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	5510.01	14121.44			
3							
1	6854.30						
		.0	-24450.32	137775.53			
		2.0	-29990.32	83334.89			
		4.0	-43730.32	17814.26			
		6.0	-49270.32	-75186.37			
		8.0	-54810.32	-179267.01			
56							
1	-2600.99						
		.0	-34404.83	178119.78			
		2.0	-39944.83	103770.11			
		4.0	-53684.83	18340.44			
		6.0	-59224.83	-94569.22			
		8.0	-64764.83	-218558.89			
59							
1	-7267.47						
		.0	-35553.03	182771.44			
		2.0	-41093.03	106125.39			
		4.0	-54833.03	18399.33			
		6.0	-60373.03	-96806.73			
		8.0	-65913.03	-223092.78			
62							
1	-10495.79						
		.0	-33717.47	175392.91			
		2.0	-39257.47	102417.96			
		4.0	-52997.47	18363.02			
		6.0	-58537.47	-93171.92			
		8.0	-64077.47	-215786.87			
65							
1	-13534.12						
		.0	-30601.46	162815.90			
		2.0	-36141.46	96072.98			
		4.0	-49881.46	18250.07			
		6.0	-55421.46	-87052.85			
		8.0	-60961.46	-203435.77			
68							
1	-16486.15						
		.0	-26684.88	146982.71			
		2.0	-32224.88	88072.94			
		4.0	-45964.88	18083.18			
		6.0	-51504.88	-79386.58			
		8.0	-57044.88	-187936.35			
71							
1	-19744.13						
		.0	-22016.02	128099.03			
		2.0	-27556.02	78526.99			
		4.0	-41296.02	17874.95			
		6.0	-46836.02	-70257.09			
		8.0	-52376.02	-169469.13			
74							
1	-23909.87						

isa Statis Portal (10 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	-16169.48	104422.71			
		2.0	-21709.48	66543.76			
		4.0	-35449.48	17584.80			
		6.0	-40989.48	58854.15			
		8.0	-46529.48	-146373.10			
7							
1	-10812.06						
		.0	-7135.98	67557.23			
		2.0	-12675.98	47745.27			
		4.0	-26415.98	16853.31			
		6.0	-31955.98	-41518.65			
		8.0	-37495.98	-110970.61			
54							
1	3170.36						
		.0	7030.10	52629.95			
		3.0	-1279.90	61255.24			
		6.0	-17789.90	28550.54			
		9.0	-34299.90	-45484.16			
		12.0	-42609.90	-160848.86			
57							
1	-2585.46						
		.0	1699.30	84531.00			
		3.0	-6610.70	77163.91			
		6.0	-23120.70	28466.83			
		9.0	-39630.70	-61560.26			
		12.0	-47940.70	-192917.35			
60							
1	-4523.72						
		.0	418.28	92255.40			
		3.0	-7891.72	81045.23			
		6.0	-24401.72	28505.05			
		9.0	-40911.72	-65365.12			
		12.0	-49221.72	-200565.29			
63							
1	-6283.16						
		.0	618.64	91091.04			
		3.0	-7691.36	80481.95			
		6.0	-24201.36	28542.86			
		9.0	-40711.36	-64726.23			
		12.0	-49021.36	-199325.32			
66							
1	-8094.95						
		.0	1527.90	85667.85			
		3.0	-6782.10	77786.56			
		6.0	-23292.10	28575.27			
		9.0	-39802.10	-61966.01			
		12.0	-48112.10	-193837.30			
69							
1	-9900.76						
		.0	2927.51	77297.78			
		3.0	-5382.49	73615.30			
		6.0	-21892.49	28602.82			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		9.0	-38402.49	-57739.66			
		12.0	-46712.49	-185412.13			
72							
	1-12116.81						
		.0	4793.56	66134.41			
		3.0	-3516.44	68050.09			
		6.0	-20026.44	28635.77			
		9.0	-36536.44	-52108.55			
		12.0	-44846.44	-174182.87			
75							
	1-15305.98						
		.0	7275.80	51246.56			
		3.0	-1034.20	60608.97			
		6.0	-17544.20	28641.38			
		9.0	-34054.20	-44656.21			
		12.0	-42364.20	-159283.80			
78							
	1 -4575.32						
		.0	10911.25	28931.47			
		3.0	2601.25	49200.22			
		6.0	-13908.75	28138.96			
		9.0	-30418.75	-34252.29			
		12.0	-38728.75	-137973.54			
55							
	1 -6629.47						
		.0	-23713.37	130013.83			
		2.0	-29253.37	77047.09			
		4.0	-42993.37	13000.35			
		6.0	-48533.37	-78526.39			
		8.0	-54073.37	-181133.12			
58							
	1 -3079.80						
		.0	-34807.16	173982.08			
		2.0	-40347.16	98827.77			
		4.0	-54087.16	12593.46			
		6.0	-59627.16	-101120.85			
		8.0	-65167.16	-225915.17			
61							
	1 -2511.60						
		.0	-36820.73	181930.68			
		2.0	-42360.73	102749.22			
		4.0	-56100.73	12487.75			
		6.0	-61640.73	-105253.71			
		8.0	-67180.73	-234075.18			
64							
	1 -2693.71						
		.0	-35688.51	177444.76			
		2.0	-41228.51	100527.74			
		4.0	-54968.51	12530.72			
		6.0	-60508.51	-102946.30			
		8.0	-66048.51	-229503.32			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
O COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
7							
1	-3200.13						
		.0	33171.27	167489.86			
		2.0	-38711.27	95607.33			
		4.0	-52451.27	12644.79			
		6.0	-57991.27	-97797.74			
		8.0	-63531.27	-219320.27			
0							
1	-3764.10						
		.0	-29746.72	153959.87			
		2.0	-35286.72	88926.44			
		4.0	-49026.72	12813.01			
		6.0	-54566.72	-90780.42			
		8.0	-60106.72	-205453.86			
73							
1	-4603.67						
		.0	-25427.02	136913.26			
		2.0	-30967.02	80519.23			
		4.0	-44707.02	13045.19			
		6.0	-50247.02	-81908.84			
		8.0	-55787.02	-187942.88			
76							
1	-5564.74						
		.0	-19920.92	115141.93			
		2.0	-25460.92	69760.09			
		4.0	-39200.92	13298.24			
		6.0	-44740.92	-70643.60			
		8.0	-50280.92	-165665.44			
79							
1	1437.63						
		.0	-12565.68	85947.44			
		2.0	-18105.68	55276.09			
		4.0	-31845.68	13524.74			
		6.0	-37385.68	-55706.62			
		8.0	-42925.68	-136017.97			
30							
1	4396.74						
		.0	10931.80	3366.60			
		2.0	3791.80	18090.20			
		4.0	-11548.20	18533.80			
		6.0	-18688.20	-11702.60			
		8.0	-25828.20	-56219.00			
83							
1	-49057.71						
		.0	20260.93	-34171.89			
		2.0	13120.93	-790.02			
		4.0	-2219.07	18311.84			
		6.0	-9359.07	6733.71			
		8.0	-16499.07	-19124.42			
86							
1	-62277.56						
		.0	20745.31	-36575.12			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	13605.31	-2224.50			
		4.0	-1734.69	17846.12			
		6.0	-8874.69	7236.74			
		8.0	-16014.69	17652.64			
1							
1	53018.63						
		.0	22541.08	-21376.06			
		3.0	11831.08	30182.17			
		6.0	-7078.92	33210.40			
		9.0	-25988.92	-12291.37			
		12.0	-36698.92	-106523.14			
34							
1	52142.88						
		.0	27081.06	-48126.32			
		3.0	16371.06	17051.87			
		6.0	-2538.94	33700.05			
		9.0	-21448.94	1818.24			
		12.0	-32158.94	-78593.57			
87							
1	32686.62						
		.0	27367.94	-49617.55			
		3.0	16657.94	16421.26			
		6.0	-2252.06	33930.07			
		9.0	-21162.06	2908.87			
		12.0	-31872.06	-76642.32			
82							
1	19446.12						
		.0	6171.95	20244.59			
		2.0	-968.05	25448.49			
		4.0	-16308.05	16372.38			
		6.0	-23448.05	-23383.72			
		8.0	-30588.05	-77419.83			
85							
1	42666.69						
		.0	17201.97	-22810.19			
		2.0	10061.97	4453.75			
		4.0	-5278.03	17437.69			
		6.0	-12418.03	-258.37			
		8.0	-19558.03	-32234.43			
88							
1	6128.61						
		.0	18032.89	-25856.45			
		2.0	10892.89	3069.34			
		4.0	-4447.11	17715.12			
		6.0	-11587.11	1680.91			
		8.0	-18727.11	-28633.31			
89							
1	-71369.77						
		.0	13912.77	-25962.23			
		2.0	9532.77	-2516.68			
		4.0	-727.23	12168.87			
		6.0	-5107.23	6334.42			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			8.0	-9487.23	-8260.04			
1								
	1	-5510.01						
			.0	12711.70	-22215.01			
			2.0	8331.70	-1171.62			
			4.0	-1928.30	11111.78			
			6.0	-6308.30	2875.17			
			8.0	-10688.30	-14121.44			
90								
	1	-25694.70						
			.0	17232.72	-28876.38			
			3.0	10662.72	12966.78			
			6.0	-1787.28	23339.94			
			9.0	-14237.28	2243.10			
			12.0	-20807.28	-50323.75			

ASTA S.H. & YAZID, GONDOLAYU PROJECT

PROGRAM:SAP90/FILE:B-11.F3F

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1156684.33						
		.0	64133.32	-266093.32			
		1.0	64133.32	-201960.00			
		2.0	64133.32	-137826.68			
		3.0	64133.32	-73693.36			
		4.0	64133.32	-9560.04			
5							
	1132507.70						
		.0	53816.91	-146231.17			
		1.0	53816.91	-92414.26			
		2.0	53816.91	-38597.36			
		3.0	53816.91	15219.55			
		4.0	53816.91	69036.46			
9							
	1 98494.81						
		.0	49455.05	-107507.47			
		1.0	49455.05	-58052.42			
		2.0	49455.05	-8597.37			
		3.0	49455.05	40857.68			
		4.0	49455.05	90312.73			
13							
	1 63407.93						
		.0	46288.77	-90589.02			
		1.0	46288.77	-44300.25			
		2.0	46288.77	1988.52			
		3.0	46288.77	48277.29			
		4.0	46288.77	94566.06			
17							
	1 30216.76						
		.0	42883.60	-78720.09			
		1.0	42883.60	-35836.49			
		2.0	42883.60	7047.11			
		3.0	42883.60	49930.70			
		4.0	42883.60	92814.30			
21							
	1 188.81						
		.0	39054.29	-67710.48			
		1.0	39054.29	-28656.19			
		2.0	39054.29	10398.10			
		3.0	39054.29	49452.39			
		4.0	39054.29	88506.68			
25							
	1-25910.56						
		.0	34708.48	-56142.21			
		1.0	34708.48	-21433.73			
		2.0	34708.48	13274.75			
		3.0	34708.48	47983.22			
		4.0	34708.48	82691.70			
29							
	1-47442.28						
		.0	29810.11	-43478.31			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			1.0	29810.11	-13668.20			
			2.0	29810.11	16141.91			
			3.0	29810.11	45952.01			
			4.0	29810.11	75762.12			
3								
		1-63743.28						
			.0	24655.24	-29240.42			
			1.0	24655.24	-4585.18			
			2.0	24655.24	20070.06			
			3.0	24655.24	44725.30			
			4.0	24655.24	69380.54			
37								
		1-73832.15						
			.0	19851.38	-10444.75			
			1.0	19851.38	9406.63			
			2.0	19851.38	29258.00			
			3.0	19851.38	49109.38			
			4.0	19851.38	68960.75			
41								
		1-75229.05						
			.0	7934.68	24548.74			
			1.0	7934.68	32483.42			
			2.0	7934.68	40418.10			
			3.0	7934.68	48352.79			
			4.0	7934.68	56287.47			
45								
		1-61075.96						
			.0	-20313.60	65780.81			
			1.0	-20313.60	45467.21			
			2.0	-20313.60	25153.61			
			3.0	-20313.60	4840.01			
			4.0	-20313.60	-15473.59			
49								
		1-31938.09						
			.0	-12922.02	24162.64			
			1.0	-12922.02	11240.62			
			2.0	-12922.02	-1681.40			
			3.0	-12922.02	-14603.42			
			4.0	-12922.02	-27525.44			
2								
		1*********						
			.0	78623.39	-284738.23			
			1.0	78623.39	-206114.84			
			2.0	78623.39	-127491.46			
			3.0	78623.39	-48868.07			
			4.0	78623.39	29755.32			
6								
		1*********						
			.0	82261.51	-200661.31			
			1.0	82261.51	-118399.80			
			2.0	82261.51	-36138.29			
			3.0	82261.51	46123.22			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		4.0	82261.51	128384.73			
0							
	1**********						
		.0	82224.69	-172758.39			
		1.0	82224.69	-90533.70			
		2.0	82224.69	-8309.02			
		3.0	82224.69	73915.67			
		4.0	82224.69	156140.36			
4							
	1**********						
		.0	79465.16	-157094.29			
		1.0	79465.16	-77629.12			
		2.0	79465.16	1836.04			
		3.0	79465.16	81301.20			
		4.0	79465.16	160766.37			
18							
	1**********						
		.0	75237.30	-143933.24			
		1.0	75237.30	-68695.94			
		2.0	75237.30	6541.36			
		3.0	75237.30	81778.66			
		4.0	75237.30	157015.96			
22							
	1**********						
		.0	69792.47	-129939.70			
		1.0	69792.47	-60147.23			
		2.0	69792.47	9645.24			
		3.0	69792.47	79437.70			
		4.0	69792.47	149230.17			
26							
	1**********						
		.0	63220.17	-114135.98			
		1.0	63220.17	-50915.81			
		2.0	63220.17	12304.36			
		3.0	63220.17	75524.52			
		4.0	63220.17	138744.69			
30							
	1**********						
		.0	55540.28	-96078.59			
		1.0	55540.28	-40538.31			
		2.0	55540.28	15001.97			
		3.0	55540.28	70542.25			
		4.0	55540.28	126082.52			
34							
	1**********						
		.0	46826.96	-75115.57			
		1.0	46826.96	-28288.60			
		2.0	46826.96	18538.36			
		3.0	46826.96	65365.32			
		4.0	46826.96	112192.28			
38							
	1-84505.23						

sa Statis Portal (13 lantai) Kg/m

ME ELEMENT FORCES

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	37344.62	-48438.64			
		1.0	37344.62	-11094.01			
		2.0	37344.62	26250.61			
		3.0	37344.62	63595.24			
		4.0	37344.62	100939.86			
2							
	1-39769.40						
		.0	21574.97	-3844.34			
		1.0	21574.97	17730.63			
		2.0	21574.97	39305.60			
		3.0	21574.97	60880.56			
		4.0	21574.97	82455.53			
6							
	1 -1158.63						
		.0	-21423.25	66424.39			
		1.0	-21423.25	45001.14			
		2.0	-21423.25	23577.90			
		3.0	-21423.25	2154.65			
		4.0	-21423.25	-19268.60			
10							
	1 -4965.18						
		.0	-8862.08	15808.41			
		1.0	-8862.08	6946.33			
		2.0	-8862.08	-1915.74			
		3.0	-8862.08	-10777.82			
		4.0	-8862.08	-19639.90			
3							
	1**********						
		.0	88449.52	-297402.86			
		1.0	88449.52	-208953.34			
		2.0	88449.52	-120503.82			
		3.0	88449.52	-32054.30			
		4.0	88449.52	56395.22			
7							
	1**********						
		.0	98247.65	-233196.23			
		1.0	98247.65	-134948.58			
		2.0	98247.65	-36700.93			
		3.0	98247.65	61546.72			
		4.0	98247.65	159794.37			
11							
	1**********						
		.0	98773.27	-205568.26			
		1.0	98773.27	-106795.00			
		2.0	98773.27	-8021.73			
		3.0	98773.27	90751.53			
		4.0	98773.27	189524.80			
15							
	1**********						
		.0	96798.06	-191475.28			
		1.0	96798.06	-94677.22			
		2.0	96798.06	2120.83			

M E E L E M E N T F O R E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
) COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		3.0	96798.06	98918.89			
		4.0	96798.06	195716.95			
)							
	1**********						
		.0	93246.98	-179702.79			
		1.0	93246.98	-86455.82			
		2.0	93246.98	6791.16			
		3.0	93246.98	100038.13			
		4.0	93246.98	193285.11			
3							
	1**********						
		.0	88390.42	-166931.81			
		1.0	88390.42	-78541.39			
		2.0	88390.42	9849.03			
		3.0	88390.42	98239.45			
		4.0	88390.42	186629.86			
27							
	1**********						
		.0	82314.42	-152148.16			
		1.0	82314.42	-69833.74			
		2.0	82314.42	12480.68			
		3.0	82314.42	94795.11			
		4.0	82314.42	177109.53			
31							
	1**********						
		.0	75034.82	-134865.80			
		1.0	75034.82	-59830.98			
		2.0	75034.82	15203.84			
		3.0	75034.82	90238.65			
		4.0	75034.82	165273.47			
35							
	1**********						
		.0	66442.77	-114293.10			
		1.0	66442.77	-47850.33			
		2.0	66442.77	18592.44			
		3.0	66442.77	85035.21			
		4.0	66442.77	151477.98			
39							
	1**********						
		.0	55760.10	-88670.06			
		1.0	55760.10	-32909.95			
		2.0	55760.10	22850.15			
		3.0	55760.10	78610.26			
		4.0	55760.10	134370.36			
43							
	1**********						
		.0	48849.45	-56586.93			
		1.0	48849.45	-7737.48			
		2.0	48849.45	41111.97			
		3.0	48849.45	89961.42			
		4.0	48849.45	138810.86			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T D	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
7								
	1	-76753.19						
			.0	-245.77	29113.69			
			1.0	-245.77	28867.93			
			2.0	-245.77	28622.16			
			3.0	-245.77	28376.39			
			4.0	-245.77	28130.63			
1								
	1	-31356.80						
			.0	12795.14	-21387.76			
			1.0	12795.14	-8592.62			
			2.0	12795.14	4202.53			
			3.0	12795.14	16997.67			
			4.0	12795.14	29792.81			
4								
	1	*********						
			.0	71833.77	-276179.18			
			1.0	71833.77	-204345.41			
			2.0	71833.77	-132511.64			
			3.0	71833.77	-60677.87			
			4.0	71833.77	11155.91			
8								
	1	*********						
			.0	65242.93	-169087.34			
			1.0	65242.93	-103844.40			
			2.0	65242.93	-38601.47			
			3.0	65242.93	26641.46			
			4.0	65242.93	91884.39			
12								
	1	*********						
			.0	62174.00	-132875.63			
			1.0	62174.00	-70701.63			
			2.0	62174.00	-8527.63			
			3.0	62174.00	53646.37			
			4.0	62174.00	115820.36			
16								
	1	*********						
			.0	59662.01	-117018.98			
			1.0	59662.01	-57356.97			
			2.0	59662.01	2305.03			
			3.0	59662.01	61967.04			
			4.0	59662.01	121629.04			
20								
	1	*********						
			.0	56961.13	-106617.27			
			1.0	56961.13	-49656.14			
			2.0	56961.13	7304.98			
			3.0	56961.13	64266.11			
			4.0	56961.13	121227.24			
24								
	1	*********						
			.0	53735.82	-96866.84			

