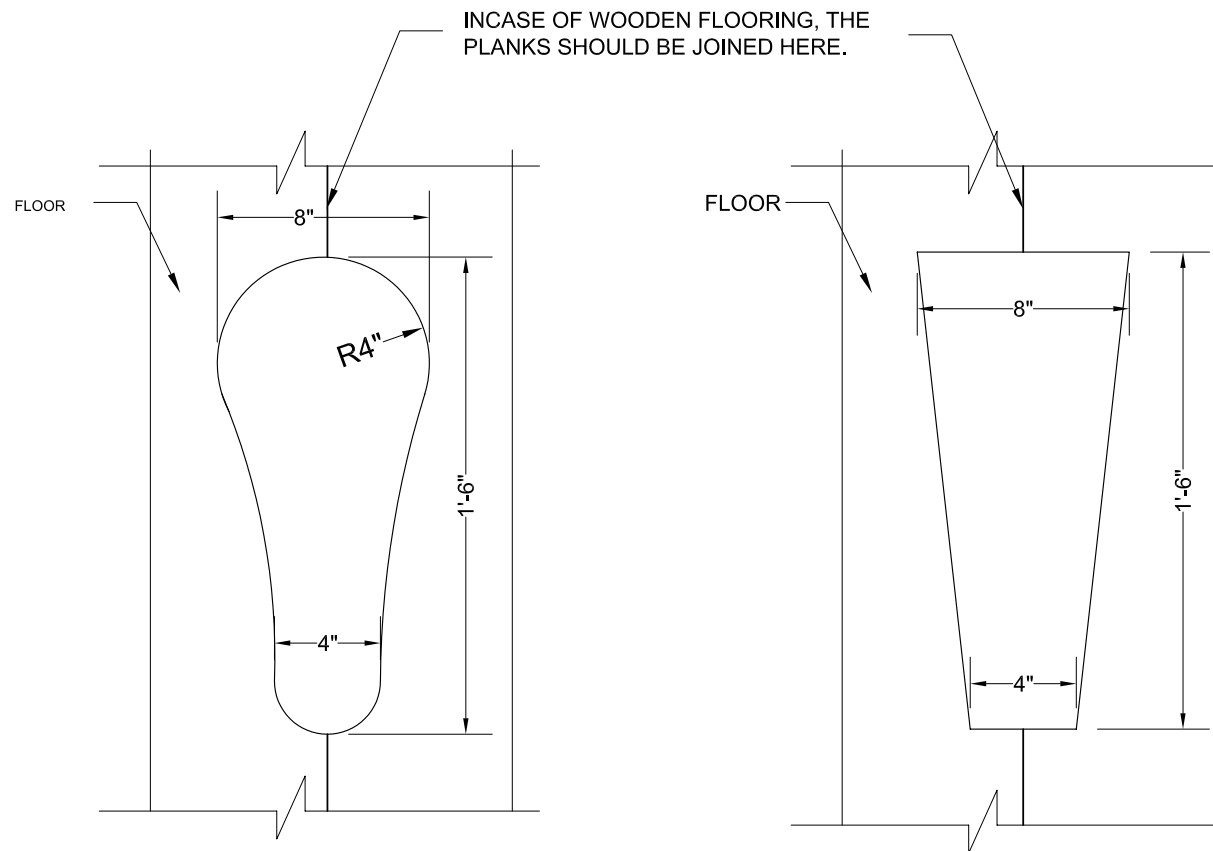




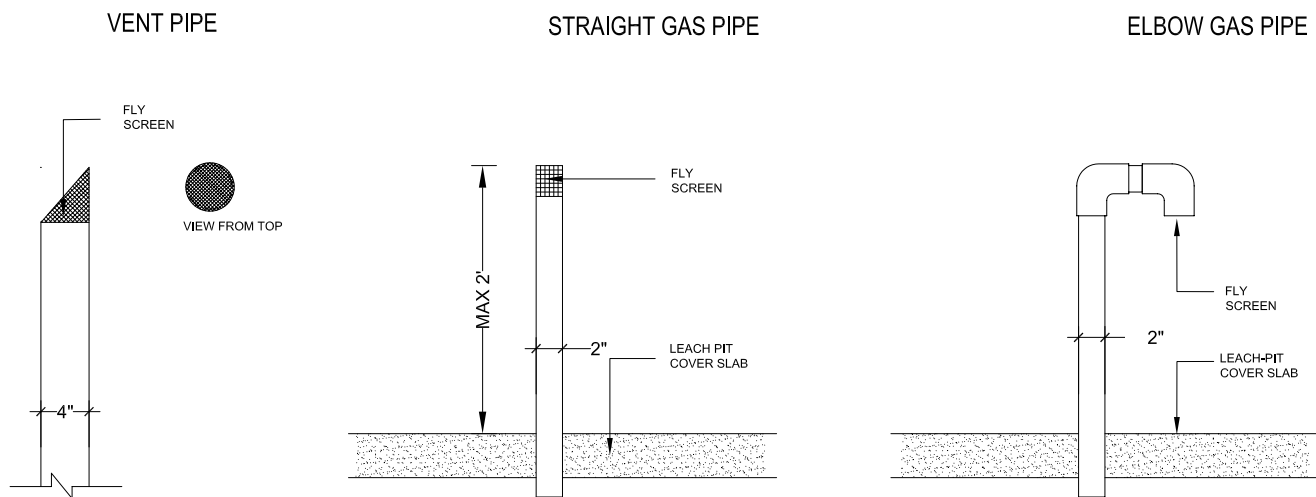
6. Additional technical details

6.1 Drop hole designs





