**PDHonline Course P230 (2 PDH)**

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# Working with Bidder's Meetings

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# Working with Bidder's Meetings

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## 1. INTRODUCTION

At some time in the life of most projects either the lead engineer, the project manager or a purchasing agent will need to work with multiple companies to obtain labor and material costs for the project execution.

Depending on several factors including project size, company size and company policy more than one supplier or construction company may be called in to provide bids for the work. With a small project you may only ask one favored company to provide a bid, however, with most large companies when the project size exceeds some specific dollar amount the corporation wants multiple bids. Regardless of the dollar amount someone is now faced with obtaining competitive bids for specific work detailed in the project.

This work for your project may consist of items similar to the following:

- Engineering design
- Supply of some specific item of equipment
- Supply of piping, structural steel or electrical components for the project
- Provide construction labor and materials for a building
- Provide labor and materials to install a new process
- Provide labor and materials for a major maintenance activity such as:
  - painting
  - cleaning
  - roofing
  - spill cleanup

Regardless of the project content, you want to develop costs which, can be compared one to the other by you or your boss. How do you maximize the chances of getting truly competitive bids and have all of the bids reflect the same work content?

That process or goal is achieved using a bidder's meeting, a detailed scope of work included in a bid package and a timeline.

Most bidder's meetings contain five essential parts:

- Definition of the scope of work
  - Project content
  - Project timing
  - etc
- Presentation of work conditions
  - Safety training,
  - Work hours

 

    - MSDS sheets for potential contractor exposure
    - Etc.
- Presentation of supporting documents providing details of the facility / project
    - plant drawings
    - project details
        - Scope of Work to be bid
        - Drawings
            - Process
            - Electrical
            - Building
    - plant pipe, painting, and insulation codes
    - plant electrical format and control philosophy drawings
    - contracts already in place if any
    - etc.
- Contact information
    - For technical questions
    - For purchasing questions
    - Reporting responsibility in the project for your company
    - Insurance and Warranty requirements
    - Completion bonds
- Required delivery date and format of bid

Before we analyze the bidder's meeting content let's explore why we are doing this.

## 2. PURPOSE OF THE BIDS

Understanding why you want bids for project activities hinges on understanding the dynamics of developing project cost estimates.

Generally engineering projects contains several cost components; you might break your project activities down into components similar to these.

- Initial engineering design
- Final engineering design
- Site selection
- Site preparation
    - Soil reports
    - Soil preparation
    - Foundations
    - Building structure
- Equipment
    - Design
    - Fabrication

  - Freight
- Rigging
- Installation labor
  - Mechanical
  - Electrical
  - Piping
- Startup support
  - Electrical system
  - Equipment
  - Piping systems
- Non capital costs (expense items) associated with the project such as taxes and permits

Why do we want competitive bids?

In part because most engineers do not have enough experience across all engineering and construction activities to estimate the entire project on their own.

There are multiple benefits to be derived from a bidder's meeting. Obviously the last item listed below is by definition the reason for the process, other benefits accrue as a result of the process.

- Offer management the necessary information to select the most cost effective project execution approach
- Develop a range of costs for the project
- Compare your favorite contractor's price with that of his competition (keep him honest)
- Satisfy corporate purchasing requirements
- Separate project costs by component for corporate or tax purposes
- Establish an expenditure time line for the project so corporate can plan its capital funds disbursement timing (for example foundation costs occur some months before piping and electrical costs)
- Lock in project costs prior to beginning work
- Estimate Return On Investment (ROI)
- Establish amortization plans
- Calculate product sales price impact of the project
- Supply information to the local tax authority
- Assist in project manpower planning
- Select the most cost effective and qualified bidder

## 3. WHEN DO WE NEED A BIDDER'S MEETING?

Some projects need multiple bids, sometimes only a portion of a project needs multiple bids and frequently we don't need multiple bids at all. If the project contains:

- Easily isolated scopes of work (piping, electrical, foundations, etc.)
- Large quantities of specialized work (grading, painting, insulating, etc.)
- Separate and distinct units (process building, boiler building, laboratory building, etc.)
- Separate design activities (architectural, engineering, environmental, etc.)
- Large quantities of equipment (tanks, reactors, pumps, etc)

Then a bidding process is likely to offer significant benefits to the project. It might be easier to understand by looking at several sample projects.

