

MYNISTRY OF EDUCATION AND TRAINING

MYNISTRY OF CONSTRUCTION

HANOI ARCHITECTURAL UNIVERSITY

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**THE CONSERVATION AND THE VALUE PROMOTING OF
THE FRENCH QUARTER'S ARCHITECTURAL HERITAGE
IN THE SAVANNAKHET CITY LAO PDR**

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SUMMARY OF PHD THESIS IN ARCHITECTURE

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The thesis can be found in;

1. National Library of Vietnam
2. Hanoi Architectural University's Library

AUTHOR'S PUBLISHED RELATED WORKS

1. **Conservating and promoting the values of architectural – urban heritages of French colonial period in Savannakhet old quarter towards sustainable tourism** [Science journal of Architecture & Construction (ISSN 1859 – 350X), no. 31/2018]
2. **The feature of the Lao pillar house of French quarter's Architectural in Savannakhet city Lao PDR** [Science journal of Architecture & Construction (ISSN 1859 – 350X), no.32/2018]

INTRODUCTION

1. Reason for choosing the topic

In the historical development process, Laos accumulated many great architectural heritage funds from different cultures in many periods, including architectural heritages in the French domination period (1893-1954). These heritages have high values of architecture, art and use in the modern period, have existed in the cultural and social life in Laos for over half a century, and always play an important role in the history of national development. They are part of Laos' cultural heritages, are a system of urban and architectural heritages, and are called architectural heritages in the French domination period. This architectural heritage fund has great potential values, and urban development can impulse economic development in the locality. In addition, heritage integration into the social life and urban activities will contribute to preserving and promoting heritage values in the sustainable direction.

However, in the current process of development in the urban modernization direction, many urban areas give top priority to economic development in the short term rather than the long-term development of the architectural heritage fund. For this reason, many heritages have been violated, abused or even destroyed. In spite of bringing great economic benefits, such development results in the loss of spiritual values, which is a great loss to the community and the country or mankind. To assure balance between preservation and development, it is necessary to do proper research by using scientific and humanistic methods appropriate for heritage characteristics, values and potentials in order to propose suitable solutions to promote potential heritage values in the direction of sustainable development.

The French Quarter in Savannakhet City is one of the five quarters in the French domination period in Laos and consists of a relatively complete and diversified system of urban and architectural heritages. This Quarter was built in the history of establishment and development of Savannakhet City. These architectural heritages have great potential values, but they have not been operated to the fullest extent. This results partly from the fact that there has been no proper planning for preservation of the heritages, the architectural heritage fund has not been determined, there have been no management regulations and basic

solutions to preserve and promote appropriate heritage values, and that there have been no research papers or works on architectural heritages in the French Quarter in Savannakhet City in the sustainable direction. Therefore, the research topic “*Preserving and promoting values of architectural heritages in the French Quarter in Savannakhet City*” is scientifically significant and necessary in the current condition.

2. Research purposes of the thesis

- + Affirm potential values of architectural heritages in the French Quarter in Savannakhet City;
- + Propose solutions to preserve architectural heritages in the French Quarter in Savannakhet City on a scientific and practical basis;
- + Promote potential values of architectural heritages in the French Quarter in Savannakhet City in the direction of sustainable development.

3. Research subject and scope

▪ Research subject

The research subject is the system of architectural heritages in the French Quarter in Savannakhet City. These architectural heritages consist of structures, space and urban landscape which were created in the French domination period (1893-1954).

▪ Research scope

The research scope is determined according to space and time limits. The French Quarter in Savannakhet City is limited by routes, Mekong River water surface, green belt, flower garden, etc. At present, this quarter is the historical urban center with an area of 55.41 ha according to the city planning UA_a.

4. Research Methodology

The thesis used an approach and an analytical thinking and synthesis system to identify, clarify and process information by using the following methods:

- Survey/investigation method,
- Interview method,
- Statistical/collection method,
- Comparison assessment/forecasting method,
- Analytical method,
- Field research method.

5. Scientific and practical significance

▪ Scientific significance

+ Affirmed values of architectural heritages in the French Quarter in Savannakhet City on the basis of assessing potential values and asserting the organic relationship between cultural identity and heritage value.

+ Systematized research methods and criteria for assessing potential values of architectural heritages and dealt with many aspects of the French Quarter in Savannakhet City.

+ The thesis used a new approach for method and thinking for analysis of architectural heritages and for determination of potential values of heritage through various criteria for assessing potential values of heritages.

+ The thesis proposed a group of proper solutions according to the two research contents: *Preserving and promoting heritage values* on the basis of sustainable development in the challenge of the development process in the direction of modernization and urbanization.

▪ Practical significance

+ Supplied reliable scientific data and research results to scientific works related to architectural heritages in the French domination period that have a small and medium scale like the French Quarter in Savannakhet City.

+ Contributed to supplementing the legal environment on preservation and helping managers prepare a strategy for preserving and promoting values of urban and architectural heritages in the French domination period in cities in the Lao People's Democratic Republic.

6. New contributions of the thesis

▪ Scientific contributions

+ Built a new approach and research methodology (built a theory system and determined heritage values) in the strategy for promoting and promoting values of urban and architectural heritages.

+ Established criteria for determining potential values of urban and architectural heritages in the French Quarter in Savannakhet City.

