

# The Current State and Solutions to Improve The Quality Management of Construction Works in Lam Dong Province

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**Abstract** - The article presents the research results which include analysis of the current situation, identifying the causes affecting the quality management of construction works in construction projects in Lam Dong province. From the expert opinions, experiences and references synthesized from previous scientific research articles, the essay focuses on the matters of state management agencies, investors, applications. contractors, units that manage, operate, exploit and use construction works. The research results confirmed 9 causes of shortcomings in the quality management of construction works in Lam Dong province and propose some solutions to improve the quality management as a reference basis for state management agencies, investors, construction contractor units, units that manage, operate and exploit construction works to better serve management. construction quality management.

**Keywords** - *Quality management, construction, reality, solution, increase quality.*

## I. INTRODUCTION

A construction work is a product created by human labor, materials and equipment installed in a building, which is positively associated with the ground, possibly including the underground, upper part, ground floor, underwater and above water, to be built according to the design. Construction works include civil engineering, industrial works, transportation, agriculture and rural development, technical infrastructure and other works [1].

The quality of construction works is one of the fundamental elements of a project on the construction of works, a very important issue, directly impacting economic efficiency, human life and development. Quality of construction is not only about the durability of the building. Broadly, the quality of construction works is the sum of relationships, it is the sustainability of the works, the guarantee of optimum harmony between economic (economical), technical (security) aspects as a whole, fine arts (beautiful) and promoting efficient use of the project (the use of the work).

Besides, in the perception of many people, the concept of "quality" is limited only around the sustainability of works. In this regard, according to Tran Chung, he defined: "Understanding the quality like that is not wrong, but incomplete". That existence in the perception of many people, even some people working in state management at ministries, branches and localities, is a problem. Therefore, in some

places, the quality management of new construction works focuses on each stage without an overview. The connotation of construction quality management includes many criteria appearing throughout the process of construction investment, from project preparation to construction and installation, including warranty and maintenance. maintenance during use. In addition, the aesthetics and convenience are always considered the criteria for evaluating the quality of the project" [2].

The International Organization for Standardization [ISO] has defined quality in ISO 9001: 2008 as follows: quality is a set of characteristics of an entity, enabling that entity to satisfy its needs which have been announced or hidden. [3]

The Vietnamese standard TCVN 5637:1991 provides the principles when managing construction quality:

- Ensure the State's unified management of the work quality.
- Comply with relevant laws and construction technical standards.
- Responsible for quality control and construction quality. Quality control must be timely, objective, careful and accurate.
- Respect the responsibilities of all organizations involved in quality management. Timely notify prevention of technical mistakes that risk damaging, degrading the works or causing dangerous incidents to the works.
- Strictly implement the regime of reward and punishment in ensuring the quality of works according to the basic construction management regulations. [4]

Recognizing that problem, the quality management of construction works in Lam Dong province has always been cared for and directed by leaders of the Provincial Party Committee, People's Council and People's Committee. province, with the attention of all levels, sectors and social communities. Over the past years, the quality of construction works in the province of Lam Dong has seen many positive changes. The quality control of construction works is increasingly important, basically put into order. Most of the construction works invested with state capital basically comply with the State's regulations on the quality management of construction works. Many projects have been checked and put into operation by the investor, bringing practical effects,

good quality assurance, meeting technical, aesthetic, usability and service requirements. real life of social community and local socio-economic development. Therefore, the study of the topic "Solutions to improve the quality of construction works in Lam Dong province is a meaningful requirement in terms of theory as well as practice"

## II. CURRENT CONDITION

### A. Overview

Located in the key economic region of the South Central Highlands, Lam Dong is a province with relatively strong socio-economic development. GDP growth excluding oil and gas on average is about 5% / year, in which there is a significant contribution of construction investment. Over the past years, the province has invested thousands of billion VND from the state capital to invest in the construction of technical and social infrastructure, creating a major turning point for the socio-economic development local tourism, fundamentally changing the face of urban and rural areas, ensuring firmly national defense and security in the area, contributing to making Lam Dong one of the localities with economic development. Socio-economic is high in the key economic region of the South Central Highlands and in the country.

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### B. Existing problems

Over the past years, the quality of construction works in the province has seen many positive changes. The quality control of construction works is increasingly important, basically put into order. Most of the construction works invested with state capital basically comply with the State's regulations on the quality management of construction works. Many projects have been checked and put into operation by the investor, bringing practical effects, good quality assurance, meeting technical, aesthetic, usability and service requirements. real life of social community and local socio-economic development.

