

## Gender neutral toilet standards guideline recommendations based on Indonesian behavior and habits

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**Abstract.** The availability of public toilets in public spaces is essential because sanitation is one of the basic human needs. Mall is one of the places visited by various groups of people, therefore the design of public toilets in mall need to consider the needs of diverse toilet users. In Indonesia, toilet design guidelines are already made by the Indonesian Toilet Association, but they have yet to pay attention to all the inclusivity points of some groups. Good public facilities should be able to meet the sanitation needs of all users, including people with disabilities, unconventional gender groups (transgender and non-binary), and companions for children/parents of different genders. Data were collected through observation, questionnaires, interviews, and literature studies. Observation were carried through three shopping mall in bandung, braga citywalk, bandung beautiful plaza, paris van java to observe the existing toilet conditions. Descriptive and experimental qualitative methods carry out the method of data analysis. A comparative study was conducted on existing toilet design guidelines to formulate points of recommendations for designing gender-neutral toilets that are tailored to the behavior of the Indonesian people, followed by an experimental process to produce visual recommendations for gender-neutral toilet designs, namely single-stalled, multi-stalled, enclosed, and multi-stalled open space toilet types.

**Keywords:** Guideline, Neutral-Gender, Toilet, User Behavior, Public Area

### Introduction

Sanitation is one of the essential things that must be fulfilled in human life (Suryani, 2020). Toilets are sanitation facilities used by humans for defecation or tidying up activities. Therefore, toilets are facilities in public spaces that are very important for the community (Suprpto & Kuswardini, 2020). One of the criteria for an excellent public toilet is that which facilitates the sanitation needs of all visitors (Qomah in Lustiyati & Rahmuniyati, 2019), including certain user groups such as the disabled (Permen PU No.30/2006), unconventional gender groups (transwomen, transmen, and non-binary gender) as well as child companions and parents of different genders (Sanders, 2017). However, the reality is that there is still discrimination against transgender people when using separate public toilets, which makes these users feel uncomfortable (Martosenjoyo, 2017). Mall is a public space visited by various groups of people. The mall functions as a space for buying and selling, promotion, and recreation activities (Nursalin et al., 2021), so the availability of toilets in the mall must be considered. In addition, the level of accessibility of mall facilities in West Java is considered inadequate for its visitors (Alyani & Madya, 2021). In a search conducted on previous research, there has not been any discussion about the condition of toilet malls in Indonesia, even though the data is essential to find out the suitability of fulfilling inclusive mall toilet facilities in Indonesia. Based on the

problems previously presented, the provision of gender-neutral toilet types can be a solution to increase inclusivity and reduce discrimination (Bovens & Marcoci, 2023; Porta et al., 2017; Sanders, 2017).

The Indonesian Toilet Association conducted research and development in 2016 to create gender-neutral toilets in public spaces. These toilets are designed to be accessible to any gender group and provide security for non-binary users, child companions, and parents of different genders. The design concept is limited to the design concept without details of the facilities or dimensions. There are toilet design guidelines made by The Indonesian Toilet Association (2016). However, the content in the guidelines does not cater to all the points of inclusivity of various group needs this results in the lack of genderneutral public toilet facilities in Indonesia. The consideration and design of gender-neutral toilets require special attention to meet the needs and comfort of users of diverse public spaces and increase the accessibility and inclusivity of public toilets in Indonesia. Therefore, as a reference for the design of gender-neutral toilets in Indonesia in the future, the writing team formulated additional provisions for designing gender-neutral public toilets accompanied by details about the types and standards of facilities, as well as provisions for dimensions and ratios that can meet all the sanitation needs of its users.

In designing gender neutral toilets that suit the behavior and habits of Indonesians, several standard guidelines can be applied to ensure comfort and safety for all users. This is important considering that Indonesia has wide cultural diversity, and sensitivity to gender issues is an important aspect in providing inclusive public facilities. First, design that considers privacy is key. Gender neutral toilets should be designed to maximize individual privacy, for example by providing a stall that is completely enclosed from floor to ceiling. Apart from that, using doors that lock from the inside is also important to provide a sense of security to users. This accommodates the habits and comfort of Indonesians who may still feel uncomfortable with the concept of gender neutral toilets. Second, cleanliness must be a top priority.

Considering Indonesian people's habits and high expectations for the cleanliness of public toilets, gender neutral toilets must always be clean and well maintained. Facilities such as soap, running water, and paper towels or an electric hand dryer should always be available. The addition of aroma therapy in the toilet can also be an added value to increase user comfort. Third, education and outreach to the public about the existence and purpose of gender neutral toilets is very important. This can be done by installing signage or information boards that are clear and easy for everyone to understand. This information can include proper and correct usage procedures, as well as an explanation of why gender neutral toilets are provided. In this way, the public can better understand and ultimately accept the existence of gender neutral toilets as part of efforts to create inclusive public spaces(Pertiwi, Faza, & Rusyda, 2024). Standard toilets play an important role in everyday hygiene and sanitation practices in households and public facilities around the world. The design and functionality of this important piece of equipment has evolved over the years to meet society's changing needs, with a focus on efficiency, comfort and environmental considerations. Standard toilets typically consist of a bowl, tank and flushing mechanism, designed to hygienically remove human waste. The most common type found in homes and public toilets is the gravity flush toilet, which uses gravity to move water and waste through a plumbing system.

