

## Recommended Program Management Services

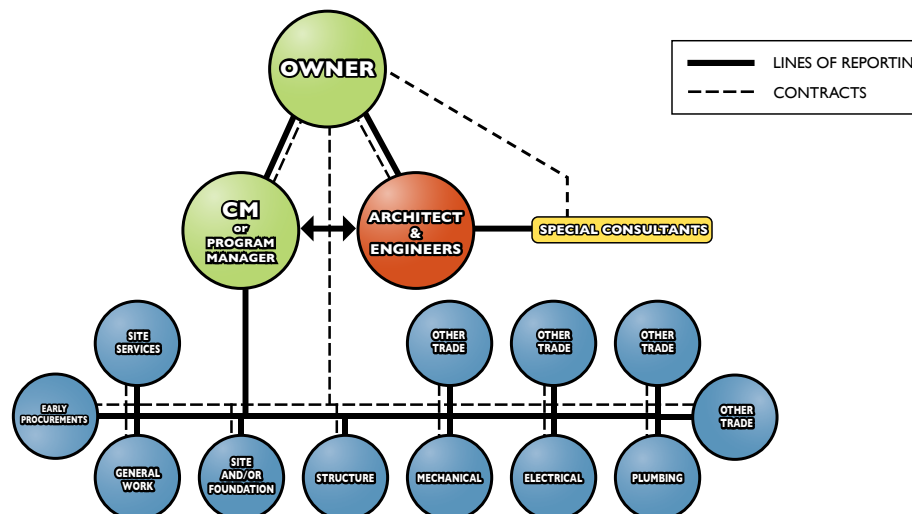
# For a **CM Agency** Project

The “Construction Management Agency” project delivery method was the basic “CM” idea that emerged in the 1960s as major construction programs, particularly public agency programs, began to be undertaken after World War II. During that period this early alternative delivery method was referred to simply as “Construction Management” or “CM”.

For the first ten or so years after World War II, most construction in the United States consisted of projects that might be categorized as “catch-up” projects. There was almost no construction during the war that was not part of the war effort. In the late 1950s and early 1960s, some very large public construction programs for both building and infrastructure projects were begun. Also, during this period, the Country began to experience much higher costs of money and inflation. Consequently, “busted budgets” in large amounts almost became the norm for those programs. Since general contractors were often the messengers of the bad news, they were the ones who took the brunt of the blame (though some admittedly profited from the large change orders).

Around this same time, a number of projects needed to be greatly accelerated, particularly in the industrial and military areas. In the accelerated projects, the construction and/or off-site fabrications as well as long lead materials and products orders were often needed to be authorized before design was complete, sometimes before much design at all had been completed. Another factor at the time was that after World War II, larger percentages of the construction project were carried out by subcontractors who, in turn, became larger, more specialized and of greater influence in the industry.

As a result of all of these factors, the idea emerged of a professional manager of construction, compensated on a fee basis to reduce the adversarial relationship between the Owner and the builder. In time it came to be realized, though, that the Contractor was not the only party contributing to the problem, though some Owners began to use “CM” fairly regularly. Also, during this period the idea emerged that to fully deal with the time and cost problems, one had to deal with more than just the construction and needed to more effectively manage the pre-design and design phases of the project as well as the procurements of non construction items such as furnishings, moveable equipment, security and telecom systems, etc. Thus it became obvious to some that the Owner’s interests could only be fully addressed if the management of the full construction “program” was dealt with, not just the construction itself. (At the end of this pamphlet, see other definitions of “CM” and “Program Management” that are in use today.)



## CM Agency

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As can be recognized from the history of Construction Management and Construction Program Management (“Program Management”), in many situations the role of the CM and the Program Manager are rolled into one entity so long as that entity has all of the required qualifications.

In some cases, probably very large and/or complex projects, there may well need to be a separate Program Manager reporting to the Owner with the CM reporting to the Program Manager.

As can be seen in the chart on the previous page, the CM often acts as the Owner’s representative in managing the whole design and construction program, indicating that a CM firm, which has good capabilities in managing pre-design planning and design might well be engaged to manage the whole “program” for the Owner. Likewise, the Construction Program Management firm (“Program Manager”) which has the capabilities to manage the construction in the field and otherwise, might well be engaged as the CM for the CM Agency project delivery method.

