

# ***Talking about the Defect Control of the Building Decoration and Renovation Project by the Owner***

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**Abstract:** Building decoration and renovation project refers to covering the existing building main body with new decorative finishes, further designing and improving the existing building space effect, and improving and making up the deficiencies of building space, so that the building space can meet the use requirements and become more personalized. The implementation of such a project is different from that of a new project. In addition to considering the functionality of the project after reconstruction, it also takes into account the original situation and environment of the building. Drawing design and project cost preparation during project implementation are important work in project implementation management. The number of design defects and cost preparation defects directly affects the management quality during project implementation. In order to ensure the better implementation of the project, the Owner shall conduct in-depth understanding and management in each step of drawing design and project cost preparation. Only by "looking ahead and looking behind" can the defects in project implementation be effectively controlled.

## **1. Grasp the Spirit of National Policies and Documents, Standardize Design Documents, and Conform to Market Rules**

Building decoration and renovation is an engineering construction activity that uses decoration materials to decorate the exterior and interior of buildings and structures to make the interior and exterior spaces of buildings and structures meet certain environmental quality requirements. In order to standardize management, the Tenth Executive Meeting of the Ministry passed the Regulations on the Administration of Building Decoration on July 28, 1995, which was promulgated and came into force on September 1, 1995. In April 2009, the Drawing Standards for Interior Decoration of Housing Buildings, which was approved by the Ministry of Housing and Urban Rural Development of the People's Republic of China and compiled under the leadership of Professor Xiangsheng Gaof of the School of Architecture of Southeast University, was approved by the Ministry of Housing and Urban Rural Development and announced nationwide. It is also the first national industrial standard in China's architectural decoration design industry. The preparation and promulgation of the Regulations on the Administration of Building Decoration and the Drawing Standards for the Design of Interior Decoration of Buildings marks that the building decoration industry is gradually moving towards legalization and standardization, so that our design, construction and other work will have

rules to follow.<sup>[1]</sup> As the construction unit, we can only make preparations for the smooth implementation of the project if we master and fully understand the spirit of various specifications, rules and regulations and other documents issued by the national construction administrative department. In order to do this work well, we need to do the following: First of all, for the renovation project, the owner must deeply investigate the shortcomings of the project's use function before the renovation and the functional requirements of the project after the renovation; Secondly, the owner unit and the design unit should fully communicate and improve the design documents to inform the owner's needs, so that the designers can learn to think in terms of the owner unit's position and think about what the project should do and how to do it; The owner unit and designers should fully interpret the design specifications, respect the industry rules and relevant rules and regulations, and avoid touching the red line.<sup>[2]</sup> Designers should not be required to blindly adhere to the owner unit and violate some design principles, such as: ignoring the fire demand and structural safety, changing the original building structure and randomly adding or reducing walls. Before construction, carefully organize the design, construction, owner unit and relevant departments to carry out joint review of construction drawings. When it comes to difficult projects such as demolition, relocation and original concealment, it must be clear during the joint review of drawings.

## **2. Scientific Compilation of Construction Cost of Building Decoration and Renovation Projects**

After liberation, in order to recover the national economy, China formally promulgated the National Construction Engineering Labor Quota in 1955. After several modifications and supplements in the following decades, a complete set of quota data was formed, including the National Unified Construction Engineering Quota and the National Unified Construction Decoration Engineering Consumption Quota GYD-901-2002.<sup>[3]</sup> The project quota is prepared by the national competent departments at all levels in accordance with certain scientific methods and procedures, is a necessary condition for the preparation of scientific and reasonable project cost, and is also a necessary condition for promoting the orderly development of the entire construction industry.

### **2.1. Be Familiar with the Role of Project Cost in the Management of Building Decoration and Renovation Projects.**

Type of project cost. Investment estimate, design estimate, revised estimate, construction drawing budget, construction budget, bidding control price, bidding quotation, contract price, project settlement, and completion final account.<sup>[4]</sup>

The role of project cost in project construction. The project cost is the basis for project decision-making, as well as an important basis for project financial analysis and economic evaluation; It is the basis for formulating investment plans and controlling investment. A correct investment plan is conducive to the rational and effective use of funds; Is the basis for raising funds; It is an index to evaluate the investment effect, and the cost of each project forms an index system; It is a means of reasonable profit distribution and adjustment of industrial structure.

### **2.2. Get Familiar with the Site, Define the Purpose of Reconstruction, and Scientifically Prepare the Project Investment Estimate.**

The building decoration and renovation project is different from the new project. When preparing the investment estimate, the owner should do the following: first, be familiar with the project itself, know its shortcomings in the use process, and be able to define the use function of the project after transformation; Secondly, we should grasp the shortcomings of the three interfaces and space functions of the existing project, and make clear why and how we change.<sup>[5]</sup> In the process of

preparation, the owner unit shall go to the site to investigate the project in combination with the original project completion drawings, understand the current situation around the project, understand the current situation of its concealed works and compare whether it is consistent with the drawings, which is conducive to better improving the project use function and effectively avoiding omission in the investment estimation.