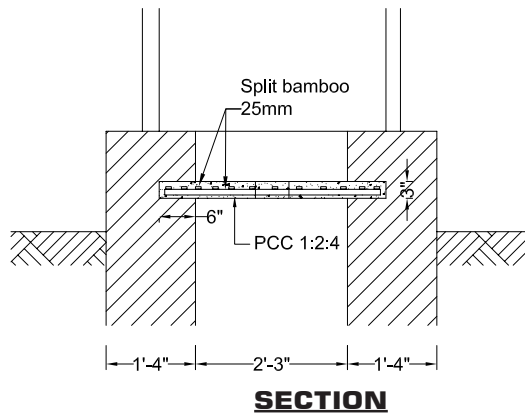
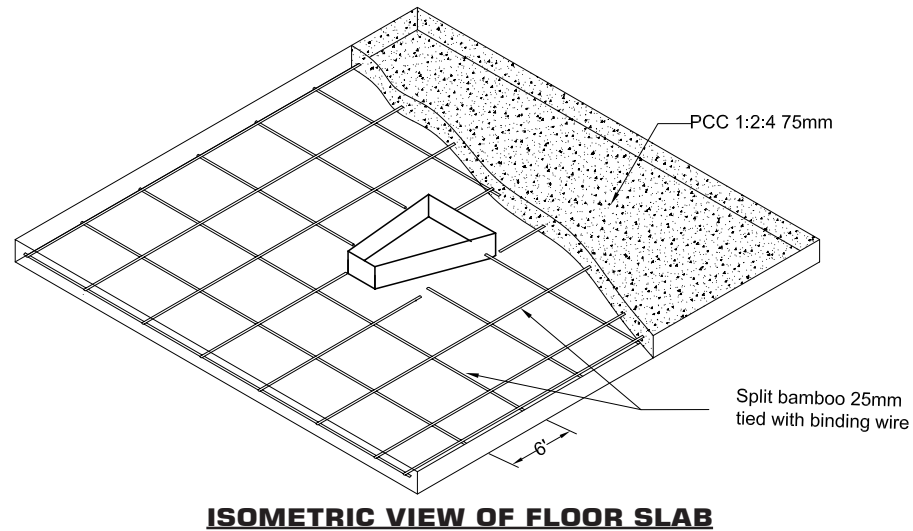
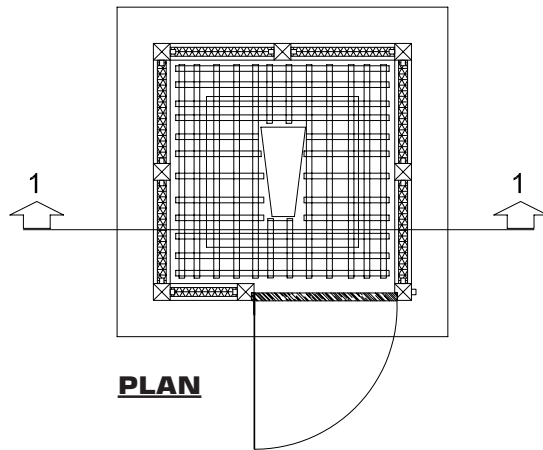
6.2 Vent and gas pipes