Under CM Agency, companies who are typically referred to as “sub-contractors” are referred to as trade contractors. In some cases there may be as few as from five to eight such contracts, one of which might be a General Work contract, a catch-all for everything that is not included in the four to seven specialty trade contracts. However, more frequently today, there are many more than eight separate trade contracts used in CM Agency.

Site services, such as clean-up, site fencing, security, and miscellaneous labor might be included in the contract responsibilities of the CM. In other cases, all or part of these functions are contracted out to one or more specialty trade contractors.

As there are multiple trade contracts, sometimes the term “CM Agency Multiple Primes” is used for CM Agency.

The CM would typically assist the Owner and the Architect/Engineers with input on costs, cost effective construction methods, constructability, scheduling and sequencing issues throughout the pre-construction design phases. Continuous consultation, estimating and providing input into the design and construction schedule would be the norm. At design milestones, the CM would provide the Owner, Architect/Engineers and the PM with the most reliable possible estimate of the final total cost. Basically, the CM would fulfill the functions of a general contractor except for providing a performance bond or a fixed price for the project.

Today, with the Owner having a wider range of alternative project delivery methods from which to choose, and with experience many have had with CM Agency, it would appear that the most appropriate uses for CM Agency would be the following:

- a. Projects that are so complex and/or have so many unknown conditions that it would not be feasible for the Owner to obtain an enforceable fixed price even after completion of final working drawings and specifications.
- b. Projects for which time of completion is more important than adherence to the cost budget.
- c. Interior fit-up or “churn” projects, particularly for Owners who have a continuing demand for many such small projects.
- d. Complex historic restoration projects.

**Typical CM Services under the CM Agency Project Delivery Method:**

The services set out below are based on the circumstances in which the Owner has selected the Architect/Engineers before the CM is selected. If the Owner elected to engage the CM first, the CM's services would be the same in the pre-design phase as the services of a Program Manager. (See Brookwood's pamphlet on Design-Build, CM-at-Risk or Bridging.)

**PRE-DESIGN PHASE**

- Determine that the Program of Requirements, funds available for the project and the overall Schedule for the design, construction and related procurements are compatible with one another. Assist the Owner in resolving any compatibility issues.
- Initiate and operate/deliver thereafter a dynamic database, cost-loaded scheduling and reporting Program Management Information System (PMIS) along with briefing reports for senior executives of the Owner's organization. These may be web-based per authorization from Owner.
- Simultaneously with above, develop a detailed Master Project Schedule ("Schedule") for all major activities of all parties as well as a plan of construction procurement through the various required trade contracts.

**DESIGN PHASE**

- Assist the Owner in the selection of the Architect and Engineers and putting the AE under contract.
- Throughout the design phases carry out cost analyses and cost control procedures using a multi-track costing program with line item by line item reconciliations.
- Track schedule adherence throughout the design and construction phases and advise the Owner and other parties on any necessary recovery scheduling.

**CONSTRUCTION PHASE**

- Manage the construction through the buy out of the full project and the management of the various trade contracts as well as any site activities that are under the CM's contract. Coordinate the inspection of the work of the various trade contractors with the Architect/Engineers.
- Assist the Owner in closing out the various contracts and provide records for retention.

### **Varying Definitions of the terms Construction Management and Program Management**

Construction Management: In addition to the definition of Construction Management (“CM”) outlined in this document above, the term is used in a variety of ways today. One way that is different from the above definition is the CM acting as an extension of the Owner’s organization to provide various services in connection with the administration of a construction project for which there may be a single general contract or several contracts. These services would usually start prior to the bidding/negotiation phase for the construction contract(s) and often include inspections of the work on behalf of the Owner. Another term used for these services, particularly in building projects, is Contract Administration (“CA”). In infrastructure projects, these services may be more extensive and might include such services as layout and quantity surveying. The term CM is also used to mean both Construction Manager and Construction Management. In college programs, a Construction Management course of study is usually meant primarily to prepare the student for a career in construction contracting.

Program Management is short for Construction Program Management, the management on behalf of the Owner or user of the pre-design planning, design, construction procurement, other non-construction procurements, commissioning and occupancy phases of the project and may include assistance to the Owner in procuring the financing and coordinating with the sources of project funding. “Development Management” typically means full program management plus the management of real estate development aspects of the project. Some today, though, are using the term Program Management to mean the management of multiple projects.