

DESAIN ARSITEKTUR 5
MODUL 3

MIXED USE BUILDING

PUTU AGNESSIA BELLASARI KUSUMA
17021102051

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Apartment



KONSEP TATA TAPAK

Zonasi Pemanfaatan Lahan

Shopping Center



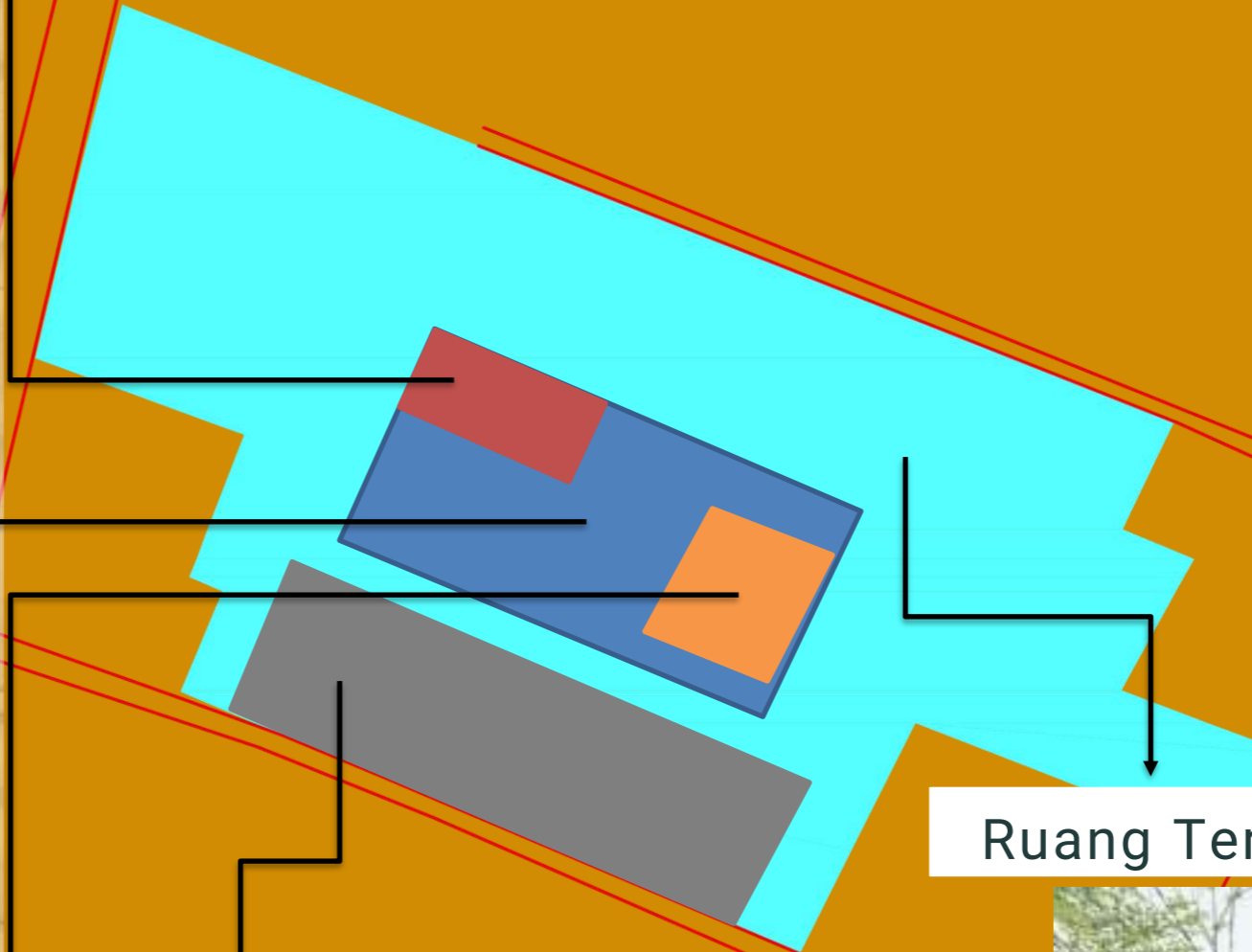
Ruang Terbuka Hijau



Rental Office

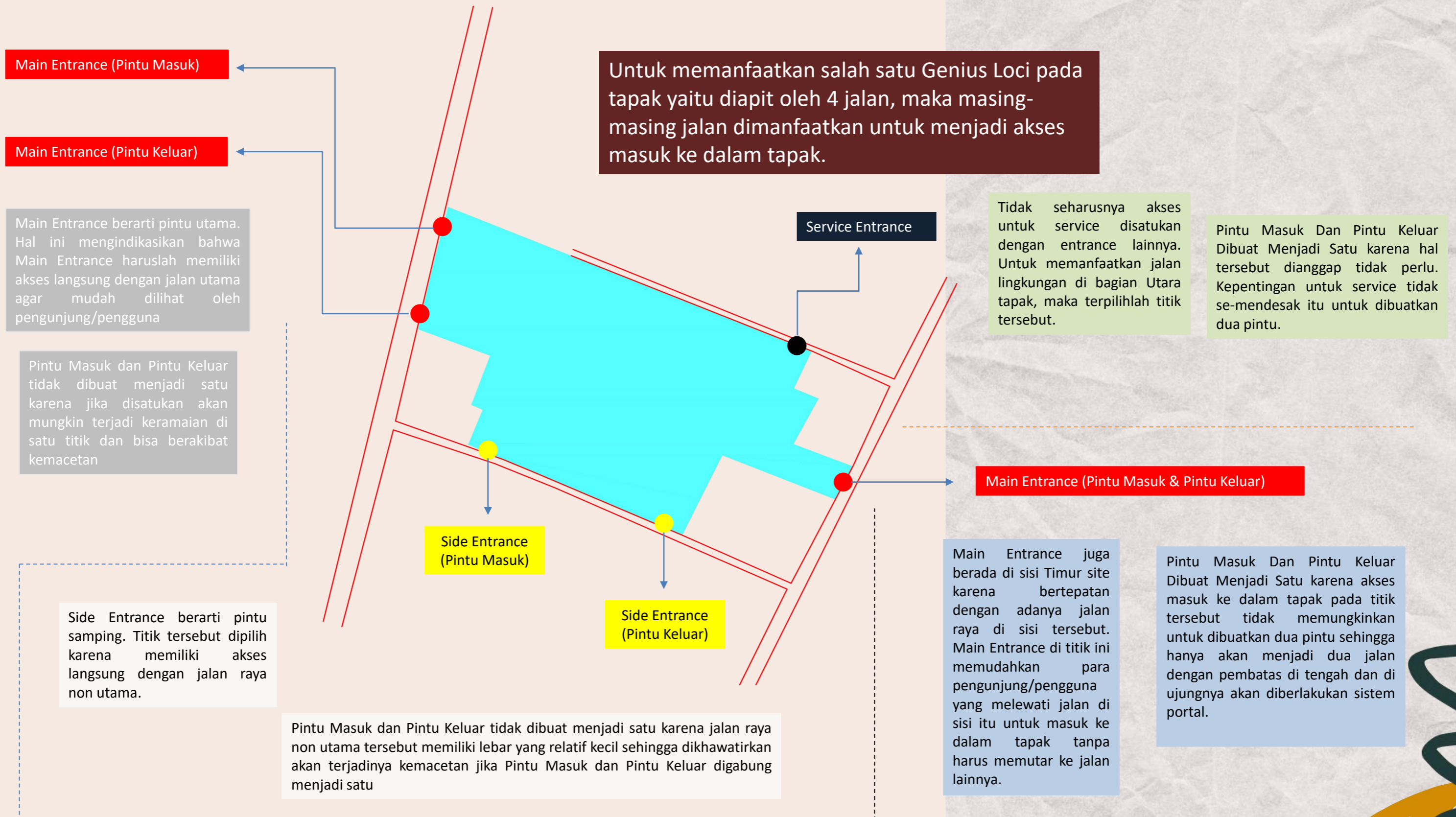


Parking Area



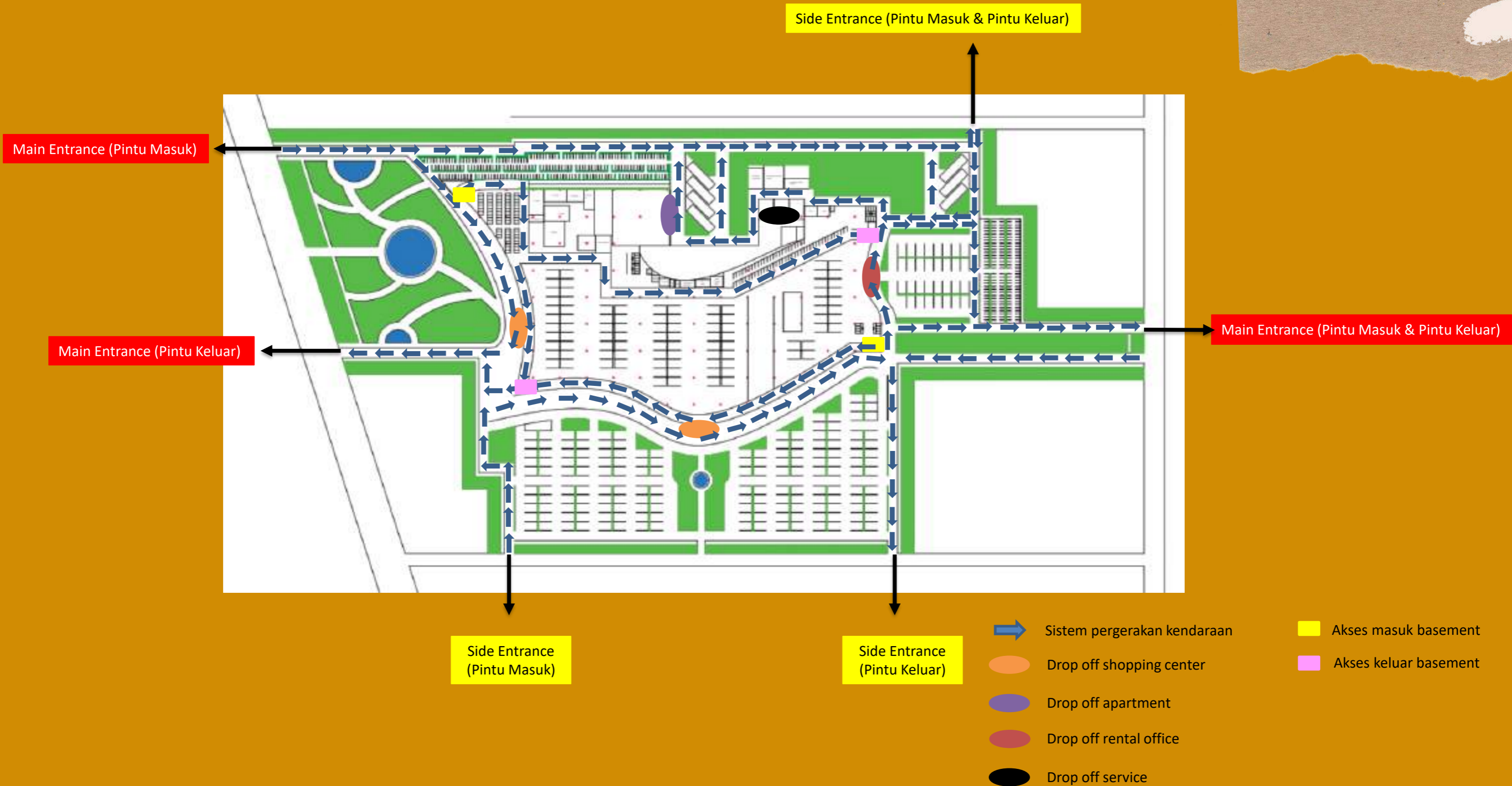
KONSEP TATA TAPAK

Perletakan Akses Masuk-Keluar Tapak



KONSEP TATA TAPAK

Sistem Dan Jalur Pergerakan Di Dalam Tapak



Demi faktor keamanan, maka di setiap pintu masuk dan keluar akan diterapkan sistem portal.



Sumber gambar:
https://www.google.com/url?sa=i&url=http%3A%2F%2Fparkirotomatis.com%2Fpage%2F2%2F&psig=AOvVaw3OWXGml_LbyKqDmReVkQdr&ust=1585673381303000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCKDNqPHTwugCFQAAAAAdAAAAABAI

KONSEP KONFIGURASI MASSA BANGUNAN

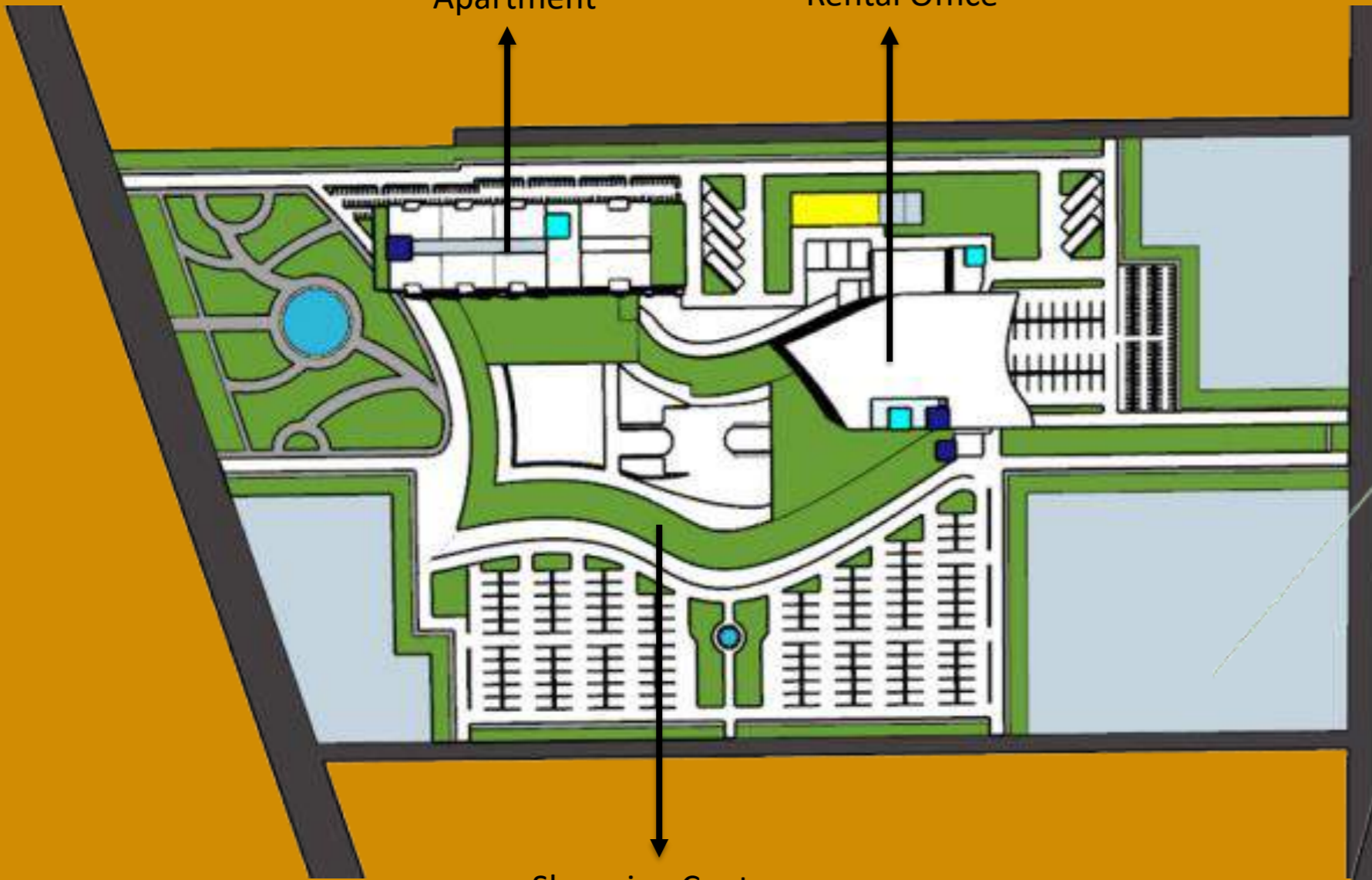
Perletakan Relatif Massa Pada Tapak



Apartment

Rental Office

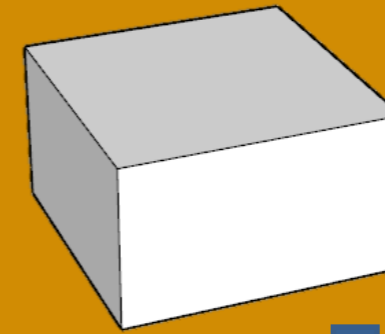
Shopping Center



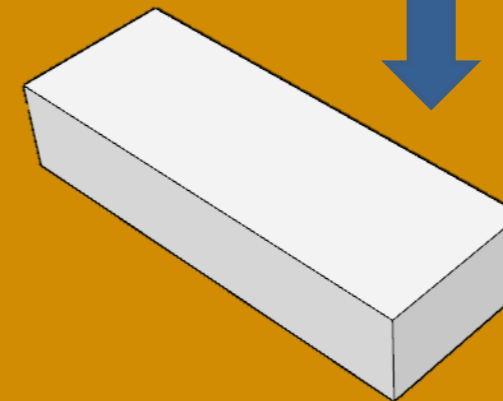
KONSEP KONFIGURASI MASSA BANGUNAN

Konfigurasi Geometri Massa

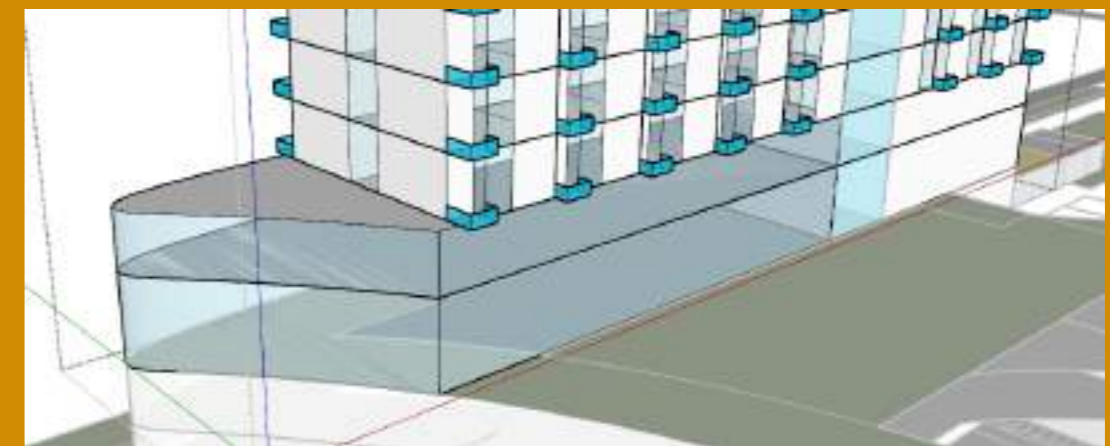
APARTMENT



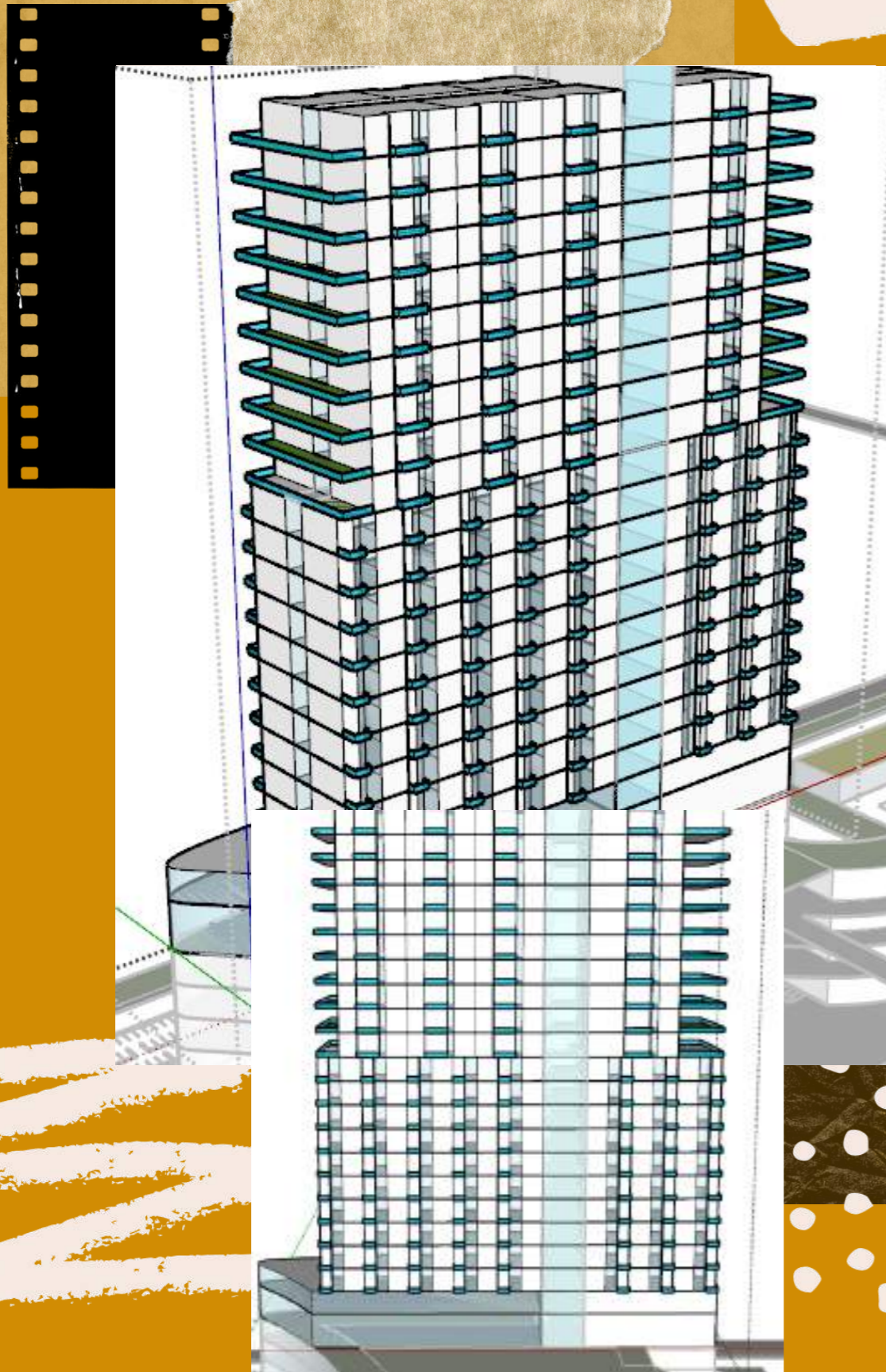
Bentuk awal berbentuk kotak



Massa kemudian menjadi memanjang karena menimbang satu lantai apartment memiliki beberapa unit kamar



Lantai 1 dan 2 apartment mengikuti bentuk massa shopping center yang berada di bawahnya. Bentuk lengkungan menerapkan sifat air yang fleksibel

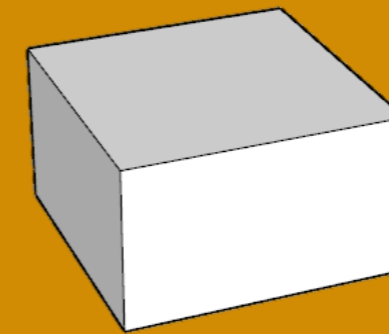
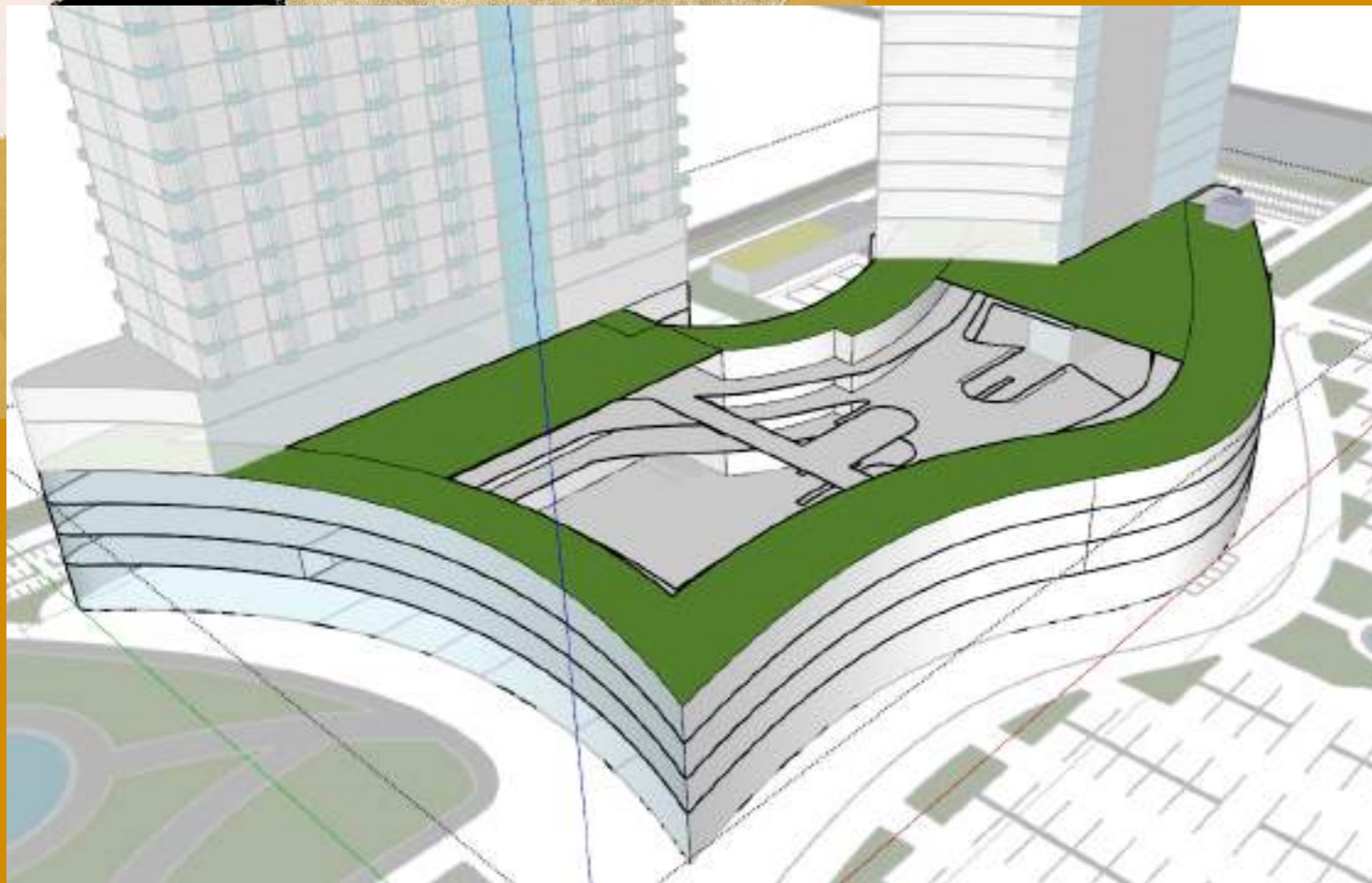


Bentukan yang ada kemudian diterapkan pada lantai-lantai selanjutnya (vertikal) sehingga membentuk satu tower apartment

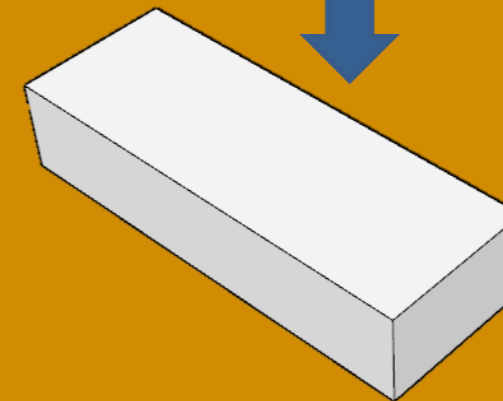
KONSEP KONFIGURASI MASSA BANGUNAN

Konfigurasi Geometri Massa

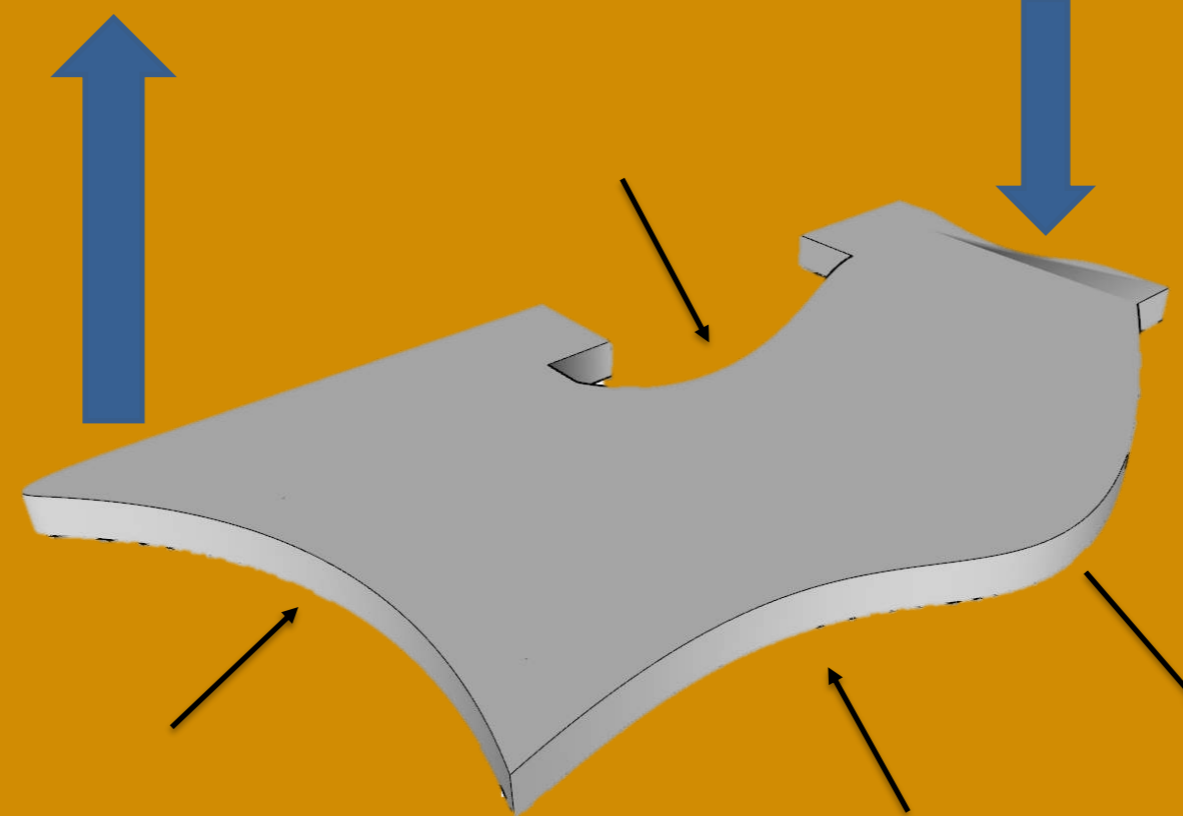
SHOPPING CENTER



Bentuk awal berbentuk kotak



Massa kemudian menjadi memanjang karena menimbang shopping center yang menjadi tumpuan untuk apartment dan rental office, dan juga sebagai pemanfaatan lahan yang bentuknya memanjang



Massa shopping center kemudian dinaikkan (vertikal) dan dibuat sebuah bukaan/void. Hal ini bertujuan untuk memanfaatkan cahaya alami dari matahari sehingga bisa mengurangi pengeluaran untuk lampu (penerapan tema capital investment)

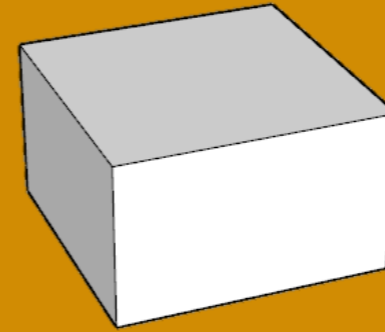
Pada beberapa bagian dibuat menjadi cekung dan cembung agar massa terlihat seperti mengalir/bergelombang dan tidak kaku. Hal ini untuk menerapkan tema Tangible Metaphor. Adapun analogi yang diambil yaitu sifat air yang fleksibel dan terus bergerak

KONSEP KONFIGURASI MASSA BANGUNAN

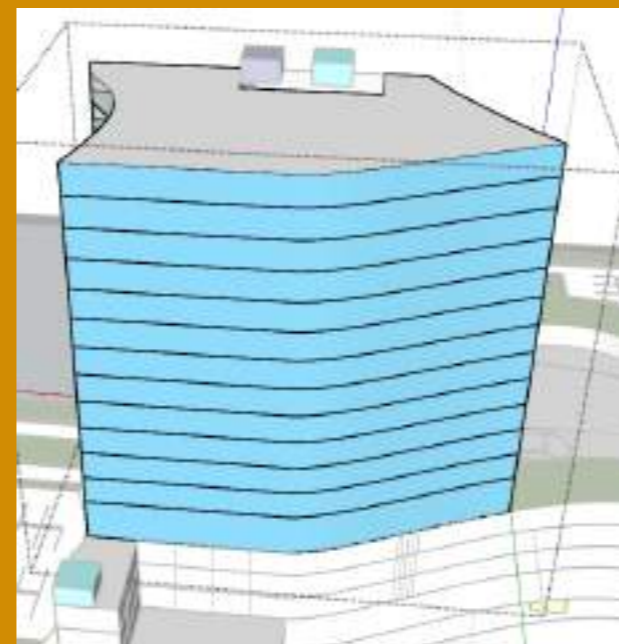
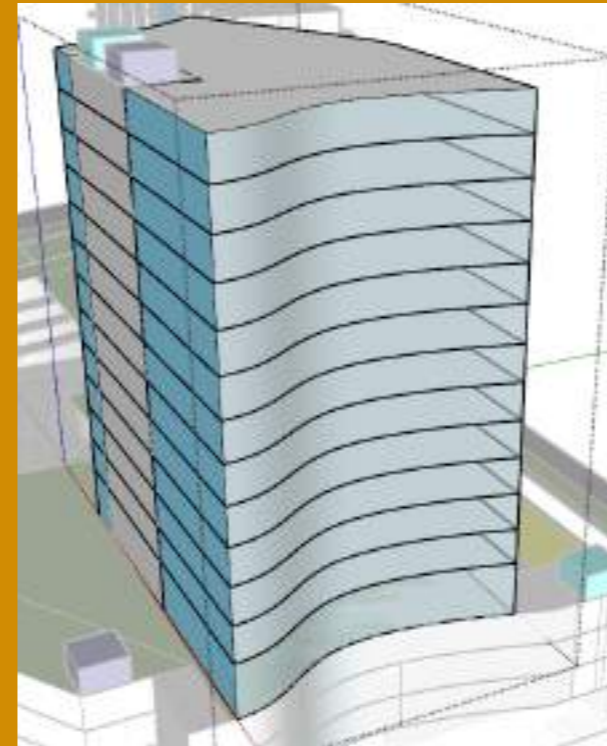
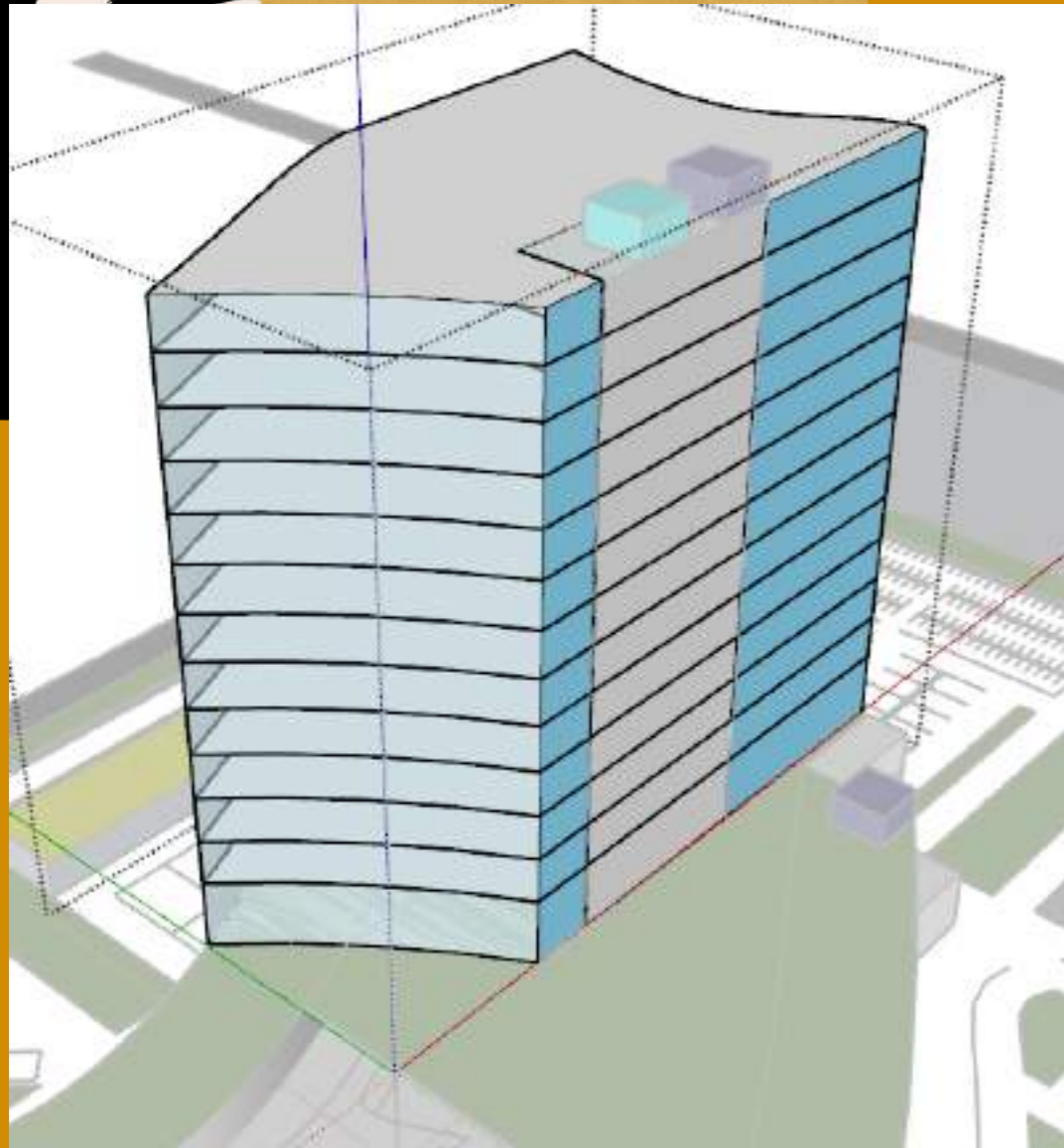
Konfigurasi Geometri Massa

RENTAL OFFICE

Bentuk awal berbentuk kotak



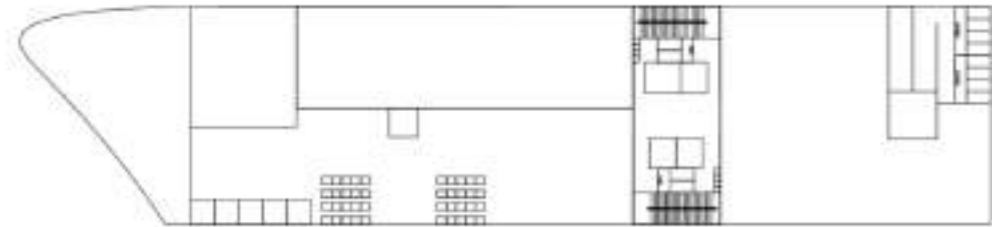
Pada beberapa bagian rental office, bentukannya mengikuti shopping center yang berada di bawahnya. Hal ini bertujuan untuk mensinkronisasi struktur shopping center dan rental office



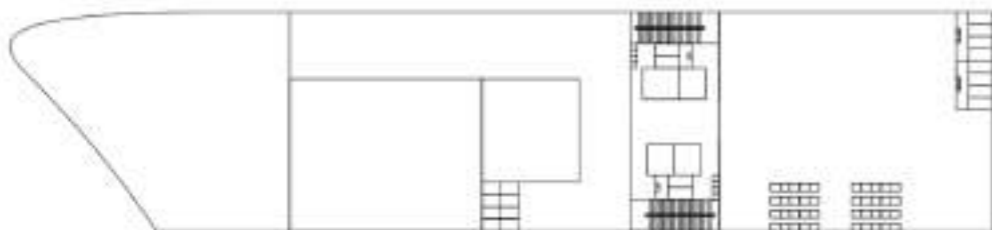
KONSEP KONFIGURASI MASSA BANGUNAN

Besaran Ruang Yang Asosiatif Dengan Program Ruang Dalam

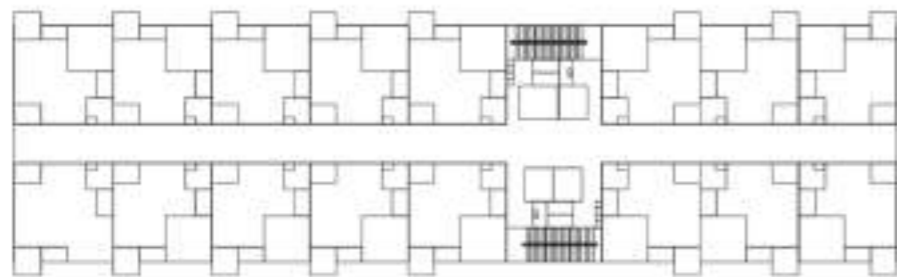
APARTMENT



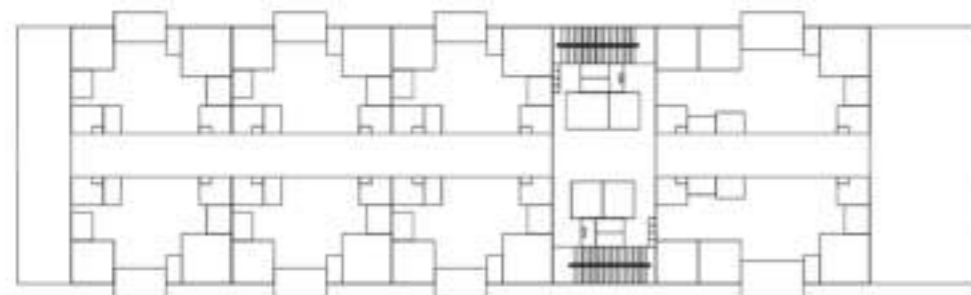
Lantai 1 1.356,03 m²



Lantai 2 1.356,03 m²



Lantai 3 - 12 1.210,52 m²



Lantai 4 - 22 1.210,52 m²



Total luasan apartment

24.553,36 m²

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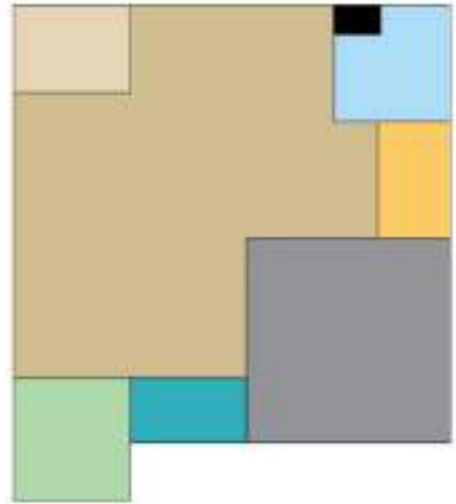
otbridge. There i
is southern bank

KONSEP KONFIGURASI MASSA BANGUNAN

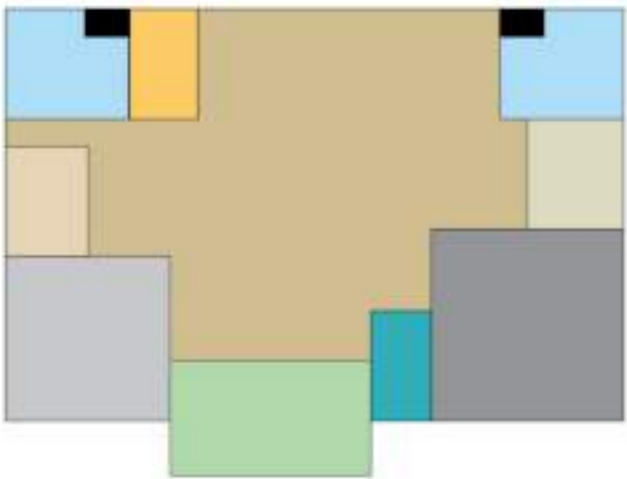
Besaran Ruang Yang Asosiatif Dengan Program Ruang Dalam

A P A R T M E N T

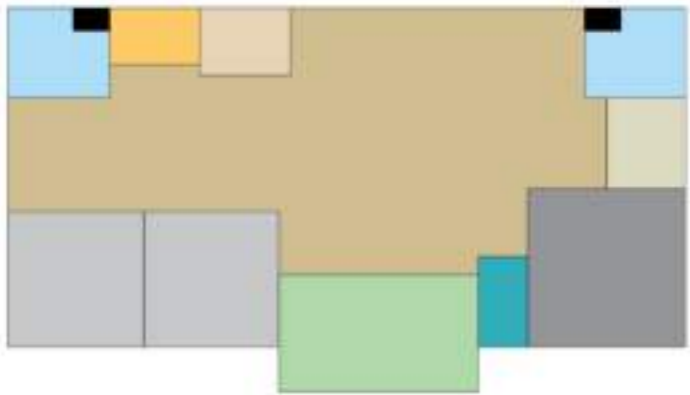
Tipe Studio



Tipe 2 Bedroom



Tipe 3 Bedroom



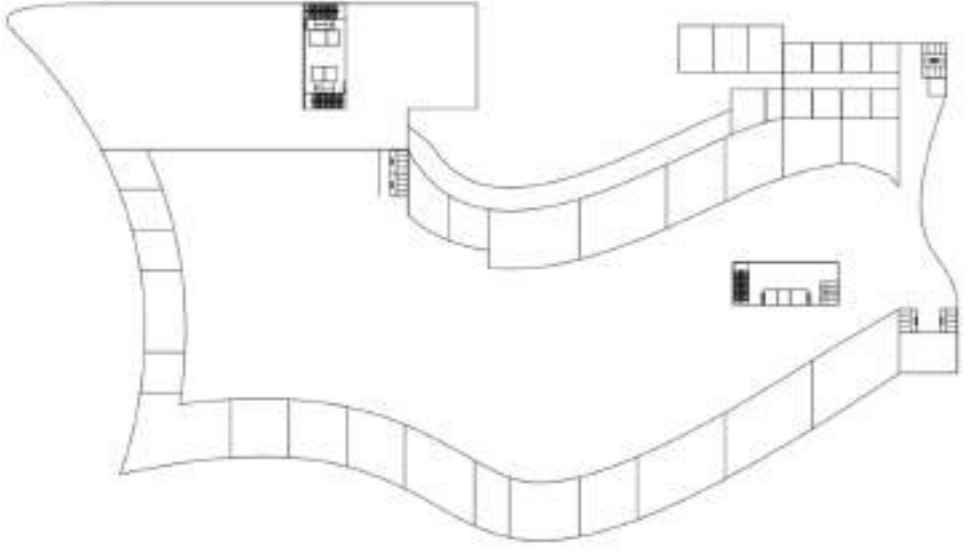
- Living Room
- Kamar Tidur Utama
- Kamar Tidur 1 & 2
- KM/WC
- Pantry
- Ruang Study/Kerja
- Gudang
- Ruang Ganti
- Balkon
- Shaft