Recent advances in toilet technology have introduced features aimed at conserving water, such as low-flow and dual-flush models, which significantly reduce the amount of water used for each flush. This is not only environmentally friendly but also cost-effective for users who pay for water usage. In addition, the toilet design has been refined to increase user comfort, taking into account height, shape and additional functions such as bidets integrated into more advanced models.

In addition to functional improvements, aesthetic variations in toilets are becoming more common, allowing individuals to choose a style that complements their bathroom decor. From

one-piece and two-piece designs to wall-mount options, the market offers a variety of options to suit different preferences and space requirements. As we continue to prioritize sustainability and comfort in our living spaces, standard toilets will likely undergo further innovation, making them an exciting and important aspect of modern home design and public health infrastructure. Through the implementation of these standard guidelines, it is hoped that gender neutral toilets can be accepted and used comfortably by the Indonesian people. This is an important step in efforts to create inclusivity and social justice in public spaces.

The concept of gender-neutral toilets has gained significant attention and momentum as part of broader efforts to ensure inclusivity and respect for all individuals, regardless of their gender identity. Gender-neutral toilets, also known as unisex toilets or all-gender toilets, are facilities that anyone can use, eliminating the traditional binary choice of male and female. This approach not only provides a practical solution for transgender and non-binary individuals, who may face discomfort or discrimination when choosing gender-specific restrooms, but also challenges societal norms and encourages a more inclusive environment for everyone.

The implementation of gender-neutral toilets can be seen as a step towards recognizing and validating the diverse experiences and needs of all members of society. This addresses practical issues related to safety and comfort that some people face when using public toilets. For transgender and non-binary people, the choice between men's and women's bathrooms can cause anxiety, fear of harassment, or even physical violence. Gender-neutral facilities offer safer and more welcoming spaces for everyone, regardless of gender identity. Additionally, the movement towards gender-neutral toilets underscores the importance of inclusivity in public spaces. This serves as a reminder that public facilities must meet the needs of all users, embrace diversity and foster a culture of mutual respect and understanding. As more institutions, businesses and public spaces adopt gender-neutral toilets, this is driving a societal shift towards greater acceptance and support for gender diversity, making our communities more inclusive and respectful of each individual's identity (Pertwi et al., 2024).

A clean and comfortable toilet is a basic need in every environment, whether in the workplace, educational institutions, public places or in private homes. Therefore, having good toilet standard guidelines is very important to ensure user comfort and health. The following are several recommendations for standard toilet guidelines that can be applied:

1. First, cleanliness is the most crucial thing. Toilets must be cleaned regularly at least twice a day using an effective disinfectant to kill germs and bacteria. Floors, walls, toilets, urinals and sinks should be thoroughly cleaned. In addition, it is important to ensure that the air ventilation in the toilet is functioning properly to prevent the spread of bacteria and keep the air fresh.
2. Second, the completeness of toilet facilities must also be considered. Make sure the toilet is equipped with facilities such as toilet paper, hand washing soap, hand dryer or paper towels, and enough trash cans. Providing clean water must also be a priority, both for flushing toilets and for washing hands. Installing boards or signs providing instructions for correct toilet use and toilet etiquette can also help users comply with hygiene and comfort guidelines.

Third, accessibility for people with disabilities is also very important. Toilets must be designed in such a way as to facilitate access for users with special needs, including the provision of wider special toilets, handrails on the sides of the toilet, and access without stairs. This not only shows inclusivity, but also ensures comfort and safety for all users. Implementing the recommendations of these standard toilet guidelines not only increases comfort and cleanliness, but also respects the right of every individual to obtain adequate sanitation facilities. In this way, everyone can carry out their activities more comfortably and productively.

## Methods

Observation, questionnaires, interviews, and literature studies were carried out for data collection. The population in this study is public toilet shopping malls in Indonesia, namely buildings containing more than 50 retail units with a minimum size of 10,000 m<sup>2</sup>, department stores, food courts, and leisure areas such as cinemas or ice rinks (Guy, 1998). The study population sample was three malls in Bandung, namely Trans Studio Mall, Paris Van Java, and Paskal 23, which were included in the Shopping Mall criteria. Bandung City had a total population of 2.51 million people in 2020 (Badan Pusat Statistik Kota Bandung, 2020), selected as a research sample with a percentage of 0.9% of the total Indonesian population and is the third most populated city in Indonesia (BPS Surabaya City, Badan Pusat Statistik Kota Bandung, DKI Jakarta Province, 2020).