sa Statis Portal (13 lantai) Kg/m

ME ELEMENT FORCES

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			1.0	53735.82	-43131.01			
			2.0	53735.82	10604.81			
			3.0	53735.82	64340.63			
			4.0	53735.82	118076.45			
8								
	1*********							
			.0	49902.93	-86349.40			
			1.0	49902.93	-36446.47			
			2.0	49902.93	13456.47			
			3.0	49902.93	63359.40			
			4.0	49902.93	113262.34			
32								
	1*********							
			.0	45462.80	-74472.96			
			1.0	45462.80	-29010.17			
			2.0	45462.80	16452.63			
			3.0	45462.80	61915.43			
			4.0	45462.80	107378.22			
36								
	1*********							
			.0	40153.03	-60417.08			
			1.0	40153.03	-20264.05			
			2.0	40153.03	19888.97			
			3.0	40153.03	60042.00			
			4.0	40153.03	100195.03			
40								
	1*********							
			.0	33880.90	-43688.07			
			1.0	33880.90	-9807.17			
			2.0	33880.90	24073.73			
			3.0	33880.90	57954.62			
			4.0	33880.90	91835.52			
44								
	1-85291.05							
			.0	33765.90	-23082.89			
			1.0	33765.90	10683.01			
			2.0	33765.90	44448.91			
			3.0	33765.90	78214.82			
			4.0	33765.90	111980.72			
48								
	1-31509.28							
			.0	-6694.18	46074.39			
			1.0	-6694.18	39380.20			
			2.0	-6694.18	32686.02			
			3.0	-6694.18	25991.84			
			4.0	-6694.18	19297.66			
52								
	1-10563.68							
			.0	5306.85	-7750.40			
			1.0	5306.85	-2443.55			
			2.0	5306.85	2863.31			
			3.0	5306.85	8170.16			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
)	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			4.0	5306.85	13477.01			
3								
	1	6845.41						
			.0	-24176.63	136671.13			
			2.0	-29716.63	82777.88			
			4.0	-43456.63	17804.62			
			6.0	-48996.63	-74648.63			
			8.0	-54536.63	-178181.89			
6								
	1	-2580.14						
			.0	-34012.90	176543.93			
			2.0	-39552.90	102978.13			
			4.0	-53292.90	18332.34			
			6.0	-58832.90	-93793.45			
			8.0	-64372.90	-216999.25			
9								
	1	-7246.72						
			.0	-35086.88	180901.75			
			2.0	-40626.88	105187.99			
			4.0	-54366.88	18394.22			
			6.0	-59906.88	-95879.54			
			8.0	-65446.88	-221233.31			
2								
	1	-10479.82						
			.0	-33191.16	173286.15			
			2.0	-38731.16	101363.83			
			4.0	-52471.16	18361.50			
			6.0	-58011.16	-92120.83			
			8.0	-63551.16	-213683.15			
5								
	1	-13526.69						
			.0	-30027.95	160524.78			
			2.0	-35567.95	94928.87			
			4.0	-49307.95	18252.97			
			6.0	-54847.95	-85902.94			
			8.0	-60387.95	-201138.85			
8								
	1	-16481.19						
			.0	-26099.37	144648.89			
			2.0	-31639.37	86910.14			
			4.0	-45379.37	18091.40			
			6.0	-50919.37	-78207.34			
			8.0	-56459.37	-185586.09			
71								
	1	-19399.63						
			.0	-21531.71	126170.01			
			2.0	-27071.71	77566.58			
			4.0	-40811.71	17883.15			
			6.0	-46351.71	-69280.28			
			8.0	-51891.71	-167523.70			
74								
	1	-22615.13						

A M E F L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	-16301.01	105002.54			
			2.0	-21841.01	66860.53			
			4.0	-35581.01	17638.52			
			6.0	-41121.01	-59063.49			
			8.0	-46661.01	-146845.50			
7								
	1	-26437.14						
			.0	-10088.87	79825.29			
			2.0	-15628.87	54107.55			
			4.0	-29368.87	17309.81			
			6.0	-34908.87	-46967.92			
			8.0	-40448.87	-122325.66			
30								
	1	-22795.31						
			.0	-1396.90	44412.01			
			2.0	-6936.90	36078.22			
			4.0	-20676.90	16664.42			
			6.0	-26216.90	-30229.37			
			8.0	-31756.90	-88203.17			
54								
	1	3207.29						
			.0	7096.38	52234.74			
			3.0	-1213.62	61058.89			
			6.0	-17723.62	28553.04			
			9.0	-34233.62	-45282.81			
			12.0	-42543.62	-160448.66			
57								
	1	-2543.32						
			.0	1764.78	84143.87			
			3.0	-6545.22	76973.21			
			6.0	-23055.22	28472.54			
			9.0	-39565.22	-61358.12			
			12.0	-47875.22	-192518.79			
60								
	1	-4487.20						
			.0	462.05	92001.34			
			3.0	-7847.95	80922.49			
			6.0	-24357.95	28513.64			
			9.0	-40867.95	-65225.20			
			12.0	-49177.95	-200294.05			
63								
	1	-6251.96						
			.0	632.99	91016.46			
			3.0	-7677.01	80450.42			
			6.0	-24187.01	28554.39			
			9.0	-40697.01	-64671.65			
			12.0	-49007.01	-199227.68			
66								
	1	-8081.86						
			.0	1505.55	85816.81			
			3.0	-6804.45	77868.47			
			6.0	-23314.45	28590.13			

Isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			9.0	-39824.45	-62018.22			
			12.0	-48134.45	-193956.56			
9								
	1	-9908.88						
			.0	2849.87	77780.06			
			3.0	-5460.13	73864.67			
			6.0	-21970.13	28619.28			
			9.0	-38480.13	-57956.11			
			12.0	-46790.13	-185861.50			
2								
	1	-11719.74						
			.0	4600.82	67299.57			
			3.0	-3709.18	68637.04			
			6.0	-20219.18	28644.51			
			9.0	-36729.18	-52678.02			
			12.0	-45039.18	-175330.55			
75								
	1	-13901.82						
			.0	6763.47	54352.59			
			3.0	-1546.53	62177.99			
			6.0	-18056.53	28673.39			
			9.0	-34566.53	-46161.21			
			12.0	-42876.53	-162325.81			
78								
	1	-16954.80						
			.0	9439.31	38305.26			
			3.0	1129.31	54158.19			
			6.0	-15380.69	28681.13			
			9.0	-31890.69	-38125.94			
			12.0	-40200.69	-146263.01			
31								
	1	-7025.65						
			.0	12978.93	16581.03			
			3.0	4668.93	43052.83			
			6.0	-11841.07	28194.63			
			9.0	-28351.07	-27993.57			
			12.0	-36661.07	-125511.77			
55								
	1	-6590.84						
			.0	-23493.25	129142.79			
			2.0	-29033.25	76616.28			
			4.0	-42773.25	13009.77			
			6.0	-48313.25	-78076.74			
			8.0	-53853.25	-180243.24			
58								
	1	-3068.93						
			.0	-34520.48	172843.85			
			2.0	-40060.48	98262.88			
			4.0	-53800.48	12601.91			
			6.0	-59340.48	-100539.05			
			8.0	-64880.48	-224760.02			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
1							
1	-2511.99						
		.0	-36513.17	180706.03			
		2.0	-42053.17	102139.69			
		4.0	-55793.17	12493.35			
		6.0	-61333.17	-104633.00			
		8.0	-66873.17	-232839.34			
4							
1	-2700.88						
		.0	-35374.80	176192.06			
		2.0	-40914.80	99902.47			
		4.0	-54654.80	12532.87			
		6.0	-60194.80	-102316.72			
		8.0	-65734.80	-228246.31			
67							
1	-3225.30						
		.0	-32864.30	166260.36			
		2.0	-38404.30	94991.75			
		4.0	-52144.30	12643.14			
		6.0	-57684.30	-97185.46			
		8.0	-63224.30	-218094.07			
70							
1	-3832.89						
		.0	-29487.80	152916.53			
		2.0	-35027.80	88400.93			
		4.0	-48767.80	12805.33			
		6.0	-54307.80	-90270.26			
		8.0	-59847.80	-204425.86			
73							
1	-4440.14						
		.0	-25367.51	136644.77			
		2.0	-30907.51	80369.76			
		4.0	-44647.51	13014.74			
		6.0	-50187.51	-81820.28			
		8.0	-55727.51	-187735.30			
76							
1	-5309.77						
		.0	-20449.51	117240.76			
		2.0	-25989.51	70801.75			
		4.0	-39729.51	13282.73			
		6.0	-45269.51	-71716.28			
		8.0	-50809.51	-167795.30			
79							
1	-6272.13						
		.0	-14541.02	93885.03			
		2.0	-20081.02	59263.00			
		4.0	-33821.02	13560.97			
		6.0	-39361.02	-59621.06			
		8.0	-44901.02	-143883.09			
82							
1	-114.99						
		.0	-7365.49	65445.52			

sa Statis Portal (13 lantai) kg/m

M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	END1	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		2.0	-12905.49	45174.53			
		4.0	-26645.49	13823.55			
		6.0	-32185.49	-45007.43			
		8.0	-37725.49	-114918.41			
3							
	1 -9934.72						
		.0	14153.09	-9493.34			
		2.0	7013.09	11672.84			
		4.0	-8326.91	18559.01			
		6.0	-15466.91	-5234.81			
		8.0	-22606.91	-43308.63			
36							
	1-67073.63						
		.0	21601.35	-39624.55			
		2.0	14461.35	-3561.84			
		4.0	-878.65	18220.86			
		6.0	-8018.65	9323.57			
		8.0	-15158.65	-13853.73			
84							
	1 48146.55						
		.0	23540.38	-27329.22			
		3.0	12830.38	27226.92			
		6.0	-6079.62	33253.06			
		9.0	-24989.62	-9250.79			
		12.0	-35699.62	-100284.65			
37							
	1 41313.35						
		.0	27283.38	-49065.56			
		3.0	16573.38	16719.59			
		6.0	-2336.62	33974.74			
		9.0	-21246.62	2699.88			
		12.0	-31956.62	-77104.97			
35							
	1 11558.78						
		.0	9018.34	9159.62			
		2.0	1878.34	20056.31			
		4.0	-13461.66	16673.00			
		6.0	-20601.66	-17390.31			
		8.0	-27741.66	-65733.62			
88							
	1 17319.40						
		.0	18468.24	-27767.86			
		2.0	11328.24	2028.63			
		4.0	-4011.76	17545.11			
		6.0	-11151.76	2381.59			
		8.0	-18291.76	-27061.93			
89							
	1-77530.19						
		.0	14288.86	-27464.88			
		2.0	9908.86	-3267.15			
		4.0	-351.14	12170.57			
		6.0	-4731.14	7088.30			

Sx Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

T LOAD O COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		8.0	-9111.14	-6753.98			
1							
1	-5306.85						
		.0	12836.32	-22567.57			
		2.0	8456.32	-1274.93			
		4.0	-1803.68	11257.71			
		6.0	-6183.68	3270.35			
		8.0	-10563.68	-13477.01			
0							
1	-23420.36						
		.0	16865.68	-26537.33			
		3.0	10295.68	14204.70			
		6.0	-2154.32	23476.73			
		9.0	-14604.32	1278.75			
		12.0	-21174.32	-52389.22			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
1							
	1172928.68						
		.0	63720.38	-2e4e21.23			
		1.0	63720.38	-200900.85			
		2.0	63720.38	-137180.46			
		3.0	63720.38	73460.08			
		4.0	63720.38	-9739.69			
5							
	1149036.80						
		.0	53392.10	-145262.85			
		1.0	53392.10	-91870.75			
		2.0	53392.10	-38478.64			
		3.0	53392.10	14913.46			
		4.0	53392.10	68305.56			
9							
	1115438.30						
		.0	48975.05	-13e574.11			
		1.0	48975.05	-57599.06			
		2.0	48975.05	-8624.01			
		3.0	48975.05	40351.04			
		4.0	48975.05	89326.09			
13							
	1 80853.07						
		.0	45742.48	-89566.02			
		1.0	45742.48	-43823.54			
		2.0	45742.48	1918.94			
		3.0	45742.48	47661.41			
		4.0	45742.48	93403.89			
17							
	1 48240.30						
		.0	42264.51	-77569.69			
		1.0	42264.51	-35305.18			
		2.0	42264.51	6959.34			
		3.0	42264.51	49223.85			
		4.0	42264.51	91488.37			
21							
	1 18865.10						
		.0	38355.49	-66430.79			
		1.0	38355.49	-28075.31			
		2.0	38355.49	10280.18			
		3.0	38355.49	48635.66			
		4.0	38355.49	86991.15			
25							
	1 -6512.61						
		.0	33927.55	-54781.43			
		1.0	33927.55	-20853.88			
		2.0	33927.55	13073.68			
		3.0	33927.55	47001.23			
		4.0	33927.55	80928.78			
29							
	1-27275.27						
		.0	28942.24	-42180.88			

sa Statis Portal (13 lantai) Kg/m

ME E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	28942.24	-13238.64			
		2.0	28942.24	15703.60			
		3.0	28942.24	44645.84			
		4.0	28942.24	73588.08			
	1-42834.56						
		.0	23377.78	-28461.97			
		1.0	23377.78	-5084.19			
		2.0	23377.78	18293.58			
		3.0	23377.78	41671.36			
		4.0	23377.78	65049.13			
	1-52584.46						
		.0	17506.63	-13485.18			
		1.0	17506.63	4021.45			
		2.0	17506.63	21528.08			
		3.0	17506.63	39034.71			
		4.0	17506.63	56541.33			
	1-55736.08						
		.0	11543.48	4768.89			
		1.0	11543.48	16312.37			
		2.0	11543.48	27855.85			
		3.0	11543.48	39399.33			
		4.0	11543.48	50942.81			
	1-50559.94						
		.0	-1013.90	33012.62			
		1.0	-1013.90	31998.72			
		2.0	-1013.90	30984.82			
		3.0	-1013.90	29970.92			
		4.0	-1013.90	28957.03			
	1-32738.45						
		.0	-20835.28	53284.96			
		1.0	-20835.28	32449.68			
		2.0	-20835.28	11614.39			
		3.0	-20835.28	-9220.89			
		4.0	-20835.28	-30056.18			
2	1*********						
		.0	78155.83	-283198.80			
		1.0	78155.83	-205042.97			
		2.0	78155.83	-126887.14			
		3.0	78155.83	-48731.30			
		4.0	78155.83	29424.53			
6	1*********						
		.0	81746.80	-199502.30			
		1.0	81746.80	-117755.51			
		2.0	81746.80	-36008.71			
		3.0	81746.80	45738.08			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	81746.80	127484.88			
	1*********						
		.0	81685.45	-171689.72			
		1.0	81685.45	-90004.28			
		2.0	81685.45	-8318.83			
		3.0	81685.45	73366.61			
		4.0	81685.45	155052.06			
1	1*********						
		.0	78905.38	-156025.36			
		1.0	78905.38	-77119.98			
		2.0	78905.38	1785.40			
		3.0	78905.38	80690.78			
		4.0	78905.38	159596.16			
8	1*********						
		.0	74655.59	-142837.21			
		1.0	74655.59	-68181.62			
		2.0	74655.59	6473.98			
		3.0	74655.59	81129.57			
		4.0	74655.59	155785.17			
22	1*********						
		.0	69186.55	-128822.75			
		1.0	69186.55	-59636.21			
		2.0	69186.55	9550.34			
		3.0	69186.55	78736.89			
		4.0	69186.55	147923.43			
26	1*********						
		.0	62595.67	-113062.32			
		1.0	62595.67	-50466.66			
		2.0	62595.67	12129.01			
		3.0	62595.67	74724.68			
		4.0	62595.67	137320.34			
30	1*********						
		.0	54904.72	-95252.53			
		1.0	54904.72	-40347.82			
		2.0	54904.72	14556.90			
		3.0	54904.72	69461.62			
		4.0	54904.72	124366.34			
34	1*********						
		.0	46131.57	-75266.00			
		1.0	46131.57	-29134.43			
		2.0	46131.57	16997.14			
		3.0	46131.57	63128.72			
		4.0	46131.57	109260.29			
38	1*********						

Isa Statis Portal (13 lantai) Kg/m

FRAME ELEMENT FORCES

ELT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			.0	36320.70	-52831.67			
			1.0	36320.70	-16510.97			
9			2.0	36320.70	19809.73			
			3.0	36320.70	56130.43			
			4.0	36320.70	92451.13			
2	1	-62777.50						
			.0	25971.73	-26562.83			
			1.0	25971.73	-591.09			
23			2.0	25971.73	25380.64			
			3.0	25971.73	51352.37			
			4.0	25971.73	77324.11			
6	1	-22398.69						
			.0	9047.78	11910.39			
			1.0	9047.78	20958.17			
27			2.0	9047.78	30005.95			
			3.0	9047.78	39053.73			
			4.0	9047.78	48101.51			
10	1	3517.42						
			.0	-18888.74	52461.27			
			1.0	-18888.74	33572.53			
31			2.0	-18888.74	14683.79			
			3.0	-18888.74	-4204.95			
			4.0	-18888.74	-23093.69			
3	1	*********						
			.0	88020.31	-295918.92			
			1.0	88020.31	-207898.61			
35			2.0	88020.31	-119878.29			
			3.0	88020.31	-31857.98			
			4.0	88020.31	56162.34			
7	1	*********						
			.0	97824.80	-232193.52			
			1.0	97824.80	-134368.71			
39			2.0	97824.80	-36543.91			
			3.0	97824.80	61280.89			
			4.0	97824.80	159105.69			
11	1	*********						
			.0	98389.82	-204786.75			
			1.0	98389.82	-106396.93			
43			2.0	98389.82	-8007.11			
			3.0	98389.82	90382.72			
			4.0	98389.82	188772.54			
15	1	*********						
			.0	96457.94	-190821.15			
			1.0	96457.94	-94363.21			
			2.0	96457.94	2094.73			

/ isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T D	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			3.0	96457.94	98552.67			
			4.0	96457.94	195010.60			
9								
	1*********							
			.0	92949.73	-179150.26			
			1.0	92949.73	-86200.53			
			2.0	92949.73	6749.20			
			3.0	92949.73	99698.93			
			4.0	92949.73	192648.67			
23								
	1*********							
			.0	88135.25	-166488.29			
			1.0	88135.25	-78353.04			
			2.0	88135.25	9782.21			
			3.0	88135.25	97917.46			
			4.0	88135.25	186052.71			
27								
	1*********							
			.0	82098.49	-151875.19			
			1.0	82098.49	-69776.70			
			2.0	82098.49	12321.79			
			3.0	82098.49	94420.28			
			4.0	82098.49	176518.77			
31								
	1*********							
			.0	74876.07	-135027.06			
			1.0	74876.07	-60150.99			
			2.0	74876.07	14725.09			
			3.0	74876.07	89601.16			
			4.0	74876.07	164477.24			
35								
	1*********							
			.0	66466.01	-115763.71			
			1.0	66466.01	-49297.70			
			2.0	66466.01	17168.32			
			3.0	66466.01	83634.33			
			4.0	66466.01	150100.35			
39								
	1*********							
			.0	56838.13	-93763.49			
			1.0	56838.13	-36925.36			
			2.0	56838.13	19912.77			
			3.0	56838.13	76750.91			
			4.0	56838.13	133589.04			
43								
	1*********							
			.0	45041.29	-68259.70			
			1.0	45041.29	-23218.41			
			2.0	45041.29	21822.88			
			3.0	45041.29	66864.16			
			4.0	45041.29	111905.45			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
) COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
7							
	1-98819.10						
		.0	38293.11	-42673.92			
		1.0	38293.11	-4380.81			
		2.0	38293.11	33912.29			
		3.0	38293.11	72205.40			
		4.0	38293.11	110498.51			
1							
	1-23021.65						
		.0	1583.74	21333.28			
		1.0	1583.74	22917.02			
		2.0	1583.74	24500.76			
		3.0	1583.74	26084.49			
		4.0	1583.74	27668.23			
4							
	1*********						
		.0	71463.47	-274772.38			
		1.0	71463.47	-203308.91			
		2.0	71463.47	-131845.44			
		3.0	71463.47	-60381.97			
		4.0	71463.47	11081.49			
8							
	1*********						
		.0	64911.30	-168274.57			
		1.0	64911.30	-103363.27			
		2.0	64911.30	-38451.97			
		3.0	64911.30	26459.33			
		4.0	64911.30	91370.63			
12							
	1*********						
		.0	61853.68	-132236.47			
		1.0	61853.68	-70382.79			
		2.0	61853.68	-8529.11			
		3.0	61853.68	53324.57			
		4.0	61853.68	115178.26			
16							
	1*********						
		.0	59341.20	-116421.96			
		1.0	59341.20	-57080.76			
		2.0	59341.20	2260.45			
		3.0	59341.20	61601.65			
		4.0	59341.20	120942.86			
20							
	1*********						
		.0	56634.16	-106024.76			
		1.0	56634.16	-49390.60			
		2.0	56634.16	7243.56			
		3.0	56634.16	63877.71			
		4.0	56634.16	120511.87			
24							
	1*********						
		.0	53397.72	-96277.76			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

