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Study Of Accessible Public Space For The Elderly Case Study Of Simpang Lima, Semarang City

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ABSTRACT

The development of an area cannot be separated from the existence of public space, Public Space such as Simpang Lima is one of the important aspects in city development so that it can be utilized by the community, public space must be usable by all levels of society, including elderly users. Currently, the city of Semarang has experienced an increase in the number of elderly people since 2017 and continues to increase, special attention to elderly users is important so that this increase does not become a new problem in urban areas. One of the government's efforts to pay attention to the elderly is by creating public spaces. Public spaces in the city of Semarang, such as Simpang Lima, are still popular with the elderly. Many elderly people are found in the morning with sports activities, but according to the elderly, the facilities at Simpang Lima have not been able to meet their needs. So that it raises several problems in the field, these problems are the basis of the study, namely What is the accessibility of the elderly in the Simpang Lima public space? What are the obstacles to accessibility for the elderly in using public space facilities at Simpang Lima? The research method uses a qualitative approach by conducting observations, interviews, and literature reviews after which it is analyzed using accessibility requirements. The activities of the elderly in reaching and using public spaces are in accordance with the accessibility that has been provided, this is based on convenience and safety. Accessibility barriers experienced by the elderly at Simpang Lima are the lack of supporting accessibility facilities such as comfortable seating, information boards and directions, and toilets complete with facilities for the elderly.

Keyword: Accessibility, Accessible, Public Space, Simpang Lima

ABSTRAK

Berkembangnya sebuah daerah tidak terlepas dari adanya ruang publik, Ruang Publik seperti Simpang lima menjadi salah satu aspek penting dalam pembangunan kota agar dapat dimanfaatkan masyarakat, ruang publik harus dapat digunakan semua kalangan masyarakat, termasuk pengguna berusia lanjut. Saat ini Kota Semarang mengalami peningkatan jumlah lansia dari tahun 2017 dan terus mengalami peningkatan, perhatian khusus untuk pengguna lansia menjadi hal penting agar peningkatan ini tidak menjadi masalah baru dalam perkotaan. Salah satu upaya pemerintah dalam memperhatikan lansia dengan terciptanya ruang publik. Ruang publik di Kota Semarang, seperti Simpang Lima masih populer bagi Lansia. Banyak lansia di temui ketika pagi hari dengan aktivitas olahraga, namun menurut lansia fasilitas di Simpang Lima belum dapat memenuhi kebutuhan mereka. Sehingga memunculkan beberapa masalah di lapangan, masalah tersebut menjadi dasar dari penelitian yaitu Seperti apa aksesibilitas lansia di ruang publik Simpang Lima? Seperti apa kendala



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aksesibilitas lansia dalam menggunakan fasilitas ruang publik di Simpang Lima. Metode penelitian menggunakan pendekatan kualitatif dengan melakukan observasi, wawancara, dan kajian pustaka setelah itu di analisis menggunakan persyaratan aksesibilitas. Aktivitas lansia dalam mencapai dan menggunakan ruang publik sesuai dengan aksesibilitas yang telah disediakan, hal tersebut dilandasi kemudahan dan keselamatan. Hambatan aksesibilitas yang dialami lansia di Simpang Lima adalah belum terpenuhinya fasilitas penunjang aksesibilitas seperti tempat duduk yang nyaman, papan informasi dan penunjuk arah, toilet lengkap dengan fasilitas bagi lansia.

Keyword: Aksesibilitas, Aksesibel, Ruang Publik, Simpang Lima

1. Introduction

Accessibility is the degree of ease in terms of time, cost, and effort when moving from one place to another (Riesmaya, 2013). Accessibility is the ease of movement within an environment, which relates to both circulation and visual connections (Sholahudin, 2007). Accessible public space is a design aspect that considers the needs of everyone, without limitations. It aims to ensure equity between users with special needs and those without, so that all individuals can coexist fairly (Lubis, 2008). Accessibility is defined as the condition in which buildings, sites, public spaces, or other facilities meet the technical requirements for accessibility (Murdiyanti, 2012). According to the provisions of Indonesian Minister of Public Works Regulation No. 30 of 2006, there are four principles that must be fulfilled in terms of accessibility: ease, usability, safety, and independence.

Accessible public space can be described as fulfilling the concept of universal design . The concept of universal design or universal design was developed as an approach to creating an inclusive built environment, allowing various groups with different characteristics and needs to be able to access and utilize public space without requiring special designs or facilities. This idea initially emerged as a response to the needs of World War II survivors who experienced physical limitations, thus giving rise to the urge to design spaces that were equally accessible to everyone. Since the 1960s, the application of universal design has begun to be adopted by various cities in the world in their public space planning (de Souza et al., 2016).

According to College of Design, North Carolina University in Kadir et al (2012), there are seven main principles in universal design:

1. Equitable Use : The design must be able to be used by anyone without discrimination based on differences in user abilities .
2. Flexibility in Use : The design is able to adapt to the various individual preferences and functional capabilities of the user.
3. Simple and Intuitive Use (Simple and Intuitive Use): Design is easy to understand and use without requiring high levels of experience, expertise or technical understanding, and is not affected by language or concentration limitations.
4. Perceptible Information Information) : Design conveys information effectively to users in various environmental conditions or sensory limitations that users have.
5. Tolerance for Errors (Tolerance) of Error) : The design is designed to minimize the risks and negative impacts resulting from misuse or potential accidents.
6. Low Physical Effort Effort) : The design allows users to access and operate facilities efficiently and comfortably without requiring great physical effort.
7. Size and Space for Access and Use (Size and Space for Approach and Use): The design provides sufficient space and size for all users to approach, reach, manipulate, and use the facility, regardless of their body size, posture, or level of mobility.

These principles are an important basis for creating public spaces that are inclusive, comfortable and safe for all users, including vulnerable groups such as the elderly and people with disabilities. Accessible public space has the aim of ensuring that there are no barriers between users with special needs such as the elderly and normal users in carrying out activities. The success of the development of a region is one of the aspects of health and social welfare, namely the increase in the average life expectancy of its population. This increase is in line with the increasing life expectancy of the elderly (Lubis, 2008).

World Health Organization (WHO) developed an accessibility model through the International Classification framework of Functioning, Disability and Health (ICF) is a conceptual approach that views disability as the result of the interaction between an individual and their health condition and the surrounding environmental factors. The ICF emphasizes that barriers to access do not solely come from an individual's physical or mental limitations, but are also influenced by how the environment is designed. In this model, there are four main interrelated components, namely body functions and structures, activities, participation, and environmental factors. The most relevant components in the context of designing public facilities are environmental factors, which include all forms of barriers or support from the physical, social, and policy environments.

In supporting the comfort and functionality of public facilities, Maslow's theory of needs is an important foundation in understanding how the physical environment can contribute to the fulfillment of basic human needs. Maslow (1943) compiled a theory of human motivation in the form of a hierarchy of needs, consisting of five levels, namely physiological needs, safety, belonging, appreciation, and self-actualization. Each level of needs must be met sequentially to enable individuals to reach the highest level of needs, namely self-actualization.

