



# Designing Resort Hotel in Ruma Kaca Tourism Area with Contextual Architecture Approach.

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**Abstract.** Ruma Kaca which was originally a residence of a Niagara's sub-district, Simanindo sub-district in 1950, is now an important asset for Simanindo sub-district, considering that this area is one of the National Tourism Strategic Areas (KSPN). With the development of tourism areas, it is estimated that a large number of tourists visiting the island of Samosir. The number of tourists makes lodging accommodations in the area must also increase. This study aims to design a Resort Hotel in the Ruma Kaca Tourism Area, to improve the quality of tourism, and the cultural and historical assets of Simanindo. Ruma Kaca at that time became the main potential in the analysis of Resort Hotels with contextual architecture as a theme. With this Resort Hotel, tourists are expected to enjoy the impression of a classic and luxurious feel, as well as being able to love nature and the diversity of Indonesian culture.

**Keywords:** Ruma Kaca, Resort Hotel, Contextual Architecture

## 1. Introduction

The existence of Lake Toba with its natural and cultural wealth makes the surrounding area a priority tourist attraction (ODTW) in North Sumatra the government made Lake Toba a National Tourism Strategic Area (KSPN), consisting of the Simarjarunjung, Parapat, Pangururan, Simanindo areas and others. Of course, Samosir Regency which is in the middle of Lake Toba is a strategic

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location, plus a lot of natural and cultural wealth which lies within it which is certainly a special attraction for tourists. (Dinas Kebudayaan serta Pariwisata Sumatera Utara, 2007).

Simanindo District is one of the areas in Samosir Regency, which has the most tourist attractions in the form of historical, natural and cultural attractions. Therefore, it is important to develop tourism infrastructure, including lodging/hotels. This is in accordance with the Master Plan Detailed Plan (RIRD) for the National Tourism Strategic Area of Lake Toba, which states the need for the development of tourist ports and tourist attractions based on the potential of rural culture in this area (BPIW PU, 2017).

One of the historical and cultural attractions in Simanindo Sangkal village is Ruma Kaca. The initial function of Ruma Kaca was a private house descended from the family of King Panualang Sidauruk, before turning into a gathering place for local residents. Now, Rumah Kaca is targeting an increase in local and foreign tourists. With a colonial architectural style that has historical value (Heritage) it becomes a strong character for Ruma Kaca itself. Ruma Kaca has several supporting facilities such as the tombs of kings, the Huta Bolon museum which exhibits ancient historical objects, and there are also cultural rituals through music, Tortor dance, Sigale-gale, and Panaluan Tunggal.

With the increase in tourists, therefore the importance of lodging accommodation that meets standards, especially in the Simanindo sub-district which has the most historical, cultural and natural sites in Samosir district. Based on the study above, resort hotel needs are important in improving the quality of tourism, considering the goal is to meet human needs for recreation and tourism, because resort hotels are built close to nature which can provide peace for visitors who are good for physical and spiritual health.

## **2. Literature Review**

### **2.1 Vitznau Park Hotel**

Quoted from the [lartisien.com](http://lartisien.com) web page, Vitznau Park Hotel (Fig. 1) is located in the city of Vitznau in the Lucerne district, Switzerland, this five-star hotel (\*\*\*\*\*) has direct access to Lake Lucerne. This building has a modern and classic theme, the use of facades and materials in classical European buildings, combined with a modern theme in the interior of the building. There are public space facilities and a swimming pool on the outside of the building, which has a direct view of Lake Lucerne.

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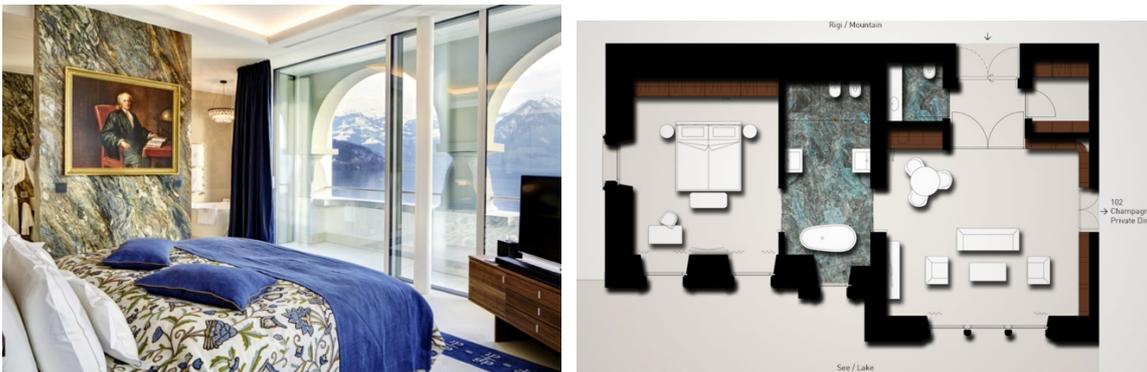
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**Figure 1** Vitznau Park Hotel

*Source: Lartisien.com*

This Vitznau Park Hotel has 48 Residents, Suites, and Junior Suites distributed based on 2 types of views, namely lake and mountain views.