T LOAD /) COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	53397.72	-42880.04			
		2.0	53397.72	10517.68			
		3.0	53397.72	63915.40			
		4.0	53397.72	117313.12			
3							
	1*********						
		.0	49538.29	-85806.96			
		1.0	49538.29	-36268.67			
		2.0	49538.29	13269.62			
		3.0	49538.29	62807.91			
		4.0	49538.29	112346.19			
2							
	1*********						
		.0	45035.97	-74195.58			
		1.0	45035.97	-29159.61			
		2.0	45035.97	15876.35			
		3.0	45035.97	60912.32			
		4.0	45035.97	105948.29			
36							
	1**********						
		.0	39896.64	-61215.69			
		1.0	39896.64	-21319.06			
		2.0	39896.64	18577.58			
		3.0	39896.64	58474.22			
		4.0	39896.64	98370.85			
40							
	1**********						
		.0	33833.54	-46441.22			
		1.0	33833.54	-12607.68			
		2.0	33833.54	21225.86			
		3.0	33833.54	55059.39			
		4.0	33833.54	88892.93			
44							
	1-77679.30						
		.0	27084.50	-30423.60			
		1.0	27084.50	-3339.10			
		2.0	27084.50	23745.40			
		3.0	27084.50	50829.90			
		4.0	27084.50	77914.40			
48							
	1-45822.27						
		.0	24970.01	-13109.97			
		1.0	24970.01	11860.04			
		2.0	24970.01	36830.05			
		3.0	24970.01	61800.06			
		4.0	24970.01	86770.07			
52							
	1 -9996.16						
		.0	-5994.32	35624.35			
		1.0	-5994.32	29630.02			
		2.0	-5994.32	23635.70			
		3.0	-5994.32	17641.38			

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	-5994.32	11647.05			
1	6843.28						
		.0	-23891.88	135523.16			
		2.0	-29431.88	82199.39			
		4.0	-43171.88	17795.63			
		6.0	-48711.88	-74088.13			
		8.0	-54251.88	-177051.90			
1	-2553.94						
		.0	-33598.50	174879.67			
		2.0	-39138.50	102142.68			
		4.0	-52878.50	18325.68			
		6.0	-58418.50	-92971.32			
		8.0	-63958.50	-215348.31			
1	-7224.43						
		.0	-34585.23	178892.10			
		2.0	-40125.23	104181.64			
		4.0	-53865.23	18391.17			
		6.0	-59405.23	-94879.29			
		8.0	-64945.23	-219229.76			
1	-10465.04						
		.0	-32612.77	170973.58			
		2.0	-38152.77	100208.05			
		4.0	-51892.77	18362.52			
		6.0	-57432.77	-90963.02			
		8.0	-62972.77	-211368.55			
1	-13519.97						
		.0	-29375.20	157919.16			
		2.0	-34915.20	93628.76			
		4.0	-48655.20	18258.36			
		6.0	-54195.20	-84592.04			
		8.0	-59735.20	-198522.45			
1	-16487.07						
		.0	-25377.71	141772.58			
		2.0	-30917.71	85477.16			
		4.0	-44657.71	18101.73			
		6.0	-50197.71	-76753.69			
		8.0	-55737.71	-182689.11			
1	-19415.69						
		.0	-20762.66	123109.66			
		2.0	-26302.66	76044.33			
		4.0	-40042.66	17899.01			
		6.0	-45582.66	-67726.32			
		8.0	-51122.66	-164431.65			
1	-22322.54						

RASTA S.H. & YAZID, GONDOLAYU PROJECT . PROGRAM:SAP90/FILE:B-1

sa Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

M	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
	COMB	FORCE	END1	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			.0	-15559.28	102050.05			
			2.0	-21099.28	65391.49			
			4.0	-34839.28	17652.92			
			6.0	-40379.28	-57565.64			
			8.0	-45919.28	-143864.20			
7								
	1	-25501.85						
			.0	-9749.90	78534.32			
			2.0	-15289.90	53494.51			
			4.0	-29029.90	17374.70			
			6.0	-34569.90	-46225.10			
			8.0	-40109.90	-120904.91			
10								
	1	-28894.85						
			.0	-3151.63	51772.45			
			2.0	-8691.63	39929.20			
			4.0	-22431.63	17005.94			
			6.0	-27971.63	-33397.31			
			8.0	-33511.63	-94880.56			
33								
	1	-25786.62						
			.0	5176.14	17930.19			
			2.0	-363.86	22742.48			
			4.0	-14103.86	16474.76			
			6.0	-19643.86	-17272.95			
			8.0	-25183.86	-62100.67			
34								
	1	3252.32						
			.0	7156.86	51874.93			
			3.0	-1153.14	60880.50			
			6.0	-17663.14	28556.07			
			9.0	-34173.14	-45098.36			
			12.0	-42483.14	-160082.79			
37								
	1	-2492.59						
			.0	1818.87	83826.29			
			3.0	-6491.13	76817.90			
			6.0	-23001.13	28479.50			
			9.0	-39511.13	-61188.89			
			12.0	-47821.13	-192187.28			
60								
	1	-4444.36						
			.0	489.41	91847.66			
			3.0	-7820.59	80850.88			
			6.0	-24330.59	28524.10			
			9.0	-40840.59	-65132.68			
			12.0	-49150.59	-200119.46			
63								
	1	-6215.25						
			.0	627.25	91064.83			
			3.0	-7682.75	80481.59			
			6.0	-24192.75	28568.35			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
O	COMB	FORCE	END I	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
5								
	1	-6552.17						
			.0	-23273.64	128273.06			
			2.0	-28813.64	76185.78			
			4.0	-42553.64	13018.50			
			6.0	-48093.64	-77628.78			
			8.0	-53633.64	-179356.07			
8								
	1	-3057.62						
			.0	-34234.03	171705.16			
			2.0	-39774.03	97697.09			
			4.0	-53514.03	12609.03			
			6.0	-59054.03	-99959.04			
			8.0	-64594.03	-223607.10			
61								
	1	-2512.48						
			.0	-36204.31	179474.23			
			2.0	-41744.31	101525.62			
			4.0	-55484.31	12497.00			
			6.0	-61024.31	-104011.61			
			8.0	-66564.31	-231600.22			
64								
	1	-2707.05						
			.0	-35055.05	174912.75			
			2.0	-40595.05	99262.66			
			4.0	-54335.05	12532.57			
			6.0	-59875.05	-101677.52			
			8.0	-65415.05	-226967.62			
67								
	1	3236.44						
			.0	-32537.07	164946.94			
			2.0	-38077.07	94332.80			
			4.0	-51817.07	12638.66			
			6.0	-57357.07	-96535.49			
			8.0	-62897.07	-216789.63			
70								
	1	-3859.43						
			.0	-29159.14	151593.06			
			2.0	-34699.14	87734.78			
			4.0	-48439.14	12796.49			
			6.0	-53979.14	-89621.80			
			8.0	-59519.14	-203120.08			
73								
	1	-4502.32						
			.0	-25065.42	135421.57			
			2.0	-30605.42	79750.73			
			4.0	-44345.42	12999.90			
			6.0	-49885.42	-81230.94			
			8.0	-55425.42	-186541.78			
76								
	1	-5139.33						
			.0	-20282.74	116537.90			

sa Statis Portal (13 lantai) Kg/m

Y M E E L E M E N T F O R C E S

T LOAD) COMB	AXIAL FORCE	DIST END	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		2.0	-25822.74	70432.43			
		4.0	-39562.74	13246.96			
		6.0	-45102.74	-71418.51			
		8.0	-50642.74	-187163.99			
1	-6063.12						
		.0	-14770.37	94790.85			
		2.0	-20310.37	59710.12			
		4.0	-34050.37	13549.39			
		6.0	-39590.37	-60091.34			
		8.0	-45130.37	-144812.07			
1	-6749.04						
		.0	-8466.93	69858.89			
		2.0	-14006.93	47385.03			
		4.0	-27746.93	13831.18			
		6.0	-33286.93	-47202.68			
		8.0	-38826.93	-119316.53			
1	-2114.49						
		.0	-1497.03	42391.88			
		2.0	-7037.03	33857.81			
		4.0	-20777.03	14243.75			
		6.0	-26317.03	-32850.31			
		8.0	-31857.03	-91024.37			
1	-22008.61						
		.0	17821.49	-24327.94			
		2.0	10681.49	4175.05			
		4.0	-4658.51	18398.03			
		6.0	-11798.51	1941.01			
		8.0	-18938.51	-28796.01			
1	41094.67						
		.0	24565.39	-33150.71			
		3.0	13855.39	24480.47			
		6.0	-5054.61	33581.65			
		9.0	-23964.61	-5847.17			
		12.0	-34674.61	-93805.99			
1	-7645.82						
		.0	12604.94	-4856.53			
		2.0	5464.94	13213.36			
		4.0	-9875.06	17003.24			
		6.0	-17015.06	-9886.87			
		8.0	-24155.06	-51056.99			
1	-85469.04						
		.0	15150.65	-30025.89			
		2.0	10770.65	-4104.58			
		4.0	510.65	13056.72			
		6.0	-3869.35	9698.03			

Tesa Statis Portal (13 Lantai) Kg/m

M E M B E R E L E M E N T F O R C E S

T O	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			8.0	-8249.35	-2420.66			
1								
	1	5994.32						
			.0	13403.84	-25277.75			
			2.0	9023.84	2850.07			
			4.0	1236.16	10817.60			
			6.0	-5616.16	3965.27			
			8.0	-9996.16	-11647.05			
0								
	1	-18907.92						
			.0	16791.14	-25714.04			
			3.0	10181.14	14684.38			
			6.0	-2268.86	23612.80			
			9.0	-14718.86	1071.23			
			12.0	-21268.86	-52940.35			

Tisa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

LT ID	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
1								
		1151699.37						
			.0	62516.48	-262066.78			
			1.0	62516.48	-199550.29			
			2.0	62516.48	-137033.81			
			3.0	62516.48	-74517.33			
			4.0	62516.48	-12000.84			
5								
		1131291.18						
			.0	51813.56	-142091.30			
			1.0	51813.56	-90277.74			
			2.0	51813.56	-38464.18			
			3.0	51813.56	13349.39			
			4.0	51813.56	65162.95			
9								
		1101441.47						
			.0	47231.64	-103239.04			
			1.0	47231.64	-56007.40			
			2.0	47231.64	-8775.76			
			3.0	47231.64	38455.89			
			4.0	47231.64	85687.53			
13								
	1	70800.19						
			.0	43834.39	-85950.24			
			1.0	43834.39	-42115.85			
			2.0	43834.39	1718.54			
			3.0	43834.39	45552.94			
			4.0	43834.39	89387.33			
17								
	1	42305.15						
			.0	40194.70	-73644.12			
			1.0	40194.70	-33449.42			
			2.0	40194.70	6745.28			
			3.0	40194.70	46939.98			
			4.0	40194.70	87134.69			
21								
	1	17210.11						
			.0	36128.35	-62200.54			
			1.0	36128.35	-26072.19			
			2.0	36128.35	10056.16			
			3.0	36128.35	46184.50			
			4.0	36128.35	82312.85			
25								
	1	-3734.44						
			.0	31548.47	-50271.97			
			1.0	31548.47	-18723.49			
			2.0	31548.47	12824.98			
			3.0	31548.47	44373.45			
			4.0	31548.47	75921.93			
29								
	1	-19923.75						
			.0	26419.24	-37447.92			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			1.0	26419.24	-11028.68			
			2.0	26419.24	15390.55			
			3.0	26419.24	41809.79			
			4.0	26419.24	68229.02			
3								
	1	-30793.57						
			.0	20722.14	-23626.32			
			1.0	20722.14	-2904.18			
			2.0	20722.14	17817.96			
			3.0	20722.14	38540.09			
			4.0	20722.14	59262.23			
37								
	1	-35798.20						
			.0	14449.80	-8855.71			
			1.0	14449.80	5594.10			
			2.0	14449.80	20043.90			
			3.0	14449.80	34493.71			
			4.0	14449.80	48943.51			
41								
	1	-34428.49						
			.0	7579.64	6637.48			
			1.0	7579.64	14217.13			
			2.0	7579.64	21796.77			
			3.0	7579.64	29376.41			
			4.0	7579.64	36956.06			
45								
	1	-26291.33						
			.0	-67.14	22065.58			
			1.0	-67.14	21998.44			
			2.0	-67.14	21931.31			
			3.0	-67.14	21864.17			
			4.0	-67.14	21797.03			
49								
	1	-11568.11						
			.0	-12316.57	33761.63			
			1.0	-12316.57	21445.07			
			2.0	-12316.57	9128.50			
			3.0	-12316.57	-3188.07			
			4.0	-12316.57	-15504.64			
2								
	1	*********						
			.0	76822.98	-280532.04			
			1.0	76822.98	-203709.06			
			2.0	76822.98	-126886.08			
			3.0	76822.98	-50063.10			
			4.0	76822.98	26759.88			
6								
	1	*********						
			.0	79865.71	-195654.00			
			1.0	79865.71	-115788.29			
			2.0	79865.71	-35922.58			
			3.0	79865.71	43943.12			

isa Statis Portal (13 lantai) kg/m

A M E E L E M E N T F O R C E S

T LOAD ID COMB	AXIAL FORCE	DIST END I	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	79865.71	123808.83			
10							
	1**********						
		.0	79758.09	-167968.06			
		1.0	79758.09	-88209.97			
		2.0	79758.09	-8451.88			
		3.0	79758.09	71306.21			
		4.0	79758.09	151064.30			
14							
	1**********						
		.0	76897.19	-152175.30			
		1.0	76897.19	-75278.11			
		2.0	76897.19	1619.08			
		3.0	76897.19	78516.27			
		4.0	76897.19	155413.46			
18							
	1**********						
		.0	72577.51	-138858.22			
		1.0	72577.51	-66280.71			
		2.0	72577.51	6296.81			
		3.0	72577.51	78874.32			
		4.0	72577.51	151451.83			
22							
	1**********						
		.0	67048.00	-124731.66			
		1.0	67048.00	-57683.67			
		2.0	67048.00	9364.33			
		3.0	67048.00	76412.32			
		4.0	67048.00	143460.32			
26							
	1**********						
		.0	60406.57	-108892.11			
		1.0	60406.57	-48485.54			
		2.0	60406.57	11921.03			
		3.0	60406.57	72327.59			
		4.0	60406.57	132734.16			
30							
	1**********						
		.0	52681.67	-91075.01			
		1.0	52681.67	-38393.34			
		2.0	52681.67	14288.32			
		3.0	52681.67	66969.99			
		4.0	52681.67	119651.66			
34							
	1**********						
		.0	43888.22	-71247.45			
		1.0	43888.22	-27359.23			
		2.0	43888.22	16528.99			
		3.0	43888.22	60417.21			
		4.0	43888.22	104305.43			
38							
	1**********						

Isa Statis Portal (13 lantai) Kg/m

ME ELEMENT FORCES

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		.0	34050.64	-49523.34			
		1.0	34050.64	-15472.71			
		2.0	34050.64	18577.93			
		3.0	34050.64	52628.57			
		4.0	34050.64	86679.20			
2							
	1*********						
		.0	23223.63	-26261.41			
		1.0	23223.63	-3037.78			
		2.0	23223.63	20185.85			
		3.0	23223.63	43409.48			
		4.0	23223.63	66633.11			
46							
	1-68617.39						
		.0	11022.13	-2493.55			
		1.0	11022.13	8528.58			
		2.0	11022.13	19550.71			
		3.0	11022.13	30572.85			
		4.0	11022.13	41594.98			
50							
	1-25093.81						
		.0	-825.54	14878.03			
		1.0	-825.54	14052.49			
		2.0	-825.54	13226.95			
		3.0	-825.54	12401.41			
		4.0	-825.54	11575.86			
3							
	1*********						
		.0	88420.43	-295551.58			
		1.0	88420.43	-207131.15			
		2.0	88420.43	-118710.71			
		3.0	88420.43	-30290.28			
		4.0	88420.43	58130.15			
7							
	1*********						
		.0	98771.74	-234036.59			
		1.0	98771.74	-135264.84			
		2.0	98771.74	-36493.10			
		3.0	98771.74	62278.64			
		4.0	98771.74	161050.38			
11							
	1*********						
		.0	99495.52	-207039.39			
		1.0	99495.52	-107543.88			
		2.0	99495.52	-8048.36			
		3.0	99495.52	91447.16			
		4.0	99495.52	190942.67			
15							
	1*********						
		.0	97727.91	-193439.45			
		1.0	97727.91	-95711.54			
		2.0	97727.91	2016.37			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			3.0	97727.91	99744.29			
			4.0	97727.91	197472.20			
19								
	1**********							
			.0	94371.77	-182088.34			
			1.0	94371.77	-87716.57			
			2.0	94371.77	6655.21			
			3.0	94371.77	101026.98			
			4.0	94371.77	195398.75			
23								
	1**********							
			.0	89703.21	-169733.81			
			1.0	89703.21	-80030.59			
			2.0	89703.21	9672.62			
			3.0	89703.21	99375.83			
			4.0	89703.21	189079.05			
27								
	1**********							
			.0	83805.71	-155425.59			
			1.0	83805.71	-71619.88			
			2.0	83805.71	12185.82			
			3.0	83805.71	95991.53			
			4.0	83805.71	179797.24			
31								
	1**********							
			.0	76713.94	-138916.45			
			1.0	76713.94	-62202.51			
			2.0	76713.94	14511.43			
			3.0	76713.94	91225.37			
			4.0	76713.94	167939.31			
35								
	1**********							
			.0	68446.35	-120177.70			
			1.0	68446.35	-51731.35			
			2.0	68446.35	16715.00			
			3.0	68446.35	85161.35			
			4.0	68446.35	153607.70			
39								
	1**********							
			.0	59014.29	-99317.44			
			1.0	59014.29	-40303.14			
			2.0	59014.29	18711.15			
			3.0	59014.29	77725.44			
			4.0	59014.29	136739.74			
43								
	1**********							
			.0	48472.93	-76778.01			
			1.0	48472.93	-28305.08			
			2.0	48472.93	20167.85			
			3.0	48472.93	68640.79			
			4.0	48472.93	117113.72			

