



Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources)

By Trefor Williams

[Download now](#)

[Read Online](#) 

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams

With a fresh approach that addresses the unique features of construction management for the 21st century, this book provides an overview of the construction industry and the management of construction projects. Construction Management: Emerging Trends and Technologies offers solid, foundational concepts in "traditional" areas, including construction contracts, cash flow, estimating and scheduling. Setting it apart from traditional books on the subject, it breaks away from these traditional areas to explore emerging areas of interest, such as "mega-projects," design-build construction, public private partnerships, the application of information technology to construction, configuration management, and sustainable construction. With thorough, up-to-date information and detailed explanations, this is an indispensable resource for anyone seeking a better understanding of the up-and-coming state of the construction management industry.

 [Download Construction Management: Emerging Trends & Technologies \(Go Green with Renewable Energy Resources\) By Trefor Williams](#)

 [Read Online Construction Management: Emerging Trends & Technologies \(Go Green with Renewable Energy Resources\) By Trefor Williams](#)

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources)

By Trefor Williams

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams

With a fresh approach that addresses the unique features of construction management for the 21st century, this book provides an overview of the construction industry and the management of construction projects. Construction Management: Emerging Trends and Technologies offers solid, foundational concepts in "traditional" areas, including construction contracts, cash flow, estimating and scheduling. Setting it apart from traditional books on the subject, it breaks away from these traditional areas to explore emerging areas of interest, such as "mega-projects," design-build construction, public private partnerships, the application of information technology to construction, configuration management, and sustainable construction. With thorough, up-to-date information and detailed explanations, this is an indispensable resource for anyone seeking a better understanding of the up-and-coming state of the construction management industry.

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams Bibliography

- Sales Rank: #1453354 in Books
- Brand: Brand: Cengage Learning
- Published on: 2009-09-25
- Released on: 2009-09-25
- Original language: English
- Number of items: 1
- Dimensions: 9.25" h x .65" w x 8.00" l, 1.05 pounds
- Binding: Paperback
- 288 pages



[Download Construction Management: Emerging Trends & Technol ...pdf](#)



[Read Online Construction Management: Emerging Trends & Techn ...pdf](#)

Editorial Review

Review

1. The Nature of the Construction Industry Introduction to Construction. Some Statistics About the Construction Industry. Projects and the Construction Industry. Comparison of Construction and Automobile Manufacturing. Construction Project participants. Specialization within the Construction Industry. Emerging Trends in the Construction Industry. Megaprojects. Globalization. The US Transportation Infrastructure Crisis. The Importance of Ethics in the Construction Industry. Careers in Construction. 2. Methods of Delivering Construction Projects. Introduction. Basic Construction Contractual Arrangements. Public and Private Owners: Construction Contract Types. Competitive Bidding. Unit Price and Lump Sum Projects. Steps in the Competitive Bidding Process. Completion of the Design and the Development of the Bid Package. Advertising the Bid. Obtaining the Bid Package. Preparing the Bid. Design Changes During the Bidding Period. Pre-Bid Meetings. Submitting the Bid and the Bid Opening. Award of Contract Notice to Proceed. Bid Security and Bid Bonds. Bid Package Details. Specifications. General Conditions. Special Conditions. The Complexity of Bidding. The Importance of General Conditions During Construction. Change Orders. Time Extensions. The Ethics of Competitive Bidding. 3. Change Orders and Disputes during Construction. Introduction. Change Orders. Changed Conditions. Design Errors and Omissions. Change in Project Design. Negotiating Change Orders. Contractor's Duty to Perform Change Order Work. Issues Related to Time and Delay. Liquidated Damages. Time Extensions. Resolving Construction Disputes. Dispute Resolution Boards and On-Site Neutrals. Arbitration and Mediation. Litigation. Partnering. Value Engineering. 4. Construction Management Contracts: An Alternative to Design-Bid-Build. Introduction. Construction Management Contract Formats. Agency Construction Management. At-Risk Construction Management Contracts. 5. Design Build Procurement: Combining the Designer and the Contractor. Introduction. Potential Benefits of Using Design-Build. The Design-Bid Process. The Request for Proposals: Defining the Project Scope. Competitive Procurement: One-Step and Two-Step Procurement. Preliminary Designs Included in the RFP. Formations of Teams and Consortiums. Additional Legal Risks for Contractors with Design-Build. 6. Emerging Trends in Project Procurement: Public Private Partnerships. Introduction. Reasons for the Emergence of Public-Private Partnerships. The Structure of Public Private Partnerships. Build-Operate-Transfer. Design-Build-Finance-Operate. Examples of Public Private Partnerships. BOT Projects. DBFO Projects. Conclusions. 7. Cost Control, Profitability and Cash Flow. Monitoring costs during construction. Assessing project profitability. Construction accounting and the profitability of the firm. Cash flow during construction. Unbalanced bids. Financing. Using computer software for accounting cost control. The JobView software. Monitoring project profitability using the software. Producing financial documents. 8. A Short Introduction to Scheduling and Planning. The importance of planning. Increasing project complexity. Linear scheduling techniques. Line-of Balance Analysis. Example applications. The Critical Path Method. Introduction. Benefits. History. The Basics of CPM. Activity. Network diagrams. Calculations. Computers and Scheduling. Discussion of available programs. Examples of input and output. Interpretation of output. 9. Managing Project Complexity: Configuration Management. Introduction. Increasing project complexity. The need to manage the effect of changes on project scope. Definition of Configuration Management. The Configuration Management Methodology. Configuration Management Plan. Document Management Process. Baseline Management Process. Contract Change Management Process. Specialized Configuration Management Software. The ccsNet software. 10. Construction Equipment Productivity. Productivity Concepts. What is productivity? How is it measured? Heavy Construction equipment basics. Earthmoving Equipment. Calculating equipment productivity. Calculations of capacity and cycle times. Selecting equipment numbers using the balance point calculation. Emerging Applications of Automation. Automated Earthmoving. Automated paving. Geo-tracking of equipment. Limitations on the adoption of

