THE CITY OF AUGUSTA

MARK S. O'BRIEN, MAYOR

CITY COUNCIL
JEFFREY M. BILODEAU
MICHAEL G. BYRON
DALE McCORMICK
DAREK M. GRANT
CECIL E. MUNSON
PATRICK E. PARADIS
DAVID M. ROLLINS

WILLIAM R. BRIDGEO
CITY MANAGER

INFORMATIONAL MEETING AGENDA

THURSDAY, SEPTEMBER 25, 2014

CITY HALL (COUNCIL CHAMBERS)

6:30 P.M.

A. Items for discussion submitted by the City Council and/or the City Manager:

1. AMHI Cemetery project
2. Zoning change for artisan food establishments
3. Procurement Ordinance Amendment – construction management at risk

B. Persons wishing to address the City Council who have submitted a formal request in accordance with Section 2-61 of the Code of Ordinances:

1. Margaret Tilman -- Discontinue use of Fluoride in Public Water System

C. Open comment period for any persons wishing to address the City Council.

City of Augusta, Maine

DEPARTMENT OF DEVELOPMENT SERVICES

AUGUSTA STATE AIRPORT
CODE ENFORCEMENT
ECONOMIC DEVELOPMENT

ENGINEERING
FACILITIES & SYSTEMS
PLANNING

MEMO

To: City Council
William Bridgeo, City Manager

From: Matt Nazar, Director of Development Services

Date: September 22, 2014

Re: Distillery, small brewery/brew pub, bakery

The Planning Board held a public hearing regarding "Small Distilleries, Breweries, and Bakeries", as a new use in the Land Use Ordinance. The Board voted unanimously to recommend this change to the City Council. The biggest concern, it would seem, is size and the impact on the neighboring properties. Those issues can be dealt with in a definition.

A new definition reads as follows:

Small Distilleries, Breweries, and Bakeries: Any distillery, brewery, or bakery, with or without an associated restaurant or retail component that occupies less than 5,000 square feet of floor space. Any retail element must be primarily for the sale of the product being produced on-site.

The districts the Board recommended the use be a permitted use in are: IA, PD, KL, KBD1, KBD2, CB

And the recommendation is that the use be a conditional use in these districts: RV, BP, and PD2

16 CONY STREET, AUGUSTA, MAINE 04330
PHONE: (207) 626-2365 • FAX: (207) 626-2520 • TDD: (207) 626-3003

ANALYSIS OF PROJECT DELIVERY METHODS

CONSIGLI
Est. 1905

Construction Issues	Negotiated CM Approach	Traditional Hard Bid GC Approach
Team Approach	CM becomes a team member and is able to work closely with the owner and design team throughout design and construction to solve problems without adding cost.	Traditional linear approach frequently fosters adversarial relationships and protection of individual interests.
Team Composition	The CM selection process allows the selection of team members that are closely aligned ideologically. This can result in a long-term relationship.	Even a selective list bid process does not allow an opportunity to select a partner based on qualifications and approach.
Guarantee	Guarantee that project program and budget will be achieved at the completion of the pre-construction process.	No guarantee of final cost. Final bid numbers frequently are higher than GMP proposals.
Release of Early Documents	CM can begin to plan, price and procure based on the early release of documents.	Not an option. Documents need to be 100% complete for bidding.
Project Set Up/Planning	CM will be able to properly plan, incorporate and implement a project plan that is specific and tailored to this project.	The contractor awarded the project will have no more than 30 days to implement a site set up plan.
Identification of Long Lead Times	Long lead times can be procured prior to completion of drawings and a GMP to facilitate schedule. This includes proprietary spec items.	Procurement occurs after 100% documents are completed and project is awarded; this frequently results in, 'take what you can get' materials selections.
Steering of Design toward Budget/ Available Funding	As a team member, CM will work closely with the owner and design team to continuously check pricing and constructability issues to ensure that the final design documents are in line with the owner's budget.	No involvement until drawings are completed valuable time lost if bids are over budget. Additional costs will be incurred by the owner if additional re-design and rebidding is necessary.
Ensuring Best Price and Quality	CM provides open book competitive trade bidding and involves the owner and design team in fi nal decision-making and award. The owner is involved in all cost decisions.	Competitive bidding does not ensure that subcontractor trades are providing the best pricing or are the most qualified.
Subcontractor Selection	Subcontractors will be selected based on experience, reputation, qualifications, and completeness. Frequently, subcontractor interviews are conducted prior to selection.	Even with selected GC bidders, subcontractors are frequently selected solely on price.
Subcontractor Involvement	Subcontractors perform at least 75% of projects. The CM process allows subcontractors to provide input before key design questions are answered.	Subcontractor participation is limited if any.
Subcontractor Participation	Frequently more subcontractors will participate with a CM project.	Many subs will not bid on a competitive process because they do not: ▹ Know who the contractor will be ▹ Know if the project will be on budget ▹ If they are competing against comparative subcontractors.

