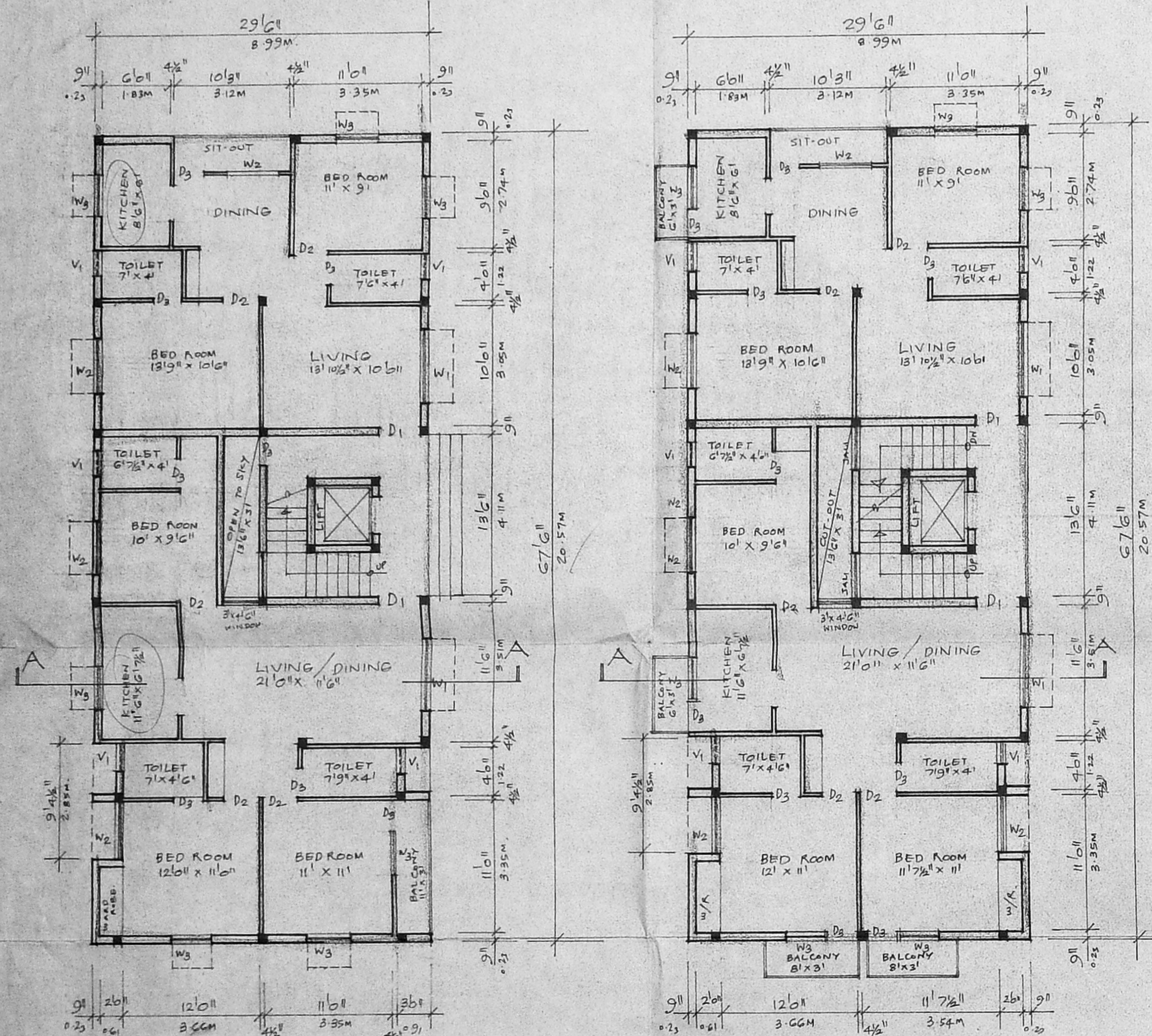
