

The Profile of Jalan Pandanaran Texture in Semarang

Edy Darmawan*, Agung Dwiyanto, Adhisti Samsinar Enis

Architecture Department, Engineering Faculty, Diponegoro University, Semarang
Jawa Tengah, Indonesia

*Corresponding author's email: edy_darmawan [AT] yahoo.com

ABSTRACT---- *The corridor of Jalan Pandanaran is known as the culinary gift center of Semarang City and has specific characters as a mixed area. Within this area there are activities related to both goods and service trading activities, offices, and activities related to the people dwelling there. However, its development is not supported with the availability of good urban facilities. The change in land function, insuitable spatial use, and the overwhelming development of stores, offices and other buildings without considering the need of parking area have contributed to the traffic congestion at Jalan Pandanaran. The Jalan Pandanaran Corridor actually has potencies that can be utilized to improve the image of Semarang City with its unique features. This corridor can function as a connector between two areas in the city having different function namely Simpang Lima and Tugu Muda. Based on this problem, the purpose of this research is to describe the profile of Jalan Pandanaran by examining its characteristics using physical condition analysis and non-physical condition analysis; and the method conducted in this research is qualitative descriptive in which the data were collected from field observation, interviews, and studying documents.*

Keywords--- Profile, Jalan Pandanaran, Semarang City

1. INTRODUCTION

Physically, the city's function is to give comfort to people. The city's physical appearance spatially has connection among its spaces as a unity. The connection among those spaces within the city needs a street network relating the spaces with building space design (Trancik, 1986). Streets are parts of a city as a physical entity (Rapoport, 1983). Street corridors are parts of a city connected to elements such as nature, life, and human activities. Street corridors are used to identify an area because they are easily recognized by pedestrians, and the image of an area depends on the image of its street performance. Physical characteristics of a street will show the identity of its area and influence its visual quality (Cullen, 1996). However, in reality cities tend to grow organically following the development of human activities. Cities' physical appearance is obviously considered as the embodiment of human activities, so finally they grow uncontrollably without being intentionally planned. The insuitable change in spatial function and spatial use and a vast quantity of large buildings which are built without paying attention to the city's environment and condition have created uncomfortable feeling among its people. This problem has become common phenomena occurring in most of big cities in Indonesia particularly in Semarang.

Semarang City is a city having many interesting features that are potential to develop. Some of these features are its strategic location and its potential tourist destinations, and one of those tourist destinations is the corridor of Jalan Pandanaran. This street corridor is unique because it linearly connects two different but important spots in Semarang, Simpang Lima as the business center and Tugu Muda as the culture and history center. In Dutch colonial era, this corridor was an elite housing estate. When Simpang Lima started to develop as a business center, in the same time Jalan Pandanaran also developed (Wiharnanto, 2001). The growth of Jalan Pandanaran Corridor was marked by the presence of commercial buildings like offices, hotels, supermarkets, banks, and restaurants, and it then gradually shifted the function of the area from an elite housing estate to a mixed zone dominated by commercial activities. The occurrence of the commercial buildings, especially the shops selling Semarang's culinary gift, has attracted many people from both inside and outside of the city, and therefore has made Jalan Pandanaran Corridor well-known as the Semarang culinary gift center. Werdiningsih (2006) stated that the image of Jalan Pandanaran area, which connects two important spots of the city and which serves as the center of culinary gift and as the homogeneous commercial area marked with commercial buildings, has created its potencies to be the important part of an effort to develop the city's image. Nevertheless, the image of this corridor as the culinary gift center is still not supported with suitable facilities and spatial urban planning which leads to various problems.

The various activities happened at the Jalan Pandanaran Corridor should also be provided with various facilities. The new buildings, made with less attention to the environment and without cogitating the need of parking areas, have triggered conflicts related to the occupation of parking lot and have caused the illegal use of sidewalk as a trading place for street vendors. According to Rajabessy (2015), changes in activity system can lead to new movements that eventually become a burden to network and movement system. This aforementioned problem can be seen from how heavy the traffic is when many people start to crowd into Jalan Pandanaran area to buy culinary gifts. Furthermore, Fauzia (2013) explained that the vehicles movement at this corridor is considerably high particularly when there are many arrival and departure activities in commercial area which decelerate the movement. This deceleration, disorganized circulation system, and unavailability of parking areas cause traffic congestion at the corridor and at particular hours. Obviously, such condition disturbs visitors' convenience and degrades the aesthetic values of an area. Based on those facts, this research was planned for the purpose of describing the profile of Jalan Pandanaran Corridor. The description of the profile was conducted by analyzing the corridor's physical characteristics and non-physical characteristics, so it can clearly specifies its potencies and its problems which then become inputs for developing Jalan Pandanaran area.