+ Contributed to clarifying scientific assessments of architectural heritages in the French domination period and considered the heritages as an integral part of architecture and urbanity in order to propose solutions to preserve and promote heritage values in the current process of urban

development.

▪ **Practical contributions**

+ Affirmed the organic relationship of cultural identity to characteristics and values of urban and architectural heritages in the French Quarter in Savannakhet City.

+ Synthesized important data and information on urban and architectural heritages according to the research process of the thesis through research and inventory in order to establish an architectural heritage fund in the French Quarter in Savannakhet City.

+ Established criteria for determining potential values of urban and architectural heritages in the French domination period in the French Quarter in Savannakhet City.

7. Thesis's structure

The thesis consists of the parts Introduction, Contents, Conclusions and Recommendations:

- *Chapter 1:* Overview of establishment of urban and architectural heritages in the French domination period in Savannakhet City and the actual state of preservation of architectural heritages (41 pages);

- *Chapter 2:* Scientific basis and approach for assessing potential values of architectural heritages in the French Quarter in Savannakhet City (43 pages);

- *Chapter 3:* Solutions to preserve and promote values of architectural heritages in the French Quarter in Savannakhet City (63 pages);

- Reference list (84 documents) and

- 14 separate appendices (95 pages).

CONTENTS

CHAPTER 1: OVERVIEW OF ESTABLISHMENT OF URBAN AND ARCHITECTURAL HERITAGES IN THE FRENCH DOMINATION PERIOD IN SAVANNAKHET CITY AND THE ACTUAL STATE OF PRESERVATION OF ARCHITECTURAL HERITAGES

1.1 Establishment and development of the French Quarter in Savannakhet City

French architecture appeared in Laos in the late 20th century. At that time, the Lao feudal system was underdeveloped, and the Indochinese

countries including Vietnam, Cambodia and Laos were French colonies. In addition, there were many urban areas constructed by France according to the Western (European) planning such as Gia Dinh - Cho Lon, Hanoi, Hai Phong, Phnom Penh, etc. In these areas, French-style architectural works of all types were constructed according to different scales. In the French domination period, many French-style architectural works were constructed in urban areas according to various styles and are called French architectural heritage. The formation of French architectural heritage in Laos was later than that in other Indochinese areas because it was not until 1893 that such heritage appeared in Lao. At that time, King *Oun kham (1873-1894)* ruled the country and signed an agreement whereby France was asked to take away Siam's power, and France agreed. Since then, Laos was ruled by France, and France constructed a large number of architectural works and urban areas in many areas in Laos, mainly along the banks of the Mekong River so that France could colonize Laos soon. Large urban areas in Laos constructed by France include Luangphabang, Vientiane, Thakhek, Savannakhet and Champasack.

The French Quarter in Savannakhet City was formed in 1895 for the initial purpose of being the provisional capital of Laos. This urban area was constructed on a wild land in a small village by the Mekong River and was initially designed as a riverside European-style urban area. At first, France established a concession area in the Southern area (Zone of Better Resident) and constructed large architectural works including Governor's Office, hospital and residence buildings. In the urban development, the French Quarter in Savannakhet City was mainly expanded in the Southern-Northern direction along the Mekong River, with two parallel main routes including Velle de la Port du Ciel Street or Khanthabuly Street and Quai De Pavie Street or Thahae Street. In the history of urban development and expansion, in addition to native local residents, there were immigrants participating in urban development: Vietnamese and Chinese communities. These resident groups lived in the urban center and were mainly traders because there was a market in the urban center.

In 1900, the construction of Laos' new capital was completed, and the French Quarter in Savannakhet City began to be used as a large postal and

traffic center in the French domination period and then as the largest military zone in Laos which was called SENO. The urban area was established and developed in various periods and was characterized by its expansion according to the planning, and many French-style architectural works of all types had been constructed there until the French domination period in Laos ended in 1954. Then, the French Quarter became the urban center of Savannakhet City.

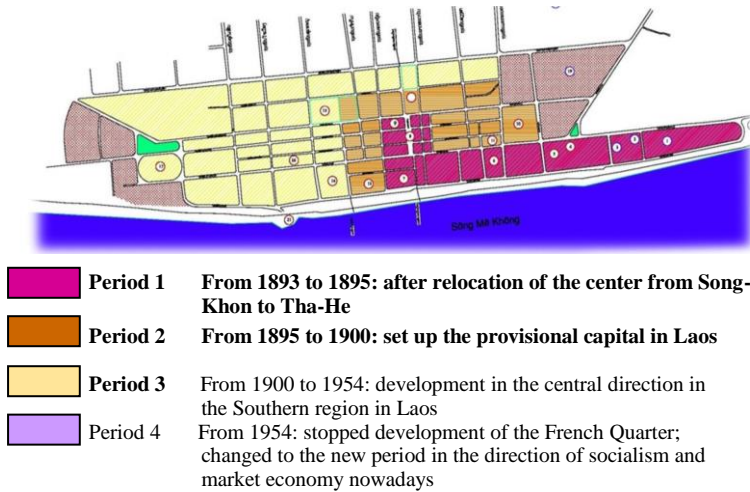


Figure 1.1: Map indicating periods of development of the French Quarter in Savannakhet City

1.2 Actual state of the French Quarter in Savannakhet City

1.2.1 Actual state of the urban area

The French Quarter in Savannakhet is composed of water surface, routes, green belt, flower garden, square and architectural works. Through the survey and analysis of the actual state, the French Quarter in Savannakhet City is a historical urban center (UA_a) with an area of 55.41 ha, is located in six villages and is inhabited by 678 households. According to urban characteristics, this urban area can be divided into 4 particular areas: Southern area, central area, Mekong riverside area and Northern area.

