Accessibility Level of Batik Solo Trans to Tourism in Surakarta City

Rizky Arif Nugroho[1]

[1]Student : Department of Architecture
Institut Teknologi Sepuluh Nopember
Surabaya, Indonesia

Eko Budi Santoso[2], Cahyono Susetyo[3]

[2,3]Supervisor : Department of Architecture
Institut Teknologi Sepuluh Nopember
Surabaya, Indonesia

Abstract—Tourism has a close relationship with transportation. Transportation sector provides access to destination. Transportation main function of transportation is accessibility[1]. Therefore, transportation should reach tourism areas with ease. This research purposes to measure accessibility level of Batik Solo Trans to tourism in Surakarta City. Method used in this research are identify leading tourist destinations, analysis using ArcMAP software by ESRI, and identify congestion area in Surakarta City. We measure the area served by Batik Solo Trans using 500 meters wide area buffer analysis from Batik Solo Trans route to tourism area in Surakarta City and identify congestion area in Surakarta City using field survey data from relevant agency. Then, we could determine the level of Batik Solo Trans accessibility to tourism in Surakarta City. Finding founds that the accessibility level of Batik Solo Trans to tourism in Surakarta City is quite high with exception in certain tourism areas which cannot reached with ease.

Keywords— Accessibility, Buffer, Arcgis, Tourism, Transportation

I. INTRODUCTION

The development of the tourism sector in Surakarta does not have good integration between the tourism sector and the transportation sector. As a result, the tourism potential of Surakarta City cannot be developed maximally due to the obstacles in the transportation sector. According to the Tourism Promotion Agency of Surakarta, congestion can hamper the rate of tourism activity in the city of Surakarta.

Congestion inhibits the development of tourism potential in the city of Surakarta[2]. Traffic conditions around Pasar Gede are crowded and the lack of parking space causes congestion. The congestion will hamper travelers' journey so they will not feel comfortable when traveling. In addition, the location of Pasar Gede located on the path of public transportation is one of the factors that can support Pasar Gede as tourism object because of its accessibility[2]. One effort to reduce congestion is by utilizing the public transportation sector.

Surakarta itself has a program to overcome congestions, one of them is through the use of Batik Solo Trans as a public transportation mode for the community. Therefore the effort that can be done to maximize the tourism potential in Surakarta City is through improving the performance of the public transportation sector, especially Batik Solo Trans. Through the support of Batik Solo Trans to the tourism sector then the potential of tourism in the city of Surakarta can grow to the maximum.
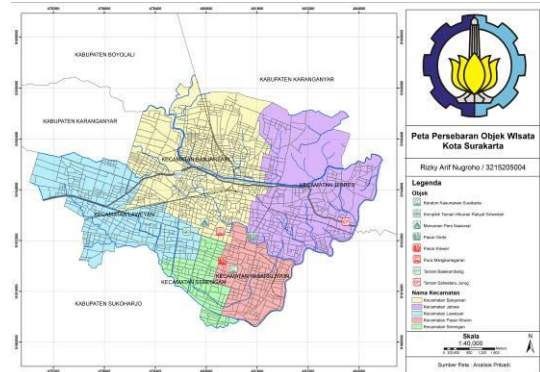

Fig. 1. Surakarta City Map

II. METHODOLOGY

Analysis of accessibility is done with the aim to determine the level of accessibility of tourists to Solo Trans Batik, especially bus stops and the accessibility of Trans Solo Battery stop to tourist attractions and accommodation. Therefore, the first thing to be analyzed is the identification of leading tourist destinations in Surakarta City in accordance with the opinion of tourists in Surakarta City. Leading tourist destinations will be analyzed using descriptive statistics. Descriptive statistics is a method of statistical analysis to explain by describing or deciphering the data in order to be easily understood[3]. Then the things that will be analyzed next is the distance of the bus stop to the tourism objects as a representation of the accessibility of the route to the existing tourist objects in Surakarta City, the distance between the bus stop and the accommodation, and the distance between bus stops. The analysis technique used is using buffer analysis using ArcMAP software version 10.1. The buffer distance is 500 meters. Then the traffic congestion will be mapped using the ArcMap version 10.1 application and comes with data on the level of service roads in the congestion area[4].

III. ANALYSIS AND RESULTS

A. Leading Tourism Object

The city of Surakarta has a very diverse tourist attraction. All these objects have their respective advantages that can attract different tourists. The tourists have a favorite tourist destination that became the choice of his visit. Based on this, it is necessary to know the most favored tourist attraction as a leading tourist attraction in this study.

Based on the questionnaire that has been disseminated, then obtained the following results.

Published by :

http://www.ijert.org

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 6 Issue 06, June - 2017

Fig. 2. Leading Tourism Object

From the figure above can be seen if the object of tourist attraction most preferred by tourists is Keraton Kasunanan Surakarta. Keraton Kasunanan Surakarta is a palace building that was founded in 1175 by Paku Buwono II. Within the Keraton Kasunanan Surakarta complex there are several ancient buildings and museums that showcase a collection of high-value art objects such as chariots, heirlooms, and other artifacts. Thus it can be concluded if the majority of tourists who visit the city of Surakarta like a tourism object that has the character of art and culture.