automation in building construction. 11 Estimating Basics. What is estimating? Different Levels of Estimating. Contract Type and estimate detail. Engineer's Estimates. Bid Estimates. Equipment Costs. Depreciation. Operating costs. Calculation of an hourly charging rate. Labor Costs. Costs from Union agreements. Calculation of fringe benefit cost. Material Costs. Supply chain management. Using estimating reference books. Using the computer to prepare estimates. Solutions for Heavy and commercial contractors. Simple programs for residential contractors. Using the computer for quantity take-off. 12. Construction Labor and Safety. Union and Non-Union Construction. Labor Law. Important legislation. Right-to work states. Important construction unions. Contractor organizations. AGC. Negotiation of union contracts. ABC. Safety. The need to provide a safe working environment. Negative effects of accidents on insurance rating. Other cost of accidents. OSHA regulation. 13. The Emerging Role of Information Technology. Why are computers and the web important in Construction? Definition of Information Technology. Data exchange. Using web-based systems in construction. Computers and PDAs in the field. Computer and Web-based Systems to Manage Projects. Project Web-Portals. Mobile computers for scheduling. Mobile data collection . Field office management. Wireless communications and mobile computing at the Construction Site. Wi-Fi. Mesh Networks. Simple solutions for small contractors. Peer-to-Peer Networking. Weblogs and Wiki. 14. Sustainability in Construction. The importance of sustainability for society. The sustainability of constructed facilities. How sustainability changes residential construction contracting. Commercial Building Sustainability. Changes in methods and materials. Green Roofs. How does consideration of sustainability effect construction? Reusable and recyclable materials. Emissions from construction equipment. Demolition of facilities.

About the Author

Trefor P. Williams, Ph.D., P.E., is a Professor of Civil and Environmental Engineering at Rutgers University, and a registered professional engineer in New York and New Jersey. He is the author of Information Technology for Construction Managers, Architects and Engineers, © 2007, Delmar Cengage Learning.

Users Review

From reader reviews:

Adam Jones:

The book untitled Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) contain a lot of information on this. The writer explains the woman idea with easy way. The language is very straightforward all the people, so do not really worry, you can easy to read this. The book was published by famous author. The author gives you in the new age of literary works. You can easily read this book because you can keep reading your smart phone, or gadget, so you can read the book within anywhere and anytime. In a situation you wish to purchase the e-book, you can open their official web-site and order it. Have a nice study.

Paul Howard:

Beside that Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) in your phone, it may give you a way to get closer to the new knowledge or facts. The information and the knowledge you are going to got here is fresh in the oven so don't be worry if you feel like an outdated people live in narrow community. It is good thing to have Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) because this book offers for you readable information. Do you sometimes have book but you don't get what it's facts concerning. Oh come on, that will not happen if you have this within your hand. The Enjoyable blend here cannot be

questionable, including treasuring beautiful island. Use you still want to miss it? Find this book as well as read it from currently!

Dustin Alvarez:

A lot of publication has printed but it differs. You can get it by online on social media. You can choose the best book for you, science, comic, novel, or whatever simply by searching from it. It is referred to as of book Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources). You can include your knowledge by it. Without making the printed book, it may add your knowledge and make you actually happier to read. It is most crucial that, you must aware about guide. It can bring you from one destination to other place.

Troy Kemp:

Publication is one of source of knowledge. We can add our information from it. Not only for students but also native or citizen want book to know the revise information of year to year. As we know those publications have many advantages. Beside we add our knowledge, can also bring us to around the world. By the book Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) we can have more advantage. Don't that you be creative people? To be creative person must like to read a book. Merely choose the best book that acceptable with your aim. Don't end up being doubt to change your life at this time book Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources). You can more inviting than now.

Download and Read Online Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams #L1J97GCV2Y0

Read Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams for online ebook

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams books to read online.

Online Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams ebook PDF download

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams Doc

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams MobiPocket

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams EPub

L1J97GCV2Y0: Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) By Trefor Williams