Evaluation of Denpasar Type C Terminal Facilities to Improve Quality and Efficiency

I Wayan Yudi Martha Wiguna[a,1*], Muhamad Siraj Arkhandaffa Hidoyo[a,2], Rahmat Ahmad[b,1], Arif Devi Dwipayana[b,2]

[a]Land Transportation Management Study Program, Bali Land Transportation Polytechnic, 82161 Tabanan, Bali, Indonesia
[b]Automotive Technology Study Program, Bali Land Transportation Polytechnic, 82161 Tabanan, Bali, Indonesia
[1*] wayan.yudi@poltradabali.ac.id

[*]corresponding e-mail

ABSTRACT

In 2016, Ubung Denpasar Terminal transitioned from Type A to Type C, as determined by the Mayor of Denpasar through Decree Number 188.45/1060/HK/2016. Located on Jalan Cokroaminoto, Ubung Village, North Denpasar District, Denpasar City, this terminal serves as a vital transportation hub. However, due to infrastructure problems and damage, all Inter-Provincial Buses ceased operations at Ubung Terminal. Consequently, the terminal now exclusively serves mini/micro buses within the province and Trans Metro Dewata in Bali Province. To address the terminal's needs, comprehensive research was initiated to evaluate facility shortages through inventory analysis. Using a qualitative descriptive analysis methodology, the research aims to identify improvement areas, aligning with the technical guidelines in the Decree of the Directorate General of Land Transportation Number 271/HK.105/DRJD/96 concerning technical specifications for public passenger vehicle stops. The expected outcomes are to enhance the functionality, safety, and comfort of Ubung Terminal, thereby increasing the efficiency and effectiveness of public transportation services in Denpasar

Keywords *:* transportation; public transport; passenger terminal; facilities

A. Introduction

Bali, which is known as a favorite destination for tourists both from within the country and abroad, has built an extensive transportation network (BPS, 2023; Wacika, 2021). This network improvement not only makes a positive contribution to regional economic progress, but is also a government priority, especially in the field of land transportation (Demir et al., 2019; Suradnya, 2017). Terminals function as important intersections that connect various modes of transportation, facilitate transfers between modes, manage vehicles and passengers, and serve as starting and ending points for trips.

Article 33 of Law Number 22 of 2009 regulates the establishment and operation of terminals in certain areas, with the aim of facilitating the movement of people and goods and harmonizing various modes of transportation. The terminal, which is important as a link for various public transportation, is designed to regulate the flow of passengers and cargo, providing efficient facilities for intermodal transfers (Hidayat et al., 2022). In addition, terminals play an important role in monitoring public vehicle traffic and maintaining road order. Apart from its main function, the Ubung Terminal also acts as a means of supporting increasing regional income, this is in line with the Minister of

Transportation Regulation Number 40 of 2015 which sets standards for Passenger Transport Terminal Management Services.

Ubung Terminal stands as one of the terminal stations located in Denpasar City (Hidayat et al., 2022). Even though it is located on the outskirts, Ubung Terminal has a strategic and profitable position. Initially it was classified as a Type A terminal, then its status was revised to Type C in 2016, in accordance with Denpasar Mayor Decree Number 188.45/1060/2016. Functioning as a Type C terminal, Ubung Terminal serves urban (Angkot) and rural (Andes) transportation. Trans Metro Dewata (TMD) transport vehicles and AKDP and AKAP buses connecting urban and rural areas are not allowed to operate at Ubung Terminal, instead being diverted to Mengwi Terminal. The presence of this terminal is a benchmark for the performance of public transport services in the vicinity, and is closely related to local community activities (Raharjo et al., 2022). Therefore, consideration of the aesthetic appeal and transportation connectivity within the terminal requires serious attention (Carlsson & Zoymbos, 2023).

Transport mode integration includes the coordination or combination of existing public transport routes, which is an important element to ensure a smooth transition between transport modes for society (Akhtar & Khan, 2015; Kumar et al., 2019). This integration facilitates public access to transportation and travel activities so that it requires supporting infrastructure. Currently, several locations within the city have been designated as transportation integration centers. In particular, Trans Metro Dewata (TMD), Intra-Provincial Feeder Public Transport (AKDP), and Ubung Type C Terminal facilitate connections between various points within and between cities.

