

PLANNING AND MODELLING OF GATED COMMUNITY FOR MIDDLE INCOME GROUPS

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Abstract: Gated community first started in Latin America since 1970's. This is for residential development purpose this area is restricted for a specific impacts of the neighborhood. For security purpose and spreading social inequality. Gated community is mainly focused in social features like fragmentation, segregation and exclusion. Gated community is mainly for Urban Development around the world to increase the fear of Urban crime and violence. Gated community involves the design of building like design of beams columns and planning of rooms with the requirements of sizes for low income people with closed walls and fences. with all amenities like Park, shopping mall, Temple, Community Hall, Supermarket etc..., The main aim of these is to create an integrated community which is interactive barrier free secure and peaceful.

Keywords – Gated community, Middle income groups, Amenities, Planning.

I. INTRODUCTION

Gated community is a residential community basically have only one Gate to enter. It is not only about expensive house, luxury Lifestyle, Royal families with all specifications but it is more changed in a way of life mainly in urban areas. Purpose of gated community is to offer its residents safely increase which eliminates the traffic.

Benefits of gated community:-

1. Bonding with neighbors.
2. Bonding with people.
3. Bonding with nature.

In rural areas people are very closely bonded to each other. They sand each other in every situation those are facing problems. In urban areas even we don't know the person with whom we are sharing our flat every person too busy with their individual works to talk. It presents a lot of happiness and lot of opportunities like social gathering together during the festival times, children's from various family are playing together and go for morning and evening walk. In gated communities we don't buy only property but we buy a new life style.

Main cause of gated community

1. Aspiration of middle class.
2. Security from crime and harassment.
3. Exclusive access to all amenities

Types of gated community

1. Lifestyle communities.
2. Prestige communities.
3. Security zone.

Advantages of gated community

1. Higher security control.
2. Slower vehicle speeds.
3. Greater safety for pedestrians.
4. Greater sense of community.

Disadvantages of gated community

1. Entry with only permission.
2. Community fees may be required.
3. Traffic build up at busy time.
4. Broken Gates causes problems.

Methodology

1. Selection of site.
2. Plotting the layout of shape of site by using total station.
3. Planning the community with required amenities
4. Planning of East and west facing individual houses by using Revit software.

Modeling of gated community

1. Selection of site: We selected around 13 acres of land for modeling of individual house in 165 square yards and we designing nearly 130 houses.
2. Plot area for East facing 217 square yards, for West facing 240 square yards.
3. For is layout we are providing 60% of land for buildup area and 40% for landscape open to sky.