However, through the actual inspection and review by state management agencies on the quality of construction works, besides the results achieved, the quality of construction works in some public investment projects. There are still shortcomings and limitations in the province. Specifically, on the following sides:

- Some design works are of low quality and have not complied with the State's technical standards and regulations. Unsuitable architectural form, lack of creativity, heavy copy, fast outdated. The use of the work is not suitable, when it is

redundant, when it is insufficient, it is difficult to exploit the work effectively;

- Some projects are not of high quality, not meeting the requirements of use well, new projects put into operation in a short time have damaged such as wall cracking, leaking, ground removal, subsidence, rust of iron and steel structures, damage to technical systems, equipment, etc., many times need to be repaired, causing costly and wasteful of capital and causing negative public opinion in society.

The reason for these shortcomings in the quality of construction works mentioned above is largely due to management work. The management of the work quality has not been performed well at all stages, from management of state agencies, management of entities involved in construction activities to management during the exploitation process, use. Therefore, in order to improve the quality of construction works in general and construction works with public investment in particular, it is necessary to clearly identify the cause of the limitations that reduce the quality of works to find solutions systematic and synchronous, in order to improve investment efficiency, long-term use quality of the project, ensure absolute safety to human lives and social assets...

## III. REASONS

### A. Influence from policy mechanism

#### *Legal grounds:*

- Law on Public Investment dated June 18, 2014 (for state-owned projects);
- Law on Construction dated June 18, 2014;
- Decree No. 59/2015 / ND-CP dated June 18, 2015 of the Government on management of construction investment projects;
- Decree No. 42/2017 / ND-CP dated April 5, 2017 of the Government amending and supplementing a number of articles of Decree No. 59/2015 / ND-CP dated June 18, 2015 of the Government on construction investment project management;
- Decree No. 68/2019 / ND-CP dated August 14, 2019 of the Government on management of construction investment costs;
- Circular 09/2019 / TT-BXD dated December 26, 2019 of the Ministry of Construction guiding the determination and management of construction investment costs;
- Decree No. 37/2015 / ND-CP dated 22/4/2015 of the Government detailing the construction contract;
- Decree No. 63/2014 / ND-CP dated June 26, 2016 of the Government detailing the implementation of a number of articles of the Bidding Law regarding contractor selection;

#### *a) Project preparation phase:*

- Organize the preparation, appraisal and approval of the pre-feasibility study report (if any);

- Prepare, evaluate and approve the feasibility study report or construction investment economic - technical report to consider, decide on construction investment and perform other necessary works related to the preparation project;

*b) Project implementation phase includes the following jobs:*

- Carrying out the land allocation or land lease (if any);
- Prepare the construction ground, clear bombs and mines (if any);
- Construction survey; formulation, appraisal and approval for construction design and cost estimate; grant construction permits (for works that require a construction permit);
- Organizing contractor selection and signing construction contracts;
- Construction works;
- Construction supervision; advance payment, completed volume payment;
- Acceptance of completed construction works;
- Handing over the completed works and putting into use;
- Operate, test and perform other necessary jobs;

*c) The completion of construction and putting the project's works into operation and use includes the following jobs:*

- Construction contract settlement, construction work warranty.

*B. Causes of problems and limitations on the quality of construction works*

*Firstly*, the system of legal normative documents of state agencies, in fact, has not been promulgated in time, lacks synchronization. Many regulations are inconsistent or inconsistent with reality;

*Second*, the state management apparatus of construction work quality is still thin and its capacity has not met the requirements well. At the provincial level, departments in charge of specialized construction works do not have sufficient number of professional staff to perform the state management of work quality; In localities, in the specialized construction department, the percentage of engineers with specialization in construction remains low, and the quality is uneven. Especially at the commune level, there is no professional or technical staff, who is in charge of many fields, and has not received professional training. Therefore, the quality of investment project appraisal, design and cost estimates of construction-specialized agencies is still flawed; State management on the quality of construction works is ineffective, manifested in the inspection work has not had timely and systematic plans, lack of post-inspection. The handling of violations is not resolute, the coordination in the system of apparatus is still limited;

*Third*, many works are delayed due to difficulties in compensation, site clearance or spreading investment leading to a lack of capital, causing price slippage, construction cessation also affects the quality. amount of work;

*Fourth*, many agencies and units assigned to the task of investors do not have sufficient construction expertise, many are part-time, so the quality management of construction works is very limited. Many investors cannot control the quality of the project, mainly contracting consulting organizations to carry out from the survey, design to the supervision and acceptance of the project, so the quality of some works has not high;

