



Center for Innovative School Facilities of Oregon

A Project of Innovation Partnership

Procurement

The following was excerpted from the comments of four experts from the construction industry, Jerry Milstead of Milstead & Associates, Inc., Brent Schafer and Ken Dixon of Todd Construction, Inc., and Gerald H. Williams, Jr. of R. Brown Consulting Group, LLC. Each individual offers his own unique, expert view on the procurement process and the brief does not reflect any one viewpoint in totality.

Introduction

While there are multiple ways to procure public works (design/bid/build, CM/GC, design/build, pre-qualify/bid, etc.), the law in Oregon only provides for two tracks on public improvements. The first is the default method and is design/bid/build. It is the traditional method and deservedly so because it is easy to understand plus the results are based solely on one quantifiable factor – cost to the public entity. The second method requires the project be exempt from the default or traditional method and falls under the heading of alternative contracting.

For bidding, the standards and solicitation process are documented in statute and well tested in case law. They are covered in the ORS 279C 300 series. Here is a link if you would like to look further: <http://landru.leg.state.or.us/ors/279c.html> <<http://landru.leg.state.or.us/ors/279c.html>> . Basically, once a state or local governmental entity decides they want to bid a project it's a fairly simple process of drawing up plans, advertising according to dates and places defined by statute, and accepting bids. The details for advertising are in the ORS 279C 300 series.

For alternative contracting, there is more effort required to select the method and choose the contractor. Again the ORS 279C 300 series talks about how to make the exemption and the ORS 279C 400 series talks about the procedures for competitive proposals. <http://landru.leg.state.or.us/ors/279c.html> <<http://landru.leg.state.or.us/ors/279c.html>> . The selection of the method is where the challenges occur. The bottom line is that in Oregon public improvements must be made at the least cost to the taxpayer. This is easily demonstrable with design/bid/build because the lowest responsive price is selected. However in competitive proposals the full price cannot be known until after the project is complete so a careful observer would recognize it's impossible to meet statutory criteria for least cost. Whether the process is design/build or CM/GC or pre-qualify/bid, the process is the same. The public entity must undertake a study to create findings the exemption will not promote favoritism/diminish competition and will save the entity substantial money. Then a public hearing must be held where the findings are presented and a vote of the governing body taken to exempt the project from statutory bidding requirements. Once this is done the competitive proposal process must be advertised and undertaken. All this is covered by statute. Once exempted, the process, the scoring and most everything else are at the discretion of the local governing body.

Overview¹

When considering procurement services for a construction project, cost effectiveness is best served by selecting a procurement method that best suits the 1) type and complexity of the project and 2) the knowledge and experience of the owner. The first step is to identify the overall goal of the project, followed by the establishment of a timeline to complete the project. In addition, a company or project manager should address any potential issues that could hinder the construction process, namely around time, cost, environmental factors, and preserved land to name a few. All of these factors must be considered before choosing the correct procurement strategy for your construction project.

There are three, basic methods of procurement: Design-Bid-Build, Design-Build, and Construction Manager/General Contractor (CM/GC). Each method begins with the property owner establishing a budget and building criteria for the project. The three procurement methods each have their strengths and drawbacks. As indicated by industry experts, it is clear that there are differing opinions on which methods are most appropriate for certain projects. When selecting a procurement method, it is important to consider the breadth of the project and the qualifications of the owners. Additional information about each procurement process, as well as project characteristics can be viewed by accessing the Milstead & Associates presentation on *Procurement Strategies for Construction Services* (.pdf here); Todd Construction, Inc.'s research on CM/GC, *A CM/GC Perspective* (.pdf here); and Gerald H. Williams, Jr.'s presentation on *An Evaluation of Contracting Methods for the Public Building Sector in Oregon* (.pdf here).

In the **Design-Bid-Build** track, the owner selects a team to complete the design process. When the design is finalized, it is advertised for bid on the open market. In the end, the construction project is awarded to the **lowest bidder**. Participation can be limited to a pre-qualified list of bidders or a predetermined set of criteria.

If the **Design-Build** method is chosen, the design and construction firm are selected as one team, and take complete control of the project through completion. The selection of the design and construction team is based on criteria set forth by the property owner.

The **CM/GC** method begins with the selection of the architectural design team. During the preliminary stages of the design process, a construction firm is selected to join the owner/design team. The construction firm assists in finishing the design, and sets a guaranteed maximum price (GMP). The actual trade work is competitively bid by the CM/GC team and subcontracted to them.

Design-Bid-Build

Clearly, each process has advantages and disadvantages. According to Jerry Milstead of Milstead and Associates, Inc., **Design-Bid-Build** starts with the lowest price, but the final

The following has been adapted from a presentation delivered by Jerry Milstead, Milstead and Associates, Inc. The presentation was delivered at the 2008 Bonds and Ballots Conference; 1/24/08, Salem, OR.

cost is unclear and could be drastically different from expectations due primarily to change orders. Design-Bid-Build is the process preferred by most Oregon statutes, and is most familiar to the public. If the public needs to be sold on the necessity and method of the project, Design-Bid-Build is easily explainable. The contractor is selected on a competitive basis, which has the potential to lower overall costs. The completion of the design before bidding begins usually leads to fewer design errors and minimal schedule restraints.