**Figure 2** Vitznau Park Hotel Deluxe Residence

*Source: Lartisien.com*

This Deluxe Resident (Fig. 2) has a size of 95m<sup>2</sup>, with a view towards the lake with a living room, and balcony. This resident displays paintings by famous painters, some residents have Jacuzzis in them.

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**Figure 3** Vitznau Park Hotel Junior Suite

*Source: Lartisien.com*

This Junior Suite (Fig. 3) has a size of 48m<sup>2</sup>, with a view towards Lake Lucerne, and a balcony.

## 2.2 Louvre Museum

Located in the Louvre Museum's courtyard in Paris and surrounded by the museum's three wings, the Louvre Pyramid serves as the museum's new entrance (Fig. 4). Providing an attractive visual contrast with the existing history museum, the glass pyramid was designed and built in 1989 by architect I.M. Pei to modernize and expand the Louvre Museum. The aim was to extend the museum with an underground structure that acts as a bridge between the wings of the existing building.



**Figure 4** Louvre Museum

*Source: Pexels.com*

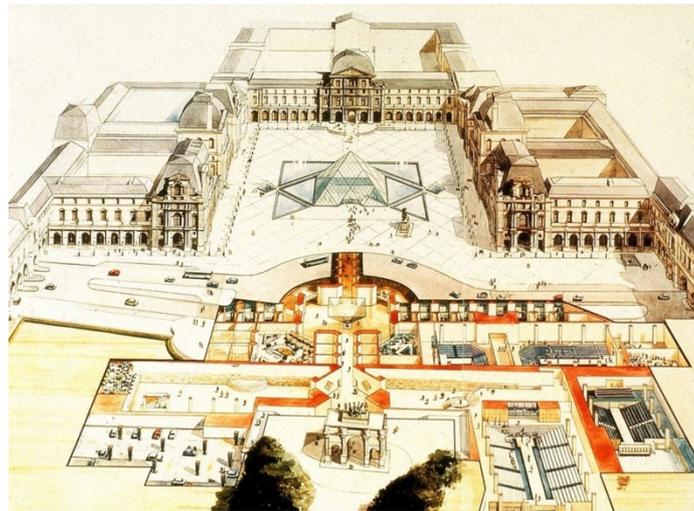
The placement of the new building in the historic courtyard provides a considerable distance from the historic building. The mass of the Louvre pyramid contrasts with the existing volume. However,

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due to its reduced height and volume and transparency, it reacts and strengthens existing relationships (Riza and Dorath, 2011). The scale of the pyramid is very appropriate because it is smaller than the surrounding monumental buildings and does not overwhelm historical buildings. The Louvre Pyramid is in contrast to the existing relationship in rhythm and proportion. The visible part of the new structure is the pyramid, a pure geometric shape that is not associated with direct urban elements (Riza, et al, 2012).