CONSIGLI
Est. 1905

Construction Issues	Negotiated CM Approach	Traditional Hard Bid GC Approach
Safety and Logistics on Plan	Developed as a preconstruction deliverable with the owner identifying operational and site logistic concerns.	Developed after award of contract with not much input from the owner—could affect pricing, productivity, and efficiencies.
Quality of Work	The owner, design team, and CM are involved in the subcontractor trade selection process, thus giving more control to the team in the buyout process.	Traditional bid structure provides incentive to get the lowest number on the street, possibly jeopardizing quality.
Guaranteed Maximum Price (GMP) vs. Lump Sum	GMP allows the owner to be involved in the budget preparation and results in a transparent cost process. Initial GMPs may not be less than the initial competitive bid price, but the final cost of construction may be.	GMP allows the owner to be involved in the budget preparation and results in a transparent cost process. Initial GMPs may not be less than the initial competitive bid price, but the final cost of construction may be.
Potential Cost Savings	The owner has the ability to identify and use potential project savings.	Contractor keeps all savings.
Contingencies in Estimate	Contingencies are open book and set as a team. They are controlled by the CM and used to cover unforeseen conditions or scope added by the Owner.	Contingencies are hidden and decisions are made with profitability in mind.
Coordination of Work	CM will be in charge of the entire construction process. Early release and procurement scope can be seamlessly incorporated into the full project.	Increased cost and schedule risk due to insufficient time for coordination. Added contingencies and warranty issues can result.
Escalation of Costs	The CM process allows for a quicker buy period because drawings do not need to be 100% complete. Recent documentation has shown that construction costs are predicted to continue to increase. Any delays in bidding and procurement could increase project costs.	Procurement of materials will start after successful bid and contract award. Delays in procurement of several months could result in increased cost as described.

CM eJOURNAL

THE RISK IN CM "AT-RISK"

BY WARNER STRANG

INTRODUCTION

The objective of professional construction managers should be to give their clients the best possible experience with design and construction, without endangering their own firms and families. The focus of this article is to describe how a construction manager can improve an Owner experience by accepting the transfer of some cost risk, without endangering the relationship of trust, or the CM 'firms' financial footing.

In the last thirty years, public agencies in the United States have won the right to use a method of construction contracting that engages a construction manager early in or prior to the design process. It uses that entity to manage the project until its completion. The construction manager is an agent of the Owner in managing the design process, but takes the role of a vendor when a total cost guarantee is given. Many professional construction managers are leery of this change of role, and resist being placed "At-Risk".

The traditional system of public construction in the United States requires the selection of an architect who prepares complete plans for lump sum bids by general contractors. The development of construction management can be seen as a moral revolution against the poor performance of the traditional system[1], or as a natural extension into the public sector of practices that had improved work in private construction since the end of World War II[2]. Regardless of whose writing of history is correct, with the advent of CM At-Risk owners on public projects now have the option to be protected from cost overruns beyond a certain point in the project, in exchange for some worries. The objective of this paper is to pick those worries apart, and suggest some ways to alleviate them.

In choosing the CM At-Risk method there are some potential advantages to both the Owner and the construction manager, and there are some potential drawbacks to each of them. Since the objective is to improve the Owner's experience with the process, this article will start with the Owner's point of view. Then it will look at the issues from the construction manager's point of view.

