

Rough Planning of Melaka Malay City Before 1511 Based on Portuguese Sources

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Abstract--- *The Empire of the Malay Sultanate of Melaka is often referred to as an imposing and glorious empire of various administrative, economic, and physical aspects. The Melaka Malay City in the context of this paper refers to Bandar Melaka during the reign of the Melaka Malay Sultanate, which was originally from Bukit Melaka which houses Melaka Palace to the surrounding area. The purpose of this study is to examine and interpret the picture of the Melaka City based on the sources of Portuguese sketches and drawings which are believed as valid. The method focused in this paper is through debates on sketches and drawings obtained, then contrasted and combined with historical records relating to Melaka City or events related to the sketches and paintings. This research is a bit of a story, as well as describing the Melaka Malay Sultanate era before the Portuguese's conquest in terms of environmental, physical, and other related aspects. The implications of this study can be a catalyst for continuous and deeper research to know about Melaka City and skyline during the era of the Malay Sultanate. The study showed that the plan of Melaka city was not a planned city plan since the reign of the first Sultan of Melaka, but was a city that grows organically according to the current and growing needs of the Melaka Malay Empire. The layout features of the Melaka City are in line with its function as an entrepot city, hence the municipal rough plan match and resemble the picture of paintings and sketches described in most historical records. In conclusion, the Melaka Malay City before the Portuguese's conquest was likely to be a physical civilization and should be examined and explicitly evidenced in rebuilding the Melaka Malay civilization that had long been established.*

Keywords--- *Melaka Municipality, Planning, Paintings and Sketches, Portuguese Sources.*

I. INTRODUCTION

The definition of a city in the Malay term generally means the place or center of its population and many activities and arrangements are carried out. In Malay Archipelago community, the township is often associated with two important elements which are concentrated population and business as a key activity. The sources of historical writing describe the situation of the Malay Archipelago with some important criteria which roughly explain the Malay community in the traditional township. Firstly, the former kingdoms were in and about the jurisdiction of the sultan or ruler. Secondly, the nature of the city is a port city with trading activities and religious diffusion (among the merchants of the Middle East and India). Thirdly, the local community is subject to the order of the sultan or king and make settlements along the river (Mutalib, 1992).

As an Islamic state, townships from context and Islamic point also need to be understood to know the system of Melaka city layout as an Islamic Malay municipality. The Islamic municipality in the context of the Malay Archipelago does not refer to the prevalence and purpose of the municipality from the Arabian Peninsula due to its unequal nature,

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especially in terms of monarchy or caliph and geography. The Islamic Township in the context of the Malay Archipelago takes its position in a complex structure, not just an individual gathering environment of conducting business transactions but involving the entire structure of civilization formation. This modern Islamic Municipality is a municipality for Islamic and non-Muslim communities administered under the rule of Islam which is then governed by the Islamic Shari'a law as the main reference in the Qur'an and the Sunnah of the Prophet (Rasdi, 2003).

Despite the high technological achievement in the Malay's construction at one time in the past, it is now facing extinction as a result of the ignorance of the modern Malay community of its existence. This is because of the lack of documentation on the mastery that exist in the Malay built environment which could also help to cultivate pride and self-esteem among the Malays through the knowledge of their technological heritage (Kosman et al., 2018). This lacking effect the Malay heritage which refers to cultural significance, knowledge and expertise through the way of life, cultural entities, and lifestyle. It symbolizes the civilization of community in a place. Preservation of the heritage assets is beneficial to future generations and local community in terms of social, economics and politics (Ramli et al., 2017).

This paper aims to unravel the historical records of the Portuguese in order to locate and map the Melaka municipal plan before the collapse of the Melaka Malay empire into the hands of the Portuguese. The two municipal definitions above will be the fundamental and internal argument when mapping historical records into the municipal plan of the Melaka Malay City. Doing digital mapping could conduct a digital reconstruction, which would digitally preserve valuable field data that could otherwise be compromised. Moreover, digital models provide opportunities for hypothetical anastylosis to be thoroughly analysed before physical reconstruction is carried out, ensuring that the structure is accurately represented (Ramli et al., 2018).

Melaka Kingdom was established by Sumatran prince, Paramewara, at the late 13th century and soon after due to its strategic location, the port became one of the most famous trading centers in Southeast Asia (Moor, 2004). As a result of strong ties between Melaka and the royal court of China during this period brought first cultural assimilation between to region appeared. Melaka flourished, and in its peak of prosperity is described as the most prosperous trading ports with the greatest number of wholesale merchants and abundance of shipping that can be found in the whole world (Barbosa, 1921). However, the gradual spread of Islam did not seem to have affected the traditional architecture of the region where basic Austronesian morphology remains. Since the establishment of Islam in Melaka in 15th century and its distribution to Peninsula, great number of mosques has been erected in the region (Vlatseas, 1990). Traditional Melaka style mosques, following Southeast Asia traditional mosque design, consist of a modest centralized columned prayer hall, which is axial and symmetrical in the plan and the entrance to this space is usually from the opposite end in the direction of qibla, but supplementary entrances may also be introduced from the sides (Lim, 2001).

Soemayah Armani and Ezrin Arbi (2013) in their paper entitled 'The Foreign Architectural Influences on Melaka Style Traditional Mosques' aimed at rediscovering foreign influences in the style of traditional mosque architecture in Melaka which they have already neglected. They point out that despite the many foreign influences that came to Malacca during Melaka famous as the world's leading trading power at the time, the architecture of Malacca still preserved the culture of local architecture in the multi-ethnic Melaka urban landscape, but only taking the least influence from the great state civilization in East and West that are perceived in accordance with the identity of Malacca. This

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statement was issued after conducting a comparative and similar study of the architecture of mosques in foreign countries with the architectural characteristics of the mosque of Nusantara and the uniqueness of the combination.

