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SANITATION  
IN  
PRIMARY SCHOOLS  
(PLAN OF ACTION)

GOVERNMENT OF BANGLADESH

UNICEF

NOVEMBER 1992

822-BD92-14256

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12/10/92		
Action	Draft	Discuss
Comment	Info	File

Government of the People's Republic of Bangladesh  
 Ministry of L.G.R.D. & Co-operatives  
 Local Government Division  
WS-1 Section.

12/10

Minutes of the meeting held on 30.9.92 in Local Govt. Division on School Sanitation under joint collaboration of UNICEF and Bangladesh Government.

1. A meeting was held at 1.00 P.M. on 30.9.92 in the Local Government Division on School Sanitation under joint collaboration of UNICEF and Bangladesh Government. Mr. Mushfiqur Rahman, Secretary, Local Government Division presided over the meeting. The following officers/Representatives attended the meeting:

1. Mr. Md. Nurul Abedin,  
Joint Secretary,  
Local Govt. Division.
2. Mr. Matiur Rahman Shah,  
Joint Secretary ( Dev.)  
Ministry of Education.
3. Mr. Aminuddin Ahmed,  
Chief Engineer,  
DPHE.
4. Dr. Delwar Ali Khan,  
Senior Programme Co-ordinator,  
UNICEF.
5. Mr. Shafayat Ali,  
Deputy Secretary,  
Local Govt. Division.
6. Mr. Md. Abu Saleh,  
Deputy Secretary,  
Primary & Mass Education Divn.
7. Mr. Md. Mowwar Hossain,  
Superintending Engineer,  
LGED.
8. Mr. Md. Ataulah Bhuiyan  
Superintending Engineer,  
LGED.
9. Mr. Md. Fariduddin Ahmed,  
Superintending Engineer,  
DPHE.
10. Mr. Philip Fan,  
Chief,  
Water and Environmental Sanitation  
UNICEF.
11. Dr. Helen Patton,  
Environmental Sanitation Co-ordinator,  
UNICEF.

Contd.....P/2.

12. Mr. Ml. Abdul Hannan Bawlafer,  
Sr. Asstt. Secretary,  
Primary & Mass Education Division
13. Mr. Ml. Nasiruddin Ahmed,  
Asstt. Secretary,  
Local Govt. Division.
14. Mr. A.T. Siddiqi,  
Deputy Chief,  
UNICEF, Dhaka Divisional Office.
15. Mr. Selim Ahmed,  
Programmed Officer,  
UNICEF.

2. On the very outset the Chairman welcomed the officers/representatives present in the meeting and initiated the discussion on how School Sanitation Programme would be effectively implemented in Schools in Bangladesh. In course of the discussion he stated that UNICEF has proposed to extend additional financial assistance for implementing the School Sanitation Programme as discussed with the Hon'ble Foreign Minister of Bangladesh. He also referred to the importance attached by Hon'ble Prime Minister for Social Mobilization for improving Sanitation in Bangladesh. The proposed UNICEF Co-operation in this regard was in line with principles adapted in Social Mobilization Programme for sanitation in Bangladesh. He sought for the whole hearted cooperation from all to make this programme a success. Then the Chairman invited UNICEF Representative to give his opinion on School Sanitation Programme.

3. UNICEF Representative Dr. Delowar Ali Khan said that UNICEF had been extending all possible assistance in sanitation programme in Bangladesh under the Muster Plan. UNICEF is ready for extending all possible cooperation for additional assistance for the programme. Sanitation in Bangladesh is a gigantic task. It is not possible for UNICEF to take up this programme alone. He stressed the need for coordinated cooperation from all other agencies in Bangladesh. He specially attached much importance to sanitation at School level as it would have far reaching effect on National Sanitation Programme. To implement this programme successfully he underscored the need for training and motivation of school children and teachers.

Contd. .... P/3.

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being done

4. Mr. Philip Wan, Chief, Water & Environmental Sanitation UNICEF, during discussion pointed out the technical and financial aspects of the programme. He told that UNICEF developed 3 models of latrines and urinals with different estimated costs and proposed to adapt one of the models suited to these schools.

5. Mrs. Helen R. Patten Environmental Sanitation Coordinator UNICEF informed the meeting that the existing latrines and urinals of schools were not properly maintained. Provisions should be made in the programme for proper maintenance of urinals and latrines to be constructed in school. On the basis of his visit, Mr. Salim Ahmed, UNICEF, Representative gave a practical experience about school sanitation carried out in Rajshahi Division.

6. It is revealed in the discussion that the school sanitation programme would be implemented in addition to the programme of sanitation now being carried out under ADB assistance ( 9000 Primary school construction programme) as well as normal village sanitation being implemented by DPHE. . .

7. After the aforesaid discussion the following decision were taken :-

- (a) 16 Thanas will be taken under this programme in 1992 taking 4 thanas from each division.
- (b) On an average about 1600 Primary schools will be selected under this programme in 1992.
- (c) This programme will commence from 1st. November, 1992.
- (d) A committee comprising of the following members will submit a report before 10.10.92 on the terms of reference mentioned below :-

- (i) Chief Engineer, DPHE. - Convener.
- (ii) Mr. Abu Saleh, Deputy Secretary, Primary & Mass Education Divn. - Members.
- (iii) Mr. A. Jalil Dali, Dy. Director, General Education Programme. - "
- (iv) Mr. Ataulah, Superintending Engineer, LGED. - "
- (v) Mr. Philip Wan, Chief, Water & Environmental Sanitation, UNICEF. - "
- (vi) Mr. Salim Ahmed, UNICEF, Representative. - "

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Terms of reference :-

- (i) Selection of Primary Schools giving due importance to diarrhoea and flood prone areas.
  - (ii) Selection of models latrines and urinals as prepared by UNICEF considering the location of school and estimated cost of proposed models.
  - (iii) Detailed methods of execution of the programme.
  - (iv) Committee may consider any other points for proper implementation of the programme.
8. The next meeting on this subject will be held on 10.10.92 at 1.00 P.M. in the Local Govt. Division.

The meeting ended with vote of thanks to the chair.

Sd/- 1.10.92

( Mushfiqur Rahman )  
Secretary

No. WS-1/20-2/92-999(50)

Dt. 03.10.1992.

Copy forwarded for information and necessary action to :-

1. Chief Engineer, DPHE.

✓ 2. Mr. ... Dix: Dilwar Ali Khan, Senior programme co-ordinator  
UNICEF.

3. P.S. to Secretary, Local Govt. Divn.

4. P.A. to Joint Secretary, Local Govt. Division.

03/10/92  
( J. K. Shah )  
Sr. Assistant Secretary

Faizer Rahman.  
03.10.92

## SANITATION IN PRIMARY SCHOOLS

### 1. INTRODUCTION

The provision of improved sanitation is one of the basic elements of Primary Health Care and essential preconditions for Child Survival and Development. As part of the UNICEF strategies to promote Environmental Sanitation within the context of the Water and Sanitation Decade and the Health for All by the year 2000, UNICEF will collaborate with LGRD and MOE to provide sanitary facilities to all primary schools in Bangladesh. Sanitary latrines in a primary school are not only basic necessities but also promote the practice of good hygiene. It is also reported that the absence of sanitary latrines in schools is a contributory factor to the low girl attendance rate.

### 2. OBJECTIVES OF PROJECT

- To translate the teaching of hygienic practices at schools into practice, and create a clean environment.
- To provide privacy and convenience for defecation and urination, thus encouraging higher school attendance by girls.
- To provide a model and a channel to reach parents and community members for adopting improved hygienic practices.

### 3. BACKGROUND

#### 3.1 On-going school Sanitation Programme

Primary and Mass Education Division. Under the IDA Project (3rd Flood, 1988) implemented in Chittagong and Dhaka Divisions, construction of 1081 latrines was planned for the period 1990-92. Most of these latrines have already been completed. Under the General Education Project, 3610 latrines will be covered of which 610 are funded by ADB. This activity will be started shortly. In addition, GEP has also taken up construction of 4000 new schools where latrines will also be provided.

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The Thana Education Committee selects the schools on the basis of the conditions of the latrines and the approval is done by the Steering Committee chaired by the Secretary, Primary and Mass Education Division. The LGED subsequently evaluates the selection criteria and if found to be fulfilled, floats tenders and recruits contractors.

The money is routed from the Education Department to the Thana Nirbahi Officer and Thana Engineer for disbursement. No contribution money is expected from the schools for the latrines. However, for the new schools costing about Tk. 3 lakh, the committee contributes 33 decimal of land and Tk. 10,000.

The maintenance aspect has not been taken up in an organized way, nor has any training/orientation of the school faculty members been done.

Department of Public Health Engineering. DPHE in collaboration with UNICEF initiated in the past a school sanitation programme with the establishment of demonstration latrine in 7,500 primary school. The Health Education Unit of DPHE was engaged in imparting health education and motivational activities through the Integrated Approach Programme since 1985, which also covers the school. In addition, DPHE is promoting rural sanitation using the school channel to reach out to the parents and community. Taking into consideration the poverty level, the do-it-yourself (homemade) latrine and the waterseal ring and slab single pit latrine are promoted. This approach forms part of the social mobilisation for sanitation.

The DPHE in collaboration with Health, Education and other sectors are engaged in the advocacy and awareness building drive. Headmasters of project schools participate in a one-day training.

### 3.2 Feedback from school teachers

Very useful information have been gathered from a group of 20 teachers in Naysham division invited for a meeting in Naysham on 24 September 1992 with the participation of Education Department, DPHE and UNICEF. A list of the critical factors related to the experiences on school sanitation has been summarised in annex 1. The information, combined with the experiences gained from the GEP have been considered in the formulation of the sanitation project in primary schools.

### 4. STRATEGY

The plan is to initiative, in a phased manner, activities in the 68 CPE (Compulsory Primary Education) Thanas and 110 intensive sanitation/diarrhoeal prone Thanas. These activities will support the greater emphasis given to these Thanas in the education and sanitation sectors. The program will consist of training of the school headmasters/ teachers to ensure full utilization and proper maintenance of the facilities by the school community at all times. In addition, the construction of the latrines should be high quality. Classroom teaching of students should coincide with construction of the school latrines for maximum effectiveness. To enhance



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the participation of the school, it is recommended that the school should set up a maintenance fund and be totally responsible for the repair and maintenance of the sanitary facilities.

Since worm infection is high among children, it is planned that a deworming scheme in selected sanitation thanas will be included with the support of the Health Ministry. This scheme will also serve as an educational tool to demonstrate the relationship between improper excreta disposal and worm infestation.

[ Based on the experiences gained, the programme would be expanded on a phased basis to cover all the primary schools.

## 5. SELECTION OF PROJECT SCHOOLS

In the first phase, 4 Thanas in each of the 4 Divisions of the country will be selected, and all the rural schools without sanitary facilities will be covered. Priority would be given to CPE-cum-Diarrhoea prone thanas followed by latrines Sanitation Thanas.

*how kom is his Renthu* [ The school will be required to provide for the maintenance of the facilities. Only the schools where the headmasters are prepared to ensure the proper utilisation and maintenance of the sanitary facilities, and promote improved hygienic practices of the school community will be taken up. A preliminary questionnaire will be sent to each school to seek basic information, followed by the training of the headmasters. Subsequent to these, the final list of project schools will be drawn up by the Primary and Mass Education Division in collaboration with DPHE and UNICEF Divisional Offices.

All registered non-government primary schools will be included.

## 6. ROLE OF SCHOOL COMMUNITY

### 6.1 Role of teachers

- use the sanitary latrine !
- teach children the benefits of using a sanitary latrine.
- make sure that all staff members and children use the sanitary latrine.
- make sure that the latrine is looked after properly. A dirty latrine always gets dirtier and, finally, no one wants to use it.
- check the latrine every day and make sure that there is enough water for using and flushing the toilets. *who?*
- make sure repairs are carried out at once.
- promote improved hygienic practices among parents and, whenever the opportunity arises, the community members.

*Handwritten:* Nicht schmutz von Lüstige!

## 6.2 Role of Students

- use the sanitary latrine. Do not pass stools or urinate in the open. Keep the school compound clean.
- ? *Handwritten:* L - flush the latrine with water after use.
- help fill the water tank so that enough water is available at all times.
- help teachers to make sure that the latrine is used properly and is well maintained.
- promote improved hygienic practices at home.

## 6.3 Role of School Management Committee

- foster goodwill among all school community members for collaboration in proper use and maintenance of the school sanitary facilities.
- generate funds for regular maintenance and repair of sanitary facilities.

## 7. DESIGN OF SANITARY FACILITIES

### 7.1. Gender

Separate latrine/urinal will be provided for girls and boys. Experiences have shown that teachers share the facilities with the students.

### 7.2. School Size

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In the majority of schools, the number of students in any shift is unlikely to exceed 250 students. Hence, two designs will be adopted as shown in figure 1, which are applicable to schools with a student population of:

- (a) up to 125 students
- (b) above 125 students

### 7.3. Latrine and Urinal design

It is estimated that less than 10% of the students require facilities for defecation on any given day. However, all the students and teachers will need facilities for urination.

The latrine will be of the pour-flush waterseal type connected to a dual-pit system. The excreta are discharged to one of the pits with a capacity to contain excreta collected during 2 years. When the pit is full, the discharge of the latrine will be diverted to the second pit. After the second pit is full, the contents of the first pit can be safely emptied and used as fertilizer.

?  
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?

The urinal for girls will be the same as the latrine. The boys' urinal will be provided with a drain and pipe discharging into the pit.

?

Each latrine/urinal is designed for use by 60 persons. Hence, for a student population of less than 125, a latrine each for the girls and boys will be provided, which will serve both as latrine and urinal.

In calculating the pit size, the volume required is taken as 0.045 cubic metres per person per year. The pit is designed for a 2-year storage capacity. (Detailed calculations in annex 2)

A water tank will be provided to store water for hand washing after toilet usage and flushing the latrines and urinals. Taps are fitted to the tank for hand washing. Water will be provided inside each latrine by taps. Each latrine/urinal will be provided with a container of 2 litre capacity.

8. WATER SUPPLY FOR PROJECT SCHOOLS

Where no handpump is available within the school compound, a tubewell will be provided under the project. Depending on the hydrogeological area, a shallow tubewell fitted with a No 6 handpump or a Tara tubewell will be installed. Where a deep tubewell is required, as in the coastal belt, alternate arrangements, such as providing a deep tubewell for both the school and village community should be considered due to the high investment required.

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The tubewell should be located as near to the sanitary facilities as possible for convenience. At the same time, it should not be nearer than 10 metres from the latrine pits to avoid any risk of contamination of the ground water source. However, the pump will be located on a raised platform at the water tank so that the water is discharged directly into the tanks. The pump will be connected to the tubewell by underground pipe.

9. CONSTRUCTION OF SANITARY FACILITIES AND WATER SUPPLY

The construction works will be undertaken by the DPHE through contractors. A local contractor will be hired for each or second unions, and will also be responsible for the procurement of the building materials.

The hired contractors with their key masons will participate in the construction of the first latrine and urinal complex in the union under the supervision of the engineer. This will help to ensure that the design is understood by all contractors and the quality control maintained when other latrines are built.

Pen

The Engineers will certify the satisfactory completion of the works and the Headmasters will send a statement to the Education Department and DPHE indicating that the works has been undertaken at his/her satisfaction, before final payment to the contractor.

The water supply will also be implemented by DPHE.

A detailed workplan and methodology will be developed.