### **2.3. Have the Ability to Read Drawings, Be Familiar with the Construction Process, and Ensure the Smooth Completion of the Project Budget.**

As a project manager, the level of map reading ability and familiarity with the construction process determine the quality of its management work, which is also one of the necessary conditions to ensure the integrity of the project budget. During the drawing review and budget review, the Owner shall ensure whether the functional requirements of the project shown in the drawings are missing and complete after reconstruction; After the budget unit has prepared the bidding control price of the project, it shall compare the list according to the drawings. The comparison contents include: whether the parts and sub items on the list are complete or not; Whether the project description is complete and specific (such as demolition of the original building, etc.); The contents that are not fully expressed on the drawings shall be described on the project features (such as the markings on the road, etc.). The preparation of the project budget is most feared by the employees who are careless or lack of on-site experience and are not familiar with the construction process. Some people will say that these are all the work of designers and budget personnel. Why should the owners do what they want? In fact, in this work process, the Owner's review work is mainly for auxiliary designers and budget personnel. When the designers and budget personnel cannot fully understand the Owner's transformation intention in the work process, the Owner's auxiliary review is particularly important.<sup>[6]</sup> The Owner fully understands the intention of the design documents and the auxiliary review of the use functions, and timely detects and fills the gaps, which is one of the important means to avoid project omissions and one of the effective methods to control the defects of the project.

### **3. Reasonably Use the Provisional Sum in the Project Budget and 5% - 10% of the Contract Price**

The cost composition of the building decoration and reconstruction project has certain particularity. The reconstruction project is to redesign and construct based on the existing structural main body and in comparison with the building construction drawings and structural drawings.<sup>[7]</sup> During the implementation of the project, because a large number of concealed works and partial illusion of the status quo are involved, the project may have problems such as design, budget omissions, errors, etc. When these problems occur, we will add items and increments, The provisional sum in the project budget shall be used, even exceeding 5% - 10% of the contract price. Part of the temporarily listed metal in the contract price, which belongs to the Owner's reserve fund during the project implementation, and an amount for the cost of goods, materials, equipment, services and other unexpected events in the contract; Because of its particularity, when using this fund, the owner unit should have a strict budget control and application in advance, and a strict review afterwards. In order to ensure the reasonable and effective use of the provisional sum and 5% - 10% more than the contract price, the Owner must strictly supervise and manage the overall quality and cost of the whole project. In case of design omission and budget omission during the construction process, the Owner should not unilaterally listen to the lobbying of the construction party, and should pay attention to the following points: strengthen the contract management, and use the provisional sum even more than 5% - 10% of the contract price when involving additional items

and increments.<sup>[8]</sup> Before use, you must thoroughly understand the terms and regulations, especially the cost involved in the contract such as the construction period, the settlement method of the price, and the settlement of default disputes after the addition and increment, so as to avoid unnecessary losses and red lines caused by disputes arising from unclear contract terms in the future; Compare the drawings and lists on site, determine whether there are omissions and determine the size of design errors to check and fill the gaps, make a budget according to the bid price after determining the errors, and then determine the application for the amount of missing items according to the provisional sum and the amount exceeding 5% - 10% of the contract price; For the added items and increments, the Owner and the Supervisor shall do a good job in daily inspection and management. For the concealed quantities, they shall be the key inspection objects during the handover and acceptance, and the situation that the construction is not carried out according to the rules and regulations shall be stopped in time to ensure the standardization of the project construction; The audit on the use of provisional sum and 5% - 10% more than the contract price is very strict, and the process data must be standardized.<sup>[9]</sup> For additional items, incremental design and various related procedures in the construction, strict examination and approval must be carried out, especially the compliance of the instructions submitted to the superior department to ensure their standardization and legitimacy.<sup>[10]</sup>

#### 4. Conclusion

Building decoration and reconstruction project is a very complicated project with various situations. It not only needs to consider whether the new use functions of the owner are satisfied after the reconstruction, but also the original environment and conditions of the building.<sup>[11]</sup> The time, manpower and material resources consumed are also huge. If there is no effective management, no "looking ahead and backward", or no effective treatment when problems occur, Will lead to the failure of the project, and ultimately affect the progress of the entire project. Therefore, in the process of reconstruction, the design work and cost control work must be paid enough attention by the owner. Scientific and reasonable design of the project and standardization of project cost compilation are key factors that affect the success of the building decoration and reconstruction project. To ensure the overall quality of the building decoration and reconstruction project, The Owner shall: the management members of the Owner's project team must be professional - "professional people do professional things". The Owner shall "look ahead and backward" in the management of design, and shall closely cooperate with the designers in a timely and effective manner; The management of project cost, control the budget, do a good job in the field survey of project status and concealed works, and ensure that the design and budget can not be missed. In the final analysis, the Owner should ensure that the design does not lack functions, and the budget does not omit items and quantities, as well as the rational use of human and financial resources; Establish a scientific project management system, control the budget price within a reasonable range under the condition of perfect functional requirements, and ensure that all parts can be implemented according to the plan. During the project implementation, the control of engineering design and cost is a problem we have to face. Only the owner with certain design and cost capabilities can achieve a good management of the project, ensure better defect control in the project, and better complete the project implementation.

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