Statis Portal (13 lantai) Kg/m

M E E L E M E N T F O R C E S

LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
	1-75724.34						
		.0	36706.72	-53899.71			
		1.0	36706.72	-17192.99			
		2.0	36706.72	19513.73			
		3.0	36706.72	56220.45			
		4.0	36706.72	92927.17			
	1-30920.87						
		.0	28355.03	-36339.54			
		1.0	28355.03	-7984.51			
		2.0	28355.03	20370.52			
		3.0	28355.03	48725.55			
		4.0	28355.03	77080.58			
4							
	1********						
		.0	71820.10	-274397.87			
		1.0	71820.10	-202577.77			
		2.0	71820.10	-130757.67			
		3.0	71820.10	-58937.56			
		4.0	71820.10	12882.54			
8							
	1*********						
		.0	65639.99	-169661.86			
		1.0	65639.99	-104021.87			
		2.0	65639.99	-38381.88			
		3.0	65639.99	27258.11			
		4.0	65639.99	92898.10			
2							
	1**********						
		.0	62727.75	-134074.42			
		1.0	62727.75	-71346.67			
		2.0	62727.75	-8618.92			
		3.0	62727.75	54108.83			
		4.0	62727.75	116836.58			
6							
	1**********						
		.0	60286.51	-118422.70			
		1.0	60286.51	-58136.19			
		2.0	60286.51	2150.32			
		3.0	60286.51	62436.82			
		4.0	60286.51	122723.33			
20							
	1**********						
		.0	57645.01	-108174.85			
		1.0	57645.01	-50529.84			
		2.0	57645.01	7115.17			
		3.0	57645.01	64760.19			
		4.0	57645.01	122405.20			
24							
	1*********						
		.0	54463.44	-98554.58			

Isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD D COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		1.0	54463.44	-44091.13			
		2.0	54463.44	10372.31			
		3.0	54463.44	64835.76			
		4.0	54463.44	119299.20			
28							
	1*********						
		.0	50647.25	-88198.15			
		1.0	50647.25	-37550.90			
		2.0	50647.25	13096.35			
		3.0	50647.25	63743.60			
		4.0	50647.25	114390.85			
32							
	1*********						
		.0	46168.16	-76716.79			
		1.0	46168.16	-30548.63			
		2.0	46168.16	15619.52			
		3.0	46168.16	61787.68			
		4.0	46168.16	107955.84			
36							
	1*********						
		.0	41012.29	-64012.00			
		1.0	41012.29	-22999.71			
		2.0	41012.29	18012.58			
		3.0	41012.29	59024.87			
		4.0	41012.29	100037.16			
40							
	1*********						
		.0	35151.26	-50121.27			
		1.0	35151.26	-14970.00			
		2.0	35151.26	20181.26			
		3.0	35151.26	55332.52			
		4.0	35151.26	90483.79			
44							
	1-83118.28						
		.0	28496.79	-35379.84			
		1.0	28496.79	-6883.05			
		2.0	28496.79	21613.74			
		3.0	28496.79	50110.54			
		4.0	28496.79	78607.33			
48							
	1-46966.94						
		.0	21729.28	-21216.06			
		1.0	21729.28	513.22			
		2.0	21729.28	22242.51			
		3.0	21729.28	43971.79			
		4.0	21729.28	65701.07			
52							
	1-17257.22						
		.0	12307.08	-7770.21			
		1.0	12307.08	4536.87			
		2.0	12307.08	16843.95			
		3.0	12307.08	29151.03			

Lisa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

_T LOAD ID COMB	AXIAL FORCE	DIST END	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
		4.0	12307.08	41458.11			
53							
1	7213.92						
		.0	20408.19	130090.46			
		2.0	-27548.19	82134.09			
		4.0	-42888.19	19897.72			
		6.0	-50028.19	-73018.65			
		8.0	-57168.19	-180215.03			
56							
1	-2296.08						
		.0	-29849.71	168401.99			
		2.0	-36989.71	101562.57			
		4.0	-52329.71	20443.15			
		6.0	-59469.71	-91356.28			
		8.0	-66609.71	-217435.70			
59							
1	-7069.75						
		.0	30641.28	171637.78			
		2.0	-37781.28	103215.21			
		4.0	-53121.28	20512.65			
		6.0	-60261.28	-92869.91			
		8.0	-67401.28	-220532.48			
62							
1	-10317.31						
		.0	-28495.04	163031.45			
		2.0	-35635.04	98901.38			
		4.0	-50975.04	20491.30			
		6.0	-58115.04	-88598.77			
		8.0	-65255.04	-211968.84			
65							
1	-13379.64						
		.0	-25095.04	149335.22			
		2.0	-32235.04	92005.14			
		4.0	-47575.04	20395.06			
		6.0	-54715.04	-81895.02			
		8.0	-61855.04	-198465.10			
68							
1	-16355.13						
		.0	-20944.56	132584.82			
		2.0	-28084.56	83555.70			
		4.0	-43424.56	20246.59			
		6.0	-50564.56	-73742.52			
		8.0	-57704.56	-182011.63			
71							
1	-19295.76						
		.0	-16189.31	113369.84			
		2.0	-23329.31	73851.22			
		4.0	-38669.31	20052.60			
		6.0	-45809.31	-64426.02			
		8.0	-52949.31	-163184.64			
74							
1	-22216.90						

Isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
O COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
		.0	-10869.82	91855.35			
		2.0	-18009.82	62975.71			
		4.0	-33349.82	19816.06			
		6.0	-40489.82	-54023.58			
		8.0	-47629.82	-142143.22			
7							
	1-25130.67						
		.0	-5004.62	68117.94			
		2.0	-12144.62	50968.70			
		4.0	-27484.62	19539.45			
		6.0	-34624.62	-42569.80			
		8.0	-41764.62	-118959.04			
30							
	1-28022.84						
		.0	1369.71	42306.03			
		2.0	-5770.29	37905.44			
		4.0	-21110.29	19224.85			
		6.0	-28250.29	-30135.74			
		8.0	-35390.29	-93776.33			
83							
	1-30735.22						
		.0	8137.17	14890.48			
		2.0	997.17	24024.81			
		4.0	-14342.83	18879.14			
		6.0	-21482.83	-16946.52			
		8.0	-28622.83	-67052.19			
86							
	1-29621.57						
		.0	14723.22	-11964.60			
		2.0	7583.22	10341.83			
		4.0	-7756.78	18368.26			
		6.0	-14896.78	-4285.30			
		8.0	-22036.78	-41218.87			
54							
	1 4171.19						
		.0	11997.35	42198.85			
		3.0	1287.35	62125.91			
		6.0	-17622.65	33522.96			
		9.0	-36532.65	-43609.98			
		12.0	-47242.65	-169272.92			
57							
	1 -2188.46						
		.0	6626.69	74341.19			
		3.0	-4083.31	78156.26			
		6.0	-22993.31	33441.34			
		9.0	-41903.31	-59803.58			
		12.0	-52613.31	-201578.50			
60							
	1 -4208.85						
		.0	5241.99	82707.12			
		3.0	-5468.01	82368.09			
		6.0	-24378.01	33499.07			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
)	COMB	FORCE	END I	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			9.0	-43288.01	-63899.95			
			12.0	-53998.01	-209828.97			
3								
	1	-5997.63						
			.0	5318.85	82302.83			
			3.0	-5391.15	82194.37			
			6.0	-24301.15	33555.91			
			9.0	-43211.15	-63612.55			
			12.0	-53921.15	-209311.01			
6								
	1	-7850.13						
			.0	6091.47	77718.39			
			3.0	-4618.53	79927.79			
			6.0	-23528.53	33607.19			
			9.0	-42438.53	-61243.41			
			12.0	-53148.53	-204624.02			
69								
	1	-9713.70						
			.0	7328.42	70340.80			
			3.0	-3381.58	76261.05			
			6.0	-22291.58	33651.29			
			9.0	-41201.58	-57488.46			
			12.0	-51911.58	-197158.21			
72								
	1	-11570.86						
			.0	8954.11	60624.53			
			3.0	-1755.89	71421.86			
			6.0	-20665.89	33689.18			
			9.0	-39575.89	-52573.50			
			12.0	-50285.89	-187366.18			
75								
	1	-13423.46						
			.0	10937.53	48755.89			
			3.0	227.53	65503.49			
			6.0	-18682.47	33721.10			
			9.0	-37592.47	-46591.30			
			12.0	-48302.47	-175433.69			
78								
	1	-15293.08						
			.0	13256.33	34869.73			
			3.0	2546.33	58573.72			
			6.0	-16363.67	33747.71			
			9.0	-35273.67	-39608.30			
			12.0	-45983.67	-161494.32			
81								
	1	-17195.83						
			.0	15877.08	19164.29			
			3.0	5167.08	50730.53			
			6.0	-13742.92	33766.77			
			9.0	-32652.92	-31726.99			
			12.0	-43362.92	-145750.75			

isa Statis Portal (15 lantai) kg/m

A M E   E L E M E N T   F O R C E S

T D	LOAD COMB	AXIAL FORCE	DIST ENDI	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
4								
	1	-18533.72						
			.0	18724.95	2074.47			
			3.0	8014.95	42184.33			
			6.0	10895.05	33764.19			
			9.0	29805.05	23185.94			
			12.0	40515.05	128666.08			
37								
	1	-17773.89						
			.0	21486.80	-14501.92			
			3.0	10776.80	33893.49			
			6.0	8133.20	33758.90			
			9.0	-27043.20	-14905.68			
			12.0	37753.20	-112100.27			
55								
	1	-6180.11						
			.0	-19799.78	122893.82			
			2.0	-26939.78	76154.26			
			4.0	-42279.78	15134.71			
			6.0	-49419.78	-76564.85			
			8.0	-56559.78	-182544.40			
58								
	1	-2912.24						
			.0	-30805.47	166511.27			
			2.0	-37945.47	97760.32			
			4.0	53285.47	14729.37			
			6.0	-60425.47	-98981.57			
			8.0	-67565.47	-226972.52			
61								
	1	-2441.24						
			.0	-32846.55	174553.14			
			2.0	-39986.55	101720.04			
			4.0	-55326.55	14606.93			
			6.0	-62466.55	-103186.18			
			8.0	-69606.55	-235259.28			
64								
	1	-2641.49						
			.0	-31763.46	170249.53			
			2.0	-38903.46	99582.60			
			4.0	-54243.46	14635.67			
			6.0	-61383.46	-100991.25			
			8.0	-68523.46	-230898.18			
67								
	1	-3181.57						
			.0	-29303.54	160508.54			
			2.0	-36443.54	94761.46			
			4.0	-51783.54	14734.38			
			6.0	-58923.54	-95972.70			
			8.0	-66063.54	-220959.78			
70								
	1	-3816.19						
			.0	-25975.47	147346.43			

isa Statis Portal (13 Lantai) Kg/m

M E M B E R E L E M E N T F O R C E S

JOINT	LOAD COMB	AXIAL FORCE	DIST END	1-2 PLANE SHEAR	1-2 PLANE MOMENT	1-3 PLANE SHEAR	1-3 PLANE MOMENT	AXIAL TORQ
			2.0	-33115.47	88255.48			
			4.0	-48455.47	14884.54			
			6.0	-55595.47	-89166.41			
			8.0	-62735.47	-207497.35			
75								
	1	-4479.09						
			.0	21926.90	131347.52			
			2.0	29066.90	80353.73			
			4.0	-44406.90	15079.94			
			6.0	-51546.90	-80673.85			
			8.0	-58686.90	-191107.64			
76								
	1	-5155.87						
			.0	17201.39	112683.31			
			2.0	24341.39	71140.53			
			4.0	-39681.39	15517.74			
			6.0	-46821.39	-71155.05			
			8.0	-53961.39	-171967.84			
79								
	1	-5861.03						
			.0	-11818.66	91430.82			
			2.0	-18958.66	60653.51			
			4.0	-34298.66	15596.20			
			6.0	-41438.66	-60141.11			
			8.0	-48578.66	-150158.43			
82								
	1	-6654.47						
			.0	-5823.83	67767.01			
			2.0	-12963.83	48979.35			
			4.0	-28303.83	15911.69			
			6.0	-35443.83	-47835.97			
			8.0	-42583.83	-125863.63			
85								
	1	-6767.51						
			.0	608.66	42347.35			
			2.0	-6531.34	36424.66			
			4.0	-21871.34	16221.98			
			6.0	-29011.34	-34660.71			
			8.0	-36151.34	-99823.39			
88								
	1	-9422.20						
			.0	7050.28	17166.44			
			2.0	-89.72	24127.01			
			4.0	-15429.72	16807.58			
			6.0	-22569.72	-21191.86			
			8.0	-29709.72	-73471.29			
89								
	1	-39836.57						
			.0	11568.11	-15504.64			
			2.0	7188.11	3251.58			
			4.0	-3071.89	13247.80			
			6.0	-7451.89	2724.02			

isa Statis Portal (13 lantai) Kg/m

A M E E L E M E N T F O R C E S

T	LOAD	AXIAL	DIST	1-2 PLANE		1-3 PLANE		AXIAL
D	COMB	FORCE	ENDI	SHEAR	MOMENT	SHEAR	MOMENT	TORQ
			8.0	-11831.89	-16559.77			
91								
	1-12307.08							
			.0	6142.78	2999.63			
			2.0	1762.78	10905.21			
			4.0	-8497.22	10050.77			
			6.0	-12877.22	-11326.67			
			8.0	-17257.22	-41458.11			
90								
	1-40662.11							
			.0	13261.91	-4983.90			
			3.0	6691.91	24946.84			
			6.0	-5758.09	23407.58			
			9.0	-18208.09	-9601.67			
			12.0	-24778.09	-74080.93			

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

JT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.003359	.000235	-.001423
6	.004166	-.002006	-.001528
7	.005635	-.001799	-.001339
8	.006896	-.002869	-.001803
9	.010001	.000411	-.001837
10	.011044	-.003757	-.001756
11	.013144	-.003503	-.001415
12	.014670	-.005411	-.001565
13	.017700	.000480	-.001989
14	.018667	-.005282	-.001874
15	.020847	-.005106	-.001446
16	.022282	-.007849	-.001610
17	.025690	.000447	-.002031
18	.026503	-.006597	-.001906
19	.028625	-.006588	-.001456
20	.029988	-.009590	-.001619
21	.033682	.000327	-.002025
22	.034328	-.007722	-.001902
23	.036348	-.007943	-.001434
24	.037627	-.011245	-.001591
25	.041513	.000137	-.001983
26	.041989	-.008671	-.001864
27	.043865	-.009163	-.001379
28	.045044	-.012627	-.001527
29	.049041	-.000104	-.001907
30	.049340	-.009459	-.001794
31	.051034	-.010245	-.001295
32	.052098	-.013751	-.001430
33	.056128	-.000376	-.001799
34	.056242	-.010100	-.001694
35	.057718	-.011181	-.001182
36	.058650	-.014633	-.001303
37	.062644	-.000660	-.001660
38	.062563	-.010604	-.001565
39	.063791	-.011969	-.001043
40	.064573	-.015295	-.001147
41	.068470	-.000932	-.001494
42	.068182	-.010983	-.001410
43	.069133	-.012600	-.000879
44	.069750	-.015759	-.000966
45	.073491	-.001169	-.001302
46	.072981	-.011248	-.001230
47	.073640	-.013069	-.000699
48	.074070	-.016051	-.000755
49	.077586	-.001343	-.001077
50	.076871	-.011411	-.001047
51	.077199	-.013367	-.000464

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

IT	U(X)	U(Y)	R(Z)
52	.077343	-.016200	-.000479
53	.080937	-.001427	-.001093
54	.080101	-.011479	-.001044
55	.079455	-.013475	-.000174
56	.079367	-.016245	-.000260

Kisa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.011700	.000173	-.002940
6	.012804	-.002148	-.002898
7	.014343	-.001979	-.002701
8	.014999	-.002951	-.003331
9	.019714	.000367	-.001753
10	.020754	-.003880	-.001667
11	.022857	-.003639	-.001307
12	.024534	-.005490	-.001528
13	.027361	.000421	-.001999
14	.028326	-.005411	-.001887
15	.030526	-.005252	-.001455
16	.031971	-.007731	-.001581
17	.035353	.000376	-.002027
18	.036159	-.006731	-.001905
19	.038276	-.006738	-.001442
20	.039636	-.009676	-.001615
21	.043320	.000245	-.002019
22	.043957	-.007859	-.001900
23	.045967	-.008095	-.001424
24	.047248	-.011334	-.001583
25	.051123	.000045	-.001977
26	.051590	-.008812	-.001862
27	.053458	-.009319	-.001370
28	.054639	-.012719	-.001520
29	.058624	-.000203	-.001902
30	.058915	-.009604	-.001793
31	.060602	-.010402	-.001286
32	.061667	-.013845	-.001424
33	.065685	-.000482	-.001794
34	.065792	-.010247	-.001693
35	.067263	-.011341	-.001174
36	.068197	-.014730	-.001297
37	.072180	-.000771	-.001656
38	.072092	-.010754	-.001565
39	.073315	-.012129	-.001035
40	.074100	-.015394	-.001142
41	.077986	-.001047	-.001491
42	.077693	-.011135	-.001411
43	.078640	-.012762	-.000872
44	.079261	-.015860	-.000962
45	.082991	-.001286	-.001300
46	.082478	-.011401	-.001231
47	.083134	-.013231	-.000692
48	.083568	-.016153	-.000752
49	.087076	-.001462	-.001076
50	.086358	-.011565	-.001050
51	.086683	-.013529	-.000457

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
52	.086831	-.016303	-.000475
53	.090423	-.001546	-.001093
54	.089584	-.011633	-.001043
55	.088929	-.013636	-.000173
56	.088841	-.016348	-.000255

.sa Statis Portal (13 lantai) Kg/m

NT DISPLACEMENTS

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.020238	.000211	-.006745
6	.020424	-.002170	-.006350
7	.020792	-.002037	-.006160
8	.020865	-.003188	-.006931
9	.047821	.000352	-.004415
0	.048994	-.004103	-.004256
1	.050764	-.003985	-.004057
2	.051553	-.006179	-.004683
3	.057619	.000489	-.001823
4	.058554	-.005585	-.001726
5	.060807	-.005597	-.001328
6	.062554	-.008673	-.001517
17	.065648	.000468	-.002098
18	.066480	-.006912	-.001976
19	.068677	-.007183	-.001513
20	.070019	-.010854	-.001618
21	.073851	.000362	-.002071
22	.074502	-.008045	-.001947
23	.076537	-.008624	-.001470
24	.077774	-.012722	-.001641
25	.081867	.000187	-.002031
26	.082342	-.009002	-.001915
27	.084232	-.009923	-.001432
28	.085372	-.014288	-.001582
29	.089601	-.000040	-.001962
30	.089905	-.009799	-.001852
31	.091618	-.011075	-.001355
32	.092639	-.015569	-.001495
33	.096928	-.000299	-.001861
34	.097051	-.010446	-.001759
35	.098550	-.012072	-.001250
36	.099437	-.016582	-.001375
37	.103713	-.000570	-.001729
38	.103646	-.010956	-.001636
39	.104899	-.012909	-.001117
40	.105635	-.017348	-.001226
41	.109833	-.000831	-.001569
42	.109562	-.011339	-.001487
43	.110543	-.013580	-.000959
44	.111113	-.017890	-.001051
45	.115170	-.001059	-.001382
46	.114681	-.011607	-.001311
47	.115373	-.014078	-.000783
48	.115755	-.018234	-.000845
49	.119599	-.001228	-.001159
50	.118909	-.011771	-.001132
51	.119274	-.014394	-.000552

isa Statis Portal (13 lantai) Kg/m

NT DISPLACEMENTS

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
2	.119377	-.018409	-.000580
3	.123289	-.001308	-.001172
4	.122478	-.011837	-.001117
5	.121902	-.014509	-.000275
6	.121817	-.018454	-.000377

