

Research and Analysis of Engineering Cost Management in the Design Stage

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Abstract: The construction cost is the construction price of the construction project. Generally speaking, due to the construction project with a long cycle, frequent changes in production factors and product single, fixed characteristics, making the cost of construction projects. If to construction engineering cost control well, to the owners will reduce the cost, in terms of construction enterprises will increase profits. The construction project cost control, to the owners will increase the cost of construction enterprises will reduce profit or even a loss. In this sense, the construction project cost management is an important part of the construction project management, we must adopt scientific management method, reasonably determine the cost and effective control of cost, in order to maximize for the owners save expenditure, for construction enterprises to improve business efficiency.

Keywords: Architectural design engineering cost; Engineering change project budget; Bidding investment estimation; Project decision-making

1. Introduction

The key of construction project cost lies in the design phase of the project. The influence of different construction stage on the engineering cost is different, the design phase of the project cost is far greater than the project implementation stage. However, for a long time, generally ignored design phase of the project cost control, the cost management's main focus is placed in the project implementation stage 11 audit construction drawing budget and settlement of project cost, the breakdown.

2. The Status of the Design Phase in the Field of Engineering Construction and Engineering Cost Management

2.1. Design is an important part of the project investment

Any a project from the project plan to the completion of delivery, must project experience, examination and approval, the establishment of budget, construction bidding, completed acceptance of a complete set of procedures, and design stage is an important step in the process. Project feasibility study and investment estimation: before the project decision-making, the government and the administrative departments in accordance with the project feasibility study report and investment estimation, whether the project has the project conditions. Project expansion design and project budget: the competent administrative department according to project design and project budget, review the project design scheme is reasonable, the project budget is in the construction of the plate. Project construction plan design and construction is the main implementation of the project construction

process. Construction enterprise according to the construction drawing and construction drawing budget, and the organization and implementation of the project. In the construction of the design change and change settlement is the construction unit, supervision unit, construction unit according to the design change visa, the implementation of the project change, and for the project change settlement procedures. Completion of the project and the budget of the project is the construction unit, construction unit, the regulatory authorities in accordance with the design, the project completion graph tissue engineering inspection to determine whether the project meet the technical standards, whether they have delivered for use.

2.2. Design phase is an important stage to determine the completion of the project

With any of the products of the production process, the course of the construction of the project construction is composed of two main, first in line with the investors with the intention of the project design, including project feasibility study, expanded preliminary design, construction drawing design, reflecting the project construction technique of constructing state; second, project cost management, including project budget, engineering budget, engineering settlement, the reaction of the construction project of comprehensive economic state. The two main line runs through the whole process of the project construction, the overall economic state depends on the technology structure state, and the technical structure state serves the comprehensive economic state. As a result, the design phase is an important foundation to determine the cost of the project construction.

2.3. Design is an important part of the construction cost control in the field of construction

According to the international industry authoritative data analysis, the total investment in the construction project, the design cost accounting for the cost of the project 3%-5%, but the project construction process, design aspects of the impact of the project cost is over 70%-80%. After full economic analysis and cost accounting, the design scheme is bound to play a general role in the cost control of construction projects. Analysis from the three phases of the construction period: prior to the construction of the project, the design company can use the special status of professional and technical expertise and design scheme, in the selection of the construction site, optimize the investment program, equipment selection and other aspects, to the investment recommendation technology is feasible, function to meet the demand, low construction cost and short construction period design scheme, and the project preliminary design budgetary estimate of intuitive reflected. Middle construction project, design company can according to the overall design program, reasonable and feasible construction scheme is put forward in this paper, the process is the implementation of the program, division of construction site, various types of cross with professional advice, to shorten the time limit for a project, avoid waste and save investment. In the late period of project construction, the design company may review the whole process of project construction according to the project budget, and confirm whether the final accounts are reasonable from the two aspects of technical construction and budgetary estimate standard.

3. The Status and Current Situation of the Cost Management in the Design Stage

Comprehensive analysis, in the process of cost management of construction project design with great influence and important role can not be replaced, and in the actual management, as one of the main work in design stage of engineering cost management has long been in a subordinate position, work value and importance is not reflected, did not get enough attention. The reason is mainly the management system of our country and the planned economy mode. Mainly reflected in: design stage is the preparation of project budget, attached to the unified design fees, can not form a independent fee unit, and therefore can not reflect the individual workload; authorities failed to develop a complete examination of engineering budgetary estimate working level of quantitative indicators to from the system of laws and regulations to clear project budgetary estimate of construction project control efforts, coupled with the reality exists frequent change of the design scheme and other phenomena, leading to budget for the project could not be implemented smoothly and ultimately become a mere formality; for a variety

of reasons of management system. Investment management department only the design phase of the proposed budget for the project as a basis for project examination and approval, but not to as the control of the final scale of investment projects, resulting in investment management and construction in the field of "Three -" phenomenon serious, "fishing" projects continue to occur, even to the difficult to control the situation.

4. Improving the Management Level of Engineering Cost

Improving the management level of engineering cost is one of the important contents of the design company to deepen the reform in the field of construction market competition is becoming increasingly fierce, while foreign GM, is more suitable for the market economy "on the design of the service economy, economies design" mode of operation, will also with the door open to China and economic scheme design, will greatly improve the design of the intrinsic value, enhance company competition ability.

So design company must accelerate the pace of reform, completed ahead of schedule within the industry business to, in strengthening the project cost management at the same time, make clear the combination of technology and economy of the business objectives, cogent accomplish technology to serve economic and technical economy and combination. Should be planned from the following several aspects to begin: to change the usual business philosophy, increased emphasis on the work of project cost management combined with the usual foreign engineering construction and operation mode, the establishment of engineering design and the economy closely business philosophy, gradually adjust the configuration of design within the company, and strive to achieve "investment estimation and expanded preliminary design in close coordination, cost accounting and construction design in close coordination, change the connotation of the design scheme of the construction project, to ensure that the design has both high technology and science and engineering cost control design scheme of the. Adjustment to the internal work processes, strengthen professional cross matching in the preliminary design approval.

With construction project investment estimation as the basis, change the internal work flow, realize the "design professional requirements 11 professional newspaper in cost estimation of industry design to complete the design cost department estimates" cross matching work, especially before the final project design, fully listen to the views of the cost engineer and improve rationality of design scheme of the technical feasibility and the total amount of investment. To strengthen the study and exchange of professional, professional and technical per-

sonnel to improve the comprehensive operational capability.

5. Concluding Remarks

In short, the cost engineer in the work should correct use engineering measurement right to audit, project progress section of the right to audit, engineering cost audit in payment, active on the construction project investment decision-making, design, bidding, construction and settlement every aspect of the investment in the implementation of effective control, play the role of cost engineer, quality, time limit for a project, investment control target, so that the cost of construction has been widely recognized by the whole society, social status and benefits of cost workers be improved indeed.

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