The contractual arrangement of the parties is not the sole determinant of the success of building projects. Indeed, there are situations in which contracts are an afterthought, and their terms are quickly forgotten. If the Owner, builder, and designer are competent and expect to depend on each other far into the future, they will probably

---

[1] In *The CM Contracting System*, Edwin Haltenhoff portrays the root form of construction management as agency construction management, and discusses departures from that system as necessary evils.

[2] The Harvard Business Review of March-April 1973 had an article entitled *How To Avoid Construction Headaches* that heralded a new approach as an outgrowth of success in private construction. That trend continued slowly for the next 30 years.

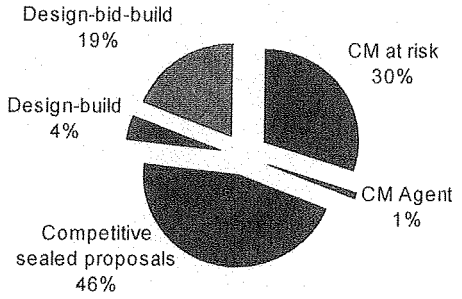
Copyright ©2002 by the Construction Management Association of America

do their best regardless of the form of contract. If the participants suspect one another of dishonor, and believe that punishment for poor work will not be possible, it is unlikely that they will produce a success. None-the-less, in most real situations a well thought out set of relationships helps produce a good result, and construction managers owe it to their clients.

FROM THE OWNERS POINT OF VIEW

The great advantage to CM At-Risk for most public Owners is that their governing bodies accept it. In most states it is the most widely used form of construction management practiced[3]. Most Owners see having a Guaranteed Maximum Price (GMP) as equivalent to having a Stipulated Sum Cost, and on that basis are willing to enter the experiment.

Texas K-12 and public higher education projects



Relationships are a selection factor in 81% of this work

Source: Effects of State Legislation on Contracting Methods of Public Schools and Universities, Forum on Construction Project Delivery for Texas Public Work, January 31, 2001, K. Everette Sylvester, Ph.D, Principal Investigator

Agency Multi Prime Construction Management is available to public Owners in most states. It appears that its use has been small because of the fear of creating a lack of accountability for the total cost[4]. Most governing bodies have a healthy knowledge of the lack of control they have over the cost consciousness of their staff.

The choice then for most public Owners is between CM At-Risk and the traditional system. If they do not want to use the traditional method because of past poor results,

---

[3] A reference here on the state laws. Damian Hill, AGC, study to be completed in August 2002.

[4] Ibid

Copyright ©2002 by the Construction Management Association of America

and are not bold enough to try Design-Build, they are encouraged in this direction. Let's look at the risks involved.

THE COST OF THE WORK

Does using a Construction Manager At-Risk raise or lower the cost of the building? On one hand one might imagine that having a very cost conscious group involved early might lower it. On the other hand, the usual CM process seems to involve less risk-taking on cost by the Construction Manager than that taken by a lump sum Contractor. So In this case, maybe the total cost is may be raised. The Construction Industry Institute Study seems to indicate a substantial savings in cost growth, but no good information on comparative initial cost[5].

The issue is difficult to get hard information on. Each project is unique and can't be done built both ways several times to do an experiment. There is one good laboratory, - though. In the Florida schools program it is common to have one prototypical set of plans built several times in several different ways. The conventional wisdom is that the results of a study of those instances would find that on the same set of plans Construction Management At-Risk was on the average less expensive than Lump Sum Bidding, but only because it did not have the occasional terrible result of low bid contracting. Eight times out of ten the low bidder was less expensive than the CM At-Risk, but two times the lump sum bid project was far more expensive because of lawsuits, and lost use of the facility. The resulting belief is that there is a cost advantage to CM At-Risk over lump sum bidding because it reduces the risk of the disastrous, lawsuit-riddled project. There is, however, no academic study to confirm that widely held belief.

There is no data about CM Agency construction in the Florida's school programs because it appears that it is seldom used.

The larger question concerns whether the presence of a cost conscious group during design will tend to hold the cost of the work down. That effect would be present with both CM Agency and CM At-Risk. Most Construction Managers feel it is true, but there aren't any clear studies on this question either.