2. RESEARCH METHODOLOGY

Research methodology is basically a way to collect data based on certain objectives and purposes (Sugiyono, 2008). This research uses descriptive-qualitative method that can be used to describe and specify findings in order to gather actual and detailed information around the site, to identify problems, to make comparison or evaluation, and to determine what others should do when they face the same problems and learn from their experiences to make decision in the future (Arikunto, 2006). The purpose of this research is to profile Jalan Pandanaran by analyzing its characteristics of Corridor Jalan Pandanaran both physically and non-physically. The collection of data is done by direct observations on site, interviews, and studying documents. Observation, according to Moleong (2002), is a systematic activity of recording either an object or an event in order to understand the noticed phenomenon; which in this case are physical and non-physical developments occurring at Jalan Pandanaran Corridor. All acquired data are then analyzed based on the theories that have been arranged according literary analysis. The analysis technique used in this research is descriptive qualitative analysis that is usually in the form of a description or an explanation in which its data have been arranged, manipulated, and presented clearly (Kusmayadi dalam Putri, 2009). This analysis is conducted to explain physical conditions of research site in the point of view of morphological study (figure ground, linkage system, dan theory place) with urban planning elements approach, and to explain non-physical condition that forms the spaces in the research site.

3. RESULTS AND DISCUSSIONS

3.1 The General Description of The Research Site

The research site is located behind the corridor which is in the area of Kecamatan Semarang Tengah (Sub-district of Central Semarang) and BWK (Sub City Center) I Semarang according to Perda Kota Semarang (Regional Regulation of Semarang City) Number 14 Year 2011. This area has function as a public service center in which there are various activities related to offices, commerce, recreation, residence, and conservation of historical buildings. This street stretches from Simpang Lima area to Tugu Muda area, and in order to easily focus on the research, the description of Jalan Pandanaran is divided into three segments called segment 1, segment 2, and segment 3 in **Figure 1** below.



Figure 1. The research site of Jalan Pandanaran Corridor

Jalan Pandanaran Corridor is a 1.3 km linear area and it is categorized into secondary artery with two lanes or ways 7 metres in width. The traffic flow at the corridor is started from the east to the west with streetblock as the street marker. Three cars can pass in one row on this street. At some streets mainly around the culinary gift shops, there are parking lots for cars with parallel system located at the right side of the street. Physically Corridor Jalan Pandanaran consists of a line of building masses and pavements located at its right and the left sides and following the street network. The pavements are 1.5 – 2 metres wide and 15 – 20 centimetres tall. Elements of the pavements are paving moleded at a 45 degree angle. Paving is elongatedly set following the street and each side thatborders the street is marked by stones made from cement as a barrier. The corridor is also completed with drainage channels in which the channels located at the north of the street are closed with paving while the ones located at the south are left open. At both sides of the corridor are trees functioning as a shelter and as an implementation of Go Green program; even though not all these sides are planted by trees because some of them are used as parking area.



Figure 2. (a) Trees as a shelter; (b) The parking system at the street; (c) The condition of the pavement

3.2 Physical Characteristics Analysis of Corridor Jalan Pandanaran

Physical elements forming Corridor Jalan Pandanaran can be investigated from urban planning elements. These elements are figureground, linkage system, and place theory.