10. TRAINING AND MOTIVATION

The success of the program will hinge largely on the motivation and interest of the school community as a whole. Hence, a training program for headmasters/teachers will be developed with accompanying education materials.

A National Core Team of trainers will be formed, with the support of a consultant. The team will assist in the development of the training curricula and manual. The contents will take into account the feedback from teachers where school latrines have already been in use for sometime.

The Core Team will train the Thana training team which will consist of selected officials from the Education, DPHE, LGRD and Health sector. The Thana team will be responsible for the training of the Headmasters/teachers and assistant Thana Education officers. Union Parishad Chairman and SMC Chairman will also be trained.

A training draft programme is given in annex 3.

11. MAINTENANCE OF SANITARY FACILITIES

Each school should undertake to generate regular funds for both regular maintenance and necessary repairs to the structure.

A maintenance system should be developed by each school before construction starts. Various methodologies that have proved successful will be discussed during the training sessions.

12. DEWORMING OF SCHOOL CHILDREN

In selected school, scheme for deworming of children both from the health/sanitation context and as an educational tool will be developed. The concept and methodologies will be framed with the participation of the health department.

13. COORDINATION

A Steering Committee chaired by the Secretary, LGRD will meet on a monthly basis to monitor the overall progress of the project. Other members of the committee are:

- i) Secretary, Primary & Mass Education Division
- ii) Project Coordinator, General Education Project (GEP)
- iii) Chief Engineer, DPHE
- iv) Director General, Department of Primary Education
- v) Chief Engineer, LGED
- vi) Senior Programme Coordinator, UNICEF
- vii) Chief, Water & Environmental Sanitation, UNICEF
- viii) Programme Officer, Education, UNICEF.

The Thana Committee chaired by Thana Education Officer (TEO) will meet on a bi-weekly basis to monitor the project implementation and report to the Steering Committee. Other members of the committee are:

- i) Sub-Assistant Engineer, (SAE), DPHE
- ii) Upazila Engineer, LGED
- iii) Union Parishad Chairman
- iv) Thana Health and Family Planning Officer
- v) UNICEF Divisional Officer.

At the school level, the respective Head teacher and the chairman, School Management Committee will ensure all training. Also, they will cooperate with DPHE SAE for timely completion of latrine and tubewell.

14. COST OF PROJECT

The cost can only be tentative at this stage. Firmer estimate will depend on the actual data on the size of school, the numbers requiring sanitary latrines and water supply etc.

Under the present phase, it is estimated that the number of schools in the 16 thanas is 1600. Assuming that 30% of the schools have sanitary latrines, the tentative number of project schools is about 1200.

It is assumed that all the project schools will be provided with the average size latrine/urinal (alternative design 2), and that about 50% of these schools will require water supply (half with suction tubewells and half with tubewells).

A provisional estimate is given below:

i.	Cost of latrines/urinals @ \$ 520 ( 1200)	=	\$ 624,000	<i>Proog</i>
ii.	Water supply by suction tubewell @ \$ (500 nos)	=	\$ 150,000	
	Water supply by Tara Tubewell @ 460 (500 nos)	=	\$ 230,000	
iii.	Deworming Scheme (estimated)	=	\$ 20,000	
iv.	Training components	=	\$ 72,000	
	Total Costs		<u>\$1,096,000</u>	
			=====	

say \$ 1.2 million

15. PROJECT FUNDING

Latrine construction and tubewell installation will be done by DPHE. Upon request from Chief Engineer, DPHE, funds will be allocated by UNICEF Divisional Offices to respective Executive Engineers, DPHE concerned for onward transmission to SAE, DPHE at the Thana level.

TEO, DPE will be responsible for implementation of training at the Thana and school level. Necessary training fund for thana and school level will be allocated to TEO, DPE, by UNICEF Divisional Offices (Rajshahi, Dhaka, Khulna, Chittagong).

16. Work schedule

A tentative workplan for the various activities is attached.



Prima  
did feedback

ANNEX - 1

CRITICAL FACTORS - Feedback from teachers

1. Security

Latrines and urinals should be attached to, or preferably inside the school building. Both should be locked at night. If it is far from school people break it open and use it and it gets blocked. Latrines must be kept open during school hours.

2. Number of Latrines and Urinals

2 latrines and two urinals per 200 students is required. Minimum of 2 latrines is required, as if there is only one latrine, and it gets blocked, then there is no other facility. Considering the numbers of children the number of latrines can be increased for larger schools.

3. Motivation

Headteachers especially need to be highly motivated. They can explain and motivate the management committee, parents and teachers, and ensure correct use and maintenance of the latrines. Teachers parents and children need to understand why the use and maintenance of latrine is important.

4. Best quality

Good quality latrine is required for maintenance. Two pits are needed. Ceramic bowl will assist proper flushing and avoid blockaging. ?

5. Availability of Water

A water tank should be installed at the latrines, which can be filled up daily from a nearby water source. A tubewell needs to be close to the school, within 100 feet, as the children are small and cannot carry water too far. Pond water is too dirty to use for washing. Tubewells need to be installed in schools without a nearby handpump, and damaged pumps need to be replaced. Older children on rota basis, should fill the water tank at the latrines every day.



6. Security for tubewells

Handpumps are often stolen from school tubewells, and a security system need to be designed, or the pumps installed inside the building.

7. Use of latrine - students and teachers need to be taught how to use a latrine. (Tin plate pictures on inside of the latrine door could be developed).

8. Use of Plenty of water

The latrine need to be flushed with plenty of water. Blockage is a common problem due to inadequate amounts of water being used. Some teacher advocate use of two lotas. Water Tank with taps need to be constructed at the latrines.

Water tanks can have taps inside the latrines for washing and flushing, and outside taps for handwashing.

9. Regular cleaning

The latrine needs to be cleaned and flushed with a few buckets of water regularly. teacher and students working together seems to be the best strategy - One teacher working with two students with a rotation of teacher and students.

10. Gender separation

!! Girls and boys toilets should be separate. This maintains purdah. Also it seems that girls keep the latrine clean and that encourages the boys to keep them clean. Also girls are shy to approach the latrine if a boy is using it.

The latrines need separate use, but can be side by side.

11. Sweeper

only then?

A sweeper needs to be called if the latrine gets blocked. One school paid the caretaker an extra fee for cleaning the latrines.

12. Funds for maintenance

Some funds need to be made available for maintenance and repair and paying the sweeper. Some schools used exam fees, some used teacher contribution. Parents could contribute for a maintenance and repair fund.

13. Light and Fresh air

There should be a good space between the top of the wall and roof for light and fresh air. This is culturally acceptable and nice to use.

14. Younger children

Younger children need to be encouraged to use the latrine/urinals. There is a general attitude that for young children it doesn't matter. It should be part of first class introduction to the school.

15. Parents

Parents need to be explained that children using and cleaning the latrines is part of development and in their best interests. Cleaning the latrines is social work.

16. Training

Training should include advantages, how to use and maintenance of latrine. These need to be clearly explained. Training should be participatory.

17. Trainers

Thana level trainers should train all teachers in each school, (not only headmasters).

18. Maintenance Manual

Manual should be developed for school teachers.

19. Follow-up

Regular follow up and support will assist implementation. This can be done by ATEOs.

ANNEX - 2A

DESIGN OF LATRINE PITS

1. School Population less than 125 students.

Assuming 10% of students defecate at school in any day, number of students passing /FS stools = 12

Volume of excreta per person per year = 0.045 m<sup>3</sup>

Volume of excreta for 12 persons per year = 0.54 m<sup>3</sup>

Capacity required for 2 year storage = 1.08 m<sup>3</sup>

Assuming a freeboard of 0.3m, and pit diameter of 1.2m, pit depth = 1.3m

2. School Population above 125 students (assume 250 students)

Number of students passing stools = 25

Volume of excreta for 25 persons per year = 1.12 m<sup>3</sup>

Capacity required for 2 years = 2.24 m<sup>3</sup>

For pit diameter of 1.2m, depth of pit = 2.3m

ANNEX 2B : SIZE OF WATER TANK

1. School Population less than 125 students

Water for flushing after defecation at 3 litres per person	=36 litres
For urination at 1 litre per person	=125 litres
For hand washing at 1 litre per person	=125 litres
Total capacity	= 286 litres, say 500 litres

( Note. The tank can always be replenished as required)

2. School Population above 125 (250 students.)

Water for flushing after defecation	=	75 litres
For urination	=	250 litres
For hand washing	=	250 litres
Total capacity	=	575 litres

Design for 1000 litres

ANNEX - 3

Training Programme:

1. The success of the school sanitation programme will largely depends on the motivation and interest of the school teachers and the students as a whole. A training programme for Head Teachers/Assistant teachers is necessary at the school level to support and maintain the school sanitation programme.
  
2. Training Division of Directorate of Primary Education (DPE) will be responsible for the overall training of the school sanitation programme. A National Consultant (having good knowledge and experience of developing training manual etc) will be engaged for the development and implementation of the training programme in support of DPE Training Division.
  
3. A National Core Team (12 persons), consisting of DPE, DPHE, LGED and UNICEF (Sanitation Unit and Divisional Office) will work closely with the consultant. An orientation and planning workshop will be arranged with these National Core Trainers to identify the contents as well as the process of training of the Thana Core Trainers.
  
4. The National Core Trainers will be responsible to train the Thana Core Trainers. Probable thana core trainers team are:
  - Thana Education Officer (TEO, DPE)
  - Sub-assistant Engineer (SAE, DPHE)
  - Thana Engineer, LGED
  - Asst. Thana Education Officer
  - One Medical Officer of Thana Health Complex.

i.e., 5 core trainers in each of the 16 Thanas under the first phase of school sanitation programme (5x16 thanas = 80 core trainers). Thana core trainers training can be arranged in two batches (40 each) at BARD, Comilla and RDA, Bogra at the same time or one week after the other.

5. Duration of the training of each group of thana core trainers will be 3/4 days. It will cover the school sanitation programme implementation, use, maintenance and repair of the school latrines, class room teaching models and impart participatory training skills.
6. The thana training team is responsible to conduct the orientation/training for the Head/Assistant teachers of all Govt. Primary Schools in their respective thanas. Approximately 300 teachers in each thana (i.e., 300 teachers x 16 thana = 4800 teachers) will be trained. Duration of the training/orientation will be one day. 30 teachers will make a batch and 10 training/orientation courses will be arranged in each thana. These training/orientation can be arranged at the thana/union level bringing teachers from 7/8 schools together in one school convenient to everyone and selected by Thana Education Officer.
7. 16 District Primary Education Officers, 16 Sub-Divisional Engineers of DPHE, 16 District Engineers of LGED and 16 Civil Surgeons and 16 ATEO (total 80) will be oriented at the District level to Supervise and monitoring of the School Sanitation Programme. One day orientation can be arranged in two places simultaneously (32 from Khulna/Rajshahi and 32 from Dhaka/Chittagong).
8. Assistant Thana Education Officers (ATEO) of Department of Primary Education (DPE) will also be oriented for follow-up monitoring and support at the school level. Approximately 64 ATEOs (4 ATEOs in each thana) from 16 first phase selected thanas will be oriented. This orientation can be arranged in two batches (32 in each batch) at the Divisional HQ. They will also attend teachers training for the schools under their respective supervision.
9. School teachers will orient and motivate their respective school management committee (SMC), Parent Teachers Association (PTA) and parents on the school sanitation programme. They will conduct special classroom teaching with their students. This will include sanitation and hygiene in general, school latrine construction, use of latrine and maintenance of the latrines. Class room teachings will be conducted simultaneously with the actual construction of the latrines in each school.

TRAINING STRUCTURE

NATIONAL CORE TEAM  
(12 MEMBERS)

TRAIN



16 THANA TRAINING TEAM  
(4 MEMBERS EACH TEAM)

TRAIN



4800 SCHOOL TEACHERS  
(70 SCHOOLS, 300 TEACHERS EACH THANA)

TRAIN



64 ATEOs  
(4 EACH THANA FOR FOLLOW-UP)

TRAIN



SCHOOL CHILDREN

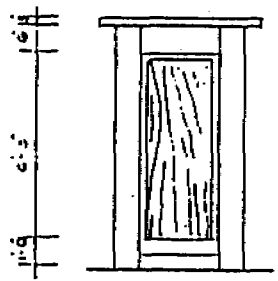
ORIENT



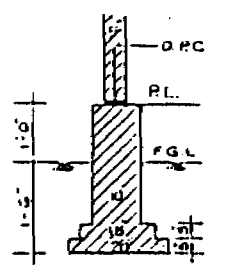
PARENTS



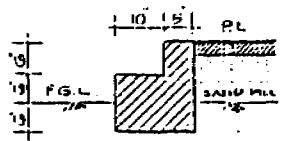




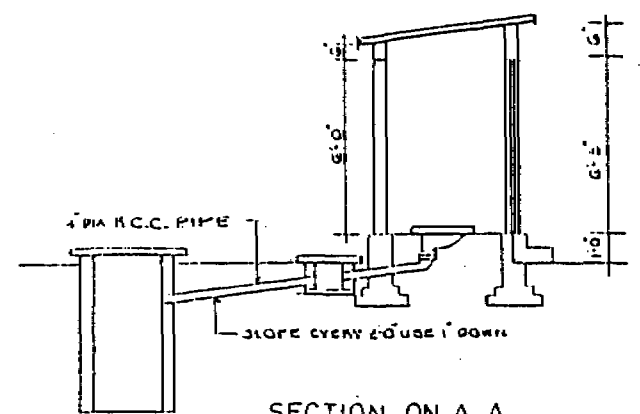
FRONT ELEVATION



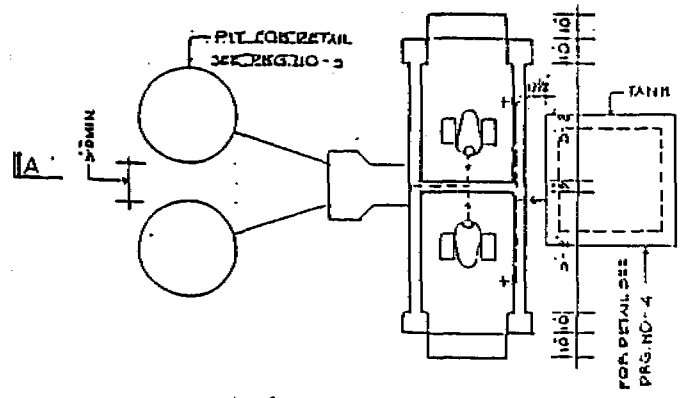
20" WIDE BRICK FOUNDATION



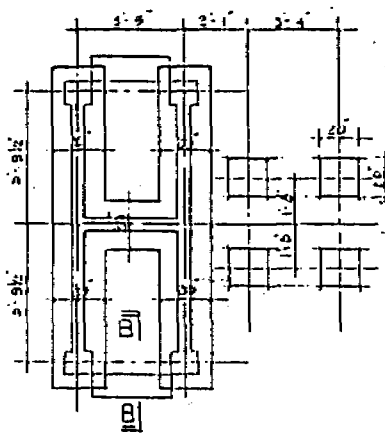
SEC ON B - B



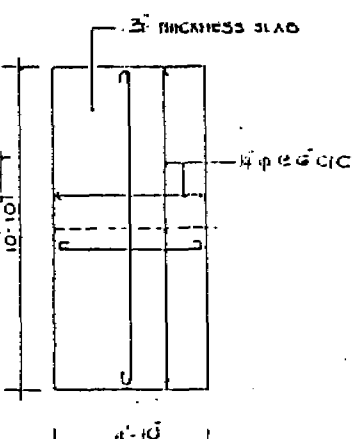
SECTION ON A-A



PLAN OF BOYS & GIRLS TOILET.

