

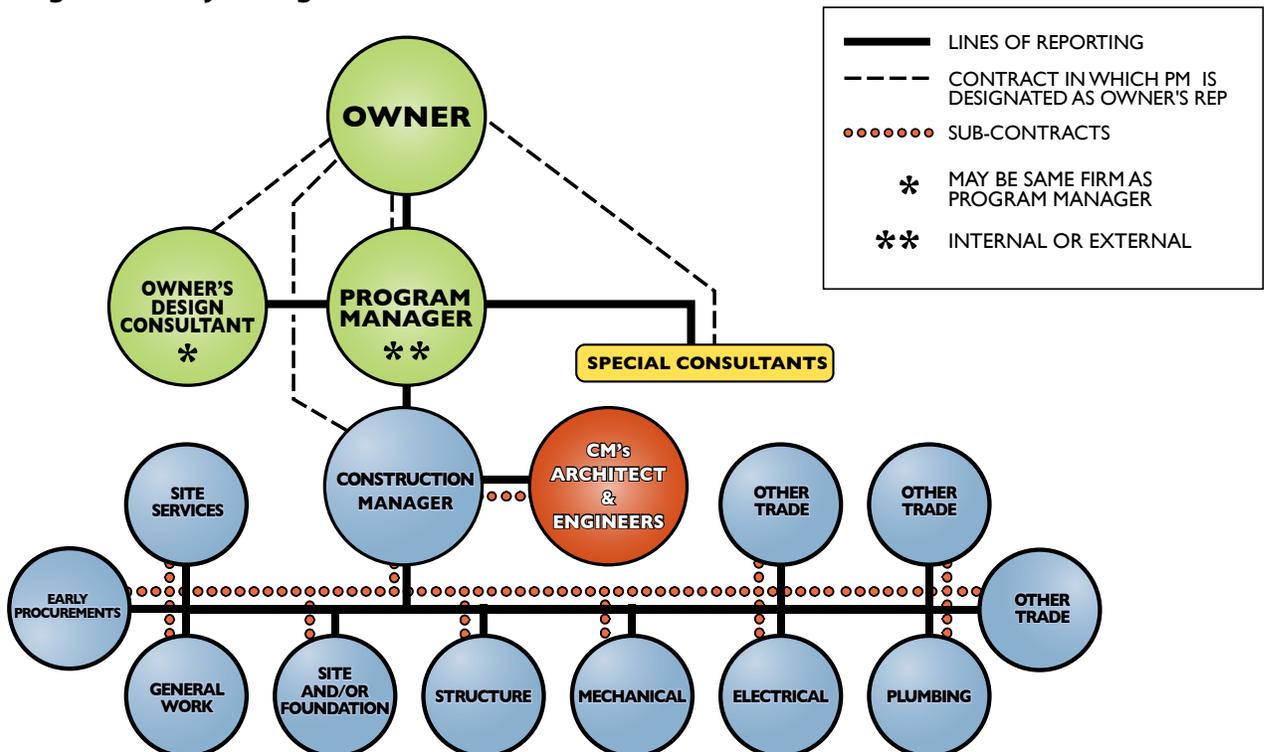
Recommended Program Management Services
For a **Bridging/CM-at-Risk** Project

By combining the Bridging method with the CM-at-Risk method of project delivery, all of the benefits to the Owner of the CM-at-Risk method are retained and the Owner's position may be significantly improved in a number of other respects. The proper method of preparing Bridging Contract Documents will give the Owner a more enforceable price by around the mid point of the architectural and engineering design phases than will a "Guaranteed Maximum Price" based on anything less than 100% complete traditional Contract Documents. Further, by adding the Bridging aspects to CM-at-Risk, the Owner's exposure to contractor initiated change orders is significantly reduced. Also, as compared to any other method that does not employ Bridging methods and procedures, this combined concept should greatly reduce the Owner's exposure to post construction disputes arising out of flaws in design or construction that are discovered after occupancy.

Bridging/CM-at-Risk is based on the framework of employing the fairly widely used CM-at-Risk method but with the Bridging method overlaid, there being no basic conflicts in combining these two methods.

