MCAA

National Education Initiative

...bringing education to you!

- Fundamentals of Project Management
- Advanced Supervisory Education

FUNDAMENTALS OF PROJECT MANAGEMENT

DAY 1

Conducting an Effective Turnover Meeting – 2 hours
Effective turnover meetings maximize project profitability through the timely and complete transfer of information from estimators to project managers. They provide for standardized information exchange and facilitate project planning and control. This session covers all the fundamentals for conducting an effective turnover meeting.

Pre-Construction Planning and its Effect on Profitability – 6 hours
Investing project management resources in pre-construction project planning yields significantly higher productivity and profitability. Energetic in-class discussion will identify thorough pre-construction planning as a mandatory process for all projects.

DAY 2

Productivity Improvement: Material Management and Site Planning Methods for Mechanical Projects – 2 hours
Poor site planning and material management/handling practices are often the main causes of poor labor productivity. Learn how material management and labor productivity are related, and get strategies for improving material handling and site planning. This session reviews practical principles, guidelines, and procedures for effective material management and site planning.

Cost Control I: Fundamentals of Job Cost Control – 4 hours
Participants in this session will gain an understanding of job cost control and labor cost trending methods as detailed in the Job Cost Control section of the MCAA Project Manager's Manual. They will learn to use the job cost control system as a management tool to accomplish your project objectives rather than focusing on cost documentation. This "basic" session is geared to new or potential project managers with little or no experience in job cost control systems and procedures.

Project Billings and Maintaining Positive Project Cash Flow – 2 hours
Maintaining positive cash flow is one of the project manager's greatest challenges. This session focuses on how the project manager can make project billings more profitable. Participants will learn billing methods for maintaining positive project cash flow and review the detrimental effects of poor cash flow.

DAY 3

Contracts I: Using the Contract as a Tool for Project Management – 4 hours
Participants in this session will gain a basic understanding of contract types and components, and learn how to use the contract to maximize profitability while managing a mechanical construction project. They will learn skills to help them know what the contract says and how to organize and manage the project accordingly.

Time Management Skills and Managing Multiple Projects – 4 hours
Effective managers of time who can manage multiple projects are invaluable to their firms. This session identifies the greatest time wasters and provides strategies for improving time management skills. Participants will also identify and discuss the best practices required for becoming a better manager of multiple projects.

DAY 4

Effective Project Documentation – 4 hours
Excellent project documentation can prevent or protect your company from problem "escalation." In this session, participants will review basic project documentation types and the steps to plan and implement the documentation process. They will also identify goals of good project documentation and learn methods for increasing their effectiveness in the documentation process.

Change Order Management I: Procedures for Successfully Managing Change Orders – 4 hours
Change orders can be profitable only if managed properly. To do so, your company must have standard written change order management procedures that are enforced. This session includes a study of basic change order management procedures as detailed in the Change Order section of the MCAA Project Manager's Manual.

DAY 5

Essential Management Skills for the Project Manager – 8 hours
This session offers an opportunity to learn the unique, basic management skills of the mechanical project manager. Participants will gain an understanding of the essential traits, skills, and behaviors that allow effective management. Topics include: leadership and management skills; management ability vs. technical savvy; the importance of organization and standardization; motivating others to perform; managing the boss; delegation skills; communication skills; and working with difficult people.

DAY 6

Negotiating I: Basic Negotiating Skills for Project Managers – 4 hours
Mechanical project managers spend a part of each day negotiating change orders, subcontracts, equipment and material purchases, rental equipment rates, submittal and shop drawing approval, time and space allocation, back charges, etc., though most have no formal training in negotiations. This session provides basic skills to improve these individuals' negotiating abilities and increase their comfort level when negotiating.

Mechanical Scheduling I: The Basics of Scheduling a Mechanical Project – 4 hours
Scheduling the work provides more control and better documentation when projects that are delayed by others are forced to accelerate to meet the original completion date. Mechanical contractors who do little project scheduling often find themselves at the mercy of unrealistic CM/GC/owners' schedules that lack mechanical detail

activities. An active presentation and class discussion will attempt to answer the following questions:

- What basics of CPM scheduling must be understood to comprehend the CM/GC/owner's CPM schedule?
- Why must mechanical contractors schedule their own work?
- What type of scheduling method should be used, and when?
- Why is a mechanical schedule such a critical piece of project documentation?
- Why should a mechanical schedule be "labor-loaded" to show planned labor usage?
- How does mechanical scheduling reduce risk?

