

1. HYDRANT SYSTEM:

ON/OFF switches located near the hose reel hose or hydrant outlet, at each floor the main FirePump at the underground water tank with a capacity to discharge 900 liters per minute at 3 bar. pressure as measured at the terrace level should be installed.

The Rise for the buildings exceeding 15 meters and above 15 meters height should not be less than 100 mm. internal diameter. The riser should be connected to the bottom of the terrace tank with a stop valve and a NRV to act as a Down-comer.

One riser is required for every 10000 meters floor area and if the building is divided into two or more parts then each part should have a separate riser with all the fittings at floor level. Each floor should have one hydrant outlet with a coupling for attaching 60 mm hose 6.25 mm bore Hose-reel hose with 8 mm. SS. Shut-off nozzle at each floor landing. The length of the hose reel hose should be enough to reach the farthest corner of the floor. Hose-box with 15 meters long 35mm. dia. hose and 2.5 m. bore nozzle at alternate floors. The hose-reel hose should be coupled to the Riser.

Fire-service inlet should be installed at a point near the entry to the premises where a Fire service vehicle can approach easily.

A permanent hydrant point comprising of 63 mm dia. size 200 of hydrant riser should be installed at the terrace level.

A hand pump Raising bypass connection should be done at the terrace level. The overhead tank should be of a capacity of not less than 20,000 liters. The underground tank should be of not less than 1,00,000 liters.

2. FIRE LIFT:

The Fire Lift and all the lifts should have a provision to ground automatically in case of electricity failure. Each building should have at least one lift as a Fire Lift and if the building is divided into two or more parts then each should have a Fire Lift. Lift-well should have blowers to pressurize the lift-well so connected that it will automatically operate when alarm call point is operate, so that it prevents the lift well getting smoke blown.

3. FIRE ALARM:

Fire alarm call point to be installed at each floor with sounders capable of being heard all throughout the building.

4. FIRE EXTINGUISHERS

One Carbon Dioxide (CO2) type extinguisher of 4.5 kg. with ISI mark, and one extinguisher of 5kg. Dry Chemical Powder (DCP) type extinguisher with ISI mark to be installed on each floor in case of commercial building.

One Carbon Dioxide (CO2) type extinguisher of 4.5 kg. with ISI mark, OR Two Carbon Dioxide (CO2) type extinguisher of 2 kg. with ISI mark capacity on alternate floors in case of residential building.

If the building is divided into two or more parts then each part should have these extinguishers installed.

5. STAIRCASE:

The staircase has to be open from at least one or two sides but if the staircase is in the centre core of the building it has to be pressurized to prevent it from getting smoke logged.

The Riser/Down-comer should be located in the staircase or close to it to make it easily approachable in case of Fire from the floor below or above.

6. BASEMENT:

The basement of 200 sq. meters or more should be protected with Automatic Sprinkler system with at least one sprinkler head for actual car parking space.

Additionally be protected by a Hydrant outlet and two 25 mm. bore Hose-reel hoses with 8 mm. bore nozzles at each basement level.

7. LIGHTNING ARRESTER:

A lightning arrester should also be installed and be properly earthed to prevent damage to the building when the lightning strikes.

8. PHOTO LUMINESCENT (AUTO GLOW) SIGNAGES:

If the building falls in a confined area or if it has an enclosed staircase or is not well lit up on the inside, then adequate photo luminescent (auto glow) signage should be displayed at each floor / landing / pathway / dead-end along all exit routes leading to the ground level. The signage should indicate fire fighting, fire safety equipment present on the respective floor/landing/pathway/dead-end and along all exit routes leading to the ground level.

9. ELECTRIC POWER SUPPLY TO THE ENTIRE FIRE-SAFETY SYSTEM

Electricity supply to the fire pump, fire alarm system, staircase pressurization system and fire lift should be made available from the main Electrical supply. (i.e. from Electrical power supply of the company) This is to ensure availability of power supply to the fire protection & Safety system even after the main electrical supply to the building is switched off at the time of fire.