**Figure 5** Louvre Museum Plan

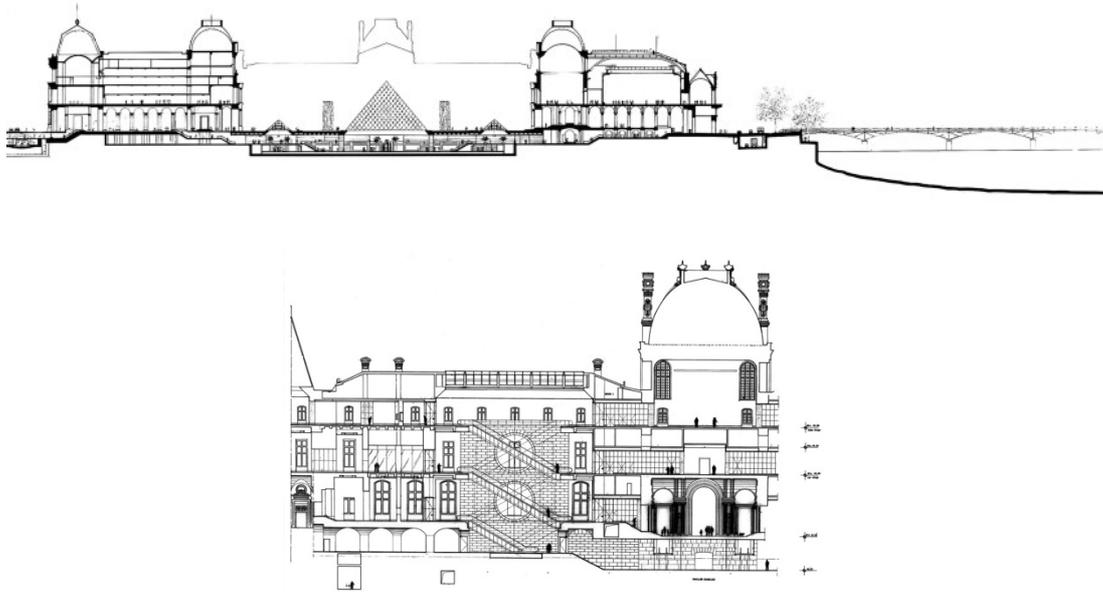
*Source: Architectmagazine.com*

The transparent materials used in the pyramids create a contrast to the large museums surrounding them, but in a harmonious manner. Through the pyramids, the historic palace can be seen both from inside and outside the new building. Therefore, when inaugurated, the glass pyramid of many architects and considered a "bold continuation of history" (Reichold and Graf, 1999: 176). Wells-Thorpe (1998:109) argues that the pyramid "is an excellent example of harmony through contrast." According to him the pyramid, as a building, legitimizes the contrasting approach, which proves that this design really does provide a solution.

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**Figure 6** Louvre Museum Plan

*Source: Architectmagazine.com*

A new pyramid that speaks its own language and represents the application of contemporary design. Designed to be rich in contrast, but visually competing with the historic surroundings. Locations can also enhance the sense of place through their own character without compromising existing quality.

In this way, the pyramid of the Louvre was integrated into the historical context of the existing historical setting with a respectful yet contrasting attitude. Because it creates contrast, it represents a contextual approach to design.

### 3. Methodology

Based on the research conducted, contextual architecture considers the image of the existing one by aligning the physical and non-physical aspects (philosophy) of the building to the building to be designed. Since the survey is descriptive and qualitative, it will be conducted in two parts. One is a direct survey and the other is a literature review.

The purpose of a descriptive research method is to provide a systematic, factual and accurate explanation of the facts and characteristics of a particular group or area. This study will be used to

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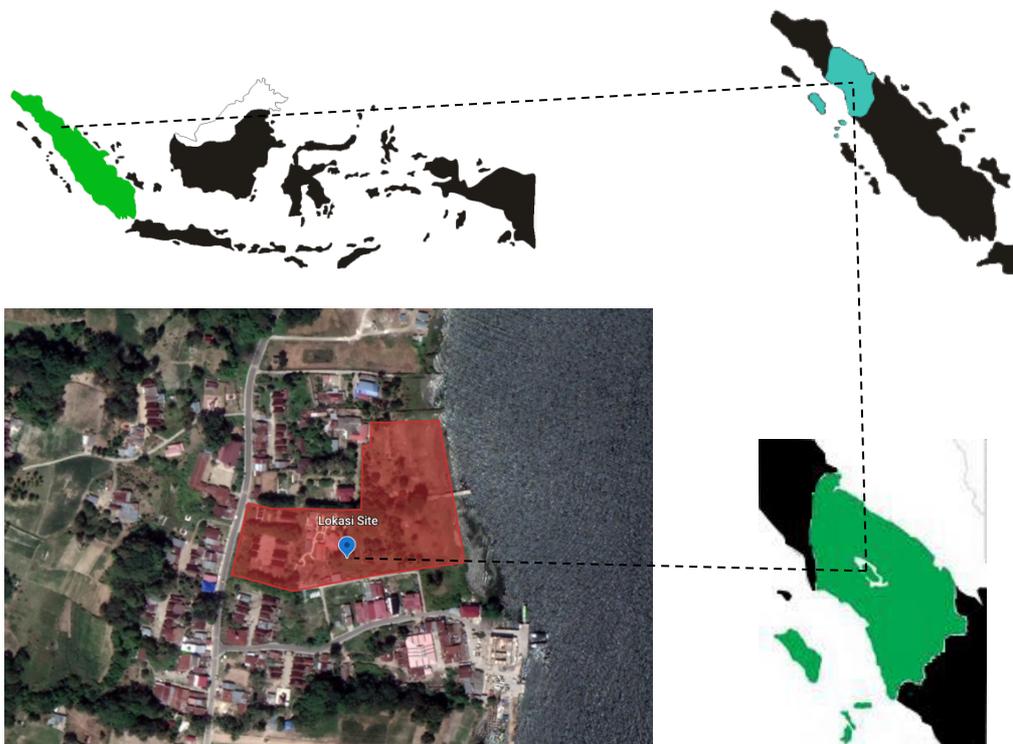
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understand how to design a resort hotel in the tourist area of Ruma Kaca, Samosir with a contextual architectural approach.