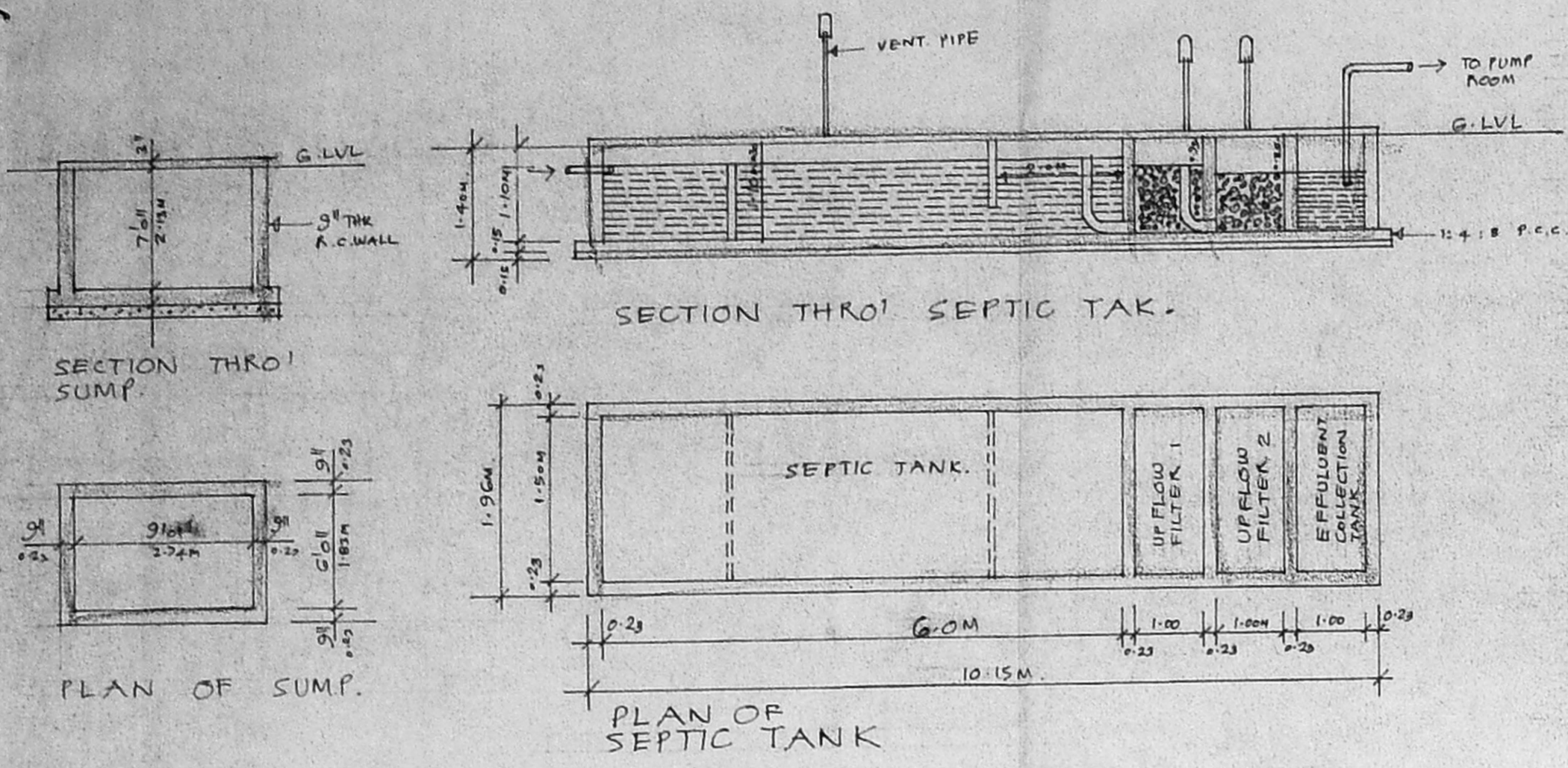