FEES FOR CONSTRUCTION MANAGEMENT

An Owner might want to know if the fees paid to a CM At-Risk are higher or lower than the comparable costs to a general contractor in the traditional system, or the fees to an Agency CM. The answer is that the accounting group that monitors construction companies, the Construction Financial Management Association (CFMA), can find no systematic differences between CM At-Risk and lump sum general contracting[6].

---

[5] Construction Industry Institute (CII), Research Report 133-1, Alan Champagne et al, 1999.

[6] CFMA Annual Financial Survey 2000, p 53.

Copyright ©2002 by the Construction Management Association of America

Different sorts of Construction Managers At-Risk price work differently, but overall it appears that it is about as well or poorly paid as other types of construction. The fees for CM Agency are usually less, because there is no element of business risk.

There is one negative element to CM At-Risk fees. In many areas of the country they are subject to some marvelous sleight of hand. If the "fee" that is quoted is to be a part of the selection, you can be sure that it will be only a small part of the final gross margin to the Construction Manager. An Owner, in order to not be misled, needs a close advisor not to be misled. The calculation of the actual gross margin to the builder from fee, mark-ups on labor, allocations of fixed expenses like insurance, and savings sharing should be done by an experienced person. The negotiation of a final contract should center on assuring the builder a fair profit for a good job.

THE TIME IT TAKES

Does putting the CM At-Risk raise or lower the time it takes to complete the work? To the extent that the Owner is willing to begin construction before the plans are complete, either CM Agency or CM At-Risk lowers to the total time over using the traditional system. If a cost guarantee gives the Owner the confidence to do that, then the CM At-Risk system takes less time. There are several studies that find better schedule performance of CM At-Risk than traditional systems, but no comparisons of CM At-Risk and CM Agency[7].

THE QUALITY OF THE RESULT

Does using a CM At-Risk produce a better or worse building than CM Agency or the traditional system? It is likely to produce better quality than lump sum bidding, for the same reason that it is likely to be a little more expensive much of the time. It tends to use bondable, therefore better, more expensive subcontractors.

On the surface it should be about the same between CM Agency and CM At-Risk. They both bid the work to subcontractors under the scrutiny of the Owner. There are, however, some social tendencies based on the usual backgrounds of the firms that may make a difference in quality. CM At-at Risk contractors are usually descended from general contractors, and that gives them one advantage and two disadvantages.

On the plus side for CM At-Risk, it is usually easier for the firms to discourage poor quality subs from bidding. The CM At-Risk firm has the image of a general contractor who can punish poor work more easily by not providing work for them on the other projects on which they work, and by demanding better work. On the negative side, the existence of a cost guarantee may influence the field staff to look the other way when a problem comes up that would tend to push the cost over the guarantee. In most cases the only

---

[7] Construction Industry Institute (CII) Research Summary 133-1, December 1997

Copyright ©2002 by the Construction Management Association of America

way the CM At-Risk can lose money is to have a big field problem. So there may be less enthusiasm for good inspection in close situations. Also on the negative side, the background of the CM At-Risk's personnel is usually from lump sum bidding, and they often feel closer to the subcontractors than the Owner by habit.

It is hard to judge construction quality by any objective standard. The CII study makes a case for the quality of a CM At-Risk project being higher than a lump sum project but there is no data on CM Agency.

WHAT'S THE RISK?

Often discussions of CM At-Risk focus on the risk of a cost overrun costing the CM a great deal of money. That doesn't happen often.

When it is possible most Owners wait until the guarantee is given on the basis of completed, or almost completed, plans. The CM is allowed a contingency for the normal mistakes in construction. If later bid packages come in above the amount allowed for them in the GMP there is pressure to reduce the scope of the work so that it's the cost to the CM fits within his guarantee. In thirty years of work of this sort I have only seen two GMP's exceeded during the project causing the CM to make up the difference. But many GMP's have escalated above the original number.

A greater risk is that the CM now is the vendor of a product, and bears all of the risks that manufacturers and operating companies do in other lines of work. Hidden defects can come back to cost dearly years later. Accidents to craftsmen can exceed insurance coverage. The normal dangers of buying and selling multi-million dollar pieces of work mean that the CM At-Risk has a great many hidden risks, and that consequently the Owner now doesn't. The CM Agent is less in the position of selling a product, and so has less of the risk of a manufacturer.