10. INDIVIDUAL FIRE SEFTY SYSTEM

FIRE SEFTY SYSTEM SHOULD BE PROVIDED IN INDIVIDUAL SHOW ROOM BY OWNER

IMPORTANT INSTRUCTIONS:

After inspection of a low-rise building by the fire service authority if the fire officer concerned feels that need for additional fire prevention/protection measures / ventilation system or equipment (i.e. - Passive system / Suppression system / Fire door / Window / Detection system / Active system / Sprinkler / Drencher etc.) as per Fire Load / Fire Risk / Public gathering.

Potential / Occupancy / Confined area, those additional measures / equipment have to be implemented / installed.

NOTES:

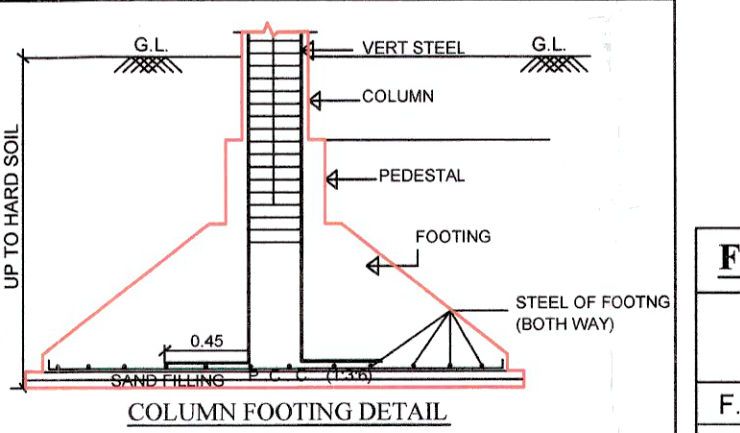
- IT IS CERTIFIED THAT PLOT UNDER REFERENCE IS SURVEYED BY ME AND THE DIMENTIONS OF ALL SIDES OF PLOT AND PLOT AREA AS SHOWN IN PLAN AREA MEASURED BY ENGINEER ON RECORD AND IN ACCORDANCE WITH OWNERS/REVENUE RECORD.
- ENGINEER IS FULLY RESPONSIBLE FOR LEAVING OPEN SPACE AND MARGIN.
- THE DEPTH AND POSITION OF EXISTING MUNICIPAL MAIN-HOLE IS VERIFIED ME ON SITE AND PERMITS CAN GET DRAINAGE CONNECTION.
- IT IS CERTIFY THAT ACCORDING TO C.G.D.C.R.-2017 ALL REQUIREMENT OF THE BUILDING ARE CHECKED AND NECESSARY ACTION ARE TAKEN.
- IT IS CERTIFY THAT ACCORDING TO THE CLAUSE NO. 4.4.3 OF THE C.G.D.C.R.-2017, THE STRUCTURE OF THE BUILDING IS DESIGN AS PER THE NORMS OF THE INDIAN STANDARDS.
- DESIGN OF STAIRCASE AND RAILING IS PROVIDED AS PER PROVISION OF THE CLAUSE NO. 13.1.11 AND 13.1.13 OF C.G.D.C.R.-2017.
- PEDESTRIANS RAMP IS PROVIDED AS PER THE PROVISION OF THE CLAUSE NO. 13.1.14 OF C.G.D.C.R.-2017.
- LIFT IS PROVIDED AS PER THE PROVISION OF THE CLAUSE NO. 13.12 AND OF C.G.D.C.R.-2017.
- WATER TANK IS PROVIDED AS PER THE PROVISION OF THE CLAUSE NO. 13.6 OF C.G.D.C.R.-2017.
- LETTER BOX FOR SHALL BE PROVIDED AT GROUND LEVEL FOR EACH UNIT.
- WATER TANK FOR FIRE SAFETY REQUIREMENT PROVIDED AS PER FIRE PREVENTION AND FIRE SAFETY ACT-2016.
- ELECTRICAL INFRASTRUCTURE SHALL BE PROVIDED AS PER CLAUSE NO.13.11 OF C.G.D.C.R.-2017.
- DRINKING WATER FACILITY FOR DISABLED PERSONS IS PROVIDED AS PER THE CLAUSE NO. 13.6.2 OF C.G.D.C.R.-2017.
