Introduction to Estimating - Part 1

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Basic Bid Concepts & Intro to Estimating
Course Objectives

▪ Understanding the bid and pricing process & the typical bid format for both primes and subcontractors

▪ An overview on basic concepts for estimating

▪ An overview of the basic protocol & process for submitting a sub bid

▪ Understanding how to develop a professional & credible Scope Letter

▪ *This workshop is designed for construction contractors*

▪ *Per the CA Public Contract Code....Low Bidder Wins!*
Basic Requirements

- Proper license as a Prime Contractor - General Contractor (A or B)
- Proper license as a Subcontractor - Specialty (C-category)
- Registered with the Department of Industrial Relations (DIR) (Registration cost is $400 per year)
- Required liability insurance coverage, plus a Workers Compensation policy
- Must pay prevailing wages to all workers (effectively, union scale)
- Must comply with Apprenticeship standards
- Standard Pay procedure of once every 30 days, in arrears
- All bid proposals must meet without qualification or reservation, the specifications as written in the bid documents
- If you are bidding as a Prime, all projects over $25,000 will be required to be fully bonded
Project Information

- Information to Contractors / Invitation to Bid - (Date, Time, & Place)
- Bonding Requirements - (Bid Bond & Performance / Payment Bonds)
- **The Bid Proposal Form is Always Included in the specifications**
- Description of the Work
- Insurance Requirements
- DIR Registration & Prevailing Wages required along w/ Certified Payrolls
- Project Labor Agreement (PLA) Requirement - (if any)
- MBE / DBE / SBE / WBE / DSVBE / Requirements - (if any)

- Contract completion time & liquidated damages
- Type of CPM Schedule Required
- Submittals Requirements - (Number of Copies, Turn Around Time)
- Change Order Procedures - (Cost backup, Markups, Disputes)
- Weather Days Allowance Policy
- Pay Application Procedure / Retention Policy.... (5% per California PCC)
- Safety Program Requirements
- SWPPP Plan Requirements
- Quality Control / Materials Testing Requirements
- Project Close-out Procedures
Best Practices

Contact with Prime Bidders

• Meet & Greet sessions with Prime GC’s do not occur for every project. They are held occasionally when warranted.

• At best, they get your Capability Statement & business card

• You will be placed on their list of available subs, it is not necessarily a preferred list

• You will be sent an email (ITB) for every project they plan to bid
Typical Sequence of Bidding

- Check the websites of Caltrans & other Public Agencies
- Find a project that fits your profile & capabilities.....if decision is to bid, then
- Download Plans & Specifications *(Caltrans Contractors Corner)*
- Review the Project Description & Engineers Estimate
- **Review the Bid Form List of Bid Items**
- Review the List of Primes planning to bid the job
- Decide what portion you will bid upon and prepare your Scope Letter *(note: be sure to mimic the bid item list as shown in the Primes Bid Form)*
- Send the bidding primes your *unpriced* Scope Letter
- Begin working on your estimate
- On Bid Day morning, send your *priced-out* Scope Letter
Scope Letters - Process & Protocol

- DBE’s often feel their bids are ignored, given second class status, or even being shopped around
- The GC must receive, evaluate, track and post a multitude of sub bid data while finalizing their bid, and it is not just their price!
- Over 95% of all sub bids are submitted in the last hour before bid time
- Your **Scope Letter** should be on your letterhead with all the information as shown on the sample
- Preparing your price list in the same format as the Prime’s Bid Form is the **professional** way to submit your bid
- Following this protocol will ensure you receive fair consideration and evaluation of your proposal. *It immediately signals the GC that this bid is from a sub who understands the process*
Submitting Your Scope Letter

- Be as clear and concise as possible
- Be sure to structure your pricing to match the format in the Prime’s Bid Proposal
- Be sure to reference the Spec Section that applies to your work
- Include all applicable taxes & freight
- Acknowledge all addendums (key)
- State any delivery restraints that could affect the schedule
- Identify unloading requirements
- If appropriate, offer alternate pricing for partial scope, but be clear!
- State how long your price is good for (key)
Worst Practices

When Submitting a Scope Letter

- Do not bid alternate items unless they are approved by the A/E firm
- Do not include a detailed quantity take-off unless bid form calls for it
- Do not exclude taxes or freight on any of your materials or equipment
- Don’t expect that you will dictate payment terms
- Do not make a long list of exclusions that are not industry standard for your type of work
- Requests for upfront monies are almost never allowed
- Do not wait until 15 minutes before bids are due to submit price
- Do not wait until bid day to ask questions
Submitting on Bid Day

- Finalize your price
- Email or fax to the bidding primes 45 - 60 minutes early
- Follow the owner’s website to see bid results
- The next day contact low bidder & request results for your work
- If they used your number and listed you, send a short congratulatory note
Questions So Far?

