

**DESIGN OF SEPTIC TANK WITH UP FLOW FILTERS (ENVIRONMENTAL)**

No. of dwellings -- 6 Nos.  
 No. of Users -- 5x6 = 30nos.  
 Rate of water supply is -- 150 LPH/Day  
 Then flow of sewage per day -- 30x150 = 4500 Lts./Day.  
 Detention period is -- 18 Hrs.  
 Tank capacity -- 4500x18 = 3375 Lts.  
 24

The tank is to be cleared every year. So the sludge storage capacity at the rate of 15Lts./person/year.  
 -- 30x15 = 450  
 -- 3375+450 = 3875

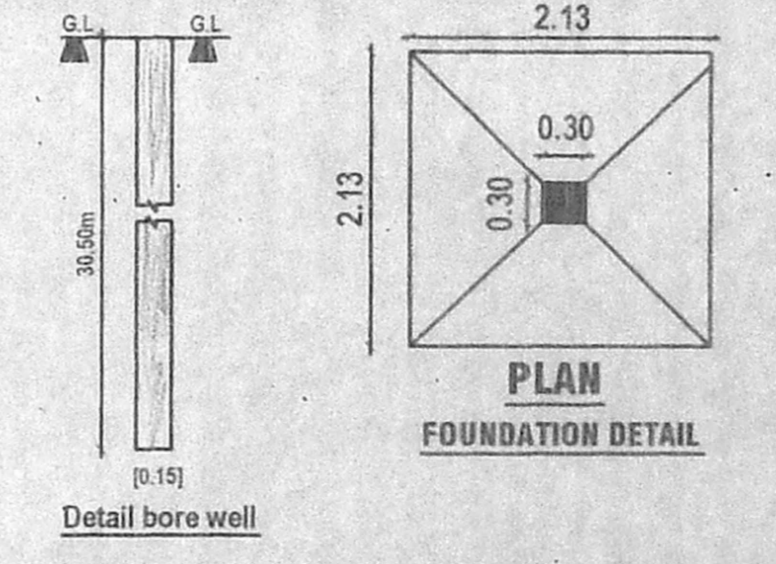
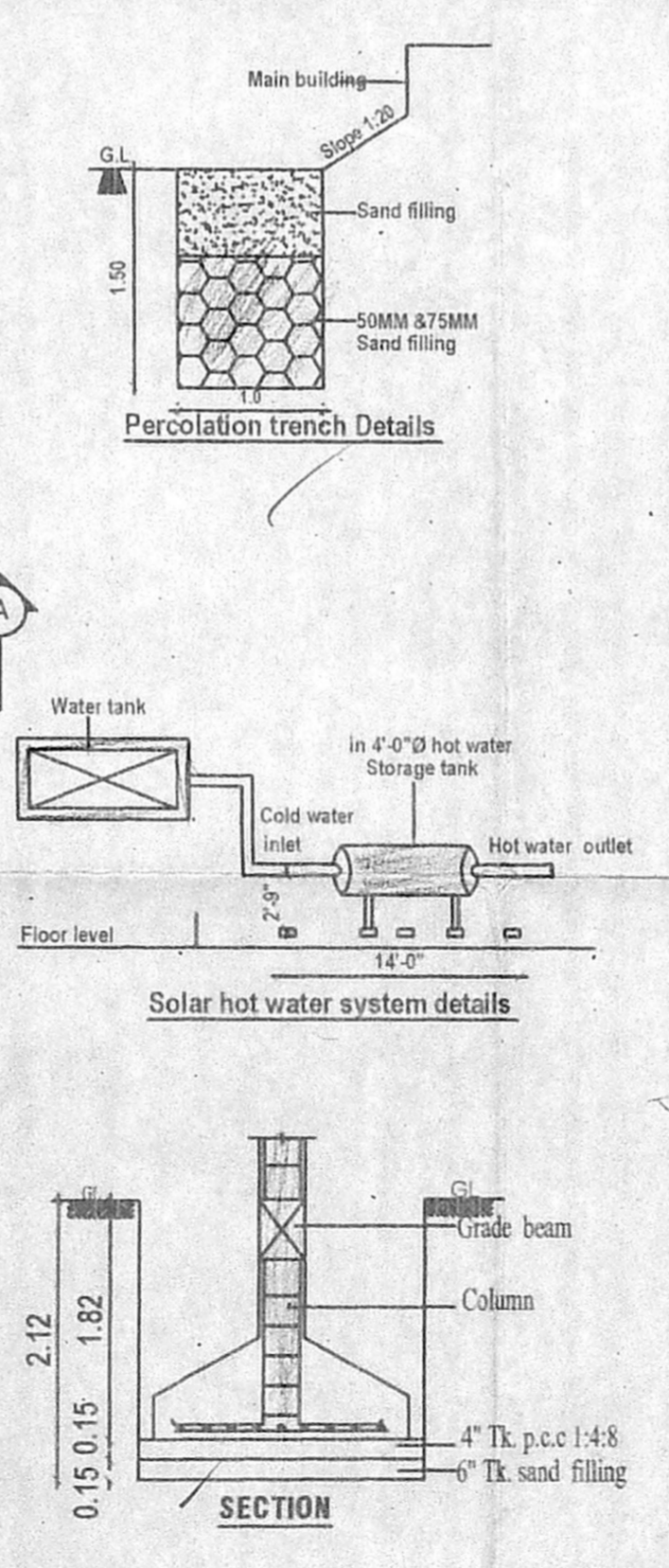
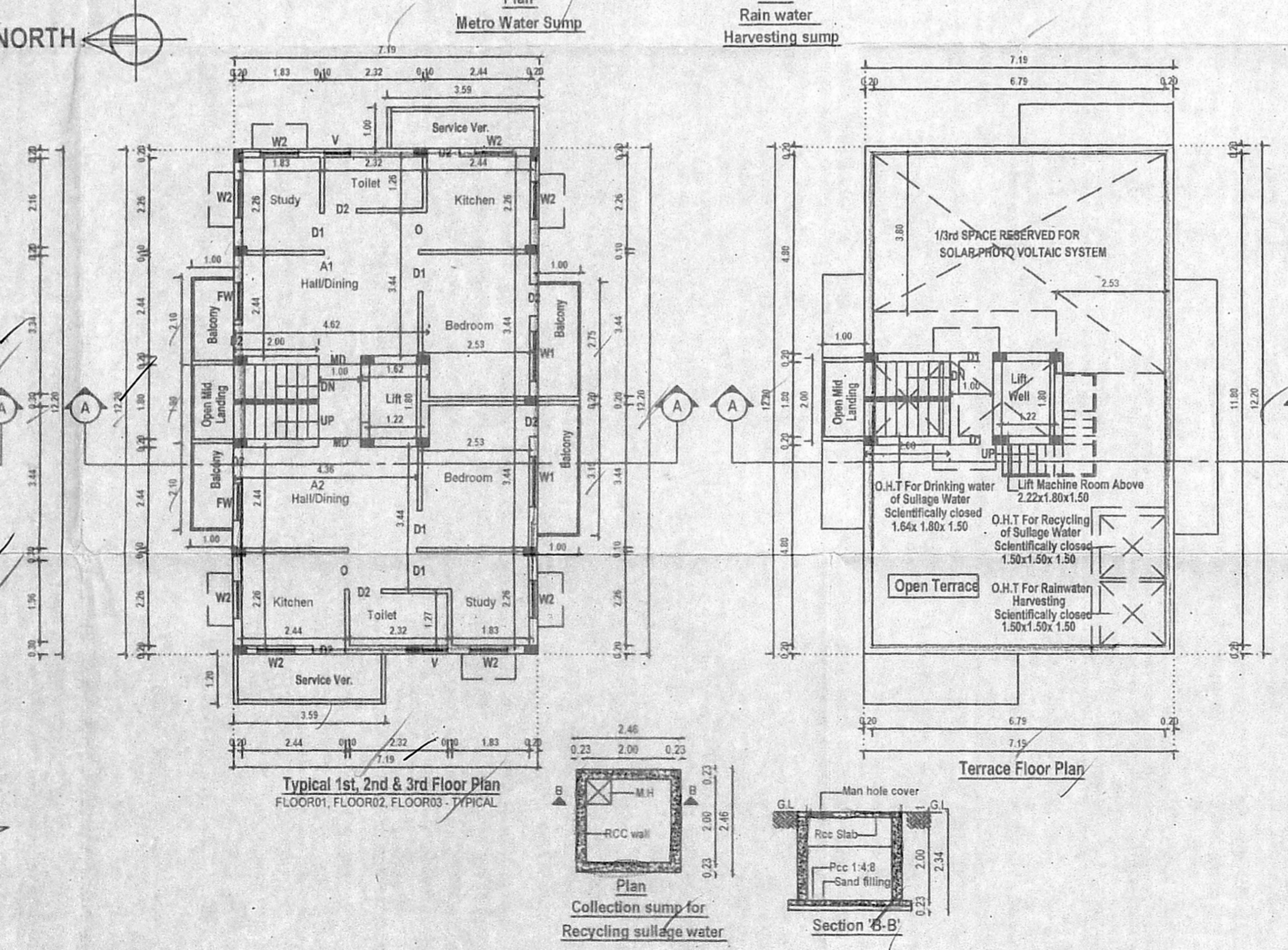
