



# MAKING SENSE OF CONSTRUCTION UNDERSTANDING PROJECT DELIVERY + CONTRACTING METHODS



# CONSTRUCTION CONTRACTING OPTIONS:

RELATIONSHIPS, RESPONSIBILITIES + RISK

Providing tailored contracting methods to best meet each Owner's specific needs.

CONSTRUCTION  
MANAGEMENT AT-  
RISK (CMAR)

CONSTRUCTION  
MANAGEMENT  
ADVISOR (CMA)

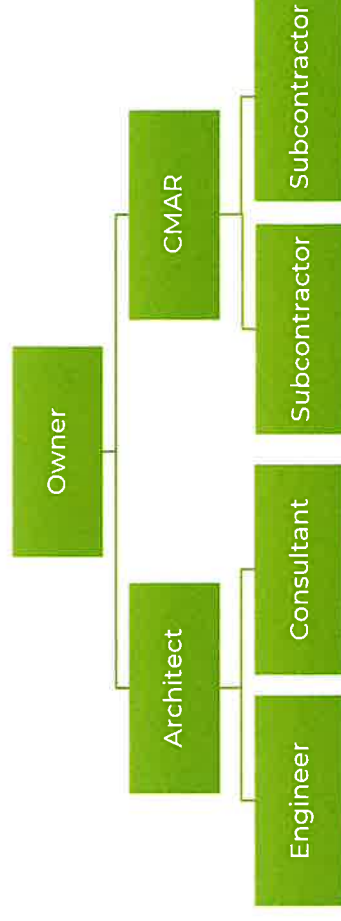
DESIGN-BID-BUILD  
GENERAL  
CONTRACTING (GC)



# CONSTRUCTION MANAGER AT RISK (CMAR)

## ROLE

- + CMAR is usually chosen early in planning phase, responsible for design input and all construction
- + CMAR serves as an Owner's Representative in the preconstruction phase
- + CMAR provides a Guaranteed Maximum Price (GMP) after bids are received from subcontractors
- + CMAR operates primarily as a General Contractor (GC) during construction
- + CMAR and A/E contract separately with the Owner



# CONSTRUCTION MANAGER AT RISK (CMAR)

## PROS

- + CMAR selection based on experience and qualifications, not only cost
- + Early CMAR selection allows for greater budget confidence, design review, early procurement packages, and due diligence resulting in fewer changes and delays
- + CMAR works to align + Maintain Owner budget, scope and schedule
- + CMAR contracting allows for prequalification of subcontractors (MN 471.463) and best value procurement.
- + A reputable CMAR will alleviate the Owner's burden of day-to-day problem solving
- + CMAR provides a Guaranteed Maximum Price (GMP) equivalent to a GC bid following the bid phase.
- + CMAR holds all construction contracts and issues all payments, reducing the number of payments issued by Owner
- + Single point of accountability for quality and schedule compliance – CMAR holds contractual risk of schedule and quality.

## CONS

- + CMAR controls their own construction contingency which is in addition to the Owner's contingency
- + CMAR may receive financial gains from Change Orders and may provide varying degrees of self-performed labor which is billed against budgeted allowances developed by the CMAR
- + Owner and A/E are responsible for system of checks & balances during construction phase
- + CMAR does not have a fiduciary responsibility to the Owner when at risk for overall cost and/or when self-performing work
- + CMAR must provide bonds in addition to contractor bonds and must pay insurance fees on all construction costs
- + GMP guarantees only the scope of work reflected in the contract documents and does not guarantee against changes or unforeseen conditions
- + "Changes" create increases in the GMP while the CMAR may have a contingency balance that is returned at the end of the project.