The connection between this theory and research lies in how inclusively designed public facilities can meet the needs of users, especially for vulnerable groups such as people with disabilities, children, and the elderly. For example, the provision of safe and disabled-friendly toilets answers physiological and safety needs, while the presence of comfortable pedestrian paths and adequate seating areas supports social and esteem needs. By meeting these needs, facility users can feel valued, comfortable, and able to carry out their activities independently, thus supporting the achievement of self-actualization.

Based on Maslow's theory, it can be concluded that the availability and quality of adequate public facilities are not only related to their technical and physical functions, but also have psychological and social impacts on their users. Therefore, in this study, Maslow's theory is used to analyze the extent to which available public facilities are able to support the basic needs of users as a whole. The phenomenon of elderly population in urban areas has received special attention along with the government's desire to build elderly-friendly cities. This commitment emerged after Indonesia's participation in signing a global agreement for the elderly in the Madrid International Plan of Action on Ageing or MIPAA 2002 and refers to Law No. 13 of 1998 concerning the welfare of the elderly which mandates the establishment of a national commission for the elderly at the national and regional levels (Hermawati, 2015).

Elderly people are people over 60 years old who generally have physical decline and changes such as limited vision, movement, hearing, and mobility frequency. In addition, they also have psychological vulnerabilities in the form of dementia and depression (de Mendonca Lima, Ivbijaro, 2013). Elderly people experience several disorders in daily mobility, here are the disorders they often experience (Kuniawan et al, 2017).

1. Limitations in physical performance, unable to stand for long and difficulty carrying heavy objects even at close range.
2. Experiencing disorders when pushing, lifting, pulling an object and having difficulty raising and lowering one's own body position.

The elderly need public spaces for activities to stimulate the brain to age actively because as a person ages, brain function decreases. There are three activities that can stimulate the brain, namely physical activity, mental stimulation and social activity. Physical activity in the form of light exercise or walking. Mental stimulation in the form of playing puzzles, singing, discussions, or making crafts. Social activities in the form of social activities, socializing with people (Stanley, 1999). Elderly-friendly public spaces are when elderly people can use, enjoy and do activities in public spaces without fear of falling, tripping or experiencing crime (Burton & Lynne, 2006). Public spaces support the elderly in stimulating the brain which is included in the aspects of physical activity and social activity.

The number of elderly in the city of Semarang continues to increase from year to year, according to data from the Semarang City Central Statistics Agency from 2017 to 2021. This requires special attention so that it does not become a new problem in urban areas. The elderly will experience decreased body function and

abilities, to minimize this, efforts are needed to stimulate the brain with physical activity, mental stimulation and social activities. These activities can be supported by the existence of public spaces.

Elderly visitors at Simpang Lima are often found doing sports activities, according to an interview with Mr. Oky as the field coordinator of the Semarang City Housing and Settlement Area Service. Elderly people are often found in the morning, doing sports activities such as jogging and cycling, from the results of the interview, elderly visitors complained about accessibility facilities that were not friendly to them, such as difficult access to Simpang Lima, toilet facilities, and seating. The results of the interview on April 4, 2023, which was conducted for elderly visitors, found that there were several problems, such as the Simpang Lima road which was too wide, making it difficult for visitors to cross the Simpang Lima road, especially for elderly users who have physical limitations.

The creation of a special park for the elderly at Simpang Lima is one of the government's special concerns for the elderly population in Semarang City, but the existence of the elderly park is not accompanied by the provision of facilities for the elderly, such as road access, toilets, ramps, seating and others. Geographically, Simpang Lima is a park that is strategically located because it is easily accessible from East Semarang to West Semarang. Creating public spaces for the elderly is to accommodate the limitations of the elderly who have physical decline and changes such as limited vision, movement, hearing, and frequency of mobility as well as psychological vulnerabilities in the form of dementia and depression. Therefore, public spaces for the elderly are designed to meet the principles of having to meet designs that are easily accessible and do not cause confusion, provide opportunities for exploration, can accommodate all forms of activities, and are inclusive (Ristianti & Wakhidah, 2021).

International indicator standards published by the International Organization for Standardization for Standardization (ISO) which regulates accessibility and comfort of the built environment (Accessibility and usability of the built environment). These standards are designed to ensure that the physical environment, including buildings and outdoor spaces, can be accessed, used, and navigated by all people without discrimination, including people with disabilities , older people, children, and individuals with temporary disabilities. ISO 21542:2011 specifies various technical requirements and design guidelines, such as maximum slopes on ramps , minimum widths of doors and corridors, design of accessible toilets , information systems and signage , placement of handrails, and maneuvering space for wheelchair users. In addition, this standard also covers aspects of user comfort and safety, including non-slip floor surface materials, lighting, and Braille signs and visual contrast for visually impaired users.

In the context of this study, the ISO 21542:2011 standard is used as a reference to evaluate the conformity of public facilities to international accessibility principles. The implementation of this standard is considered an important indicator in realizing an inclusive, disabled-friendly environment, and supporting fair and equal social participation. Therefore, the use of ISO 21542:2011 in this study acts as a parameter in assessing the feasibility of the design of the public facilities reviewed.

1.1 Summary of Accessibility Indicators in Public Spaces

Based on the results of the literature study, 7 indicators of technical requirements related to accessibility in Public Spaces were obtained in accordance with the Regulation of the Minister of Public Works No. 14 of 2017, the following is a summary of the standard measurements for Accessibility facilities in Public Spaces:

Table 1. Accessibility Indicators in Public Spaces.

Facility	Regulation of the Minister of Public Works and Public Housing(PUPR) of Indonesia number 14 of 2017	ISO 21542:2011	Compliance
1. Pedestrian Path	Pedestrian paths have surface requirements, dimensions and other standards, for the surface of the pedestrian path must not be slippery, must be stable and strong. Every 9 meters in length can be provided with a seat, and equipped with a safety edge or barrier.	The surface must be stable, not slippery, and there must be no gaps greater than 10 mm.	In accordance
2. Ramp	Ramps have a slope that must not exceed 6° or a ratio to height of 1:10, ramps have an effective width of 95 cm without a safety	Max . slope 5% (1:20), ideal < 8%, min. width	Almost Fit