KONSEP KONFIGURASI MASSA BANGUNAN

Besaran Ruang Yang Asosiatif Dengan Program Ruang Dalam

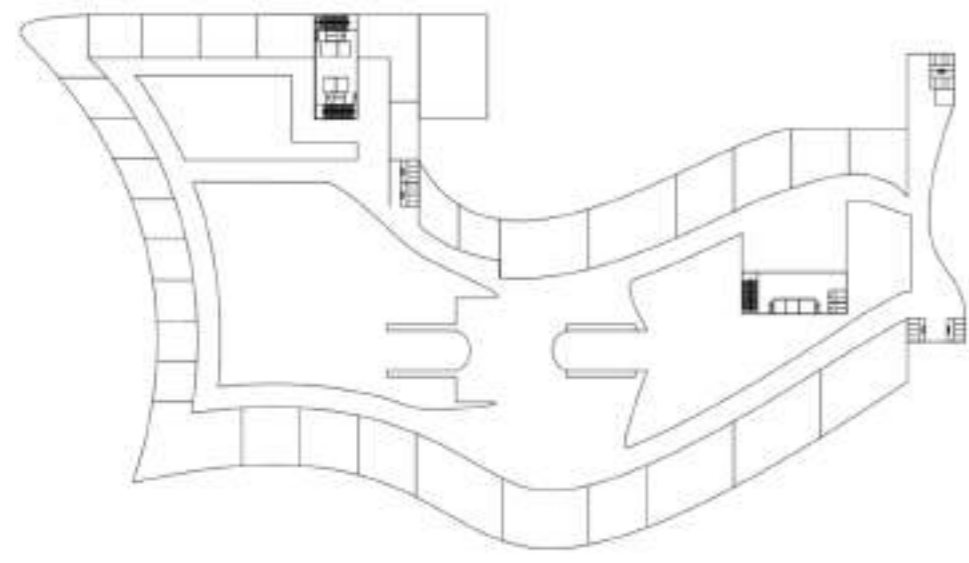
SHOPPING CENTER



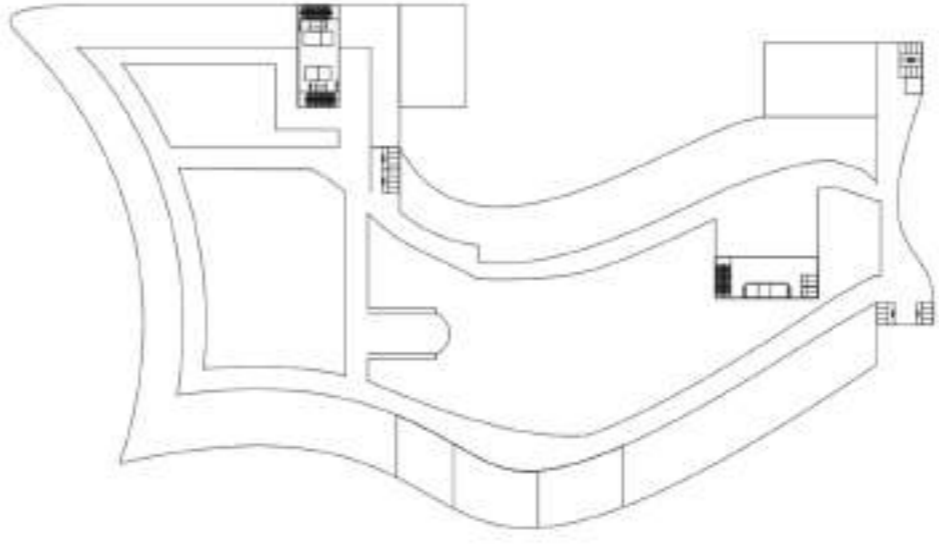
Lantai 1 7.695,7 m²



Lantai 2 7.399,3 m²



Lantai 3 7.399,3 m²



Lantai 4 7.399,3 m²

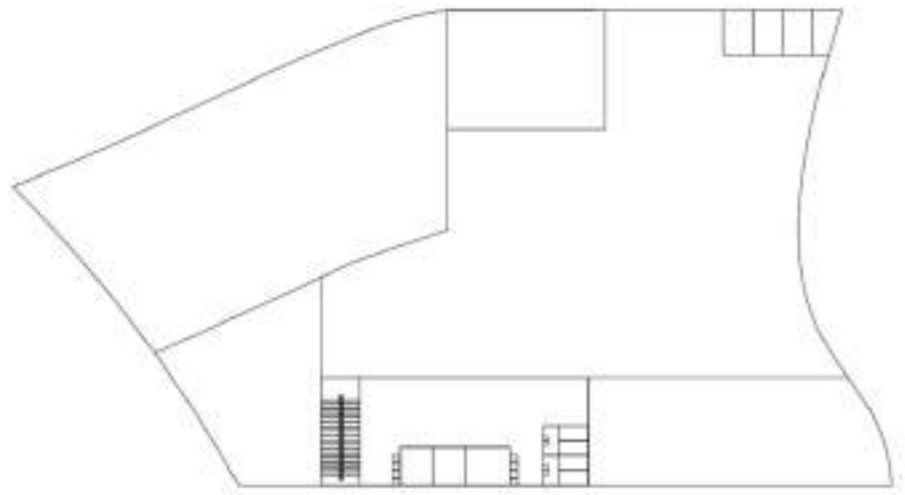
Total luasan shopping center 29.893,6 m²



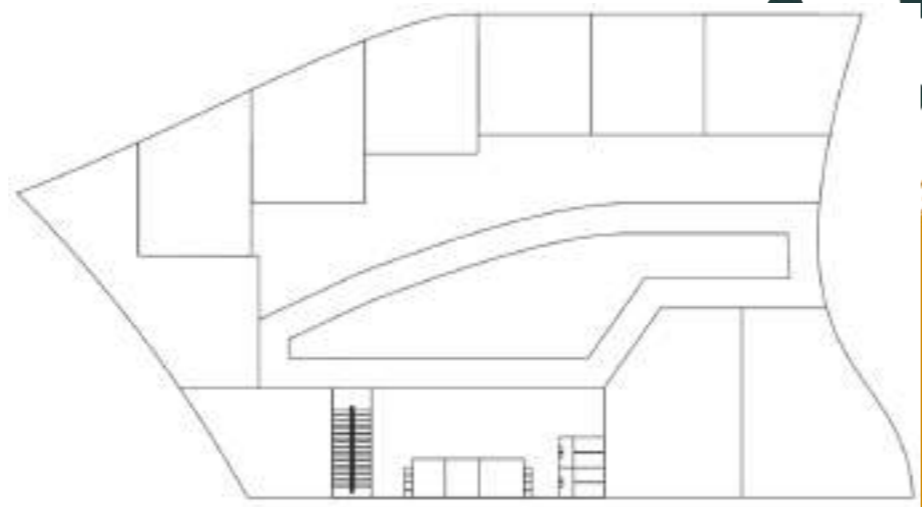
KONSEP KONFIGURASI MASSA BANGUNAN

Besaran Ruang Yang Asosiatif Dengan Program Ruang Dalam

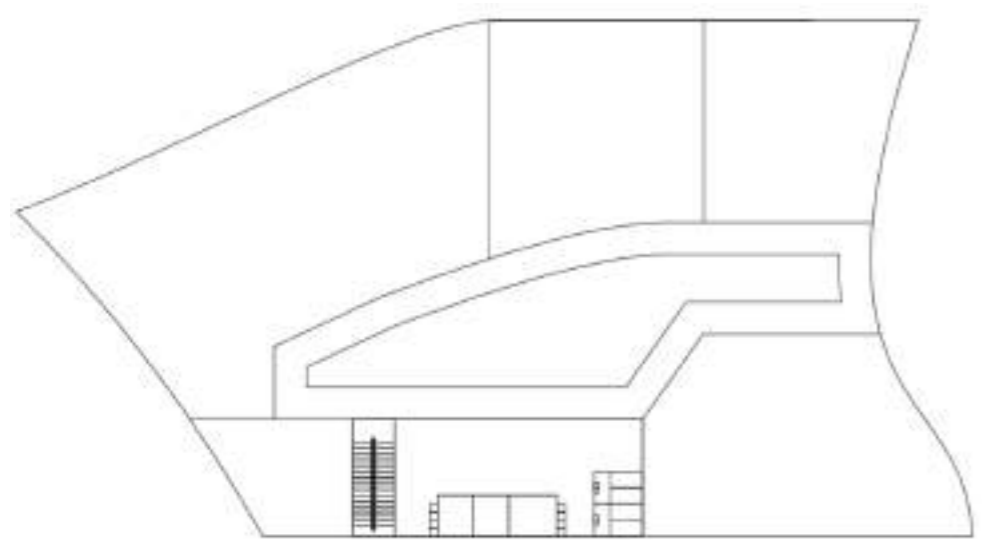
RENTAL OFFICE



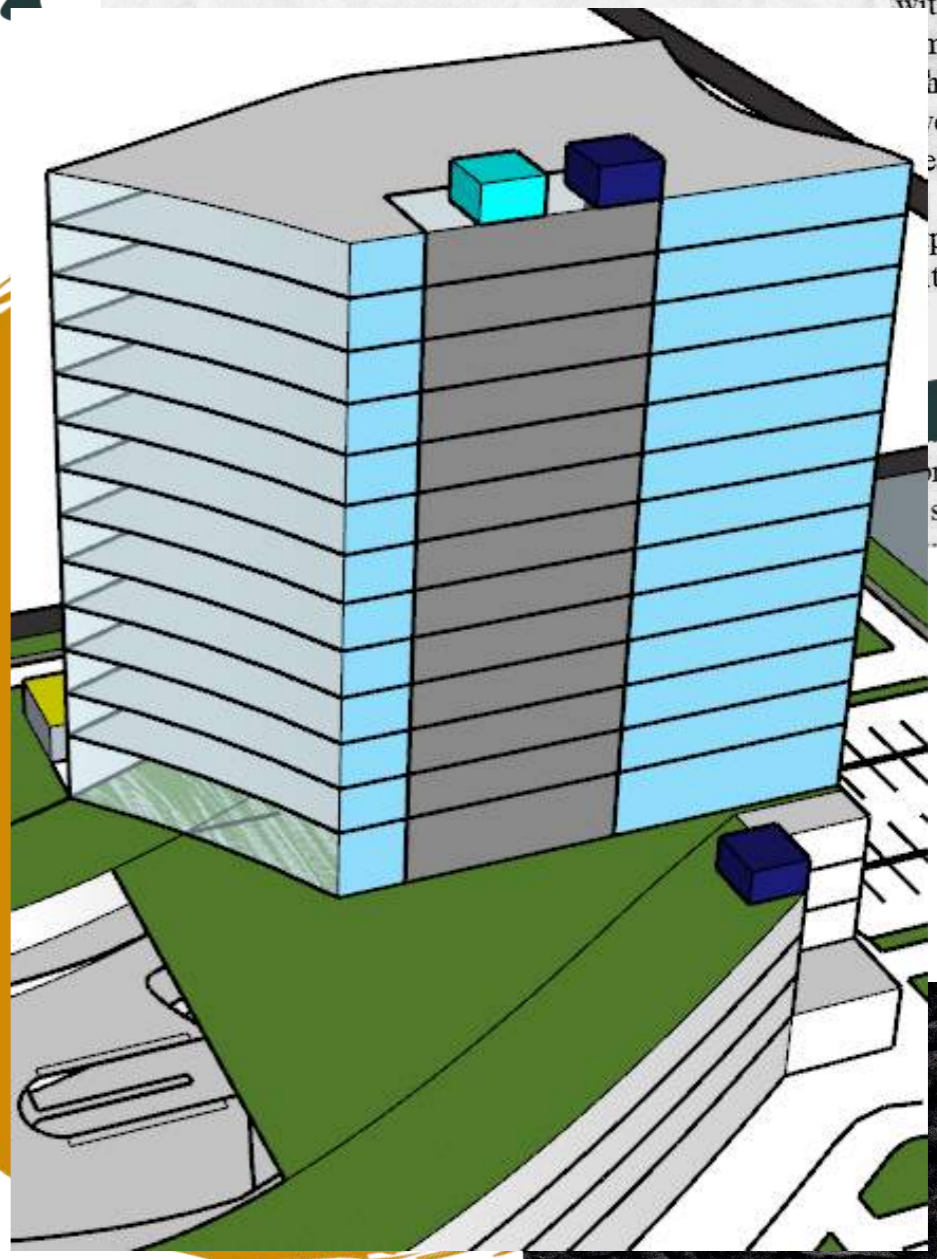
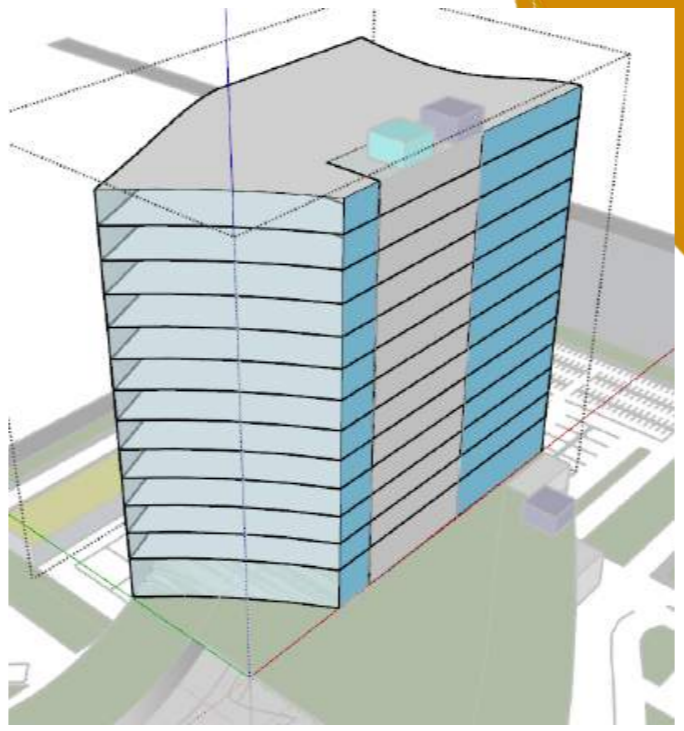
Lantai 1 2.224,14 m²



Lantai 3 1387,75 m²



Lantai 2 1451,41 m²



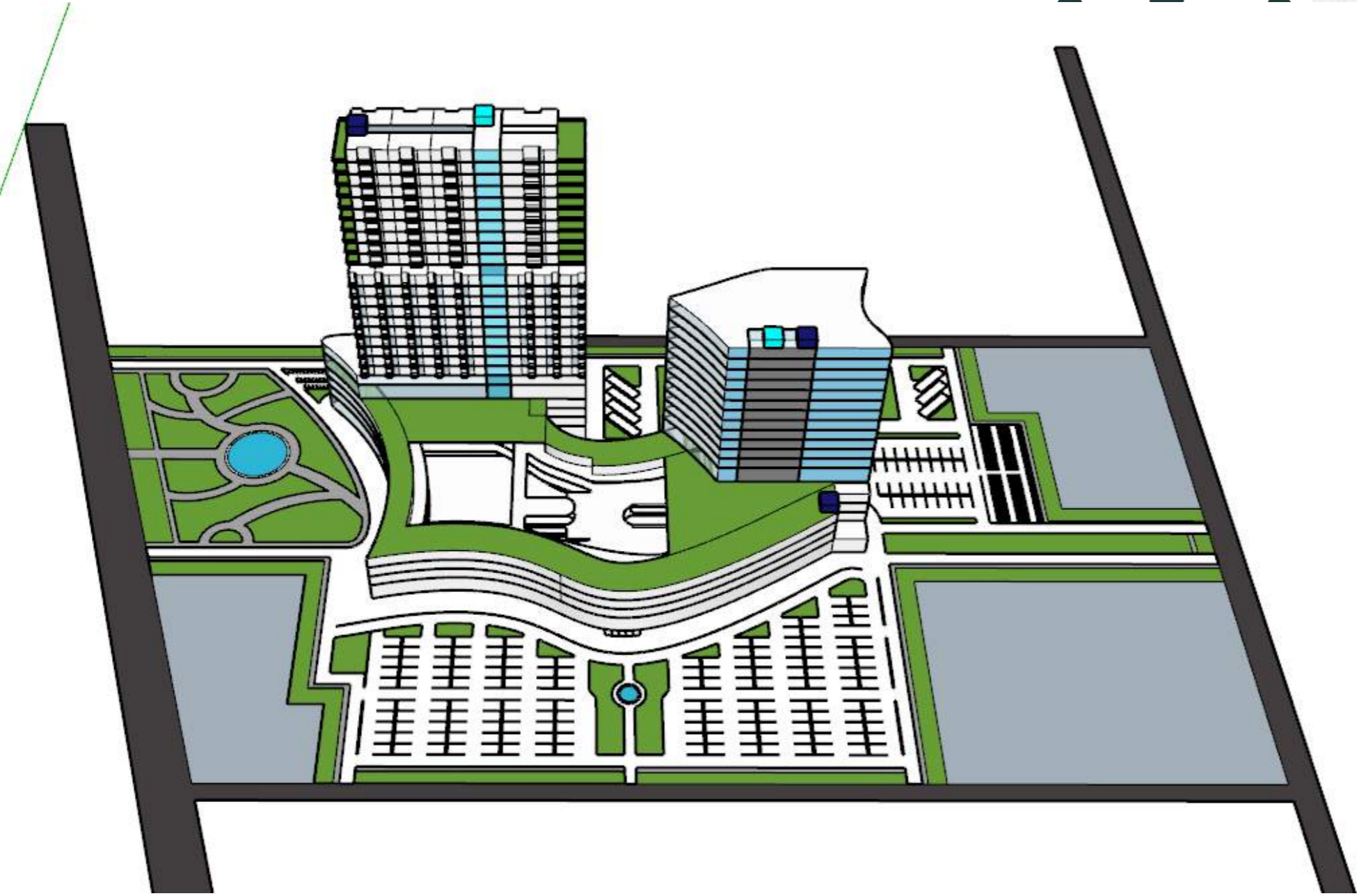
Total luasan rental office

16.419,94 m²

KONSEP KONFIGURASI MASSA BANGUNAN

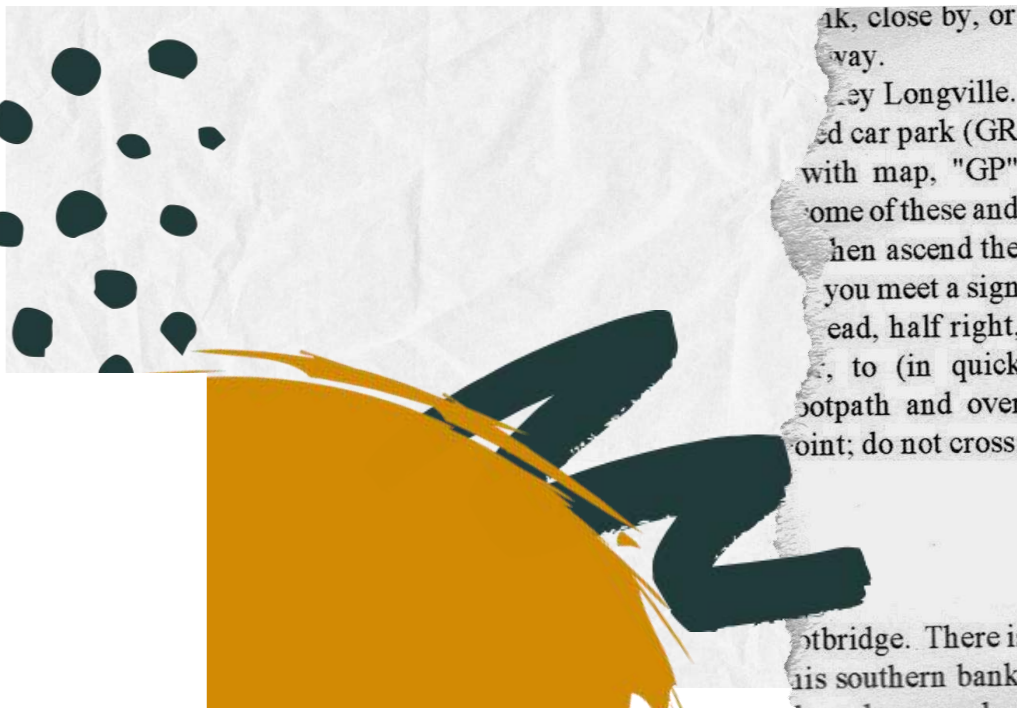
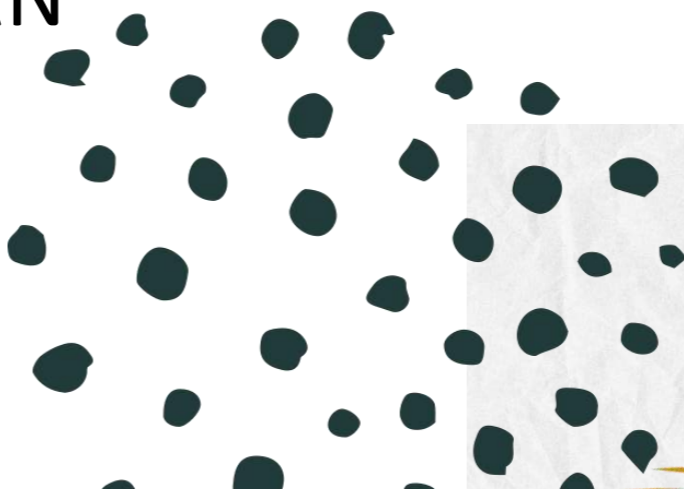
Besaran Ruang Yang Asosiatif Dengan Program Ruang Dalam

MIXED USE BUILDING



Total luasan massa mixed use building

70.866,9 m²



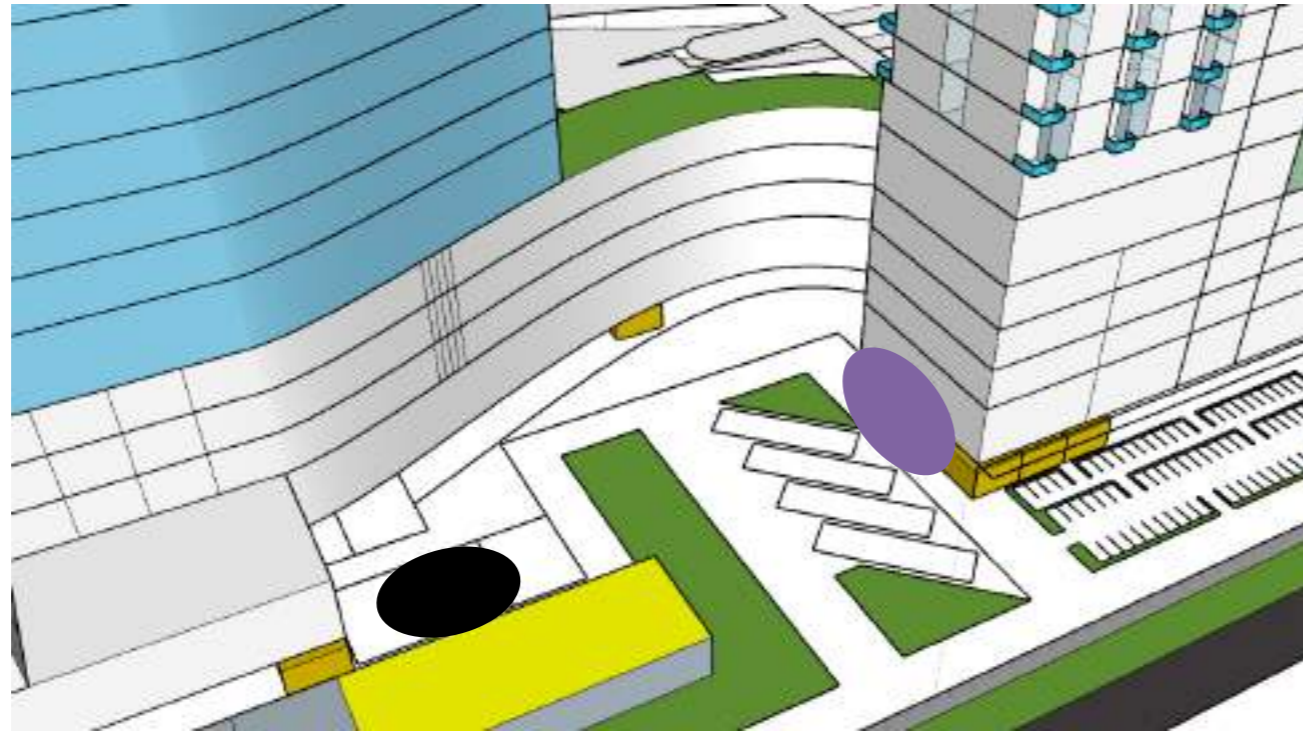
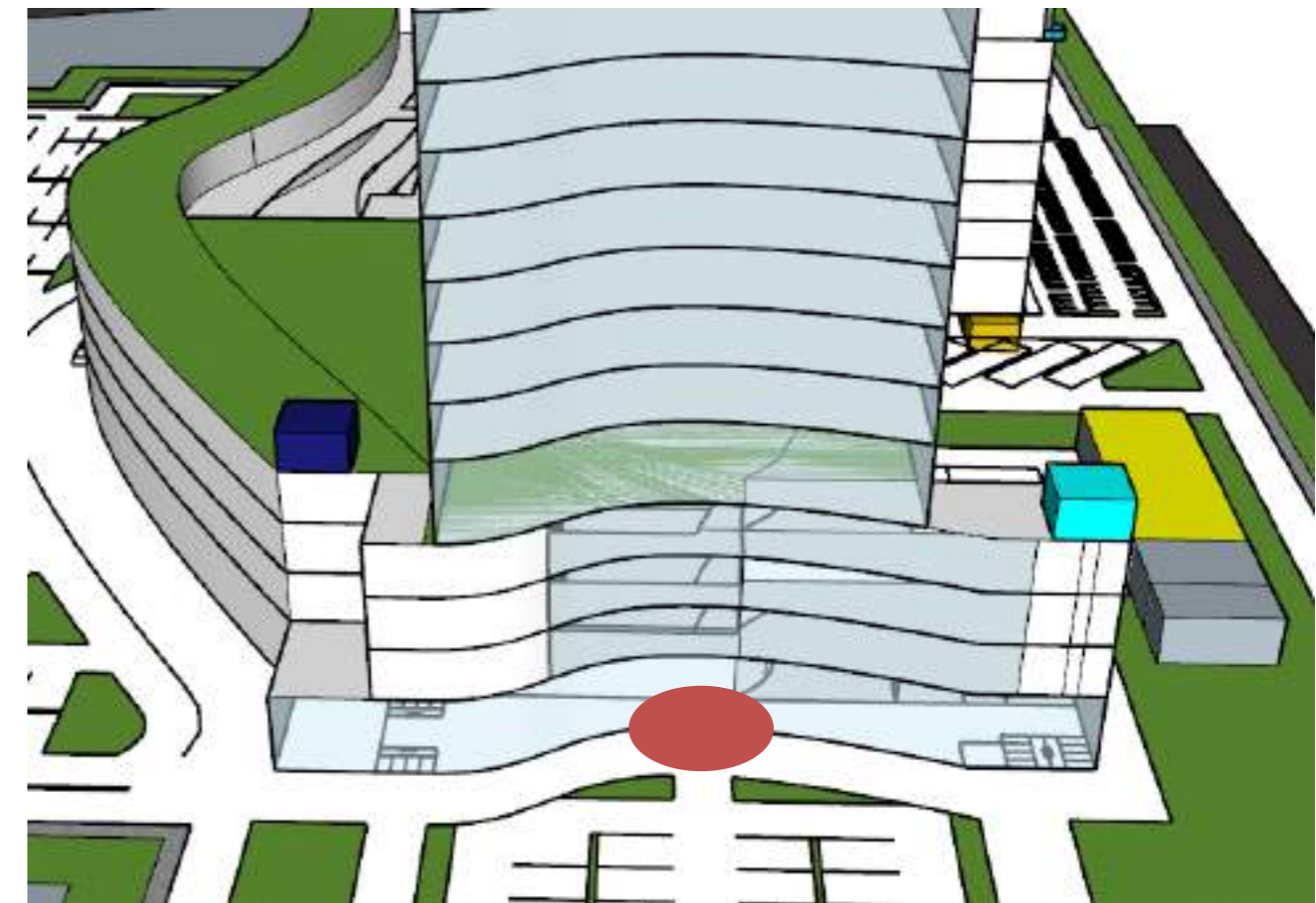
ed islanders and bought their plots, who could expect big money for a accessible island? One man sold for a e rumour went. Collings was larger west of Dingle loved a character, so his plans came to nothing. thought about who owned the Great ighties, when an advertisement in the ed the island for sale for a million art of a long and complicated legal y based in Dingle, which had acquired of the land, and the Irish government Charles Haughey, the owner of Inis to establish a national park. The issue reme Court as I crossed on that first the future was unclear. There were g brought back to life anyway, I had



KONSEP TATA RUANG DALAM

PERLETAKAN ZONA AKSES PENGHUBUNG RUANG DALAM &

RUANG LUAR



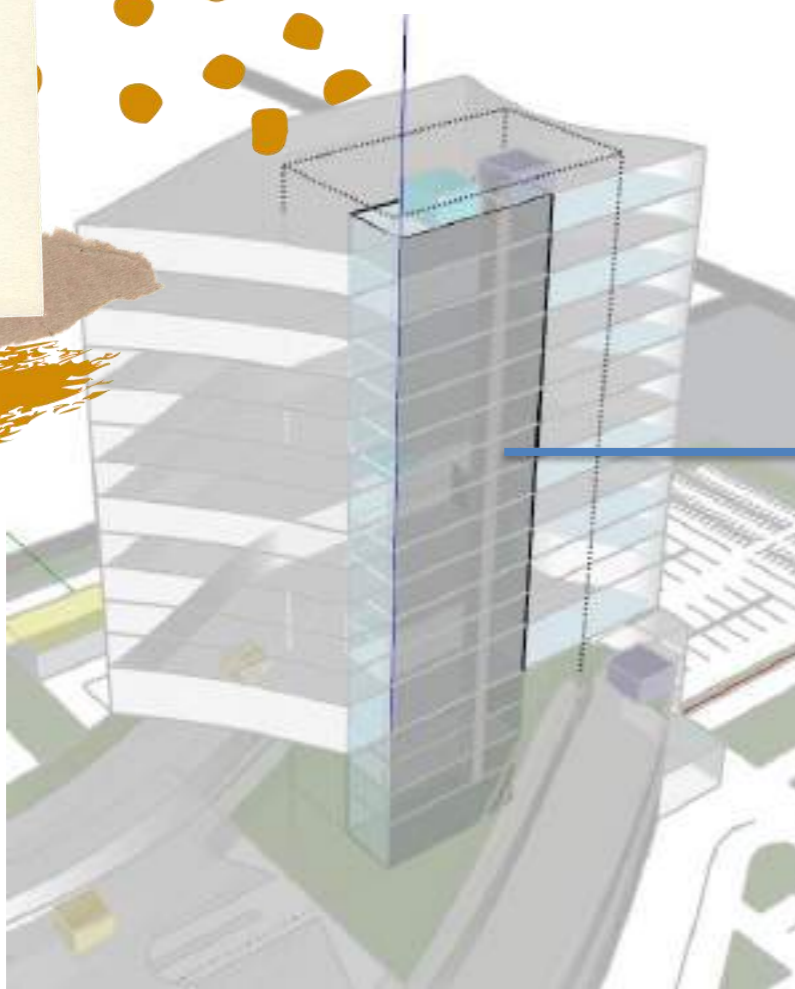
-  Drop off shopping center
-  Drop off apartment
-  Drop off rental office
-  Drop off service

ed islanders and bought their plots, who could expect big money for a accessible island? One man sold for a e rumour went. Collings was larger west of Dingle loved a character, so his plans came to nothing. thought about who owned the Great ighties, when an advertisement in the ed the island for sale for a million art of a long and complicated legal y based in Dingle, which had acquired of the land, and the Irish government Charles Haughey, the owner of Inis to establish a national park. The issue reme Court as I crossed on that first the future was unclear. There were g brought back to life anyway, I had

KONSEP TATA RUANG DALAM

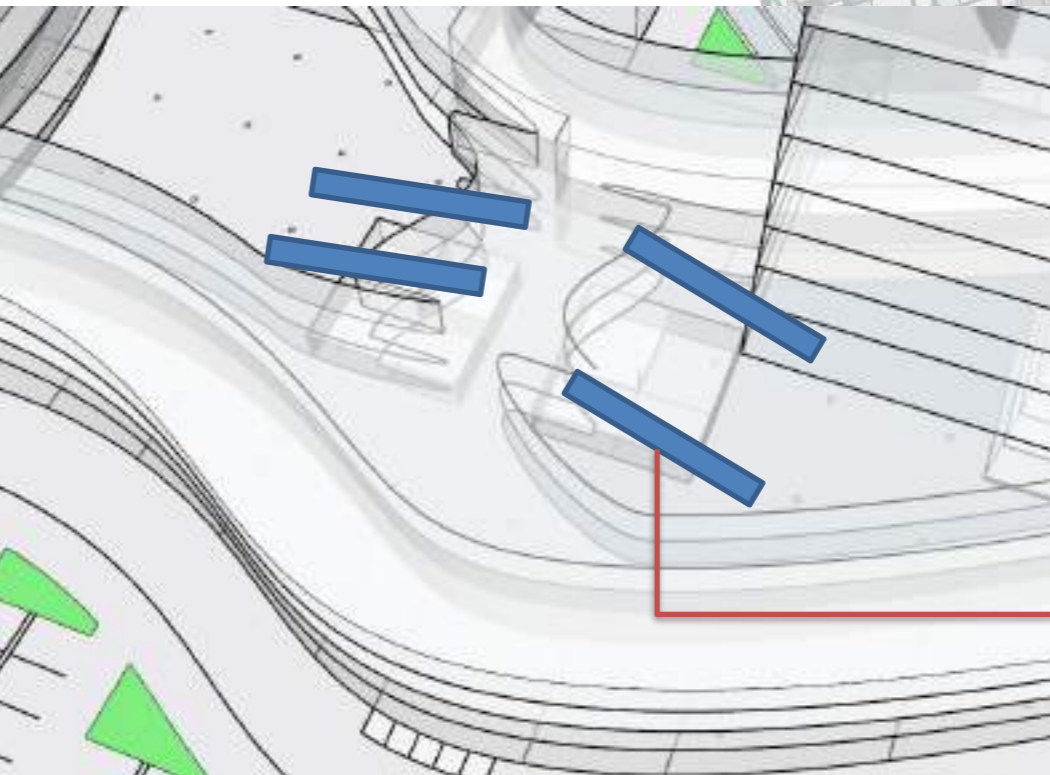
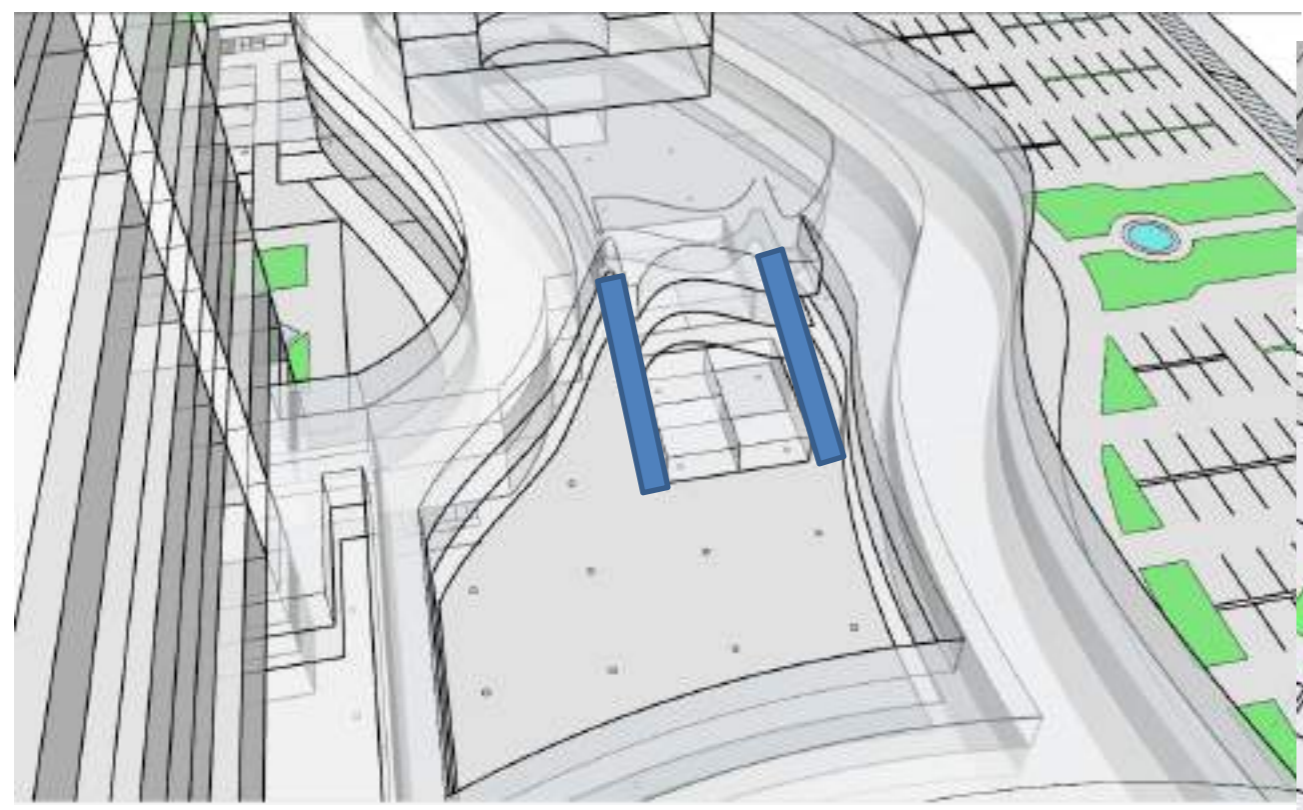
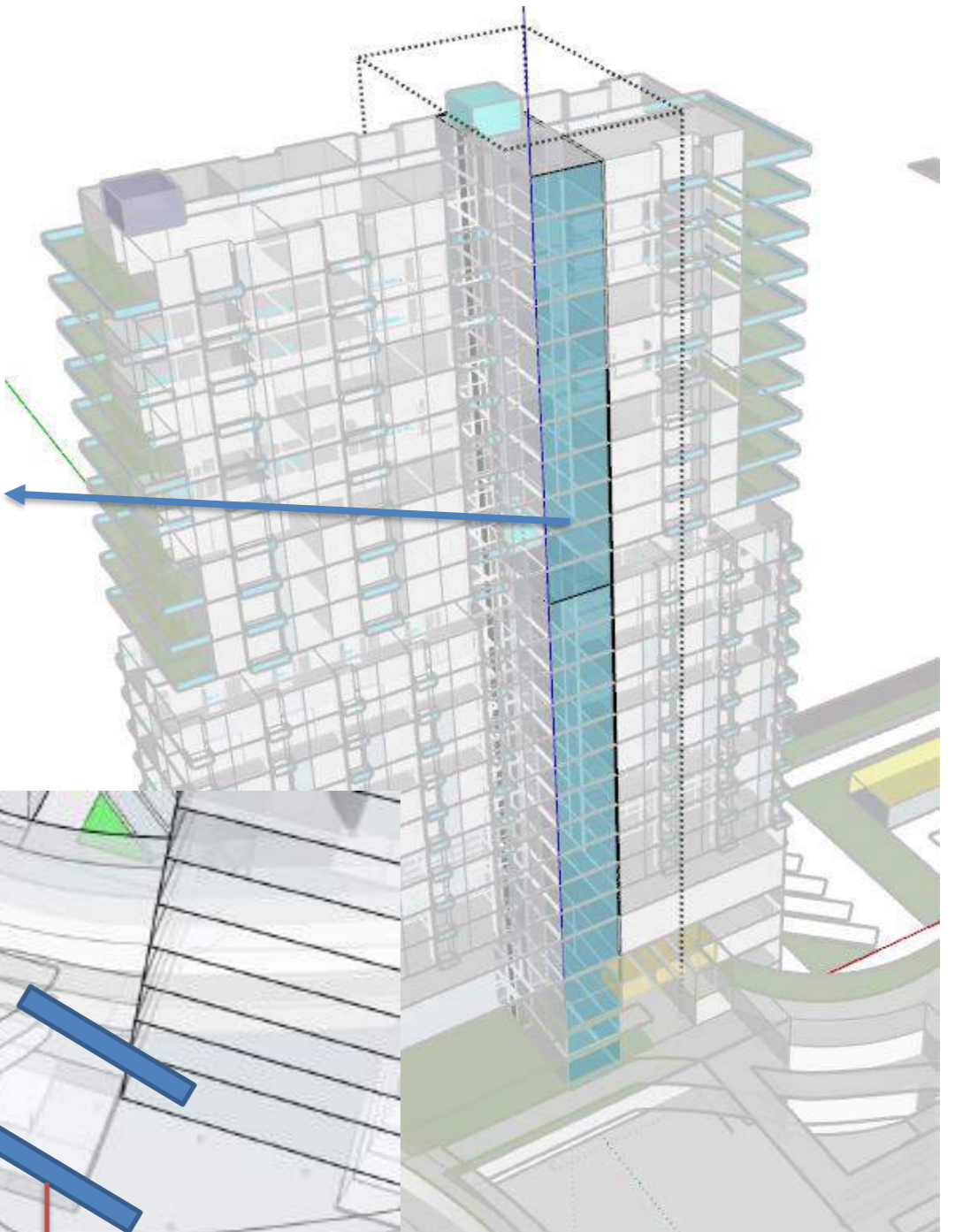
PERLETAKAN TITIK AKSES PENGHUBUNG ANTAR LANTAI

(SIRKULASI VERTIKAL)



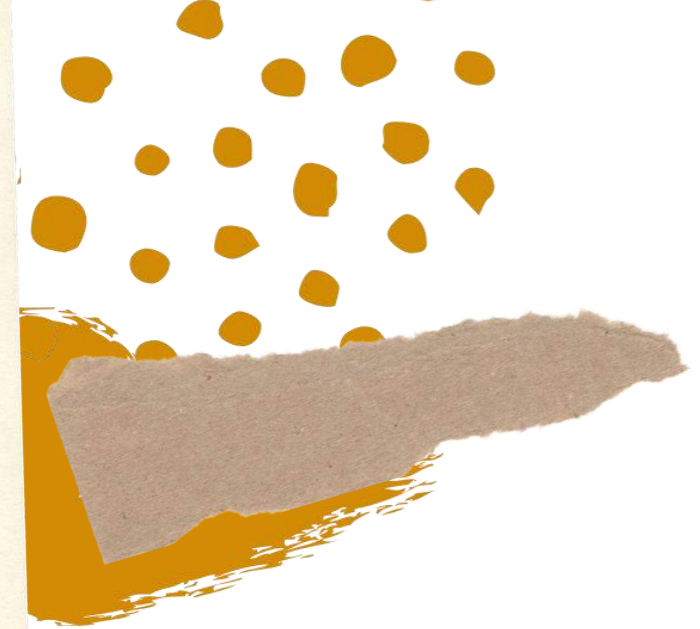
Lift
Shopping center
Rental office
Lantai 1 - 4
Lantai 5 - 15

Lift
Shopping center
Apartment
Lantai 1 - 4
Lantai 5 - 26



Escalator
Shopping center
Lantai 1-4

...ctured the slate roof and blown
 ...nties it was bought by a rich and
 ...a called Taylor Collings, who
 ...holiday and fell in love with it.
 ...rebuild the village as a holiday
 ...slanders and bought their plots,
 ...o could expect big money for a
 ...sible island? One man sold for a
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 ...t of Dingle loved a character, so
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 ...the island for sale for a million
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 ...e land, and the Irish government
 ...rles Haughey, the owner of Inis
 ...establish a national park. The issue
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 ...ought back to life anyway, I had

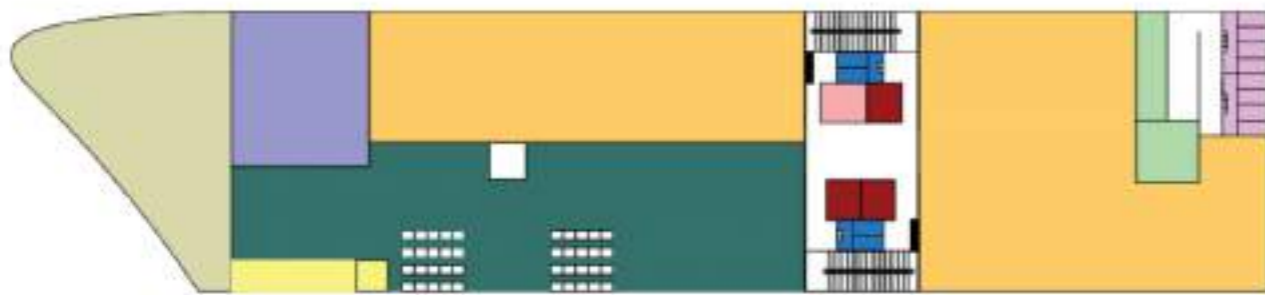


KONSEP TATA RUANG DALAM

POLA RUANG SIRKULATIF & RUANG FUNGSIONAL PER LANTAI

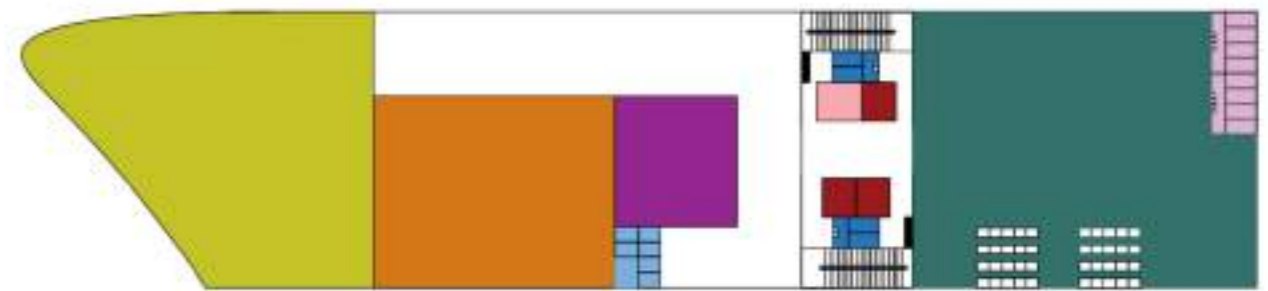
BANGUNAN

APARTMENT



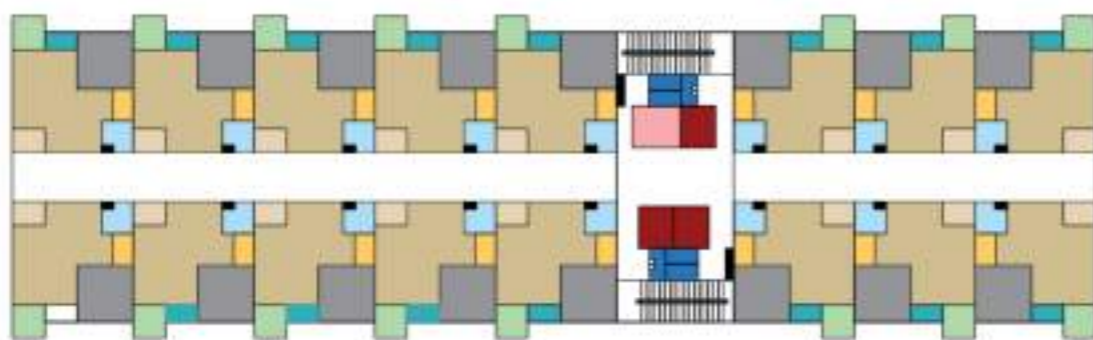
Lantai 1

- Market
- Core
- Laundry
- Mushola
- ATM
- Toilet
- Lobby
- Ruang pengelola



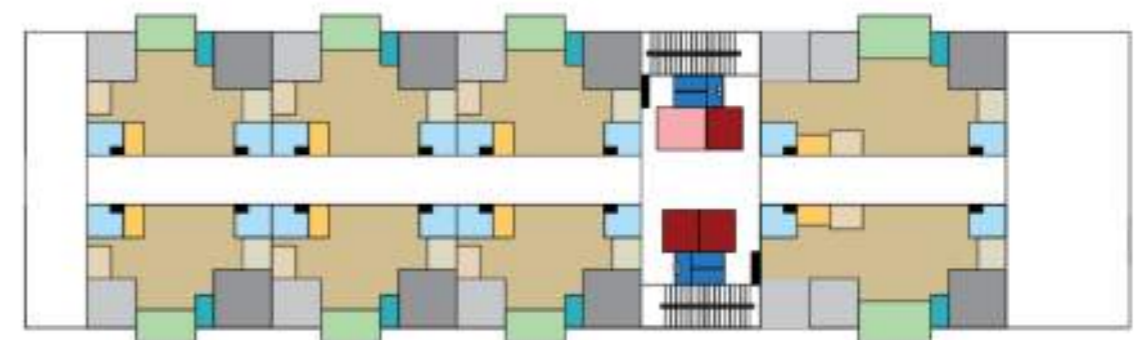
Lantai 2

- Cafeteria
- Core
- Fitness & gym
- Lobby
- Ruang ganti
- Toilet
- Ruang mandi



Lantai 3-12

Unit Studio



Lantai 13-22

Unit 2 BR dan 3 BR

the Supreme Court as I crossed on that first
on, and the future was unclear. There were
d being brought back to life anyway, I had