The results of research conducted by Dhana et al (2022) showed that changing the type of Ubung terminal caused internal and external impacts. The internal impact written down is a decrease in the number of passengers, a decrease in terminal revenue. Incompatibility of terminal facilities, a decrease in the number of transportation at the terminal, and a decrease in the number of traders at the Ubung terminal. Meanwhile, external factors include misuse of sidewalks, careless parking, messy passenger mobility, and a decline in the economic activities of local residents.

In research by Pradnyana & Wirahadi (2018) it was found that the current level of service for the operation of the Ubung terminal does not comply with the Service Standards for the Operation of Road Transport Terminals according to Minister of Transportation Regulation Number 40 of 2015, and the factors causing the decline in the status of the Ubung terminal are the lack of land for the terminal. Ubung is supposed to follow the type A terminal standard, namely 4.7 ha, while the Ubung terminal only has an area of 1.6 ha. And facilities to support activities are still lacking. because the location of the Ubung terminal was previously a strategic location, in the middle of Denpasar city center. Based on the data obtained, to upgrade to type A again, the location must be moved to obtain a suitable land area. The results of the two studies mentioned by the researcher intend to examine the extent of evaluation of the Ubung type C terminal facilities in Denpansar city to improve service quality and efficiency.

B. Methods

In the process of scientific investigation, a number of useful information is needed to complete the analysis and discussion of the topic being researched. The type of data used in this research is qualitative descriptive analysis data. Qualitative data is data that produces descriptive data in the form of written or spoken words from objects or people being observed (Moleong, 2021). The information obtained is divided into two main categories, namely secondary data and primary data. This data comes directly from the Ubung Terminal Authority and Trans Metro Dewata. The types of data required for research purposes are:

a. Main data

Primary data refers to information obtained through surveys designed to meet the specific needs of ongoing analysis. This serves to complement the secondary data collected previously. For this research, important primary data includes the results of an asset inventory carried out at the Ubung Terminal and a survey that focuses on the operational dynamics and statics of various transportation capitals at the Terminal, such as Trans Metro Dewata, Angkot, Andes, AKDP, and AKAP buses, although only transit via Ubung Terminal.

In addition, a compilation of location points that are important to comply with Department of Transportation regulations regarding Type C terminals and a map depicting the revised Trans Metro Dewata route network are important basic data. The inventory process at Ubung Terminal uses surveys to systematically document the location, type, size and condition of each bus stop (Wiguna et al., 2023). Several methodological steps are involved in preparing this inventory study.

b. Secondary data

Access to data from related organizations, such as Terminal Ubung, facilitates secondary data collection. This dataset includes information about various types of buses operating in the Ubung city area. Where primary data is not available, additional data will be sought to ensure comprehensive coverage. This approach ensures that data requirements are met effectively.