	edge and 120 cm complete with a safety edge, for the lowest safety edge 10 cm.	120 cm, handrails mandatory	
3. Stairs	The material of the steps must not be slippery and the edges must be anti-slip, the slope of the steps must not be more than 35° with a width of 30 cm and a height of no more than 18 cm, each step must be equipped with a handrail and railing at the end.	Equipped with hand grips on both sides, anti-slip, max height 18 cm	In accordance
4. Toilet	Toilets for men and women should be separated, toilets should have clear signs and each gender should have at least one disabled toilet and one children's toilet with non-slip flooring. Toilet doors generally open outwards, if the door opens inwards it should have sufficient dimensions for wheelchair users to maneuver inside, toilets should be equipped with handrails, the width of the door for wheelchair users is 90 cm and regular toilets 70 cm.	Outward opening doors, wheelchair maneuvering space min. Ø 150 cm, handrails mandatory	Almost Fit
5. Parking Area	Toilets for men and women should be separated, toilets should have clear signs and each gender should have at least one disabled toilet and one children's toilet with non-slip flooring. Toilet doors generally open outwards, if the door opens inwards it should have sufficient dimensions for wheelchair users to maneuver inside, toilets should be equipped with handrails, the width of the door for wheelchair users is 90 cm and regular toilets 70 cm.	Must be near the entrance, min. 3.6 m x 5 m per slot , with international symbols	Need Adjustment
6. Signs and Signatures	Signs and markers must be informative and easy to find, signs for the disabled must be complete, such as pedestrian instructions, toilet signs, parking signs for the disabled, Braille signs with a minimum distance of 1 cm.	Must be clear, use international symbols, equipped with Braille, visual contrast	In accordance
7. Seating Area	The chair has a maximum height of 45 cm with a width of 60 cm for 1 user and 120 cm for 2 users, every 9 m there must be a chair complete with trash can facilities.	Seating should be available regularly, comfortably, with wheelchair space.	In accordance

Source: Author Analysis, 2025

Most aspects of Regulation of the Minister of Public works and Public Housing (PUPR) of Indonesia number 14 of 2017 have adopted the principles of ISO 21542:2011, especially in terms of pedestrian paths, stairs, ramps , and signage . However, there are some minor technical differences, such as in the slope of the ramp and the details of the size of the toilet maneuvering space. The PUPR Regulation will be used as the main theory because the regulation has been refined and is currently in effect in Indonesia.

2. Method

The following research uses a qualitative approach methodology. Qualitative research is fundamental and naturalistic or natural and cannot be done in a laboratory but in the field.

2.1 Data collection technique

Data collection techniques are an important task in research because they will show whether the research is successful or not. Therefore, data must be collected using collection techniques. The collection method in this study was carried out in three stages, namely:

1. Observation.

Observation is a technique for collecting data when conducting observations at Simpang Lima Field. Data collection is related to recording, grouping with the aim of understanding the conditions in the field in more detail in order to find out the ongoing phenomena related to how elderly visitors' accessibility is at Simpang Lima.

2. Literature Review

A literature review is conducted with the aim of increasing knowledge about the concept of accessibility in public spaces which will be used as a basis for consideration or as a guideline in the analysis process. Researchers also use academic research in data collection techniques. To assist the writing process, a literature review in data collection techniques involves collecting information contained in articles, books, or using research methods from existing studies. The purpose of this study is to find facts and understand the assumptions behind the theory of accessibility in public spaces that will be used.

3. Interview

Interviews are a data collection technique that includes asking questions to informants and then the results obtained are recorded, described or also recorded (Hasan, 2002). According to Basrowi & Suwandi (2008) interview is a description of the user of events, activities, communities, perceptions, motivations, empathy, demands and reconstructing the complete future expectations, changing and expanding the results of information from a person. The interview in this study aims to find out the facts in the field regarding the research topic. Interviews in the study focused on elderly visitors and managers at Simpang Lima because they were informants at Simpang Lima.

2.2 Data Analysis Techniques

According to Sugiyono (2009), data analysis is the process of collecting and systematizing information from sources such as survey results, field notes, and other sources so that it is easy to understand and communicate to others. Hasan (2002) stated that qualitative analysis is analysis without carrying out mathematical, statistical, and other related modeling processes. There are three categories of analysis techniques in qualitative research, the following is an explanation:

1. Data Collection

Collection of data that has been obtained from observation results. Data obtained from the field will likely be very large, therefore it needs to be conveyed clearly and in detail by reducing the data. Data reduction is similar to summarizing by selecting the main points and then focusing on several things that are the focus of the research. This will make data reduction have a clear picture and can make it easier for researchers to collect the data needed later.

Data obtained from the researcher's location is poured into a complete and detailed report related to accessibility. The report in the reduction stage is summarized, selecting the main points, focusing on important parts and then looking for themes or patterns. The focus of research related to accessibility is to find out the activities, obstacles and potentials experienced by elderly users in Simpang Lima.

2. Data Presentation

Data collection is carried out with the aim of making it easier for researchers to read the graph as a whole or relevant parts of the study. Data presentation is carried out by describing the results of interviews which are poured into the form of descriptions with narrative text, and supported by documents, photographs, or similar images to obtain a conclusion.

The research analysis begins with the use of assessment, namely presenting data in the field and then linking it to the standard size of public space for the elderly, then validated by direct interviews with the elderly in Simpang Lima.

3. Drawing Conclusions

Drawing conclusions based on the results of observations in the Simpang Lima Public Space, the results of interviews with the elderly and Simpang Lima managers are then analyzed and the final results of the conclusions are obtained. Conclusions obtained in a study must be verified repeatedly during the data collection process, which is known as the research process. In the analysis process, it is necessary to search for patterns, themes, hypotheses, and others which are then outlined in the conclusion.

3. Discussion

Simpang Lima is a public space that can be used by everyone and all its users, public spaces in Simpang Lima are also open for various activities such as concerts, bazaars and others. The use of public spaces involving many people must obtain permission from the Semarang City Housing and Settlement Service. The permit is used to coordinate officers in the field such as cleaners and security officers. Not only at certain events, security officers are always present at Simpang Lima, at night there are security officers who go around to maintain the security of public space users, with a number of 2 to 3 personnel. While during the day there are no security officers on duty. The absence of security officers on duty encourages the public to be able to maintain security in public spaces. Public awareness of the importance of their own safety is an important foundation that must be possessed by everyone. Although during the day there are no security officers on patrol, there is a police post in the southwest part of Simpang Lima.



Figure 1. (a) Simpang Lima Police Post; (b) Police post location.

