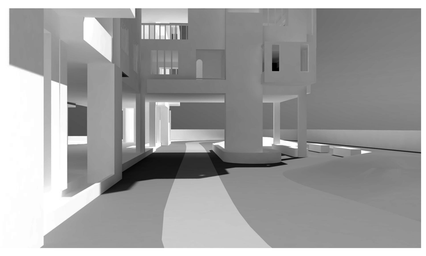
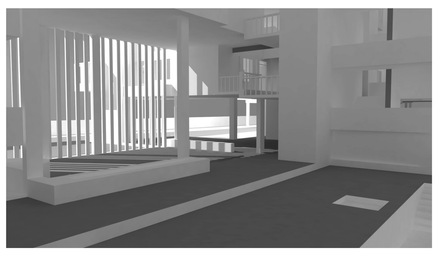
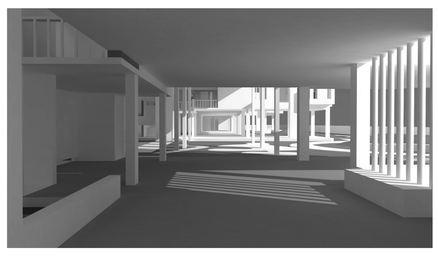
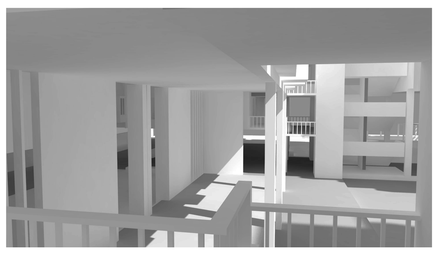
OIKOPOLIS 2.0 : Attack of the clones
Chirag UA2514