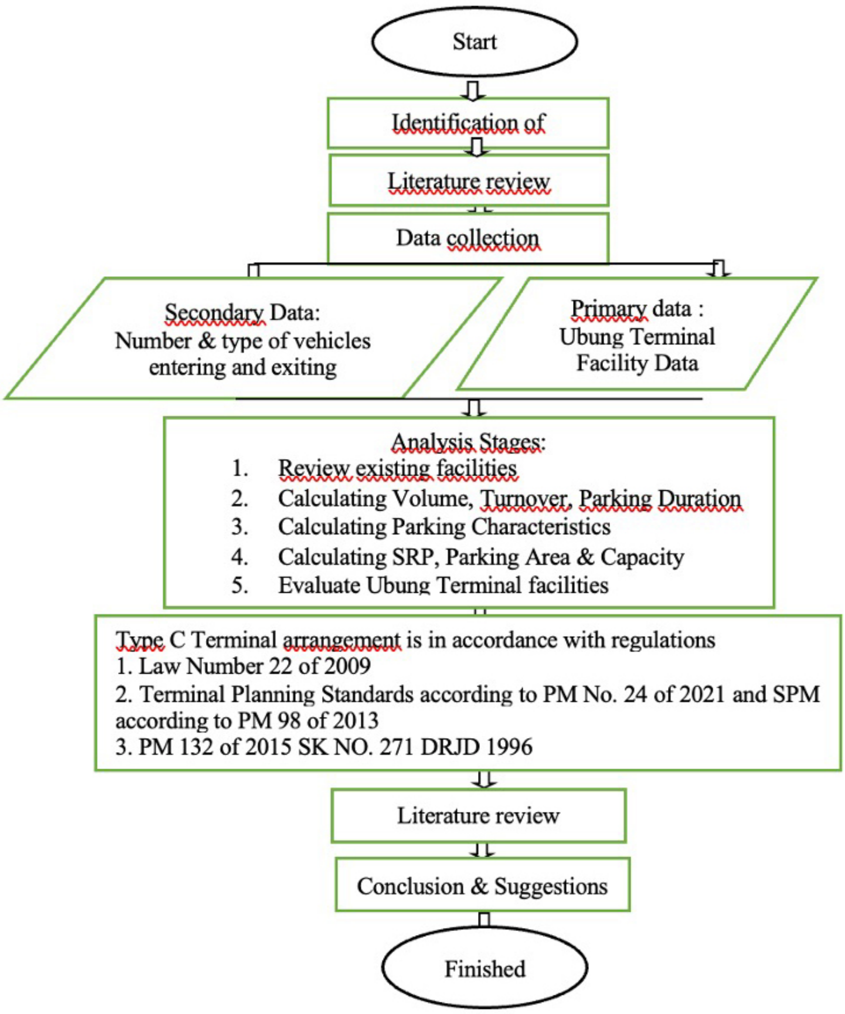

Figure 1 Research Flow Chart

E ISSN 2442-3149 | P ISSN 2355-472X
https://journal.itltrisakti.ac.id/index.php/jmtranslog

Table 1 Parking Volume

Big	Volume (Vehicle/Day)
Denpasar – Buleleng	7
Denpasar – Gilimanuk	10
KB 1 (Kuta Badung Parking Lot – Tabanan Preparation Terminal)	12
KB 2 (GOR Ngurah Rai – Ngurah Rai Airport)	18
KB 3 (Ubung Terminal – Matahari Terbit Beach)	12
KB 4 (Ubung Terminal – Monkey Forest)	14
KB 5 (Kuta Parking Center – Ubung Terminal)	12
Denpasar – Yogyakarta	2
Denpasar – Surabaya	2
Denpasar – Jakarta	2

c. Results and Discussion

The assessment of terminal area needs refers to the directions contained in Minister of Transportation Regulation Number 132 of 2015. These procedures include carrying out a comparative evaluation of the Ubung Terminal area against the benchmarks set out in this regulation (Ministry of Transportation of the Republic of Indonesia, 2015). Surveys are conducted to collect data regarding parking capacity, and calculations are carried out in each parking zone by counting the number of parked vehicles during a certain time period, usually from 05:00am to 05:00pm. Parking capacity shows the total number of vehicles utilizing parking facilities in a certain time interval, usually in one day.

Volume = Qin + Qs
Qin : Number of incoming vehicles (Vehicles)
Question : Vehicles that existed before the time of the survey (Vehicles)

Based on the survey findings, the volume data (Place/Day) provided above represents the accumulated average hourly volume for each department from 5:00 AM to 5:00 PM. The research results show that the KB 2 section has the highest parking volume because the number of operational routes is greater than other large routes.

Parking turnover is determined by dividing the volume of parked vehicles by the number of parking spaces available. The calculation results show that the KB 2 direction has the highest turnover rate. As can be seen in Table 1, in a 12 hour duration (05:00am - 05:00pm), around 9–10 buses use each parking space. Parking turnover reflects the level of utilization of parking spaces and is calculated by dividing the parking volume by the number of parking spaces in a certain time period (Rifai & Hafis, 2021). The table data above also shows that the parking volume for the Ubung terminal with two different destinations is not too low compared to the other eight terminals. This means that the Ubung terminal parking facilities can be said to be quite adequate.

Pp = Vp : Rp
Pp = parking turnover (bus/day/SRP)
Vp = parking volume (bus/day)
Rp = parking space (SRP)

Headway or intermediary time is the time between two means of transportation to pass a bus stop point/place. The smaller the intervention time, the higher the infrastructure capacity. The resulting data shows that the parking turnover for the Ubung terminal is in the middle between the other eight terminals, meaning that the Ubung terminal requires higher infrastructure capacity than the other four terminals. Meanwhile, KB 2 terminal requires higher infrastructure than KB 4.