1.2.2 Actual state of architectural heritages

Architectural heritages in the French domination period in this urban area mainly have small and medium scales, and the number of them is small. Before 1997, it was estimated that there were about 130 French-

style architectural works. However, in 2015, there were only about 95 works, 6 of which were rehabilitated, downgraded and left fallow and were at risk of disappearing. These architectural heritages can be divided into the following two groups according to architectural type and characteristics:

+ Architectural heritages as public works: 29 works, accounting for 30%;

+ Architectural heritages as domestic houses: 66 works, accounting for 70%, including 4 types: Villa house, Single house, Pillar house and Adjacent house.

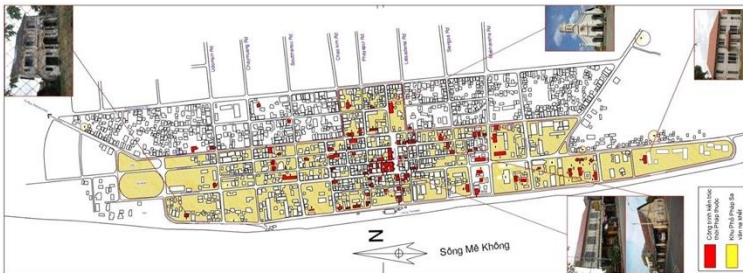


Figure 1.2: Actual state of the number of architectural works in the French Quarter in Savannakhet City

+ *Service state*: At present, most of these architectural heritages are in good condition although they were rehabilitated to ensure appropriateness for the current period. As for the service state, architectural works as public works were changed in terms of function and purpose of use and are owned by the State, and architectural works as domestic houses still perform initial functions but their owners were changed or their purposes of use are combined with other purposes (service and commercial purposes). Also, with regard to use characteristics, these architectural heritages are changed from initial house architecture to public work architecture and vice versa. This is because of economic problems and a lack of offices for state agencies. In addition, it is advisable to make the best of the availability of architectural heritages.

+ *Structural engineering*: Architectural heritages in the French Quarter in Savannakhet City mainly have 1-2 storeys and have 2 French-style frame systems including bearing wall and bearing frame. Both of these types of frames mainly use bearing brick walls and posts with a wall thickness of (20-40) cm and a post thickness of (40x40) cm - (60x60) cm. Roof frame, floor, beam and other elements such as staircase, balcony,

decorative parts, etc. were made of wood bars and panels. The architecture of bearing frames of the architectural heritages is the combination of French architecture and Lao traditional architecture of house on stilts, and other architectural heritages and other styles use bearing walls.

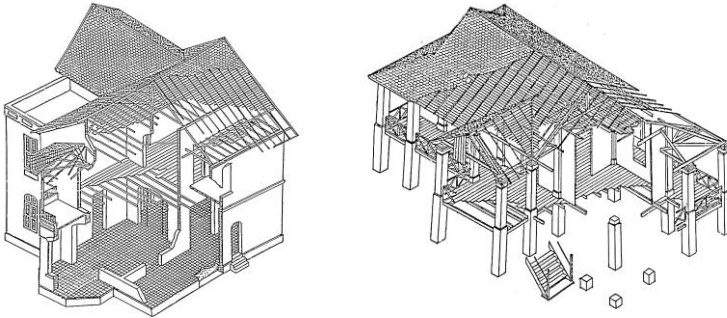


Figure 1.3: Bearing wall and bearing frame

+ *Architectural style:* Architectural heritages in the French Quarter in Savannakhet City were mainly constructed according to the duplicate architectural design, workmanship and conditions (economic, purpose, social, etc.) in the region on the basis of appropriateness for the urban scale at that time. These architectural heritages are divided into the following 3 styles:

- Neoclassical style,
- French style,
- Indochinese style.



Figure 1.4: Types of architectural styles of the French Quarter in Savannakhet City

1.3 Current situation and experience in heritage preservation

The thesis deals with the situation and experience in heritage preservation in some countries in the world in general and in Laos in particular in order to learn the following lessons:

- *Experience in heritage preservation in Asian countries*

- + Japan

- Kyoto ancient city
- Kurashiki old urban area, Okayama city

- + Dadaocheng old quarter, Taipei

- + Hoi An old quarter, Vietnam

- Situation of preservation of urban and architectural heritages in the French domination period in Laos' two large cities of Vientiane and Luangphabang.

- Domestic and foreign scientific publications and research papers related to the thesis topic.

1.4 Problems which the thesis should focus on solving

- *Shortcomings identified by the thesis*

- 1) Interest has not been taken in and special importance has not been attached to awareness education in comparison with heritage values.

- 2) Urban development has an impact on the number, style and purposes of use of the architectural heritages. This is related to the existence and characteristics of the architectural heritages.