Basically, they were more about the design of prominent buildings of Melaka Malay City such as mosque and religious buildings. Other than that, research about Melaka Malay City were more about the fortress of Melaka City. Mohamad Izani et al. (2009) described an attempt to preserve the A Famosa Fortress in Malaysia in 3D model. First, a brief background of the A Famosa fortress is presented to justify the importance of preserving this historical heritage. Then the stages involved in the digital preservation process are discussed and some images of the 3D model of this fortress are illustrated. The fortress layout that they found from the finding is basically based on textual description. Therefore, researches about Melaka Malay City plan are still not known or not very precisely about the use of plan or urban planning. However, a research stated that the design of Melaka (fort) City or A'Famosa Fortress was in square or rectangular shape as it was built on the site of the Great Mosque of Melaka, and this is synonym with the design of other Malay forts or cities (Kosman et al., 2019).

The focus of development is not just around the city's central business district, but also in other emerging centers. The areas in the suburbs have advantages for certain land use. The design, layout, character and philosophy of the Malay were incorporated anthropometrically and ergonomically of Melaka people in the planning that defined their culture and architecture. Anthropometry and ergonomic are among of the design fundamental knowledge which the establishment of the human anthropometric data is a crucial process for the product and spatial design development, whereas, ergonomic refers to the study on how the product can be designed comfortably, safely, and effectively (Kosman et al., 2016).

II. METHODOLOGY

Various aspects and methods were conducted to find the most suitable matches and comparisons that almost accurately describe the rough planning of Melaka City before 1511. The remains and recorded plans of Melaka City since Portuguese era will be the basis of its municipal plan. Hence, the study of historical records and sketches of the Melaka City from the Portuguese sources will be made to construct the earliest planning of Melaka City. Later, the historical records of the city from Malay Archipelago, Chinese, Portuguese and Dutch sources will be depicted in the planning. The combination of all sources will be presented in the rough planning of Melaka City on Melaka map during Portuguese era and current map of Melaka City.

III. RESULTS AND DISCUSSION

3.1 Melaka City by Portuguese Sources of Paintings/Sketches

The paintings in the European kingdoms below are believed to have been painted by Dutch and Portuguese spies before the expansion of the colonies to Asia (Nordin, 2010). This is reasonable as the paintings need to show the current situation of Melaka City and then be analysed before they do any extension of power or trade. These paintings show the complexity and overlapping of facts with historical records from Europe in terms of the position of buildings and a factual picture of Melaka's township and surroundings. This equation makes the source of this painting difficult to deny, thus helping to create and organize urban township plans of Melaka at that time.

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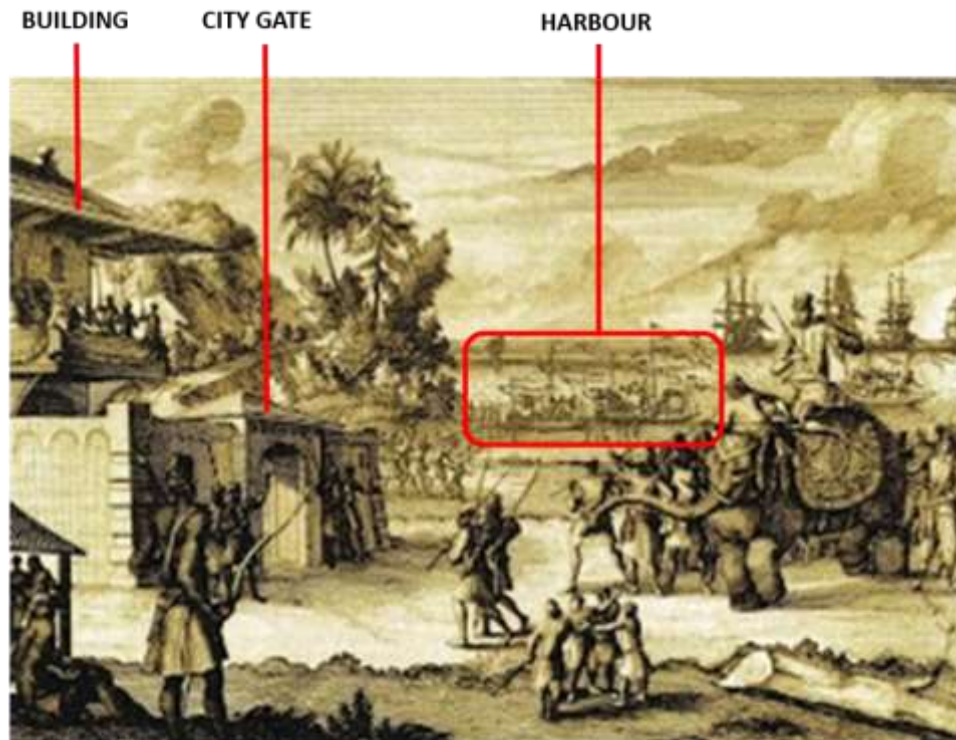


Figure 1. The picture of the building, city gate and harbor in Melaka City

(Source: *Twee on gelukkige scheeps-togten oost-indien van Jorge De Mello, in het Jaar 1507 en Jorge D'Aguiar, in het Jaar 1508. Beyde in het Portugys beschreven uyt de egte hand-schriften der reysigers op ordre des Konings van Portugaal door Joan de Barros Raads-Heer en History schrijver van die majesteyt.*)

This sketch is derived from the *Twee on the jukle of the sloop-togten of the van Jorge De Mello, in Jaar 1507 en Jorge D'Aguiar, in het Jaar 1508. Beyde in het Portugies beschreven uyt de egte hand-schriften der reysigers op ordre des Konings van Portugaal door Joan de Barros Raads-Heer en History schrijver van die majesteyt*. This is a picture of the arrival of the Diego Lopez de Sequiera group to look down on the Sultan of Melaka in 1508. Based on the painting, there are several elements that can be interpreted clearly. The elements to be discussed are the elements of nature, the physical character as well as the social and social portrayal of society at that time.

The coastal area of Melaka City seems wide for port management. It's easy to accept a small boat or anchor boat. Additionally, the business of welcoming the arrival of traders and other government ambassadors can be done in order and according to the custom of royal celebrations where guests can be paraded on elephants and many can witness the celebration as in this sketch. The vast and deep-sea area is where the big ships dock. According to Roy de Araujo, when he wrote about Melaka port at that time, there were almost 270 small ships, boats and large boats along the coast and the sea of Melaka. (PDM, 2012).