Calculating parking area requires data

Table 2 Parking Turnovers

Big	**Volume (Vehicles / Day)**	**Static Capacity (Parking Space)**	**Parking Turnover**
	A	**B**	**A : B**
Denpasar – Buleleng	7	2	3.5
Denpasar – Gilimanuk	10	2	5
KB 1 (Kuta Badung Parking Lot – Tabanan Preparation Terminal)	12	2	6
KB 2 (GOR Ngurah Rai – Ngurah Rai Airport)	18	2	9
KB 3 (Ubung Terminal – Matahari Terbit Beach)	12	2	6
KB 4 (Ubung Terminal – Monkey Forest)	14	2	7
KB 5 (Kuta Parking Center – Ubung Terminal)	12	2	6
Denpasar - Yogyakarta	2	1	2
Denpasar - Surabaya	2	1	2
Denpasar-Jakarta	2	1	2

on average parking duration and average arrival headway. According to the manager, the average parking duration is ± 5 minutes in the Trans Metro Dewata Corridor (TMD).

Parking accumulation is the number of people who park in a place at a certain time and is divided according to the category of travel destination type, with the equation

Accumulation = X + Ei – Example
Hey :Entry/number of vehicles entering the parking location
Ex :Exit/vehicle leaves the parking location
X : number of vehicles previously available

Parking Space Unit (SRP) is an effective area for placing vehicles (passenger cars, buses/trucks, or motorbikes), including free space and the width of door openings used in certain cases. (KD No.272/HK.105/DRJD/96)

Trans Metro Dewata Buses, AKDP Buses, City/Village Transport can be classified into the medium category so that the SRP obtained has a Minimum Width (Bp) of 3.20 m. and Minimum Length 8.40 m. So we get 26.88 m² with rounding to 27 m². so SRP = 27 m².

The area requirement required is the sum of the Maximum Area in Each Department obtained from the SRP used by the bus filled in by the previous bus.

Based on Table 4, the optimal Terminal Parking Area to accommodate the maximum number of vehicles currently required is 351 m².

Terminal Facility Planning

The terminal functions as a hub for vehicles to arrive, depart, board, disembark passengers and/or goods, as well as facilitating changes in transportation modes (Sedayu, 2019; Sofwan, 2017).

Minimum Service Standards (SPM) is a public policy that regulates the type and quality of basic services which are mandated as regional affairs and are the basic rights of every citizen (Ministry of Transportation of the Republic of Indonesia, 2013). The SPM includes Main Facilities, Supporting Facilities and General Facilities.

The types of facilities which are the main facilities of the Ubung Type C Terminal are obtained through PERMENHUB No. 132 of 2021 Article 21. Data on the condition of Main Facilities is data obtained from field surveys. The data obtained shows that there are 15 main facilities that should be available

Table 3 Departure and Arrival Headways

Big	Progress
Denpasar – Buleleng	-
Denpasar – Gilimanuk	-
KB 1 (Kuta Badung Parking Lot – Tabanan Preparation Terminal)	0.12
KB 2 (GOR Ngurah Rai – Ngurah Rai Airport)	0.12
KB 3 (Ubung Terminal – Matahari Terbit Beach)	0.12
KB 4 (Ubung Terminal – Monkey Forest)	0.12
KB 5 (Kuta Parking Center – Ubung Terminal)	0.12
Denpasar - Yogyakarta	-
Denpasar - Surabaya	-
Denpasar-Jakarta	-

in a terminal, but the Ubung terminal only has seven main facilities available in good condition. Meanwhile, eight other main facilities are not available at the Ubung terminal, so it is necessary to fulfill the main facilities at the Ubung terminal.

The type of facility which is the main facility of the Ubung Type C Terminal is obtained through Permenhub No. 132 of 2021 Article 22 paragraph 3. Data on the condition of Main Facilities is data obtained from field surveys and existing conditions at the Ubung Terminal. Table 6 shows that of the 13 public facilities required by a terminal, the Ubung terminal only has six public facilities available with the condition of the facilities being five of them good, one poor and one adequate. seven other public facilities are not available at Ubung terminal.