- 3) There is a lack of official legal documents on architectural heritages; Laos has only general legal regulations on architectural heritages. There are no legal documents on specific architectural heritages.

- 4) Heritage management has not met requirements for urban development. This results in the fact that heritage preservation is not appropriate for the actual state of urban areas.

- 5) Financial resources are the main problem in implementing heritage preservation activities. The State budget is not enough for such implementation. In addition, other financial resources from individuals, traders, international organizations, etc. still account for a small proportion.

- *Problems to be solved by the thesis*

- + Determine characteristics and values of architectural heritages in the French Quarter in Savannakhet City by using the approach and the assessment of heritage potentials having accuracy and high reliability to accurately give potential values of architectural heritages for the research

purpose.

+ The research purpose and contents of the thesis include the establishment of an urban and architectural heritage fund, determination of heritage characteristics and identification of potential values to propose solutions to preserve the heritages by localizing the urban area to be preserved and solutions to preserve architectural heritages according to the actual situation, potential level and characteristics of the heritages.

+ Promote values of architectural heritages in the French Quarter in Savannakhet in the development plan in the direction of sustainable development according to the city development strategy from 2020 with a vision toward 2030.

CHAPTER 2: SCIENTIFIC BASIS AND APPROACH FOR ASSESSING POTENTIAL VALUES OF ARCHITECTURAL HERITAGES IN THE FRENCH QUARTER IN SAVANNAKHET CITY

2.1 Scientific basis for preserving and promoting heritage values

The thesis used the approach for a system of research methods and theoretical basis appropriate for research perspectives and the actual state of architectural heritages.

- *Heritage approach:*

- Collection, survey and investigation methods: to collect and verify specialized information;

- Statistical and analytical methods: to systematize data on architecture, urbanity and heritages of the French Quarter in Savannakhet City.

- Comparison and forecasting methods: to identify trends for changes in the process of urban development and changes in the system of architectural heritages in the French Quarter in Savannakhet City.

- Interview and field research methods: to know opinions of residents, specialists and managers as a basis for proposing solutions to preserve and promote values of architectural heritages according to the actual state of the heritages and urban development.

- *Theoretical basis for heritage preservation*

- + Preserve characteristics of urban landscape:

- Determine structural characteristics, particular urban spatial morphology and development trends for each area.

- Classify architectural works which need to be preserved,

rehabilitated and promoted. Architectural works of little value may be demolished, changed functionally or newly constructed.

- Determine a fund for urban landscape of the French Quarter and boundaries of the affected area of the heritages and carry out zoning for heritage protection.

- Determine the future development trend and use function of each area and relationship in overall urbanity.

- Determine the height, layout, block and locations for new urban highlights on the basis of not affecting the initial urban structure.

- + Preserve and use architectural heritages: The extension of the existence of the recognized architectural heritages is one of the basic tasks. It is necessary to integrate them into the modern society. This object can be achieved by the following 2 ways:

- Emphasize artistic and historical values by restoration, rehabilitation, repair, etc.

- Properly apply new use functions.

- *Factors affecting the promotion of heritage values*

These factors include historical process, nature, culture and society, environment, economy, tourism, etc. The preservation and promotion of values of architectural heritages depends on the factors on the actual state of the heritages:

- + Construction structure and engineering

- + Use and rehabilitation

- + Current regulations on management and preservation

2.2 International and Lao legal documents on heritage preservation

The thesis deals with contents in International charters on heritage preservation including Athens Charter (1931), Venice Charter (1964), Burra Charter (passed in 1979), Nara Document (1994), Charter on protection of historical cities and urban areas (1987), International Convention on Cultural Tourism (1999) and Hoi An Protocols (2003). These documents are combined with laws on preservation of cultural heritages and the amended legal documents to be applicable to each heritage area in relics and heritages in Laos. In general, these laws and documents do not provide for details of specific heritages, only giving an overview of relic protection and restoration rather than preservation. Also, interest has not been taken in community participation, and special

importance has not been attached to education for raising awareness of heritage preservation.

2.3 Approaches for determining values and assessing potentials of architectural heritages

- *Methodology for assessing heritage potentials*

Based on the methodology for assessing heritage potentials mentioned by Nahoum Cohen et al. (MIT, USA) in the book “*Urban Conservation, 1999*” and the author’s experience, the thesis similarly studies the preservation of architectural heritages in the French domination period at Hanoi Architectural University. The way of assessing heritage potentials will be implemented as follows:

- *Way of assessing heritage potentials*

- + Determine characteristics and areas to be preserved and classified according to different levels including history, use, aestheticism and originality.

- + Study and analyze initial data (old boundaries, land use rate, dimensions of areas, natural boundaries, etc.)

- + Determine elements which need to be preserved for the purpose of assessing heritage potentials including the way of land use, architectural style and urban activities.

- *Criteria for assessing heritage potentials*

It is necessary to consider the overall combination of tangible and intangible values of each location through establishing criteria on the basis of particular values of architectural heritages. Elements and criteria established to assess heritage potentials include the following factors:

- + Characteristics of historical space;

- + Characteristics of urban and work structure and morphology;

- + Characteristics of typical architectural works.

The assessment of heritage potentials is carried out according to proportion (%). The higher the proportion is (60%), the more valuable and potential the architectural heritage is. Depending on the purpose of assessing heritage potentials as well as characteristics and values of the heritage fund, the criteria and valuations (%) for each criterion will be different.