FROM THE CONSTRUCTION MANAGER'S POINT OF VIEW

All of the foregoing deals with how the Owner should look At-Risk. How should practitioners feel about it?

For a professional service Construction Manager who is accustomed to doing CM Agency work, assuming the position of the CM At-Risk has the attraction of affording his client some comforting assurance on total cost, but exposing the CM to some commercial risk. Managing this risk will require some changes in procedures and objectives, but will bring with it some additional fee for risk.

For the general contractor the change will be the advocacy of the client's position that is imposed by the role of a Construction Manager. CM At-Risk is still largely a position of representing the Owner's interests, and if it is pursued as simply a negotiated general contract it will leave the Owner dissatisfied and the CM without future work.

Copyright ©2002 by the Construction Management Association of America

PROTECTING AGAINST OVERRUNS

For the professional service CM, the financial questions come down to preventing cost overruns on units of work that have been bid prior to the guarantee, and bid overruns on units which are only estimated in the guarantee. The main changes in procedures are:

Estimating with a larger contingency. A CM who can see himself paying the difference can see more potential problems in any incomplete set of plans. The challenge is to combine prudence with a desire not to seriously over estimate.

Being more selective on subcontractors. In many cases an Agency CM will allow some subcontractors to propose for secondary Owner-driven social reasons. As a CM At-Risk, he will find himself with a harder heart, and perhaps require subcontract bonds where he once thought them unnecessary.

Being more aggressive on change orders. If the CM At-Risk has been on board all along, he will find asking for changes because of ambiguities in the plans as hard difficult as ever. He will however find it necessary to be more aggressive on changed conditions, and external problems like the weather. He will find himself at times on the other side of the table from the Owner. Doing this without giving offense or provoking a reaction requires a measure of skill at relationships, and at playing the role of the "good builder".

Billing to allow positive cash flow. The CM At-Risk pays the bills, so he will need to make sure he has the money to do so. Often that means billing on a schedule of values basis more than the sum of the bills in hand, to allow for costs in the middle of the next month. An Agency CM can adopt a distant attitude to these problems, but a CM At-Risk cannot.

A Construction Manager who comes from a background of negotiated general contracting for progressive private Owners does not find it difficult to reconcile the obligation to serve his client and his obligation to protect his business. One who comes from the professional service Agency background may find it difficult. Succeeding in making this change in a professional service firm may mean some cultural changes and perhaps some staff changes. An Agency CM turned At-Risk CM runs the real risk of financial loss if he doesn't pay devote attention to this.

THE ASPECT OF TIME

Another common aspect of CM At-Risk is the requirement for damages for delay. It is a comfort to some Owners to have such a clause. It poses a greater risk of ruining the relationship, however, than all of the cost guarantees that are requested.

Most of the time risk in a construction project occurs away from the site. The design work remaining when construction begins, including submittals and their approval, and

Copyright ©2002 by the Construction Management Association of America

the decision-making on changes during construction, account for most of the reasons for delay in completion[8]. If one were to assemble all the information needed to confirm orders for materials, and all the design decisions, and provide all of the funds needed, and shield all those on site from changes, the construction time would have relatively little risk in it.

A CM At-Risk, who has damages for delay, must clearly point out when he is delayed so he does not incur those damages. In pointing that outdoing so, he is criticizing imperfections in his client's organization. That criticism often leads to a breakdown in the relationship. For that reason most Construction Managers rarely agree to such damages on projects with significant potential delays.

HOW DOES A CM MOVE INTO WORK AT RISK?

A Construction Manager who has worked on a professional service basis for some time has a host of questions to answer to himself before he proposes to act as a CM At-Risk. The first and most important question is whether that role is against his "religion". That is, can he imagine reconciling the diverse obligations to his client and his own firm?

Almost every occupation has inherent conflicts that are resolved by practitioners every day. Insurance agents and stock stockbrokers reconcile their obligations to act for their clients with the sales commissions from selling their various wares. Architects reconcile their desire to build beautiful buildings with their clients need for practical structures within their budgets. But if an individual cannot see himself playing this role comfortably he should not start the process.

