

**Comprised of ten units (and two overview units)
each designed for 25 hours of instruction**

- Unit 1: *Leadership and Motivation*
- Unit 2: *Oral and Written Communication*
- Unit 3: *Problem Solving and Decision Making*
- Unit 4: *Contract Documents and Construction Law*
- Unit 5: *Planning and Scheduling*
- Unit 6: *Understanding and Managing Project Cost*
- Unit 7: *Accident Prevention and Lost Control*
- Unit 8: *Managing the Project—The Supervisor's Role*
- Unit 9: *Productivity Improvement*
- Unit 10: *General and Specialty Contractor Dynamics*
- Unit CS: *Construction Supervisor Overview*
- Unit HH: *Heavy/Highway Construction Supervisor Overview*



STP Delivery

- Comprised of Instructor's Guides with PowerPoint presentations and Participant's Manuals for each unit, easily adapted to fit multiple needs.
- Designed for flexible delivery—each unit is divided into ten, 2.5 hour sessions, delivered over several weeks or consolidated into two eight hour days.
- Regularly facilitated by AGC Chapters, construction firms, community colleges and construction training centers.



Training Our Industry on Today's Needs

- Training thousands of individuals every year—over 7,000 people went through a course in 2008 and over 122,000 have been trained since the program's inception.
- Regularly updated to reflect the changing industry ensuring a quality, relevant training program.



Understanding and Managing Project Costs Course Learning Objectives

- Know and apply basic management ideas, principles, and skills that will enable you to immediately manage the crew on your construction project more effectively
- Know and apply important project cost management principles
- Understand how cost reporting can improve the overall success of a project
- Understand how the process of estimating and pricing, from concept through detailed estimating to change orders
- Proactively manage project costs
- Proactively manage various risks/potential delays that could impact your project



Understanding and Managing Project Costs Sessions

- Introduction to *Understanding and Managing Project Costs*
- Construction Estimates
- Who Controls Project Costs?
- Reporting and Analyzing Actual Costs
- Planning for Cost Control
- Cost Control Strategies
- Labor Cost Variances
- Managing Risk and Loss Potentials
- Working with Project Partners
- Post-Project Evaluations



Examples of Unit 6 Session Learning Objectives

- Identify how contractors obtain work and the process that leads up to the physical construction process
- Complete a subcontractor selection process and select subcontractors for an estimate
- Plan labor crews and production to manage construction cost
- Analyze personnel management and the losses that can occur
- Review communication strategies for relaying suggested changes to your foreman and other employees to improve future projects



The Sure Fresh Project

- The Sure Fresh Project is used in many STP Units
- The project contains many common :
 - Site excavation and grading
 - Two bridges
 - Two gatehouses
 - Office building
 - Receiving warehouse
 - Foundations and slabs for three warehouses
 - Paving and landscaping
- Blueprint drawings are included for each participant and on the Instructor's CD
- Activities can be geared toward building or heavy/highway construction



Example of an "Apply What You Have Learned"

- Find out some of the history behind your current project:
 - What involvement did your company have in the design phase, if any?
 - How and when was the construction estimate for the project completed?
- Do you receive daily cost reports?
- On your current project, review your labor productivity and analyze what conditions are impacting whether your crews are meeting or beating the budget.



Examples of "Looking Forward to Session X"

- You will need an architect's and engineer's scale for some of the exercises in Session 2.
- Become familiar with the cost control system your firm uses.
- Familiarize yourself with the ways that your firm encourages productivity, efficiency, and cost savings.
- Review how your company analyzes projects after they are completed.



What's New In Unit 6

- MasterFormat 2004
- Project Partners
- Positive Wording
- Focus on Multiple Delivery Methods and Contract Types
- Updated Labor Costs
- Additional Survey Questions
- A focus on the importance of ethical conduct

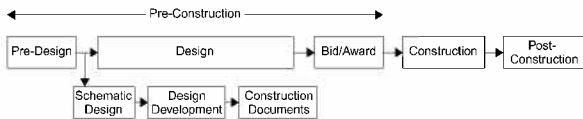


Session 1 Learning Objectives

- Identify how contractors obtain work and the process that leads up to the physical construction process.
- Recognize the role of the contractor's staff and the designers in the pre-construction phases of the project.
- Indicate how a project is obtained and how that process relates to the construction of the project.



