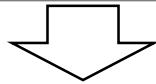


Steps for Emergency Sanitation

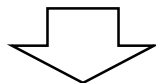
A. Calculate sanitation requirements

E.g. Number of toilets



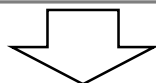
B. Check important design considerations

- Siting
- Soil Conditions
- Additional important considerations e.g. gender and special needs



C. Construction of latrines

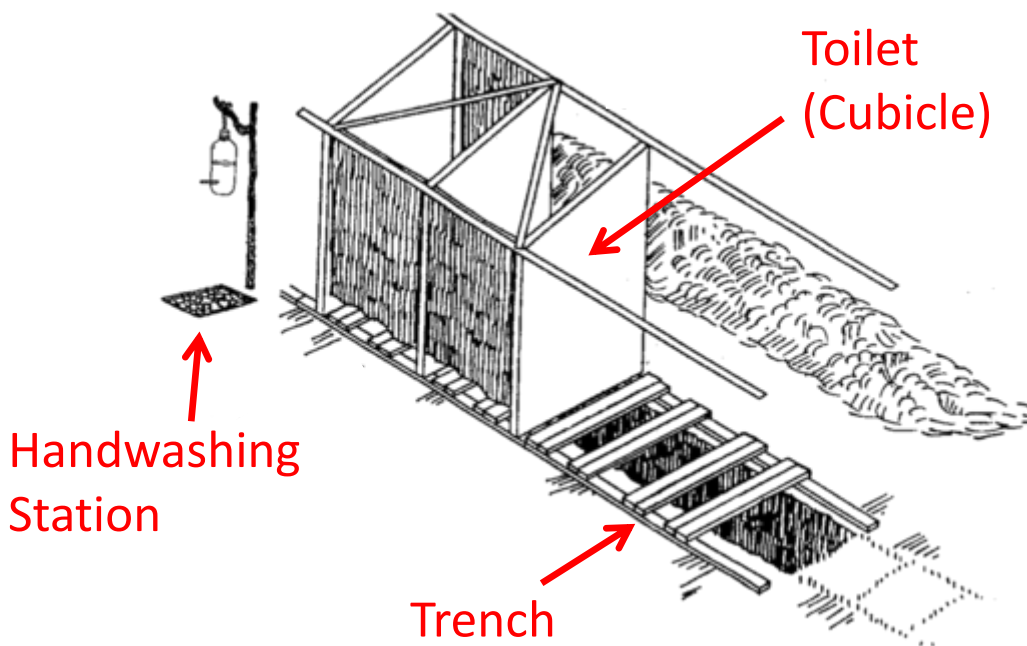
1. Excavation of pit
2. Laying of slab and foundations
3. Construct Superstructure
4. Build Handwashing facility



D. Plan and implement Operation, Monitoring and Maintenance

A. Quantity Required/ Number of Latrines AND Toilets (Cubicles)

Useful Definitions – A Trench Latrine



People per Toilet (Cubicle)

Maximum of 40 people per toilet (cubicle)

Toilets (Cubicles) per Trench Latrine

1 toilet (cubicle) per 1m of trench length

Maximum of 6 toilets per trench latrine

Separate Latrine facilities for males and females

SANITATION IN EMERGENCIES

3 OF 8

B. Design Considerations – “Siting”



Site latrine downwind where possible

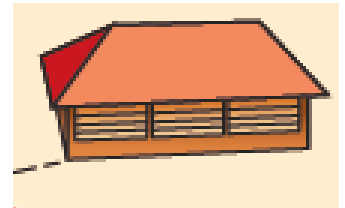


Site latrine downhill of Fresh Water Sources where possible

Groundwater Source



Shelter OR House

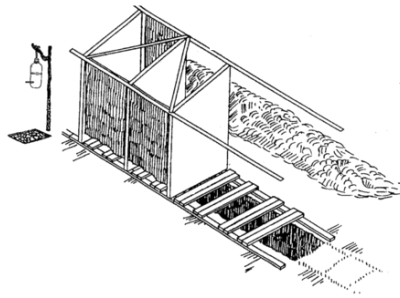


Diversion ditch to prevent surface water flow into latrine



Min 30m away

Between 20m and 50m away



NOT in a flood zone



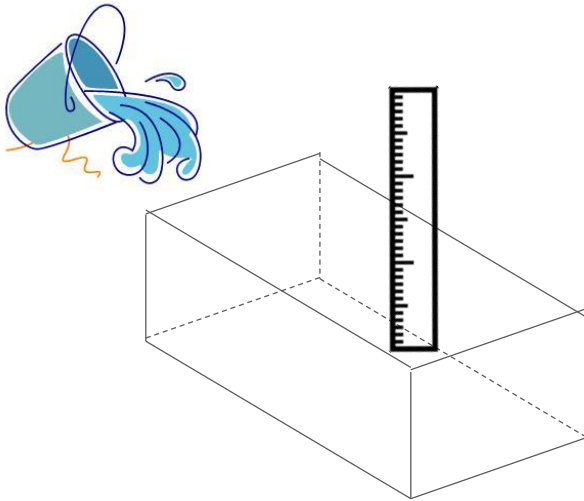
Trench Latrine

B. Design Considerations – “Soil”

Soil Considerations

Soil should have an infiltration rate **greater than 120mm/day**

Calculating for Infiltration Rate:



1. Dig a sample hole at site location
2. Place a ruler by the side
3. Fill with water to a measurable level
4. Measure the fall in water level (mm) at set time intervals
5. Calculate the infiltration rate (mm/day) using the calculation below

The soil infiltration rate in mm/day

$$= \frac{\text{drop in level (mm)}}{\text{time (days)}}$$

E.g. If the water level drops 12mm in 30 minutes:

$$\text{Infiltration Rate} = 12 / (30 \times 60\text{mins} \times 24\text{hours}) = 576\text{mm/day}$$

B. Design Considerations – “Additional”

Gender Segregation



Latrines should be gender segregated

Special Needs

AT LEAST 1 cubicle in a trench latrine should account for special needs



Provide Privacy

Minimise Security Threats especially to women and girls

Be easy to clean

Allow for disposal of women's menstrual hygiene materials

Minimise fly and mosquito breeding where possible

Provide a method for decommissioning e.g. cover and mark off area

Roofing to cover users

6 OF 8

Partitions of local materials 1m apart

Timber foot rests and floor plates

Lightweight timber frame

Excavated soil (used for back-fill)

Plastic sheeting door flap

Partition wall

Spacing of foot rests varied to suit adults and children (no more than 150mm apart)

Plastic sheeting

Trench 0.8m wide x 2.0m deep, length to suit the number of cubicles required

0.8m

1m

0.8m

1.1m

0.8m

SANITATION IN EMERGENCIES

7 OF 8

C. Construction – “Bill of Materials”

Example for a 6 cubicle trench latrine

Trench			
Dimensions	Length (m)	Width (m)	Depth (m)
Excavation of Trench	6.0	0.8	2.0

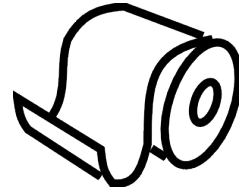
Floor/ Slab			
Item	Description	Units	Quantity
Length supports	Timber: 15mm x 100mm x 6000mm	mm	2 off
Floor/ Slab	Timber: 15mm x 150mm x 1100mm	mm	42 off
Wood Nails	Galvanised: 1inch	inch	200 off

Superstructure			
Item	Description	Units	Quantity
Front Post	Timber: 50mm x 50mm x 2300mm	mm	7 off
Rear Post	Timber: 50mm x 50mm x 2100mm	mm	7 off
Cross Tie	Timber: 50mm x 25mm x 1200mm	mm	7 off
Diagonal Tie	Timber: 50mm x 25mm x 1800mm	mm	7 off
Long Tie (Bottom)	Timber: 75mm x 25mm x 6000mm	mm	2 off
Long Tie (Top)	Timber: 75mm x 25mm x 6000mm	mm	2 off
Wood Nails (Big)	Galvanised: 2inch	inch	60 off
Wood Nails (Small)	Galvanised: 1inch	inch	220 off
Walls	Plastic Tarpaulin: 2m width	m	30m length
Door	Plastic Tarpaulin: 2m width	m	10m length

Roof			
Item	Description	Units	Quantity
Rafter	Timber: 25mm x 25mm x 1800mm	mm	7 off
Purlin	Timber: 25mm x 25mm x 6000mm	mm	3 off
Roof	Plastic Tarpaulin: 2m width	m	7m length
Wood Nails	Galvanised: 1inch	inch	100 off

D. Operation, Monitoring and Maintenance

The key operation (use) and maintenance actions include:



Use

- Ensure users understand the need for correct use, good maintenance, hand washing and hygiene
- Appropriate personal cleaning material e.g. toilet paper/water and bucket, are **available upon entry** to the latrine
- Ensure handwashing facility, inclusive of soap and water, is **available upon exit** of the latrine



Maintenance

- Ensure that there are individuals that take responsibility for the management of the latrine/s. They should check regularly that latrines and equipment are being BOTH used and maintained
- Ensure that the slab and surroundings are cleaned every day.
- Backfill the trench with 100mm of soil every day to reduce smell and flies
- Ensure surroundings are well drained and there is no surface water pooling