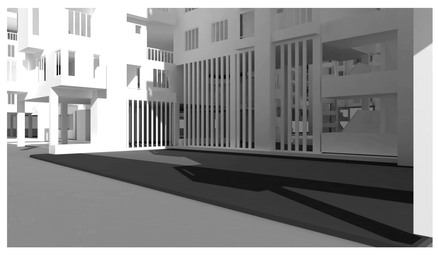
MODULAR



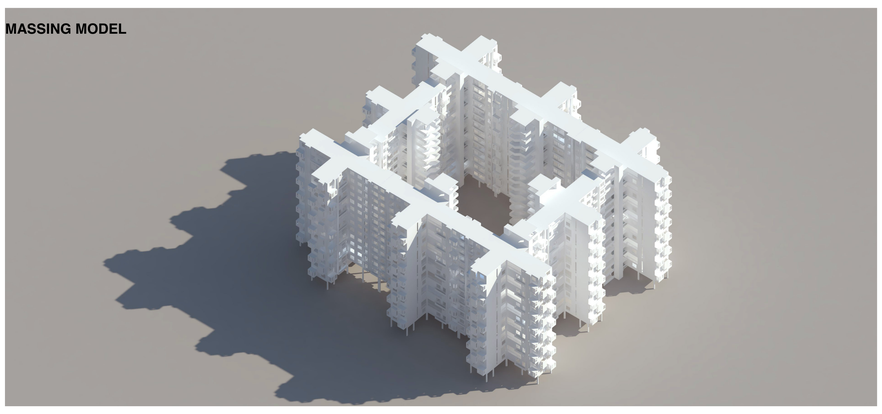






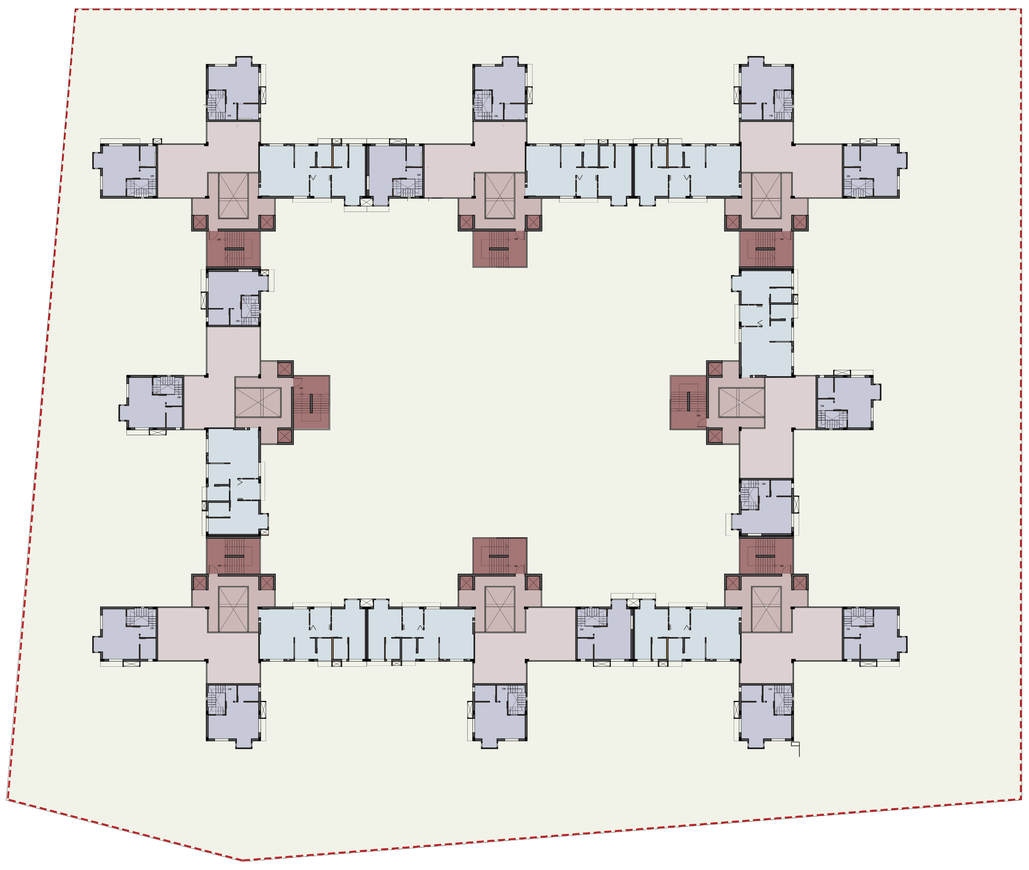


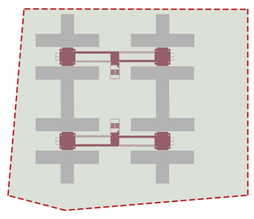
MASSING MODEL



EVEN FLOOR PLAN

0 5 10 15 20 30



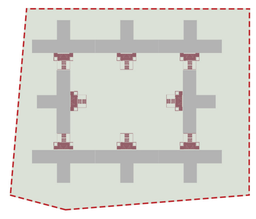


Initial iteration:
-2 blocks (G+14) share 1 lift core and 4 blocks share 1 fire staircase.

-4 blocks are interconnected with corridors.

-Divides the site into small parts.

-Corridor area per dwelling is increased which proves to be a loss situation for a developer.



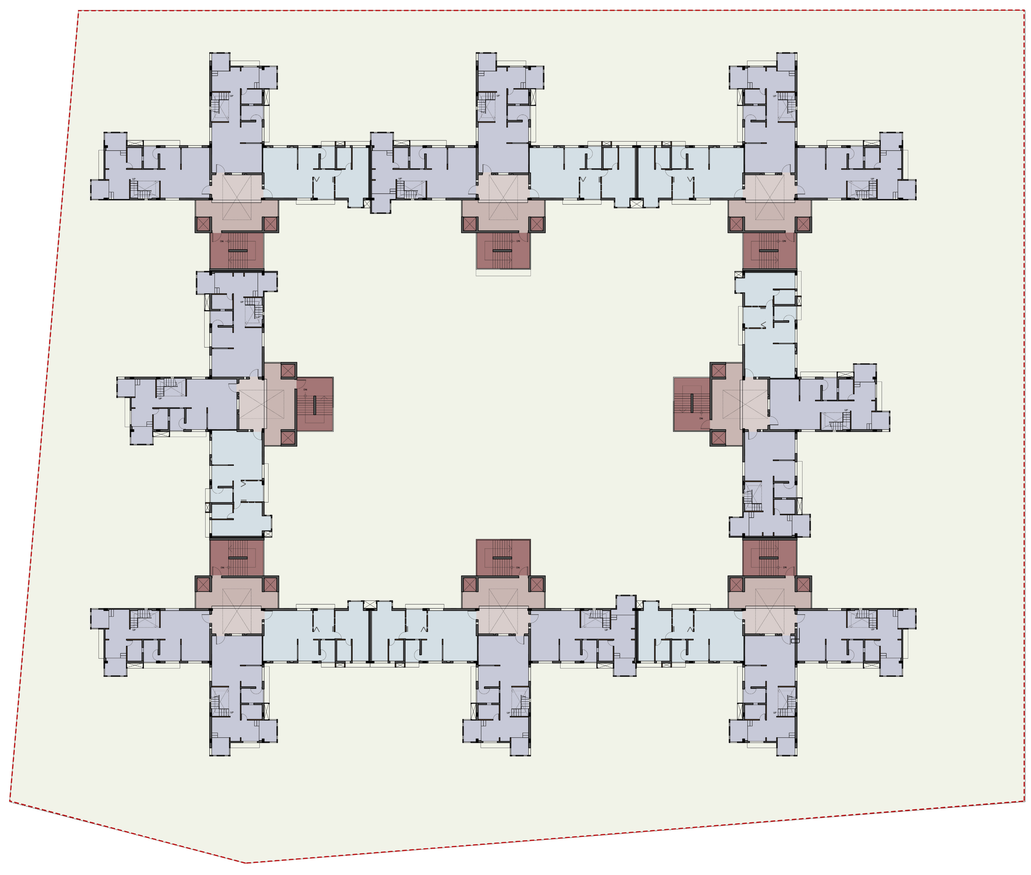
Chosen iteration:
-All the 8 blocks (G+14) acts as a point block with individual cores.

