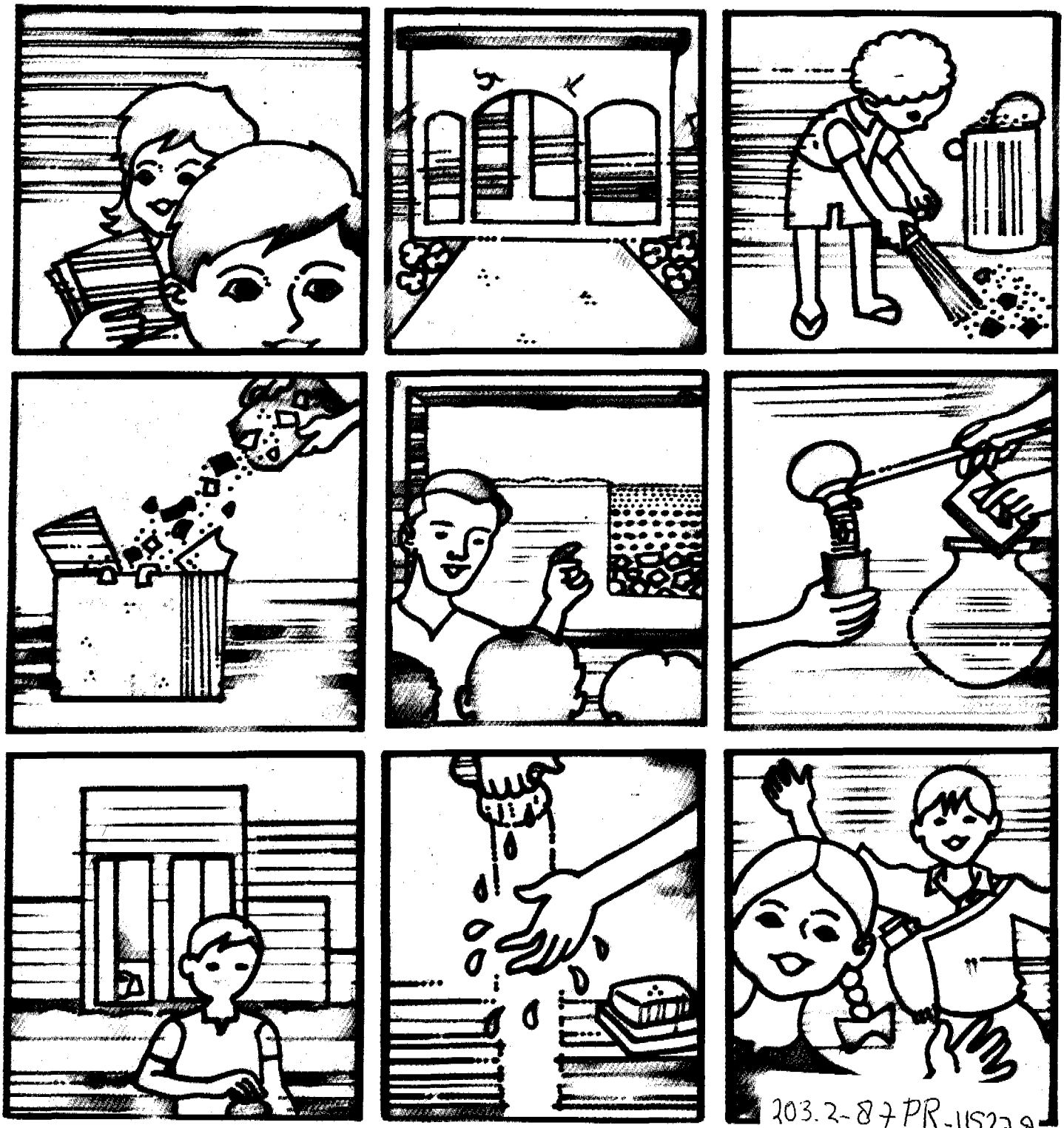
PROMOTION OF SANITATION IN PRIMARY SCHOOL



HEALTH. IN. 2

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3. Breastfeeding to nourish and protect the young infant from infection and good weaning practices during the transition to family food, a period of high risk from malnutrition.
4. Immunization against tetanus, measles, polio, whooping cough, diphtheria and tuberculosis which cripple and kill millions of children every year.

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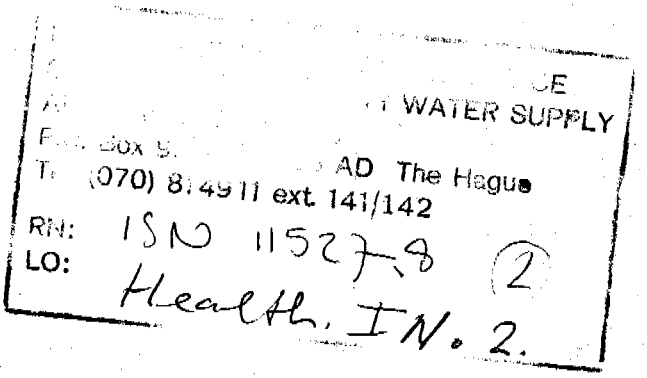

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1. INTRODUCTION

In India, the high incidence of mortality and morbidity, particularly among children, is largely attributed to unsafe water supply, poor personal hygiene practices and insanitary environment. During the last decade, considerable progress has been made in the provision of water supply and for which UNICEF has actively collaborated with the Government. However, progress in sanitation has been slow due largely to a combination of factors, namely, poverty, lack of awareness, conservatism and low priority given to it.

In response to the UN sponsored Water Supply and Environmental Sanitation Decade (1981-1990), the Government of India has set targets of achieving 80 per cent sanitation coverage of the urban and 25 per cent coverage of the rural population by 1990.

The purpose of this document is to indicate one possible strategy for UNICEF cooperation in promoting sanitation in primary schools, including the construction and use of sanitary facilities.

2. APPROACH

The country has a huge network of rural schools offering primary education to nearly 55 million children. The rural school system offers a vast readymade infrastructure of enormous potential to exert a profound influence, not just on the children within its four walls, but also on the community at large. The promotion of personal hygiene and environmental sanitation through the construction and use of lavatories in schools will help inculcate good habits among children from their impressionable and formative years of childhood.

3. WHY SCHOOL LATRINE?

Each and every school should have adequate water supply and sanitation facilities.

The Ministry of Health (1) as far back as 1949 recommended the provision of latrines, urinals and water in all day-schools. The minimum postulated requirements were one urinal for every 60 members, one latrine seat for every 100 members and at least a well or other source of water supply within 40 meters. The Fourth All India Educational Survey (1982) showed that 38 per cent of the rural schools have water facilities within the school compound compared to 68 per cent in the urban areas, while only 11 and 55 per cent have lavatory facilities respectively, thereby indicating the need for such basic requirements.

The provision of a lavatory in schools is aimed at achieving the following objectives:

(a) Changing the engrained habits of people from the practice of open defecation to the use of a latrine which can be best achieved through motivation and education. Children are more receptive to new ideas and therefore the school is a suitable institution for such a scheme.

(1) "Report of the Environmental Hygiene Committee", Ministry of Health, 1949.

(b) The school curriculum on hygiene and sanitation always emphasises the need for sanitary disposal of excreta and the dangers caused by its absense. However, no theoretical education on health and sanitation will carry credibility unless it is backed by concrete example. The effective way to get the message across is through the provision of lavatories in each school for use by children and teachers.

(c) The experience and knowledge gained by the children through the use of lavatories in school and sanitation education imparted by the teachers should be passed on by the children to their parents and other children who may not have the benefit of a formal education.

4. THE PROGRAMME

As part of UNICEF cooperation in India, project support for the provision of sanitary facilities to primary schools can be promoted. The immediate objective is to collaborate with the State Governments to implement some schemes on a demonstrational basis in selected areas. Priorities should be given to areas where the joint GOI-UNICEF Nutrition and Health Education Projects are being implemented through the Rural School System (NHEES) and where the success of such schemes are potentially high due to the interest of the school staff. This will provide the basis for the development of a long-term strategy at the state level aimed at the provision of sanitary facilities as an integral part of a primary school. The present objective can be promoted through a dialogue between the concerned state officials and UNICEF Zone Offices.

4.1 Formulation of the Scheme

Formulation of the scheme will involve decisions on the size of the programme, project area, funding pattern, unit design and implementing agency for construction. Orientation of Headmasters/Teachers from the identified schools, to ensure proper usage and maintenance of the units, will be an integral part of the project. The steps for the scheme formulation are outlined in Appendix A.