*Fifth*, the survey, design and selection of design solutions, the use of construction materials and construction technology are still limited, especially the project formulation and basic design steps are not of sufficient quality. Therefore, to the design stage in the following steps, there must be adjustments and supplements to prolong the project implementation time; uncaredful survey, lack of reliability; project planning under the investor's subjective. Currently, there are many newly established consulting organizations, limited qualifications and experience, lack of internal quality management system, there is a phenomenon of some consulting firms implementing services in the form of brokerage or leasing, lack of capacity, causing unfair competition in consulting activities. Therefore, in the project planning process, the work design still has many shortcomings;

*Sixth*, the organization of bidding to select consultants, from project planning consultants, survey consultants, design consultants to verification consulting, supervision consulting, quality verification consulting in current conditions still heavy formality, less competitive, affecting the quality and progress of project implementation;

*Seventh*, the compliance in the construction process and the contractor's capacity are generally weak, not meeting the requirements. The contractor's quality management system is inadequate and has not yet complied with the quality management conditions required by the project's technical standards; Measures to ensure work safety, labor safety, and implementation of environmental regulations are still overlooked. Construction sites are not implemented scientifically, construction sites are messy; The quality and cost control apparatus for the contractor's quality assurance have not been given due attention; using substandard materials, supplies and equipment into the work. The risk of violating the quality of construction works is great and potential;

*Eighthly*, the management and quality supervision in the implementation process of the investor, the PMU, construction supervision consultancy, author supervision of design consultants... have many weaknesses lack of professionalism. The supervision consultant team has not met the requirements in the quality management on the project, does not regularly follow the site, is easy to accept the materials, materials, and equipment that are not up to the standards to be put into the work. submission, not resolutely handling violations of quality;

*Ninth*, the management and use of the works of the using units are not paid adequate attention, the sense of use is also limited, affecting the quality of the work. The regular maintenance, maintenance and repair work for the project according to the

maintenance process is not interested by the using management units, so the work quickly degrades, reducing the work's life.

#### IV. SUGGESTED SOLUTIONS

##### *A. Improve the efficiency of construction quality management by state management agencies*

- Develop management capacity of state management agencies on the quality of construction works including People's Committees at all levels, Department of Construction and Departments of specialized construction management, district functional departments. Consolidate sections specialized in state management of work quality at specialized construction management departments. At the district level, it is necessary to add a technical and professional force to the specialized construction departments to have enough force to manage the state of work quality as decentralized. At the commune level, it is necessary to have professional staff with a college degree or higher, and for the time being, priority should be given to wards and towns. Regularly organize the evaluation and classification of the existing cadres, civil servants and public employees in order to plan for professional training. In the short term, it is necessary to soon establish a Construction Inspection Department in accordance with the provisions of Joint Circular No. 07/2015 / TT-BXD-BNV dated November 16, 2015 of the Ministry of Construction and the Ministry of Home Affairs regarding the functional guidance. , powers and organizational structure of specialized agencies under the People's Committees of provinces and centrally-run cities, People's Committees of districts, urban districts, towns and provincial cities in the fields of state management in the construction industry;

- Promulgate regulations on coordination among branches, specialized agencies of the province and district agencies; to soon issue a decision to decentralize, authorize the quality management of construction works for localities and branches according to the State's regulations and the actual local situation;

- Departments of Construction and specialized construction management departments need to actively propagate and disseminate legal documents to subjects participating in construction activities; guide the quality management process in investment project formulation, survey, design for investors, project management boards and related organizations and individuals for reference and application;

- Construction-specialized agencies need to improve the quality of the appraisal of investment projects, construction design and cost estimates; strengthen inspection, examination and verification of the quality of construction works; resolutely handle violations of the construction work quality; statistics, posted on the website of the Department of Construction, consulting contractors, construction work violating the quality of construction works for investors to pay attention when choosing to participate in project implementation. Quality inspection activities need attention to accurately and comprehensively assess the quality of the project.

##### *B. Improve the efficiency of construction quality management of investors*

- On the basis of the assigned functions and tasks, it is necessary to soon consolidate the apparatus of the specialized and regional PMUs of the province and districts to ensure the capacity conditions for these units according to the current regulations;

- The investor must have a specialized department to supervise the consulting contractors in the contract performance. Having a plan and measures to select the real qualified and qualified contractor by many channels, through reality, not just checking on the file;

- Quality management is under an economic contract, where the quality requirements should be detailed in the contract. This is a mandatory legal requirement and an effective remedy for the investor to ask the contractor to implement in order to ensure the quality of the work.

