

CONSTRUCTION MANAGEMENT DEFINED

Construction Management is a professional management practice applied to construction projects from project inception to completion for the purpose of controlling time, cost, scope and quality.



Construction Management

The Construction Manager (CM) is the principal agent who advises on and manages the construction process over the life of the project, or specific phases of the project, regardless of the project delivery method used.

Construction Management at Risk

The Construction Manager <u>consults</u> in the Pre-Design and Design Phases of a project and includes a construction cost proposal and performance role during the construction phase. The Construction Manager becomes a <u>General</u> <u>Contractor</u> upon agreement of the project cost.

PROJECT DELIVERY SYSTEMS

As an owner, it is necessary to choose an overall project delivery and contracting strategy which efficiently delivers the project.



DESIGN/BID/BUILD

- Usually, public projects are procured through a sealed bid
- Creates a <u>linear</u> approach to project delivery
- Need to have a completed design <u>prior</u> to bid
- Requires a <u>longer lead time</u> for construction
- Reduces opportunity for design innovation
- Lowest responsive and responsible bidder is contracted
- Contracted for a fixed price

CONSTRUCTION MANAGER AT RISK - CMAR

- A delivery method that entails a commitment by the Construction Manager to deliver the project within a <u>Guaranteed Maximum Price</u> (GMP)
- The Construction Manager acts as the
 <u>consultant</u> to the Owner in the development
 and design phases, but as the equivalent of a
 <u>general contractor</u> during the construction
 phase

DESIGN - BID - BUILD

ADVANTAGES

- Familiar delivery method
- Defined project scope for design and construction
- Design team and contractor accountable to owner
 - Lowest price proposed and accepted; this includes contractors fee and overhead
 - Lower upfront cost if drawings are 100%

BEST SUITED FOR: less complicated projects that are budget sensitive, but not schedule sensitive and not subject to change.

DESIGN - BID - BUILD

DISADVANTAGES

- Linear process means longer schedule duration
- Price not established until bid; may require redesign and rebid if bids exceed budget
 - Any and all <u>savings go to contractor</u>
 - Quality of contractors and subcontractors not assured
- Fosters adversarial relationships between all parties increasing probability of disputes
 - **No design phase input** from contractor on project planning, budget or estimates
 - Not optimal for projects that are sequential, schedule or change sensitive
 - Change orders and claims can increase final cost

CONSTRUCTION MANAGER AT RISK - CMAR

ADVANTAGES

- •Selection of contractor based upon qualifications, experience and team
 - Contractor provides design phase assistance in budget and planning
 - Continuous "Open Book" budget control
 - All savings go back to owner
- Screening of subcontractors allows owner and contractor quality screening
 - Faster schedule than traditional bid; fastest track construction possible
 - Ability to obtain GMP earlier in process; earlier than traditional bid
 - More teamwork between design firm and contractor
 - Provides more ability to handle change in design and scope
 - <u>Reduced changes and claims</u> once in construction
- BEST SUITED FOR: new or renovation projects that are schedule sensitive, difficult to define or subject to potential changes; for projects requiring a high level of construction management due to multiple phases, technical complexity or multi-disciplinary coordination.

CONSTRUCTION MANAGER AT RISK (CMAR)

DISADVANTAGES

- Difficult for owner to evaluate the GMP or determine whether the best price has been achieved for the work, however, we can require public bidding of subcontractors
 - Costs more than traditional bid due to reduced competition in pricing of contractor overhead, fee and sub-contractor costs, however, contract negotiations are allowed
 - CM may expand budget to create future savings

