

Improvement Criteria for Environs of Mandalay Royal Palace and Moat, Myanmar

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1. INTRODUCTION

Today, Mandalay Palace is a primary symbol of Mandalay and a major tourist destination. Mandalay Palace was the primary royal residence of King Mindon and King Thibaw, the last two kings of the country. The complex ceased to be a royal residence and seat of government on 28th November, 1885 when, during the Third Anglo-Burmese War, troops of the Burma Field Force entered the palace and captured the Royal Family.



Fig.1 Inside of the Palace Compound

The British turned the palace compound into Fort Dufferin, named after the then viceroy of India. Throughout the British Colonial Era, the palace was seen by the Burmese as the primary symbol of sovereignty and identity. Much of the palace compound was destroyed during World War II by allied bombing; only the Royal Mint and the watch tower survived. A replica of the Palace was rebuilt in the 1990 as with some modern materials.

ABSTRACT

Mandalay is the historical old capital, a capital of Myanmar culture. Buddhist Sasana and Myanmar traditional arts and crafts, with the life span of one hundred and fifty two year, a city which abounds in historical sites, cultural memorials and Buddhist edifices (e.g Mandalay Royal Palace). At present, many types of new public buildings are appeared Environs of Mandalay Royal Palace, and Moat Area. So, the heritage value of Royal Palace and Moat area may be destructed by new public buildings and residential buildings. The value of the environs of Royal Palace and Moat Area will be lost due to addition of public buildings and new houses. These new buildings need to pay attention on the Royal Palace and Moat area according to their location chosen. This paper is conducted to suggest and recommend for improvement criteria around the Mandalay Royal Palace and Moat. In this paper, the 26th-B Street and 80th Street among major roads environs the Mandalay Royal City and Moat area selected to study and analyze depending on the facts such as height of buildings, setback of buildings, building usages, building form, materials color, fence and other factors. After analyzing these factors, the result of improvement criteria for environs of Mandalay Royal Palace and Moat will be achieved.

KEYWORDS: Improvement Criteria, Mandalay, Old Capital, Royal Moat, Royal Palace



Fig.2 Palace Wall on the moat with Mandalay Hill in the Distance

The height of Watch Tower of the palace is 78 feet. All along the city walls there are 2800 melons for musket shooting. Thus with this people can contemplate the immense might of the military of ancient Myanmar monarchies. Each of the musket shooting holes is two feet nine inches wide. The Royal Moat is 225 feet wide and 11 feet deep.



Fig.3 Watch Tower

These monuments have their unique reflection of architectural and archeological and artistic achievements in the past. This paper is mentioned to provide design criteria for developments associated with conservation area. Moreover it is intended to purpose the way reduce impact on the cultural heritage value of Mandalay Royal Palace and Moat due to the new public buildings.

2. Study and Analyze of Existing Buildings Environs of Mandalay Royal City and Moat

In this paper, the buildings on the 26th-B Street and 80th Street among major road around the Mandalay Royal City are selected to study. It is important to conserve around the Mandalay Royal City area because the buildings on the main road that are face to face to the Royal Palace. This paper is intended to obstruct the essence of Royal Palace by new development building on major road. For the new buildings of future extension, the buildings around Mandalay Royal City should be controlled not to contrast from the influence of the character of Mandalay Royal City. It is the center of city and it has good transportation.

To conserve the areas around the Mandalay royal city, relationship between existing buildings and Mandalay royal city are studied and analyzed depending on the fact such as height of buildings, setback of buildings, building forms building usages, materials, color, fence and other factors. In this paper the building on the 26th B Street and 80th Street among the Mandalay Royal City are selected to study and analyze.

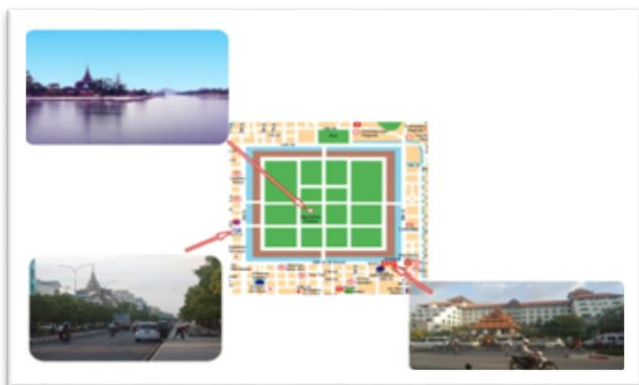


Fig.4 Environs of Mandalay Royal Palace and Moat

A. Study and Analyze of Buildings along the 26th-B Street Environs The Moat

The 26th B Street itself is about 6 miles long, from eastern MyoPat Road to western Ayerawaddy River Side. It belongs to about 2 miles besides the Mandalay Royal Moat. In 26th-B

