

COMMUNITY-LED ACCELERATED WASH (COWASH)



Effective and sustainable
WaSH services

8. WWT TRAINING MANUAL FOR INSTITUTIONAL WASH IMPLEMENTATION IN COWASH IV USING WOREDA MANAGED PROJECTS (WMP) APPROACH

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1 INTRODUCTION

1.1 BACKGROUND

- Since April 2021, the fourth phase of the project which is going to be implemented until end of December 2024 has been started. The phase is to be implemented in 104 woredas located in 6 regions (Amhara, Benishangul Gumuz, Oromia, SNNP, Sidama and Tigray).
- The overall objective of phase IV is to contribute to achieving Ethiopia's Ten Years Development Plan (2021 – 2030) which targets for the WASH sectors in terms of water, sanitation and hygiene access coverage and quality of service delivery in selected rural areas by using CMP approach.
- The outcomes of the project include: -
 - increased community and institutional water supply coverage,
 - increased community and institutional sanitation and hygiene coverage and usage,
 - increased functionality and sustainability of built WASH facilities through improved service delivery and
 - women's empowerment and leadership through WASH related activities.
- There are different changes made in phase IV as compared to the past three phases. One is institutional WASH (water supply and sanitation facilities) for schools and health institutions are to be implemented using the **Woreda Managed Project (WMP)** approach.
- Although the institutional WASH implementation does not follow the full CMP approach which includes the financial and procurement management by WASHCOs, it is recommended that preparatory activities of the CMP approach such as promotion, application preparation & submission, appraisal and project approval by the Woreda WASH Team (WWT) are to be followed also in the institutional WASH implementation as they are important cycles contributing to the sustainability of the institutional WASH facilities.
- So, this training manual details the use of the Woreda Managed Project (WMP) approach in water supply, latrines and menstrual hygiene management (MHM) implementation in schools and health institutions in COWASH IV.
- Hence, the focus of this training manual is to present the major principles, procedures and formats to be used for the promotion, application preparation, appraisal, approval, implementation and management of the Woreda Managed Projects (WMP) approach for institutional water supply schemes and latrines implementation.

1.2 KEY ISSUES AND ADDITIONALS TO THE MANUAL

- As an implementation manual for institutional sanitation, the two key issues which are given more focus in this manual are: -
 - Institutional WASH implementation procedures using WMP approach.

- Highlights on sanitation facility packages & designs for schools and health institutions.
- Additional materials to this manual include: -
 - Government of Ethiopia procurement guideline, standard tender documents.
 - **“Water Supply Sanitation and Hygiene (WASH) Facilities in Schools Design and Construction Manual, November 2019”** prepared by the Ministry of Education (MoE).
 - **“Health Centre and Health Post Water Supply, Sanitation and hygiene facilities design and implementation manual June 2012”** prepared by Ministry of Health (MoH).
 - These are required to be referred and used in cases when designs, procurement and construction management related issues which are not stated in this manual are required/encountered.

1.3 MAJOR PRINCIPLES IN THE IMPLEMENTATION OF INSTITUTIONAL WASH IN COWASH IV

One of the outcomes of COWASH IV is **Outcome 3** which deals with institutional WASH as follows.

Outcome 3: Improved Institutional WASH by Narrowing the Gap in Improved Institutional Latrine, Climate Resilient and Safe Water Supply, and Menstrual Hygiene Management (MHM).

In order to contribute to the outcome, implementation of water supply schemes, latrines and menstrual hygiene management (MHM) using the WMP approach is important.

The major principles in the implementation of institutional WASH using the WMP approach in COWASH IV: -

- a) **Approaches for sustainability of WASH facilities:** Although institutional WASH implementation in COWASH IV does not follow the full CMP approach, some of the cycles in the CMP approach which have contributions in ensuring the sustainability of WASH facilities such as application/demand expression by the institutions, project appraisal by woreda experts, approval of the project application by WWT, monitoring the implementation of the facilities, and operation & maintenance management of the facilities by the institutions committees will be followed in the WMP approach for institutional WASH implementation.
- b) **Sources of fund:**
 - The sources of funding for new or rehabilitation of water supply schemes constructions to institutions where there is functional latrine, but no functional water scheme is from the Government of Finland (GoF). This GoF fund to be used for this purpose accounts only **15%** of the total GoF share of each region allocated for the phase.
 - The institutions to be served with this source of fund are those institutions with standard latrines but could not be served with water supply due to the need for more complex/high technologies.
 - And the types of water supply technologies given priority to be financed with the GoF fund source are shallow well drilling with hand or solar pump, rural piped

schemes from gravity or motorized springs, rural piped schemes for deep well drillings with motorized or solar pumping, roof water harvesting, pipeline connection from existing nearby pipeline and internal water distribution system to different water consumption points such as toilets, MHM rooms, clinic rooms etc. Hand dug well and on spot spring construction are not given priority in this source of fund.

- A pre-condition for institutions to be selected for GoF funding is a reliable O&M management and financing plans plus secured O&M budget for at least two years after the commissioning of the scheme. Additional pre-condition specially for institutions where internal water distribution system is required, is a realistic consumption management plan to avoid careless/excessive water use, especially water is paid according to metered use.
- The sources of funding for new or rehabilitation of water supply schemes constructions to institutions where there is functional latrine but no functional water scheme can also be from the Government of Ethiopia (GoE).
- The sources of funding for institutional latrines and MHM for institutions having functional water supply schemes is from the Government of Ethiopia (GoE).
- The sources of funding for “**full package WASH facilities**” construction to institutions (water supply, latrine and MHM) to institutions without functional water supply, institutional latrines and MHM is from the Government of Ethiopia (GoE).

- c) **Fund Transfer:** The fund for the physical construction of WASH facilities (water supply, latrines and MHM) are transferred directly to the woreda finance office from the region via Commercial Bank of Ethiopia (CBE). As the sources of fund are both from GoF and GoE, the fund transfer is detailed as follows. In case of the sourcing from GoE the investment fund flows directly from Bureau of Finance (BoF) to Woreda Office of Finance (WoF), and in case of the sourcing from GoF the fund first flows from Ministry of Finance (MoF) to BoF and from BoF to WoF.
- d) **Contract and Fund Management:** The fund for the implementation of institutional WASH facilities is managed by the woreda finance office (WoF).
- the contract administration/management of the institutional water supply implementation is handled by the woreda water office (WoW),
 - the contract management for the school sanitation facilities is handled by the woreda office of education (WoE), and
 - the contract management for health institutions sanitation implementation is handled by the woreda office of health (WoH).
- e) **Procurement procedure:** The procurement (for goods and services) in the implementation of the institutional WASH facilities follows the Ethiopian Federal Government Procurement and Property Administration Proclamation no 649/2009 and the Federal Government Public Procurement Directive issued by the Ministry of Finance and Economic Development (MoFED) in June 2010 which each region adapted to its specific condition.

2 INSTITUTIONAL WATER SUPPLY TECHNOLOGIES IN COWASH IV

The institutional WASH facilities to be implemented in COWASH IV are for those schools and health institutions located in the rural areas of the project woredas.

The type of water supply technologies to be implemented in schools and health facilities (health post and health center) depending on the availability of the source. The following are the water supply technologies recommended to be implemented in COWASH IV schools where they are feasible.

- New or rehabilitation of hand dug well (HDW) with hand pump with Handwash facility
- New or rehabilitation on Spot spring development (SPD) with Handwash facility
- New or rehabilitation of spring development (SPD) with collection chamber (CC) with Handwash facility
- New or rehabilitation of Shallow Wells with hand pump installation with Handwash facility
- New or rehabilitation of Rural Piped scheme (RPS) from gravity spring with Handwash facility
- New or rehabilitation of Rural piped scheme (RPS) from deep well source with Handwash facility
- New or rehabilitation of Rural Piped scheme (RPS) from Motorized Spring with Handwash facility
- New or rehabilitation of shallow well or deep well drilling fitted with solar pump where feasible
- Expansions from existing water system with handwash facility
- New Deep wells drilling
- New Roof Water Harvesting (RWH)

2.1 DRINKING FOUNTAINS (WATER TAPS) & HAND WASH BASINS FOR SCHOOLS WITH PIPED WATER

- Drinking water taps are designed for schools where there is pipeline water.
- The drinking fountain or faucets provide direct access to water supply for school children both for drinking and handwashing.
- The tap has a basin with a functional drainage pipe and soak away pit. It is located at a convenient location and, if possible, should be located 20-30m from the playground area.
- The number of taps to be installed depends on the number of students in the school. The following table shows the recommended number of taps for different number of students in rural schools. On average in rural areas one water tap is for use to 100 students.

Table 1. Number of drinking fountain (water taps) for rural schools

I.N.	Number of students	Number of taps	Number of stands
1	600	6	1 stand with 3 taps each side of a stand
2	1000	10	1 stand with 5 taps each side of a stand
3	1500	14	1 stand with 7 taps each side of a stand

Basic design of drinking water fountain

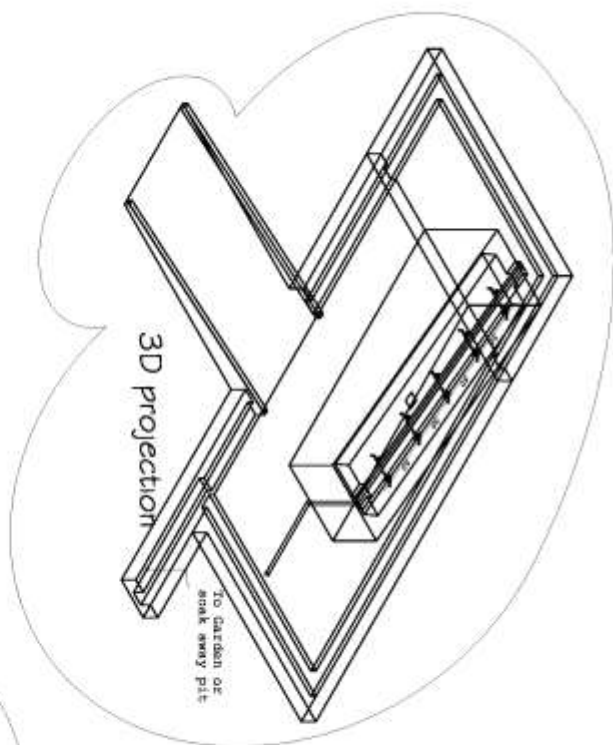
- Drinking water fountains should be located near playground areas where it is convenient for school children to use them. They should also be designed in such a way that younger, shorter and children living with a disability can easily access them.



Photo 1. Photo of 10 taps drinking water fountain at schools

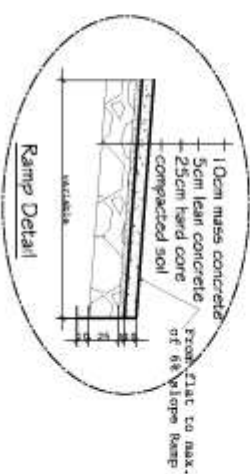
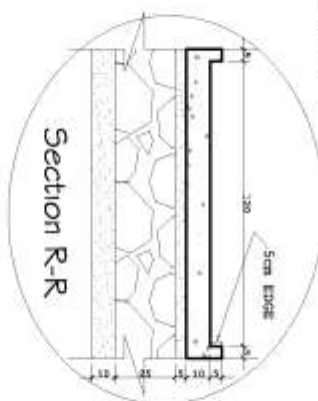
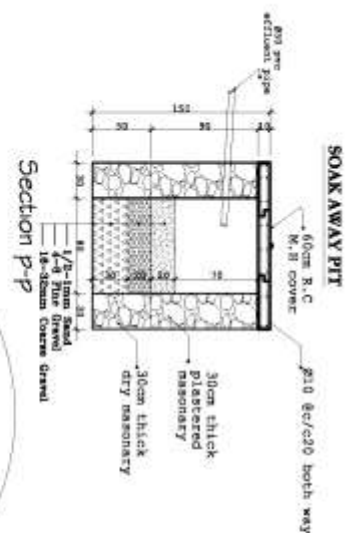
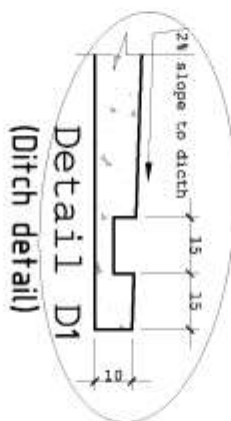
- The detailed architectural drawings, dimensions and specifications for school drinking water fountain with 12 taps (6 on each side) is shown in figure 10.2. The spacing of each tap on the stand is 40cm distance along each side of the stand. The drinking water fountain can be adapted to local conditions.

[illegible]



NOTE

1. Any Change based on site level engineering judgment is possible.
2. Handrail can be constructed a long side of ramp where necessary.
3. Ramp should be constructed only on one side of the water point.
4. In the direction of faucet designed for Equity and inclusion aspect.
5. the slope of the ramp should be from flat (plane) to 8% depending on nature of topography.
6. Maximum wheel chair size (1.2m) should be considered to construct ramp (to determine width)
7. 5cm thick edge (sort of Guiding edge) should be casted at two at two sides of ramp to protect sudden sliding of wheel chairs.
8. Ramps to be constructed should be some what rough to ease walking for curaruch users.
9. Each and every water point constructed should be as per this design.
10. Without compromising the average distance from users, water point shall be located on relatively flat site as much as possible.



PROJECT
DESIGN & CONSTRUCTION MANUAL FOR WATER SUPPLY AND
SANTORY FACILITIES IN PRESCHOOL, PRIMARY & SECONDARY
SCHOOLS IN ETHIOPIA

OWNER
MINISTRY OF EDUCATION (MOE)

DESIGNED BY
SULEJH GOBENA, Water Aid Ethiopia
DRAWING TITLE
WATER POUNTAIN & SOAK AWAY PIT DETAILS

CAD BY
Zewdu & Muluget
SCALE
AS SHOWN
DATE
JULY 2019
AR
02/02

3 INSTITUTIONAL SANITATION/LATRINE DESIGNS IN COWASH IV

3.1 SCHOOL SANITATION/LATRINE

As COWASH is a bilateral program working with the government, the institutional latrines design to be used in COWASH IV are those prepared by the Ministry of Education and Ministry of Health of Ethiopia.

- The very recent guiding manual for school WaSH implementation in Ethiopia is **“Water Supply Sanitation and Hygiene (WASH) Facilities in Schools Design and Construction Manual, November 2019”** prepared by the Ministry of Education (MoE).
- The manual includes different school water supply, latrines, and Menstrual Hygiene Management (MHM) design options to be applied from per-schools to high schools.

The MoE November 2019 manual gives different options of latrines: -

- The school WASH design and construction manual focuses on introducing different technology options of latrines based on availability of piped water in the school as (piped/flushed latrines or dry pit/composting type VIP latrines), depending on the number of students as (4, 6, 8 and 10 seats), based on geological formation/soil condition of the area (for rocky, swampy or normal soil type) and based on cultural diversity (for Afar and Somali regions) design options are included in the manual.
- The options in terms of number of seats of latrines (4, 6, 8 and 10 seats) for one sex are with the assumption that in rural schools for girls one latrine pit serves 50 girl students and one latrine pit serve 75 boy students.

From the different design packages in the MoE manual (November 2019), recommended school sanitation packages in COWASH IV.

a) For teachers (plans & sections of the design shown in Annex 1.1):

- Hollow concrete block (HCB) made 3 seats dry pit/composting type latrine in normal soil.
- Urinal (urination facility).
- Hand washing facility

b) For boy students (plans & sections of the design shown in Annex 1.2):

- Hollow concrete block (HCB) made 4 seats dry pit/composting type latrine in normal soil.
- Urinal (urination facility).
- Hand washing facility

c) For girl students (plans & sections of the design shown in Annex 1.3):

- Hollow concrete block (HCB) made 4 seats dry pit/composting type latrine in normal soil.