Data collection begins by observing the condition of toilets and distributing questionnaires to visitors using a random sampling method. Questionnaire data is used to seek urgency, not as a basis for experimentation. *Simple random sampling* is used so that each member of the population has an equal chance of being selected (Sugiyono, 2016). 108 respondents represented the sample from the population to find out the needs and preferences of the type of toilets in the mall, from the average total population of visitors to TSM, PVJ, and 23 Paskal malls as many as 34.3 thousand people (Delianita, 2019; Jamil, 2018; Ridwan, 2021). The number of respondents was determined based on (Israel, 1992) sample size and population formula. The margin of error and the data confidence level were calculated based on the same theory. An online calculator (SurveyMonkey.com) obtained a margin of error of 9% and a confidence level of 95%.

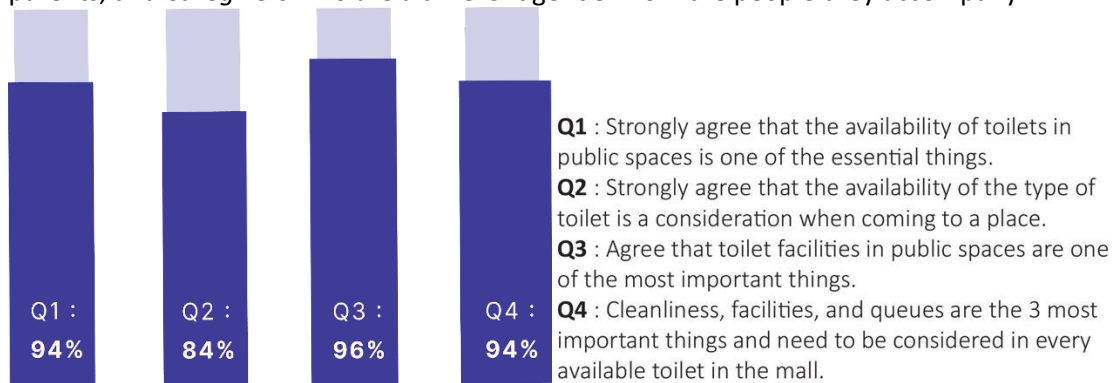
In-depth interviews were conducted with speakers selected based on questionnaire criteria, including Caregivers, Non-Binary, single-parent groups, and visitors with gender-neutral toilet needs. Literature references from various toilet design guidelines, including the Indonesian Toilet Association (2016), (ASEAN, 2016), (Restroom Association (Singapore), 2018), (Sanders, 2017), (Cubicle Centre, 2017), and (Swachha Andhra Corporation (SAC), 2016) were used to study, collect and compare the content contained in each guideline. In addition, journals on the behavior of public toilet users (Mafra et al., 2020), (Wilson in Grandi et al., 2022) are used as a reference to find out the behavior, habits, and preferences of Indonesians when using public toilets. Descriptive and experimental qualitative methods carry out data analysis. According to (Sugiyono, 2016), descriptive qualitative methods explain and answer the problems studied in detail and are followed by an experimental process to produce gender-neutral toilet design recommendations that have been adjusted to the results of literature studies.

## Result and Discussion

The data collection process begins with directly observing toilet facilities available at three shopping malls in Bandung. Based on observations done, it can be concluded that all toilets available are separate male and female toilets, two out of three malls provide accessible toilets, and the three malls provide *nursing rooms*. Children's toilets are only available in two malls, TSM and 23 Paskal. In addition, the children's toilets available at 23 Paskal have separate gender-appropriate areas, while TSM provides *single-stalled* type toilets for children. The type of toilet provided across three malls were seated toilets.

After making observations and seeing the availability of toilets, we conducted further research by distributing questionnaires filled out by 108 respondents. The results showed that as many as 18.5% or 20 toilet users needed gender-neutral toilets. The figure of 18.5% indicates

the need for gender-neutral toilets for users with specific conditions, such as non-Binary, single parents, and *Caregivers* who are a different gender from the people they accompany.



**Fig 1.** Questionnaire Result

An in-depth interview was conducted with 5 online speakers to find out the reasoning behind the questionnaire's answers. The five speakers were one Male, three Women, and one non-binary, two of whom were *caregivers* who were different genders from the people they accompanied. From the interviews with the respondents, several problems were discovered, namely the feeling of discomfort and worry when using a separate toilet, as said by source A that often gets discriminatory treatment because it is considered to be entering the toilet of the opposite sex, while source B feels uncomfortable when he has to take his parents who have limitations to enter the toilet who are different genders from him. From the results of interviews with the five speakers, it can be concluded that the current separate toilet that is provided, cannot meet the needs of users with special needs. In addition, the need for gender-neutral toilets is not only intended for the comfort, safety, and needs of unconventional gender groups such as transwomen, transmen, and non-binary genders but also child companions and parents of different genders.

Through literature studies and comparisons of existing toilet standards, it was found that there was no standard for designing gender-neutral toilets as obtained from interviews to support the need to provide gender-neutral toilets in public spaces.

Some of the things that have been mentioned above are the urgency on which the design of gender-neutral toilet recommendations is based. Thus, additional provisions were made as a gender-neutral toilet standard based on considerations of Indonesian customs to facilitate a wide variety of users. This toilet standard is not only intended for certain groups but also meets the needs of the toilet users in general.