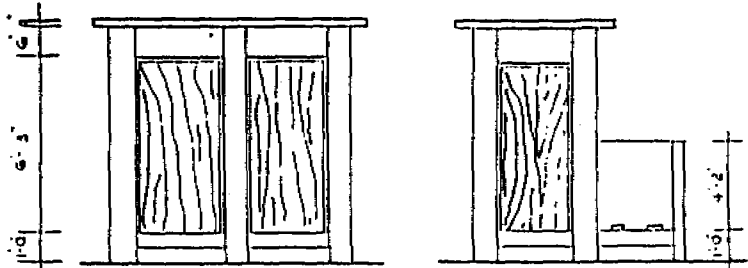


FOUND. TRENCH PLAN



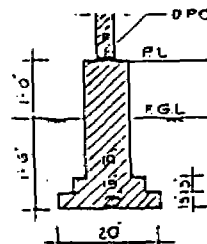
ROOF OF TOILET

GOB - UNICEF		
SANITATION IN PRIMARY SCHOOL		
DETAILS OF LATRINE		
DESIGNED: M. Hasan	APPROVED:	DATE:
DRAWN: MR. S. ZAMAN		ONG. NO-1

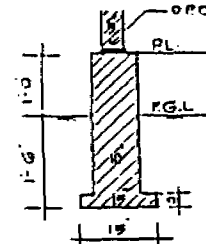


FRONT ELEVATION

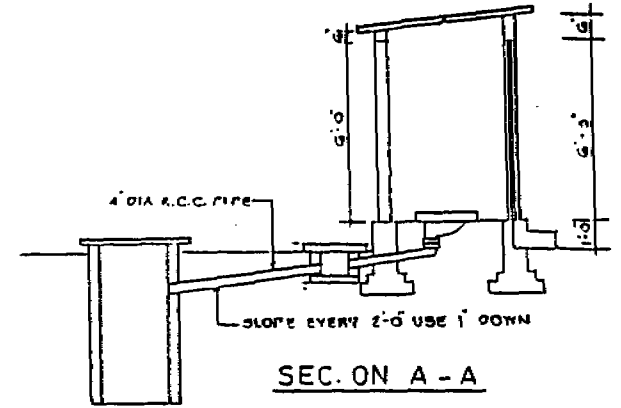
BACK ELEVATION



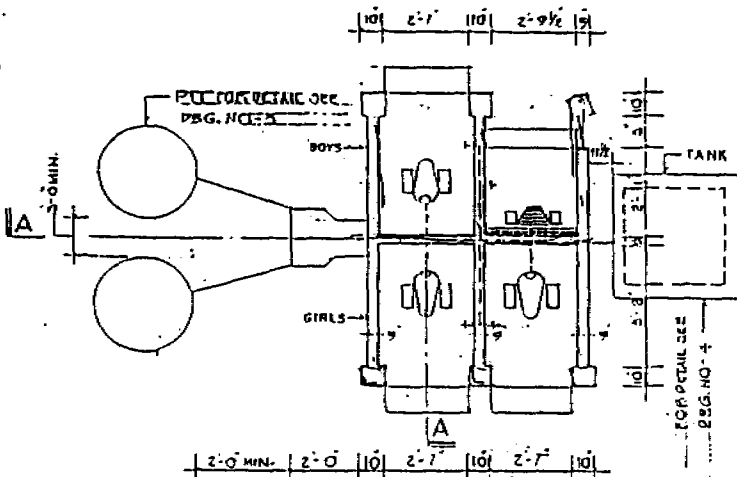
20 WIDE BRICK FOUNDATION



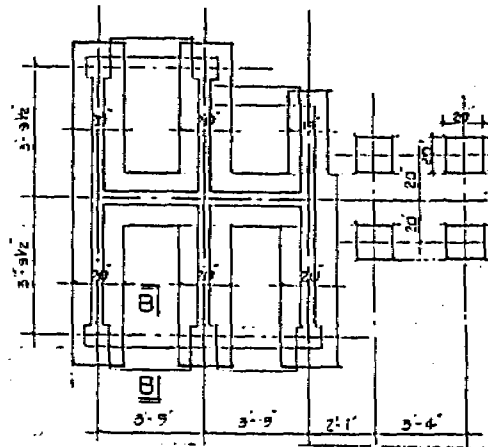
15 WIDE BRICK FOUNDATION



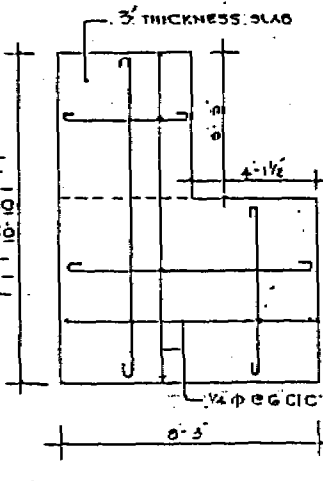
SEC. ON A - A



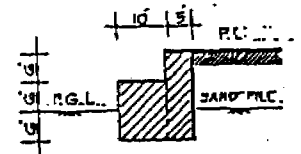
PLAN OF BOYS & GIRLS TOILET



FOUND. TRENCH PLAN

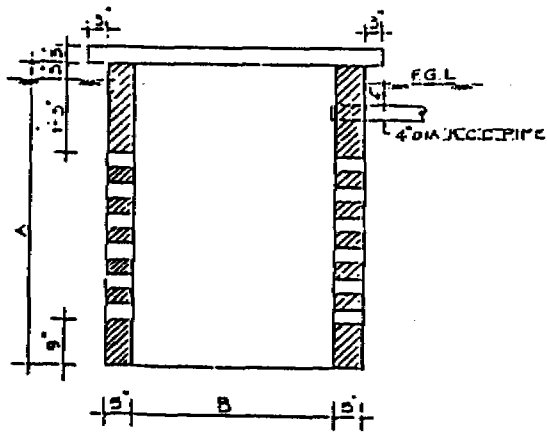


ROOF OF TOILET

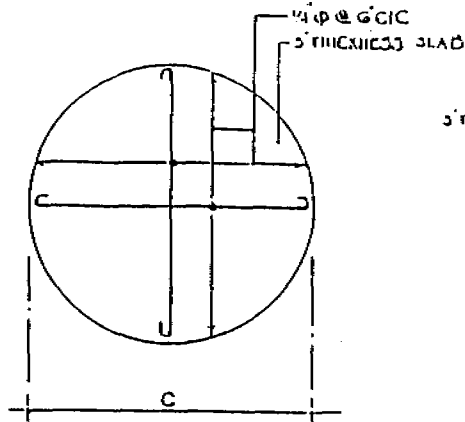


SEC. ON B - B

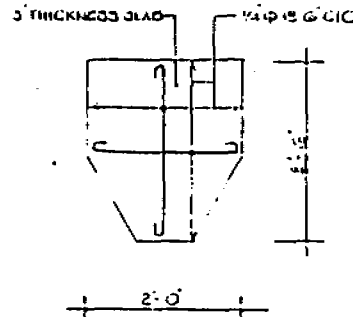
GOB - UNICEF		
SANITATION IN		
PRIMARY SCHOOL		
DETAILS OF LATRINE		
DESIGNED <i>M. Hasan</i>	APPROVED	DATE
DRAWN <i>M.S. ZAMAN</i>	APPROVED	DRG. NO - 1



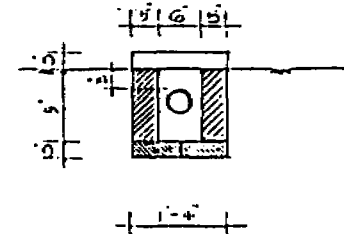
SECTION ON A-A



PIT SLAB DETAIL



DETAILS OF INSP CHAMBER SLAB



SEC. ON B-B

Notes.

1. SCHOOL POPULATION LESS THAN 125 STUDENTS

A = 4'-4"

B = 3'-11"

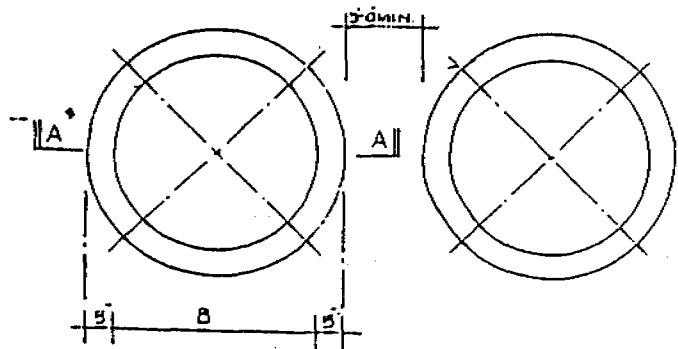
C = 5'-3"

2. SCHOOL POPULATION 126 TO 250 STUDENTS

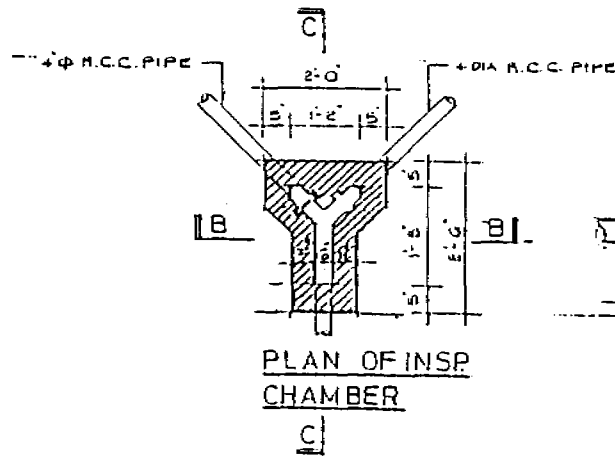
A = 7'-6"

B = 3'-11"

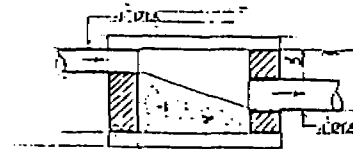
C = 5'-3"



PIT DETAIL



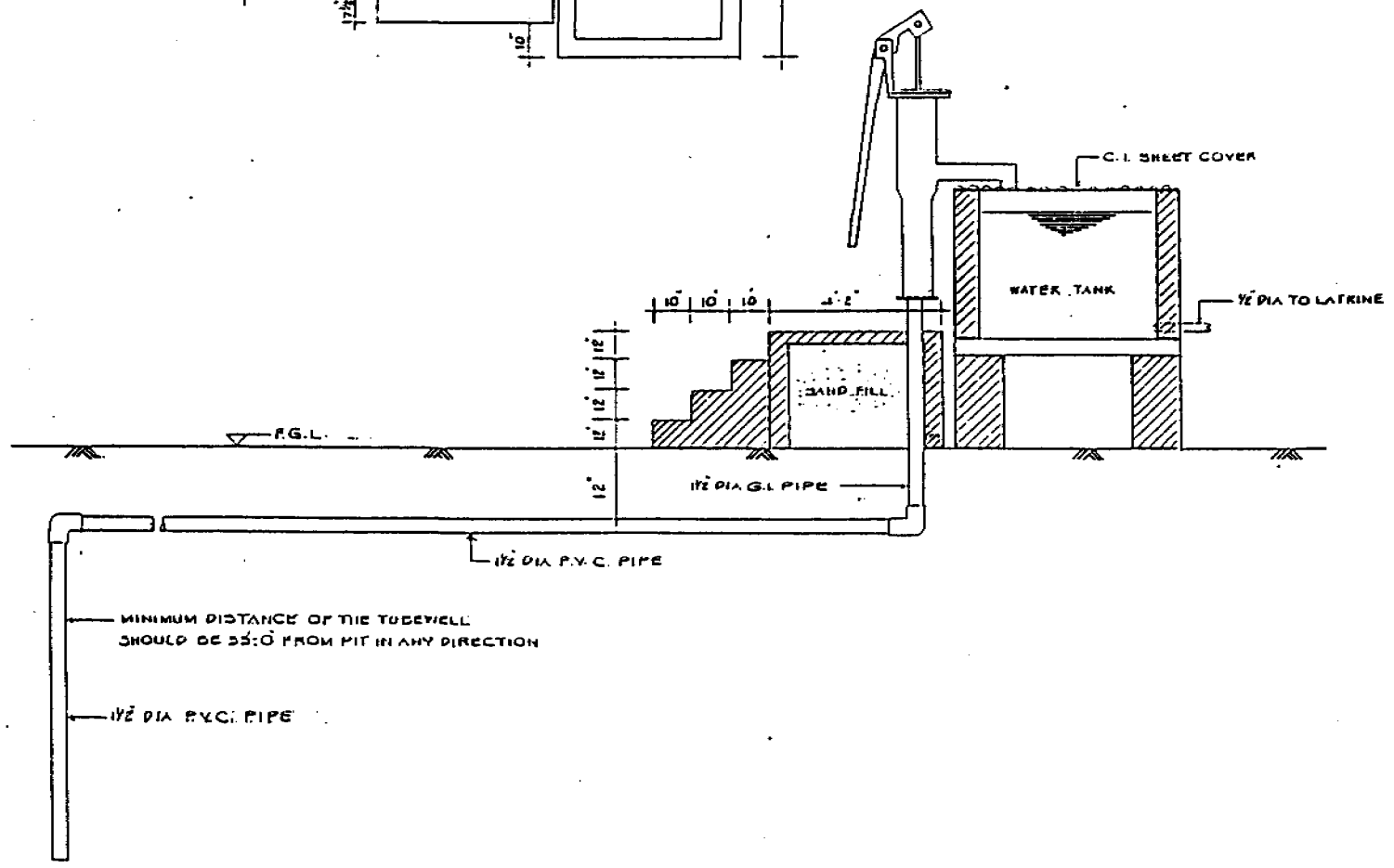
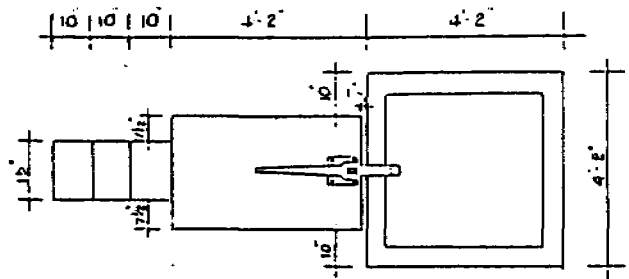
PLAN OF INSP CHAMBER