Handouts

1. Typical Bid Proposal Form
2. List of Bid Items - 1
3. List of Bid Items - 2
4. Sample Insurance Spec
5. Submitting for Sub Bid - N

Typical Work - Wage Costs
(7a) Laborer
(7b) Carpenter
(7c) Cement Mason
(7d) Operating Engineer
Types of bid proposals (for the Prime)

- Lump Sum
- Unit Price Format  (The typical Caltrans or HSR way)

Unit pricing for a specific list of bid items is how all heavy-civil / transportation type projects are bid. Whatever format the Prime is bidding to owner, then subs must bid to the Prime in same format
ESTIMATING THE PROJECT

OBJECTIVES

- Efficiently Estimating The Job In A Timely Manner
- Develop the Correct Spreadsheet Format For Unit Pricing
- Obtaining sub & supplier pricing
- Develop the Unit Prices per Bid Item
- Developing a Scope Letter the Prime will view as competitive & credible
Estimate Structure

Direct costs
- Labor
- Materials
- Equipment
- Subcontractors
- General Conditions

Indirect costs = Markup
- Office Overhead & profit
Key Components of the Estimate

- Unit Pricing - Definition of Pay Quantities (in the specs)
- Determining labor and equipment costs
- Unit Pricing Spreadsheet Format

- Distribution of Cost for General Conditions
- Quantity Take-offs
- Bundling or Breakout of Bid Items
Labor Costs

• Work to be performed “in-house” by your own forces
• Productivity = How much work can be done in given unit of time
• All workers to be paid prevailing wage and benefits
• Apprenticeship regulations will apply
• All workers to be paid hourly... “Piece work” method is illegal
• Department of Industrial Relations (DIR) sets the wages
• Certified payrolls are required
Best Practices

True Cost of Labor

• Every contractor should be aware of what their total cost per hour is for the trades they employ
• Always consider the proposed schedule of the contract in case your work goes into another pay raise category
• With CA Labor regs and union contracts, quite often a partial day’s work warrants a full day’s pay (show-up/minimum time).
• Multi-tasking requires multiple pay rates (avoid if at all possible)
Crew Rates

• Size Crew Needed to Perform Task
  • 1 - Carpenter foreman @ $90/hr * = $ 90
  • 2 - Carpenters @ $85 * = $ 170
  • 1 - Apprentice Carp @ $50 * = $ 50
  • 2 - Laborers @ $65 * = $ 130
  • Total Cost / hour for framing crew = $ 440

• For a 40 - hour week, cost is: $440 x 40 = $17,600
  For one (1) day, cost is $3,520 (Please note.. sample values)
Subcontractors

- Competitive Price
- Defined Scope of Work
- Reasonable Exclusions & Conditions
- Good references & track record
- Staffing ability
- Safety Record  *(Check the specs for EMR requirements)*
- Staffing capacity
- Administrative ability
- Bonding capacity *(if necessary)*
Best Practices

Material Costs

• Be sure material quotes are approved for use in the project
• ALWAYS include sales tax and freight to jobsite
• Be sure to account for unloading expense
• Be sure supplier can deliver material or equipment within the schedule contract time
• Get commitment in writing from supplier for price protection
• If not possible, get an estimate on possible cost increase & use it
• Get familiar with payment terms – No upfront money from GC
• Always use a Purchase Agreement in lieu of standard PO
Quantity Take-offs

The term “take-off” refers to the process of calculating the quantities of materials need to build the project.

1. The old-fashioned way (Math):
   Measure, count, & calculate

2. Software programs
   a. Blue Beam
   b. Heavy Bid
Materials & Equipment

- **For Material Costs** be sure to include tax and delivery
- **Always double-check your quantities!**
- Be sure material meets the specifications
- Check availability & delivery time
- Figure out how to handle price escalation.....(NO change orders for price increases)

- **For Equipment Costs** be sure to include tax, **freight** and delivery
- Be sure equipment meets specifications **completely!** This means the Mfgr’quote must include submittals preparation and other items tied to the equipment spec...(testing & commissioning, training, performance,etc.)
- If awarded your contract, use a Purchase Agreement instead of simple P.O.

- **For your in-house equipment** or equipment rentals, be sure to include cost of fuel, maintenance, delivery and pickup
Selecting Subs & Suppliers

• Develop a source list (Builders Exchange, Daily Pacific Builder, etc.
• Consult with industry peers
• Send out requests for proposals/bids
• Compare bid sheets and select best bidders
• Build network of reliable subcontractors and suppliers
• Beware of the “Lowest Price Mentality” (i.e. check via the “Apples to Apples”) evaluation
Best Practices

Jobsite Overhead

- General Conditions in Specifications define supervision & other PM requirements such as engineer, safety officer, etc.
- Cost of temporary fencing, job trailer, toilets, drinking water, erosion control, permits, inspections, vehicles and fuel, etc. can be substantial…… (6 -10 % of the cost of the bid).
- Jobsite OH is a real and valid JOBSITE COST, it is not office OH.
- Safety Programs cost money and will be mandatory (Covid)
Typical Cost Items in General Conditions

- Supervision
- Project management
- Bonding and insurance
- Temporary Power
- Surveying
- Permits & fees
- Special Insurance Riders

- Jobsite utilities
- Temporary fencing at laydown site
- Soils Lab expense
- Jobsite facilities: Chemical toilets, inspector’s trailer, job office trailer, storage containers, security guards, etc.
Best Practices

Admin Costs

- Be aware that project management cost can be substantial.
- On certain transportation projects, liability insurance limits can be substantially higher than normal. Get quote from broker.
- Certified payrolls must be filed weekly.
- *For open-shop subs, workers will get the entire prevailing wage package, including the cost of benefits as one hourly rate. This is if you do not have approved health & pension plans.
BIDDING AND ESTIMATING

Post-Bid

- Develop standard estimating checklists, and spreadsheet templates
- De-brief on both successful and unsuccessful bids
- Maintain files on all successful and unsuccessful bids
Thank You