1. Analysis of Urban Planning Elements

Shirvani mentioned 8 elements forming a city. They are:

a. Land Use

Hartshorn (1992) stated that the pattern of development that usually takes place at street corridor areas is called ribbon (following street networks/corridors) in which there are various commercial activities found along the main street corridor whether they are planned or not; and these activities are usually influenced by the traffic flow in that area. A similar condition also takes place at Corridor Jalan Pandanaran where the use of spaces at this corridor consists of commercial function located along the street and residential function located at the north and the south of the street. Hotels and shops control and change the residential function at the end of east side of the street next to Simpang Lima area. On the other hand, the residential function at the end of west side toward Tugu Muda has turned to commercial function. At the last parts of Jalan Pandanaran Corridor there is a mosque located at the eastern end and a church located at western end. Collected data inform that the use of the corridor is 60% for commercial buildings, 20% for mixed function, 15% for housing, and 5% for offices. These data show that most of activities occurring at this area are the commercial ones both goods and service.

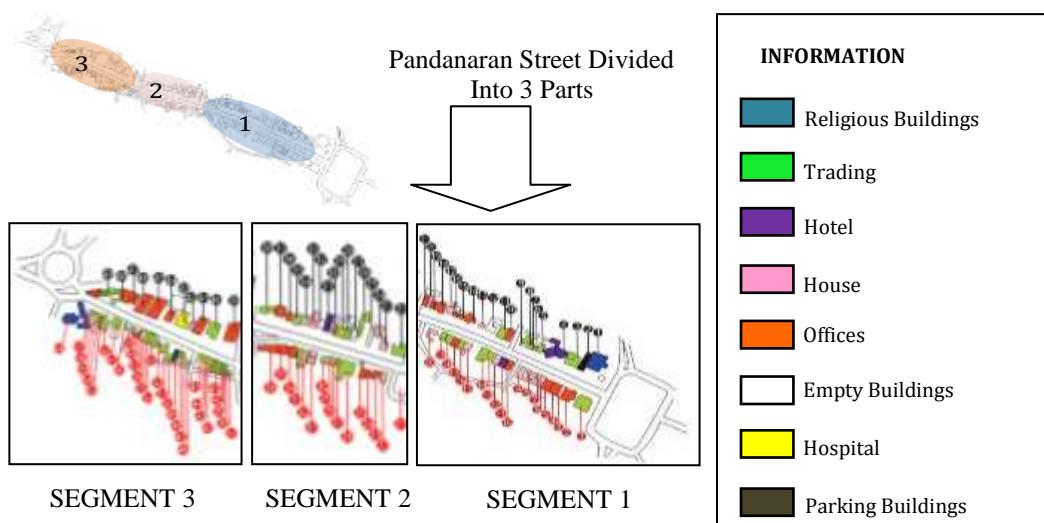


Figure 3: Land Use on the Corridor Jalan Pandanaran

b. Buildings' Form and Mass

Buildings' shape and mass discuss about how the form and the mass of a building can shape a city and about how these building masses relate each other (Zahnd, 1999). As a mixed area, the buildings at Corridor of Jalan Pandanaran has varied forms, masses, and heights. On average, supermarkets are 1-3 storeys high, office areas are 1-4 storeys high while hotel and other commercial buildings can be 12 storeys high. The appearance of building mass can form, direct, orient, and support the linkage. So, it can strengthen the impression of the corridor (Shirvani, 1985). It can be seen on The Corridor of Jalan Pandanaran in which the arrangement and the structure of buildings give a strong impression to the corridor. Besides, the height of buildings in this corridor has been limited in order to make them visually interesting. This visual connection is emphasized on the forming of positive skyline, so it will create an integrated environment between the old buildings and the new ones hence the maintenance of the city's characters. Skyline on an area is not only the order of various buildings at the city, but it is also the various meanings for the area. On the corridor of Jalan Pandanaran, the skyline is divided into three segments

- Segment I of The Corridor of Jalan Pandanaran

From the image of buildings skyline on segment I, we can see that the peak is on the street end which is close to Simpang Lima. Buildings with more than 3 storeys high, Santika Hotel and Indosat Service Center on the northeast side, seem to face toward certain directions. Both buildings are 12 storeys high, so they look prominent among the surrounding buildings. In the middle of segment I, the buildings skyline looks lower. On the northeast, the buildings skyline looks flat because the buildings dimension and height range between 1 to 2 storeys high. Meanwhile, on the southwest, it looks high in the middle because of the existence of @Hom Hotel, and it looks low or tends to look flat at the street end because the buildings have 1 to 4 storeys high. The buildings skyline looks more prominent at the street end close to area of Simpang Lima because of the existence of economical traction in goods and service trading activities. Generally segment I of The Corridor of Jalan Pandanaran, dominated by banking and shopping precincts with 0 (zero) GSB, gives intimate and spacious impression due to the space on the left and the right side between buildings. Nevertheless, it still has roomy impression because there are many buildings with 3 storeys or more.