The type of facility which is the main facility of the Ubung Type C Terminal is obtained through Permenhub No. 132 of 2021 Article 22 paragraph 2. Data on the condition of Main Facilities is data obtained from field surveys. Passenger Transportation Facilities are a combination of the facilities found in the open waiting room in one of the Terminal buildings so they are not separate facilities

Table 4 Recapitulation of the total area currently required

Time	Maximum Area of Each Department (SRP X Accustar)										Total (sq.m) / m^2
	1	2	3	4	5	6	7	8	9	10	
05.00 – 06.00	27	27	27	27	27	27	27	0	0	0	189
06.00 – 07.00	27	27	27	54	54	54	54	0	0	0	297
07.00 – 08.00	27	27	27	27	27	27	54	27	27	27	297
08.00 – 10.00	27	27	27	54	27	27	27	27	27	0	270
09.00 – 10.00	27	54	27	27	27	27	27	27	27	27	297
10.00 – 11.00	27	27	27	27	27	54	54	27	27	0	297
11.00 – 12.00	54	54	27	54	27	81	27	27	0	0	351
12.00 – 13.00	27	27	27	81	27	54	27	0	27	27	324
13.00 – 14.00	27	27	27	27	27	27	27	27	27	0	243
14.00 – 15.00	27	27	27	27	27	27	27	0	27	27	243
15.00 – 16.00	27	27	27	54	27	27	27	0	54	0	324
16.00 – 17.00	27	27	27	27	27	81	27	27	27	27	324

Table 5 Main Facilities of Ubung Terminal

	Availability	**Condition**	**Utilization**
Vehicle Departure Route	There is	Good	In accordance with the
Vehicle Arrival Path	There is	Good	In accordance with the
Passenger Waiting Room	There is	Good	In accordance with the
Vehicle Parking Area	There is	Good	In accordance with the
Public Vehicle Parking	There is	Good	In accordance with the
Terminal Office Building	There is	Good	In accordance with the
Information Media	There is	Good	In accordance with the
Road Equipment	There is	Good	In accordance with the
Vehicle crew rest facilities	There is	Good	In accordance with the
Technology Facilities	There isn't any		
Ticket Purchase Room	There isn't any		
information Center	There isn't any		
Name plate	There isn't any		
Luggage storage space	There isn't any		
Emergency gathering place	There isn't any		
Bulletin board	There isn't any		
Evacuation Route	There isn't any		

(Ministry of Transportation of the Republic of Indonesia, 2021). Table 7 shows the supporting facilities at the Ubung terminal. Of the 12 supporting facilities, the Ubung terminal only has five facilities, three of which are in good condition, one of which is adequate and one of which is poor. Meanwhile, the other seven Ubung terminals do not have these supporting facilities.

Facility requirements are differentiated between Type A, Type B and terminals Type C (Kesia et al., 2020; Farida et al.), No This

Table 6 Ubung Terminal Public Facilities

	Availability	**Condition**	**Utilization**
Toilet/Bathroom	There is	Bad	In accordance with the
Parking and Ride Facilities	There is	Good	
Vehicle Crew Rest Facilities	There is	Good	In accordance with the
Worship Facilities	There is	Good	In accordance with the
Cleaning, Maintenance and Hygiene Facilities	There is	Enough	In accordance with the
Goods Delivery Facilities (trolley)	There is	Good	In accordance with the
Public vehicle light repair facilities	There isn't any		
ATM facilities	There isn't any		
Lodging facilities	There isn't any		
Smoking area	There isn't any		
Automated Teller Machine Facilities	There isn't any		
Telecommunication Facilities	There isn't any		
Service Complaints Media	There isn't any		

E ISSN 2442-3149 | P ISSN 2355-472X
https://journal.itltrisakti.ac.id/index.php/jmtranslog

Table. 7 Ubung Terminal Supporting Facilities

	Availability	Condition	Utilization
Kiosk/Canteen	There is	Good	In accordance with the
Information and Complaints Room	There is	Bad	In accordance with the
Cleaning Facilities and Cleaning Staff	There is	Good	In accordance with the
Trading Facilities/Canteen	There is	Good	In accordance with the
Passenger Transit Facilities	There is	Enough	In accordance with the
Facilities for Persons with Disabilities/ Disabilities	There isn't any		
Fire extinguisher	There isn't any		
Payphone	There isn't any		
Fire extinguisher	There isn't any		
Deposit box	There isn't any		
Park	There isn't any		
Medical facility	There isn't any		

is divided into PP 43 of 1993 and Ubung Terminal is included in the Type C Terminal category and there are special calculations for the needs of canteens and prayer rooms which refer to other facilities.

