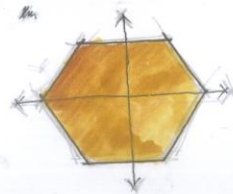
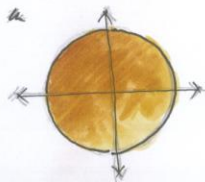
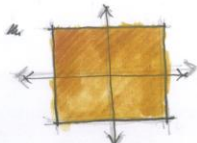


VARIABEL DESAIN

KOMPONEN BANGUNAN APUNG

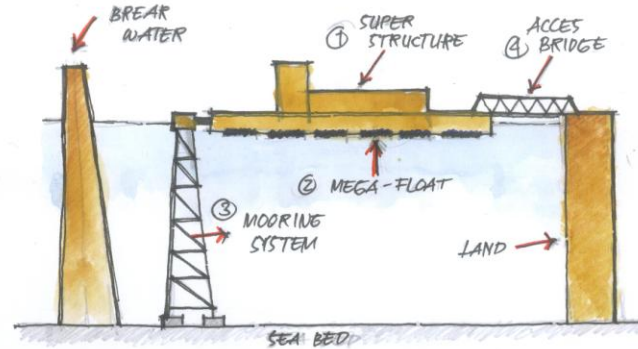
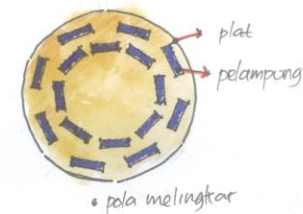
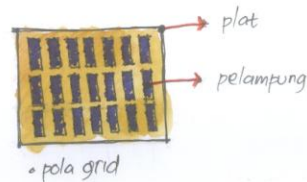
① SUPER STRUCTURE

↳ massa bangunan — simetris
— ringan

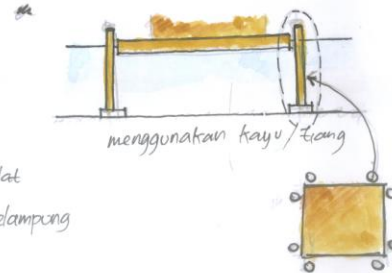
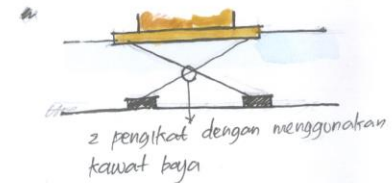
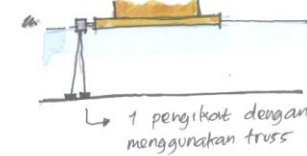


② MEGA-FLOAT

↳ plat struktur



③ MOORING SYSTEM — sistem tambat



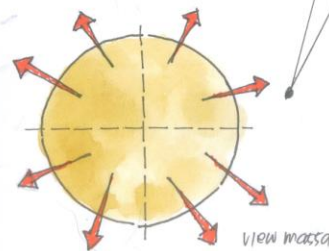
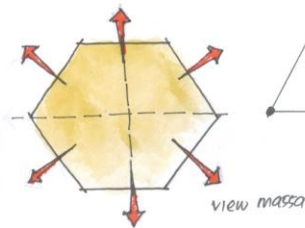
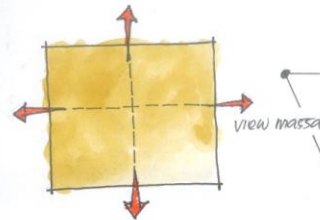
ALTERNATIF DESAIN

PARAMETER DESAIN

• berdasarkan analisa komponen bangunan terapung.

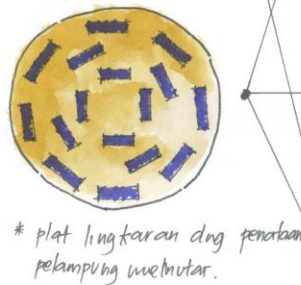
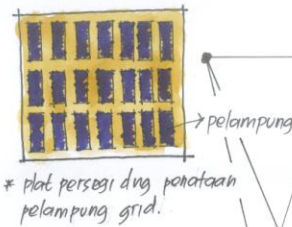
① SUPER STRUCTURE

— massa bangunan — simetris



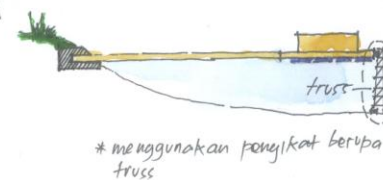
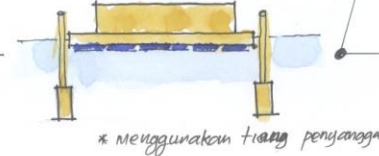
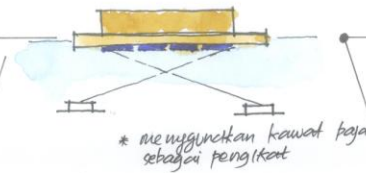
② MEGA-FLOAT

— plat apung



③ MOORING SYSTEM

— sistem tambat

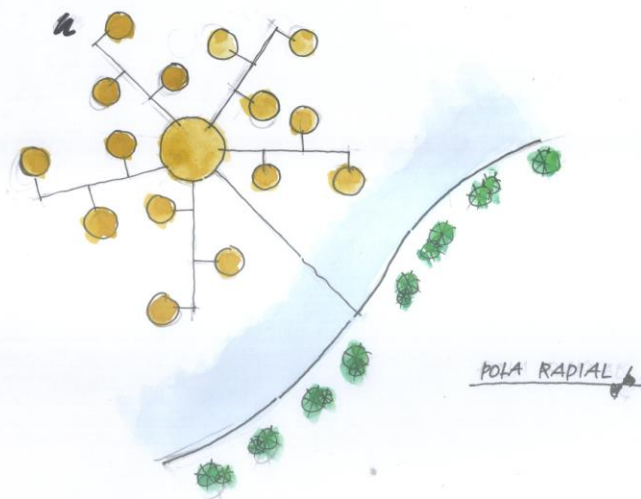
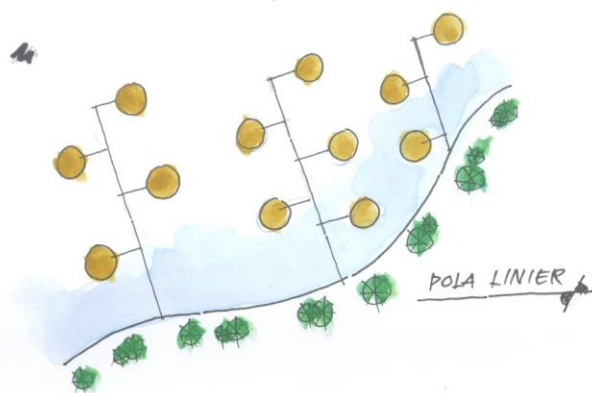


