



Michael Kitchens

# ESTIMATING and PROJECT MANAGEMENT for BUILDING CONTRACTORS



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Abstract:

This book provides guidelines to the day-to-day processes of construction estimating and project management. It is a useful overview for both beginners and seasoned professionals who seek a better understanding of the skills and abilities required of a good estimator and project manager. These include decision-making skills; knowledge of labor, equipment, contracting and subcontracting, financial considerations and cost control, job site safety, schedules, claims, delays, quality assurance; and more. This book also provides information on ethics, training, computers, and real-life experiences.

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## **Dedication**

**This book is dedicated first and foremost to my family - Judy, my wife, and Crystal, Kylee, and Cody, my children.**

**This book is also dedicated to my mentors in the fields of estimating, project management and management philosophy. Those mentors are:**

**Rudy Alvarado**

**Dorman Blaine**

**Gene Carlier, P.E.**

**Bill Judd**



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## INTRODUCTION

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The construction industry is one of the largest industries in the United States of America. Construction accounts for approximately 10% of the nation's gross national product and about 15% of the country's employment. It is the largest user of steel, aluminum, copper, cement, rubber, lumber, brick, building supplies, fuel, power, and a multitude of other products that rely on the construction industry.

The construction industry has almost 1,000,000 participants; however, more than 60% of the contractors have three or fewer full-time employees. In the finest tradition of capitalism and free enterprise, construction contractors are fiercely competitive with one another.

The construction industry has become increasingly complex through the years as a result of technological advance, natural evolution and litigation. However, unlike other service industries (the construction industry is unquestionably a service industry), the success of a construction business enterprise is much more reliant on the caliber and attributes of its people than it is on technological advances or by the availability of capital facilities. The construction industry is certainly, above all else, a people profession.

The economic turnaround of the United States during the last few years has been devastating to the construction industry. As a result of reduced demand for construction services, an already competitive industry has become even more competitive which directly relates to declining profit margins and sometimes bankruptcy.

In 1978 twenty-two out of every ten thousand general contracting businesses failed. By 1992, that number had increased over six-fold to 140. This increase is due to several reasons.

- In the heat of competition, contractors are bidding at or even below their costs.
- Contractors are not providing proper training to key personnel.
- Contractors are taking more risks with less reward than ever before.
- Contractors as a whole are not staying current with the latest technology.
- Contractors do not stay abreast of new management philosophies.

Other industries are feeling the brunt of the recession as well as pressure from other nation's producers in what is quickly generating into a world economy. These other industries are tackling the onslaught through