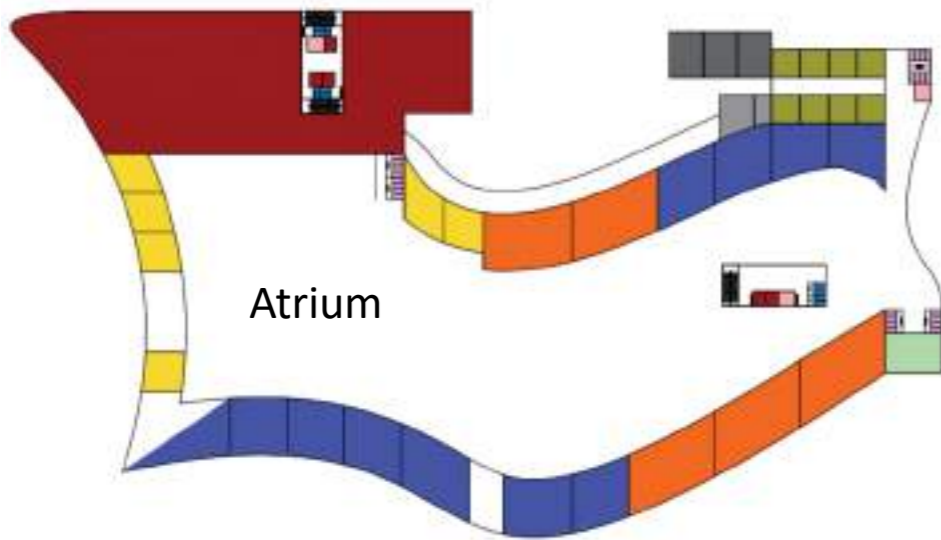
275

KONSEP TATA RUANG DALAM

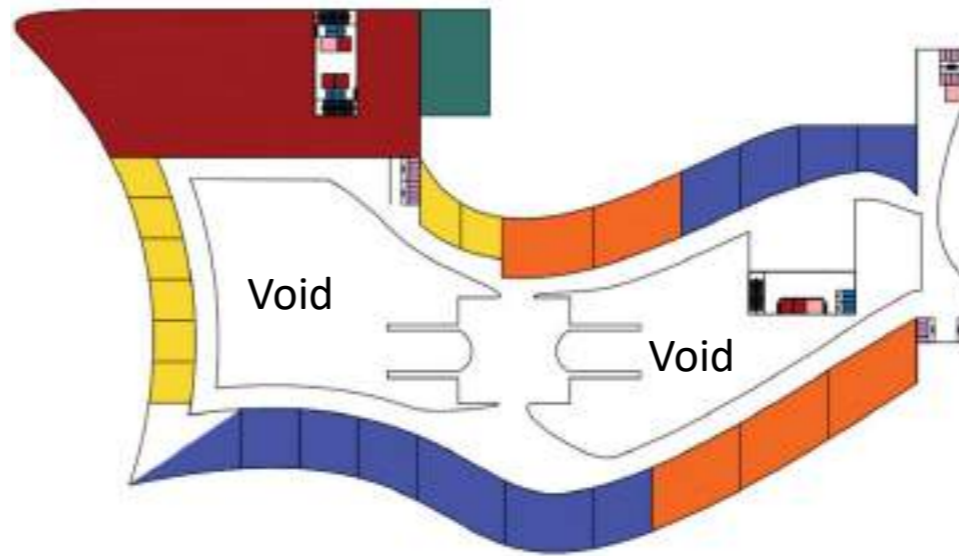
POLA RUANG SIRKULATIF & RUANG FUNGSIONAL PER LANTAI

BANGUNAN

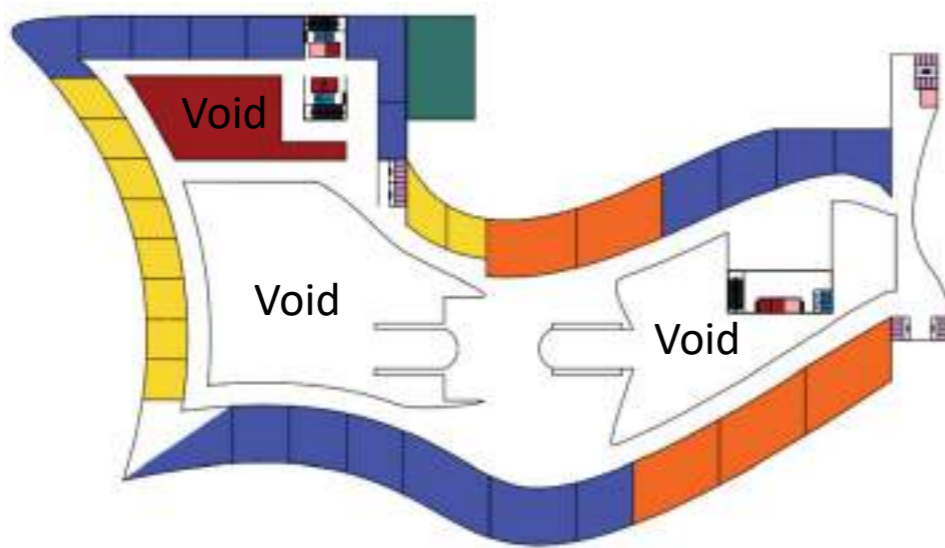
SHOPPING CENTER



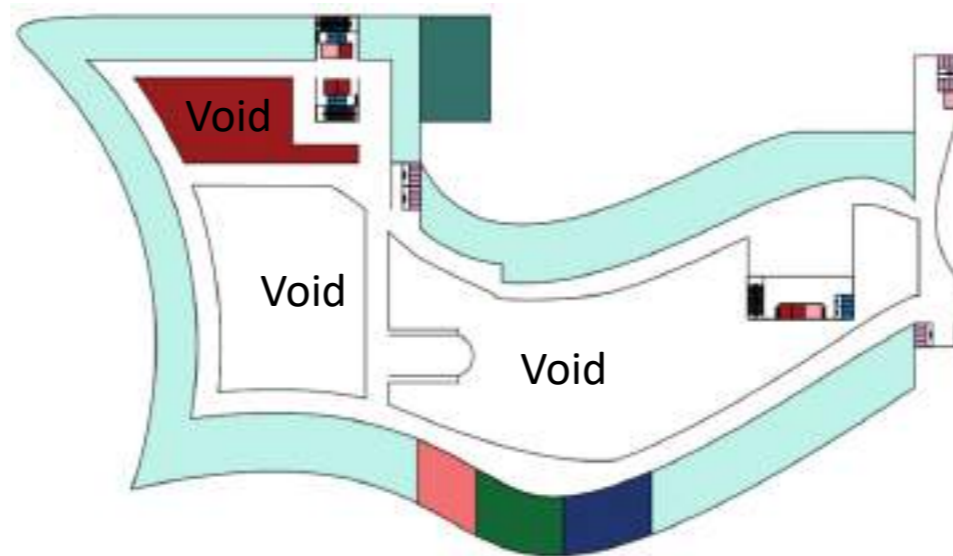
Lantai 1



Lantai 2



Lantai 3



Lantai 4

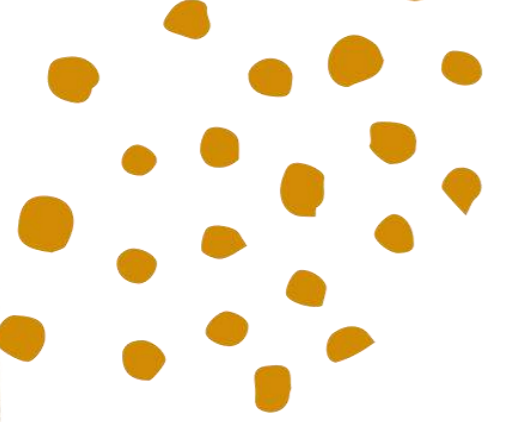
- Department store
- Retail besar
- Retail sedang
- Retail kecil
- Ruang pengelola
- Area bongkar muat barang
- Toilet
- Mushola
- Lift barang
- Tempat bermain anak
- Bank 1
- Bank 2
- Food court, restaurant, supermarket
- Akses masuk shopping center & apartment

...d slates, and anything else that
ives.

...bove, was the two-storey house
It had been modern and strong
ntured the slate roof and blown
nties it was bought by a rich and
a called Taylor Collings, who
oliday and fell in love with it.
rebuild the village as a holiday
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...ght about who owned the Great
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of a long and complicated legal
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275

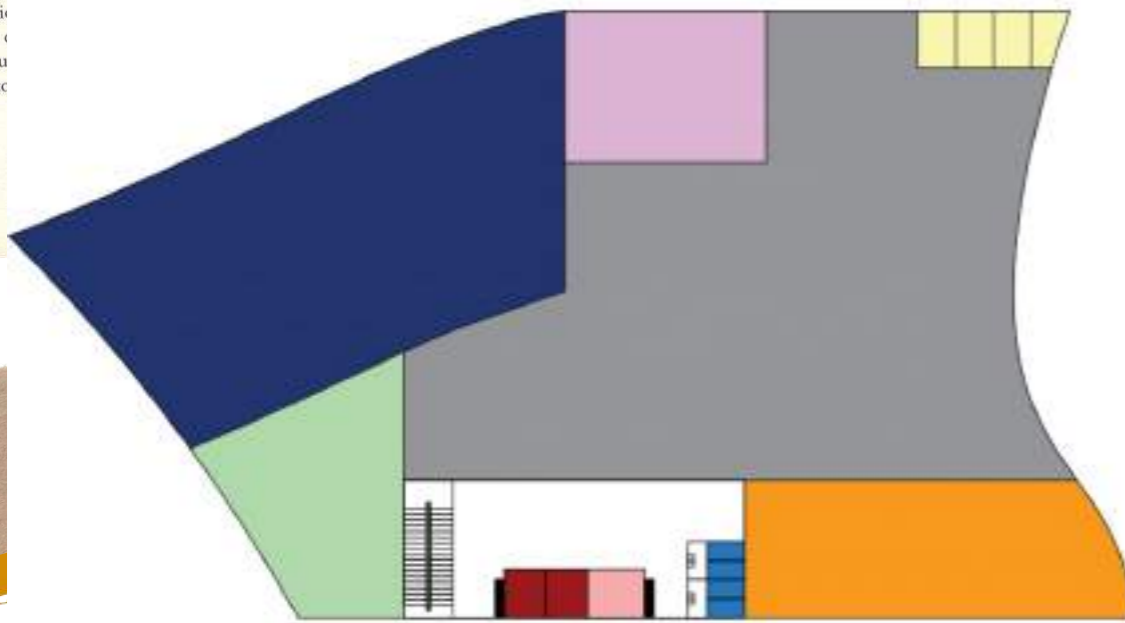


KONSEP TATA RUANG DALAM

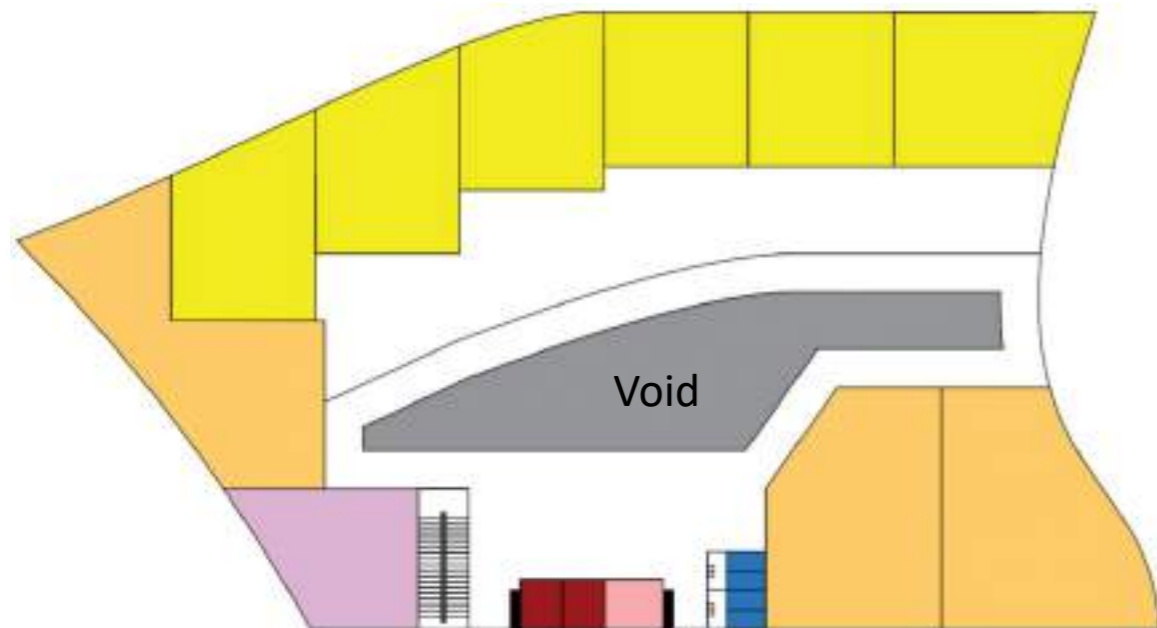
POLA RUANG SIRKULATIF & RUANG FUNGSIONAL PER LANTAI

BANGUNAN

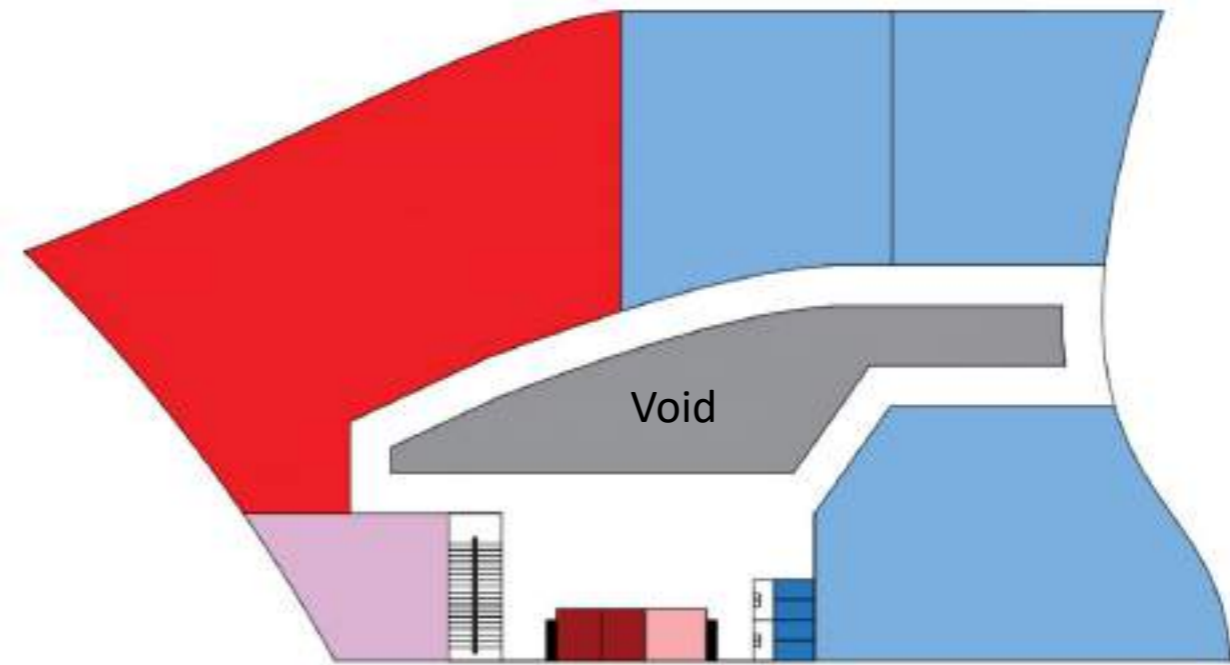
RENTAL OFFICE



Lantai 1



Lantai 2



Lantai 3

- Core
- ATM
- Lobby
- Cafeteria
- Ruang pengelola
- Musholla
- Ruang workshop
- Rental office tipe a
- Rental office tipe b
- Rental office tipe c
- Rental office tipe d

... was the two-storey house
... had been modern and strong
... had the slate roof and blown
... it was bought by a rich and
... called Taylor Collings, who
... day and fell in love with it.
... build the village as a holiday
... ders and bought their plots,
... uld expect big money for a
... island? One man sold for a
... ur went. Collings was larger
... Dingle loved a character, so
... came to nothing.
... t about who owned the Great
... when an advertisement in the
... island for sale for a million
... long and complicated legal
... in Dingle, which had acquired
... nd, and the Irish government
... Haughey, the owner of Inis
... lish a national park. The issue
... court as I crossed on that first
... ure was unclear. There were
... ht back to life anyway, I had



KONSEP TATA RUANG DALAM

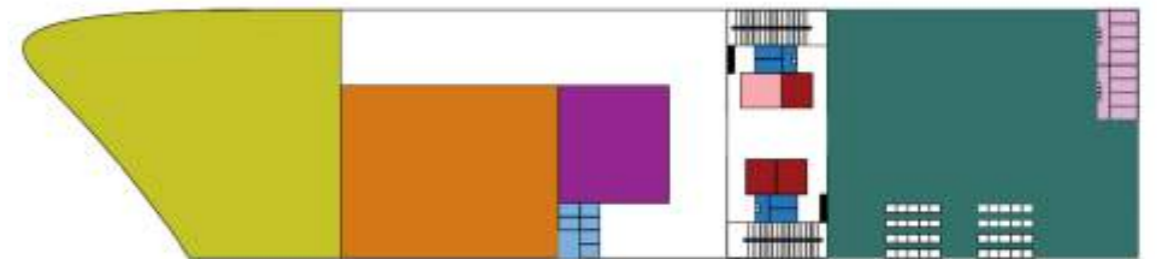
ZONASI TIPE RUANG FUNGSIONAL PER LANTAI BANGUNAN

APARTMENT



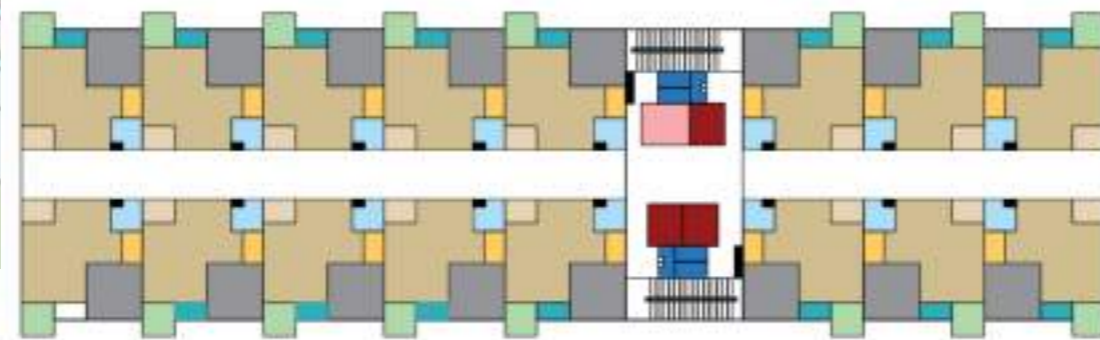
Lantai 1:

- Aktivitas pengelola
- Aktivitas penerimaan
- Aktivitas penunjang



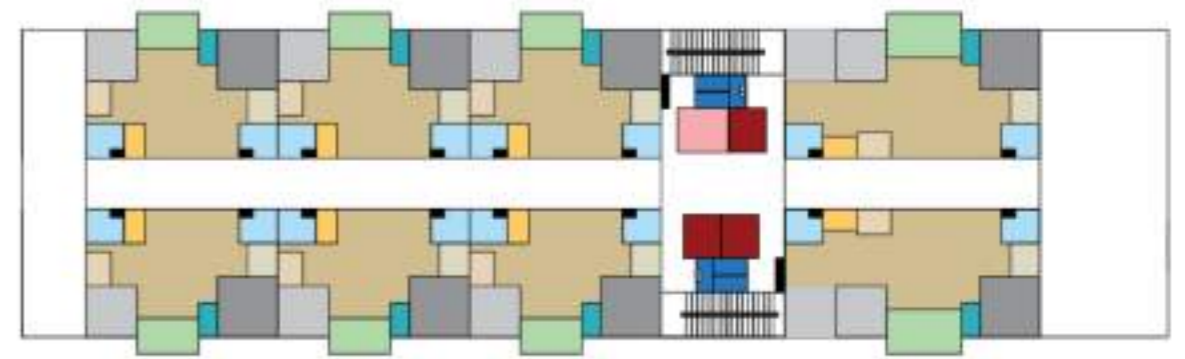
Lantai 2:

- Aktivitas pengelola
- Aktivitas penerimaan
- Aktivitas penunjang



Lantai 3 – 12:

- Aktivitas hunian



Lantai 13 – 22:

- Aktivitas hunian

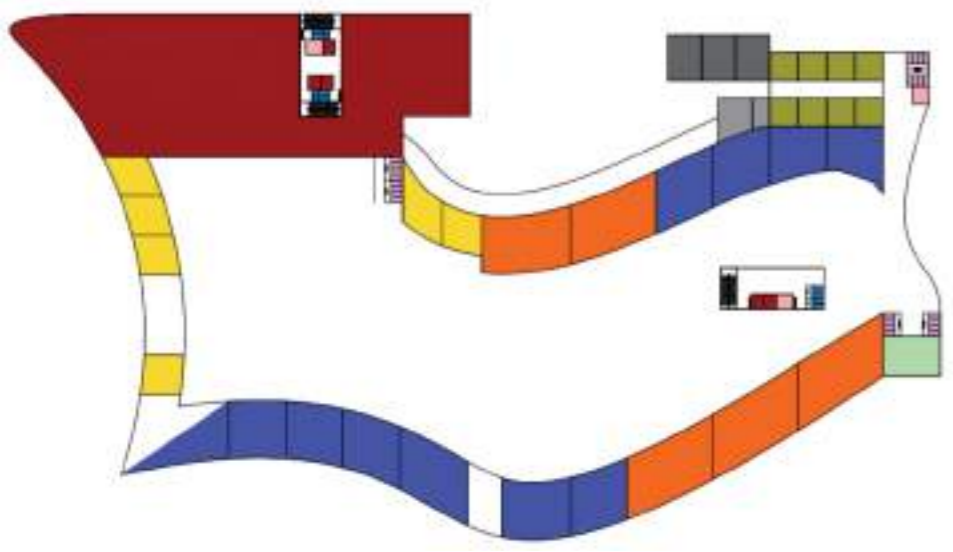
was in the mid-eighties, when an advertisement in the *Street Journal* offered the island for sale for a million dollars. That was the start of a long and complicated legal battle between a company based in Dingle, which had acquired Charles Collings's share of the land, and the Irish government at that time by Charles Haughey, the owner of Inis Meáin - which wanted to establish a national park. The issue went all the way to the Supreme Court as I crossed on that first day of the season, and the future was unclear. There were hopes of the island being brought back to life anyway, I had



KONSEP TATA RUANG DALAM

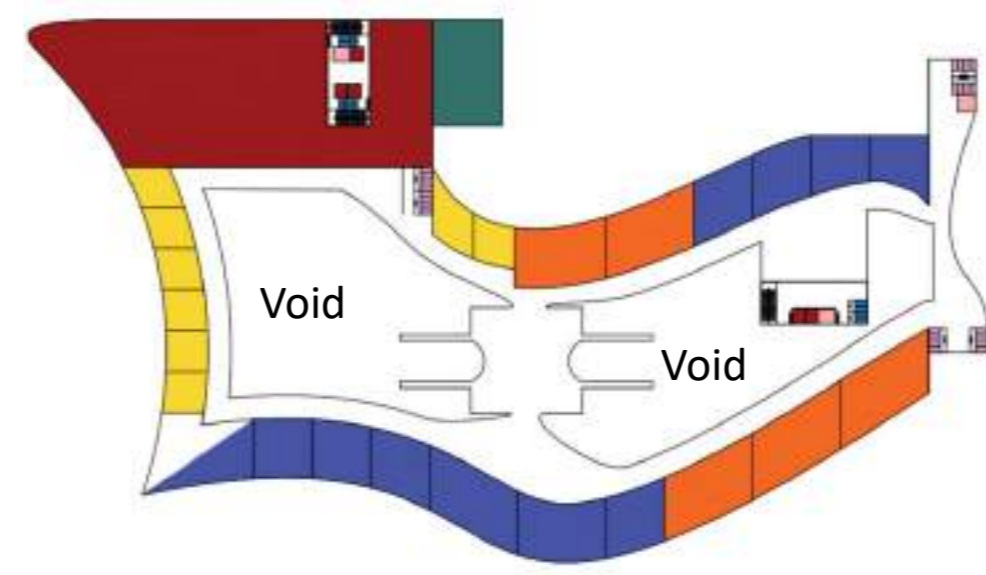
ZONASI TIPE RUANG FUNGSIONAL PER LANTAI BANGUNAN

SHOPPING CENTER



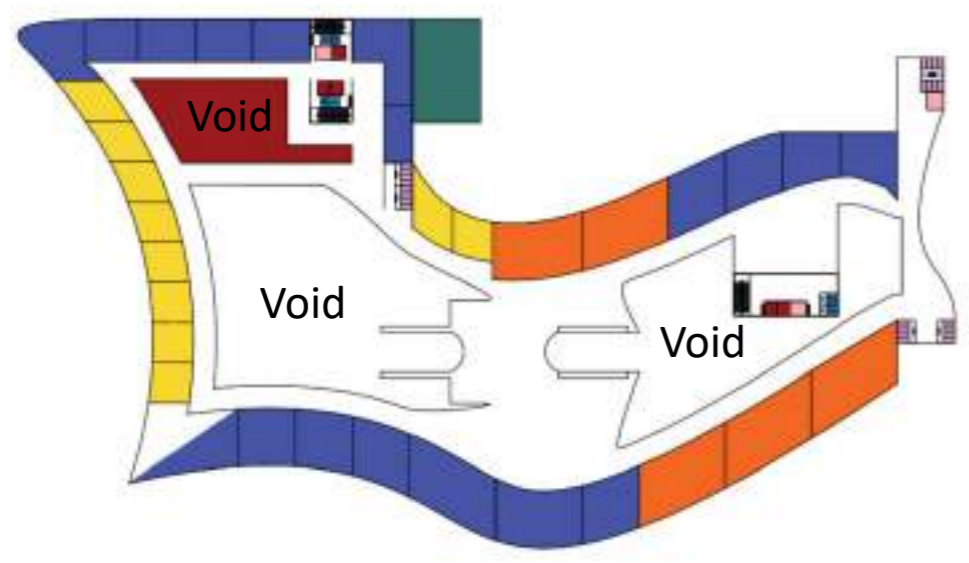
Lantai 1:

- Aktivitas utama (retail)
- Aktivitas pengelola
- Aktivitas pelayanan umum
- Aktivitas pelengkap
- Aktivitas bongkar muat barang



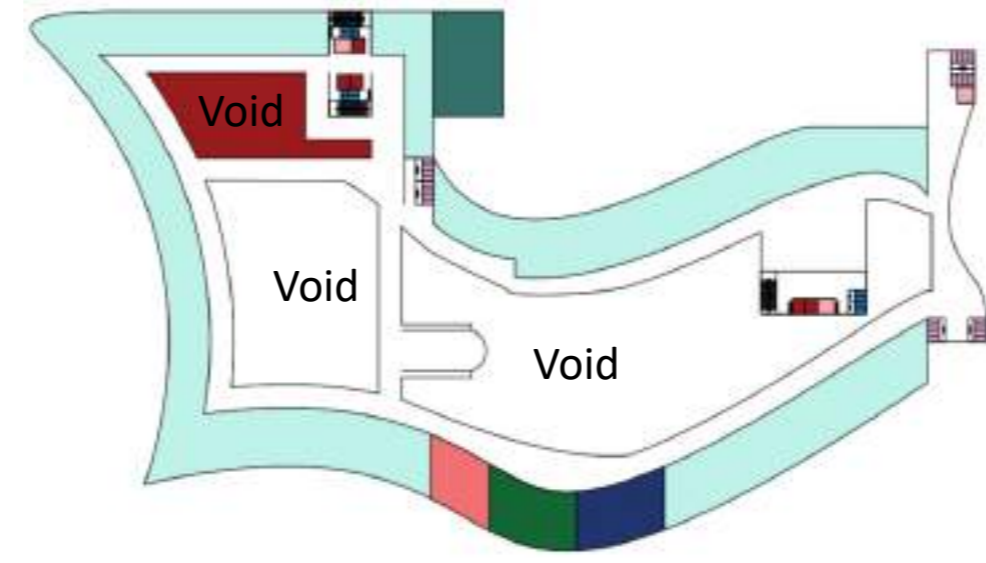
Lantai 2:

- Aktivitas utama (retail)
- Aktivitas pelengkap



Lantai 3:

- Aktivitas utama (retail)



Lantai 4:

- Aktivitas pelengkap



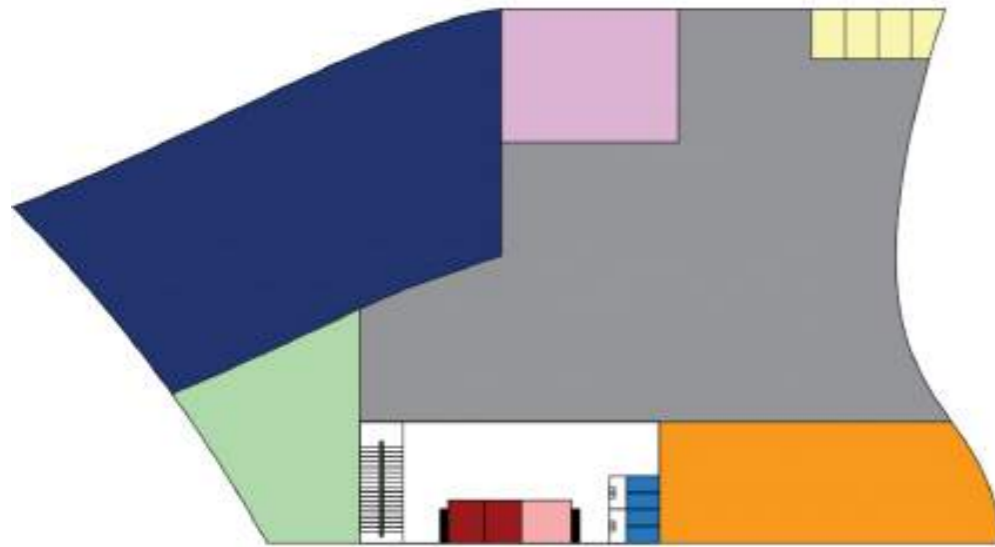
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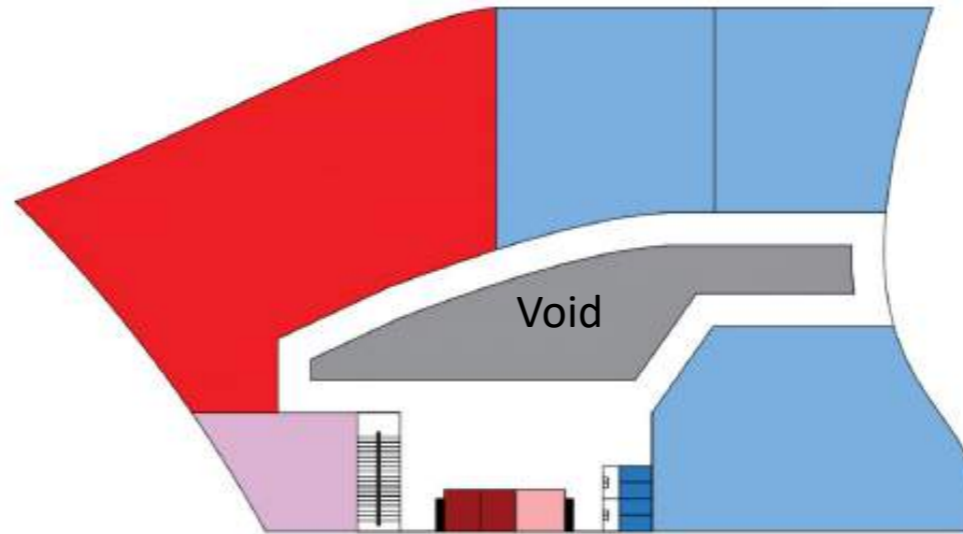
KONSEP TATA RUANG DALAM

ZONASI TIPE RUANG FUNGSIONAL PER LANTAI BANGUNAN

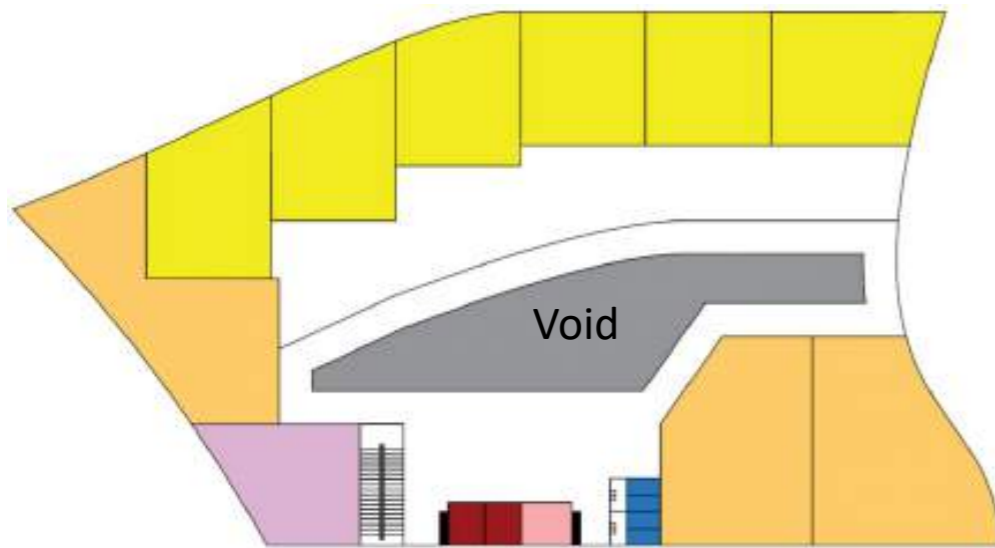
RENTAL OFFICE



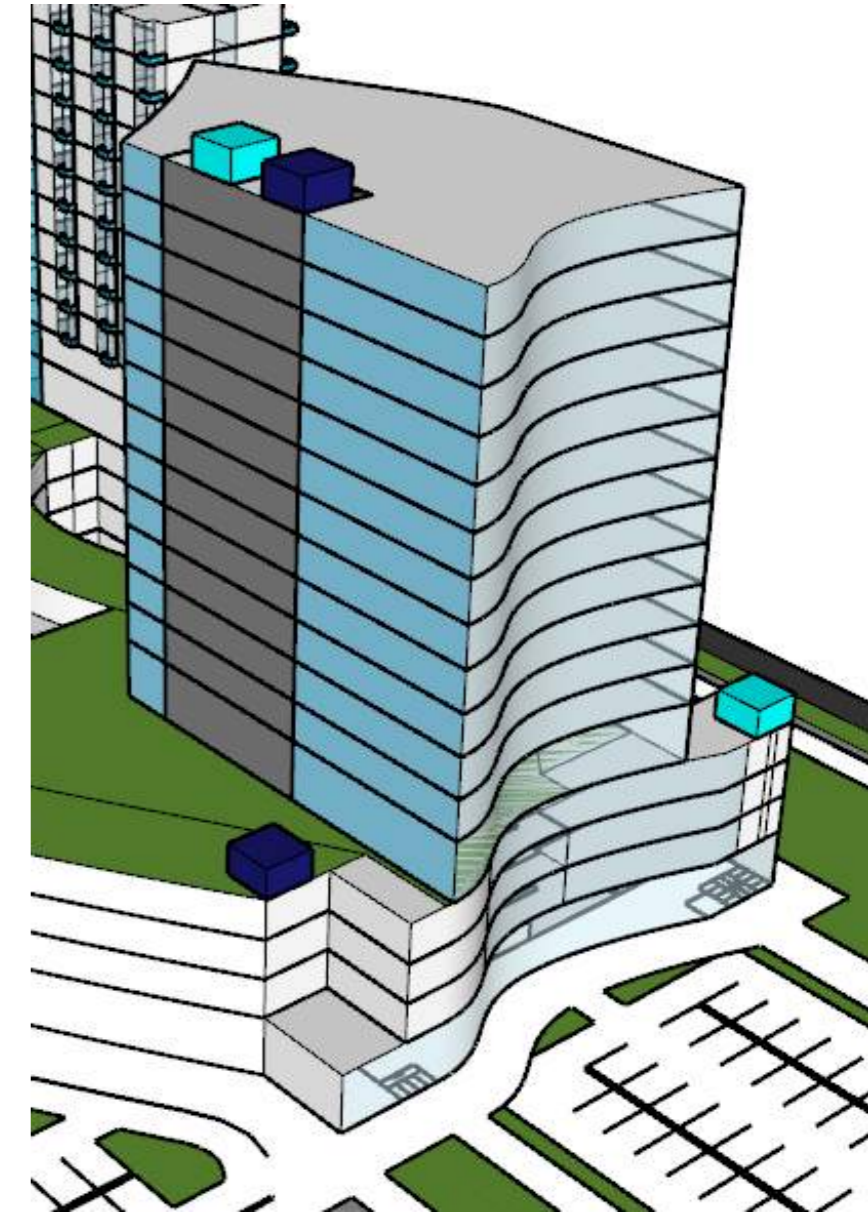
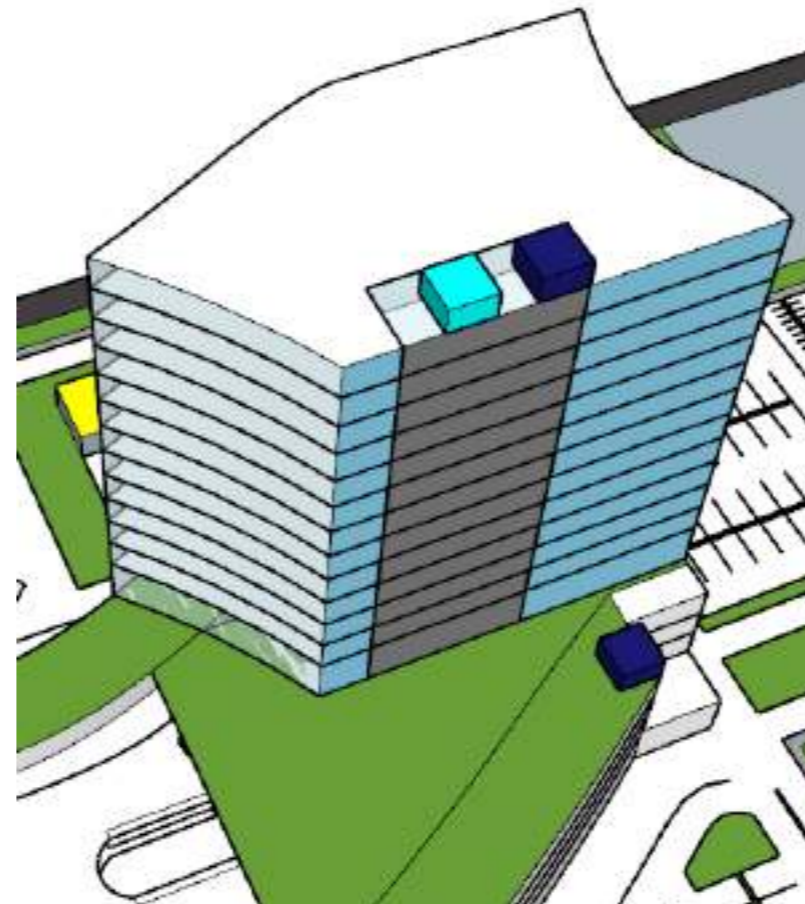
Lantai 1:
- Aktivitas pengelola
- Aktivitas penunjang



Lantai 7 - 11:
- Aktivitas utama (unit sewa)



Lantai 2 - 6:
- Aktivitas utama (unit sewa)



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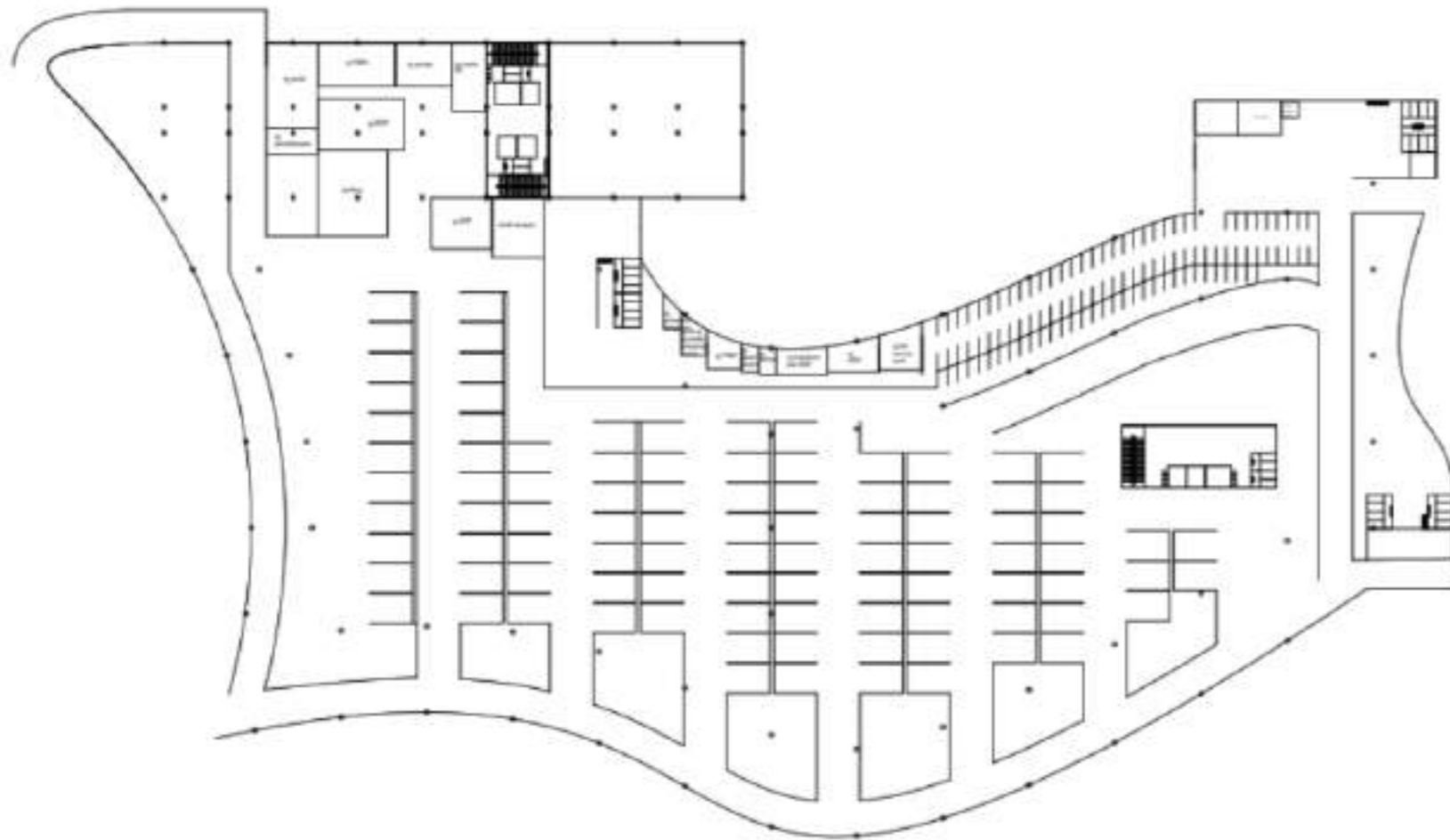
275



KONSEP TATA RUANG DALAM

ZONASI TIPE RUANG FUNGSIONAL PER LANTAI BANGUNAN

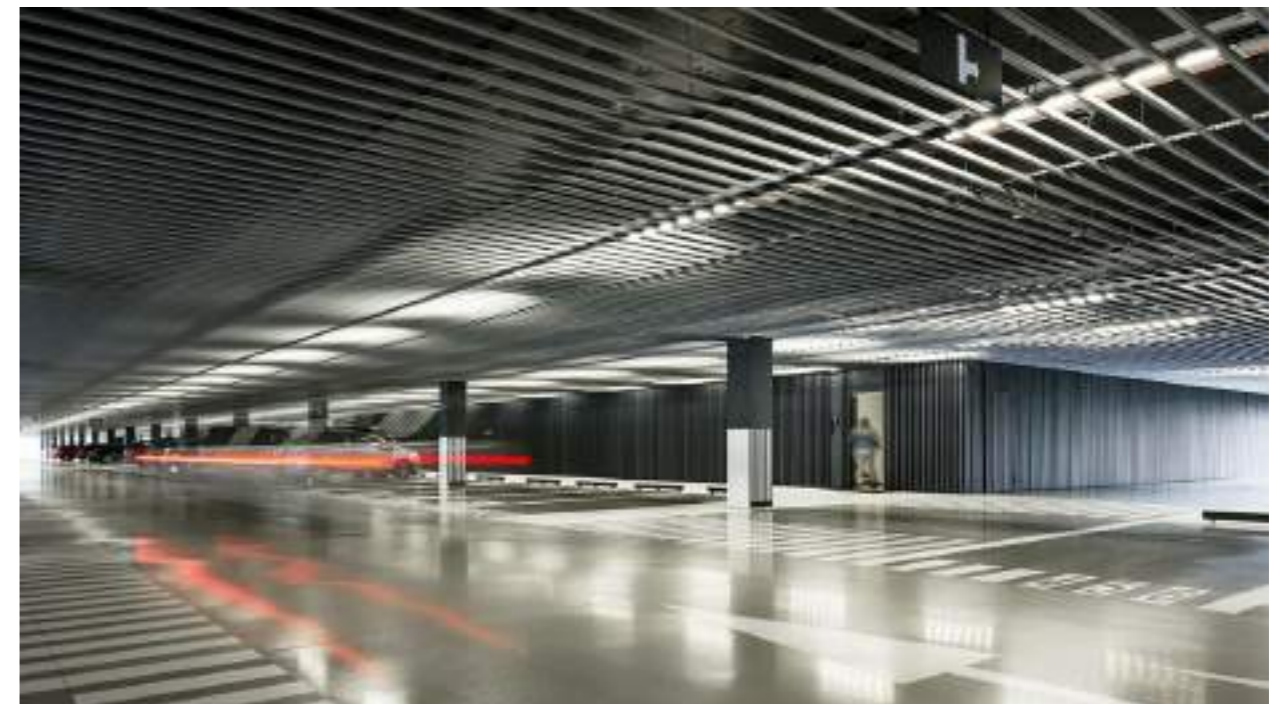
BASEMENT



- Basement:
- Aktivitas service
 - Parking area



Sumber gambar: graphicriver.net



Sumber gambar: archdaily.com

KONSEP TATA RUANG DALAM

Interior Finishing

APARTEMEN

Tipe Studio



Sumber gambar: <https://farmhouserom.com/2019/05/03/63-awesome-double-bed-idea/>

Kasur yang digunakan yaitu jenis Double Bed. Untuk menyiasati apartemen tipe studio yang ukurannya relatif kecil, maka untuk menghemat tempat, akan mengaplikasikan Storage Bed, yaitu tempat tidur multifungsi yang bisa menjadi tempat penyimpanan.



Sumber gambar: <http://jessica-elizabeth.net/4-principles-for-creating-the-perfect-bathroom/>

Km/Wc dibuat menyatu dalam satu ruangan untuk menghemat tempat. Jenis yang digunakan pada apartemen tipe studio yaitu Shower dan Toilet duduk



Sumber gambar: <https://clodihome.com/35-beautiful-small-apartment-decorating-on-a-budget/>

Ruang Keluarga dan Pantry akan menjadi satu kesatuan pada apartemen tipe studio dengan alasan keterbatasan ruang. Tetapi walaupun menjadi satu, sirkulasi di area living room ini tetap akan diperhatikan.



Ruang Study/Ruang Kerja yang berukuran kecil akan disiasati dengan penggunaan storage yang menempel pada dinding agar tidak memakan tempat.

Sumber gambar: <https://www.behance.net/gallery/80308319/zhk-russkij-dom>

KONSEP TATA RUANG DALAM

Interior Finishing

Tipe 2 Bedroom



Sumber gambar: <https://pin.it/2MYJDhB>

Kamar tidur utama menggunakan tempat tidur dengan tipe double bed.



