

STUDY ON THE MAJOR DELAY FACTORS IN FINISHING WORKS BEFORE COMPLETION OF CONSTRUCTION

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ABSTRACT: There are many variations and risks in construction work and the risk is getting increased in accordance of big scale, variation and complexity for the construction work. If the process management is not planned thoroughly, it affects the construction period. . The delay of construction period causes the increase of project budget and low productivity and it is the cause of poor construction for recovering the long-term suspension of construction in construction work. There are various problems such as low quality, negligent accidents, etc. Especially, the delay of finishing work can be fatal before the completion of construction. It is study on analysis of the influence factor for delay of construction period and how to apply in real work site in finishing work. It is regarded that this study will lead to thorough process movement in work site and critical data.

Keywords: *Process Management, Delay of Construction Period, Finishing Work*

1. INTRODUCTION

As the scale of construction is getting big, the rational process management is getting complicated and also it is important. The delay of construction period has been constantly occurred because of uncertain factors depending on the soil condition, site situation and correlated many types of construction (Daeup Lee, 2007)

The purpose of construction is to be economical and safe complication for quality specification specified on design book within construction period.

Finishing work means a series of subsequent work carried out after ground and structural construction in order to complete the final assessment of construction work also, it is relevant to various types of construction such as masonry construction, plaster work, doors and windows construction, waterproof construction, tile construction, interior finishing work, etc. (Youngjae KIM and others, 2003) Finishing work has various and complicated structures due to detailed process so, there are no standard for detailed construction type and necessity of setting up the priority between prior and post work are weak.

Superintendent should recognize the cause of delay for finishing work and set up the proper plan against the cause of delay of construction period between stages of structural work and finishing work.

This study is to analyze the cause of construction period for the frame work and finishing work and make the countermeasure for the delay of construction period in comparison of frame work.

2. THEOLOGICAL BACKGROUND

2.1 Analysis of existing studies

As considering the studies performed for above subjects, study on the method of analysis for the delay of construction period and estimate of delayed days for construction period and study on the calculation of damages according to the delay of construction period and the prevention of disputes have been performed.

Table 1. Existing studies

Title of study and writer	Contents
Influence of the Structural	Influence of the structural framework on the work period of critical path of finish works
A Case Study on Reason Analysis for Schedule Delay of Apartment House, Park, Chang-Wook (2009)	Estimating the delayed days of construction period and analyzing the cause of delay for the construction period by Questionnaire survey for relevant site in the construction of apartment house.
Delay Factors Based on Importance of Finish Work in Apartment Construction Project, Lee, Seung-Hoon (2010)	Prioritizing the delay of final works with importance level of each types of construction by dividing finishing work into wet construction and other finishing works.
An Analysis on Delay factors of Major Trades in Apartment Housing Projects, Han, Jong-Kwan(2003)	Establishing the cause of delay of construction period from the point of view of contractor and analyzing the main cause of delay of construction period on each process and the status of company in Korea

2.2 CONSIDERATION OF THEORY FOR THE DELAY OF CONSTRUCTION PERIOD

2.2.1 Cause of the delay for construction period

The Delay of construction period means the period when the part of whole project is extended or it's not executed due to unpredictable environment factors.(Callahan, 1992).

As for the analysis of delay for construction period, the related data is analyzed according to the cause of delay for the construction period and it is important stage to decide where the responsibility lies. Also, it is carried out by

referring the contract and precedent, common practice, etc. So, the cause of delay for construction period should be analyzed precisely and tab13 2.1 shows the cause of delay for construction period by each category. It is necessary to set the range for reviewing the related project document by finding relevant causes for each issue if there is claim of delay for construction period.

Table 2.1 Cause of delay for construction period

Categories	Cause of delay
Engineering	Inaccurate drawings Incomplete drawings Late engineering
Management	Equipment breakdowns Equipment delivery Improper equipment Shortage of equipment
Exterior Delays	Environmental issues Later than planned start Regular change Permit approval
Management	Construction methods More than planned Quality assurance/quality control Schedule too optimistic Not working on critical tasks
Labor	Craft shortages Labor productivity Labor strike Rework
Materials	Damaged goods Improper tools Material delivery Material quality
Weather	Freezing Heat and humidity Rain Snow

3. ANALYSIS ON DELAY FACTOR FOR CONSTRUCTION PERIOD BY TYPES OF CONSTRUCTION

3.1 Factor of delay of frame work period

The factor of frame work period is shown as below table 3.1. There are impossible factors to be managed by prior management because the most of frame work is carried out indoor so it is directly related to climatic condition and involves unpredictable negligent accidents or civil complaints, etc.

Table 3.1 Analysis on cause of delay for frame work period

Type of Construction	Cause
Frame Work	Climatic condition Shortage of labor plan Poor or bankrupted subcontractor Prevention and delay for civil complaint Negligent accidents during construction Improper construction and procedure Suitability for method of construction Error and omission for drawing Shortage of labor experience

3.2 Factor of delay for finishing work period

The cause of delay for construction period is analyzed by dividing to 3 types of finishing work briefly. As table 3.2 shows the causes of delay of construction delay for each type of finishing work, it will be helpful to suggest the improvement of delay factor for construction period.

Table 3.2 Analysis of delay for construction period by each type of construction

Type of Construction	Cause
Masonry Work	Shortage of labor plan
Plastering Work	Interference of other types of construction
Tile construction	Wrong construction/plan for other

	types of construction Wrong construction due to discordance of drawing Shortage of labor experience
Doors and windows construction	Shortage of labor plan Poor or bankrupted subcontractor Shortage of plan for establishment fund
Interior finishing construction	Shortage of labor plan Shortage of labor experience Establishment fund Shortage of plan

4. CONCLUSION

Personnel in project site regards as the delay of period of finishing work is less serious than Ground work or frame work but the delay of construction work before the completion of construction should be taken sensitively. Because the delay of construction work is directly related to the cost of construction from the point of view of the contractor.

This study analyzes the factors of delay of construction period for frame work and finishing work. It is understood that the frame work has different delay factors from the types of finishing work. It is the countermeasure of delay of construction period in finishing work.

1. Checking the drawing error by constant communication between designer, contractor and subcontractor
2. Making thorough plan, management and control for the initial finishing work
3. Making process plan and management to carry out the integrated management for frame work and finishing work
4. Setting up enough prior and post relations between types of finishing work

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