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Design-Bid-Build v. Guaranteed Maximum Price Contracting: The Basics for Owner's Counsel

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This article provides a brief framework for understanding procurement of construction services through fixed price competitive bids. The article then briefly discusses some significant issues related to Guaranteed Maximum Price (GMP) contracts, and hopefully will serve as a primer to those interested in better understanding such contracting.

At the outset of most large construction projects, an owner often enjoys a strong bargaining position, as they will be awarding contracts for a substantial project. The strength of the agreements entered into between the owner and construction team members is a direct function of the owner's bargaining position and their skill in utilizing it. While standard form construction agreements exist for each of the various construction procurement models, owners who regularly procure construction services often use their own forms or heavily modify available standard forms. Achieving favorable terms in an efficient manner requires the owner's attention right at the outset of the decision to undertake a construction project.

Background

The following outlines some basic construction contracting concepts.

Traditional Construction Procurement Model: Construction services are often procured by soliciting fixed price bids from prequalified General Construction Contractors (GCs). The bid documents for fixed price work should include finished plans, specifications and related terms and conditions that accurately specify the scope of work. The owner's design professional, working with the owner's construction counsel, usually prepares the finished contract documents that are made part of the bid solicitation. The bid often requests a fixed price for the overall project with some incidental adjustments through alternatives and/or unit prices. Solicitation is usually made from at least three prequalified bidders. This method of procuring construction services is often referred to as Design-Bid-Build (DBB). It is generally accepted as a reliable way to ensure that the price being paid for a construction project is competitive.

Alternative Models: There are several alternative procurement models that may be used when DBB is not feasible. These include Construction Manager at Risk, Design-Build and Integrated Project Delivery. Each of these alternative models commonly employs guaranteed maximum pricing as the method for establishing the amount to be paid to the builder.

Construction Transaction: A construction project typically involves payment of a significant sum over a short period of time in exchange for large quantities of building supplies, varied and sophisticated equipment, and skilled construction trade, labor and administration services. The process also involves the purchase of insurance, surety bonding, and employment of specialized managerial talent to assemble, coordinate and manage the entire process.

Contract Documents: The contract a builder signs to perform construction work consists of many documents that are incorporated by reference into a main agreement. The incorporated documents include at least the plans, the specifications, and general terms and conditions. The construction agreement and all incorporated documents are commonly referred to in the aggregate as the contract documents.

The construction procurement process and resulting agreements address several concerns. These include: specifying the finished project; providing a mechanism for establishing and controlling project costs; maintaining quality control; and assigning, allocating and insuring project risks.

In construction work, the contract documents collectively describe what the finished project will be. It is generally left to the contractor to determine the means and methods by which the finished project is produced. This allows different contractors to draw upon their unique and varying skills and resources to decide how best to accomplish a given project. The main constraint imposed upon the contractor's means and methods of construction is that they be accomplished safely.

Preparing contracts within this framework allows contractors freedom to accomplish the work in different ways. As a result, different contractors might bid different prices for the same work. Thus, contracting in this fashion is amenable to soliciting several bids to find the best overall price.

Pricing a Prototype: Each capital project is a prototype involving many unique features. Unique features include the project site and its existing conditions, the geographic region, the existing labor market for each of many skilled trades, climatic conditions, financing constraints and the period of time available to complete the work. Were the foregoing not unique enough, consider also the unique combination of designs, equipment, materials and technologies to be assembled into any given project.

The price a GC quotes for a given project is also somewhat perishable as it is dependent upon the availability of the GC's administrative team, the availability of required skilled labor, seasonal climate changes, and price fluctuations in construction materials and supplies. GCs often administer several projects at one time with a management team assigned to each project.

A GC that is near-fully booked will tend to bid with higher margins. Where a GC's administrative team is projected to be underutilized during the time scheduled for a given project, a GC will naturally bid with lower margins. This and many other factors operate in different ways on each individual construction firm to affect the price quoted for a specific project to be performed at a specific time. Because of price perishability, final construction pricing is best established just prior to the commencement of construction.