Project 1 Scope: Expanding a multi-story process building and installing a small grouping of new process equipment and utilities

You might break this project into two separate bids:

Building
Process

Project 2 Scope: Put a new roof on a large warehouse

If you don't have a preferred roofing contractor this is the ideal project for a bidder's meeting. You get to compare contractor's pricing, meet the contractors and get some feel for them from a face to face meeting.

Project 3 Scope: Install several small pumps in an existing facility

This appears to be a simple project consisting of purchase of pumps, mechanical installation, some piping and electrical work. A bidder's meeting can be used but most likely the total work is not worth the effort.

Project 4 Scope: Paint several miles of existing plant piping.

This can be a large effort and last for an extended period. Since most of the cost will be labor this is an ideal project to obtain comparison figures from multiple bidders.

Project 5: Scope: Build a "greenfield" chemical process facility

This is generally a large undertaking comprised of components similar to the following:

1. Site Selection
2. Building Design
3. Process Design
4. Utilities Design
5. Site Preparation
6. Foundation and Pilings
7. Building Construction
8. Process Equipment Procurement
9. Process Equipment Rigging
10. Process Equipment Installation
11. Electrical System Installation
12. Commissioning of Process / Utilities

13. Project Management
14. Construction Management
15. Public Relations / Media Representative

Depending on the size of your company some of the above might be handled in house for example items 1, 3, 8, 13, 14, and 15. It's very unlikely that your company has the in-house capability to drive pilings, item 6.
Once the project is defined sufficiently the engineer can begin to work out how many separate contracts he wants to issue and consequently how many bidder's meetings he needs.

Staying with Project 5 in a little more detail let's look at what could be used as a possible selection of bids to be issued. The idea here is to begin thinking about the bidding process and possible compositions for various bid packages.

1. Site Selection
   This has two components:
   - Geographical Location
     Generally a corporate decision based on expected market, raw materials, etc. and not generally something turned over to an outside company to decide
   - Actual piece of land within the geographical location
     This is a possible choice for a bidder's meeting but would be better handled by choosing a reputable local real estate firm.
2. Building Design
   As soon as you have sufficient process details this becomes an ideal bidder's meeting selection. Most companies have some architectural desires, which may mean an architectural design bidder's meeting followed by a structural design bidder's meeting at a later date.
3. Process Design
   Frequently this is an in-house effort but it can be and frequently is an activity accomplished by outside engineering houses. Taking on a greenfield design in house limits the engineering support available for other activities. There are potential conflicts in having multiple engineering firms involved in a single project excepting very specialized engineers. Therefore it is probably best to limit the separation of the engineering activity into multiple bids.
4. Utilities Design
   A good choice for bidding but the work generally starts after the process work is complete which could extend the project schedule. A way around this delay is to combine items 3 and 4 under one engineering contract, thus the utilities design can begin almost immediately.
5. Site Preparation

Once the basic building design is completed this work can be bid. This is an ideal bid item since it is somewhat specialized, generally limited in scope and most likely will proceed faster with a excavation company rather than a General Contractor (GC) or builder.