④ ACCESS BRIDGE

— sirkulasi bangunan



④ ACCESS BRIDGE — sirkulasi terapung
— penataan massa

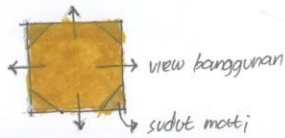


KOMBINASI VARIABEL DESAIN

① KOMBINASI 1

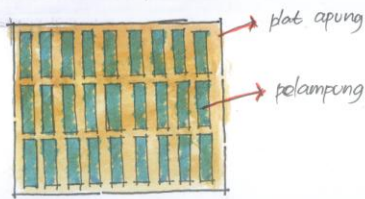
massa bangunan PERSEGI + plat apung PERSEGI + sistem tambat KAWAT BAJA + sirkulasi dan penataan massa LINER

① massa bangunan

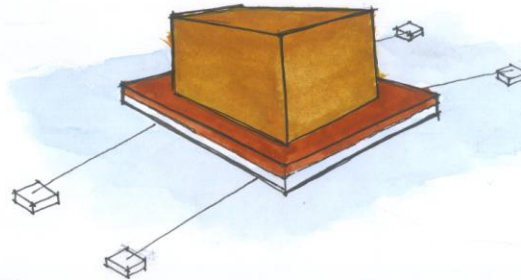


- memiliki view terbatas hanya di empat sisi bangunan

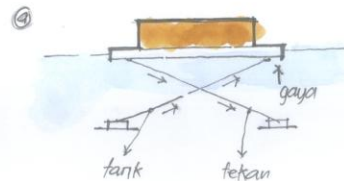
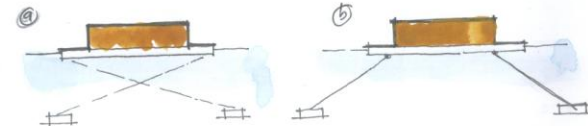
② plat apung



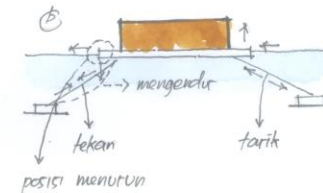
- menggunakan sistem modular
- memiliki kemudahan dalam proses konstruksi
- dapat digunakan pada bangunan terapung skala kecil dan besar.



③ sistem tambat

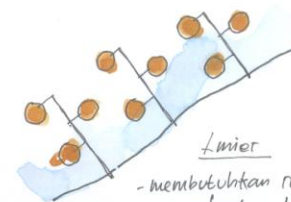


- * sistem tambat ini lebih stabil dan cocok digunakan pada bangunan apung skala kecil.



- * sistem tambat ini kurang stabil dan cocok digunakan pada bangunan apung skala besar.

④ sirkulasi dan penataan massa



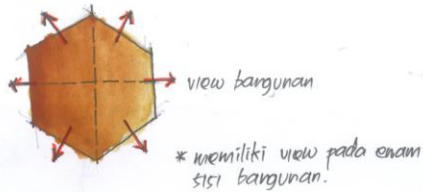
- membutuhkan ruang yang kecil
- pemanfaatan lahan dengan maksimal

KOMBINASI VARIABEL DESAIN

② KOMBINASI 2

massa bangunan
SEGI ENAM + plot apung
LINGKARAN + sistem tambat
TANG PENYANGGA + sirkulasi dan penataan massa
RADIAL

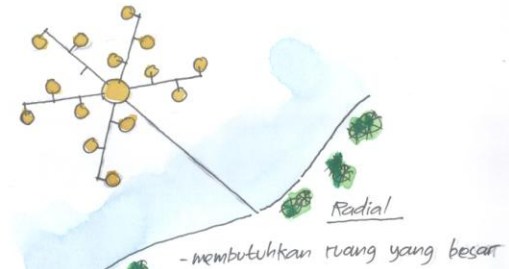
① massa bangunan



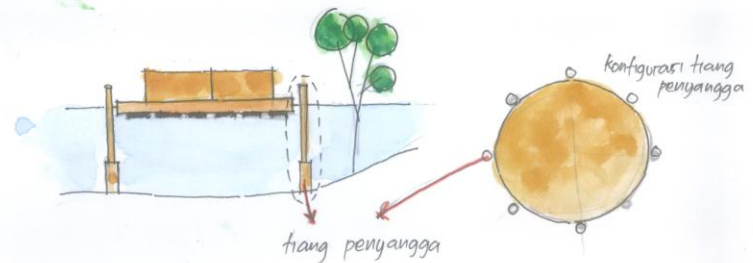
② plat apung



③ sirkulasi dan penataan massa



④ sistem penyangga



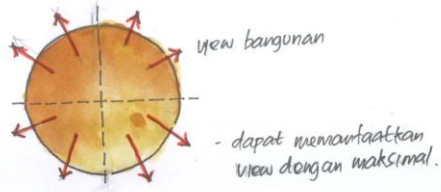
- berfungsi menjaga posisi bangunan pada saat keadaan air sedang naik dan turun.

KOMBINASI VARIABEL DESAIN

③ KOMBINASI 3

massa bangunan LINGKARAN + plat apung PERSEGI + sistem tambat TRUSS + sirkulasi dan penataan massa LINIER

① massa bangunan



pola ruangan

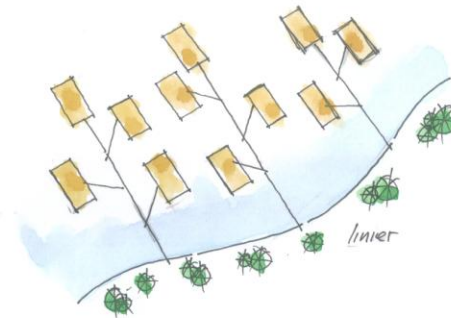


② plat apung

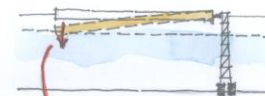
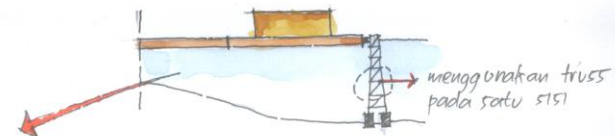


penggunaan pelampung pada tepi plat dapat menghemat biaya konstruksi.