To compile these provisions, a literature study was carried out by comparative study method on several existing journals and guidelines such as ATI (Indonesian Toilet Association), A Guide To A Better Public Toilet Design and Maintenance (Restroom Association (Singapore), 2018), and Guideline For Public And Community Toilet Management by Cities for Andhra Pradesh (Swachha Andhra Corporation (SAC), 2016), (Sanders, 2017), journal of toilet user habits in Indonesia (Mafra et al., 2020), journal Design of Ergonomic Dashboards for Tractors And Trucks: Innovative Method and Tools (Wilson in (Grandi et al., 2022)). This provision is designed through a combination, modification, and new development of existing guidelines, then adjusted to the habits and preferences of the Indonesian people as in the journal Public Toilet User Behavior (Mafra et al., 2020), (Wilson in (Grandi et al., 2022)). The preparation of provisions is carried out using the theoretical basis of design regarding spatial planning to meet user satisfaction (Ajie, 2011), Human Centered Design which pays attention to several factors such as *proxemics*, *anthropometrics*, *ergonomics*, *human diversity*, *elderly*, and children, level of accessibility, creation of spatial atmosphere, adaptivity, and personalization of design for the public (Wahono et al., 2017) and particular standards, namely ADAAG (Americans with Disabilities Act – Standard

for Accessible Design) to realize universal design, as well as the color theory that has a psychological effect (Monica & Darmayanti, 2022)

According to the research, the development of gender-neutral toilet design provisions necessitates special provisions to support the diverse needs of users influenced by age, health, and gender. The provisions are written with the user's comfort and safety in mind and the toilet's operational efficiency. To ensure inclusivity for all users, gender-neutral toilet guidelines include accessible toilet facilities so that users with disabilities can use the toilet with the assistance of companions or independently.

The multi-stalled open-space toilet type is based on the stalled toilet model. In contrast, the other two types of toilets (single-stalled and *multi-stalled enclosed space*) result from modifications to the *Stalled!* toilet model, which is tailored to the preference of Indonesian toilet users. Three types of toilet are made so that the provider of toilet facilities in the mall can choose and provide the type of toilet that suits the needs, availability of land, and financial capabilities of the mall. The provision of the number and ratio of toilet facilities such as cubical, sink, mirror, and vanity, as well as the separation of vanity and hand-washing areas, are carried out to meet user needs (ASEAN, 2016), while also reducing the number of queues in toilets (Bovens & Marcoci, 2023).

### Clean toilets

Clean and healthy toilets are an important part of our living environment. The criteria for a clean and healthy toilet not only include physical cleanliness, but also good design and management. First, surface cleanliness is a top priority. This means toilets, floors, walls and other equipment must be free of dirt, dust and bacteria. Regular use of disinfectants is highly recommended to kill germs and maintain cleanliness. Second, good ventilation is key to keeping a toilet healthy. Adequate ventilation can reduce humidity which is a place for mold and bacteria to grow (Ati, 2016). It also helps eliminate unpleasant odors and ensures the air inside the toilet is constantly renewed. In addition, sufficient lighting is also important, both natural and artificial, to ensure that toilet cleanliness can be easily monitored and minimize places where germs gather. Lastly, providing hygiene support facilities such as soap, hand sanitizer and toilet tissue is an inseparable part of a clean and healthy toilet. Closed trash cans must also be available and cleaned regularly to avoid the accumulation of rubbish which can attract insects or other nuisance animals. By meeting these criteria, toilets will not only be cleaner and healthier, but also more comfortable for users (Rusyda & Suryadi, 2020).

The use of clean and hygienic toilets has a number of important benefits for people's health and welfare. First, good toilets prevent the spread of diseases that can be transmitted via the fecal-oral route, such as diarrhea, cholera and dysentery. These diseases often thrive in environments without adequate sanitation, and by using clean toilets, the risk of spreading these diseases can be minimized. Second, the use of toilets also contributes to improving environmental health. When human waste is managed properly, water and soil pollution can be prevented. This is important for preserving local ecosystems and natural resources used by humans and animals. For example, clean water that is safe to drink is a direct result of good sanitation practices, including toilet use. Third, psychological and social aspects are also positively affected by the presence of proper toilets. Access to adequate sanitation facilities can improve individual dignity, privacy, and security, especially for women and children. This reduces their risk of sexual harassment and violence that may occur when looking for hidden places to relieve themselves outside the home. Additionally, children, especially girls, are more likely to continue their education if schools provide clean, gender-segregated toilets. Therefore, ensuring universal access to clean and hygienic toilets is an important step in advancing public health,

protecting the environment, and improving the quality of life for individuals. Good sanitation is a human right that must be guaranteed for everyone, wherever they are.