In addition to the sea and the beach, the shape of the earth in this sketch also shows the position of city gate located next to the hillside area which has a trail or path along the slope. This shows that the Malacca Malay Sultanate administration complex is located on the hill and the trail path is also one of the public use paths to the beach and then move to other places. There are lush shrubs growing on the hillside, as well as coconut trees and rhu trees. These plants are common plants in the equator and in Malay Archipelago, so it is impossible to say that the sketches show different

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climatic conditions. Coconut trees and rhu trees are thriving plants in the sandy area so the coastal area is a fertile area for both of these trees. These plants also serve as a powerful sea breeze buffer element that transform strong wind into breezy when reaching the mainland, as well as shading areas whilst coconut as a source of mineral water and good food. Clearly this sketch illustrates the correct place and nature of the scene as well as describing the welcome received by the Portuguese delegation at that time.

In terms of the physical character of the city and the Melaka Malay City, this sketch clearly indicates that the entourage arrived at the gate or gate of the Melaka castle as any foreign delegation had to meet the Sultan Melaka first. The city's gateway is illustrated in a neat, well-designed design, as well as possibly constructed of stone, clay or mortar. The design and wood material have a distinctive wood-like shape on the second floor of this sketch. At the gate there is a five-storey roof that is synonymous with the design of the roof in the Malay Archipelago.

The building in this sketch clearly looks like a two-story building. The building is likely to be an '*awang*' complex or royal palace guard house. According to the typology and hierarchy of buildings within the government or castle complex, the position of the complex is after the city gate and is the checkpoint for all who enter the complex before heading to the palace. In this sketch, the ground floor of the building is likely to be constructed of stronger limestone and rocks to accommodate the top-floor building. The top floor of this building is clearly constructed from transverse wood. This gives different look to the building. Interestingly, on this porch or balcony at upper level, is decorated with fabric jewellery to beautify the space that serves as a place to view the surroundings.

The roof of the building also shows the design of a five-storey roof as found on the roof of the city gate in front of it. The structure of the roof is clearly constructed from wood while the roof of the building is likely to be beautifully shaped wood. It is common and widely-used of *berlian* wood for government buildings' roof, or other hardwood such as *meranti* and *cengal*. Roof selection is important as it is a 'look' that can be seen remotely and works to protect the building and everything under the roof. As a building within a rich and prosperous kingdom government complex, it is possible that the building materials used are chosen from the best material in order to give the impact of the Malay empire and the prosperity of the Malay sultanate on its physical character.

Melaka Malay city during the reign of the Malay Sultanate was clearly a city with a wall and the structure constructed from stone. Possibly, they used limestone, laterite stone, clay and egg shell mixtures, shellfish (A. Halim, 1990) and other ancient building materials that can strengthen the structure and last longer. The construction of the wall is beautifully designed and shows the characteristics of a strong and powerful building that protects a government administrative center. The laterite stones used are from the surrounding areas of Melaka harbor such as Upeh Island, Java Island and other small islands nearby. The structure of the city and building was subsequently damaged during the Portuguese war over Malacca and was rebuilt during the Portuguese rule (Nordin, 2010).

In terms of cultural aspects, it can be seen from the sketch that the Malacca Malay Sultanate government honors guests as practiced in Islam and Malay customs. Although the group of Lopez de Sequiera was the first European nation to land in Malacca - a group of strangers who had never been seen, with knowing their languages nor their intentions of coming to Melaka either to trade or to do any disturbance, but the Sultan of Melaka still welcomed them with respect and great custom. In Malay customs and culture at that time, elephants were royal animals and mean of transportation

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which only Sultan and royal relatives used elephants in various official and grand events. This royal elephant is beautifully decorated as a symbol of the status of his owner, the Sultan. In this sketch, the Sultan of Melaka welcomed and celebrated foreign guests into the palace complex by lavishing the head of the delegation, Lopez de Sequiera, to the royal elephants. This shows the high level of attitude and in Malay royal society as well as showing friendly gestures to foreign guests, traders or anyone who comes to Melaka.

In this sketch it is also seen how much the guards are accompanying the entourage and controlling the gate of the city. The number of guards show how much the government is concerned about the role and law enforcement in Melaka to ensure the safety of all residents living or trading in Malacca. There are two types of communities involved in this sketch, the Melaka Malay community and the Javanese Malay community. This is known from their clothes. In the Malacca Malay hierarchy that worked as guards, they wore a shirt with a half-knee sarong besides a *dastar* (sarong / headgear). The Javanese Malays usually do not wear shirts and wear knee half-knee sarongs (Khasnor Djohan, 2010).

The equality of all these guards is that they have spears and arrows as weapons and precautionary measures to face undesirable possibilities. In this sketch, all the guards did not show the threats to the entourage with their weapons, but rather as the safety tool that they always carry while working to safeguard the security of the entourage and escort them to meet the sultan in the palace complex.