D. Conclusion

This research leads to the conclusion that conducting a series of terminal inventory surveys is necessary to gather information about the current condition of the facility before planning a requirement. The need for type C Ubung Terminal facilities, with a total area of 6,264 m², is then in line with PM Number 24 of 2021. The current area of the Ubung Terminal is 7,890 square meters.

Increasing the operational efficiency of the Ubung Terminal requires the construction of a number of facilities that are still not in accordance with PM 40 of 2015, restructuring the flow of several facilities that should be

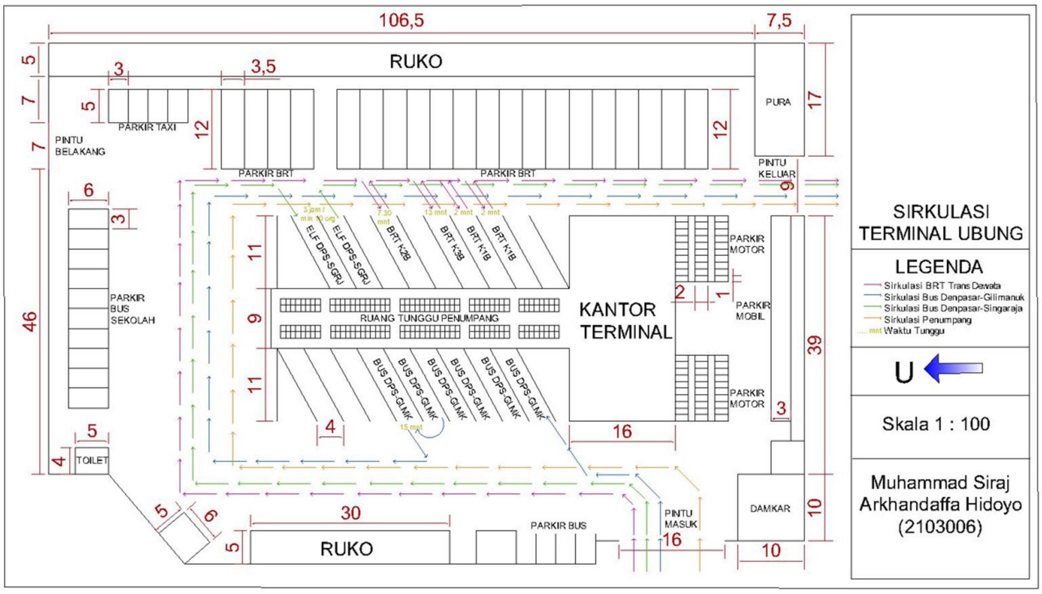

Figure 2 Proposed Layout of Type C Ubung Terminal

Table 8 Results of Recapitulation of Type C Terminal Facility Needs

A. Vehicle	**Criteria**	**Need**	**The actual field**	**Unit**
Parking lotAKDP, AK ADES		900	1048	m^2
Public Transport Parking Lot	In accordance with Keb.	350		
Private Vehicle Parking		200	130	
Vehicle Circulation		1100	2300	m^2
Reserved Parking Space		550	572	m^2
B. User Services		**Type C**	**The actual field**	**Unit**
The waiting room		480	210	m^2
Canteen	60% X Area R. Wait	140	90	m^2
Bathroom			30	
Restroom		30		
				m^2
Prayer room	Number of Lanes 11-15	52.5	9.9	m^2
C. Operational		**Type C**	**The actual field**	**Unit**
Office building	Branch Terminal	36	83	m^2
security post		16	19	m^2
Administration room		39		
Surveillance Room		16	19.8	
Information Room		10	1.3	m^2
D. Room Outside		**Type C**	**The actual field**	**Unit**
Total Area		6264	7,890	m^2
Land requirements		12,528	19,501	m^2

available there but still have minimal access, including private vehicle parking. , security posts, and other access points such as rooms, bathrooms/toilets, and TPA (garbage disposal site). Apart from that, because AKAP buses are placed primarily to transport regular passengers and do not take long to park, the current circulation condition of Ubung Terminal is a conflict between AKAP buses and cars entering the terminal. The Ubung Type C Terminal meets all land criteria and other requirements. Requires only minor repairs that are directly related to maintenance and repair of facility equipment.