- DRAINAGE FACILITY IS PROVIDED AS PER THE CLAUSE NO. 13.10 OF C.G.D.C.R.-2017.
- SIGNAGES OF THE PARKING PLACE IS TO BE PROVIDED AS PER THE PROVISION THE CLAUSE NO. 13.7 OF THE C.G.D.C.R.-2017.
- ENTRANCE OF THE BUILDING IS PROVIDED AS PER CLAUSE NO.13.16 OF C.G.D.C.R.-2017.
- THE PAYING OF BUILDING UNIFORMAL PLAN IS AS PER THE PROVISION OF THE CLAUSE NO. 13.1.3 OF C.G.D.C.R.-2017.
- THE STRUCTURE DESIGNING OF BUILDING IS AS PER NORMS OF SPECIFIED IN THE INDIAN STANDERDO AND NECESSARY ACTION SHALL BE TAKEN FOR THE STRUCTURAL SAFETY DURING CONSTRUCTION.
- RAIN WATER STORAGE TANK AND RAIN WATER HARVESTING SYSTEM SHALL BE PROVIDED AS PER THE CLAUSE NO. 17.2 OF C.G.D.C.R.-2017.
- COMMUNITY BIN PROVIDED AS PER THE PROVISION OF THE CLAUSE NO.17.2.4 & 17.2.5 OF C.G.D.C.R.-2017.
- GREY WATER RECYCLING SYSTEM & DUAL PLUMBING SYSTEM IS PROVIDED AS PER THE CLAUSE NO. 17.3 OF C.G.D.C.R.-2017.
- TREE PLANTATION IS PROVIDED AS PER CLAUSE NO.17.4 OF C.G.D.C.R.-2017.
- SOLAR ASSISTED WATER HEATING SYSTEM SHALL BE PROVIDED AS PER THE CLAUSE NO.17.5 OF C.G.D.C.R.-2017.
- POLLUTION CONTROL SYSTEM IS PROVIDED AS PER THE CHAPTER NO. -18 OF C.G.D.C.R.-2017.
- FIRE SAFETY SYSTEM IS PROVIDED AS PER CHAPTER NO. 14 OF C.G.D.C.R.-2017.
- FIRE SAFETY PROVISION SHALL BE MADE AS PER FIRE PREVENTION AND LIFE SAFETY MEASURES REGULATION-2016 AND FIRE PREVENTION AND LIFE SAFETY MEASURES REGULATION - 2013.
- MAINTENANCE AND UPGRADEATION OF BUILDING IS AS PER CHAPTER NO. 19 OF C.G.D.C.R.-2017.
- MARGINAL SPACE & BASEMENT SLAB SHALL HAVE LOAD BEARING CAPACITY OF 4060 TONNES PER SQUARE METER SHALL BE PROVIDED AS PER CHAPTER NO. 14 OF C.G.D.C.R.-2017.
- AND FIRE PREVENTION AND FIRE SAFETY ACT-2016.
- ROOF TOP SOLAR ENERGY INSTALLATION & GENERATION SHALL BE PROVIDED AS PER CLAUSE NO.17.5.1 OF C.G.D.C.R.-2017.
- THE GLAZED SURFACE AREA OF THE EXTERNAL FACADE SHALL BE NON REFLECTIVE AND PROVIDED UP TO MAX. OF 50% OF THE TOTAL SURFACE AREA OF EACH FACADE WITH THE PROVISION OF SAFETY RAILLING UP TO SILL LEVEL AS PER CLAUSE NO.13.13 OF C.G.D.C.R.-2017.