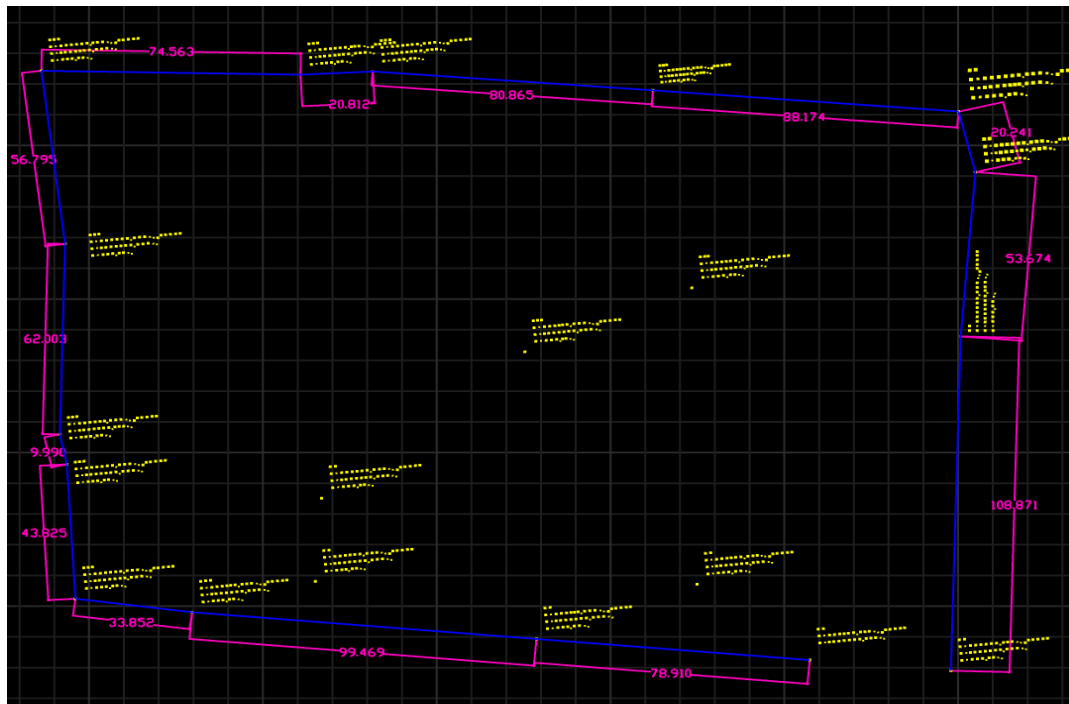


Fig.1 Plotting layout of our site

CO-ORDINATES OF POINTS							
Point:	Latitude:	Longitude:	Altitude: (m.)	E: (m.)	N: (m.)	Z: (m.)	Height (MSL): (m.)
P1	17.47107282	78.72356662	400	258250.069	1933111.049	400	472
P2	17.47089138	78.72359415	393	258252.754	1933090.927	393	465.01
P3	17.47041385	78.72350691	397.43	258242.854	1933038.174	397.43	469.44
P4	17.46943766	78.72338314	396	258228.416	1932930.265	396	468
P5	17.46950375	78.72300586	395.51	258188.419	1932938.06	395.51	467.54
P6	17.46975357	78.72272389	396.58	258158.791	1932966.073	396.58	468.54
P7	17.46963299	78.7227549	398.98	258110.993	1932953.293	398.98	470.97
P8	17.46985584	78.721696	399.91	258049.72	1932978.699	399.91	471.91
P9	17.47009823	78.72173731	400.01	258054.43	1933005.48	400.01	472.01
P10	17.47047674	78.7223276	397.11	258117.644	1933046.633	397.11	469.11
P11	17.47062259	78.72279651	396.4	258167.655	1933062.183	396.4	468.41
P12	17.47121027	78.72274921	400.97	258163.406	1933127.301	400.97	472.94
P13	17.47133464	78.72199924	398.33	258083.892	1933142.021	398.33	470.31
P14	17.4713431	78.72180356	402.96	258063.114	1933143.206	402.96	407
P15	17.47141851	78.7211062	400.33	257989.125	1933152.439	400.33	407
P16	17.47090567	78.72111982	397.95	257989.893	1933095.649	397.95	407
P17	17.47034962	78.72105021	400.02	257981.762	1933034.181	400.02	407
P18	17.47026006	78.72106051	398.98	257982.738	1933024.253	398.98	407
P19	17.46986451	78.72104435	401	257980.497	1932980.485	401	407
P20	17.46979623	78.72135491	394.98	258013.402	1932972.533	394.98	407