6. Foundation and Pilings
   Surprisingly this can be considered two separate contracts and not create serious conflicts. Pile driving is frequently done by small companies who specialize in that work but who would be stretched by having to pour foundation concrete or even pile caps. Both scopes are well defined and limited; the foundations could be handled by the building contractor and that approach would limit conflicts which invariably occur if the foundation is from one company and the building proper from another.
7. Building Construction
   This is generally a bid item even in very large companies with in-house construction forces available. With a greenfield facility you generally have more than one building so you could conceivably ask for different bids on each structure. If you choose that path there must be a firm set of rules separating the two construction activities and there needs to be a system in place to prevent interference from occurring between the two construction companies.
8. Process Equipment Procurement
   Generally an in-house activity unless an outside engineering firm is providing design in which case they generally provide procurement services. Not a good item for bidding. However bids should be taken on individual equipment items such as tankage, pumps, etc. If individual equipment items are bid then specifications are required but a formal bidder's meeting is not.
9. Process Equipment Rigging
   This can actually be combined with several other activities if everything is ready. For example since the structural steel rigger probably has a crane on site he might want to put in a bid to rig certain equipment items, this could be a cost savings as well. Others who might want to bid include the General Contractor and the piping contractor.
10. Process Piping Installation
    This is usually a sufficiently large item of cost that bidding is wise. However the amount of detail required to obtain accurate bids is significant and it may not all be ready at the desired time of the bid. One path is to provide the bidder's with as much information as is available (all must get the same information) and obtain bids for that reduced scope of work. From these bids the contractor can be selected. This bid does not provide the final costs of the piping work but allows for an estimate to be constructed and a contractor

to be selected. Once the final details, or most of them, are available then the contractor selected in the first activity above is asked for a final bid. This allows for a re-estimate of total cost to be developed, does not slow down the project and allows some work to be started based on the original "selection" bid. This approach is applicable to most items which are to be bidded; caution must be exercised so as not to overwork the contractors by asking for too many bids.

11. Electrical System Installation

    The same approach as for Item 10, Process Piping Installation should be considered here.

12. Commissioning of Process / Utilities

    In today's world many companies want an independent third party to provide commissioning. This is a definite bid opportunity and the cost is generally not a significant percentage of the total project cost. You do need to be aware that some of the bidder's for this effort will be competitors of the engineering design firm (for example) and perhaps even of the construction companies. The end result will be a report of activities and conditions of each item "commissioned" under the contract. Before you assume that the original contractor is responsible for any item which failed commissioning investigate the situation yourself.

13. Project Management

    The larger the project the more important this becomes; small projects with a high degree of technical sophistication are also candidates for outside help in this area. Project management activities can consume 100% of your time so you need to consider who is available and qualified. Several sources of PM's exist and include the construction company and the engineering company.

14. Construction Management

    In the old days this was always a member of the General Contractor's staff, today these individuals are part of engineering companies, equipment suppliers, construction companies and as free lance contractors. Most General Contractors are adjusted to having an "owner representative" on hand as a Construction Manager. Remember that the term does not necessarily involve supervision of workers but rather as a constant reviewer of the work.

15. Public Relations / Media Representative

    In today's world of lawsuits and damaging media reports about a variety of construction activities the PR person has become a worthwhile addition to the project team. It is also work best left in the hands of a professional. Although the scope is small the impact of a good media representative is similar to that of a good Construction Manager. Generally an item that fits well as a bid item; the general bidder's meeting format may not be as effective

as a one-on-one meeting and a written scope of work. This is also not necessarily an item to be handled by the local engineer but rather at a corporate level; in particular if there are political, economic or environmental "hot buttons" within the project scope.

RULE # 1: Developing bids is expensive and time consuming for the contractors, it is also a necessary sales activity. Do not alienate the contractors by asking for bids just to be asking.

RULE # 2: Allow bidders sufficient time to review the bid package and develop their proposal. A sufficiently detailed bid package can run to hundreds of pages if the drawings are counted.

## 4. MECHANICS OF THE MEETING

This is the easy part. The goal of this portion of the bidding process is to have ALL of the bidders attend the same meeting, generally at your facility.

Having competing companies together in one room is not as uncomfortable as it might sound. Most company representatives are professional enough to realize that any untoward actions on their part would most likely disqualify them from bidding. If they are truly interested in providing a bid they will concentrate on the bidding process.