DESIGN OF SEPTIC TANK WITH UPFLOW FILTER FOR 8 DWELLINGS.

NO. OF FLATS OR DWELLINGS : 8
 ASSUMING 5 PERSONS PER FLAT }
 NO. OF PERSONS } 8 X 5 = 40.
 NO. OF USERS : 40.
 ASSUMING 2 FIXTURES PER FLAT : 8 X 2 = 16 UNITS.
 PER HOUR DISCHARGE : 16 X 6 = 96 LPM.

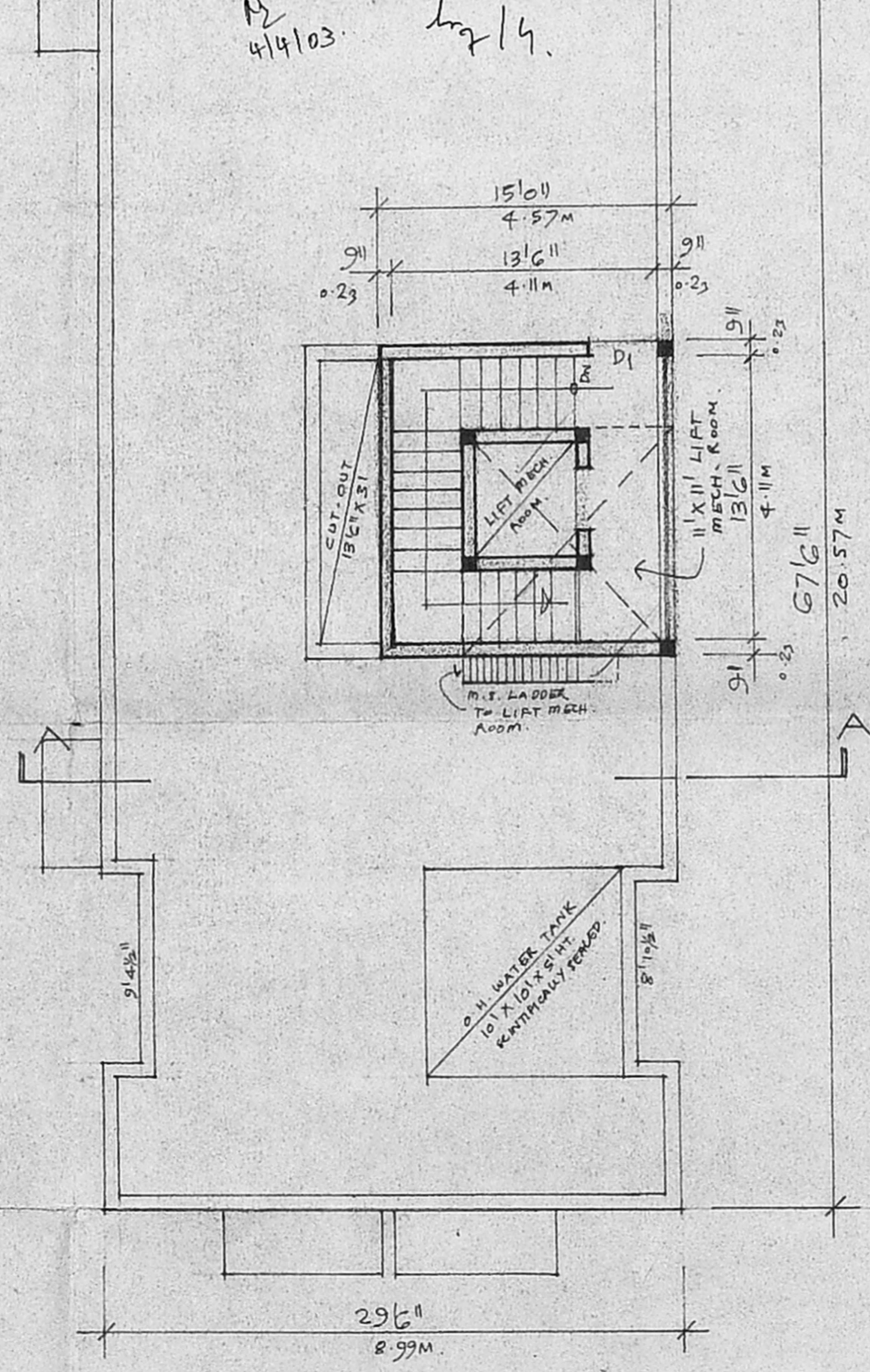
SEPTIC TANK
 SURFACE AREA NEEDED : $\frac{96 \times 0.92}{10} = 8.832$ SAY = 9.0 m²
 VOLUME OF SEDIMENTATION }
 ASSUMING 0.3m DEPTH } : 9 X 0.3m = 2.7 m³
 FOR DEGRESSION : 40 X 0.032 = 1.28 m³
 FOR SLUDGE STORAGE : 0.0002 X 365 X 40 = 2.92 m³
 FREE BOARD FOR SLUDGE : 9 X 0.3 = 2.70 m³