### Toilet Use

Proper and correct use of the toilet is an important thing that every individual must pay attention to. This is not only related to personal hygiene, but also environmental health. A toilet that is used properly can help prevent the spread of germs and disease. One important aspect of using a toilet is cleanliness. Every toilet user should ensure that they clean the area after use. This includes flushing the toilet properly, as well as cleaning the toilet seat if necessary. Using water and soap to wash your hands after using the toilet is also very important, as this is one of the main ways to prevent the spread of germs. Apart from cleanliness, ethics in using public toilets also need to be considered. For example, avoid using the toilet for too long if there are other people waiting, don't throw rubbish in the toilet, and avoid making noise that can disturb other users. By practicing good ethics and hygiene in toilet use, we can help create a healthier and more comfortable environment for everyone. Proper use of the toilet not only maintains cleanliness and comfort for users, but also shows a responsible attitude towards the environment and other people. Here are some basic rules that you need to pay attention to when using the toilet, whether at home, at work or in public places. First, always make sure to clean the toilet after use. This includes flushing the toilet until it is clean, using a toilet brush if necessary, and making sure there is no residual waste left behind (Rusyda & Suryadi, 2020).

Use of water and use of toilet paper must be done wisely, use enough and do not throw tissue or other objects that do not dissolve in water into the toilet because they can cause blockages. Second, maintaining the cleanliness and tidiness of toilets is a shared responsibility. Always dispose of rubbish properly, such as used sanitary napkins or tissue, in the rubbish bin provided. If using a public toilet, try not to touch the surface of the toilet directly with your skin to avoid germ contamination. Use the toilet seat pad provided or cover it with tissue. Third, respecting other people's privacy and comfort is also very important. Knock first before entering a toilet that is locked or marked "in use". Avoid making unnecessary noise or using the toilet as a place to linger, such as playing on your cell phone, as this can disturb or cause discomfort to other users who are waiting. Following these basic rules not only reflects personal decency and cleanliness, but also helps keep the toilet environment clean, healthy, and comfortable for everyone. Therefore, ensuring universal access to clean and hygienic toilets is an important step in advancing public health, protecting the environment, and improving the quality of life for individuals. Good sanitation is a human right that must be guaranteed for everyone, wherever they are.

### Matter Which Must Available In Toilet

The toilet is an important room in a building, be it a private house, business premises or public facilities. Therefore, ensuring that the toilet is equipped with various essential needs is something that should not be ignored. The three main aspects that must be provided in every toilet include cleanliness, comfort and safety (Rusyda & Suryadi, 2020).

First, cleanliness is the most important thing. Toilets should be equipped with soap and running water for washing hands, as this is a basic step to prevent the spread of germs and disease. Apart from that, toilet paper or toilet tissue and air freshener are also very important to keep the toilet clean and comfortable to use. Toilet cleaners and toilet brushes must also always be available, to ensure that the toilet can be cleaned regularly and is kept clean.

Second, user comfort must also be considered. This can be achieved by providing amenities such as trash receptacles, paper towels or hand dryers, and comfortable toilet seats. Adequate lighting and good air ventilation are also very important to keep the air in the toilet



fresh. For public toilets, providing a fairly private cubicle with a well-functioning lock is something that should not be overlooked.

Third, the safety of toilet users must be a priority. Anti-slip floors to prevent slipping accidents, handrails on walls to help users who need help moving around, and clear signage for use of the facility must be provided. In some cases, providing a first aid kit for minor handling is also recommended.

By ensuring these three aspects are met, a toilet will not only be comfortable and safe to use, but will also help maintain high standards of cleanliness. This will create a healthier and more hygienic environment for everyone. The following are things that are available in the toilet.

#### 1. Signage/Sign

- a. Sign location must clear And can seen from distance 5-10 meters.
- b. Type Toilet Woman And Toilet Man must clear.
- c. Door enter to areas Toilet No need There is door, use mazes or letter "S", If need For closed Evening day can use *roller-door* from kind trellis to maintain air circulation. If this is not possible because there are animals, And other factors, so can use door, as long as it's deep time the operation of the door must be always in shape open.

#### 2. Areas Toilet

- a. Which called Areas Toilet, is location Which There is sink And cubical toilet.
- b. In Areas Toilet, provided sink with size mature And child.
- c. Use tap press or sensors, with strength minimum 1 bar Forsave water.
- d. Available mirror be equipped with soap wash hand type *foam* and dryerhand (*hand dryer*). For dryer (*hand dryer*), recommended use *hand dryer* Which Already use UV or hepa filter For reduce usage *hand tower* | Which often stolen or *hand tissue* Which used excessive And No should.
- e. Use place rubbish Which closed with size 30–40 liter with aperture system pedal, And coated with plastic Which easy decompose ( *bio-degradable* ).
- f. In lower counter sink No can There is *cabinet* / drawer or cupboard, so that easy to clean and for repair/maintenance (*maintenance*), as well as No become place Which hidden And used For things Which No Good.
- g. On areas Toilet Man there is urinals with *flushing "Free hands"*.
- h. Provided *Vanities* (place makeup) be equipped with counter small or obstacle And mirror, especially on Toilet Woman, Because often woman ornate Enough long use mirror in front sink And This result user others wait and or out toilet without washing hand.
- i. Available writing/stickers "FORBIDDEN SMOKE", as well as timetable cleanliness.