④ sirkulasi dan penataan massa



⑤ sistem tambat



posisi bangunan menurun apabila volume air berkurang.

- sistem tambat dengan truss bisa digunakan pada air dengan volume yang tetap.

- bendungan
- laguna, dll.

ALTERNATIF DESAIN

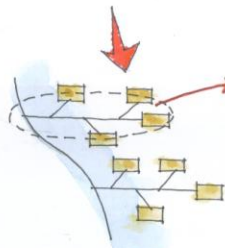
FLOATING TREE

① DISKRIPSI DESAIN — pohon jati



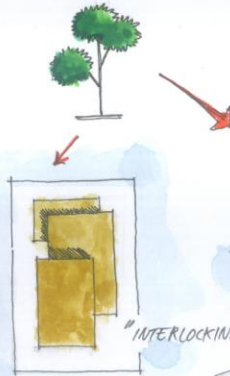
KONSEP SIRKULASI

konsep pohon digunakan sebagai konfigurasi massa

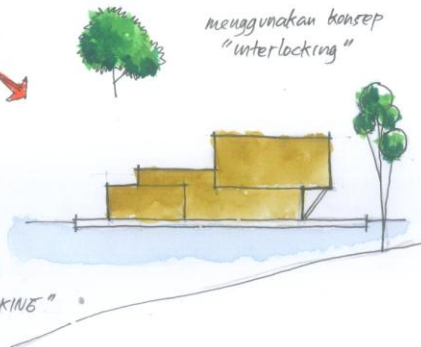


pola sirkulasi berbentuk ranting pohon

KONSEP BENTUK



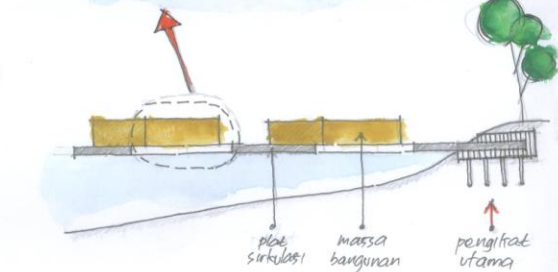
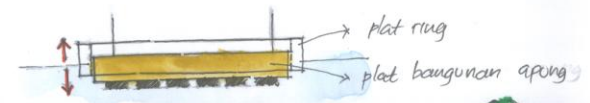
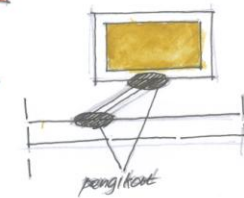
menggunakan konsep "interlocking"



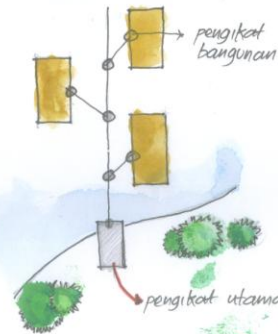
"INTERLOCKING"

② SISTEM KONSTRUKSI

SISTEM PENGIKAT



PENGIKAT UTAMA



pengikat utama

plat sirkulasi

massa bangunan

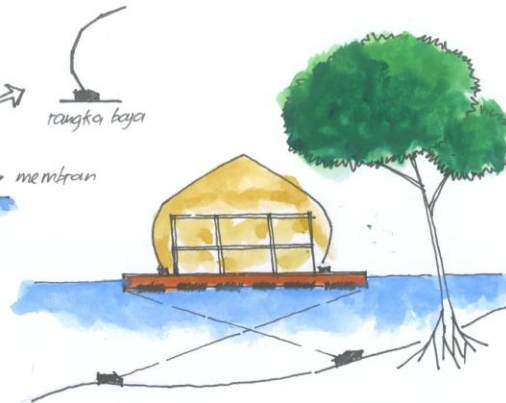
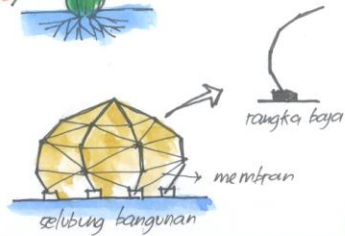
pengikat utama

ALTERNATIF DESAIN

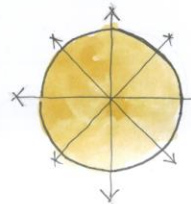
ECENG GONDOK

① DEKRIPSI KONSEP

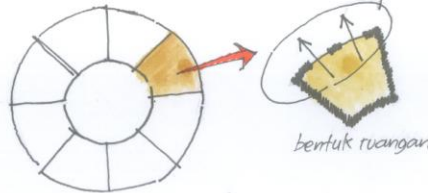
- STILISASI "ECENG GONDOK"



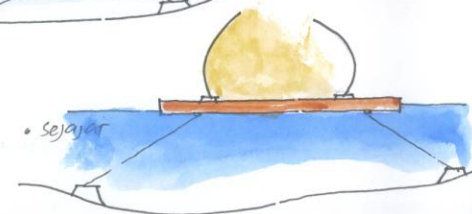
- DENAH BANGUNAN



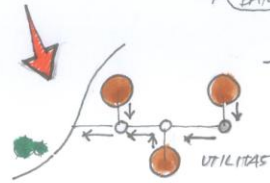
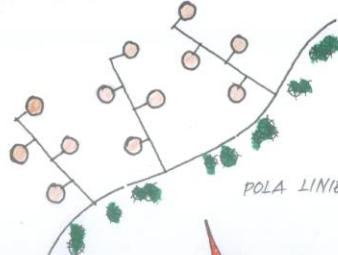
ARAH VIEW DARI DALAM RUANG
penempatan view dengan maksimal



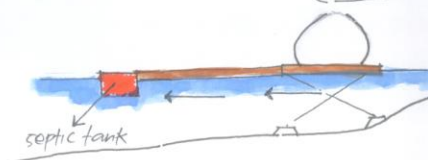
- SISTEM STRUKTUR



- POLA SIKULASI DAN PENATAAN MASSA



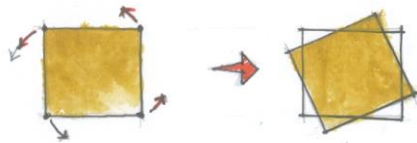
BANGUNAN → SALURAN → SEPTIC TANK → SALURAN DARAT