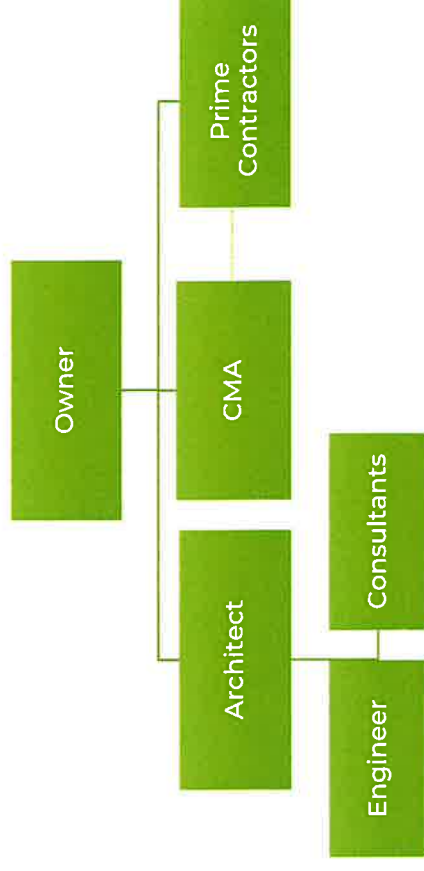


# CONSTRUCTION MANAGER AS ADVISOR (CMA)

## ROLE

- + CMA is usually chosen early in planning phase, responsible for design input and all construction
- + CMA is Owner's advocate – responsible for design input, construction and Owner's representation
- + CMA serves as an Owner's Representative through all phases of the project
- + Owner holds contracts with trade contractors
- + CMA and A/E contract separately with the Owner

*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 MANAGER AS ADVISOR (CMA)

## PROS

- + CMA selection based on experience and qualifications, not only cost
- + CMA acts as an Owner's Representative in all phases
- + Reduced cost associated with Bonding, Change Orders, sales tax, and mark-ups
- + Early CMA selection allows for greater budget confidence, design review, and due diligence resulting in fewer changes and delays
- + CMA works to align + maintain Owner budget, scope and schedule
- + Owner controls contingencies and retains all cost savings
- + CMA receives little to no financial gains from Change Orders
- + Alleviates Owner's burden of day-to-day problem solving
- + CMA often leads procurement of owner-provided services including commissioning, testing/inspections, etc.
- + CMA typically manages an overall project budget, including construction and owner costs as opposed to only construction costs

## CONS

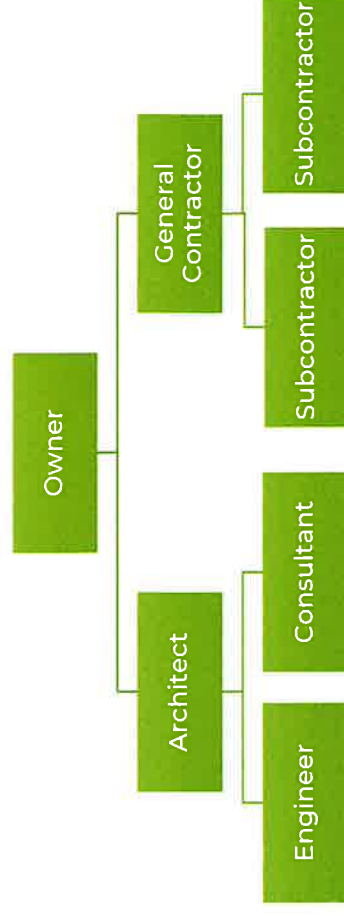
- + Final project cost not confirmed until bids are received
- + Owner will hold multiple contracts for construction
- + Prime contractors are each contractually responsible for meeting quality standards
- + Owner holds contractual risk for schedule and quality
- + Many General Contractors are not qualified to serve as a CMA
- + Potential for increased volume (but not cost) of change orders with multiple prime contracts
- + Costs are guaranteed (bonded) by individual contractors, but the CMA does not provide an overall cost guarantee
- + Multiple points of accountability with multiple prime contracts



# GENERAL CONTRACTOR (GC)

## ROLE

- + Hired by Owner based on low bid for a scope of work after designs are completed
- + GC is responsible for completing work in compliance with the bid documents but is not responsible for representing the Owner's interests.
- + GC is responsible for all construction
- + GC and A/E contract separately with the Owner
- + Subcontractors contract directly with GC