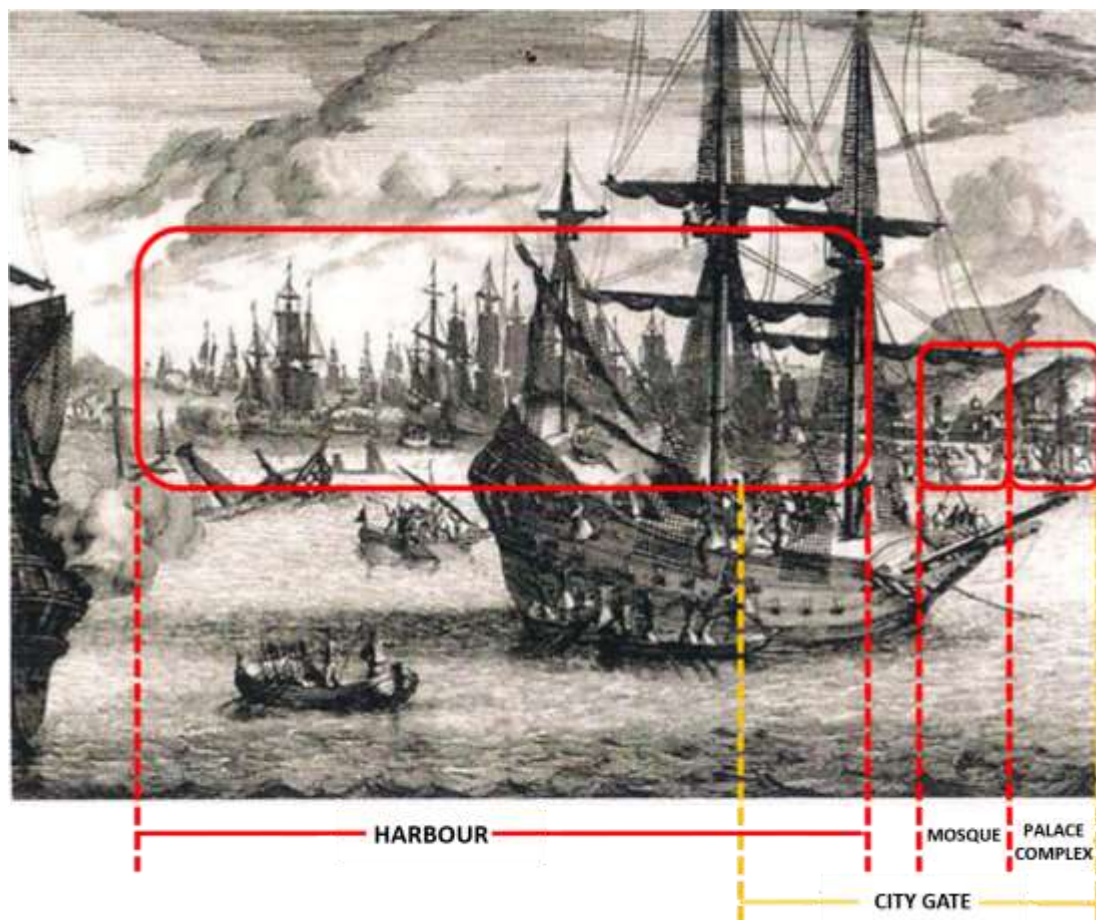


Figure 2. Description of port and Malacca Malay Town Complex

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(Source: *Twee on gelukkige scheeps-togten oost-indien van Jorge De Mello, in het Jaar 1507 en Jorge D'Aguiar, in het Jaar 1508. Beyde in het Portugys beschreven uyt de egte hand-schriften der reysigers op ordre des Konings van Portugaal door Joan de Barros Raads-Heer en History schrijver van die majesteyt.*)

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The sketch illustrates the number of ships docked from the front of the Malacca government administrative complex to Upeh beach. This shows how much the size of the sea and the beaches of Melaka to receive so many numbers of ships coming. Such capacity will definitely require a large and systematic management and harbor along the Melaka coastal area especially from Upeh beach (north of the palace complex) to the beach of Air Leleh (south of the palace complex). The shape of the Melaka landscape depicted in this sketch is focused on the complex of government or Melaka city. The area is horizontally along the coast and populated with buildings. Behind the buildings there is a small hill likely to be the Bukit Melaka, where the palace of Melaka was founded on a variety of historical records. In addition, Melaka is surrounded by mountains and hills behind it.

This figure shows that there is a stone wall not far from the coast. This long stone wall separates the coastal area from population and buildings. It is possibly the wall of Melaka Malay city which surrounds the administrative complex of the Melaka government or perhaps the whole of Malacca. There are various types of buildings behind walls that range from different terraced buildings and different roof designs. This diversity and distinction often indicate the diversity and the difference in the function of a building. There are several three-storey buildings or three roof levels at a single storey building. This is because the three-tiered roof is a common roof in the archipelago with a philosophical value on the contrary. This sketch also shows several towers or buildings occupied. It is possible that the building serves as observation tower to observe port and trade activities, or observing and cautioning any suspicious activity on the sea.

There is a sketch of the towers and adjacent buildings that are very prominent. It is likely to be a mosque building based on the vaulted and tranquil shape of buildings like the usual contemporary mosque buildings in the Middle East. Additionally, this position and appearance is very well suited to one of Tom Pires's remarks from the historical and verbal narration of the Portuguese who settled in Malacca after the capture of Malacca:

"... King Mansur Syah built a beautiful mosque once located where it is now famous for the famous Melaka City and that is the prettiest in the region."

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This fact also shows the position of the Portuguese Melaka City built on the ruins of the Melaka Mosque, according to another historical record in the Portuguese Document on Malacca which was recorded by Alfonso's recorder as said:

"... Alfonso de Albuquerque is now busy building a fortress, where the mosque was once, and was named 'Famosa.'"

The important thing to say in this sketch is the atmosphere when the attack took place in the sea. There are various types of small ships or Malay boats that carry out attacks to capture or immerse the Portuguese ship. It is seen on several small boats or boats that are around the Portuguese ship. Based on the sketch of the soldier's clothes in the boat or small vessel, it can be identified that they are made up of Malay soldiers and Javanese mercenaries. In addition to attacks from boats and small boats, there are also attacks by Melaka from the coast. There are cannons arranged on the beach with the actions of soldiers on the beaches around the fireplace - likely to launch an attack on a Portuguese ship at sea. There are many ships in the sea that seem to have been unobtrusive or interfering in this attack as the focus of small ships and the Malay and Javanese boats in this sketch rests on the big boats in the middle of the sketch. There are several ships drowning around the big ship that is the focus of this sketch that is likely to be a successful submerged Portuguese ship.

The point of interest in this sketch is that there is a person on the highest deck of that Portuguese ship who looks like he is drawing or sketching something in that frenetic conditions. If we look closer, the individual is an artist because there is a boxed drawing tool with him. Typically, the tool is a grid of granular or paperback that is usually used by artists or painters to paint and describe a picture more precisely in terms of scale and overview of the drawing. This tool is able to accelerate the drawing process so it is appropriate to use especially in the event of attack and noise.

