
The Role of Price in the Best Value Selection Process

Texas legislation allows government entities to use a range of construction delivery methods, including Competitive Sealed Proposals (CSP), Construction Management At Risk (CMAR) and Design Build (DB) – and authorizes the use of the best value selection process to award contracts based on a blend of qualification and price criteria.¹

For decades, government entities have used qualification criteria to select architects and engineers; so there are ample precedents for the qualifications side of a best value selection process. However, the only familiar precedent for price-based selection was competitive bidding. Because the selection processes for CMAR and DB occur before construction documents have been finalized, and in many cases well before they are begun, the lump sum bid price of the CB and CSP delivery methods based on 100% complete construction document, is not relevant. So, other price components are used, including the price of the contractor's pre-construction services, general conditions and fee for overhead and profit. But the devil is in the details – in practice, depending upon how used and how comparatively evaluated, these price components can yield misleading results that conflict with the principle of best value.

This essay sets forth price factor problems, clarifies statutory requirements and recommends alternative pricing approaches that reinforce the concept of best value selection.

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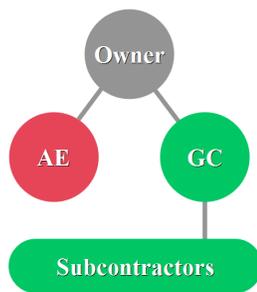
DELIVERY METHODS

Competitive Bidding (CB)

Competitive bidding was the dominant method of procuring construction in Texas prior to the introduction of enabling legislation for alternative delivery methods in the 1990s. With CB, the government entity's AE completes construction documents. Then the entity conducts a bidding process, receives bids from general contractors (GCs) and opens them publicly. A bid is typically a lump sum amount for the total cost of the work that includes the general contractor's fee for overhead and profit, general conditions and cost of subcontracted or self-performed construction work. The contract must be awarded to the lowest responsible bidder.

Responsible usually means that the GC is able to provide a bid bond. To award to other than the low bidder the government entity must notify the low bidder and provide an opportunity for the low bidder to appear before the governing body of the entity to present evidence as to the bidder's responsibility to perform – a high hurdle. So even if a GC did not perform well on a previous project for the same government entity, it is likely that the entity would end up using the low bid GC again.

During the bid process GCs must receive sub-bids from dozens of subcontractors in a very short period of time, often just an hour or two before the GC's bid is due to the government entity. With no time for thoughtful analysis and conditioning of bids, the results are problem prone. For example, if a bid comes in from an unknown sub at the last minute and it is low enough to affect the ranking of the general contractor's price in the government entity's bid tally, because other GCs are likely to use the low bid, the GC will probably use it, too – you don't win low bid work by being conservative. Then, even if a mistake is discovered, rather than walking away and forfeiting a bid bond, the low bidding GC will probably sign the contract, try to recover any loss during subsequent procurement or construction, and risk the unintended consequence of triggering a chain reaction that might impact the work of other subcontractors leading to more schedule and quality problems. Such common circumstances in competitive bidding can force an even well-intentioned GC to search creatively for reasons to file claims against the government entity.



CB and CSP

Competitive Sealed Proposals (CSP)

The competitive, sealed proposal process is similar to the CB process, except that a qualifications component is added to the bid price – the highest scoring blend of qualifications and price is the best value. So, with CSP it is possible that a contract can be awarded to other than the low price bidder. Because poor performance can result in not being selected for future work, the CSP process provides a powerful

incentive for a GC to work collaboratively with the government entity throughout construction.

However, the CSP process has the same short-time-frame problem for receipt and analysis of bids as does the CB process. Thus, it can produce similar problematic results triggering the creative search by even a well intentioned GC to find reasons to file claims against the government entity. But, with CSP, the claims will probably be handled in a friendlier but still less than ideal way.