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.022832	.000211	-.008215
6	.022889	-.002190	-.007572
7	.022907	-.001884	-.007153
8	.022800	-.002857	-.007880
9	.062860	.000324	-.008936
10	.062901	-.004126	-.008424
11	.063142	-.003689	-.008294
12	.063271	-.005496	-.009167
13	.095246	.000329	-.004847
14	.096357	-.005806	-.004667
15	.098185	-.005429	-.004457
16	.098984	-.007894	-.005102
17	.105553	.000325	-.001835
18	.106330	-.007042	-.001723
19	.108584	-.006828	-.001288
20	.110328	-.009816	-.001462
21	.113486	.000172	-.002066
22	.114139	-.008151	-.001943
23	.116246	-.008208	-.001446
24	.117527	-.011471	-.001539
25	.121368	-.000044	-.001984
26	.121825	-.009085	-.001863
27	.123708	-.009438	-.001358
28	.124876	-.012853	-.001522
29	.128862	-.000308	-.001900
30	.129135	-.009862	-.001790
31	.130827	-.010527	-.001282
32	.131889	-.013977	-.001420
33	.135902	-.000599	-.001791
34	.135993	-.010493	-.001690
35	.137470	-.011470	-.001169
36	.138400	-.014861	-.001294
37	.142376	-.000897	-.001653
38	.142276	-.010990	-.001562
39	.143505	-.012261	-.001031
40	.144288	-.015524	-.001139
41	.148166	-.001180	-.001489
42	.147862	-.011365	-.001409
43	.148816	-.012895	-.000869
44	.149436	-.015990	-.000960
45	.153159	-.001424	-.001299
46	.152637	-.011626	-.001230
47	.153302	-.013366	-.000690
48	.153736	-.016283	-.000750
49	.157236	-.001603	-.001076
50	.156513	-.011788	-.001050
51	.156846	-.013665	-.000456

lisa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
52	.156993	-.016432	-.000474
53	.160586	-.001688	-.001097
54	.159742	-.011855	-.001045
55	.159087	-.013772	-.000171
56	.158999	-.016477	-.000254

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.023392	.000260	-.008543
6	.023488	-.002233	-.007898
7	.023545	-.001818	-.007469
8	.023442	-.002838	-.008208
9	.066975	.000416	-.010556
10	.066884	-.004208	-.009774
11	.066766	-.003560	-.009398
12	.066712	-.005451	-.010236
13	.112322	.000432	-.009470
14	.112296	-.005909	-.008941
15	.112498	-.005248	-.008804
16	.112633	-.007799	-.009699
17	.145611	.000334	-.004932
18	.146627	-.007352	-.004732
19	.148446	-.006874	-.004508
20	.149207	-.009897	-.005142
21	.156053	.000229	-.001852
22	.156655	-.008372	-.001728
23	.158848	-.008158	-.001268
24	.160508	-.011530	-.001434
25	.163867	-.000004	-.002031
26	.164334	-.009285	-.001912
27	.166321	-.009414	-.001395
28	.167500	-.012909	-.001481
29	.171464	-.000281	-.001914
30	.171732	-.010042	-.001798
31	.173453	-.010513	-.001277
32	.174503	-.014031	-.001430
33	.178535	-.000583	-.001797
34	.178611	-.010657	-.001695
35	.180105	-.011464	-.001172
36	.181034	-.014913	-.001297
37	.185022	-.000890	-.001658
38	.184908	-.011142	-.001566
39	.186154	-.012261	-.001033
40	.186934	-.015575	-.001142
41	.190823	-.001180	-.001493
42	.190508	-.011506	-.001413
43	.191477	-.012900	-.000871
44	.192096	-.016040	-.000963
45	.195827	-.001429	-.001303
46	.195295	-.011762	-.001234
47	.195976	-.013374	-.000693
48	.196408	-.016332	-.000754
49	.199917	-.001611	-.001081
50	.199185	-.011920	-.001055
51	.199533	-.013675	-.000457

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
52	.199677	-.016481	-.000477
53	.203286	-.001697	-.001104
54	.202433	-.011986	-.001050
55	.201781	-.013783	-.000171
56	.201693	-.016526	-.000257

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.023471	.000313	-.008603
6	.023575	-.002278	-.007958
7	.023645	-.001751	-.007537
8	.023544	-.002820	-.008283
9	.067777	.000521	-.010901
10	.067728	-.004299	-.010112
11	.067655	-.003427	-.009723
12	.067607	-.005414	-.010573
13	.116646	.000583	-.011055
14	.116488	-.006041	-.010263
15	.116327	-.005053	-.009873
16	.116283	-.007737	-.010737
17	.162530	.000500	-.009403
18	.162457	-.007508	-.008876
19	.162617	-.006626	-.008726
20	.162744	-.009787	-.009603
21	.195165	.000308	-.004853
22	.196062	-.008723	-.004640
23	.197832	-.008136	-.004398
24	.198538	-.011590	-.005009
25	.205481	.000116	-.001841
26	.205896	-.009540	-.001708
27	.207983	-.009304	-.001226
28	.209529	-.012949	-.001383
29	.213040	-.000181	-.001964
30	.213310	-.010269	-.001851
31	.215144	-.010433	-.001317
32	.216205	-.014067	-.001395
33	.220227	-.000499	-.001816
34	.220293	-.010859	-.001706
35	.221826	-.011396	-.001171
36	.222743	-.014947	-.001311
37	.226760	-.000819	-.001669
38	.226627	-.011324	-.001575
39	.227900	-.012203	-.001040
40	.228679	-.015607	-.001150
41	.232589	-.001118	-.001502
42	.232256	-.011674	-.001420
43	.233253	-.012849	-.000876
44	.233869	-.016070	-.000971
45	.237619	-.001374	-.001312
46	.237072	-.011919	-.001241
47	.237777	-.013328	-.000698
48	.238208	-.016361	-.000760
49	.241735	-.001561	-.001090
50	.240990	-.012071	-.001062
51	.241360	-.013632	-.000461

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

IT	U(X)	U(Y)	R(Z)
52	.241500	-.016509	-.000483
53	.245136	-.001650	-.001117
54	.244269	-.012135	-.001058
55	.243623	-.013741	-.000172
56	.243536	-.016555	-.000263

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.023414	.000368	-.008593
6	.023518	-.002324	-.007950
7	.023588	-.001686	-.007528
8	.023486	-.002802	-.008273
9	.067770	.000630	-.010957
10	.067729	-.004390	-.010167
11	.067668	-.003298	-.009785
12	.067623	-.005377	-.010643
13	.117319	.000746	-.011385
14	.117200	-.006178	-.010583
15	.117084	-.004858	-.010180
16	.117045	-.007681	-.011056
17	.166547	.000712	-.010912
18	.166343	-.007688	-.010135
19	.166146	-.006370	-.009729
20	.166099	-.009706	-.010578
21	.211107	.000540	-.009067
22	.210989	-.008930	-.008557
23	.211102	-.007827	-.008390
24	.211213	-.011463	-.009232
25	.242314	.000270	-.004678
26	.243076	-.009927	-.004457
27	.244768	-.009214	-.004195
28	.245408	-.012981	-.004774
29	.252317	.000006	-.001803
30	.252533	-.010556	-.001663
31	.254480	-.010264	-.001160
32	.255889	-.014080	-.001308
33	.259497	-.000335	-.001868
34	.259557	-.011113	-.001763
35	.261210	-.011258	-.001212
36	.262137	-.014957	-.001283
37	.266158	-.000672	-.001693
38	.266008	-.011549	-.001590
39	.267331	-.012080	-.001042
40	.268099	-.015614	-.001168
41	.272048	-.000986	-.001518
42	.271690	-.011878	-.001432
43	.272724	-.012736	-.000886
44	.273339	-.016076	-.000982
45	.277121	-.001253	-.001325
46	.276550	-.012108	-.001252
47	.277293	-.013223	-.000706
48	.277720	-.016365	-.000771
49	.281277	-.001446	-.001103
50	.280511	-.012251	-.001074
51	.280914	-.013531	-.000468

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
52	.281049	-.016512	-.000491
53	.284726	-.001537	-.001135
54	.283838	-.012312	-.001070
55	.283200	-.013641	-.000174
56	.283114	-.016558	-.000273

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I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.023312	.000422	-.008562
6	.023416	-.002369	-.007921
7	.023486	-.001624	-.007498
8	.023384	-.002781	-.008241
9	.067531	.000740	-.010939
10	.067491	-.004480	-.010151
11	.067430	-.003172	-.009767
12	.067384	-.005337	-.010624
13	.117100	.000912	-.011434
14	.116988	-.006315	-.010632
15	.116885	-.004669	-.010235
16	.116849	-.007622	-.011118
17	.166947	.000933	-.011218
18	.166780	-.007872	-.010430
19	.166626	-.006118	-.010012
20	.166584	-.009626	-.010872
21	.214614	.000812	-.010473
22	.214369	-.009158	-.009730
23	.214134	-.007514	-.009310
24	.214079	-.011358	-.010126
25	.256877	.000566	-.008565
26	.256714	-.010186	-.008082
27	.256777	-.008849	-.007897
28	.256868	-.012832	-.008690
29	.286124	.000236	-.004430
30	.286736	-.010978	-.004204
31	.288327	-.010105	-.003919
32	.288893	-.014080	-.004459
33	.295655	-.000080	-.001740
34	.295660	-.011435	-.001594
35	.297438	-.011030	-.001070
36	.298689	-.014938	-.001207
37	.302341	-.000442	-.001746
38	.302175	-.011835	-.001648
39	.303624	-.011883	-.001085
40	.304401	-.015592	-.001147
41	.308367	-.000774	-.001545
42	.307984	-.012133	-.001451
43	.309080	-.012554	-.000891
44	.309685	-.016051	-.001003
45	.313514	-.001054	-.001345
46	.312911	-.012343	-.001268
47	.313704	-.013050	-.000719
48	.314130	-.016339	-.000785
49	.317729	-.001256	-.001121
50	.316932	-.012474	-.001090
51	.317382	-.013364	-.000476

.isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
52	.317508	-.016485	-.000503
53	.321245	-.001352	-.001161
54	.320327	-.012530	-.001087
55	.319700	-.013476	-.000176
56	.319614	-.016530	-.000285

RASTA S.H. & YAZID. GONDOLAYU PROJECT

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	-.008524
5	.023198	.000476	-.007885
6	.023302	-.002413	-.007462
7	.023373	-.001564	-.008202
8	.023271	-.002758	-.010900
9	.067224	.000849	-.010113
10	.067184	-.004571	-.009727
11	.067123	-.003052	-.010582
12	.067076	-.005292	-.011415
13	.116632	.001077	-.010613
14	.116521	-.006452	-.010213
15	.116417	-.004488	-.011097
16	.116380	-.007555	-.011261
17	.166479	.001156	-.010472
18	.166320	-.008057	-.010058
19	.166177	-.005874	-.010926
20	.166138	-.009540	-.010750
21	.214694	.001093	-.009996
22	.214482	-.009392	-.009563
23	.214287	-.007208	-.010389
24	.214238	-.011250	-.009846
25	.259775	.000901	-.009151
26	.259491	-.010467	-.008717
27	.259218	-.008482	-.009488
28	.259153	-.012699	-.007929
29	.299039	.000601	-.007480
30	.298830	-.011293	-.007275
31	.298839	-.009685	-.008009
32	.298910	-.013904	-.004116
33	.325867	.000232	-.003889
34	.326313	-.011896	-.003578
35	.327785	-.010803	-.004071
36	.328269	-.014897	-.001653
37	.334780	-.000113	-.001502
38	.334559	-.012198	-.000959
39	.336146	-.011595	-.001082
40	.337219	-.015535	-.001600
41	.340866	-.000470	-.001511
42	.340455	-.012460	-.000935
43	.341685	-.012295	-.000990
44	.342298	-.015991	-.001377
45	.346157	-.000768	-.001290
46	.345520	-.012642	-.000728
47	.346388	-.012804	-.000809
48	.346804	-.016277	-.001147
49	.350461	-.000982	-.001112
50	.349625	-.012757	-.000488
51	.350135	-.013126	

lisa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
52	.350252	-.016421	-.000518
53	.354068	-.001084	-.001195
54	.353109	-.012807	-.001110
55	.352494	-.013240	-.000179
56	.352410	-.016466	-.000301

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: N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000530	-.008484
5	.023080	-.002459	-.007848
6	.023184	-.001506	-.007424
7	.023256	-.002732	-.008161
8	.023155	.000958	-.010853
9	.066896	-.004663	-.010068
10	.066856	-.002935	-.009681
11	.066796	-.005241	-.010534
12	.066750	.001244	-.011374
13	.116089	-.006592	-.010573
14	.115979	-.004312	-.010171
15	.115875	-.007481	-.011053
16	.115837	.001381	-.011241
17	.165770	-.008247	-.010452
18	.165610	-.005638	-.010034
19	.165467	-.009443	-.010903
20	.165427	.001377	-.010785
21	.213964	-.009633	-.010030
22	.213758	-.006910	-.009599
23	.213575	-.011131	-.010434
24	.213527	.001246	-.010089
25	.259507	-.010760	-.009382
26	.259252	-.008122	-.008935
27	.259017	-.012558	-.009715
28	.258957	.001003	-.009065
29	.301250	-.011638	-.008429
30	.300926	-.009265	-.007980
31	.300616	-.013737	-.008696
32	.300542	.000672	-.007170
33	.336890	-.012281	-.006762
34	.336636	-.010327	-.006535
35	.336589	-.014690	-.007200
36	.336636	.000291	-.003743
37	.360866	-.012711	-.003513
38	.361131	-.011293	-.003176
39	.362470	-.015447	-.003616
40	.362863	-.000057	-.001548
41	.369031	-.012882	-.001390
42	.368563	-.011942	-.000827
43	.369945	-.015888	-.000939
44	.370820	-.000379	-.001433
45	.374419	-.013030	-.001351
16	.373739	-.012477	-.000772
7	.374750	-.016171	-.000803
8	.375172	-.000608	-.001185
9	.378877	-.013123	-.001141
0	.377995	-.012808	-.000497
1	.378590		

atis Portal (13 lantai) Kg/m

D I S P L A C E M E N T S

NATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

U(X)	U(Y)	R(Z)
.378689	-.016313	-.000541
.382612	-.000717	-.001242
.381597	-.013166	-.001140
.380995	-.012924	-.000182
.380914	-.016358	-.000319

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I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.022961	.000586	-.008443
6	.023065	-.002509	-.007810
7	.023137	-.001450	-.007385
8	.023037	-.002703	-.008120
9	.066560	.001071	-.010804
0	.066521	-.004763	-.010022
1	.066462	-.002821	-.009633
.2	.066416	-.005184	-.010483
.3	.115522	.001414	-.011327
14	.115412	-.006743	-.010528
15	.115309	-.004139	-.010123
16	.115271	-.007396	-.011003
17	.164986	.001611	-.011202
18	.164827	-.008451	-.010413
19	.164684	-.005406	-.009992
20	.164643	-.009332	-.010860
21	.213009	.001670	-.010765
22	.212804	-.009892	-.010008
23	.212620	-.006618	-.009573
24	.212572	-.010997	-.010408
25	.258506	.001602	-.010116
26	.258257	-.011076	-.009406
27	.258032	-.007768	-.008959
28	.257975	-.012399	-.009747
29	.300610	.001425	-.009269
30	.300311	-.012013	-.008619
31	.300036	-.008848	-.008158
32	.299966	-.013555	-.008880
33	.338343	.001157	-.008141
34	.337981	-.012715	-.007573
35	.337633	-.009849	-.007109
36	.337548	-.014480	-.007759
37	.369763	.000822	-.006291
38	.369463	-.013196	-.005931
39	.369359	-.010757	-.005681
40	.369381	-.015199	-.006267
41	.390461	.000458	-.003312
42	.390528	-.013478	-.003081
43	.391733	-.011558	-.002716
44	.392028	-.015742	-.003099
15	.397763	.000140	-.001427
6	.397019	-.013546	-.001259
7	.398204	-.012050	-.000685
8	.398851	-.016012	-.000766
9	.402363	-.000110	-.001244
0	.401419	-.013613	-.001208
1	.402162	-.012401	-.000536

)isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

)T	U(X)	U(Y)	R(Z)
52	.402255	-.016152	-.000537
53	.406294	-.000229	-.001309
54	.405213	-.013646	-.001181
55	.404629	-.012520	-.000176
56	.404545	-.016196	-.000348

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PROGRAM:SAP90/FILE:B-11.SOL

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

T	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.022842	.000645	-.008403
6	.022946	-.002565	-.007773
7	.023019	-.001393	-.007347
8	.022919	-.002670	-.008079
9	.066225	.001190	-.010756
10	.066186	-.004877	-.009976
11	.066129	-.002707	-.009584
12	.066082	-.005119	-.010432
13	.114952	.001595	-.011280
14	.114843	-.006917	-.010482
15	.114741	-.003966	-.010073
16	.114703	-.007300	-.010952
17	.164187	.001856	-.011159
18	.164029	-.008685	-.010371
19	.163887	-.005173	-.009944
20	.163846	-.009207	-.010812
21	.212000	.001981	-.010729
22	.211795	-.010189	-.009972
23	.211611	-.006324	-.009530
24	.211563	-.010843	-.010366
25	.257325	.001981	-.010095
26	.257075	-.011439	-.009384
27	.256850	-.007412	-.008929
28	.256792	-.012219	-.009720
29	.299355	.001875	-.009286
30	.299061	-.012444	-.008634
31	.298794	-.008429	-.008169
32	.298727	-.013348	-.008899
33	.337336	.001680	-.008302
34	.336993	-.013217	-.007719
35	.336678	-.009365	-.007242
36	.336597	-.014248	-.007896
37	.370417	.001417	-.007078
38	.370017	-.013770	-.006589
39	.369631	-.010209	-.006108
40	.369536	-.014939	-.006684
41	.397031	.001113	-.005294
42	.396686	-.014118	-.004988
43	.396526	-.010947	-.004715
44	.396524	-.015445	-.005216
45	.414028	.000804	-.002830
46	.413877	-.014281	-.002592
47	.414971	-.011565	-.002209
48	.415147	-.015796	-.002506
49	.420370	.000553	-.001297
50	.419354	-.014286	-.001155
	.420293	-.011881	-.000464

lisa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
52	.420555	-.015926	-.000513
53	.424546	.000421	-.001399
54	.423371	-.014306	-.001271
55	.422839	-.012010	-.000207
56	.422759	-.015969	-.000339

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

) COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.022725	.000712	-.008363
6	.022828	-.002638	-.007736
7	.022902	-.001329	-.007309
8	.022803	-.002635	-.008038
9	.065896	.001325	-.010709
10	.065857	-.005024	-.009931
11	.065800	-.002580	-.009536
12	.065754	-.005049	-.010382
13	.114394	.001800	-.011235
14	.114285	-.007139	-.010438
15	.114184	-.003774	-.010025
16	.114146	-.007198	-.010902
17	.163406	.002133	-.011118
18	.163248	-.008985	-.010329
19	.163106	-.004915	-.009897
20	.163065	-.009073	-.010765
21	.211008	.002331	-.010694
22	.210803	-.010569	-.009935
23	.210620	-.005999	-.009485
24	.210571	-.010678	-.010323
25	.256140	.002409	-.010067
26	.255890	-.011901	-.009353
27	.255665	-.007018	-.008889
28	.255607	-.012025	-.009682
29	.298008	.002382	-.009270
30	.297714	-.012992	-.008613
31	.297447	-.007964	-.008138
32	.297379	-.013126	-.008873
33	.335897	.002270	-.008313
34	.335559	-.013855	-.007726
35	.335251	-.008828	-.007240
36	.335173	-.014000	-.007905
37	.369118	.002094	-.007197
38	.368731	-.014502	-.006689
39	.368375	-.009598	-.006193
40	.368283	-.014665	-.006772
41	.396930	.001877	-.005885
42	.396492	-.014947	-.005482
43	.396070	-.010261	-.004979
44	.395968	-.015145	-.005478
45	.418159	.001648	-.004187
46	.417768	-.015205	-.003934
47	.417567	-.010803	-.003649
48	.417535	-.015464	-.004030
49	.431032	.001440	-.002298
50	.430698	-.015297	-.002105
	.431632	-.011210	-.001581

RASTA S.H. & YAZID, GONDOLAYU PROJECT PROGRAM:SAP90/FILE:B-12.SOL

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

NT	U(X)	U(Y)	R(Z)
52	.431516	-.015653	-.001785
53	.436844	.001305	-.001589
54	.435549	-.015283	-.001210
55	.435120	-.011304	-.000088
56	.435210	-.015694	-.000344

