PLANNING FOR THE CONSTRUCTION OF SPECIAL WAITING ROOM FACILITIES FOR PEOPLE WITH DISABILITIES AT TERMINAL 1 OF JUANDA AIRPORT SURABAYA.

R.Rizki Firman Syah*, Wiwid Suryono, Nurani Hartatik

Politeknik Penerbangan Surabaya, Jalan Jemur Andayani I No 73, Kota Surabaya, 60236
**Corresponding Author. Email: ancaarkanro81@gmail.com*

ABSTRACT

Airports are key gateways for global mobility and are important for all passengers, including those with special needs, such as passengers with disabilities. In an effort to improve services to passengers with disabilities, planning inclusive and disability-*friendly facilities is a must.* This research uses descriptive analysis method. This research aims to design and plan waiting room facilities that meet the needs and provide a better experience for disabled passengers at Juanda Airport. Data collection techniques by taking data from the source where the problem occurs by observing the existing conditions in Terminal 1 of Juanda Airport Surabaya and recording the absence of a disabled waiting room and interviewing Landside employees of Juanda Airport Surabaya regarding the absence of a disabled waiting room. The design contained in this waiting room provides supporting facilities such as chairs with foldable arms, information boards with large letters, clear and current announcement systems, and hearing aids.

Based on the planning results, the design of the disabled waiting room facility plan is obtained in accordance with the author's guidelines using Autocad and Sketchup with room dimensions of 7.5 meters x 4 meters. To support the manufacture of waiting room facilities at Terminal 1 Juanda Airport Surabaya, the RAB calculation using Microsoft Excel was obtained at Rp. 207. 571. 000 ,00 spelled out two hundred and seven million five hundred and seventy-one thousand rupiah.

Keywords: Waiting Room, Difabel, Facility, Design, Passanger.

INTRODUCTION

Juanda Surabaya Airport (IATA: SUB, ICAO: WARR), is an airport located in Sedati District, Sidoarjo Regency, 20 km south of Surabaya. Juanda Surabaya Airport is operated by PT Angkasa Pura I.

Airports are key gateways for global mobility and are important for all passengers, including those with special needs, such as disabled passengers.

Currently, disabled waiting room facilities are only available at I Gusti Ngurai Rai Airport in Bali and Yogyakarta International Airport. In East Java itself, Surabaya Juanda Airport, which is one of the busiest airports in Indonesia, still does not have this disabled waiting room facility, even though it has been listed in the "SNI of Airport Facilities for Service Users with Special Needs" published by PT Angkasa Pura I, in the sense that Juanda Airport still does not exist and has not fulfilled these facilities for airport service users with special needs.

Aspects that are considered in planning the manufacture of special waiting room facilities for disabilities at Gate 9 are such as, length and width (dimension), the area of the gate used as the location of the waiting room, the distance between the location of the waiting room to the evacuation route (emergency exit), the selection of locations that must be fast for evacuation.

This research aims to design and plan waiting room facilities that meet the needs and provide a better experience for passengers with disabilities at Juanda Airport.