-No loss of FSI in corridors. Hence, building more cores prove to be cheaper than corridors.

-Creates a central court for large scale gatherings.

ODD FLOOR PLAN

0 5 10 15 20 30



Vertical circulation

Studio units

Duplex units

Free lobby

Buyable lobby

GROUND FLOOR PLAN
SCALE 1:200

0 5 10 15 20 30

- The building mass divides the site into three parts; a central court, hollow plinth and the marginal space. Based on these divisions, the functions of the spaces were decided.

1) **central court**: the court acts as a large common gathering space for activities such as garba, football ground, etc.

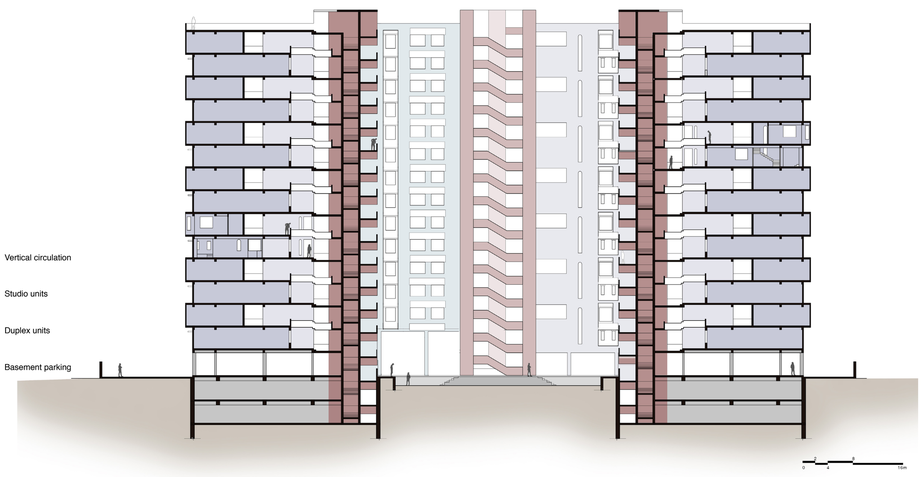
2) **hollow plinth**: space under the hollow plinth is used as amenities such as gym, conference room, marriage/function space, festival/pooja space, common toilets, etc.

3) **Marginal space**: margins are further divided into a car circulation / parking space, jogging tracks and smaller gardens.

- The vehicular road (grey) and car parking on the ground is blocked off by walls, jali or amenities to reduce the noise and vision from the public spaces.

-The mass on the ground floor is tucked into the hollow plinth. This, combined with the plinth going in and out of the hollow plinth at various points decrease the nature of a conventional hollow plinth.

