

Study of Toilet Facilities Based on User Choice in Kiaracandong Station

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Abstract— Kiaracandong Station is the second major train station in Bandung. At this station, it serves economy class, business, and executive trains. The station is one of the public spaces that must be equipped with toilet facilities. This study focused on the completeness of supporting facilities available in toilet facilities at the Kiaracandong Station, Bandung. The purpose of this study is to examine and analyze the completeness of the facilities in the Kiaracandong Station toilets so that users can comfortably and safely use the existing toilet facilities at the station, as well as useful to be taken into consideration in the design and development of toilet design in the Bandung, Kiaracandong station. This research used descriptive qualitative research methods in depth. The data analyzed are the results of interviews with Kiaracandong station users, direct observations on toilet facilities, as well as a review of documents relating to toilets at the Kiaracandong station in Bandung. The results of this study provide an overview of the completeness that must be met in the standardization of public toilets in public spaces, in this case, the Bandung city, Kiaracandong Station. The existing equipment in the Kiaracandong Station toilets, in general, has provided the necessary equipment that is equipped with a toilet room either using squatting or sitting toilets, sinks, and urinal. On the other hand, there are deficiencies in supporting facilities that are not in accordance with the standard public toilets for public spaces, including the absence of sink facilities for children and disabled wheelchair users, special closets for children and disabled wheelchair users as well as a urinal for children.

Keywords—Toilet Facilities, Toilet Equipment, Toilet Users

I. INTRODUCTION

Train Station is one of the public spaces included in the internal public space. This type of public space consists of public space managed by the government and can be accessed by free citizens [1]. Related to existing facilities at the train station. A train station is a building or place that is the last stop or a temporary train before continuing the journey [2]. In the city of Bandung, there are 2 large train stations namely Bandung Station and Kiaracandong Station. In this study, challenging at the Kiaracandong train station in Bandung [3]. Kiaracandong Train Station enters the Bandung DAOP II area. This train station serves short and long-distance travel. One of the facilities in the Kiaracandong train station is a toilet. The toilet is a public toilet because it placed in a public space that is the train station. Public toilets are clean, safe, comfortable and

hygienic areas that designed completely with toilets, clean water, and other equipment [4].

Completeness of public toilet facilities is an essential concern because it used by many people. Therefore, to accommodate the needs of users of public toilets, toilet facilities must be in accordance with existing regulatory standards [5]. This will affect the user's choice to use the toilet. Cleanliness and comfort are closely related to public toilet facilities [6]. Health and cleanliness of public toilets are what support toileting activities in public toilets. Bacteria will spread very quickly to other users if the state of public toilets is not appropriately treated [7]. Indonesian toilet culture is very closely related to water facilities. Indonesians use water more often than tissues or other rinse facilities. Therefore, the availability of water is the most important thing in the toilet [8].

In this research, the author wants to identify the completeness of toilet facilities at Kiaracandong train station. To support this research, the writer uses descriptive qualitative research methods in depth. With the hope of increasing knowledge about standardization of the completeness of toilet facilities in the public sphere and helping the Kiaracandong train station to complete the toilet facilities to conform to the recommended public toilet standardization.

II. METHODS

The type of research that the writer does is descriptive qualitative in-depth [9]. Aiming to describe the object under study, namely toilets in the city of Bandung Kiaracandong train station. The things that become the reference for this research are the completeness of the facilities in the research object. This obtained by direct field study to the toilet area of the Kiaracandong train station. To strengthen the data, the authors conducted interviews with research subjects, namely the toilet users. The object and subject under study related directly to ergonomics and anthropometry regarding the area of public space facilities [10].

III. RESULTS

Toilets divided into two categories, namely public toilets as public facilities and private toilets. In this study, the toilets discussed were public toilets located in Kiaracandong Station, Bandung City. The station divided into two areas, namely the main or north station and the

south station. Both of these areas are equipped with a toilet and toilet rooms with a toilet seat or squat. Especially in men's toilets are equipped with urinary facilities. As with other public toilets that the toilets at Kiaracandong Station are also equipped with special toilets for the disabled [11].

