

# Project Management/Field Operations Fundamentals

# Session objectives

**By the end of this session you should have an understanding of:**

- Estimate Review and Handoff Process
- Project Management (PM) Start Up and On-Going Management Processes
- Field Operations Coordination and Reporting Fundamentals

# Estimate Review Process

- Goal: To properly transfer a project from Bidding/Estimating to the Project Management Team for Contract Execution and Project Delivery.
- Suggested deliverable:
  - Control Budget
- Estimate review by category:
  - Labor
  - Materials
  - Equipment
  - Subcontractor(s)
  - Indirects

# Labor Estimate Review

- Number of estimated labor hours per activity
- Labor burden rate and inclusion/exclusion
- Salary estimates with durations (mostly project Supervision)
- Escalation of Labor Rates, if any applicable
- Overtime requirements, if any assumed at bid time
- Unusual schedules (Rotations, 7 days, Shifts over 8 hours)
- Unusual Skill set requirements (crane operators, safety or QA/QC managers, etc...)

# Materials Estimate Review

- Materials for all self perform activities should be separated by task.
- All bulk material purchases should be separated as follows:
  - Materials must be clearly identified, major purchases summarized by reasonable categories (i.e. concrete, rebar, steel, lumber, drywall, etc...) using a numeric system such as CSI format.
  - Materials must be separated by quantities estimated and the proper unit of measurement (UOM).
  - Materials furnished by customer/owner must be clearly identified.
  - Materials with long lead delivery or special procurement terms (new accounts, sole source, special approvals, etc...) must be clearly identified.

# Equipment Estimate Review

- Equipment for all self perform activities should include a summary with the following information.
  - Type(s) of Equipment
  - Brief Explanation for Equipment Use
  - Duration of Equipment on Site
  - Fuel, Oil & Grease Budget
  - Cost of Equipment at a minimum of monthly rate
  - Special Purchase or Long Lease Terms
  - Special Training Requirements (Safety)
  - Operator Requirements

# Subcontractor(s) Estimate Review

- The scopes for subcontractor(s) will be separated and committed by a written and duly executed agreement.
- Subcontractors quotes must be provided with scope summary's and any review comments from bid time.
- Subcontractors must be separated by scope type, in a format similar to CSI.
- Subcontractors pre-qualifications, finances, bonding/insurance documents from bid time must be transferred to the PM Team.

# Indirects Estimate Review

- Review all main office indirects by category that were included in estimate.
- Review all project indirects by category that were included in estimate.



# Control Budget

- Goal: Provide an original Control Budget that will be used to track the Project Cost and protect or improve the fee.
- The Control Budget must be logical and measurable in order to properly forecast and manage the Project Resources.
- The Control Budget reflects the original estimate and is separated by the cost types that were part of the estimate review:
  - Materials
  - Labor
  - Equipment
  - Subcontractor(s)
  - Indirects

# Project Management Startup

- The following is a suggested list of deliverables that should be planned for and developed prior to starting the work:
  - Contract Document(s) Review/Site Visit Summary Plan (include all preconstruction photos and video)
  - Project Schedule(s) Plan
  - Site Specific Safety Plan
  - Site Specific QA/QC Plan
  - Site Specific Records & Document Control Plan
  - Project Closeout Plan

# PM Startup Deliverables

- Contract Document(s) Review/Site Visit Summary Plan (good practice is to include all preconstruction photos and video as attachments)
  - Purpose is to document or index the items in the contract documents that require the Project Management Teams attention to be in compliance (e.g. Notices, Changes in the Work, Time, Payment, etc...). Note: Each contract must be reviewed independently and thoroughly.
- Project Schedule(s) Plan
- This plan should identify the types of schedules required and the frequency for updates.
- The Plan should include at least the following:
  - Base Line Schedule – Critical Path Method (CPM): Started at Bidding Phase. Schedule shall be resource loaded.
  - Updated CPM Schedule(s)
  - Look Ahead Activity Schedule(s): 2 Weeks, 3 Weeks Ahead

# PM Startup Deliverables (continued)

- Site Specific Safety Plan
  - Plan should include what steps will be taken to manage hazards associated with the particular scopes of work being performed during the project.
- Site Specific QA/QC Plan
  - Plan should outline how project QA/QC requirements shall be delivered in accordance with the contract documents.
- Site Specific Records & Document Control Plan
  - Plan should outline all contractual document retention and control requirements and any company requirements that are also required.