BLOCK SECTION



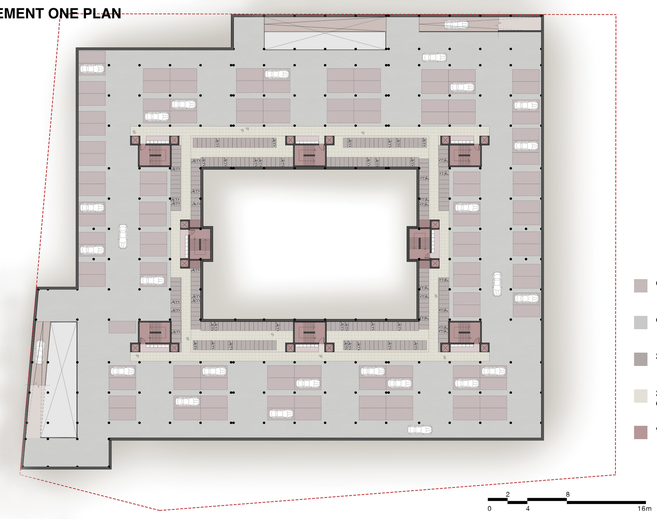
Vertical circulation

Studio units

Duplex units

Basement parking

BASEMENT ONE PLAN



car parking

car circulation

2 wheeler parking

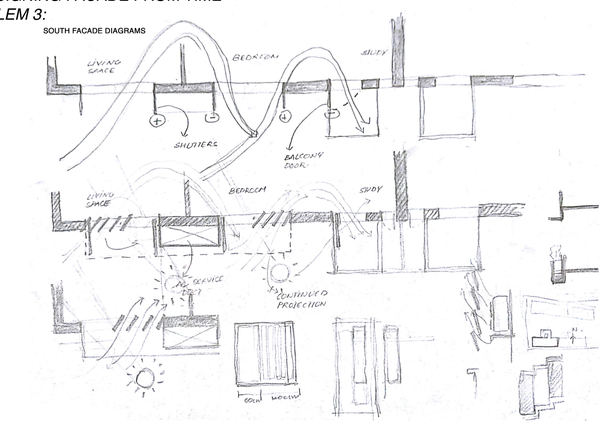
2 wheeler and pedestrian circulation

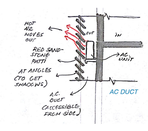
vertical circulation

0 4 8 16m

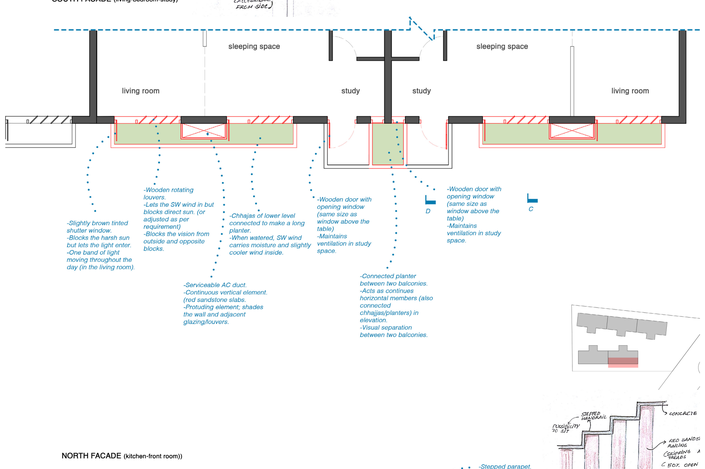
REDESIGNING FACADE FROM TIME
PROBLEM 3:

SOUTH FACADE DIAGRAMS

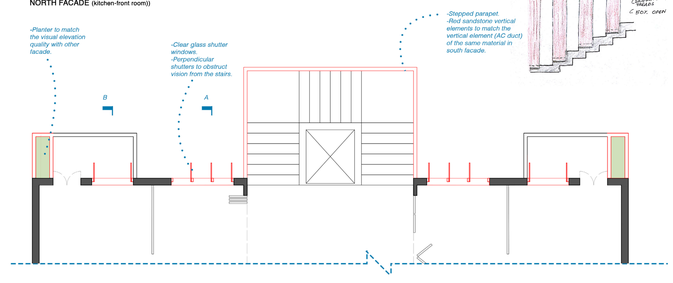




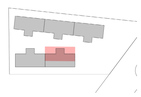
SOUTH FACADE (living-bedroom-study)

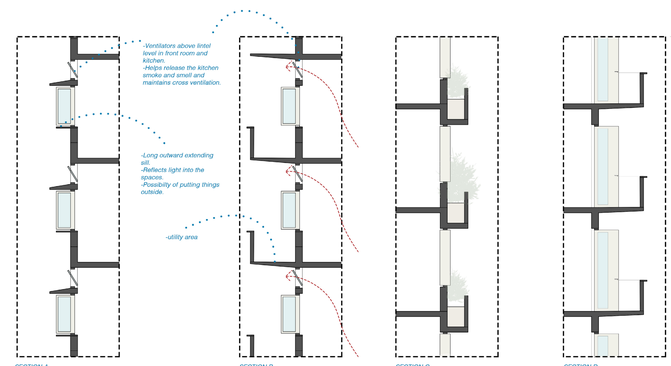


NORTH FACADE (kitchen-front room))