#### 3. Cubical Toilet

- a. The cubicle is the area where the toilet is located, it can be a squat toilet or toilet Sit down. Lots of it amount between toilet squat And toilet Sit down depends wide areas location And level from amount user toilet.
- b. Distance between wall cubical And door should 15 - 20cm on floor And door cubical Already open go out.
- c. We must reduce point corner, Because corner tend become place hiding water and bacteria and fungi. Remembering that our country is a country tropical and very moist as well often lighting in very toilet minimal And No There is ventilation or circulation air Which Good (air silent) so that can result mold And Also place bacteria develop breed.
- d. Toilet available with flusher And jet spray For clean (pebok).
- e. Provided Also place rubbish For bandage (*lady son*) And tissue.
- f. On generally Toilet Which simple No provide Tissue Toilet, Because usually para user bring Alone. However should There is decal education "Forbidden Throw away Bandage,

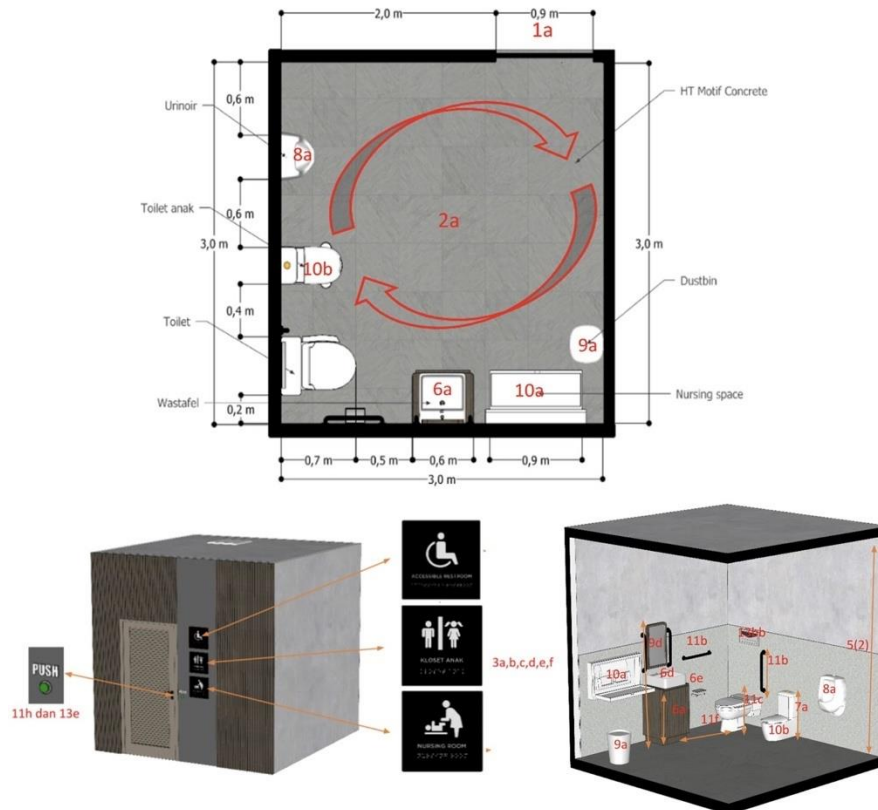


Diaper, Tissue Wet into the Toilet.” Matter This can channel disposal in toilet, especially If tissue wet thrown away to in toilet can clog channel, Because material base tissue wet from plastic so that hard late in water And No easy decompose.

- g. Available hanger For bag or dress.
  - h. Door cubical be equipped with key Which works with Good.
  - i. There is difference levels height on floor areas toilet sink with toilet/ cubical. On generally floor areas cubical more low 5 - 10mm from floor of the sink area, this is to prevent water from coming out of the cubicle And wetting areas sink.
  - j. Between cubical with toilet (Good toilet squat with toilet Sit down or Also toilet squat with toilet squat) should given separator sewer/channel, Because often user toilet squat make floor wet, so that No dirty cubical in beside him.
  - k. In floor available Also *Floor-drain* And be equipped with cover/filter.
  - l. In every 2 (two) toilet need There is control channel For *maintenance / maintenance/repair*.
  - m. In toilet provided illumination/light minimum 200 lux as well as need There is circulation air Which Good (so that No moist And smell).
4. Toilets Disability
- a. Toilet This is toilet for Which need special (disabled/person defective/impaired), Where room Which available must Enough wide so that chair wheel can rotating. Availability location toilet disability Sometimes it is separate, but sometimes it is combined with other cubicles, where difference There is on wide cubical, minimum 1.2m with door minimum 100cm so that chair wheel can enter.
  - b. In stand-alone Disability Toilets, sliding/pushing doors are provided as well as room Which Enough For twist chair wheel. Whereas on Toilet Disability Which simultaneously with cubical Which other usually equalized with type door cubical Which other only size door more wide.
  - c. Available light alarm on door.
  - d. In stand-alone disabled toilets, an alarm button is provided become One with light alarm front door enter cubical disability, with height 75 - 80 cm.
5. Family Toilet
- a. Family Toilet is facility toilet for family, Where father Which bring child Woman or Mother bring child man.
  - b. Provided toilet size mature And toilet child Which be equipped with jetspray
  - c. Provided sink with faucet sensors or *hands-free* size mature And children and equipment (*amenities*), in the form of: mirror, hand washing soap and dryer hand (*hands dryer*).
  - d. Available hanger dress.
  - e. For Mother Which will carry out his wish, need provided seat toddler (*baby seats*) or place change diaper (baby changing) Which anti *microbacterial* And placed in side toilet mature.
  - f. When land limited or room No sufficient, *Family Toilet* often time Also put together with Toilet Disability
6. Janitor
- a. Place put or keep equipment And ingredients cleaner as well as place For clean equipment cleanliness Toilet after used on areas toilet.
  - b. No room size It can be too small, to make it easier and more comfortable for officers moment wash equipment after used. The existence of this space is often underestimated, even though it is important for everyone equipment can cleaned with disinfectant And para officer cleanliness (*cleaning service/ facility care*) easy move.

