AIN SHAMS UNIVERSITY
FACULTY OF ENGINEERING

EFFECT OF CHANGE ORDER ON THE CONSTRUCTION PROJECTS

By

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A Thesis

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STATEMENT

This dissertation is submitted to Ain Shams University in partial fulfillment for the requirements of the degree of Doctor of Philosophy in Structural Engineering.

The work included in this thesis was carried out by the author in the Structural Engineering Department, Ain Shams University.

No part of this thesis has been submitted for a degree or a qualification at any other University or Institution.

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ABSTRACT

A Change Orders in the construction projects have a very serious problems and bad effects on the quality, time, and cost of the projects. The basic steps of this study were made questionnaire from (33) expertise in sports construction projects to rank the Change Order reasons list according to some factors such as impact on project cost and time, deviation from execution plan of the project, frequency of occurrence. Youth Sport Center Construction Project (YSCCP) in Egypt as example of sports construction industry have faced quit number of Change Orders leading to cost increasing and time extension. (9) Groups of youth sport center construction projects experienced (151) Change Orders. These groups of projects were utilized to contemplate different causes of Change

Orders, the frequency of their occurrence, the responsible of this Change Order, the cost of Change Orders, and the time extension attributed to these Change Orders. It was found that, there is a relationship between project cost and construction time within construction projects. This study tried to develop a time-cost relationship model to be valid on the Youth Sport Center construction project. The model was included Change Orders categories; Work disciplines (Civil work, Electrical work, Structural work, Architectural work) and Project parties (Owner, Consultant, Contractor, Local Authorities).

Keywords: Change Order, Construction, Impact, Cost, Time, Sports Facility

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