

## DUAC Smart Public Toilet

In India it is estimated that on an average about 60% of the population have no toilets in their homes. The number is still higher in rural areas at about 72%. The condition of the limited number of existing public toilets being pathetic people prefer to defecate in the open thereby compromising themselves to dreadful diseases like cholera, typhoid, hepatitis, jaundice etc. It is estimated that there are above 25 lakh women in Delhi who go for their necessary functions before dawn every morning in the open fields putting their lives to risk in view of the high level of crimes against women. The Commission has always believed that adequate civic amenities help in enhancing the aesthetics of a city. In view of the unsatisfactory situation relating to public toilets in the city of Delhi, the Commission felt that it is high time that an initiative was taken for developing high tech self sustaining public toilets which could be put up in slums, unauthorised colonies, market places and in other places like gardens and parks where foot fall is high. After receiving approval from the Government in the year 2012 on a proposal mooted by it ,the Commission on the basis of a design competition developed a prototype for a low cost self sustaining High-Tech Public Toilets which has been installed at various locations around New Delhi



For its efforts in promoting innovation in public convenience design, “Washrooms and Beyond” presented the WB Honours 2014 to Delhi Urban Art Commission for the category “Innovation in Public Washroom Design”.

## Objectives

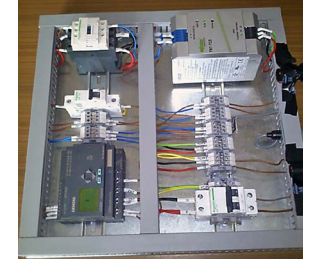
- Distinctive & aesthetically pleasing designs.
- Smart, contemporary and environment friendly features.
- Industrially prefabricated designs for mass production.
- Long life tenure of approximately 15-20 years.
- Tentative cost INR 1.50 lakh per seat.
- Hassle free transportation to predesignated sites for quick installation.
- Adequate space for advertisement and revenue Generation.

## Salient Features

- Extensive use of stainless steel in interiors, for ease of maintenance and cleaning.
- Use of Bio – digesters developed for environment friendly waste disposal even where no sewer connection is available.
- Solar panels with LED lighting
- PLC (Program Logic Controller) aided working for better efficiency
- Ample light and cross ventilation
- Resistant to tampering and vandalism
- Tough and heavy duty water saving fixtures in stainless steel
- Advertisement panels for revenue generation.



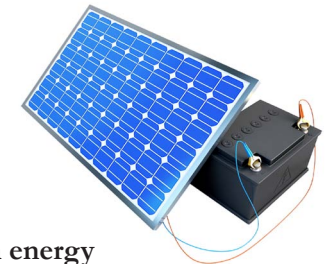
**Sustainable :** Waste disposal through DRDO Bio-digester.



**Automation :** Upgradable PLC (Programme Logic Control) based system.



**Cost Effective :** Low cost recyclable material.



**Green energy**

- a. Solar Panel.
- b. Use of LED lamps for long-life and low energy consumption.





**DESIGN 1 (Size of one unit - 1.40m X 1.40m)  
(Internal height - 2.20m)**

**Location :** Mustafa Kamal Attaturk Marg, New Delhi

Inspired by the vernacular architecture using “Bamboo” as the primary theme.

**Specification :**

- **Exteriors:** Fibre reinforced plastic (FRP)
- **Interiors:** Stainless steel 304 grade , 1mm thick
- **Frame:** Mild steel (MS)





## DESIGN 2

(Size of one unit - 1.50m X 2.60m)

(Internal height - 2.20m)

**Location :** Swami Dayal Hospital, New Delhi

A hexagonal twin unit design having male and female compartments alongside.

### Specification :

- **Exteriors:** Polypropylene honey comb, Polyurethane (PU) painted.
- **Interiors:** Stainless steel 304 grade, 1mm thick
- **Frame:** Polypropylene honey comb folding wall



### DESIGN3a

(Size of the unit - 1.80m X 3.0m)

(Internal height - 2.20m)

Location : Mandi House, New Delhi

This elliptical twin cabin is designed for both males and females.