Sumber gambar: <https://pin.it/6Nvzjoi>

Km/Wc utama pada apartemen tipe loft akan menggunakan bathup dan shower serta toilet duduk dan semua itu menjadi satu kesatuan dalam satu ruang.



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Sumber gambar: <https://pin.it/3E9yzt8>

Kamar tidur 1 yang berada di bagian atas adalah tipe storage single bed. Hal ini bertujuan untuk menghemat tempat pada ruang yang kecil.



Sumber gambar: <https://pin.it/59wllHu>

Ruang Keluarga dan Pantry akan menjadi satu kesatuan pada apartemen tipe loft dengan alasan keterbatasan ruang. Tetapi walaupun menjadi satu, sirkulasi di area living room ini tetap akan diperhatikan.



Sumber gambar: <https://pin.it/5POYSIP>

Ruang ganti pakaian dalam hal ini memakai sistem walk in closet dimana pengguna bebas memilih pakaian dan menggunakannya di tempat itu juga. Walk in closet dipilih karena dirasa cukup menghemat tempat.

KONSEP TATA RUANG DALAM

Interior Finishing

Tipe 3 bedroom



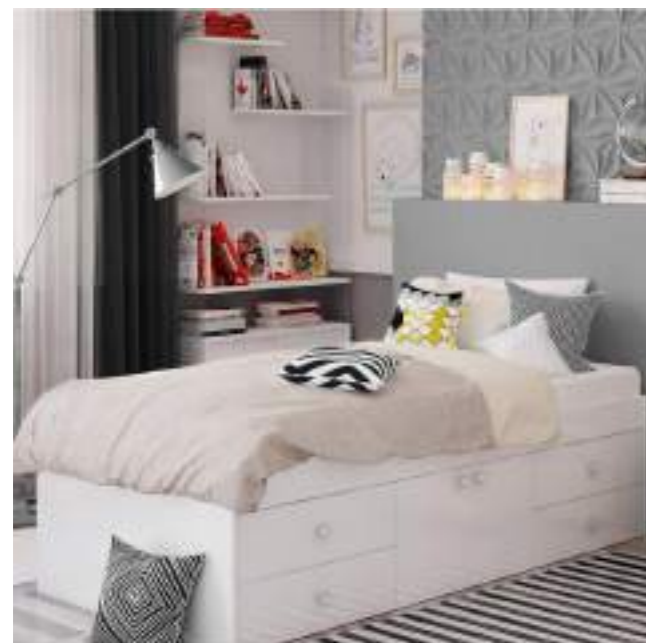
Sumber gambar: <https://pin.it/2MYJDhB>

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Kamar tidur 1 dan 2 adalah tipe storage single bed. Hal ini bertujuan untuk menghemat tempat pada ruang yang kecil.



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Sumber gambar: <https://pin.it/4vaMtpK>

Ruang Keluarga dan Pantry akan menjadi satu kesatuan pada apartemen tipe 3 room dengan alasan keterbatasan ruang. Tetapi walaupun menjadi satu, sirkulasi di area living room ini tetap akan diperhatikan.



Sumber gambar: <https://pin.it/IDCI1MY>

Ruang study/ruang kerja dibuat seminimalisir mungkin dengan storage yang berada di bagian bawah sehingga tidak memakan banyak tempat.

KONSEP TATA RUANG DALAM

Interior Finishing



Sumber gambar: <https://pin.it/28QO1pp>

Living room pada apartemen menggunakan warna terang dengan motif yang tidak terlalu rumit agar memberikan efek yang lebih luas.



Sumber gambar: <https://pin.it/3iLJcmY>

Warna cream adalah salah satu contoh warna yang baik untuk diterapkan pada area living room karena dapat menciptakan ruangan yang nyaman dan sejuk.

Warna biru yang diterapkan pada ruang study/ruang kerja akan membuat pikiran jernih dan meningkatkan konsentrasi.



Sumber gambar: <https://pin.it/5MYe5s>



Sumber gambar: <https://pin.it/5KzpwHS>

Warna abu-abu pada kamar tidur dapat memberikan suasana tenang dan membantu melepas lelah atau stress sehingga memudahkan untuk beristirahat dan tidur nyenyak.

Warna putih pada kamar mandi dapat menciptakan kesan bersih, luas, juga bercahaya yang alami.



Sumber gambar: <https://pin.it/5vVAuOt>

KONSEP TATA RUANG DALAM

Interior Finishing

RENTAL OFFICE

Warna biru yang diterapkan pada ruang study/ruang kerja/rental office akan membuat pikiran jernih dan meningkatkan konsentrasi.



Sumber gambar: <https://pin.it/1S29Ogh>



Sumber gambar: <https://pin.it/6sZZwo0>



Sumber gambar: <https://pin.it/pbxID1E>

Warna kuning pada ruang study/ruang kerja dapat meningkatkan konsentrasi karena bisa membangunkan otak dan sistem saraf. Warna kuning juga dapat memicu pelepasan hormon yang membuat seseorang bahagia yaitu serotonin.



Sumber gambar: <https://pin.it/1ApON1r>

KONSEP TATA RUANG DALAM

Interior Finishing

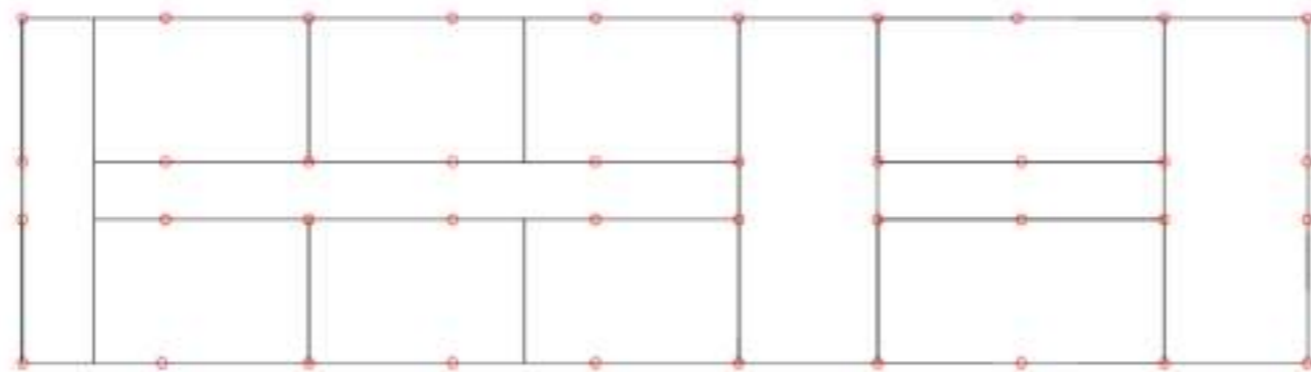
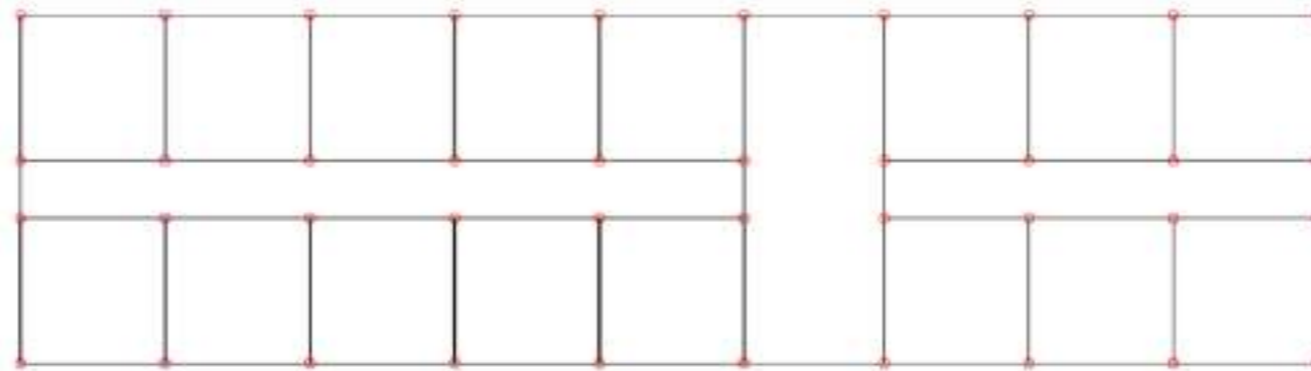
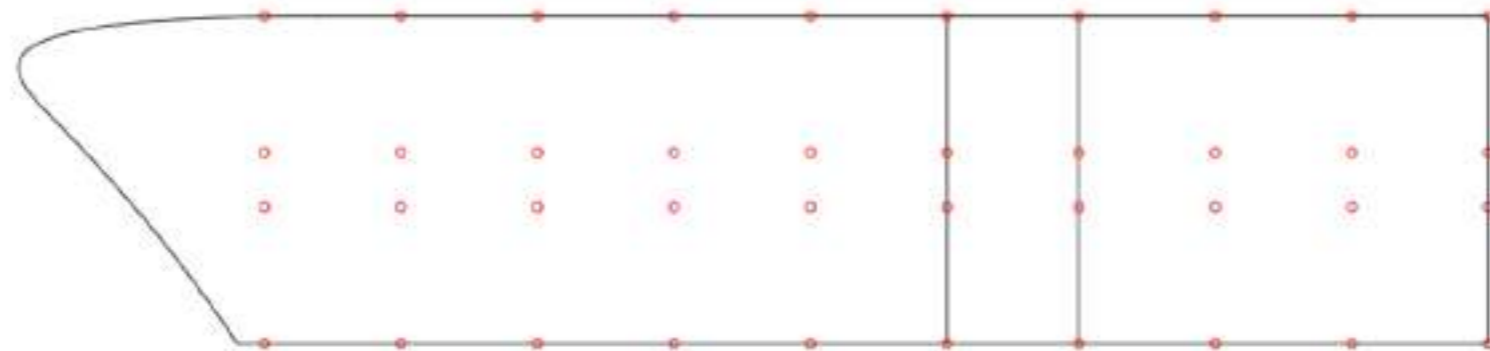


Konsep shopping center yaitu terbuka



KONSEP STRUKTUR

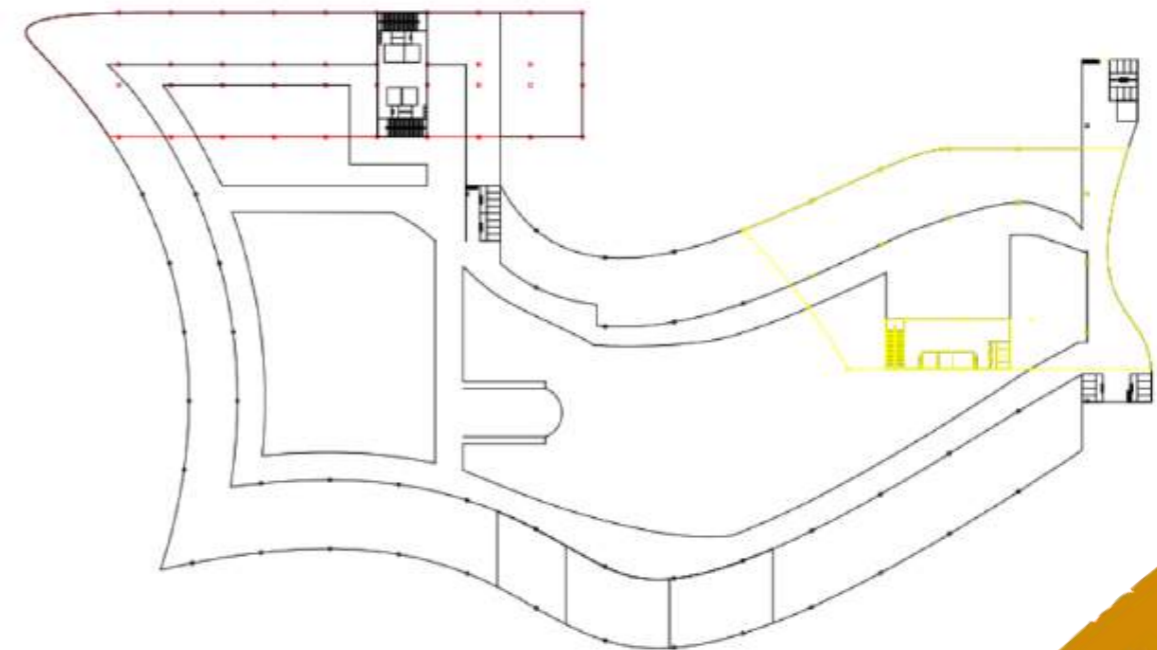
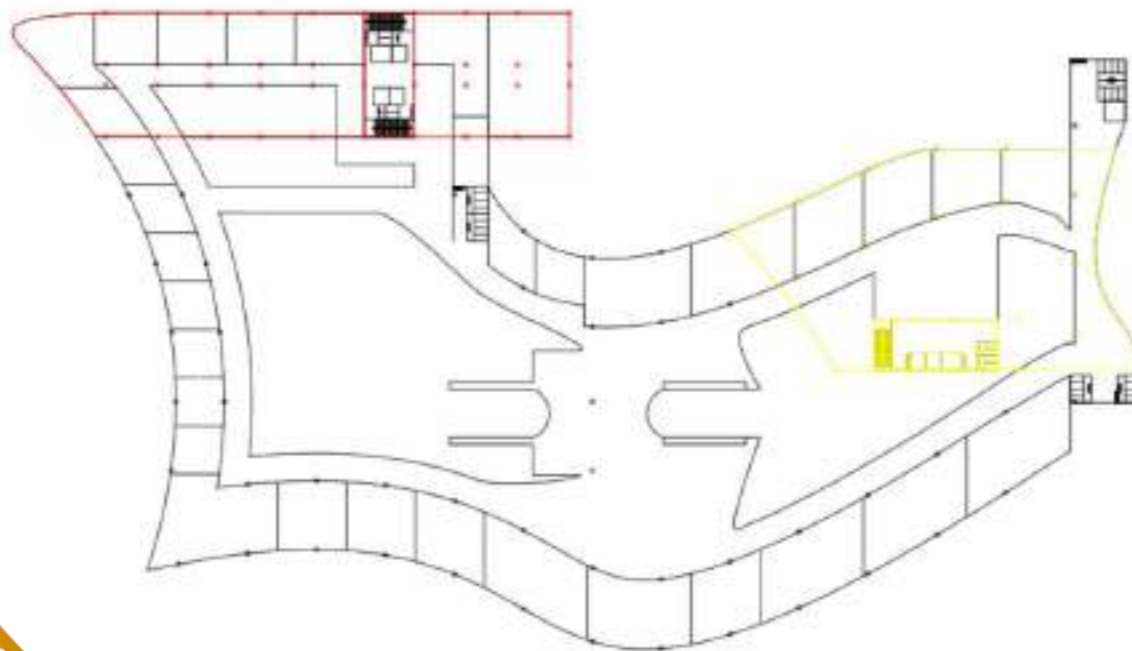
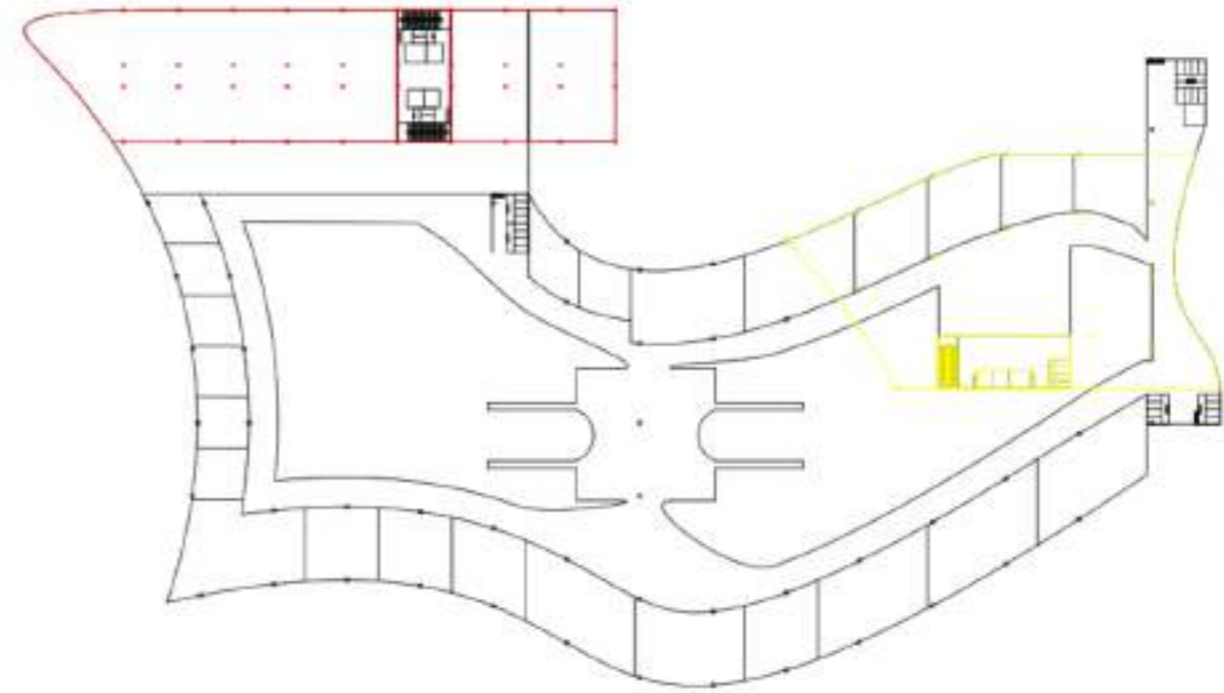
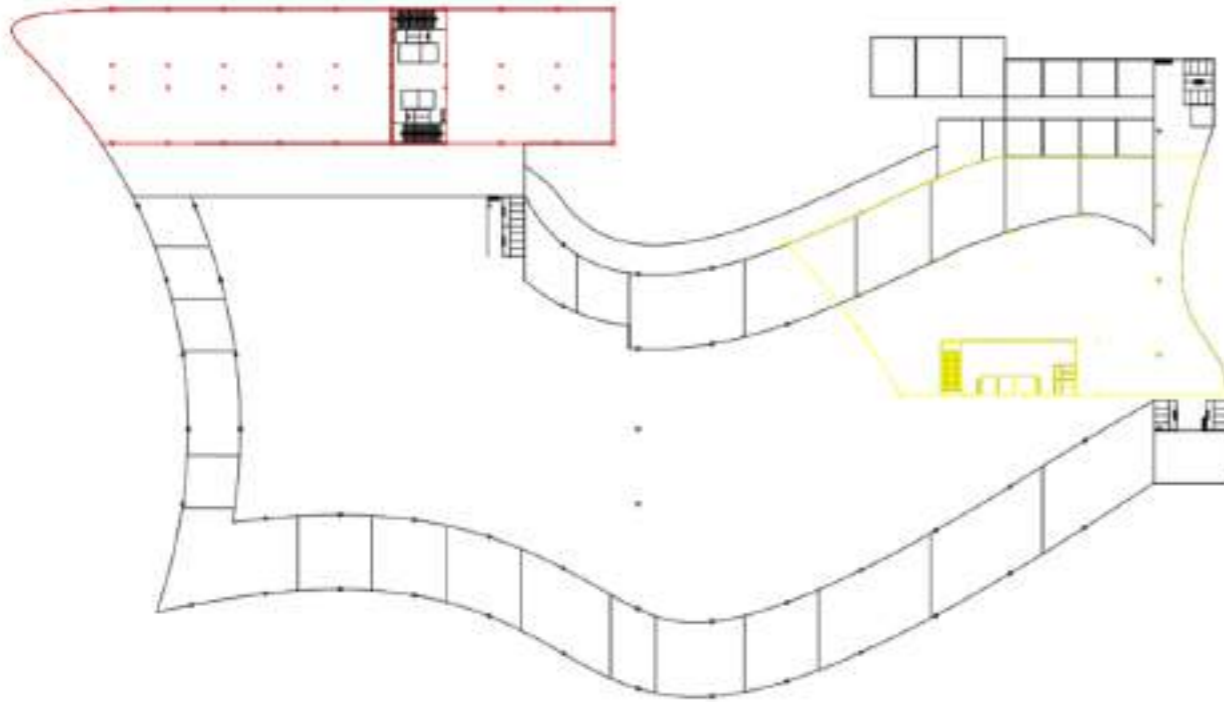
TATA MODUL - APARTMENT



Jarak antar kolom utama: 7,5 m

KONSEP STRUKTUR

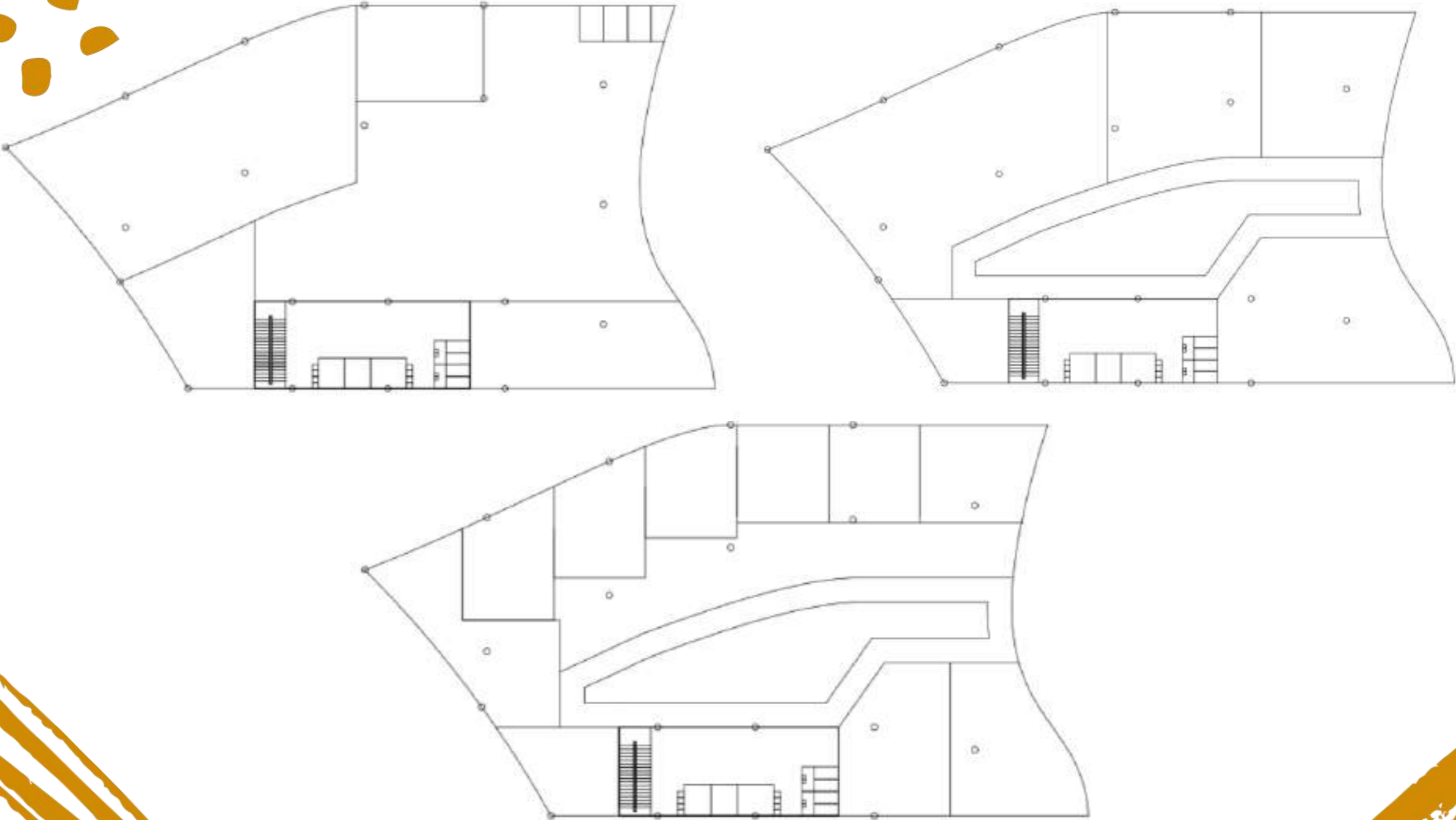
TATA MODUL – SHOPPING CENTER



Jarak antar kolom utama: 10m, dan menyesuaikan dengan kondisi ruang dalam

KONSEP STRUKTUR

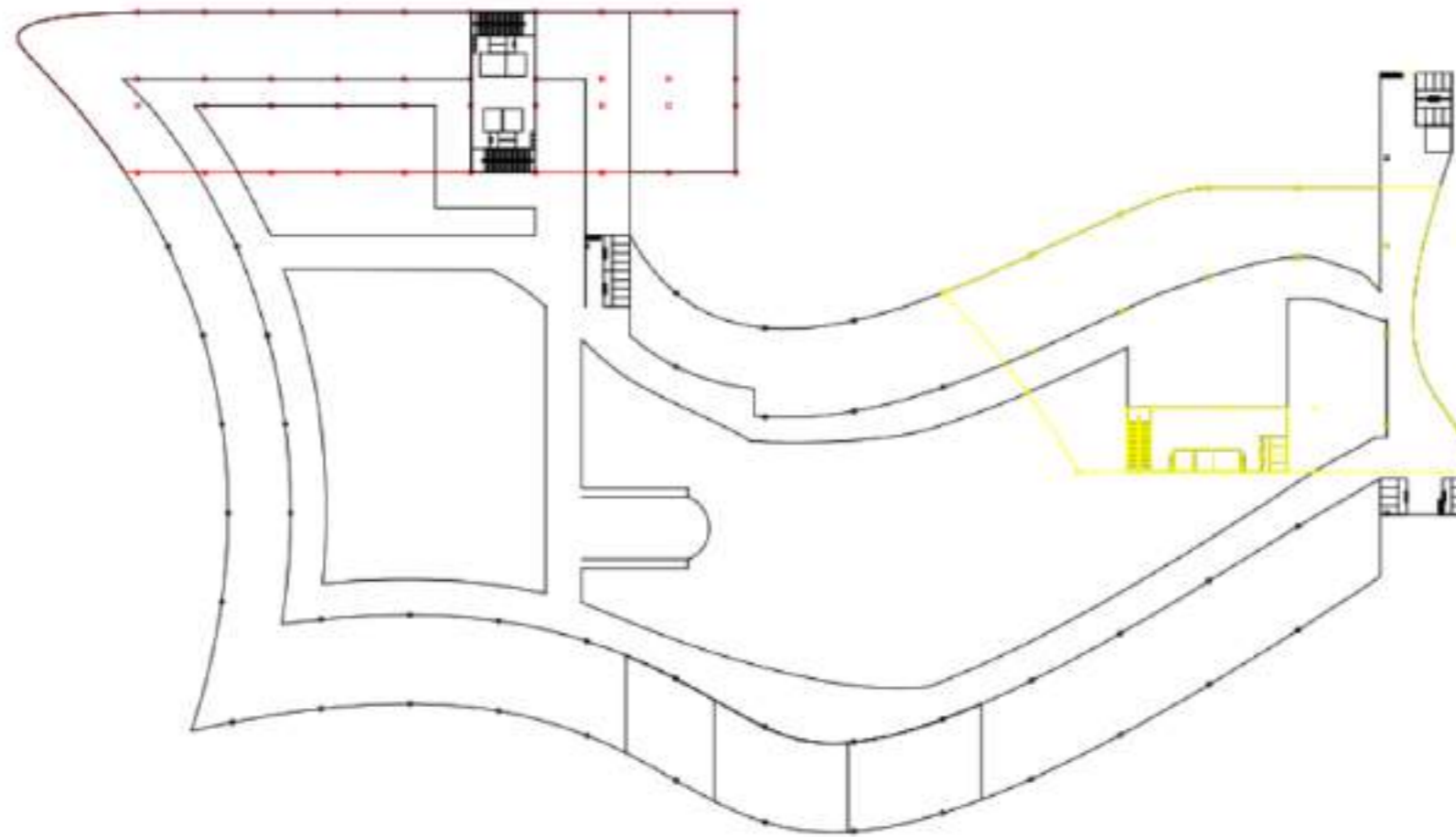
TATA MODUL – RENTAL OFFICE



Jarak antar kolom utama disinkronisasi dengan shopping center

KONSEP STRUKTUR

TATA MODUL – MIXED USE BUILDING

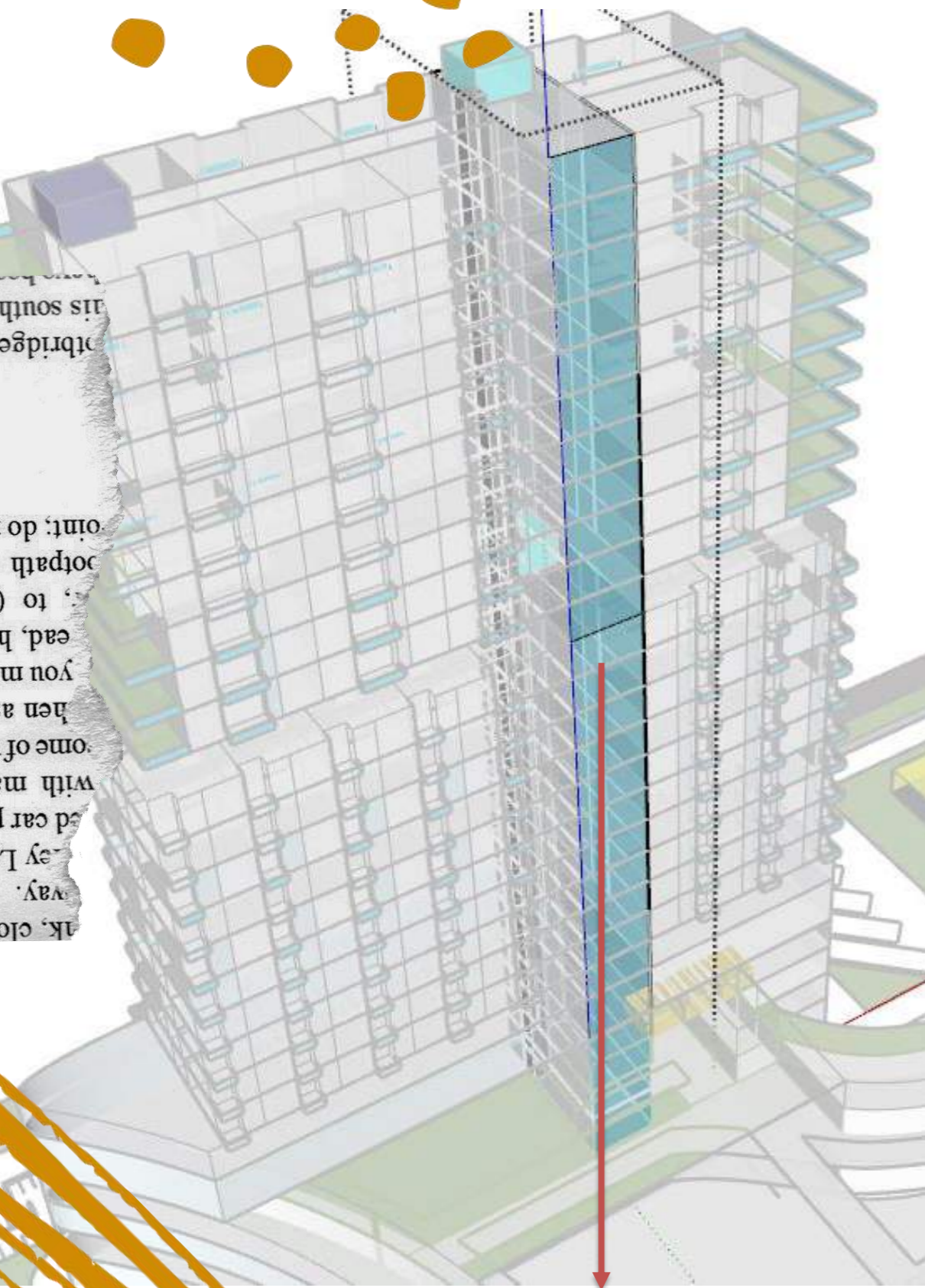


Kolom yang digunakan yaitu kolom bulat dengan diameter 50 cm

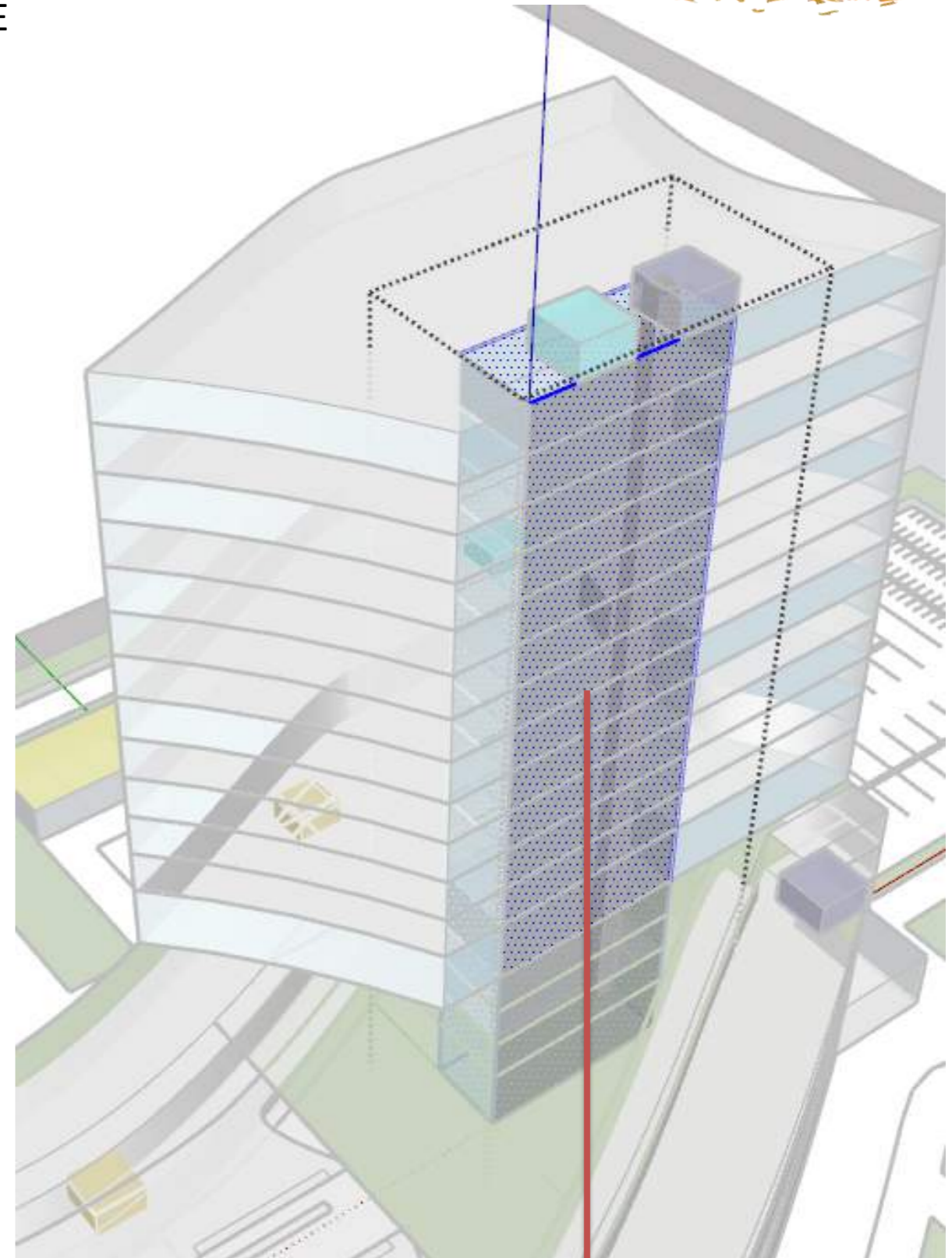


KONSEP STRUKTUR

PERLETAKAN CORE



APARTMENT



RENTAL OFFICE

KONSEP STRUKTUR

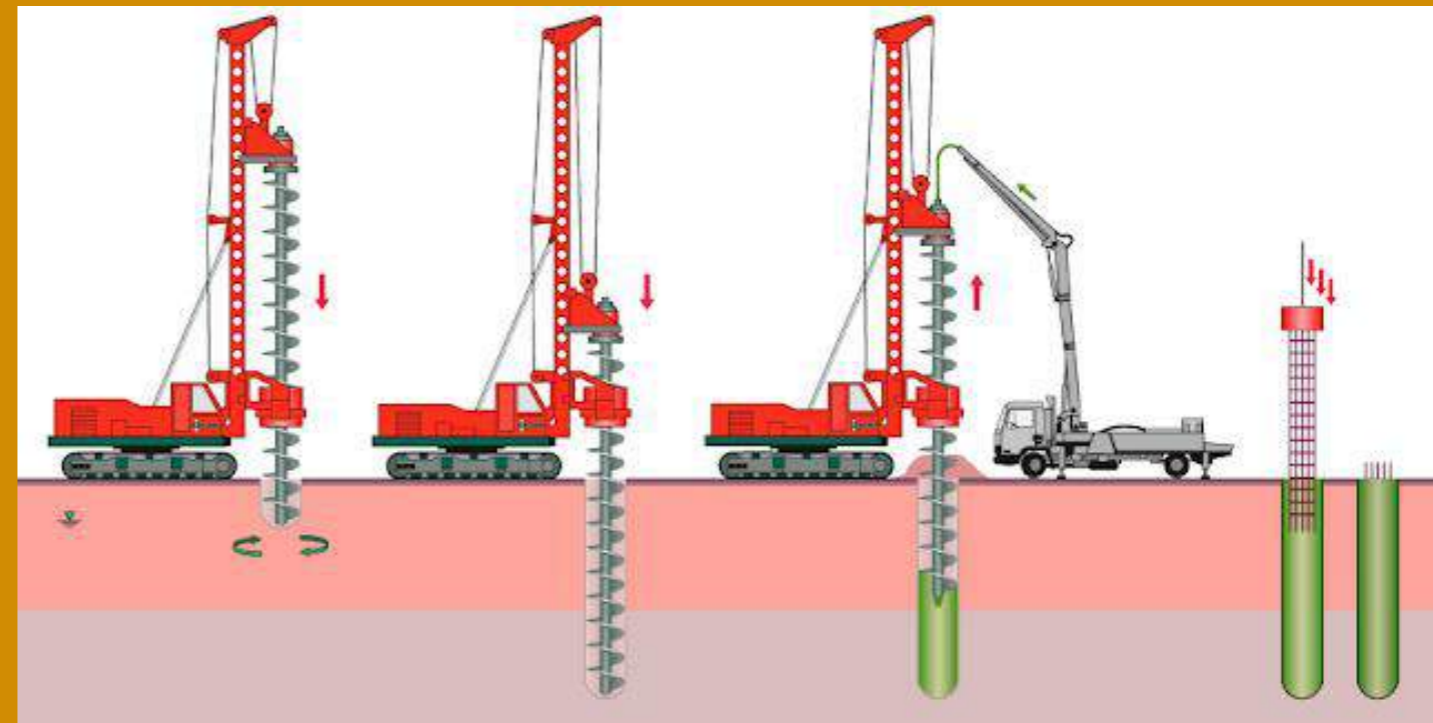
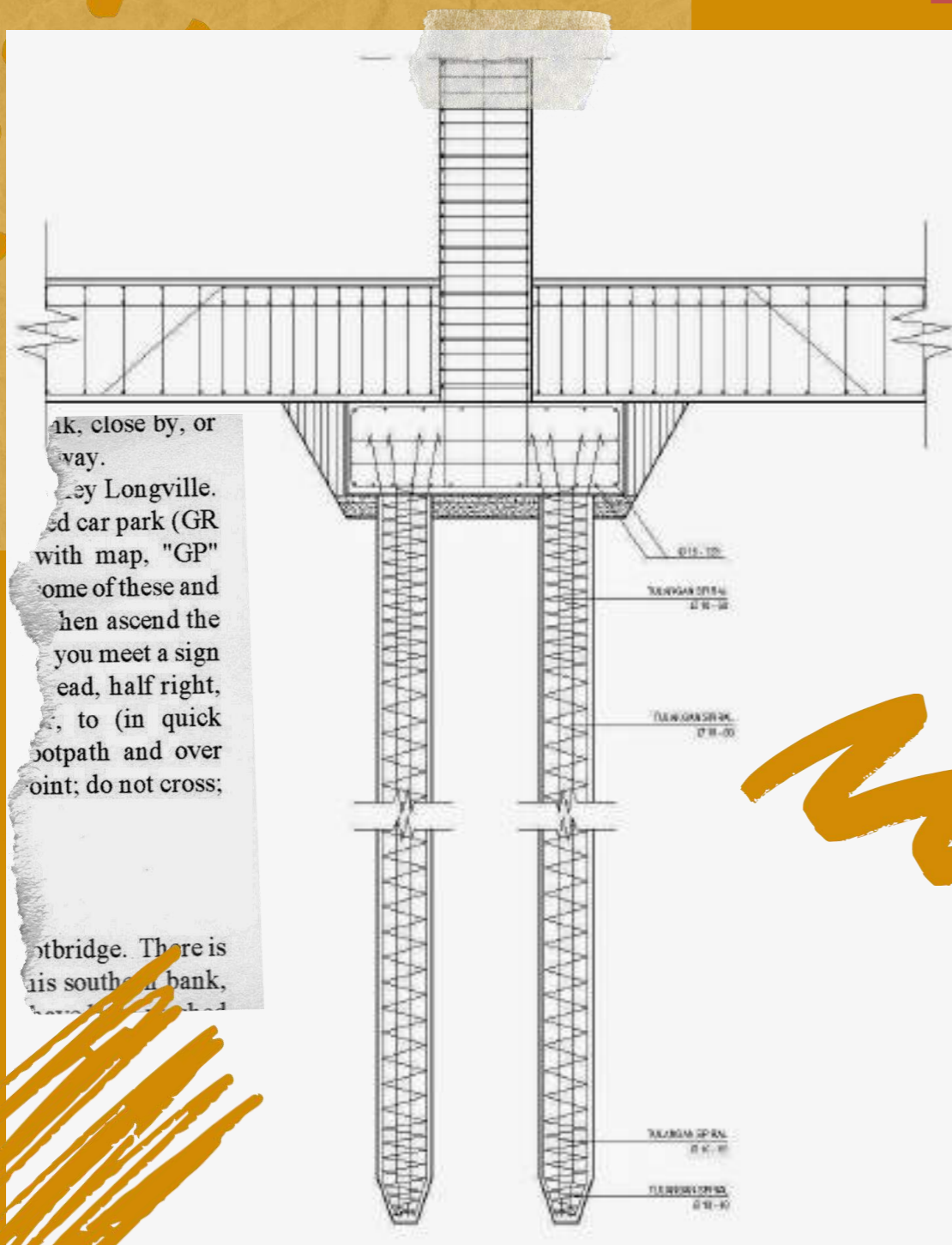
TATA ELEVASI LANTAI / FLOOR TO FLOOR HEIGHT



KONSEP STRUKTUR

Pondasi

BORE PILE



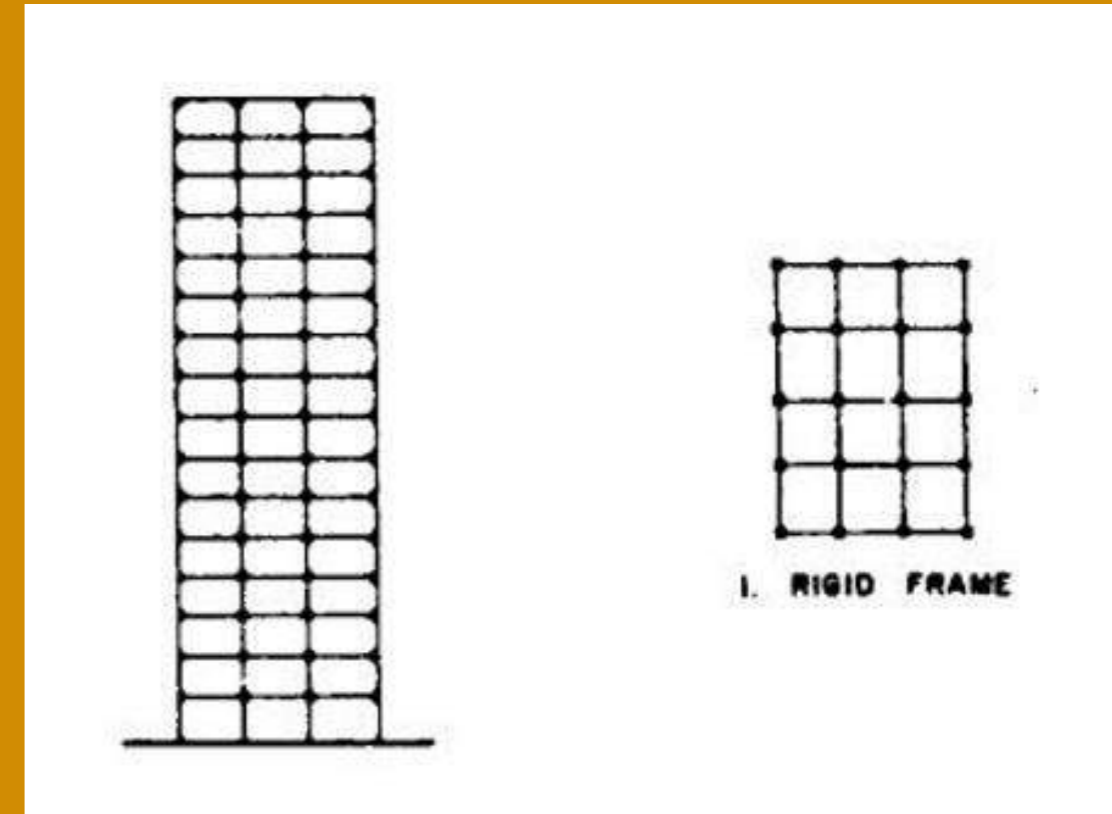
Pondasi *bore pile* merupakan salah satu pondasi yang dipergunakan untuk bangunan apabila tanah dasarnya tidak mempunyai daya dukung tanah untuk memikul berat bangunan tersebut.

Keuntungan penggunaan pondasi bore pile:

1. Pemasangan tidak menimbulkan gangguan suara dan getaran yang membahayakan bangunan sekitarnya.
2. Mengurangi kebutuhan beton dan tulangan dowel pada pelat penutup tiang (pile cap).
3. Kolom dapat secara langsung diletakkan di puncak bored pile.
4. Kedalaman tiang dapat divariasikan.
5. Tanah dapat diperiksa dan dicocokkan dengan data laboratorium.
6. Bored pile dapat dipasang menembus batuan, sedang tiang pancang akan kesulitan bila pemancangan menembus lapisan batuan.
7. Diameter tiang memungkinkan dibuat besar, bila perlu ujung bawah tiang dapat dibuat lebih besar guna mempertinggi kapasitas dukungnya.
8. Tidak ada risiko kenaikan muka tanah.

