

**DATE ISSUED:** October 17, 2003 **REPORT NO.** 03-209

**ATTENTION:** Rules Committee  
Agenda of October 22, 2003

**SUBJECT:** Construction Manager (CM) At Risk Project Delivery Method

**REFERENCE:** Manager's Report 03-166 dated July 25, 2003  
Manager's Report 03-036 dated February 26, 2003  
Manager's Report 99-016

SUMMARY

Issues – Should the City Council authorize a ballot measure, for the March 2004 election, proposing a Charter amendment to authorize the City's use of CM-At Risk as a project delivery method?

Manager's Recommendation – Authorize a ballot measure, for the March 2004 election, proposing a Charter amendment to authorize the City's use of CM-At Risk as a project delivery method.

Other Recommendations – None

Fiscal Impact – None; election expense cost sharing procedures have been changed, thus additional ballot measures will not increase the City's share of expenses. On a long term basis, while not quantifiable or guaranteed, this alternative project delivery method provides the opportunity to realize savings in future project costs.

BACKGROUND

In recent years, the design of buildings and other public facilities has become increasingly sophisticated. Codes, regulations, and energy standards impose ever greater demands on the level of sophistication of the design of public facilities required to support City operations. It has become even more challenging to design projects so that the resulting design is constructible and consistent from one discipline to another (e.g., the mechanical does not conflict with the structure). Sometimes there are problems with the constructability of design, which result in contractor change orders. It is difficult to create a set of design documents that are consistent,

constructible, and can be built without incurring design-related change orders. Complex designs lead to a requirement for equally sophisticated construction methodologies. Managing municipal resources in this environment demands an array of competitive project delivery tools that can assist the City in identifying and selecting architectural and engineering firms that have demonstrated experience in designing and building to a budget and schedule.

In November 1998, the San Diego electorate passed one such measure, Proposition F, which allowed for the design and construction (design-build) of a public works project by a single entity selected through a competitive process instead of awarded as a result of a low bid process. While the City is using the design-build contracting process successfully, the complexities faced by the City in today's construction market highlight the need for an additional project delivery method similar to design-build to allow a contractor selected through a competitive process to provide early design and construction management.

## DISCUSSION

An additional project delivery tool that could be made available is generally referred to as Construction Manager-At Risk or "CM-At Risk". Like design-build, CM-At Risk is a widely used tool in the public and private sectors. This proposed delivery method would provide the City with flexibility, construction cost accountability, and the opportunity to take advantage of additional value-engineering suggestions to provide an appropriately designed project that is functional, operationally effective, and constructed at the lowest possible combination of initial and life-cycle costs. This method would be beneficial to the City in situations where there is an architect already on board, or when it is desirable to hire an architect independent of the builder, and when tighter control of costs and schedule is sought.

In this delivery method, the Construction Manager (CM-At Risk) is hired by the City before the completion of design to act as the construction coordinator, participate in the design process, and to be the general contractor, assuming a satisfactory guaranteed maximum price, or GMP, is established. There is considerable flexibility in meeting specific project needs in that a CM-At Risk firm could be engaged concurrent with or even before the architect. In any case, and the reason the method is known as Construction Manager-At Risk, the Construction Manager assumes the liability and responsibility of the general contractor for an established GMP. The GMP would then only be modified through a change order if the City, or the Construction Manager claims that the City, and the City agrees, changes the design, size or scope of the project. This could happen for reasons such as our interactions with the community and user groups are such that the project no longer reflects the scope of work upon which the GMP was developed or there are conditions (typically unforeseen site conditions) discovered that were not known at the time of contract negotiation.

The typical CM-At Risk process involves four phases. First, the City contracts with the architect for design services. Before the design development phase is more than 50% complete and when value-engineering analysis can be performed, scope of work documents are prepared. Second, CM firms or Contractors are short-listed based on a Request for Qualifications (RFQ) process. Third, based on the design documents, the project is presented to the pre-qualified Contractors through a Request for Proposals (RFP) process in order to select the CM-At Risk Contractor. At this point a GMP could be established or business terms including fees, markups, hourly rates, a

definition of how a GMP will be prepared, value-engineering ideas, a commitment of the project team, and general conditions may be evaluated and used as a basis of selecting the CM-At Risk Contractor.

Fourth, through a two-phase agreement, the City hires the CM-At Risk Contractor to advise the Owner during pre-construction and work with the Owner to incorporate value-engineering and develop a GMP before construction documents are completed by the design team. At this point, the Owner makes a decision about whether the GMP is acceptable. If so, the second phase of the agreement is put into effect and the CM-At Risk Contractor is authorized to construct the project. Then, when construction documents are complete, the CM-At Risk Contractor could bid the construction to pre-qualified subcontractors, negotiate a best value procurement with appropriate subcontractors, or form the team of subcontractors by a combination of these two means, all within the previously established GMP. If the GMP is not acceptable, the Owner can elect not to authorize phase two for construction and bid the project out in a traditional manner or direct that the design be revised to meet its budget as is always the City's prerogative.

The CM-At Risk project delivery method differs from the traditional design-bid-build, and more recently utilized design-build, methods (see attached flow chart). In the design-bid-build method, plans are completed, the project is put out to bid, and then a construction contract is awarded to the lowest responsible bidder. In CM-At Risk, the contractor is hired during the time the architect is preparing the design and assists the owner by incorporating value-engineering while the design is in progress. Also, the selection process is based on a broad set of criteria, rather than low bid.