Source : Author Document, 2024

The following are details of the facilities and functions of the space at Simpang Lima:

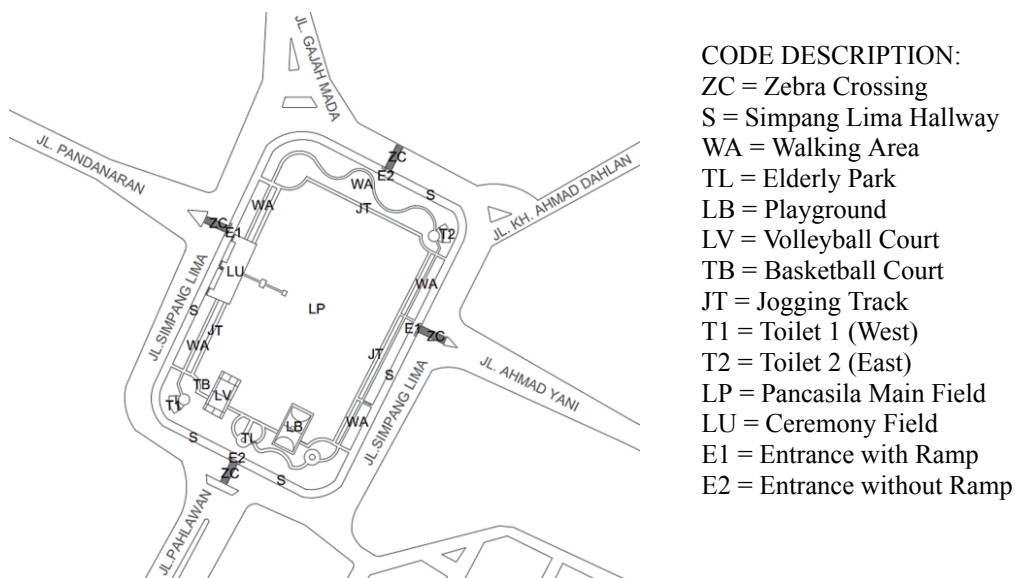


Figure 2. Details of the Functions of Simpang Lima Field

Source : author analysis, 2024

3.1 Pedestrian path

Pedestrian paths in the area Simpang Lima is located on a corridor that directly borders with Jalan Simpang Lima, so can accessed Good from outside Simpang Lima via door enter main and also from in Simpang Lima through the walking area . Facilities available on the route this pedestrian covers track guide paths, ramps (access ramps), places trash , and seating .

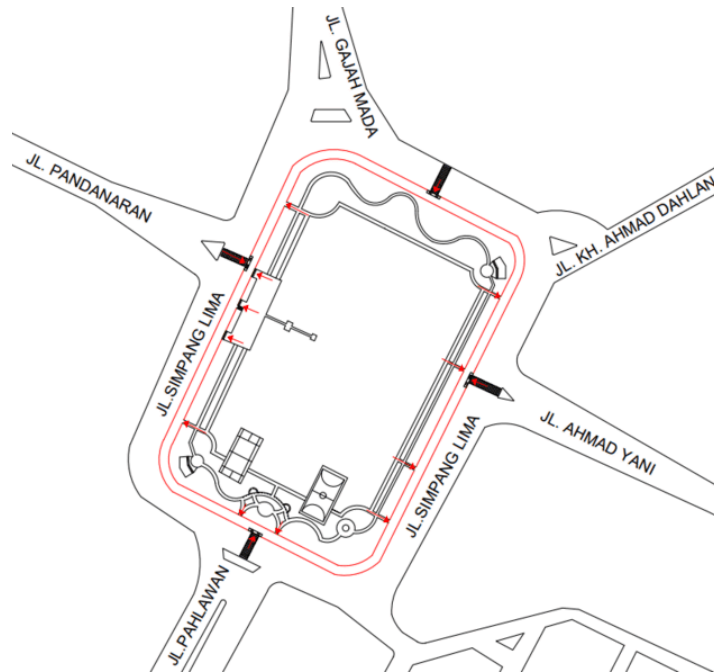


Figure 3. Access to Simpang Lima Corridor

Source : author analysis, 2024

From the side dimensions, width available corridors reaching 800 cm, which is very far exceeding the minimum standard of 160 cm is set in Article 3 Paragraph 1 of Regulation of the Minister of PUPR of Indonesia number 14 of 2017. This means track pedestrians at Simpang Lima have fulfilled standard For adequate space for various type users, including those who use tools to help mobility like chair wheels, and allow more movement free in public space.



Figure 4. Damage to ceramic floor in hallway

Source : author analysis, 2024

However, even though dimensions track Already fulfill the standard , there are a number of problems that need to be solved to be noted, especially related safety and comfort for users. One of the problems found is damage to surface roads in some points throughout pedestrian paths. Some floor tile ceramics in the corridor are broken or peeled off, which can cause danger potential for elderly and users. Based on principle regulated safety in Article 5 Paragraph 3 Regulation of the Minister of PUPR of Indonesia number 14 of 2017, every building or pedestrian path must be free from potential dangers that can endanger safety users. Damage to the surface road This can threaten user elderly, because they are more prone to accidents like fall or slipped. Based on findings interview with a number of user elderly, they feel worry Because damage floor This potential cause accident physical, such as stuck or fall, which can resulting in injury Serious.

In addition, the study also found that the area Simpang Lima, although providing track enough pedestrian

width and useful facilities like seats and places for trash, is not yet equipped with signage or instruction in adequate direction. Based on Article 6 Paragraph 2 of Regulation of the Minister of PUPR of Indonesia number 14 of 2017, the open pedestrian area For general must be equipped with sign instruction clear direction, including For instruction location facility general such as toilets, seating, and entry and exit areas. This is very important. especially For visitors elderly who tend to own limitations in speed movement, vision, and ability For recognize locations important. Based on findings from the interview, many elderly who feel difficulty to know location facilities in the area of Simpang Lima without clear instructions . Some visitors must be around moreover formerly before Finally knowing existing facilities, which of course just reduces comfort in the use of public rooms.

The presence of signage or instruction adequate direction not only will help elderly navigate this area, but also will increase accessibility in a way overall for all over users, including those who come For first time. As explained by Kurniawan et al. (2017), the elderly own limitations physical obstacles movement them, so that instruction clear and easy directions access is very necessary For ensure they Can doing activities with safe and comfortable in the room public.

Interesting findings in study This is height participation elderly in Morning activities such as jogging and cycling in the area Simpang Lima. Activities This show that area This own potential For become room more public friendly elderly. Thus, greater accessibility is good, including repairing damaged floors and additional instruction direction, very much needed For support activity. The increased accessibility This can make area Simpang Lima as example room public inclusive that can facilitate mobility elderly with more okay, while ensure safety and comfort they.

In general overall, based on analysis this, can concluded that although Simpang Lima is already fulfil a number of condition base in accordance with Regulation of the Minister of PUPR of Indonesia number 14 of 2017, Routine maintenance of facilities, repairs to conditions damaged floors and adding clear signage is essential For increase quality accessibility area This.

3.2 Ramp

Simpang Lima has 3 ramp facilities, 2 are located at the entrance and 1 is located at the ceremonial field access. The ramp at the entrance has a slope of 11° according to Regulation of the Minister of PUPR of Indonesia number 14 of 2017, the maximum is 6°, the slope of the ramp at Simpang Lima exceeds the maximum standard, seen from the principle of independence, with this slope it is too steep for wheelchair users to be able to use the ramp independently, this slope can be a potential hazard if used by wheelchair users alone. The width of the ramp is 120 cm and is in accordance with the standard, each staircase or ramp must be equipped with a two-layer handrail for children and adults to hold, while at Simpang Lima there is only one layer for adult users, seen from the principle of usability, the handrail cannot be used by all users and does not comply with existing standards. The height of the handrail at Simpang Lima is 1 m, if according to the standard Regulation of the Minister of PUPR of Indonesia number 14 of 2017 it should have a height of 65-80cm, the handrail facility does not comply with the established standards. The ramp entrance area has u-ditch holes up to 6 cm wide. In terms of safety, these holes can be a potential hazard for wheelchair users and the elderly when passing through this area because there is floor damage, differences in height and there are u-ditch holes.