METHOD

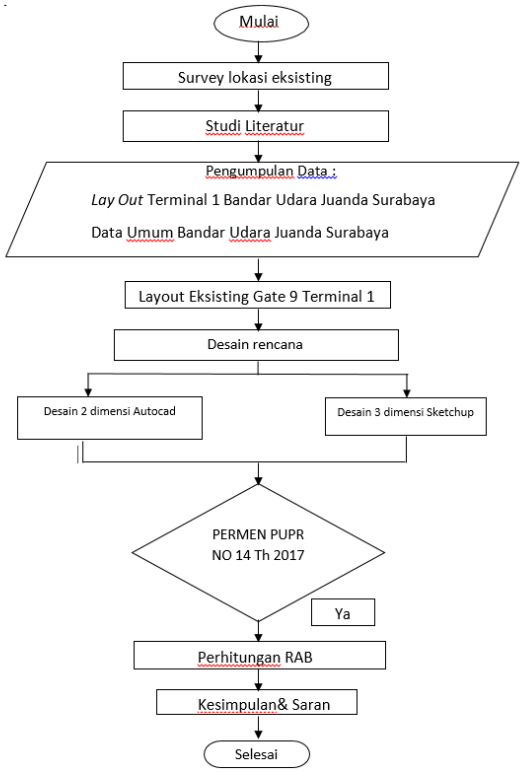

Figure 1 Research Flow Chart

Primary Data

Data collection techniques by taking data from the source where the problem occurs by observing the existing conditions at Juanda Airport Surabaya and recording the absence of a disabled waiting room and interviewing Landside employees of Juanda Airport Surabaya regarding the absence of a disabled waiting room.

Secondary Data

The literature study method used in relation to data collection is to collect data through various sources of articles.

Planning Overview

For the planning of making disabled waiting room facilities at Terminal 1 Juanda Airport Surabaya Gate 9 area will be implemented so that the disabled waiting room can meet the needs of facilities for airport service users with special needs according to existing regulations and effective in its use.

Planning Overview

Based on PM 98/2017 on the concept of facilities for users with special needs, there are four principles, namely:

1. Safety, is a matter that pays attention to safety for all people in the airport including airport service users with special needs.

2. Ease, is a matter where all airport users with special needs can reach all places in the airport without obstacles according to their needs.

3. Usability, is a matter where each of the airport service users with special needs must be able to use all public places in the airport.

4. Independence is the principle that all airport service users with special needs must be able to access and use all airport areas without the assistance of others.

Discussion

Judging from the existing conditions in the field, namely at the location of gate 9 Terminal 1 and is approximately 20 meters from the evacuation route. Designed with a room that has facilities - supporting facilities for users with disabilities. The desired condition of this planning is based on the SNI of PT Angkasa Pura I, namely the availability of this disabled waiting room facility with a size of 7.5 meters x 4 meters in Terminal 1.

Layout Design

For the planning of making disabled waiting room facilities at Terminal 1 Juanda Airport Surabaya Gate 9 area with dimensions of 60 x 15 meters will be carried out in accordance with regulatory standards, so that the disabled waiting room can meet the needs of facilities for airport service users with special needs according to existing regulations and effective in its use. The following is a picture of the existing conditions and a picture of the plan for making disabled waiting room facilities.

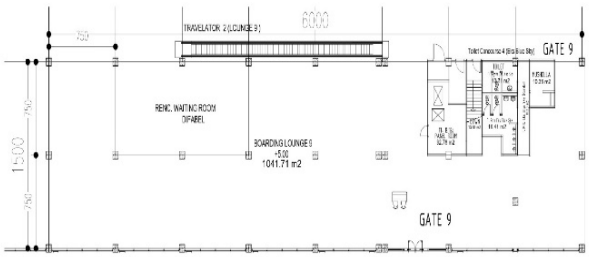

Figure 2 Existing Layout of Gate 9 Terminal 1

Figure 3 Existing Condition Gate 9 Terminal 1

The picture above is Gate 9 which is located on the first floor of Terminal 1 of Juanda Airport Surabaya. The location of Gate 9 was chosen for the reason that it is seen from the existing conditions in the field, namely at the location of gate 9 Terminal 1 and is approximately 20 meters from the evacuation route which is able to facilitate passengers with disabilities in reaching it and its location which is in the middle of the 13 gates available at Juanda Surabaya Airport.

Figure 4 Gate 9 waiting room plan location

The above is the location of Gate 9 which will be planned for the construction of a disabled waiting room facility. Gate 9 has dimensions of 60 meters x 15 meters. In order to support, meet the SNI for the provision of disability facilities PT Angkasa Pura 1 and improve services when serving operational activities of service users in Terminal 1 to keep running by upholding safety, comfort and realizing zero accidents at Juanda Airport Surabaya.