2.4 Establishing criteria for assessing potentials of architectural heritages in the French Quarter in Savannakhet City

▪ *Contents of criteria for assessing heritage potentials: Based on the following two contents:*

+ *Criteria for assessing urban potentials: including 55 blocks (irregardless of dimensions) used to assess potentials for urban elements and overall urban structure*

Table 2.1: Criteria for assessing potentials of preservation of overall structure and urban elements in the French Quarter in Savannakhet City

ASSESSMENTS	MAIN ELEMENTS AND PROPORTION (%)	MAXIMUM VALUE FACTORS		
A. Criteria	Characteristics of historical space	30%	1. Spiritual and emotional values	5%
			2. Social and functional values	5%
			3. Historical value	10%
			4. Historical landscape value	5%
			5. Image value	5%
B. Can be compared with other similar locations	Characteristics of urban and work structure and morphology	30%	6. True, complete and unique value	5%
			7. Particular urban structure	5%
			8. Particular architectural style and type	5%
			9. Spatial relationship and cubic proportion	5%
			10. Diversity of typical architectural style	5%
			11. Urban technical infrastructure system	5%
	Characteristics of typical architectural works	15%	12. Work and work group of typical value	5%
			13. Skills, building materials and completeness	5%
			14. Unique architectural style	5%
			15. Unique urban activities	10%
	Characteristics of urban activities	25%	16. Traditional urban activities	10%
17. Regular urban activities			5%	

Results of assessing urban potentials in the above table is

in Chapter 3 of the thesis.



Figure 2.2: Map of blocks and particular areas in the French Quarter in Savannakhet City

+ *Criteria for assessing potentials of architectural heritages*: based on the following two contents: architectural characteristics and types of architectural works as shown in the table below.

Table 2.2: *Criteria for assessing potentials of architectural heritages in the French Quarter in Savannakhet City*

ASSESSMENTS	MAIN ELEMENTS AND PROPORTION (%)	MAXIMUM VALUE FACTORS		
A. Criteria	Characteristics of historical space	30%	1. Historical value for 50 - 100 years	5%
			2. Spiritual and symbolic value	10%
			3. Historical site value	5%
			4. Value associated with historical event and celebrity	5%
B. Can be compared with other similar locations	Aestheticism and style	35%	5. Originality	10%
			6. Indigenouness in cross-culture and combination of culture and traditional architecture	10%
			7. Unique and typical architectural style	10%
			8. Aestheticism and harmony with the region	5%
			9. Unique aesthetic style	5%
	Function and activities	20%	10. Initial function maintenance	5%
			11. Regular activities	5%
			12. Harmony with urban activities and surrounding area	10%
			13. Unique function	5%
Technique and	15%	14. Unique construction technique	5%	
		15. Original materials	5%	

	building materials	16. Use of alternative materials and technique appropriate for the region and the current period	5%
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2.5 Characteristics of architectural heritages in the French Quarter in Savannakhet City

2.5.1 Characteristics of urban spatial morphology

The urban structure is formed with particular factors which are river, green belt, flower garden, square, etc. combined with the route network in the typical planning in the French domination period.

2.5.2 Characteristics of architectural heritages

■ *Architectural characteristics*: mainly 1-2 storeys, including 3 styles (Neoclassical, French and Indochinese). Remarkably, the architectural heritages in the French Quarter in Savannakhet City have local characteristics based on the combination of traditional culture and architecture with French architecture, specifically Vietnamese-Chinese adjacent house architecture and Lao house on stilts. These characteristics are also shown as follows:

+ Various types of roof: there are 6 types of roof: Gable roof, Hipped roof, Haft hipped roof Tudor roof, Hipped roof - Gable roof and Haft hipped roof - Gable roof.

+ The main facade has a small loggia and triangle wooden paint elements with various dimensions. On the wall surface, there is a bore hole for air ventilation.

+ Construction structure and technique has 2 types including bearing wall and bearing frame.

■ *Characteristics of use function*: The architectural heritages were mainly rehabilitated and changed functionally to be appropriate for the current period. In addition, the purposes of use of and owners of these architectural heritages were changed.

2.6 Conditions on resources, policy and sources for the development of Savannakhet City

1) City development strategy from 2015 to 2030:

+ The Savan-Seno Special Economic Zone “SEZ” project has 4 zones:

- Export Processing Zone
- Free Trade Zone

- Free Service Zone
- Logistic Center
- + The East-West Economic Corridor (EWEC) project has 3 objectives:

- Urban construction according to 4 functional zones
- Construction of 3 green routes running through the urban area
- Construction of an urban corridor with different functions

Basis for sustainable economic and cultural tourism development in Savannakhet City: At present, Savannakhet City has an economic growth rate of 10.5%/year. In the City, there are 119 destinations for cultural and natural tourism, 42 of which have potentials for tourism development in the sustainable direction.

CHAPTER 3: SOLUTIONS TO PRESERVE AND PROMOTE VALUES OF ARCHITECTURAL HERITAGES IN THE FRENCH QUARTER IN SAVANNAKHET CITY

3.1 Opinion on solutions to preserve and promote heritage value

- *Opinion on preservation solutions:* Proposing on preservation solutions of heritage are carried out in abreast between architectural and urban heritage, considered as an urban living complex of heritage system that cannot be separated.