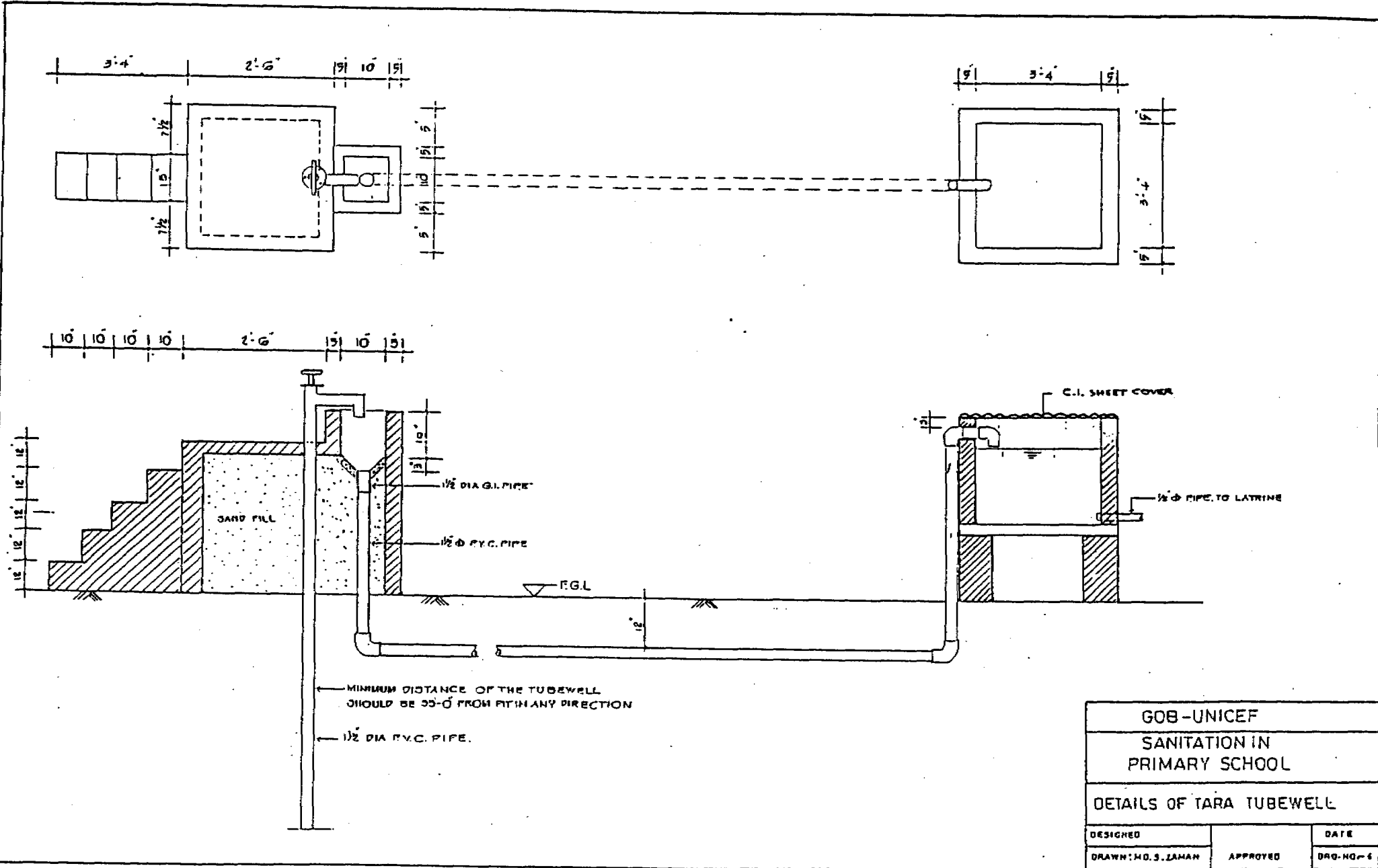
SECTION C-C

GOB-UNICEF		
SANITATION IN PRIMARY SCHOOL		
DETAILS OF PIT & INSPECTION CHAM.		
DESIGNED <i>M. Hasan</i>	APPROVED	DATE
DRAWN: MD. S. TAMAM	APPROVED	DRG. NO: 1





GOB - UNICEF		
SANITATION IN PRIMARY SCHOOL		
DETAILS OF TUBEWELL NO 6		
DESIGNER	APPROVED	DATE
DRAWN: M. S. ZAMAN		DRG. NO - 5



GOB-UNICEF		
SANITATION IN PRIMARY SCHOOL		
DETAILS OF TARA TUBEWELL		
DESIGNED		DATE
DRAWN: M.D. S. ZAMAN	APPROVED	DRG. NO. 6

TRAINING BUDGET

1.	Orientation and Planning Workshop with National Core Trainers	Tk. 20,000
2.	Training Manual Development, testing, Finalization and printing	Tk.1000,000
3.	Thana Core Trainers Training (80)	
	- TA/DA of Thana Core Trainers	Tk. 100,000
	- Cost of training venue, tea/ sacks, misc. cost	Tk. 30,000
	- TA/DA of National Core Trainers	Tk. 75,000
4.	Orientation of DPEO, SDE, LGED Engineers, Civil Surgeon (64)	
	- TA/DA of District Supervisors	Tk. 100,000
	- Cost of training venue, teachers	Tk. 30,000
	- TA/DA of National Core Trainers	Tk. 75,000
5.	Orientation of ATEOs (64)	
	- TA/DA of ATEO	Tk. 100,000
	- Cost of training venue, tea/ snacks	Tk. 30,000
	- TA/DA of National Core Trainers	Tk. 75,000
6.	Head/Assistant Teachers Orientation 16 Thana x 70 Schools x 4 Teachers = 4480 teachers	
	- TA/DA @ Tk. 150	Tk. 720,000
	- Tea/Snacks @ Tk. 15	Tk. 67,200
	- TA/DA of Thana Core Trainers	Tk. 150,000
7.	Supervision and Monitoring	Tk. 200,000
		=====
	Total:	Tk.2772,200
		US\$ 72,000

**BILL OF QUANTITIES WITH ESTIMATE OF COST FOR CONSTRUCTION OF  
3 LATRINES AND 1 URINAL.**

Sl. NO.	DESCRIPTION OF ITEM	QUANATITY	UNIT	MARKET RATE		REMARKS
				RATE	AMOUNT	
01.	Earth work in excavation	361	Cft	0.60	217	
02.	Brick flat soling work (2nd class)	51	Sft	6.50	332	
03.	Brick work in 1st class (1:6) in foundation wall, etc.	118	Cft	37.00	4366	
04.	Brick work 1st class in 5" thick (1:6)	240	Sft	18.50	4440	
05.	Damp proof coarse work					
	(a) On plinth wall	18	Sft	16.00	288	
06.	Plastering work in cement sand mortar					
	(a) On brick surface (1:6)	308	Sft	4.00	1232	
	(b) On RCC surface (1:4)	73	Sft	4.00	292	
07.	R.C.C. work in slab (1:2:4)	30	Cft	68.00	2040	
08.	M.S. reinforcement using 1/4" dia	0.85	Cwt	1200	1020	
09.	White washing work	378	Sft	0.35	133	
10.	Supply and fitting fixing of chowkat for door (Jam wood)	3.63	Cft	400	1452	
11.	Supply and fitting fixing of door shutter (1.25") (Jack Wood).	49	Sft	50	2450	
12.	Supply and fitting fixing of water closet.	3	each	500	1500	
13.	Supply and fitting fixing of 4" dia RCC pipe.	25	Rft	20	500	
14.	Neat cement finishing work	185	Sft	1.50	278	
				Tk. -	20,540	
					*****	

doc: LATRINE1.EST/FHK18  
PW/PHK



BILL OF QUANTITIES WITH ESTIMATE OF COST FOR CONSTRUCTION OF  
2 LATRINES (ONE BOY - ONE GIRL)

SL. NO.	DESCRIPTION OF ITEM	QUANATITY	UNIT	MARKET RATE		REMARKS
				RATE	AMOUNT	
01.	Earth work in excavation	185	Cft	0.60	111.00	
02.	Brick flat soling work (2nd class)	31	Sft	6.50	201.00	
03.	Brick work in 1st class (1:6) in foundation wall, etc.	65	Cft	37.00	2405.00	
04.	Brick work 1st class in 5" thick (1:6)	250	Sft	18.50	4625.00	
05.	Damp proof coarse work					
	(a) On plinth wall	8	Sft	16.00	128.00	
06.	Plastering work in cement sand mortar					
	(a) On brick surface (1:6)	370	Sft	4.00	1480.00	
	(b) On RCC surface (1:4)	56	Sft	4.00	224.00	
07.	R.C.C. work in slab (1:2:4)	21	Cft	68.00	1428.00	
08.	M.S. reinforcement using 1/4" dia	0.75	Cwt	1200.00	900.00	
09.	White washing work	282	Sft	0.35	99.00	
10.	Supply and fitting fixing of chowkat for door (Jam wood)	1.54	Cft	400	616.00	
11.	Supply and fitting fixing of door shutter (1.25") (Jack Wood).	32	Sft	50	1600.00	
12.	Supply and fitting fixing of water closet.	2	each	500	1000.00	
13.	Supply and fitting fixing of 4" dia RCC pipe.	12	Rft	20	240.00	
14.	Neat cement finishing work	120	Sft	1.50	180.00	
15.	Pan	4	Nos.	500	2000	
				-----		
				Tk. - 15,237.00		
				=====		

doc: LARINE2.EST/FHK18  
PW/FHK

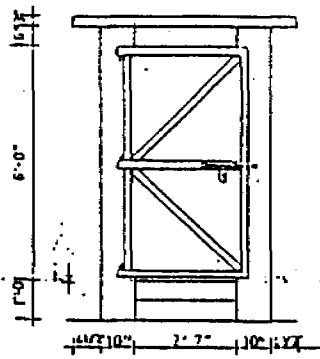
**BILL OF QUANTITIES WITH ESTIMATE OF COST FOR CONSTRUCTION OF  
WATER TANK CAPACITY – 1000 LITRE WITH SHALLOW TUBEWELL**

SL NO	DESCRIPTION OF ITEM	QUANTITY	COST		REMARKS
			UNIT RATE	AMOUNT	
1	Earth work in excavation	17	Cft	0.60	10.00
2	Brick plate form work with 1st class brick	6	Sft	18.50	110.00
3	Brick work in 1st class (1:6) in foundation wall etc.	13	Cft	37.00	481.00
4	Brick work 1st class in 5" thick (1:6)	53	Sft	18.50	980.00
5	Plastering work in cement sand mortar				
	(a) On brick surface (1:6)	150	Sft	4.00	600.00
	(b) On RCC surface (1:4)	21	Sft	4.00	84.00
6	R.C.C. work in slab (1:2:4)	6	Sft	68.00	408.00
7	M.S. reinforcement using ¼" dia	0.25	Cwt	1,200.00	300.00
8	White washing work	106	Sft	0.35	37.00
9	Supply and fitting ½" dia G.I. Pipe	15	Rft	20.00	300.00
10	½" dia G.I. fittings	1	Each	L.S.	120.00
11	Bib cock for Toilet	5	Each	12.00	60.00
12	Neat cement finishing work	65	Sft	1.50	98.00
13	Cover with C.I. Sheet and wooden frame	1	Each	L.S.	500.00
<b>SUB-TOTAL :</b>					<b>4,088.00</b>
14	Sinking cost of Shallow Tubewell as per drawing			L.S.	1,000.00
15	Construction of Platform for Shallow pump as per drawing			L.S.	2,674.00
<b>GRAND-TOTAL :</b>					<b>7,762.00</b>

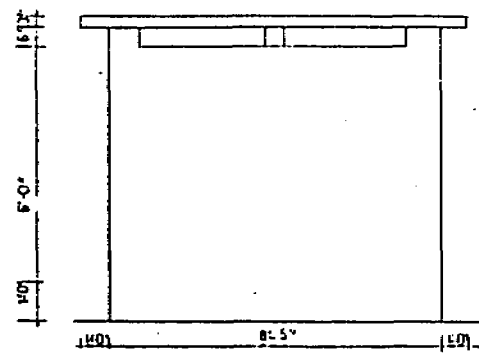
Note: Material cost of Tubewell not included (Tk. 3,500).

BILL OF QUANTITIES WITH ESTIMATE OF COST FOR CONSTRUCTION OF  
WATER TANK CAPACITY - 1000 LITRE WITH TARA TUBEWELL

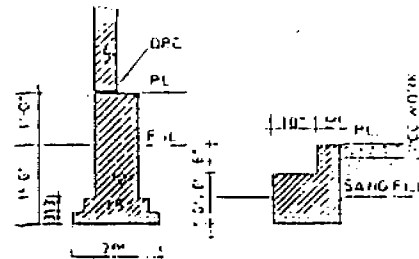
SL. NO	DESCRIPTION OF ITEM	QUANTITY	UNIT	COST		REMARKS
				RATE	AMOUNT	
1	Earth work in excavation	17	Cft	0.60	10.00	
2	Brick plate form work with 1st class brick	6	Sft	18.50	110.00	
3	Brick work in 1st class (1:6) in foundation wall etc.	13	Cft	37.00	481.00	
4	Brick work 1st class in 5" thick (1:5)	53	Sft	18.50	980.00	
5	Plastering work in cement sand mortar					
	(a) On brick surface (1:6)	150	Sft	4.00	600.00	
	(b) On RCC surface (1:4)	21	Sft	4.00	84.00	
6	R.C.C. work in slab (1:2:4)	6	Sft	68.00	408.00	
7	M.S. reinforcement using ½" dia	0.25	Cwt	1,200.00	300.00	
8	White washing work	106	Sft	0.35	37.00	
9	Supply and fitting ½" dia G.I. Pipe	15	Rft	20.00	300.00	
10	½" dia G.I. fittings	1	Each	L.S.	120.00	
11	Bib cock for Toilet	5	Each	12.00	60.00	
12	Neat cement finishing work	65	Sft	1.50	98.00	
13	Cover with C.I. Sheet and wooden frame	1	Each	L.S.	500.00	
SUB-TOTAL :					4,088.00	
14	Sinking cost of TARA Tubewell as per drawing			L.S.	4,000.00	
15	Construction of Platform for TARA pump as per drawing			L.S.	2,774.00	
GRAND-TOTAL :					10,862.00	
Note: Material cost of Tubewell not included (Tk. 7,200).						