#### Specification :

- **Exteriors:** Aluminium composite panel (ACP)
- **Interiors:** Stainless steel 304 grade , 1mm thick
- **Frame:** Galvanised iron (GI) and rockwool insulation



**DESIGN 3b**  
**(Radius - 1.10m)**  
**(Internal height - 2.20m)**

Barrel shaped compact design for both male and female

**Specification :**

- **Exteriors:** Aluminium composite panel (ACP)
- **Interiors:** Stainless steel 304 grade , 1mm thick
- **Frame:** Galvanised iron (GI)





## DESIGN 4

(Size of the unit - 1.80m X 3.0m)

(Internal height - 2.20m)

**Location:** Gate No. 6, Ram Manohar Lohia Hospital, New Delhi

The elliptical twin cabin is designed for both males and females.

### Specification :

- **Exteriors:** PU painted Aluminium veneering.
- **Interiors:** Stainless steel 304 grade , 1mm thick
- **Frame:** Aluminium honey comb sandwich panel structure with stainless steel veneering





## DESIGN 5

(Size of the unit - 6.90m X 2.75m)

(Internal height - 2.20m)

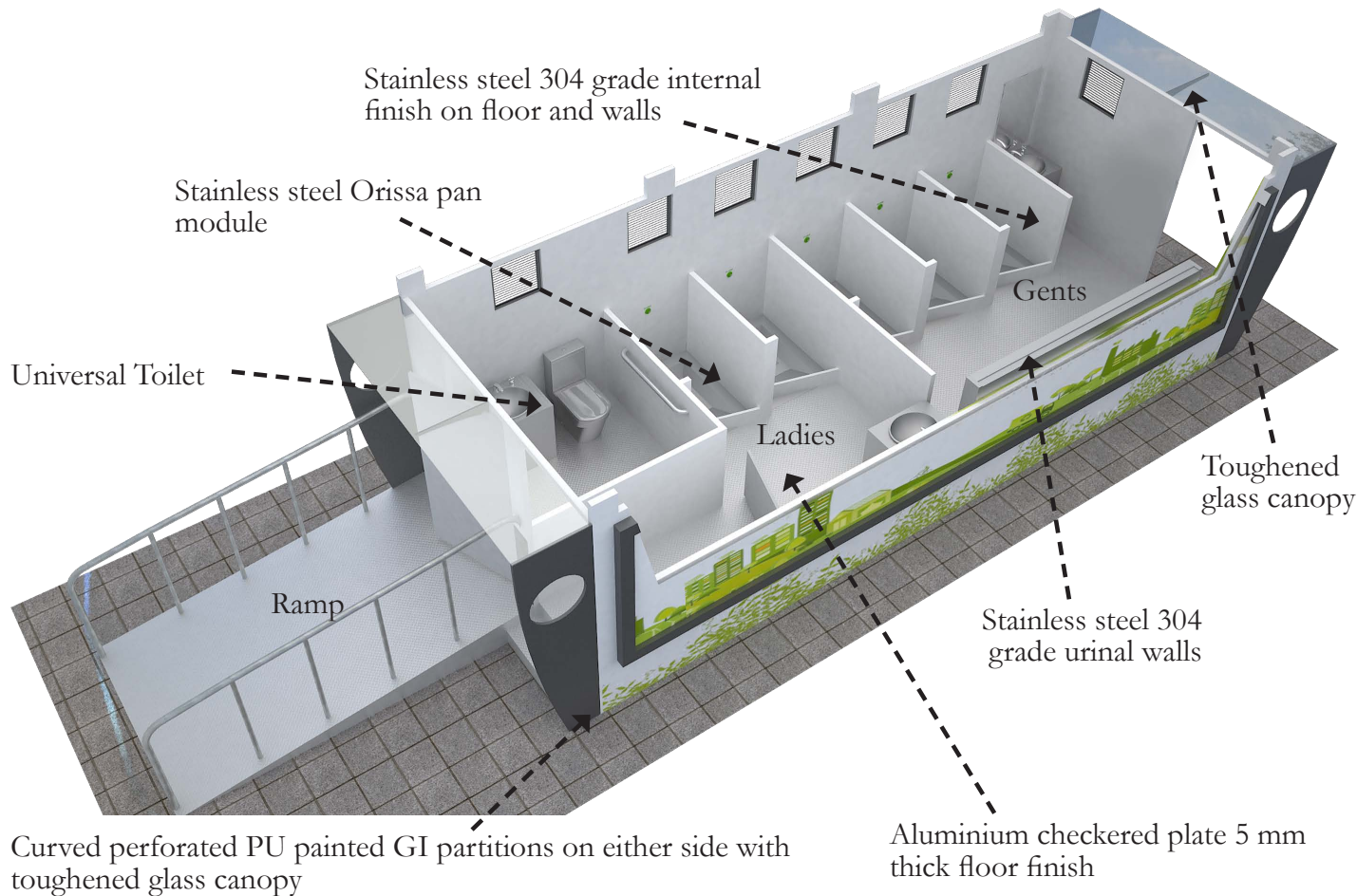
## INTERNAL LAYOUT OPTIONS

### Option 01

With Two Ladies WCs, One Universal Toilet as per CPWD specifications, three gents WCs, three urinals and three washbasins.

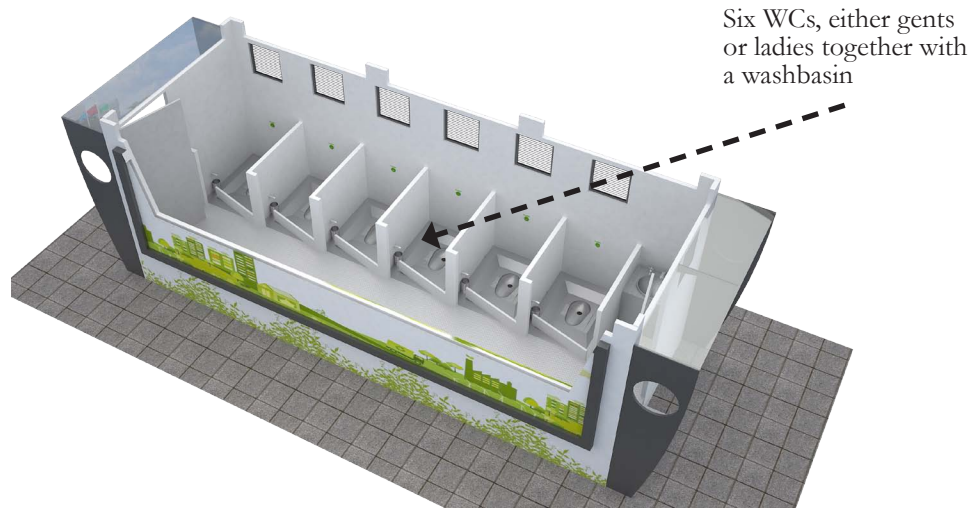
Combination of:

- a. One universal
- b. Two ladies WCs
- c. Three gents WCs and four urinals
- d. Three washbasins

