

Research on Methods to Increase the Effectiveness of Construction Site Management

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Abstract: The development of architectural industry has promoted construction's scale development, and the internal structure is also getting more and more complicated, the development status quo of construction works often decides the increased difficulty of construction, therefore, in order to ensure the effectiveness of the overall construction quality, there is a need to adopt reasonable measures to increase the quality standard of construction site management during construction process, to ensure that construction projects can be completed successfully. This article had made specific discussions regarding methods to increase the effectiveness of construction site management, in hope to provide practical references for specific works in the future.

Key Words: Construction Works; Construction Site; Quality Control

Rapid development of the construction industry is a very favorable condition for construction unit, but it follows by the continuous increase of demand by construction party towards construction, which causes the constant improvement of construction quality and safety by construction companies in order to satisfy the unceasing demand on construction quality by construction units, at the same time create greater economic benefits for construction units and construction parties.

However, there are a lot of deficiencies in current construction site management. Although the management of construction site is not directly linked to the building structure and building quality, but if there is no perfect construction site management system and a systematical construction site environment, the standard of construction works will not be guaranteed. Construction site management works are not paid serious attention, and are not strict on their work duration and materials; imperfect construction organization design, orderless work process; existence of

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security vulnerabilities in construction site; noisy construction environment, rubbish, severe noise pollution, these will all result as bad site management, which critically affects the normal operation of projects.

1. Characteristics of Construction Site Management

To further upgrade the quality standard of construction site management, the first thing we need to do is to analyze the characteristics of construction site management in detail. The current stage of construction site management is mainly under these few characteristics. First, the construction quality in construction site are always affected by many factors, for example the topography of the construction site, construction technology, construction materials and equipments, construction plan etc, these factors will affect the construction quality to a certain extent. Secondly, there is a large fluctuation in construction projects and construction quality. Although there are related construction specifications as a guide and assurance during the process of construction projects, the construction process is often affected by all kinds of factors and results in a declination in quality. Thirdly, there is a certain degree of concealment towards the quality of construction projects. The development of any construction projects involves a lot of little projects, comprehensive testing is required during the process of quality management, yet the existence of concealed projects is inevitable, if there is a lack of supervision and management on concealed projects during the process of quality management, the quality of the whole construction project will be affected. Lastly, the limitation of a construction project is larger during final inspection, every single construction projects need to go through final inspection after work completion, only methods such as rework or service can be done if problems are found during final inspection to control, therefore in order to avoid the great problem of final inspection limitation, there is a need to reinforce the quality of supervision and management during construction process, avoiding as much quality problems brought up by irregular construction.

2. A number of problems that exists in Construction Site Management

2.1 The lack of perfect quality supervision in construction site management

In any process of construction project, the quality control and management needs to be ensured by engineering supervision, supervision unit is currently one of the several indispensable departments in construction works, the unit acts as an important promoter of the improvement of management quality level in construction site. However, in the current phase of construction site, most of the supervision units find it difficult to carry out supervision and management works in a serious and responsible attitude, many of the supervision units only pay attention on the main structure, they let the follow up works flow in form. At the same time, the phenomenon of collusion between supervision unit and construction unit also appears, this affects the quality of construction works in a large degree. In addition, the working quality supervision system in our country is not perfect in the moment, and it is difficult to provide a strong system protection towards the quality supervision and management of construction site, and therefore it creates a vast obstacle which obstructs the improvement of standard quality management of the construction site.

2.2 The Lack of Perfect Quality Management System in Construction Site

Currently, there are many construction units who are overly pursuing economic benefits during construction progress, yet ignored the importance of strengthening Quality Management, could not establish a sound and perfect quality management system and quality evaluation standard in actual construction process, therefore is causes the lack of related system and standard as an assurance during the process of construction site quality management. Other than that, the construction industry usually needs to analyze the problems existing in the quality system and rating standard through internal examination, and then take effective measures to solve the problems, but at the current level, many of the construction units only go through casually during internal examination, related personnel could not complete the

internal examination seriously and responsibly, therefore it makes it difficult to take proper measures towards existing malpractice of quality management system and evaluation standard in time, thereby unable to provide support and assurance at the later stage of quality management in construction site.

2.3 Low Quality Staff in Construction Site, Insufficient Capability and Construction Technology

At the present stage, construction workers in construction are mainly formed by farmers, the technical literacy of these construction workers are relatively low, and their overall ability and construction skill are not comprehensive enough. Moreover, in order to reduce construction cost, the construction units did not provide training on construction skills and ability as well as safety consciousness for their construction workers at pre-construction period, therefore, irregular construction process during actual construction process will usually happen, irregular construction process will directly lead to quality problems of the whole project. Other than that, low quality managing personnel in certain parts of construction process will also affect the construction site's quality management, for example, when the manager does not have a strong sense of responsibility during the quality management process, unable to perform well on his responsibility, and is too care free during the supervision of quality management, it will eventually lead to quality problems in construction site.

3. How to increase the Quality Management Standard of the Construction

Site

3.1 Prepare well before actual construction

The manager of construction site must increase the degree of attention towards construction site management, establish perfect management system for the construction site, improve the comprehensive level of workers, and at the time of reinforcing the manager's own professional knowledge, he must also reinforce the thinking and quality education in order to fully understand the importance of his own job. Strict construction management can efficiently increase construction efficiency, enhance construction quality, especially towards construction projects that needs complicated construction technology. For example, projects in decoration works, which have more complicated construction technology plus the different material usage, technical preparation works must be done during construction site management, reasonable arrangement of construction process, materials preparation, equipments as well as allocation of workers.