- Urinal (urination facility).
- Hand washing facility
- Hollow concrete block (HCB) made 4 rooms block Menstrual Hygiene Management (MHM) with hand wash facility.

Out of the different latrine design options put in the MoE manual for boys and girls students a 4-seat dry pit latrine in normal soil has been chosen because of the following justifications: '-

- Most school latrines constructed by COWASH so far are in normal soil conditions.
- As there is no piped water in most of the rural schools, dry pit/composting type is appropriate.
- For rural areas 4 rooms boys latrine serve 300 students (75 students/seat x 4 seats) and 4 seat latrines for girls serve 200 students (75 students/seat x 4 seats) which implies nearly 500 students. This is the average number of students in many rural schools.

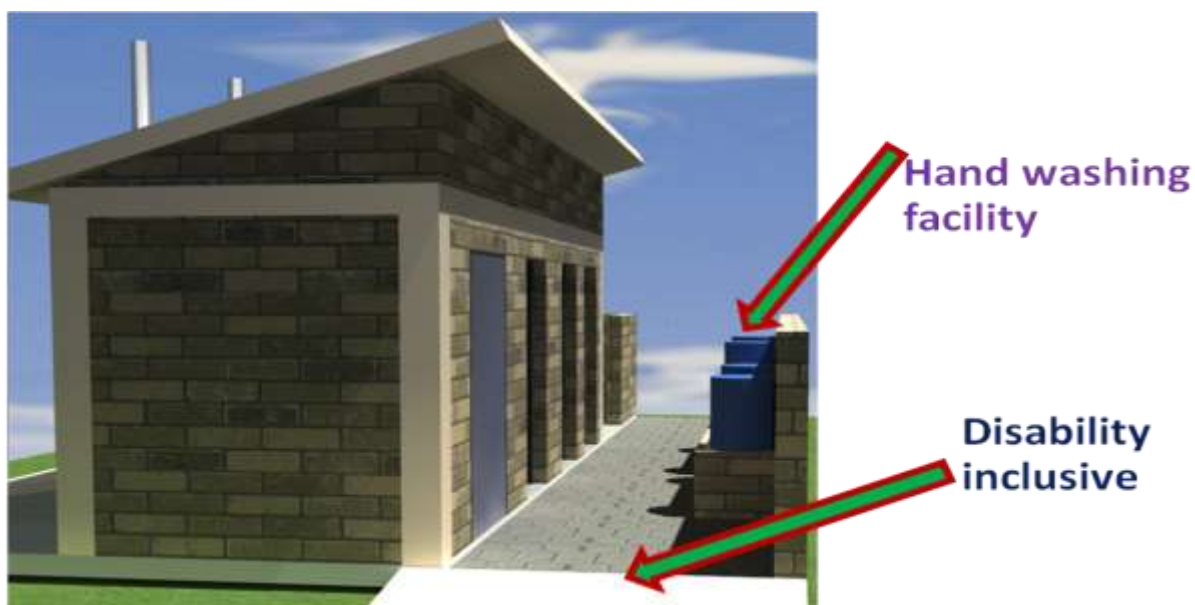


Figure 3.1 Four seat latrine for boys

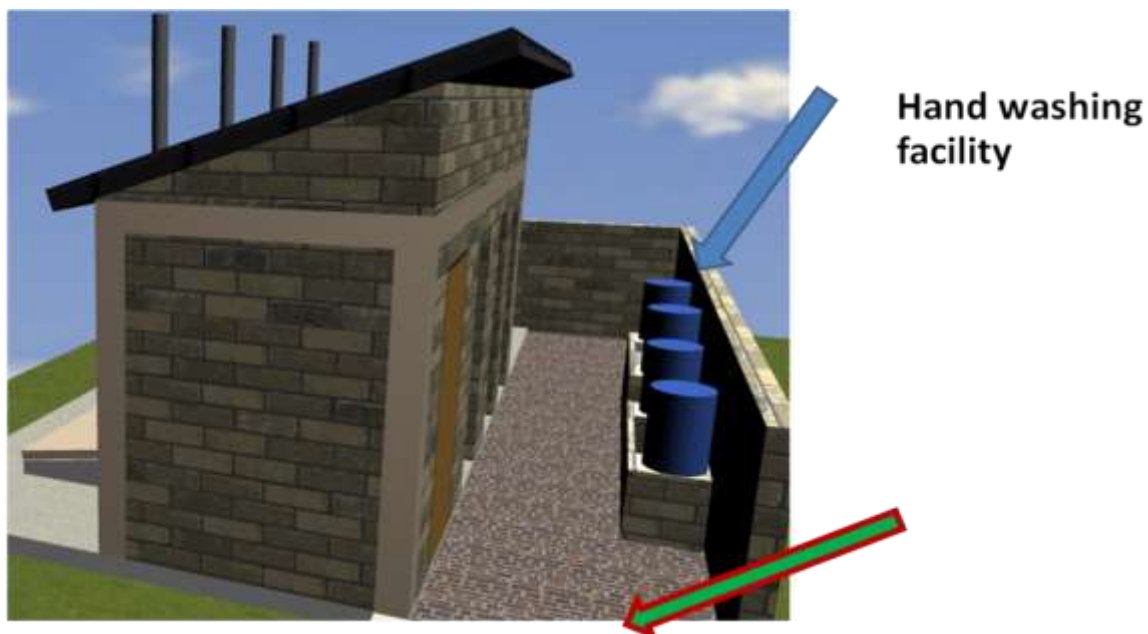


Figure 3.2 Four seat latrine for girls



Figure 3.3. Urinals for boys



Figure 3.4. Urinals for girls

3.2 MORE ON SCHOOL SANITATION/LATRINE DESIGN & CONSTRUCTION

3.2.1 Site selection criteria for school latrines and MHM facility

- Getting the right site selection for school WASH facilities (latrines and MHM) is the first important job in ensuring they are usable by students.
- Factors (checklist) to consider in locating toilet blocks are set out below. Inevitably, with all these factors to consider and harmonize, the location of school toilets is going to be a compromise.
- This reinforces the need for consultation and engagement of girls, boys and their teachers.
- The direction of the wind, the location of the boundary fence, soil conditions, borehole placement, and the presence of public road ways and streets in and outside of the school must be factored into the final decision.

- The important factors to be considered in school latrines construction site selection are: -
 - The distance from the toilet block to the classroom, if possible, should be at least 30m away. Latrines more than 50m away may be too far for a small child.
 - There should be some distance between the latrine and the boundary wall of the school. If the toilet is placed on the boundary, there may be a risk of students extending their trip to the toilet to a trip outside the school. Equally, girls may feel insecure so close to the boundary of the school. Here it is best to get their opinion.
 - The site of the latrine blocks needs to have sufficient space area, 5-10m, from the fence for suction trucks to access the latrine blocks and remove (de-sludge) the content.
 - The distance between the boys' and girls' toilets should be decided through consultation. For some schools 20m or more may be needed to secure the privacy and security needed by girls.
 - The latrine should be a minimum of 30m downstream side distance from a well or borehole to avoid any.
 - Future plans to expand the school are another consideration in the design.
 - Soil conditions – avoid rocky outcrops, unstable ground conditions and depressions with a shallow water table. A small earth auger can be used to test ground conditions if there is any doubt.
 - Drainage – ensure that rain water cannot flood the pit.
 - Pathway accessibility of latrines to users including disabilities.

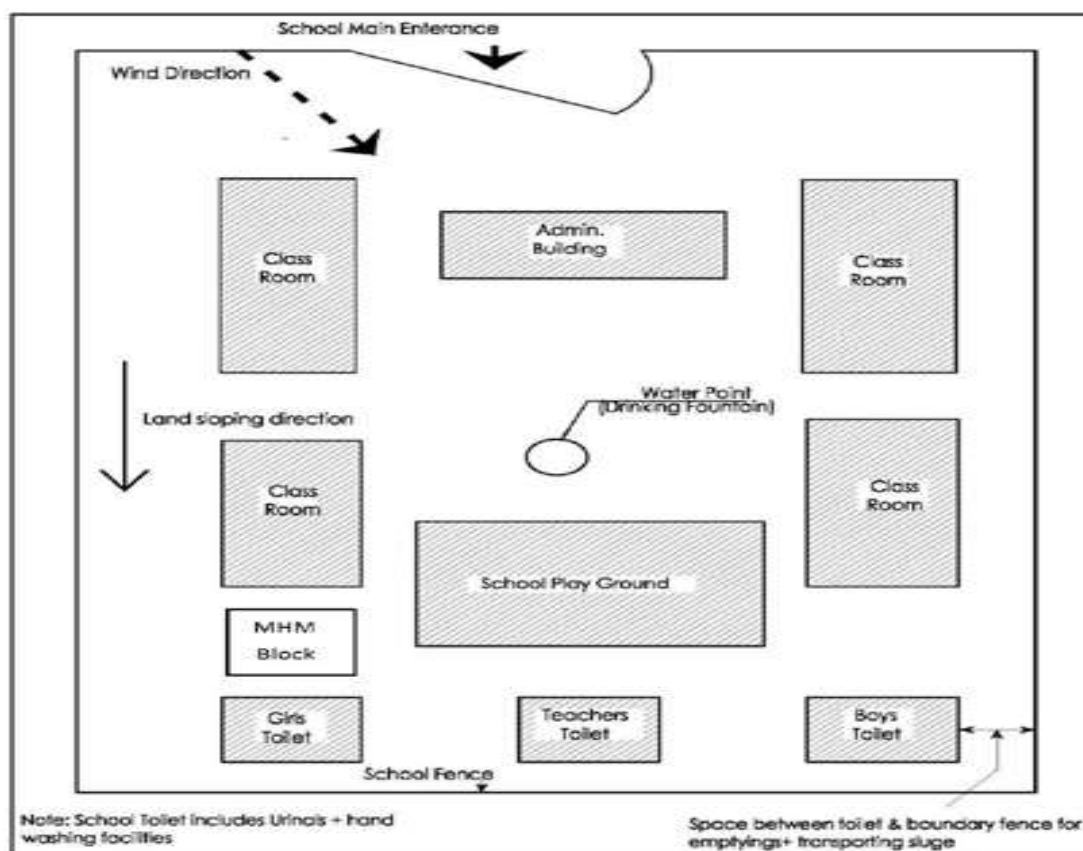


Figure 3.5. One possible layout option for locating WASH facilities in the school compound

3.2.2 Construction of composting type “alternating dry twin pit” four seat latrines for schools

a) Description of composting type dry pit latrines and how they operate

- The most common option of latrines for rural schools is the **dry pit/composting type** as there is no piped water in many of the rural schools. This section of the manual includes some important points in the construction of composting type dry pit latrines for schools.
- In case where there is piped water in the school compound, a **latrine with piped water** can also be an option to be constructed in rural schools.

b) Composting type Ventilated Improved Pit (VIP) latrine

- In many schools in Ethiopia where dislodging is not possible, when school toilets are full, the pit is covered with soil and abandoned.
- Human waste is a valuable resource for soil conditioning and crop production.
- There is a global effort to support the widespread use of human waste for agricultural purposes since it provides organic fertilizer.
- A composting toilet has become a widely used latrine in many parts of the world and it is also being adopted in Ethiopia.
- If it is properly constructed and used, it is a sustainably usable toilet that can service three or four times the life of other simple latrines.
- A composting toilet is a toilet in which composting of human waste takes place. Usually, the composting chamber is located underneath the slab of the latrine block. When the pit chambers are full, they are sealed for minimum of one year to allow the waste to aerobically decompose. To keep the latrine operational, another drop hole is opened in the same cubicle (toilet room).

c) Emptying the compost

- There are considerable challenges when removing and transporting compost. The main are culture of the people and health risk.
- There is a need to know when exactly to empty the pit to minimize the health risk.
- The other consideration is to plan a site where the compost can be used effectively to provide an economic return.
- There is a need for the compost to mix with soil for effective impact. Trying to empty the pit before the recommended time (minimum one year) can have serious health and environmental consequences and this should be avoided.
- The most widely used method for emptying compost is to scoop manually using a shovel after a minimum of one year sealed (anaerobic) condition and this is relatively easy for shallow pits.
- The compost is accessed through a service hole provided at the latrine slab. A concrete cover slab is removed to open the access hole. After opening the cover, it is advisable to allow a few hours for proper ventilation.
- The basic composting type “alternating pit toilet” that is discussed here is a four-seat latrine (see figure 9.1).
- The four-seat latrine has five shallow pits, separated by a partition with one superstructure. The alternating twin pit VIP latrine differs from conventional deep pit VIP latrines in the layout of the floor of each toilet cubicle.

- In the alternating twin pit VIP design, each cubicle accommodates two drop holes, one over each pit and one being temporarily sealed with a 30mm concrete tile. Only one pit is used at a time.

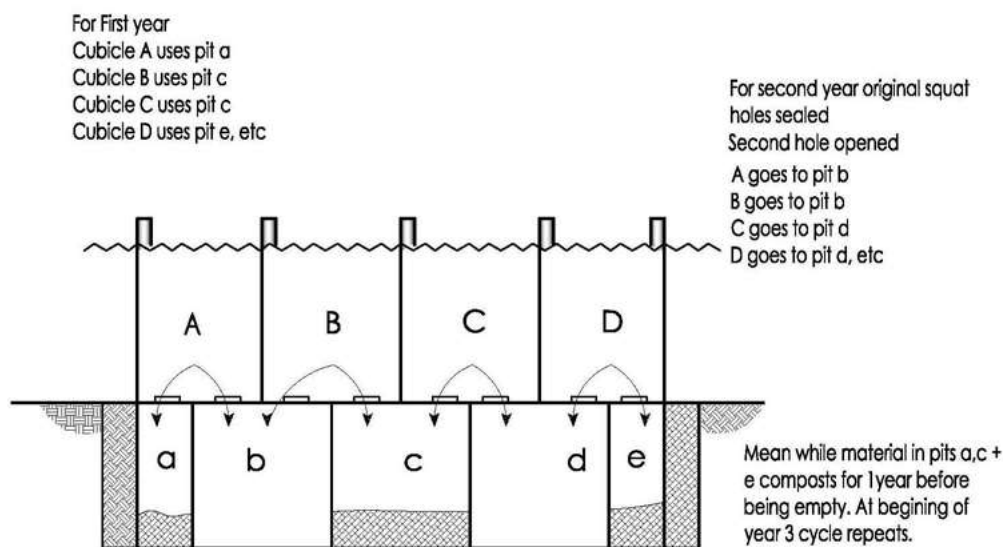


Figure 3.6: Alternating VIP Design: basic operation

- When the first seat is full, the drop hole is sealed and the second pit is opened to become operational. At this stage, the first pit contents are left to compost for a year.
- Alternatively, taking into account child friendly principles, the school authorities and/or Parents and Teachers Association (PTA) may want to make better and more regular use of composted fecal matter and urine to support agricultural production.