B. Distance Bus Stop to Tourism Object

Distance of stop to attraction object must be within the limits of convenience for a person to walk. When the distance is too far, then someone will be reluctant to walk towards the place. By using ArcGIS 10.1 software, it can be known the distance between the bus stop and the tourism object. For more details, it can be seen on the following map.
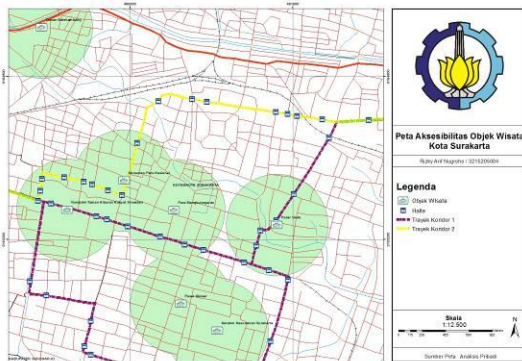

Fig. 3. Distance Bus Stop to Tourism Object Map

Based on the map above, can be seen if there are attractions that are located above 500 meters from the nearest stop is Keraton Kasunanan Surakarta, Pasar Klewer, and Taman Balekambang. This means the accessibility of the three tourism objects is still low because it is difficult to reach by walking from the bus stop.

C. Distance of Bus Stop To Accommodation

The distance of the accommodation to the bus stop must be known to make it easier for tourists to move towards the tourism object. By using ArcGIS 10.1 software, the distance between the stop and the accommodation can be known.
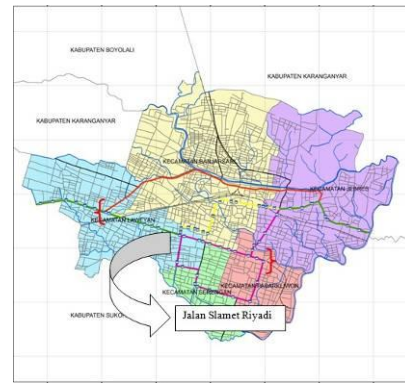

Fig. 4. Accommodation Map

Based on the map above, it can be seen if the entire area of Slamet Riyadi Street where many accommodation lodging in Surakarta City is located has been passed by Batik Solo Trans route. Tourists can choose which accommodation is desired, as long as it is located approximately 500 meters from Slamet Riyadi street, the accessibility is high.

D. Distance Between Bus Stops

The number of Batik Solo Trans bus stops reaches 77 bus stops. The bus stop consists of several types such as open building shelter, closed building stop, and portable stop. Approximately 71% of the total numbers of bus stop are located in the central area of activity in the city of Surakarta. The distance between bus stops ranged from 200-500 meters. Although there are several bus stops that distanced 1-2 kilometers between one another. As for the shortest distance between two bus stops is 167 meters of Ngapeman Bus Stop and Timuran Bus Stop. Thus it can be concluded if the accessibility between bus stops is good enough.

E. Traffic Congestion

Congestion is an obstacle to tourism activity in the city of Surakarta because it reduces the movement of tourists and accessibility to certain locations. According to data obtained from the Department of Transportation Communications and Informatics Surakarta, there are seven points prone to congestion spread across the streets of the city of Surakarta. The location of congestion prone points can be seen on the following map.
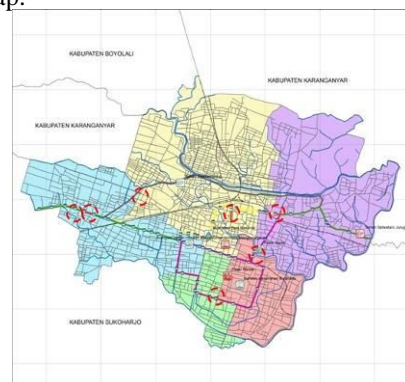

Fig. 5. Congestion Area Map

For congestion-prone points the data are as follow :

TABLE 1. VOLUME CAPACITY RATIO

Location	VCR	Service Level
Slamet Riyadi Street (Solo Square)	0,71	C
Slamet Riyadi Street (Persimpangan Faroka)	0,71	C
Adi Sucipto Street (Tugu Wisnu)	0,84	D
Veteran Street (Persimpangan Gemblegan)	0,84	D
Kolonel Sutarto Street (Persimpangan Panggung)	0,73	C
Urip Sumoharjo Street (Pasar Gede)	0,68	B
S. Parman Street (Pasar Legi)	0,84	D

IV. CONCLUSION

Based on the results of the previous analysis, the accessibility of Batik Solo Trans to tourism objects in Surakarta City is seen from the leading tourism object, the accessibility of the bus stop to the tourist object, the accessibility of the bus stop to the accommodation, and the distance between the bus stops, and congestion. Thus it can be concluded if the analysis of accessibility of Batik Solo Trans to the object of tourist attraction in the city of Surakarta is as follows.

- The leading tourism object by tourists is Keraton Kasunanan Surakarta.

- Keraton Kasunanan Surakarta, Pasar Klewer, and Taman Balekambang have low accessibility because it has a distance of more than 500 meters from the nearest bus stop.
- The need for accommodation is included in the high accessibility because the Batik Solo Trans route has reached the area around Slamet Riyadi street where there are many inns.
- Accessibility between bus stops is quite high.
- The level of service for road segments around the majority of congestion prone points is still low.

REFERENCES

[1] Moeis, H., & Fahmi, A. (2012). Model Layanan Transportasi Untuk Menarik Minat Wisatawan Berkunjung Ke Obyek Wisata Di Jawa Timur, Governance, 3(1), 24-34.

[2] Teteki, N. W. (2010). Potensi Pasar Gede Sebagai Obyek dan Daya Tarik Wisata Budaya dan Kuliner di Kota Solo.

[3] Siregar, S. (2010). Statistika Deskriptif Untuk Penelitian, Jakarta: Rajawali Pers.

[4] Morlok, E. K. (1978). Introduction To Transportation Engineering and Planning (pp. 657-658). New York: McGraw-Hill.