A clear downside of this method is its adversarial nature. Constant bidding may drive the cost down, but it is hard to generate partnerships within the industry. The property owner is left with sole responsibility for the project's outcome, while relinquishing control of certain aspects of the project. Because the different phases are competitively bid, the lowest bidder is selected. Although saving money is a top-priority, Design-Bid-Build limits the property owner's ability to select based on other potentially important factors and may be more expensive in the long run.

Design-Build

With **Design-Build**, the owner is free to select a company based on whatever criteria are most expedient. Because the number of parties involved is cut down, mid-process design changes are more practical, and the initial cost is usually within the budget. This method is primarily used for specific-use buildings.

The negatives of this method stem from the owner's lack of input and risk partnerships. Because one firm controls the project, it is more difficult for the owner to control certain aspects of the design process. The owner cannot favor or reward the contractor or builder that most perfectly realizes their vision. If the owner wants to change the design after the initial planning process, there is little problem doing so, but the cost is solely the owner's burden. The set cost of the project can also create incentives for the contractor to argue for cheaper materials in order to increase their profits.

CM/GC

From a financial standpoint, the most attractive feature of the **CM/GC** method is the Guaranteed Maximum Price (GMP) established prior to bidding. During the design phase, the owner selects a contractor to help finish the design. The contractor is able to contribute to the completion of the design process, in the full knowledge of their own abilities. Because the contractor contributes, fewer design changes are needed when the project transitions to the building phase. The **CM/GC** can start competitively bidding the trade work before the design is completed which saves time and therefore, money. Rigid time constraints are a reason to select **CM/GC**. The initial cost of the **CM/GC** method is higher, making it impractical for certain projects. However, the issue can be debated whether the end cost is higher.

CM/GC lends itself to high risk, high complexity projects. Each necessary skill required for the project can be bid to an expert. This method requires cooperation, and a manager who can oversee the complex scheduling issues. Because each element is bid and handled by an issue specific expert, the overall cost is driven down.

CM/GC Solicitation

There are multiple ways to solicit a CM/GC Contract. The following is the most common path. Depending on the complexity of the project, the path can be started at multiple points.

- 1) Issue RFQ
- 2) Receive and Review Qualifications
- 3) Score Qualifications and Create Shortlist
- 4) Issue RFP
- 5) Receive and Review Proposals
- 6) Score Proposals and Create Shortlist
- 7) Conduct Interviews
- 8) Score and Select CM/GC Firm
- 9) Negotiate and Award CM/GC Contract

In order to exempt a project from competitive bidding, the contracting agency must adopt the following findings:

- 1) The Exemption will not Encourage Favoritism
- 2) The Exemption will Result in Substantial Savings to the Agency
- 3) The Effect on the Operational Budget
- 4) The Effect on Public Safety
- 5) Is There a Public Benefit?
- 6) Will Value Engineering be Done?
- 7) What Effects do Market Conditions Have?
- 8) The Effect on Public Safety
- 9) The Technical Complexity
- 10) What is the Funding Source and What Effect will the Exemption Have?

During² the solicitation process, it is important to consider more than just the cost. It is helpful to create a weighted scoring system that takes the following factors into account:

- The Firm's Profile
 - o How long has the Firm been continually operational in the NW
 - o Volume of Work
 - o Firm Specialties
 - o Firm Insurance, Banking, and Legal Resources
- Litigation History: Obtain a list of all instances when Firm has been involved, either as defendant or plaintiff, in a court case, regardless of outcome
- Obtain a list and description of Firm's recent school projects, or projects of comparable size and complexity

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- - Resumes and Work Histories for the people at the Firm who will be directly involved with the project
- - The Firm's methodology for Project Cost and Scheduling Controls
- - The Firm's proposed Quality Control Plan
- - Identify Potential Problems and Receive Feedback from Firm about Possible Solutions

Comparative Analysis of CM/GC vs. Design Bid Build

The summary of this comparative analysis is based on information obtained nearly ten years ago. Please understand that the comparison's accuracy is limited due to its age, and due to conflicting opinions on which procurement method is the most cost effective throughout this particular construction process.

In January 1999, the Beaverton School District conducted a cost comparison on two recently built schools. One school was built using Design-Bid-Build while the other used CM/GC. The site using CM/GC required an additional \$857,166 in site prep, otherwise the sites and designs were analogous. This unique situation allowed the District to analyze the differences between the methods. According to analysis by Brent Shafer of Todd Construction, Inc., the CM/GC project appeared to cost \$666,590 more than the Design-Bid-Build project (once site-specific costs were removed). Schafer concluded that the CM/GC project was 11% more expensive. In addition, the recommendation to combine bidding with CM/GC saved the Beaverton School District over \$1 million. Further information on Todd Construction's analysis of the CM/GC process can be accessed ([.pdf here](#)).

Oregon is one of the few states that allows contractors to be selected based on qualifications, rather than lowest bid. Because of this, there is little data available to support or deny the effectiveness of CM/GC. Gerald H. Williams, Jr., Ph.D., P.E. of the R. Brown Consulting Group, analyzed the cost differences. Dr. Williams assembled a panel of 30 industry professionals to elicit advice on appropriate measures of performance, and collected raw data. He identified 215 projects that would allow him to compare CM/GC and Design-Bid-Build.

Dr. Williams concluded that CM/GC is more technically efficient (on the basis of fast tracking construction), but does not result in statistically significant cost differences. During his research, he found that owners felt better taken care of and more involved with CM/GC. The team recommended owners make decisions based on scheduling concerns rather than cost. CM/GC is useful when a project needs to be fast tracked, and there is a set deadline.

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