Among them, it is important to maximum comply and maintain the urban overall structure, environmental space landscape, architectural style and original use functions of the heritage.

- *Opinion on promotion of heritage value:* Building the promotion solutions on the potential value of the heritage is carried out on the basis of sustainable development of Savannakhet City. With the model of cultural tourism development and urban management according to the basic goal is prolonged longevity, utilizing adapt ability and maximum exploiting the heritage which associated with general development strategy of the city.

3.2 Identification on the value of architectural heritage in the French Quarter in Savannakhet

- *The value of urban planning:* is the inheritance and continuation of using the typical model of this French Quarter planning in the development, expansibility, and construction of new cities.

- *The value of architectural heritage:*

- + *Historical Value:* Most architectural heritage is over 80 years old of history associated with the development process of the city to now.

- + *Use Value:* includes the value on original use function, adaptive value on use function and the value on functional conversion of adaptive use.

- + *Cultural and Spiritual Value:* is the cultural interference combine with the lifestyle and urban activities which always takes place in architectural heritage

- + *Aesthetic Value:* are the architectural styles and forms

- + *Technology Engineering Value:* is the solidity of the project.

3.3 Results on potential assessment of architectural and urban heritage of French Quarter in Savannakhet City

Assessment on the potential by the criteria, the total of results are determined if the value above > 60% is reached.

3.3.1 Results on potential assessment of urban

- + *Assessment on the overall structural potential:* is synthetized assessment result of 55 city block. Results on average potential assessment of this city block are determined > 70 %.

- + *Assessment on the potential of specific areas:* is divided into 4 specific areas with synthetized results in the following table:

- Southern Area = 75%
- Urban Center Area = 85%
- Mekong Riverside Area = 60%
- Northern Area = 65%

3.3.2 Results on potential assessment of architectural heritage

Assessment on architectural heritage potential is carried out according to the potential definition table, which consists of 3 levels: high level (III), medium level (II) and low level (I). With 03 contents including type of architecture, architectural styles and technical status of the project.

- *Assessment on the potential according to type of architecture,* which is conducted by 04 contents including historical value, aesthetic and style value, activities functional value and engineering and material value. Among them, assessment of architectural heritage potential divided into the following two groups:

- + Assessment on architectural heritage of public works potential. The

average results can be obtained with High potential = 82% and Average = 18%.

+ Assessment on architectural heritage potential of housing. The average results can be obtained with High potential = 75% and Average = 25%.

▪ *Assessment on the potential according to architectural style:* which is conducted by 04 contents including Origin, Aesthetic and Style, Activities functional and Status of the project. Potential assessment results calculated by average point which can be obtained with High potential = 86% and Average = 14%.

▪ *Assessment on the potential according to technical status'* which is conducted by 03 contents including project structure, technology engineering and construction material. Average results on potential assessment which can be obtained with High potential = 78% and Average = 22%.

3.4 Preservation solutions for architectural heritage adapt to French Quarter in Savannakhet

Proposing the preservation solutions for architectural heritage in the French Quarter in Savannakhet is conducted according to 2 combination subjects: architectural and urban heritage. Among them, it has been based on the assessed heritage potential level as a premise in making the following heritage adaptive preservation solutions.

3.4.1 Preservation solutions for urban

+ Proposing the preservation solutions will be based on potential level areas identified by 3 level areas (I, II and III), which conducted in the French Quarter in Savannakhet City as following:

- Preservation area of urban overall.
- Preservation area of urban component.

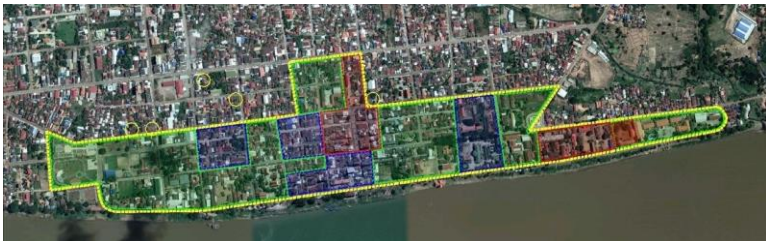




Figure 3.2: Map of overall preservation boundary of French Quarter in Savannakhet

+ Preservation solutions are given by potential level area, the results are given by high potential areas including:

- Southern Area, city block (1,3,5,9,10)
- Central Area, city block (16,17,18,19,20,21,25,26,27)
- Mekong Riverside Area, city block (22,28,29)
- Northern Area, city block (44,45,46).

3.4.2 Preservation solutions for architectural heritage

Proposing the preservation solutions for architectural heritage will be carried out according to 02 architectural groups including public works and houses. Among them, the content of the preservation solutions is also based on architectural heritage potential level according to 3 levels (I, II and III) which are combined with architectural heritage situation of each of the following works:

3.4.2.1 Preservation solutions for architectural heritage of public works

Providing the preservation solutions for architectural heritage of public works will be carried out by 03 contents including architectural style, technical status and use status.