4.2 Sanitation Education and School Teachers Orientation

Education on personal hygienic habits and sanitation is a part of the primary school curriculum. Under the NHEES Project launched by the Government of India, UNICEF is funding the production of education material for the children.

The school teacher provides education to the children and can in fact play an important role in the all-round development of the village by reaching out to the community. A two-day orientation on sanitation to better equip the school teacher for imparting sanitation education as well as for proper usage and maintenance of the school latrine is an important component of this scheme. A programme for the orientation of headmaster/teachers is given in Appendix B.

Experience todate by some States in conducting the orientation course with UNICEF collaboration has highlighted the necessity of such courses. A cell comprising officers of the Education, Health and Engineering Departments at the District and Block levels must be created and they should be the resource persons for the course. Education materials to support the school teachers in imparting sanitation knowledge are vital. Todate UNICEF has produced sets of flash cards on sanitation (1) and a School Sanitation booklet (2).

UNICEF will collaborate with the respective State Governments to develop further educational aids as necessary.

4.3 Construction of Lavatory

The most appropriate agency for the construction work will vary from area to area and has to be decided after discussion with the officials concerned. In the case of new schools the same agency or institute involved in the construction of the school could be used to install the lavatory; in the case of existing schools, the work can be executed by local labour under the supervision of, for example, the Block level engineer, or an appropriate government engineering department.

4.4 Maintenance

The success of the whole scheme will depend on the proper maintenance of the lavatories. A workable maintenance system including provision of funds for basic tools (i.e. bucket & broom) should be evolved before the project is launched. The users, i.e., pupils and teachers, should ensure that the lavatory is being properly used; in this connection, a school lavatory maintenance card designed to be fixed at a convenient place, e.g., the school verandah wall, is given in Appendix C. A daily cleaning of the lavatory before or after school hours is recommended. A sweeper can be employed part-time by the local education authorities or panchayat. Alternatively, wherever possible, the school children can be organised on a class-room basis, say, to keep the units clean prizes can be awarded to the best working group as encouragement.

Since the easy availability of water for cleaning of toilets, and personal usage including washing of hands is vital, a storage tank with a capacity of at least 200 litres should be provided as shown in the attached drawings (Figs. 1 & 3) Alternatively, in case where piped water source exists within the school or nearby, then this can be extended into each toilet; UNICEF will assist through the provision of pipes and fittings.

(1) A set of Flash cards entitled "Towards Better Health" covering six sanitation topics—by UNICEF, 1984.

(2) School Sanitation—by UNICEF, (1985).

5. TYPE OF LATRINES

For schools having upto 75 children, a single latrine may be provided for use by both sexes (Figure 1). If the number of children ranges from 75 to 150, then two single units consisting of one each for boys and girls are proposed. Separate urinals will not be necessary. When the number of children is between 150 and 250, a separate latrine and urinal for boys and girls is recommended, (Figure 3). For children well above 250, construction of additional units may be considered.

Two categories of latrines are in current use in India, namely waterseal and dry latrines. The waterseal units are suitable in areas where water is available, and people use water or soft materials for anal cleaning.

For the purpose of obtaining an indication of the cost of construction, as dealt with in section 6, the use of clay bricks as building materials has been considered. However, the **choice** of other materials will be dictated by local availability, suitability, costs and the skills of the local masons.

5.1 Waterseal Latrine

A Waterseal Latrine has the advantage of being odour, fly and insect free. A dual pit system is proposed as it has the advantage that each pit is used alternatively and emptied after a maximum retention of two years. During this period, the pit content is converted to odourless and rich organic humus which can be used as fertiliser and handled safely.

A long pit service life has the advantage of less frequent emptying but at the expense of a deeper and hence more costly pit. In the present design, pit service life of three years is recommended to keep the cost low and to demonstrate to the school children, the recycling of the waste as manure for school gardening.

Waterseal pans and traps which require no more than 2 litres of water for flushing are recommended. The main characteristics are a steep base slope and a minimum waterseal.

5.2 Dry Latrine

The Reed Odourless Earth Closet (ROEC) is described here and its essential feature is a chute which directs the excreta into an offset pit. The chute can be of metal or PVC pipe of 150 to 200 mm diameter placed during the construction of the squatting slab (as shown in Figure 5) or cast as part of the toilet pan.

The chute is set at a steep angle of 30° to the vertical to facilitate the discharge of excreta into the pit. However, the chute can still be fouled and will require cleaning with water regularly, using a long hand brush, to discourage fly breeding.

6. DESIGN CONSIDERATIONS

Some of the pertinent design aspects are discussed below:

6.1 Size of sludge pits

In the case of a single unit the sludge accumulation is computed on the basis of 75 children with the assumption that 15 per cent of the children will use the latrine daily. The sludge accumulation per child has been taken as 60 per cent of that for an adult (i.e. 0.60 x 0.045 M^3 per year). Taking into account the duration of school hours and vacations, the period of usage in a year will be about 9 months. For a waterseal latrine having a pit service of three years, the sludge volume of each pit is 0.6 M^3. Hence a pit size of 1.0 M diameter and 1.0 M depth including a freeboard of 0.2 M is recommended. On the same basis, for the latrine-cum-urinal complex accommodating the needs of about 250 children, the recommended pit size is 1.5 M diameter and 1.5 M deep, allowing a freeboard of 0.2 M

A pit service of ten years has been considered for the dry latrine as indicated in figure 4. In this case, the pit requires desludging after the effective pit volume has been filled up.

6.2 Risk of Domestic Water Pollution

Safe excreta disposal at the expense of polluting water sources for domestic purposes should be avoided. In clay and sand formation, and where the water table is more than 2 meters below the pit bottom, the distance of the pit from the water well should not be less than 10 M With higher water table, the distance should be inceased to 15 M In rock formation where the pit bottom is more than 5 M above the water table, a separation of 15 M is recommended. For higher water table alternative design should be considered. More detailed guidelines are provided in Figure 6.

7. COST ESTIMATES

For illustrative purposes, cost estimates of material requirements for the waterseal and ROEC units using brick super-structure have been worked out based on New Delhi 1984 prices and given in Tables 1 to 3 respectively.

The summarised costs of materials are as follows:

(a) Waterseal Single Unit	Rs. 1230/-
(b) Waterseal Latrine-cum-Urinals Unit	Rs. 4750/-
(c) ROEC Latrines-cum-Urinals Unit	Rs. 4940/-

The choice of construction materials will vary between project areas depending on the availability of materials and the local construction skills. The construction cost has not been included but can be approximately estimated as being 30 per cent of the materials costs.

Table 1 : Material requirement for waterseal School Latrine with clay brick superstructure (75 Children)

Item	Unit	Qty.	Cost/Unit(1) Rs.	Amount Rs.
Bricks	No	900	0.45	405.00
Cement	Bag	5.0	50.00(2)	250.00
Sand	M^3	0.9	59.00	53.10
Brick ballast	M^3	0.13	59.00	7.67
Aggregate	M^3	0.2	94.00	18.80
Mild Steel (pit cover, lintel and roof slab)	Kg	11.0	6.00	66.00
Door (including fittings)	No	1	200.00	200.00
Fibre glass pan & trap	No	1 set	100.00	100.00
White lime	Kg	2.2	7.00	15.40
Colouring material	Kg	0.25	5.00	1.25
			Sub Total	1117.22
			10% contingencies	111.72
			Total	1228.94
			Say	1230.00

Note :

(1) New Delhi prices 1984.

(2) Rate based on Govt. Dept. price.

Table 2: Material requirement for waterseal School Latrines-cum-Urinals with clay brick superstructure (for 250 children)

Item	Unit	Qty	Cost/Unit(1) Rs.	Amount Rs.
Bricks	Nos	3285	0.45	1478.25
Cement	Bags	20.00	50.00 (2)	1000.00
Local sand	Cum	3.05	59.00	179.95
Coarse sand	Cum	0.44	53.00	23.30
Brick ballast	Cum	0.83	59.00	49.00
Stone ballast	Cum	0.43	94.00	40.40
G.I. corrugated sheet (size 6'×3') 26 gauge for doors	Nos	4	120.00	480.00
AC corrugated sheets (size 8'×3')	Nos	3	125.00	375.00
M.S. bars and angle iron for chaukats	Kg	29.00	6.00	174.00
Mild steel holdfasts	Nos	8	4.00	32.00
Angle iron for doors (size 30×30×3 mm)	Kg	32.00	6.00	192.00
Paint	Ltrs	2.00	20.00	40.00
Plastic reinforced fibreglass pan and trap	Nos	2	100.00	200.00
Damp proof course 20 mm thick	Sqm	1.70	30.00	51.00
			Sub Total	4314.90
			10% contingencies	431.49
			Total	4746.39
			Say	4750.00

Note:

(1) New Delhi prices, 1984.