3.2 Do well in coordination works, and make rational project plans

In order to raise the overall quality of construction sites in construction projects, the construction unit must combine situations in all aspects of the respected area as well as specific requirements of high-rise buildings, do well in all works, develop workable management mechanism, select co-operation unit with higher industry credibility, communicate with concerned department such as, construction unit, supervision unit, then coordinate various aspects well, create a good base for increasing the overall management quality of construction site, make sure that construction plans are scientific, reasonable, and also make sure high-rise building construction proceed smoothly. At the same time, the construction unit must also implement the construction project's management work properly, comprehensively analyze the specific situation of the construction site area, develop "scientific, reasonable" implementation plan, have clear management responsibilities, make sure that the managers take part in the high-rise building project from start to the end, and with the help of dynamic management, optimize and adjust all kinds of situation that are found in the construction site, fully implement the project, and scientifically manage the construction site.

3.3 Improve the System Design and Management Process of the Site

Under the premise of experience summary, breaking down all kinds of project structure, and developing promotion standards is one of the efficient ways for construction unit to complete their construction duty, and reduce loss. Construction units must see in long term, by using development insight, plan the construction project's standardized management in long term from structural design, external display design, management process design, equipment management and so on to slowly rise to the construction unit's standardized management guidelines. Fully unleash the guiding function, specification function, encouragement function and cohesive function.

3.4 Reinforcing Construction Site's Management, and Improve Quality Management Mechanism

The construction unit must intensify the construction site management, by combining construction characteristics, nature and so on, to optimize the project's safety management mechanism, they can also arrange related personnel to scientifically supervise the construction site, and solve existing safety problems efficiently. This is to avoid frequent accidents and disputes related to safety in construction projects, to prevent serious economic loss. At the same time, the construction unit must optimize perfect formulated quality management mechanisms, differentiate by levels, and implement them, as to foreshadow the improvement of construction site management's efficiency. The construction unit with the help of quality management mechanism, must convene all kinds of regular meetings that involves the participation of construction parties, and sub-contractors, and the construction contractor must make a report of the progress of work, raise problems that they encountered and also their subsequent work plans, whereas the supervision party should make a report of the results of their own work. The construction unit must take the participated party's comments and mentions accordingly, and take construction progress as the base, to suggest comments on the target problem and also specific requirements.

3.5 Emphasize on Construction Site's Materials and Data Management, and ensure the wellness of concealed project's acceptance work

Materials is the key of construction projects, the cost of materials has taken up a big part of the overall construction cost, therefore, strengthening the management of construction site materials is a must. During materials management, materials purchasing, preservation of materials and usage of materials need to be in accordance to the needs of construction site management. Before the materials enter to the construction site, the supervision unit must follow relevant provisions strictly, and inspect the construction materials carefully to check for hidden problems. Once they find out that the materials are not according to the relevant provisions, they must immediately take reasonable measures, making sure that the materials have reached the standard before entering the site. They must also prevent unqualified materials from entering the construction site, and also avoid shoddy works and waste of materials. At the same time, the construction projects must have construction requirements, construction drawings, design change text and other documents etc, these construction data are not only for the inspection of the inspection unit, but also as a guidance in the construction site, which is affecting the construction works. From construction design to inspection, workers must differentiate and preserve construction data and information. Other than that, the construction unit must do well in high-rise building's concealed inspection work, and after the end of concealed inspection works, require the construction party to immediately and accurately fill in reports relating to the concealment construction, together with the supervision of all participating parties, inspection, make sure that the inspection is up to standard before continuing to the next procedure.

3.6 Reinforcing Supervision Quality Management

During the process of improving the high-rise building's construction site management, the construction unit must

require the supervision party to strictly follow the list of provisions in the contract accordingly, and efficiently carry out his work responsibilities, reinforcing supervision quality management. The construction unit can conduct monthly report meetings, and require the supervision personnel to report the high-rise building's recent progress and all kinds of situations that happens in the construction site, for example, the inspection work, rework situations, quality accidents, also get to know and understand the progress of the construction project at all time, to get first hand data and information. On this basis, construction unit must allow the supervision unit to understand fully of the construction site, supervise and take control in all aspects of important factors in the construction site such as construction workers, construction technology, construction equipments, in order to improve the overall standard of high-rise building's construction site management. Take "Worker's position control management" as example, the construction unit must combine all situations from the high-rise building, and optimize to a perfect construction site management workers follower system, and develop a "working and supervise" activity in the construction site, accurately show the key point of construction site supervision inspection, killing one stone with two birds, midnight overtime working, especially on important positions and weaker parts, to prevent construction delay.

3.7 Strengthen Construction Quality Management

During the construction of high-rise building, the construction unit must strengthen the construction project's management in different degrees, to efficiently control construction quality. They should also require supervision personnel to strictly manage the construction unit's quality, do well in site inspecting works, avoid hidden problems in construction site, and regularly carry out overall inspection works, and immediately solve existing problems, to ensure that the construction project progress can go on smoothly, and bring the efficiency of construction site management to another level.

Conclusion

In conclusion, the construction site management in construction site is an important factor of ensuring the quality of a construction project. The construction unit must put the construction site management efficiency at first place, pay high attention, and implement all work aspects properly. Communicate more and well with the construction unit and supervise the construction unit properly. Construction unit must focus on the construction site materials and management of data and information, do well in concealing inspection works, reinforce supervision and construction quality management, strengthen construction site safety management, try to perfect quality management mechanism and so on, in order to improve construction site's management standard. Besides that, continuously improving construction unit's core competition, efficiently cope with all sorts of adjustments, and promote modern construction industry's continuous growth.

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