Thus, it is likely that the individual is the official sealer or portrait of the Portuguese ship. This is because the Portuguese who are just beginning their first cruises to the East from India bring together artists and painters who act as a recorder for everything that happens during their voyage. These are considered important because their records and drawings are actual references that tells new information or knowledge about Melaka or any particular situation which they need to bring back to their country and presented to their king. Therefore, the information must be based on true event with actual picture of that event before that information will further disseminated to any plan or other expeditions. Usually the historical record corresponds to the drawings or sketches performed during the expedition. This suggests that these Portuguese paintings and sketches of the times were most likely to be accurate, clear, true and reflect the real situation at that moment. While it was not possible during the attack that had drowned many of their ships, the painter who was the messenger and the important person in the expedition had time to paint dramatically with the fact that the current situation was inaccurate as the historical material was then are proof to be brought back to their country as references.

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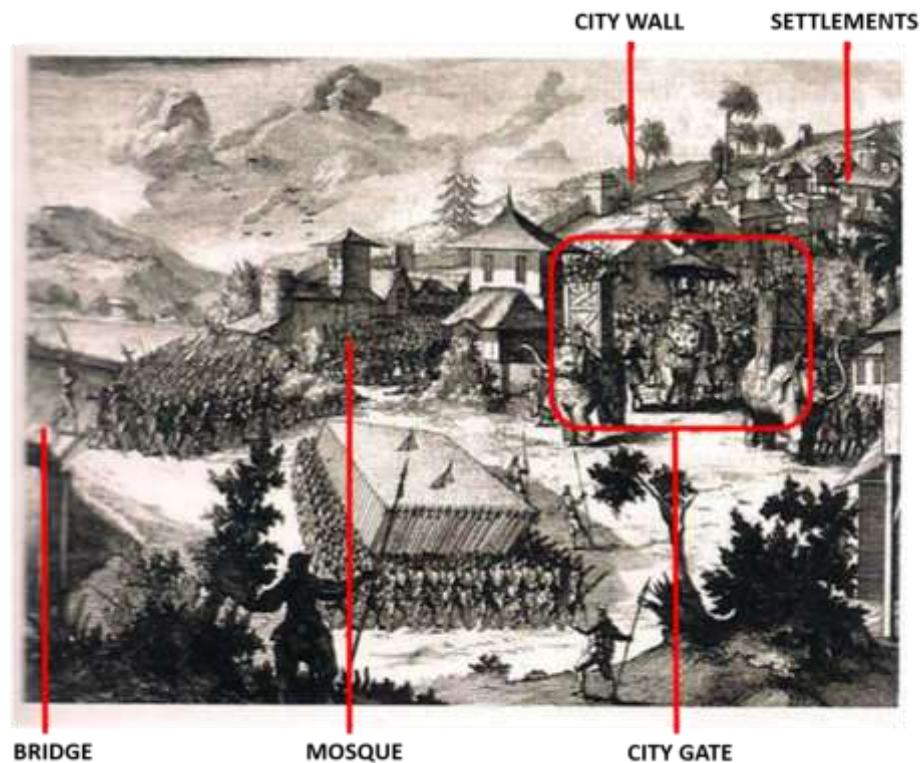


Figure 3. The description of the bridge, mosque, and city with many similarities with historical records (Source: Twee on gelukkige scheeps-togten oost-indien in het Jaar 1511. Beyde in het Portugys *beschreven uyt de egte hand-schriften der reysigers op ordre des Konings van Portugaal door Joan de Barros Raads-Heer en History schrijver van die majesteyt.*)

This sketch is derived from Twee on gelukkige scheeps-togten oost-indien in het Jaar 1511. Beyde in het Portugys *beschreven uyt de egte hand-schriften der reysigers op ordre des Konings van Portugaal door Joan de Barros Raads-Heer en History schrijver van die majesteyt.* This scenario is likely to be a portrayal of the Portuguese invasion of Melaka in 1511. The main elements to be discussed are physical characters and also the current situation.

Based on the sketch, there are coconut trees and *rhu* trees. Behind the walled area, there are many coconut trees. Coconut trees are synonymous with the basic environment of a home or a whole place. It is possible that most of the coconut trees are planted in the Malay township or village, where the area is close to sandy beaches that are suitable for coconut trees' growth.

Melaka Malay city is protected or gated by stone wall according to this sketch. Within a certain distance along the wall, there is an arch-shaped or arch building - possibly functioning as a guard post to control and keep all the residents behind the city wall. It looks like it was constructed by stone for its sturdy look.

Behind the Melaka Malay Town, there are various floors of buildings, various roof designs and different types of buildings that are likely to reflect different functions. In this sketch it can be seen that some types of roofs are synonymous with the architecture of the roof of the Malay Archipelago communities with high philosophical value that is the roof of the plywood, long roof, and roof of the five saucers. Generally, the construction behind the walls has a diverse influence from Malay archipelago's architecture and also possibly from China and other countries that have

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international trading relations with Melaka. There may also be various types of building materials used according to historical records such as the use and mix of stone, limestone, clay, wood and others.

The current atmosphere in that sketch depicts the Sultan of Malacca being paraded with royal elephants to the open space in front of the city gate. The elephant is beautifully decorated and has an elephant stand - specifically to place and protect the sultan. In front of this royal elephant there are two elephants on the left and right of the royal elephants. Based on the decoration of the elephants, it is likely that both are elephants of war. This is because in addition to its position in front of the royal elephants to protect the sultan, there is a wooden box structure above those elephants that puts guards inside it as is to launch any attack from a higher place or to ward off attacks against the sultan. This design represents the height of the Malay people's thinking in the war strategy.

In front of these elephants there was a swarm of soldiers with a likelihood that the Javanese soldier who had been bribed to betray Malacca and helped the Portuguese to capture Malacca as according to the history of Malay and Portuguese history. This identification is based on the costumes or clothing of these soldiers who look on the glove and spears. A group of soldiers near the bridge is likely to be the Portuguese troops coming to the Melaka Malay city from Upeh through the wide Melaka bridge that connects Upeh with the Melaka government area at the foot and Bukit Melaka. In addition, these soldiers appear to be dressed more fully than the Javanese soldiers. This scene depicts Portuguese attacks assisted by other mercenaries to break the defense of Malacca's Malay troops then conquering Melaka.



