

Construction Change Orders

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Agenda

- Tools to Prevent Change Orders
- 4 Elements of Change Orders
- Authorization of Change Orders
- Reasons for Change Orders
- Appropriate Uses of Change Orders
- Cardinal Changes
- Review and Approval Process
- Evaluation of Change Order Requests
- 3 Methods for Establishing Price

Tools to Prevent Change Orders

- Clear Plans and Specs
- Pre-bid site inspections
- Addenda
- Claims of Error
- Partnering
- Clear Change Order and payment provisions
- Know your contract

4 Elements of Change Orders

- Scope of Work
- Price
- Time
- Terms and Conditions

Authorization of Change Orders

- Authorize before work is performed
- Field Authorizations (Field Orders)
- Unilateral Change Orders
- Surety Approval of Change Orders
- Waiver language

Advantages of Work by Change Order

- Speeds up the process
- Dealing with known contractor
- Separate plans and specs not needed
- More cost effective to manage one project
- Minimizes impact of two contractors on site

Reasons for Change Orders

Additional Work

Additional Work consists of work that must be undertaken to meet the contract requirements and without which the work requested in the original contract could not be completed.

Extra Work

Extra Work consists of work that is outside and entirely independent of the contract. Essentially, it is work that need not be performed in order to satisfy the terms of the original drawings and specifications.

Construction Contracts, by Jimmie Hinze (Boston: Irwin McGraw-Hill, 1993), p. 150.

Appropriate Uses of Change Orders

- Unforeseen conditions
- Design errors, deficiencies, or defects
- Design changes requested by Owner
- Increased quantities
- Upgrading materials
- Compensation for delays (unusual weather or owner caused delays)

Appropriate Uses of Change Orders

- Force majeure
- Regulatory changes
- Safety or environmental issues
- Emergency work
- Additive, Deductive, or Alternate work
- Negotiated claim settlement
- Deletion of work

Appropriate Uses of Change Orders

- Additional work of the same type
- Potential work identified in advertisement
- Natural progression of original project

Cardinal Changes

A major change in the scope of a project that deviates from the intent of the original concept and general scope of work as approved.

Problems with Cardinal Changes

- Non-competitive pricing
- Violates intent of competitive bidding law
- Contractor may refuse to perform
- Doesn't spread work to other firms

Examples of Cardinal Changes

- Planned as a separate project
- Project at different location
- Different nature of work
- Work not reasonably anticipated
- Changes basic character of project
- Could be bid as a separate project
- Undeclared and not related emergency work

Other Problematic Change Orders

- Additive, deductive, alternate work impacting the bidding process
- Deductive Change Order immediately after award to meet budget

Review and Approval Process

- Proposal
- Owner response
- Claim
- Alternate dispute resolution
- Court

Evaluation of Change Order Requests

- Risk allocation
- Standards for pricing Change Orders
- Owner's dual responsibility
- What do contract documents require?
- What could the contractor have reasonably anticipated?
- Did Owner make changes after award?

3 Methods for Establishing Price

- Lump Sum (Fixed Price)
- Unit Price
- Time and Materials (Force Account)

Lump Sum (Fixed Price)

- Labor
- Materials
- Equipment
- Small tools and consumables
- Overhead
- Profit
- Insurance and bond

Labor

- Based on:
 - Basic wage and benefits
 - Worker's Comp premiums
 - FICA
 - Travel allowance (if applicable)
 - Safety compliance (WISHA)

Materials

- Based on:
 - Actual known costs
 - Supplier quotations
 - Standard industry pricing guides

Equipment

- Based on:
 - Actual invoice cost
 - Industry standards such as
 - AGC/WSDOT Equipment Rental Agreement
 - Utilities and Transportation Commission for trucks used on highways
 - National Electrical Contractors Association for equipment on electrical work
 - Mechanical Contractors Association for equipment used on mechanical work
 - Primedia Rental Rate Blue Book

Allowances

- Small tools
 - (percentage of direct labor costs)
- Expendables and consumable supplies
 - (direct costs)

Overhead

- Costs attributable to direct and indirect delay, acceleration, or impact
- Non-craft labor
- Temporary construction facilities
- Field engineering
- Schedule updating
- As-built drawings
- Home office cost
- B&O taxes
- Office engineering
- Estimating costs
- Additional overhead due to extended contract time

Profit

- Negotiate reasonable amount acceptable to contractor and owner, or
- Use formula outlined in contract

Insurance and Bond

- Cost of additional premiums due to the change order

Unit Prices

- Obtained through either
 - Bidding process
 - Negotiated for change order

Unit Prices – Bidding Process

- Competition for unit prices
 - Unit price contract
 - Lump Sum contract with unit prices requested
 - Additives and deductives
- No competition for unit prices
 - Need to negotiate unit prices

Unit Prices - Negotiated

- Based on formulas for determining pricing for Lump Sum (Fixed Price) change orders
- Owner must measure quantities to serve as basis for payment

Time and Material (Force Account)

- When work can't be easily estimated
- When there is a disagreement over cost
- Establish maximum amount
- Contractor and owner keep records
- Contractor costs consistent with pricing for Lump Sum (Fixed Price) change orders

Questions



Mike Purdy has more than 27 years of experience as a manager in public contracting and procurement. He is currently the Contracts Manager for the University of Washington's Capital Projects Office and is responsible for managing design and construction contracts for more than \$1 billion worth of projects at the University. Before joining the UW in 2005, he spent five years at the Seattle Housing Authority where he served as Contracting and Procurement Manager, overseeing all of the contracting and purchasing (construction, design consultants, other consultants, goods, supplies, and services) for the largest residential landlord in the state. Prior to that he worked for the City of Seattle for more than 21 years, where he administered the city's construction and consultant contracts as the city's Contracting Manager.

He has a bachelor's degree in business and public administration and an MBA, both from the University of Puget Sound, and a master of divinity degree from Fuller Theological Seminary. Mike is also the principal of Michael E. Purdy Associates (www.mpurdy.com), a consulting firm providing contracting and procurement advice to government agencies in the area.

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