DEPTH = $\frac{VOLUME}{STORAGE} = \frac{10}{9} = 1.1$ m.

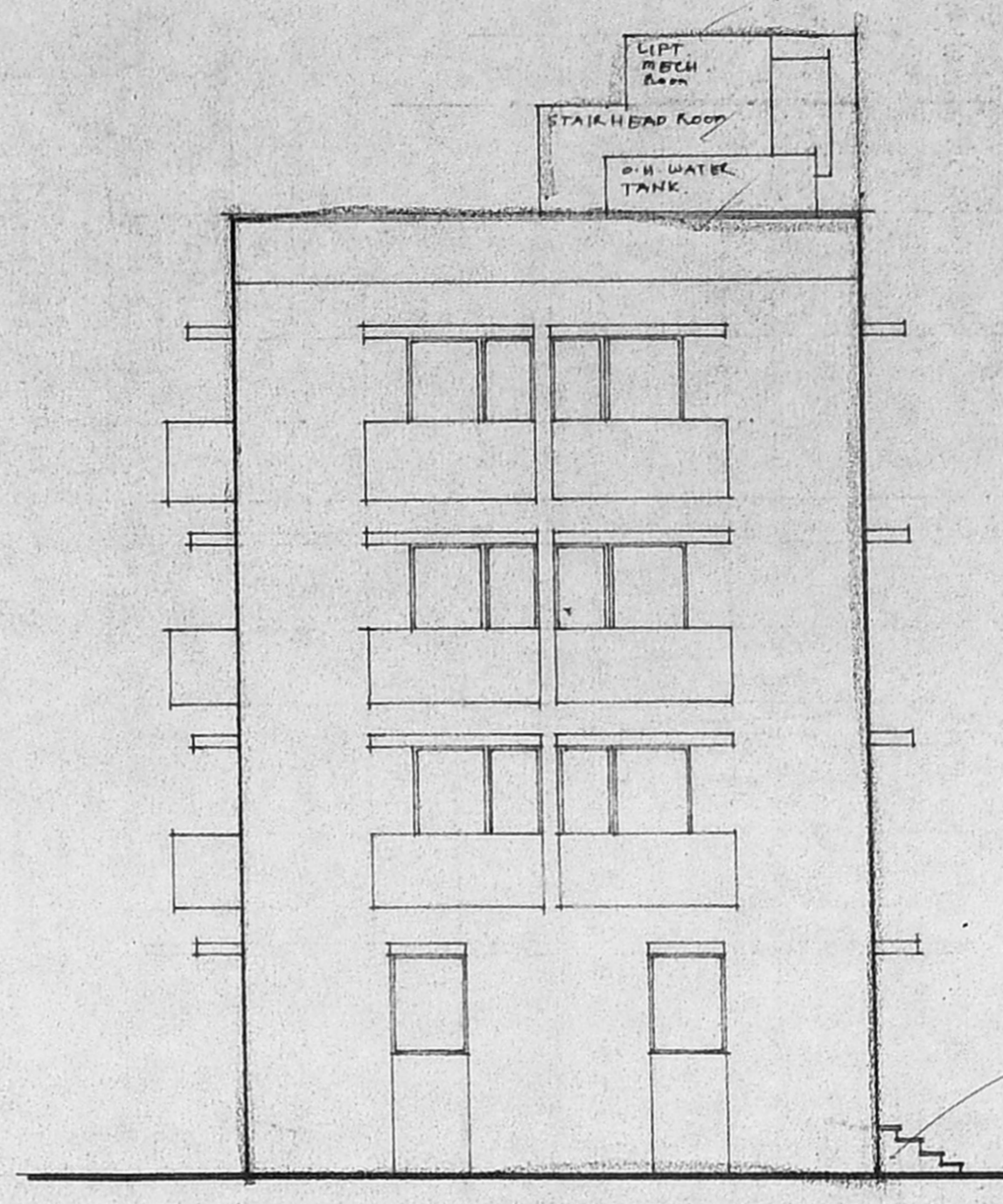


GROUND FLOOR PLAN. SCALE 1/8" = 1'0" (1:100)
 1ST, 2ND & 3RD FLOOR PLAN. SCALE 1/8" = 1'0" (1:100)

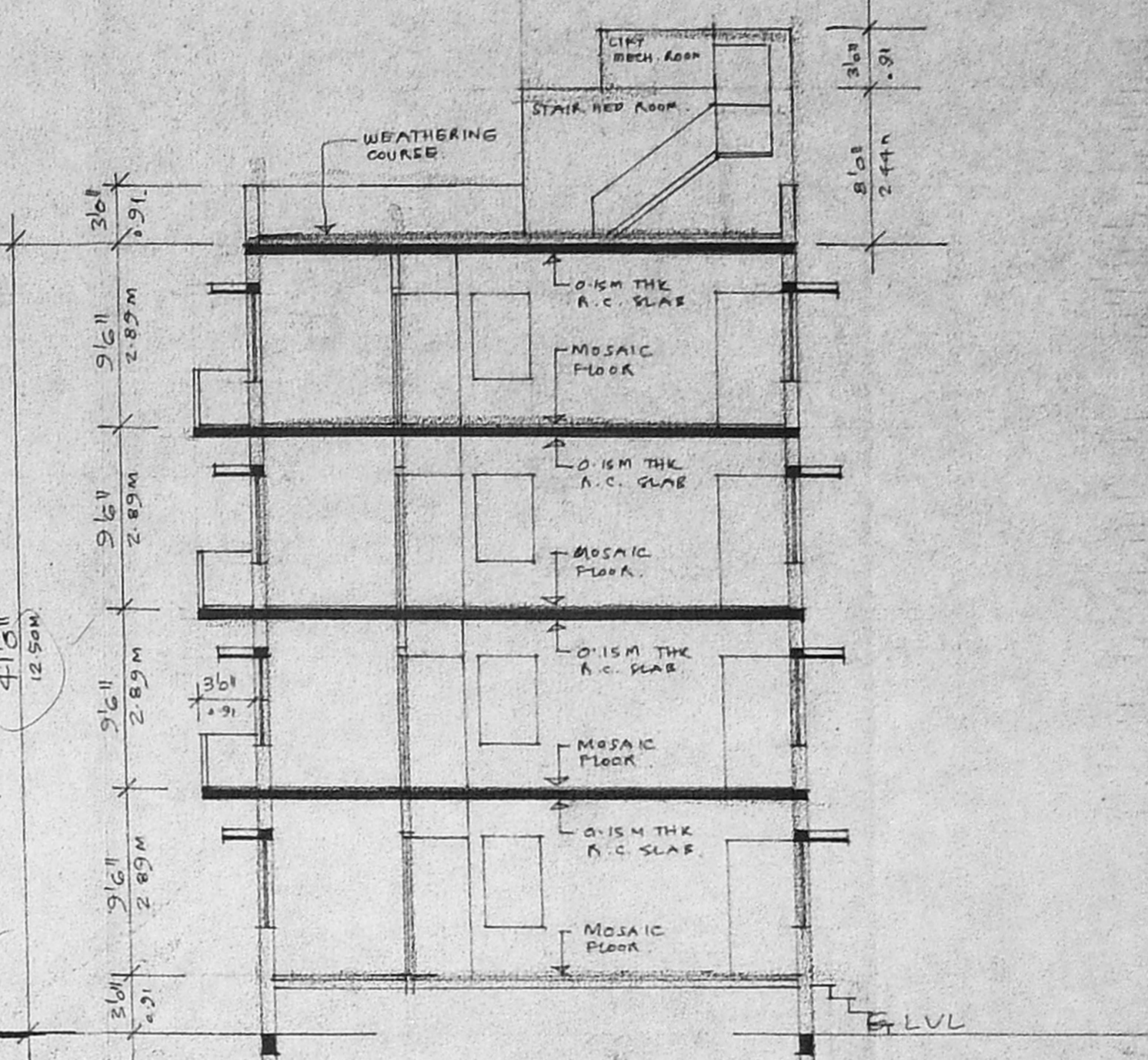
OFFICE COPY
 APPROVED
 SUBJECT TO THE CONDITIONS IN THIS OFFICE LETTER.
 Planning Permit No. B/SPI/443/156/2003
 No. B/19/582/2002
 Date 4/1/2003
 FOR MEMBER SECRETARY
 CHENNAI METROPOLITAN
 DEVELOPMENT AUTHORITY
 CHENNAI-600 008.