See Figure 1. below. If the Owner is engaging an outside Program Manager, that professional team should be brought on board first. The Owner's Design Consultant ("ODC", sometimes referred to as the "Bridging Architect" of the "Design Architect") would then be engaged. The CM with its "production architect", as a sub to the CM or as part of the CM firm's organization, would be brought in early in the design phase and would have a Bridging type design-build form of CM agreement with the Owner.

Figure 1 : Project Organization



Bridging/CM-at-Risk

The design team of architects and consulting engineers which works directly with and for the Owner, as mentioned above, is the Owner's Design Consultant (sometimes referred to as the "Bridging Architect") and provides the same services the Owner's Design Consultant provides in the Bridging method. These services may be combined with the services of the Owner's Program Manager or may be separate as shown in Figure 1. In Bridging/CM-at-Risk the Architect and Engineers "of record", who prepare the Construction Documents in compliance with the Bridging Contract Documents, are separate from the Owner's Design Consultant and are in the same position as other trade contractors, i.e., entities that are in a subcontractor role in other project delivery methods. Under Bridging/CM-at-Risk, all of the aspects of CM-at-Risk are retained for the Owner and additional advantages of Bridging are realized by the Owner.

A major improvement for the Owner of Bridging/CM-at-Risk over CM-at-Risk is that the price obtained part way through the three design phases is highly enforceable for the Owner compared to a GMP based on any level of completeness below 100% complete construction documents. This is because of the method of developing the Bridging Contract Documents which have about the same level of effort as traditional Design Development ("DD") documents, but are significantly different from DD documents.

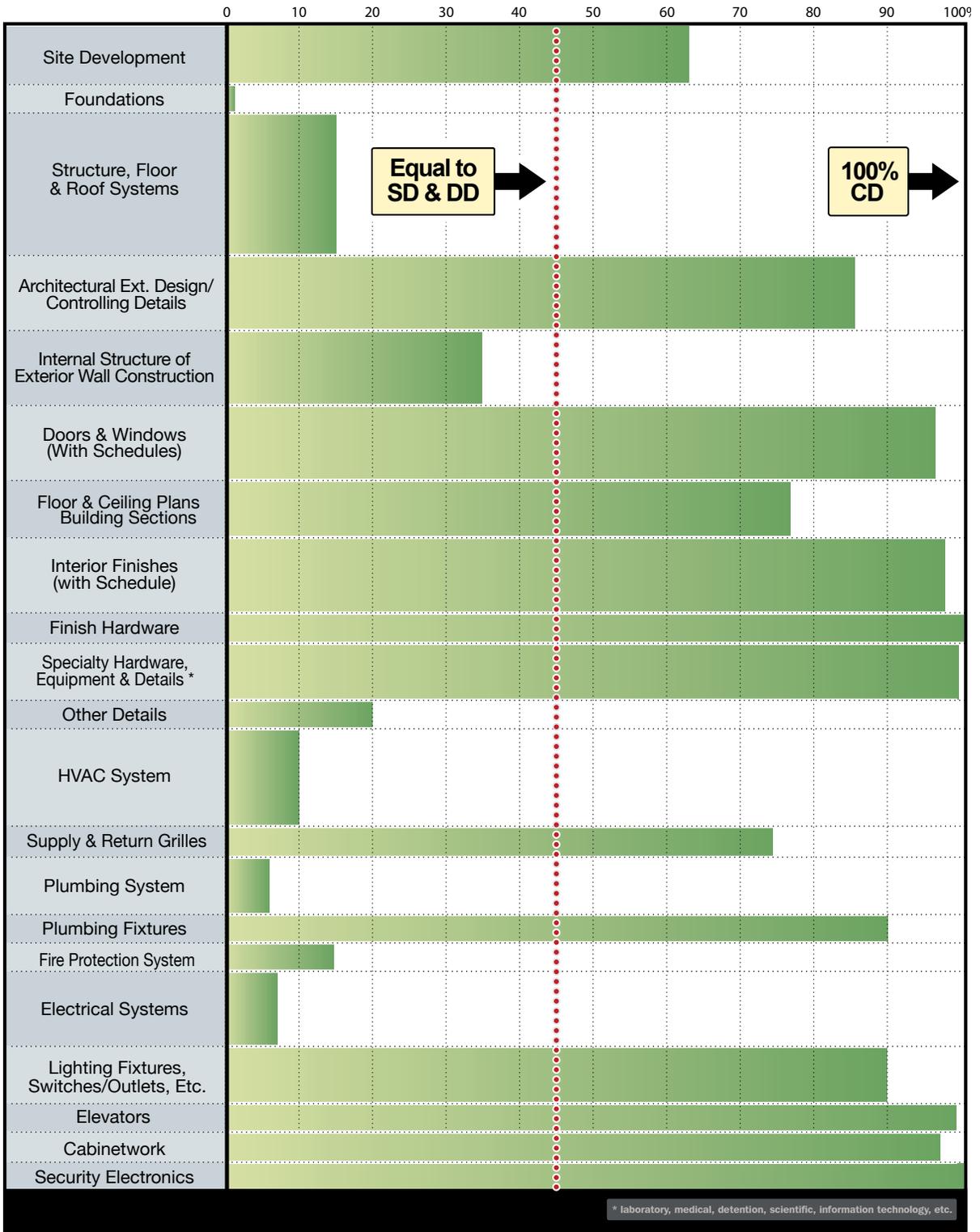
Typical Program Management Services to the Owner for a Bridging/CM-at-Risk Project:

PRE-DESIGN PHASE

- Assist the Owner in making final decisions about the project requirements and scope, possibly carrying out for the Owner preliminary technical investigations as to the suitability of the site, evaluating with and for the Owner potential legal and permitting constraints. As necessary, assist Owner in site acquisition.
- 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.
- Prepare or determine that a full Program of Facility Requirements ("Program") has been prepared and approved by all stakeholders in the Owner organization. Put into a format, or determine that the Program has been put into a format that is suitable as an exhibit to the contracts with the Owner's Design Consultant and the CM.
- Simultaneously with above, during the review and approval of the Program, develop a Total Project Budget ("Budget") covering all hard and soft costs as well as non construction related procurements, such as furnishings, moveable equipment, security systems, signage, fees, taxes, financing costs, etc. along with contingency funds. (This requires a skilled PM with thorough knowledge of the design process. The objective should be for the PM to develop and recommend a Total Project Budget with the construction contract price line items set at a figure that the PM knows a competent AE can design within.)

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Typical Levels of Design Completion of the Bridging Contract Documents



Bridging/CM-at-Risk

PRE-DESIGN PHASE *(CONTINUED FROM PAGE 2)*

- Simultaneously with above, develop a Master Project Schedule (“Schedule”) for all major activities of all parties from the pre-design phase through occupancy.
- Determine that the Program, Budget and Schedule are compatible with one another. Assist the Owner in resolving any compatibility issues.
- If the Program Manager and the Owner’s Design Consultant (“ODC”) are to be different firms, assist the Owner in identification of candidate ODCs and CMs, obtaining information about qualifications and/or carry out due diligence whether selections are to be competitive or single source. Assist the Owner in the award of the ODC and CM contracts.

DESIGN PHASE

- Throughout the design phases carry out cost analyses and cost control procedures with verification of the CM’s estimates and quotes 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.
- Throughout the design phases and construction coordinate the approval process with all users and stakeholders in the Owner’s organization as well as with any separate financing and/or approval agencies that are not to be processed by the Contractor. See back page for typical level of effort in the ODC’s preparation of the Bridging Contract Documents.

CD PREP AND CONSTRUCTION PHASE

- Assist Owner in concluding the agreement with the CM as to a hard total price before the CM’s AE proceeds with the preparation of the Construction Documents by the CM’s AE.
- Oversee the ODC’s review of the Construction Documents prepared by the CM’s AE.
- Assist the Owner in concluding the agreement with the CM as to final total cost of construction and authorization of construction.
- During the construction phase, administer the CM’s contract in essentially the same manner as the Owner and PM would administer a cost-plus flat fee general contract. Coordinate the inspections of the work carried out by the ODC and/or separately engaged inspectors. Review and approve on behalf of the Owner all progress and final payments to the CM as well as to the ODC along with any other vendors or providers of services.
- Assist the Owner in closing out the various contracts and provide records for retention.