KONSEP STRUKTUR

RIGID FRAME STRUCTURAL SYSTEM



- Dalam struktur rangka kaku, balok dan kolom dibangun secara monolitik untuk menahan momen yang dikenakan karena beban
- Sistem struktur rangka kaku sangat cocok untuk bangunan beton bertulang
- Struktur sistem rangka kaku menahan momen lentur, gaya geser, dan beban aksial
- Ketinggian lantai 20 – 25 bangunan bertingkat dapat dibangun menggunakan sistem rangka kaku
- Keuntungannya yaitu kemudahan konstruksi, membangun dengan cepat dan dapat dirancang secara ekonomis

KONSEP STRUKTUR

BETON BERTULANG



- Kekuatan tekan yang dimiliki oleh beton bertulang lebih tinggi daripada material konstruksi lainnya
- Material beton bertulang menjadi primadona konstruksi salah satunya karena daya tahan yang sangat baik terhadap air dan juga api. Umumnya saat terjadi kebakaran dan juga banjir, material beton yang padat mampu melindungi tulangan pada beton bertulang dari api dan air sehingga umumnya kerusakan hanya akan terjadi pada bagian permukaan saja
- Konstruksi beton bertulang unggul dalam hal perawatan. Tak cuma mudah dan praktis, biaya pemeliharaan dari konstruksi beton bertulang juga relatif lebih rendah
- Konstruksi beton bertulang juga memiliki durabilitas yang tinggi. Konstruksi ini terkenal akan keawetannya dan tahan lama dibandingkan dengan bahan lain. Umumnya struktur beton bertulang mampu digunakan dalam jangka waktu yang lama
- Biaya pembangunan relatif lebih rendah

KONSEP STRUKTUR

PLAT LANTAI BETON



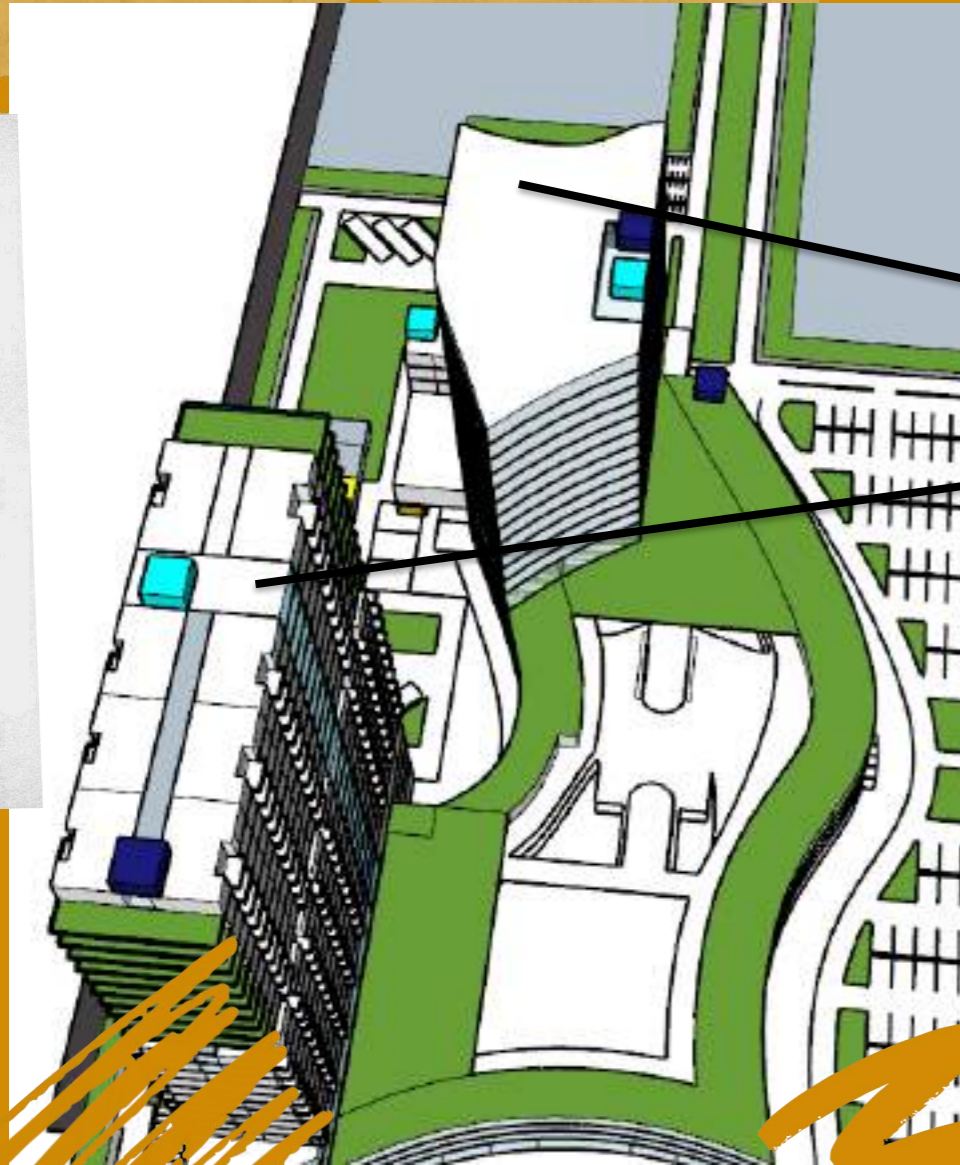
Plat lantai dari beton mempunyai keuntungan antara lain :

- Mampu mendukung beban besar
- Merupakan isolasi suara yang baik
- Tidak dapat terbakar dan dapat lapis kedap air, jadi di atasnya boleh dibuat dapur dan km/wc
- Dapat dipasang tegel untuk keindahan lantai
- Merupakan bahan yang kuat dan awet, tidak perlu perawatan dan dapat berumur panjang.

KONSEP STRUKTUR

ATAP APARTMENT & RENTAL OFFICE

DAK BETON



Atap yang digunakan pada massa apartment dan rental office adalah dak beton. Atap jenis ini digunakan karena bagian atas apartment dan rental office ditujukan untuk tempat utilitas.



KONSEP STRUKTUR ATAP SHOPPING CENTER



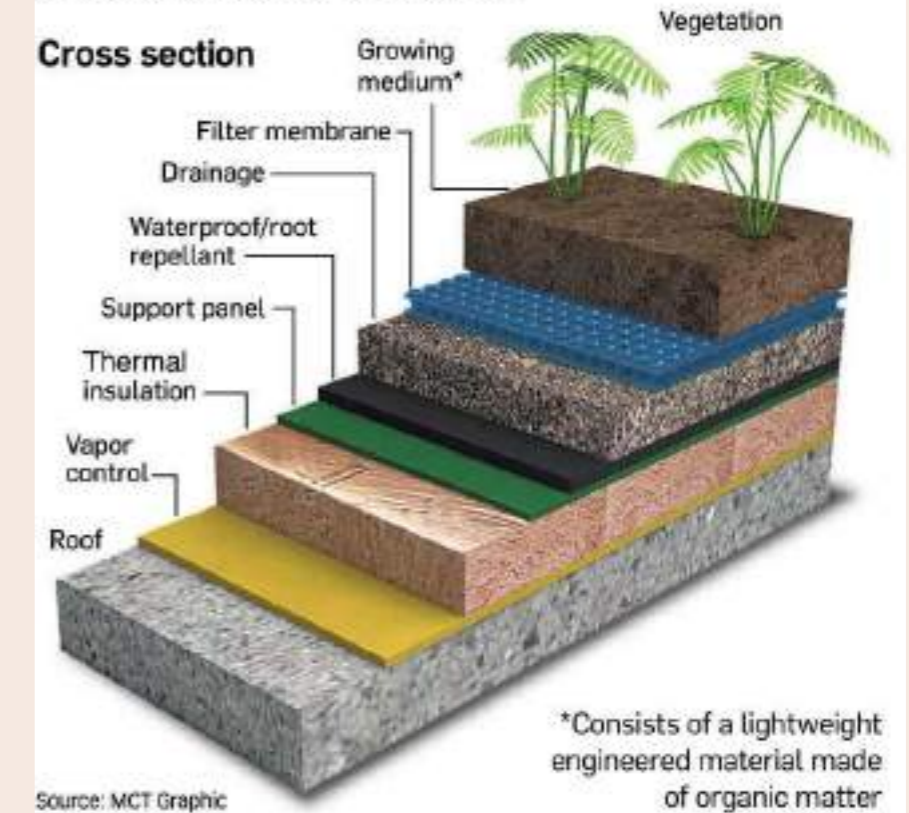
Sumber gambar: farukix.com



Sumber gambar: s-on-site.com

Roofs that really hold water

Green roofs vary in plant types used, size and shape, but may consist of some or all of the following:



Sumber gambar: world-architects.com



Sumber gambar: landarchs.com

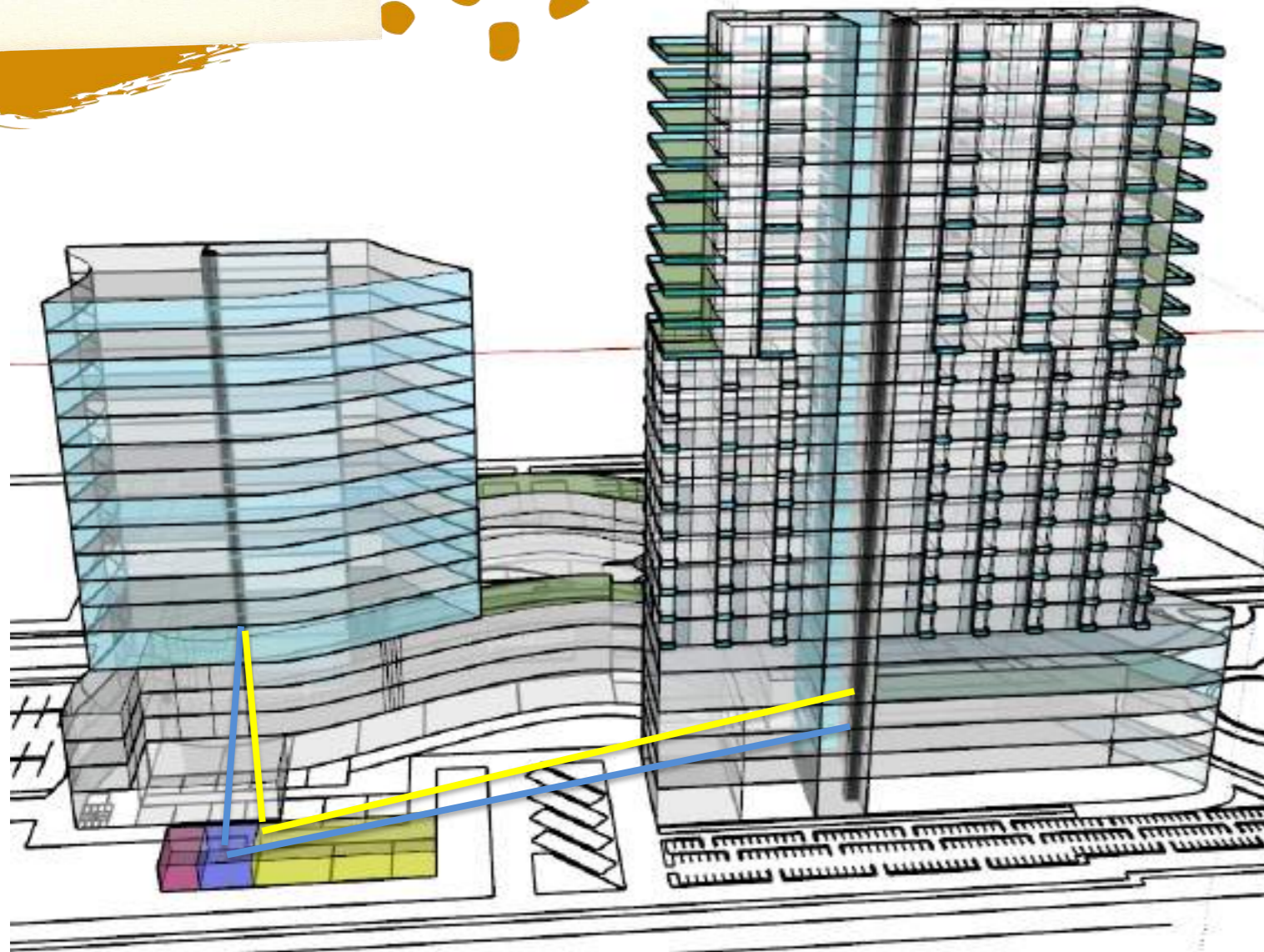


was in the mid-eighties, when an advertisement in the *Street Journal* offered the island for sale for a million dollars. That was the start of a long and complicated legal battle between a company based in Dingle, which had acquired the share of the land, and the Irish government at that time by Charles Haughey, the owner of Inis Meáin - which wanted to establish a national park. The issue went all the way to the Supreme Court as I crossed on that first day of the season, and the future was unclear. There were some people who thought that the island being brought back to life anyway, I had



KONSEP UTILITAS

SISTEM KELISTRIKAN



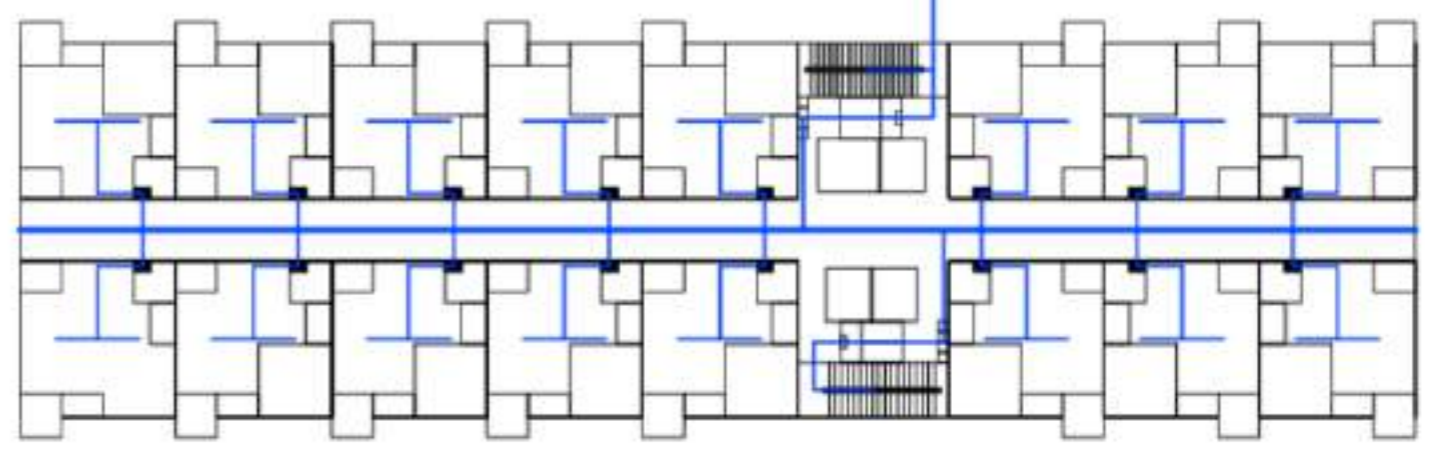
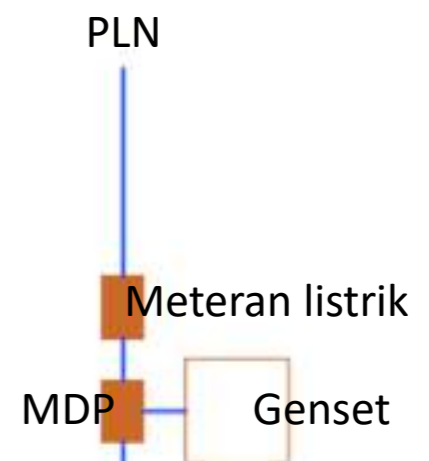
Alur sistem utilitas listrik utama



Alur sistem utilitas listrik cadangan



- SDP
- Genset
- MDP
- Trafo
- Sumber listrik utama (MDP)
- Sumber listrik cadangan genset



Denah instalasi listrik (apartment)

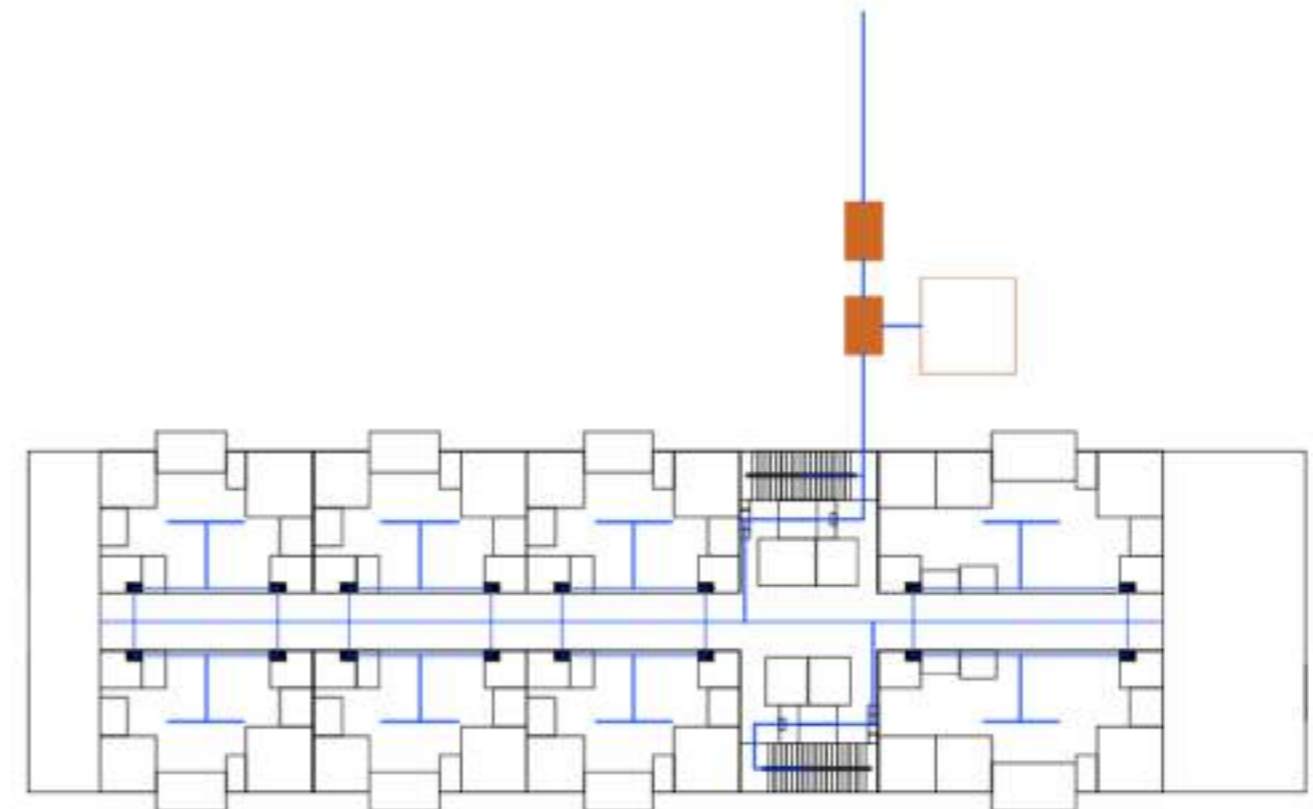
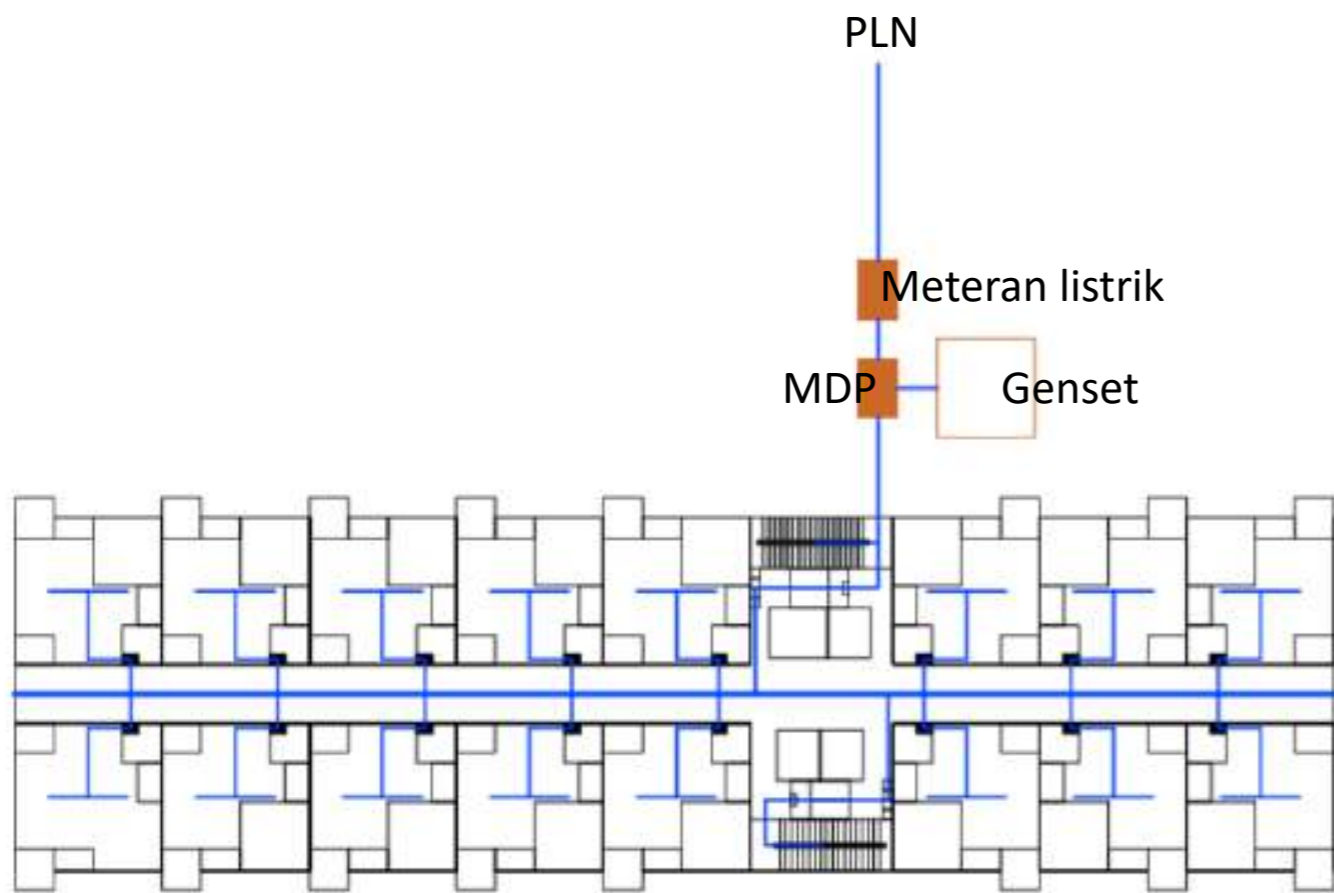
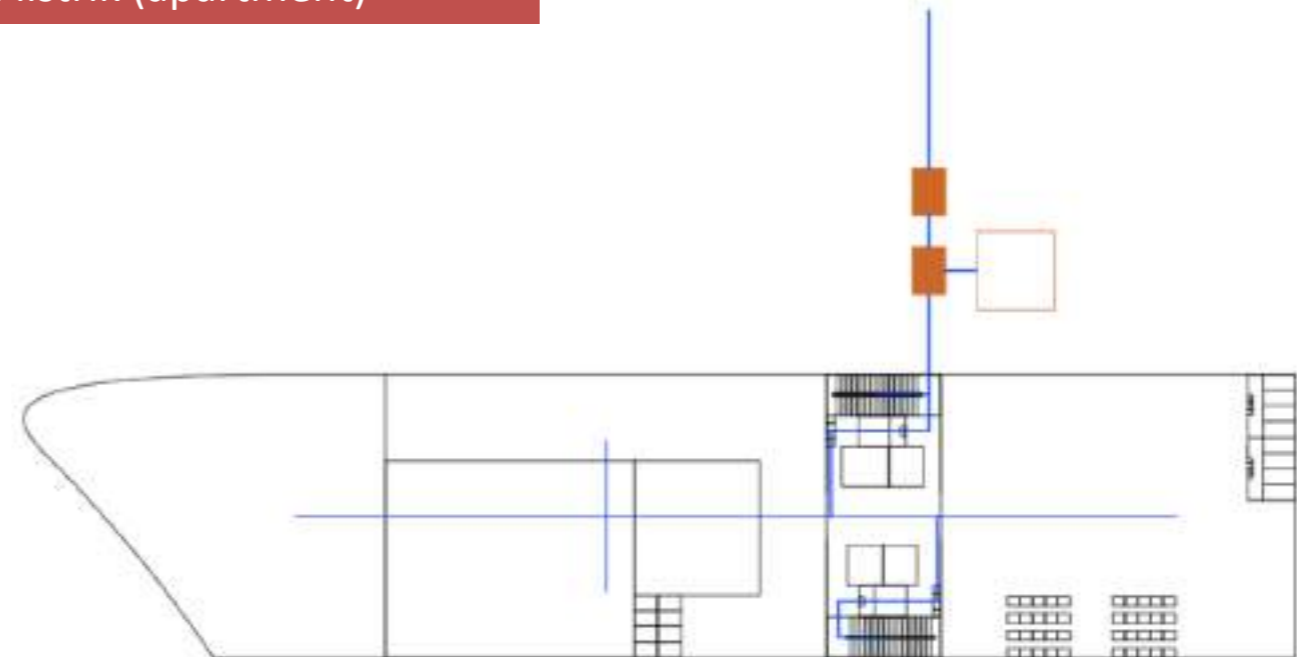
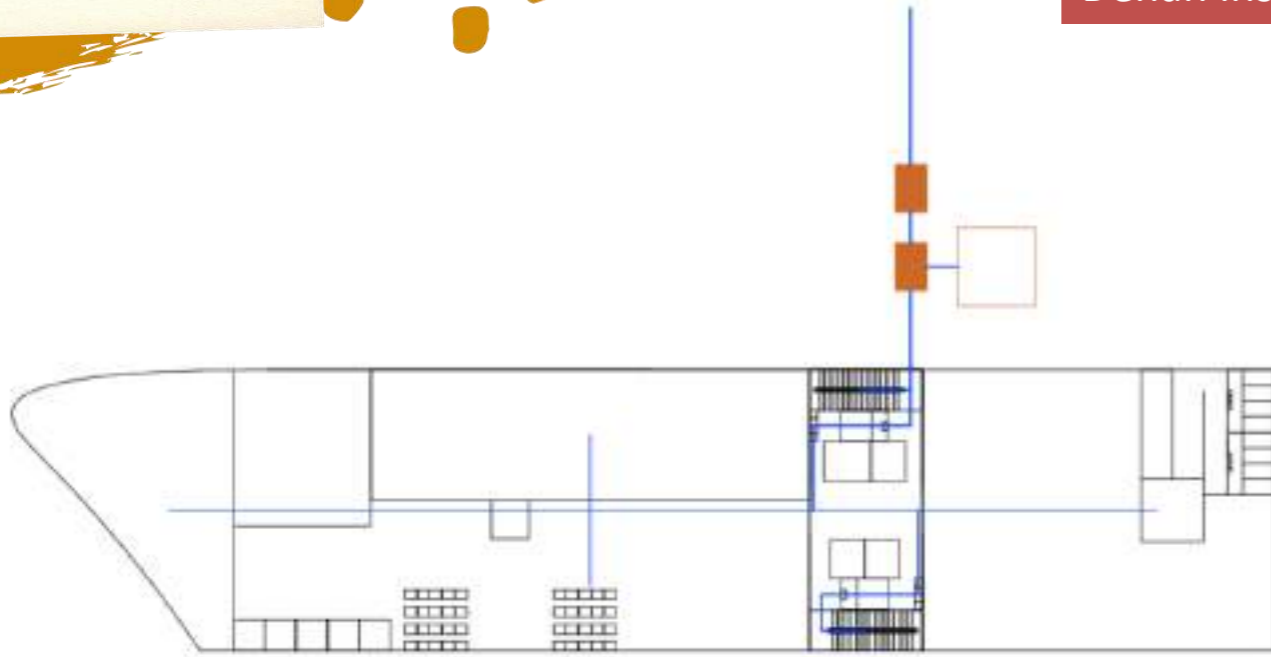
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KONSEP UTILITAS

SISTEM KELISTRIKAN

Denah instalasi listrik (apartment)



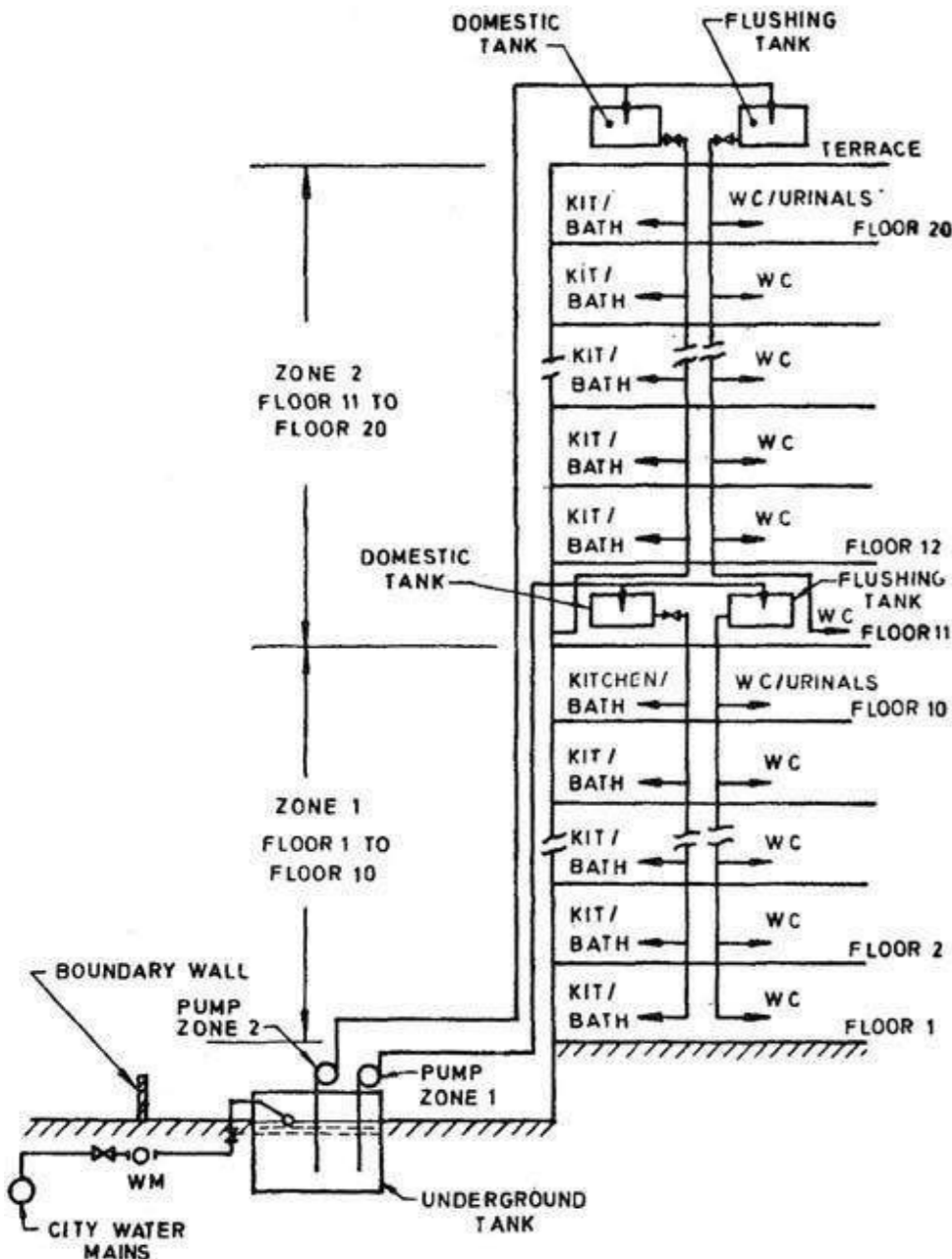
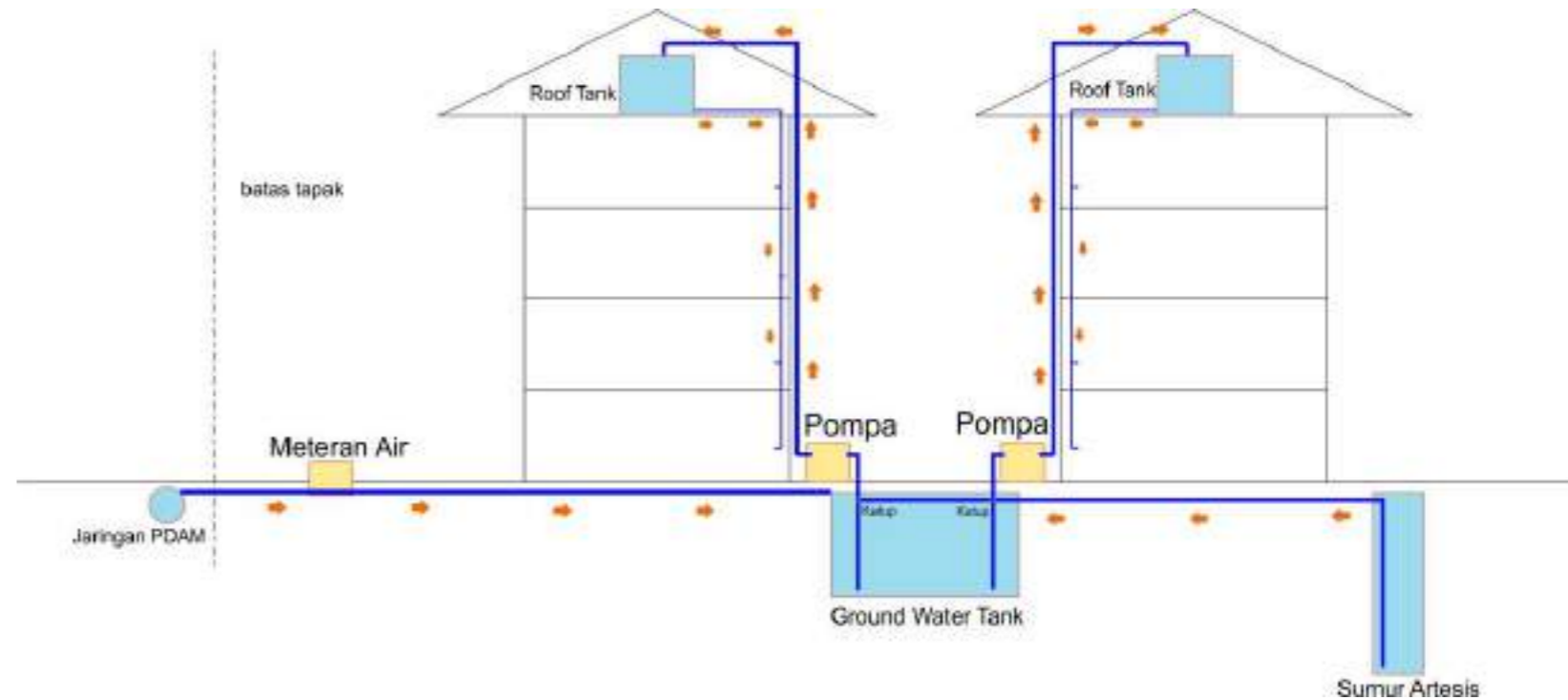
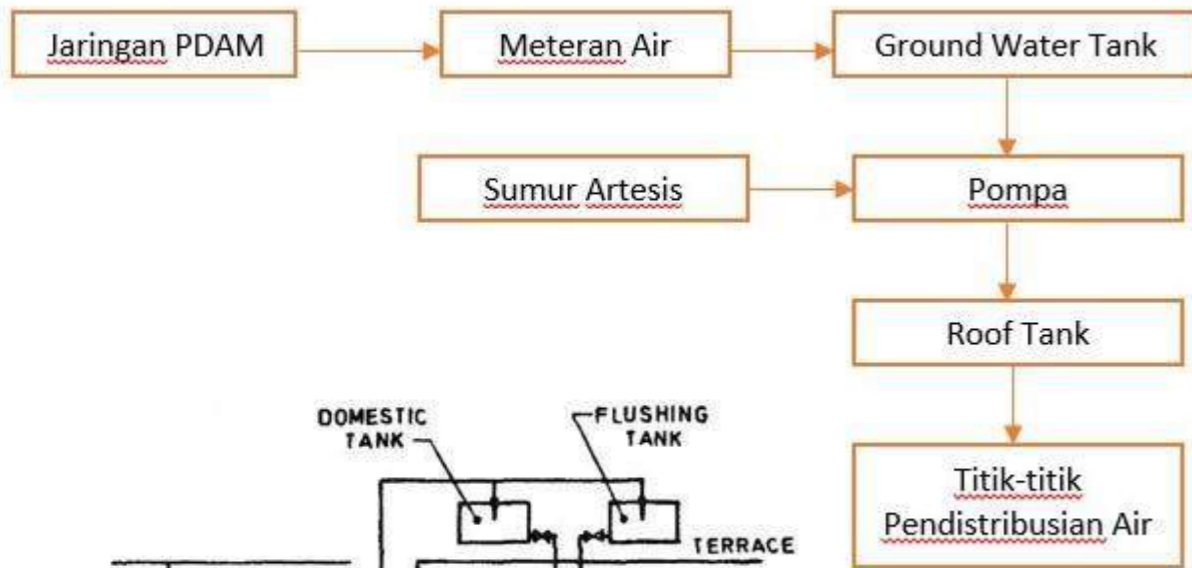
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275

KONSEP UTILITAS

SISTEM TATA AIR

AIR BERSIH



Sistem supply air pada bangunan tinggi berasal dari pengambilan air dari sumur maupun dari PDAM/meteran dan dilanjutkan dengan pembuatan penampung air atau biasa disebut dengan Ground Water Tank (GWT) jika diletakkan pada dasar bangunan disebut Underground dan jika tangki diletakkan di atas bangunan disebut Roof Tank.

Dengan mengandalkan gaya gravitasi, air dari Roof Tank kemudian didistribusikan ke tiap titik pengambilan air seperti keran wastafel, keran bak air mandi, sprinkler dan hidrant dengan sistem shaft.

Untuk bangunan dengan interval ketinggian yang cukup tinggi biasanya dibuat sistem distribusi air dengan pola pemompaan dua sampai tiga kali sesuai kemampuan daya pompa yang direncanakan yang biasanya dilengkapi dengan sistem penampungan transisi pada daerah dilatasi tersebut, hal ini dikarenakan karena keterbatasan kemampuan pompa untuk menyuplai air pada elevasi gedung yang cukup tinggi sehingga membutuhkan daerah dilatasi/transisi untuk melakukan penampungan ke tingkat berikutnya.

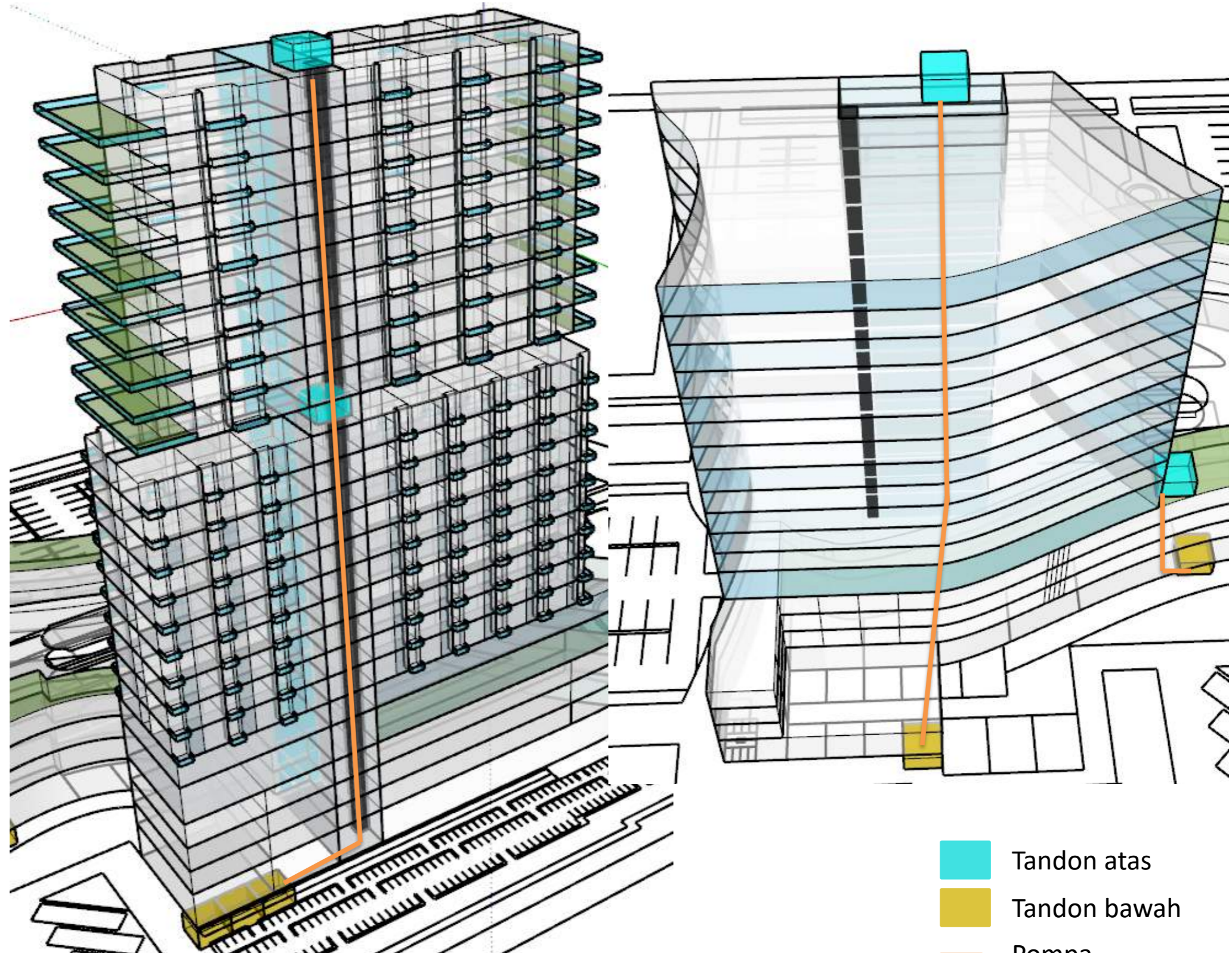
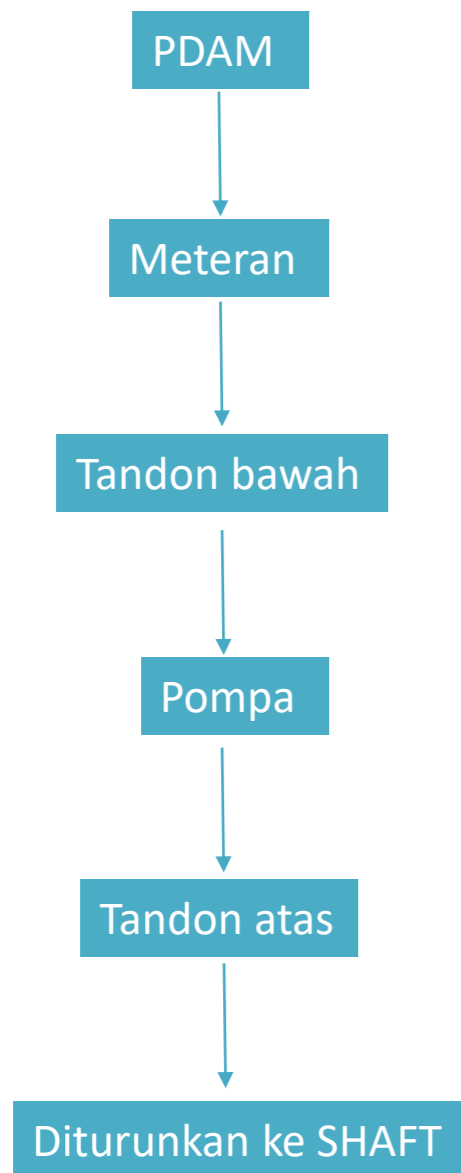
dollars. That was the start of a long and complicated legal battle between a company based in Dingle, which had acquired Taylor Collings' share of the land, and the Irish government – led at that time by Charles Haughey, the owner of Inis Icléain – which wanted to establish a national park. The issue was still before the Supreme Court as I crossed on that first boat of the season, and the future was unclear. There were signs of the island being brought back to life anyway, I had

275

KONSEP UTILITAS

SISTEM TATA AIR

Alur sistem utilitas air bersih



- Tandon atas
- Tandon bawah
- Pompa

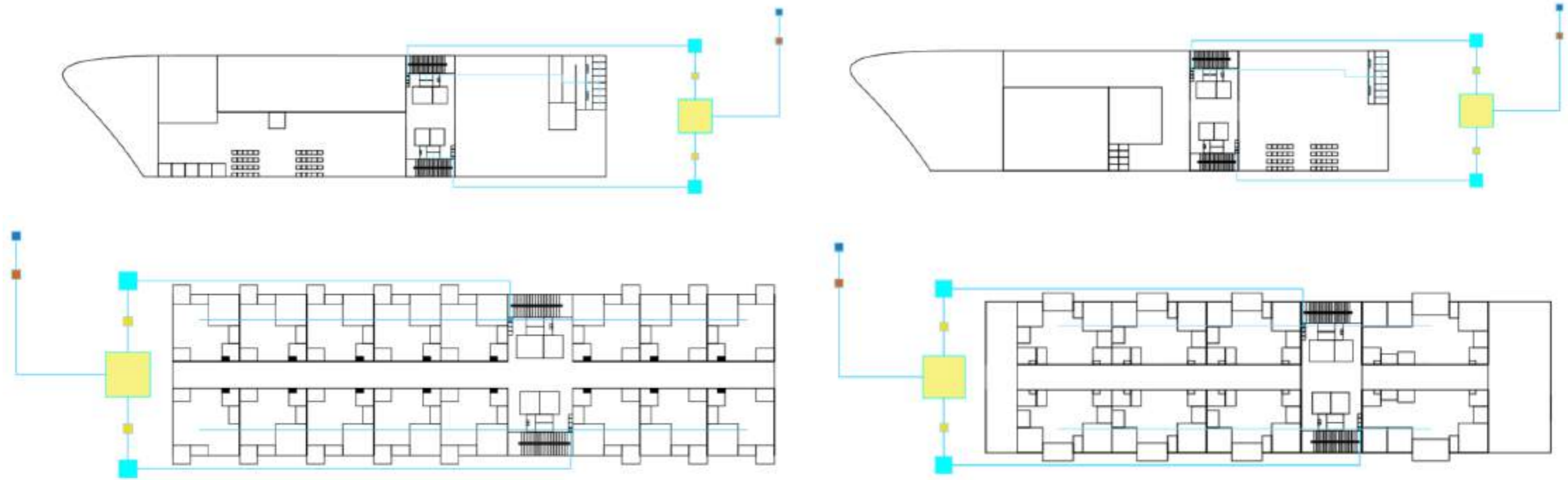
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275

KONSEP UTILITAS

SISTEM TATA AIR

Denah Pendistribusian Air Bersih (Apartment)



-  Jaringan PDAM
-  Meteran air
-  Ground water tank
-  Pompa
-  Roof tank
-  Shaft
-  Jalur pendistribusian

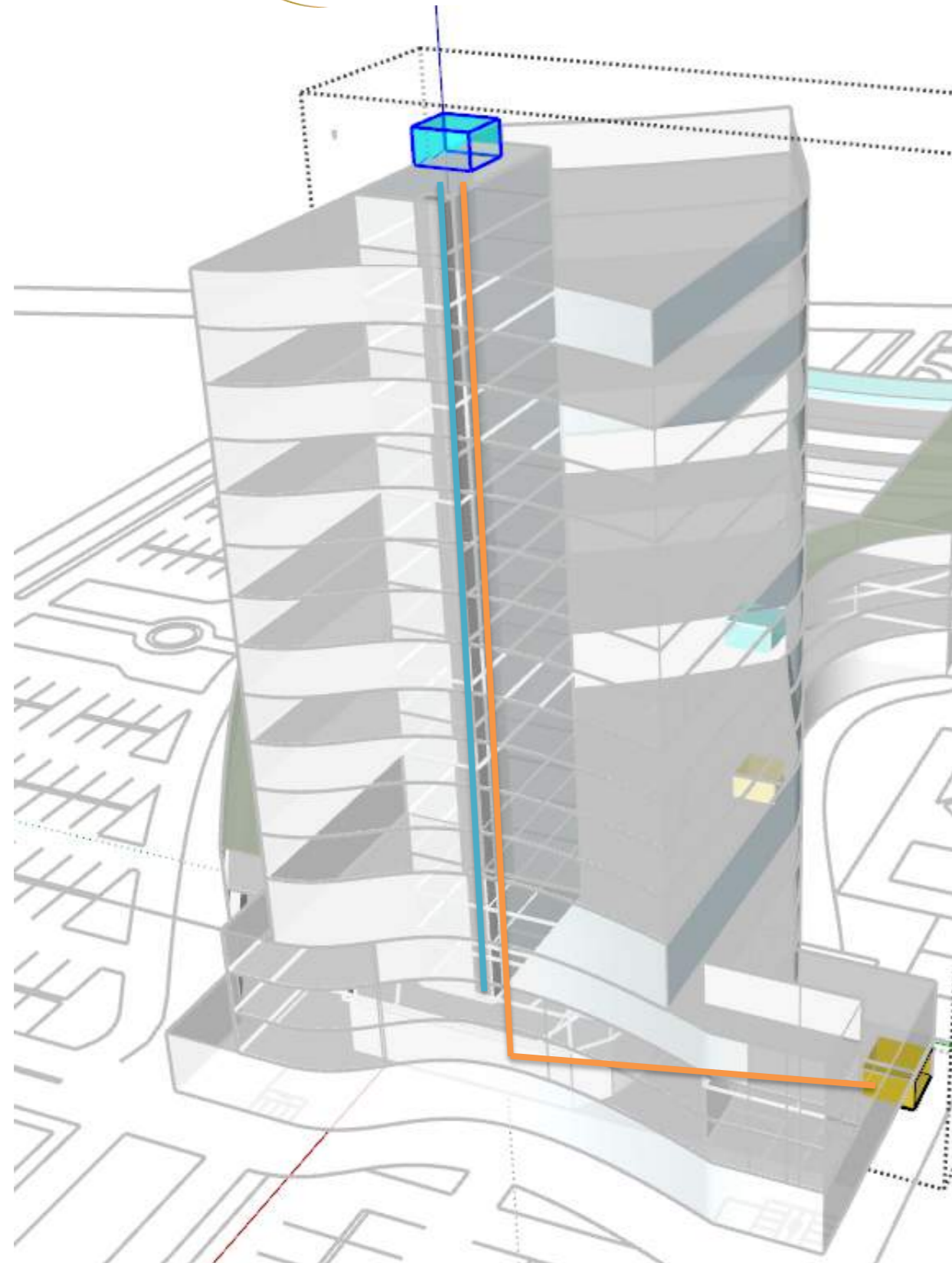
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275