# GENERAL CONTRACTOR (GC)

## PROS

- + GC provides a lump-sum bid once all designs are fully completed
- + GC holds all construction contracts
- + GC may self perform and/or expedite work with their own forces
- + Single point of accountability for quality and schedule compliance
- + GC holds schedule and quality risk

## CONS

- + GC serves self-interests to reduce their cost
- + Low bidders may lack experience and expertise for the specific project
- + No financial transparency and little to no opportunities for cost savings
- + No preliminary cost estimates or involvement in the design phase
- + GC receives financial gains from Change Orders
- + No Owner participation in subcontractor selection
- + Eliminates opportunity for fast-tracked or phased-bidding
- + GC does not act as an Owner's Representative
- + Owner and A/E are responsible for managing the overall project



COST CONTROLS  
DURING  
CONSTRUCTION



# USE + CONTROL OF CONSTRUCTION CONTINGENCY

## CONSTRUCTION MANAGER AT-RISK:

- + CMAR contingency is in addition to Owner contingency
- + CMAR determines, with Owner Approval, the contingency amount
- + Owner and A/E have little to no input towards how contingency is used, and contingency use does not require Owner approval
- + Owner typically retains all contingency savings upon completion, but CMAR does control their contingency, and it may be exhausted
- + "Changes" result in GMP increases that may be offset by returned contingency

## CONSTRUCTION MANAGER ADVISOR:

- + Owner, with input from CMA, determines contingency amount
- + Team approach provides checks and balances to ensure all contingency uses are valid
- + All contingency use requires Owner approval
- + Owner retains all contingency savings upon completion

## GENERAL CONTRACTOR

- + GC contingency is in addition to Owner contingency, and typically not disclosed to the Owner
- + GC determines their own contingency amount based largely on risk tolerance
- + GC contingency is included in the lump-sum bid and controlled entirely by the GC with no savings returned to the Owner upon completion



# DEALING WITH CHANGE ORDERS

## CONSTRUCTION MANAGER AT-RISK:

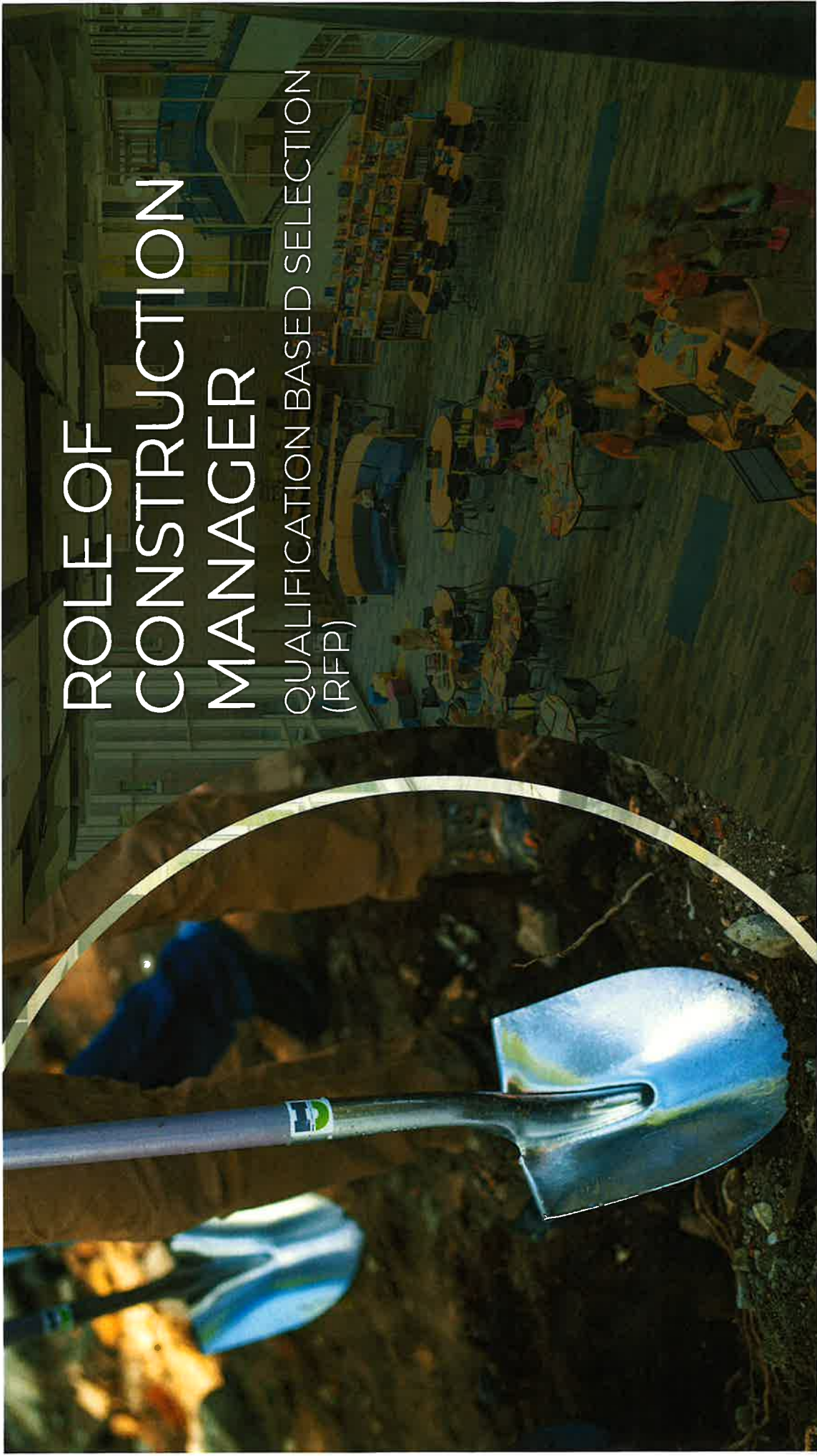
- + CMAR works to reduce potential changes during the preconstruction phase
- + CMAR reviews all change order costs for merit and value before costs are submitted for review by the design and Owner team, but Owner and design team are ultimately responsible for an independent cost review.
- + CMAR may self perform work, causing them to include their own costs on Change Orders
- + CMAR receives a single Change Order from the Owner resulting in a similar cost, but lower volume of changes compared to CMA
- + "Changes" are increases to the GMP, not CMAR contingency usage.