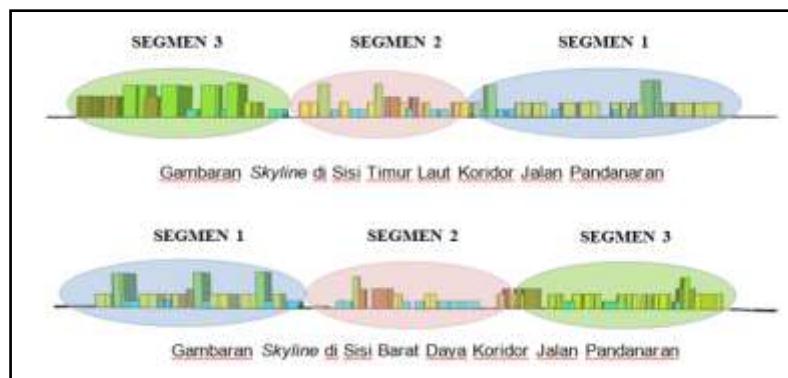
- Segment II of The Corridor of Jalan Pandanaran

The point of application view on Segment II of The Corridor of Jalan Pandanaran is directed to Hotel Pandanaran building because it looks dominant and distinct from the other buildings. If it is seen from the street end which is close to Simpang Lima, its existence on the northeast and with 12-storeys high can be the focal point. On southwest, the buildings skyline looks flat at the street end because their height ranges between 1 to 2 storeys. The relatively equal height of the buildings at the street end of the southwest side does not make dynamic skyline to the area. On the southwest street end, the *skyline* image looks quite high because there are offices and commercial buildings with 3 to 4 storeys.

- Segment III of The Corridor of Jalan Pandanaran

On the northeast side of segment III, the buildings skyline image looks high at the street end because of the existence of 16-storey Suara Merdeka building which looks very more prominent than other buildings. Meanwhile, from the middle to the end, the buildings skyline image looks flat because most of the buildings have 3 to 4 storeys functioning as an office. The existing buildings looks integrated with other buildings, and seems like a series of buildings. The northeast side is dominated 3- 4 storey office buildings. On southwest, the buildings are dominated by shopping precincts with varied height from 1 to 4 storeys, and it makes the buildings skyline image more varied. On this side, there are many advertisement boards aligning along the road. It becomes the guidance that this area is a special area, a center of Semarang's culinary gift foods. Generally, their existence with their advertisement boards may attract the visitors' attention, but because there is no clear legal arrangement on how the boards are placed, their existence discomfort and even disturb the visitors. Therefore, we should pay attention to the arrangement of the advertisement boards as a part of signage which in accordance with Rubenstein's statement (1992) has function as an identity, - traffic signs, commercial identity, and information signs in order to make them functions optimally.

The Corridor of Jalan Pandanaran as a mixed area has an alternately contrasting and monotonous impression. On the right and left side are trees as a shelter which can be a directing element. The varied form and height of the buildings on the corridor give varied quality image of the buildings shown by the skyline image of each segment below.



Description:

- | | | | |
|---------------------------------------|----------------------|--------------------------------------|----------------------------------|
| █ | One-storey buildings | █ | Three-storey buildings |
| █ | Two-storey buildings | █ | More than three-storey buildings |

Figure 4: Skyline images of each segment on Jalan Pandanaran Corridor

c. Circulation and Parking

Circulation of the city is one of the most appropriate tools to structure the city, because it can form, direct, and control the activities path of a city (Shirvani, 1985). Circulation is always related to parking, because parking space gives direct impact to the environment. The circulation of Jalan Pandanaran Corridor which has 2 lanes is basically smooth. However, in the beginning of segment III, retardations of movement are often occurred. It is because of unsufficient parking areas at the culinary gift shopping center that causes many visitors park their vehicles on the road. Condition of circulation and parking of Jalan Pandanaran can be seen on figure 5 below.

d. Open Space

Open space is a vital element of a city because its existence can form the character of the city (Darmawan, 2003). Open space has many forms giving aesthetics, social, or ecological functions. The form of open space on the corridor of Jalan Pandanaran is seen by the existence of Taman Pandanaran. This park is built to fulfill the need of green open space in Semarang which functions as water catchment point of the area. Besides, it provides place for people to do activities, especially the recreative ones. But it is not optimally functioned yet, because of the less of trees that eventually makes the tempreature hot at daylight.