Figure 5 Conditions around the waiting room plan

Conditions around the location that will be made a special waiting room facility for the disabled at Gate 9 Terminal 1 Juanda Airport Surabaya. Seen in the picture above are some supporting facilities in the form of wheelchairs from one of the airlines operating at Juanda Airport. The wheelchair is provided by the airline with the aim of being able to help and facilitate airport service users, especially people with disabilities.

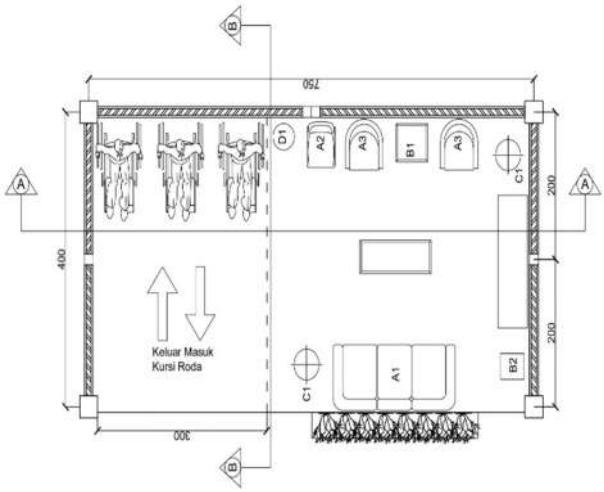

Figure 6 Disabled waiting room floor plan layout

The above is a plan for a disabled waiting room facility that has dimensions of 7.5 meters x 4 meters. This facility is designed to support, fulfill the SNI for the provision of PT Angkasa Pura 1 disability facilities and improve services when serving operational activities of service users in Terminal 1 to keep running by upholding safety, comfort and realizing zero accidents at Juanda Airport Surabaya.

There is a description of the picture as stated in the picture above, namely the following information:

- Structure column size: 30 cm
- Practical column size: 15 cm
- Partition wall size: 15 cm
- Wheelchair width size: 90 cm

In addition to the image description, there is also a description of the furniture used in the design plan above as follows:

- A1 = Triple Seater Sofa
- A2 = Single Seater Chair
- A3 = Lounge Chair Single Seater
- B1 = Coffee Table
- B2 = Water Dispenser
- C1 = Standing Lamp

- D1 = 30 lt trash can

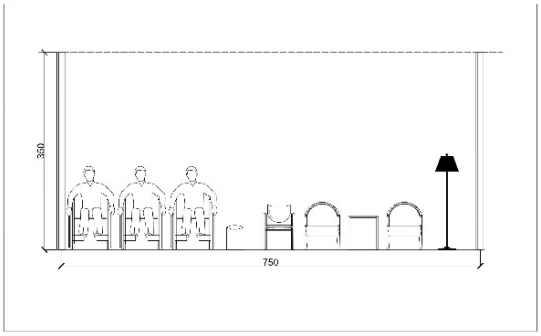

Figure 7 A-A cutout layout of disabled waiting room

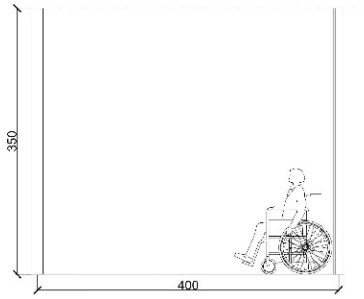

Figure 8 B-B cutout layout of disabled waiting room

Figure 9 3 Dimensional design of disabled waiting room

Calculation of Cost Budget Plan

If the project is implemented without RAB, there will be cost overruns due to procurement of materials against the scope of work, unpaid workers' salaries, procurement of equipment according to specifications and various other impacts.

The RAB for the disabled waiting room at Terminal 1 of Juanda Airport Surabaya refers to the HSPK of East Java Province 2022 and PUPR 2022.