Figure 5. Floor damage at Jalan A Yani Entrance
Source : author document, 2024

Meanwhile, for the ramp on the access to the ceremonial field, the width of the ramp is recorded as reaching 140 cm, which is wider than the minimum standard of 90 cm stipulated in Regulation of the Minister of PUPR of Indonesia number 14 of 2017, so it meets the space requirements for users with mobility aids. In addition, the slope of the ramp on the ceremonial field only reaches 3°, which is in accordance with the maximum standard set. Although this ramp meets the desired slope criteria, the main drawback of this ramp is the absence of handrails, which are an important element in supporting the movement of users, both those using wheelchairs and those walking. This reduces the level of safety and comfort of using the ramp, especially for the elderly, who need handrails to maintain balance and prevent accidents when using the ramp.

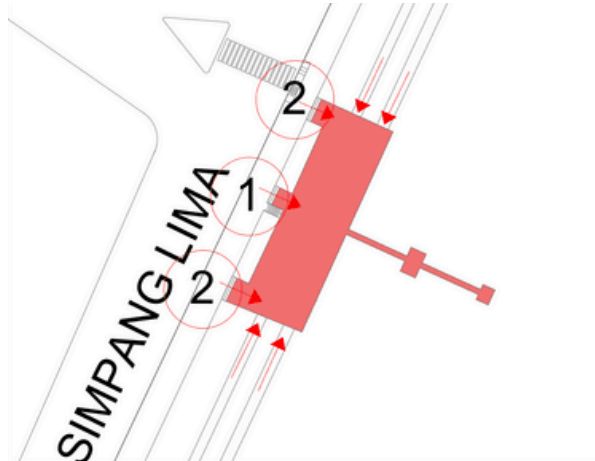


Figure 6. Ceremonial Ground Access
Source : author analysis, 2024

The presence of the ramp at Simpang Lima is a response to the universal use of public space, but there are other obstacles for elderly wheelchair users in using the facility because it is too steep. Overall, the results of this study indicate that although the ramp at Simpang Lima has accommodated several basic accessibility needs, there are several aspects that do not meet the standards set by Regulation of the Minister of PUPR of Indonesia number 14 of 2017. The slope of the ramp at the main entrance that exceeds the specified limit has the potential to endanger wheelchair users and the elderly, while the presence of handrails that are only one side and too high does not meet the expected accessibility standards. In addition, damage to the road surface and the presence of u-ditch holes are potential hazards for more vulnerable users, especially the elderly and wheelchair users.

3.3 Stairs

Facilities for the stairs at Simpang Lima consist of several units of stairs that have dimensions of 17 cm high, 60 cm wide, and a slope of 16°. These dimensions have met the standards set out in PUPR Regulation No. 14 of 2017, which states that the height of the steps must be between 15-20 cm, and the width of the steps must be sufficient to provide comfort for its users. Thus, the stairs at Simpang Lima have met the criteria based on dimensional issues, ensuring that users can climb the stairs safely and comfortably.



Figure 7. (a) Stairs at Entrance Road Pahlawan; (b) Stairs to East Toilet

Source : author document, 2024

A number of problems related to the necessary stairs were noticed. Surface stairs at Simpang Lima using ceramic's useful texture as an anti-slip for reduced risk slipped. Even so, the edge ladder has sharp boundaries, which have the potential to become dangerous, especially for elderly or those who are lacking notice. Based on Principle Safety, sharp edges on stairs can increase risk of injury If users fall down or stumbled. Therefore, it is recommended For repair edge stairs to be more gentle or restricted with more protector safety, to reduce potential dangers posed.

About the existence of the handle hand facility, the stairs at Simpang Lima are not equipped with handle hand, which should be in accordance with principle comfort and accessibility. Regulation of the Minister of PUPR of Indonesia number 14 of 2017, it is regulated that every ladder must be equipped with a handle hand to give support addition for users, especially those who have physical limitations. Presence handle hand will make it easier users, especially elderly, for guard balance moment climb up stairs. However, based on results interview, user elderly No feel experience difficulty although No existence handle hand, because amount ladder only consists of from three child stairs, which makes it easier they For overcome ladder without too Lots effort. This indicates that although handling hands are very necessary, in this case, the amount of children with a little ladder Possible No too become a problem big.

However, obstacles others felt by the elderly in the area of the stairs leading to the toilet on the side east of Simpang Lima. In this area, there is a sloping floor, which causes a decline in comfort across it, especially for elderly. Based on the results of interviews with a number of user elderly, they state that they feel difficulties and not comfortable moments passing through this area. The slope floor can potentially become dangerous, because elderly who have mobility limited can more easily fall down or lose balance the moment they pass the sloping floor. Therefore, repair to This sloping floor is very necessary to reduce the risk of fall down for users, especially elderly. This shows that aspect maintenance and repair towards this area is very important For creating greater accessibility good and safe for all over users.

From the results of this study, it can be concluded that although the dimensions of the stairs at Simpang Lima are already fulfilling standards of Regulation of the Minister of PUPR of Indonesia number 14 of 2017, still there are a number of aspects that need to be considered fixed. Especially related with security surface stairs, namely with removing sharp edges to reduce potential injury. In addition, the grip hand should be added to the ladder to increase comfort and safety, although in a number of cases, elderly people do not feel disturbed by his absence Because it is a little ladder.

Other obstacles encountered are the sloping floor in the stair area heading to the toilet, which became a problem significant for elderly. For overcome problem said, repairs the sloping floor becomes a very important step so that the facilities stairs at Simpang Lima can fulfil standard greater accessibility good, and support creation room safe and comfortable public for all users, including elderly and disabled disability.

3.4 Toilet

Simpang Lima has Toilet facilities in two parts, namely west and east. The toilets on the west side are managed by the outside and inside condition relatively well maintained with cleanliness is maintained, while the toilet is on the side east No own guards and conditions its cleanliness Enough neglected. Toilet side east this also has poor accessibility, especially for visitors elderly. Access to the east toilet involves a number of child stairs, which are without a handle hand, making it difficult elderly to move safely. In addition, the dimensions of the toilet on the east side is very small, namely 190 x 110 cm, which makes it No adequate For fulfilling needs of the elderly, especially elderly with mobility limited or use chair wheel.