Remember that this is not an auction even though the word "bidding" tends to make one think of that particular form of selling. Except for the form of the requested proposals and perhaps some specific costs to be included in everyone's bid, dollar amounts are not a topic discussed in a bidder's meeting. Those specific costs for inclusion in the bids might include previously negotiated cost items necessary to the project; outside safety consultant, outside environmental company, etc.

The best location for a bidder's meeting is at the site where the contractor's efforts will be expended. For example if your project involves expansion of an existing production unit then having the meeting at that location allows for a walk through of the proposed project work area.

You'll need enough room for all the participants and there may be more than one person from each company. Each company may want to make notes on the material you supply so tables for each company are generally in order. This provides some small degree of privacy, remember these people are competitors.

RULE # 3. All bidders must be given exactly the same information if you expect to receive truly competitive bids.

This Rule is absolutely essential and best followed by giving all parties written handouts covering the following points. Don't forget to give the same material to those expected to take calls and provide answers to bidder's questions.

We'll touch on these points first and then on a few occasionally necessary parts to the bidder's meeting.

## 5. HANDOUT CONTENTS (THE BID PACKAGE)

Sometimes you can give people too much information, most often you don't give them enough information. The purpose of asking contractors to provide bids for work was discussed earlier, how accurate the information you supply and how thoroughly it covers the scope of work controls how accurate the contractor's bid will be. The more accurate the individual bids the better your overall cost estimate to management will be and the lower the chances of having insufficient funds approved for the project.

RULE #4. Do not count on memory, yours or the bidders, to ensure everyone has the same and correct information about the project. Written information is always superior to verbal information. Minimize verbal transmission of important project information.

Putting project information in writing provides everyone with the same chance of winning the work and allows individuals to go back and check project items without calling you on the phone. This written approach tends to reduce (they are never eliminated) complaints from the losing bidders.

Handout contents are of two types:

General information which applies to all project work in a facility
Project specific information applicable only to the project on which you are requesting bids

Let's take the General items first. These essentially consist of (this is not an all inclusive listing):

- Contractual Requirements
  - Insurance
  - Confidentiality Agreement [(1)]
  - Government Permits and whether provided by the Company or the Contractor
  - Format of proposals (bids)
  - Preferred equipment vendor listing
- Plant Safety Rules
  - Protecting your company's facility and employees
  - Preventing Injuries
  - Reporting Emergencies
  - Evacuation Procedures
- Work Rules
  - Work Permits (hot work, vessel entry, electrical work, etc.)
  - Lift Plans for cranes, etc.
  - Utility Shutdowns

  - Work hours
  - Vehicle control
  - Lay down areas
- Plant Standards
  - Pipe Codes
  - Insulation Codes
  - Painting Codes
- Change control procedures

(1) Should be in place prior to providing project information

Project specific content includes (this is not an all inclusive listing):

- Scope of Work
  - Description of process, etc.
- Work location within the facility
  - Laydown areas
  - Employee Parking
  - Heavy equipment routes within your facility
- Design drawings
  - Process
  - Electrical
  - Building
  - Structural
  - Utilities
- Vendor Proposals for Equipment
- Items being provided by the Company
- Project schedule, completion date, etc.
- Due date for bids

Each project will have a list specific to the project contents; the data provided needs to be organized logically. Since the building is built from the ground up that is a good logical approach to the bid package contents. The more detail included in the bid package the longer it takes the bidders to produce the estimate but that detail also helps ensure a thorough bid covering all aspects of the scope of work covered by the bid request.

Some items in the list above may not make sense at first. For example why include "Vendor Proposals for Equipment". Generally you blank out the dollar amount shown in the proposal, the remaining details indicate equipment size, weight, possible lift points and other information critical to how the equipment must be handled during installation. Frequently dimensional drawings or photos of the equipment are included, this type of knowledge tends to give the bidder more confidence and consequently lowers his bid.