FRONT ELEVATION

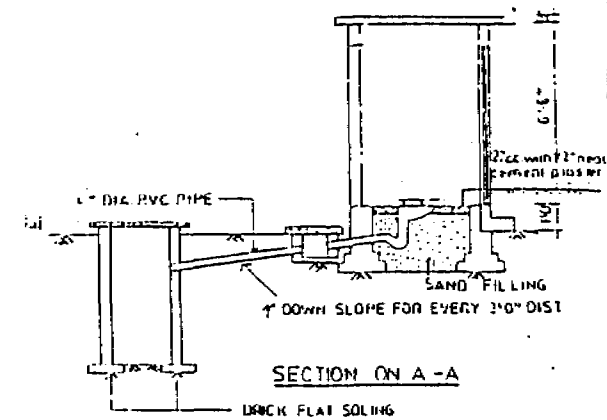


SIDE ELEVATION

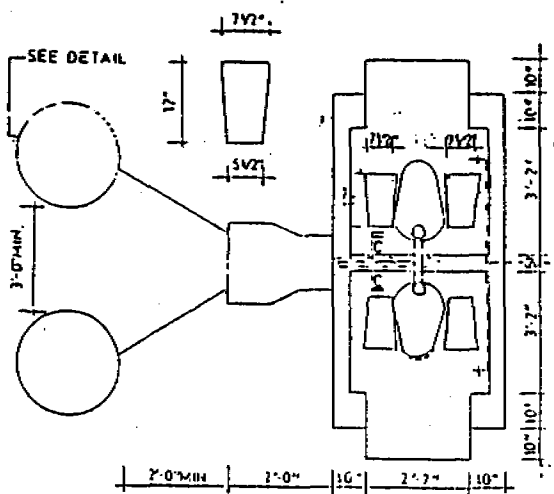


20" WIDE BRICK FOUNDATION

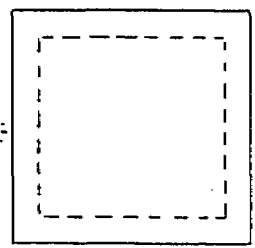
SEC. ON B-B



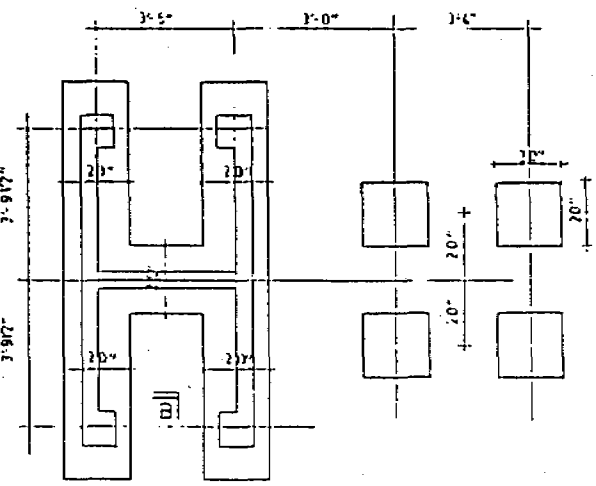
SECTION ON A-A



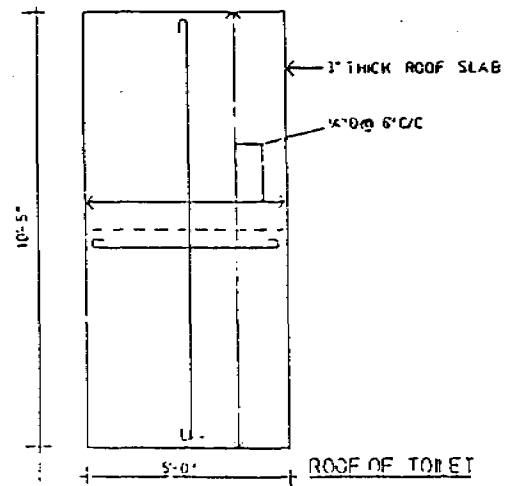
PLAN OF BOYS & GIRLS TOILET



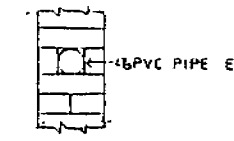
TANK



FOUND. TRENCH PLAN



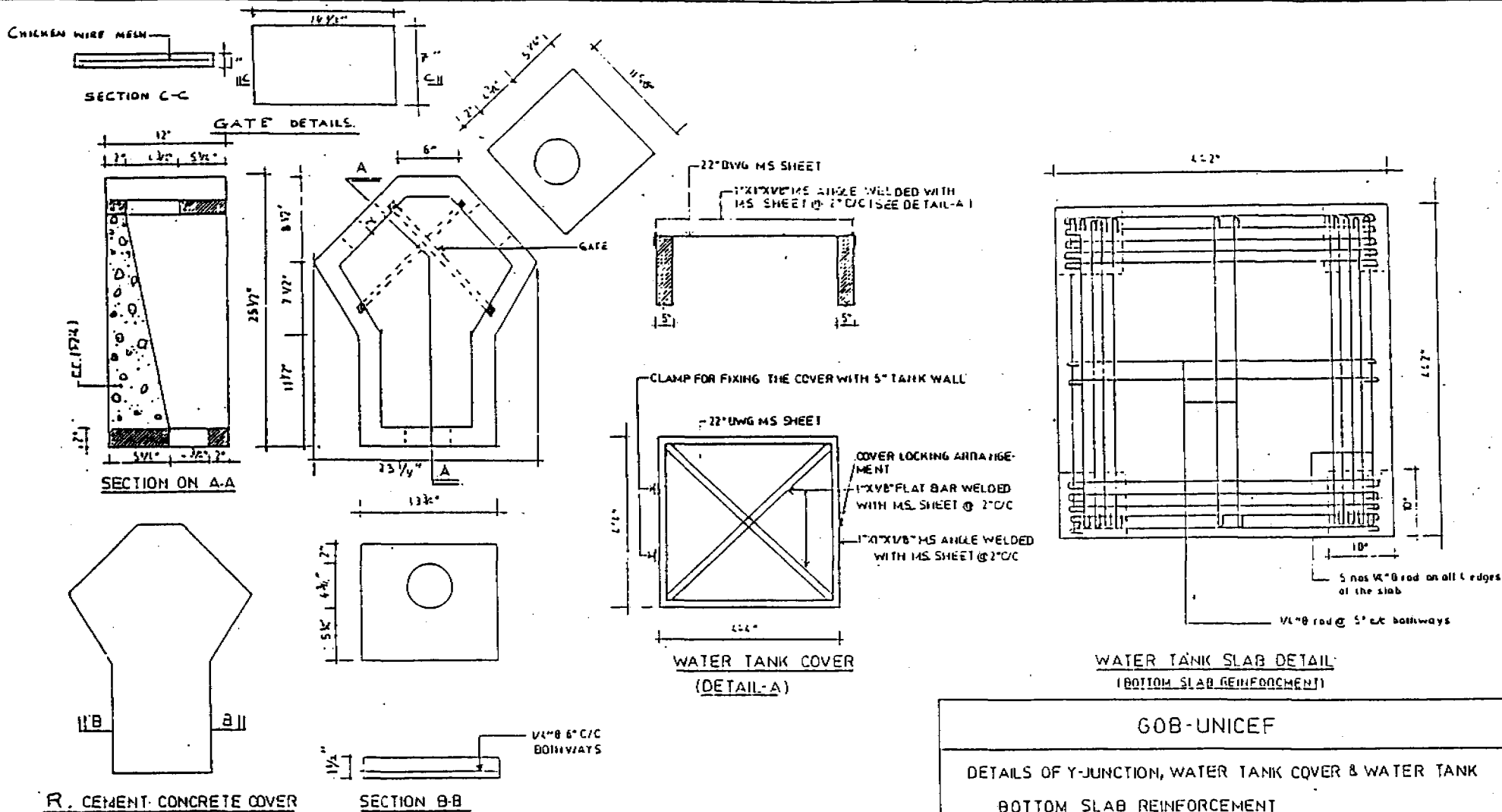
ROOF OF TOILET



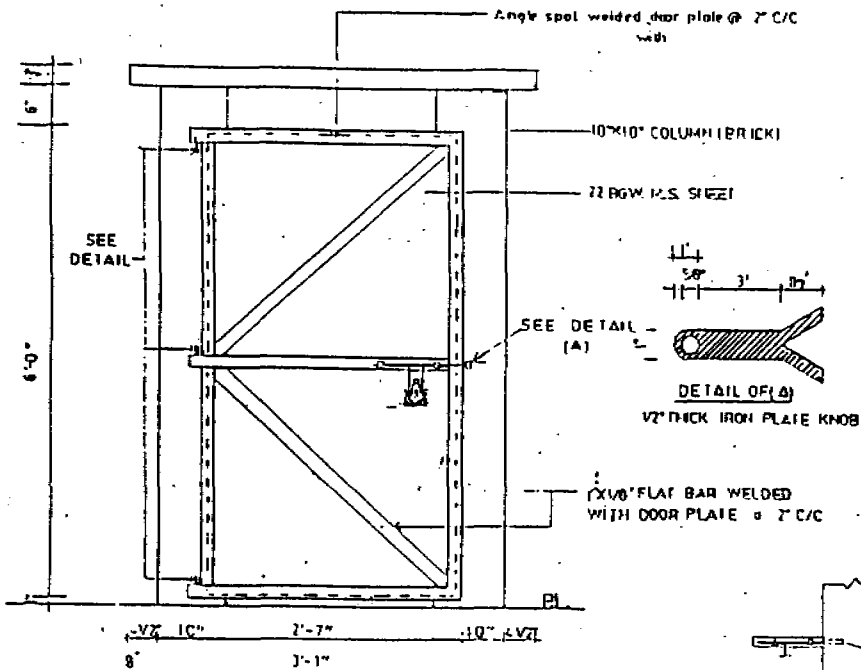
SEC. ON C-C

GOB-UNICEF		
SANITATION IN PRIMARY SCHOOLS		
DETAILS OF LATRINE TYPE - A -		
DESIGN	DATE	APPROVED
	01/14/11	[Signature]

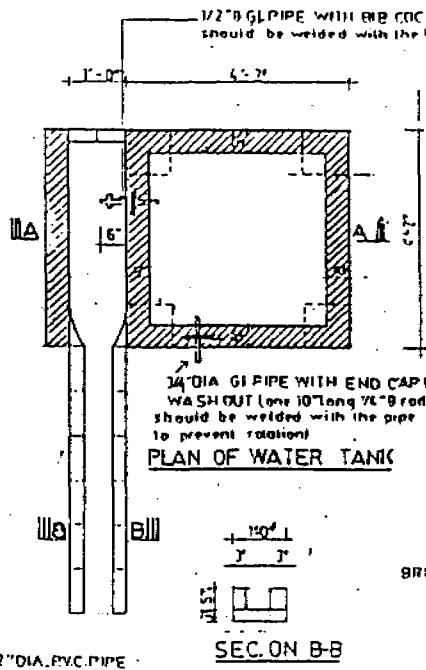




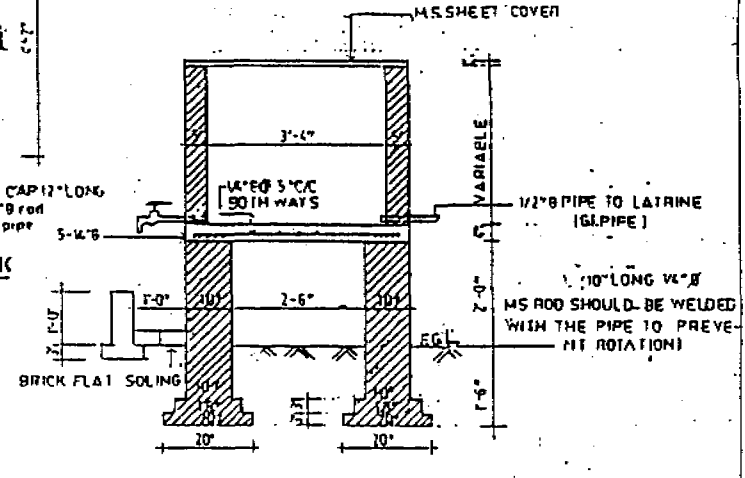
GOB-UNICEF		
DETAILS OF Y-JUNCTION, WATER TANK COVER & WATER TANK BOTTOM SLAB REINFORCEMENT		
SANITATION IN PRIMARY SCHOOL		
DESIGN	DRAWN	APPR. <i>[Signature]</i> ORG. NO. 3.



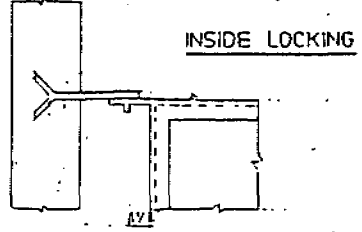
DETAILS OF SCHOOL LATRINES DOOR



SEC. ON B-B



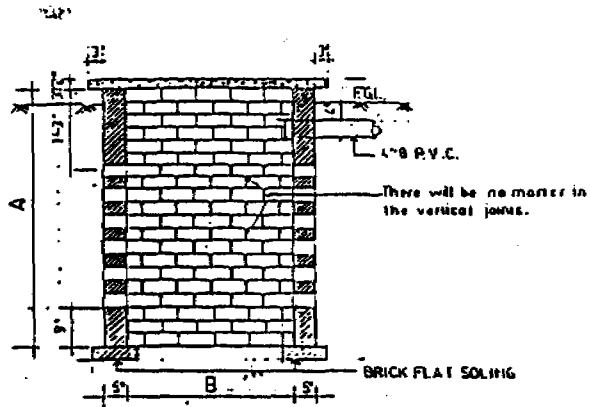
SECTION ON A-A



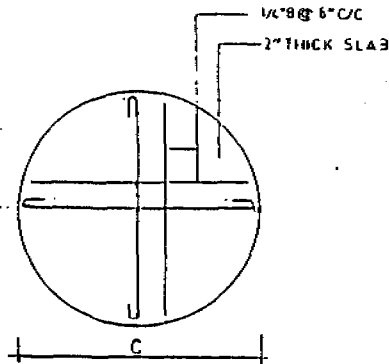
INSIDE LOCKING

DETAILS OF FIXING DOOR WITH WALL

GOB-UNICEF			
SANITATION IN PRIMARY SCHOOL			
DETAILS OF DOOR & WATER TANK			
DESIGN	DRAWN	APPR. <i>[Signature]</i>	ORG. NO. 4



SECTION ON K-K



PIT SLAB DETAIL

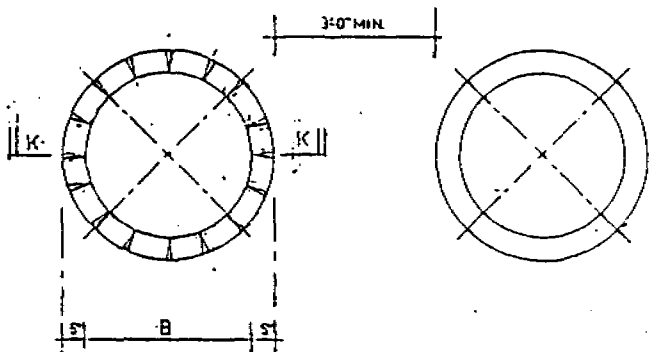
**NOTE:**

1. SCHOOL POPULATION LESS THAN 125 STUDENTS

A = 4'2"  
 B = 3'11"  
 C = 5'3"

2. SCHOOL POPULATION ABOVE 125 STUDENTS

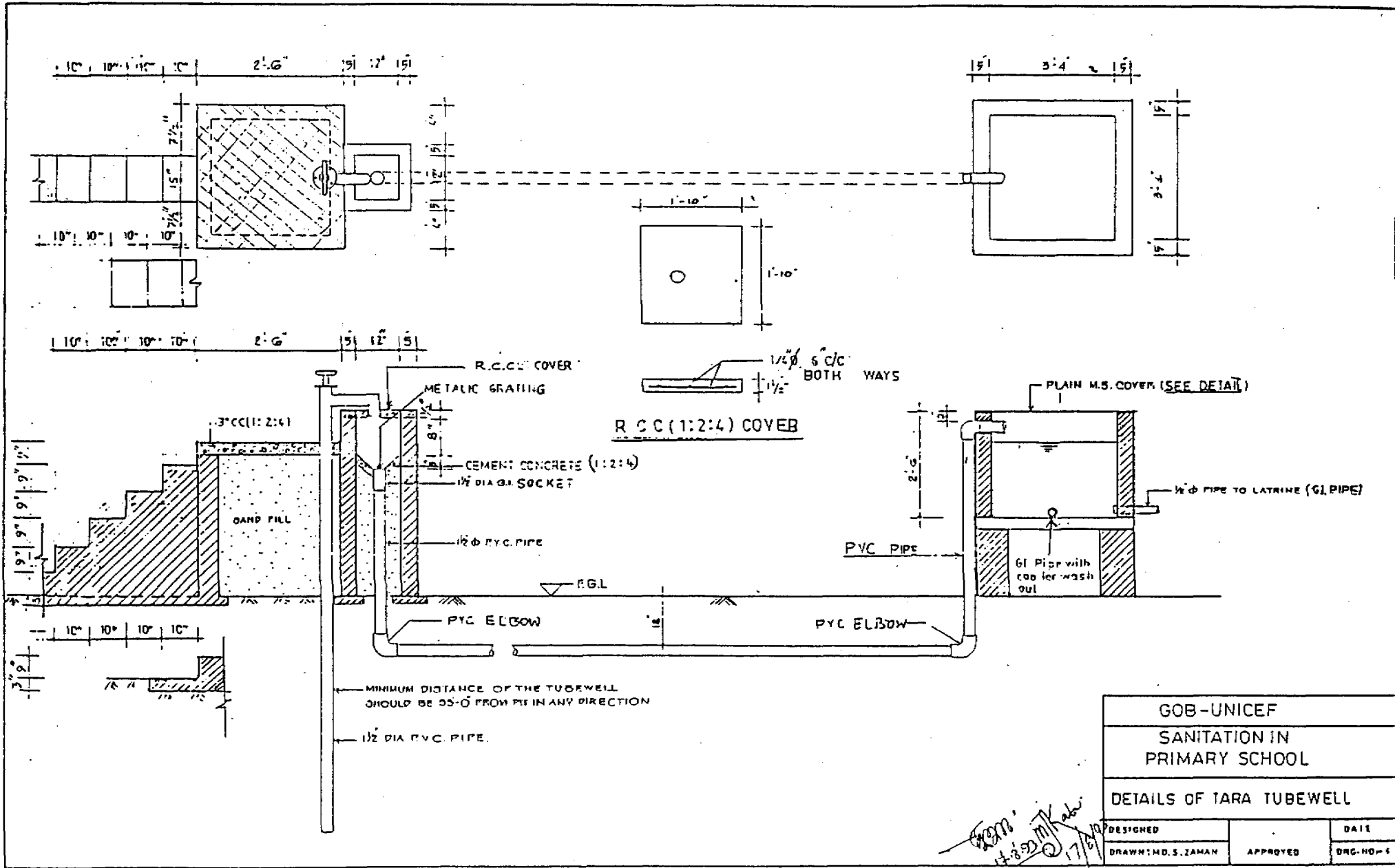
A = 7'6"  
 B = 3'11"  
 C = 5'3"