KONSEP UTILITAS

SISTEM TATA AIR

Pendistribusian Air Bersih Rental Office dan Shopping Center



- Ground water tank
- Roof tank
- Pompa
- Shaft

dollars. That was the start of a long and complicated legal battle between a company based in Dingle, which had acquired Taylor Collings' share of the land, and the Irish government – led at that time by Charles Haughey, the owner of Inis Icléain – which wanted to establish a national park. The issue was still before the Supreme Court as I crossed on that first boat of the season, and the future was unclear. There were signs of the island being brought back to life anyway, I had

275

KONSEP UTILITAS

SISTEM TATA AIR

AIR KOTOR

Diagram Pembuangan Limbah Cair

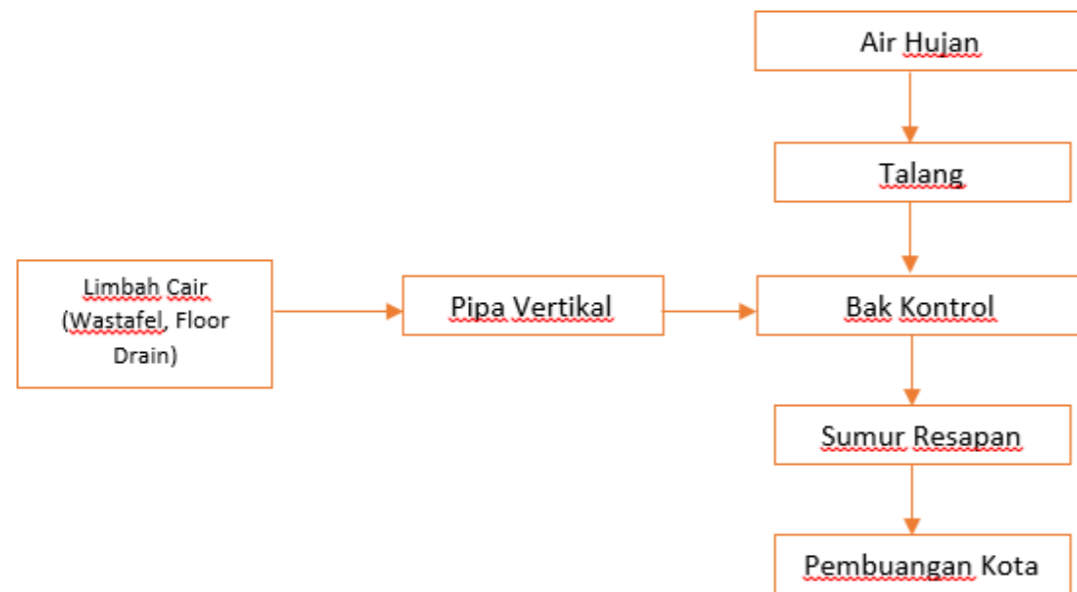
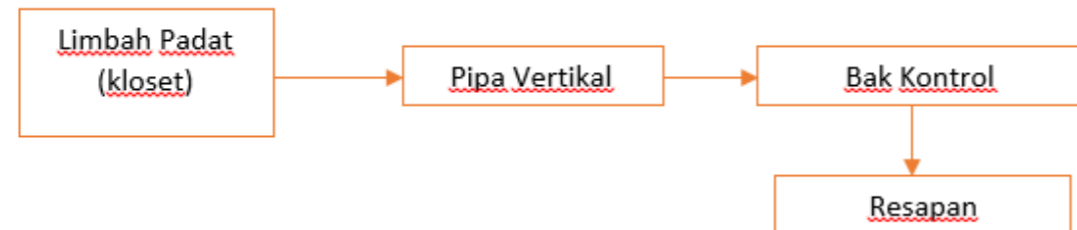


Diagram Pembuangan Limbah Padat



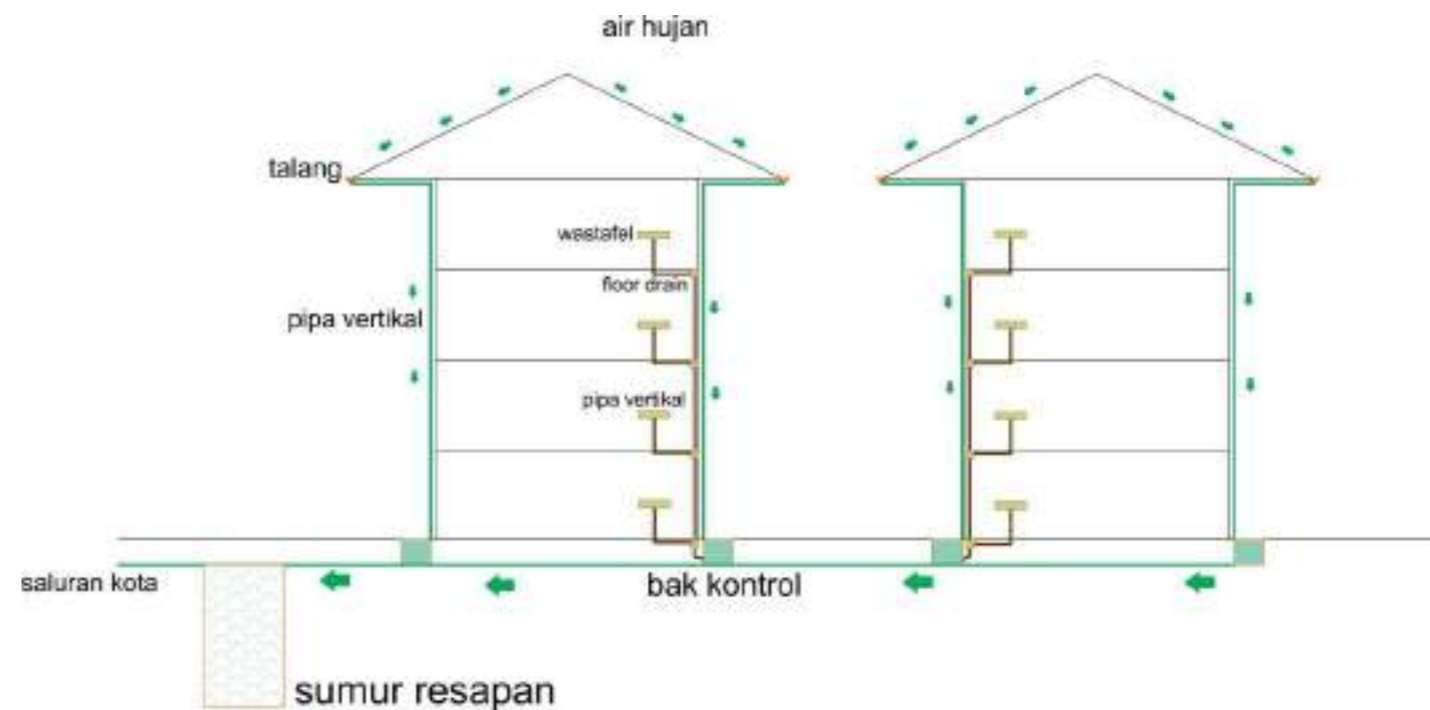
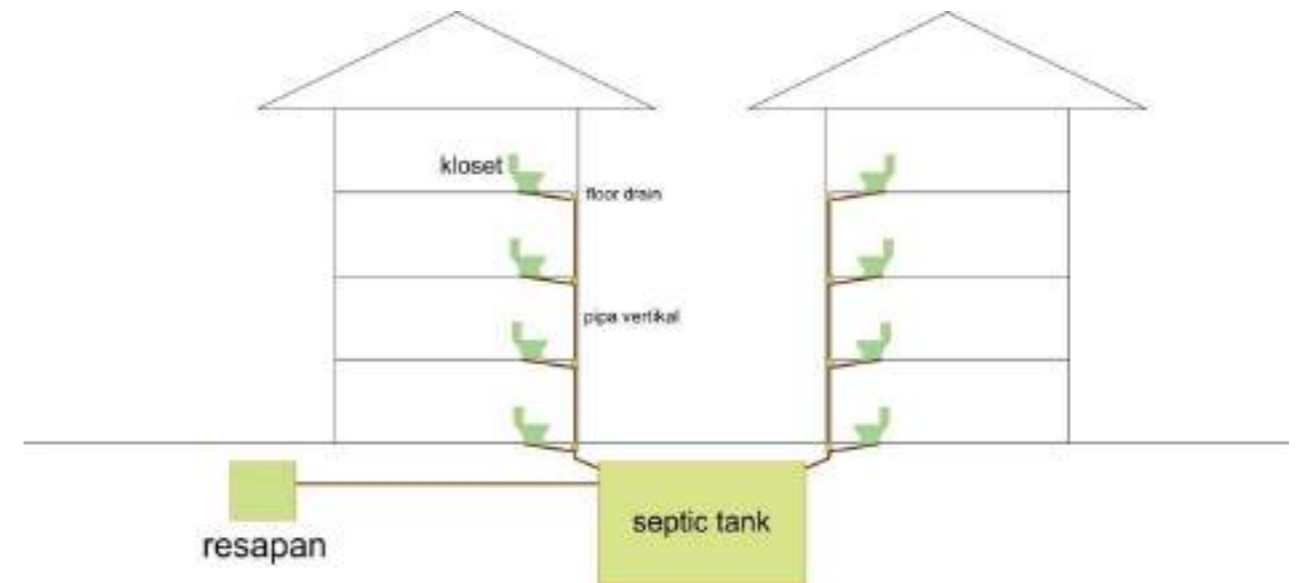
Jaringan air kotor dalam bangunan terbagi menjadi tiga kelompok, yaitu:

1. Limbah cair, berupa air kotor yang berasal dari floor drain kamar mandi, wastafel, dll.,
2. Limbah padat, yang berasal dari kloset kamar mandi,
3. Air hujan.

Pada penanganan limbah cair, air kotor yang berasal dari floor drain kamar mandi, wastafel, tempat cuci piring dsb pada tiap lantai disalurkan ke bawah melalui pipa menuju ke lantai dasar, lalu disalurkan menuju bak kontrol. Kemudian air dialirkan menuju sumur resapan sebelum dibuang ke saluran kota.

Pada penanganan limbah padat, kotoran yang berasal dari kloset tiap lantai disalurkan melalui pipa limbah padat secara vertikal menuju ke lantai dasar yang kemudian langsung disalurkan ke dalam septic tank. Pipa limbah padat yang melintang secara horizontal harus memiliki kemiringan minimal 5% tiap 1 meter untuk meminimalkan resiko tersumbat. Karena hal ini, penempatan septic tank juga perlu diperhatikan, apabila jaraknya semakin jauh dari letak kloset lantai dasar, maka penempatan septic tank akan membutuhkan kedalaman yang semakin besar. Pada septic tank, limbah kemudian ditampung dan diendapkan, lalu air yang tersisa dialirkan ke sumur resapan. Untuk penempatan septic tank beserta resapannya, sebaiknya diletakkan berjauhan dengan sumur artesis maupun gorund water tank, minimal berjarak 15 meter. Hal ini dilakukan agar jaringan air bersih tidak tercemar limbah dari septic tank.

Untuk penanganan air hujan, digunakan talang yang disesuaikan dengan bentuk atap, yang kemudian dialirkan secara vertikal melalui pipa menuju ke bak kontrol yang sama dengan yang digunakan pada penanganan limbah cair di lantai dasar.



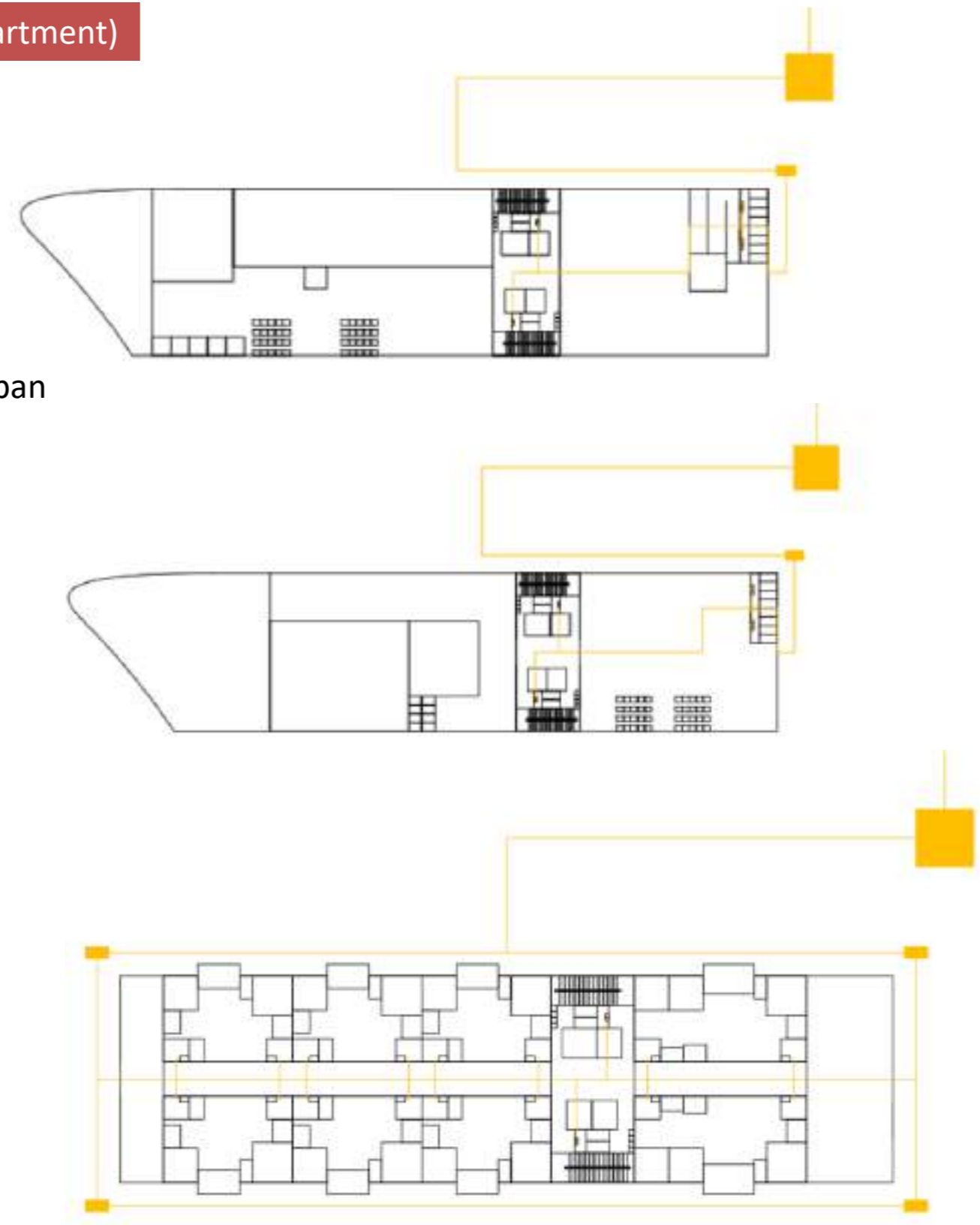
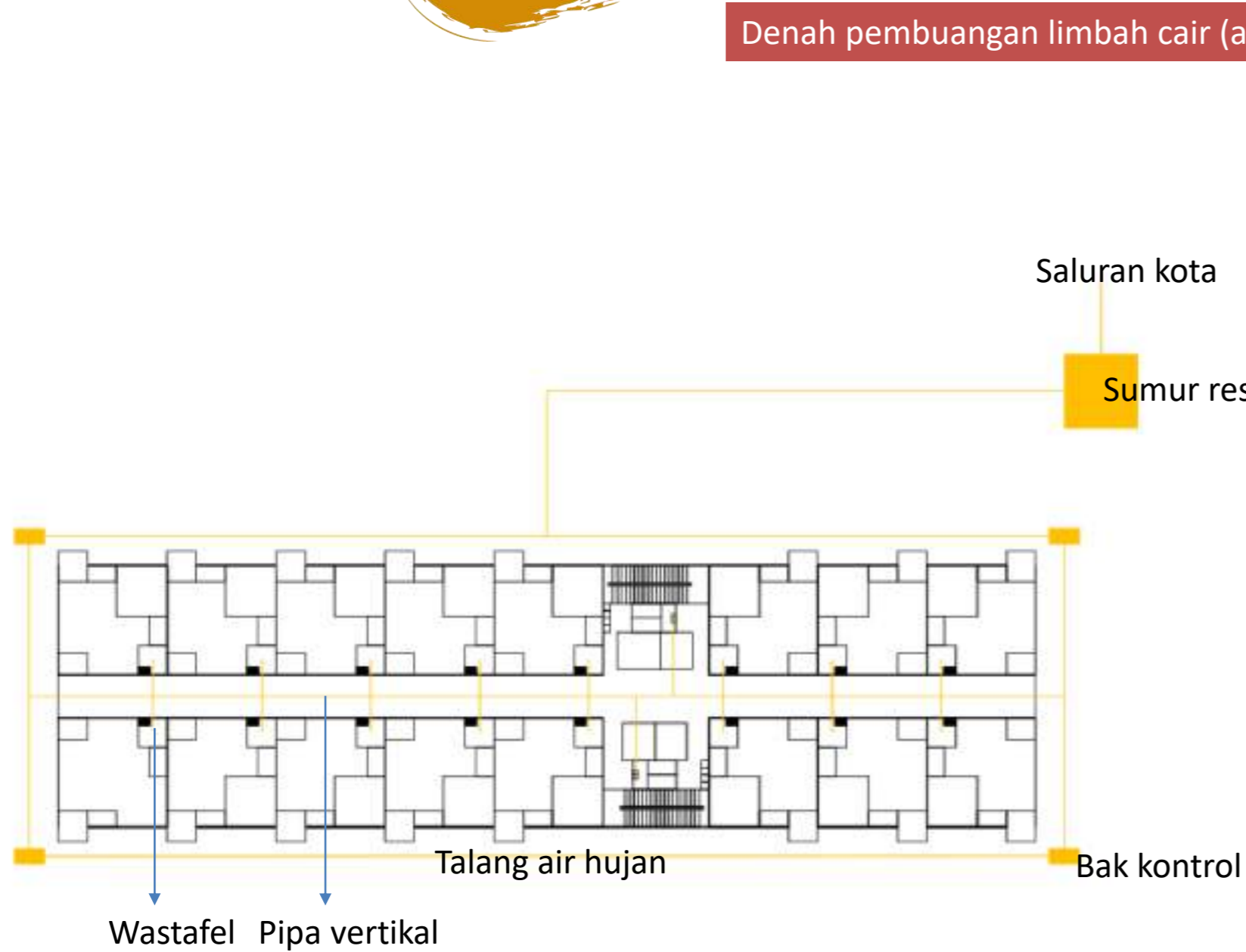
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275

KONSEP UTILITAS

SISTEM TATA AIR

Denah pembuangan limbah cair (apartment)



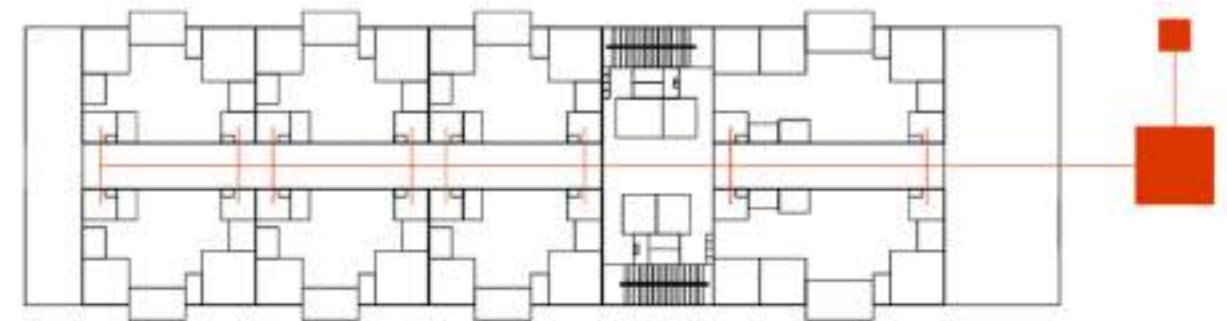
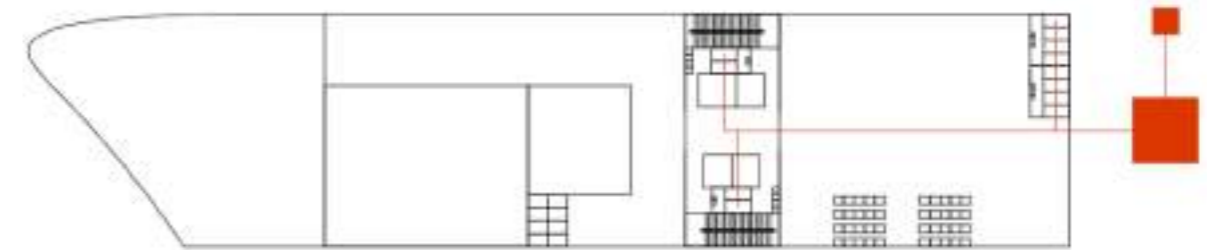
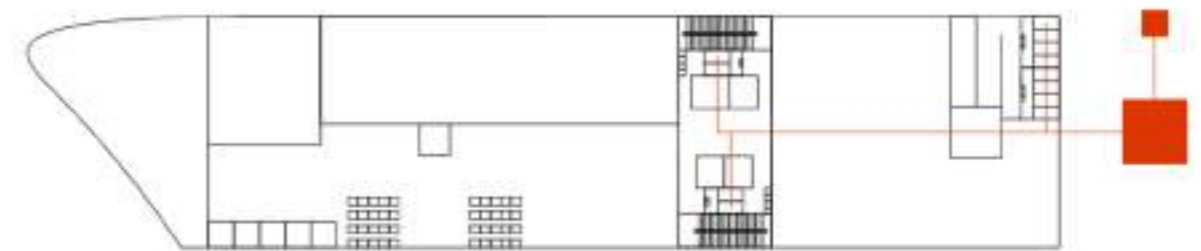
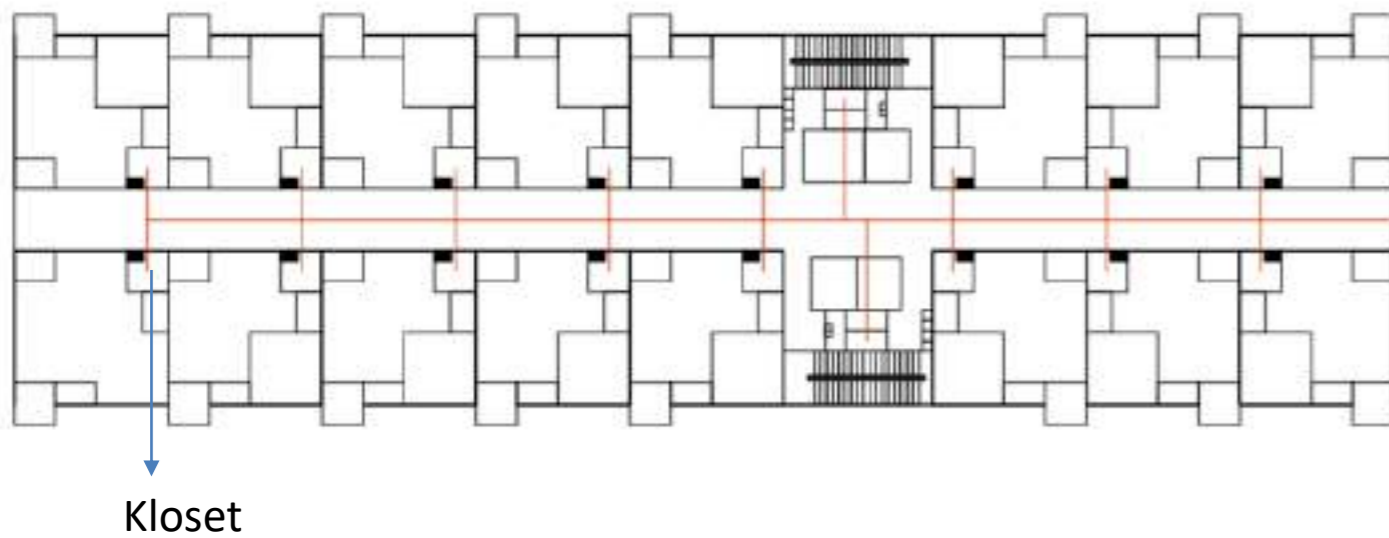
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275

KONSEP UTILITAS

SISTEM TATA AIR

Denah pembuangan limbah padat (apartment)



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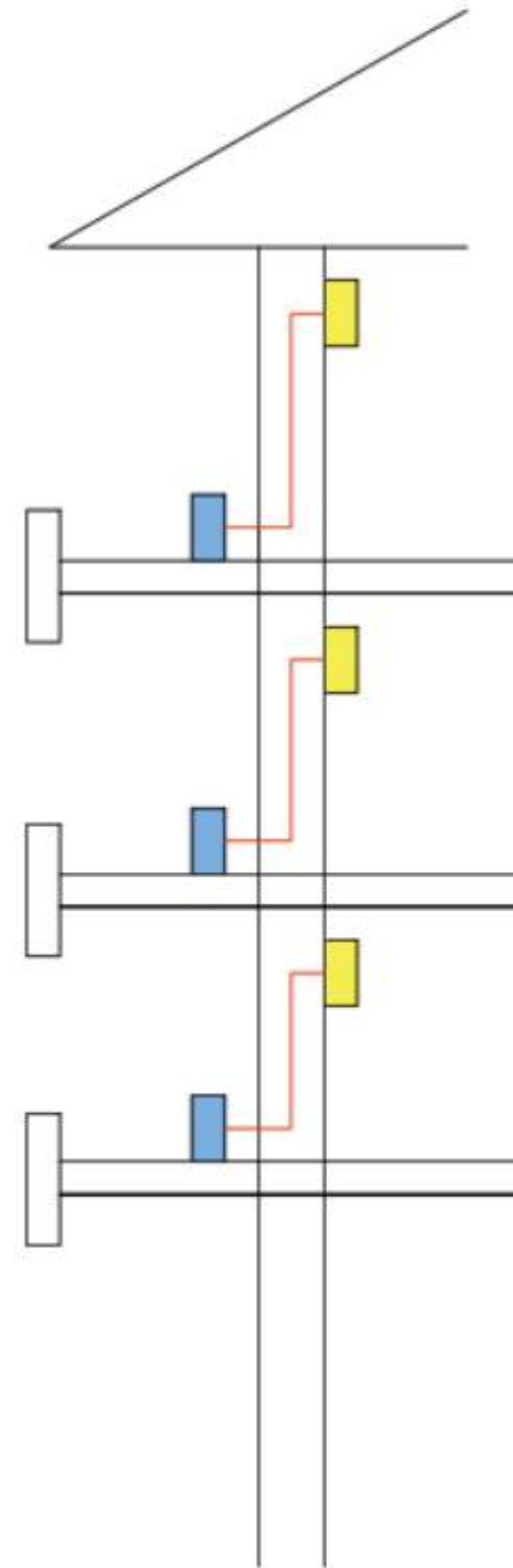
KONSEP UTILITAS

SISTEM PENGHAWAAN

Pada apartemen, penghawaan yang digunakan yaitu penghawaan alami dan buatan. Penghawaan alami berasal dari bukaan balkon sedangkan penghawaan buatan menggunakan AC.

Pada unit tipe studio, jenis AC yang digunakan yaitu AC Split. AC Split ini akan digunakan di Ruang Tidur Utama.

Pada unit tipe 2 room dan 3 room, jenis AC yang digunakan yaitu AC Multi Split. AC Multi Split ini berarti bisa 2 atau 3 koneksi tetapi hanya pakai 1 CU. AC akan ditempatkan di Ruang Tidur Utama, Ruang Tidur 1, dan Living Room.



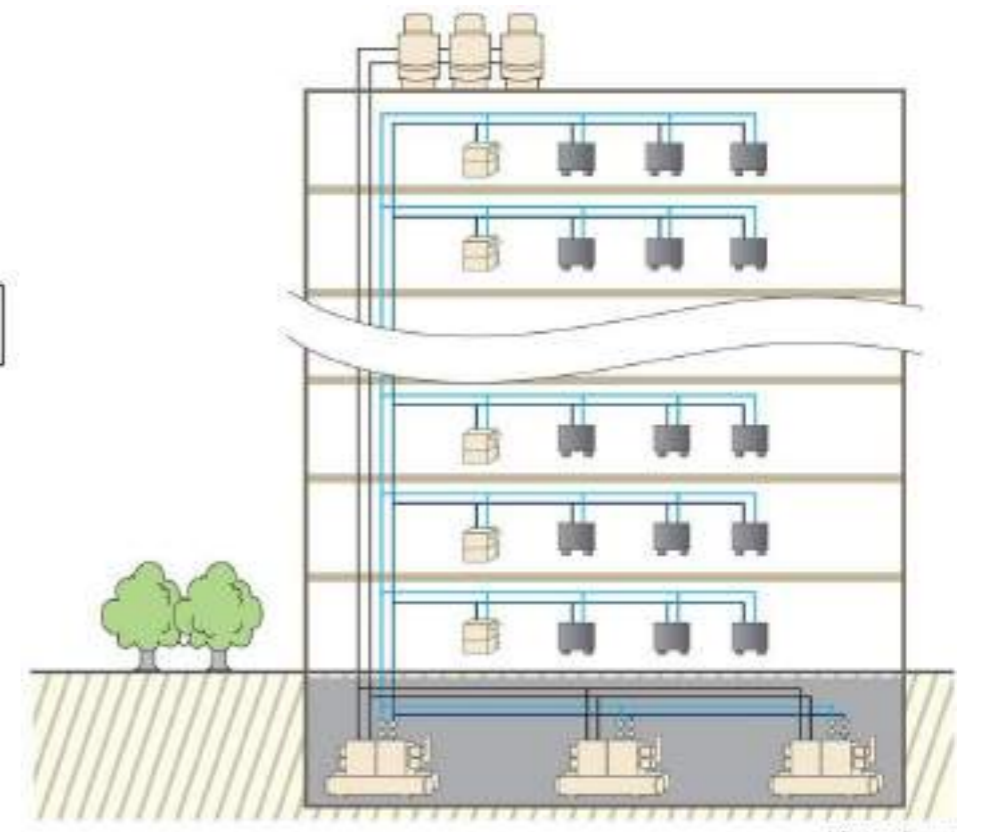
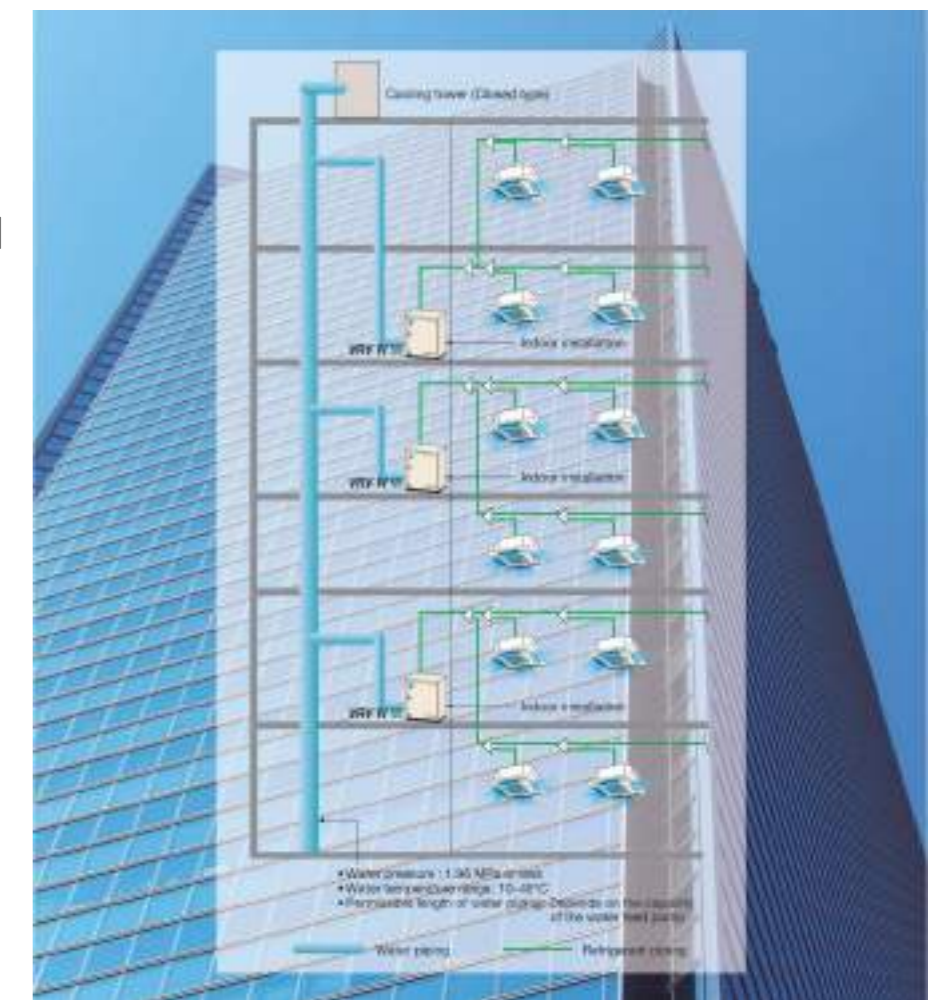
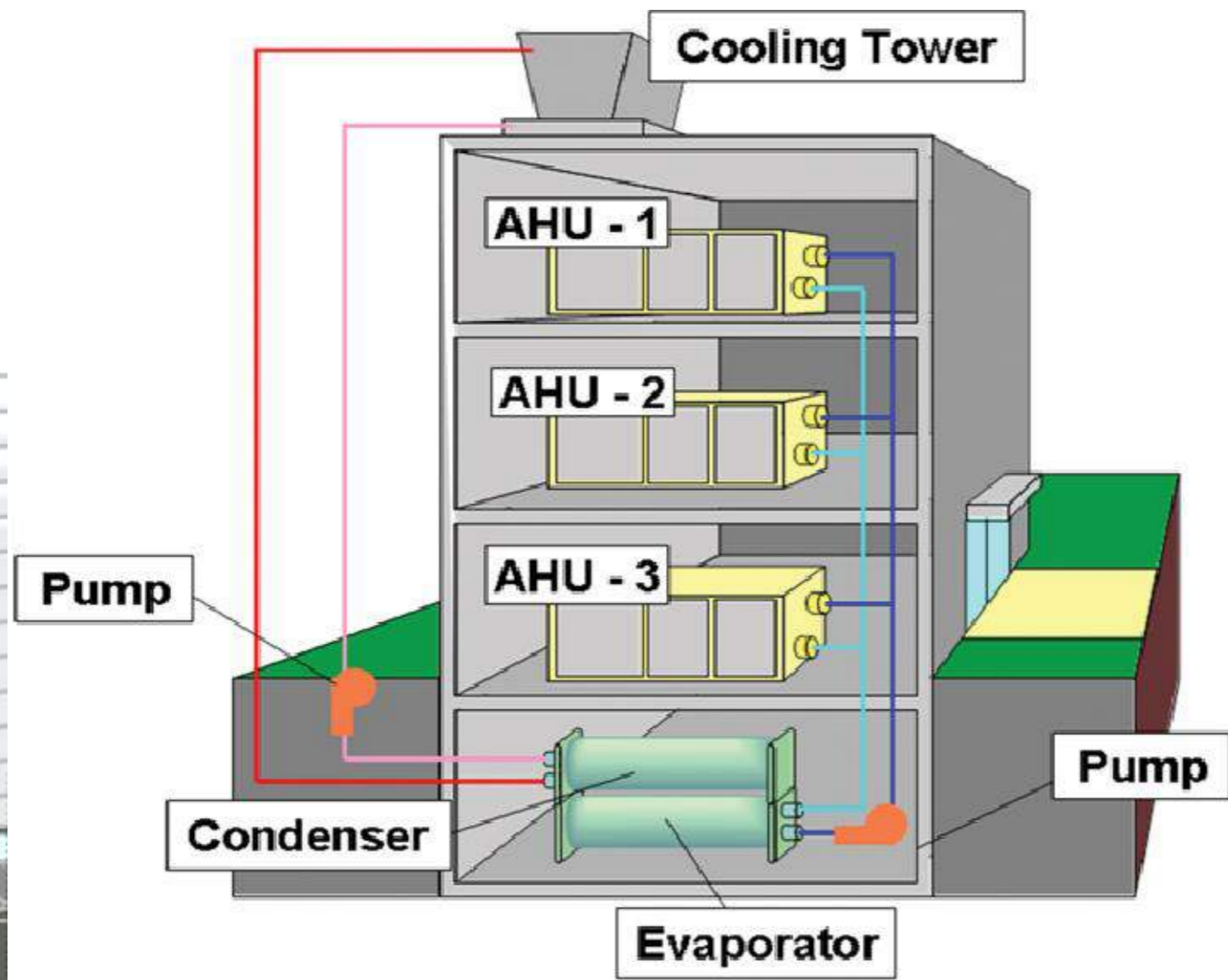
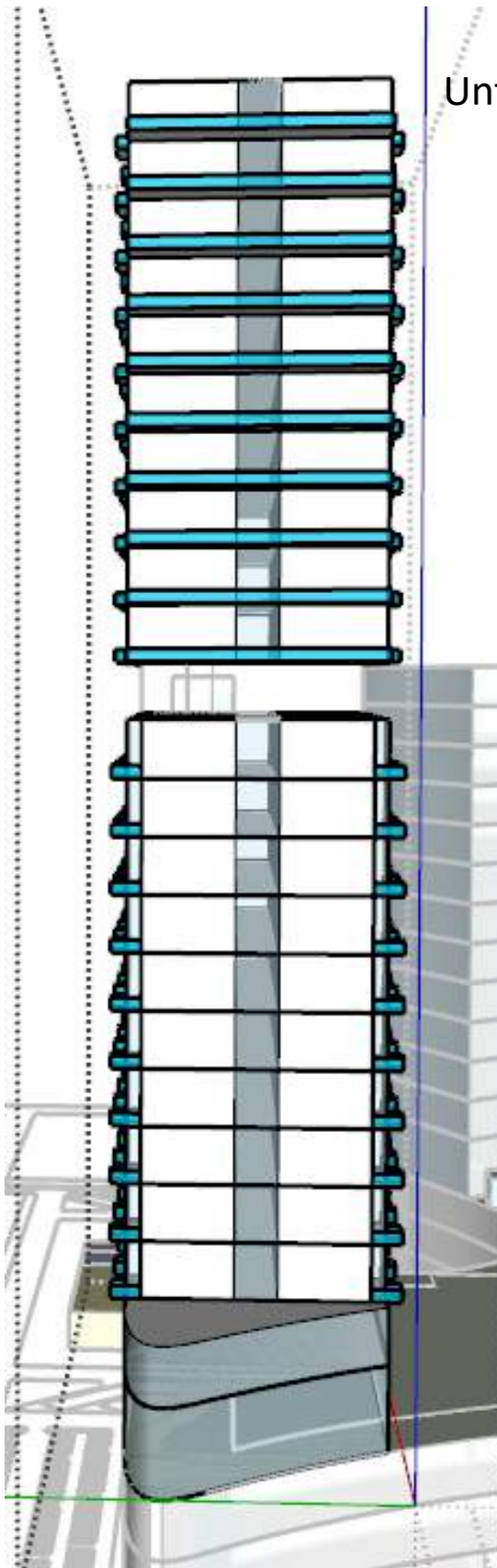
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275

KONSEP UTILITAS

SISTEM PENGHAWAAN

Untuk lantai 1, 2, dan koridor lantai 3 – 21, jenis AC yang digunakan yaitu AC Central



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KONSEP UTILITAS

SISTEM PENGHAWAAN

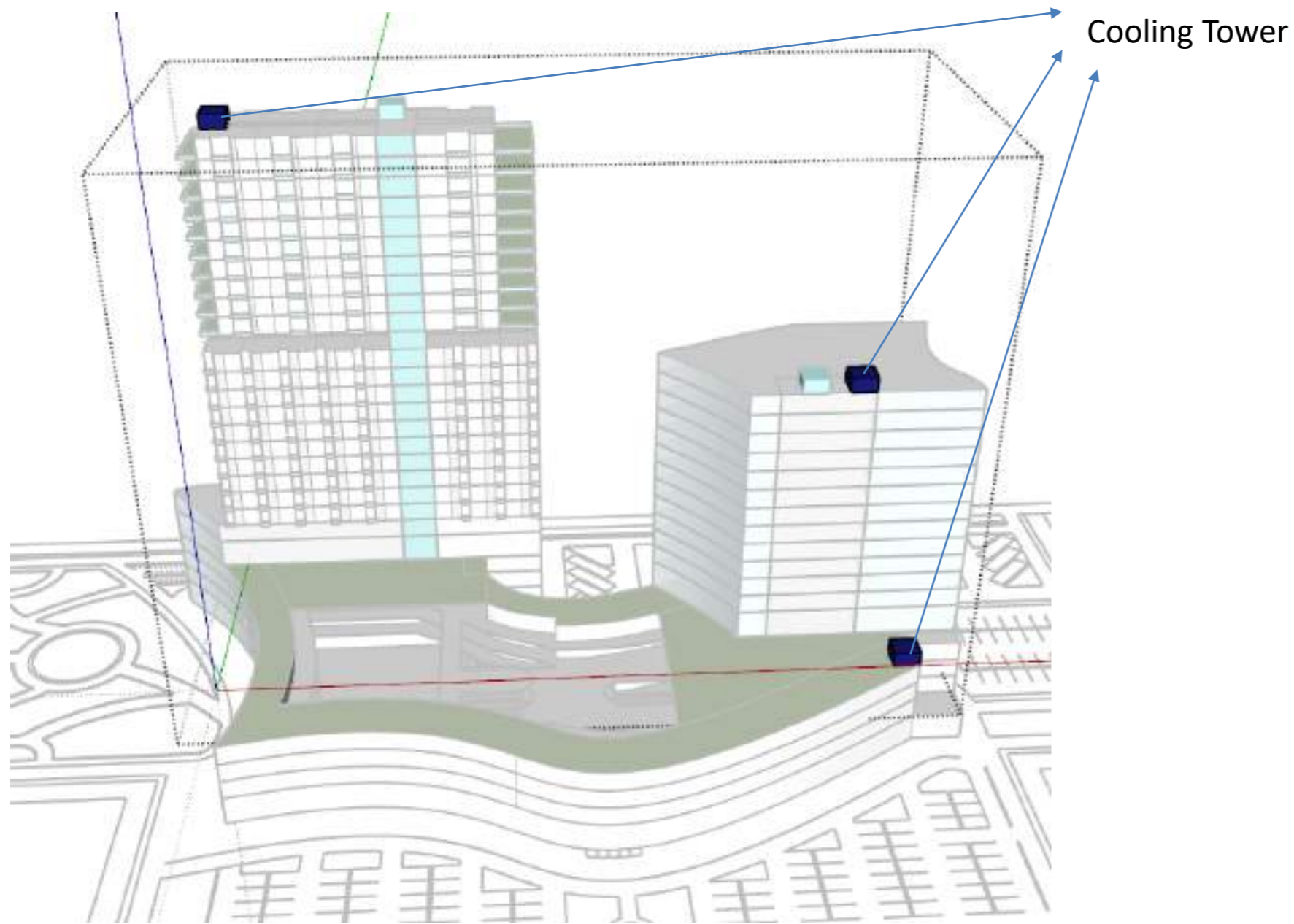
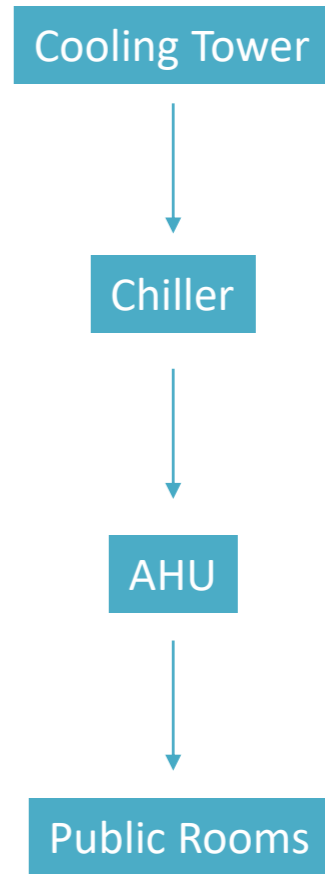


Diagram sistem penghawaan AC Central



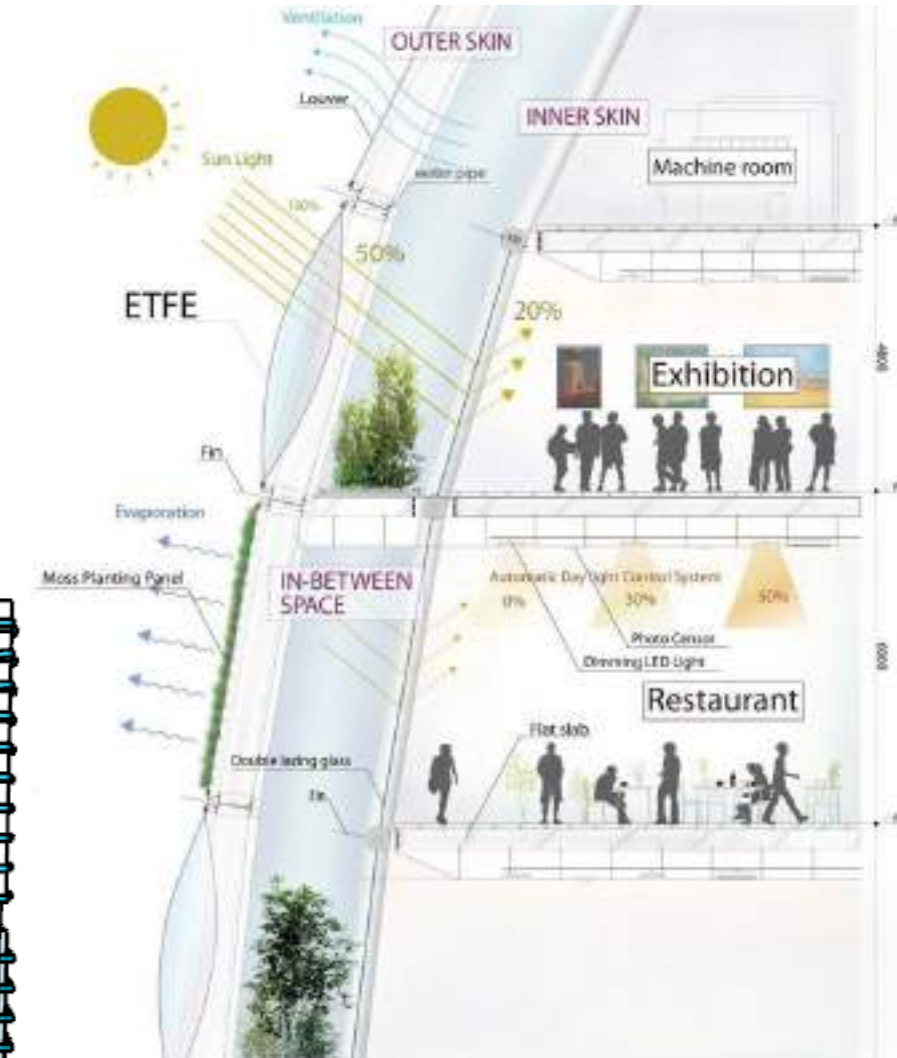
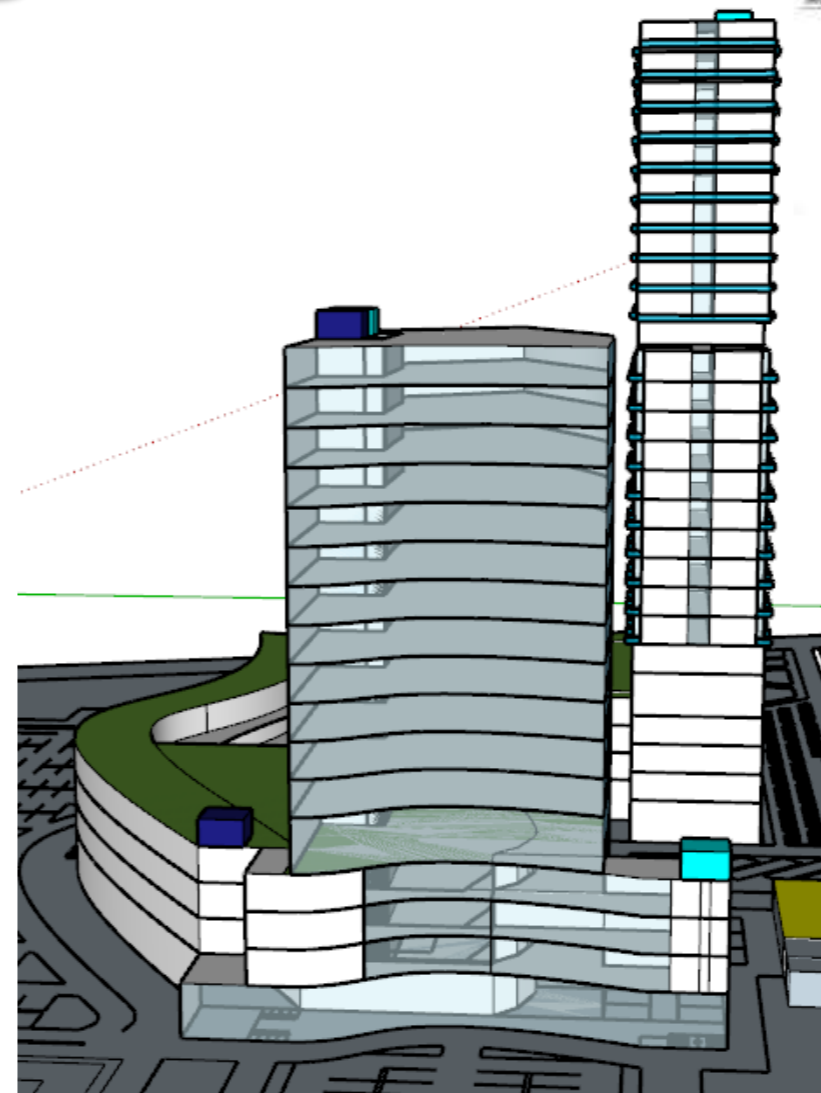
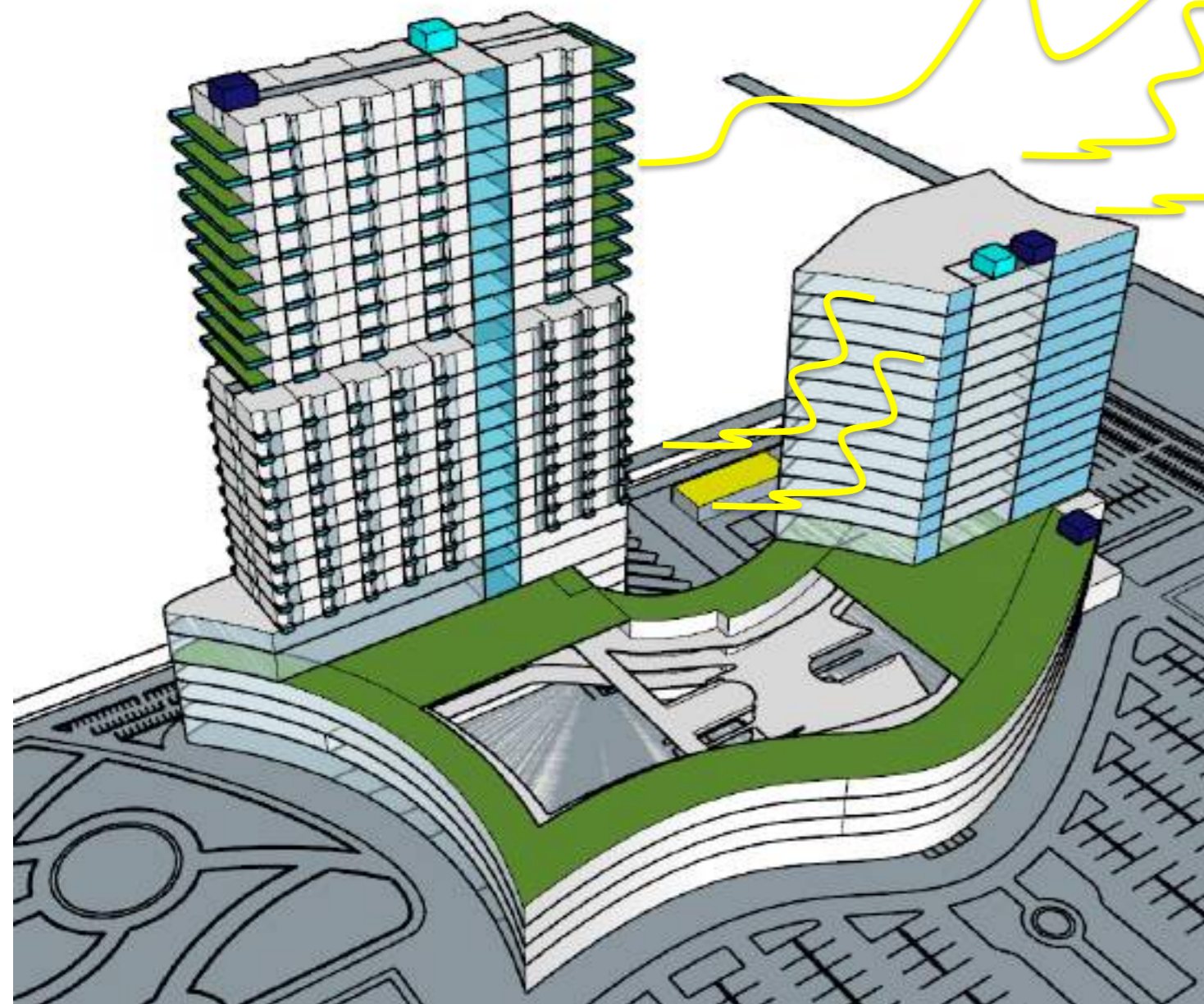
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KONSEP UTILITAS

SISTEM PENCAHAYAAN

Sistem pencahayaan alami yaitu dengan memanfaatkan cahaya matahari. Agar cahaya matahari bisa masuk ke dalam bangunan, maka di sisi Timur dan Barat akan menggunakan kaca.