- c. Be equipped with tub Janitor Which Correct, Which can used For soak equipment as well as be equipped with faucet neck swan with system aperture shift swivel) .
- d. There are hangers for equipment as well as blocks for placing materials. cleaning agent, and can also be used as a place to place stock equipment cubical toilet (like tissue toilet).
- e. The light in this room must be at least 200 lux to be easily visible otherwise clean. Apart from that, with sufficient lighting and good air circulation Janitor still clean And No become place nest bacteria.

Based on the gender-neutral toilet provisions formulated above, the three toilet model are made into layouts and isometric for design reference.



**Fig 2.** Single-Styled Toilet Layout and Isometric

The Single-Styled Toilet design in figure 2 above can be placed according to the availability of the mall area, for example, on the terrace, voids, or separate areas in the mall. This toilet uses waterproof material to reduce maintenance in accordance with the material provisions in the table above. The layout and isometric of multi-stalled enclosed space toilet can be seen in figure 3 and 4 below.

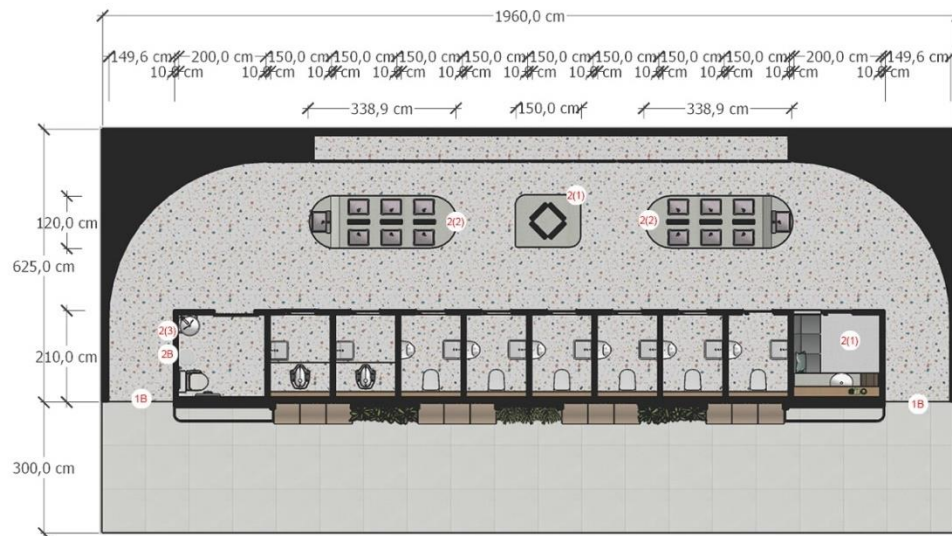


Fig 3. Layout Multi-Stalled Enclosed Space Toilet



Fig 4. Isometric Multi-Stalled Enclosed Space Toilet

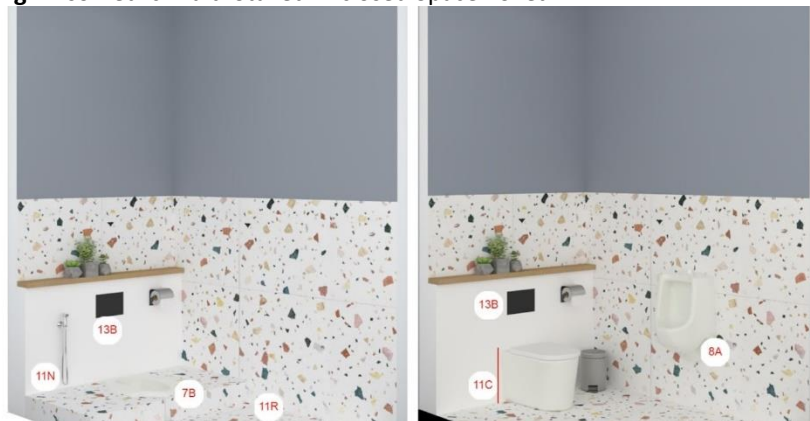


Fig 5. Cubicle Multi-Stalled Enclosed Space Toilet

Figure 5 and 6 show the cubical of the multi stalled enclosed space toilet provide squatting and seated toilet.