## 4. Result and Discussion

### Project Description

The site is located in Simanindo Sangkal village, which has an area of 192km<sup>2</sup> (Fig. 7). Located in Simanindo sub-district, the largest sub-district in Samosir district. Simanindo Sangkal village is located at an altitude of 899m to 1025m above sea level. The temperature in Simanindo Sangkal village is 19°C – 24°C.



**Figure 7** Site Location

Raya Simanindo street is classified as a primary arterial route. The lateral building border is at least 2 meters, the rear building border is at least 2 meters, and the building distance is 4 meters, because the front building border is at least 10 meters. (RDTR Kabupaten Simanindo 2017-2037)

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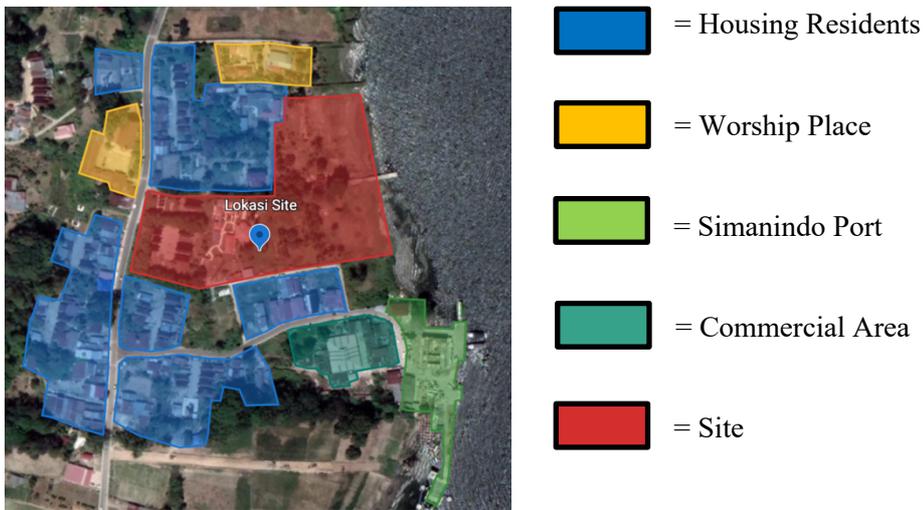


Figure 8 Site Boundaries

The building around the site (Fig. 8) contains two places of worship, namely the HKBP, and the Catholic Church, close to the Simanindo port and commercial area around the port, and housing residents with a moderate density.

**Building Mass Concept**



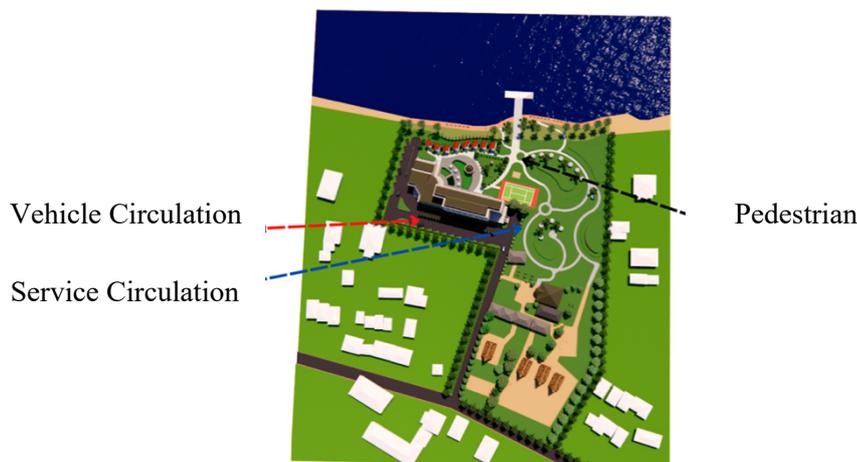
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**Figure 9** Mass Concept

