

LANGKAT DISTRICT MUSEUM DESIGN USING A MALAY NEO VERNACULAR APPROACH**Hajar Suwanto¹, Rizky Aryan Pratama²***1Architecture Department, Faculty of Engineering, University of North Sumatra, Medan, 20155, Indonesia***Corresponding Author: hsuwantoro@gmail.com, rizkyaryanpratama25@gmail.com***Abstract**

Langkat Regency, as one of the districts in North Sumatra, has a long and rich history with strong cultural and religious influences, especially in the Malay Sultanate. Therefore, it is important to preserve these historical relics and the need for a suitable place to store these historical relics. In Tanjung Pura District there is a historical museum building in Langkat Regency, but this building is now less active and less suitable to be used as a museum which should be like a museum. - Other active museums. By redesigning the Langkat Regency museum building, applying the Neo Vernacular Malay approach, where the Langkat area is a Malay land, it can be hoped that its function will be active again so that the local community and the outside community can see it again and become a means of education about the history and heritage of the Langkat Regency area..

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Malay Neo Vernacular
Architecture, Museum,
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1. Introduction

A museum is an institution dedicated to preserving, studying, and exhibiting historical, cultural, artistic, or scientific artifacts and objects. Museums stem from the development of human needs to preserve and protect valuable cultural, historical, and intellectual heritage. In Indonesia, learning places are still ranked second in correlation with entertainment venues, in a city many malls or entertainment venues are built rather than generating or developing teaching places such as places that have historical value such as museums.

The existence of a museum does not only store historical ancient objects. The museum functions more as a place of historical transformation for the next generation. Many museum conditions are poorly maintained so that in the end the museum cannot continue to store history for the next generation, starting from small things such as not maintaining the building, historical relics that are not maintained according to the schedule and left until they become damaged and lost, from this resulting in the museum slowly stopping operating.

Langkat Regency has a long and rich history with a strong influence of Malay culture, and a very strong Islamic style, namely the Langkat Sultanate. This sultanate was known to the wider community as a respected Malay kingdom at that time. Langkat Regency was formerly a former Malay Kingdom so there are many historical relics in Langkat Regency. With so many historical relics, a building (Museum) is needed which functions as a place to store historical heritage, so that the historical heritage is stored safely and can be maintained as it should. With the existence of the Building, the surrounding community can know more and know more about the history of Langkat Regency, because the old building (Museum) only uses the Sultan Langkat Density Center Building.

In the planning of the museum, the theme of Neo Vernacular Malay is applied in the area of Langkat Regency, which used to be a Malay Langkat sultanate. Malay architecture, which is a laggam of Traditional Architecture in areas dominated by the Malay community, is an ethnic community originating from the Austronesian nation (Syafwandi in Winadari 2005). The building of Malay Traditional Architecture is divided into several elements, namely, Roof Elements, Wall Elements, Window Door Elements, and Ornaments.

2. Literature Review

2.1 Museums

The museum comes from the Greek word Museion. Museion is a sacred building to worship the Nine Goddesses of Art and Knowledge. One of the nine Goddesses is Mouse, who was born to the supreme god Zous with his wife Mnemosyne. Museums are institutions that aim to help people understand and appreciate human achievements in nature, the history of civilization, art, science, and technology. (Museum, institution dedicated to helping people understand, and the record of humanity's artistic, scientific, and technological achievement)

According to the Great Indonesian Dictionary, a museum means a building that is used to permanently display objects that deserve public attention, such as historical relics, art, science, and others as well as a place to store ancient items. There are several classifications of museums:

- Art Museum: also called art exhibition, it consists of an enclosed or open space that can be used as an exhibition, and usually displays art objects, sculptures, drawings, illustrations, and sculptures.
- History and Archaeology Museum: Museum collections typically include artifacts, art, and archaeological items
- National Museums: National museums are limited to a few museums because they are under government regulations.

2.2 Malay Neo-Vernacular Architecture

Malay architecture is a style of traditional architecture in areas where the local area is overwhelmed by local Malay gatherings, especially neighborhood ethnic gatherings that start from the Austronesian family (Syafwandi in Winandari 2005) in Amanati (2010: 1).

According to Effendi (2009), a traditional Malay building is an object that is used as a family residence. In addition to being used as a place of residence, traditional Malay buildings are usually also used as a place of deliberation, a place for offspring and as a place to shelter for anyone who needs it.