RASTA S.H. & YAZID, GONDOLAYU PROJECT

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

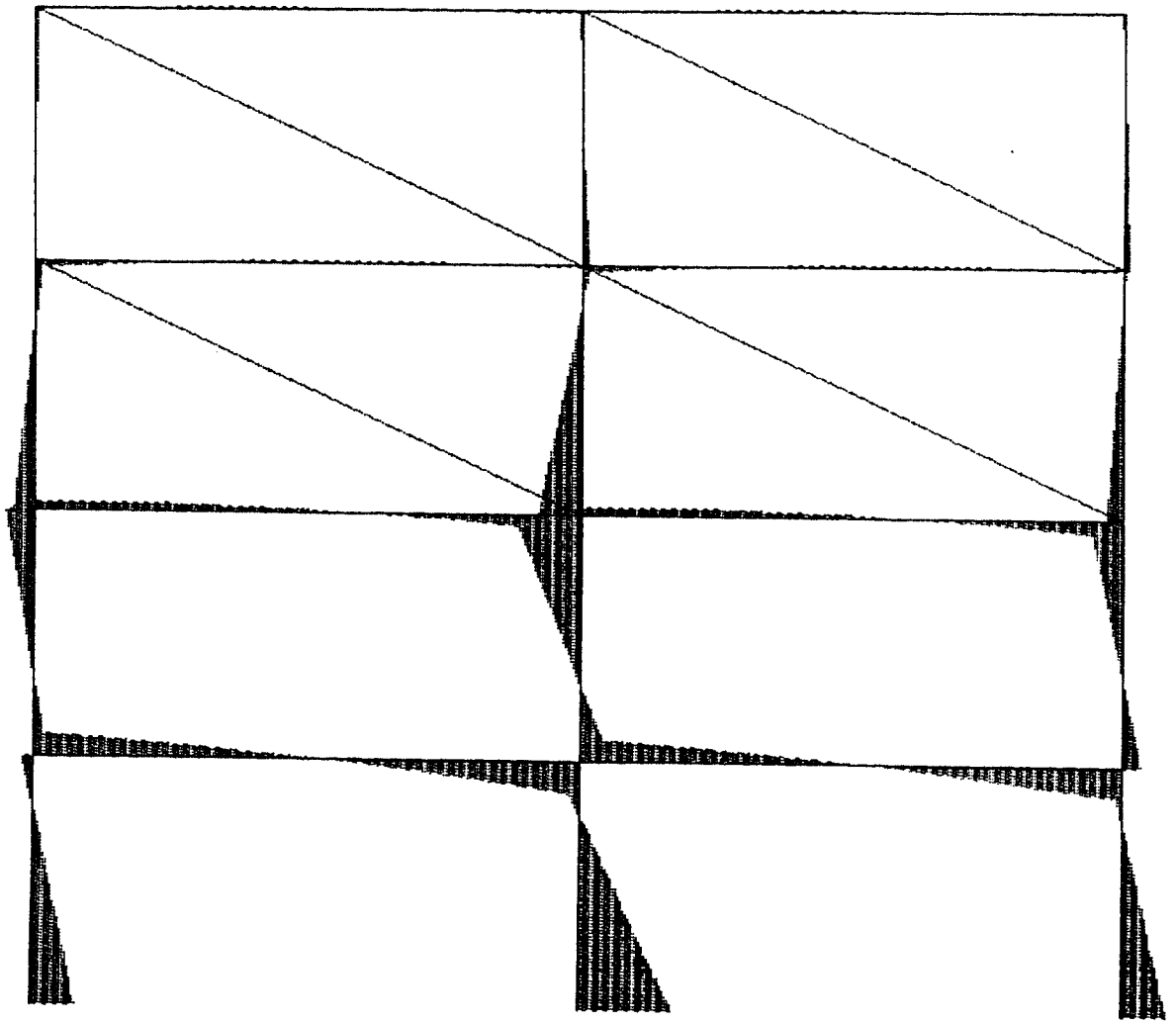
T	U(X)	U(Y)	R(Z)
1	.000000	.000000	.000000
2	.000000	.000000	.000000
3	.000000	.000000	.000000
4	.000000	.000000	.000000
5	.022593	.000624	-.008354
6	.022703	-.003133	-.007736
7	.022798	-.001606	-.007237
8	.022704	-.002790	-.007972
9	.065578	.001165	-.010699
.0	.065544	-.005981	-.009926
.1	.065494	-.003100	-.009462
12	.065450	-.005347	-.010312
13	.113892	.001582	-.011234
14	.113785	-.008528	-.010441
15	.113689	-.004504	-.009953
16	.113652	-.007627	-.010837
17	.162747	.001873	-.011130
18	.162590	-.010776	-.010342
19	.162454	-.005820	-.009830
20	.162414	-.009619	-.010706
21	.210226	.002047	-.010718
22	.210024	-.012734	-.009959
23	.209845	-.007046	-.009424
24	.209797	-.011330	-.010272
25	.255275	.002118	-.010105
26	.255027	-.014412	-.009388
27	.254806	-.008173	-.008835
28	.254748	-.012769	-.009640
29	.297102	.002103	-.009324
30	.296810	-.015822	-.008661
31	.296547	-.009194	-.008092
32	.296479	-.013950	-.008842
33	.335006	.002021	-.008385
34	.334670	-.016978	-.007790
35	.334365	-.010098	-.007207
36	.334287	-.014889	-.007889
37	.368325	.001894	-.007299
38	.367944	-.017893	-.006782
39	.367597	-.010874	-.006188
40	.367508	-.015606	-.006791
41	.396437	.001747	-.006077
42	.396012	-.018581	-.005649
43	.395622	-.011509	-.005047
44	.395521	-.016124	-.005561
45	.418800	.001605	-.004748
46	.418335	-.019058	-.004419
47	.417913	-.011990	-.003818
48	.417811	-.016466	-.004243
49	.435112	.001497	-.003411
50	.434663	-.019341	-.003227
51	.434259	-.012301	-.002628

isa Statis Portal (13 lantai) Kg/m

I N T D I S P L A C E M E N T S

COMBINATION 1 - DISPLACEMENTS "U" AND ROTATIONS "R"

IT	U(X)	U(Y)	R(Z)
52	.434116	-.016659	-.002887
53	.446483	.001449	-.002854
54	.445880	-.019444	-.002420
55	.444956	-.012429	-.001386
56	.444769	-.016730	-.001860