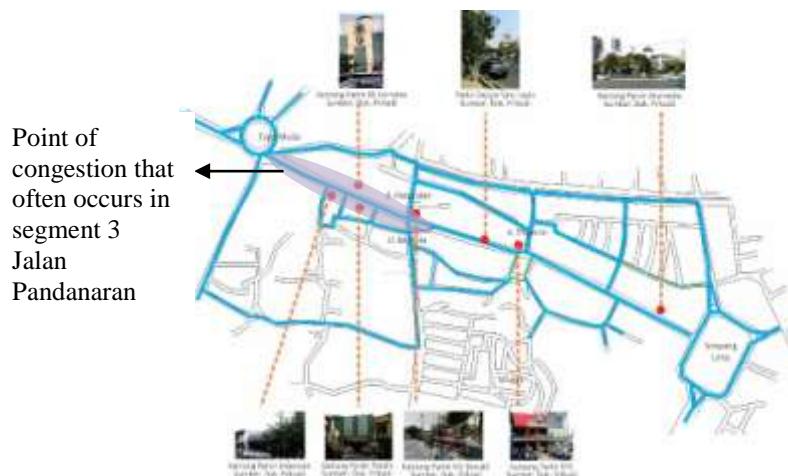


Figure 5: Circulation and Parking of Jalan Pandanaran

e. Pedestrian Ways

Pedestrian ways function as a unifying element of heterogenous buildings and as a public space to do activities and social-cultural integration (Rapoport dalam Hamidah, 2012). But, the condition of pedestrian ways on the Corridor of Jalan Pandanaran, which is sub-system of linkage system, has not yet been optimally used by pedestrians. This situation is caused by its damaged and unflat condition, and the existence of street vendors using half or its entire dimension. Whereas, Utermann (1984) said that providing fun, safe, and comfortable pedestrian ways will attract people based on its purpose because they think that it was an easy, fast, and cheap. It is also supported by Spreiregen (1965) who said that walking is the best transportation system although it has constraint regarding with the speed (3-4 km/hour) and the range (depends on the physical condition).



Figure 6: Pedestrian Ways on the Corridor Jalan Pandanaran

f. Signages

Signages functions as the direction of a city. Signages must be well-designed to characterize the buildings, resurrect the city, and inform us visually (Shirvani, 1985). Basically, the current signage on the Corridor of Jalan Pandanaran has already been complete, but the signage size – advertisement boards – in front of the shops is quite big. It disturbs the riders and makes the visualization of the Corridor of Jalan Pandanaran becomes unpleasant. The advertisement boards' placement needs to set and arrange in order to increase the attractiveness of the Corridor of Jalan Pandanaran.

g. Supporting Activities

Supporting activities consist of all usages and activities supporting the city's public space because they complement each other. On urban planning, supporting activities are elements which support two or more centers of public activities located in downtown and have a quite huge service concentration (Shirvani, 1985). Supporting activities are not only providing plaza and pedestrian ways but also considering the elements of special usage and urban function. The Corridor of Jalan Pandanaran has activities related to trading, offices, and tourism as the supporting activities, and the arrangement has not been well yet. Many street vendors use pedestrian ways to sell their products. The supporting facilities, such as dust bins, have not yet been well-functioned causing the trashes scatter all over the street and smell bad.

h. Preservation

Preservation in urban planning is a protection to the settlement, the current city space, and its specific characteristics (Shirvani, 1985). On the Corridor of Jalan Pandanaran is a preserved buildinga and Sputnik Pharmacy located in segment 2. This building is well-managed eventhough its function has already been changed to culinary gift shop. Its façade is very narrow, so it is not too easy to see.