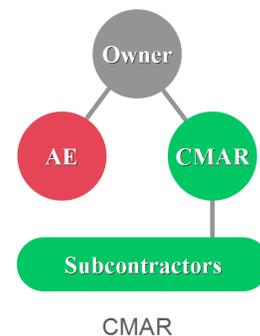
Construction Management At Risk (CMAR)

Construction management at risk is different from CB and CSP in that the total cost of the work is not a factor in the selection process. Best value selection criteria include both qualifications and that portion of the price of construction that is attributable to CMAR services.

Because the CMAR is typically brought into a project during the design phase, the CMAR is able to provide cost estimating, scheduling, option analysis, plan review and value engineering to help the design team capture savings and add value.

Another important difference is that the cost of subcontracted work is determined by competitive bidding of trade contractors. At the CMAR's option the bidding process can be methodical and staggered to avoid the short time frame problems of the CB and CSP bidding process.

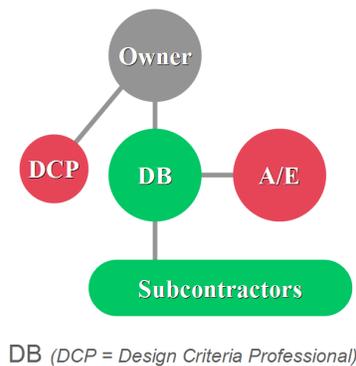
Usually after most trade contracts have been bid, the CMAR gives the government entity a guaranteed maximum price (GMP) or a lump sum price proposal that is the sum of the CM's overhead, profit, general conditions, cost of subcontracted work, cost of self-performed² work and contingencies that may established.³ When approved, construction work proceeds with monthly billings to the government entity on an open-book basis, subject to audit.



Design Build (DB)

Like CMAR, Design Build is different from CB and CSP in that the total cost of the work need not be a factor in the selection process. It is different from CMAR in that both design and construction services are procured under a single contract.

Using the design build process, government entities, other than colleges and universities, are required by statute to work with an architect or engineer to develop design criteria for a project. The architect or engineer may be a member of the government entity's staff. Design criteria are loosely defined by statute and may include: general information on the project such as site legal description, survey information, project scope, space requirements, special material and system requirements, quality standards, conceptual criteria, project budget and schedule and/or selection criteria. The government entity has significant latitude in determining which criteria to use.



There are two design build selection methods.

DB Method 1 Using established design criteria, the government entity may competitively solicit best value proposals from DB entities. Typically, the selection process employs two steps – Step 1 to select a short list by comparatively evaluating qualifications submittals and Step 2 to select a DB entity by comparatively evaluating a design submittal and a price proposal including the DB overhead and profit fee, general conditions, cost of subcontracted or self-performed construction work, contingencies³ and the cost of design services. When approved, final design and construction work proceeds with monthly billings to the government entity.

DB Method 2 Alternatively, government entities may elect to select a DB based on qualifications, fees and general conditions alone, without a design or a price for the total cost of the work, similar to the CMAR selection process. The government entity and the selected DB team collaborate throughout the design phase to capture savings and add value. The design phase culminates with the negotiation of a GMP or lump sum price contract for delivery of final project design and construction. The GMP or lump sum price includes the DB fee for overhead and profit, general conditions, cost of subcontracted or self-performed² construction work, contingencies³ and the cost of design services. For that portion of the work attributable to design and construction professional services price is negotiated; for subcontracted or self-performed work price is determined by competitive bidding. The DB can avoid the short bid duration problems of CB and CSP by employing a methodical, staggered-bid schedule allowing enough time to thoroughly analyze and condition bids. When the GMP or lump sum price is approved, final design and construction work proceeds with monthly billing to the government entity on an open-book basis, subject to audit.

BEST VALUE SELECTION

The Texas statutes which authorize alternative construction delivery methods provide that the following selection criteria may be used in requests for proposals or requests for qualifications: the proposer's experience, past performance, safety record, proposed personnel, methodology, other appropriate factors that demonstrate capability, proposed fees and price for general conditions.

