

Construction Accounting and Financial Management

Chapter 7 Managing Costs

Construction Accounting & Financial Management, 3/e
Steven Peterson

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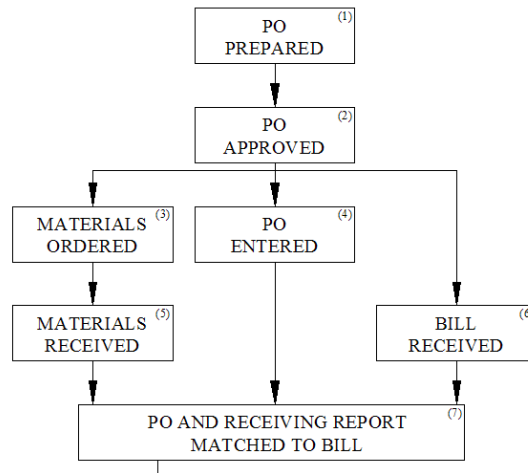
Material Purchases

- Purchase orders approved by project manager
- Supervisor has limited authority to approve small purchase orders

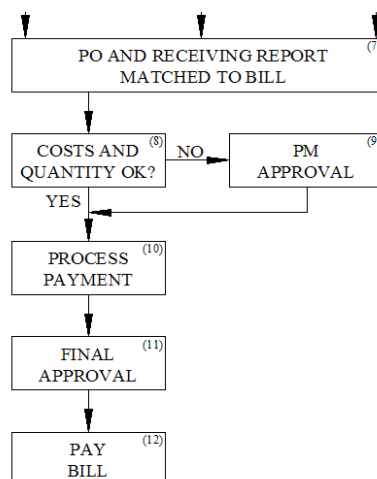
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Materials Purchases



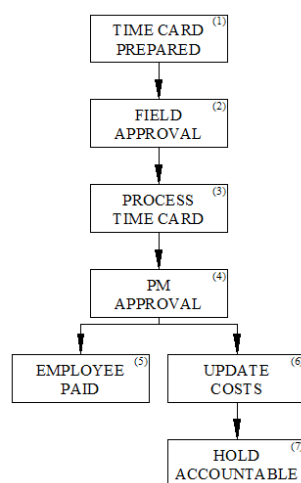
Materials Purchases



Labor Costs

- Hard to control
- Tracked by timecards
- Must be processed quickly

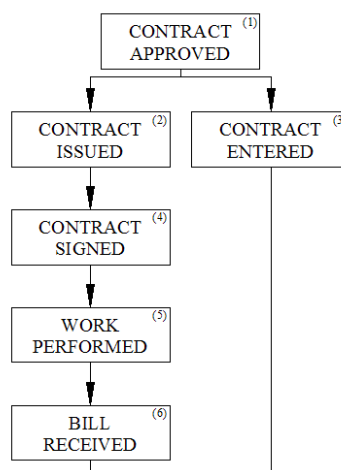
Labor Costs



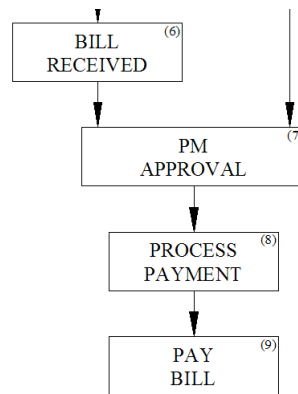
Subcontracts

- Often requires progress payments
- Hard to determine percent complete

Subcontracts



Subcontracts



Equipment

- Hard to control
- Controlled like labor
 - Use equipment time cards
- Be sure equipment is returned as soon as the project is done with it

Other Costs

- Where possible, use purchase orders
- When a purchase order has not been used, approval by project manager is required
 - For example, for utility bills

General Overhead Costs

- Must be managed as aggressively as construction costs

Job Profitability

- Update weekly
 - Cost to complete
 - Estimated cost at completion
 - Estimated profit
- Include committed costs even if not tracked in the accounting system

Cost Loaded Schedule

- Prepare schedule
- Assign cost to the tasks
- Determine the weekly or monthly costs

Earned Value

- Measures performance with regards to
 - Schedule
 - Cost
- Ignores items which do not have a cost
 - For example, submittals

Budgeted Cost of Work Scheduled (BCWS)

- The expected cost of the work that is scheduled to be performed during a specific period of time

Budgeted Cost of Work Performed (BCWP)

- The expected cost of the work that is actually performed during a specific period of time

Actual Cost of Work Performed (ACWP)

- The actual cost of the work that is performed during a specific period of time
- Hard to calculate in a timely matter because of lag in receiving and processing invoices

Schedule Performance Index (SPI)

- $SPI = BCWP/BCWS$
- Measures progress of work
- Results
 - >1 : Ahead of schedule
 - =1 : On schedule
 - <1 : Behind schedule

Cost Performance Index (CPI)

- $CPI = BCWP/ACWS$
- Measures control of budget
- Results
 - >1 : Under budget
 - =1 : On budget
 - <1 : Over budget

Labor Cost Performance Index (LCPI)

- Same as CPI except it only looks only at in-house labor
- $LCPI = BCLP / ACWP$
 - BCLP = budgeted cost of labor performed
 - ACWP = actual cost of work performed
- Measures control of in-house labor costs

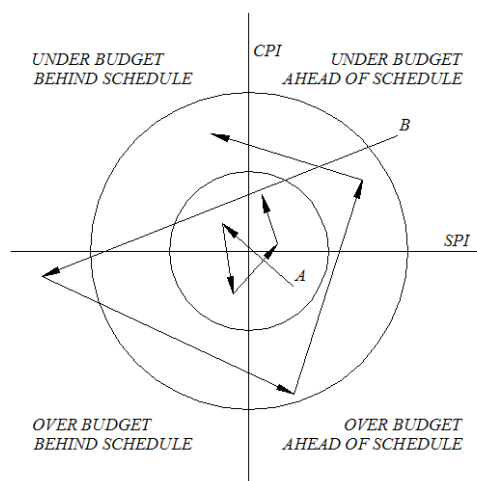
Labor Cost Performance Index (LCPI)

- Results
 - >1 : Under budget
 - =1 : On budget
 - <1 : Over budget

Total Estimate Cost at Completion

- $TEC \text{ at } C = \text{Total Estimate}/CPI$
- Assumes CPI will not change

SPI/CPI Target levels



Project Closeout Audit

- Validate data
- Find areas where performance was better than expected
 - Learn how to repeat it
- Find areas where performance was worse than expected
 - Learn how to avoid it