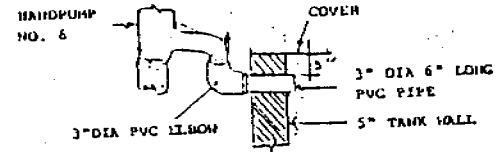
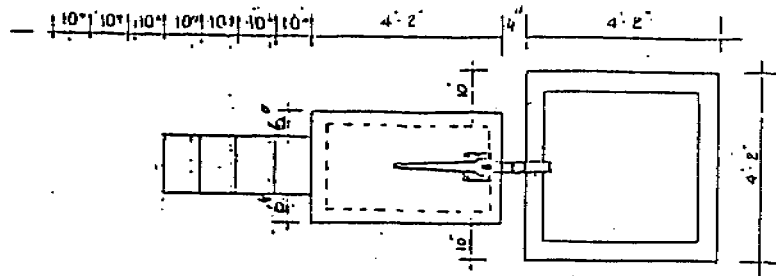
PIT DETAIL

GOB-UNICEF			
SANITATION IN PRIMARY SCHOOL			
DETAILS OF PIT & INSPECTION CHAMBER			
DESIGN	DRAWN	APPR.	DRG. NO. 5.

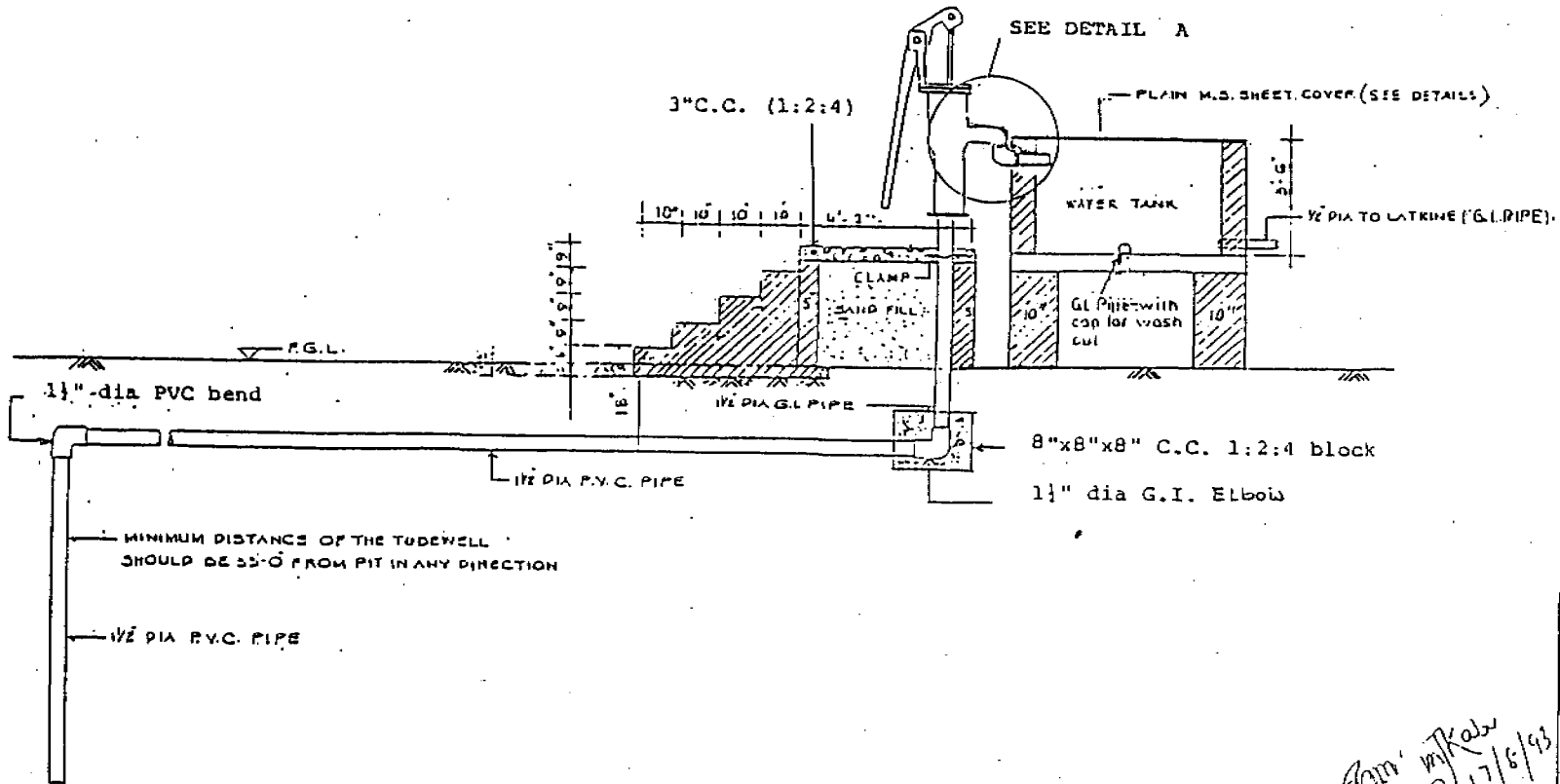




GOB-UNICEF SANITATION IN PRIMARY SCHOOL		
DETAILS OF TARA TUBEWELL		
DESIGNED DRAWN: M. S. ZAMAN	APPROVED	DATE DRG. NO- 5



DETAIL A



GOB - UNICEF		
SANITATION IN PRIMARY SCHOOL		
DETAILS OF TUBEWELL NO 6		
DESIGNER	APPROVED	DATE
BRAWIK M. S. ZAMAN		17/6/93
ORC. NO - 2		

*Handwritten signature and date:*  
17/6/93

তথ্যাবধায়ক প্রকৌশলীর কার্যালয়, জনস্বাস্থ্য প্রকৌশল  
পরিকল্পনা সার্কেল  
১২/এইড, দিনকুশা বাণিচিৎক এনএফ, ঢাকা-১০০০

খসড়া নং ৭৬০(৫) - বি, সি তারিখ, ঢাকা ২৫/৬/১১২০ইং  
১১/৭/১৪০০ বাং

প্রেরক : করিম উল্লিন আহমেদ সিদ্দী,  
তথ্যাবধায়ক প্রকৌশলী, জনস্বাস্থ্য প্রকৌশল  
পরিকল্পনা সার্কেল, ঢাকা।

প্রাপক : তথ্যাবধায়ক প্রকৌশলী,  
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর  
ঢাকা / চট্টগ্রাম / রংপুর / রাজশাহী /  
বরিশাল / খুলনা সার্কেল।

বিষয় : প্রাইমারী স্কুল স্যানিটেশন কার্যক্রম (২য় বর্ষ) এর প্রাক্কন প্রেরণ প্রসঙ্গে।

এতদসঙ্গে প্রাইমারী স্কুল স্যানিটেশন (দ্বিতীয় বর্ষের) কাজের জন্য অনুমোদিত এক প্রাক্কনের  
টি সেট প্রেরণ করা হইল। প্রাক্কনটি প্রাইমারী স্কুল স্যানিটেশন (প্রথম বর্ষের) কাজের অভিজ্ঞতার  
আলোকে মাঠ পর্যায়ের নির্বাহী প্রকৌশলীগণের প্রেরিত প্রাক্কনের ভিত্তিতে প্রস্তুত করা হইয়াছে। প্রাক্কনিত  
অর্ধের মধ্যে ব্যক্তিগত কাজটি বাস্তবায়নের প্রয়োজনীয় চান্দাচন্দর চনা অনুমোদন করা হইল। ইউনিটের সহিত  
অর্ধ পর্যায়ের বিষয়ে জটিলতা এড়াবার লক্ষ্যে কোন কোন এন,টি, আইটেম যথাস্থানে ইউনিটের সহিত  
ব্যক্তিরকে অনুরোধ না হয় সেই বিষয়টি নিশ্চিত করিতে অনুরোধ করা হইল।

আগের আওতাধীন সংশ্লিষ্ট নির্বাহী প্রকৌশলীগণের বিধি প্রাক্কনের অনুমতি পরবর্তী  
প্রয়োজনীয় ব্যবস্থার নিমিত্ত প্রেরণ করার জন্য অনুরোধ করা হইল।

সংযুক্তিঃ প্রাক্কনের কপি ১ কপি।

খসড়া নং ৭৬০(৫)/১০ - বি, সি তারিখ, ঢাকা ২৫/৬/১১২০ইং  
১১/৭/১৪০০ বাং

( করিম উল্লিন আহমেদ সিদ্দী )  
তথ্যাবধায়ক প্রকৌশলী  
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর  
পরিকল্পনা সার্কেল, ঢাকা  
২৫/৬/১১২০ইং

স্বাক্ষরিত জনস্বাস্থ্য অধিদপ্তর :-

- ১। অতিরিক্ত প্রধান প্রকৌশলী, জনস্বাস্থ্য প্রকৌশল অধিদপ্তর, বাংলাদেশ সরকার, ঢাকা।
- ২। তথ্যাবধায়ক প্রকৌশলী, জনস্বাস্থ্য প্রকৌশল অধিদপ্তর, ডায়াল সার্কেল, ঢাকা।
- ৩। নির্বাহী প্রকৌশলী, জনস্বাস্থ্য প্রকৌশল, কার্যসূচী ও সমন্বয় বিভাগ, ঢাকা।
- ৪। নির্বাহী প্রকৌশলী, জনস্বাস্থ্য প্রকৌশল, গাইবান্ধা / ঝালকাঠি / খুলনা / নাগেরহাট / চাঁদা /  
ভোলা / পিরোজপুর / নওগাঁ / হাটহাট / নরসিংদী / হাবড়া / নরসিংদী /  
পূন্যপাড়া / প্রাচীন ব্যক্তিগত বিভাগ।

( করিম উল্লিন আহমেদ সিদ্দী )  
তথ্যাবধায়ক প্রকৌশলী  
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর  
পরিকল্পনা সার্কেল, ঢাকা  
২৫/৬/১১২০ইং

Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Tara Tube-Well

Sl	Description of Item	Quantity	Unit	Rate	Amount
1.	Earth work in excavation in all kinds of soils in foundation trenches including levelling, ramming & preparing the base bilging out water & shoring if necessary providing center line bench mark removing the spoils etc. with all lead and lift as per drawing and direction i/c. soak pit	435 cft	p/cft	0.76	330.60
2.	Brick work with first class bricks in cement mortar (1:6) in foundation and plinth filling the interstices with mortar raking out joints cleaning & soaking the bricks at least for 24 hours before and curing etc. all complete as per direction	175 cft	p/cft	42.98	7521.50
3.	1' inch thick D.P.C. (1.5:3) in cement concrete with cement sand picked jnarna chips including breaking chips screening centering casting curing etc. and finished with a coat of bitumen as per drawing and direction	18 sft	p/sft	23.32	419.76
4.	5' inch brick work with first class bricks in cement mortar (1:6) and making bond with plat form, soak pit, walls including necessary scaffolding raking out joints cleaning and soaking the bricks properly and curing etc. all complete as per drawing and direction.	450 sft	p/sft	20.16	9072.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
5.	A) Minimum 0.5' inch thick cement plaster (1:6) to dado & pīnth including finishing the edges & corners curing etc. all complete as per drawing & direction	800 sft	p/sft	5.76	4608.00
	B) Minimum 0.25' inch thick cement plaster (1:4) to ceiling, cornice i.e. all exposed faces of R.C.C. work including rounding the the corners edges curing scaffolding etc. all complete as per drawing and direction	125 sft	p/sft	4.46	557.50
6.	Reinforced cement concrets work (1:2:4) with best quality cement, coarse sand, picked jhama chips including breaking chips, screening shuttering supplying polythene sheet (1kg covering 6.4 sq.m) for making shuttering leak proof, piacing of M.S. Rod mixing the aggregate, casting compacting curing etc. (excluding the cost of reinforcement) including soak well any junction cover as per drawing & direction.	37 cft	p/cft	89.42	3308.54
7.	C.C. work (1:2:4) with best quality cement, sand, picked jhama, chips, casting in forms, compacting curing etc. as per drawing.	13 cft	p/cft	76.00	988.00
8.	Construction <del>Costing</del> of y-junction with necessary C.C. work <del>R.C.C.</del> (1:2:4) work true to the drawing including curing preparing base etc complete and making necessary connection with soak pit and pans as per drawing and direction of the Engineer-in-charge	1 item	LS	500.00	500.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
9.	Construction of drain with best quality bricks sand, and cement as per drawing including preparing the base curing etc. complete as per direction of the Engineer-in-charge.	5 rft	p/rft	50.00	250.00
10.	Supplying, fabrication and fixing to details as per design M.S Rod reinforcement in concrete or wherever necessary with straightening cleaning the rust, binding in position with G.I. wire as per drawing & direction.	1.15 cwt	p/cwt	1483.00	1705.45
11.	White washing three coats with slaked lime supply of gum, blue, including scaffolding clearing the surface before wash as per direction of the Engineer in charge.	378 sft	p/sft	0.37	139.86
12.	Supplying fitting, fixing & painting to door with 1x1x0.125 inches angle, 1x0.125 inches flat bar and 22 BWG.M.S. sheet as per drawing welding in the angles and flat bars should be continuous. Fixing the M.S. sheet with the frame should be done by spot welding @ 2" C.C.	4 Nos	Each	1200.00	4800.00
13.	Supplying fitting fixing Bangladeshi white vitreous water closed (BISF MODEL No-311) including P-Trap with pipe leading to Y junction preparing the base with cement concrete (1:3:6) etc. complete as per drawing and direction.	3 Nos	Each	500.00	1500.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