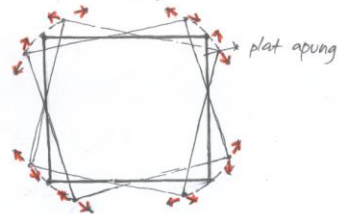
ALTERNATIF DESAIN

SPINNING FLOATING BOXES

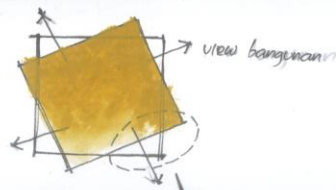
① DISKRIPSI KONSEP — spinning box



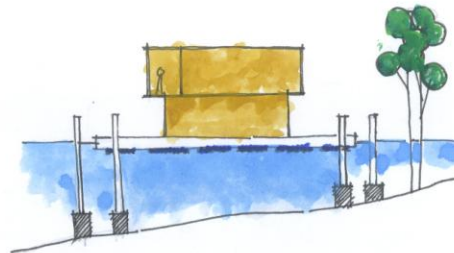
bangunan yang dapat berputar dng. memaksimalkan fungsi dari bangunan apung.



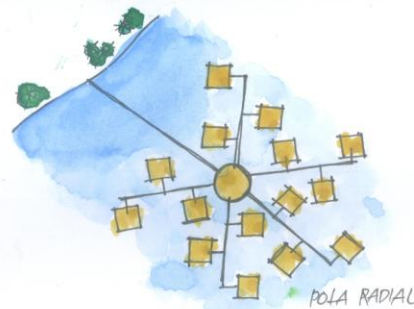
② DENAH BANGUNAN



area terbuka pada lantai dua dimana tatapan sebagai balkon.

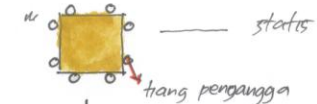


③ POLA SIRKULASI DAN PENATAAN MASSA

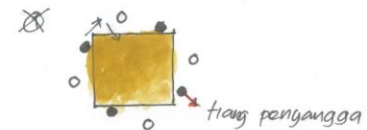


④ SISTEM STRUKTUR — sistem tambat menggunakan tiang

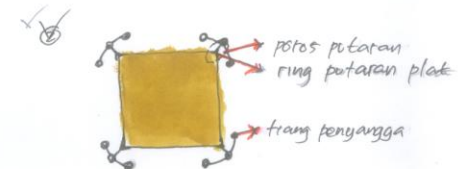
ALTERNATIF SISTEM TAMBAT



agar bangunan dapat bergerak maka tiang penyangga dimodifikasi



dapat bergerak tetapi tidak beraturan.

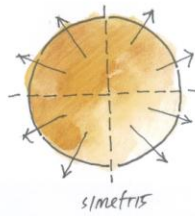


dapat bergerak dengan potos yang tetap.

VARIABEL TERPILIH

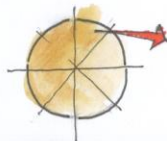
masa bangunan LINGKARAN + plat apung PERSEGI + sistem tambat KAWAT BAJA + sirkulasi dan tata masa LINIER

① masa bangunan



view bangunan

- bentuk lingkaran dapat memantarkan view secara maksimal
- memiliki kesan dinamis

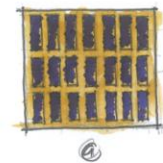


- denah bangunan



pola ruang lingkaran

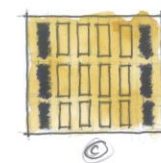
② plat apung



- konfigurasi pelampung a diletakkan merata, sehingga pembagian beban merata



- konfigurasi b hanya meletakkan pelampung pada kedua tepi plat

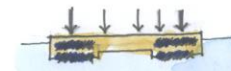


merupakan perpaduan antara konfigurasi a & b

beban bangunan



- beban pada plat merata

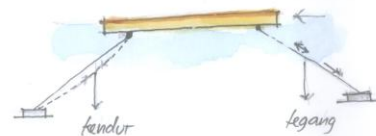
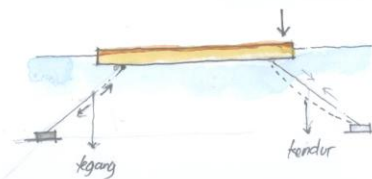
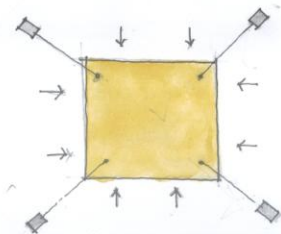
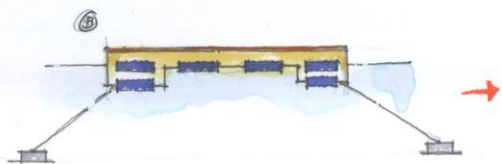
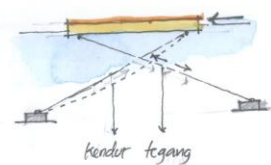
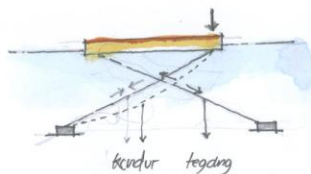
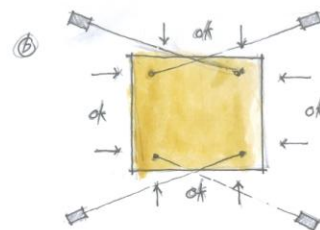
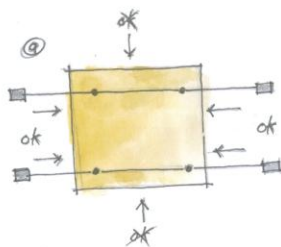
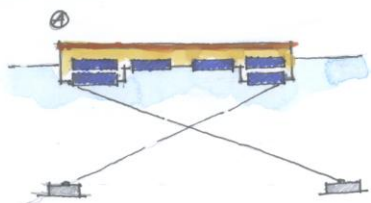