## CONSTRUCTION MANAGER ADVISOR:

- + CMA works to reduce potential changes during the preconstruction phase
- + CMA reviews all change order costs for merit and value before costs are submitted for review by the design and Owner team
- + CMA does not typically self-perform work, and does not typically receive a financial benefit from Change Orders
- + Several contractors may be affected by a Change Order, resulting in a higher volume, but not cost, of change orders

## GENERAL CONTRACTOR

- + GC is not involved prior to bidding and is not incentivized to reduce potential change orders
- + GC should review all change order cost for merit and value before submitting for approval, but review is often lacking, adding review burden to Owner and A/E
- + GC Markups are typically 10% to 15%, which is often significantly higher than CM markups
- + GC profits from change orders and is not incentivized to reduce costs or changes
- + GC receives a single Change Order from the Owner, often at a higher cost but with a lower volume of changes compared to CMA



# ROLE OF CONSTRUCTION MANAGER

QUALIFICATION BASED SELECTION  
(RFP)



# PRECONSTRUCTION SERVICES

- + ESTIMATING
- + VALUE ENGINEERING/COST CONTROL
- + DESIGN & CONSTRUCTABILITY REVIEW
- + PHASING/SCHEDULE & EARLY PROCUREMENT
- + BID MARKETING

COMPLEX  
PROJECTS  
SOLVED.



## BIDDING

- + BID MARKETING - QUALIFICATIONS
- + LOW BID OR BEST VALUE AWARD
- + PHASED BIDDING/EARLY PROCUREMENT



# CONSTRUCTION SERVICES

- + PHASING & SCHEDULING
- + FULL-TIME SITE MANAGEMENT
- + QUALITY CONTROL
- + BUDGET MANAGEMENT
- + PAY APPLICATION PROCESS
- + CONTINGENCY
- + CLOUD-BASED PROJECT  
MANAGEMENT TOOLS



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