For different types of projects, the relative importance of qualification and price criteria may vary. For example, when project requirements are not explicitly defined and there is a risk of unsuccessful contract performance, qualifications may play a dominant role – that's typically the case for CMAR and almost always the case for DB. Conversely, when project requirements are explicit and when the risk of unsuccessful contract performance is minimal, price may play a dominant role – that's often the case for CSP.

The Statutes

The explicit statutory requirements regarding price are sometimes misunderstood. Close reading of the statutes¹ reveals that price criteria may be included in the proposal stage, or deferred to the contract negotiation stage. Alternative delivery methods for municipalities, counties, certain other local governments, higher education institutions and school districts are authorized by different statutes. But all use of the word “shall” to indicate an explicit requirement and the word “may” to indicate an option. The word “may” is consistently used regarding price criteria. For example:

“...the governmental entity *may* request proposed fees and prices...shall receive, publicly open, and read aloud... the fees and prices, *if any*...”⁴”

So, a government entity has wide latitude in determining how and when price criteria should be considered in a best value selection processes.

Qualifications Criteria

Typically, the qualifications portion of a best value selection process will use threshold criteria that result in a pass or fail grade – the respondent meets the criteria or does not. Evaluation criteria, however, result in scores that can be added to each qualifying respondent’s price criteria score and then used to rank respondents.

The following are typical qualifications selection criteria:

Qualifications Criteria	
Threshold Criteria	Financial Capability (typically an annual business volume as a stipulated multiple of the budgeted construction cost)
	Bonding Capacity (typically a letter from a bonding agent indicating the availability of bonding for this project in the full amount of the budgeted construction cost)
	Insurance Coverage (typically a certificate of insurance demonstrating compliance with public entity requirements)
	Safety Record (typically a worker’s compensation modification rate of less than 1.0)
	Historically Underutilized Business Plan (typically a plan to use HUB subcontractors for a portion of the construction work)
Evaluation Criteria	Experience (typically a description of the respondent’s relevant past projects)
	Performance (typically a list of client references)
	Personnel (typically a description of the education and relevant experience of proposed staff)
	Methodology (typically a statement of the respondent’s understanding of the project and approach to key project issues)
	M/WBE Participation (typically a commitment to M/WBE participation in professional service portion of CM or DB services)

Price Criteria

In the price portion of a best value selection process the sum of various price quotations is the basis of the total price criteria score that when combined with the total qualifications criteria score can be used to rank respondents.

The following are typical price criteria:

Price Criteria		CSP	CMAR	DB
Pre-Construction Phase	A/E Design Services Price			●
	Construction Related Services Price		●	●
Construction Phase	A/E Construction Phase Services Price			●
	General Conditions Cost		●	●
	Home Office Overhead and Profit Fee		●	●
	Total Construction Price	●		●

Fostering Best Value

Although consideration of price may be deferred to the contract negotiation stage, construction in the public sector has traditionally been bought through open, competitive bidding. So, regardless of the merits, it is sometimes difficult for citizens, elected officials and administrators to completely uncouple the CMAR and DB proposal process from price. There are ways that price criteria can be employed to avoid problems and foster a best value selection. Let's look at price criteria problems and possible solutions.

Problems and Recommended Solutions

Pre-Construction Phase Services

The pre-construction phase of a project offers significant opportunities to capture savings and add value. In fact during the legislative process, bringing construction brainpower to the project during design was considered to be one of the most important potential contributions of the CMAR and DB delivery methods. So, it seems important that price not be used in a way that minimizes the scope of services needed to achieve the desired benefits.