##### *C. Improve the efficiency of construction quality management by contractors*

- Increase inspection and supervision of the investor's bidding to consider the selection of qualified and experienced contractors suitable to the contractor; prevent negative manifestations in bidding to create a healthy competitive environment;

- Strengthen inspection of consulting and construction contractors' activities. Consulting contractors are only allowed to perform jobs that are suitable to the actual capacity conditions; enhance the capacity of project implementation actors (developers, supervisory contractors, design consultants and construction contractors) by increasing accountability of stakeholders according to the sanctions. The principle is that the wrongdoer must compensate for the damage caused by his fault, if any. Surveying, designing, constructing, supplying equipment and other related contractors are responsible for the quality of work performed by themselves even after the warranty period;

- Strengthen inspection and strictly handle contractors who violate regulations on quality assurance of construction works in order to gradually form a transparent environment in construction investment management.

##### *D. Improving the effectiveness of construction quality management of the managing and using units*

Disseminate and widely propagate to the construction management and user units and other subjects fully aware of the importance of construction maintenance. The construction management and user units only receive the work and put it into use when there are documents about the maintenance process. During the use process, the units must appoint staff in charge of maintenance; organize training, propaganda and education so that all officers and employees in the agency have basic general knowledge about maintenance, thereby being conscious of the use and operation of the works as well as implementation. maintenance according to approved procedure. Make an annual maintenance plan according to the



approved maintenance process to proactively propose competent authorities to arrange funding for maintenance.

In addition, in the process of using the building, the user must raise the awareness of building protection, train staff and employees in their agency or unit to strictly follow the operating procedures. use works; promptly repairing minor damages to prevent arising into major ones affecting the quality and life of the project.

## V. CONCLUSIONS

In short, the quality of construction works is a very important factor in the construction investment project. Construction quality management must be done well, closely and seriously at all stages, from the work of identifying appropriate investment policies, ensuring feasibility; the formulation, evaluation and approval of investment projects, work construction design and cost estimates; organizing the selection of consulting contractors and construction works; construction supervision and work acceptance; The last one is the management, exploitation and use of the project. At each stage, related organizations and individuals must improve their responsibilities, strictly comply with the State's regulations on construction project management, construction quality control and maintenance. In this way, the quality of construction works invested from public investment capital will really bring into play the efficiency of construction investment.

## V. RECOMMENDATION

Request the Ministry of Construction to study and propose to the Government to amend the Decree No. 46/2015 / ND-CP dated May 12, 2015 and Decree No. 59/2015 / ND-CP dated June 18, 2015 of the Government. towards stronger decentralization for localities to carry out the work of design appraisal, estimate, and inspection of construction work acceptance (from grade I and below);

Request the Ministry of Construction to soon review and adjust the Circular No. 03/2016 / TT-BXD dated March 10, 2016 on decentralization of construction works and guidance on application in management of construction investment activities. in the direction of reducing the building grade to suit the local practical conditions and international integration;

The Ministry of Construction is requested to have a comprehensive study plan on the management of construction investment costs in our country today. Currently, our country uses the system of cost estimates announced by the Ministry of Construction to determine cost estimates and settlement of investment costs. However, the current norm system is too outdated, very wasteful, not in line with reality, but must be applied to projects using state capital, which is one of the reasons leading to the rate of return. investment of public investment projects is higher than that of private projects;

Request the Provincial People's Committee to study and allocate more staff for specialized construction agencies (Department of Construction, departments of specialized construction management, construction management offices under People's Committees of districts and cities). in order to have enough personnel to well perform the tasks according to

the provisions of the Construction Law and its guiding documents.

## REFERENCES

- [1] Construction Law No. 50/2014 /QH13 dated June 18, 2014.
- [2] Tran Chung, *Improving the efficiency of construction quality management. The foundation for international integration.*
- [3] ISO 9001: 2008, Quality management system according to international standards.
- [4] TCVN 5637: 1991: Construction quality management of construction works - Basic principles.
- [5] Decree No. 06/2021/ND-CP on Jan 26, 2021 on quality management and maintenance of construction works.
- [6] Decree No. 59/2015 / ND-CP dated 18/6/2015 of the Government on management of construction investment projects.
- [7] Decree No. 68/2019/ND-CP dated August 14, 2019 of the Government on the management of construction investment costs.