Y
X

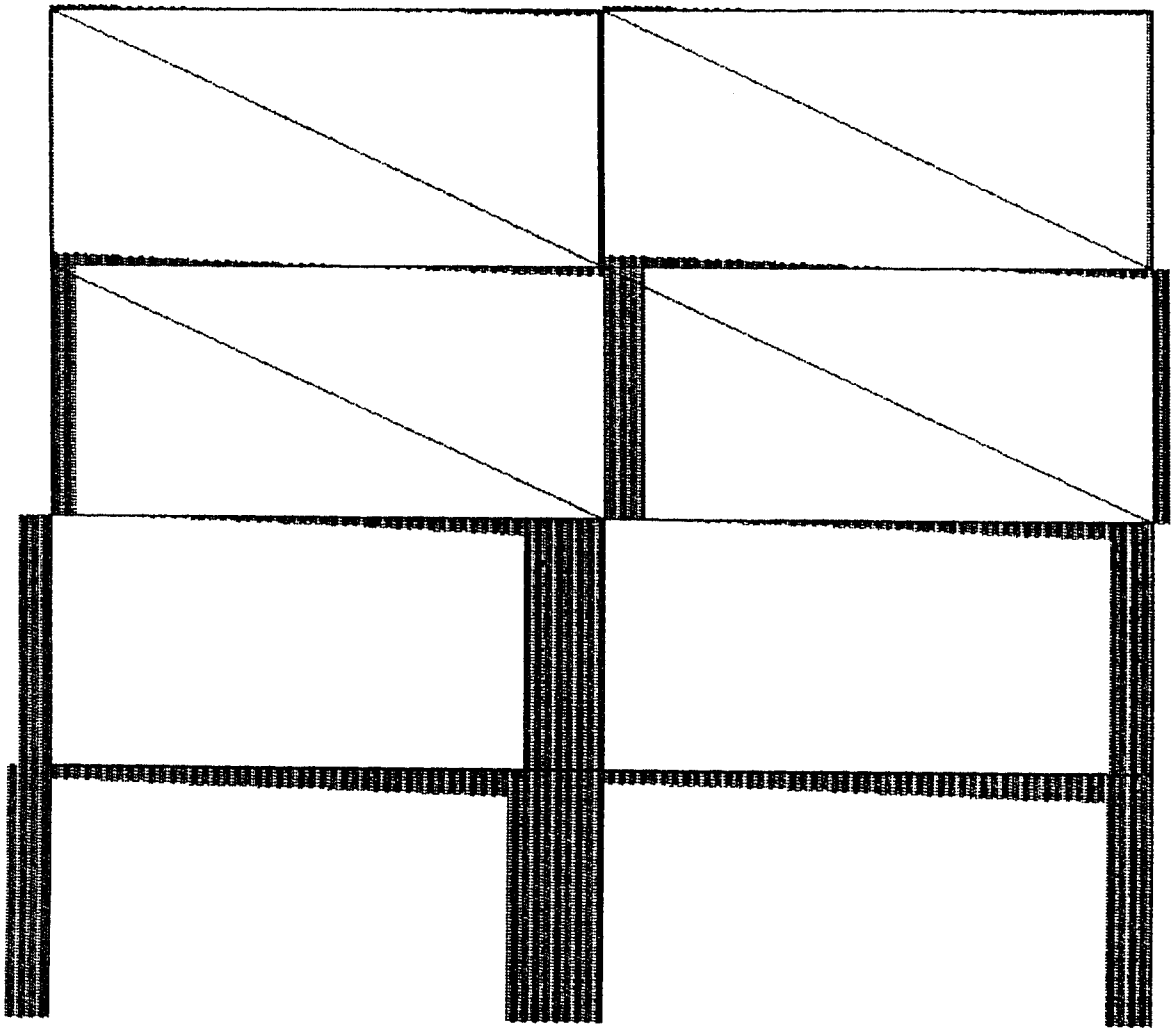
I-2

FRAME
OUTPUT M33
LOAD 1

ENVELOPES

MIN < 2>
-.7789E+06
AT .00
MAX < 5>
.5682E+06
AT 4.80

SAP90



Y
X

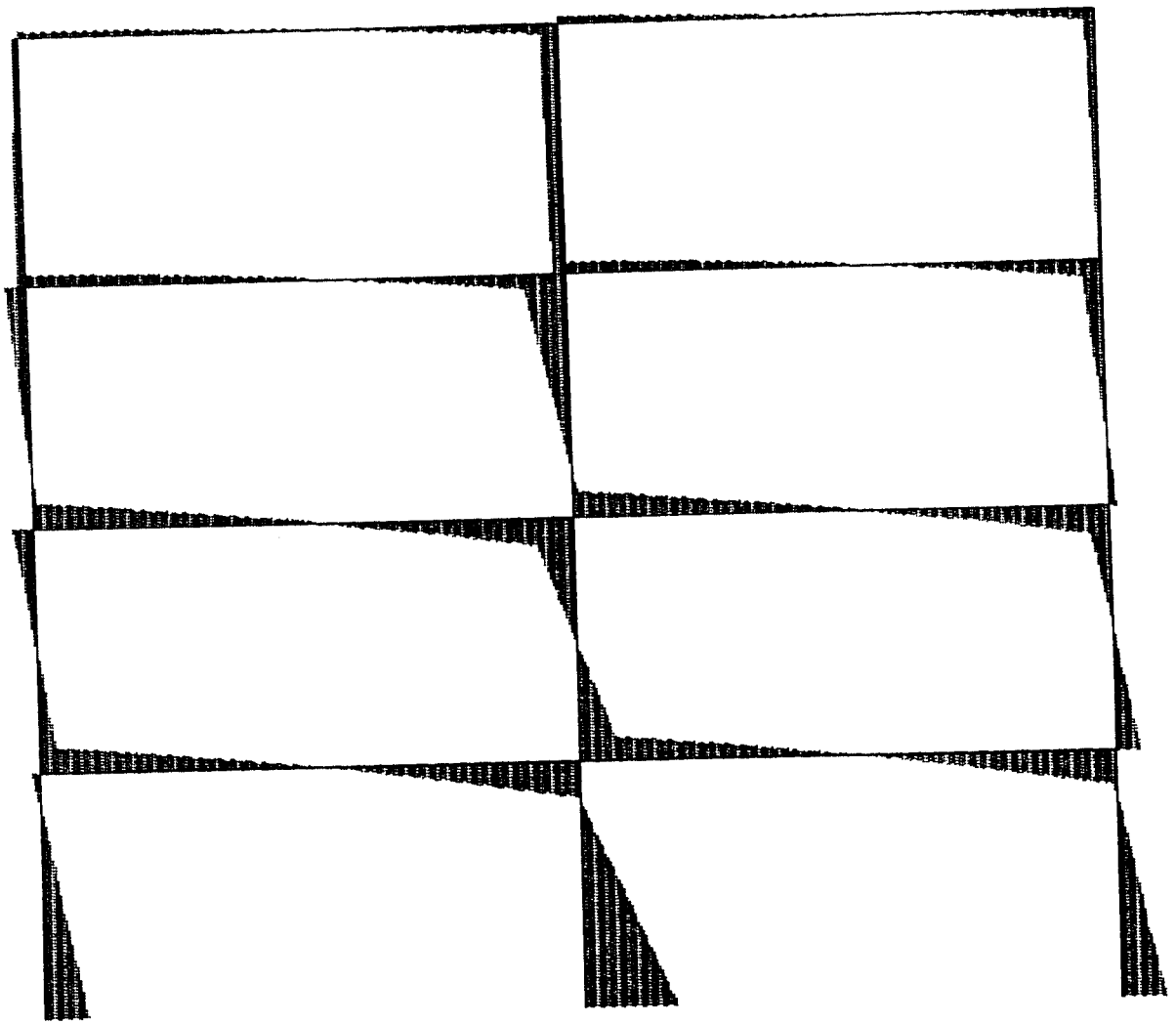
I-2

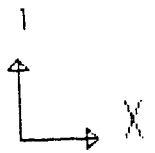
FRAME
OUTPUT V22
LOAD 1

ENVELOPES

MIN < 8>
-.8842E+05
AT .00
MAX < 2>
.2046E+06
AT .00

SAP90



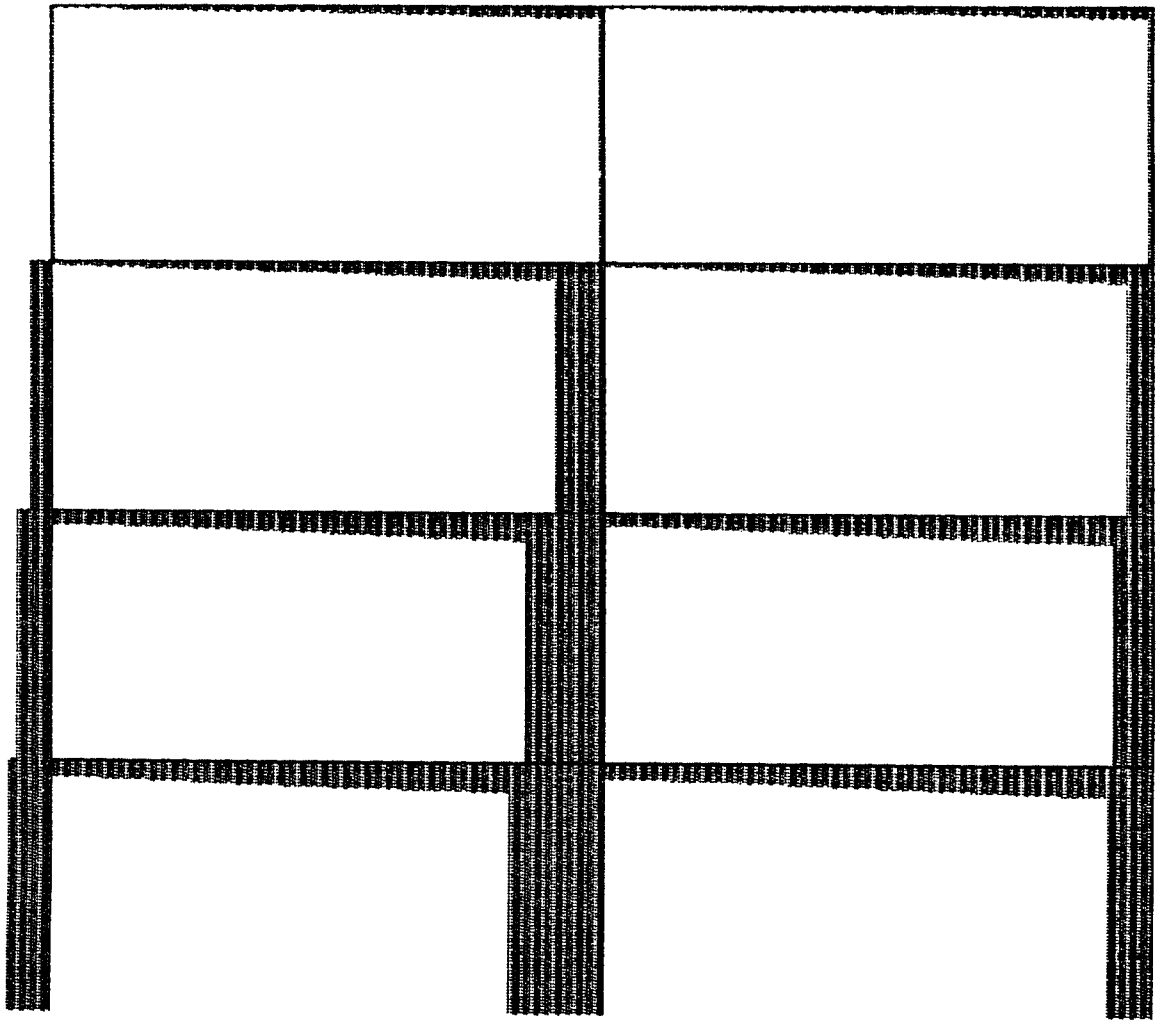


I-K

FRAME
OUTPUT M33
LOAD 1

ENVELOPES
MIN < 2>
-.8209E+06
AT .00
MAX < 5>
.4176E+06
AT 4.80

SAP90



Y
X

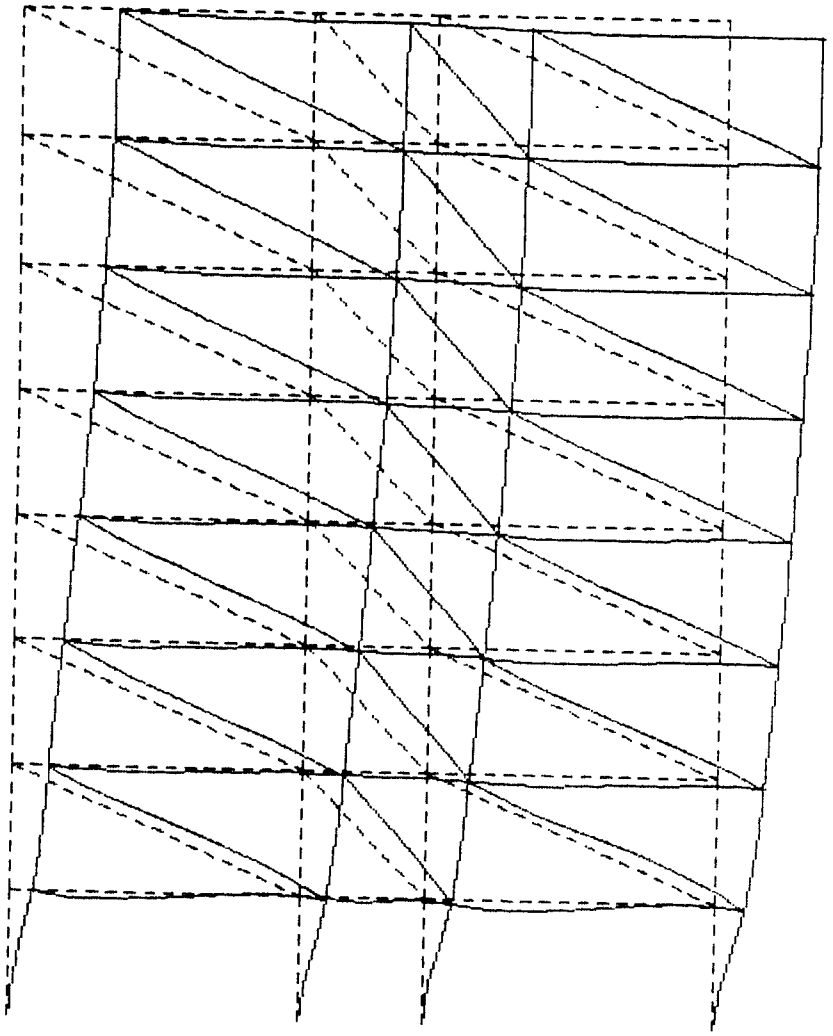
I-K

FRAME
OUTPUT V22
LOAD 1

ENVELOPES

MIN < 13>
-.7018E+05
AT 10.60
MAX < 2>
.2019E+06
AT .00

SAP90



Y
X

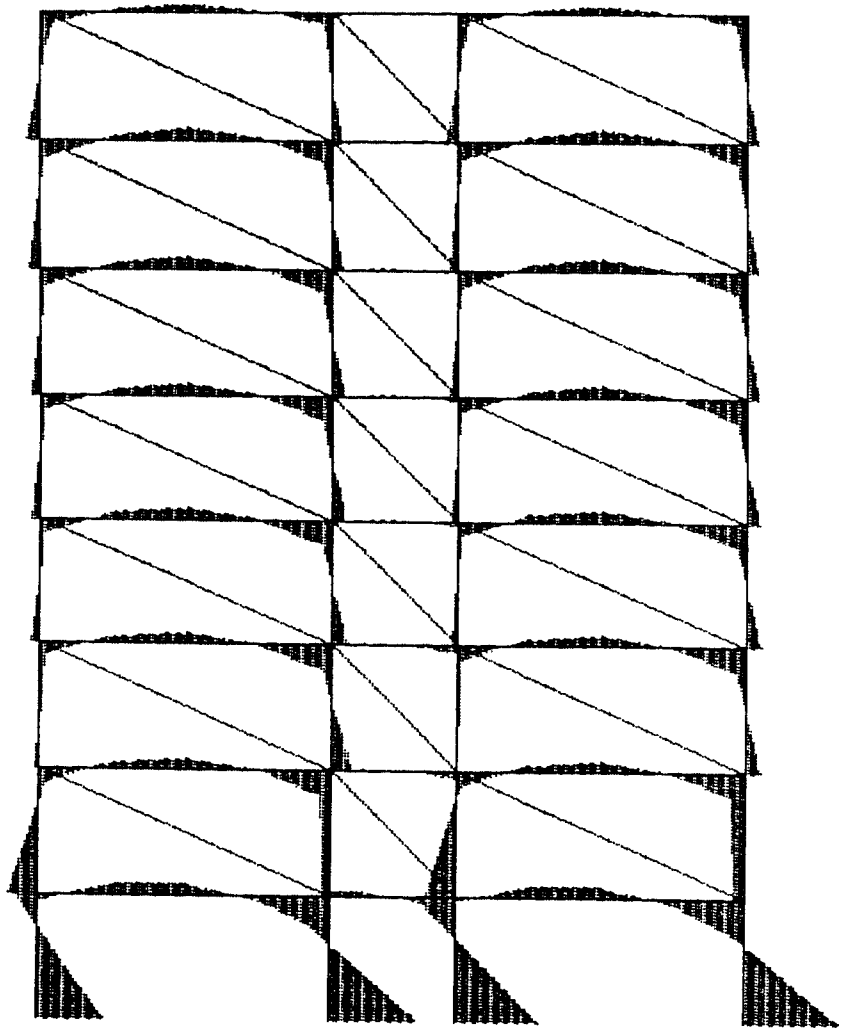
A-1

DEFORMED
SHAPE

LOAD 1

MINIMA
X .0000E+00
Y -.3292E-02
Z .0000E+00
MAXIMA
X .2010E-01
Y .0000E+00
Z .0000E+00

SAP90



Y

X

A-1

FRAME

OUTPUT M33

LOAD 1

ENVELOPES

MIN < 4>

-.5536E+05

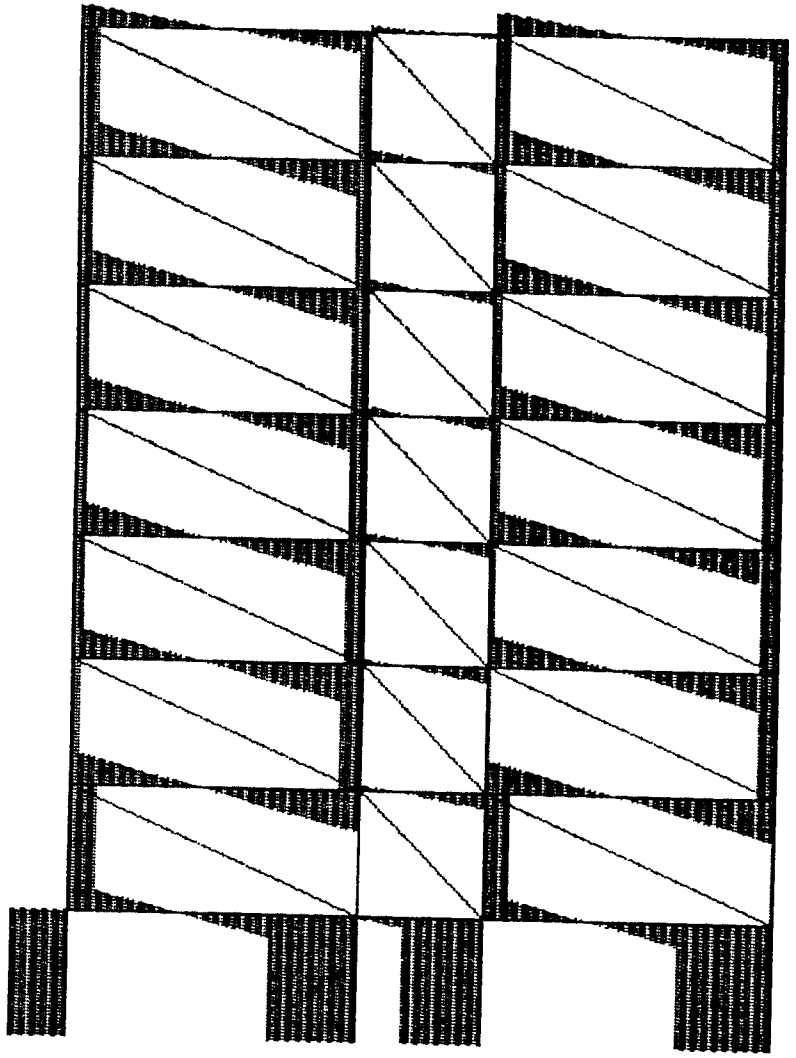
AT .00

MAX < 4>

.3041E+05

AT 3.00

SAP90



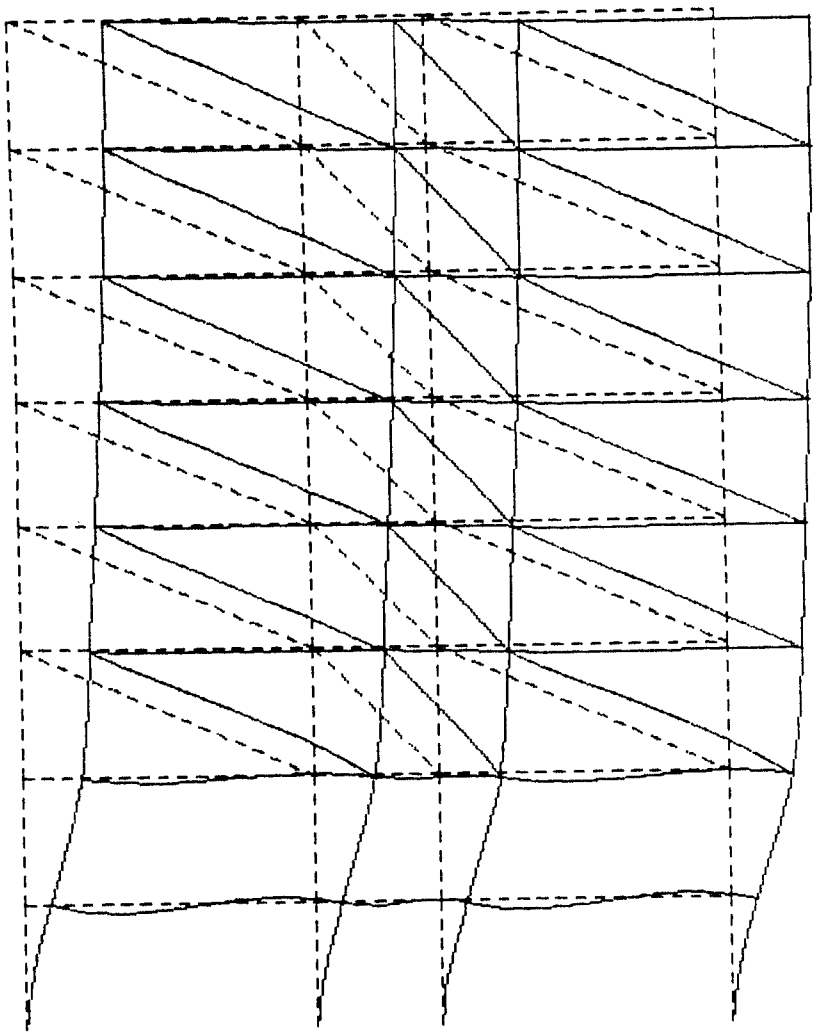
Y
X

A-1

FRAME
OUTPUT V22
LOAD 1

ENVELOPES
MIN < 35>
-.1428E+05
AT 7.00
MAX < 4>
.2859E+05
AT .00

SAP90



Y
X

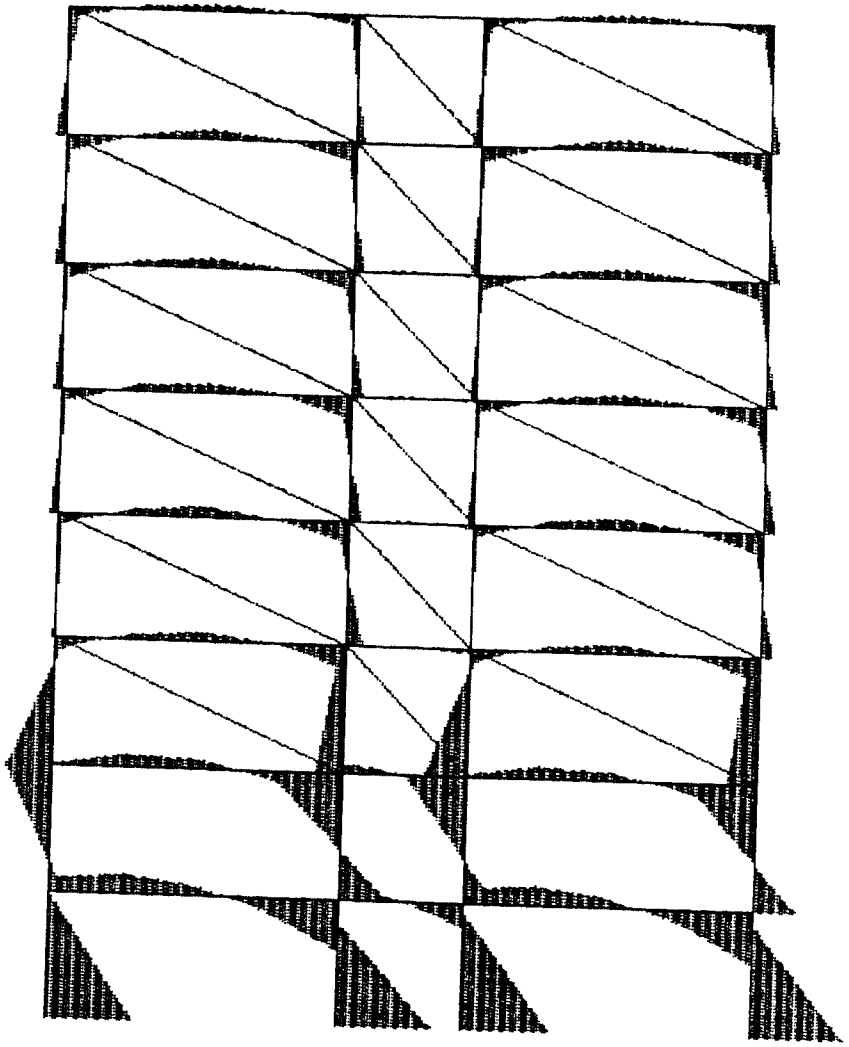
A-2

DEFORMED
SHAPE

LOAD 1

MINIMA
X .0000E+00
Y -.3324E-02
Z .0000E+00
MAXIMA
X .3371E-01
Y .0000E+00
Z .0000E+00

SAP90



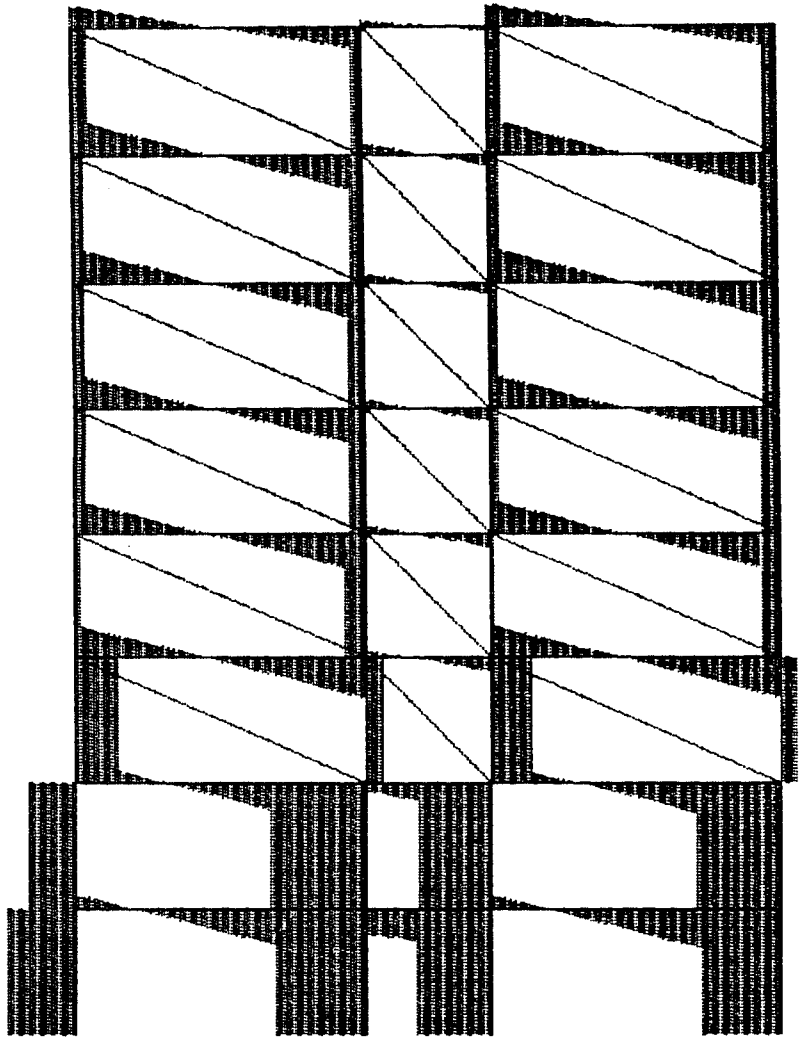
Y
X

A-2

FRAME
OUTPUT M33
LOAD 1

ENVELOPES
MIN < 2>
-.6833E+05
AT .00
MAX < 6>
.5406E+05
AT 3.00

SAP90



Y
X