Work Volume

The volume of each job must be known to make it easier to plan the cost budget, following the calculation of the volume of work:

- Area measurement work (m²)

Length	= 7.5 meters
Width	= 4 meters
Volume	= length x width of the building
	= 7.5 x 4 m²

- Steel erection of practical columns

Length	= 4 meters
Weight (kg)	= 4.82 kg/m
Number of columns	= 4 pieces
Volume	= Weight (kg) x Column length x number of columns
	= 4.82 kg/m x 4 m x 4
	= 77.1 kg/m

- Partition wall work (m²)

Volume	= Total wall length x wall height
	= (3.67m + 3.67m + 2m+ 2m) x 4m
	= 11.34 x 4
	= 45.36 m²

- Electrical installation

Cable nym 3 x 2.5 mm	= 2 bh
Power socket	= 4 units
Double switch	= 2 units
Led lamp	= 2 pcs

Work Budget

To carry out these work activities, a budget is needed to carry out the work as attached below:

Table 1 RAB Construction of disabled waiting room facilities

RINCIAN ANGGARAN BIAYA (RAB)				PT. ANGKASA PURA I (PERSERO) BANDAR UDARA JUANDA	
PEKERJAAN : PEMBUATAN WAITING ROOM DIFABEL				RKAP TAHUN 2023	
FASILITAS : RUANG TUNGGU					
LOKASI : GATE 9 TERMINAL 1					
NO	URAIAN PEKERJAAN	VOLUME	Sat	HARGA SATUAN (Rp)	JUMLAH HARGA (Rp)
a	*b*	*c*	*d*	*f*	*a= c x f*
I	**Pembuatan Ruang Tunggu Difabel**				
	Pekerjaan Pengukuran Area	30	m2	Rp 78.159	Rp 2.344.771
	Pemasangan Baja Kolom Praktis	77,1	Kg	Rp 1.316.176	Rp 101.468.408
	Pekerjaan Dinding Partisi	120	m2	Rp 344.090	Rp 41.290.824
	Pengecatan Tembok Baru	120	m2	Rp 43.160	Rp 5.179.179
	Pemasangan Wallpaper Dinding	37,2	m2	Rp 243.735	Rp 9.066.928
	Pemasangan Instalasi Listrik	10	Unit	Rp 325.958	Rp 3.259.582
				JUMLAH	**Rp 162.609.692**
				KEUNTUNGAN JASA 10%	**Rp 24.391.454**
				JUMLAH + KEUNTUNGAN JASA 10%	**Rp 187.001.146**
				PEMBULATAN	**Rp 187.001.000**
				PPN 11%	**Rp 20.570.110**
				JUMLAH TOTAL	**Rp 207.571.000**
TERBILANG : DUA RATUS TUJUH JUTA LIMA RATUS TUJUH PULUH SATU RIBU RUPIAH					

Difference between Existing Condition and Plan

After carrying out the work later, there are some differences between the existing conditions at Gate 9 and the conditions planned for the construction of disabled waiting room facilities as follows:

Table 2 Existing and Planned Conditions

Kondisi Eksisting dan Rencana		
No	Kondisi Eksisting	Kondisi Rencana Diinginkan
1	Belum adanya *waiting room* difabel	Dibuatnya fasilitas *waiting room* difabel
2	Hanya terdapat ruang tunggu Gate 9	Terdapat Gate 9 dan *waiting room* difabel
3	Hanya terdapat Kolom Struktur Beton	Terdapat penambahan kolom praktis baja
4		Penggunaan dinding partisi gypsum pada ruangan
5		Penambahan fasilitas charging untuk difabel
6		Penambahan fasilitas furniture untuk difabel
7		Penambahan kondisi interior *waiting room* difabel
8		Penambahan instalasi listrik *waiting room* difabel

CONCLUSION

Based on the results of the design planning of the disabled waiting room facility and the calculation of the cost budget required at Terminal 1 Bandar Juanda Surabaya as follows:

1. The design is designed with a disabled-friendly room layout by considering easy accessibility, spacious movement areas, supporting facilities for resting spaces, helping service users with disabilities to feel more calm and comfortable and facilitating charging areas for assistive equipment.
2. The budget required for the construction of a disabled waiting room facility at gate 9 of Terminal 1 of Juanda Airport Surabaya amounted to Rp. 207. 571. 000 ,00 fairly two hundred seven million five hundred seventy-one thousand rupiah.