**Fig 6.** Accessible cubicle Multi-Stalled Enclosed Space Toilet



**Fig 7.** Nursing Room Multi-Stalled Enclosed Space Toilet

The multi-stalled enclosed space toilet has nursing rooms, and facilities such as baby changing, washbasin, and sofas are provided.



**Fig 8.** Vanity and Hand Washing Area of Multi-Stalled Enclosed Space Toilet

There is a separate vanity facility on the multi-stalled enclosed space toilet and a sink that can be used for people with disabilities and children. The layout and isometric multi-stalled open space toilet shown in figure 9 and 10 below.

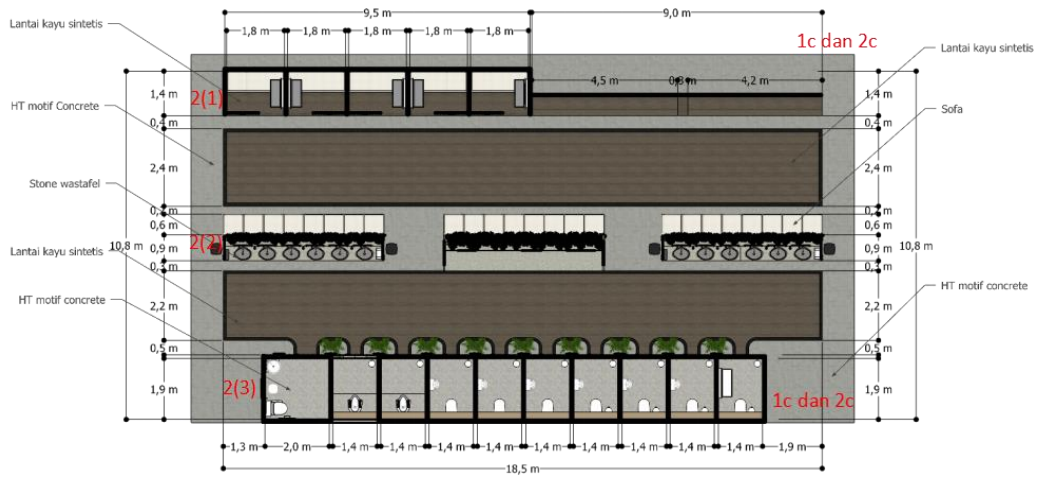


Fig 9. Layout Multi-Stalled Open Space Toilet

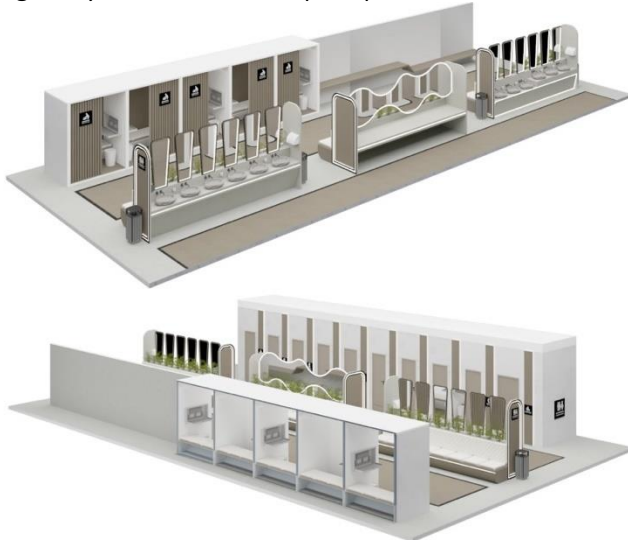


Fig 10. Isometric Multi-Stalled Open Space Toilet



Fig 11. Cubicle in Multi-Stalled Open Space Toilet

The Multi-Stalled Open Space Toilet design shown in figure 11 above can be placed in an area that visitors can access from all directions or near a high traffic area. This toilet facility is

divided into three areas, namely *grooming*, *washing*, and *eliminating* areas, each with specific activities.

## Conclusion

The result of this study is that there is a need to add gender-neutral toilet design provisions to existing toilet guidelines. The provision was added to increase the inclusivity of toilet facilities in shopping malls. The formulated provisions are gender-neutral toilet layouts divided into three types of layouts, namely single-stalled, multi-stalled enclosed space, and multi-stalled open space. Facilities available in toilets, such as toilets, sinks, vanity, and other accessories, need to pay attention to user accessibility. In addition, the available cubicles and nursing rooms need to put their users' privacy first to increase comfort. Cubical dimensions and toilet facilities are adjusted to accommodate single-parent users and caregivers of different genders with accompanying persons.

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