- beban tidak merata dan dapat terjadi momen

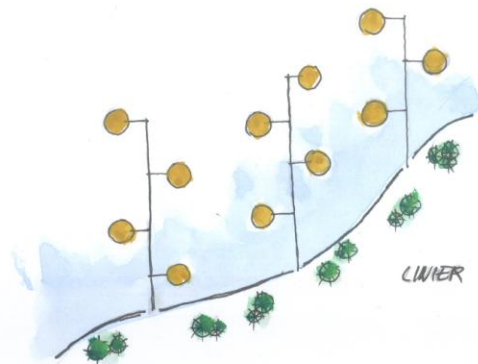


dapat menerima beban lebih besar dan menjaga plat dari momen plat itu sendiri

③ sistem tambat

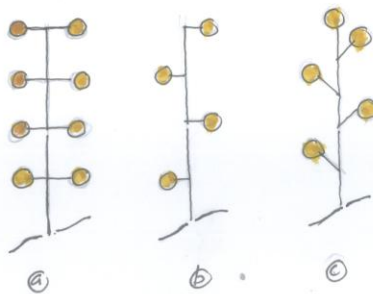


4. sirkulasi dan penataan massa

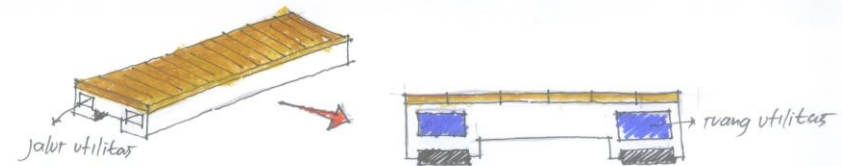
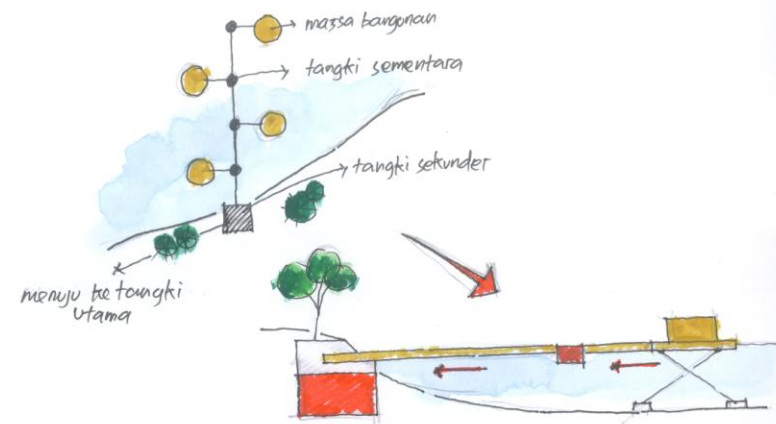


- membutuhkan ruang yang kecil
- akses dari tapak menuju bangunan lebih dekat
- kemudahan dalam mengolah sistem utilitas

