

Universal TOILET

AT KATHMANDU DURBAR SQUARE

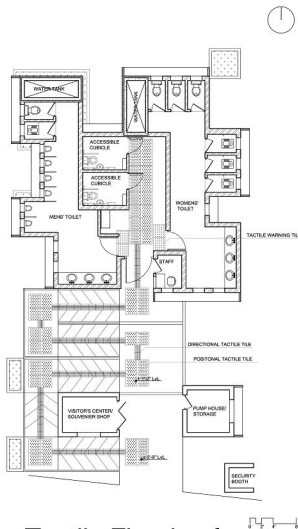
Universal Design

The project meets the requirement for universal design criteria recommended such as space for wheelchair turning, appropriate accessible cubicle with grab rails, special WC, Wash basins etc as shown in the section.

Apart from meeting the basic physical requirement, the project features additional features such as a common ramp for everyone so that no one feels differentiated and there is no segregation. The ramp is also of slope 1:20 grade as reashark has shown even the common grade of 1:12 physically taxing for wheel chair bound persons that are not in prime shape such as women and elderly. the toilet also features a common lobby to all and no special entrance.

There is also grab rails for elderly people who are not wheel chair bound.

Tactile Flooring for Blind is shown below.



Tactile Flooring for Visually impaired

Sustainable Design

The project features an Eco-San toilet which runs with the concept of recycling human wastes in order to close loop between sanitation and nature. The concept of Infinite knot with a closed loop also was a strong guide for the toilet to feature such feature. Due the site being in urban environment the toilet cannot be fully eco-sanitary due to space limitation and lack of disposal places. There is also facility for connection for municipal sewage connection for backup and wastes that cannot be handled on site. More over the eco sanitary aspect is more for raising awareness about eco-sanitary toilets.

Urine Diverting toilet

Basically the toilet features Waterless urinals which collect urine only and also urine diverting WC separate from faeces. The Urine is stored for 1-2 Weeks after which it becomes a nutritious fertilizer and used on green beds of the toilet on the room and around so as to use of the urine and close the loop.

Bio Gas generation

Waste that is free from urine is fed to the bio gas digester. the generated bio-gas can be used by nearby cafe and tea houses in return for other services to the public toilet. this should create a more communal feeling. the remaining slurry is treated so that it can be safely disposed of away from the city in a farm and can be used as a fertilizer.

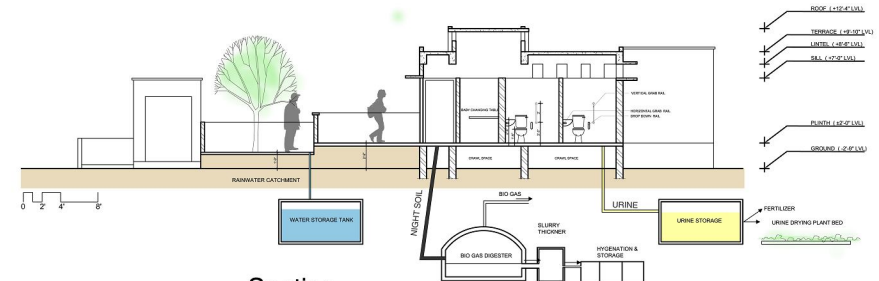
water re-use

Rainwater is stored in large underground tanks to be used

Appropriate and Lowcost

the toilet is constructed of common construction technology of brick masonry and RCC slabs. It is common and easy to find labour and construction is also simple

Brickwork and RCC is also more permanent hence maintenance cost is negligible. In Nepal virtually no maintenance is done on structures and budget hardly allocated so in long term this construction scheme is easier to construct and maintain as well as saves money in the long term as compared to more newer, complex and fragile low cost technology.



Section

Architectural Design

As already convered in panel 1, the use of brick facade and the form of in/out form helps it harmonized and complement traditional architecture.

Squatting WC is used in 1:1 ration along with sitting WC not only because it is more locally preferred but because research shows that squatting is more healthy as it can prevent colon cancer and other colon related problems. Grab rails are placed in non-accessible cubicles with squatting WC so that elderly and pregnant can easily use it as well.

The crawl space below the toilet is used for not only maintenance and storage (water/urine) but also it allows flexibility in changing pipe layout in the future according to future needs.