REFERENCES

[1] Aerodrome Manual Bandar Udara Juanda Surabaya

[2] Aeronautical Information Publication (AIP) Bandar Udara Juanda Surabaya.

[3] Direktorat Jendral Perhubungan Udara. (2019). Bandar Udara Juanda Surabaya Diakses pada 25 Januari 2023, dari http://hubud.dephub.go.id/website/BandaraDetail.php?id=214

[4] PT. Angkasa Pura 1. (2020). Panduan Desain Fasilitas Bandar Udara Untuk Pengguna Jasa Berkebutuhan Khusus.

[5] Dinas PUPR. (2022). Pedoman Bahan Konstruksi bangunan dan Rekayasa Sipil Analisa Harga Satuan Pekerjaan (AHSP) Bidang Pekerjaan Umum.

[6] Permen PUPR Nomor 14 Tahun 2017 tentang Persyaratan Kemudahan Bangunan Gedung

[7] Peraturan Direktur Jenderal Perhubungan Udara Nomor 326 Tahun 2019 tentang Standar Teknis dan Operasional Peraturan Keselamatan Penerbangan Sipil -Bagian 139 (Manual of Standard CASR – Part 139) Volume I Bandar Udara (Aerodrome)

[8] PM Perhubungan No.98. (2017) Penyediaan Aksesbilitas Pada Pelayanan Jasa Transportasi Publik Bagi Pengguna Berkebutuhan Khusus

[9] Wibowo, T. (2019). Evaluasi Penerapan PM 178 Tahun 2015 Sebagai Standar Pelayanan Jasa Penumpang Bandar Udara (Studi Kasus Di Bandar Udara Abdulrachman Saleh Malang) (Doctoral dissertation, Universitas Gadjah Mada).

[10] Karunia Utami, A. r. i. n. y. (2021). Optimalisasi Standar Pelayanan Fasilitas pengguna Jasa di Terminal Bandar Udara Tjilik Riwut Palangka Raya (Doctoral dissertation, Sekolah Tinggi Teknologi Kedirgantaraan Yogyakarta)

[11] De Neufville, R., Budd, L., & Ison, S. (2016). Perencanaan dan desain sistem bandara. Manajemen transportasi udara: Perspektif internasional, 61.

[12] Raguraman, K. (1999). Menerbangkan pesawat: Konsep dan masalah utama dalam perencanaan dan manajemen kapasitas bandara.

[13] Rizwan, K. F. Analisis empiris kesulitan yang dihadapi oleh penumpang di area tunggu Terminal Bandar Udara Internasional Chennai.

[14] Sugi Rahayu, U. D., & Ahdiyana, M. (2013). Pelayanan publik bidang transportasi bagi

difabel di Daerah Istimewa Yogyakarta. SOCIA: Jurnal Ilmu-Ilmu Sosial, 10(2).

[15] Yuda, Y. P., Putra, I. D. G., & Susanti, A. (2019). Transformasi Konsep Ruang Tunggu Dalam Proses Redesain Terminal Batubulan. Jurnal Patra, 1(2), 109-115.

[16] Rismiyanti, L., & Nurhasan, N. (2020). Identifikasi Ketersediaan Ruang Publik pada Stasiun Purwosari terhadap Kenyamanan Pengunjung. Prosiding (SIAR) Seminar Ilmiah Arsitektur 2020.

[17] Anderson, P., & Kitchin, R. (2000). Disability, space and sexuality: access to family planning services. Social science & medicine, 51(8), 1163-1173.

[18] Duman, Ü., & Uzunoğlu, K. (2021). The importance of universal design for the disabled in public buildings: a public building in northern Cyprus as a case study. Civ. Eng. Archit, 9, 690-707.

[19] Vilcape, L., & Elizabeth, S. T. (2023). Architectural criteria that influence and contribute to the educational training and rehabilitation of children and young people with disabilities in cebes and surroundings of the city of arequipa. Remittances Review, 8(4).