• jenis konfigurasi sirkulasi dan penataan lintas



* SISTEM UTILITAS

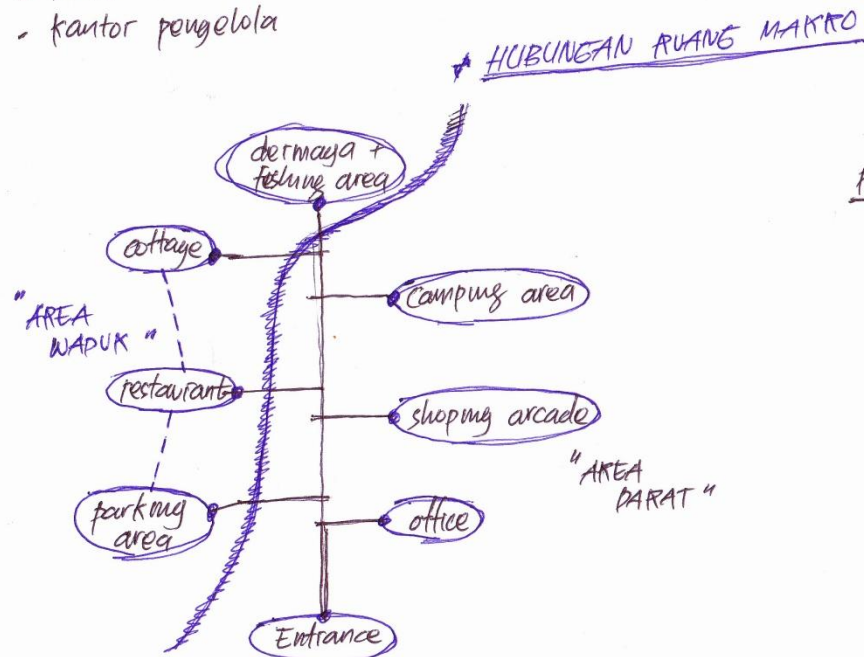


* utilitas disalurkan melalui ruang yang ada pada sirkulasi bangunan

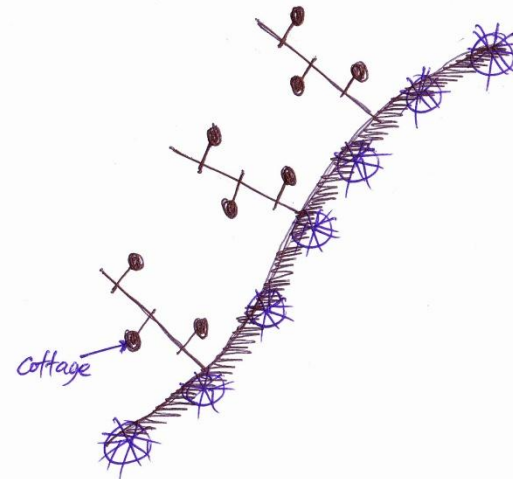
KONSEP ORGANISASI RUANG MAKRO - Linier

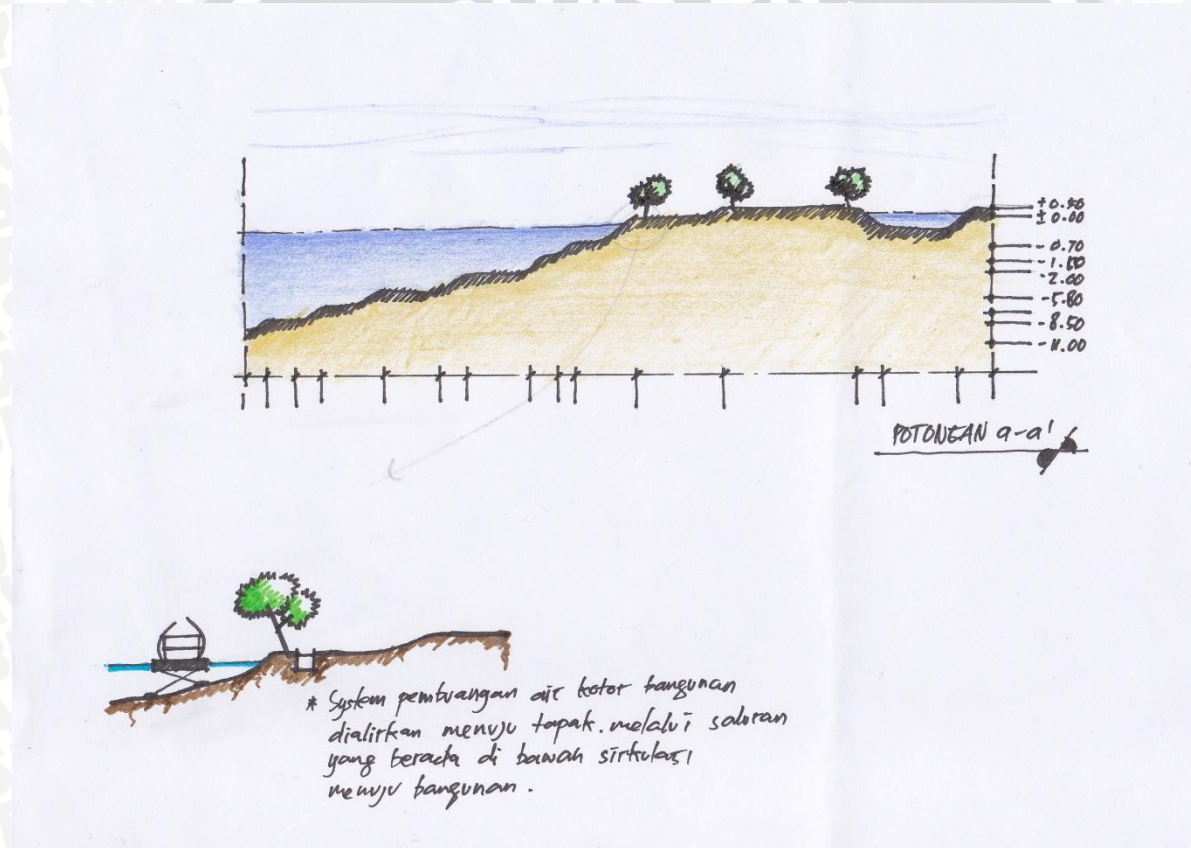
▼ JENIS ~~MASSA~~ MASSA

- cottage
- restaurant terapung
- olahraga air — dermaga
- tempat memancing
- shopping arcade
- kolam renang
- servis
- kantor pengelola

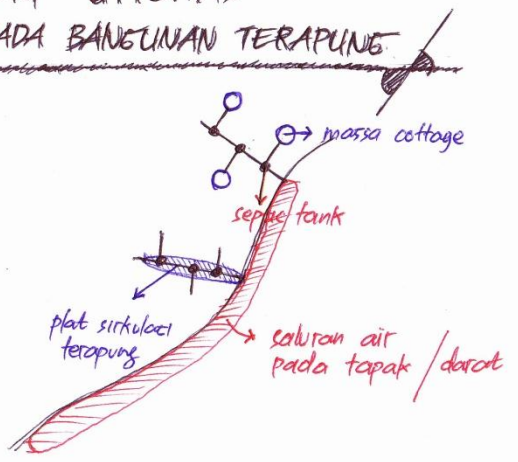


PENATAAN MASSA - LINIER

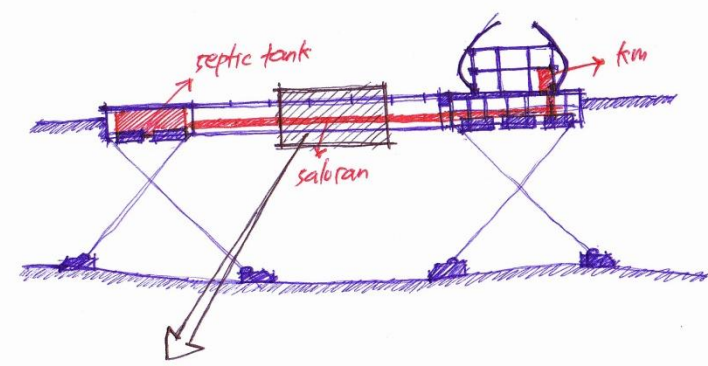




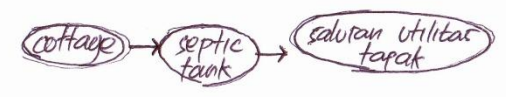
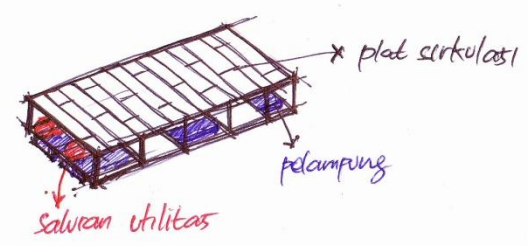
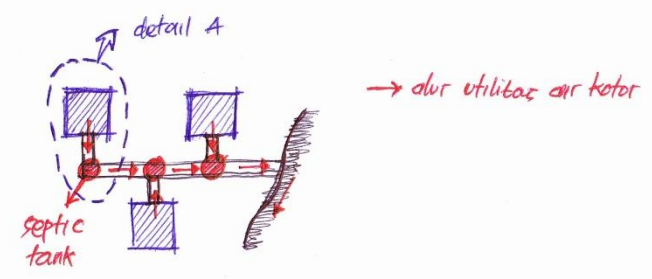
SISTEM UTILITAS PADA BANGUNAN TERAPUNG