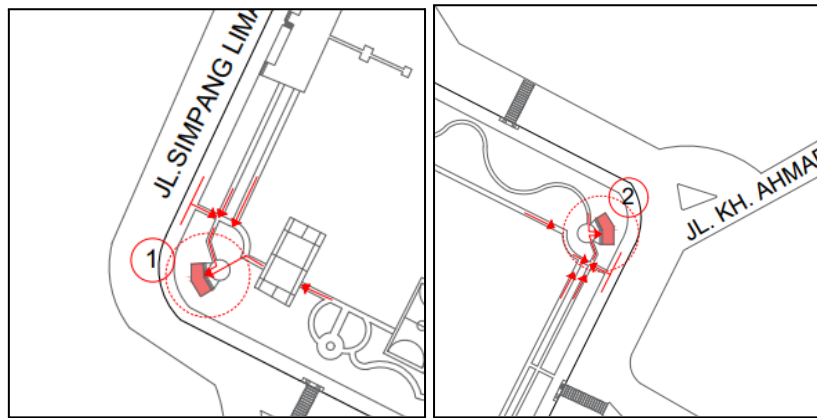


Figure 8. (a) First Toilet Access; (b) Second Toilet Access

Source : author analysis, 2024

Based on the Regulation of the Minister of PUPR of Indonesia number 14 of 2017, public toilet facilities must fulfil a number of important things, including size of toilet room, access in and out, as well as provision facility support like handle hand and toilet seat to make it easier for the elderly. Toilets at Simpang Lima, especially those on the side east, do not fulfil a number of standards set. The open toilet door in No in accordance with standards that require the toilet door opens to outside, to ensure that users can move freely inside the room although the door is closed. In case This, PUPR Regulation number 14 of 2017 states that If the toilet door is open to in, then space inside the toilet must be Enough wide for users Still Can move without obstacles. Small toilet size becomes a complaint mainly for elderly who feel difficulty to move or move position, especially moment use toilet facilities.

Furthermore, the toilets at Simpang Lima are not equipped with hand sanitizer and a sitting toilet, two very necessary facilities for elderly. Regulation of the Minister of PUPR of Indonesia number 14 of 2017 regulates that the toilet for user elderly must equipped with handle hands that can help they stand or sit with safe, as well as a more comfortable sitting toilet comfortable for those who have limitations physical. Existence handle hands that are not is in this toilet be one of factor reason main difficulty accessibility for elderly. In addition, the condition of poor hygiene in the side toilet and water shortages became a significant problem which added difficulty for user elderly.

In terms of accessibility, toilets at Simpang Lima are also not fulfilling Principle Convenience and Usability as set up in Regulation of the Minister of PUPR of Indonesia number 14 of 2017. Access to the toilet via a number of child ladders without handle hands is very difficult elderly . Principle of Usability demands facilities that not only fulfil standard size, but also are easily used by all users, including elderly who have physical limitations. Condition slippery floors, and lack of facility support like handle hands, making this toilet No friendly users, especially for elderly.

Based on interviews with a number of user elderly, they disclose that the toilet at Simpang Lima is one of the facilities they have most frequently complained about. Users elderly feel difficulty reach the toilet because the amount child stairs, and they also feel No comfortable with small toilet size and condition cleanliness that is not awake with good, especially on the toilet side East. Conditions This show that toilet facilities at Simpang Lima are not yet available fully fulfil principles recommended accessibility For user elderly.

3.5 Parking Area

Accessibility of parking users at Simpang Lima can be seen below, some parking lots are not open 24 hours. On the shoulder of the road can only be used at 18.00 WIB to 05.00 WIB. Parking is in an area that is easily accessible by entrance and easily seen by visitors.

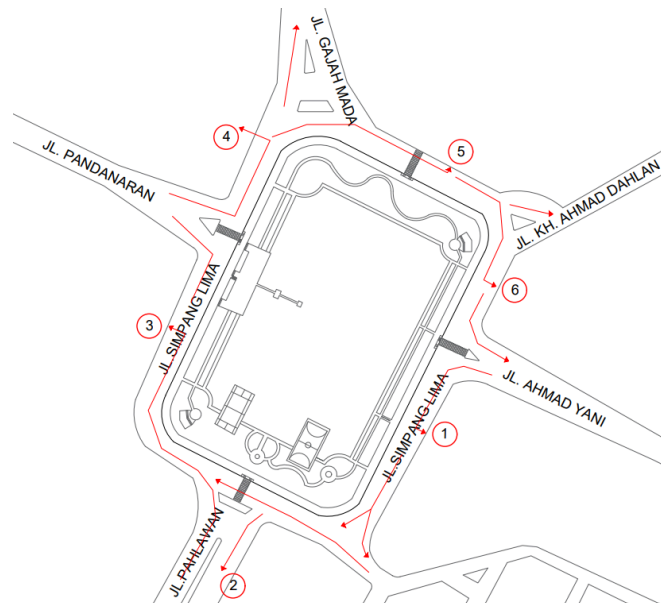


Figure 9. Visitor Parking Access

Source : author analysis, 2024

Information :

- 1 Simpang Lima Shophouse Parking and Simpang Lima Shophouse Parking (road shoulder)
- 2 City Plaza Parking
- 3 Ex E-Plaza Parking (road shoulder)
- 4 Mosque Baiturrahman Parking
- 5 Ciputra Hotel/Mall Parking and Ciputra Hotel Parking
- 6 Simpang Lima Plaza Parking and Simpang Lima Plaza Parking (road shoulder)

Based on results observation, there is a number of parking managed by the department transportation, with dimensions of the parking area on the shoulder of the road is 350 cm x 500 cm, which is already fulfil the minimum standard set by Regulation of the Minister of PUPR of Indonesia number 14 of 2017, namely 230 cm x 500 cm. For user chair wheels, parking available Already Enough adequate with dimensions 370 cm x 500 cm, which has also been fulfilled standard which governs that distance parking For user chair wheel No may more from 60 meters from door come in. This shows that facility parking at Simpang Lima is already Enough adequate For user elderly, including user chair wheel.

From the side safety, parking This is equipped with surface good asphalt, as well as markers and boards information about regulation parking. In this case, according to the principle safety in Regulation of the Minister of PUPR of Indonesia number 14 of 2017, facilities parking at Simpang Lima is sufficient to support mobility elderly, especially from side comfort parking. Facilities this is also easily accessed by visitors, without obstacles large, and adequate For need regulated parking.



Figure 10. (a) Parking in Front of Simpang Lima Shophouse; (b) Ex-Plaza Front Parking

Source : author document, 2024

Facility parking at Simpang Lima in a general Already fulfil standard accessibility, there are a number of obstacles that must be overcome to be noted, especially in aspect security and independence elderly in use facility parking. According to the principle of comfort in Regulation of the Minister of PUPR of Indonesia number 14 of 2017, the elderly feel Enough easy use existing parking, and not There is complaint means related with convenience parking. Using signs and regulations parking also helps user elderly users. For known rules and methods use the parking area with clear.

However, the security aspect at the facility parking needs to get more attention. Parking area located on the shoulder of the road with level intensity. Then a high cross can become a potential danger for elderly, especially If they must move in the parking area the moment There is passing vehicles. In principle safety, passing vehicles without a divider or barrier clear can cause accidents, good for user roads and also for visitors who are parking, especially elderly who have limitations in mobility. Lack of security special like marker divider between vehicles and pedestrians in the parking area Can become a threat for safety elderly.