(2) Rate based on Government Department Price.

Table 3 : Material requirement for Dry School Latrines-cum-Urinals with clay brick superstructure (for 250 children)

Item	Unit	Qty	Cost/Unit(1) Rs.	Amount Rs.
Bricks	Nos	3200	0.45	1440.00
Cement	Bags	20.00	50.00(2)	1000.00
Local sand	Cum	2.7	59.00	159.30
Coarse sand	Cum	0.4	53.00	21.20
Brick ballast	Cum	0.6	59.00	35.40
Stone ballast	Cum	0.6	94.00	56.40
G.I. corrugated sheet (size 6'×3') 26 gauge for doors	Nos	4	120.00	480.00
AC corrugated sheets (size 8'×3')	Nos	4	125.00	500.00
M.S. bars and angle iron for chaukats	Kg	39.00	6.00	234.00
Mild steel holdfasts	Nos	8	4.00	32.00
Angle iron for doors (size 30×30×3 mm)	Kg	32.00	6.00	192.00
Paint	Ltrs	2.00	20.00	40.00
PVC Pipe 150 mm dia for chute (3)	M	1.60	90.00	144.00
AC Pipe for 100 mm dia for vent Pipe	M	3.00	41.00	123.00
Fly screen for vent pipe	Nos	2	10.00	20.00
Chute covers	set	2	5.00	10.00
			Sub Total	4487.30
			10% contingencies	448.73
			Total	4926.03
			Say	4940.00

Note:

(1) New Delhi prices, 1984.

(2) Rate based on Government Department price.

(3) Provision made for 2 meters but actual length required is 1.6 m.

APPENDIX A—FORMULATION OF THE SCHEME

The following procedure are suggested:

(i) Discussion at state level between Government counterparts (Education Department) and UNICEF on preliminary details such as the size of the programme, the project area, the funding pattern, possible implementing agency for construction etc. to reach agreement in principle.

(ii) Discussion between Government counterparts (e.g. the District Collector, District Education Officer) and UNICEF on the details of the scheme including the designation of a Project Coordinator.

(iii) Filling up of survey questionnaires by headmasters to enable finalisation of the list of project schools (Survey format given in Form A:1).

(iv) Planning the schedule of activities for the orientation of headmasters/school teachers and the training of junior engineers and masons.

(v) Visit to project areas and to a sample of selected schools; formulation of the methodology for maintenance of the units, and finalisation of the design including cost estimates. (The cost can be revised after the demonstration unit has been constructed during the masons' training camp).

(vi) Formalisation of agreement of cooperation between Government and UNICEF.

(vii) Training of the engineers and masons.

(viii) Two-day orientation of one teacher/headmaster of each project school on issues relevant to the scheme. (Refer Appendix B for details). Participants can be recalled for one day for follow-up after 3-6 months after completion of the unit depending on rate of implementation.

(ix) Selection of site for the latrine should be done by the implementing agency in consultation with the school headmaster. The unit should be located at a convenient distance close to the school building, keeping in view the safe distance from the water source to avoid water pollution. (Refer section 6.2 of main text for details on water pollution).

(x) Start the construction of the sanitary units.

(xi) Monitoring of the progress of implementation through monthly reports and field visits by the Project Coordinator.

Form A-1 : Survey of Water Source in Primary School and Proposed School Latrine Maintenance

Name of primary school: _____

Village: _____ Block: _____ District: _____ State: _____

Name of Headmaster: _____ Mid-day meal: YES/NO

Number of pupils: Boys _____ Girls _____

(If more than one shift, specify numbers per shift)

Number of teachers: _____

Type of water source in or near school compund	YES	NO	Distance from school in mts.	Months water not available	Remarks
Pond or stream					
Open Well					
Tube-well/Hand-pump					
Piped water					

Is a latrine cum-urinal necessary for the school? YES/NO

If NO, give reasons _____

If a latrine cum-urinal is constructed, how will it be maintained?

(a) By students/teachers: YES/NO

(b) By Sweeper: YES/NO

Do you have a sweeper in your school: YES/NO

If NO, how will money be raised to employ one?

Betterment committee/Parent Association/Panchayat/Other _____

(c) Brush/broom: YES/NO

(d) Bucket: YES/NO

If NO, who will provide?

School/Betterment committee/Parent Association/Panchayat/Other _____

Signed by Headmaster _____

APPENDIX B—ORIENTATION OF HEADMASTERS/TEACHERS ON SCHOOL SANITATION PROGRAMME

The Orientation Programme will be planned with the participation of District/Block level officials from the Education, Health and Engineering departments. A resource team consisting of one representative from each of the above departments is recommended for conducting the orientation course. A typical two-day programme is given in Table B-1 . Salient features of the programme are given below:

1. **Materials for distribution to resource persons and school headmasters/teachers prior to orientation**

a)	Booklet on School Sanitation	(local language)
b)	Set of Flip Charts on Sanitation	—do—
c)	Checklist of completed units (Form B.1) — to be filled in by the headmasters/teachers and sent to District Education Officer.	—do—
d)	School latrines/urinals Maintenance Form	—do—
e)	Monthly Moniroting Form (Form B.2) — to be filled in by the headmasters/teachers and sent to District Education Officers.	—do—
f)	Design drawing of the proposed sanitary latrine.	

2. **Syllabus for Resource Persons:**

a) **Representative from the Medical Department** (Preferably the District/PHC Medical Officer) who will:

— explain diseases affecting children, particularly those related to personal hygiene and environmental sanitation, with emphasis on diseases more prevalent in the local area;

— make use of the Flip Charts on Sanitatation and Disease, Personal Hygiene, Home Sanitation and Vector Control as also the booklet on School Sanitation, for the content of his talk and subsequent discussions.

b) **Representative of Engineering Department** (Preferably the District/Block Engineer) who will explain:

— concept of a latrine from the user's point of view, with emphasis on following aspects:
odour free; fly free; no sight of excreta; concept of two pits; use of digested excreta as fertiliser.

— Pan and water seal:
steep slope and small water-seal; just two litres of water for flushing.

— Design plan and essential construction features of proposed unit with special reference to—
drain connections; inspection chamber; pit lining and pit covers; soakage pit for urinals.

— Use and maintenance of the unit, preventive measures to avoid chockage of the unit; education of children not to throw stones, sticks etc. into pan/water seal.

— Construction of soakage pit for waste water disposal in school compound; construction of drain for discharge of water; use of garbage pit.

The following Flash Cards would be relevant:
Disposal of Human Excreta.
Waste water and Cattle Dung/Garbage Disposal.

c) **Representative of Education Department** (Preferably the District Education Officer) will cover the following:

— Importance of children at the school level being introduced to aspects of personal hygiene and environmental sanitation, relating to inculcating the practice of using sanitary toilets.

This should be seen as an integral part of the health education elements existent in the curriculum.

— regular use by students and teachers alike;

— the need to leave latrines open during school hours. The teachers should explain and show to each class, in turn, the functioning of the latrines once they return from the orientation programme;

— system of filling the tank with water, preferably with the involvement of the school children;

— enlist the cooperation of the villagers, school betterment committee, parent-teacher association etc. both to acquaint them on the importance of training children to use toilets, and to ensure that the units are not tampered with by the village community;

— need for regular maintenance of the units;

— reaching out to the community for promotion of sanitation (School Sanitation booklet relevant)

b) **District Collector and Block Development Officer**

— Participation of the Collector and the BDO, who are in-charge of rural development activities at District and Block levels, to impress upon teachers their role as motivators in creating awareness and better environmental conditions for the community.

3. Involvement of Participants in Orientation Programme

While the Orientation Programme will consist of inputs from the various resource persons as indicated above, mainly in the form of lectures and discussions, it is strongly recommended that there should be active involvement of the participants themselves, as suggested below:

a) Cleaning up of surroundings where orientation programme is to be held, by the school children with active involvement of teachers.

The headmaster of the school should be briefed prior to the orientation with regard to this activity.

b) Preparation of soakage pits, simple drains and garbage pits. Engineer to visit the school and arrange for demonstration to be carried out as part of the orientation.