Figure 4. An overview of two-storey buildings within the Melaka City that Albuquerque described during his attack on Melaka in 1511
(Source: *Eredia's Description on Malacca*, 2010)

The sketch above illustrates some physical characters about Melaka. The elephant, which is the royal official transportation, was used to carry the Sultan of Melaka at that time, or possibly a Portuguese delegation before or after the capture of Melaka. There are also people or guards that blowing tools like trumpets which are typically European

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musical instruments. The Malays at that time used tools such as turrets or *semboyan* as pre and post-war to announce the event.

The most important character in the sketch is the background of the building behind it. The building is clearly a two-storey building which looks like was constructed by stone and limestone, has a large window, splendor curtain in every window and even beautifully decorated. It is likely that the building is part of a palace or government building, and major governance that goes through the course of the royal elephant from the castle to down the foothills and vice versa. It is also possible that the sketch is incorrect because the design is roughly similar to the design of buildings in Europe. As the Portuguese is accustomed to the sketches and portraits of the building in Europe, it is likely that they paint something that has become a habit.

It is likely that the sketch illustrates the actual situation in Melaka. This is because there are many historical records about the building in Melaka by the Portuguese writers wrote that many buildings were constructed from various building materials such as stone, a mixture of stone and limestone, a combination of stone and wood, a mixture of stone and clay, wood and may be various other basic materials. Therefore, probably this building might be one of the important buildings such as part of a palace or government buildings because it was built by stone as the main structure for strength and 'strong' look. There are indeed Portuguese records that support the depiction of the sketch:

"When the breeze was blowing, he directed Gaspar de Paiva with a hundred soldiers to burn the part of the city near the bridge. Simao Martins was given the same assignment in the mosque area where the Sultan's palace was located. Instructions have been made, resulting in the destruction of a palace veranda containing seats, several carpets, gold-embroidered silk curtains and many other valuables." - Note Fernao Lopes de Castanheda in *History of The Exploration and Conquest of The Indies by The Portugese*.

Notwithstanding the actual situation and character of the Melaka Malay city at that time, the main element to be expressed in this Portuguese sketch which also were in historical records is the portrayal of physical character of Melaka's buildings as stone built. This sketch also illustrates the high cultural and social status of Melaka as the prosperous, rich and respected Melaka empire. This can be seen from the character of a beautifully decorated and well-maintained building, up to the royal animals are decorated and well-kept.

Based on the sketches, there are some obvious similarities in the design of the Melaka Malay city and its gate. First, Melaka Malay city and the the gate are made of stone. Second, the position of the Melaka Palace on the Upper of Melaka. Third, the Great Mosque of Malacca at the foot of the hill next to the Melaka River. Fourth, the bridges cross the Melaka River. Fifth, the Malacca harbor is located along Upeh beach, Leleh and Bukit Melaka beach. Sixth, the settlement is within the Melaka City. Seventh, there is a stone building inside Melaka Malay city. Eight, many ships docked and traded in Malacca. All of these elements can be used as a basis for mapping the township of Malacca Town before the Portuguese invasion, which will be combined with other historical sources for more accurate findings.

Table 1. Similarities and difference between Portuguese's paintings/sketches

<i>Similarities</i>	<i>Differences</i>
1. The Melaka Malay City and gates were made of stones. 2. The location of the palace was on top of <i>Bukit Melaka</i> .	1. The architecture of Melaka City were combination of China and Malay architectural features.

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3. The Grand Mosque of Melaka were located at the foot of <i>Bukit Melaka</i> and next to Melaka River.	2. The extent of the coastline of Malacca as a port area is uncertain.
4. The bridge across the Melaka River connects Upeh with the City of Melaka.	3. The details of buildings in Melaka City were varies.
5. Port of Melaka is along the beaches of Upeh, Leleh and <i>Bukit Melaka</i> .	4. The size/grandeur of the Melaka Malay City cannot be precisely determined because the paintings are not on a exact scale.
6. Settlements are located in the city of Melaka, Upeh and Ayer Leleh.	
7. There were buildings made of stones in Melaka Malay City.	
8. Many ships dock and do trading business in Melaka.	

3.2 Description of Melaka Town Plan Before Portuguese Colonization

Based on above historical evidence found, mapping of the port city of Malacca can be divided into three hierarchies with clear separation morphology as below:

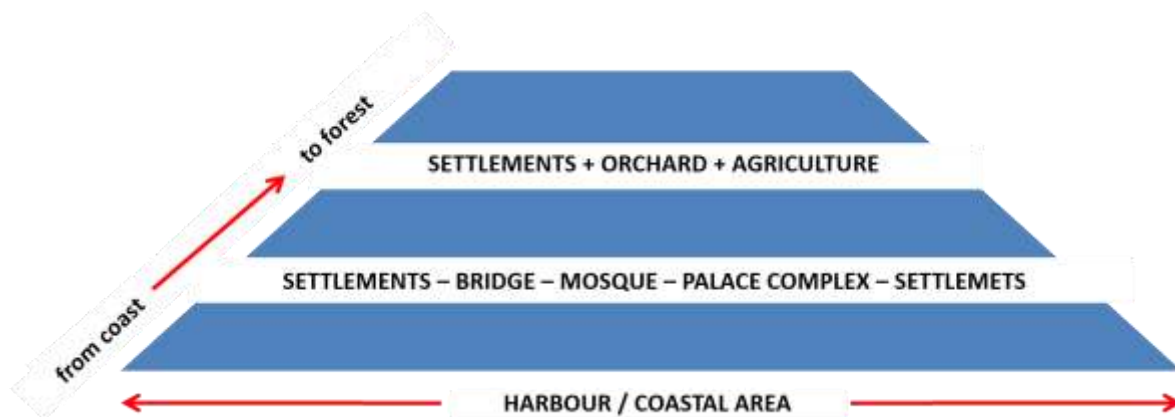


Figure 5. The hierarchy of Melaka City mapping and morphology

The first hierarchy is the Malacca harbor location extending from the coast to the settlement and the city of Melaka. The second hierarchy is the most affluent area as it is the administrative area of Melaka, the mosque as a center of knowledge and *da'wah*, bridges that connects area as well providing areas for economic activities to traders and residents of Melaka that involved with trading activities. The third hierarchy is the area deeper into Malacca forest up to Mount Ledang that had lots of orchard houses of Melaka's residents, agricultural area and settlements of most Malacca residents involved with agricultural activities and others.