Table 2.1 Application of Malay Neo Vernacular Architecture to buildings

Application of Design	Information
Room Treatment	The concept of space refers to the typical points of Malay houses, but still considers the function of the building in order to meet the needs of users.
Tread Processing	The concept of an easy-to-reach site design provides clear and directional access and convenient paths for people with disabilities.
Mass Processing	The concept of plural mass design by adopting the pattern of traditional Malay villages on the banks of the river, is a linear poa.
Display & Shape Processing	The concept of shape & appearance design based on Neo Vernacular principles, by applying the concept of Malay architecture with a modern touch as a tourism attraction and as a means of education about the Malay Tribe.
Structural & Construction Processing	The concept of a sturdy structure & construction by paying attention to the safety and comfort of users and applying several points of 28 regional characteristics that exist in Malay houses in the Upper Structure, Super Structur and Sub Structure of the building.
Utility & Safety System Processing	The concept of an effective and efficient utility & safety system by considering the user, duration of use, cost, and building structure.

Source: Personal Analysis, 2024

Characteristics of Malay Architecture:

- **Roof (tube)**
The typology of Malay traditional houses is a house above or below a buffer and has a high section (Mudra, 2004). Kassim (2017) said that the upper part of a Malay house generally reflects the early stages of its occupants, but also their social status and well-being. (Al Mudra, 2004).
- **Wall**
The arrangement of partition walls in Malay architectural houses is divided into 3 procedures, the first is the division of horizontal sireh, the arrangement of cassette walls is a vertical arrangement technique and the layout of love walls is a stacking installation technique. (Al Mudra, 2004).
- **Window**
The windows of the Malay house are isolated into 3, namely the top, middle, and base. The middle and base segments are machined and can be closed independently, while the top can be reliably opened for ventilation. (Firdhaus, Sahabuddin, and Longo, 2017).
- **Ornament**
Conventional Malay ornaments are divided into 4 parts, namely green plants, fauna, nature, and strict beliefs. In general, the type of pruning that is often used widely is greening. Pruning is transformed into a specific shape, either with the current structure or with a new structure. Flower carving is divided into 3 categories, namely: flowers, bamboo shoots, and spikes. (Faisal, n.d.)

3. Methodology

The method of selecting a location for museum design involves important considerations to ensure that the location chosen is in accordance with the needs and objectives of the museum design. There are several factors that are usually considered in choosing a location for a museum, namely, Accessibility, Potential for visits, Availability of land and size, Security, Infrastructure and supporting facilities, Historical or cultural context, Sustainability.

4. Results and Discussion

4.1 Project Description

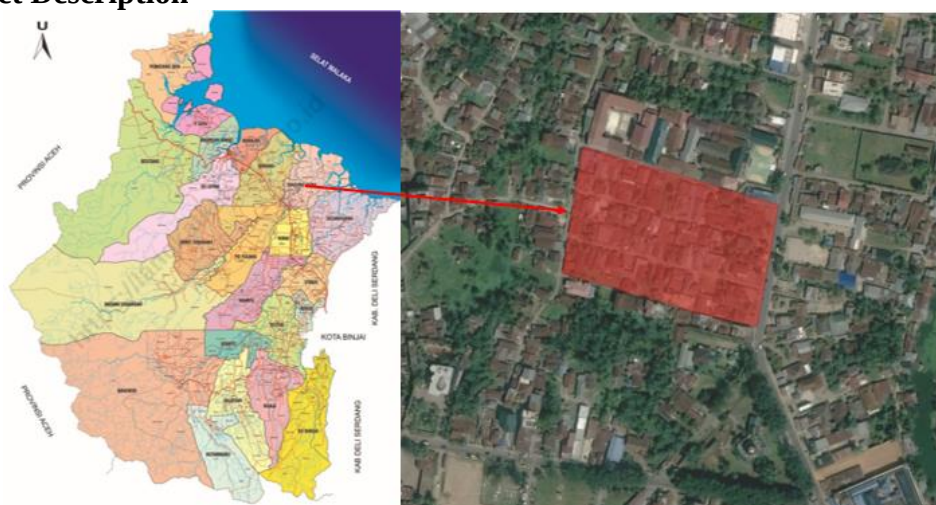


Figure 4.1 Site Location
Source: Google Earth, 2024

Some of the location analyses that have been carried out by the author, This location is the most appropriate to use because it is in accordance with the location requirements in the design of this museum, the location is on Jl. Tengku Amir Hamzah, Tj. Pura District, Langkat Regency, North Sumatra Province, The following Site data:

- Project : History Museum
- Project Theme : Neo Vernacular Malay
- Status : Fictitious
- Site Land Area : 20,000 m² / 2 H

4.2 Regional Boundaries

Regional boundaries in the design of the Museum

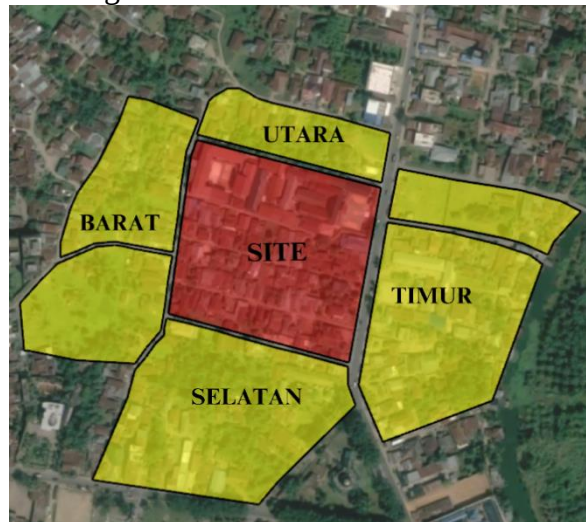


Figure 4.2 Site Limitations

Source: Google Earth, 2024

1. North Side: High School

Figure 4.3 Territorial Boundaries



Source: Google Maps, 2024

2. East Side: Primary School



Figure 4.4 Regional Boundaries
Source: Google Maps, 2024

3. South : Commercial



Figure 4.5 Regional Boundaries
Source: Google Maps, 2024

4. West : Settlement



Figure 4.6 Regional Boundaries
Source: Google Maps, 2024

4.3 Concept of Form/Mass

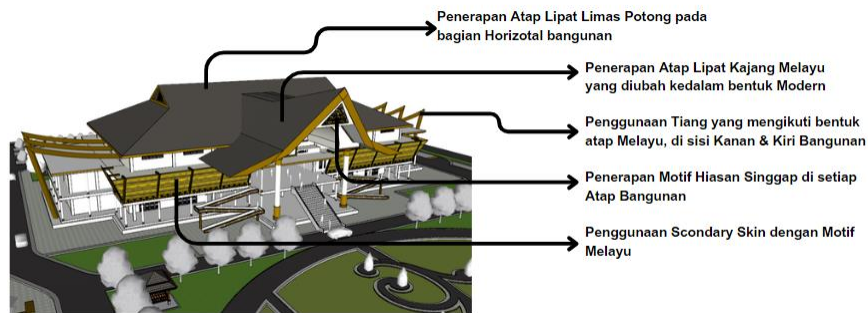
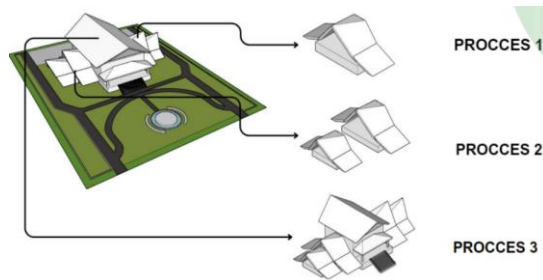