The standardization of toilets is critical in public toilets because they can meet the needs of users. Each user has a different behavior about toilet use. This behavior has an impact on the habits of users using public toilets. Therefore, the completeness of public toilets is essential to study because it related to the safety, comfort, and satisfaction of its users. Many factors affect the user's behavior towards the use of a toilet seat or squat. Education is essential for users who are not familiar with toilet seats because the culture of Indonesian users in the past has been accustomed to using squat toilets. This habit closely related to the use of water as a means to rinse away dirt compared with the use of tissue (see Fig. 1).

IV. DISCUSSION



Fig. 1. Toilet Chart of Kiaracandong

This study examines the object of a toilet at the Kiaracandong Station in Bandung. The analysis aspect is the relationship between the toilet of the Kiaracandong Station to the completeness and facilities contained in the toilet and the standardization of the completeness and facilities that provided on public toilets in public spaces, in this case, the train station. The next analysis is between available toilet facilities with ergonomics and anthropology aspects that are in accordance with the design of public toilet rooms. The link between the research object and the research subject here is the Kiaracandong Station toilet analysis of the behavioral and habits aspects of its users.

A. Toilet area

After conducting the steps of observation and research, data and research results obtained regarding toilets at Kiaracandong Station, Bandung City, related to the completeness of toilet standards and behavior and user choices [12]. Matters relating to this toilet facility are (see Fig. 2).

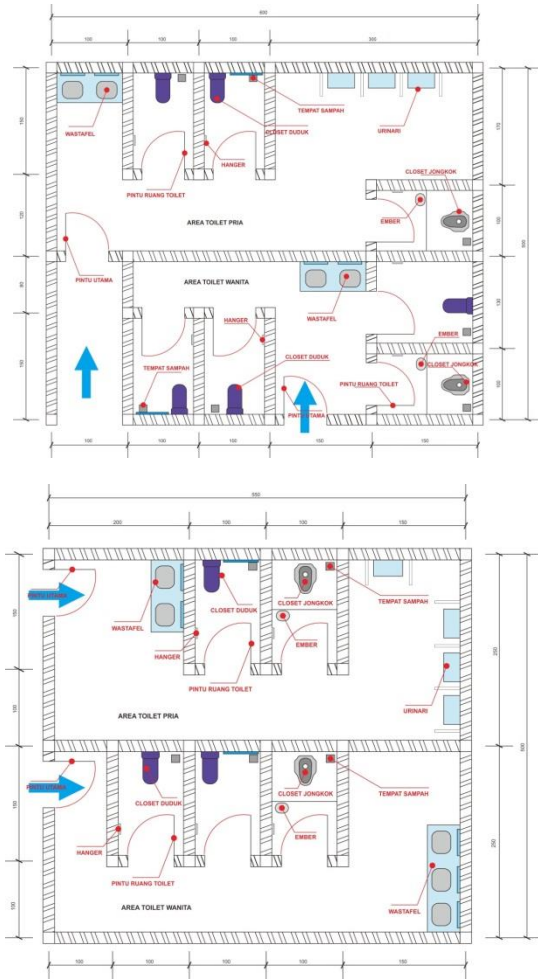


Fig. 2. Kiaracandong Station Toilet Area Plan (Source: PT KAI DAOP 2 Bandung)