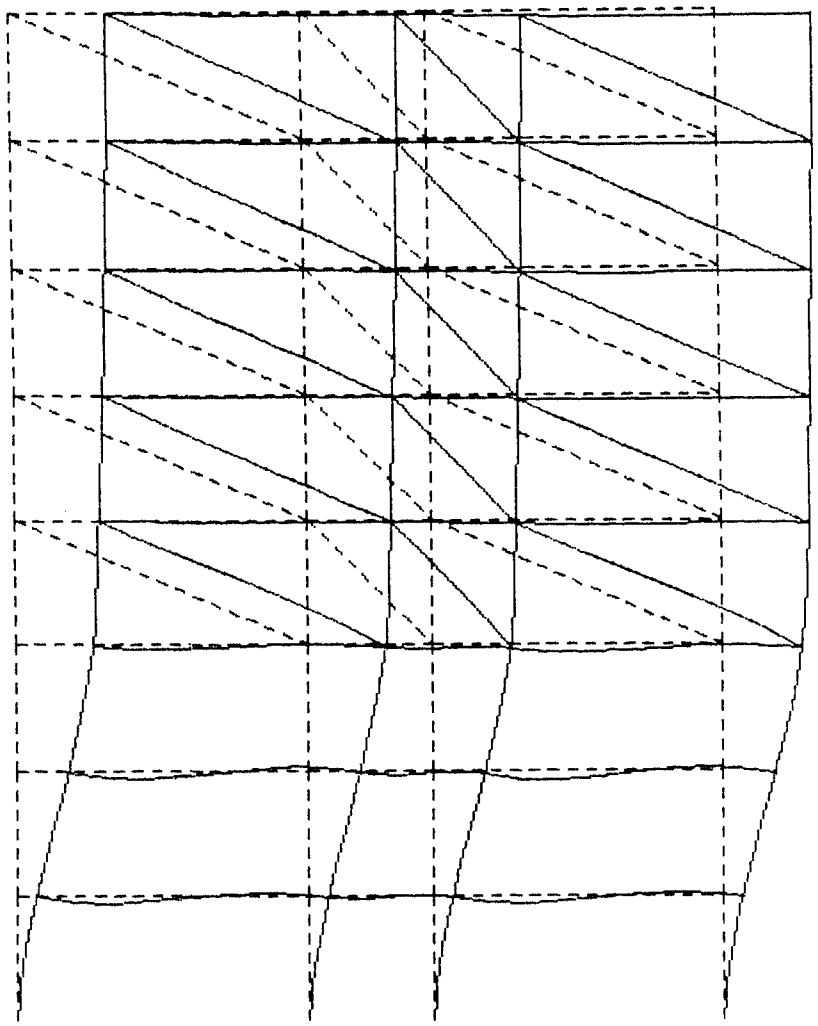
A-2

FRAME
OUTPUT V22
LOAD 1

ENVELOPES

MIN < 35>
-.1819E+05
AT 7.00
MAX < 6>
.2938E+05
AT .00

SAP90



Y
X

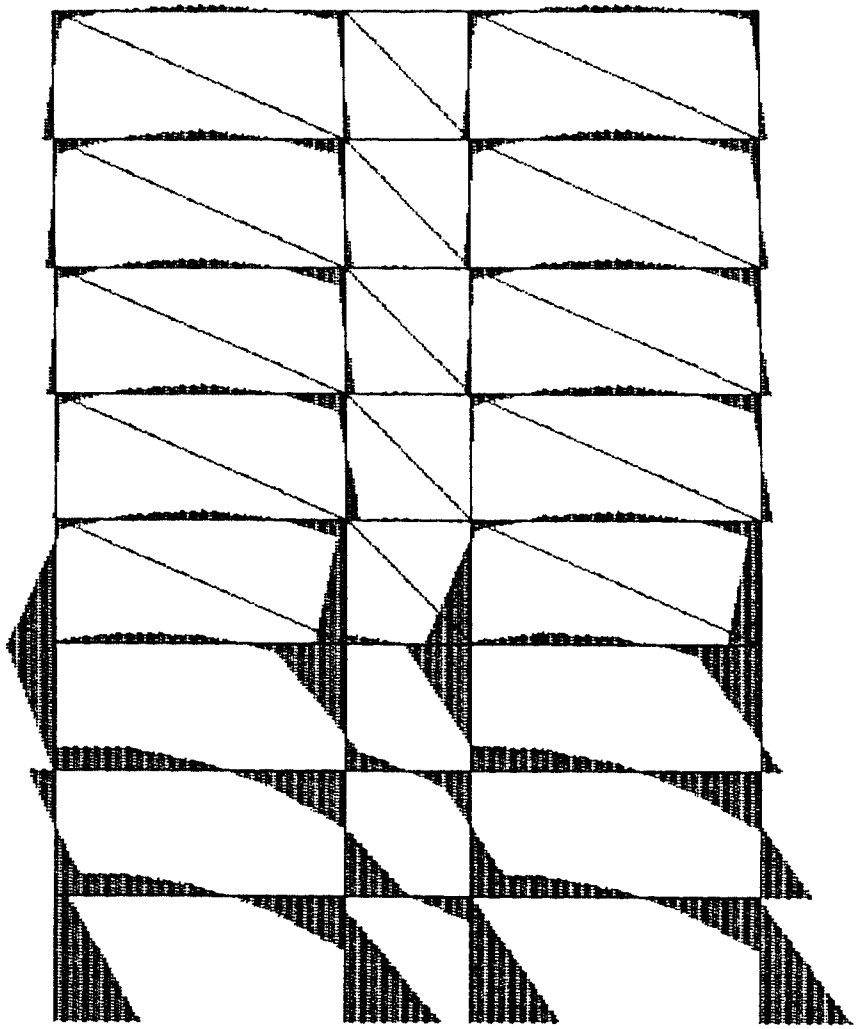
A-3

DEFORMED
SHAPE

LOAD 1

MINIMA
X .0000E+00
Y -.3359E-02
Z .0000E+00
MAXIMA
X .5308E-01
Y .0000E+00
Z .0000E+00

SAP90



Y
X

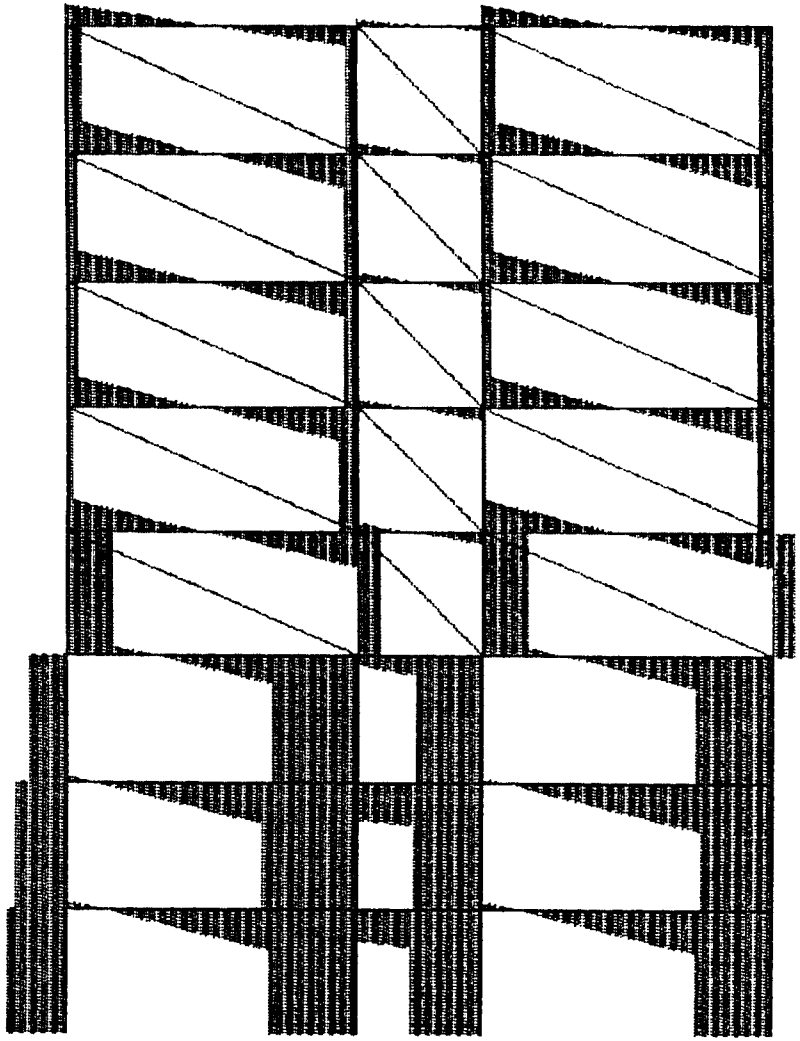
α-3

FRAME
OUTPUT M33
LOAD 1

ENVELOPES

MIN < 2>
-.7527E+05
AT .00
MAX < 10>
.6103E+05
AT 3.00

SAP90



Y
X

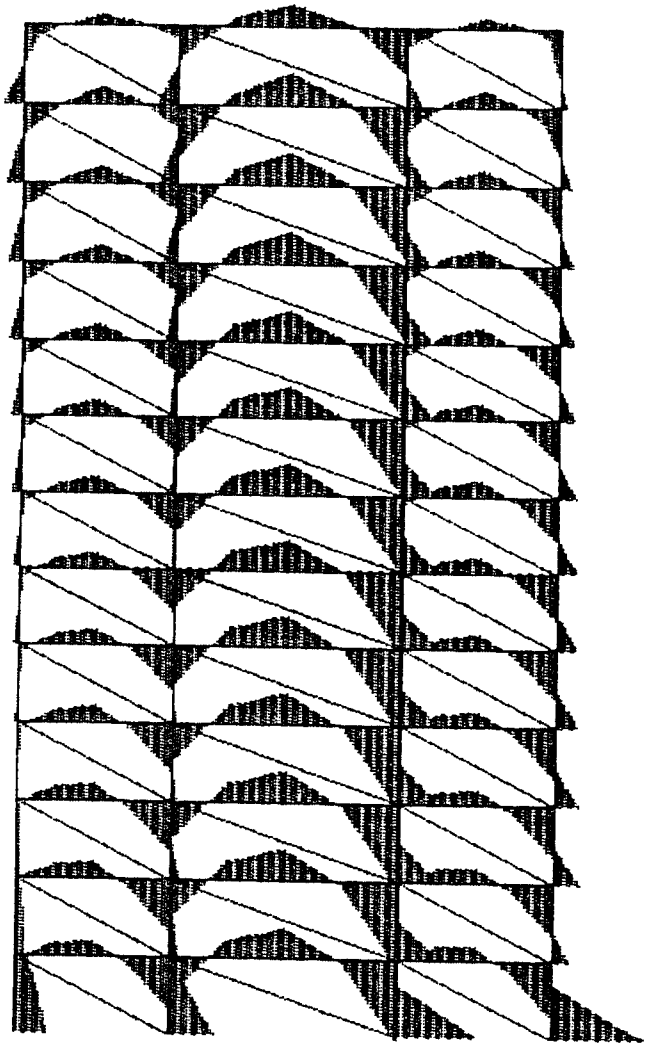
α-3

FRAME
OUTPUT V22
LOAD 1

ENVELOPES

MIN < 38>
-.2075E+05
AT 7.00
MAX < 6>
.3050E+05
AT .00

SAP90



Y
X

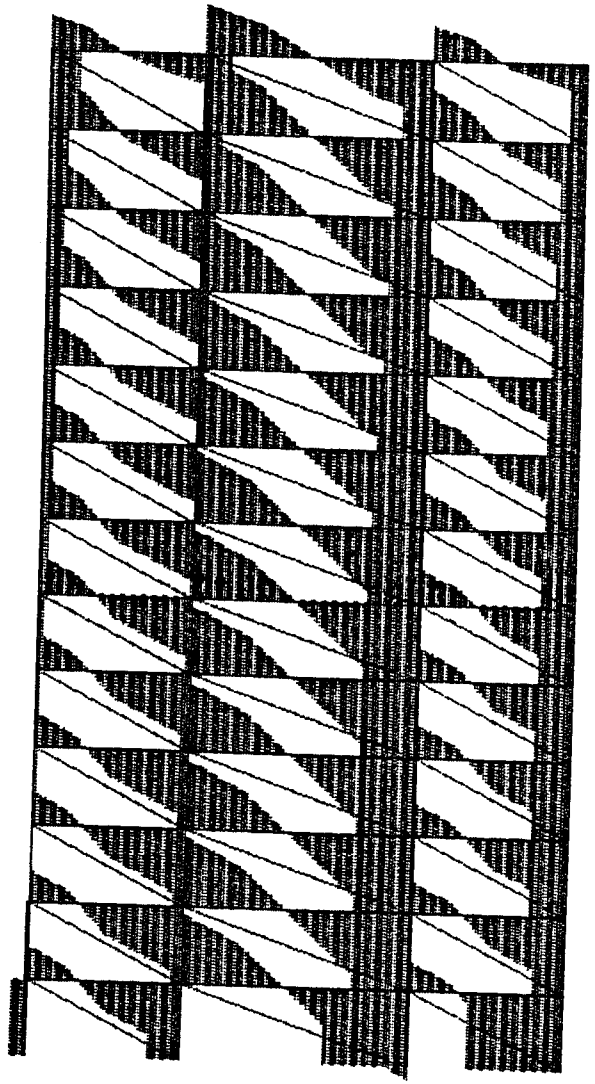
B-P

FRAME
OUTPUT M33
LOAD 1

ENVELOPES

MIN < 4>
-.9948E+05
AT .00
MAX < 15>
.4179E+05
AT 4.00

SAP90



Y
X

B-P

FRAME

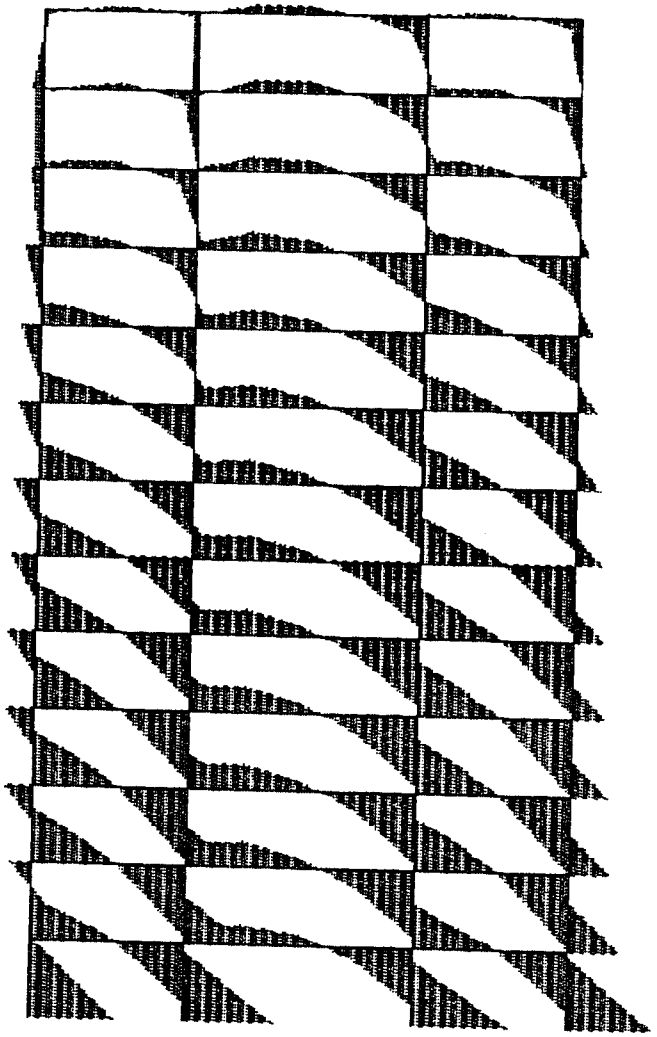
OUTPUT V22

LOAD 1

ENVELOPES

MIN < 63>
-.3321E+05
AT 12.00
MAX < 4>
.3495E+05
AT .00

SAP90



Y
X

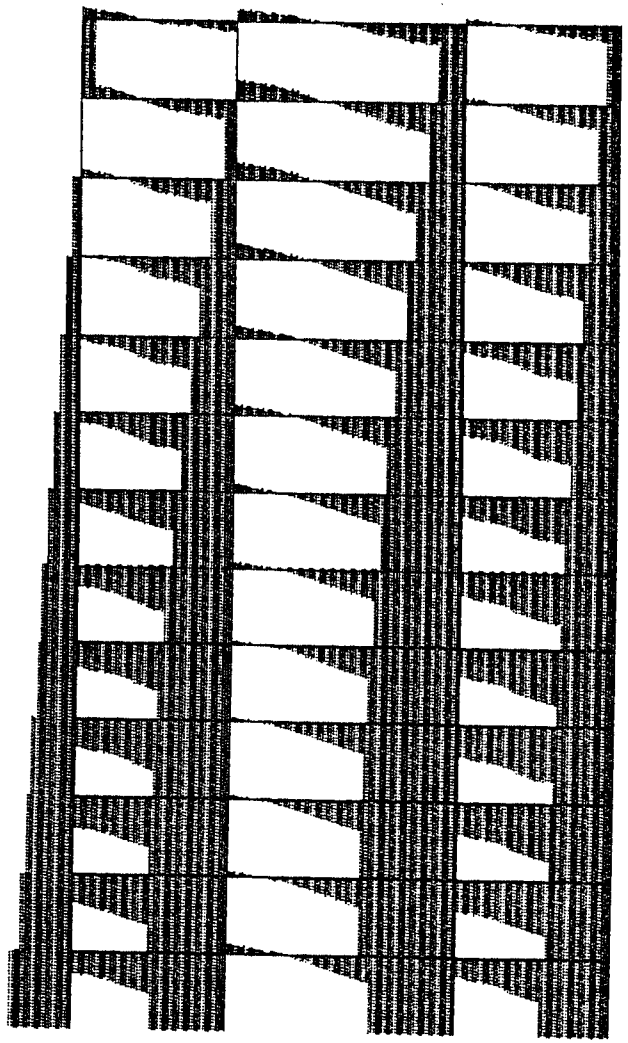
B-K

FRAME
OUTPUT M33
LOAD 1

ENVELOPES

MIN < 3>
-.2956E+06
AT .00
MAX < 15>
.1975E+06
AT 4.00

SAP90



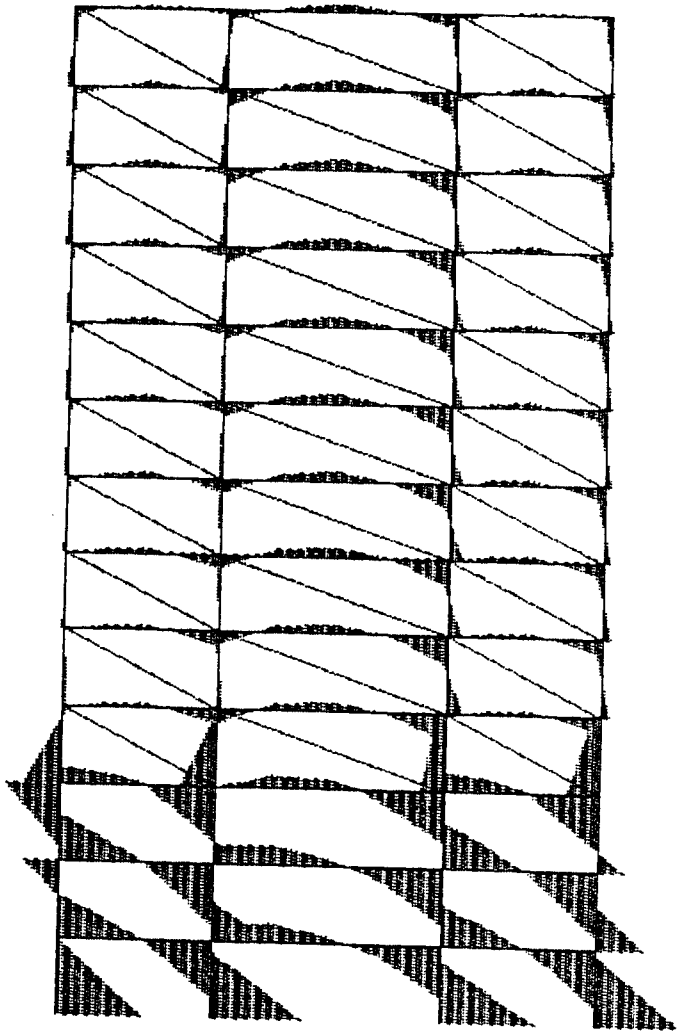
Y
X

B-K

FRAME
OUTPUT V22
LOAD 1

ENVELOPES
MIN < 61>
-.6961E+05
AT 8.00
MAX < 11>
.9950E+05
AT .00

SAP90



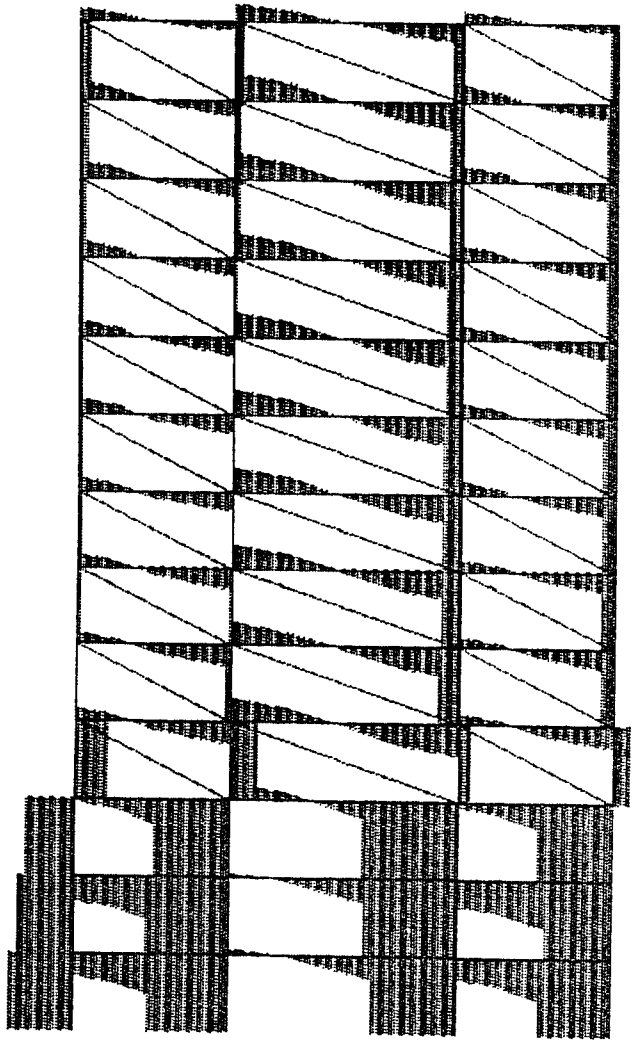
Y
X

B-3

FRAME
OUTPUT M33
LOAD 1

ENVELOPES
MIN < 3>
-.3001E+06
AT .00
MAX < 1>
.2657E+06
AT 4.00

SAP90



Y
X

B-3

FRAME
OUTPUT V22
LOAD 1

ENVELOPES
MIN < 58>
-.5873E+05
AT 8.00
MAX < 11>
.1014E+06
AT .00

SAP90