⊕ DETAIL A



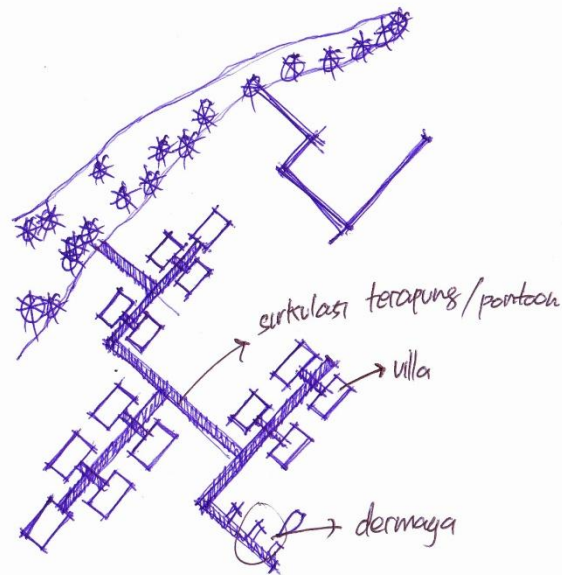
⊕ ALUR UTILITAS PADA BANGUNAN TERAPUNG



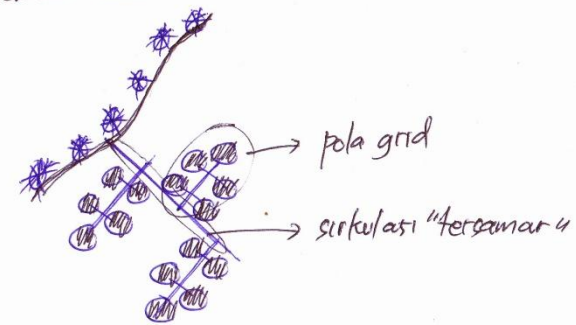
KOMPARASI

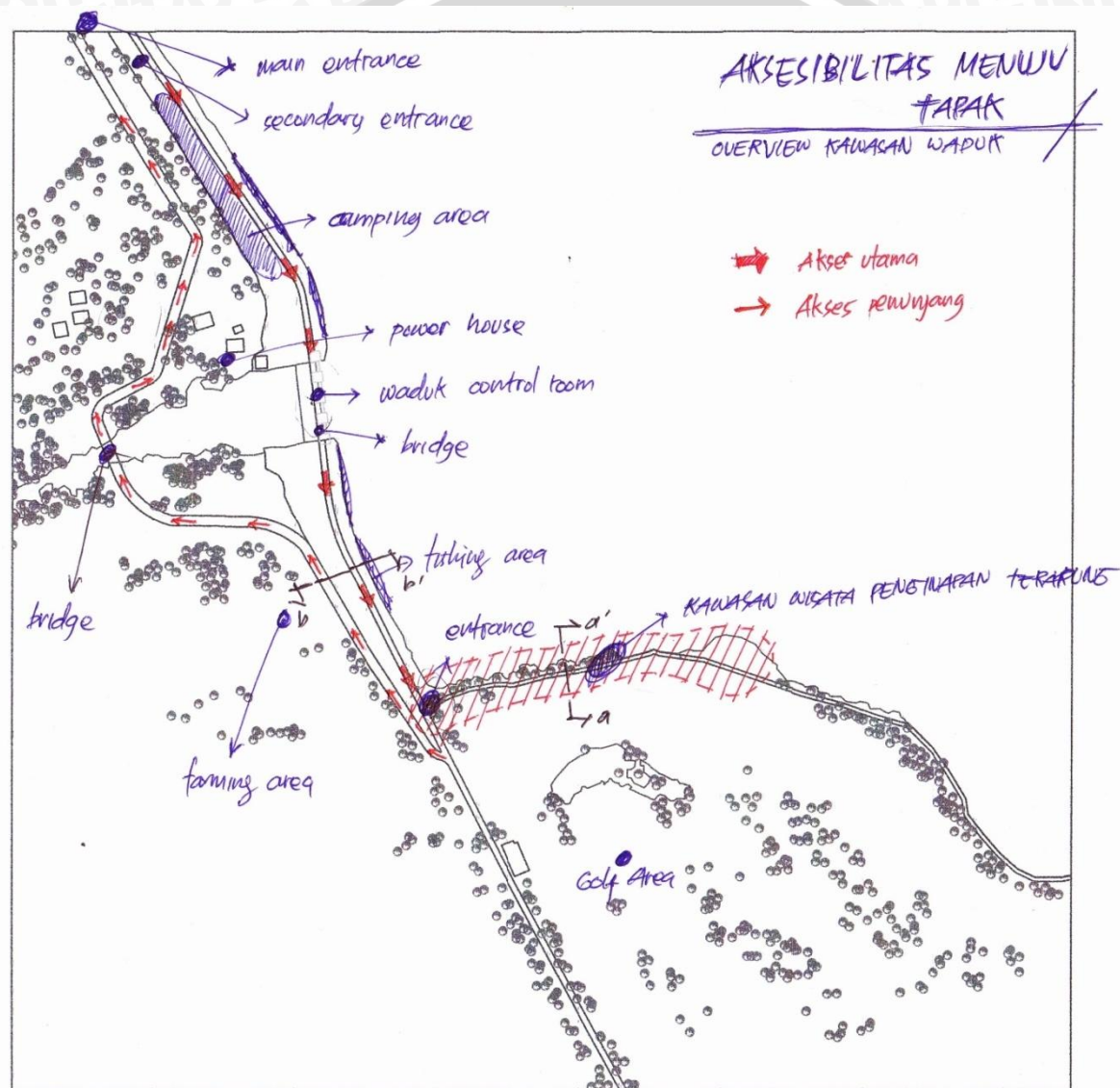
Floating Intelligent Green Villas

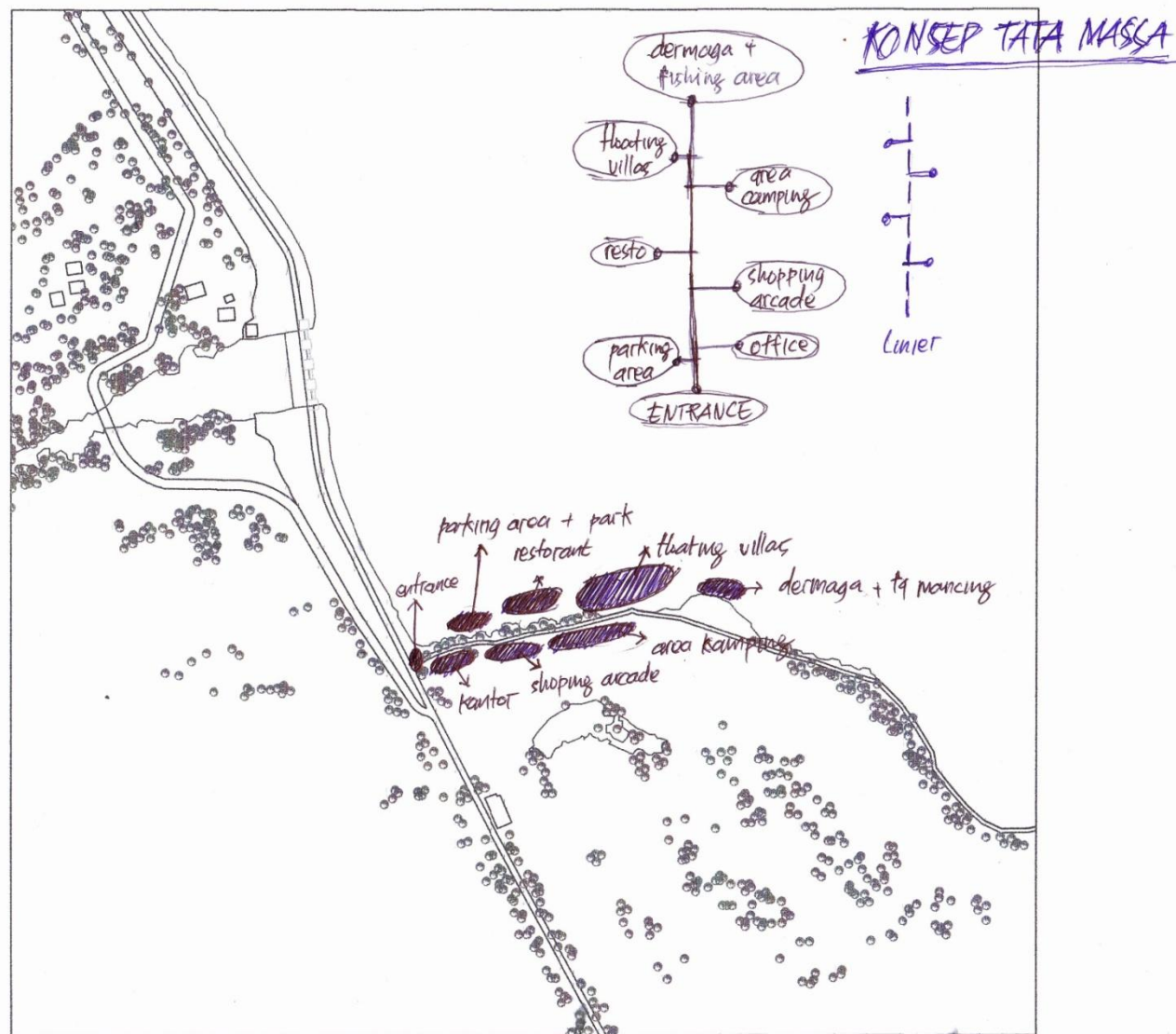
~ SITE PLAN



~ Petaan massa kawasan — Pola Grid

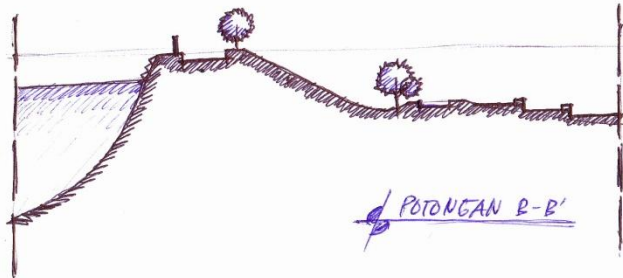
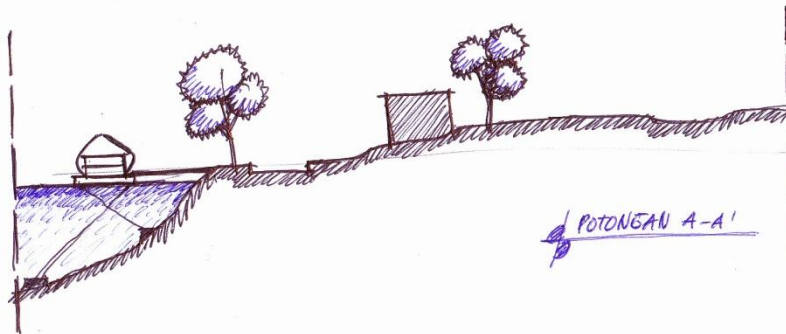






KONDISI EKSTISTING

Waduk Batujai



* DATA KAWASAN

- LOKASI

Desa/Kecamatan : Batujai / Praya Barat