In each toilet area, there are sink facilities, each equipped with a mirror and the lighting is right on the ceiling, should be good lighting on the sink is the placement of lights on the wall close to the mirror and facing the user. On the sink, the table is also equipped with liquid soap. Trashcans and hand dryers and wipes are also available at each sink facility. The trashcan that is used is already good because its use does not require direct touch from the user's body parts. The sink is equipped with a water faucet by working in a rotating way. The material used in the sink is ceramic with a glossy white/shiny surface with a slippery surface to give the impression of clean and hygienic. The slippery surface makes it easy when the sink cleaned. Faucet on the sink using the stainless steel material to give a sterile impression. There is a mirror with a size equal to the height of an adult to facilitate and accommodate the needs of users, both short and tall. The sink countertop uses ceramic material to minimize the presence of standing water when using the sink. The floors and walls used in the toilet area are gray 50x50cm tiles and shiny and smooth surfaces. This need makes it easy to maintain the toilet area, but it is unfortunate that the use of tiles with a smooth and shiny surface will cause slippery conditions when exposed to water so that there is a possibility that it could endanger

the user. In the toilet area, there is also a sign of a smoking ban, which attached to the wall. Air vents and exhaust gadgets are also available in every toilet area in both male and female toilet areas. Each hallway is equipped with several light points, which make the toilet area bright but not dazzling.

The dimensions of the sink height dimensions in the toilet area of the Kiaracondong Station are suitable for adult users but are not suitable for children and disabled users due to the unavailability of a sink explicitly intended for children and disabled users. The distance between the sinks is in accordance with the recommended standardization of the sink in a public toilet (see Fig. 3).

B. Cubical Toilet (Bilik Toilet)

The cubical area of the toilet, both male and female, is 150x100cm (see Fig. 3).



Fig. 3. Toilet Door
(Source: Author's Documentation)

At each cubical door, the toilet is not equipped with a sign or closet type direction and the direction of the door opening leads to the cubical so that it is a bit difficult for the user considering the user is a train passenger who is relatively carrying a lot of luggage. All locks on the door function properly (see Fig. 4).

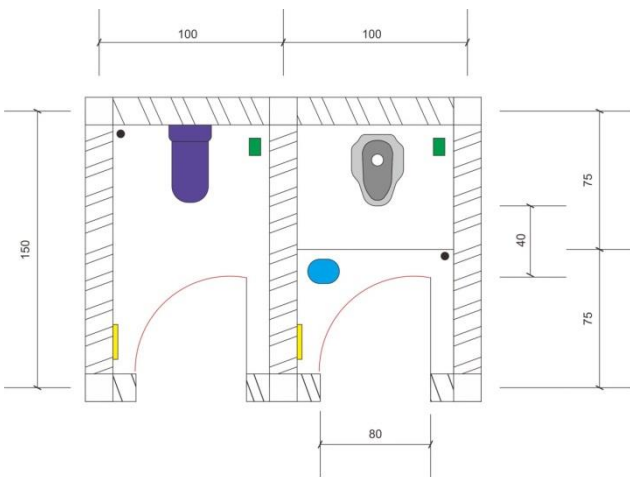


Fig. 4. Map of Kiaracondong Station Cubical Toilet Area

(Source: PT KAI DAOP 2 Bandung)

On the toilet seat is equipped with a closet cover and available faucet or lever flushing or water supply rinse toilet. In the squat toilet, there is no toilet cover, so sometimes it smells bad (see Fig. 5).



Fig. 5. Cubical Toilet Seats
(source: Author's Documentation)

In the squat toilet are also available flush rinse levers. Especially for squatting, the toilet is equipped with a bucket and bucket. In both types of toilets, both are squatting and sitting equipped with a water spray shower. Unfortunately, each toilet is not equipped with toilet paper. Trashcans are available in every cubical toilet, but women are not equipped with a woman bin (sanitary napkin disposal) (see Fig. 6).



Fig. 6. Cubical Toilet Squatting Toilet
(Source: Author's Documentation)

Available hangers or bags placed on the cubical toilet wall. In this toilet facility at Kiaracondong station, the cubical wall of the toilet does not have a height threshold from the floor. Walls and floors in cubical toilets use gray tiled and shiny surfaces. The shiny floor surface becomes slippery when there is a puddle of water that endangers the user. Each cubic toilet is equipped with one air vent at the top of the doorframe and has one lighting lamp right in the

middle of each cubical toilet. At the Kiaracandong station toilet facilities do not have special cubic for children, so children users must require adult assistance (see Table 1).