The next question is whether he has the right staff. A CM At-Risk is in part a general contractor in the public sector. A general contractor lives and dies by the quality of his superintendents. A professional service construction manager will need to have superintendents that he has confidence in, and that he pays well to manage contentious subcontractors. .If he has already been providing Agency Multi-Prime Contracting CM services, he should already have this type of person on staff. But the CM's who become superintendents must understand that they are now in the business of managing their own company's risk, in addition to providing good service to the Owner.

Another important arrangement is the provision of surety bonds. The company, or its principal owners or guarantors, will need to pledge assets to a surety in the event of a default. The company must have assets left in the business, and continue to accrue assets. Many professional service companies regularly make discretionary bonus disbursements each year of almost all of the profits, and so have little equity to back a bond. Becoming a CM At-Risk means changing the capital structure of a professional service company.

---

[8] R.F.Cushman, J.D.Carter & A. Silverman, *Construction Litigation:Representing the Contractor*, New York: Wiley, p 382

Copyright ©2002 by the Construction Management Association of America

Insurance will also change. General liability is much more expensive, and some contracts will need excess liability coverage. There are a host of special situations and perils that come up from year to year. Someone must now think of insurance as an important part of their job.

The good news that goes with all this is that a CM At-Risk can expect to make a breakeven labor multiple on his valuable people plus a risk premium of 2-4% of the cost of the project. That means that doing a large project well can be as lucrative as doing several CM Agency projects, and at the same time can fill a valuable role for clients.

HOW DOES A GENERAL CONTRACTOR MOVE INTO CM AT RISK?

It is nominally easier for a general contractor to become a CM At-Risk, because he has most of the arrangements made already. He has a bonding capacity and liability insurance. He is accustomed to warranty work and acting as the seller of a product. To many general contractors it looks like falling off a log.

That attitude won't last long. Owners expect Construction Managers to be faithful to their client, rather than faithful to the contract. There will be many times that the Owners will ask to be rescued from their own decisions. There will be other times when they would like to blame someone else for imperfect outcomes. Managing these attitudes and situations are all within the work of Construction Managers, and getting used to them will take some doing.

To prosper in the role of Construction Manager, a traditional general contractor will need to add people who are relentlessly focused on client satisfaction. He will need to work hard to interface with each client's organization at least at three levels. He will need to avoid assigning people to these projects who are hard-bitten lump sum bid contractors. If he doesn't, he will enter an unending paper chase and have both a dissatisfied client and employees.

Construction Management At-Risk has some significant advantages for Owners, and therefore to professionals who are dedicated to serving those Owners. CM At-Risk is allowed under most state laws, and is easier to adopt for most public bodies than CM Agency. It is often faster and less expensive than the traditional contracting system. It seems to cost no more in fees than the traditional system, although it has higher fees than Agency CM.

The risks to a CM entering the "At-Risk" world are real, but manageable. The CM At-Risk must learn to provide a professional level of service while managing his own risks. He needs to structure his contracts and practices to provide meaningful guarantees while avoiding conflict of interest with the Owner. He must learn more about insurance and make the financial sacrifices to obtain bonding. If he accomplishes this, however, he can provide his clients with a higher level of protection and service.

Copyright ©2002 by the Construction Management Association of America

BIBLIOGRAPHY

1. C. Edwin Haltenhoff, *The CM Contracting System*, Prentice-Hall, 1999.
2. Construction Industry Institute, Research Summary 133-1 and 133-2.
3. Construction Industry Institute, Research Summary 165-1.
4. Associated General Contractors Survey of State Regulations.
5. Construction Financial Management Association Annual Financial Survey 2000, William Schwab editor, Princeton, New Jersey.
6. Florida Educational Facilities Planners Association.
7. Daniel Halpin and Ronald W. Woodhead, *Construction Management*, Second Edition, John Wiley and Sons, 1998.
8. Sidney Levy *Project Management in Construction*, Third Edition, McGraw-Hill, 2000.
9. *Harvard Business Review*, March-April 1973, p.87-93.

About the Author: Warner Strang is a Senior Vice President of 3D/International in Houston. He has spent 35 years in the management of construction projects, 20 of them as a Construction Manager At-Risk and 15 as a professional service Construction Manager.

Copyright ©2002 by the Construction Management Association of America