- The main purpose of having a vent pipe is for eliminating flies and smell.
- Vent pipe is fitted in direct pit toilets and it extends above the roof of the toilet.
- Vent pipe should be fitted facing direct sun light.
- The addition of a vent pipe draws air currents into the structure and through squat hole.
- The squat hole is kept open during the day, through which the air passes into the pit. During the day, the black vent pipe is heated up which sucks the bad smelling gases out of the pit. During the night, squat hole is kept closed to prevent smell coming out.
- Any flies attracted to the pit through the squat hole will try to escape by heading towards the strongest light source, which comes from the vent pipe. The exit is blocked by a wire mesh so the flies eventually die and fall back into the pit.
- Water should be poured down the vent pipe every now and then to clean spider webs.



6.3 Floor slab using bamboo reinforcement

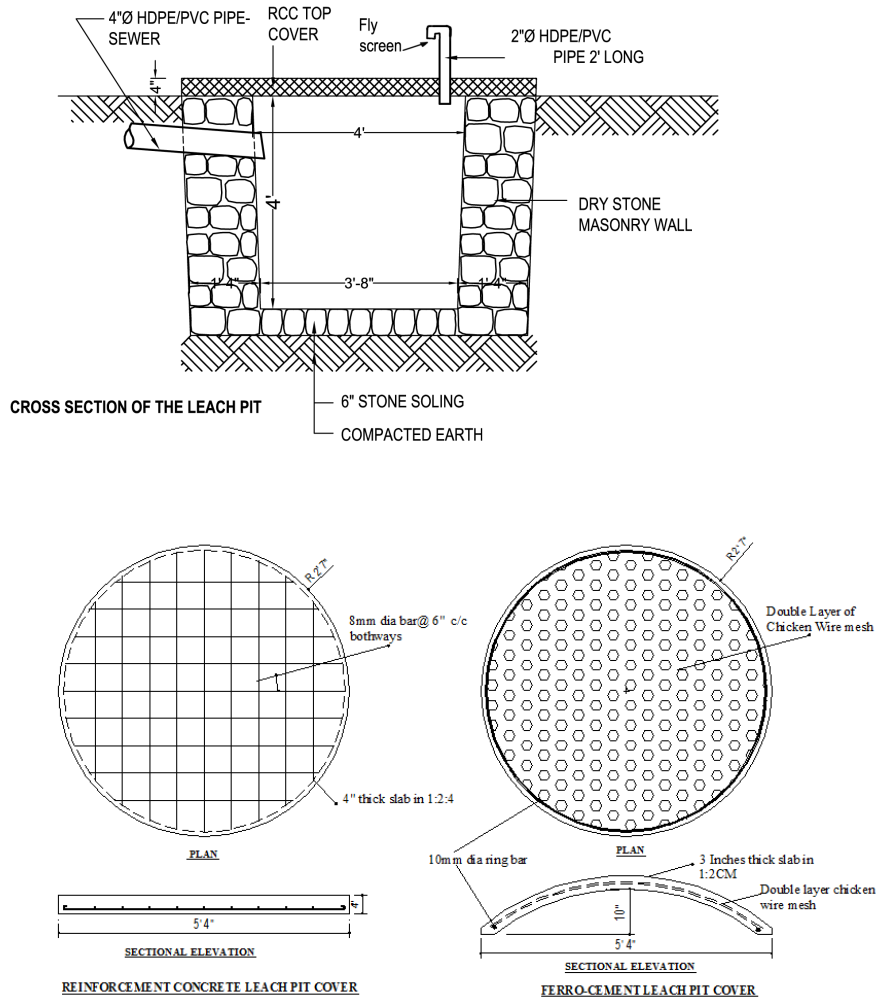


Notes:

1. The concrete floor slab can be made cast-in-situ with plain concrete of ratio 1:2:4.
2. Bamboo can be used as reinforcement. The bamboos should be dry and split to about 25mm size and cut into required length.
3. A clear cover of 25mm should be provided all around and bottom. The thickness of slab should be at least 75mm.
4. The bamboo splits should be provided in both directions at 150mm centers, tied securely with binding wire.
5. The knots should not be smoothened which will act as anchorage.
6. A cut out of required size should be kept which will fit the toilet pan or act as excreta drop-hole.