Fig.2 Co-ordinate points of collected area

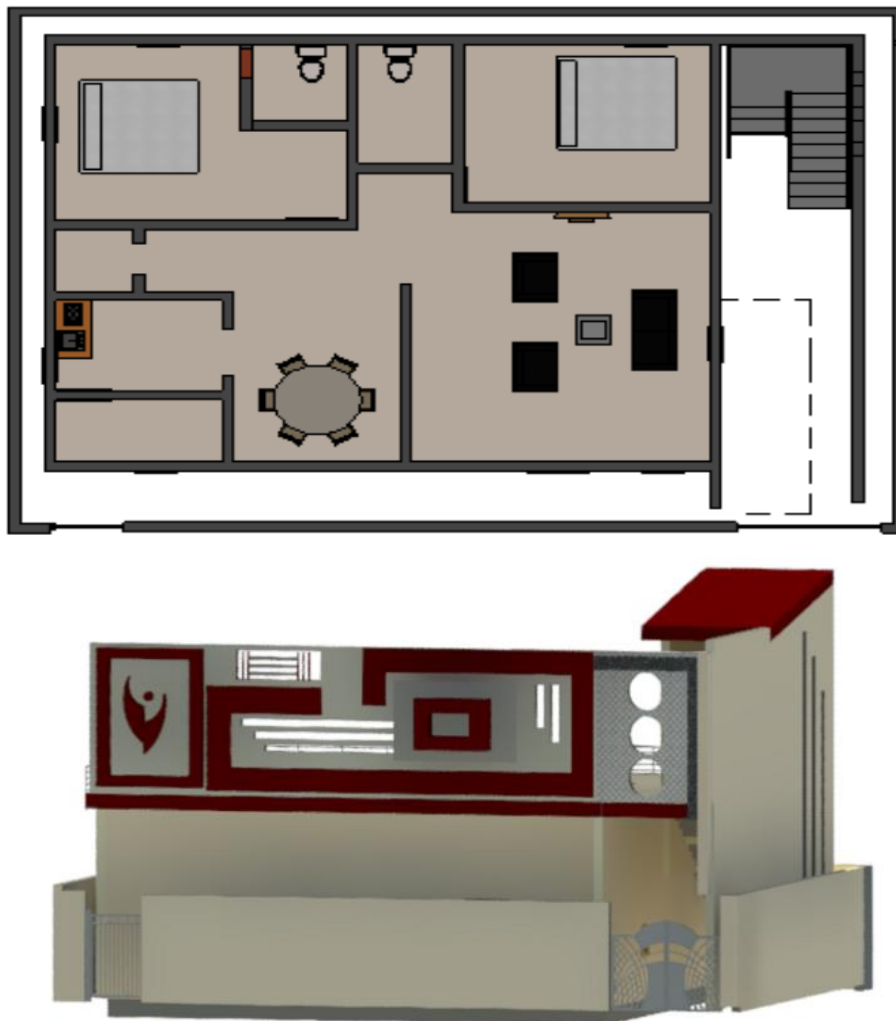
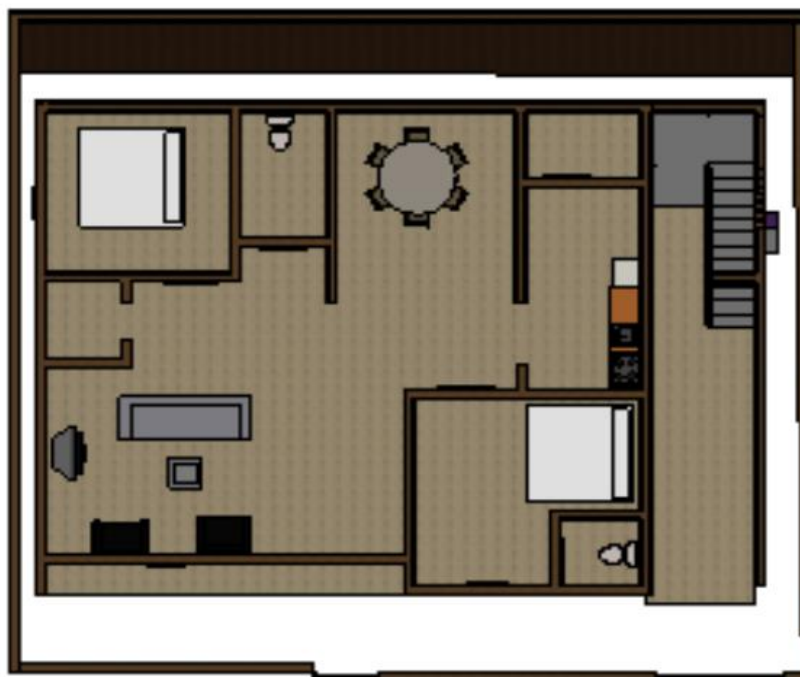