2. Figure Ground Analysis

Figure ground is a device identifying the texture and the path of urban spatial by observing solid and void elements (Shirvani, 1985). On the Corridor of Jalan Pandanaran, the spatial structure is seen by the void element which is the street and the solid element which is the buildings' mass at the right and left side of the street. Buildings' mass on the Corridor of Jalan Pandanaran is a single block located as a street line, and its circulation is a linear closed system. Its texture is homogeneous. It only has one arrangement pattern which is linear buildings' mass (aligning on the right and left side of the street). On segment I, it is seen that the figure ground is homogeneous. It also forms the corridor's pattern and affirms the existence of node Simpang Lima as CBD. The solid element of segment I of Jalan Pandanaran Corridor is shown by buildings which functions for banking, shopping, and worshiping – mosque. The void element is shown by the existence of open space, but its existence is not too strong. On this place is a city park which not only functions as a green space but also as a place for people's activities. In addition, its existence also functioned as water catchment point which is able to reduce the possibility of flood. The open space is both active and passive. Segment II of Jalan Pandanaran Corridor is still influenced by Simpang Lima – as CBD, so the figure ground on segment II is homogeneous forming the similar corridor pattern as on segment I. Although influenced by Simpang Lima, soid elemen tof segment II is more dominated by commercial and shopping buildings.Meanwhile, the figure ground of segment III tends to be heterogeneous due to the existence of the Node Historic Lawang Sewu, Cathedral Complex, Mandala Bhakti Museum, and the Official Residence of Central Java Governor. The void element on segment II and III is not too prominent because of varied height of buildings, uneven shape of buildings, and relatively widen buildings' dimension. The figure ground of Jalan Pandanaran Corridor can be seen in the figures below.

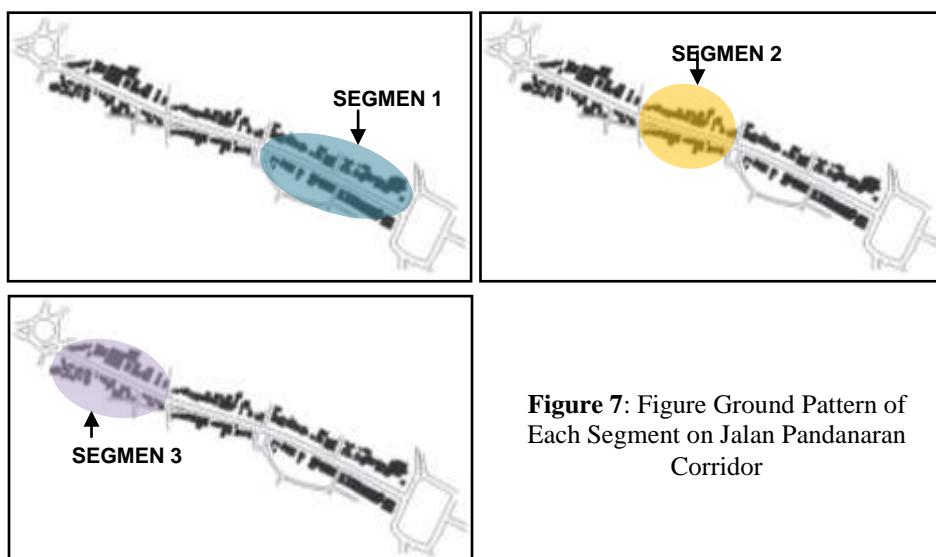


Figure 7: Figure Ground Pattern of Each Segment on Jalan Pandanaran Corridor

3. Linkage System

Linkage system discusses the connection between one place and others as the corridor's booster emphasizing and describing the connection and movement of internal corridor's room (Trancik, 1986). The Corridor of Jalan Pandanaran connecting Simpang Lima as the center of business and Tugu Muda as cultural and historical center will create a strong character if seen by linkage theory since both places are the important parts and center of activities of Semarang. The diversity of buildings' height presents a different spacial impression. Overall, it feels cozy, intimate, and not creepy. The strongest visual linkage on the Corridor of Jalan Pandanaran is on segment 3. There are many shops selling Semarang's culinary gifts. The character of Jalan Pandanaran as the center of culinary gifts is formed by the integration of the activities of people surrounding. While the linkage structural element of Trancik (1986) consisting additional elements, connection, and reduplication, is not seen on the Corridor of Jalan Pandanaran since it is just a connector – which has a neutral pattern – between Tugu Muda and Simpang Lima. The changes of land usage from housing into commercial activities only influence the vertically added buildings which eventually affect the varied height and the buildings' mass pattern. In node Simpang Lima is Baiturrahman Mosque which has been the coordinator of the area. Its roof is then being adopted by Santika Hotel. If seen by collective linkage, the pattern of Jalan Pandanaran Corridor is lengthwise linear close to megaform elements. Group of buildings has similar character, but the buildings' mass pattern form dynamic and rhythmic composition.