TABLE I. CUBICAL FACILITIES

No.	Cubical Facilities	Available	Not available
1	Sanitary type sign: toilet on the door	X	
2	The door opens out		X
3	The availability of working keys	X	
4	The toilet seat with a lid or squat toilet is available flusher tool manually, press or sensor	X	
5	Available Jet-spray (Jet-shower), jet-washer, eco-washer or Wash-let for worms	X	
6	Sanitizer available: to sterilize the toilet		X
7	The availability of seat sanitizer: to sterilize toilet holder		X
8	Tissue available		X
9	Lady bin is available in the women's toilet: a sanitary napkin or rubbish bin	X	
10	Hangers for clothes are available	X	
11	Cubical walls must have a height threshold from the floor		X
12	Children-sized toilet		X
13	Educational stickers available		X

Regarding the size of the cubical toilet area, the Kiaracandong Station's cubical toilet has fulfilled the standardization based on the review of the standard of public toilets by the Indonesian Toilet Association (ATI) and the recommended anthropometry. However, the supporting facilities inside the cubical toilet at

Kiaracandong Station still do not meet the criteria of a public toilet cubic.

C. Urinal (Urinary)

Urinals are specifically located in the male toilet area for urination needs. There is a boundary skate between one urine and another. The urine on the men's room is also equipped with a rinse water flush lever, and everything is still functioning properly (see Fig. 7).



Fig. 7. Urinary Area (Source: Author's Documentation)

There is no liquid soap or sanitizer in each urinary unit, and this toilet area is not equipped with special urine for children. Not equipped with a nomad (doormat) at each bottom of the urine (see Fig.8).

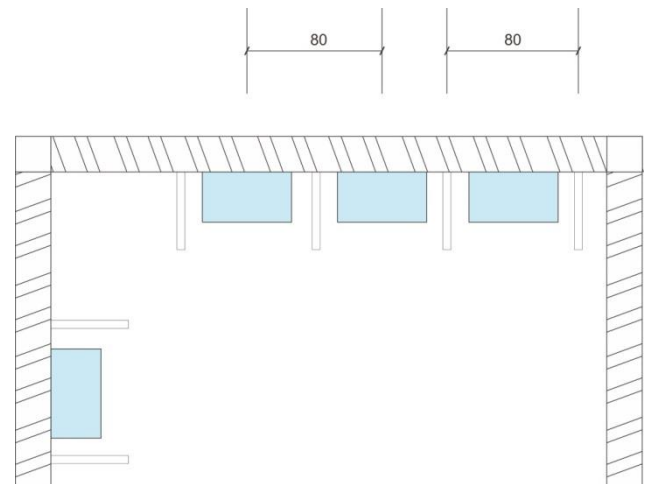


Fig. 8. Kiaracandong Station Urinary Area Plan (Source: PT KAI DAOP 2 Bandung)

The urinary area in the toilet of Kiaracandong Station in terms of size dimensions has met the standardization recommendations of the Indonesian Toilet Association as well as is in accordance with the recommended anthropometric data. However, there is a discrepancy in the supporting facilities due to the unavailability of tissue in the male toilet urinary area at Kiaracandong Station. There is air ventilation in the upper part of the urinary wall and an exhaust tool that functions as a vacuum in the area outside the area so that the air expected to remain fresh. In

addition, air ventilation functions as a lighting assistant during the daytime. In the urinary area is equipped with lighting so that the area becomes bright but does not dazzle the eyes.

D. Disability Toilets

Every public toilet facility must have disabled toilet facilities to accommodate the needs of those who have physical and elderly disabilities [13]. Kiaracandong Station has special toilet facilities for the disabled. On the toilet door, there is a sign or clear indication that this is a disabled toilet (see Fig. 9).