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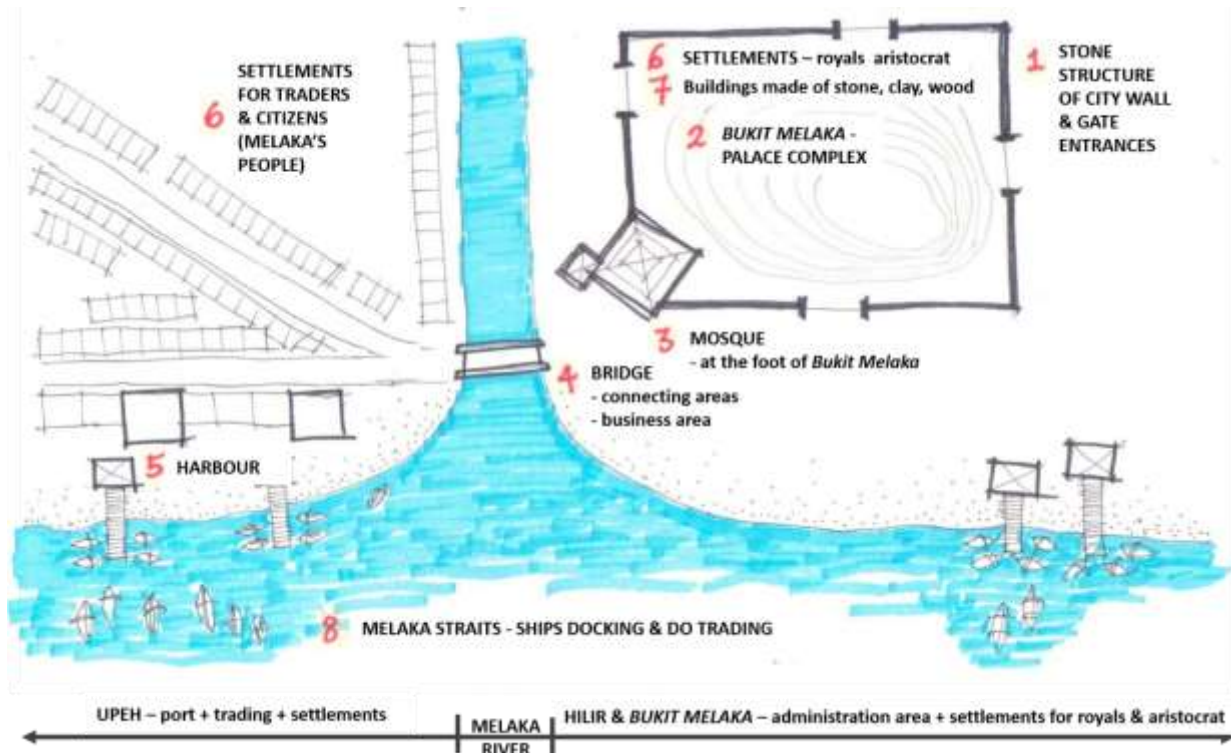


Figure 6. Gross sketch of the concept of the Melaka municipality before Portuguese occupation on 1511

All the facts, statements and descriptions described above are used as a basis for mapping the City of Melaka before the Portuguese colonization. The main elements of Malacca City which are palaces, mosques, bridges, markets, harbors, warehouses and distribution areas are arranged based on historical records and then overlapped and aligned with the current Melaka City plan to understand the use of area and the city plan of Melaka City before its collapse. These measurements and layout are not the most accurate and precise, but rather as a rough description that conform to the characteristics and character of the Melaka municipal plan based on historical sources.

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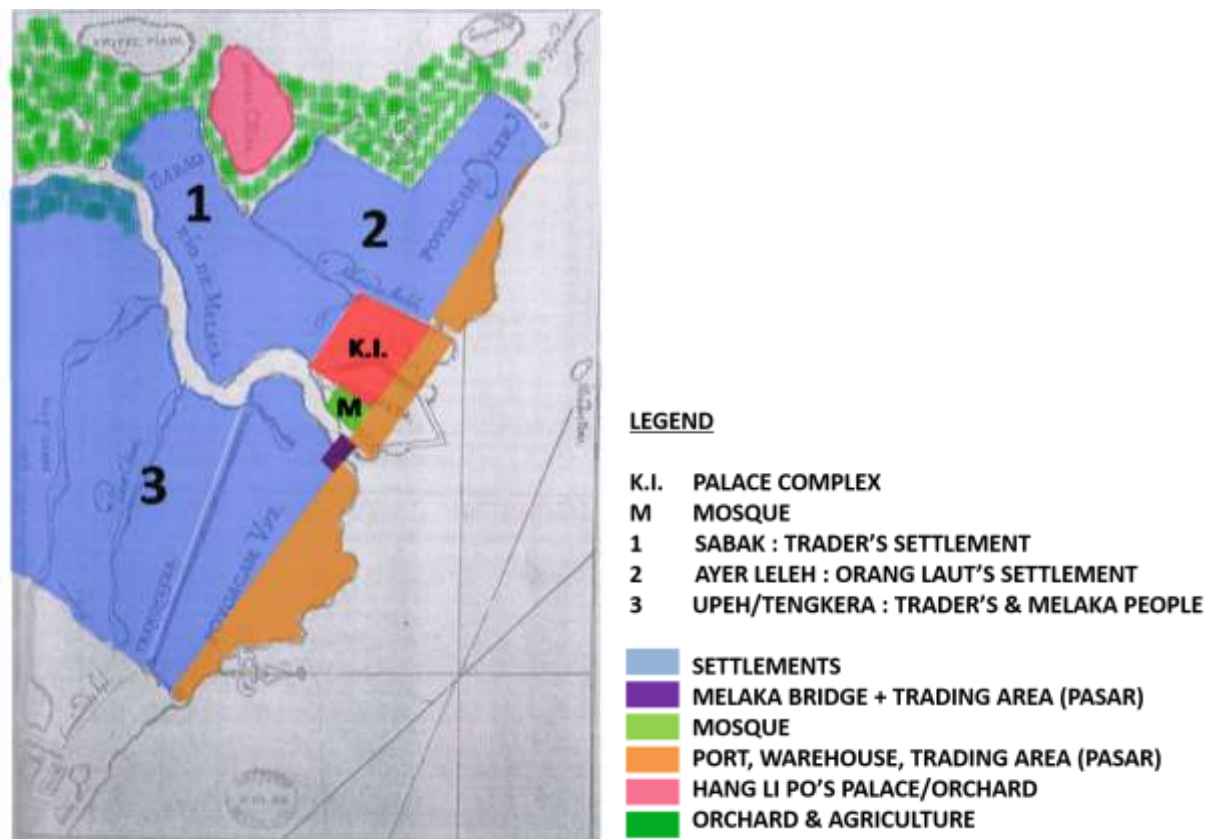