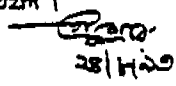
Sl	Description of Item	Quantity	Unit	Rate	Amount
14.	Supplying fitting fixing 4' dia PVC pipe (good quality) to connect pan with Y junction leading to sockpit as per drawing & direction.	20 rft	p/rft	35.00	700.00
15.	Net cement finishing to dado, plinth, water tank, floor, steps etc. all complete as per direction	380 sft	p/sft	1.75	665.00
16.	Supplying fitting fixing the best approved quality following items all necessary arrangement preparing base by (1:2:4) cc as per drawing and direction of the Engineer-in-charge.				
	(a) C.P Grating	1	Each	25.00	25.00
	(b) Cross tee (PVC)	1	Each	85.00	85.00
	(c) Tee (PVC)	1	Each	80.00	80.00
17.	Supplying and fitting fixing the following best quality approved of fixtures as per drawing and direction of the Engineer-in-charge.				
	(a) 0.50' dia G.I. pipe	15	p/rft	35.00	525.00
	(b) 0.50' dia Bend	1	Each	20.00	20.00
	(c) 0.50' dia G.I. Tee	3	Each	18.00	54.00
	(d) 0.50' dia G.I. socket	7	Each	15.00	105.00
	(e) 0.50' dia end cap	1	Each	15.00	15.00
	(f) Bib cock (Brass)	5	Each	40.00	200.00
18	Carriage of construction materials to the school site if carrying by head load is reqd.				
	a) Head Load Upto 1.5 Km	LS	LS	LS	600.00
	b) Head Load above 1.5 Km	LS	LS	LS	1000.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
19	Supplying laying and fitting fixing 1.50" inches dia PVC pipe to 1'-6" below G.L as per drawing direction making connection with water tank and tubewells with supplying all types of fixture i.e bend clamp etc as per drawing (PVC pipe will be supplied by the Dept. free of cost)	30 m	p/m	12.00	360.00
20	Supplying fitting fixing M.S. sheet (22 DWG) cover on water tank including fitting to wall and locking arrangement etc. complete as per drawing & direction of the Engineer-in-charge.	1 No	Each	1100.00	1100.00
21	Supplying and filling best quality local sand to floor including leveling ramming etc. complete.	50 cft	p/cft	5.00	250.00
22	Sinking 1.50 dia Tara T/W. a) Installation of Tara T/W (as per DPHE design and specification) as per drawing and design and direction of Engineering-in-charge (excluding cost of departmental materials) i) 2' Dia rising main cylinder etc. ii) 1.5' Dia PVC pipe etc.	59 164	p/ft p/ft	20.73 10.37	1223.17 1700.00
	b) Supplying and fitting fixing of the following best quality approved items as per drawing and direction of the Engineer-in-Charge. iii) 1.5' dia PVC bend Elbow	3	Each	15.00	45.00
23	Supplying Globe Lock-4" made in Bangladesh	4 No	Each	60.00	240.00

44693.38

স্বাক্ষরিতঃ  
প্রকল্পের প্রধান ইঞ্জিনিয়ার  
স্বাস্থ্য বিভাগের প্রধান ইঞ্জিনিয়ার  
ঢাকা

Approved: 

Say: Tk. 44693.00  
(Tk. Forty four thousand six hundred and ninety three) only.



**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
1.	Earth work in excavation in all kinds of soils in foundation trenches including levelling, ramming & preparing the basebling out water & shoring if necessary providing center line bench mark removing the spoils etc. with all lead and lift as per drawing and direction i/c. soak pit	370 cft	p/cft	0.76	281.20
2.	Brick work with first class bricks in cement mortar (1:6) in foundation and plinth filling the interstices with mortar raking out joints cleaning & soaking the bricks at least for 24 hours before and curing etc. all complete as per direction	130 cft	p/cft	42.98	5587.40
3.	1' inch thick D.P.C. (1.5:3) in cement concrete with cement sand picked jhama chips including breaking chips screening centering casting curing etc. and finished with a coat of bitumen as per drawing and direction	10 sft	p/sft	23.32	233.20
4.	5' inch brick work with first class bricks in cement mortar (1:6) and making bond with plat form,soakpit,walls including necessary scaffolding raking out joints cleaning and soaking the bricks properly and curing etc. all complete as per drawing and direction.	320 sft	p/sft	20.16	6451.20

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
5.	A) Minimum 0.5' inch thick cement plaster (1:6) to dado & plinth including finishing the edges & comers curing etc. all complete as per drawing & direction	520 sft	p/sft	5.76	2995.20
	B) Minimum 0.25' inch thick cement plaster (1:4) to ceiling, cornice i.e. all exposed faces of R.C.C. work including rounding the the comers edges curing scaffolding etc. all complete as per drawing and direction	90 sft	p/sft	4.46	401.40
6.	Reinforced cement concrets-work (1:2:4) with best quality cement, coarse sand, picked jhama chips including breaking chips, screening shuttering supplying polythene sheet (1kg covering 6.4 sq.m) for making shuttering leak proof, placing of M.S. Rod mixing the aggregate, casting compacting curing etc. (excluding the cost of reinforcement) including soak well any junction cover as per drawing & direction. & direction i/c. soak pit	30 cft	p/cft	89.42	2682.60
7.	C.C. work (1:2:4) with best quality cement, sand, picked jhama, chips, casting in forms, compacting curing etc. as per drawing.	9 cft	p/cft	76.00	684.00
8.	Costing of y-junction with necessary C.C. work R.C.C. (1:2:4) work true to the drawing including curing preparing base etc complete and making necessary connection with soak pit and pans as per drawing and direction of the Engineer-in-charge	1 item	LS	500.00	500.00

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
9.	Construction of drain with best quality bricks sand, and cement as per drawing including preparing the base curing etc. complete as per direction of the Engineer-in-charge.	5 ft	p/ft	50.00	250.00
10.	Supplying, fabrication and fixing to details as per design M.S Rod reinforcement in concrete or wherever necessary with straightening cleaning the rust, binding in position with G.I. wire as per drawing & direction.	1.05 cwt	p/cwt	1483.00	1557.15
11.	White washing three coats with slaked lime supply of gum, blue, including scaffolding clearing the surface before wash as per direction of the Engineer in charge.	280 sft	p/sft	0.37	103.60
12.	Supplying fitting, fixing & painting to door with 1x1x0.125 inches angle, 1x0.125 inches flat bar and 22 BWG.M.S. sheet as per drawing welding in the angles and flate bars should be continuous. Fixing the M.S. sheet with the frame should be done by spot welding @ 2" C.C.	2 Nos	Each	1200.00	2400.00
13.	Supplying fitting fixing Bangladeshi white vitreous water closed (BISF MODEL No-311) including P-Trap with pipe leading to Y junction preparing the base with cement concrete (1:3:6) etc. complete as per drawing and direction.	2 Nos	Each	500.00	1000.00

Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Tara Tube-Well

S/	Description of Item	Quantity	Unit	Rate	Amount
14.	Supplying fitting fixing 4' dia PVC pipe (good quality) to connect pan with Y junction leading to sockpit as per drawing & direction.	17 ft	p/ft	35.00	595.00
15.	Net cement finishing to dado, plinth, water tank, floor, steps etc. all complete as per direction	300 sft	p/sft	1.75	525.00
16.	Supplying fitting fixing the best approved quantity following items i/c all necessary arrangement preparing base by (1:2:4) cc as per drawing and direction of the Engineer-in-charge. (a) Tee (PVC)	1	Each	80.00	80.00
17.	Supplying and fitting fixing the following best quality approved of fixtures as per drawing and direction of the Engineer-in-charge. (a) 0.50' dia G.I. pipe (b) 0.50' dia Bend (c) 0.50' dia G.I. Tee (d) 0.50' dia G.I. socket (e) 0.50' dia end cap (f) Bib cock (Brass)	12 2 2 4 1 3	p/ft Each Each Each Each Each	35.00 20.00 18.00 15.00 15.00 40.00	420.00 40.00 36.00 60.00 15.00 120.00
18	Carriage of construction materials to the school site if carrying by head load is reqd. a) Head Load Upto 1.5 Km b) Head Load above 1.5 Km	LS LS	LS LS	LS LS	400.00 800.00

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Tara Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
19	Supplying laying and fitting fixing 1.50" inches dia PVC pipe to 1'-6" below G.L as per drawing direction making connection with water tank and tubewells with supplying all types of fixture i.e bend clamp etc as per drawing (PVC pipe will be supplied by the Dept. free of cost)	15 ft	p/ft	12.00	180.00
20	Supplying fitting fixing M.S. sheet (22 DWG) cover on water tank including fitting to wall and locking arrangement etc. complete as per drawing & direction of the Engineer-in-charge.	1 No	Each	1100.00	1100.00
21	Supplying and filling best quality local sand to floor including leveling ramming etc. complete.	26 cft	p/cft	5.00	130.00
22	Sinking 1.50 dia Tara T/W. a) Installation of Tara T/W (as per DPHE design and specification) as per drawing and design and direction of Engineering-in-charge (excluding cost of departmental materials) i) 2" Dia rising main cylinder etc. ii) 1.5" Dia PVC pipe etc.	59 164	p/ft p/ft	20.73 10.37	1223.17 1700.00
	b) Supplying and fitting fixing test and approved quantity of the following items as per drawing and direction of the Engineer-in-Charge. i) ii) 1.5" dia PVC bend Elbow	3	Each	15.00	45.00
23	Supplying of Globe Lock-4" made in Bangladesh	3 No	Each	60.00	180.00
					<b>32776.12</b>

সিদ্ধান্তঃ

প্রকল্পের কাজে ৩২৭৭৬ ত্রিশ হাজার ৭৭৬ টাকা  
কাজের প্রকল্পের জন্য অনুমোদিত হবে।

Say: Tk. 32776.00

CE  
The estimate was  
kindly approved  
25/11/23

(Taka Thirty two thousand seven hundred seventy six) only.

Approved  
Amiruddin Ahmad

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
1.	Earth work in excavation in all kinds of soils in foundation trenches including levelling, ramming & preparing the base bilging out water & shoring if necessary providing center line bench mark removing the spoils etc. with all lead and lift as per drawing and direction i/c. soak pit	435 cft	p/cft	0.76	330.60
2.	Brick work with first class bricks in cement mortar (1:6) in foundation and plinth filling the interstices with mortar raking out joints cleaning & soaking the bricks at least for 24 hours before and curing etc. all complete as per direction	175 cft	p/cft	42.98	7521.50
3.	1' inch thick D.P.C. (1.5:3) in cement concrete with cement sand picked jhama chips including breaking chips screening centering casting curing etc. and finished with a coat of bitumen as per drawing and direction	18 sft	p/sft	23.32	419.76
4.	5' inch brick work with first class bricks in cement mortar (1:6) and making bond with plat form,soakpit walls including necessary scaffolding raking out joints cleaning and soaking the bricks properly and curing etc. all complete as per drawing and direction.	450 sft	p/sft	20.16	9072.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
5.	A) Minimum 0.5' inch thick cement plaster (1:6) to dado & plinth including finishing the edges & comers curing etc. all complete as per drawing & direction	800 sft	p/sft	5.76	4608.00
	B) Minimum 0.25' inch thick cement plaster (1:4) to ceiling, cornice i.e. all exposed faces of R.C.C. work including rounding the the comers edges curing scaffolding etc. all complete as per drawing and direction	125 st	p/sft	4.46	557.50
6.	Reinforced cement concrets work (1:2:4) with best quality cement, coarse sand, picked jhama chips including breaking chips, screening shuttering supplying polythene sheet (1kg covering 6.4 sq.m) for making shuttering leak proof, placing of M.S. Rod mixing the aggregate, casting compacting curing etc. (excluding the cost of reinforcement) including soak well any junction cover as per drawing & direction.	37 cft	p/cft	89.42	3308.54
7.	C.C. work (1:2:4) with best quality cement, sand, picked jhama, chips, casting in forms, compacting curing etc. as per drawing.	13 cft	p/cft	76.00	988.00
8.	Costing of y-junction with necessary C.C. work R.C.C. (1:2:4) work true to the drawing including curing preparing base etc complete and making necessary connection with soak pit and pans as per drawing and direction of the Engineer-in-charge	1 item	LS	500.00	500.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
9.	Construction of drain with best quality bricks sand, and cement as per drawing including preparing the base curing etc. complete as per direction of the Engineer-in-charge.	5 ft	p/ft	50.00	250.00
10.	Supplying, fabrication and fixing to details as per design M.S Rod reinforcement in concrete or wherever necessary with straightening cleaning the rust, binding in position with G.I. wire as per drawing & direction.	1.15 cwt	p/cwt	1483.00	1705.45
11.	White washing three coats with slaked lime supply of gum, blue, including scaffolding clearing the surface before wash as per direction of the Engineer in charge.	378 sq ft	p/sq ft	0.37	139.86
12.	Supplying fitting, fixing & painting to door with 1x1x0.125 inches angle, 1x0.125 inches flat bar and 22 BWG.M.S. sheet as per drawing welding in the angles and flat bars should be continuous. Fixing the M.S. sheet with the frame should be done by spot welding @ 2" C.C.	4 Nos	Each	1200.00	4800.00
13.	Supplying fitting fixing Bangladeshi white vitreous water closed (BISF MODEL No-311) including P-Trap with pipe leading to Y junction preparing the base with cement concrete (1:3:6) etc. complete as per drawing and direction.	3 Nos	Each	500.00	1500.00



**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
14.	Supplying fitting fixing 4' dia PVC pipe (good quality) to connect pan with Y junction leading to sockpit as per drawing & direction.	20 ft	p/ft	35.00	700.00
15.	Net cement finishing to dado, plinth, water tank, floor, steps etc. all complete as per direction	380 sft	p/sft	1.75	665.00
16.	Supplying fitting fixing the best approved quality following items all necessary arrangement preparing base by (1:2:4) cc as per drawing and direction of the Engineer-in-charge.				
	(a) C.P Grating	1	Each	25.00	25.00
	(b) Cross tee (PVC)	1	Each	85.00	85.00
	(c) Tee (PVC)	1	Each	80.00	80.00
17.	Supplying and fitting fixing the following best quality approved of fixtures as per drawing and direction of the Engineer-in-charge.				
	(a) 0.50' dia G.I. pipe	15	p/ft	35.00	525.00
	(b) 0.50' dia Bend	1	Each	20.00	20.00
	(c) 0.50' dia G.I. Tee	3	Each	18.00	54.00
	(d) 0.50' dia G.I. socket	7	Each	15.00	105.00
	(e) 0.50' dia end cap	1	Each	15.00	15.00
	(f) Bib cock (Brass)	5	Each	40.00	200.00
18	Carriage of construction materials to the school site if carrying by head load is reqd.				
	a) Head Load Upto 1.5 Km	LS	LS	LS	600.00
	b) Head Load above 1.5 Km	LS	LS	LS	1000.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
19	Supplying laying and fitting fixing 1.50 inches dia PVC pipe to 1'-6" below G.L as per drawing direction making connection with water tank and tubewells with supplying all types of fixture i.e bend clamp etc as per drawing (PVC pipe will be supplied by the Dept. free of cost)	30 ft	p/ft	12.00	360.00
20	Supplying fitting fixing M.S. sheet (22 DWG) cover on water tank including fitting to wall and locking arrangement etc. complete as per drawing & direction of the Engineer-in-charge.	1 No	Each	1100.00	1100.00
21	Supplying and filling best quality local sand to floor including leveling ramming etc. complete.	50 cft	p/cft	5.00	250.00
22	Sinking 1.50 dia Shallow T/W. a) Installation of tubewell with the use of 1.5" dia PVC/GI pipes, PVC screens, PVC sand trap as per DPHE specifications including development of T/W and fixing of pumps as per drawing (NOTE. only PVC pipe, Screen, pump, adopter and solvent cement will be supplied by Deptt.)  b) Supplying and fitting fixing of the following best quality approved items as per drawing and direction of the Engineer-in-Charge. I) 1.5" dia G.I. Elbow II) 1.5" dia PVC Elbow III) 3" dia PVC Elbow with 3" dia 6" long PVC pipe	190 ft	p/ft	5.15	978.50
		1	Each	54.00	54.00
		1	Each	15.00	15.00
		1	Each	50.00	50.00
23	Supplying Globe Lock-4" made in Bangladesh	5	Each	60.00	300.00
				42882.71	