Rule #5. Remember that the goal of the bid package is to provide enough information for the bidders to make valid estimates of the labor and materials required by the scope of work.

5. ANSWERING QUESTIONS

Questions come at two times:

1. During the bidder's meeting
2. After the meeting is finished and the bidders have had a chance to review the project handouts.

Questions asked during the meeting are heard by all present and your answers will also be heard by all. Generally these questions and answers should be put on paper and issued to all present as an addendum to the bid package. Again this eliminates the "memory" problem on critical points in the scope of work.

The hard part is questions which are asked by one contractor and neither the question nor the answer are heard by the other bidders. These questions almost always occur after the bidder's meeting.

RULE #6. If a question relates to an error in your handouts then it is generally considered fair play to provide the question and answer to all participants.

For example suppose you have issued copies of the plant pipe codes and one of the bidders determines that the wrong codes have been issued. The issued codes contain a typo indicating carbon steel pipe in place of stainless steel pipe. If all the bidders use the erroneous codes your estimate will be in error by the difference in costs between carbon steel and stainless steel pipe. This could be a significant cost error.

If you don't take corrective action then only the one bid from the contractor who detected the error will be usable and you will not have competitive bids to compare. The question and answer should be on paper and issued to all participants as an addendum.

RULE #7. If a question relates to a particular contractor's experience or technique then that is a competitive advantage he has earned which should not be shared with the other bidders.

RULE #8. Try and have all communications between bidders and your team pass through only one or two people. This is generally accomplished by having an engineering spokesperson and a procurement spokesperson. This sometimes delays answers but reduces the chances of conflicting answers if all of the project team were to answer questions.

 

For example you have requested bids from companies A, B and C for a process expansion project. After the bidder's meeting Company A approaches you and requests permission to use a new pipe painting technique they have developed. This is not a patented item and if the technique were revealed to the other bidders they could adopt it easily.

This becomes an ethical question, which you must answer and which if answered incorrectly may well affect the image of your company in the market and make it difficult to obtain bidders for future work. If you reveal this technique to all bidders at a minimum Company A probably will not respond to future requests to offer a bid; they may also decide that you have damaged them financially and request compensation through the courts. Other companies viewing this unethical behavior may well decide to stay away from work you are offering.

Points to consider:

- This is a technique developed by Company A based on their experience and years in service.
- This technique gives Company A a decided advantage for this portion of the project; it also provides you with the lowest cost for this portion of the project. If all other scope of work items are bid by all three companies at the same dollar amount Company A obviously has the lowest overall cost for the project.
- Providing an answer to all bidders which reveals Company A's technique violates the unwritten ethical agreement between your company and the bidders. This is not unlike revealing the amount of Company A's bid to companies B and C.

Suppose Company A comes to you with a request to use a particular material, which could save considerable project money. However, although widely used in your industry, this material is unacceptable to your company for environmental reasons. You forgot to mention this material in the bidder's meeting and the fact that it is unacceptable; this is your error and needs to be corrected to all bidders.

Each question after the public meeting needs to be considered for its impact on the goal of obtaining competitive bids and for any ethical problems hiding within the question.

6. AWARDING THE BID

Once all of the bids are received you now have the task of selecting the winning bid. A bid analysis is just a tabulation technique to make it easy to compare two or more bids. This is the first step, basically organizing all the data contained in the bids. Let's look at a sample bid analysis.

Scope of work: Provide a 5000 gallon storage tank and installation. Include drainage pipe to a waste sewer manhole 40 feet from the tank. Insulate the tank with 2 inches fiberglass with aluminum covering. (Obviously the scope of work would be much more detailed)

Here's one approach to a bid analysis table.

| Bidder | Tank $ | Piping $ | Insulate $ | Effort Duration Days | References | Bid $ |
|---|---|---|---|---|---|---|
| Jones Borrow, Inc. | $10,000 | $6,000 | $800 | 9 | Excellent | $16,800 |
| Carson Bros. Inc. | $10,500 | $5,500 | $800 | 10 | None Received | $16,900 |
| Ajax Plumbing, Inc. | $12,000 | $2,000 | $750 | 12 | Good | $14,750 |

Depending on your needs you might select Jones Burrow even though they are $2,000 more than the low bid but save you one to three days. Obviously Ajax Plumbing's experience in piping saves you money and makes their bid the best. Carson Bros. failed on two points: high bid and no references.