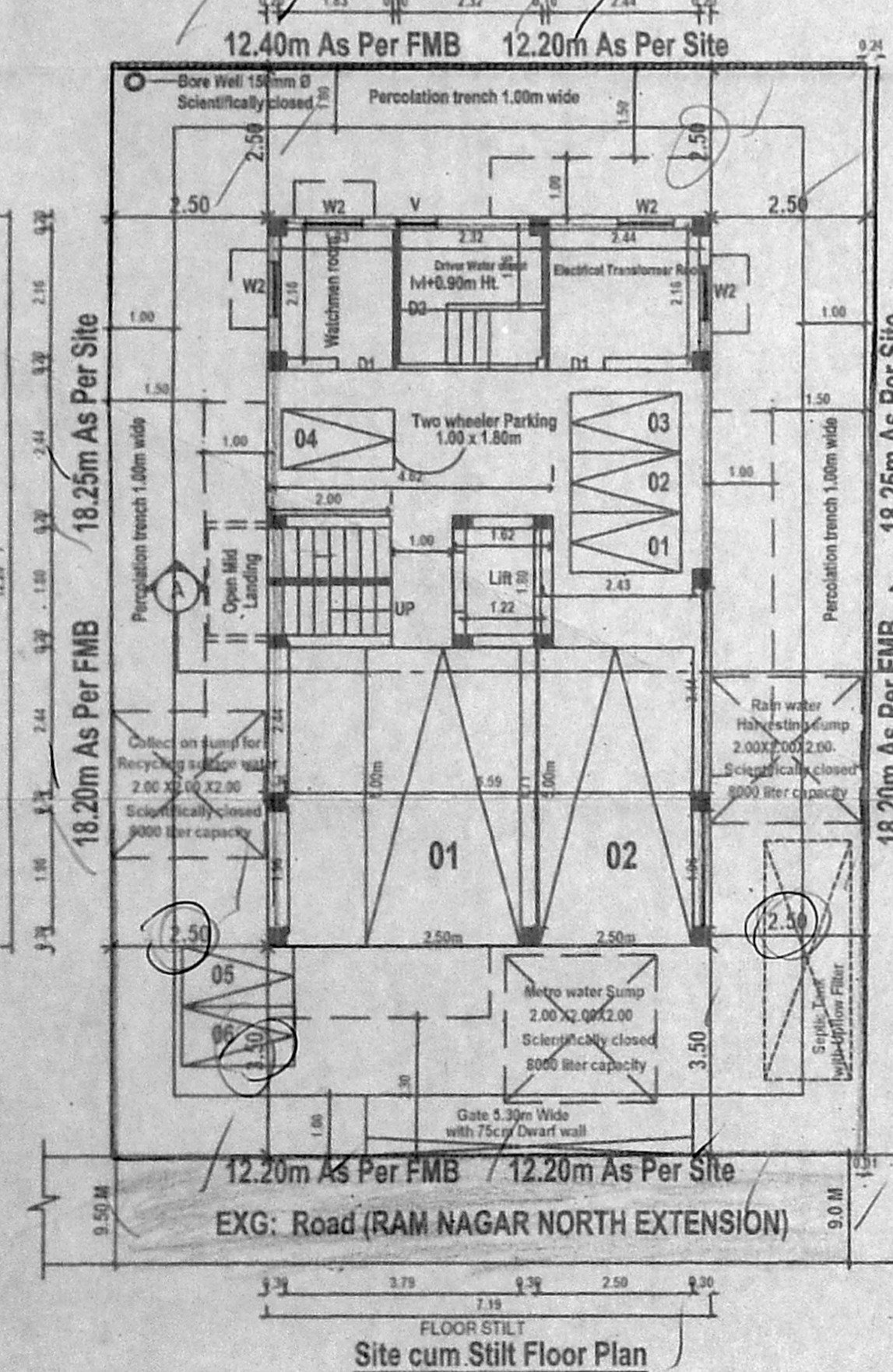
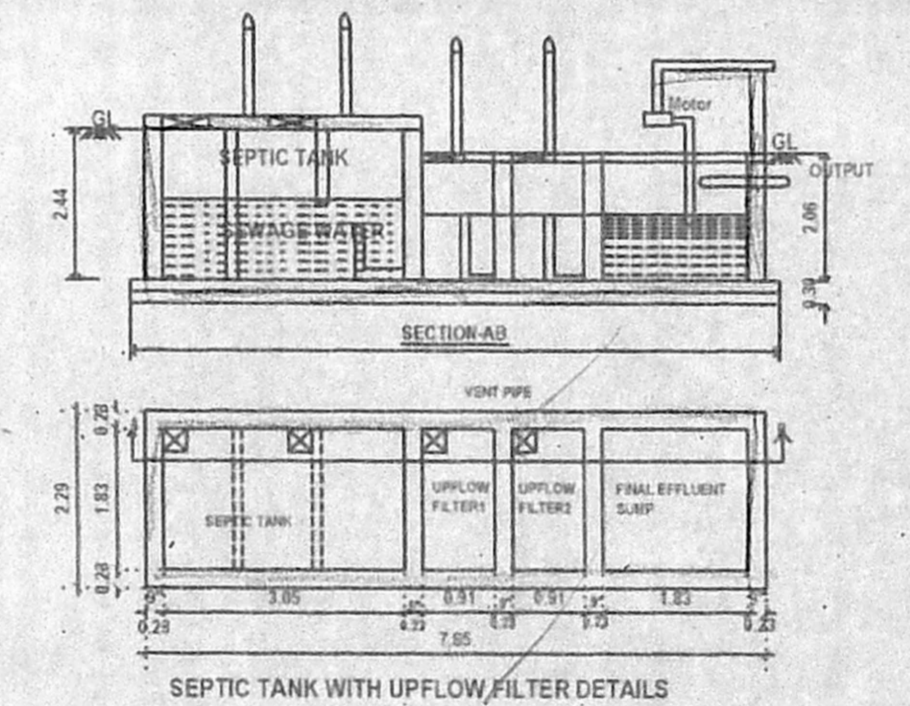
With provision for future expansion let the total capacity be 5,000 Lts. or 5.0 m3.  
 Septic tank having the capacity of -- 5.00 m3  
 Depth of liquid as -- 2.44  
 Plan of the Tank -- 5.00 = 2.04m2  
 2.44