Table B.1—TENTATIVE TIME TABLE FOR PRIMARY SCHOOL TEACHERS ORIENTATION

Day 1

0930-1000	Arrival and registration of the participants.
1000-1015	Welcome address by Assistant Education Officer.
1015-1045	Objectives of the orientation workshop (by UNICEF Officer/District Education Officer).
1045-1100	TEA BREAK
1100-1200	Personal hygiene, health aspects related to environmental sanitation, and routes of water borne, filth-borne and water related diseases transmission (by Medical Doctor or Health Educator).
1200-1300	Explanation of the design and functioning of School latrine (by Engineer).
1300-1330	Immunization and Diarrhoea Management—including preparation of Oral Rehydration Solution (by Medical doctor/Health educator).
1330-1430	LUNCH BREAK
1430-1530	Physical maintenance of school latrine; theory on soakage pit and garbage pit (by Engineer).
1530-1630	Roles of teachers and pupils in promoting sanitation in the school and in the community. Need for interaction with village leaders to avoid misuse/damage to latrine. Use of checklist and monitoring form (by Education Officer).
1630-1730	Observation of school surroundings; and the school latrine (constructed under scheme).

Day 2

0930-1330	Based on school surrounding observation, discuss sanitation problems, supervise students to clean up school compound, practical demonstration in construction of garbage pit, soakage pit and waste water drains. (1)
1330-1430	LUNCH BREAK
1430-1530	Role of School Betterment Committee; formulation of activities for reaching out to the community for promotion of sanitation (by Education Officer/Block Development Officer).
1530-1600	Slide/Film show.
1600-1700	Group discussion and conclusions drawn from group discussion.
1700-1730	Valedictory address by District Collector.

Note : (1) Basic works of the units to be initiated on day 1.

Form B.1—Sanitary Latrines in Primary Schools

Quality Checklist of Completed Units by the Headmaster

Name of School_____ Village _____

Block_____ District_____ State_____

Name of Headmaster_____ Date Latrine completed_____

Date of Survey_____

		Urinal Boys	Latrine Boys	Latrine Girls	Urinal Girls
1. Doors					
a. Door satisfactory	YES/NO				
b. Door frame fixed properly	YES/NO				
c. Door closes properly	YES/NO				
d. Door latches fixed properly	YES/NO				
e. Locks provided	YES/NO				
2. Outside (Front Sides)					
a. Steps available	YES/NO				
b. Steps properly built	YES/NO				
c. Overall wall construction	YES/NO				
3. Outside (Back Sides)					
a. Overall wall construction	GOOD/BAD				
b. Inspection chamber provided	YES/NO				
c. Is the inspection chamber constructed properly?	YES/NO				
d. Does the inspection chamber have a cover?	YES/NO				
e. Are pit covers breaking?	YES/NO				
f. Are the edges of the two pit covers covered with earth?	YES/NO				
g. Soakage pits provided?	YES/NO				
h. Connection to soakage pit constructed?	YES/NO				
4. Inside		Urinal Boys	Latrine Boys	Latrine Girls	Urinal Girls
a. Floor finish	GOOD/BAD				
b. Urinal drain properly sloped	YES/NO				
c. Pan clean during handover to Headmaster	YES/NO				
d. Has Headmaster checked by pouring water that no blockage of pans	YES/NO				
e. Has Headmaster checked by pouring water that no blockage of urinals	YES/NO				
5. Water Tank					
a. Steps to tank provided?	YES/NO				
b. Walls of tank have good finishing?	YES/NO				
c. Leakage of the tank?	YES/NO				

Signed by Headmaster _____

Form B.2—School Latrines—Monthly Report

Date_____ Year_____

Name of School _____

State_____ District_____ Block _____

No. of pupils_____ Boys_____ Girls _____

Source of water : Piped water/open well/handpump

Water carried by : Pupils/cook/sweeper/

Name of teacher incharge_____

1. Usage		Latrine				Urinal			
Week of the month		1	2	3	4	1	2	3	4
No. of users	Students Boys								
	Girls								
	Teachers								
	Total								
2. Maintenance									
Water tank in morning	full								
	half full								
	empty								
Clean									
Not clean									
Sweeper	present								
	absent								
Blockage of drain	YES								
	NO								

Note:

(1) Conduct the survey at (say) every Wednesday of the week. For frequency of usage, a handcount in the classroom of users of the previous days suggested.

(2) Please forward the form at the end of each month to

District Education Officer/Principal, BTI/Director, Public Instruction

APPENDIX C—SCHOOL LAVATORY MAINTENANCE

Date of installation:_____

A. Usage and Maintenance

1. Provide for each latrine a container with capacity of 2 litres for the user s self-cleaning and latrine flushing requirements.
2. Fill up the water storage tank every morning and replenish at mid-day or earlier if empty.
3. Wet pan with water before use. This helps in the flushing of the excreta.
4. Ensure that excreta falls into the pan by positioning the feet properly on the foot rests.
5. Flush pan after use.
6. Clean urinals and latrines before and after school hours.
7. Do not throw sticks, stones or solid materials into the pans or urinals.
8. After toilet usage, wash hands with soap and water.

B. Putting Things Right

1. **Blocked drains.** This could be due to (a) accumulation of excreta in the drain pipe **or** (b) solid materials in the pan **or** (c) the pit having filled up.

   (i) In the case of (a) open the inspection chamber and unblock using a flexible bamboo.

   (ii) In the case of (b), the solid material should removed. **Do not** push them through the water seal forcibly or the seal unit will break.

   (iii) In the case of (c), remove the leach pit cover for inspection. Check whether the pit is filled up with water or excreta. In the first case which is due to water logging, report to Block Engineer for advice. In the second case, close first pit and divert excreta to second one.

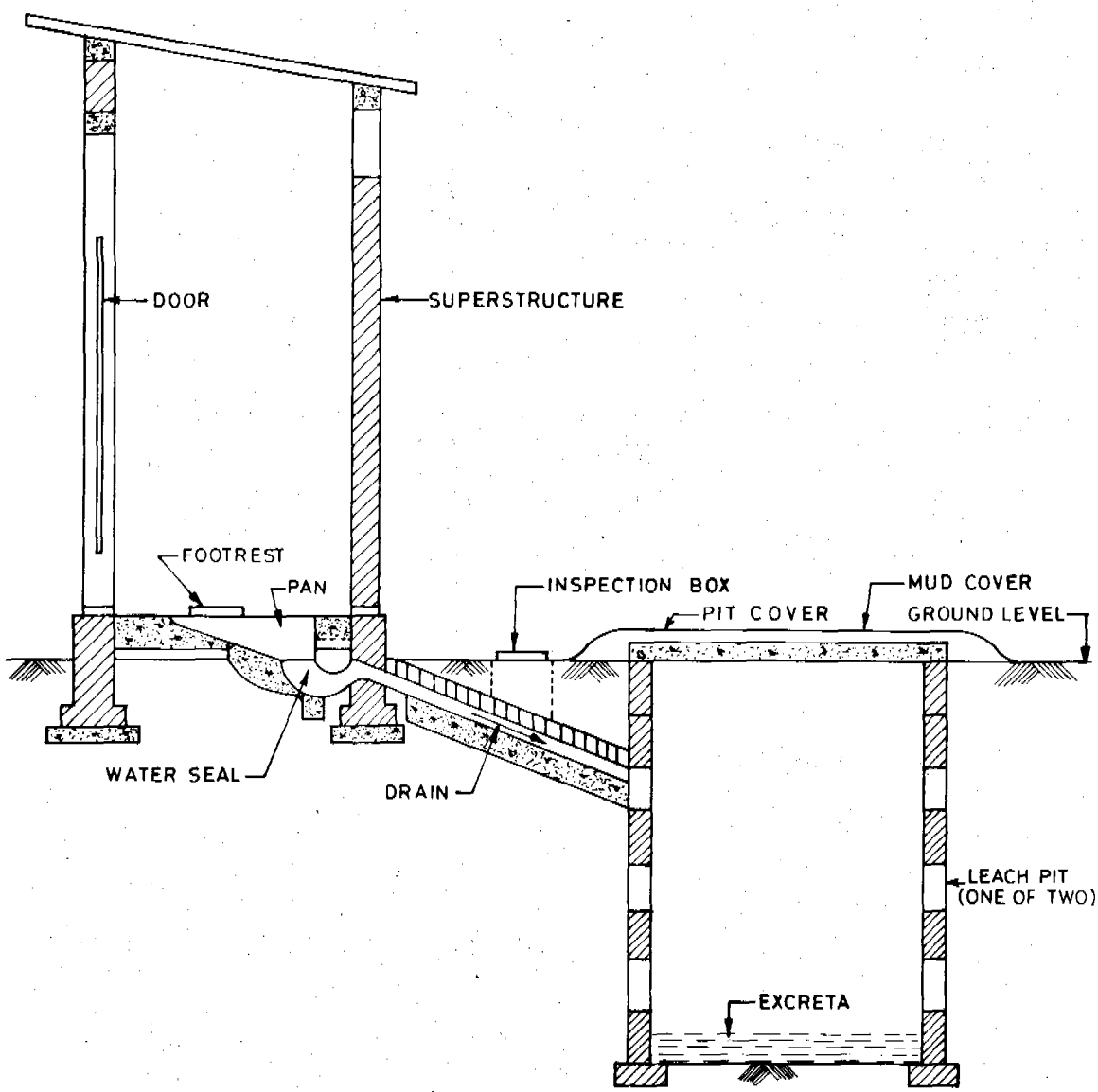
2. **Repair works.** All repair should be carried out promptly. For advice contact Block Engineer.