In terms of independence, elderly who use facility Parking at Simpang Lima often require help from officer parking For parking vehicles, especially in the parking areas located on the shoulder of the road. Based on interview with a number of visitors elderly, they mention that they feel need existence help For park vehicle they Because height intensity past vehicles wandering in the parking area said. Although the parking area has sufficient access good, the height level Then cross and lack of surveillance in the area cause concern for elderly in use facility parking in a way independent.

In addition, based on study field, at night day when area Simpang Lima is enough crowded, some visitors, good elderly and also visitors general , cancel his intention For go to Simpang Lima because difficulty find place empty parking lot. Security parking, which is one of the factor inhibitors, makes visitors choose to park in another place like Ciputra Mall, Baiturrahman Mosque, Simpang Lima shops, or Super Economy, which are considered more safe and have facilities with more parking guaranteed.

3.6 Signs and Signage

Simpang Lima has a regulation board, but complete directions with Braille are not yet available at Simpang Lima. The following is the signage at Simpang Lima.



Figure 11. Signage at Simpang Lima
Source : author document, 2024

Provision of signage in the room is not only as element aesthetics, but also to support safety and convenience for visitors, especially elderly who have physical limitations. Clear signage, easy readable, and strategic can give information important about location facilities, such as toilets, access in and out, and track pedestrians. In case This, signage is very necessary For support independence elderly, remembering without existence sufficient marker, elderly will difficulty For doing activities in a way independent.

Based on the results of interviews with visitors elderly, I found that the elderly are in great need of clear directions at Simpang Lima. Many seniors feel difficulty finding important things such as toilets, access out and in, and track pedestrians. Most of them new senior citizen first time visiting feel confusion with size area Simpang Lima is quite big. Experienced elderly This disclose that they often must circling and searching facilities, which are at risk adding to the feeling of fatigue and discomfort. Limitations physique elderly, which differentiates them from normal visitors, causing them difficulty moving in a wide area without the

presence of adequate signage.

Without the presence of clear and adequate signage, elderly not only face difficulty physically, but also risky to safety them. Fatigue caused by searching old facilities can cause health problems, such as improvement in stress and fatigue physically, which is very dangerous for elderly. Elderly people looking for a toilet or place rest that is not found appropriate time Can experience accident or fatigue Because to force self walk more Far than it should be. This is clearly contradictory with principle safety that must be noticed in the design room.

Based on principle independence, elderly should be able to use the public room independently without relying on the help of others. However, the absence of clear signage make elderly difficulty For know direction going to the facilities they have need. As a result, they often have to request help from other visitors or officers to show the right direction, which shows existence dependence socially as it should be avoided with existence marker sufficient direction.

Findings interesting in study This is a confession from visitors elderly that adding signage would be very helpful in doing activities at Simpang Lima. Elderly expect existence boards more information easy to read, with large font and icons or easy drawing understood , and installed in strategic locations, such as near door enter, door out, and close facility general such as toilets and chairs Rest.

Based on the findings, there are a number of recommendations that can be done to increase accessibility for elderly in Simpang Lima. First, the installation of clear and strategic signage. Easy signage seen and read, with large fonts and clear icons, necessary installed in a strategic location like near with door entry, toilet, and path pedestrians. This signage must also notice contrast matching colors to make it more easily read by elderly people who experience disturbance sight. Second, improvement information and instruction direction , where the signage is installed must give clear information about directions going to important areas such as toilets, paths exit, and rest areas. Third, the addition of information about facility elderly. In addition to directions, signage can also give information about facilities provided specially For elderly, such as chair wheels, special toilet elderly, and facilities supporting others that make it easier to access elderly in public. Lastly, the use of technology for signage, such as QR codes on signage that can be scanned by a smartphone, can give information more carry on or instruction direction digitally. This will be very helpful as older seniors used to use technology to get information fast and efficiently.

3.7 Seating Area

Facility seats and placing trash in the public like Simpang Lima is very important to support convenience and accessibility visitors, especially for elderly people who often use up time outside the room. Based on the Regulation of the Minister of PUPR of Indonesia number 14 of 2017, the facilities seating in the public room must fulfil standard certain For support principle safety, comfort and independence users. Research This aims to analyze facility seats and places of garbage at Simpang Lima, especially from corner view accessibility elderly, and the impact to experienced visitors elderly who use this facility. The seating at Simpang Lima is spread across two main areas, namely the corridor area and the lane area. pedestrian. Seating in the trail area pedestrian enough shady and comfortable used, but the seating in the corridor facing Jalan Simpang Lima feels hot Because direct exposed ray sun. Condition This become attention important, especially for elderly who may feel No comfortable or even exposed to risk health consequence excessive heat, as in dehydration or fatigue. Based on principle comfort and safety, exposed seating ray sun direct need get protection more, for example with roof installation or shade, for reduce risk discomfort for user elderly.

In addition, some of the seats at Simpang Lima are visibly damaged, which can become potential danger for visitors, especially vulnerable elderly to accidents. Based on the Regulation of the Minister of PUPR of Indonesia number 14 of 2017, the facilities seating must be in safe and reliable conditions used with comfort. Damage to the seat, such as structure that is not stable or sharp material, can cause injuries in the elderly who tend to not be stable enough to move. Therefore, regular repairs and maintenance are essential. To ensure The seats at Simpang Lima are safe and comfortable used by all visitors, including elderly.



Figure 12. (a) Broken chair in the hallway; (b) Seating in the walking area
Source : author document, 2024

Related with size seating, Regulation of the Minister of PUPR of Indonesia number 14 of 2017 regulates that height seating must be about 45 cm, which is size standards that have been filled with all seats at Simpang Lima. There are none. seats that exceed 45 cm, so in accordance with standards set. On the other hand, the length seating in the corridor area is 125 cm, which is a little exceed size standard For a double seat that is only 120 cm, but Still can be accepted Because No There is strict provisions about tolerance dimensions this. In the track area pedestrian, long seat is 60 cm, appropriate with standard For single seater.

Although the dimensions of the seats at Simpang Lima are already in accordance with standard, result interviews with visitors elderly show that the most comfortable seat is the one in Elderly Park, with a height seat about 38 cm. Findings This show that although the seats at Simpang Lima are already fulfil standard, elderly tend more choose seat with height A little more low Because give more comfort big for they, especially those who have limitations physique.



Figure 13. Seating at Simpang Lima Elderly Park
Source : author document, 2024

Apart from seating, facilities to place Garbage at Simpang Lima also become important things to be noticed in design rooms for friendly public elderly. At Simpang Lima, rubbish is available in the corridor area, but in other areas besides the corridor, facilities are Not yet available. Although so, no There is accumulation. The trash seen at Simpang Lima, which shows that awareness visitors about importance throw away trash in its place Enough high . In addition, the team cleanliness that works every Morning participate help guard cleanliness and tidiness of this area. Availability place limited waste This need be noticed For ensure that all areas in Simpang Lima have easy access For throw away trash, remembering importance cleanliness For comfort visitors elderly.