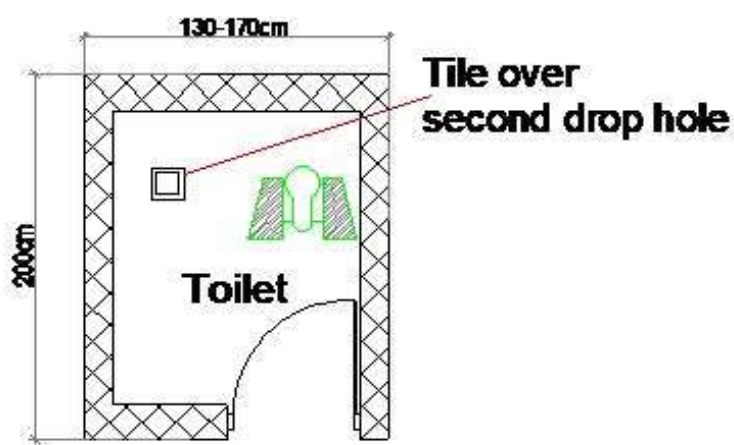


Figure 3.7: Floor (latrine seat) layout – alternating twin pit

d) Partitioning the pit and lining the wall of the partitions

- Once the pit wall is lined with masonry, the next step is to partition the pit with solid concrete blocks (SCB), reinforced concrete beams and columns as shown in the drawings for compost type latrines.

- The independent chambers are partitioned as per the design spacing shown in specific drawings. Then the wall of the partition for each chamber, except the floor, is plastered with cement (three coats) to make it watertight. The school latrines must be safe, with properly lined partition walls supporting the slab.
- SCB walls with reinforced concrete footing, beam and columns are provided in dry compost type pit latrines to reduce the risk of failure with overturning when the either side of the partition pits are full and empty.



Figure 3.8: Partition wall details for composting latrine

- Care must be taken not to use big stones for partitioning the pit so that the volume of chambers is not reduced from what is shown in the design drawings.
- The four-seat latrine block will have five chambers, similarly the six will have seven chambers and so on with one additional pit.

e) Design and construction of WASH facilities for students with disabilities

Ramps

- The first important facility needed for students with disabilities is to construct access roads or foot paths to guide them around in the school to classrooms, water supply and sanitation facilities, and MHM rooms.
- As an option, raised road side curve provides guidance for visually impaired school children can be provided.
- Ramps should be constructed at the entrance to the latrine, drinking water supply, handwashing facilities and MHM safe space for those school children using wheelchairs or with mobility issues.
- A ramp is constructed at a suitable location shown in each annexed drawing and with maximum slope of 8% convenient for users and their support givers although 5% slope is an ideal incline.
- The ground leading up to the ramp also needs to be suitable for those in a wheelchair or with limited mobility. It must be free from rocks, thick gravel, sand and grass/ plants. Handrails installed on the inside and outside of the toilet help lead users to enter the toilet, to seat themselves, and to leave the room with ease.

Hand rails and disable seat

- In both girls' and boys' latrine blocks (dry or piped), one of the toilet rooms is dedicated for students with disabilities. The room is relatively wide (minimum of 1.5m by 1.6m) and it is equipped with facilities that support students with disabilities to use the latrine. All latrine blocks will have ramp access (one or two as shown in each specific drawing) and handrails. A ramp hand rail is made of 1in galvanized pipe as shown in the annexed drawing.
- A disability friendly toilet seat is made of plastered HCB box with WC plastic cover, or ready-made ceramic WC. The disability friendly toilet is equipped with a set of 1 inch galvanized iron pipe handrails as shown in the drawing below. They are positioned horizontally and vertically. Handrails are properly anchored to the ground slab and to the walls.

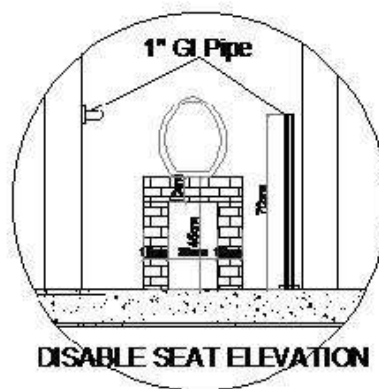
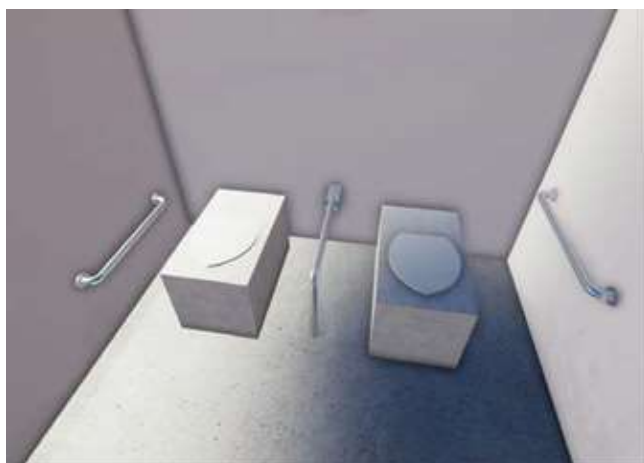


Figure 3.9: Disability friendly toilet seat sectional detail

- The toilet room for students with physical disabilities is equipped with a set of hand rails as shown above and they are positioned horizontal or vertical or both conveniently installed together to support the use of the facilities by the students. A 70cm length horizontal hand rail is installed at 70cm height from the floor anchored to the ground.

f) Urinals

- Urinals are designed and constructed as part of the latrine block structure. Their primary purpose is to reduce pressure on the toilet. Details are shown in each respective drawing.

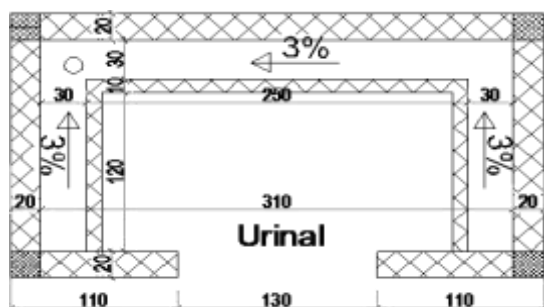


Figure 3.10 Plan of urinal for boys

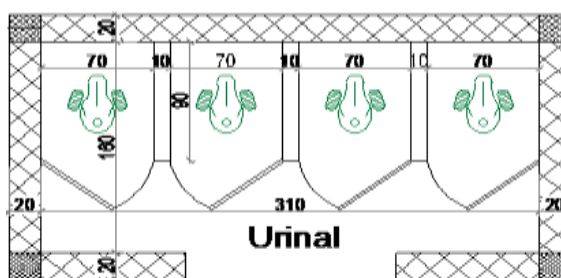


Figure 3.11 Plan of urinal for girls

g) Menstrual Hygiene Management (MHM) Facility

- To enable women and girls to live healthy, productive and dignified lives, it is essential that they are able to manage menstrual bleeding effectively.
- It is important that they have access to clean materials to absorb or collect menstrual blood, as well as safe water supply and sanitation facilities that allow privacy to change sanitary materials.

- MHM can enable school girls to remain healthy, empowered, and become more productive in their education and in supporting their family and their country at large.
- The separate building infrastructure for MHM is planned to have four rooms:(i) a counselling room, (ii) a waiting room with enough space to accommodate a seat for three school girls, (iii) a resting room equipped with a resting bed and mattress for girls who are ill from menstrual cramps, and (iv) a wash room with a washing basin for washing pads and clothes, elevated water storage container (1000L) or a shower in the case of a school with piped water supply system.
- In addition, a solid waste (sanitary pad) collection box is designed at the back of the building shown in the drawings. The floor and sectional views of the safe space for MHM is presented below.



Figure 3.10a Floor plan of MHM facility



Figure 3.10b Front view of MHM facility

3.3 HEALTH INSTITUTION SANITATION/LARINES IN COWASH IV

- Health Centre and Health Post refers to those institutions in charge of improving the health and sanitation situation of the communities.
- They also provide education and consultation on hygienic practices and support on the methods of improving the sanitation condition of the community.
- Health centre and health post sanitation is part of the major areas of the health services for patients and as demonstration centres to communities.
- The aim of health centres and health posts in providing sanitation facilities is to improve existing sanitation conditions at the institutions.
- The recent guiding manual for health institutions' WaSH is, a manual entitled "**Health Centre and Health Post Water Supply, Sanitation and hygiene facilities design and implementation manual**" prepared by MoH in June 2012.

Recommended health institutions sanitation packages in COWASH IV as put in the MoH manual are:-

1) For health posts

- a) **For females and males** (plans & sections of the design shown in Annex 2.1):
 - One block Hollow concrete block (HCB) made two seats latrine with MHM facility inside the latrine rooms.
 - Hand washing facility
- b) Incinerator (**only when needed**) (Annex 2.2).
- c) Placenta pit (**only when needed**) (Annex 2.4).



Figure 3.11. 2/two/ seats helath post latrine

2) For health centres

- a) **For females and males** (plans & sections of the design shown in Annex 2.2):
 - One block Hollow concrete block (HCB) made five seats latrine MHM facility inside the latrine rooms.
 - Hand washing facility
- b) Incinerator (Annex 2.3).
- c) Placenta pit (Annex 2.4).



Figure 3.12. 5/five/ seats helath center latrine



Figure 3.13. Incinerator for helath center

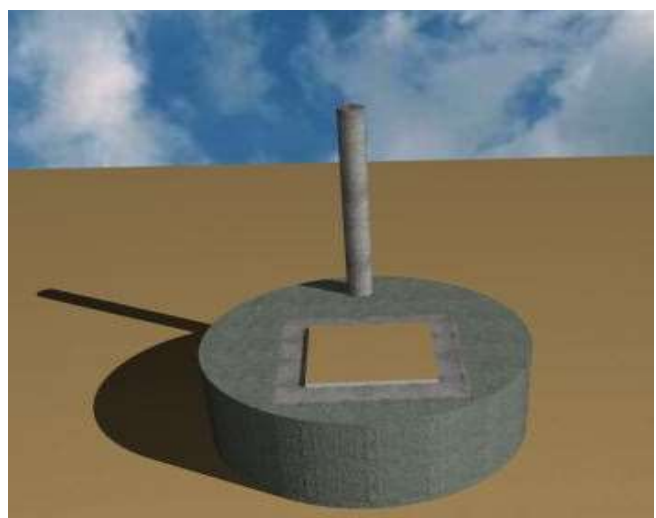


Figure 3.14. Placenta pit for helath center

4 INSTITUTIONAL WASH IMPLEMENTATION USING WMP APPROACH

4.1 WMP PROJECT PROCSSING CYCLE IN INSTITUTIONAL WASH IMPLEMENTATION

The key issues when implementing WMP approach for institutional WASH in COWASH IV are:

- 1) Implementation will fully depend on institutions own initiative (application to the Woreda WASH Team-WWT).
- 2) Institutions will receive technical and material support from the Woreda authorities during and after the construction of sanitation facilities.
- 3) Institutions have to demonstrate both their willingness and capacity to cover the operation and maintenance cost for the specific technology.

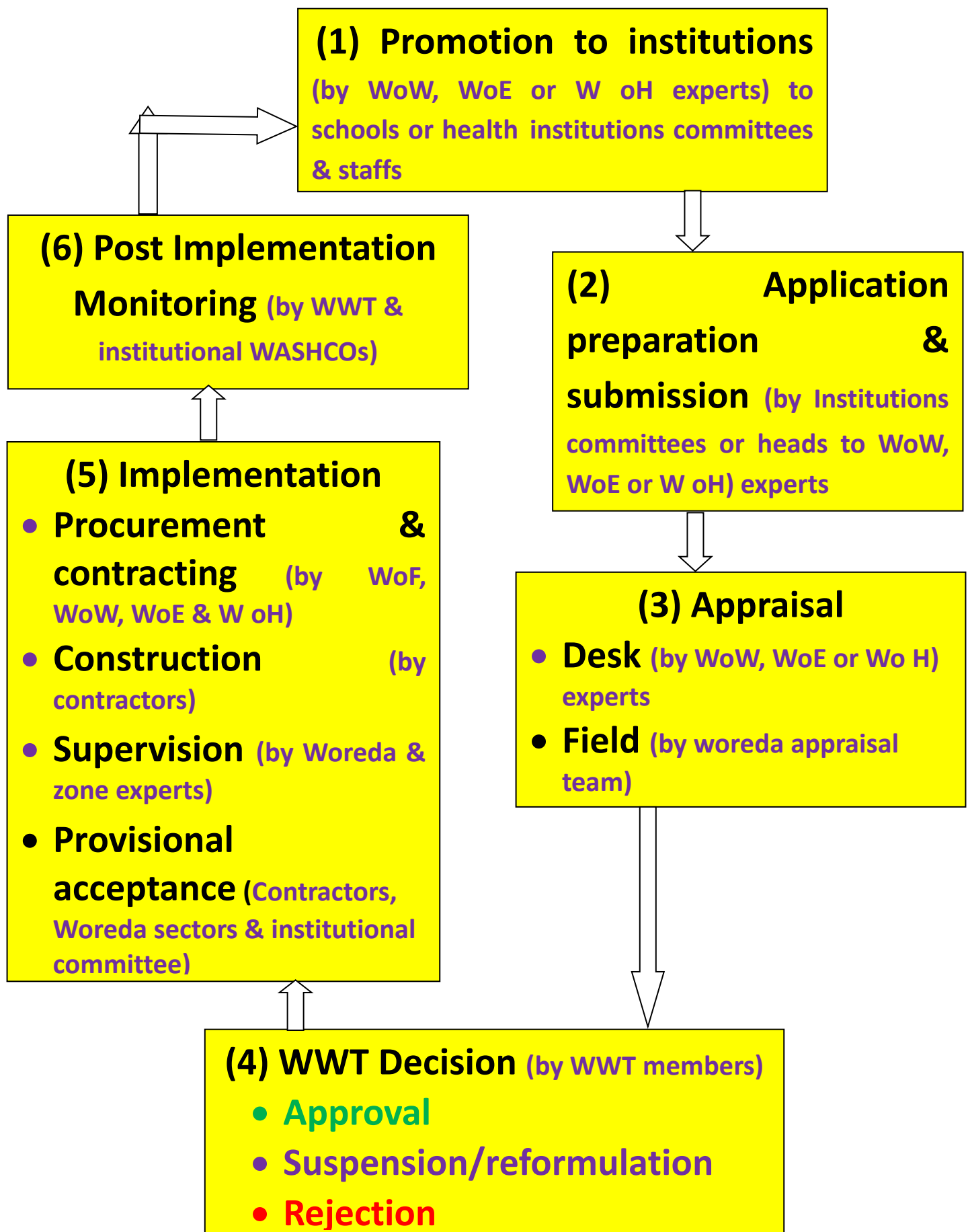
The possible criteria which demonstrate the willingness and capacity to operate and maintain the facilities can be: -

- Guarantee letter from the institution to manage the O&M of the facilities including the possible sources of O&M fund or
- Certified copy of the institution annual budget clearly showing the allocation for O&M of WaSH facilities.

NB. Upfront cash contribution for O&M is not mandatory for institutional WASH.

- 4) Investment fund for physical construction is directly transferred from region to the woreda finance office and administrated by the woreda finance office with a technical support from the woreda water, health or educations offices depending on the type of WASH facility to be implemented.
- 5) **Community contribution during construction is not a must for institutions.** But in case when needed support in improving access roads and provision of storage service for construction materials and equipment are appreciated.
- 6) **The Parents and Teachers Association (PTAs) members and Health Committees (HCs)** are expected to commit themselves to follow the progress of construction, and cover the finance for the operation and maintenance of the WaSH facilities after the construction, but they are entitled to receive technical support from the Woreda sector offices.

The Woreda Manged projects (WMP) processing cycle for the implementation of institutional WASH in COWASH IVC is shown in the following page.