Kabupaten : Lombok Tengah
Provinsi : Nusa Tenggara Barat
Mantapet : Ingasi + 3.000 ha
Tahun Pelaksanaan : 1977 - 1982

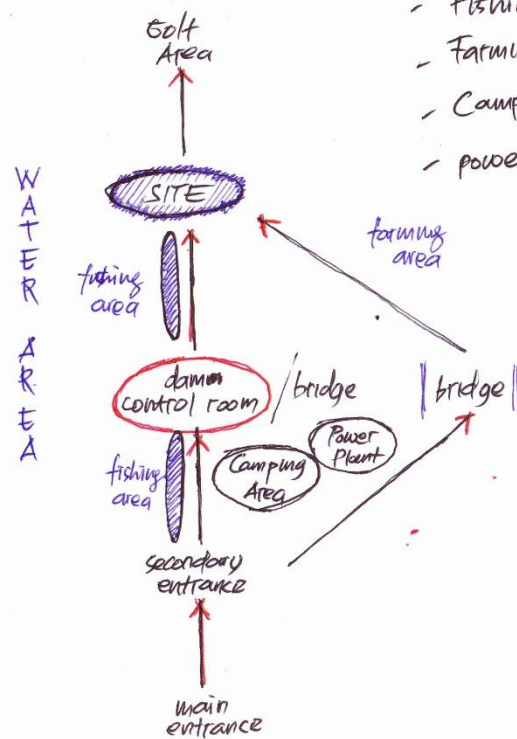
- HIDROLOGI

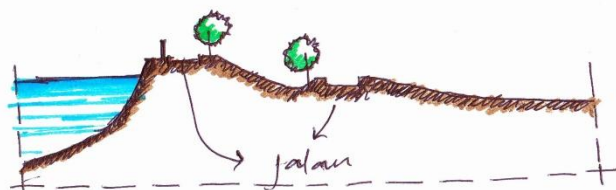
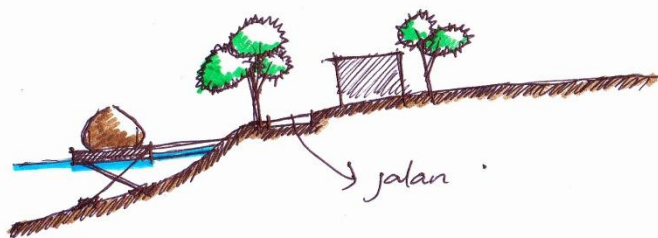
Sungai : Penajak
Luas DAS : 169 km²

SIEMATIK SIRKULASI DAN PENCAPAIAN WADUK BATUMAI

Content :

- Golf Area
- Dam Control Room
- Fishing Area
- Farming Area
- Camping Area
- power plant (small)





Konsep Bangunan eceng gondok