C. Latrine History Book

Keep a record of significant events related to the latrine/urinals e.g. repair, changing of pits, blockage or drains etc.

APPENDIX 'C'

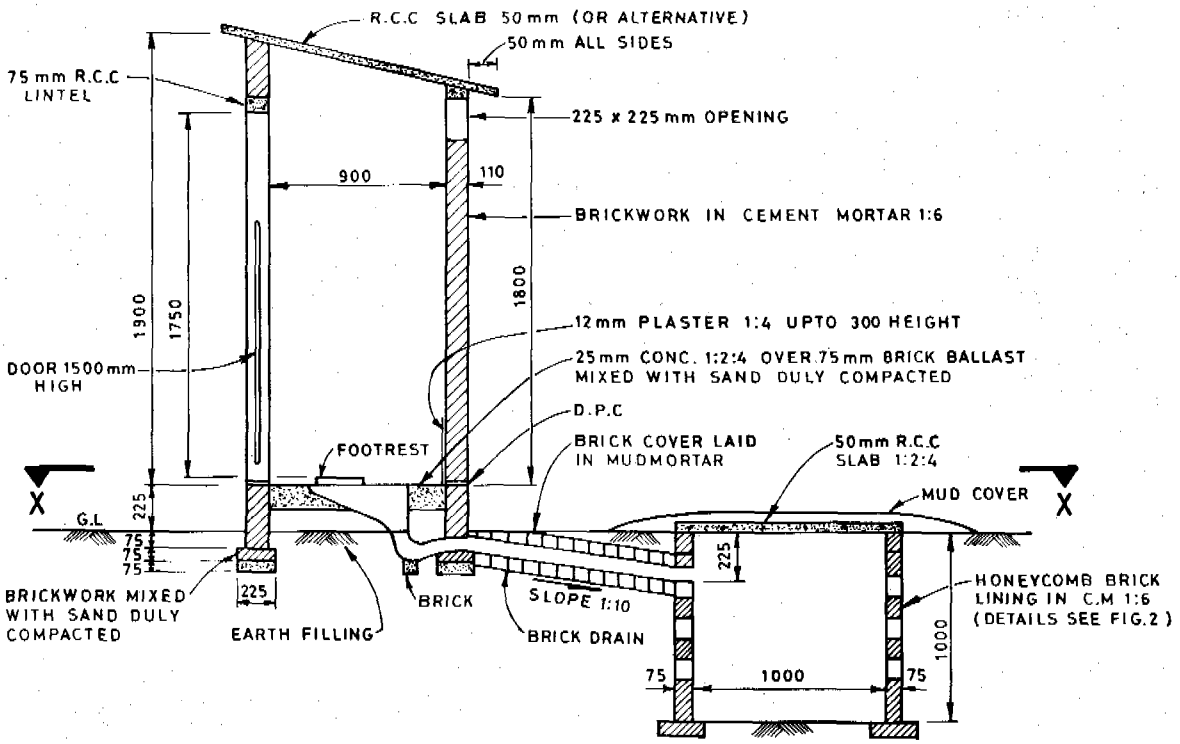
SANITARY LATRINE



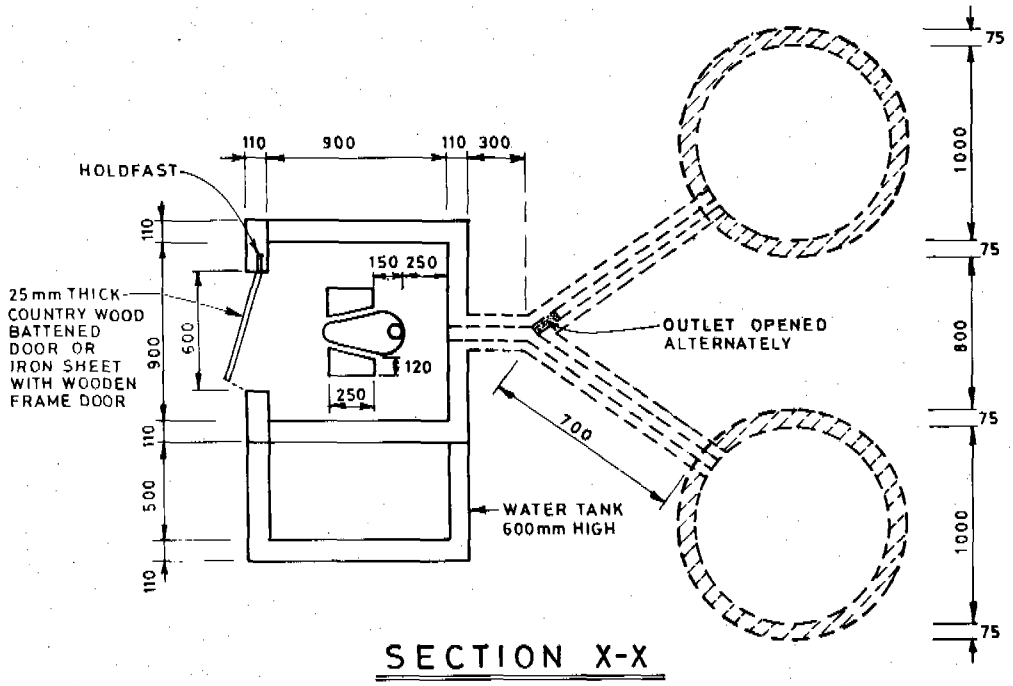
SIDE VIEW SECTION

FIG. 1

DUAL PIT WATER SEAL LATRINE



SIDE - VIEW SECTION



SECTION X-X

NOTES :-

1 DEPTH OF FOUNDATION VARIABLE TO SUIT SOIL CONDITIONS

2 ALL DIMENSIONS ARE IN mm

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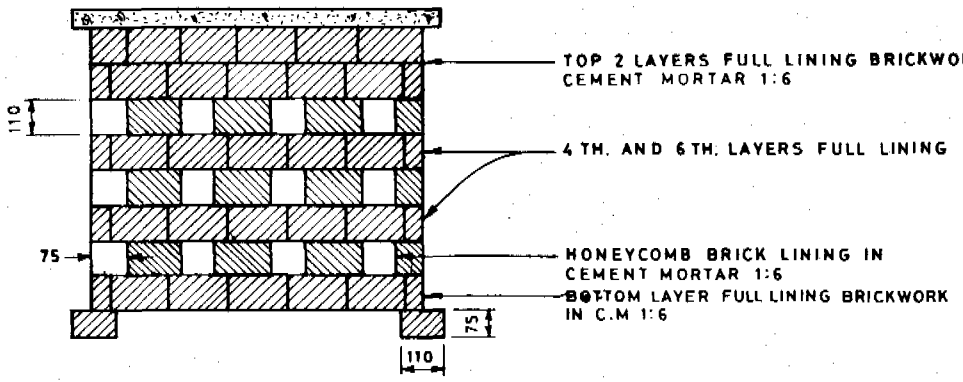
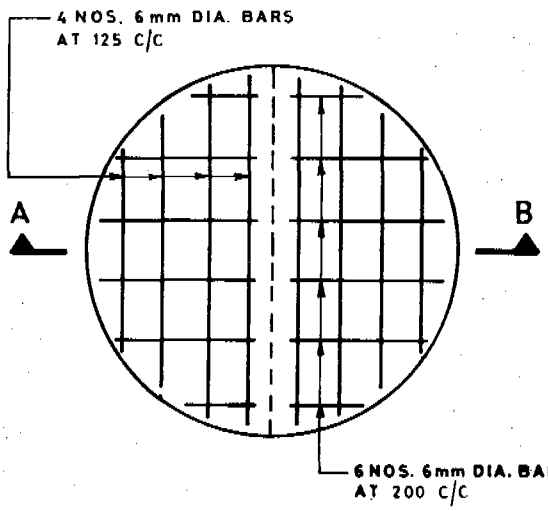
FIG. 2