Because each project is essentially a prototype, the cost to complete the overall project generally cannot be known with great precision. Many reputable cost estimating service providers will not assure the accuracy of their estimates below a range of plus or minus 10 percent. For this reason, it is difficult to know how competitive a given price is when procuring construction services through other-than properly-administered competitive bidding. The variation in construction pricing can be significant when considering a project costing tens of millions of dollars. Even with competitive bids, the range in prices offered by the various bidders can reveal the inherent variability in construction pricing. Often an early indication of a quality set of contract documents is found in a relatively tight price grouping of bid responses.

Overview of Pricing Alternatives: The following are four common methods for pricing construction work. Their features should be readily apparent. Any of these methods might be employed in the various construction procurement models.

• **Fixed price:** The work is performed for a fixed price. Every dollar the builder saves during construction drops to the bottom line. This creates powerful incentive for the builder to work quickly and efficiently. Builders of lesser integrity may cut corners, leaving the owner shortchanged. The owner should provide for real-time project inspections to verify that the work is properly performed. Real-time inspection is always more cost-effective than correcting failed construction later on. The fixed-price is commonly paid in monthly installments allocated based upon the percentage of work thus far completed. For this reason, real-time inspection serves two purposes: verifying proper completion of the work and determining percentage of completion for payment purposes.

• **Time and Materials:** The builder is reimbursed for costs incurred for labor and materials plus a fee for their profit and overhead. There is less incentive to work quickly and efficiently because the builder bears little cost risk. For the same reason, the builder is not incentivized to consider lower-priced subcontractors. As with fixed-price projects, the owner should still verify proper performance of the work. In addition to providing real-time project observation, the owner should provide real-time cost auditing to avoid paying for items that are not properly reimbursable. Thus, in addition to tracking percentage of completion for budget and quality control purposes, the owner must also audit costs to determine eligibility for reimbursement. It is best to avoid unconstrained time and materials contracting on larger projects.

• **Upset Price:** This is essentially time and material pricing to an estimated ceiling. Once the ceiling is reached, the builder stops work, which upsets the owner. Unless the builder is expressly obligated to complete time and materials work at no additional cost when that estimate is reached, the estimate is of little consequence.

• **Guaranteed Maximum Price:** This is work that is reimbursed on a time and materials basis to a fixed ceiling where the builder agrees to complete the work without additional payment once the ceiling is reached. The builder agrees to accept as payment the lesser of the actual costs of the work plus a fee or the fixed ceiling amount. This model is a hybrid of lump sum and time and material, which sounds appealing as an owner enjoys both budgetary certainty and the benefit of any cost savings. When properly administered, it can allow for flexibility when performing work that cannot be fully specified at the start of the construction phase or subject to some other significant cost uncertainty. However, guaranteed maximum pricing requires significant sophistication and additional resources to administer in a disciplined fashion. While the same can be said of Design-Bid-Build, DBB more readily attenuates the potential for abuse of the procurement process.

Design-Bid-Build (The Reference Standard): Fixed price contracts are commonly procured using the DBB method. To do so, the work must be fully specified so that different bidders can provide a fixed price for the same work. Once the work is fully specified, the process of conducting a competitive bid is straightforward and is therefore often employed. DBB allows different contractors to draw upon their unique resources and experiences to provide a specific bid for a given project to be performed at a particular time. The method maximizes the owner's bargaining position and should nearly eliminate the time and expense otherwise incurred to negotiate a construction services agreement.

If the plans, specifications and related contract documents are properly prepared, different bidders will have a common understanding of the work to be performed. This should result in an efficient bidding process. Poorly prepared specifications result in ambiguities and misunderstandings. It is often argued that DBB imposes an adversarial relationship in which a low bidder cannot afford to absorb the cost of such ambiguities. However, the problems resulting from poorly prepared contract documents are universal to any procurement model.

The following are key features of a properly administered competitive bid:

1. Committing the time and resources necessary to complete the process of defining a project, which often includes: program development, schematic design, design development, and final preparation of contract documents, including the general terms and conditions, plans and specifications.