CUTTING	0.75	0.82	1.02	1.22	1.37	1.43	1.67
INVERT LEVEL	29.25	29.08	28.79	28.63	28.47	28.33	28.17
GROUND LVL.	30.00	29.83	29.54	29.38	29.22	29.07	28.91
DISTANCE	0.00	0.00	0.00	0.00	0.00	0.00	0.00

LONGITUDINAL DRAINAGE SECTION
SCALE:- 1 CM. = 1 M. (VERTICAL)
1 CM. = 5 MT. (HORIZONTAL)

FIRE HYDRANT LEGEND

SR	SYMBOL	DISCRIPTION
1		FIRE HYDRANT PIPE MAIN
2		SLUICE VALVE
3		NON RETURN VALVE
4		COURT YARD HYDRANT VALVE
5		LANDING HYDRANT VALVE
6		HOSE BOX
7		FIRST AID HOSE REEL
8		AIR RELEASE VALVE
9		TWO WAY SIAMESE CONNECTION
10		RISE OR DROP



PROP. B. AREA CALC. OF CLUB HOUSE :-
7.53 X 6.56 = 49.40 SQ. MT.

PROP. B. AREA CALC. OF GEB SUB STN DG SET :-
2.11 X 6.40 = 13.50 SQ. MT.
2.11 X 2.00 = 04.22 SQ. MT.
= 17.72 SQ. MT.

MOSQUITO - PROOF WATER TANK :-
THE WATER STORAGE TANK SHALL BE MAINTAINED THAT PERFECTLY MOSQUITO - PROOF CONSTRUCTION BY PROVIDING A PROPERLY FITTING HINGED COVER AND EVERY TANK MORE THAN 1.50 MT. IN HEIGHT SHALL BE PROVIDING WITH A PERMANENTLY FIXED IRON LADDER TO ENABLE INSPECTION BY ANTI - MALARIA STAFF.