Figure 4.7 Mass Concept
Source: Writer, 2024

4.4 Zoning

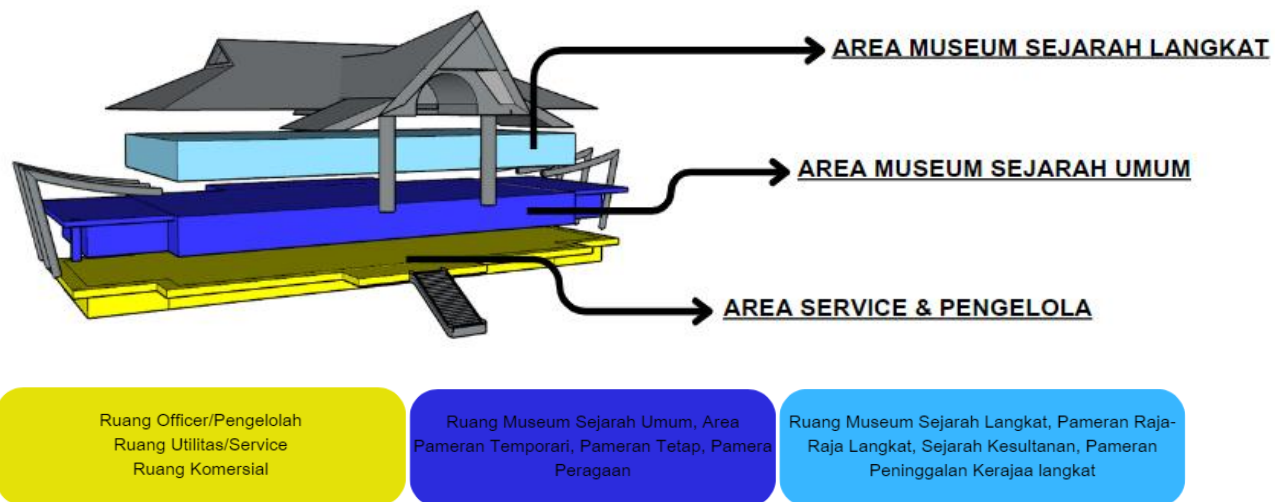


Figure 4.8 Zoning
Source: Writer, 2024

4.5 Program Room

In this analysis, it was carried out to clearly find out the perpetrators and the activities that occurred at the Langkat Regency Museum. This identification is needed to find out how many spaces must be filled in the Langkat Regency Museum.

Information:

- TSS: Time Server Standars
- NAD: Neufert Architecture Data
- US: Assumptions

Table 4.1 Admission Room Program

Facilities	Room Name	Standard	Capacity	Source	Broad
	Lobby	0.6-1.9 m2/org	150 People	TSS	150
	Reception	2 m2/org	5 People	NAD	10
Recipient	Luggage Storage Room	20 m2/unit	2 Units	NAD	40
	Ticket Purchase	2 m2/org	10 People	NAD	20
	Amphiteather	0.6-1.9m2/org	100 People	TSS	60
	Exhibition Room	6-10 m2/org	250 people	NAD	2.500
	Hall of Fame				700
	R.Performance/ Show				150
	Workshop Room	6-10m2/person	20 People	NAD	200
	Community Space				550
Exhibition Room	Temporari/Multipurpose Room	0.84m2/bench	300 people	NAD	252
	Permanent Exhibition Room	6-10 m2/org	100	NAD	600
	Seminar Room				500
	Event Painting Room				350
	Audiovisual Room	0.84m2/bench	100	NAD	84
		Men's Toilet			
	Toilet x 2	1.4 m2/unit	4 Units	NAD	11,2
Utility	Urinal x 2	1.6 m2/unit	4 Units	NAD	12,8
	Fountain x 2	0.4 m2/unit	6 Units	NAD	4,8
		Women's Toilet			
	Sink x 2	0.4 m2/unit	8 Units	NAD	6,4
	Toilet x 2	1.4 m2/unit	6 Units	NAD	16,8
Support Room	R. Computers	2 m2/ Person	50 People	NAD	100
	R. Photography	2-5 m2/ Person	10 People	NAD	50
	Library Room	2 m2/ Person	50 People	NAD	100
	Storage Space	1.4 m50 m2/unit	-	AXLE	100
	Discussion Rooms	6-10m2/person	50 People	AXLE	300
	Staff Room	2-5 m2/person	10 People	NAD	50
	Dining Room	1.4 m2/person	150 People	NAD	210
	Warehouse	10 % of the dining area	-	AXLE	21