Even though pre-construction phase CMAR and DB fees represent a small percentage of total project cost, the competitive pressure on CMAR and DB entities to be the low bidder inevitably forces respondents to think about reducing their cost by minimizing the scope of work to be provided. Some general contractors who are likely to be contenders in a CMAR or DB selection process may have strong experience in construction but comparatively little expertise in pre-construction disciplines such as parametric cost modeling, life-cycle costing, value engineering, options analysis, net- to-gross area

efficiency studies, floor-area-to-enclosure-area ratio analysis, comparative building systems evaluation and schedule-to-cost implications. It's advantageous for these firms to offer a very low price for pre-construction services that then becomes the target other proposers must meet to be competitive. So, a lower price may mean less pre-construction service resulting in a higher total project cost for the government entity.

Here's a better option:

Don't use price for pre-construction services as a selection criterion. Instead, publish the following guidelines and negotiate price during contract negotiations:

- CMAR and DB contractors to be paid only for the raw cost of labor at a near break-even multiplier of perhaps 1.7 to 1.9 to remove any profit incentive for spending more time than necessary while minimizing the disincentive of losing money by electing to pursue every reasonable opportunity to save dollars and add value.
- CMAR and DB contractors to submit a detailed resource-loaded work plan for pre-construction services during contract negotiations showing what services are contemplated, when, by whom, the level of effort required and the cost.
- CMAR and DB contractors to be compensated for pre-construction phase services on an hourly basis for labor directed towards specific results rather than a flat monthly amount for sometimes nebulous management services.
- A reasonable pre-construction services compensation range (typically .75% to 1.5% of budgeted construction cost) to be established and the higher end of the range to serve as a maximum price not to be exceeded, unless the DB or CMAR is able to demonstrate potential total project cost savings that more than offset any additional investment required and receive government entity approval to proceed.
- The difference between the maximum compensation and the amount actually expended to be contributed to a CM or DB satisfaction fee account to be administered by the government entity (see discussion below) providing the potential for the contractor to enhance any incentive payment to be made by frugality.

Construction Phase – General Conditions

General conditions consist of CM or DB labor for construction phase management and expenses for costs such as job site office, temporary utilities, temporary toilets, fencing, signage, hoisting, site clean-up and so on. Typically, the ratio of the cost of labor to expenses is one-to-one; so the expense portion can be significant.

The cost of general conditions is directly proportional to project duration. Project duration is determined by analyzing optional critical path method construction schedules during pre-construction. Swings can be enormous. For example, one school remodeling project was initially scheduled to require nine months for construction and multiple, phased, temporary re-locations of building occupants.

General Conditions Line Items

STAFFING

Project Manager
 Superintendent 1 - Full Time
 Superintendent 2 - Part Time
 Project Director
 Project Engineer
 Quality Inspector
 Safety Director

SUPPLIES

Office Supplies
 Office Equipment
 Shop Drawings
 Blueprints
 Record Drawings
 Safety Equipment
 Postage
 Messenger Service
 Computer Service

FIELD ENGINEERING

Engineers
 Rodmen
 Engineering Supplies
 Engineering Equipment

FEES, INSURANCE, ETC.

Building Permit
 Performance, Labor, Material Bond
 GC Insurance
 Protective Liability
 Worker's Compensation
 Comprehensive General Liability
 Builders Risk
 Comprehensive Auto Liability
 AGC Fee

PROTECTIVE CONST

Guard Rails
 Temporary Stairs
 Temporary Stair Rails
 Temporary Ladders
 Floor Opening Covers
 Temporary Partitions
 Sidewalk Barricades
 Covered Walkways
 Weather Enclosures
 Temporary Fill Pan Stairs
 Overhead Protection
 Elevator Shaft Separation
 Temporary Fire Protection

TEMPORARY STRUCTURES

Job Office Trailer
 Mobilization
 Tool House
 Saw Shed
 Storage Facilities
 Roads & Parking Lots
 Site Fencing

General Conditions (Continued)**TEMPORARY SERVICES**

Job Signs
 Trash Chute
 Toilets
 Drinking Water/Ice
 Watchman
 Unassigned Cleanup
 Final Cleanup
 Punch List Supervision
 Trash Dumpsters/Hauling
 Progress Photos
 Surveyor
 Lab Testing
 Radios
 Temporary Services Laborer
 Temporary Site Lighting
 Engineering Services