The Construction Process



Session 1 Review

- The Pre-Construction Phases:
 - Pre-design
 - Design
 - Bid/award
- The Construction Phase
- The Post-Construction Phase
- Project Delivery Methods
- Construction Contract Types
- The Sure Fresh Project



Session 3 Learning Objectives

- Analyze the relationship between the estimated costs and those reported within the cost control system
- Define the relationship between cost and the degree of risk inherent to the project
- Classify major risks innate to every construction project
- Define the individual responsibilities for project team members relative to project cost control



Worksheet 3-2: Identifying Cost “Trouble Spots” on the Sure Fresh Project

- Analyze the project drawings and the schedule to identify trouble spots on the Sure Fresh project
- Participants discuss in groups and with the class the potential problems they find

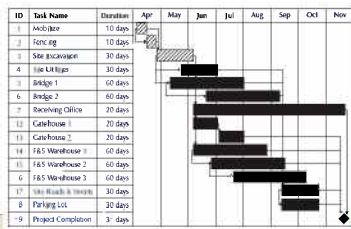


FIGURE 3-1) SURE FRESH SUMMARY SCHEDULE

Worksheet 3-2: Identifying Cost "Trouble Spots" on the Sure Fresh Project

- Some potential problems are:
 - Site excavation is a large subcontract on the critical path. Many things can impact the schedule for this subcontractor that could delay and will directly affect other follow-on activities.
 - The most significant self-performed are of work for the contractor includes the foundations and slabs for the buildings, particularly the three warehouses. This will require multiple crews. This is an opportunity to proactively manage labor crews as well as manage an area of high risk.



Session 4 Learning Objectives

- Discuss the reasons for implementing cost controls
- Review the methods for developing a cost control system
- Analyze the cost control process
- Convert the estimate into cost control items



Worksheet 4-1: Analysis of Cost Data

- Participants use a case study to analyze cost data and make assumptions based on the forecasted cost
 - The costs to date
 - The production to date
 - The quantity of work completed
 - A comparison of the estimated cost to the current cost



Apply What You Have Learned

- If possible, examine your company's cost control system.
 - Do you receive daily cost reports?
 - Does your cost control system give you the opportunity to make decisions during construction activities that can change the future unit cost or variance of an item?
 - How does your firm establish cost control items?



Session 5 Learning Objectives

- Review planning as a primary tool in cost control
- Develop the bill of materials
- Prepare a bill of materials for a portion of the Sure Fresh Project
- Plan labor crews and production to manage construction cost
- Prepare a labor plan for the Sure Fresh Project
- Understand how crew feedback during construction can improve productivity



Cost Management Plan

- Step 1: Establish a budget
- Step 2: Identify cost activities and cost control numbers
- Step 3: Assign responsibility for daily coding and reporting cost data
- Step 4: Determine a method of organizing material purchases for the cost control system



Cost Management Plan

(Continued)

- Step 5: Make activity-based crew assignments
- Step 6: Determine a method of analysis and remedial strategy
- Step 7: Determine a method for obtaining foreman feedback
- Step 8: Develop a reporting method for determining the impact of subcontractor actions



The Responsibility for Daily Coding and Reporting Cost Data

- Foremen supply data
- The superintendent is responsible for ensuring accurate data is recorded in the cost control system

Goal: Report accurate cost information daily



Session 5 Review

- A cost control plan must:
 - Identify cost activities and cost control numbers
 - Determine/assign the responsibility for daily coding and cost reporting
 - Establish a method of crew assignment
 - Establish a method of cost analysis
 - Establish a planning process for resolving cost variances
 - Establish a method for foreman feedback
 - Establish a method of reporting/managing subcontractor challenges



Session 6 Learning Objectives

- Identify strategies for obtaining cost data.
- Review how to use cost control data in minimizing costs.
- Review the causes of additional costs.
- Analyze a jobsite problem.
- Review the methods for recovering compensation for additional costs.
- Discuss the use of cost control information in identifying and analyzing change orders and subcontractor backcharges.
- Learn to isolate change order costs.