There are several recommendations that can be given, one of which is that in order for the Type C Terminal to meet Quality Assessment Standards, it is very important to include facilities that are currently inaccessible. To enable more thorough research into the construction of the Ubung Type C Terminal, arrival and departure data and a more comprehensive location plan must be collected. This needs to be done because private cars and public transportation have circulation problems. The situation of the Ubung Terminal, which is filled with homeless people all day long, means that strict regulations are also needed to provide a favorable environment for travelers and terminal users.

E ISSN 2442-3149 | P ISSN 2355-472X
https://journal.itltrisakti.ac.id/index.php/jmtranslog

E. References

Akhtar, P., & Khan, Z. (2015). Keterkaitan antara pendekatan kepemimpinan dan efektivitas koordinasi. *Jurnal Makanan Inggris, 117(1),* 443–460. https://doi.org/10.1108/BFJ-12-2013-0357

BPS, BPSPB (2023). *Perkembangan Pariwisata Provinsi Bali Tahun 2023*. Pada Badan Pusat Statistik Provinsi Bali (Edisi 30).

Carlsson, J., & Zoymbos, G. (2023). *Analysis of the operational efficiency and capacity of Mölndals Bro bus terminal*. Thesis. https://odr.chalmers.se/items/db21595b-4fd4-4727-a32c-b5ceb68d22c2

Demir, E., et al. (2019). Green intermodal freight transport: bi-objective modeling and analysis. *International Journal of Production Research*. https://doi.org/10.1080/00207543.2019.1620363

Dhana, I. K. W. W., et al. (2022). Optimalisasi Pelayanan Terminal Penumpang C "Studi Kasus: Perubahan Status Terminal Ubung Denpasar dari Tipe A Menjadi Tipe C". *Jurnal Pranatacara Bhumandala, 1(3). https://id.scribd.com/document/698950531/Studi-Kasus-Perubahan-Status-Terminal-Ubung*

Farida, I., et al. (2022). Evaluasi Penataan Terminal Angkutan Darat Pameungpeuk Kabupaten Garut. *Akselerasi: Jurnal Ilmiah Teknik Sipil.*

Hidayat, D. W., et al. (2022). Evaluasi Kinerja Dan Jumlah Armada Angkutan Umum Pada Terminal Ubung Denpasar Utara Studi Kasus Trayek Terminal Ubung-Matahari Terbit. *Jurnal Keselamatan Jalan Indonesia, 9(2),* 131–141. https://doi.org/10.46447/ktj.v9i2.447

Kementerian Perhubungan Republik Indonesia. (2013). *Peraturan Menteri Perhubungan Republik Indonesia Nomor 98 Tahun 2013*. Diakses tanggal 7 Mei 2024, dari https://jdih.dephub.go.id/api/media?data=4M8wNUm2B3U30B-NTi6urZg8QenGvrg7SW4kqVq-DugGev4PVqDPkEuJe4DtRY-85iQvD4Uv3grNGqbT8m0kGOck7kp4eUITUXzcn-J4aF4D8DvYpwDPpjDCjolkVDn7p-c5WElaWGp50wOwiAti9a4P8aub-ZARGoNE7PKlZPU1JK1AMsZ7iZ-2TZeOBfdufl8Q1u459CsmGEgKtl91zk-TIKJjuY2Mrapr

Kementerian Perhubungan Republik Indonesia. (2015). *Permenhub Nomor 132 Tahun 2015*. Diakses tanggal 7 Mei 2024, dari https://jdih.dephub.go.id/peraturan/detail?data=7JsIJEn-qjgzAoH45dIDe0G4DtSAcMKAp-m8lzEqVJ9bZY4OcRYkjE62k4ed-JijoqsHB4OTQ0XQJHfM8LWMA1GFYeH4fZJX3TlvuD8QqN-MqljJBsKFP42d8FBkf6VNaAiJjkU-45Vlua1oPpuF68m5vN2lcoJ