BUILT UP AREA TABLE

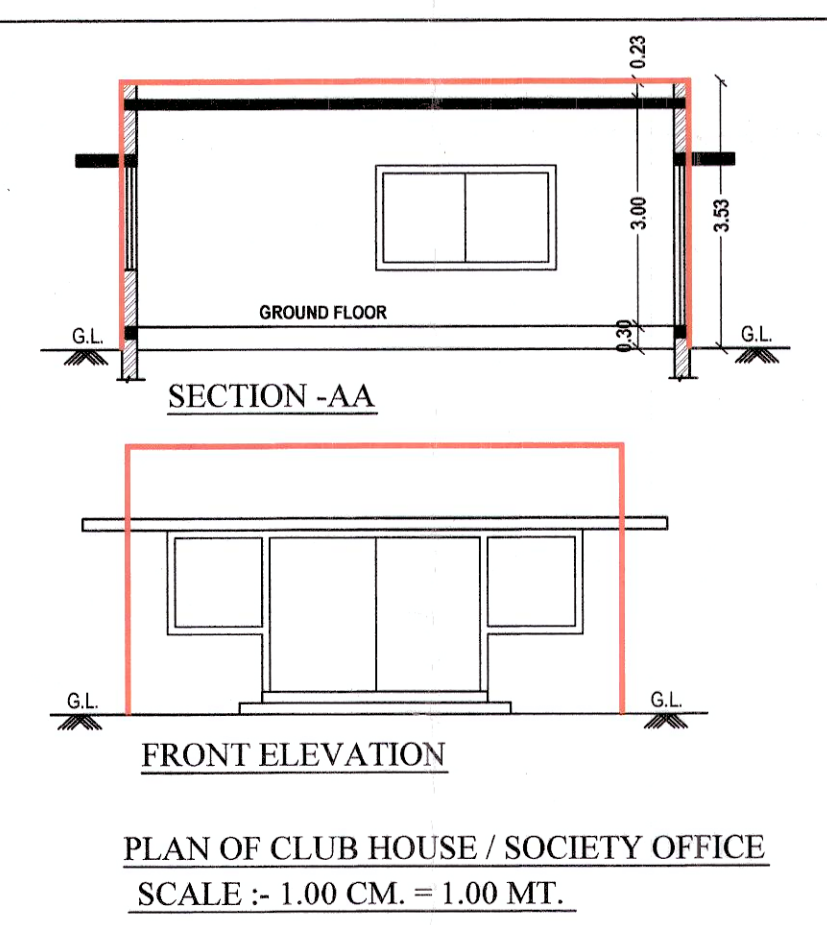
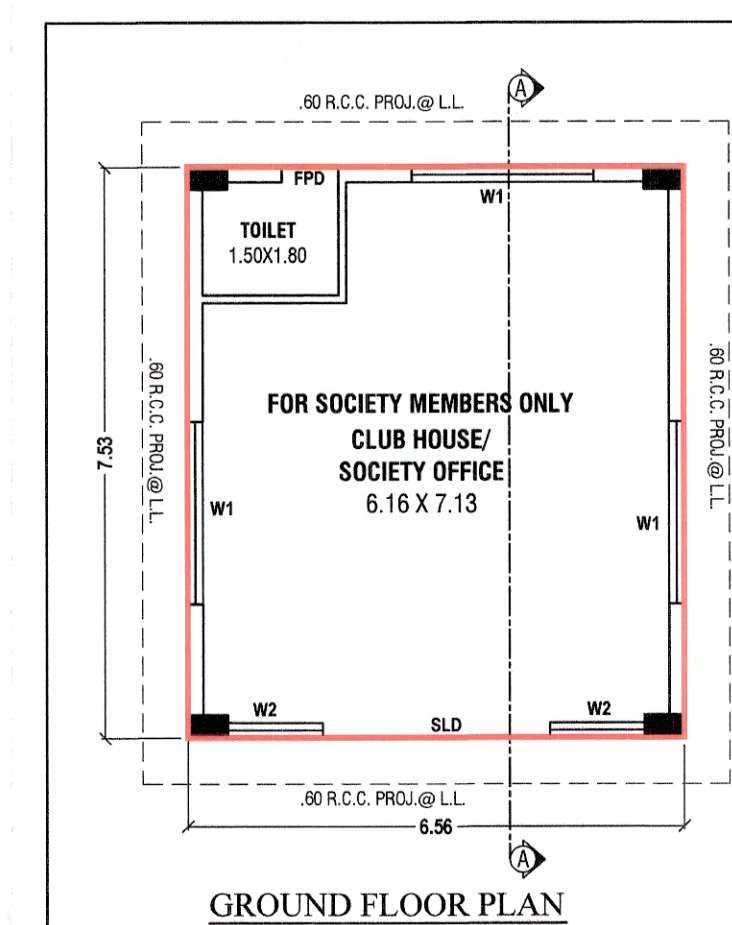
BLOCK (SQ. MTS.)	A+B	C+D+E	TOTAL
B. UP AREA ON CLUB HOUSE & GEB SUB ST & DG SET	49.40	17.72	67.12
BUILT-UP AREA ON BASEMENT	3610.26	---	3610.26
BUILT-UP AREA ON GROUND (H.P.)	446.83	1018.24	1465.07
BUILT-UP AREA ON GROUND (S.P.)	411.50	---	411.50
B. BUILT-UP AREA ON FIRST FLOOR	841.32	1018.24	1859.56
BUILT-UP AREA ON SECOND FLOOR	801.19	1018.24	1819.43
BUILT-UP AREA ON THIRD FLOOR	801.19	1018.24	1819.43
BUILT-UP AREA ON FOURTH FLOOR	801.19	1018.24	1819.43
BUILT-UP AREA ON FIFTH FLOOR	824.99	1063.45	1888.44
BUILT-UP AREA ON SIXTH FLOOR	801.19	1018.24	1819.43
BUILT-UP AREA ON SEVENTH FLOOR	801.19	1018.24	1819.43
BUILT-UP AREA ON EIGHTH FLOOR	824.99	1063.45	1888.44
BUILT-UP AREA ON NINTH FLOOR	646.10	1018.10	1664.20
BUILT-UP AREA ON TENTH FLOOR	---	954.41	954.41
BUILT-UP AREA ON STAIR CABIN	109.20	186.39	295.59
BUILT-UP AREA ON O.H.W.T	87.70	128.48	216.18
BUILT-UP AREA TOTAL	11825.96	11541.96	23367.92