DAY 7

Critical Leadership Skills for Project Managers – 8 hours

Strong leadership skills are critical to successful project management. The success of project managers, who typically manage multiple projects, largely depends on the performance of several jobsite teams. In turn, company success depends on the project manager's performance. To have successful projects and a successful career, the project manager must develop critical leadership skills. This session provides an understanding of these skills. It will include:

- Defining and dispelling the myths of leadership
- The difference between leadership and management
- A discussion of Maxwell's irrefutable laws of leadership
- Making the emotional connection with teams and team leaders
- The relationship between leadership and motivation
- Developing effective speaking and listening skills
- Creating an atmosphere of trust
- Leadership ability and its relationship to personal effectiveness and accomplishment

DAY 8

Change Order Management II: Analyzing, Identifying, and Calculating the Real Costs of Project Changes – 4 hours

Project managers who manage multiple projects are plagued daily with the disruption and aggravation of change orders. Today, the project manager's skill in managing change is critical for project profitability and success. Participants will identify and calculate the cost impacts of changed project conditions on mechanical projects. Additional topics include: the impact of overtime on labor productivity and how to calculate costs; extended home office overhead and the Eichleay Formula; the costs of increased crew sizes caused by change orders; the effect of differing temperature/humidity conditions on productivity; and changes in site access and material handling/storage conditions.

Contracts II: Analyzing, Understanding, and Managing Contract Risk – 4 hours

Mechanical contractors are signing progressively more unpalatable contracts with owners/GCs/CMs. As a result, project managers must have a more extensive understanding of the contract than before if they are to manage effectively. In this session, participants will analyze the components of a "typical" mechanical subcontract that affect the management of a specific project.

DAY 9

Value-Based Mechanical Project Management – 4 hours

Learn the techniques and strategies used by the best mechanical project managers for setting themselves and their companies apart from their peers and their competitors. Project managers who attend this session and implement the concepts will see a significant improvement in their value to their customers and to their employers. This session will include discussion of the following skills:

- Personal and corporate accountability
- Goal setting and achievement
- Sound decision making
- Ethical project management
- Building customer trust and confidence
- Professionalism
- Creating long-term, trust-based relationships
- Creating your personal "brand"
- Identifying and focusing on customer needs and providing solutions
- Investing customer money versus spending customer money
- Managing customer expectations and the importance of performance and execution

Managing the Risk of Owner Furnished Equipment – 4 hours

In today's marketplace, mechanical contractors are likely to find themselves with a customer who has pre-purchased most of the major equipment items on a project and tailored their contract documents to place all of the equipment risk on the mechanical contractor. Projects that include owner furnished equipment (OFE) must be managed differently to help mitigate this risk. This session will have special emphasis on planning, documentation, communication, and claim avoidance. It will include the following topics:

- Identifying and understanding OFE risk
- Managing and controlling OFE risk
- Bidding issues and OFE
- Contract issues and OFE
- OFE documentation issues
- OFE and project scheduling issues
- OFE short interval scheduling requirements
- Understanding the owner's position regarding OFE
- Managing customer relationships on OFE projects

DAY 10

Profitably Managing Your Subcontractors – 4 hours

Subcontractors represent a significant portion of most mechanical contracts, and the performance of your subcontractors is a direct reflection of your own

performance in the eyes of an owner, construction manager, or general contractor. The project manager's effective management of subcontractors ensures a successful project that is profitable, completed on time, and completed within budget. When mechanical subcontractors are properly managed by the project manager and foreman, mechanical contractor risk is low, customer satisfaction is high, and strong long-term relationships are developed between the mechanical contractor and their subcontractors. The session will include the following subcontractor management topics:

- Writing good subcontracts
- Thorough review and analysis of subcontractor scope of work
- Managing change orders
- Proper communication
- Developing strong relationships
- Managing safety, billing, and payment procedures
- Documentation

Successful Survival of Project Closeout – 4 hours

The end of a project is usually a challenging and difficult time for the mechanical project manager and the foreman. Unfortunately there is no magic formula, wand, or pill for eliminating the difficulty of project closeout. There are, however, several tactics and strategies the project manager and foreman can implement to improve end-of-job performance and mitigate the difficulties of project closeout. In addition to a review of innovative methods used by MCAA contractors to help reduce the typical end of project "profit/productivity drain," this session will include the following project closeout topics:

- Punch list
- Warranties
- As-built drawings
- O & M manuals
- Customer satisfaction
- Closeout productivity improvement
- Demobilization
- Change order finalization
- Final payment
- Feedback meeting

DAY 11

Basic Construction Law Concepts for Mechanical Project Managers – 8 hours

Project managers must have a rudimentary understanding of fundamental legal concepts to effectively and profitably manage their projects and their customers. With this information, they are more likely to be proactive in avoiding potential legal problems on their projects and more confident and effective in successfully documenting, debating, negotiating, and resolving difficult project issues and disagreements while maintaining positive customer relationships. This session will include an overview of the most significant construction law concepts, issues, and principles that are commonly encountered by the mechanical project manager, including:

- Interpreting the contract
- The Uniform Commercial Code and the construction industry
- The authority and responsibility of the architect/engineer
- Differing site conditions
- Unforeseen site conditions
- Basic premises of tort law
- Basic premises of contract law
- What constitutes a contract
- Maxims of law
- Design specifications vs. performance specifications
- Defective construction caused by faulty construction practices
- Defective construction caused by defective plans or specifications
- Patent vs. latent defects in plans or specifications

The instructor for this session is not an attorney. Information provided is for educational purposes only and does not constitute legal advice. Contact your company's legal counsel for specific advice.