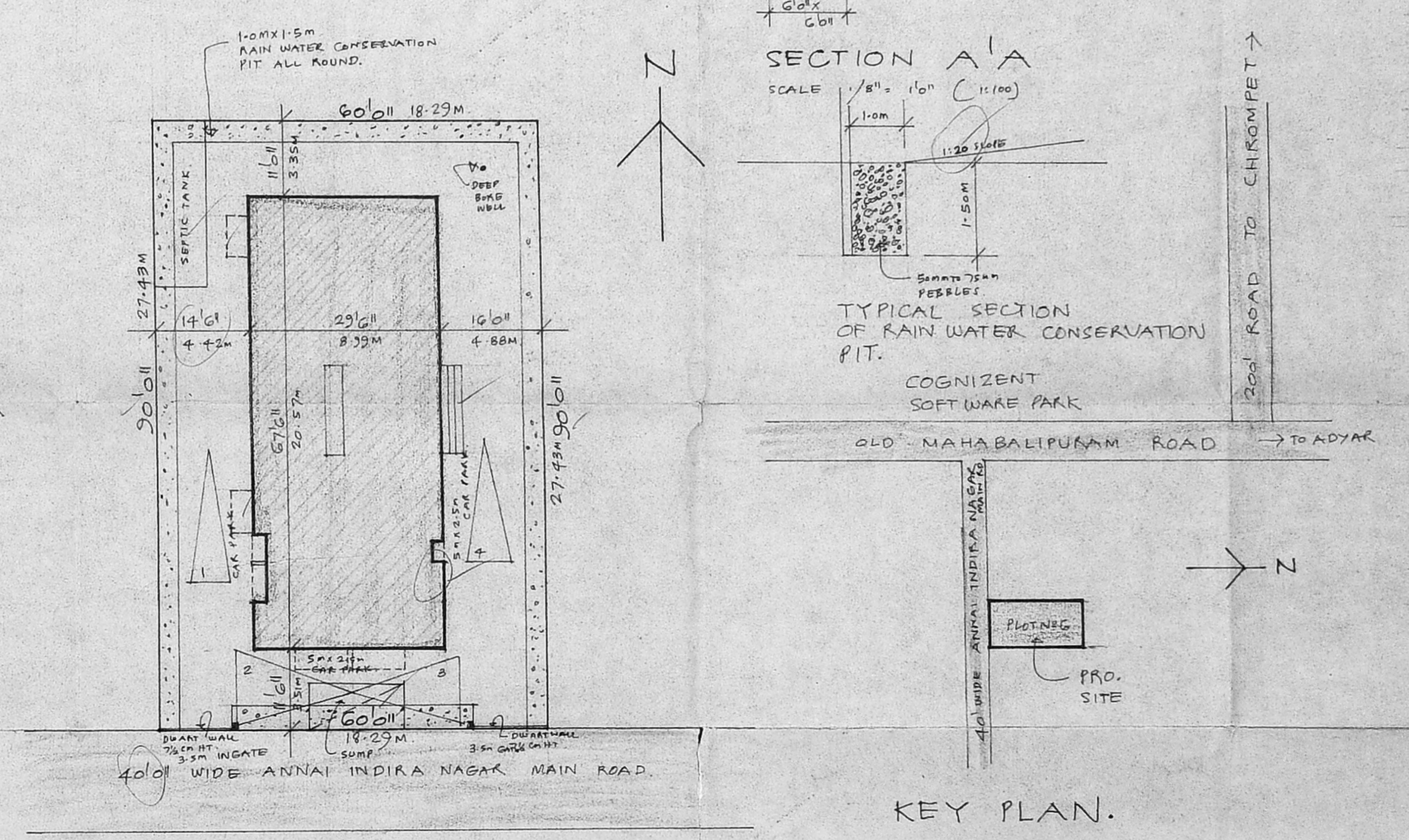
TERRACE FLOOR PLAN. SCALE 1/8" = 1'0" (1:100)