■ Preservation solutions according to architectural style

- High Potential = 69% (20 works)
- Medium Potential = 24% (07 works)
- Low Potential = 7% (02 works)

Providing the preservation solutions according to architectural style will be conducted by styles (Neoclassic, French Local and Indochina) with the following assessed potential level:

■ Preservation solutions according to use status

- High Potential = 72% (21 works)
- Medium Potential = 20% (06 works)
- Low Potential = 8% (02 works)

Providing the preservation solutions for architectural heritage of

public works according to use status, need to pay attention to the rationality of the new use function with the original use value. At the same time, it is necessary to mention the actual conditions of the use purpose which is guaranteed not to be museumized with the following content:

- + Prioritize original use function of architectural heritage of public works to preserve and renovate adaptation to the times.

- + Architectural heritage remains original use function that it needs to be encouraged and prioritized to enhance the function value, ensure the inheritance and continuity of regular operation

- + Architectural heritage has convert the new use function that it needs to ensure the external appearance and not break the internal structure

- + Architectural heritage has a combination of new and original use function that it needs to support each other.

- *Preservation solutions according to technical status*

- High Potential = 62% (18 works)

- Medium Potential = 31% (09 works)

- Low Potential = 7% (02 works)

Proposing the preservation solutions according to technical status, need to ensure construction techniques and reasonable structure with the following remarkable:

- + Structure-based according to the bearing frame is built by bricks when choosing alternative materials to ensure the stability of the works. Adhesive material (natural mortar) need to be put into abreast research when it has renovation demand according to the traditional way.

- + Beams, floors and roof frames mainly use wood to make this part. Therefore, preservation and renovation should be respected, but due to the current conditions, it is possible to replace by mixed materials with similar or higher features such as steel and iron.

3.4.2.2 Solutions to preserve architectural heritages as domestic houses

Propose solutions to preserve architectural heritages as domestic houses which will be taken according to each phase and are divided into 3 groups: Villa house - Single house, Pillar house and Adjacent house:

▪ *Solution for preserving Architectural Heritage in form of Villa house - Single house, Pillar house*

- High potential = 75% (9 works)
- Medium potential = 17% (2 works)
- Low potential = 8% (1 work)

Content of solution for preserving Architectural Heritage in form of villa, single and stilt house shall be given according to each potential level. And about the technical status, preservation solution shall be executed according to the state of each kind of Architectural Heritage with some important contents as follows:

+ *Solution for preserving Architectural Heritage in form of villa, single according to technical status*

- Respect and keep at maximum original of style and ensure the consistence of stucture, building technique according to the frame of bearing brick wall.

- The stucture of wooden roof frame can be replaced by similar material, and the roof need to be kept according to the original with similar color but it can be earthenware tiles or plates which manufactured in industrial way in order to be convenient for reality.

- The wooden floor need to be kept as original because it is suitable for stucture and real state of Laos. The beam can be combined or replaced by iron bars or similar materials for convenience, saving and more steady than wood.

+ *Solution for preserving Architectural Heritage in form of stilt house according to technical status*

- Similar to villa, it need to respect the style and ensure the consistence of construction. The roof and beams can be replaced by similar material such as iron bars.

- Stucture of bearing frame can be replaced by modern materials in order to meet the economic condition: Beam can be replaced by steel to bear the wooden floor, and floor and wooden beam can be replaced by reinforced concrete.

- The coverage part is often made by plasterboard and can be replaced by wooden planks, these materials are made in traditional craft way and can combine with other modern materials such as light cement grout pouring in reinforced frame with similar size.

- Brick column is the main bearing part the need to be respected. However, in order to strengthen resistance for construction, it can be applied many other construction techniques but still remain the early form that is reinforced column.

- *Preservation solution according to type of adjacent house*

- High potential: 57% (31 works)
- Medium potential: 28% (15 works)
- Low potential: 15% (8 works)

Solution for preserving Architectural Heritage in form of adjacent house shall be executed according to each potential level. And about the technical status, preservation solution shall be executed according to the state of each kind of Architectural Heritage with some important contents as follows:

- This Architectural Heritage is primarily built in small land near the roadway and the roof is sloping in both sides with high slope. Preservation of adjacent house architectural heritage need to keep the early structure according to construction engineering.

- Floor, beam and roof frame are made in wood. However, if improvement need to change the material according to economic condition or construction structure so the beam and roof frame can be replaced by iron bar.

- Wooden wall frame is the main bearing frame of the construction that can be increase the thickness of the wall and pillar by construct the bricks in its outside layer and can combine with steel to strengthen the bearing capacity of construction.

3.5 Promoting the value of Architectural Heritage according to sustainable development

This is indispensable part of current the streets or historical urban, Architectural Heritage itself also need to be proud and affirm the value in community cultural life.

- *Promoting the value of heritage according to sustainability:* shall be carried out according potential value factors include: Promote spiritual value, Promote according to inheritance, Promote according to utilization, Promote according to science and technology, Promote according to urban landscape and Promote according to specific of

structure.

▪ *Promoting the potential value of Architectural Heritage in cultural tourism development*

+ *Urban space development model*

Tourism activities and association between areas that make the system of cultural tourism lines in area with the purpose of determining the center point is French Quarter in Savannakhet. Determining according to color circles include Area I, connect with other potential areas include areas (II, III, IV and VI). Each area shall be connected with different areas and converge in urban center (Area I).