street (Southern part of the Moat), the building such as hotel, communication center, city hall, office, religious buildings (church), and housing can be found. In 26th-B Street, it is crowded with vehicles and traffic because it is the main entrance road into downtown from the exterior of the city, Mandalay. And, it can be seen that the area along this road is the most developed.



Fig.5 26th B street on Arial Photo of Mandalay Royal Palace and Moat

- 1) Height of Buildings
The maximum height of buildings on the 26th B Street is over 90 feet and storey of the buildings is six storeys. It can be seen that especially there are three storeys above. Some are two storeys and single storey.



Fig.6 Six Storeys Building (Hilton Hotel) at the corner of 26th 66th Street

- 2) Setback of Buildings
There can be seen that the buildings on the 26th B Street are set well back form the road.

- 3) Building forms
Hotels and guest houses are five storeys. Houses are two storeys and three storeys. Most of buildings on 26th B street are with parapet. It can be seen that few buildings are single storey. Roof forms are pitched roofs, hipped roofs and few slab roofs. The building forms are compatible with the character of Mandalay Royal City. There is no building form that is obstructed to the Mandalay Royal City.

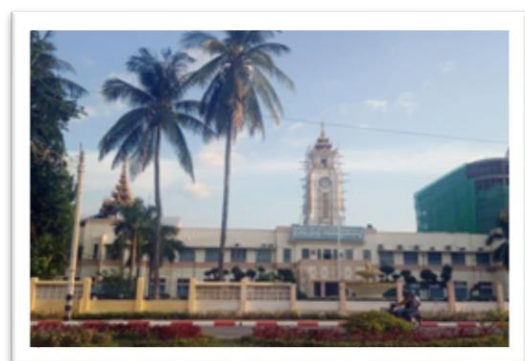


Fig.7 MCDC Building Relevant to Mandalay Royal Palace

4) Building Usages

The buildings on the 26th B Street are used for communication, public, religious, recreation, social and residential facilities.



Fig.8 Residential Buildings on 26th B Street

5) Materials and color

Timber, concrete, stone, brick, glass, steel and iron are used for material. Most of buildings are white color. A few buildings are Red-brown (rick color). The color of most buildings is relevant with the Royal City.



Fig.9 Mandalay Swan Hotel with Neutral Color that harmony to the Royal Palace

6) Fence

Only a few buildings do not have fence. Although most of buildings have their fence respectively, there is no any historic fence type on this side of the Moat. Most of fence designs match with the character of Mandalay royal City.

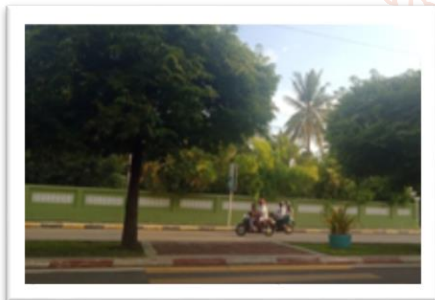


Fig.11 The Color and Design of the Fence on 26th B Street



Fig.12 Some Type of Fence on 26th B Street

7) Other Factors

There is no open space on 26th B Street. Paving materials of sidewalk are concrete, brick and stone. At present, the fence design along the moat of 26th B street has been transformed to steel bar type fence design that does not relevant and respect to essence of the Mandalay Royal Fort.



Fig.13 Undesirable Fence Design along the Moat on 26th B Street



Fig.14 Paving on The 26th B Street

B. Study and Analyze of The Buildings along the 80TH Street Environs The Moat

The 80th Street has about 2 miles besides the Moat in Western Part of it. It can be felt that is moderately pleasant part. In 80th Street, the buildings such as telecommunication office, housing, shop, and factory can be found.



Fig.15 80th street on Arial Photo of Mandalay Royal Palace and Moat

1) Height of Buildings

Most of buildings are 2 storeys to 4 storeys. The maximum height is over 60 feet. Some are single storeyed buildings.



Fig.16. Four Storeys Residential Building on 80th Street

2) Setback of Buildings.