F.S.I. AREA TABLE

BLOCK (SQ. MTS.)	A+B	C+D+E	TOTAL
COMM.	RESI.	COMM.	RESI.
F.S.I. AREA ON BASEMENT	---	---	---
F.S.I. AREA ON GROUND FL. (S.P.)	387.32	---	387.32
F.S.I. AREA ON FIRST FLOOR	371.57	713.33	1072.79
F.S.I. AREA ON SECOND FLOOR	---	634.98	1348.31
F.S.I. AREA ON THIRD FLOOR	---	634.98	1348.31
F.S.I. AREA ON FOURTH FLOOR	---	634.98	1348.31
F.S.I. AREA ON FIFTH FLOOR	---	634.23	1347.56
F.S.I. AREA ON SIXTH FLOOR	---	634.98	1348.31
F.S.I. AREA ON SEVENTH FLOOR	---	634.98	1348.31
F.S.I. AREA ON EIGHTH FLOOR	---	634.23	1347.56
F.S.I. AREA ON NINTH FLOOR	---	479.89	1193.08
F.S.I. AREA ON TENTH FLOOR	---	---	655.10
TOTAL F.S.I. AREA	758.89	5237.71	7074.93
	5996.80	7074.93	13071.53

TENAMENT & FLOOR AREA TABLE

FLOOR	USE		TENAMENT		TOTAL		FLOOR AREA (SQ. MTS)			
	A+B	C+D+E	A+B	C+D+E	COMM.	RESI.	A+B	C+D+E	TOTAL	
			COMM.	RESI.			COMM.	RESI.		
BASEMENT	PARKING	---	---	---	---	---	---	---	---	
H.P.	PARKING	PARKING	---	---	---	---	---	---	---	
GROUND	COMM.	RESI.	11	---	00	11	---	387.32	---	
FIRST	COMM.+RESI.	RESI.	10	04	11	10	15	371.57	314.46	
SECOND	RESI.	RESI.	---	08	11	---	19	634.98	713.33	
THIRD	RESI.	RESI.	---	08	11	---	19	634.98	713.33	
FOURTH	RESI.	RESI.	---	08	11	---	19	634.98	713.33	
FIFTH	RESI.	RESI.	---	08	11	---	19	634.23	713.33	
SIXTH	RESI.	RESI.	---	08	11	---	19	634.98	713.33	
SEVENTH	RESI.	RESI.	---	08	11	---	19	634.98	713.33	
EIGHTH	RESI.	RESI.	---	08	11	---	19	634.23	713.33	
NINTH	RESI.	RESI.	---	06	11	---	17	479.89	713.19	
TENTH	---	RESI.	---	---	10	---	10	---	655.10	
TOTAL	COMM.+RESI.	RESI.	21	66	109	21	175	758.89 + 5237.71 5996.60	7074.93	
									758.89 + 12312.64 13071.53	



PLAN OF CLUB HOUSE / SOCIETY OFFICE
SCALE :- 1.00 CM. = 1.00 MT.

COMMUNITY BIN (COMMERCIAL)
(COMMERCIAL) - DUST BIN REQUIRED 20 LTRS/100SQ.MTS.
TOTAL FLOOR AREA = 758.89 SQ.MT.
100 SQ. MTS. FL. AREA / 20 LTRS.
758.89 SQ.MTS / 151.78 LTRS = 152 SAY
152 LTRS. / 80 LTRS. = 1.90 SAY 2 COMM. BIN
TOTAL PROVI. 80.00 LTRS. (80 X 2)

COMMON PLOT AREA CALC :-
(1) 36.16 X 8.19 = 296.15 SMT.
(2) 37.36 X 9.05 X 1/2 = 169.05 SMT.
(3) 06.22 X 5.72 X 1/2 = 26.37 SMT.
LESS AREA ASPLINE = 01.56 SMT.
NET COMMON PLOT AREA = 490.01 SQ. MT.