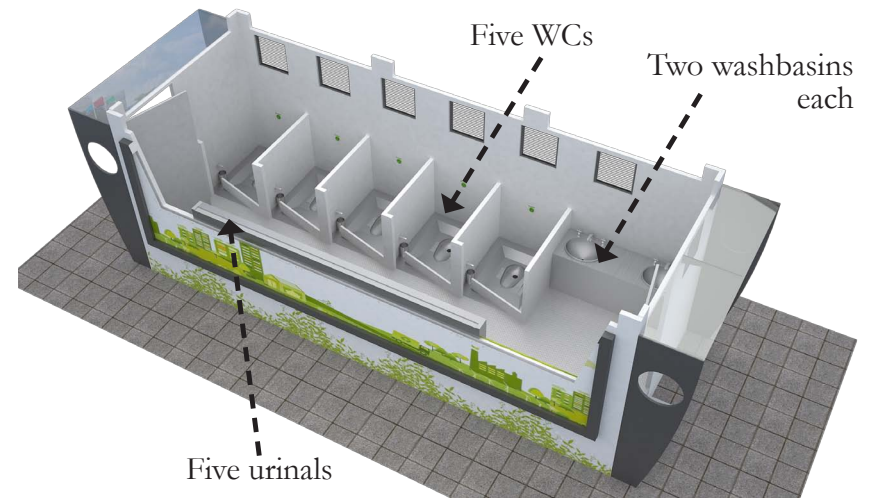




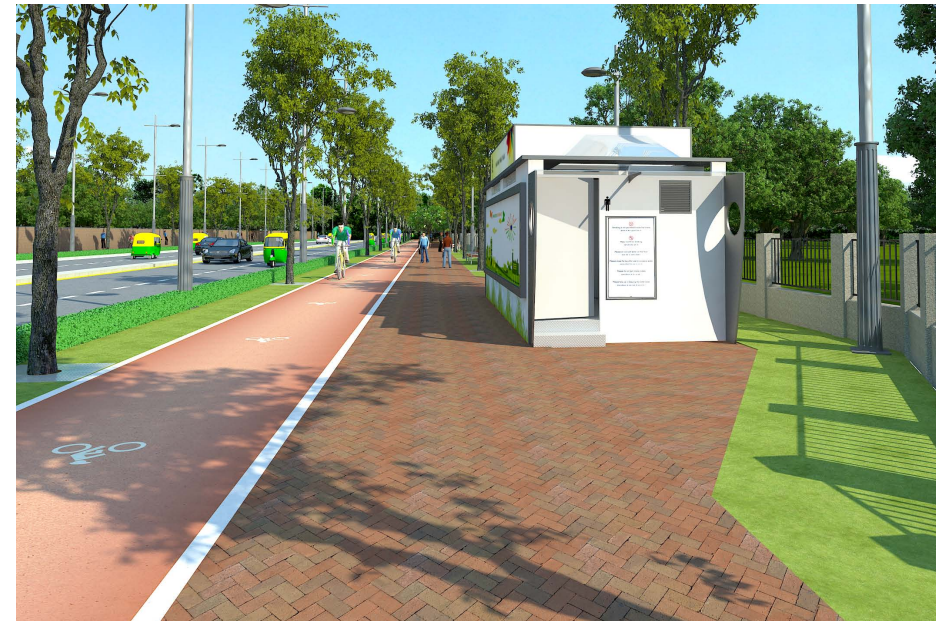
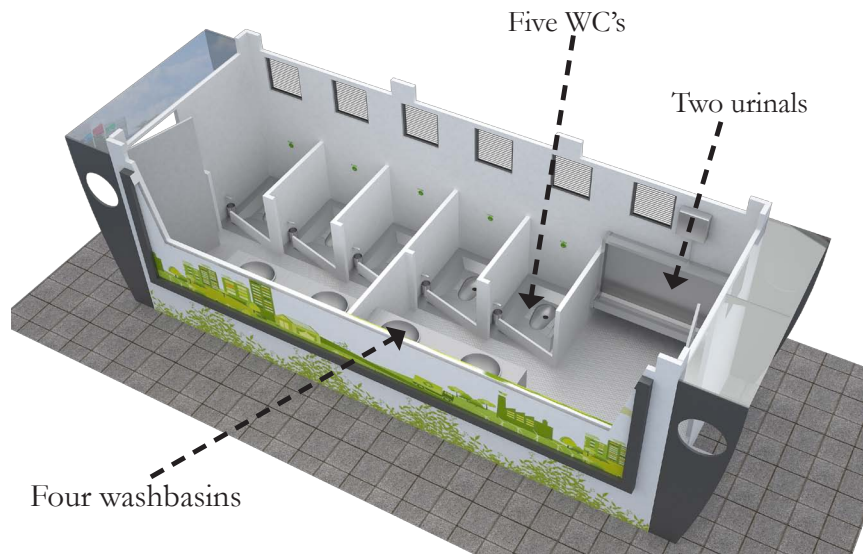
Option 02  
With Six WCs and one washbasin



Option 03  
With five WCs, Five Urinals and two Washbasins



Option 04  
With five WCs, Two Urinals and four washbasins







Common Internal Fixtures