4.2 MANAGEMENT OF THE CMP INSTITUTIONAL INVESTMENT FUND

- The management of funds is divided into financial responsibility and operational responsibility. The financial responsibility goes hand in hand with possession of funds at each moment. The following table describes these two sides of fund management responsibilities at two levels:

Table 1: Decision of financial & operational responsibilities in the management of investment funds

Management level	Financial responsibility (Disbursement of money, accounting, fund requests etc.)	Operational responsibility (giving direction and approvals)
Regional level	Finance Bureau/Water Bureau/Health Bureau/Education Bureau	Regional WASH Technical Team (RWTT)
Woreda level	Finance office	Woreda WASH Team (WWT)

Institutional WASHCO and its role

- Institutions represented by WASHCOs (Parents & Teachers Associations in schools and Health Committees in health institutions) are responsible for identifying the type of WASH facilities required to be applied for the construction, follow up of the progress of construction, and ensure budgeting for the O&M fund for the facilities.
- Once the WASH facilities are constructed the WASHCOs have to monitor regularly the conditions of the facilities and conduct discussion with the institutional community such as school administrations for schools, advocate locally for improvement in the management of the facilities, and support the maintenance of the facilities.
- In the effort the institutional WASHCO is making, the Woreda staff, particularly the Woreda Water, Health and Education Offices staff shall provide guidance and technical support.
- For the institutional WASHCOs to play their role in the follow up of the construction of the WASH facilities there is a need for briefing their role at the institutions by the woreda sector office experts but not formal training at this stage.

4.3 CRITERIA OF ELIGIBILITY FOR FUNDING

4.3.1 Eligibility of applicants (Which institution may apply)

The institutions that want to apply for funds from WMP have to fulfil the following criteria:

- The institution has to be primary school (school up to grade 8), health post or health centres.
- Application for water supply from an institution which does not have any water supply before will get priority.
- Applications for sanitation from an institution which does not have any latrine before will get priority. Institution having functional but non-standard latrines will be given the second priority.

- d) Applications for water supply and sanitation from an institution which does not have both water supply and sanitation facility.
- e) Applications for menstrual hygiene management (MHM) facility for schools which have water supply and latrines but not MHM rooms.
- f) The institution which is willing to establish or strengthen the existing WASHCO (Parent & Teachers Associations for schools and Health Committee for health institution) to bear the operational responsibility for the WASH facilities construction, and future operation and maintenance.
- g) The institution which is able to prove their commitment (presenting it in the application) how it is going to handle for proper utilization, management and maintenance of the latrine.
- h) Kebele support to the project is proven by a support letter from the Kebele administration.

4.3.2 Eligibility of projects

The WASH facilities type recommended to be financed in schools and health institutions implementation manuals are described in sections 2.1, 3.1 & 3.3 above of this manual. Just to the type of the project to be financed in COWASH IV as one of the eligibility criteria for budget approval by the WWT, the WASH facility packages eligible for financing in COWASH IV are summarized below.

- **For schools**
 - **Water supply:** Construction of new or rehabilitation of existing water supply schemes technologies listed in section 2.1.
 - **Sanitation facilities:** Construction of latrines for boys, girls & teachers, Urinals for boys & girls, and hand washing facility for boys, girls & teachers, and Menstrual Hygiene Management (MHM) rooms for girls.
 - **Menstrual hygiene management (MHM) facility:** Construction of MHM facility for schools which have water supply and latrines but not MHM rooms.
- **For health centres**
 - **Water supply:** Construction of new or rehabilitation of existing water supply schemes technologies listed in section 2.1.
 - **Sanitation facilities:** Construction of latrines and hand washing facilities for males & females, placenta pits and incinerator.
- **For health posts,**
 - **Water supply:** Construction of new or rehabilitation of existing water supply schemes technologies listed in section 2.1.
 - **Sanitation facilities:** Construction of latrines and hand washing facilities for males & females, placenta pits and incinerator when needed.

4.3.3 Eligibility of costs

In order to be considered eligible in the context of the WMP approach, costs must:-

- Be used for the WASH facilities packages shown in section 2.1, 3.1 & 3.3 only.
- Be mentioned in the budget estimate annexed to the field appraisal report.
- Be cost-effective and within the acceptable market prices.
- Have been incurred during the duration of the execution/implementation of the project.

5 WMP PROJECT PROCESSING CYCLES IN INSTITUTIONAL WASH IMPLEMENTATION

5.1 APPLICATION FORMAT AND SUPPORTING DOCUMENTS

- Application must be submitted to WWT with the format annexed to this manual (Annex F.1 for water schemes applications and Annex F.2 for latrines/sanitation facilities applications).
- The distribution of the application formats to Kebele WaSH Team is done by the Woreda Office of Water/Education/Health. Applicants (institutions) will get the formats and assistance for filling the formats from the Kebele WaSH Team and if necessary, also from the Woreda Office of Water (**WoW**), Woreda office of Health (**WoH**) or Woreda office of Education (**WoE**).
- The application format attached to this guideline is in English. If needed it can be translated into the working language of the Regional State concerned by the RSU staff.
- The application format should be filled carefully and as clearly as possible in order to facilitate its appraisal.
- The instructions attached to the application format have been made to applicants' convenience and should be followed.
- A list of necessary supporting documents required is included in the format.
- The Woreda Water, Health and Education offices personnel should commit themselves to being at the applicants' disposal to help in the preparation of the applications.

5.1.1 Institutional Water, Sanitation and Hygiene Committees (WASHCOs)

- In health institutions and schools normally, institutional committees exist to handle many of the activities to be performed in the institutions. If these committees are found to be weak due to various reasons, strengthening them to handle some activities during the implementation of the project and also in the operation & maintenance of the WASH facilities is to be given attention.

5.1.2 Cost estimate

- Budget estimate shall be prepared as part of the application. In order to prepare this cost estimate Woreda water, health and education offices together have to prepare information on the estimated *average* construction costs of the specific institutional (schools, health centres and health posts) sanitation facilities.
- The three Woreda WaSH sector offices shall update the average construction costs and provide updated information to the Kebele WaSH Team annually.
- The applicants should pay special attention to the budget estimate as it is one of the appraisal criteria and the approval of the project by WWT is to be based on.

5.2 SUBMISSION AND PROCESSING OF APPLICATIONS

5.2.1 Desk Appraisal

- Applications for water schemes for both health and education institutions shall be submitted to the water office preferably to the CMP supervisor and the desk appraisal is done by the CMP supervisor or other water office staff who are trained in the appraisal of institutional water schemes applications. The project file for the water point applications is opened and managed at the water office.
- Applications for latrines/sanitation facilities for health institutions shall be submitted to the health office preferably to the COWASH focal person at the woreda health office and the desk appraisal is done by the focal person or other health office staff who are trained in the appraisal of institutional latrine/sanitation applications. The project file for the health institutions latrines/sanitation facilities applications is opened and managed at the health.
- Applications for latrines/sanitation facilities for schools shall be submitted to the education office preferably to the COWASH focal person at the woreda education office and the desk appraisal is done by the focal person or other education office staff who are trained in the appraisal of institutional latrine/sanitation applications. The project file for the school latrines/sanitation facilities applications is opened and managed at the health.
- The applications should be delivered at the offices (depending on the type of WASH facility to be applied) by hand, to the respective office COWASH focal person preferably on working days. The body to submit the completed applications to the offices can be the institutional WASHCO (PTAs or health committees) or staff/s of the school or health facility. In the presence of the WASHCO members/applicant the following process will take place:
 - a) Application is numbered as follows: Application No. XX /EFY (XXXX).
 - b) Application is registered and the respective "Application follow-up form" (Annex F.3) is opened and it will be attached on top of the project file.
 - c) The CMP Supervisor for water schemes, the health office focal person for health latrines and the education office focal person for school latrines or his/her delegate will perform **office level appraisal** and verify the administrative compliance of the application in the presence of WASHCO members/applicant to guarantee immediate feedback in case some necessary document is missing. The office level appraisal form is shown in Annex F.4 in this manual).
 - d) The applicant will be issued a receipt concerning the submission of an administratively compliant application/non-compliant application (Annex F.5). In the latter case, the applicant will receive written explanation on reasons leading to non-compliance, e.g. list of missing documents and the applicant will be given instruction on how to complete the application. Timing for re-application may be agreed.
 - e) In case of administratively compliant application, the timing of a **field appraisal** will be proposed to the applicant by the offices focal persons or his/her delegate.
 - As there may be lack of engineers at the health and education offices, it is proposed that one engineer from the water office to be the member of the field appraisal for health or school latrines. So, when the education or health office focal persons are making appointment for the field appraisal with the applicants, it is good they contact/consult the CMP supervisor at the water office before deciding on

the date of the filed appraisal. The field appraisal should take place as soon as possible, preferably before the next WWT meeting or within 15 days.

Table 2. Desk Appraisal Criteria for Institutional WASH (water schemes and sanitation facilities) Applications

	Appraisal criteria	Yes	No
A	For Water scheme applications only (for water offices only)		
A.1	Is the requested water point construction/rehabilitation/expansion technology type eligible for financing by the WMP for institutions? (i.e., Hand dug well (HDW), Spring on spot (SPO), Spring with collection chamber (SPCC), Shallow well (SW), Rural piped scheme (RPS)? • If the answer is Yes, is it New construction, Rehabilitation or Expansion ? (Circle as appropriate).		
A.2	If yes, is it HDW, SPO, SPCC, SW, RPS from gravity spring, RPS from motorized spring, RPS from deep well with motorized, RPS from deep wells with solar power or OTHERS? (Circle as appropriate)		
B	For Sanitation facilities and MHM applications only (for Education or health offices)		
B.1	• Is the institution type eligible for COWASH IV financing? • If yes, what is the institution type? Rural primary school (1 to 8), health post, health centre (<u>underline as appropriate</u>)?		
B.2	Are the requested sanitation components for construction those included for financing for the respective institution in COWASH IV?		
C	Applicable for both water schemes & sanitation facilities applications (for use by water, health and education offices)		
C.1	Is the estimated cost of the project realistic/reasonable with the market price in the area?		
C.2	Does the application contain the following annexes?		
	- List of committee members (PTAs for schools & Health Committees for health institutions)		
	- Commitment of the institution to cover future O&M of the facilities.		
	- The seal of the institution submitting the application		
	- Recommendation letter from the Kebele administration		
C.3	Is the application administratively compliant and recommendable for field appraisal?		
C.4	Please indicate reason for temporary disqualification or rejection if not appearing above: _____ _____		
C.5	If the application did not pass the desk appraisal, has the applicant been informed of reasons for disqualifying the application?		
C.6	Date of informing the applicant on the result of desk appraisal: _____		

Place: _____ Date: _____

Name & Signature of the office level appraiser(s) from water office (for water schemes application):

Name & Signature of the office appraiser(s) from health/education office (for latrines/sanitation facilities applications): _____

5.2.2 Field Appraisal

- Applications for water schemes for both health and education institutions shall be field appraised by at least 2 water office experts who are trained in the appraisal of institutional water schemes applications. The field appraisal report shall be filed at the project file opened in the water office.
- Applications for latrines/sanitation facilities for health institutions shall be field appraised by the health office focal person and one engineer from the woreda water office as there is shortage of engineer at the health offices. In case when there is shortage of engineer even from water office and if there is a construction office at the woreda, the engineer from the construction office can participate in the field appraisal to see technical issues in the site selection for the construction of the latrines/sanitation facilities. The field appraisal report shall be filed at the project file opened in the health office.
- Applications for latrines/sanitation facilities and MHM (if separately applied) for schools shall be field appraised by the education office focal person and one engineer from the woreda water office as there is shortage of engineer at the education offices. In case when there is shortage of engineer even from water office and if there is a construction office at the woreda, the engineer from the construction office can participate in the field appraisal to see technical issues in the site selection for the construction of the latrines/sanitation facilities. The field appraisal report shall be filed at the project file opened in the education office.
- The purpose of the field appraisal is to verify the different feasibility criteria of the proposed institutional WASH facilities construction.
- The field appraisal will be carried out by Woreda Appraisal Team (WAT) members (mainly experts from WoW, WoH & WoE) who are properly trained on the procedure. The composition of the WAT may vary with 2-3 experts, but each team is expected to have at least one technical expert and one expert with ability to cover sanitation, gender, IEC as well as management related aspects.
- Field Appraisal format for institution water schemes is presented in Annex F.6 and for institutional latrines is presented in Annex F.7 of this manual and the report will be filed in the institution file opened at the respective offices.
- In addition to verifying the feasibility of WASH facilities construction, the WAT may propose corrective actions, such as budget corrections, site re-selection, etc. Some of those corrections may be implemented immediately and the application revised on the spot. In the latter case, the appraisal will be done on the revised application.
- The appraisal team will submit its field appraisal report to the WWT for approval by completing (filling) the approval format presented in Annex F.8.
- The following are the highlights of the criteria used in the field appraisal in order to verify the applications.

Table 3. The field appraisal criteria to be used for new institutional water construction

Appraisal criteria	Particular aspects considered in evaluation
1. Importance of the Project to the community	<ul style="list-style-type: none"> a) What is the present unprotected source of water, its condition, distance, its nature and its present use to the institution? b) Are there any existing developed water schemes which serve the institution community now? If yes, what is the source and at what distance it is located from the institution? c) Verify the number of beneficiaries (students in schools and patients/day for health institutions) and staff of the institution? d) Is the water scheme construction the priority needs of the institution?
2. Social Feasibility	<ul style="list-style-type: none"> a) Is the institutional WASHCO organized (PTAs or HC)? b) Is the disability data in the application reliable? c) Verify if the design of water scheme is disable friendly? d) Existing agreement with the owner of the land where the water schemes is to be constructed if site selected is on individual land outside the institution compound.
3. Technical Feasibility	<ul style="list-style-type: none"> a) Check the proposed water source in terms of quantity, quality, location, convenience for development and use after construction.
4. Environmental Feasibility	<ul style="list-style-type: none"> a) Check/identify the possible risks, rank, and prepare risk management and monitoring plan for social, environmental and climate risk screening (SECRS) issues of the project.
5. Project Implementation & costing	<ul style="list-style-type: none"> a) Prepare feasible project implementation plan b) Is the project cost still feasible and realistic after revising the unit prices as per the field appraisal?
6. Project Sustainability	<ul style="list-style-type: none"> a) Verify if the institution community is committed to cover the operation and maintenance (O&M) costs of the water scheme? b) Verify on how is the collection of O&M funds has been planned? c) Verify on how the institution community is thinking to avail spare parts for maintenance and carrying out the actual preventive and corrective maintenance? d) Verify how the institution community has planned to ensure the water quality? e) What type of training do the institution committee members, WASH and gender club members need to operate & maintain the project once construction completed? f) Is the institution willing to have its own WSP**** plan as part of the overall sub-catchment level WSP**** and implement it?