PERM BUILT UP AREA @ 15% OF C.P. AREA
THEN (490.01 X 0.15) = 73.50 SQ.MT.
CLUB HOUSE+DG SET = 67.12 SQ.MT.
+SUB STN BALANCE = 06.38 SQ.MT.
(CLAUSE 6.17.5.5 (a&c) B.U.P. AREA NOT BE CONSIDERED TOWARDS COMPETATION OF FSI OF THE BUILDING UNIT)

REQ. PERCOLATING WELL

PLOT AREA = 1500 TO 4000 SQ. MTS.
1 PERCOLATING WELL
PLOT AREA = 4856.00 SQ. MTS.
4856.00 / 4000.00 = 1.21 SQ. MTS.
PROVI. 2 PERCO. WELL

TREE PLANTATION

200 SQ. MTS. / 5 TREE
(4856.00X5)/200 = 121.40 TREES
PROVI. 122 TREES

COMMUNITY BIN (RESI.)

RESI. UNITS - 175 UNITS
1 UNITS / 10 LTRS.
175 UNITS / 1750 LTRS.
1750 / 80 = 21.87 SAY 22 NOS. CONT.
PROVI. 1760 LTRS. (80 X 22) COMM. BIN
TOTAL PROVI. 1760 LTRS. (80 X 22)

SANITATION FACILITY

FLOOR AREA (TOTAL) = 758.89 SQ. MTS.
4 SQ. MTS. = 1 PERSON
758.89 SQ. MTS. = 189.72 PERSON SAY 190 PERSON
MALE - 95 & FEMALE - 95
SANITARY REQ.
URINAL REQ.
= 1 URINAL FOR EVERY 50 PERSONS
= 190/50 = 3.80 REQ. SAY 4 FOR MALE USERS
W.C. REQ.
= 1 W.C. FOR EVERY 50 PERSONS EACH GENDER
= 190/50 = 3.80 REQ. SAY 4 FOR EACH GENDER

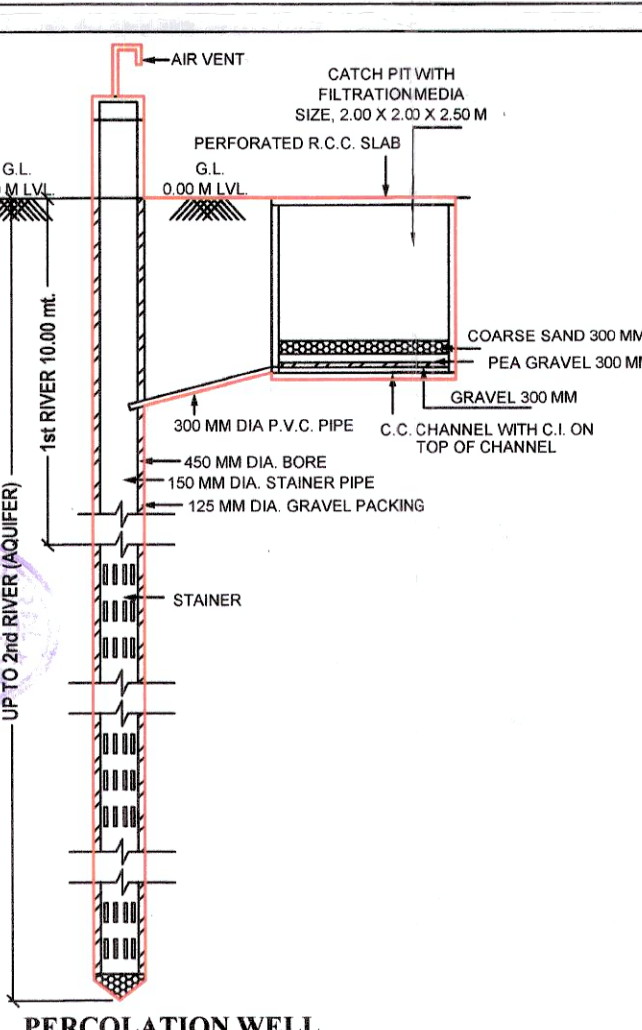
AREA TABLE

SR.	DESCRIPTION	SQ. MT.
1	PLOT AREA	4856.00
2	PERMISSIBLE F.S.I. (1.8)	8740.80
3	PERMISSIBLE CHARGABLE F.S.I.	4370.40
4	MAX. PERMISSIBLE F.S.I. (2+3)	13111.20
5	TOTAL UTILISED F.S.I.	13071.53
6	UTILISED CHARGABLE F.S.I. (5-2)	4330.73
7	MAX. PERMISSIBLE F.S.I. COMMERCIAL	1307.15