Figure 7. Overview of the town plan of Melaka Town on the old map of Portugal 1512
(Source: *Livro do Estado da India Oriental*, by Pedro Barreto de Resende, 1646; British Library, and author)

Information from sketches and paintings of Portuguese artists were taken and interpreted into the old map of Melaka Malay City as in figure 7. From the mapping, the hierarchy of land use were clearly seen. The first hierarchy are along coastal area that placed the harbors, warehouses and markets for daily business activities. All Melaka's coastal area were basically harbors that welcomed ships of traders to Melaka. Second hierarchy are the administration area where palace complex, Melaka main bridge, Great Mosque of Melaka and aristocrat settlement were placed right after roads along coastal area. This area was vast and wide up to deeper area of Melaka. Daily and business activities were happened in this area that made this area the busiest area in the city. Third hierarchy placed settlement, orchards and agriculture area up to foot of Mount Ledang.

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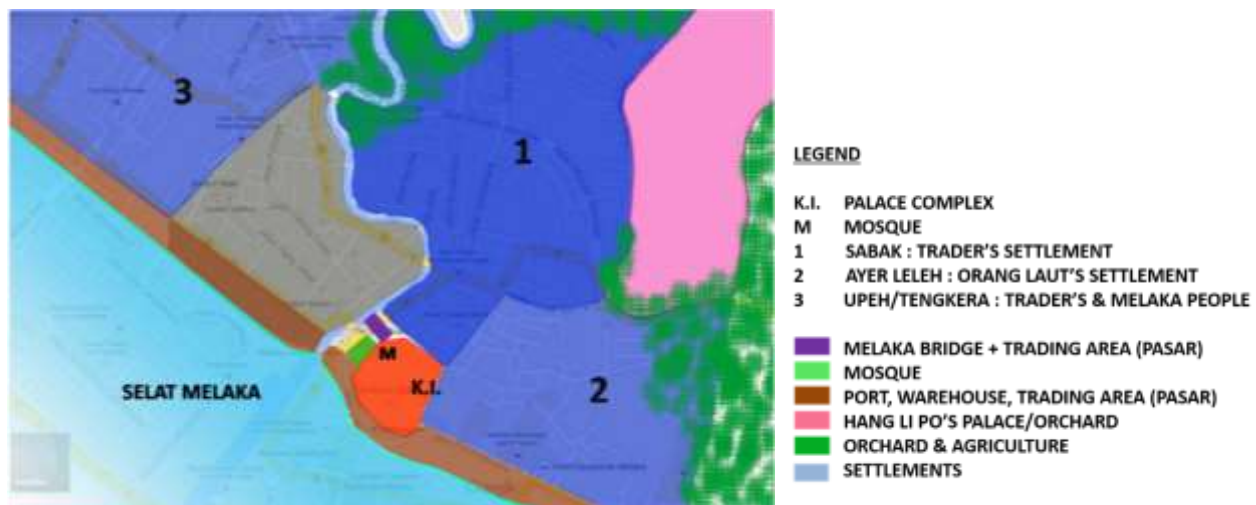


Figure 8. Overview of the town plan of Melaka City on the latest map. The Melaka Straits have been dumped hundreds of meters from its original coastal line, made Melaka's historic coastal ship's landing site lost in history (Source: Google Maps, Google Earth and author)

The same information gathered from the sketches and paintings, together with the overlapped mapping of Figure 7 were overlapped onto current map of Melaka today. From Figure 8, it shows that the land mapping was the same with the previous figure. This corresponds that both maps adapted well to the gross mapping of the Melaka Malay City which derived from the information of the paintings and sketches. It means, the gross mapping was near to precise conditions and land use of the time before Portuguese invasion.

IV. CONCLUSION

The evidence and illustration of the Melaka city presented in this paper corresponds to the main features of a Malay and Islamic township's concept. First, the City of Malacca has walls and gates entering the city area as a defense fortress. Secondly, the location of the city center of Melaka, the administrative office, palace and mosque are in a complex and become the center of the whole city and the township. Third, the market and business area are located along the main road, on the bridge, beach and roads. Fourth, there is a separation between public areas and private areas (settlement/houses) indicating that residences are located in certain areas and separated from trading areas clearly.

The study also shows that the urban plan of Melaka city is not a planned city plan since the reign of the first Sultan of Melaka, but is a city that grows organically according to the current and growing needs of the Malay Empire Melaka. It starts at the beach and Bukit Melaka, then expanded to Kampung Upeh Village, Kampung Leleh Village, Sabak, Bertam and then extending to the foot of Mount Ledang. The development and layout features of this Melaka City are in line with its function as an entrepot city which have various facilities for administrative, commercial and economic activities, daily activities and settlement of diverse groups.

The Melaka city's gross urban planning during Malacca Malay Sultanate era is too complicated to be presented in detail. Although only based on historical records, the municipal gross plan is seen to match and resemble the picture of paintings and sketches described in most historical records. The probability that exists in terms of movement, distribution of population based on historical records, and the number of activities carried out during the reign of the Malacca Malay Sultanate could be the basis of the argument to the depiction of the Melaka city (*Kota Melaka*)

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municipal plan. Indeed, further studies with scientific methods can and should be done on the Melaka City of the era in order to find the truth and more accurate details.

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