The buildings on 80th Street are set well backed from the road.

3) Buildings forms

Roof forms are pitched roof, hipped roof and a few slab roofs. Most of buildings are with parapet (on the 80th street). It can be seen that a few buildings are single storey. The building forms are compatible with the character of Mandalay Royal City. There is no building form that is obstructed to the Mandalay Royal City.



Fig.17 Some Types of Building Forms on the 80th Street

4) Building Usages

The buildings on the 80th Street are used for telecommunication, commercial and living.

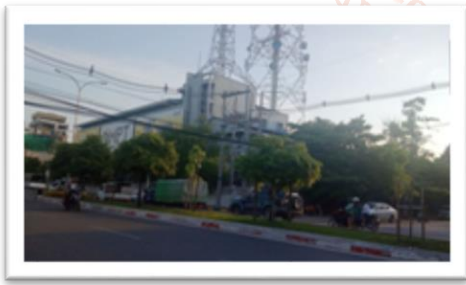


Fig.18 Telecommunication Building on 80th Street



Fig.19 Commercial and Residential Buildings on 80th Street

5) Materials and color

Timber, concrete, stone, brick, glass, steel and iron are used for material. Most of buildings are white color. A few buildings are red-brown (rick color). The color of most buildings is relevant with the Royal City.



Fig.20 Harmonious Building Color With the Royal Palace and Moat

6) Fence

Most of the buildings have fence. A few building have historic fence type. The fence designs on the 80th Street match with the character of Mandalay Royal City.



Fig.21 Simple Fence Design on 80th Street

7) Other factors

There are a few open spaces on 80th Street, Paving materials of sidewalk are concrete, brick and stone. There is no open space on 80th Street. Paving materials of sidewalk are concrete, brick and stone. There is only one building in this part that can obstruct the value of the Royal Palace and Moat. So, this building should be eliminated by substituting the redeveloped building design.



Fig.22 Paving Design without Texture and Pattern along the 80th Street

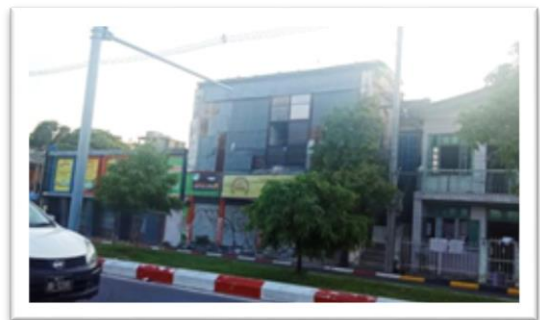


Fig.23 The Building that should be Transformed to Redevelopment Design

3. RECOMMENDATION FOR IMPROVEMENT CRITERIA

After studying the buildings on the major road around the Mandalay Royal City area, it can be found that the highest of buildings should be four storeyed building. Therefore, building height should not exceed 60 feet.

The required setback from the front and side yard property lines shall be a distance equal to the setback of the main building on the next adjacent lots within the block face. New buildings form should be conserved to be relevant with the existing buildings.

The exterior materials used for new buildings should be compatible in size, texture, surface finish and other defining characteristics with the exteriors of neighboring, buildings.

The fence height should not exceed six feet. It is important to conserve the fence designs to be in harmony with the character of Mandalay Royal City, The paving of driveway and sidewalks shall be of natural concrete, brick, cut stone, pavers, natural rock or asphalt. Choice of materials should be compactable and related with the environment.

Seating should be placed shaded areas (open space) to invite longer stays. Seats with back should be provided.

The form shape, size and height of plants are proportionately equal. It is importance to conserve to keep the form of plantation regularly (weekly or monthly).

Sign colors should be compatible with the building façade. Sign materials should be consistent and compatible with the original materials. Signage should not exceed twenty square feet in area.

4. CONCLUSION

In this research, systematic approached in literature review for assessment of development control standard manual are studied for first revise plan. And then, principle and guideline from case study of other foreign country are essential approached.

In new public buildings will appear or will not appear, around the Mandalay Royal Palace and Moat area should be conserve according to their height of buildings, setback of buildings, building usage, building forms, materials. Color, fence and other factors. All new public buildings should, respect and attention the environs the Mandalay Royal Palace and Moat area.

In Conclusion, this paper, has been pointed out the intention of not losing the essence of cultural heritage area due to construction of new buildings which should give regard to the vicinity of Mandalay Royal City area.

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