Worksheet 6-1:

A Role Play in Problem Analysis

- This role-playing activity examines cost problems, their impact, and how to analyze them.
- The roles in the groups will be:
 - Project Superintendent
 - Crew Foreman
 - Designer's Representative
 - Plumbing Subcontractor
 - Electrical Subcontractor



Session 6 Review

- Cost data need to be organized to indicate trends in cost variance
- It is important to discover why the variance is occurring, regardless of whether the variance is over or under
- Management can be responsible for some of the problems. It is important to recognize the cause and take action immediately



Session 7 Learning Objectives

- Differentiate among the causes of labor cost variance.
- Apply problem-solving methods to manage cost variances.
- Consider which project team members are responsible for managing the various labor cost problems.
- Analyze labor cost overrun problems.
- Evaluate labor cost variations in the Sure Fresh Project.



Labor Cost

- Wages
- Fringe benefits
 - Medical insurance, pension, annuity, training
- Taxes and insurance
 - Workers' comp, unemployment insurance, federal unemployment tax, FICA
- Typically about 1.5 to 1.8 x wages
- A carpenter with wages of \$27.93 costs \$52.00 per hour to the contractor.
- That same carpenter costs \$0.87 per minute.
- Daily cost is \$416.
- Every delay costs the contractor.
 - 3 carpenters delayed 30 minutes costs \$78.30.
 - Unanticipated delay costs are not included in the estimate.



Causes of Labor Cost Variances

- Causes of construction delays
 - Environmental conditions
 - Management mistakes
 - Crew performance
 - Subcontractor delay
 - Supplier delay or defective product
 - Owner/Designer caused delay
 - Unforeseen delays



Session 7 Review

- Labor cost is the combination of wages, fringe benefits, and taxes.
- Labor cost variances are caused by:
 - Environmental conditions
 - Management mistakes
 - Crew performance
 - Subcontractor delay
 - Supplier delay and defective products
 - Owner/designer delay
 - Unforeseen delays



Session 9 Learning Objectives

- Discuss the costs and cost effects associated with project partners.
- Examine scope statements and specifications to determine project partners' responsibilities and the scope of work on the jobsite.
- Use the construction schedule to track subcontractor progress.
- Discuss methods of providing information to project partners.
- Discuss control of changes and cost-plus subcontractor activities.
- Discuss backcharging to receive compensation from subcontractors.
- Discuss the importance of documentation in working with project partners.



The Cost Impact of Project Partners

- Spread the risk
- Improved schedule
- Improved expertise
- Greater capacity
- Exclusions, non-covered work
- Additional work required by subcontractor
- Subcontractor default or bankruptcy



Session 9 Review

- Subcontractor performance can impact cost by:
 - Adding labor costs due to delay or lowering costs by expediting work
 - Not accomplishing work anticipated
 - Requiring additional work by your crews
 - Defaulting or refusing to do work



Session 9 Review

(Continued)

- Management can reduce the cost impact from subcontractors
 - During the bid period
 - During the buyout period
 - Before subcontractors start work
 - While the subcontractor is on the job
 - Before the subcontractor leaves the job



Apply What You Have Learned

- On your current project, look at the challenges involving subcontractors on your jobsite:
 - What extra costs were caused by these challenges?
 - What portion of your time do you spend working with subcontractors?
 - Could you avoid more problems if you spent some time communicating your expectations with subcontractors?



Course Review

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Instructor Qualifications

- Find an instructor who:
 - Has a supervisory background
 - Can relate to your participants
 - Knows costs reports and how to apply the information to make decisions about the project
 - Has access to current cost information and cost examples/reports



Characteristics of Instructors

- Know your learners
- Know the subject
- Know teaching strengths and weaknesses
- Recognize participants as resource
- Develop a collaborative climate
- Demonstrate professionalism
- Take care of administrative responsibilities



Characteristics of STP Learners

- A wealth of experience
- A desire to be problem solvers; decision makers
- A need to be treated as adults; equals
- Established values and opinions
- Concrete goals
- Training needs dictated by jobs
- A desire to be involved
- A preference for timely training
- A desire to accept responsibility



STP Resources

- STP Web Site: www.agc.org/STP
- STP Nationwide Calendar *-find courses near you!*
- Content descriptions *-review what's covered in each unit!*
- Find information on Unit updates and corrections
- Download documents to help you deliver a course



Questions?



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