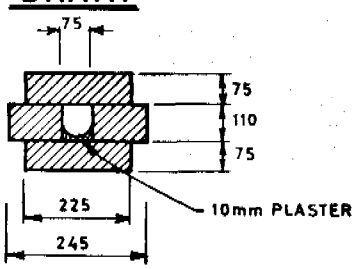
CROSS SECTION - PIT LINING



REINFORCEMENT DETAIL OF PIT COVER

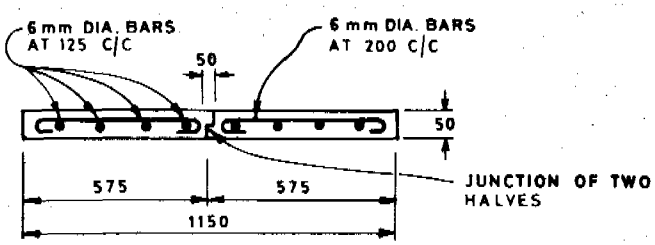


DETAILS OF BRICK DRAIN



NOTES :-

1. PROVIDE HANDLES TO PIT COVERS (USING 6mm DIA. BARS)
2. ALL DIMENSIONS ARE IN mm



SECTIONS A-B

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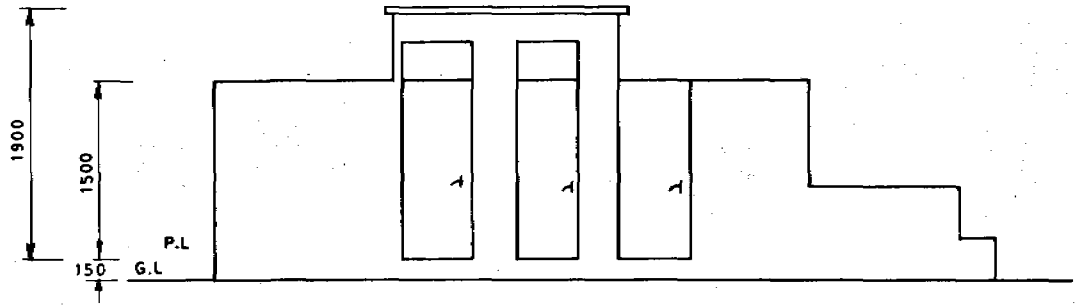
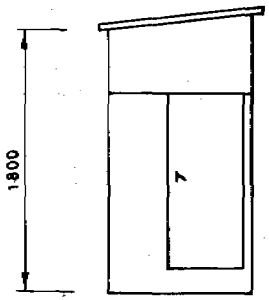
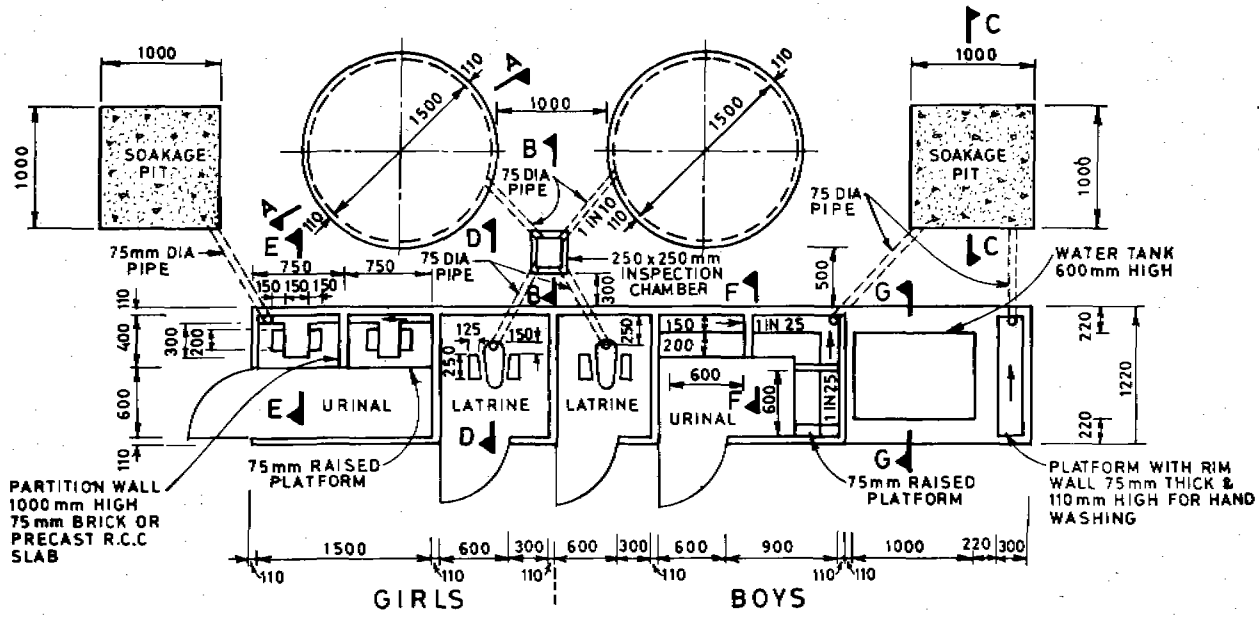
SCHOOL LATRINES - CUM - URINALS (WATER SEAL UNIT)



FRONT ELEVATION



LEFT SIDE ELEVATION



PLAN

NOTES :-

1. DESIGN FOR 250 STUDENTS
2. FLOORS TO BE PROPERLY SLOPED TO FACILITATE WASHING & DRAINAGE OF WATER
3. ALL DIMENSIONS ARE IN mm
4. DEPTH OF FOUNDATION VARIABLE TO SUIT SOIL CONDITIONS
5. URINALS BE PROVIDED WITHOUT ROOF

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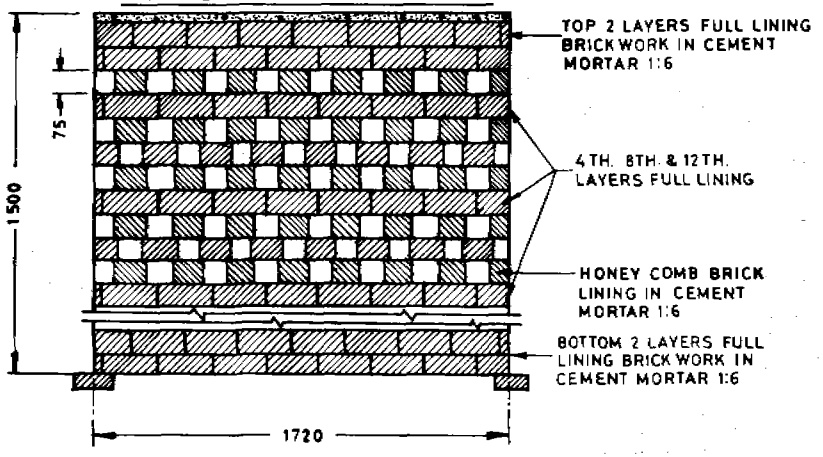
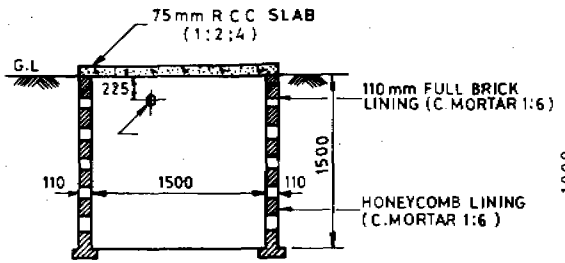
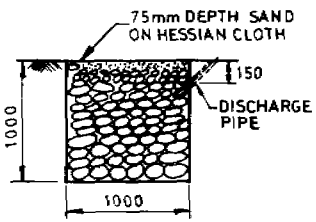
CROSS SECTION OF PIT LINING
REQUIRED FOR WEAK SOIL FORMATION