DAY 12

High Impact Communication Skills – 4 hours

Due to the complexity of the construction process and the numerous people involved in a project's completion, excellent communication skills are required to succeed at project management. When communication problems develop, relationships usually weaken, misunderstandings occur, and project failure is imminent. Excellent communication skills are essential to creating a successful project and a successful career. Communication is always difficult on a construction project and the best project managers know that it's an issue which requires a project manager's constant attention, evaluation, and improvement. This session will cover vital communication topics such as: effective listening, questioning, public speaking and presentation, basic written communication, clear explanation and understanding, and accepting the burden of communication.

Best Practices of Blue Chip Mechanical Project Managers – 4 hours

Why are some project managers consistently more successful than the "typical" project manager in our industry? What separates good project managers from great project managers? While age, experience, attitude, and talent are important factors in a project manager's success, the instructor has identified and will share the best practices skills that can be learned by any project manager who has the attitude, aptitude, and desire to improve and succeed. This session includes an overview and in-depth discussion of the many best practices used by the industry's best project managers. It also provides a review of the traits and qualities that are the common denominators among excellent project managers. This session will serve as an overview and refresher for many of the topics found in the Fundamentals of Project Management educational program.

ADVANCED SUPERVISORY EDUCATION

DAY 1

Planning Skills for Foremen – 8 hours

Effective planning makes projects more productive and profitable. This session covers three areas of planning: turnover meetings, pre-construction planning, and short interval planning. Learn the fundamentals of effective turnover meetings necessary to transfer information from estimators to the project team. Discuss how the foreman can positively influence project outcome through sound and proactive planning, and learn the fundamentals of successfully pre-planned projects. Focus on the necessity of continuous project planning using short interval planning and on scheduling to recognize upcoming project needs.

DAY 2

Productivity Improvement: Material Management and Site Planning Methods – 2 hours

Poor site planning and material management/handling practices are often the greatest causes of poor labor productivity. Learn how material management and labor productivity are related, and get strategies for improving material handling and site planning. This session reviews practical principles, guidelines, and procedures for effective material management and site planning.

The Foreman's Role in Project Documentation – 4 hours

Examine the role of the jobsite supervisor in creating daily, indisputable project documentation. Review the basic types of and uses for project documentation and learn methods to improve documentation effectiveness. The steps for planning and implementing the documentation process for a mechanical construction project will be reviewed.

Managing Labor: Coding, Tracking, and Forecasting – 2 hours

The contractor's primary risks in the construction process are: estimating, budgeting, managing, and controlling project labor costs. You will explore the jobsite supervisor's role in managing and controlling mechanical project labor costs. The jobsite supervisor's unique partnership with the mechanical project manager in timekeeping, coding, tracking, and forecasting project labor hours and costs will be stressed.

DAY 3

Essential Management Skills for the Project Foreman – 4 hours

Successful journeymen with unique abilities, but with little or no management training, are frequently promoted to "foreman" and lead crews of workers on mechanical projects. This session explores basic management skills relative to the position of jobsite foreman. Understand essential traits, skills, and behaviors that allow a foreman to more effectively manage crews. Topics covered include: the relationship between leadership and management; management ability vs. technical savvy; consistency in managing others; the importance of organization and standardization; motivating others to perform; delegation skills; and working with difficult people.

Managing Change at the Jobsite – 4 hours

Review the jobsite supervisor's role in managing the change order process. Discuss the negative impact of change orders on the completion of the original scope of work and the methods for minimizing and managing these impacts. Topics include:

- Foreman as "guardian of the scope of work"
- The real costs of change orders
- The project owner's perspective on change orders
- Methods for managing and preventing productivity loss on change orders
- The importance of the early identification of change orders
- The effects of overtime on productivity
- Managing change orders with a strong foreman/project manager team
- The importance of solid change order documentation
- What a typical contract says about change orders
- Managing time and material change orders
- Managing morale and motivation on projects plagued with numerous change orders

DAY 4

Critical Leadership Skills for Project Foremen – 4 hours

Successful project supervision requires strong leadership skills. Most foremen possess some degree of instinctive leadership skills, but learning additional leadership skills can improve overall leadership effectiveness. Learn the difference between being in charge and being an effective leader. Understand the critical leadership skills of an effective foreman. Topics to be discussed include:

- Defining leadership and dispelling the myths of leadership
- The difference between leadership and management
- Making the emotional connection between teams and team leaders
- The relationship between leadership and motivation
- Developing effective listening skills
- Creating an atmosphere of trust
- Workers vs. followers

Successful Survival of Project Closeout – 4 hours

Project's end is often a difficult time for the project foreman and his crews. The project looks complete, but often has numerous items that must be completed to meet contract requirements. The project team has often lost the momentum and energy it possessed earlier in the project. This session provides basic skills for a successful project closeout. A discussion of innovative methods used by MCAA contractors to help reduce the typical end of project profit/productivity drain is included.

DAY 5

Everyday Negotiating Skills for Jobsite Supervisors – 4 hours

Mechanical foremen spend a significant portion of each day negotiating with their subordinates, general contractors, construction managers, owners, subcontractors, vendors, and other trades. They regularly negotiate for space, time, access, sequence, hoisting equipment, answers to questions, and the like—all things that have a significant direct impact

on project success—yet they often have no formal training in negotiating. Jobsite supervisors who improve their negotiating abilities are more likely to create better results on their projects. To that end, this session will provide jobsite supervisors with basic skills to improve their negotiating abilities and increase their effectiveness and comfort level when negotiating. The session will include, but is not limited to, the following negotiating topics: importance of preparation, negotiating styles, reading the other side, how to concede, strategies for win-win, building relationships, negotiating price, questioning skills, and listening skills.

Managing Your Subcontractors – 4 hours
Subcontractors represent a significant portion of most mechanical contracts, and the performance of your subcontractors is a direct reflection of your own performance in the eyes of an owner, construction manager, or general contractor. On many projects the on-site foreman becomes so absorbed by his own specific work activities that he loses sight of the fact that the subcontractor's work is also a part of their company's contract. The project foreman's effective daily on-site management of subcontractors is required to ensure a successful quality project that is completed on time and within budget. This session will include the following subcontractor management topics:

- Thoroughly understanding the subcontractor's scope of work
- Managing change orders
- Proper communication
- Developing strong relationships
- Managing safety
- Coordination
- Documentation

DAY 6

Practical Time Management Skills for Foremen – 4 hours
The effective management of time is one of a jobsite supervisor's greatest challenges and is often the root cause of their greatest failures. Construction productivity experts have known for many years that journeyman productivity has a direct correlation to a foreman's effectiveness. A foreman's effectiveness is also directly correlated to how efficiently and wisely they use their own time. This session will focus on the practical time management methods and techniques a foreman can easily use to increase management efficiency and effectiveness. The session will include the following time management topics:

- Utilizing quiet time
- Time ownership attitude
- Delegation
- Managing the telephone
- Task prioritization
- Daily and weekly planning
- Using calendars and lists
- Managing meetings
- Organization
- Managing drop-in visitors

Qualities, Characteristics, and Habits of the Industry's Best Foremen – 4 hours
Why are some mechanical foremen consistently more successful than the typical foreman in our industry? What are the qualities, methods, and practices that separate a good foreman from a great foreman? While age, experience, attitude, and talent are important factors in a foreman's success, most of the qualities, characteristics, and habits of the industry's best foremen are skills that can be learned over time by any foreman who has the attitude, aptitude, and desire to improve and succeed. This session will focus on the following "best practice" topics: planning, safety, production, material handling, integrity/ethics, leadership, budget awareness and cost control, relationship building, communication skills, fabrication usage, documentation, and teaching/learning.

ABOUT THE INSTRUCTOR

John R. Koontz, MCAA's national director for project management and advanced supervisory education, brings a balance of academic and practical experience to his courses. A former tenured associate professor in Purdue University's Department of Building Construction Management, he served as Purdue's mechanical construction management coordinator. He has been teaching since 1992. Prior to this, he spent 15 years in the employment of MCAA contractors in a variety of positions including senior project manager, project manager, project engineer, and estimator. Professor Koontz is the director of the MCAA Institute for Project Management and Advanced Institute for Project Management at the University of Texas in Austin.

He also served as Academic Representative on the Board of Trustees of the Mechanical Contracting Education & Research Foundation. In addition to traveling the country to support MCAA's National Education Initiative, Koontz remains active in continuing education, research, and writing in the area of mechanical contracting and MCAA Student Chapter development.

Education
1984—M.S. in Construction Management, Washington University, St. Louis, MO
1982—B.S. in Building Construction Management, Purdue University, West Lafayette, IN

FOR MORE INFORMATION OR TO SCHEDULE A COURSE, CONTACT:

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