GRAND TOTAL DETAIL

BLOCK	CONSUME F.S.I.	
	COMM.	RESI.
A+B	758.89	5237.71
C+D+E	0	7074.93
TOTAL	758.89	12312.64

SR. NO.	DWELLING UNIT TYPE
A	COMMERCIAL UNIT.
B	UP TO 50 SQ.MT.
C	MORE THAN 50 AND UP TO 66 SQ.MT.
D	MORE THAN 66 UP TO 100 SQ.MT.
E	WITH AFF. F.S.I. (40%)
GRAND TOTAL	



PERCOLATION WELL
FOR BUILDING UNIT 1500.00 S.M. OR MORE AND UP TO 4000.00 S.M. & FOR PART OF IT.
NOTE - STRUCTURE DESIGN AS PER STRUCTURAL ENGINEER.
(THIS IS ONLY SKETCH PLAN)

LIFT CALCULATION

BLOCK	NO. OF UNIT ABOVE 3RD FL.	NO. OF LIFT PROVIDED (6 PERSON)	NO. OF LIFT PROVIDED (6 PERSON)
A	27	1	2
B	27	1	2
C	32	2	2
D	23	2	2
E	32	2	2

NOTE: FROM PROVI. LIFT IN EACH BLOCK ONE OF THEM SHALL BE DESIGNED AS FIRE LIFT

RESI. AFFORDABLE HOUSING PROJECT

LAY-OUT PLAN FOR BLOCK - A+B

PLAN SHOWING PROP. AFFORDABLE HOUSING FOR RESI+COMM. BLDG. ON F.P. NO. 210, T.P.S. NO. 69 (CHANDKHA-ZUNDAL - TRAGAD) SUR. NO. 276/1, 276/2 MOJE: TRAGAD, TA: GHATLODIA, DIST: A' BAD.

SCALE :- 1.00 CM. = 1.00 MT.

ZONE:- RESIDENCE(R1) USE:- RESI. (RESI. AFF.HOUSING)

AREA TABLE SQ.MTS.

PLOT AREA OF F.P. NO.:- 4856.00
COMMON PLOT REQD. @ 10% OF PLOT 485.60
COMMON PLOT PROVIDED 490.01

F.S.I. AREA TABLE SQ.MTS.

PLOT AREA OF F.P. NO.:- 4856.00
PERMI. F.S.I. AREA 1.18 (4856.00 X 1.18)..... 5740.80
PERMI. CHARGABLE F.S.I. AREA 0.90% (4856.00 X 0.90) 4370.40
TOTAL PERMI. F.S.I. AREA + CHARGABLE F.S.I. AREA 13111.20
TOTAL PROPOSED F.S.I. AREA 13071.53
TOTAL BALANCE F.S.I. AREA 39.67
TOTAL USED CHARG. F.S.I. AREA (13071.53 - 8740.80) 4330.73

KEY PLAN
SCALE :- 1.00 CM. = 25.0 MT.

COLOUR NOTE
C.S. BOUNDARY
PROP. WORK
PROP. DR-LINE
ROAD

TREE
PERCO. WELL
COMMUNITY BIN

Bhaumik N. Thakar
4, Hiltan Residency,
Opp. Shal Petrol Pump,
New Manekbaug Hall,
Ambawadi, Ahmedabad-380015.
Satellite, Ahmedabad-380 015.
Developer Lic. No. DE1216121228

Sandip K. Dave
48, Tapovan Society,
Near Manekbaug Hall,
Ambawadi, Ahmedabad-380006.
AMC - CW - 0723180221
SOW - 0015R160725100P

FOR. SHIVA DEVELOPERS
PARTNERS

Sandip K. Dave
48, Tapovan Society,
Near Manekbaug Hall,
Ambawadi, Ahmedabad-380006.
AMC - CW - 0723180221
SOW - 0015R160725100P

SANENAL V.