Commercial Space	Kitchen	40 % of the dining area	-	NAD	84
	R. Souvenirs and Retail	700 m2/unit	-	AXLE	200
	Cashier	2 m2/person	5 People	AXLE	10
	Warehouse	30 m2/unit	-	AXLE	30
	Cashier	2 m2/person	-	AXLE	6
	Loading Dock	30 m2/unit	2 Trucks	NAD	60
	ATM Center	2 m2/unit	100	AXLE	200
	Head of Museum	1 person	14-18.5m2/org	NAD	24
	R.Vice Museum	1 person	14-18.5m2/org	NAD	24
	R.Meeting	20 people	1.5-2m2/org	NAD	40
	Pantry & R. Break	1 unit	-	AXLE	22
	R.Staff	20 people	8-12 m2/org	NAD	160
Management Room	R.Staff Curatorial	1 unit	8-12 m2/org	NAD	64
	Warehouse	20m2/unit	-	AXLE	15
		Men's Toilet			
	TOILET	4 units	1.4 m2/unit	NAD	5,6
	Urinal	4 units	0.6 m2/unit	NAD	6,4
	Sink	6 units	0.4 m2/unit	NAD	2,4
		Women's Toilet			
	TOILET	6 units	1.4 m2/unit	NAD	8,4
	Sink	8 units	0.6 m2/unit	NAD	3,2
	AHU Room	20 m2/unit	-	AXLE	20
	Panel Room	12 m2/unit	-	AXLE	12
	Generator Room	30 m2/unit	-	AXLE	30
	Transformer Teeth	25 m2/unit	-	AXLE	25
	Chiller Room	20 m2/person	-	AXLE	20
	Pump Room	25m2/unit	-	AXLE	25
Service Room	Fire Control Room	20m2/unit	-	AXLE	20
	R. CCTV and Sound System	12 m2/unit	-	AXLE	12
	R.Security	40m2/unit	-	AXLE	40
	Warehouse	40m2/unit	-	AXLE	40
Security Room	R. Security	1.6 m2/org	5 People	NAD	8
	R. CCTV	1.6 m2/org	5 People	NAD	8
		Total Overall Area			10.885,5

Source: Writer, 2024

4.6 Theme Implementation

4.6.1 Roof Application

Application of the Malay Cut Limas Roof on the Horizontal Section of the Museum Building



Figure 4.9 Limas Potong Roof

Source: <https://www.riauonline.co.id/riau/read/2022/05/20/4-rumah-adat-melayu-riau-yang-harus-kamu-ketahui>

4.6.2 Application of Entrance Roof

The application of the Malay Kajang Folding Roof Combination which was changed into a Modern form in the entrance part of the Building.



Figure 4.10 Kajang Folding Roof

Source: <https://www.goodnewsfromindonesia.id/2020/04/08/keunikan-rumah-kajang-lako-provinsi-jambi>

4.6.3 Application of Malay Motifs

Application of Singgap, Hanging Bee and Single Flower Motifs on Each Building Roof

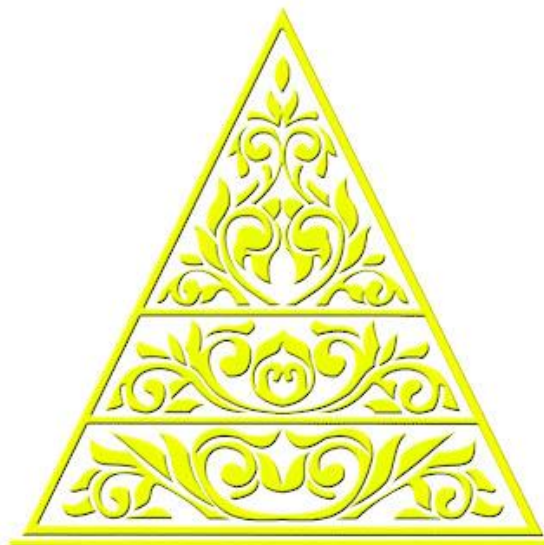


Figure 4.11 Singgap Decorative Motif

Source: <https://krishadiawan.blogspot.com/2010/03/arsitektur-dan-ragam-corak-rumah-melayu.html>

5. Conclusion

A museum is an institution designed to represent artifacts and forms of knowledge, culture, art, or science. They are part of development to promote and maintain cultural wealth, and knowledge. Museums are not only teaching, but also transforming the knowledge of the next generation. They are a means to spread knowledge in the past, so that future generations can understand the existing relics.

Museums can be classified into three categories: Art Museums, which are museums that exhibit artifacts, paintings, and sculptures, and History and Archaeology Museums, which house artifacts, paintings, and archaeology. The National Museum is also used to protect the environment and function as a museum for people in need. In conclusion, museums are institutions dedicated to helping people understand and appreciate the wealth of human knowledge, culture, and knowledge.

The study focuses on the importance of location for museum planning, taking into account factors such as accessibility, potential, location, accessibility, infrastructure, cultural context, and accessibility. The location chosen, Jl. Tengku Amir Hamzah, was considered the most suitable.

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