4. Place Theory

Place Theory is related to the understanding and definition of human's cultures and characteristics to the physical space (Shirvani, 1985). The theory said that a different sensation will appear when entering or exiting the Corridor of Jalan Pandanaran. When entering the Corridor, we will find a street corridor restricted by buildings on the left and right side. Otherwise, when exiting the corridor, we will see open space which gives a different shade. It becomes signage that we come into a different space. The corridor has varied building patterns in which some of them still maintain Dutch architecture, and some of them use modern architecture. The pattern of many buildings close to Tugu Muda still maintains the ancient architecture from Dutch while the ones close to Simpang Lima are huge and high with modern architecture. The different pattern gives a strong sensation which signs that someone is in the area of Jalan Pandanaran. It may strengthen the impression of the Corridor of Jalan Pandanaran.

3.3 Non-Physical Characteristics Analysis of Jalan Pandanaran Corridor

Jalan Pandanaran Corridor is located at Central Semarang Sub-district, and it is developed as a tourist destination and an office complex. Jalan Pandanaran provides various activities related to shopping, culinary tourism, offices, schools, health centers, worship, hospitality, historical tourism. Shopping activities at this corridor are supported by shops selling Semarang culinary gifts, electronic shops, self-service shops selling daily goods, and other kinds of shops. Besides, there are also commercial activities done by street vendors who use pedestrian lines to sell their products. These activities have made Jalan Pandanaran Corridor alive, dense, and crowded from morning until night. Beside commercial activities, there are also architectural tourism activities at an old colonial building which is located at Lawang Sewu area, and CFD (car free day) event which frequently takes place at Jalan Pandanaran Corridor on weekends strating from morning until 09.30 a.m. This event starts at Merbabu bookstore and ends at Simpang Lima. People who attend this event are not only from Semarang City, but they are also from other cities like Ungaran, Salatiga, Demak, and Kendal. These people come to do sport, go biking, go strolling, or only go shopping for various products sold at there.

From the vehicles movement activities, it is known that Jalan Pandanaran Corridor is very accessible because it is the main street connecting two landmarks of Semarang City. This corridor, which is grouped as secondary arteries, suffers heavy traffic due to a lot of public transportations and private transportations passing this street. The exsistence of commercial activities and office's administrative activities marked with a large number of vehicles also contributes to the density which eventually creates traffic congestions at particular hours. The cause of this problem is lack of parking areas that triggers the use of streets as parking lots. In addition, the unavailability of bus stops also encourages public transportations to pick or drop passengers carelessly which in the end disturbs traffic circulations at the corridor. As an alternative solution, parking parks can be built in order to reduce the congestion caused by parking lots that are accidentally created on street.

4. CONCLUSION

From the explanation above, it can be described that physically Jalan Pandanaran Corridor, functioning as a mixed zone, gives alternately contrasting and monotonous impression. At both sides of the street, there are trees serving as a barrier and a shelter that can also function as a directing element. The diversity of shapes and the height of the buildings at this corridor describe a varied quality of the buildings. The arrangement of buildings' mass is categorized

as single block serving as the street line, and its circulation system is a linear closed system. The texture pattern of the buildings is homogeneous because there is only one pattern; which is a building mass formation that forms linear pattern (lining at the right side and the left side of the street). The building structure and arrangement clearly give strong impression on the corridor, and it also looks visually attractive. This visual interconnection focuses on creating positive city skyline, so it eventually creates an environment where there is a harmonization between old buildings and new buildings. The form and mass of the buildings at the corridor, which are mostly used for commercial activities, also influence signage system; that can eventually create an image of Jalan Pandanaran Corridor as the center of culinary gifts in Semarang City. Viewed from physical components, it can be seen that most of the activities are commercial activities in both goods and services trading. Nonetheless, the existence of street vendors using pedestrian lines feels disturbing hence the need of rearrangement in order to make it look better and to increase aesthetic values of the area. The damaged pedestrian areas need to repair and modify them for diffables, and other facilities also need improvement especially trash cans considering abundant of trash scattered at there. The highly frequent vehicles movements and the possibility of traffic congestion can be reduced by providing parking parks that are able contain parking needs at Jalan Pandanaran Corridor.