Table 4. The field appraisal criteria to be used for institutional water rehabilitation

Appraisal criteria	Particular aspects considered in evaluation
1. Importance of the Project to the community	<p>a) What is the type water supply scheme to be rehabilitated and the present condition of the scheme?</p> <p>b) What is the type of water supply in use by the institution if the water scheme needing rehabilitation is not giving service?</p> <p>c) Verify the number of beneficiaries (students in schools and patients/day for health institutions) and staff of the institution?</p> <p>d) Is the rehabilitation of the water scheme the priority needs of the institution?</p>
2. Social Feasibility	<p>a) Is the institutional WASHCO organized (PTAs or HC) and functional?</p> <p>b) Is the disability data in the application reliable?</p> <p>c) Verify if the design of water scheme is disable friendly?</p>
3. Technical Feasibility	<p>a) What are the types of defects for each component of the scheme needing rehabilitation?</p> <p>b) What are the types of rehabilitation works required for each scheme component (if possible, quantity the rehabilitation works needed)?</p>
4. Environmental Feasibility	Check/identify the possible risks, rank, and prepare risk management and monitoring plan for social, environmental and climate risk screening (SECRS) issues of the project.
5. project Implementation & costing	<p>a) Prepare feasible project rehabilitation plan</p> <p>b) Is the project cost still feasible and realistic after revising the unit prices as per the field appraisal?</p>
6. Project Sustainability	<p>a) Verify if the institution community is committed to cover the operation and maintenance (O&M) costs of the water scheme?</p> <p>b) Verify on how is the collection of O&M funds has been planned?</p> <p>c) Verify on how the institution community is thinking to avail spare parts for maintenance and carrying out the actual preventive and corrective maintenance?</p> <p>d) Verify how the institution community has planned to ensure the water quality?</p> <p>e) What type of training do the institution committee members, WASH and gender club members need to operate & maintain the project once construction completed?</p> <p>f) Is the institution willing to have its own WSP**** plan as part of the overall sub-catchment level WSP*****?</p>

- The following (shown in table 6) are the highlights of the criteria to be used in the field appraisal of institutional latrines in order to verify the application (Annex F.7):

Table 5. The field appraisal criteria to be used for institutional sanitation/latrine

Appraisal criteria	Particular aspects considered in evaluation
1. Importance of the Project to the institution	<ul style="list-style-type: none"> a) What are the institutional sanitation facilities/latrines available at the institution? If there exists, please assess the condition of the latrine/s. b) Verify the number of beneficiaries (students in schools and patients/day for health institutions) and staff of the institution? c) Is the latrine construction the priority needs of the institution?
2. Social inclusion Feasibility	<ul style="list-style-type: none"> a) Is the institutional WASHCO (PTAs or HCs) organized? b) Is the disability data in the application reliable? c) Do girl students participate in the site selection? d) Are the selected construction sites at schools give privacy & security for girl students, preferably the girls' latrine be located at minimum distance of 15 meters from boy's latrine? e) Verify if the designs & selected latrine site are disable students and patients friendly? f) Verify the distance to the latrines from the institution's boundary wall. Especially for schools if the latrines are placed very close to the boundary, there may be a risk of students extending their trip to the latrine to a trip outside the school. In such a case, particularly girls may feel insecure & it is best to get their opinion.
3. Technical Feasibility	<p>Check the proposed sanitation facilities in terms of location, convenience for development and use after construction.</p> <ul style="list-style-type: none"> a) Verify the soil condition of the selected latrine site avoid rocky outcrops not to make the pit digging difficult & unstable ground conditions so that the structure will not collapse. b) For schools, verify that the distance from the latrine block to the class is between 30 and 50 meters, if possible. More than 50 meters may be too far for a small child in a desperate hurry, and in terms of toilet management and upkeep. c) Verify the location of the latrine with respect to the future plans to expand the school. d) For health institutions, verify that the latrine is located a minimum of 6 m away from the health centre or health post blocks for patients not to travel long distance and yet not to create nuisance or bad odour.
4. Environmental Feasibility	<ul style="list-style-type: none"> a) Does the design include adequate provision for proper drainage and fencing work or any other protection measures around the latrine? b) Verify the site for the latrine construction is located on raised ground in order that rain water can drain away easily. c) Verify that the distance of the latrines to a well or borehole is minimum of 30 meters to avoid any risk of contamination
5. Project Implementation & costing.	<ul style="list-style-type: none"> a) Prepare feasible project implementation plan b) Is the cost still acceptable and realistic after revising the unit prices as per the field appraisal?
6. Project Sustainability	<ul style="list-style-type: none"> a) Verify what roles each stakeholder for schools (students, teachers, school administration, PTAs, & parents) and for health institutions (institution staff & health committee) will have in the management of the facilities. b) Verify how the daily and weekly cleaning of the latrines are intended to be handled. For example, in schools by organizing the students to clean latrines regularly to a roaster, supervised by teachers. c) Verify how the operation costs (payment for cleaner, cleaning materials etc.) & maintenance costs of the sanitation facilities to be covered. d) Verify how the collection & management of money required for operation & maintenance of the facilities have been planned, if any. e) What type of training do the institution committee members need to operate & maintain the project once construction completed?

5.2.3 WWT Approval

- After having the result of the field appraisal, the WWT will take a decision to approve, postpone or reject the proposed Project.
- The decision of the WWT is made using format (Annex F.8).
- Applicants will be informed of the result of the WWT decision in writing (Annex F.9).

5.2.4 Procurement and contracting

- The general structure of the procurement methods to be used for the institutional WASH implementation is the Ethiopian Federal Government Procurement and Property Administration Proclamation no 649/2009 and the Federal Government Public Procurement Directive issued by the Ministry of Finance and Economic Development (MoFED) June 2010 which regions have adopted & translated to their working languages and distributed to each woreda finance office for use.
- In the procurement process the WASH sector office (water, education or health) experts depending on the type of the project to be implemented shall prepare a tender document together with the woreda finance office. The woreda finance office advertises the tender, the woreda procurement committee analyzes tender in this case an expert from the sector office has to be available, i.e., water office experts for water schemes tender, health office expert for sanitation facility tender for health institutions and education office experts for sanitation facilities tenders for schools.
- After the tender analyzed and winner contractor identified depending of the type of the project the water office, the education office or health office head signs contract agreement with the winner contractor. Construction progresses, the WASH office technical expert conducts construction supervision, when payment reaches the contractor prepare payment, the sector office expert/supervisor checks the payment and the sector office head approves the payment and requests the finance office to effect payment to the contractor. Then the finance office effects payment to the contractor based on the request made by the sector office and approved payment certificate by the sector office head. In case where there is a construction office in the woreda, the supervision for the construction of institutional latrines be made by an engineer from the construction office. Even the engineer shall participate in the preparation of tender document and analyses of the tenders.
- During the contracting of the construction works the appropriate grade and license of the contractor as per the government regulation has to be advertised depending on the type of the and the estimated construction cost of the WASH facility to be constructed.

5.2.5 Fund management and reporting

- The woredas finance office is responsible for the management of and reporting of funds at the woreda level. As the sources of funds for institutional WASH implementation are two (GoF and GoE) will be transferred to Woreda Office of Finance (WoF) by Bureau of Finance (BoF), the reporting of the fund use to the bureau of finance (BoF) shall follow the reporting system designed for COWASH IV for each source of funding.

5.2.6 Project completion/handing over

- As the implementation of the institutional WASH facilities does not fully follow the community managed project approach, handing over of the completed project to the institution for properly managing the system is very implementation. In additions as there is money to be retained by the woreda finance office for a year, there is a need to have proper handing over of the project from the contractor to the client sector office and the institutional committee.
- Therefore, depending on the type of the project water or sanitation, and at schools or at health institutions a project completion handing over format has to be prepared and filled and signed and shared one copy to the contractor, one copy to the woreda sector office (water, health or education) which made contract with the contractor and one copy to the institution committee (PTAs or health committee).

5.2.7 Training of stakeholders in Operation & Maintenance (O&M) of WASH facilities

- Once the construction of the WASH facilities is completed, the project enters into operation and maintenance phase where there is a need for involvement of different stakeholders.
- For this purpose, training of the stakeholders in the operation and maintenance of the institutional WASH facilities is very important.
- In schools training of Partners and Teachers Associations (PTAs), school administration staffs, students, WASH and gender clubs, cleaners/janitors, guards and water operators (depending on the type of water supply technology) be given appropriate training to properly operate, use and maintain the facilities.
- In health institutions training of health committees, health institution administrative staff, water scheme operators (depending on the type of water supply technology) and cleaners be given appropriate training to properly operate, use and maintain the facilities.

6 SUPPORT FROM ZONE SECTOR DEPARTMENTS AND BUREAUS

- Although the actual implementation of the WASH facilities are to be handled by the woreda sector offices, different supports from the zone sector departments and the region bureaus is mandatory for the effective implementation of the projects. The respective zone sector departments and bureaus which are expected to give support to woredas when needed are: -
 - Zone water department and water bureau.
 - Zone education departments and education bureau.
 - Zone health department and health bureau.
 - Zone finance department and finance bureau
 - Zone construction department and construction bureau.
- The support expected from the zones and bureaus include: -
 - In the site selection for well drilling and design of rural piped schemes for the institutions if beyond the capacity of the woredas.

- Tender document preparation and cost estimation for the institutional latrines and water schemes.
- In the tender analysis for the contracting of the institutional latrines and water schemes construction.
- In the construction supervision of institutional latrines and water schemes. Especially as the new school latrine/sanitation design facility needs experienced engineers, construction supervision support from zone or bureau level experts is very important.

7 REPORTING & OTHER FORMATS

- The formats necessary for use in this training are manual are those required only for preparatory activities for institutional WASH implementation (application preparation, appraisal and WWT approval) formats and are attached in the **“Generic Institutional WASH Implementation Manual in COWASH IV using Woreda Managed Projects (WMP) Approach”**. Sample formats have been filled and attached with this training manual as separate files. The formats for fund management and reporting shall follow the GoE system hence such formats are not included in this manual.

8 AUDIT

- The audit processes and procedures of the Government of Ethiopia shall be used.

9 INSTITUTIONAL LATRINE DESIGNS TO BE USED IN COWASH IV

As COWASH is a bilateral program working with the government, the institutional latrines design to be used in COWASH IV are: -

- a) For schools the designs put in the **“WASH Facilities in Schools Design and Construction Manual prepared by Ministry of Education (MoE), November 2019”**.

The school WASH design and construction manual focuses on introducing different technology options of latrines (piped or flushed latrines, dry pit/composting type VIP latrines), different number of seats of latrine depending on the number of students (4. 6. 8 and 10 seats), Geological formation of the area (for rocky, swampy and normal soil type), cultural diversity (for Afar and Somali regions) and also solid and liquid waste management design options are included in the manual.

Based on the experience from the past phases of COWASH, out of the different design options put in the school WASH design and construction manual, a four-seat dry pit/composting type latrine in normal soil for boys and girl each and the three-seat teacher’s latrine for normal soil condition are recommended to be implemented in the COWASH woredas and the design and bill of quantities of those designs are put in this manual.

The following are the justifications why the four-seat composting type latrine in normal soil for boys and girls are highly recommended in rural school in COWASH IV woredas: -

- Most school latrines constructed so far are in normal soil condition.
- As there is no piped water in most of the rural schools, dry pit/composting type is appropriate.

- For rural areas 4 rooms boys latrine serve 300 students (75 students/seat x 4 seats) and 4 seat latrines for girls serve 200 students (75 students/seat x 4 seats) which implies nearly 500 students. This is the average number of students in many rural schools.

But when the specific condition of the school from where application has been made by the school community, the use of other design options in terms of number of seats, foundation soil condition and piped water availability, other options put in the school WASH design and construction manual prepared by MoE can be used for the specific school. For more reference and use when demanded the manual are attached/annexed (Annex 5.1) as separate file with this manual.

- b) For health institutions the design put in the **“Health Centre and Health Post Water Supply, Sanitation and Hygiene Facilities Design and Implementation Manual”** prepared by Metaferia consulting engineers in June 2012 under the leadership of Ministry of Health (MoH).

From these both manuals the designs to be used in COWASH IV are extracted and annexed in this manual as follows.

Annex 1. School latrine/sanitation facilities designs

Annex 1.1 School Latrine design for teachers (one block with 3 seats)

Annex 1.2 Composting Type School Latrine design for Boys (one block with 4 seats)

Annex 1.3 Composting Type School Latrine design for Girls (one block with 4 seats)

Annex 1.4 Menstrual Hygiene Management (MHM) Room for Girls (one block with 4 rooms)

Annex 1.5 Concrete ring made incinerator (optional-will be constructed only when needed).

Annex 2. Health facility latrine designs

Annex 2.1 Health post latrine design (one block with 2 seats)

Annex 2.2 Health centre latrine design (one block with 5 seats)

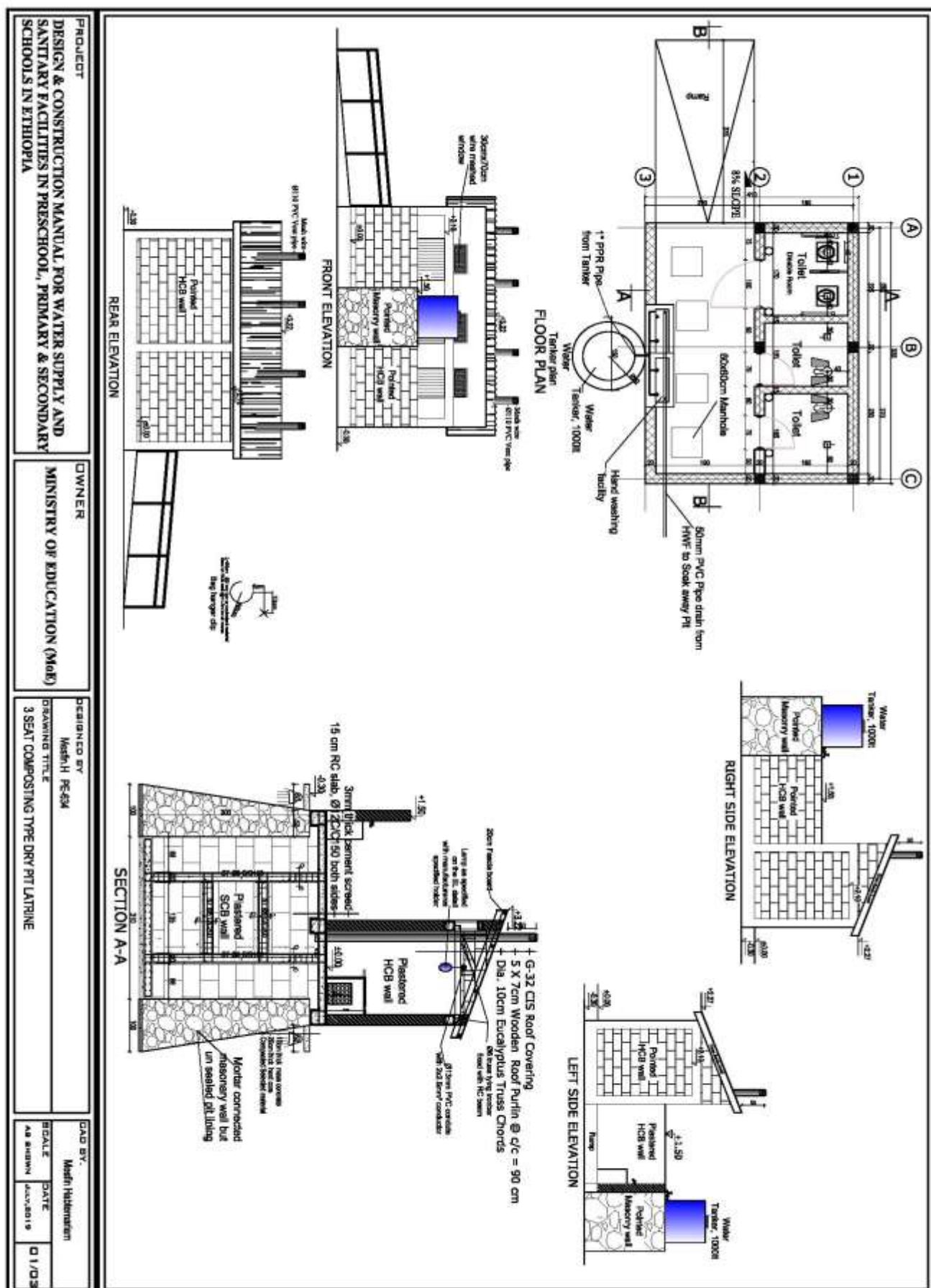
Annex 2.3 Incinerator design and Placenta pit designs

10 BILL OF QUANTITIES FOR THE DESIGNS

Bill of Quantities (BOQ) shall be read and constructed in conjunction with the architectural and structural drawings for each type of school and health latrine/sanitation facilities as shown in Annex 1 and 2 attached to this document. The bill of quantities for each design are shown in the **“Generic Institutional WASH Implementation Manual in COWASH IV using Woreda Managed Projects (WMP) Approach”** from which this training material is developed/extracted.