FRONT ELEVATION. SCALE 1/8" = 1'0" (1:100)



SECTION A-A. SCALE 1/8" = 1'0" (1:100)



SITE PLAN. SCALE 1/16" = 1'0" (1:200)

UPFLOW FILTER
 LIQUID DEPTH OF SEPTIC TANK : 1.1 m
 VOLUME : 40 X 0.045 = 1.8 m³
 UPFLOW FILTER DEPTH ALLOWING 0.3m FREE BOARD : 1.1 - 0.3 = 0.8 m.
 AREA NEEDED : $\frac{1.8}{0.8} = 2.25$ SAY 3 m²
 SIZE OF UP FLOW FILTER : 1.5 X 2.0 m
 UPFLOW FILTER NO. 1 = 1.5 X 1.0 X 0.95 m
 UPFLOW FILTER NO. 2 = 1.5 X 1.0 X 0.85 m

STATEMENT OF BUILT UP AREA
 GROUND FLOOR AREA : 186.74 m²
 FIRST FLOOR AREA : 186.74 m²
 SECOND FLOOR AREA : 186.74 m²
 THIRD FLOOR AREA : 186.74 m²
 TOTAL AREA : 739.15 m²
 PLOT AREA : 502.3 m²
 FS I : 1.478. COVERAGE : 14.7%

SCHEDULE OF JOINTERY.
 D1 3/6" x 7/0" T.W. FLUSH DOOR
 D2 3/6" x 7/0" T.W. FLUSH DOOR
 D3 2/6" x 7/0" T.W. PANELLED DOOR
 W1 6/0" x 4/6" T.W. GLAZED WINDOW
 W2 4/6" x 4/6" T.W. GLAZED WINDOW
 W3 3/6" x 4/6" T.W. GLAZED WINDOW
 V1 2/0" x 2/0" A.C. JALI

PROPOSED RESIDENTIAL BUILDING AT PLOT NO. 6, S. NO. 281/13 OF THORAIPAKKAM VILLAGE, TAMBARAM TALUK, ANNAI INDIRA NAGAR. APPD. LAY-OUT BY PPD/LO/29/89.

Signature of Owner: *E. S. Narayagam*
 Signature of Licensed Surveyor: *E. S. Narayagam*
 License No. 838/2002 - 2003, CORPORATION OF CHENNAI 101, (01) Uman Rd., 424 1939