Fig. 9. Disabled Toilet Cubical (Source: Author's Documentation)

Disabled toilet doors at the Kiaracandong station use ordinary doors with openings inside, making it difficult for disabled users; the recommended door is to use sliding doors (see Fig. 10).

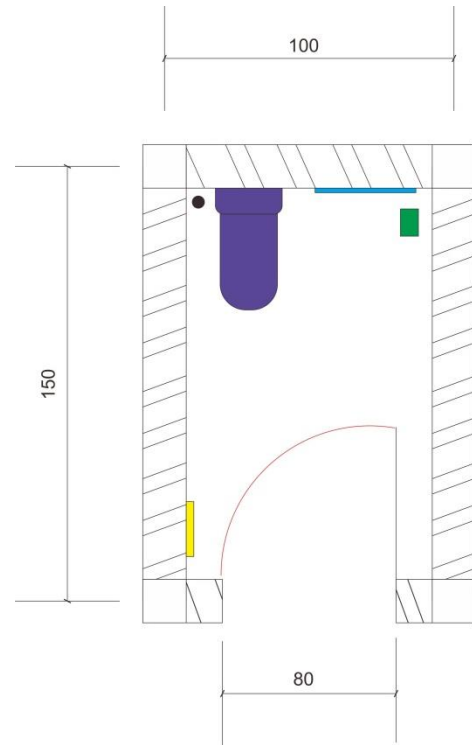


Fig 10. Map of Kiaracandong Station Disabled Cubical Toilet (source: PT KAI DAOP 2 Bandung)

The toilet door is not equipped with a special sign lamp. This disabled toilet uses the type of toilet seat as is commonly used in other normal toilets complete with cover, shower, and rinse water flush lever. On the toilet, the wall is equipped with handles or handles made of stainless steel material. There are no tissue facilities; only trashcans are available. Walls and floors use gray ceramic tiles with a shiny surface. The disabled toilet is equipped with one light, has a vent at the top of the doorframe (see Table 2).

TABLE II. FACILITIES FOR DISABILITIES

No.	Cubical Facilities for Disabilities	Available	Not available
1	There is signage: clear instructions	X	
2	The door uses sliding doors that can be opened manually or automatically		X
3	There is no difference in height level between the floors outside and inside	X	
4	Above the door, there is an alarm lamp		X
5	The toilet has a lid and flusher	X	
6	Flushing can be sensor or manual	X	
7	Hand-bar available:	X	

	handle next to the toilet		
8	There are toilet tissue beside the toilet		X
9	Alarm button available		X
10	Sanitary ware toilet available		X
11	Seat sanitizer available		X
12	Freehand bins or larger pedals are also available to accommodate trash / remaining diapers.	X	
13	The floor is not slippery and shiny	X	

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E. *The floor is not slippery and shiny.*

Most users choose to use a toilet with a squat toilet because they are accustomed to using a squat toilet and feel uncomfortable when using a toilet seat that is located in a public toilet area. Another thing that is the reason for the choice of a squat toilet is because of cleanliness and health.

V. CONCLUSION

The toilets at Bandung's Kiarcondong Station are generally suitable for use, but they are not in accordance with the standardization of the proper public toilet. Some of them are the unavailability of special toilets for children, and even toilet rooms for the disabled do not reach the standardization of disabled toilets for public spaces. For choices, users tend to choose a toilet with a squat toilet compared to a toilet seat with regard to safety, comfort, and health. For elderly users or those who have a fat body shape prefer to use the toilet with a toilet seat.

ACKNOWLEDGMENT

The author thank you to PT. KAI DAOP 2 Bandung, which has been willing to give permission to the author to conduct research in the toilet area of Kiarcondong Station, Bandung. Thanks to the informants, the users of the toilet. Thanks to Dr. Ahadiat Joedawinata as a supervisor who has provided input, direction, and knowledge that was very helpful during this research.

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