# PM Startup Deliverables (continued)

- Project Closeout Plan
  - Goal of Plan is to set up the project where the close out process is inclusive of the on going project management process. “Close the job as you go!”

# PM On-Going Management Processes

- The following is a suggested list of On-Going PM Processes that should be used when executing the work:
  - Cost Control Management
  - Change Order Management
  - Submittals
  - RFIs

# PM On-Going Management Processes

- Cost Control Management
  - Goal is to minimize cost in relation to the Control Budget
    - Job Cost Status Reporting
    - Cost Projections/Forecasts
- Change Order Management
  - A “Change” is defined as any change in contract requirements
  - Change Order Management Process objectives:
    - Respond in a timely manner
    - Maintain accountability: “You may have authority to make changes to contract documents however we need written direction to proceed”
    - Maintain proper documentation/approval in accordance with contract documents

# PM On-Going Management Processes (Continued)

- Submittals
- The submittal process affects cost, schedule, and project success.
- Submittals are required primarily for the A/E or Owner to verify the correct products and quantities will be installed as per contract requirements.
- Basic process for Submittals is defined in contract documents and typically has the following steps:
  - Identify all submittals required by contract documents.
  - Prepare submittal along with all required documentation and submit to reviewer(s)
  - Respond to any comments or record the status of the reviewed submittal (e.g. reviewed, approved, etc...)
- A “Log” should be used to track where submittals are in the review and approval process.



# PM On-Going Management Processes (Continued)

- RFIs
- RFIs stands for Request for Information and they are typically used to ask for clarifications to the following:
  - Design drawings, specifications, contract, etc...
- Basic process for RFIs are defined in contract documents and typically have the following steps (similar to submittals):
  - Draft RFI based on unclear information contained in one of the contract documents.
  - Submit to proper reviewers
  - Get response to RFI
- A “Log” should be used to track where RFIs are in the review and response process.

# Field Operations (FO) Coordination and Reporting Fundamentals

- Goal is to coordinate and report information from the field to be tracked and managed in a “Field Operations Progress Tracking Report”.
- The following information should be coordinated and reported from the Field Operations Team (Field Supervisors and Lead Craftspeople):
  - Actual Labor/Equipment/Material utilization for each Work Item Quantity performed by Unit of Measure (UOM) should be documented on a daily basis (either on paper or electronically).
    - E.g.: (L) 10 Crew Hours; (E) 10 Backhoe/Compactor Hours; (M) 10 Tons Leveling Material for 10,000 SF of Fine Grade for Concrete Slab.
  - Ideally each Work Item should be related to a unique identifier (cost code) by cost type. This is useful for sorting and reporting costs by type for budget comparisons and cost accounting functions.
  - The time period the Work Item was performed should be clearly identified when submitting the data. This is useful for updating and progressing the project schedule.

# FO Coordination and Reporting Fundamentals (Continued)

- All daily paper or electronic records of quantities and resources associated for work items performed should be incorporated into a weekly report that gets submitted to the Project Management Team for review and processing.
  - E.g. Payroll processing, backup for payment submittals, etc...
- As a good practice to encourage pre-work item planning a field operations “Think-Ahead” Schedule should be used and contain at least the following information:
  - Work item description
  - Crew needed; estimated number of hours
  - Equipment needed; estimated number of hours
  - Materials needed; estimated quantities for approved materials
  - Subcontractors needed; estimated day and durations needed

# FO Coordination and Reporting Fundamentals (Continued)

- Proper planning, coordination, and reporting of information both accurately and timely is essential to the success of a project.
- At the end of the day for construction projects: “You make money in the field!”

# Questions?