

Construction Management for Public Agencies

Purpose and Background

This seminar is a series of learning modules that have been developed to break down the construction management process for a typical public project into its component steps and reassemble it into a straightforward, logical methodology for the development of effective construction management strategies from the owner's perspective. The process starts with analyzing the construction contract, specifications, and drawings and developing a work breakdown structure upon which the owner's project controls system will be based. It then proceeds through the construction administration processes for scheduling, submittal, progress payments, quality management, and safety. The course includes a focus on change orders and claims with an emphasis on how to analyze them and develop a strategy for negotiating them with the contractor. It concludes with the construction manager's roles and responsibilities for contract close-out. The result is a comprehensive view of the construction management process and a set of proven tools to control cost, time and quality during the execution of the actual construction.

Seminar Instructor

Douglas D. Gransberg, Ph.D., P.E., C.C.P., F.RICS, M.ASCE, is the president and founder of Active Continuing Education Systems, LLC., a firm that specializes in providing professional continuing education services using a variety of delivery mediums from in-person to guided online modes. Gransberg has been an ASCE instructor since 1996. ACES offers a full-range of project management and construction engineering curricula and has furnished coursework to public and private clients in the US and overseas.

He is also the president of Gransberg & Associates, Inc. a construction management/ project delivery consulting firm. The firm was founded in 1996 and provides RFQ/RFP development services to public agencies, as well as CMGC and DB proposal development services to engineers and consultants. G&A, Inc. has been called on to assist with projects throughout the U.S. and Canada, as well as in New Zealand, Okinawa, Latin America, Europe, and the Middle East. The firm specializes in the development of project management services for complex mega-projects.

Dr. Gransberg retired in 2017 as a professor of construction engineering at Iowa State University, where he held an endowed research chair for 5 years. He received both his B.S. and M.S. degrees in Civil Engineering from Oregon State University and his Ph.D. in Civil Engineering from the University of Colorado at Boulder. He is a licensed Professional Engineer in Oklahoma, Texas and Oregon, a Certified Cost Engineer, a Designated Design-Build Professional, and a Fellow of the Royal Institution of Chartered Surveyors in the UK.

Before moving to academia in 1994, he spent over 20 years in the U.S. Army Corps of Engineers, retiring at the rank of lieutenant colonel. In his final posting, Dr. Gransberg was the Europe District's Area Engineer stationed in Ankara, Turkey where he managed an annual design and construction program that exceeded \$200 million. He teaches courses in integrated project delivery, cost estimating, project controls, and project management. His research is centered in the delivery of infrastructure/ transportation projects.

Dr. Gransberg led the efforts to develop the AASHTO *Guidelines for CMGC* project delivery and *Guidebook for Alternative Quality Management*. He was one of the co-authors of the AASHTO *Guide for Design-Build Contracting*, and is currently developing the AASHTO *Guide for Managing Geotechnical Risk in Design-build Projects*, and the second edition of the AASHTO *Partnering Handbook*. He is the author of 4 books on construction management topics and over 200 articles, conference papers, and other publications.

- For group training, contact John Wyrick (JWyrick@asce.org) or Stephanie Tomlinson (STomlinson@asce.org)

Learning Objectives

The participants in this seminar will be able accomplish the following tasks with regard to developing a negotiation strategy:

- Understand procedures for effectively managing and controlling construction projects
- Understand the function of key contract documents in the construction management process.
- Understand the construction change order and claims negotiation process.
- Understand application of project controls methodologies to a typical project.

Topics Covered

The following major topics will be covered in this seminar:

- **Principles of Construction Management:** Participants will learn to recognize the key elements inherent to the construction contracting process that must be accounted for in the public owner's project controls and contract administration process.
- **Principles of Construction Scheduling:** Participants will learn to evaluate the interrelated elements inherent to the construction process. Through discussion and evaluation, they will develop an understanding of the components to a typical public construction project and how to integrate that with the contractor's construction schedule using a work breakdown structure and work packaging. They will learn to apply the construction packaging scheme in a manner that permits them to monitor the project's baseline scope, evaluate the impact of changes.
- **Principles of Construction Project Control Systems:** Participants will learn the essentials of controlling cost, schedule, quality, safety and documentation.
- **Preparing to Negotiate Contract Changes and Delay Claims:** This topic will include interpreting the contract changes clause and classifying the elements of the change to be negotiated as either the owner's design consultant's or contractor's liability, shared liability or indeterminate liability based on the risk allocation specified by the contract. Differentiating between as-bid and changed elements of labor, materials, equipment, and indirect costs will be covered. Extending unit prices for changes and calculating rational material and labor escalation rates using stochastic cost modeling is also included.

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Summary Outline

DAY ONE

Introduction to Construction Management

- Definitions
- Project Delivery Methods
- Partnering

Construction Documents as Contract Administration Tools

- Roles and Responsibilities
- Submittals

Construction Law and Public Contracts

- Basic Principles of Construction Contract Formation
- Public Contract
- Offers and Acceptance

Construction Safety

- OSHA reports
- Preconstruction activities
- Preconstruction reports

Contract Law Case Study

Construction Planning & Scheduling

- Definitions
- Work Breakdown Structures
- Measuring progress

DAY TWO

Progress Payments

- Schedule of Values
- Pay Applications
- Earned Value Management

Construction Operations and Quality Assurance

- Daily work reports
- Preconstruction activities
- Preconstruction reports

Project Close-out

- As-builts
- Final Inspection
- Punch-list
- Final Payment
- Post-acceptance issues

Claims and Disputes

- Negotiations
- Claims
- Alternative Dispute Resolution

Preparing for Negotiations

- Developing a Negotiating Strategy
- Client's objective/opponents' objective
- Client's points/ opponents' points
- Takes and concessions

Project Dispute Case Study

ASCE seminars are available for On-Site Training. For details regarding On-Site Training and/or needs-based training opportunities, please contact:

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