Figure 14. (a) Trash Can in the Hallway; (b) janitor
Source : author document, 2024

Based on these findings, several recommendations can be made to improve comfort and accessibility for the elderly at Simpang Lima. First, seats exposed to direct sunlight need to be considered for protection or shade to reduce the risk of discomfort due to heat. Second, regular maintenance and repair of seats are needed to ensure that no seats are damaged or endanger visitors, especially the elderly. Third, although the seats at Simpang Lima already meet the standards, it is recommended to consider lowering the seat height at some points, such as those in the Elderly Park, to improve the comfort of the elderly. Fourth, expanding the provision of trash bins throughout the Simpang Lima area will improve comfort and cleanliness, as well as make it easier for visitors to dispose of trash.

Overall, the seating and trash bin facilities at Simpang Lima have met many of the standards set out in Regulation of the Minister of PUPR of Indonesia number 14 of 2017, but there are still several aspects that need to be fixed and improved, especially related to comfort for the elderly. Providing appropriate seating, repairing damaged facilities, and adding trash bins throughout the area will greatly help improve the experience of visitors, especially the elderly, in using public facilities at Simpang Lima.

4. Conclusion

Based on results analysis to seven element facility room public facilities at Simpang Lima, namely pedestrian paths, ramps, stairs, toilets, parking areas, signage and seating, can be concluded that part big facility has fulfil minimum standards according to Regulation of the Minister of PUPR of Indonesia number 14 of 2017, especially in matter dimensions and availability. However, it is still a number of the lack of obstacles accessibility, comfort, and safety, in particular for user carry on age (elderly).

Facilities like track pedestrian paths have very adequate dimensions, but the damaged surface floor becomes a potential danger for elderly. The ramp facility is already available However No all fulfil standard slope and completeness like handrail. Stairs generally in accordance with standard dimensions, but Not yet equipped with handle the important hand For security elderly. Toilet becomes the most facilities complained about Because No fulfil almost all over aspect standard accessibility. Parking area Enough adequate from side dimensions and affordability, but aspect safety and comfort Still need to be improved. The absence of signage makes it difficult to orient visitors elderly, while the seat has been fulfilled standard, but there is damage and exposure to the sun at some point.

Public Space Suggestions

1. Repair Damaged Facilities, Do routine maintenance on the track pedestrians and seating to avoid potential accidents for user elderly.
2. Standardization Facility Accessibility, Ramps and stairs must be customized return with standard slope and equipped with a double-layer handrail for support principle safety and independence.
3. Toilet Repair, Toilet renovation will provide sitting toilets, handrails, access doors, go out, enter in accordance with standards, and maintain cleanliness as well as availability of water periodically.
4. Signage Addition and Adjustment, Installation board instruction clear, contrasting, and easy directions read would be very helpful mobility elderly in the room for the wider public like Simpang Lima.

5. Additions Facility Complement, Extension distribution place waste and additions shady seating will add comfort to visitors.
6. Improvement Aspect Parking Security, Required system management more parking safe, especially at night day, and presence of the officer who helped elderly moment parking.

Suggestions For Researcher Furthermore

1. Use a mixed-method method for combining qualitative and quantitative data to get the best results more comprehensively.
2. Get Involved group other disabilities (user chair wheels, blind) to expand universal design perspective.
3. Do studies comparative between Simpang Lima and space other public in the same city or different For see best practices.
4. Evaluation term long with do before-after study after repair facility done.

References

- Basrowi Dan Suwandi. (2008). *Memahami Penelitian Kualitatif*. Jakarta: Rineka Cipta.
- Burton, E., & Mitchell, L. (2006). *Inclusive Urban - Street For Life*. Burlington MA: Elsevier's Science & Technology.
- De Mendonça Lima, Carlos Augusto, and Gabriel Ivbijaro. (2013). "Mental Health and Wellbeing of Older People: Opportunities and Challenges." *Mental health in family medicine* 10(3): 125.
- De Mendonça Lima, Carlos Augusto , and Gabriel Ivbijaro . (2013). "Mental Health and Well-Being of Older People: Opportunities and Challenges." *Mental Health in Family Medicine* 10(3): 125.
- Hasan, Iqbal, (2002). *Pokok-Pokok Materi Penelitian Dan Aplikasinya*, Jakarta: Graha Indonesia.
- Hermawati, I. (2015). *Kajian Tentang Kota Ramah Lanjut Usia*. Yogyakarta: B2P3KS Kementerian Sosial Republik Indonesia.
- International Organization for Standardization . (2011). *ISO 21542: Buildings construction – Accessibility and usability of the built environment* .
- Kadir, SA, & Jamaludin, M. (2012). Applicability of Malaysian standards and universal design in public buildings in Putrajaya . *Procedia-Social and Behavioral Sciences* , 36, 659-669.
- Kurniawan Harry, Ikaputra, Sandra Forestyana (2017). *Perancangan Aksesibilitas Untuk Fasilitas Publik*. Gadjah Mada University Press.
- Lubis, Hendra Arif K.H. (2008). *Kajian Aksesibilitas Difabel Pada Ruang Publik Kota. Studi Kasus : Lapangan Merdeka*. Tesis Sekolah Pascasarjana Universitas Sumatra Utara.
- Maslow, AH (1943). *A Theory of Human Motivation* . *Psychological Review* , 50(4), 370–396
- Murdiyanti, D. (2012). *Aksesibilitas Sarana Prasarana Transportasi Yang Ramah Penyandang Disabilitas (Studi Kasus Transjakarta)*. Universitas Indonesia, Arsitektur. Depok: Universitas Indonesia.
- Ristianti, NS. Wakhidah Kurniawati. (2021). *Dimensi Ruang Publik Perkotaan*. Universitas Diponegoro.
- Riesmaya, Vika. (213). *Dimensi Kualitas Ruang Perpustakaan Bung Karno*. Surabaya: Universitas Airlangga.
- Schroeder, D.M. Congden, S.W. (1996), "Competitive strategy and the adoption and usage of process innovation", *International Journal of Commerce and Management*.
- Sholahudin, M. (2007). *Setting Ruang dan Pengaruhnya terhadap Penyandang Cacat Tubuh di Pusat Rehabilitasi Yakkum Yogyakarta*. *Lintas Ruang*, 1 (1), 31-41.
- Stanley, Mickey. (1999). *Buku Ajar Keperawatan Gerontik Edisi 2*. (2006). Alih bahasa: Eny Meiliya. Jakarta: EGC.
- Sugiyono. (2009). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung: Alfabeta.
- Peraturan Menteri Pekerjaan Umum Nomor 14/Prt/M/2017 Tentang Persyaratan Kemudahan Bangunan Gedung.