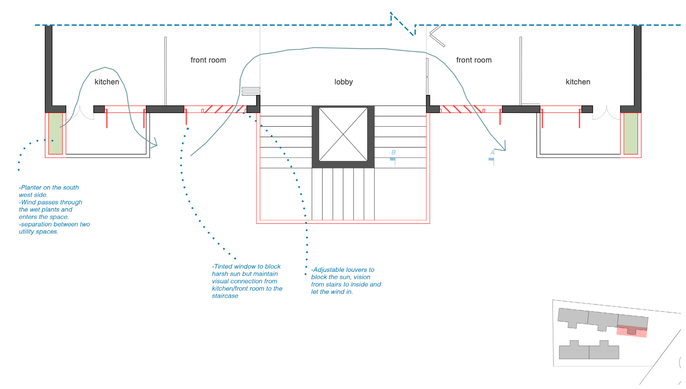


-North Facade windows with clear glass shutters to get in maximum light
- To maintain cross ventilation from south facade, Ventilators provided above lintel level.

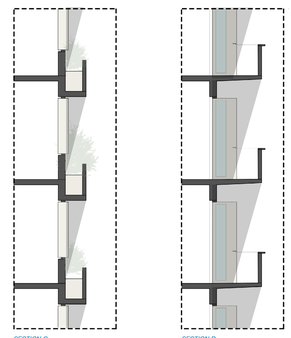




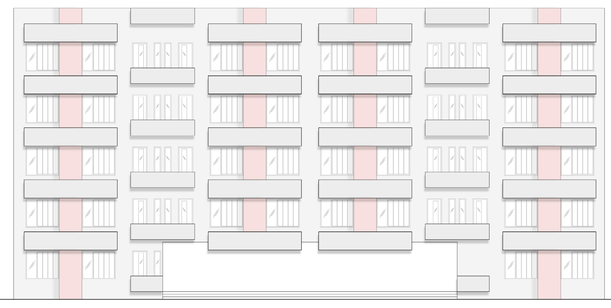
SOUTH FACADE (kitchen-front room)

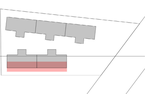


SHADOWS ON THE HOTTEST DAY.
(south facade)



SOUTH FACADE

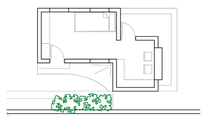




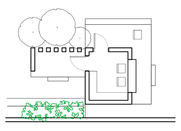
TIME PROBLEM PREPARATIONS:

Security cabin:
-option 1:
includes a bedroom, storage, semi-open court.

-option 2:
includes a bedroom, storage, semi-open court, wash area



-option 3:
Just a watch cabin with a desk and Semi open pavilion.



WATER TANKS REQUIREMENTS (data collection)

Water requirements ***per person per day:***
Average= **135 l/day**;

drinking= 5 l/day
cooking= 5 l/day
bathing and toilet= 85 l/day
washing clothes and utensils= 30 l/day
cleaning house: 10 l/day

Calculations based on a housing scheme with **100 units** and a **common** garden, hall, etc :

per house per day: 135 x 4= **540 l/day/unit**

For 100 units: 540 x 100 = **54000 l/day**
For common facilities: **50%** of residential requirements
= **27,000 l/day**

Under ground tank

capacity: 2 days requirement (residential+common)

Requirement: (54,000 + 27,000) x 2
=**1,62,000 l**

water density: $1m^3$ = 1000 l

Dimensions:

volume: 1,62,000/ 1000
= **162 m^3**

l x b x h = **7.6m x 7.6m x 2.8m**

Over head tank

capacity: 1 days requirement (residential only)

Requirement: **54,000 l**

water density: $1m^3$ = 1000 l

Dimensions:

volume: 54,000/ 1000
= **54 m^3**

l x b x h = **4.5m x 4.5m x 2.8m**

CHIRAG MEGHANI
UA2514

OIKOPOLIS II
Attack of the clones
Vishwanath Kashikar I Nilosha Dave