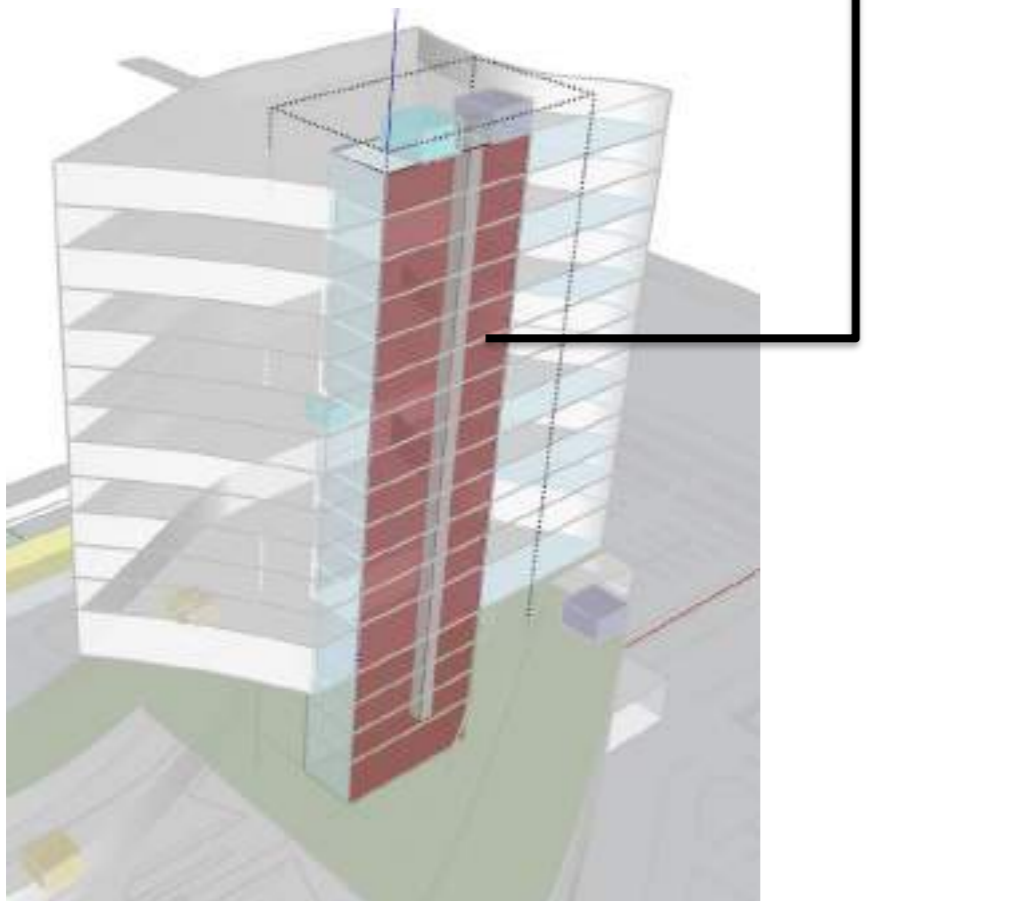
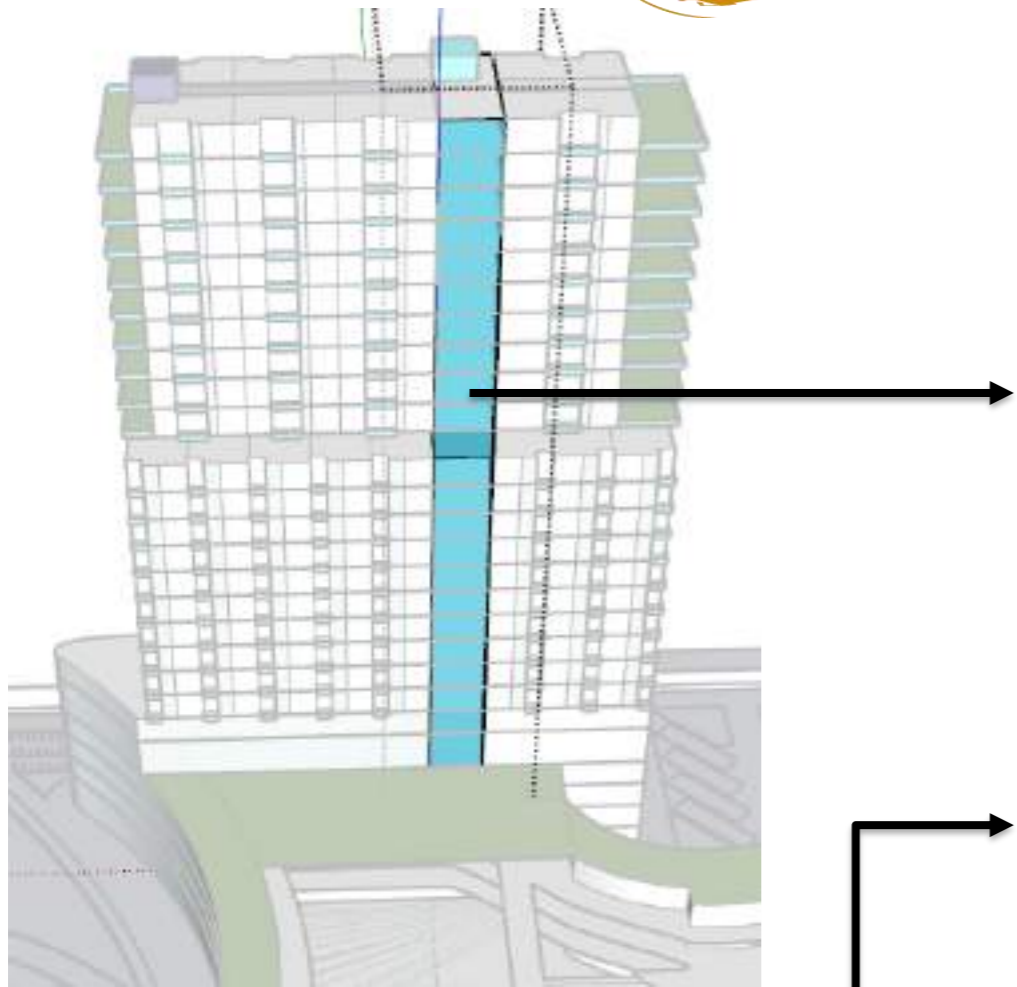
was still before the Supreme Court...
boat of the season, and the future was unclear. There were
signs of the island being brought back to life anyway, I had

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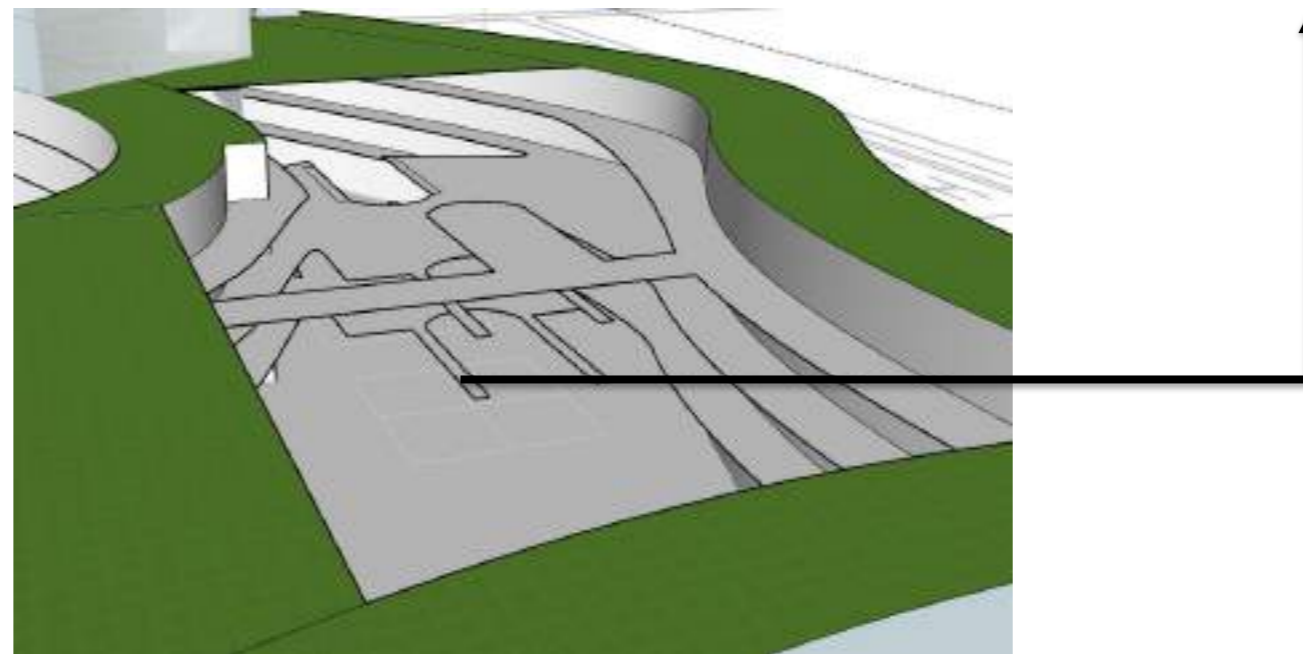
KONSEP UTILITAS

SISTEM PENDUKUNG PERGERAKAN

LIFT PENUMPANG



ESCALATOR

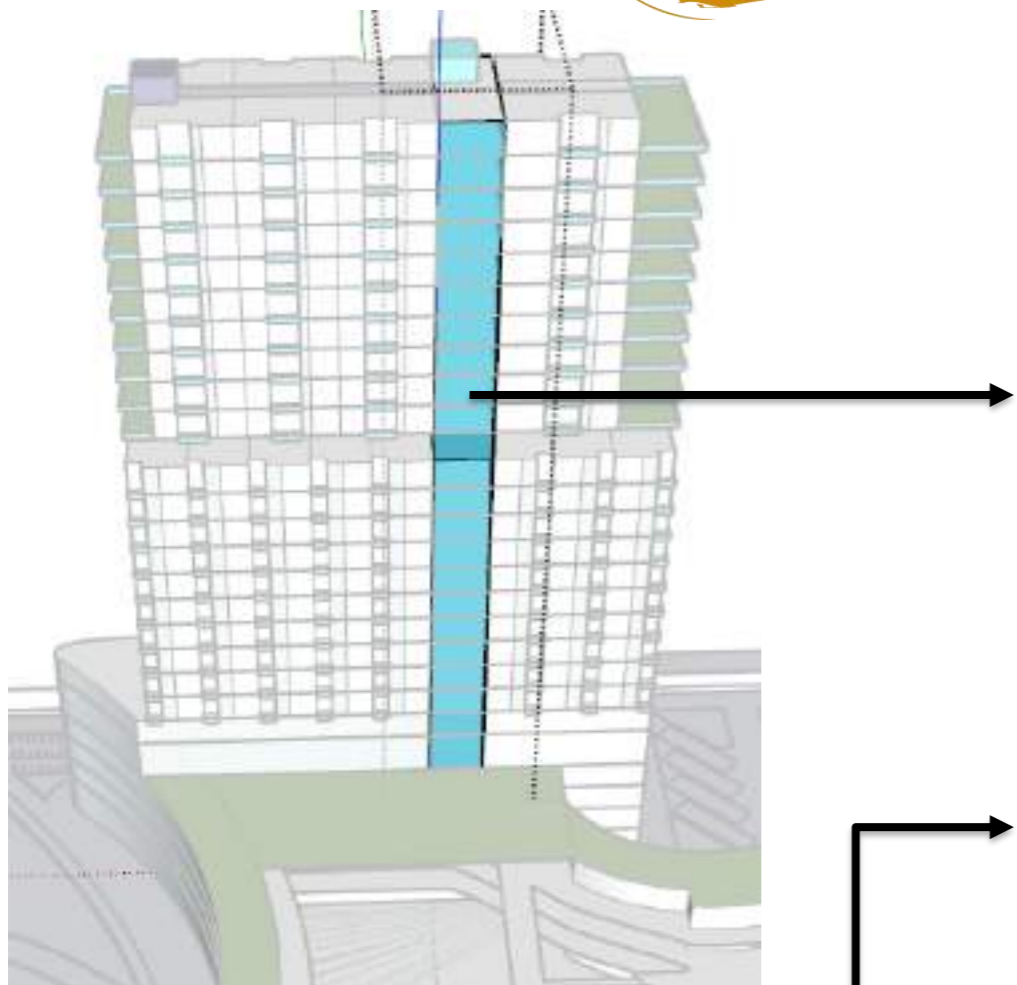


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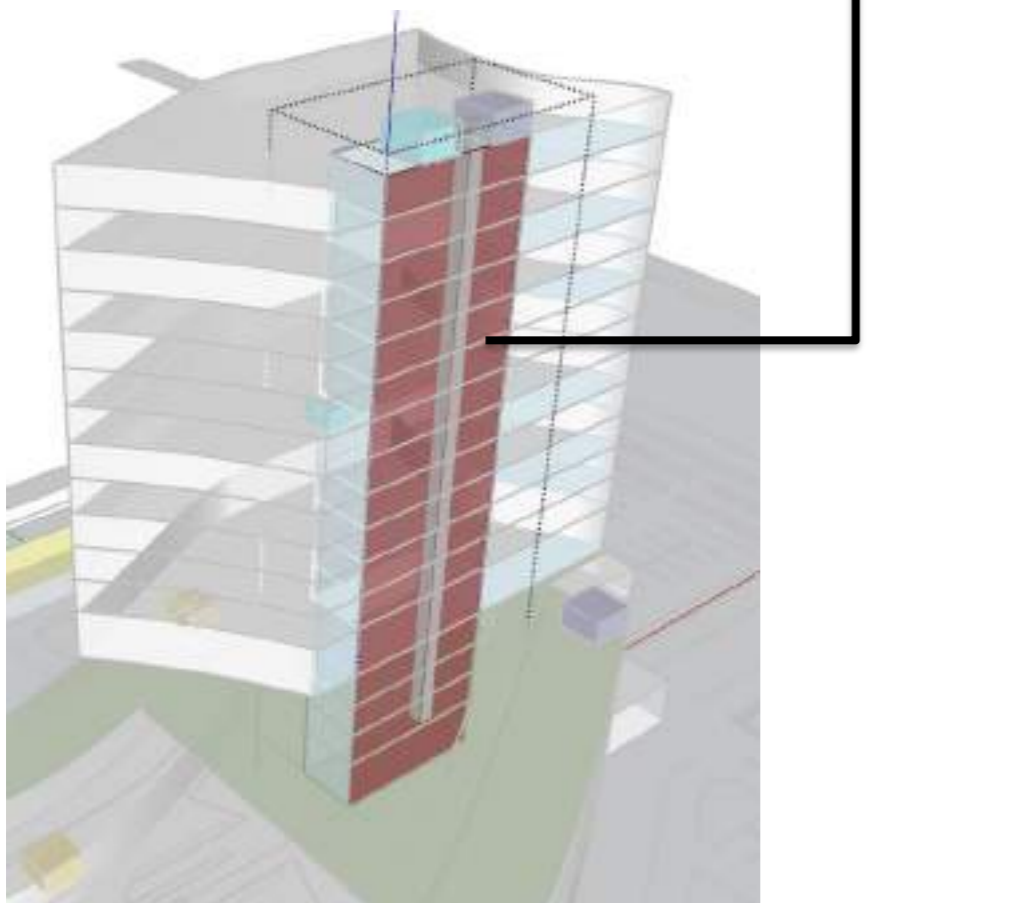
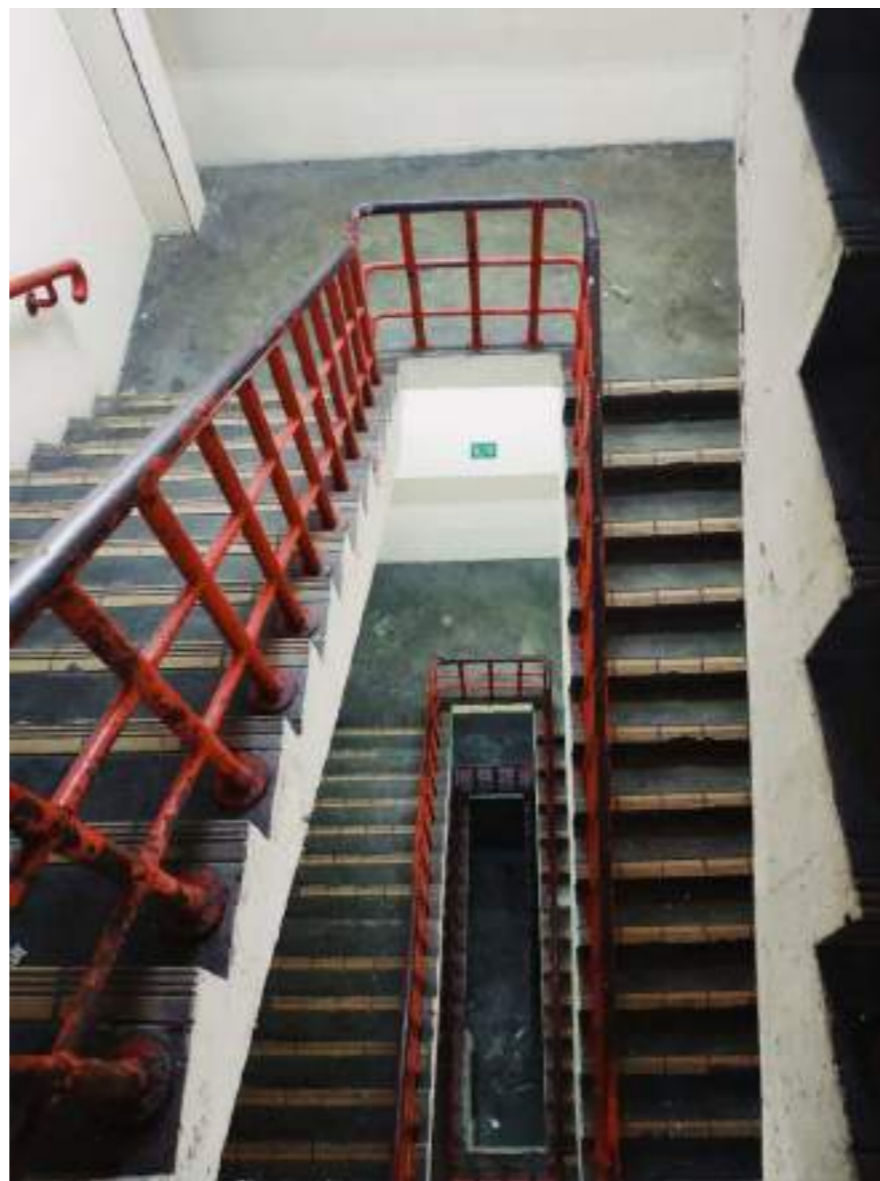
275

KONSEP UTILITAS

SISTEM PENDUKUNG PERGERAKAN



TANGGA DARURAT



LIFT BARANG



Taylor Collings's share of the land, and the Irish government – led at that time by Charles Haughey, the owner of Inis Icleain – which wanted to establish a national park. The issue was still before the Supreme Court as I crossed on that first boat of the season, and the future was unclear. There were signs of the island being brought back to life anyway, I had

275

KONSEP UTILITAS

SISTEM PROTEKSI KEBAKARAN



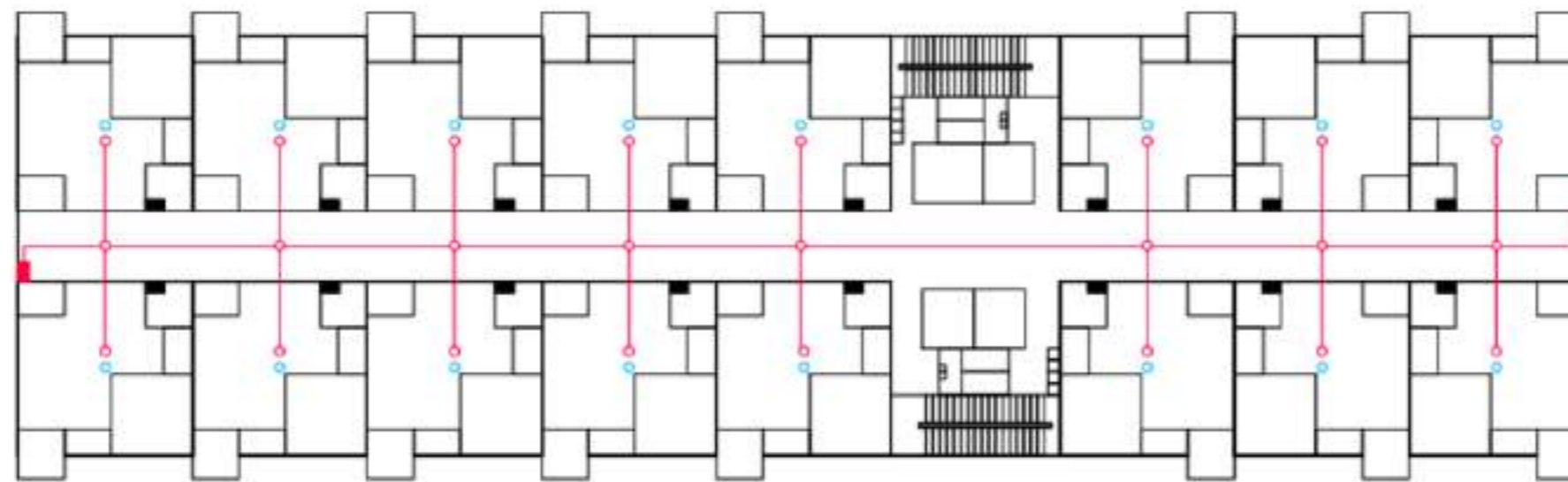
Smoke detector



Hydrant



Alat pemadam kebakaran



Denah instalasi pemadam kebakaran (apartment)

-  Sprinkler
-  Detector
-  Hydrant

was in the mid-eighties, when an advertisement in the *Street Journal* offered the island for sale for a million. That was the start of a long and complicated legal battle between a company based in Dingle, which had acquired the share of the land, and the Irish government at that time by Charles Haughey, the owner of Inis Meenynah which wanted to establish a national park. The issue went all the way to the Supreme Court as I crossed on that first day of the season, and the future was unclear. There were some of the island being brought back to life anyway, I had



KONSEP UTILITAS

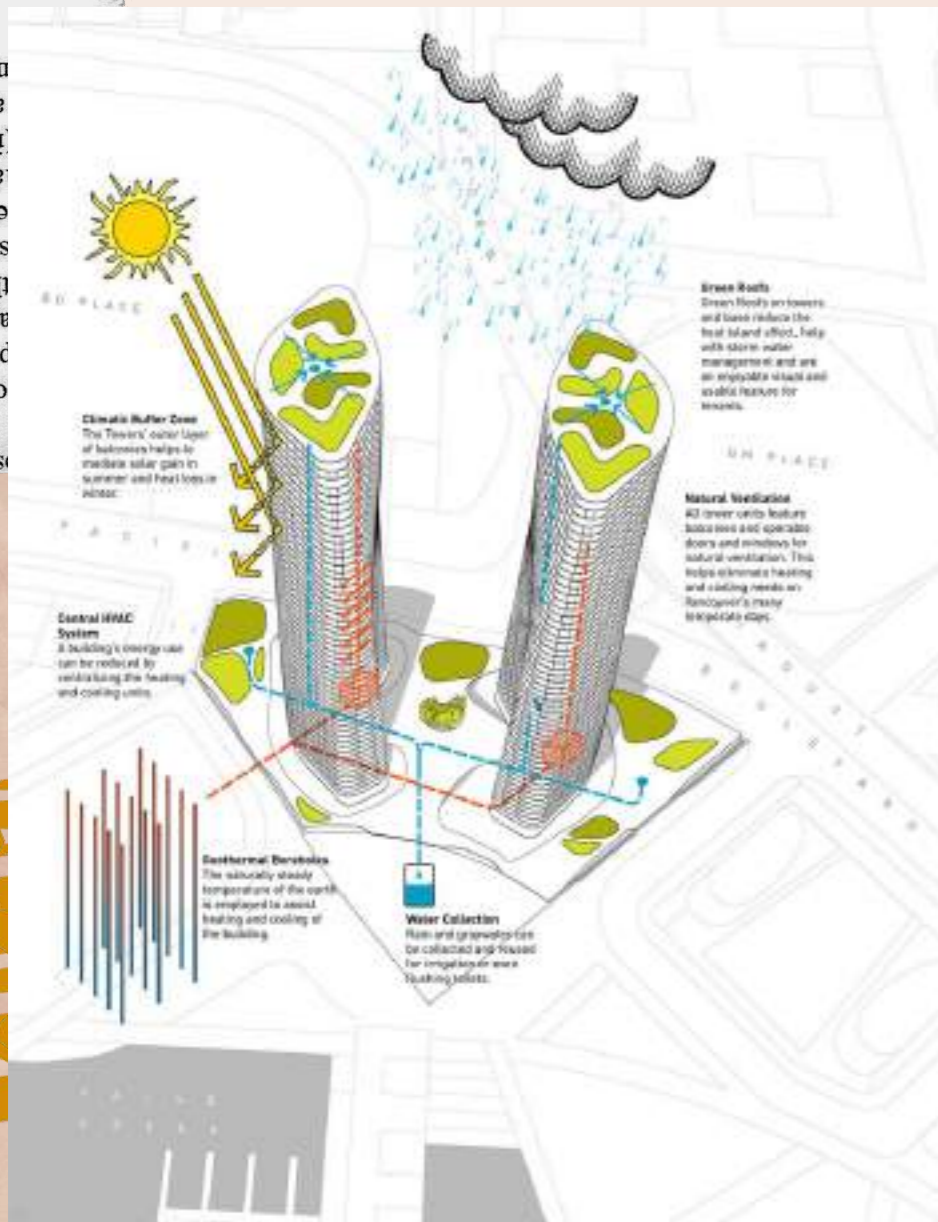
CCTV



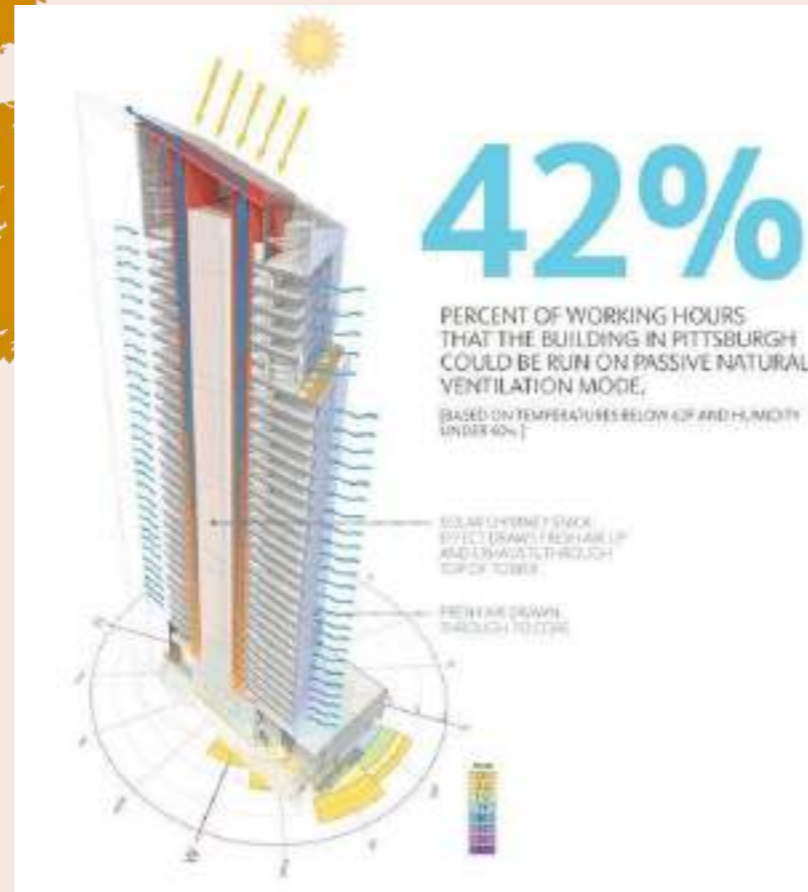
● CCTV

Denah penempatan CCTV (apartment)

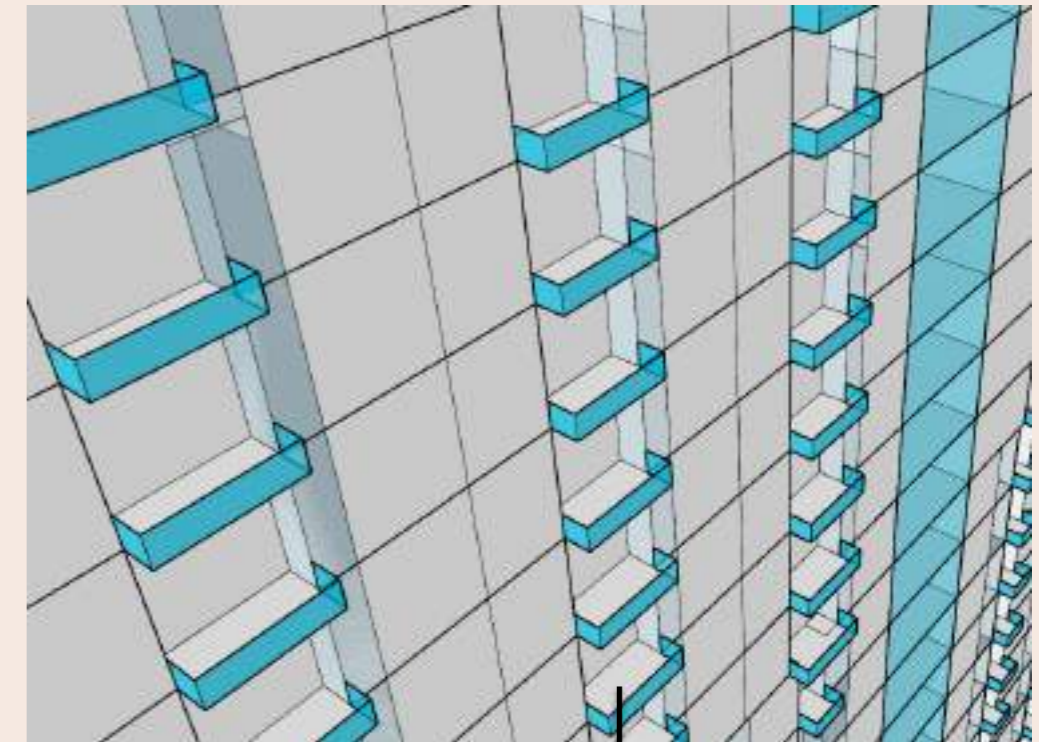
KONSEP SELUBUNG BANGUNAN



Sumber gambar: studiogang.com



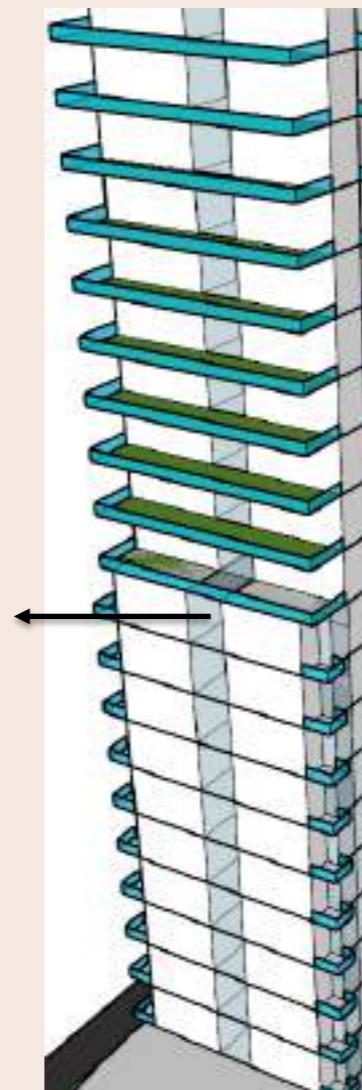
Sumber gambar: archdaily.com



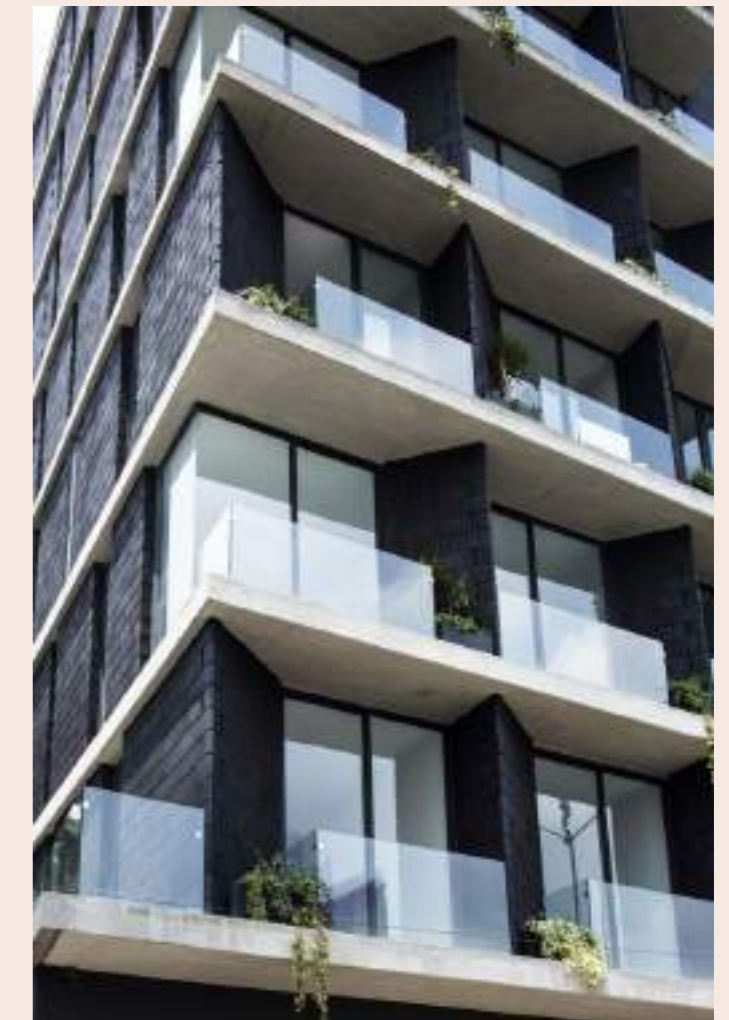
Bagian apartment yang menghadap timur dan barat akan menggunakan kaca agar cahaya matahari bisa masuk. Untuk peneduhan pada bidang transparan ini, tentunya akan menerapkan secondary skin



Sumber gambar: poole-associates.com



Penggunaan balkon pada apartment bertujuan untuk memaksimalkan sistem penghawaan alami. Balkon akan diterapkan pada sisi apartment yang menghadap utara dan selatan.