TEMPORARY UTILITIES

Electric Service
 Electric Distribution & Lighting
 Electric Cords, Etc.
 Temporary Heat
 Temporary Water Line
 Temporary Sewer Line
 Temporary Telephones
 Temporary Broad Band Internet

UTILITIES (USAGE)

Electric Temporary
 Electric Permanent
 Water
 Gas
 Telephone
 Cellular Telephone

EXPENDABLE TOOLS**PROJECT SIGNS****EQUIPMENT RENTAL**

Welding Machine
 Air Compressor
 Automobiles
 Pickup Trucks
 Flatbed Trucks
 Operators
 Generators
 Miscellaneous

HOIST COSTS

Rental
 Mobilization and Moving
 Landings
 Repair and Maintenance
 Operators

EQUIP RENTAL

Welding Machine
 Air Compressor
 Backhoe
 Operators
 Repair/Maintain
 Fuel & Lube

OTHER

Ground Breaking
 Safety Incentive Program

Analysis of options during pre-construction demonstrated that with accelerated procurement, advanced staging and working double shifts, the project could be completed in nine weeks over a summer break. The savings in general conditions more than offset a double-shift premium and the project was completed with no disruption to operations or additional cost for temporary housing. A fixed price bid for general conditions at the proposal phase would have been grossly inaccurate and could have made for a difficult decision by the contractor to give up general conditions revenue to benefit the project schedule.

There are more subtle problems. The competitive pressure to submit the lowest price for general conditions inevitably forces respondents to think about minimizing costs to lower their bid price. There are three ways to minimize general conditions costs that can be invisible to a government entity at the proposal phase.

- First, a contractor, playing to win, might reduce his apparent general conditions cost by reducing the quantity of on-site staff, by assigning some field staff to work part time on other projects, by allocating less time for coordinating with occupants or by eliminating quality and safety site visits by corporate specialists.
- Second, a contractor might shift general conditions expenses to cost-reimbursable subcontracts. For example, the site work subcontractor might be required to provide fencing and portable toilets and the masonry subcontractor to provide hoisting and clean up.
- Third, a contractor might shift some site management responsibilities to a cost-reimbursable, trade contract. For example, a carpenter foreman might be required to serve as an assistant project manager.
- Fourth, a contractor might shift a portion of the construction management cost to a self-perform sub-contract. For example, a significant portion of a site superintendent's cost might be born under a self-perform carpentry or millwork contract. Even though statute requires that self-perform work be competitively bid, because the CMAR or DB contractor is in charge of bid packaging, competitors tend not to bid aggressively and self-perform contractors are seldom underbid.

These strategies, now in use, yield a lower apparent general conditions bid price. However, they inevitably result in less service and encourage shifting costs to reimbursable trade contracts where, with significantly higher gross margins, the actual cost to the government entity is likely to be higher.

Here's a better option:

Don't use the price of general conditions as a selection criterion. Instead, publish the following guidelines and negotiate general conditions cost during guaranteed maximum price (GMP) or lump sum price negotiations.

- CMAR or DB contractor to submit a resource-loaded work plan for construction phase general conditions labor during GMP or lump sum price negotiations showing proposed staffing, levels of effort and durations.
- CMAR or DB to be paid only for the raw cost of labor at a near break-even multiplier of perhaps 1.7 to 1.9 to remove any profit incentive to spend more time than necessary while minimizing the disincentive of losing money by providing thorough construction phase services.
- CMAR or DB contractor to submit a detailed budget and cost justification for general conditions expenses during GMP or lump sum price negotiations..
- CMAR or DB to be reimbursed only for the direct cost of general conditions expenses without mark up.
- To minimize the accounting costs of dealing individually with hundreds of small general conditions items, after general conditions costs for labor and expenses have been negotiated, they may be converted to lump sum amount and invoiced in equal monthly amounts over the duration of the project.