The primary distinction between design-build and CM-At Risk contracting is that in design-build the architect works for the contractor while in CM-At Risk the architect/engineer works for the City. Using CM-At Risk would allow the City to independently weigh design considerations with cost and budget demands. CM-At Risk retains the favorable features of design-build contracting in that the CM-At Risk must provide value-engineering input at the pre-construction stage and deliver the project for a guaranteed maximum price. Similarities between design-build and CM-At Risk include:

- Contractors are engaged before the design is complete;
- Contractors are engaged not solely based on low bid;
- Contractors and architects work together to finalize the design;
- A GMP or a fixed price for construction is established before the design is complete; and,
- There is increased opportunity for DBE participation.

The CM-At Risk method is common among Owners for whom cost, schedule, or construction is expected to be complicated to manage and difficult to control, as when a project is to be fast-tracked. The principal advantages are the initial focus on design issues, construction advice during the design process, careful oversight of costs and schedule, early cost commitments, and opportunities to shorten the overall project schedule. Similar to design-build, this method may not be desirable for the projects in which community or user group interaction is anticipated throughout the course of the design and after the establishment of the GMP. The application of a CM-At Risk process would be valuable on projects of complex nature or type where it is

important to have early cost guarantees and where it is likely there will be a number of design challenges or unknown conditions that need to be resolved during the design process with the assistance of a CM-At Risk Contractor.

There are a number of important process features that would afford the CM-At Risk project delivery method the maximum opportunity for success. These features include:

1. Early Engagement – The CM-At Risk firm would be engaged early in the design process, possibly even before any design has been completed.
2. Engagement Based Upon Professional Qualifications – The CM-At Risk firm would be selected based on qualifications and business terms as opposed to a bid process for the pre-construction and construction services.
3. Self-Performance – The CM-At Risk Contractor would be allowed to self-perform certain work if it is in the best interest of the City to allow that self-performance based on some level of competitive evaluation and/or an “open book” transaction. This is often important where the project requires extensive site development, excavation, concrete work, and/or general carpentry, which are trades that are often performed by the contractors that would be attracted to a CM-At Risk project delivery method.
4. Subcontractor Pre-Qualification – It is desirable to allow the CM-At Risk firm, who is guaranteeing the total cost of all of the work before engaging the subcontractors, to be able to pre-qualify through rigid criteria those subcontractors they would accept bids from to assure that bids are only received from subcontractors that have the capacity, experience, quality, and working relationship required to provide that work within the established GMP. The subcontractors could be selected based on “Best Value”, possibly without competitive evaluation of the price as long as the subcontract is awarded within the previously established GMP or as a result of competitive bidding.
5. Sub-Component Design-Build – The ability of the CM-At Risk to potentially deliver complicated sub-systems of a project through a focused subcontractor design-build process for those components. This could simplify the design process and reduce costs for such components that are frequently provided by a design-build subcontractor such as HVAC, plumbing, fire sprinklers, building automation controls, building maintenance and operation system.
6. Subcontractor Participation - Like design-build, CM-At Risk transfers the responsibility for selection of the construction team to the construction manager. This approach has been successfully used by the private sector where the participation levels of historically under utilized firms have reached high levels of success.

In order to make the CM-At Risk delivery method available as a tool for the City to utilize in constructing public projects, a Charter amendment is required because the Charter, as currently

written, only authorizes low bid contracting or design-build contracting. It is recommended that a ballot measure proposing a Charter amendment to authorize the City's use of CM-At Risk as a project delivery method be approved for the March 2004 election. The specific language of the ballot measure is in the process of being prepared and will be returned to the full City Council later this year for final approval.

### **Next Steps**

Within the next six weeks, City staff will be working to refine the procedural details of implementing the CM-At Risk project delivery method. Staff will work with the construction community for input and draw heavily on the design-build process that the City has implemented and used successfully as an alternative project delivery tool. The specific ballot measure language needed to authorize the City's use of CM-At Risk will be developed and presented to the full City Council prior to the deadline later this year for submitting ballot measures for the March election.

### **Summary**

The complexities faced by the City in today's construction market have highlighted the need for an additional contracting method to allow for the construction of a public works project by a single entity selected through a competitive negotiation process that is similar to that of design-build. The CM-At Risk method would be beneficial to the City in situations where there is an architect already on board, or when it is desirable to hire an architect independent of the builder, and when tighter controls and costs are sought. The City would be provided with flexibility, added cost accountability, and the opportunity to take advantage of additional value-engineering suggestions to provide an appropriately designed building that is functional, operationally effective, and provided at the lowest possible combination of initial and life-cycle costs. It is recommended that a ballot measure proposing a Charter amendment to authorize the City's use of CM-At Risk as a project delivery method be prepared and placed on the ballot for the March 2004 election.

ALTERNATIVE

Do not place a ballot measure on the March 2004 election and continue to construct public projects utilizing either the traditional design-bid-build or design-build project delivery methods.

Respectfully Submitted,

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Frank Belock  
Engineering & Capital Project Director

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Jon Dunchack  
Special Projects Director

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Approved: Bruce A. Herring  
Deputy City Manager

Attachment: [Flow Chart](#)