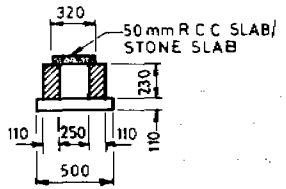
REINFORCEMENT DETAIL OF PIT COVER



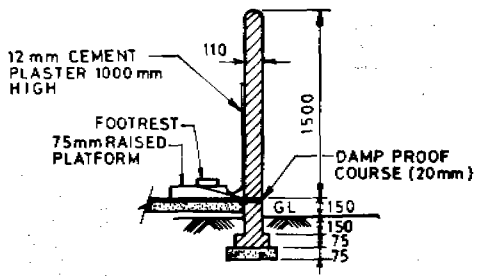
SECTION A-A



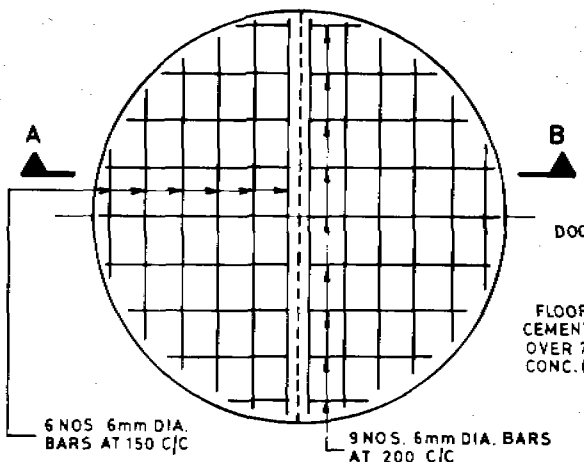
SECTION C-C

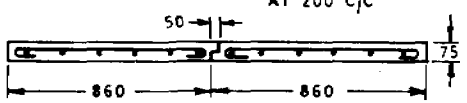


SECTION B-B

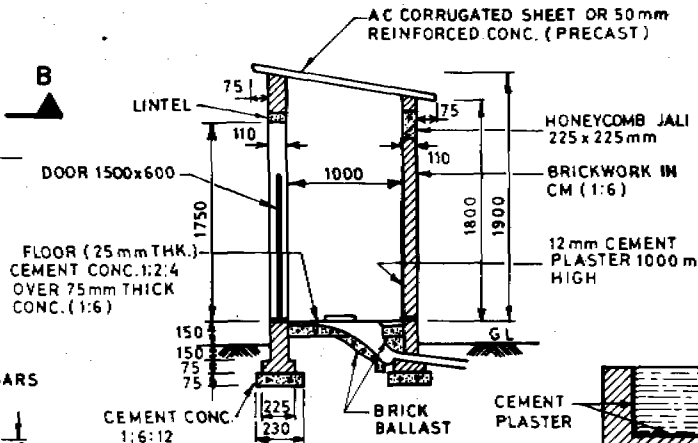


SECTION E-E

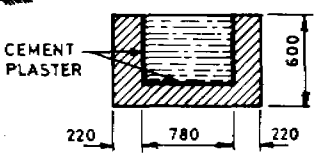




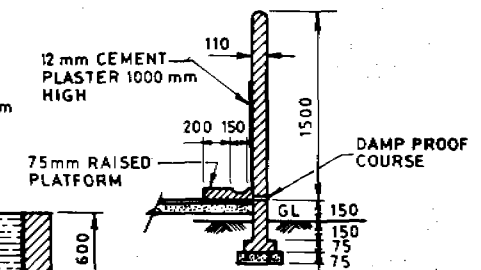
SECTION A-B



SECTION D-D



SECTION G-G



SECTION F-F

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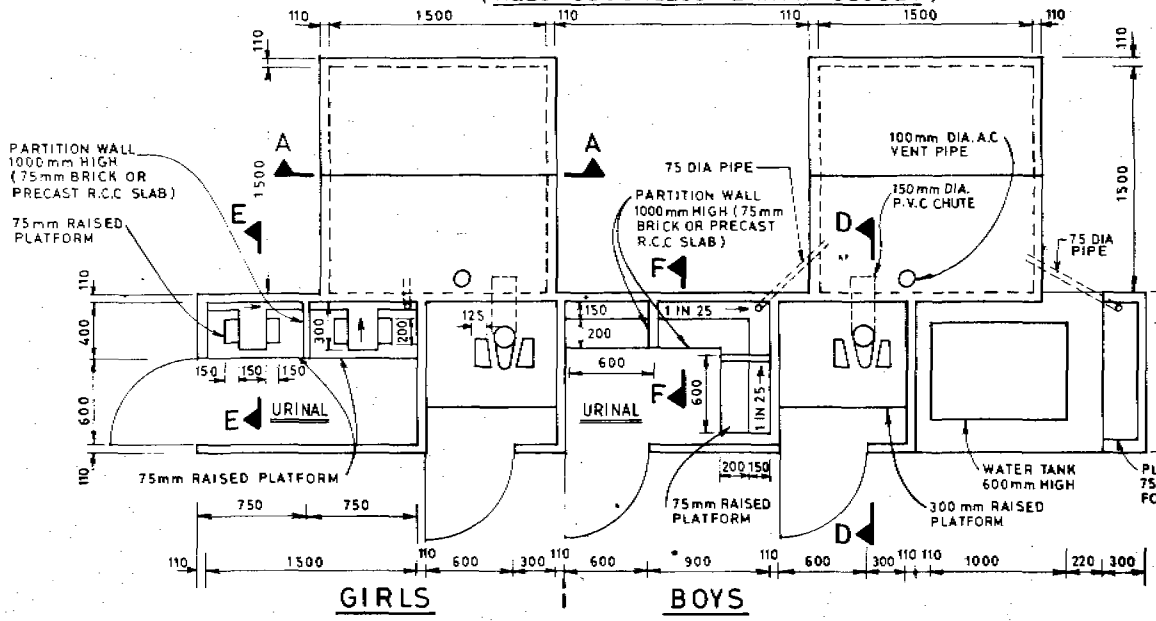
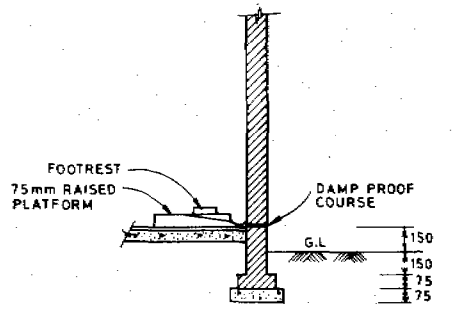
SCHOOL LATRINES – CUM – URINALS

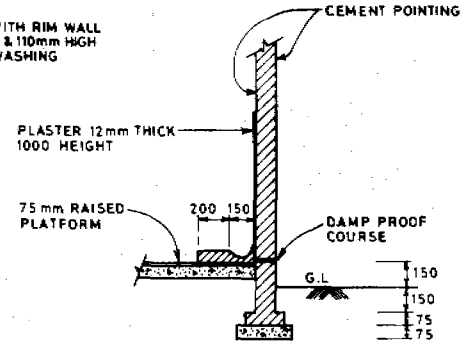
(REED ODOURLESS EARTH CLOSET)

FIG. 5

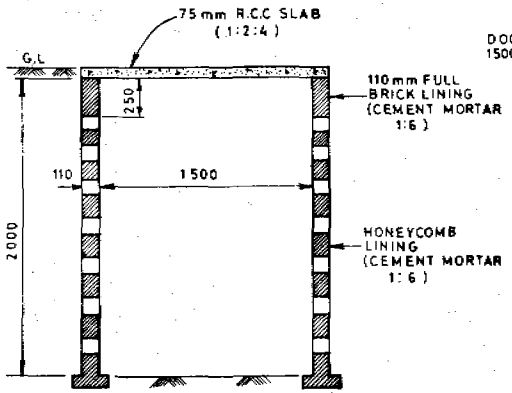




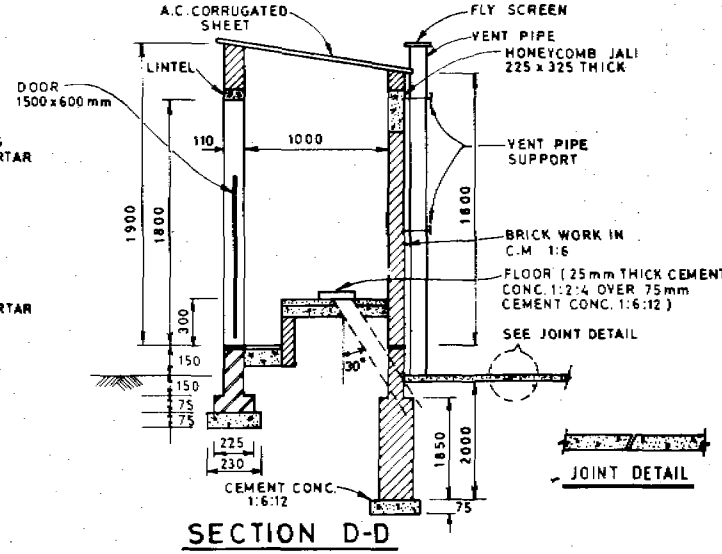
SECTION E-E



SECTION F-F



SECTION A-A



SECTION D-D

JOINT DETAIL

NOTES :-

1. DESIGN FOR 250 STUDENTS
2. FLOORS TO BE PROPERLY SLOPED TO FACILITATE WASHING AND DRAINAGE OF WATER
3. DEPTH OF FOUNDATION WILL VARY DEPNDING ON SOIL CONDITIONS
4. ALL DIMESIONS ARE IN mm