Construction Phase – Home Office Overhead and Profit Fee

The relevant statutes define fee as the payment a CMAR or DB contractor receives for overhead and profit in performing services. If the government entity elects to require a price quotation as part of the best value selection process, fee is the most comparable criteria and the least subject to distortion.

A solicitation would require the CMAR or DB to provide a lump sum price quotation for home office overhead and profit based on these guidelines:

- The form of contract to be cost reimbursement plus a fixed fee
- CMAR or DB to be paid reimbursed only for the raw cost of labor at a near break-even multiplier of perhaps 1.7 to 1.9 to remove any profit incentive to spend more time than necessary while minimizing the disincentive of losing money by providing thorough services.
- Shifting of CMAR or DB labor and expenses to trade contracts to be prohibited
- Fee to be paid monthly during the construction phase in proportion to the percent of total project cost invoiced to date.
- CMAR and DB to be dealt with as professional service providers, performance to be measured and continuous improvement to be expected. Satisfaction fee to be considered as described in the sidebar.

Comparatively Evaluation and Modeling

In typical selection processes the range of qualifications scores is likely to be tight even though one firm may have an outstanding methodology or superbly qualified staff that the government entity believes would contribute better total value. Prices tend to vary across

Satisfaction Fee

The CMAR or DB contributes a small portion, maybe 5%, of the fee to be earned and the government entity contributes a matching amount. Any saving in compensation between the maximum and the actual cost of pre-construction services is added to the account.

The top brass of the government entity and the CMAR or DB hold brief quarterly meetings. Prior to the meetings the government entity scores the performance of the CMAR or DB using its own criteria, such as schedule performance, value management, job site safety and personnel responsiveness.

A portion of the satisfaction fee is earned, or not, based solely upon the score given by the government entity to the CMAR or DB.

If the CMAR or DB does not attend the meeting, any satisfaction fee which might be earned is forfeited. If the government entity does not attend, the CMAR or DB is paid 100% of that quarter's portion of the satisfaction fee.

Meetings are also used to discuss ways that the government entity and the CMAR or DB working together can contribute to process improvement.

a broader range than qualifications. If price constitutes a percentage of the total score that is comparable to qualifications, price alone becomes the determinant and the preferred firm will not be selected. There are two ways to keep the impact of price in perspective in a best value selection process.

First, comparatively score price on a relative scale rather than an absolute scale as follows:

$$\frac{\text{Lowest Proposed Fee}}{\text{Proposed Fee of This Respondent}} \times \text{Weight Attributed to Price (Points)} = \text{Price Score}$$

Second, prepare a model spreadsheet and hypothetically score potential submitters. Since statutes require publishing selection criteria and relative weights in the RFQ or RFP, this can be accomplished with little extra effort. See what happens if scores in critically important areas such as methodology and personnel begin to spread. Does price prevail regardless of the spread in qualifications? If so, reduce the weight assigned to price.

SUMMARY

Best value is more likely to be achieved by deferring consideration of price to a post-ranking negotiation phase. In instances where a government entity's policy is intractable and requires a price proposal, use fee defined as compensation for overhead and profit as the sole price criterion. Finally, employ a fixed fee plus cost reimbursement form of agreement and prohibit the shifting of CM or DB costs to trade contracts.

¹ Texas Local Government Code – Chapter 271.118
Texas Education Code – Chapters 44 and 51

² By Texas statute, in order to self perform work a CMAR or DB must submit a competitive bid for the trades involved to the government entity for competitive evaluation side by side with other bids.

³ CMAR and DB contracts may use contingencies to address CMAR and government risks inherent in construction and allowances for un-bid work

⁴ Texas Local Government Code – Chapter 271.118 Contracts for Facilities; Paragraphs (e) and (f)