KONSEP SELUBUNG BANGUNAN

PENERAPAN SECONDARY SKIN



Sumber gambar: decorathing.com



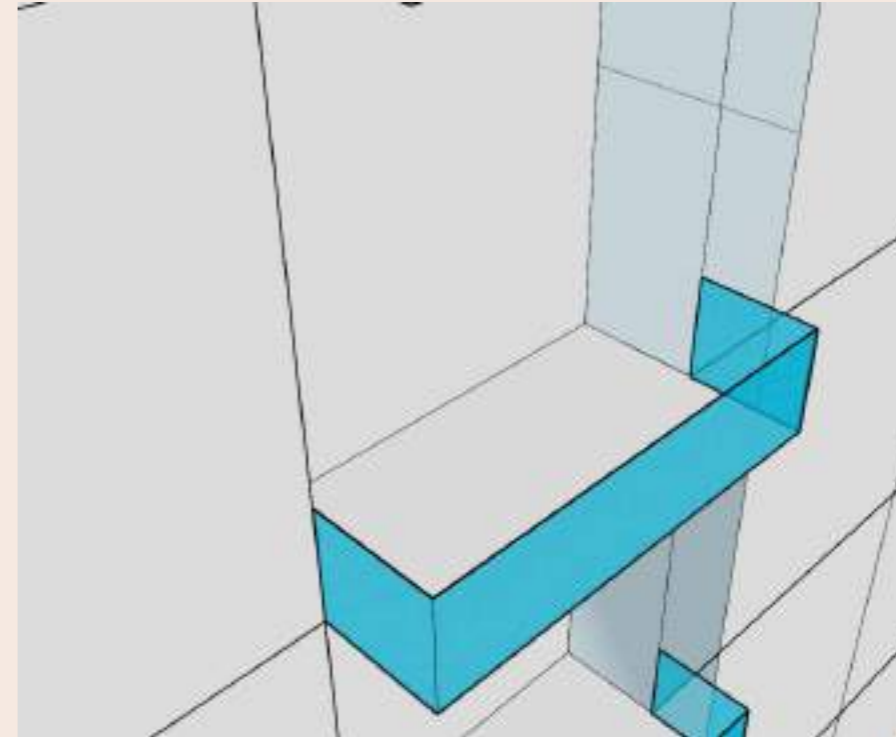
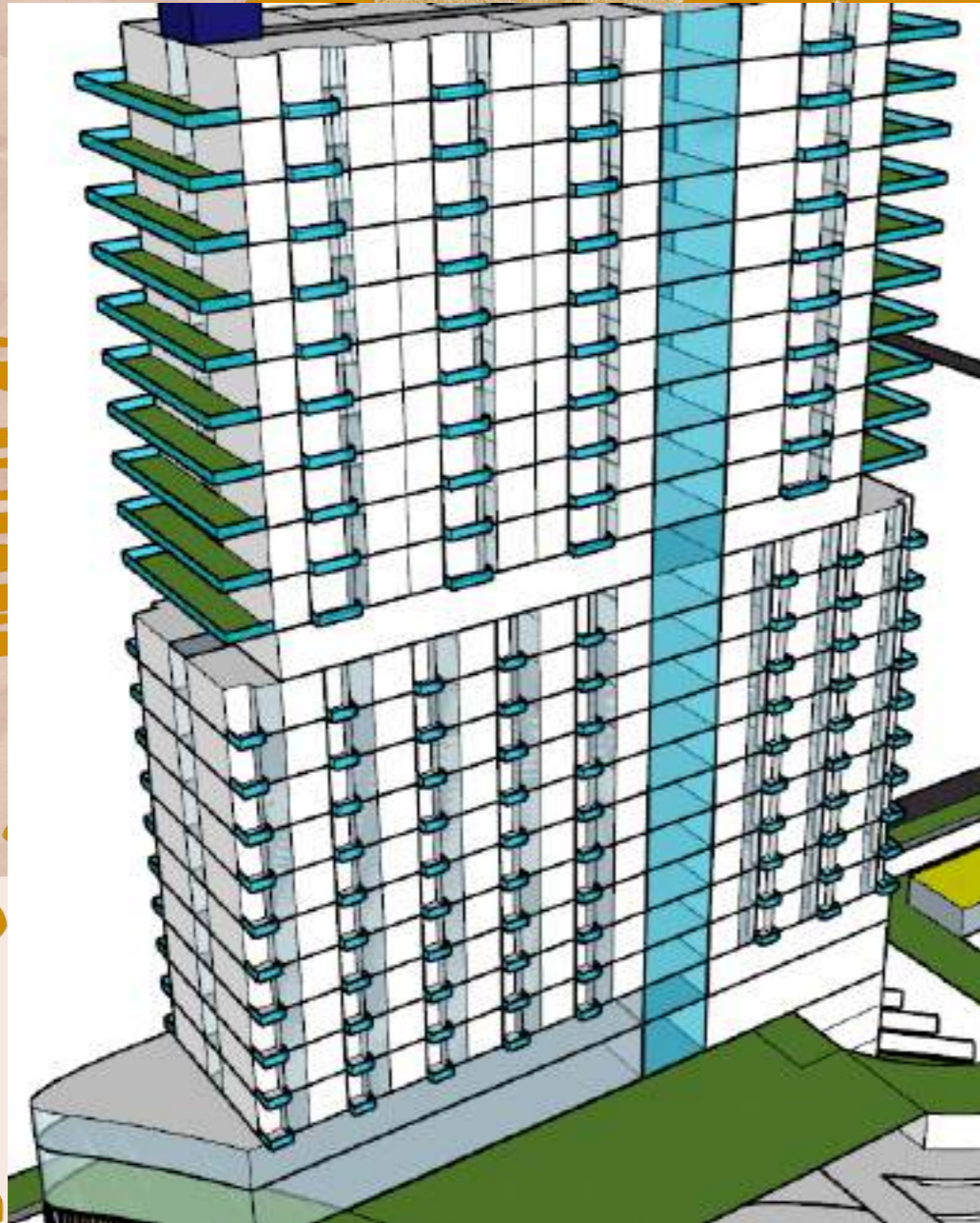
Sumber gambar: fosterandpartners.com



Sumber gambar: essentialhome.eu

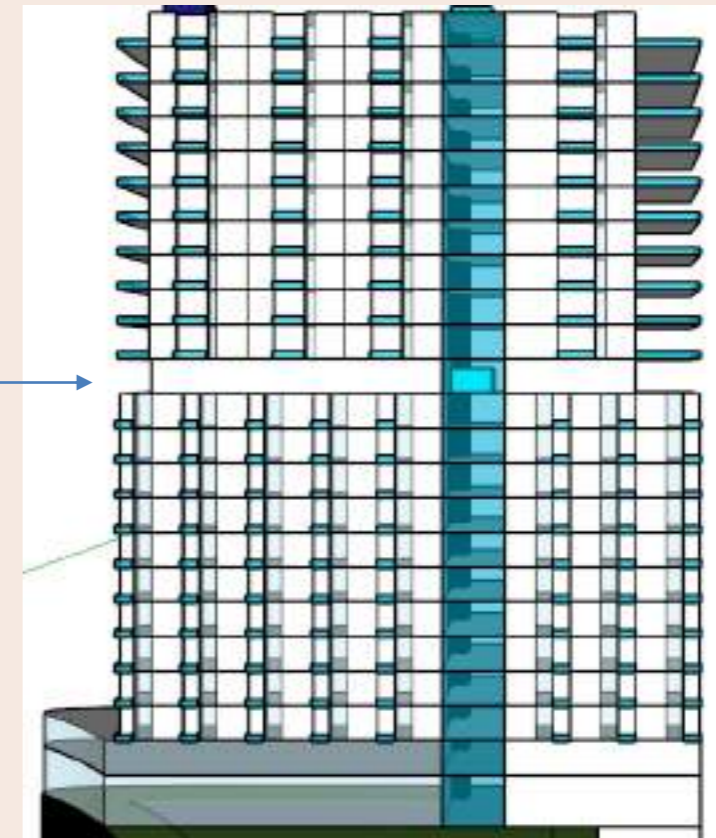
KONSEP SELUBUNG BANGUNAN

APARTMENT



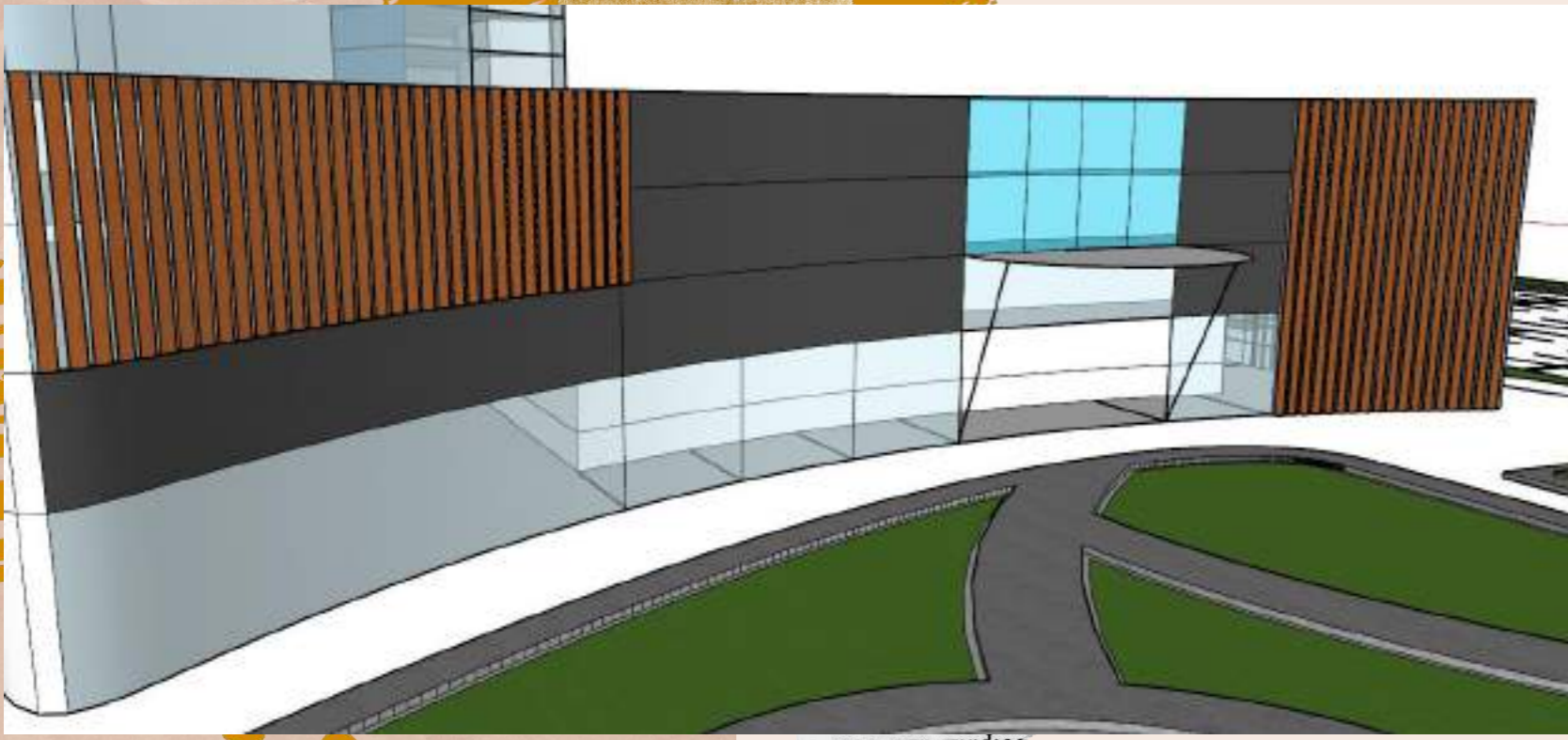
Balkon apartment

Tempat utilitas

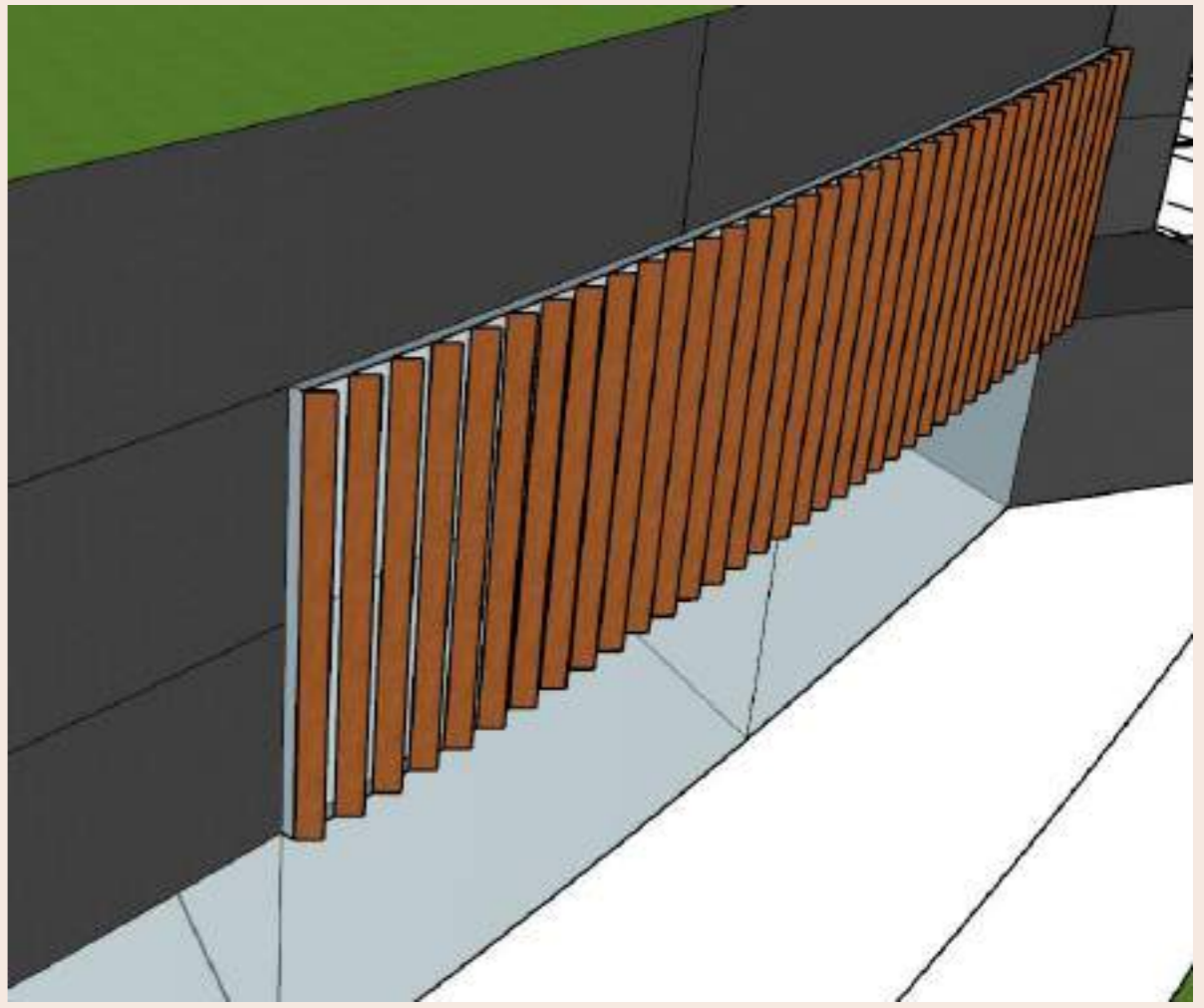


KONSEP SELUBUNG BANGUNAN

SHOPPING CENTER



to (in quick
copath and over



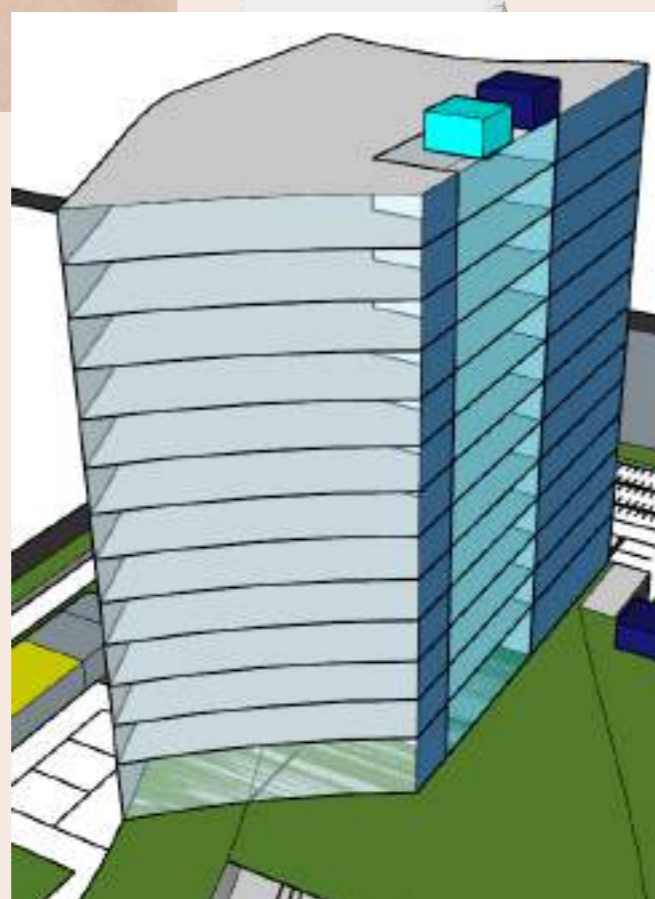
KONSEP SELUBUNG BANGUNAN

RENTAL OFFICE

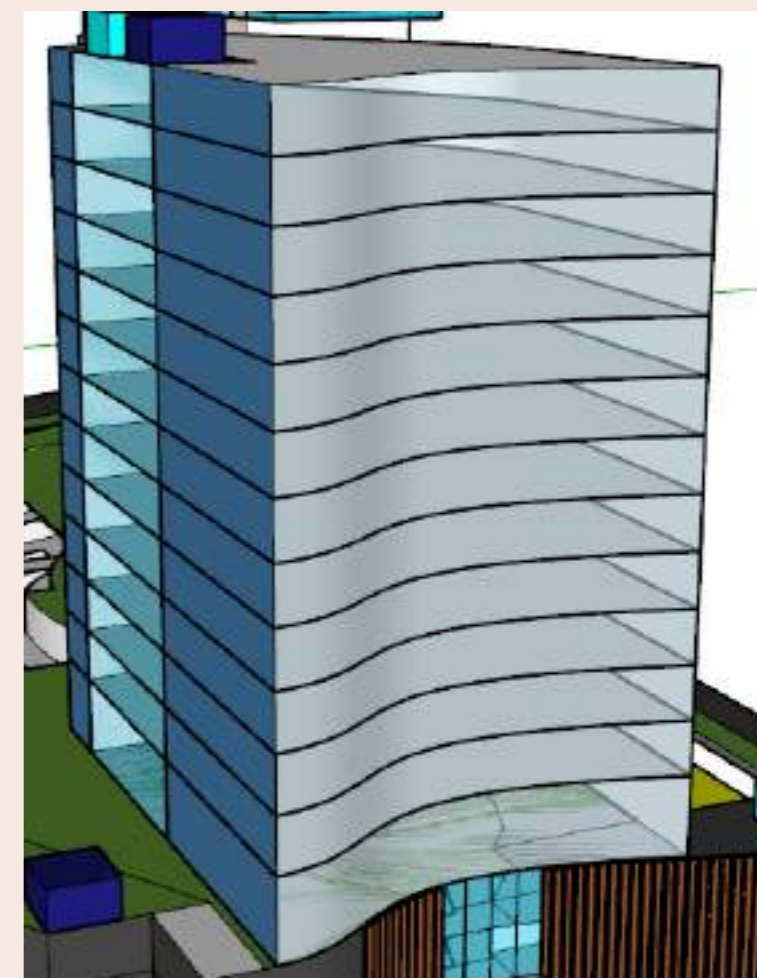


Material yang digunakan: ACP

Aluminium Composite Panel (ACP) merupakan bahan perpaduan antara plat aluminium dan bahan *composite*. *Aluminium Composite Panel (ACP)* dapat digambarkan sebagai panel datar yang terdiri dari bahan non-aluminium berupa bahan polyethylene yang disatukan di antara dua lembaran aluminium. Lembaran *Aluminium Composite Panel (ACP)* adalah lembaran yang kaku, kuat, tetapi memiliki berat yang relatif ringan.

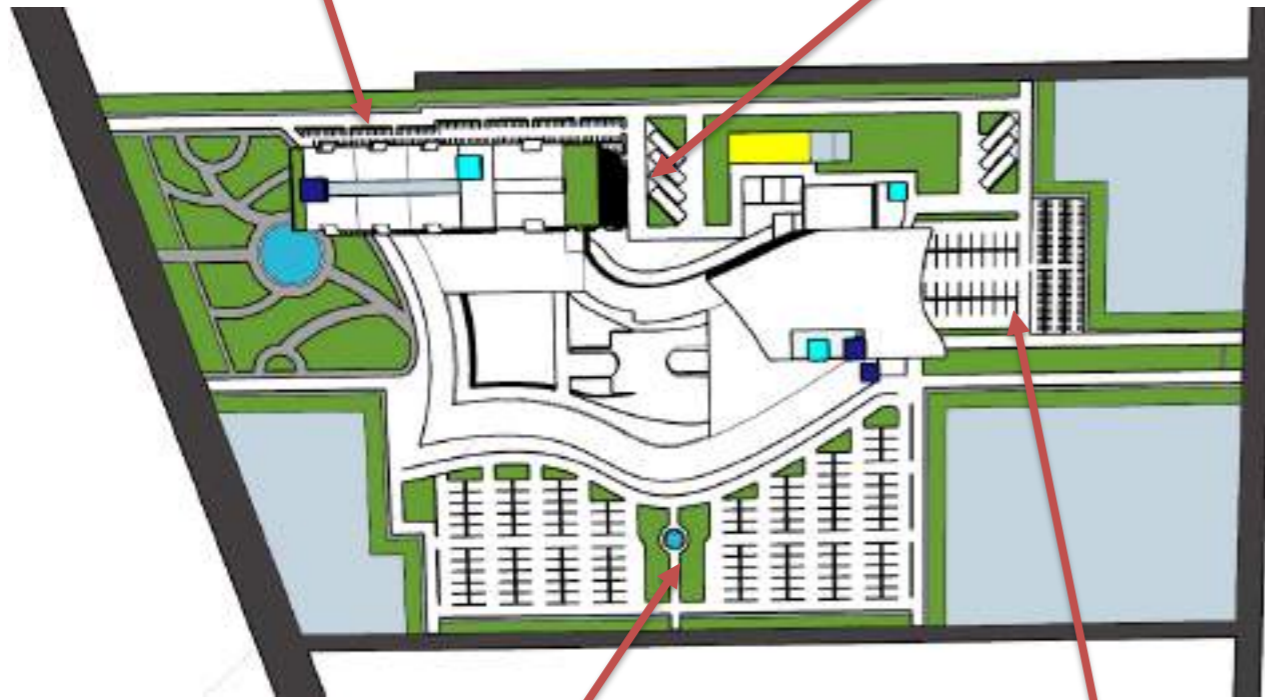


Pada sisi Timur dan Barat menggunakan material kaca. Untuk mereduksi cahaya, akan diterapkan secondary skin (seperti yang diterapkan pada shopping center).

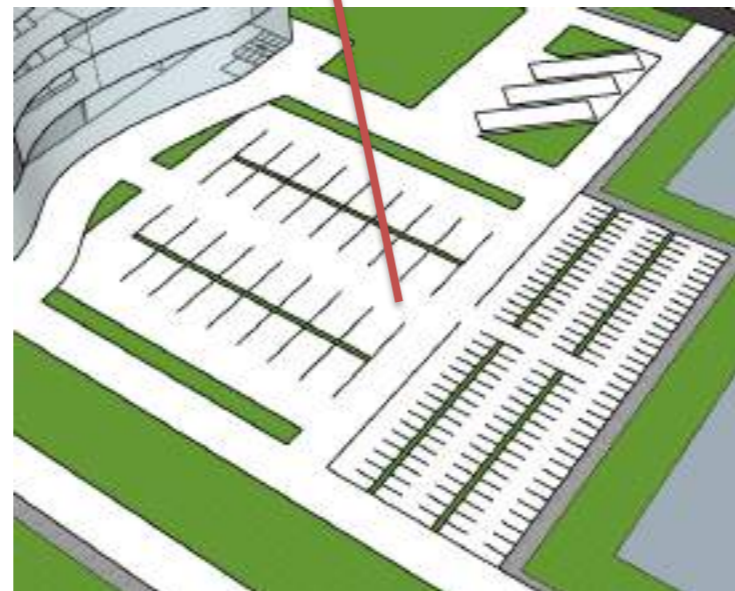
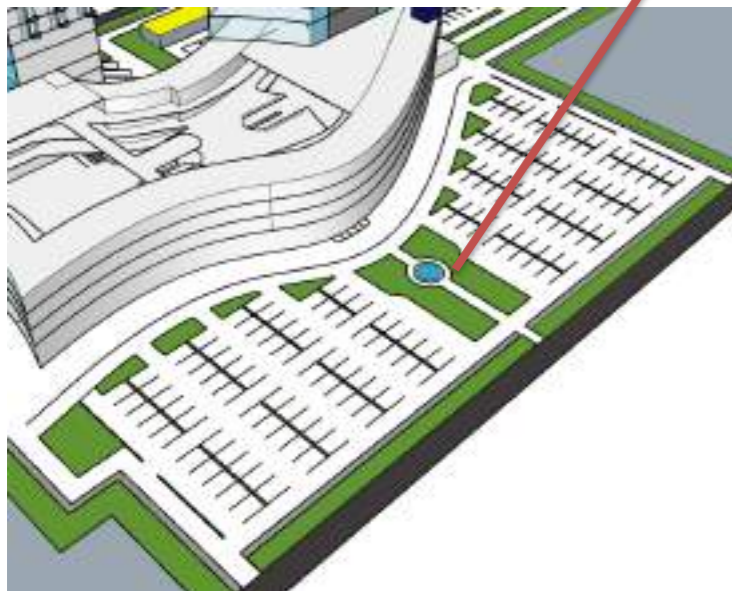


KONSEP TATA RUANG LUAR

ZONASI / TATA LETAK RTH & RTNH



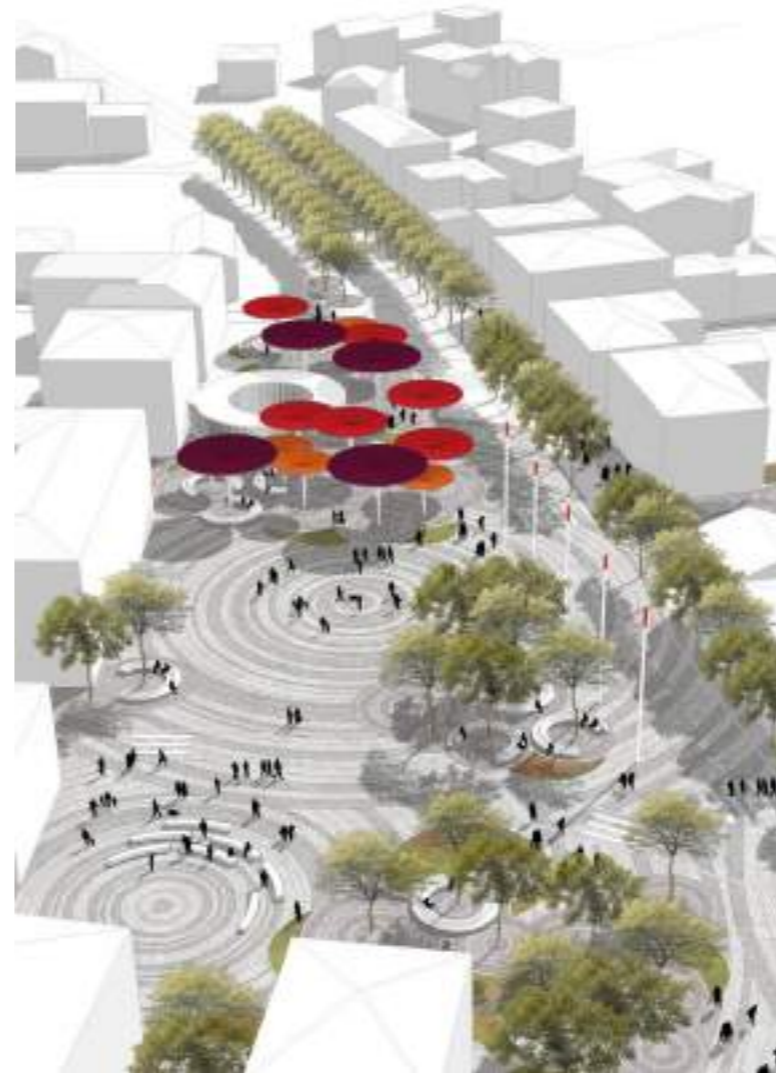
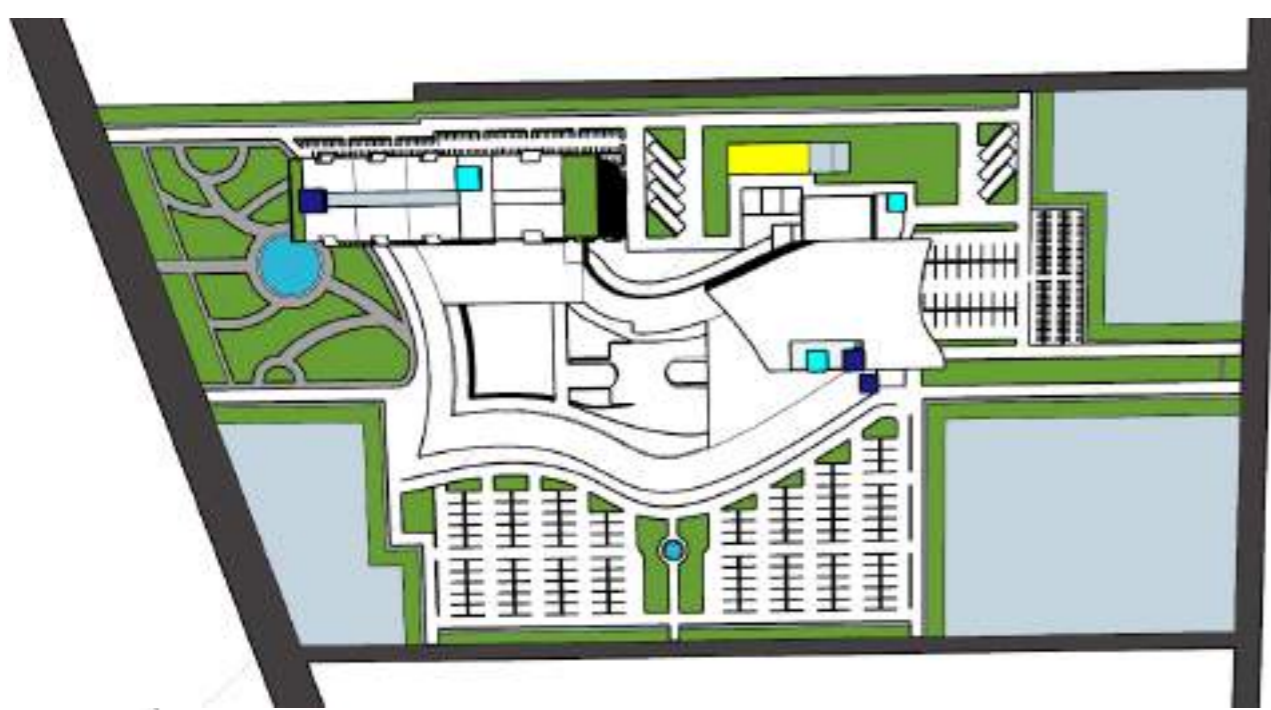
Sumber gambar: landezine.com



Sumber gambar: landezine.com

KONSEP TATA RUANG LUAR

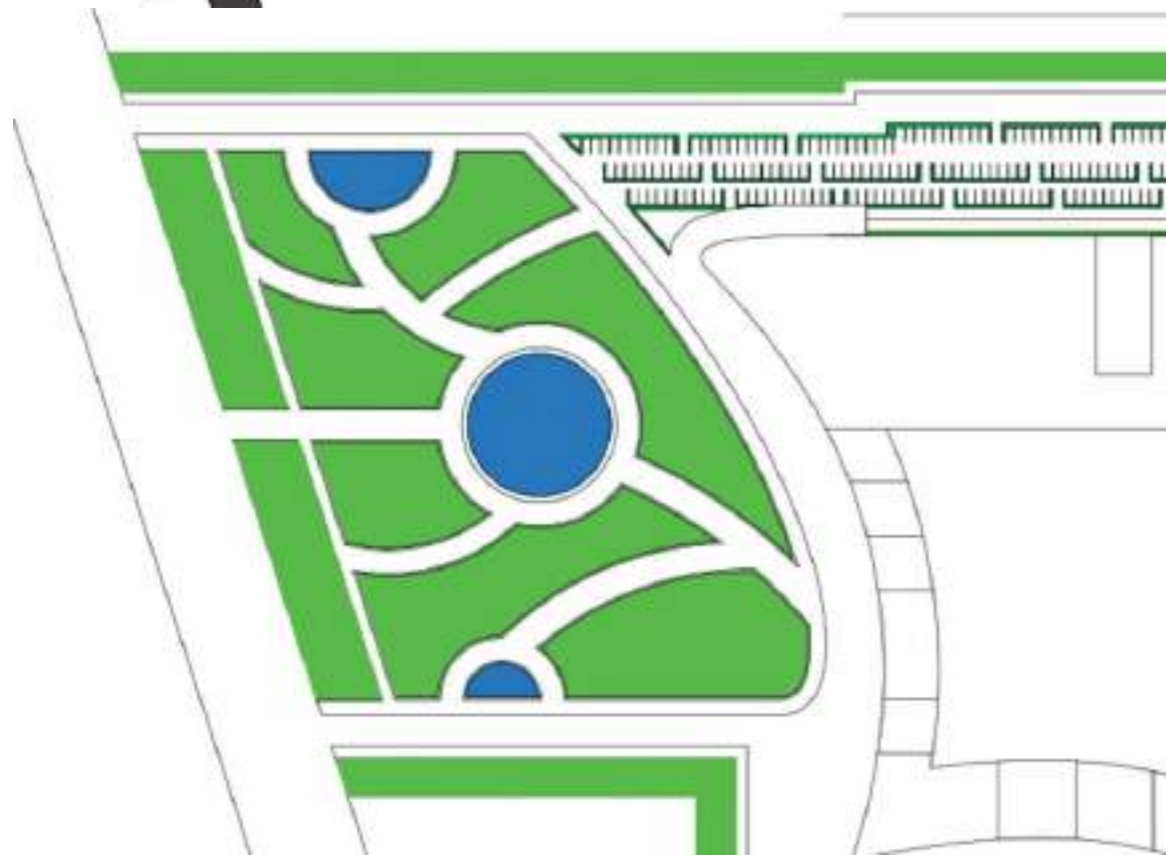
ZONASI / TATA LETAK RTH & RTNH



Sumber gambar: fachadasarq.info



Sumber gambar: dirt.asla.org



Sumber gambar: viagem.uol.com.br

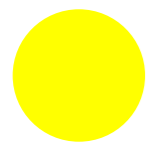
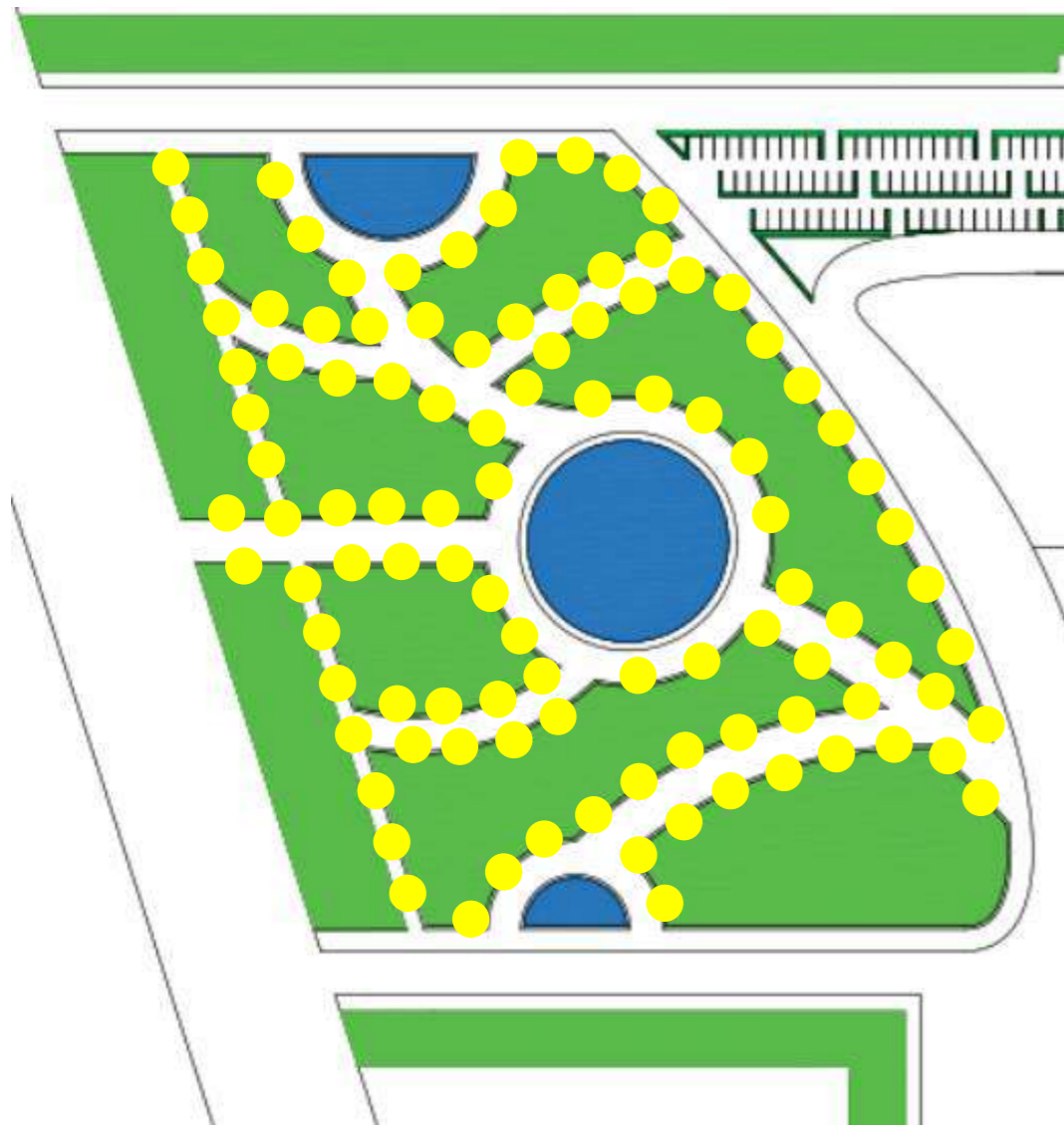


Sumber gambar: archdaily.com



KONSEP TATA RUANG LUAR

TATA LANSEKAP (PENATAAN
ELEMEN SOFTSCAPE &
HARDSCAPE)



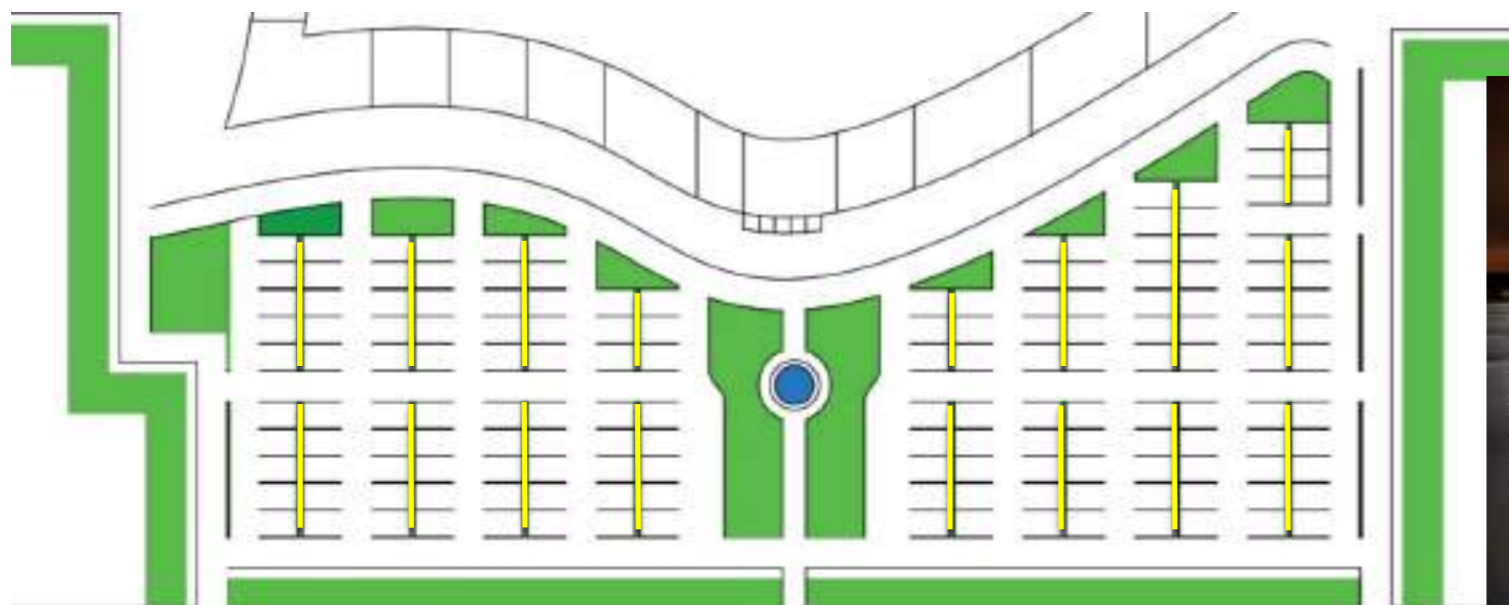
Penempatan lampu untuk
pejalan kaki



Sumber gambar: futurian.co



Sumber gambar: seattle.curbed.com



Penempatan lampu untuk
area parkir



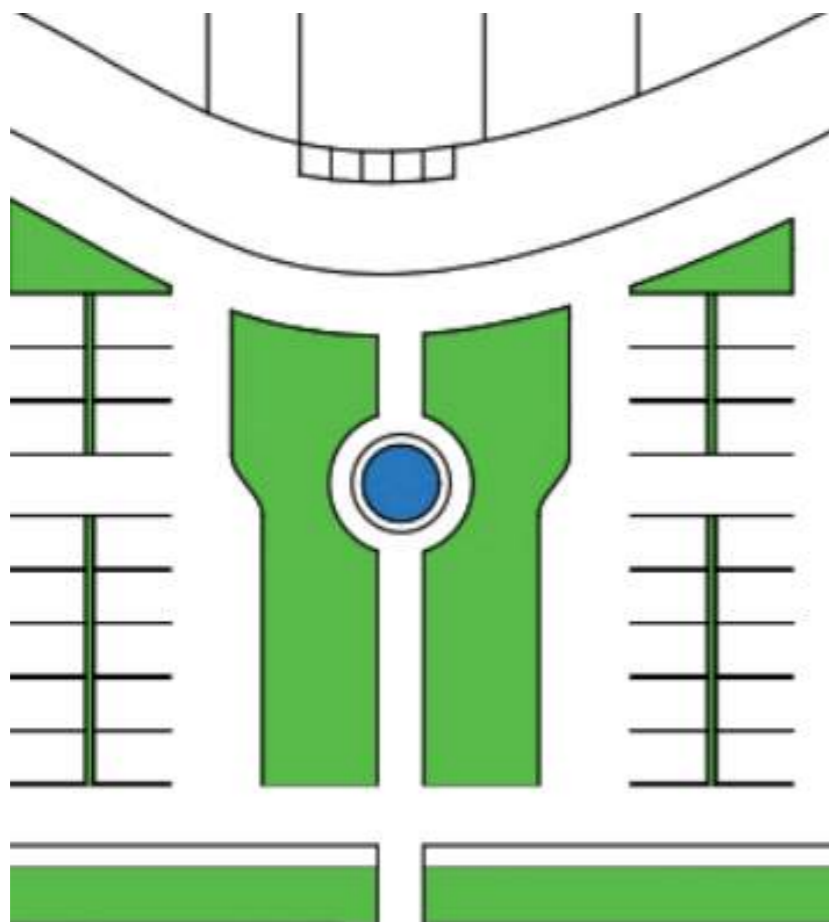
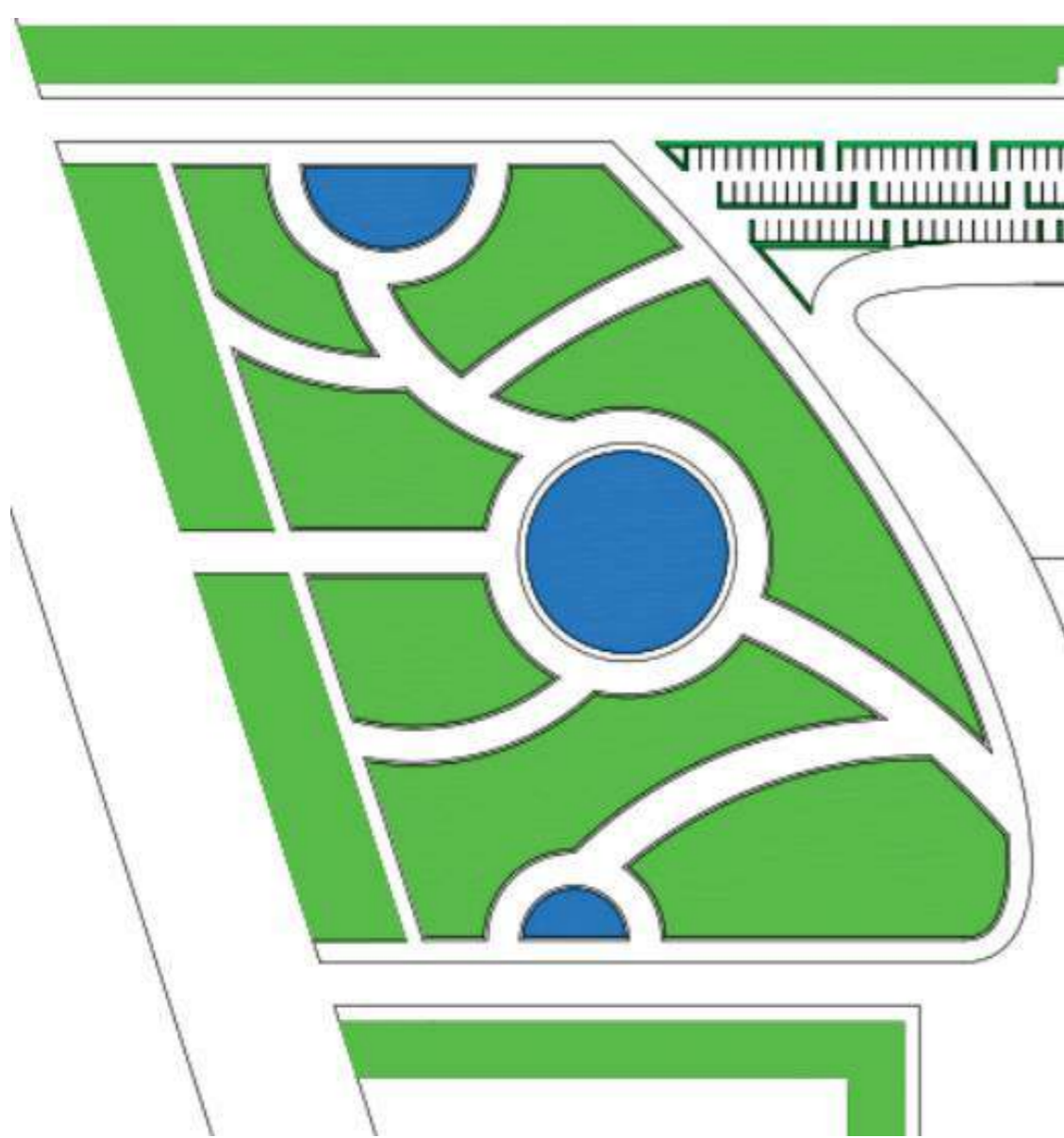
Sumber gambar: medium.com



Sumber gambar: pinterest

KONSEP TATA RUANG LUAR

TATA LANSEKAP (PENATAAN
ELEMEN SOFTSCAPE &
HARDSCAPE)



Sumber gambar: flickr.com

Kehadiran elemen air akan membuat kesan taman menjadi lebih alami dan menarik para pengunjung.



Sumber gambar: m-tec.uk.com



Sumber gambar: landarchs.com

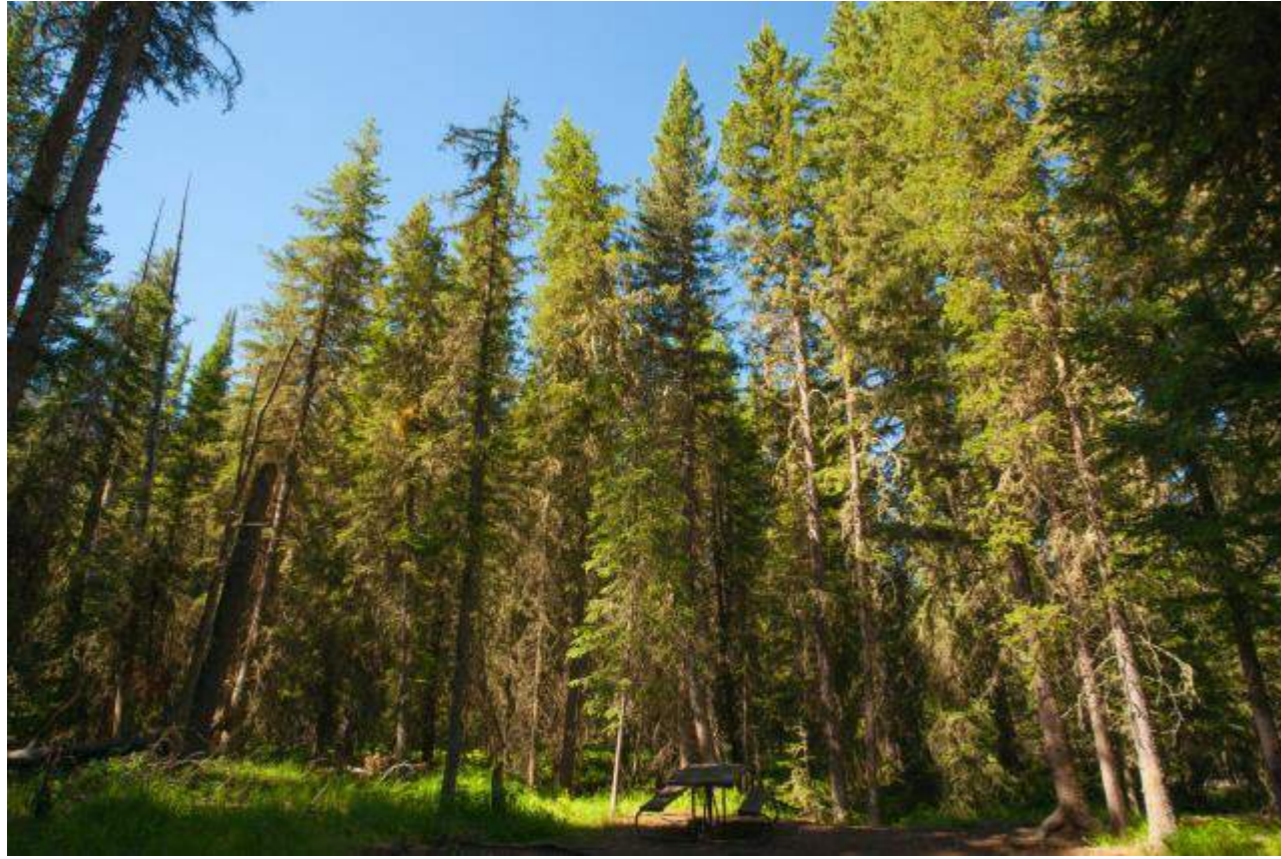


Sumber gambar: jimolive.photoshelter.com

KONSEP TATA RUANG LUAR

TATA LANSEKAP (PENATAAN ELEMEN SOFTSCAPE & HARDSCAPE)

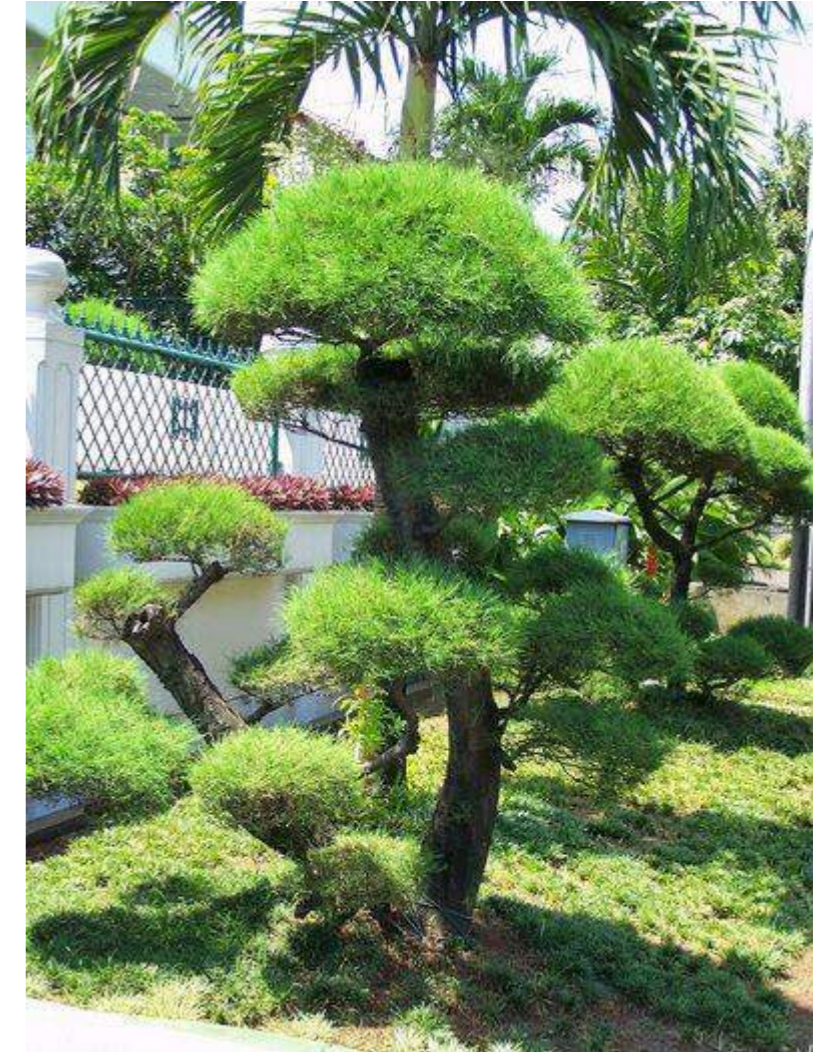
POHON PINUS



RUMPUT JEPANG



POHON CEMARA LAUT



BAMBU JEPANG



BUNGA ASTER