2. Allowing sufficient time for prospective bidders to evaluate and submit well-prepared bids.

3. Properly prequalifying three or more contractors with demonstrated experience and resources to perform the project and inviting them to participate in the bid process. Prequalification avoids the burden of considering bids from unqualified entities. Prequalification also attracts bidders if they know that lesser bidders, who often operate with lower overhead, are not participating. Multiple bidders assure competition while reducing the risk of collusion. General construction contractors are usually experienced in bidding in this fashion.

4. Requiring submission of sealed bids, permitting the bidders to observe the bid opening and providing reasonable assurance that the low bidder will be performing the work. This is a straightforward way to assure bidders that they are participating in a fairly administered process. This, coupled with the exclusion of lesser bidders, gives bidders incentive to invest the significant time and effort required to properly evaluate and prepare a competitive bid. It is important to allow sufficient time for preparation of bids.

Properly administered DBB maximizes the owner's bargaining position while efficiently procuring construction services. It requires the involvement of design professionals experienced in similar projects who remain as advisers to the owner through completion of construction. Design professionals are usually paid a fixed fee, which is established near the beginning of the relationship. The design professional does not share the price risk borne by a fixed price builder. Nor do they share in the profits that a competitive and competent builder might enjoy. Thus, the design professional does not operate under the adverse financial incentives afforded a fixed-price construction contractor. The design professional should be contractually obligated to the owner to assist in overseeing proper performance of the construction. The owner must be able to rely upon the design professional as an important primary consultant regarding design and construction of the overall project.

It is submitted that the essential features applicable to DBB fixed-price construction are just as important under any procurement model. Unless the owner is not price sensitive, these features should be suspended only to the extent required by the exigencies of a particular project. Moreover, each alternative procurement model imposes additional burdens upon the owner seeking assurance that their time and resources were efficiently expended.

Construction Manager vs. GC: In many respects, a construction manager on a guaranteed maximum pricing project is essentially the same as a GC once the construction phase commences. Construction manager and GC may be used interchangeably below when discussing construction phase activity.

Some Key Considerations

General Performance Standard: While GMP contracting is commonly employed when a significant constraint impairs the use of DBB, it is sometimes employed by an owner that prefers to work with a specific contractor from the outset. One benefit of this approach is the contractor's participation in the development and design of the project. Such a contractor should have less of a basis to claim a misunderstanding during the construction phase given their greater role in project design and preparation of the contract documents. If so, express language should be included in the contract obligating the contractor to produce a finished result that complies with the better of the original general program standards or the express terms of the contract documents.

When to Fix the GMP: GMP contracts are commonly executed in two parts. The first agreement, entered into early on, describes services of the contractor acting as a design phase construction manager. During this phase, the construction manager provides cost estimating services, advice on alternate construction methods and materials and specialized administrative support. The first agreement usually provides a lump sum or hourly fee for services up to commencement of the construction phase.

The second agreement is usually an addendum to the first agreement that fixes the GMP. It will contain several important features and is essentially a construction contract with the GMP pricing feature. The GMP should be established well ahead of commencement of the construction phase. It should be done before the owner loses the ability to consider other contractors. The owners bargaining position is a function of the owner's freedom to choose. Whenever possible, a properly administered GMP project should be readily convertible to a DBB project prior to fixing the GMP.

Fixing the GMP early on while the owner still has a strong bargaining position usually means that the price is established before the plans and specifications are fully complete. Often, the first GMP is best established in the early stages of design development. For this reason, the statement of assumptions and clarifications is included in the second agreement. These assumptions commonly reference a set of partially completed design development drawings, a statement of the project program, and other terms and conditions. The strength of the commitments made in the second agreement are fundamentally affected by the assumptions and clarifications. Thus, they should be carefully considered.

The second agreement should also include the construction manager's cost breakdown showing how the GMP has been calculated. The cost breakdown, coupled with corresponding contract language, will play a central role in determining eligibility of specific costs for reimbursement during the construction phase.