### Accessibility



**Figure 10** Masterplan

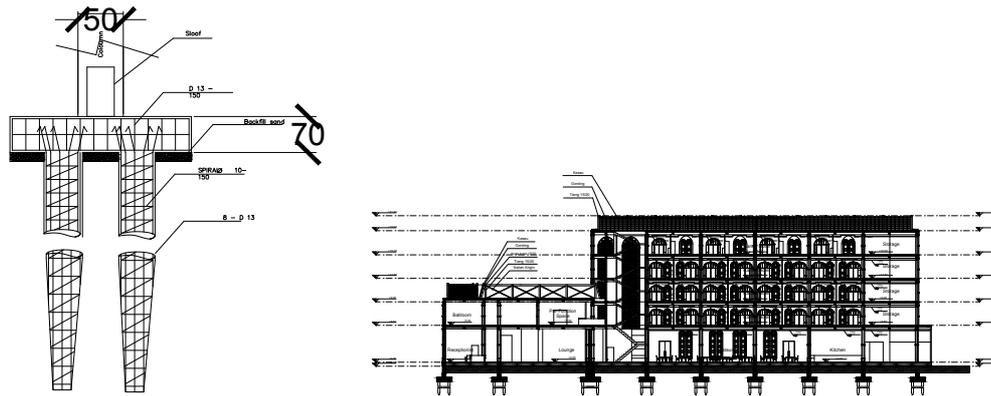
There are three circulations as in masterplan illustrated (Fig 10), namely vehicle circulation, which is around the resort hotel area which is connected to the highway, there is a service circulation as a special route for hotel managers that accesses the hotel service, then there is pedestrian circulation, which is specifically in the resort hotel area, to access various hotel supporting facilities, such as picnic areas, swimming pools, tennis courts, which have direct access to cottages, promenade, and jogging track.

### Structure

The main structure used in this resort hotel is a rigid frame and using core structure (Fig 11), because rigid frame provides architectural freedom in design. rigid frame typically imposes smaller forces on foundations than do other structural systems. The foundation used in the building is pile cap foundation (Fig 11).

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**Figure 11** Building Section and Pile Cap Foundation

### Application of Contextual Architecture

The Principles of Contextual Architecture according to the Responsive Architecture book have seven important points for responsive design (Bentley, 1985):

- (1) Permeability, accessibility, and circulation.
- (2) Variety.
- (3) Legibility.
- (4) Robustness.
- (5) Richness.
- (6) Visual Appropriateness.
- (7) Personalization.

There are some of the criteria of contextual architecture:

#### 1) Connection to environmental accessibility.

A feasible technique is to consider peripheral access and circular response to the site where the building will be constructed. In this case, resort hotel is connected with the existing through additional facility such as jogging track and picnic areas.

#### 2) Adaptation to the appearance of the facade of the building.

The technique used in this case is to apply local architectural design patterns/styles/motifs on mass forms, opening patterns or rhythms, and building facade components. This can be achieved by presenting the visual effect of the sustainable building and the surrounding buildings. Facade

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adapted inspired by the luxury philosophical aspect in Ruma Kaca, and as a contrast context, resort hotel use neo – classical architecture, that creates lux feel into the building.

### **3) Synchronization through the shape of the site and the basic form of the building.**

Use the same basic shape, but rearrange it to change its appearance. For example, the basic shape of a square building is kept in harmony with its environment, but is rearranged in a combination of square and rectangular shapes in order to follow the planned plot shape.

### **4) Adaptive innovation in building components that you want to highlight.**

Look for new shapes with the same visual effect. The search for new forms can be applied to the most striking elements, such as the shape of the roof. In this resort hotel, the applied form is the cottages, because the materials used in cottages adapted from wood as existing is.

### **5) Contrasting abstraction of the original form.**

The synergistic relationship with context is not always represented by harmonious design, which is often achieved by reusing dominant design elements found in older buildings. However, this sympathetic relationship can be achieved with contrasting design solutions.

## **3D Impression**

Resort hotel provides facilities to accommodate all the needs of the visitor, such as pool, playground, jogging track and picnic areas. Cottages also have facilities such as a swimming pool, promenade, and a resort hotel private port (Figure 12-14).



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**Figure 12** Resort Hotel**Figure 13** Playground and Jogging Track**Figure 14** Cottages and Private Port

## 5. Conclusion

In designing a resort hotel in the Ruma Kaca area, the building is designed to adapt to tropical climatic conditions and the hotel area will have a lakeside garden equipped with a swimming pool and trees that provide shade and at the same time make this area functional for tourists as a space to rest and unwind.

The contextual architectural approach applied to the building, translated into the location of the building by reducing the area facing east and west to achieve thermal comfort and reduce heat loss. To create natural ventilation and lighting, tools are provided in the form of a roster on the main staircase of the building. The concept of Luxury is derived from the history of the Ruma Kaca building itself, which was considered luxurious in its time and carries a neo-classic design which is an important aspect of contextual architectural harmony.

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