Fig.3 Plan and elevation East facing house



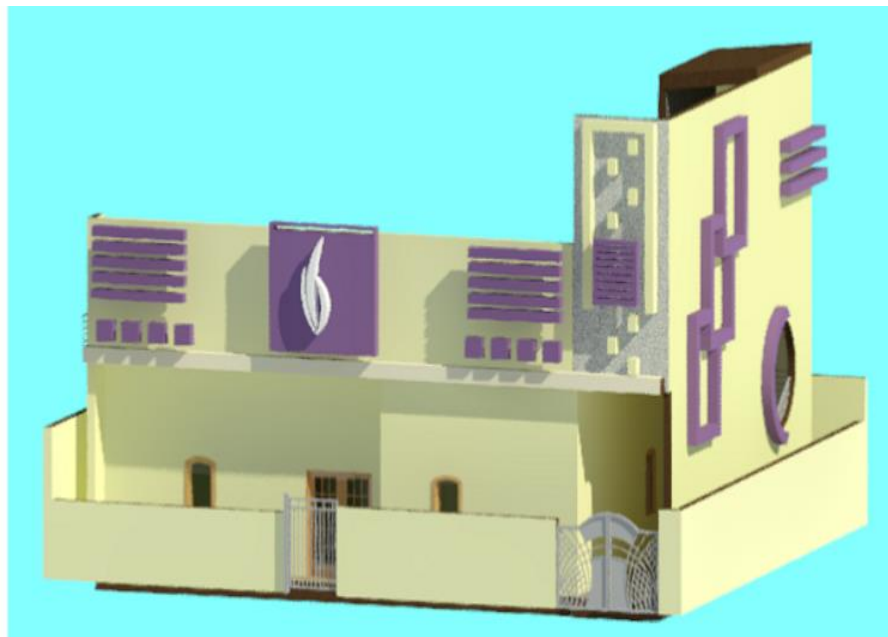


Fig.4 Plan and elevation West facing house

Facing of house	Type of room	Position of room as per vastu	Minimum area to be provided	Avg. Area provided	
East	kitchen	South-east corner	54sq.ft	79'5"sq ft	
	bedroom	South-west is best	102sq.ft	138' sq ft	
	Pooja	North-east	20sq ft	25 sq ft	
	toilet		Towards east or north	20sft only bath	
				30sq.ft bath + wc	30 sqft
	Living room	South or west	104 sq ft	298 sqft	
staircase	Except in north-east	1m wide (residential dwellings)	1m		
west	bedroom	North-east	102sq.ft	298sq ft	

Fig.5 Planning details and considerations of East and West facing houses



Fig.6 Modeling of Gated community

Design and sizes of all amenities

Design of overhead water tank:

- No of houses: 130
- No of people: 4 per house
- Water required for each person: 135 liters per head per day

- Water required per house: 540 liters per house per day
- Total water requirement for community: 70200 liters
- maintenance of landscape gardening: 30% of total requirement= 21060 liters
- Total water required for a community = 70200+21060=91260 liters
- Assuming height of water tank as 4m
- Therefore, by equating area to total water requirement
- we get diameter of tank as 5.5m

Design of hospital

- Considered hospital with 20 beds
- Considered bed size as 84" X 36
- Distance between beds = 2.5m
- Area occupied by beds = 420 sq. fts
- Area occupied by spacing between beds = 8.2' (2.5m) X 7' = 114.8 sqfts
- Total area of beds+ spacing between beds = 534.8 sq. fts
- Built-up area will be considered as 30 - 40 % of 534.8 sq. fts= 282.8 sq. fts
- Total built up area = 817.6 sq. fts
- Shopping mall area = 900 sq. yards
- General stores area =480 sq. yards
- Park area =1095 sq. yards
- Community hall area =620 sq. yards
- Temple area=45 sq. yards

II. CONCLUSIONS

- Total area of gated community = 13 acres
- Open space = 5.2 acres
- Built up area =7.8 acres
- Plot area of each house:
East facing house =217sq.yards
West facing house = 240sq.yards

Overhead water tank:

- Diameter of tank= 5.5m
- Height of water tank =4m
- Hospital area =817.6 sq. Yards
- Shopping mall area = 900sq.yards
- Park area= 1095sq.yards
- Community hall area=620 sq. Yards
- Temple area=45 sq. Yards

The gated community is best suited for MIG'S if they want more facilities the space is available. All the facilities are provided will be useful for all dwellers and they can lay another floor if required.

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