For each multiple contractor bid you must determine what factors will be used in choosing the winner. For example important points might be similar to the following.

Re-roofing Bids
- Total cost or cost per square foot
- Days to complete contract
- Insurance
- References

New Boiler Feedwater Pumps with Installation
- Total Cost
- Pump specifications
  - Horsepower
  - Net Positive Suction Head Required
  - Flow Rate and Head
  - Efficiency
- Installation Labor Cost
- Days to complete contract
- Insurance
- References

Pipe Line Painting
- Total Cost or Cost per Foot
  - Labor Costs
  - Materials Cost
- Days to complete contract
- Insurance
- References

 

In order to make a fair comparison your bid format requirements need to specify that dollar amounts are shown for those items you wish to compare company to company. Thus it is essential to determine what points are critical to the project and ensure those items are presented individually within each bid. Recognize that the bidders will recognize that these points are important to you and may "adjust" the distribution of dollars within the bid to reflect that knowledge. Widely varying amounts bidder to bidder for some items may indicate some bidders are making adjustments.

Discouraging this activity is difficult but a statement in the bid documents that extremely low dollar amounts in certain areas may invalidate a bid unless adequate explanations are provided tends to help reduce this type of bid adjustment. Likewise a statement that your company's engineering group has developed a base bid for comparison sometimes helps to keep the bidders honest.

Now that you have selected the winning bid you must tell all bidders of the outcome. This is something that needs to be done as soon as possible, waiting for the results of a bid becomes irritating and also may cause some bidders to avoid seeking other work assuming they have the winning bid for your work. Sometimes it is sufficient to tell the winner he has won and merely tell the others that someone else was selected. This is best done in writing. Whether or not you add a reason for selecting a specific bid or provide the dollar amount of the winning bid is up to you. Providing clues about the winning bid may assist the others in producing more competitive bids in the future which is to your advantage. However it is considered unethical to reveal any bidder's proposal dollar amount, his hours of labor and in some cases his approach to performing the work.

## 7. AFTER THE AWARD

Some bidders will always complain if they don't win your bid; you are generally better off without those contractors who complain about every bid. Some complaints may be justified and ALL complaints need to be investigated and the results of the investigation shared will all bidders who are aware of the complaints. A copy of the investigation should be put in the project files along with any details and a copy of the complaint; later legal action can be difficult to defend and records detailing the complaint and actions are of immense help to the legal department. Keep copies of all bids as supporting documentation. Answer complaints in writing with copies to legal and procurement or better yet turn complaint response over to legal or procurement. It is generally best not to become involved in verbal communications about a complaint.

If there is a justified complaint and the bid has been issued and work begun it is difficult to take corrective action. Again corporate legal and procurement need to be involved in finding a solution. Each case requires a solution tailored to the particulars of the complaint.

## 8. CONCLUSION

The bidder's meeting and the bid package require a lot of work on the part of the project team. A well executed effort in this part of the project carries benefits for the duration of the project.

Development of bid packages tends to reveal problems with the design and frequently high lights items forgotten in the work effort.

The selection process of the contractors to be used for the project begins the establishment of working relationships between the company and selected contractors that will need to be maintained throughout the life of the project.

Potential working relationship problems frequently surface during this activity and should be resolved prior to beginning project work. This is difficult and if the problem is serious it needs to be brought to the attention of procurement, management and legal.

A benefit of reviewing bids is the confirmation of the amount of work to be accomplished by the company portion of the project team.

With all the associated effort and problems the results of the process are worth it. Most engineers will have no problems with this effort.