5. ACKNOWLEDGEMENT

The authors say thanks to all those who have helped in collecting data used in this article as a part of the objective of our research to get an overview of texture buildings in Pandanaran Street Corridor. Thanks also authors say to Engineering Faculty, Diponegoro University who has been assisting in research funding so that this research can be accomplished.

6. REFERENCES

- [1] Arikunto. "Procedure Research: A Practical Approach". Jakarta: PT Rineka. 2006
- [2] Cullen, Gordon. "The Concise Townscape". Oxford: Butterworth-Heinemann. 1996.
- [3] Darmawan, Edy. "Public Space in Architecture City". Semarang: Publisher Diponegoro University. 2003.
- [4] Fauzia, Shifa and Anita Ratnasari Rakhmatullah. "Influence Activity Against Zone Traffic Circulation Region Jalan Pandanaran". *Jurnal Teknik PWK*, Volume 2, No. 3, 2013.
- [5] Hamidah, Noor. "Study of Circulation Pattern for Informal Sector in Public Open Space Along Yos Sudarso Street, Palangkaraya City". *Jurnal Tata Loka*, Volume 14 No. 4, November 2012, page 304-323. 2012. Planologi UNDIP Publisher.
- [6] Hartshorn, Truman A. "Interpreting The City: an Urban Geography". New York: John Wiley and Sons Inc. 1992.
- [7] Putri, Charoline Ferra Mustika. "Study Characteristics Letjend Sukowati Street Corridor for Supporting Activities Trade Center Salatiga". City and Regional Planning Department, Engineering Faculty, Diponegoro University. www.eprints.undip.ac.id. 2009.
- [8] Moleong, Lexy. "Qualitative Research Methodology". Bandung: PT Remaja Rosdakarya. 2002.
- [9] Perda Kota Semarang (Regional Regulation of Semarang City) Number 14 Year 2011.
- [10] Rajabessy, Fitriani S, Rieneke L. E. Sela, Faizah Mastutie. "Analysis Development of Commercial Activity Galala in Jalan Lintas Halmahera". Program Studies Urban and Regional Planning. Sam Ratulangi University. Manado. www.ejournal.unsrat.ac.id. 2015.
- [11] Rapoport, Amos. "The Meaning of The Built Environment". Beverly Hills: Sage Publication. 1983.
- [12] Rubenstein, Harvey M. "Pedestrian Malls, Streetscapes, and Urban Spaces". USA: John Wiley and Sons. 1992.
- [13] Shirvani, Hamid. "The Urban Design Process". New York: Van Nostrand Reinhold Company. 1985.
- [14] Spreiregen, Paul D. "Urban Design: The Architecture of Towns and Cities". Mc Graw-Hill. 1965.
- [15] Sugiyono. "Quantitative Research Methods, Qualitative and R & D". Bandung: CV Alfabeta. 2008.

- [16] Trancik, Roger. "Finding Lost Space: Theories of Urban Design". New York: Nostrand Reinhold Company. 1986.
- [17] Utermann, RK. "Accomodation The Pedestrian". New York: Van Nostrand Reinhold Company. 1984.
- [18] Werdiningsih, Hermin. "Building a Region Imaging Jalan Pandanaran as the Souvenirs Center for Semarang City". Enclosure, Volume 5, No. 2 Juni 2006. Scientific Journal of Urban Design and Settlement. 2006.
- [19] Wiharnanto, Sri. "Influence Architecture Design Elements Againts Public Space User Visits Region (Case Study: Trade Center in Pandanaran Street Semarang)". Magister of Architecture. Engineering Faculty. Diponegoro University. Semarang. 2001.
- [20] Zahnd, Markus. "Integrated Urban Design". Yogyakarta: Kanisius. 1999.