

Original Paper

Discussion on How Project Owners Carry out the Construction Management

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Abstract

In this article the significance and tasks of project owners carrying out the construction management are mainly discussed. The preparation, progress, quality and cost of the construction management are summed up. The contents and measures of each management work are summarized. Through the analysis project owners can improve the quality of engineering and achieve expected results.

Keywords

construction management, construction preparation, construction progress, construction quality

1. The Significance and Task of Construction Management

1.1 The Significance of Construction Management

Construction management refers to a series of management tasks which include planning, organization, command, coordination and control of construction activities during the implementation stage of a project. Modern construction activities need to collaborate with the departments of construction, design, materials, labor and so on. During the construction the condition is changeful and there are many uncertain factors. So project owners need to organize various factors of production more scientifically according to the actual situation and adjust all aspects of the cooperation relations to achieve the best combination of manpower and resources. Then the construction can achieve good results. So it is very necessary to strengthen the construction management.

1.2 The Task of Construction Management

The task of construction management is to use the system theory and modern management methods according to the objective laws of construction activities to shorten the construction period, improve the quality, reduce cost and ensure safety as the goal. It also needs scientific organizations and rational use of manpower, material resources and financial resources to ensure that the project can be completed

and put into production on schedule.

2. The Contents of Construction Management

During the whole stage of construction, project owners should do the following management work. Firstly they should finish the work of construction preparation and implement all the construction conditions. Secondly they should strengthen the schedule management of construction. Thirdly they should strengthen the quality management of the project. Finally they should strengthen the control of the engineering cost.

3. Construction Preparations

The first is to establish various rules and formulate the post responsibility system of organizations at all levels and organize personnel training to be equipped with the responsibilities. The second is to transact the loan application procedures, sign the loan contract and clear the way of appropriation. The third is to search for the construction units. The fourth is to deal with land requisition and procedures of water and power supply and to implement land, water and electricity conditions and conclude corresponding agreements. The fifth is to organize the construction unit to make the design of the project and prepare for purchasing, reserve and supply work. The sixth is to organize construction equipment and personnel to enter the site and establish temporary infrastructure. The seventh is to organize the design unit to carry out technical disclosure to the construction team and clarify the requirements of construction. The eighth is to audit and apply for construction procedures.

4. Control the Schedule Management of Construction

The first is to make the annual construction plan. Building a complex project requires careful plan and scientific arrangement. Project owners should make an active and feasible annual and infrastructure construction plan and arrange the construction sequence reasonably. They should make detailed plans and implement the mechanism of reward and punishment. The second is to organize the procurement of materials and equipment. The third is to strengthen the dispatching work and the daily construction management. The dispatching work is an important task that according to the requirements of monthly working plans project owners need to coordinate the contradictions arising from the daily construction and make construction tasks and conditions keep dynamic balance to ensure continuous production and complete the schedule. The fourth is to strengthen the site management and timely solve various problems in construction. At the same time project owners shall send engineers to enter the site and supervise the construction progress.

5. Improve the Quality Management of Construction

The first is to insure the quality of design. Design is the first and key link to determine the quality of engineering. So project owners should select good design unit and provide reliable basic data for the design unit to make the quality of the approved design meet the requirements. Project owners also need to do a good job in the review of design change. The second is to strengthen the quality management of supply chain. The measures that project owners should take in this respect mainly include selecting material and equipment suppliers and checking the raw materials of incoming goods. The experienced engineering technician shall be responsible for the whole process of equipment ordering, incoming inspection and installation and commissioning. The third is to strengthen the quality management in the construction stage. If project owners want to improve the quality management in the construction stage, they need to select the construction enterprise with high credibility. The responsibility of the contracting parties shall be clearly stipulated in the project contract. Project owners must clear the requirement of engineering quality and adhere to the principle of quality. They can set up a system of reward and punishment. The engineers and quality inspectors on the construction site shall inspect the construction technology plan of the construction unit, conduct on-site inspection, record the construction situation and timely discover and deal with the problems of construction quality. They must implement the system of project acceptance strictly. If they find unqualified engineering, they will not permit the settlement of the project payment. They should urge the construction unit to rework to leave no hidden trouble.

6. Control the Cost Management of Project

The first is to determine the project cost reasonably. Project owners should scrutinize the budget. The professional personnel in charge of finance and project management of project owners shall participate in the examination of the preliminary design budget estimates and the budget of the construction drawing design and shall examine the expenses in strict accordance with the provisions. The second is to make reasonable use of investment. The amount of planned investment should be calculated by the approved budget. Project owners shall not arbitrarily raise the standards, increase the project content in the construction and expand the investment amount. They should follow the budget strictly. In case of objective reasons such as the change of geological conditions, the modified design should be put forward by the design unit. And then the corresponding budget can be increased. Or the planning department shall not agree to increase additional investment and adjust the plan. The third is to control the project cost with economic methods. In the construction of basic project it is an effective method to implement the system of economic responsibility. It can not only shorten the construction period and control the cost, but also fully arouse the enthusiasm of construction personnel. As a result it can receive the effect with high speed, short period, good quality and less cost.

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