Annex 1. School latrine/sanitation facilities designs

Annex 1.1 School Latrine design for teachers (one block with 3 seats) - Three pages



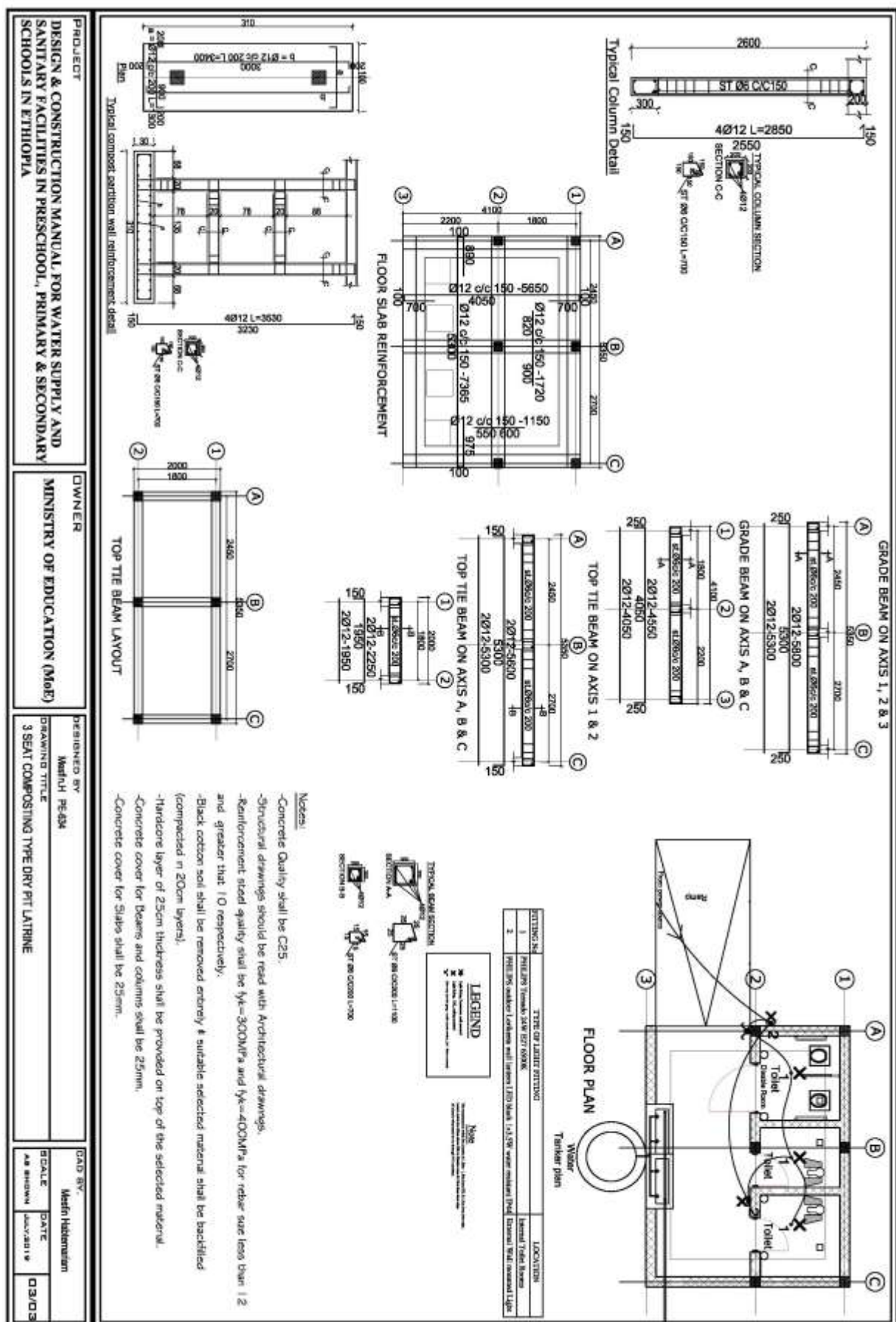
PROJECT
DESIGN & CONSTRUCTION MANUAL FOR WATER SUPPLY AND
SANITARY FACILITIES IN PRESCHOOL, PRIMARY & SECONDARY
SCHOOLS IN ETHIOPIA

OWNER
MINISTRY OF EDUCATION (MoE)

DESIGNED BY
Mesth H. Feksa
DRAWING TITLE
3 SEAT COMPOSTING TYPE DRY PIT LATRINE

DRAWN BY
Mesth H. Feksa
SCALE
AS SHOWN
DATE
JULY 2019
Q1/03

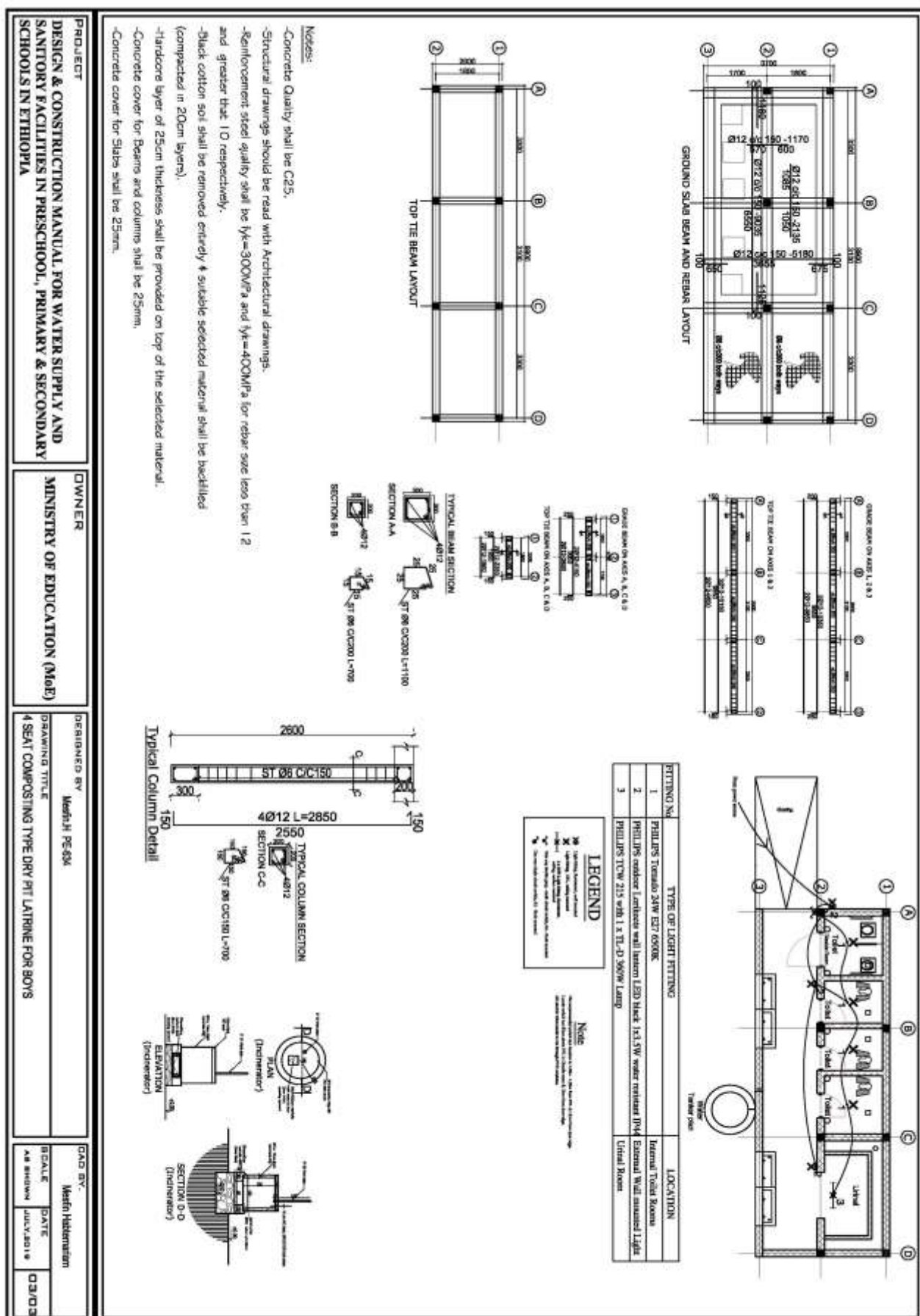




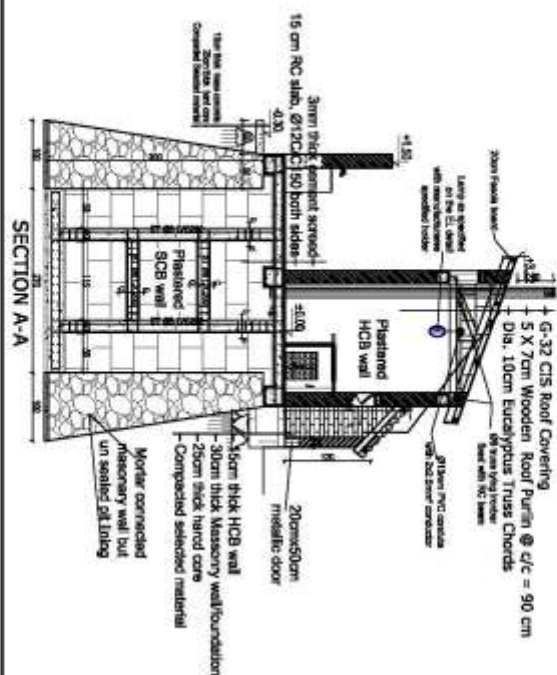
Annex 1.2 Composting Type School Latrine design for Boys (one block with 4 seats) - Three pages



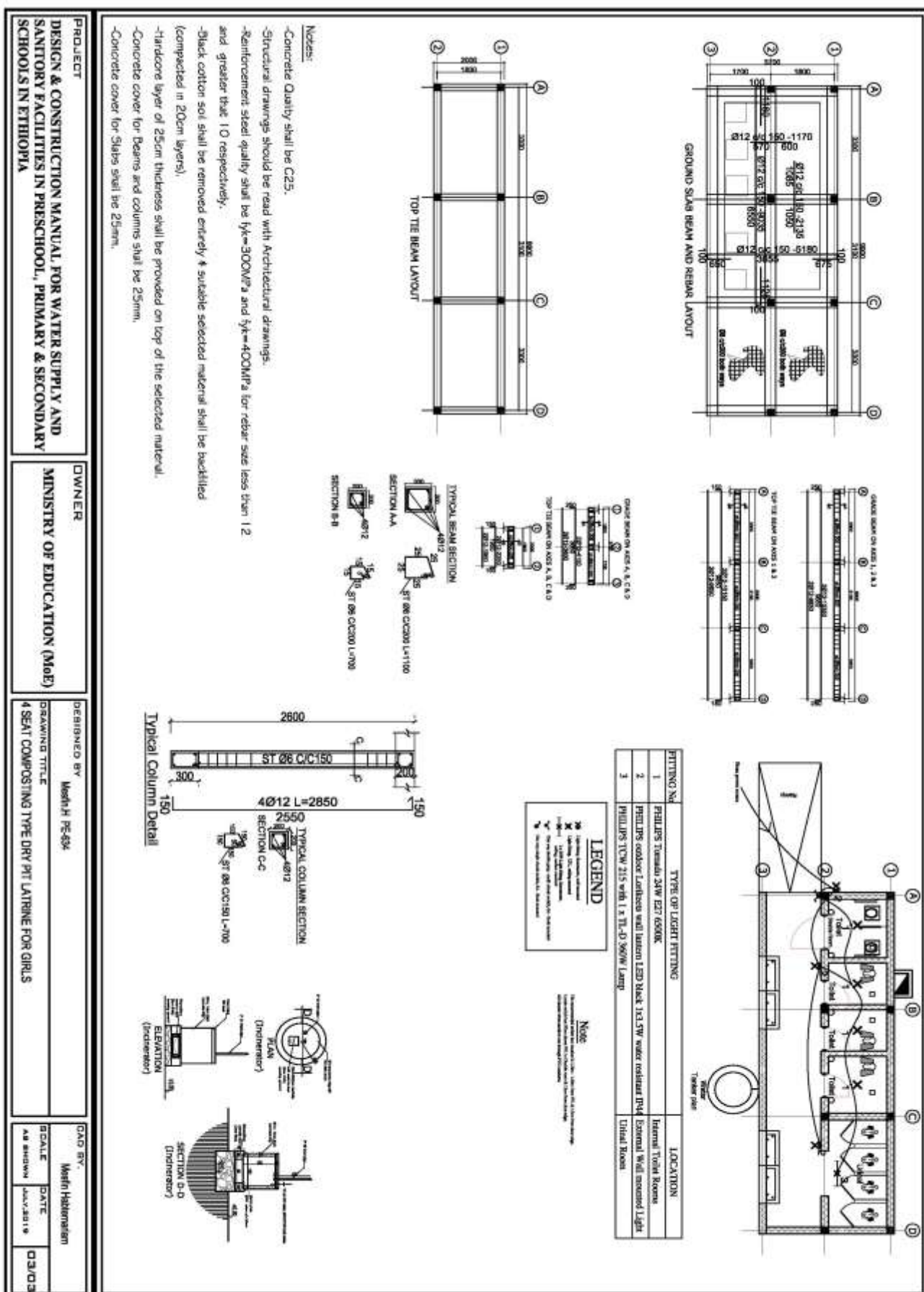




Annex 1.3 Composting Type School Latrine design for Girls (one block with 4 seats)- Three pages