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অনুমোদিত  
 Approved  
 ২৪/৪/১৩  
 ২৪/৪/১৩  
 Amin Uddin Ahmad  
 Chief Engineer

CE.  
 The estimate may kindly  
 be approved.  
 24/8/13

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**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
1.	Earth work in excavation in all kinds of soils in foundation trenches including levelling, ramming & preparing the base bilging out water & shoring if necessary providing center line bench mark removing the spoils etc. with all lead and lift as per drawing and direction i/c. soak pit	370 cft	p/cft	0.76	281.20
2.	Brick work with first class bricks in cement mortar (1:6) in foundation and plinth filling the interstices with mortar raking out joints cleaning & soaking the bricks at least for 24 hours before and curing etc. all complete as per direction	130 cft	p/cft	42.98	5587.40
3.	1' inch thick D.P.C. (1.5:3) in cement concrete with cement sand picked jhama chips including breaking chips screening centering casting curing etc. and finished with a coat of bitumen as per drawing and direction	10 sft	p/sft	23.32	233.20
4.	5' inch brick work with first class bricks in cement mortar (1:6) and making bond with plat form,soakpit,walls including necessary scaffolding raking out joints cleaning and soaking the bricks properly and curing etc. all complete as per drawing and direction.	320 sft	p/sft	20.16	6451.20

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
5.	A) Minimum 0.5' inch thick cement plaster (1:6) to dado & plinth including finishing the edges & corners curing etc. all complete as per drawing & direction	520 sft	p/sft	5.76	2995.20
	B) Minimum 0.25' inch thick cement plaster (1:4) to ceiling, cornice i.e. all exposed faces of R.C.C. work including rounding the the corners edges curing scaffolding etc. all complete as per drawing and direction	90 sft	p/sft	4.46	401.40
6.	Reinforced cement concrets work (1:2:4) with best quality cement, coarse sand, picked jham chips including breaking chips, screening shuttering supplying polythene sheet (1kg covering 6.4 sq.m) for making shuttering leak proof, placing of M.S. Rod mixing the aggregate, casting compacting curing etc. (excluding the cost of reinforcement) including soak well any junction cover as per drawing & direction. & direction i/c. soak pit	30 cft	p/cft	89.42	2682.60
7.	C.C. work (1:2:4) with best quality cement, sand, picked jhama, chips, casting in forms, compacting curing etc. as per drawing.	9 cft	p/cft	76.00	684.00
8.	Costing of y-junction with necessary C.C. work true to the drawing including curing preparing base etc complete and making necessary connection with soak pit and pans as per drawing and direction of the Engineer-in-charge	1 item	LS	500.00	500.00

Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well

Sl	Description of Item	Quantity	Unit	Rate	Amount
9.	Construction of drain with best quality bricks sand, and cement as per drawing including preparing the base curing etc. complete as per direction of the Engineer-in-charge.	5 rft	p/rft	50.00	250.00
10.	Supplying, fabrication and fixing to details as per design M.S Rod reinforcement in concrete or wherever necessary with straightening cleaning the rust, binding in position with G.I. wire as per drawing & direction.	1.05 cwt	p/cwt	1483.00	1557.15
11.	White washing three coats with slaked lime supply of gum, blue, including scaffolding clearing the surface before wash as per direction of the Engineer in charge.	280 sft	p/sft	0.37	103.60
12.	Supplying fitting, fixing & painting to door with 1x1x0.125 inches angle, 1x0.125 inches flat bar and 22 BWG.M.S. sheet as per drawing welding in the angles and flate bars should be continuous. Fixing the M.S. sheet with the frame should be done by spot welding @ 2" C.C.	2 Nos	Each	1200.00	2400.00
13.	Supplying fitting fixing Bangladeshi white vitreous water closed (BISF MODEL No-311) including P-Trap with pipe leading to Y junction preparing the base with cement concrete (1:3:5) etc. complete as per drawing and direction.	2 Nos	Each	500.00	1000.00

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
14.	Supplying fitting fixing 4" dia PVC pipe (good quality) to connect pan with Y junction leading to sockpit as per drawing & direction.	17 ft	p/ft	35.00	595.00
15.	Net cement finishing to dado, plinth, water tank, floor, steps etc. all complete as per direction	300 sq ft	p/sft	1.75	525.00
16.	Supplying fitting fixing the best approved quantity following items i/c all necessary arrangement preparing base by (1:2:4) cc as per drawing and direction of the Engineer-in-charge.				
	(a) Tee (PVC)	1	Each	80.00	80.00
17.	Supplying and fitting fixing the following best quality approved of fixtures as per drawing and direction of the Engineer-in-charge.				
	(a) 0.50' dia G.I. pipe	12	p/ft	35.00	420.00
	(b) 0.50' dia Bend	2	Each	20.00	40.00
	(c) 0.50' dia G.I. Tee	2	Each	18.00	36.00
	(d) 0.50' dia G.I. socket	4	Each	15.00	60.00
	(e) 0.50' dia end cap	1	Each	15.00	15.00
	(f) Bib cock (Brass)	3	Each	40.00	120.00
18	Carriage of construction materials to the school site if carrying by head load is reqd.				
	a) Head Load Upto 1.5 Km	LS	LS	LS	400.00
	b) Head Load above 1.5 Km	LS	LS	LS	800.00

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Shallow Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
19	Supplying laying and fitting fixing 1.50' inches dia PVC pipe to 1'-6" below G.L as per drawing direction making connection with water tank and tubewells with supplying all types of fixture i.e bend clamp etc as per drawing (PVC pipe will be supplied by the Dept. free of cost)	15 m	p/m	12.00	180.00
20	Supplying fitting fixing M.S. sheet (22 DWG) cover on water tank including fitting to wall and locking arrangement etc. complete as per drawing & direction of the Engineer-in-charge.	1 No	Each	1100.00	1100.00
21	Supplying and filling best quality local sand to floor including leveling ramming etc. complete.	25 cft	p/cft	5.00	130.00
22	Sinking 1.50 dia Shallow T/W.  a) Installation of tubewell with the use of 1.5' dia PVC/GI pipes, PVC screens, PVC sand trap as per DPHE specifications including development of T/W and fixing of pumps as per drawing (NOTE. only PVC pipe, Screen, pump, adopter and solvent cement will be supplied by Dept.)  b) Supplying and fitting fixing test and approved quantity of the following items as per drawing and direction of the Engineer-in-Charge. I) 1.5' dia G.I. Elbow II) 1.5' dia PVC Elbow III) 3' dia PVC Elbow with 3' dia 6' Long PVC pipe	190 ft	p/ft	5.15	978.50
		1	Each	54.00	54.00
		1	Each	15.00	15.00
		1	Each	50.00	50.00
23.	Supplying of Globe Lock-4" made in Bangladesh	3 No	Each	60.00	180.00
<p align="right">৩০,৯০৫ টকা</p>					30905.45

প্রাক্কলনটি ৩০,৯০৫ টকা মাত্র

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**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Deep Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
1.	Earth work in excavation in all kinds of soils in foundation trenches including levelling, ramming & preparing the base bilging out water & shoring if necessary providing center line bench mark removing the spoils etc. with all lead and lift as per drawing and direction i/c. soak pit	435 :ft	p/cft	0.76	330.60
2.	Brick work with first class bricks in cement mortar (1:6) in foundation and plinth filling the interstices with mortar raking out joints cleaning & soaking the bricks at least for 24 hours before and curing etc. all complete as per direction	175 cft	p/cft	42.96	7521.50
3.	1' inch thick D.P.C. (1.5:3) in cement concrete with cement sand picked jhama chips including breaking chips screening centering casting curing etc. and finished with a coat of bitumen as per drawing and direction	18 sft	p/sft	23.32	419.76
4.	5' inch brick work with first class bricks in cement mortar (1:6) and making bond with plat form,soakpit,walls including necessary scaffolding raking out joints cleaning and soaking the bricks properly and curing etc. all complete as per drawing and direction.	450 sft	p/sft	20.16	9072.00



**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Deep Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
5.	A) Minimum 0.5' inch thick cement plaster (1:6) to dado & plinth including finishing the edges & comers curing etc. all complete as per drawing & direction	800 sft	p/sft	5.76	4608.00
	B) Minimum 0.25' inch thick cement plaster (1:4) to ceiling, cornice i.e. all exposed faces of R.C.C. work including rounding the the comers edges curing scaffolding etc. all complete as per drawing and direction	125 sft	p/sft	4.46	557.50
6.	Reinforced cement concrets work (1:2:4) with best quality cement, coarse sand, picked jhama chips including breaking chips, screening shuttering supplying polythene sheet (1kg covering 6.4 sq.m) for making shuttering leak proof, placing of M.S. Rod mixing the aggregate, casting compacting curing etc. (excluding the cost of reinforcement) including soak well any junction cover as per drawing & direction.	37 cft	p/cft	89.42	3308.54
7.	C.C. work (1:2:4) with best quality cement, sand, picked jhama, chips, casting in forms, compacting curing etc. as per drawing.	13 cft	p/cft	76.00	988.00
8.	Costing of y-junction with necessary C.C. work true to the drawing including curing preparing base etc complete and making necessary connection with soak pit and pans as per drawing and direction of the Engineer-in-charge	1 item	LS	500.00	500.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Deep Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
9.	Construction of drain with best quality bricks sand, and cement as per drawing including preparing the base curing etc. complete as per direction of the Engineer-in-charge.	5 rft	p/rft	50.00	250.00
10.	Supplying, fabrication and fixing to details as per design M.S Rod reinforce <del>ment</del> in concrete or wherever necessary with straightening, cleaning the rust, binding in position with G.I. wire as per drawing & direction.	1.15 cwt	p/cwt	1483.00	1705.45
11.	White washing three coats with slaked lime supply of gum, blue, including scaffolding clearing the surface before wash as per direction of the Engineer in charge.	378 sft	p/sft	0.37	139.86
12.	Supplying fitting, fixing & painting to door with 1x1x0.125 inches angle, 1x0.125 inches flat bar and 22 BWG.M.S. sheet as per drawing welding in the angles and flate bars should be continuous. Fixing the M.S. sheet with the frame should be done by spot welding @ 2" C.C.	4 Nos	Each	1200.00	4800.00
13.	Supplying fitting fixing Bangladeshi white vitreous water closed (BISF MODEL No-311) including P-Trap with pipe leading to Y - junction preparing the base with cement concrete (1:3:6) etc. complete as per drawing and direction.	3 Nos	Each	500.00	1500.00

**Unit Estimate For Construction of Three Latrine and one Urinal  
& 1000 Litre Capacity Water Tank With Deep Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
14.	Supplying fitting fixing 4' dia PVC pipe (good quality) to connect pan with Y junction leading to sockpit as per drawing & direction.	20 ft	p/ft	35.00	700.00
15.	Net cement finishing to dado, plinth, water tank, floor, steps etc. all complete as per direction	380 st	p/st	1.75	665.00
16.	Supplying fitting fixing the best approved quality following items all necessary arrangement preparing base by (1:2:4) cc as per drawing and direction of the Engineer-in-charge.				
	(a) C.P Grating	1	Each	25.00	25.00
	(b) Cross tee (PVC)	1	Each	85.00	85.00
	(c) Tee (PVC)	1	Each	80.00	80.00
17.	Supplying and fitting fixing the following best quality approved of fixtures as per drawing and direction of the Engineer-in-charge.				
	(a) 0.50' dia G.I. pipe	15	p/ft	35.00	525.00
	(b) 0.50' dia Bend	1	Each	20.00	20.00
	(c) 0.50' dia G.I. Tee	3	Each	18.00	54.00
	(d) 0.50' dia G.I. socket	7	Each	15.00	105.00
	(e) 0.50' dia end cap	1	Each	15.00	15.00
	(f) Bib cock (Brass)	5	Each	40.00	200.00
16	Carriage of construction materials to the school site if carrying by head load is reqd.				
	a) Head Load Upto 1.5 Km	LS	LS	LS	600.00
	b) Head Load above 1.5 Km	LS	LS	LS	1000.00



**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Deep Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
1.	Earth work in excavation in all kinds of soils in foundation trenches including levelling, ramming & preparing the base bilging out water & shoring if necessary providing center line bench mark removing the spoils etc. with all lead and lift as per drawing and direction i/c. soak pit	370 cft	p/cft	0.76	281.20
2.	Brick work with first class bricks in cement mortar (1:6) in foundation and plinth filling the interstices with mortar raking out joints cleaning & soaking the bricks at least for 24 hours before and curing etc. all complete as per direction	130 cft	p/cft	42.98	5587.40
3.	1" inch thick D.P.C. (1.5:3) in cement concrete with cement sand picked jhama chips including breaking chips screening centering casting curing etc. and finished with a coat of bitumen as per drawing and direction	10 sft	p/sft	23.32	233.20
4.	5" inch brick work with first class bricks in cement mortar (1:6) and making bond with plat form,soakpit,walls including necessary scaffolding raking out joints cleaning and soaking the bricks properly and curing etc. all complete as per drawing and direction.	320 sft	p/sft	20.16	6451.20

**Unit Estimate For Construction of Two Latrine (one for boys & one for girls)  
& 1000 Litre Capacity Water Tank With Deep Tube-Well**

Sl	Description of Item	Quantity	Unit	Rate	Amount
14.	Supplying fitting fixing 4' dia PVC pipe (good quality) to connect pan with Y junction leading to sockpit as per drawing & direction.	17 ft	p/ft	35.00	595.00
15.	Net cement finishing to dado, plinth, water tank, floor, steps etc. all complete as per direction	300 st	p/st	1.75	525.00
16.	Supplying fitting fixing the best approved quantity following items i/c all necessary arrangement preparing base by (1:2:4) cc as per drawing and direction of the Engineer-in-charge.				
	(a) Tee (PVC)	1	Each	80.00	80.00
17.	Supplying and fitting fixing the following best quality approved of fixtures as per drawing and direction of the Engineer-in-charge.				
	(a) 0.50' dia G.I. pipe	12	p/ft	35.00	420.00
	(b) 0.50' dia Bend	2	Each	20.00	40.00
	(c) 0.50' dia G.I. Tee	2	Each	18.00	36.00
	(d) 0.50' dia G.I. socket	4	Each	15.00	60.00
	(e) 0.50' dia end cap	1	Each	15.00	15.00
	(f) Bib cock (Brass)	3	Each	40.00	120.00
18	Carriage of construction materials to the school site if carrying by head load is reqd.				
	a) Head Load Upto 1.5 Km	LS	LS	LS	400.00
	b) Head Load above 1.5 Km	LS	LS	LS	800.00