Kementerian Perhubungan Republik Indonesia. (2021). *Permenhub Nomor 132 Tahun 2021*. Diakses pada 7 Mei 2024, dari https://jdih.kemenhub.go.id/api/media?data=7YtcMhy2rqn-4v63f4a8G9x8W8sf5PVl1q4TsoPd-QN20M8ghmvmARVaf4eWs1QK-BROH4kt7wONVKAj4OTNCXFxcgf8MMyWs5juXl4KEQTVcsTWY-9wkOREqpCsM435PrzmT9i88FVQ-8jBFv6mDMiYnjtc2Uj4dUMg7v6SCl-HQT0pbaKf4DDIMDwY7X0tY71E2h-Vlunmo25elDIP5xWm0i0t8Bv089h

Kementerian Perhubungan Republik Indonesia. (2009). *UU Nomor 22 Tahun 2009*. Diakses tanggal 7 Mei 2024 dari https://peraturan.bpk.go.id/Details/38654/uu-no-22-tahun-2009

Wiguna, I. W. Y. M., et al. (2023) Evaluasi Penataan Fasilitas Terminal Tipe C Untuk Meningkatkan Efisiensi Operasional (Studi Kasus Terminal Tipe C Semanggi). *Jurnal Keselamatan Transportasi Jalan (Jurnal Keselamatan Jalan Indonesia, 2(10),* 200–2338. https://doi.org/10.46447/ktj.v10i2.560

Kesia, P., et al. (2020). Terminal Tipe C di Tahuna Arsitektur Neo Vernakular. *Jurnal Arsitektur Daseng, 9.*

Kumar, A., et al. (2019). Modeling and analysis of sustainable freight transportation. *International Journal of Production Research, 19(57)* https://doi.org/10.1080/00207543.2019.1642689

Morlok, E. K., & Chang, D. J. (2004). Measuring the capacity flexibility of a transportation system. *Transportation Research Part A: Policy and Practice*. https://doi.org/10.1016/j.tra.2004.03.001

Pradnyana., & Wirahadi, G. (2018). *Evaluasi Kinerja Terminal Ubung*. Skripsi. *https://e-journal.uajy.ac.id/18050/*

Raharjo, E. P., et al. (2022). Sosialisasi Penggunaan Angkutan Umum di SMA Negeri 1 Kediri Tabanan Bali. *Jurnal Pengabdian Kepada Masyarakat Semangat Nyata Untuk Mengabdi (JKPM Senyum), 2(2)*, 31–36. https://doi.org/10.52920/jkpmsenyum.v2i2.68

Rifai, A. I., & Hafis, K. (2021). *Analisis Kinerja Jalan Dan Karakteristik Parkir Kendaraan Di Kawasan Bandara Internasional Halim Perdanakusuma*. 3(1). http://proceedings.worldconference.id.

Sedayu, A. (2019). Pendekatan QFD Menggunakan Respon Teknis Untuk Peningkatan Pelayanan Terminal : Studi Kasus Terminal Tlogomas Kota Malang. *Jurnal Penelitian Transportasi Darat, 20(2)*, 65. https://doi.org/10.25104/jptd.v20i2.631

Sofwan, M. (2017). *Kajian Evaluasi Fungsi Terminal Penumpang Bandar Raya Payung Sekaki Kota Pekanbaru*. Skripsi (hlm. 1–50). https://digilib.itb.ac.id/index.php/gdl/view/23341

Suradnya, I. M. (2017). Analisis Faktor-Faktor Daya Tarik Wisata Bali Dan Implikasinya Terhadap Perencanaan Pariwisata Daerah Bali. *Jurnal Pariwisata STIP*, 1, 1–13.

Wacika, P. L. (2021). Strategi Komunikasi Krisis Dinas Pariwisata Provinsi Bali dalam Menghadapi Virus Korona. JCommsci - *Jurnal Ilmu Media dan Komunikasi*. https://doi.org/10.29303/jcommsci.v4i1.99

E ISSN 2442-3149 | P ISSN 2355-472X
https://journal.itltrisakti.ac.id/index.php/jmtranslog