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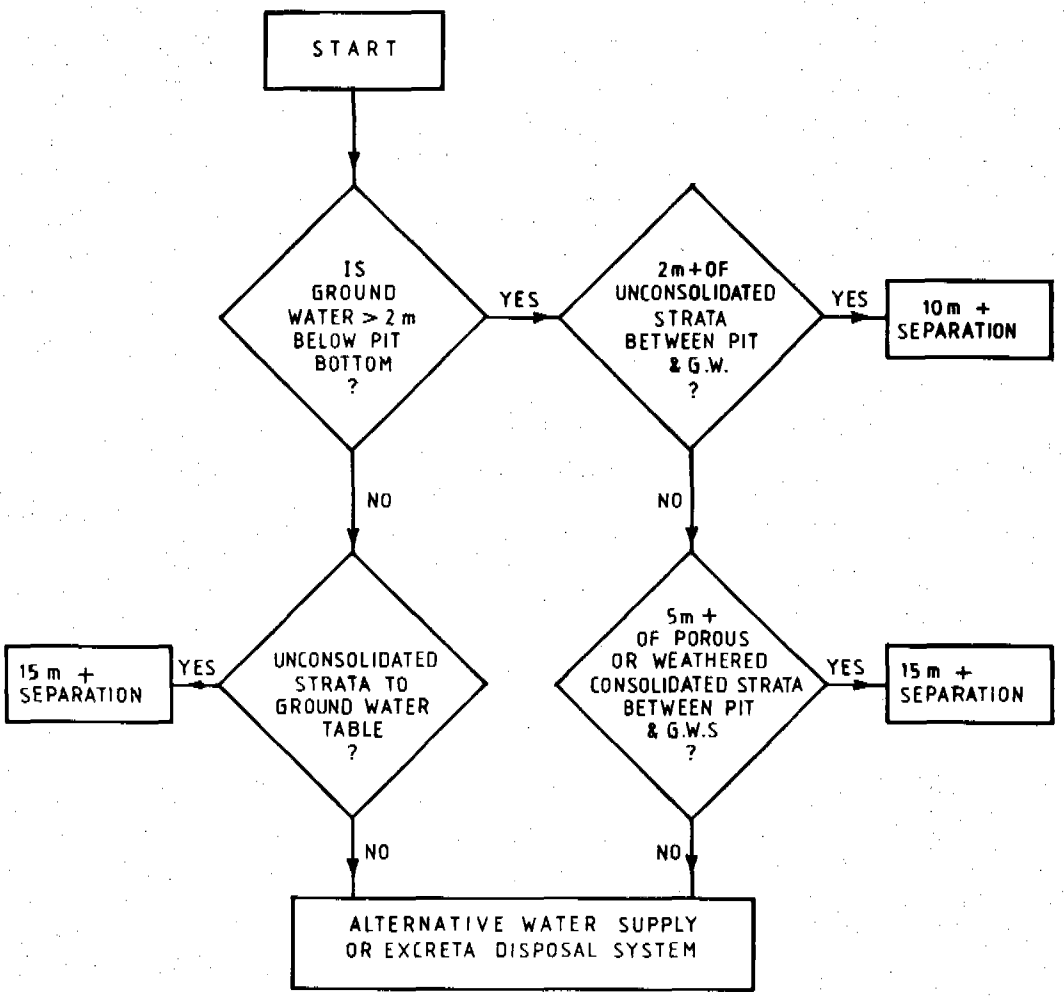
Figure 6

SELECTION OF DISTANCE BETWEEN LATRINE PITS AND WATER SUPPLY INSTALLATIONS



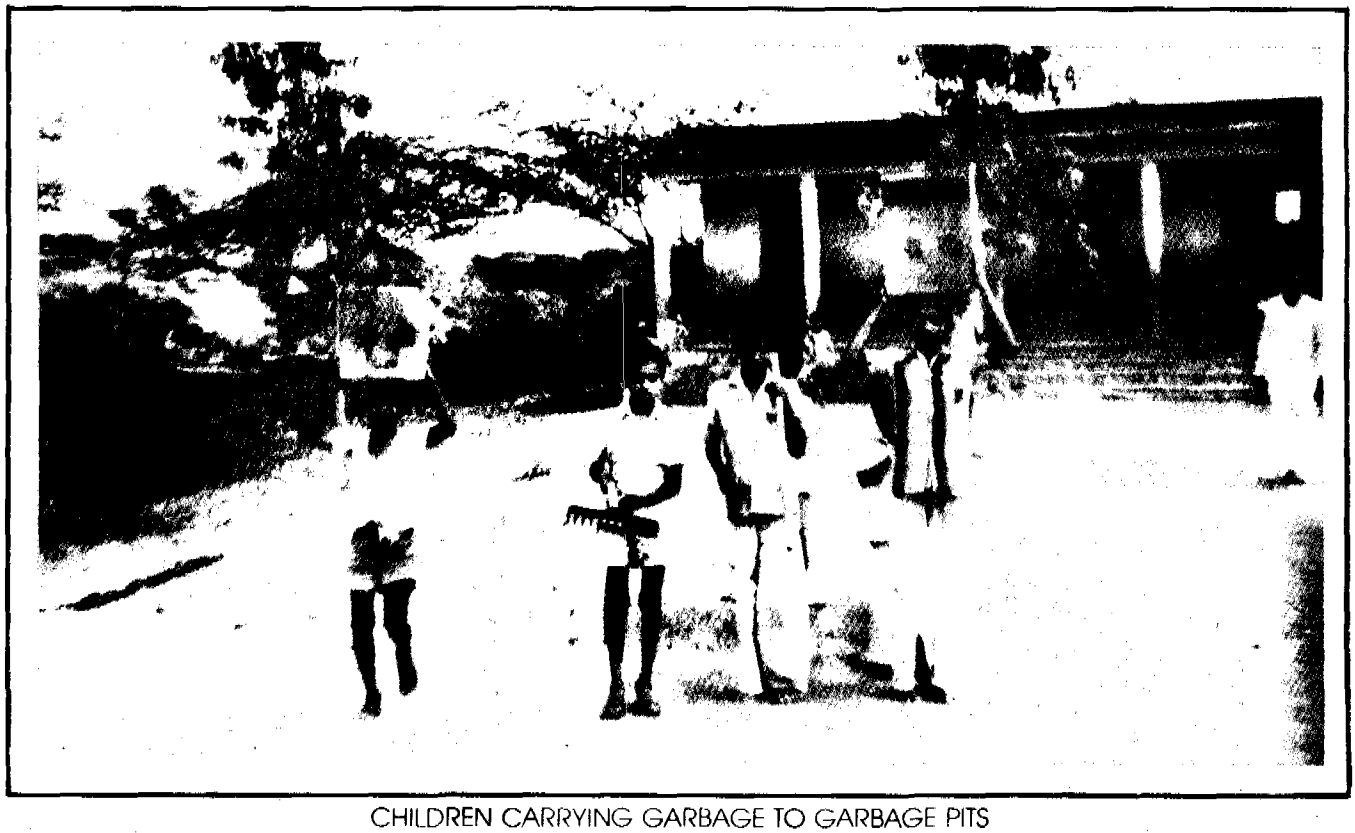
NOTE : UNCONSOLIDATED MEANS SOILS AND SEDIMENTS (SILT - SAND)

CONSOLIDATED MEANS SOFT AND HARD ROCKS.

SCHOOL LATRINE AND URINAL

ORIENTATION OF SCHOOL TEACHERS

CHILDREN CARRYING WATER TO REPLENISH WATER TANK AT LAVATORY



CHILDREN CARRYING GARBAGE TO GARBAGE PITS