The owner's interests are best protected if the second agreement contemplates further refinement of the GMP and the construction manager's cost breakdown prior to commencement of construction. These refinements will reflect refinement of the scope of work as the plans and specifications become more complete.

Termination for Convenience: The first phase agreement should expressly provide an easy method by which the owner can terminate the relationship for convenience. This permits the owner to retain the significant bargaining position one enjoys when retaining the ability to select who will receive a significant construction contract.

Owner's Contingency vs. Construction Manager's Contingency: Fixed price competitive bidding assumes that the contract documents are free of material errors and ambiguities in specifying the scope of work. A competitive low bidder cannot be expected to readily absorb additional costs that result from unclear or poorly prepared contract documents. Thus, contingency funds are commonly budgeted by the owner as a cost-effective alternative to the substantially greater costs required to produce truly error-free plans and specifications.

The construction manager's cost breakdown included in the second part of the GMP agreement often includes a "construction manager's contingency." This is commonly misunderstood to be similar to an owner's contingency. It usually is not. An owner's contingency is outside of any agreement with the construction manager. It is maintained by an owner to provide additional compensation to the construction manager should a significant error or unforeseen condition requiring additional work be revealed during the construction phase. This is far more desirable than the severe consequences resulting from a work stoppage due to lack of funding.

The construction manager's contingency is essentially an amount that provides a buffer to the construction manager for the price risk it undertakes once the GMP is reached. This risk does not include errors in the contract documents or unforeseen conditions that are otherwise eligible for additional compensation via a change order. Theoretically, the construction manager's contingency should be reduced to zero once the project is fully priced at the subcontractor level.

Bidding at the Subcontractor Level: Bidding a project to a GC on a fixed price basis requires the GC to assume the risk of subcontractor performance. Placing this risk with the GC provides significant value to an owner. The GC's ability to submit a winning bid is heavily dependent upon their subcontractor and supplier relationships. This includes the GC's understanding of the strengths and weaknesses of each subcontractor, the GC's ability to enhance a subcontractor's strengths and weaknesses with skilled support, the ability of the GC and its subs to work reliably and efficiently with each other, and the goodwill a GC can extend its subs through the likelihood of future work. When a GC submits a fixed price bid, they are making subcontractor selections that balance the benefit of employing a lower-priced sub against the GC's risk of failed subcontractor performance. When a reputable GC selects a lower-cost sub, that GC is likely willing to work more closely with and to support the sub to assure timely and proper performance.

GMP contracting reduces the GC's risk related to subcontractor performance. While the individual subcontractor price may be procured through bidding, the GC has less incentive to further reduce the price by selecting the contractor that provides the GC the greatest price/performance value. The owner and GC will tend to choose the most reliable subcontractor and their price will be built into the GMP. GMP contracting might not capture the additional value a GC can provide when procuring subcontractors after successfully bidding a project on a lump sum basis.

Real-Time Cost Accounting: Like any time and materials project, a determination must be made regarding whether each of the costs incurred by the construction manager is properly reimbursable by the owner. The construction manager is entrusted to make this determination before submitting costs to the owner for reimbursement. The construction manager should be obligated to maintain books and records in an auditable form for the owner's review. It is best for the owner to provide the resources for real-time auditing of the construction manager's monthly payment vouchers. Establishing the eligibility of individual costs in real-time is usually more effective and convenient than doing so retroactively. Knowing that such costs are being actively audited also reduces the temptation for abuse.

Use of Sub-GMPs: Sometimes additional sub-GMP's are employed, particularly with respect to work self-performed by the construction manager. Self-performed work usually includes general conditions work. A sub-GMP is similar to the GMP except that it pertains to a subset of the overall work. That subset is also included in the overall GMP. Requiring a sub-GMP by trade would deny the construction manager the benefit of averaging the differing success of the individual trade subcontracts. Requiring sub-GMPs by trade would impose a level of restraint on a construction manager that is commonly not present in lump sum project pricing.