Breadth of the Tank -- 1.83  
 Length of the Tank -- 3.05  
 Free board of the Tank -- 0.10  
 Total depth of the Tank -- 2.34+1.10 = 2.44m

PROVIDE SEPTIC TANK OF THE SIZE -- 3.05x1.83x2.44

**UP FLOW FILTERS**  
 Discharge for 30 persons -- 4500 Lts.  
 Volume -- 1.83x1.83x2.06=6.99  
 Depth -- 1.70-0.15 = 1.55  
 Plan area required  $\frac{3.35}{2.06} = 1.63 \text{ m}^2$

SIZE OF THE FINAL EFFLUENT SUMP -- 1.83x1.83x2.06  
 UP FLOW FILTER -- 1.82x1.83x2.06



PLAN SHOWING THE PROPOSED CONSTRUCTION OF THE RESIDENTIAL BUILDING AT PLOT NO: 5272-B, RAM NAGAR NORTH EXTN, PUZHUTHIVAKKAM, CHENNAI-61. OLD SURVEY NO:88/2; NEW SURVEY NO: 88/35A OF MADIPAKKAM VILLAGE SHOLINGANALLUR TALUK, S.E. DISTRICT, CHENNAI. 02/12/2016/16  
**அலுவலகப் பட்டி**  
 DIVISION :169

**JOINERY DETAILS**

MD	Door	1.00 x 2.10
D	Door	1.22 x 2.10
D1	Door	0.90 x 2.10
D2	Door	0.76 x 2.10
O	Opening	0.90 x 2.10
W1	Window	1.20 x 1.20
W2	Window	1.00 x 1.20
FW	Window	0.90 x 2.10
V	Ventilator	0.60 x 0.60

**SPECIFICATION:**  
 BRICK WORK : SUPER STRUCTURE WITH MAIN WALL USING CM 1:5 MORTAR  
 PARAPET WALL: CM 1:4 MORTAR.  
 WOOD WORK : MAIN DOOR TEAK, AND OTHER DOORS KONGU WOOD USING.  
 RCC WORK : MINIMUM GRADE OF CONCRETE M25 (1:1:2)  
 FLOORING : ALL ROOM CERAMICS TILES FLOORING.  
 PLASTERING WORK : PLASTERING WORK IN CM 1:4.  
 WEATHERING COURSE : WEATHERING COURSE IN BRICK JELLY CONCRETE IN CM WITH TWO COURSES OF FLAT TILES LAID TO DETAIL.

**AREA DETAILS**

S.NO.	PLOT AREA DETAILS IN SQ.M	
1	AS PER PATTA	250.00 SQ.M
2	AS PER DOC / LEAST AREA.	222.97 SQ.M
3	AS PER SUPER IMPOSED AREA	248.18 SQ.M

**FLOOR AREA DETAILS IN SQ.M**

S.NO.	FLOOR	F.S.I AREA	NON F.S.I BALCONY AREA	TOTAL
1	FIRST FLOOR	100.70	4.92	105.62
2	SECOND FLOOR	100.70	4.92	105.62
3	THIRD FLOOR	100.70	4.92	105.62
4	TOTAL	302.10	14.76	316.86
5	F.S.I	1.355		

**COLOR INDEX**  
 PROPOSED [Symbol] ROAD [Symbol] BOUNDARY [Symbol]  
 SCALE 1: 100

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**LICENSED SURVEYOR**