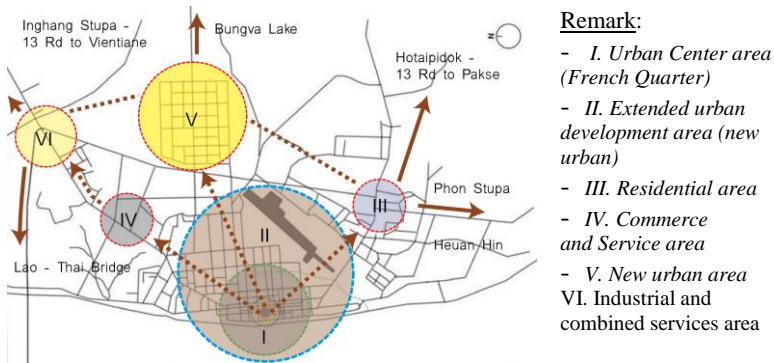


Figure 3.3: Map of urban center space development of Savannakhet + Organize cultural tourism lines according to important places

Be determined based on connection of the places which have potential promotion with Architectural Heritage system, urban space and the lines with 3 center points (3 circles = North+Center+South) have the function of connecting with other places to make the following tourism line network in the French Quarter in Savannakhet:



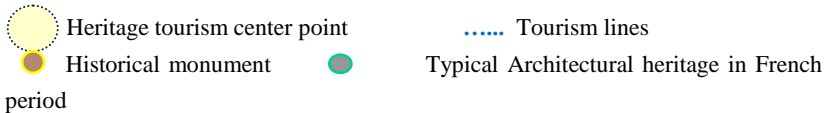


Figure 3.4: Map of organization of cultural tourism lines in the French Quarter in Savannakhet

■ *Orientation of managing Architectural Heritage and urban in sustainable development*

+ Making the criteria for management of heritage adaptation preservation:

- Criteria of preserving urban overall structure
- Criteria of preserving architectural heritage
- Criteria of preserving urban activities according to sustainable development

+ Supplementing the policies and legal documents system on preservation and promotion of heritage value in the French Quarter in Savannakhet.

3.6 Discussion

■ Evaluation methodology of potential of Architectural Heritage

+ Materializing the method of valuating the potential of Architectural Heritage with the suitable level which is possible applying in other urban areas.

+ The urgency of preservation according to preservation zoning solution in current development context of Savannakhet City.

+ Rationality of promoting value of Architectural Heritage Savannakhet according to cultural tourism development in order to enhance spiritual value, preservation awareness, build specific image of urban and promote the development of economic in area.

■ Role of value of Architectural Heritage in urban development

+ Role of using value: Architectural Heritage still operate quite effectively in urban area and contribute actively to the promotion of potential value by many different ways.

+ Role of spiritual value: develop the urban as historical quarter which is lively and contains numerous potential value.

■ Legal document system on management: according to sustainable refer to legal policies and documents of Laos in heritage preservation and urban economic development.

CONCLUSIONS AND RECOMMENDATIONS

❖ Conclusions

1) The essay can update the important information about Architectural Heritage in French Domination period at French Quarter in area and Laos. In which, it could be enumerated, predicated and identified the characteristics of Architectural Heritage at French Quarter in Savannakhet and current preservation status of Architectural Heritage of the quarters in the world and in Laos.

2) Systemizing theoretical basis about approaching method to build valuation criteria of the potential which is suitable with French Quarter in Savannakhet.

3) Proposing the solution to preserve Architectural Heritage according to the valuation result of potential and real status of the heritage as follows:

- + Solution for urban preservation by determining the preservation boundary for whole structure and components of urban.

- + Solution for Architectural Heritage preservation include architectural style, using status, technical status and potential level of heritage.

4) Promoting the value of Architectural Heritage according to following sustainable development:

- + Promoting according to sustainable development include promote spiritual value, follow inheritance, adaptable use, scientific, technic, artistic and urban landscape.

- + Promoting according to sustainable cultural tourism development model by suitable tourism activities programs and center point in tourism series in the city.

- + Orienting the management of urban in development of Savannakhet City by building criterial system and supplementing the policies on preservation and promotion of Architectural Heritage in the French Quarter in Savannakhet.

❖ Recommendations

1) During the time of researching in the French Quarter in Savannakhet, it is considered that Architectural Heritage always has the operation and change of quantity continuously because of the

development. In which, there is the exchange of using function, improvement and the owner. Therefore, the research process meet many difficulties when the research time extended and must update the information about Architectural Heritage along with the change as the continuously development of urban in the French Quarter in Savannakhet.

2) Proposing the solution for Architectural Heritage preservation is carried out based on valuation of potential and real status of the heritage. Thus, proposing the solution for Architectural Heritage preservation can be adaptable when apply to real condition of the area and the research purpose of the essay. However, to apply to similar topics which have different places and factors, it needs to have the re-adjustment and re-research according real condition but it still be applied as reference.

3) Promoting the value of Architectural Heritage as sustainable development in which, the purpose of development according to cultural tourism is the model which is use popularly in historical quarters in current period. But cultural tourism is related to many different fields and factors including social, cultural lifestyle, economic... The operation according to cultural tourism development in different heritage areas need to have other study in order to be suitable with each place and ensure the balance between development and preservation.