Shared Savings: A shared savings clause usually provides that any amount remaining between the cost of the finished project and the GMP be shared on a percentage basis between the owner and the construction manager. Some have suggested that shared savings may incentivize the construction manager to pursue greater savings. Conversely, a shared savings clause may provide greater incentive to negotiate a higher GMP and contractors contingency at the outset. To the extent that a contractor retains a contractor's contingency after completion of 100 percent contract documents, the shared savings clause might be viewed as granting a portion of the contingency to the contractor at the outset of the project.

Bonding Subcontractors: Construction manager's may include in their cost breakdown the cost for surety bonds that guarantee the performance of individual subcontractors. This cost, plus the construction manager's markup for profit and overhead, is borne by the owner. In lump sum contracting, GC's commonly forgo this expense to remain competitive. Except in unusual cases, bonding of individual subcontractors is not commonly employed even when the GC provides a performance bond for their entire scope of work. Whether or not bonding of individual subcontractors is required should be considered early on in the process of selecting a construction manager.

The Construction Manager's Fee: When selecting a construction manager, through a request for proposal process or otherwise, it is important to understand what costs are included within the construction manager's fee and are thus not otherwise reimbursable. What may appear to be a favorable fee may not include cost items that another construction manager is including.

Labor Burden: Standard form GMP agreements generally provide only an abbreviated description of reimbursable labor burden. Generally, reimbursable personnel expenses should be carefully defined. "Usual training, education and holiday benefits" or "usual bonuses" can vary significantly from firm to firm.

Reduction of GMP at 90 Percent Buy Out: GC's generally seek to "buy out" a job once it is under contract with the owner. This means that the GC enters into agreements with its subcontractors and suppliers as soon as possible to avoid the risk of price fluctuation once the overall price is fixed with the owner. One method that accelerates the capture of any savings is to require 95 percent of the GMP to be reduced to the actual cost under contract at 95 percent buy out. Since 100 percent buyout may not occur until late in the project, a percentage is used that should be achieved relatively early in the construction phase (90 percent or 95 percent). Further reduction at 100 percent buyout might be provided for.

Standard Forms: Standard form agreements are available from several vendors. The American Institute of Architects (AIA) provides both construction manager[1] and GC[2] agreements that employ GMP pricing. Forms are also available from ConsensusDocs[3] and the Engineers Joint Contract Documents Committee.[4] All such forms should be modified to reflect the interests of the parties and the project involved. The extent of modification is a function of the experience and bargaining position of the respective parties.

If the owner prepares and proffers a modified form through competitive bidding or request for proposal, the owner is more likely to achieve the terms it desires while expending less time and expense in negotiations. This will also benefit the prospective construction manager or GC in that it will have a clear understanding of the owner's expectations at the outset. Generally, the efficiency of the negotiation process is a function of the owner's bargaining position and the experience of those responsible for negotiating contract terms.

The owner's bargaining position naturally wanes with the passage of time corresponding with the owner's waning ability to seek alternate prices. Thus, addressing these issues proactively and early on maximizes use of the owners bargaining position and reduces the time and expense involved in achieving acceptable terms. While GMP contracts can be put through a bidding or request for proposal process, the final GMP and associated Clarifications and Assumptions must be negotiated.

The reader is encouraged to obtain and review any of the below listed form agreements. Considering their content is a good next step in gaining a better understanding of this arena.

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Endnotes:

1. AIA A133-2009, "Standard Form of Agreement Between Owner and Construction Manager as Constructor Where the Basis of Payment Is the Cost of the Work Plus a Fee With a Guaranteed Maximum Price."

2. AIA A102-2007, "Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is the Cost of the Work Plus a Fee With a Guaranteed Maximum Price."

3. See ConsensusDocs 500, "Standard Agreement and General Conditions Between Owner and Construction Manager (Where the CM Is At-Risk)."

4. See EJCDC C-525, "Suggested Form of Agreement Between Owner and Contractor for Construction Contract (Cost-Plus)."