6.4 Leach pit and cover

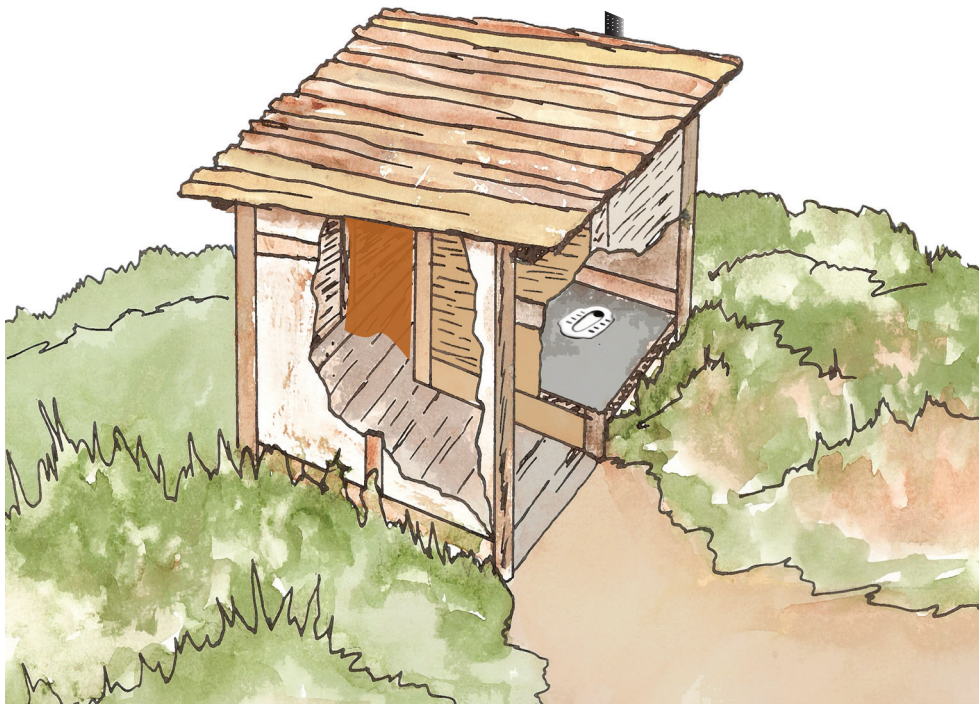


Most important function of the leach pit is to sanitize the excreta by removing the pathogens and other harmful products. In the absence of water and air, the bacteria digest the excreta into compost. The other features of a leach pit are:

- To allow water and gases to escape.
- The water used for anal cleansing is absorbed by the surrounding soil.
- Only the solid parts remains and volume reduces.
- The bacteria decompose the sludge and convert it into compost.
- The gases generated during the decomposition process are also absorbed by the surrounding soil.
- After 3-5 years the used pit gets filled up. The pit is covered by top soil and sealed. Within 20-25 months, the sludge gets converted into manure or which is safe for human handling and can be used in kitchen garden and fields if desired.



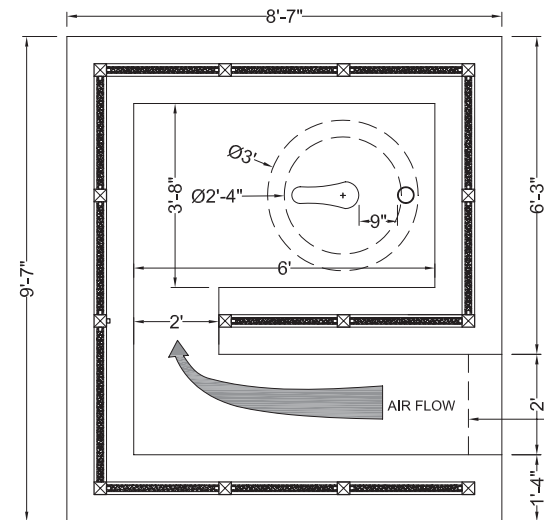
6.5 G-shaped/Spiral Plan



The recommended G-shape or spiral structure of the toilet prevents too much light entering the toilet while allowing a free flow of air.

The entrance must face the prevailing wind direction.

The open entrance ensures air-flow into the toilet space, down through the squat hole and up the vent pipe, which helps control smell and flies in the toilet.



SEMI CLOSED ENTRANCE, e.g. CLOTH etc, BUT ALLOWING AIR TO FLOW TO THE TOILET.