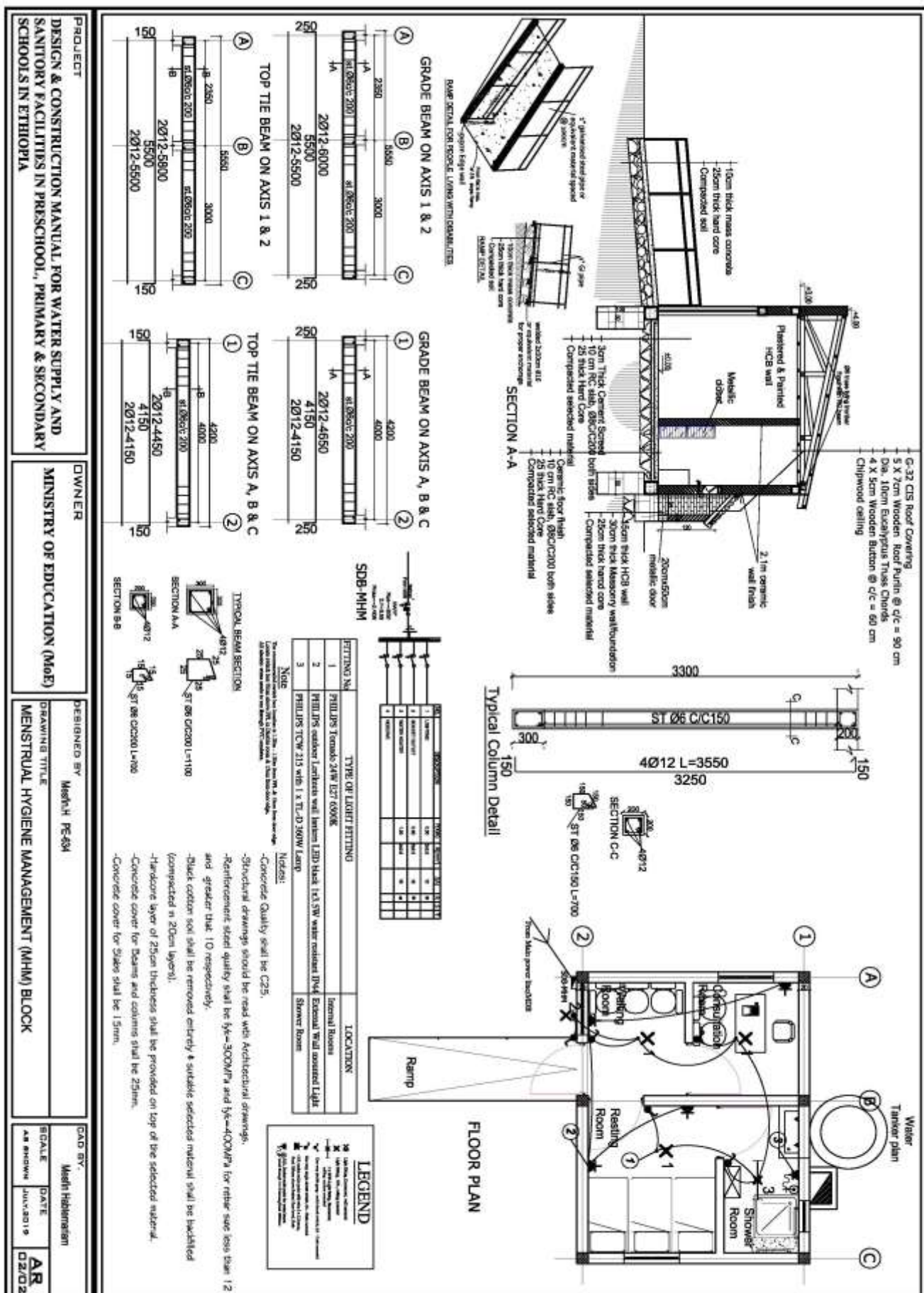


CAD BY:
 Weslin Haddock



Annex 1.4 Menstrual Hygiene Management (MHM) Room design (a block with 4 rooms) – Two pages



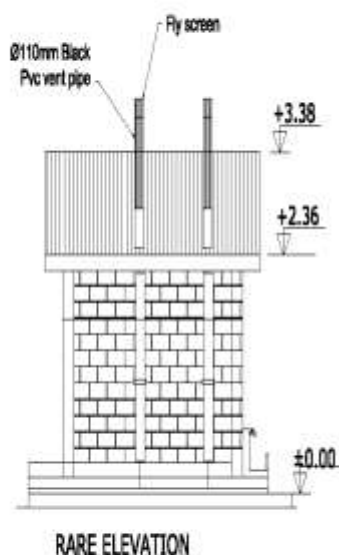
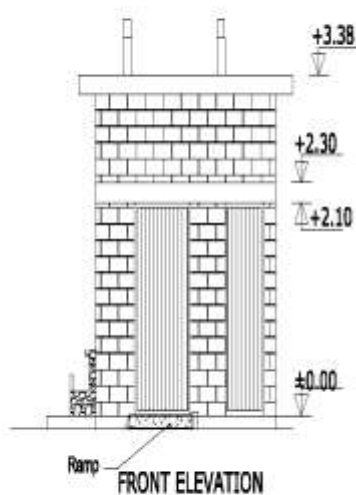
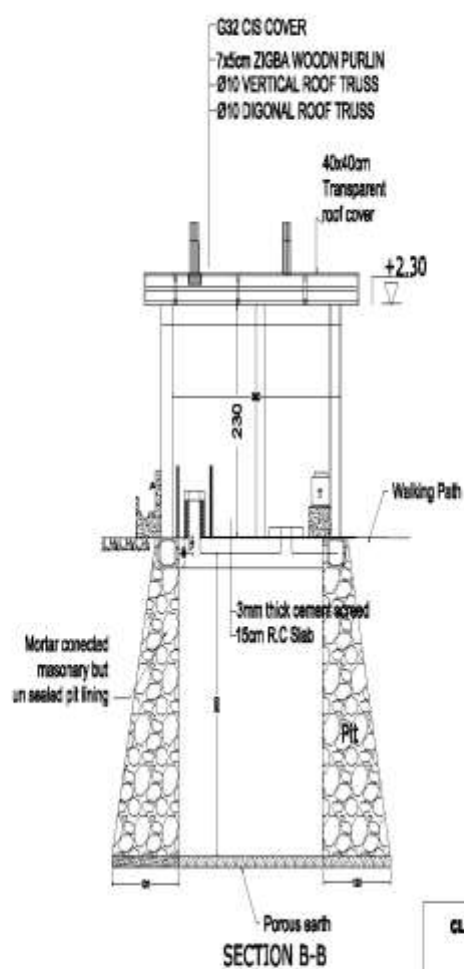
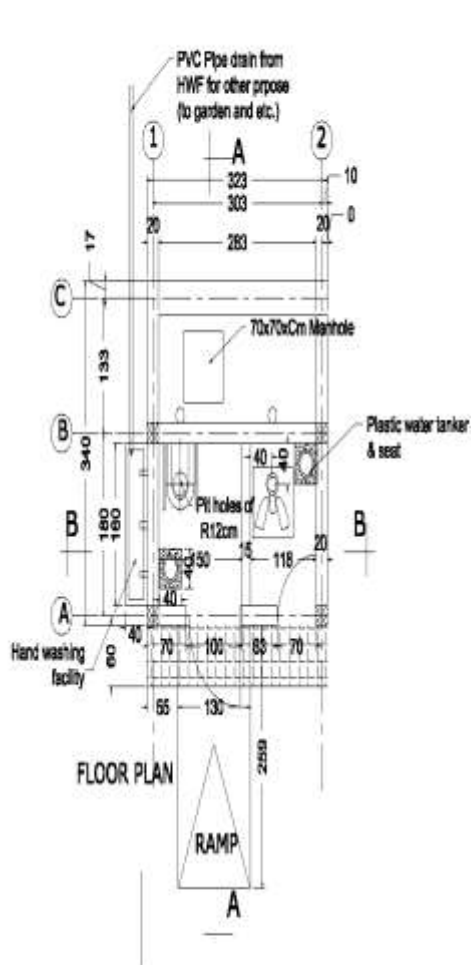


The drawing consists of three views of a concrete ring incinerator:

- PLAN:** A top-down view showing a circular structure with an outer diameter of 160 cm. It features a 2" GI Vent pipe, a 10cm thick RC slab cover, and a 30cm x 30cm manhole with a metallic door (3mm thick) opening upward. The concrete ring has a thickness of 10cm.
- ELEVATION:** A side view showing the 10cm thick RC slab, the 2" GI Vent pipe, and the 10cm thick concrete ring. The structure is shown with a ground level of ±0.00.
- SECTION D-D:** A cross-section view showing the internal structure. It includes a 10cm thick RC slab (Ø8C/C180 both sides), a 2" GI Vent pipe, a 10cm thick concrete ring, and a metallic door (3mm thick) opening upward. The structure is shown with a ground level of ±0.00 and a depth of 0.40m.

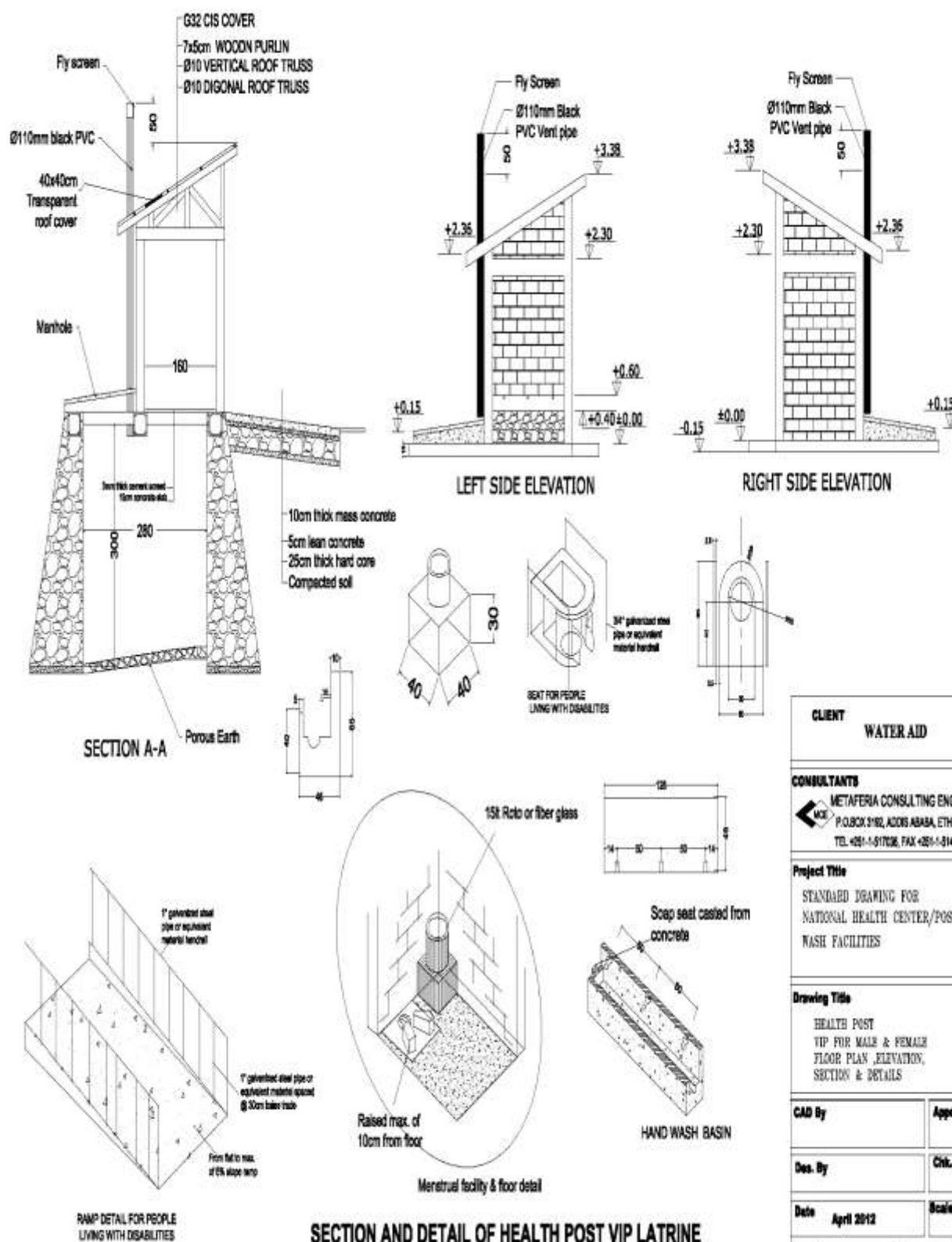
Annex 2. Health facility latrine designs

Annex 2.1 Health post latrine design (one block with 2 seats) - Three pages



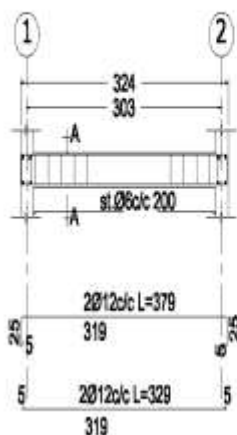
PLAN & SECTION OF HELATH POST VIP LATRINE

CLIENT		
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CONSULTANTS		
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Project Title		
STANDARD DRAWING FOR NATIONAL HEALTH CENTER/POST WASH FACILITIES		
Drawing Title		
HEALTH POST VIP FOR MALE & FEMALE FLOOR PLAN, ELEVATION, SECTION & DETAILS		
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Des. By	Chk. By	
Date	Scale	
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Dwg. No.	Sheet No.	PAGE No.
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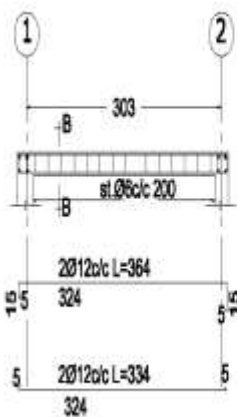


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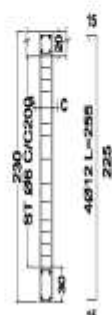
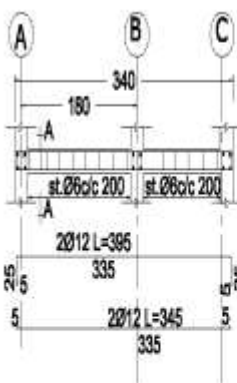
GREAD BEAM ON AXIS A,B & C



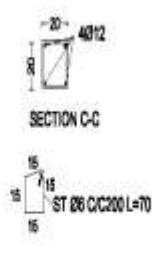
TOP TIE BEAM ON AXIS A&B



GREAD BEAM ON AXIS 1 & 2

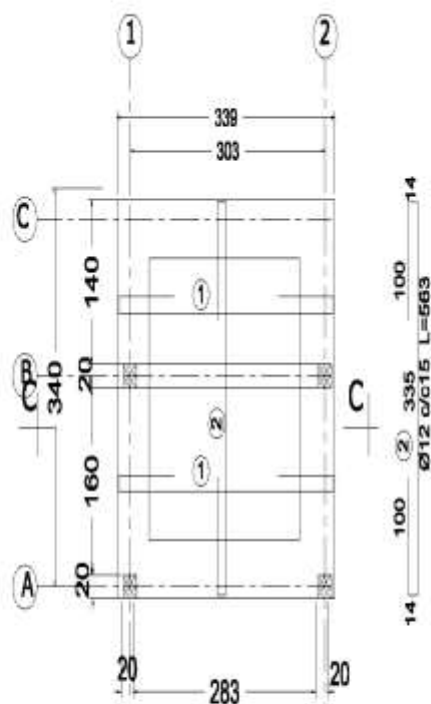


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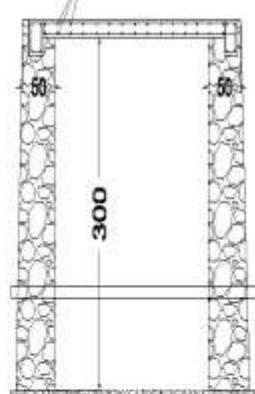
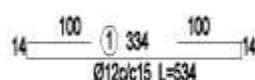


SECTION C-C

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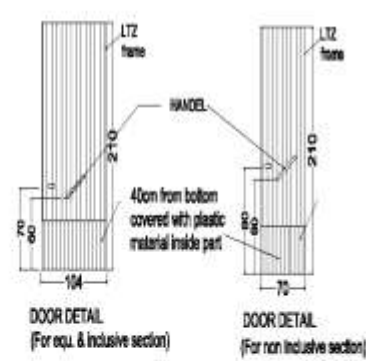


FLOOR SLAB REINFORCEMENT



SECTION C-C

TOP TIE BEAM ON AXIS 1&2



DOOR DETAIL
(For eq. & inclusive section)

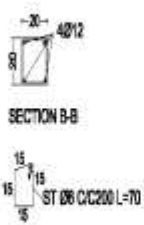
DOOR DETAIL
(For non inclusive section)



SECTION A-A



SECTION B-B



SECTION C-C

ST Ø6 C/C200 L=70

CLIENT
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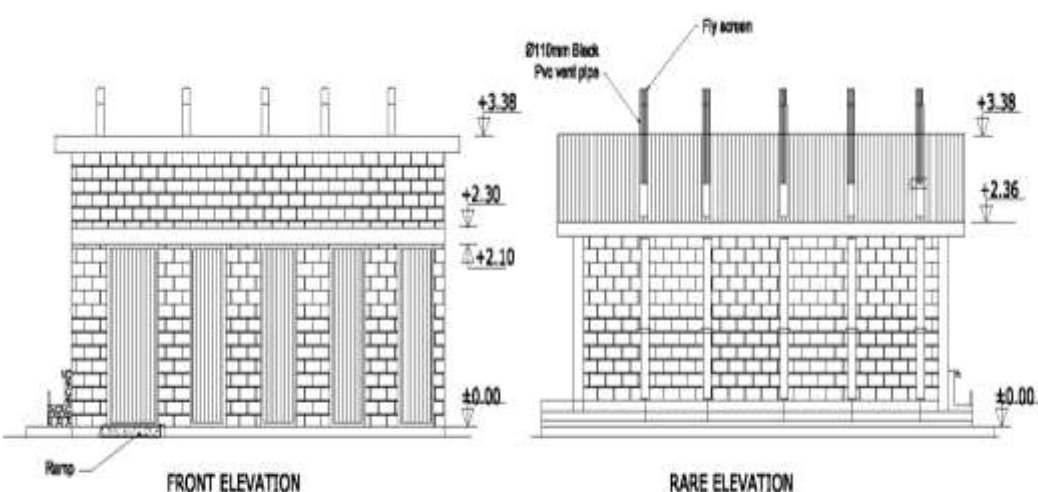
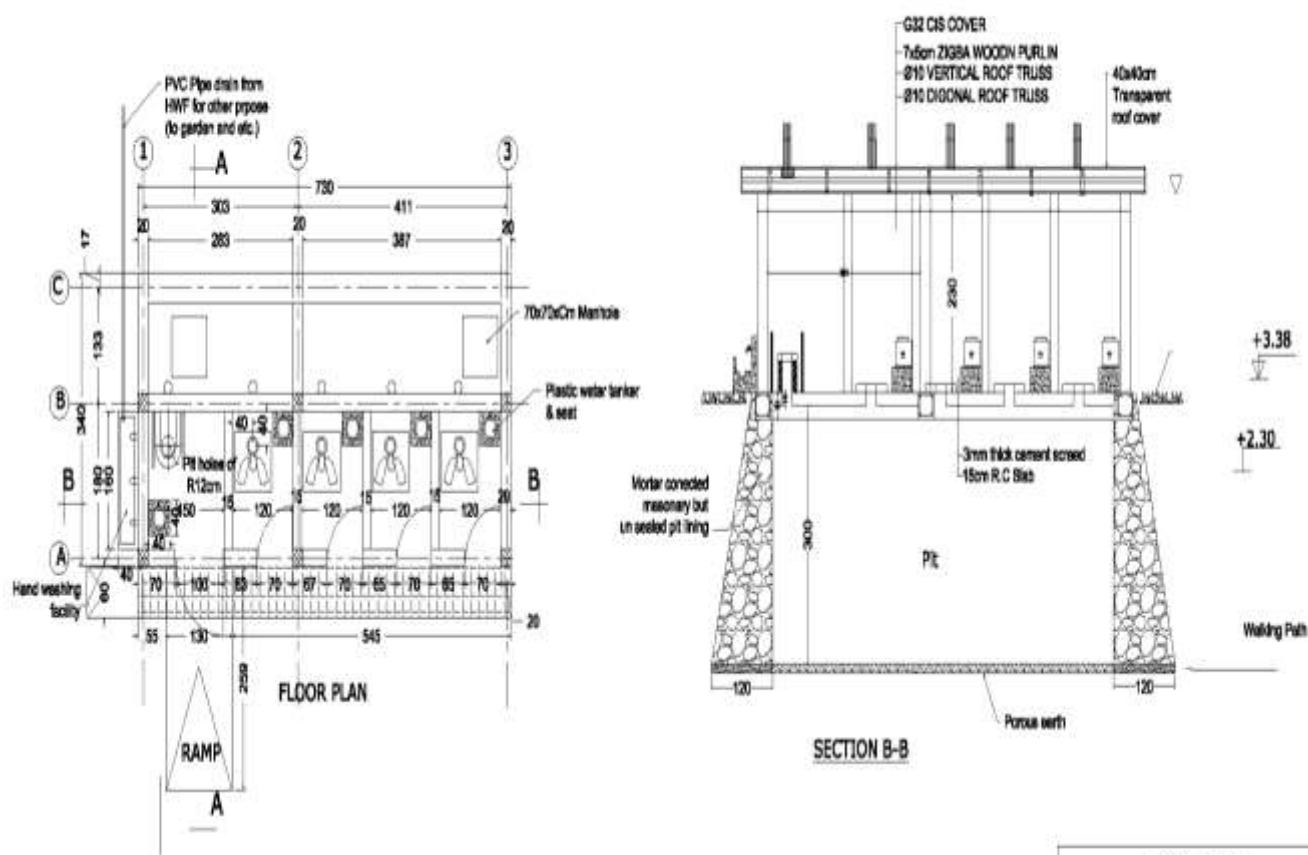
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STANDARD DRAWING FOR
NATIONAL HEALTH CENTER/POST
WASH FACILITIES

Drawing Title
HEALTH POST
VIP FOR MALE & FEMALE
FLOOR PLAN, ELEVATION,
SECTION & DETAILS


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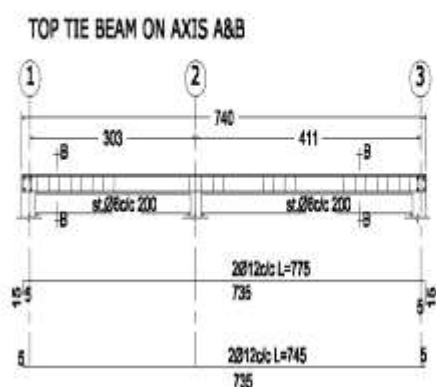
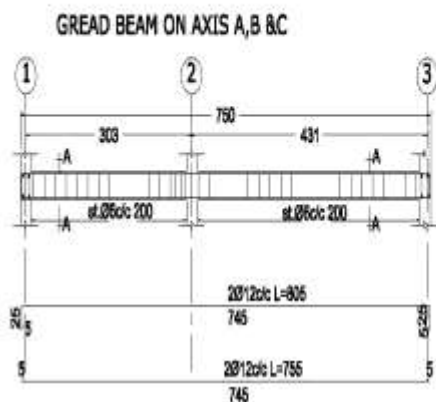
REINFORCEMENT PLAN OF HEALTH POST VIP LATRINE

Annex 2.2 Health centre latrine design (one block with 5 seats) - Three pages

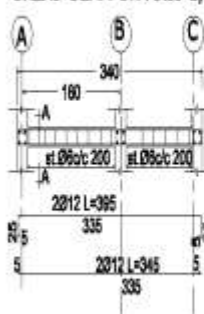


FLOOR PLAN, SECTION & ELEVATION OF HEALTH CENTER VIP LATRINE

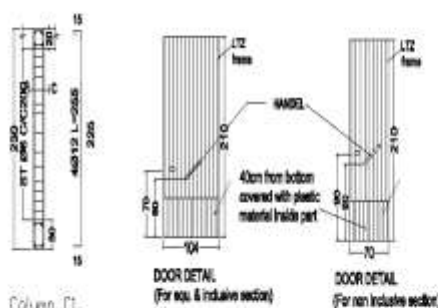
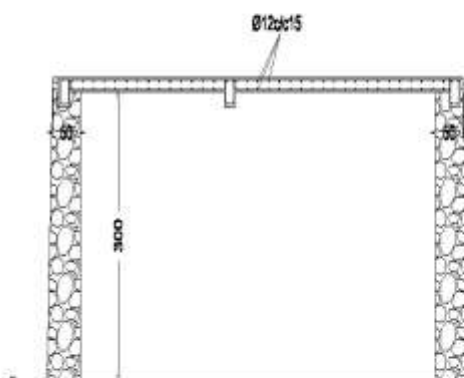
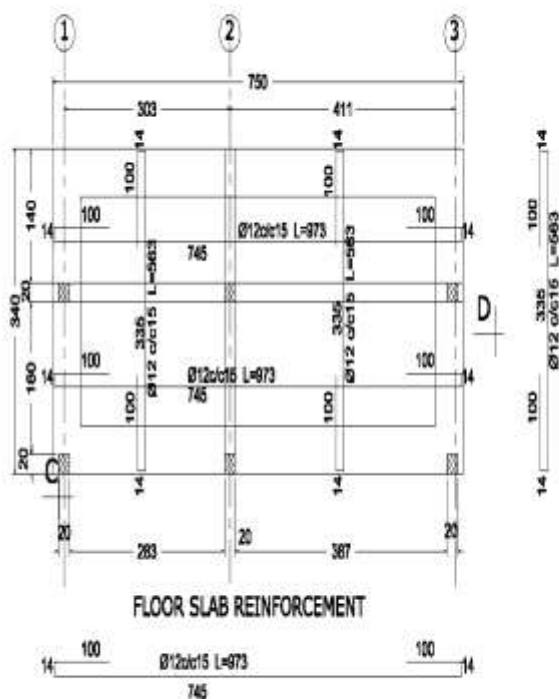
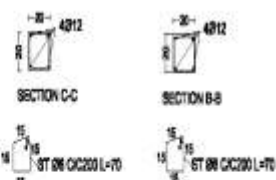
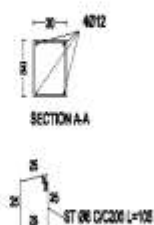
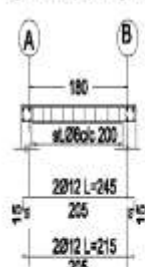
WATER AID		
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Project Title		
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CAD By	Appd. By	
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Date	April 2012	Scale
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GREAD BEAM ON AXIS 1,2 &3



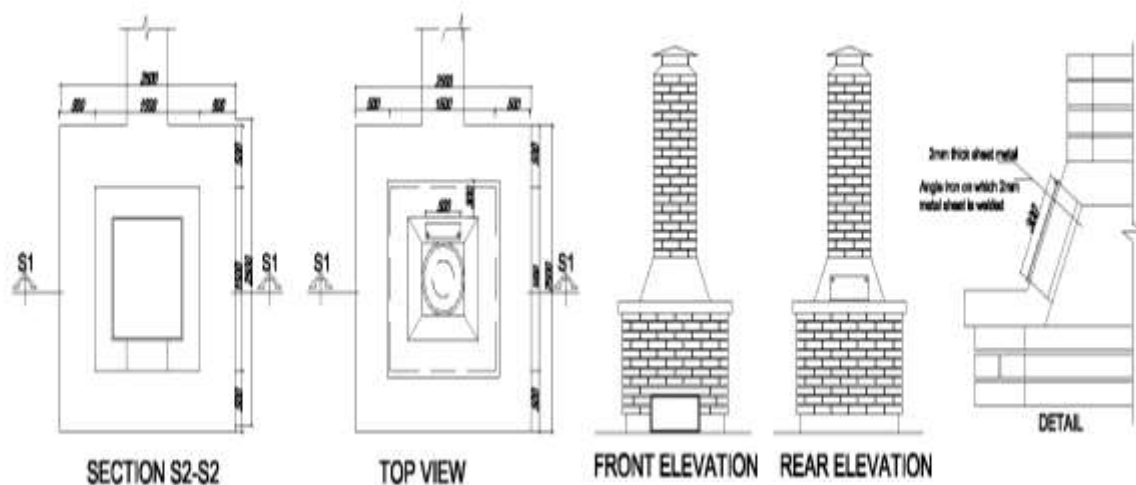
TOP TIE BEAM ON AXIS 1,2 &3



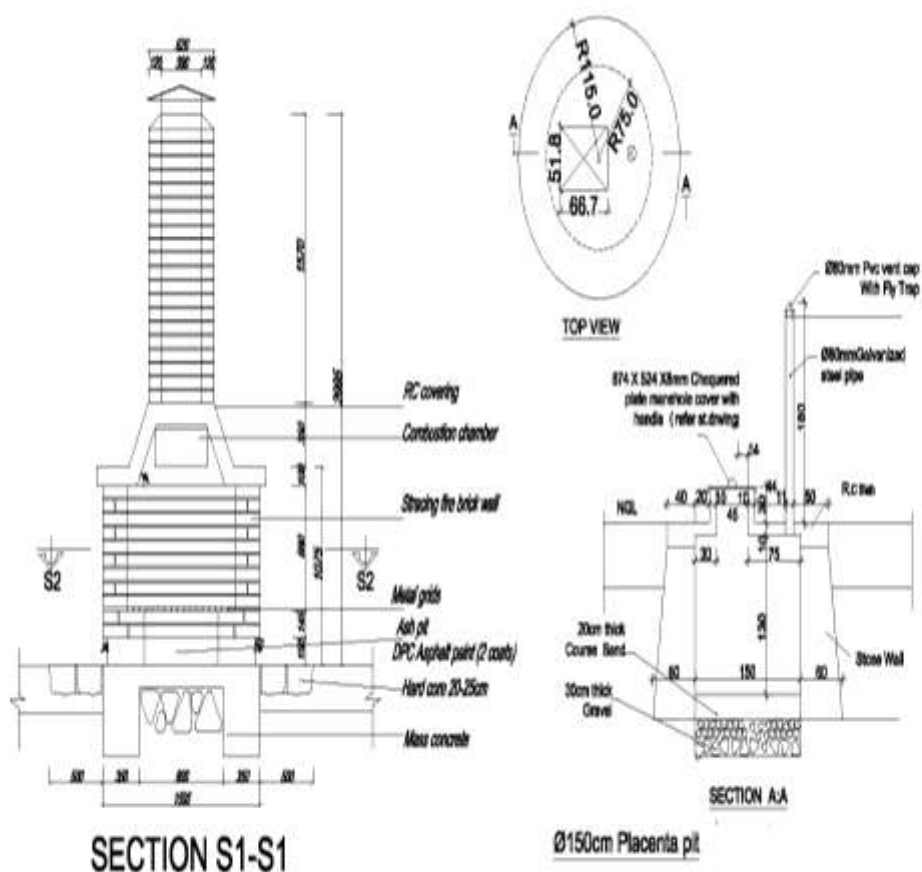
REINFORCEMENT PLAN OF HEALTH CENTER VIP LATRINE

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Project Title		
STANDARD DRAWING FOR NATIONAL HEALTH CENTER/POST WASH FACILITIES		
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TYPICAL VIP FOR MALE & FEMALE FLOOR PLAN, ELEVATION, SECTION & DETAILS		
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Annex 2.3 Incinerator design & placenta pit designs-1 page



INCINERATOR



PLAN & SECTION OF INCINERATOR AND PLACENTA PIT FOR HEALTH POST AND HEALTH CENTER

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Project Title		
STANDARD DRAWING FOR NATIONAL HEALTH CENTER/POST WASH FACILITIES		
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SEPTIC TANK, INCINERATOR & PLACENTA PIT		
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Des. By	Chk. By	
Date	Scale	
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