

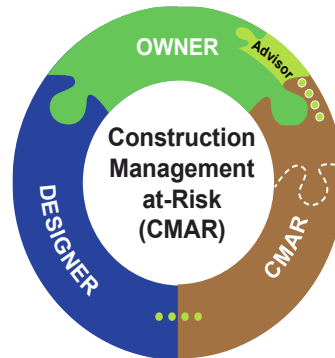
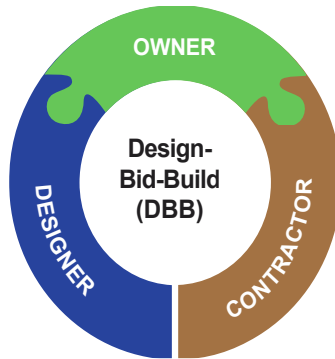
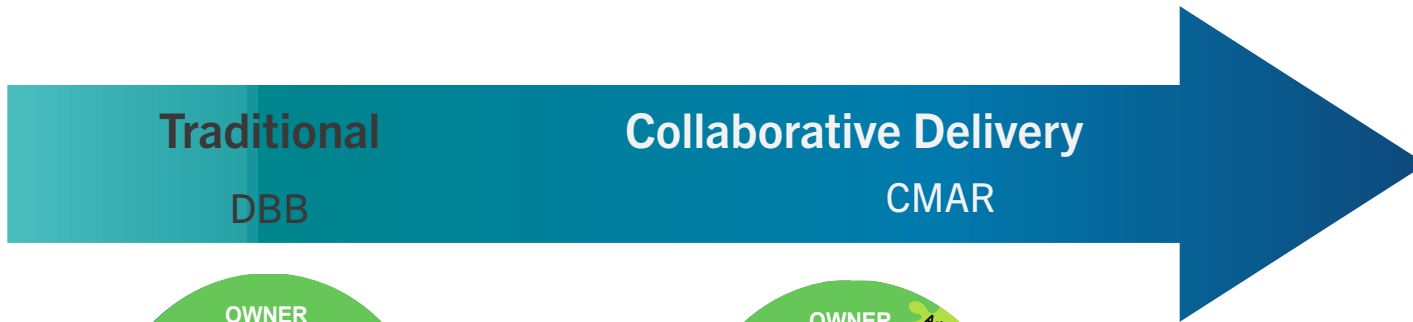
# Reservoir Committee and Authority Board Meeting

Agenda Item 3.5: Reservoir CMAR Strategy and  
Process


May 17, 2023




# What is Construction Management at Risk?



## Types of Relationships

 No Contractual Relationship

 Contractual Relationship

 Contract Amendment for GMP or Fixed Price

 Embedded Relationship  
(not contractual, but required critical interaction)

# CMAR Primary Attributes

Procurement: Selection of CMAR emphasizes qualifications and occurs relatively early in the design development process

## Phase 1: Preconstruction Phase

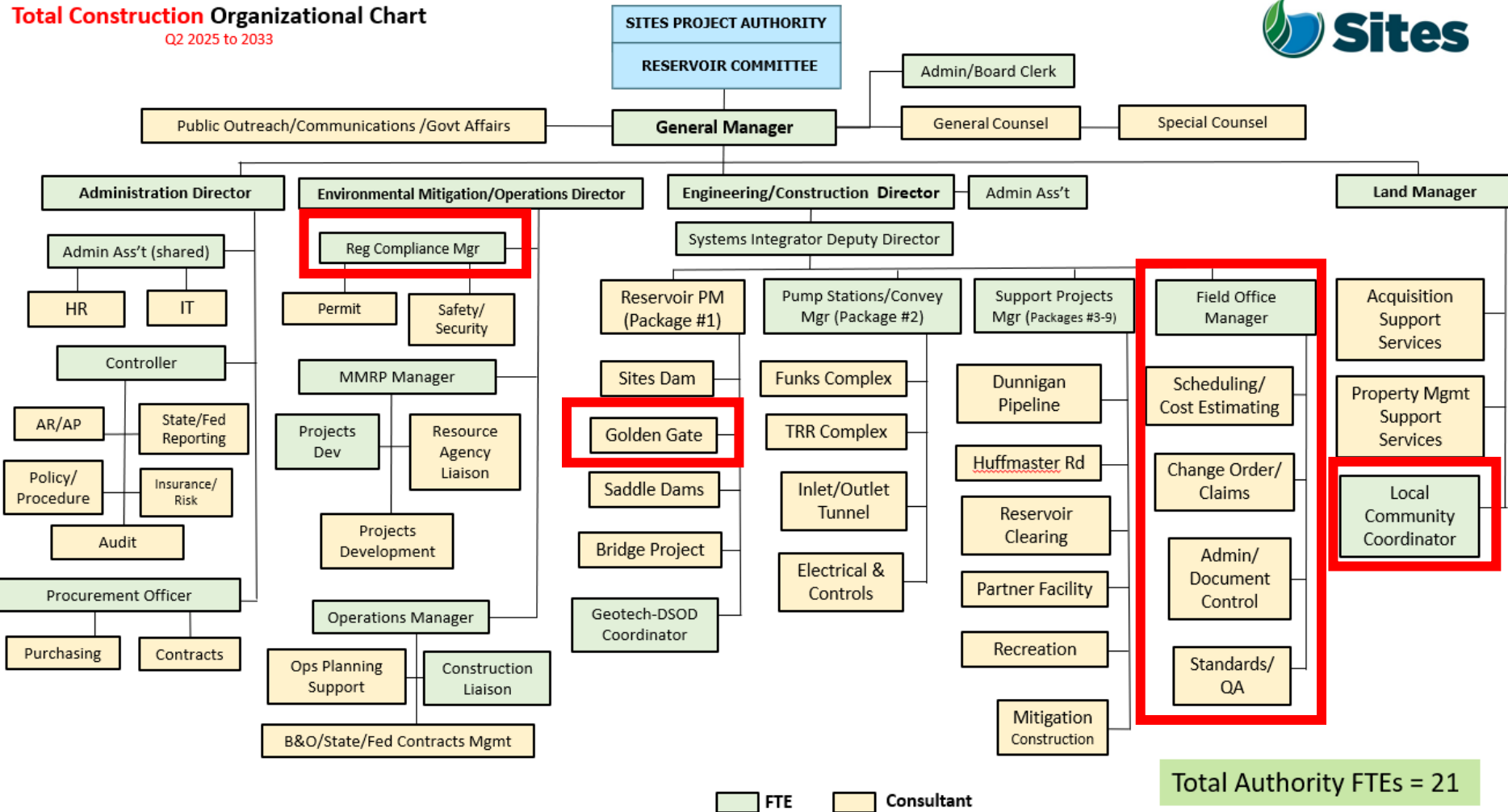
- Design by the engineer is progressed in parallel with construction planning, scheduling and cost estimating by the CMAR, reduces delivery risk.
- Development of template and “open book” cost estimate for construction.

## Phase 2 Construction

- Similar to a standard construction contract.
  - Some constructability risk transferred to CMAR
- Direct construction work may be subcontracted or self-performed.

# Conceptual Construction Organization

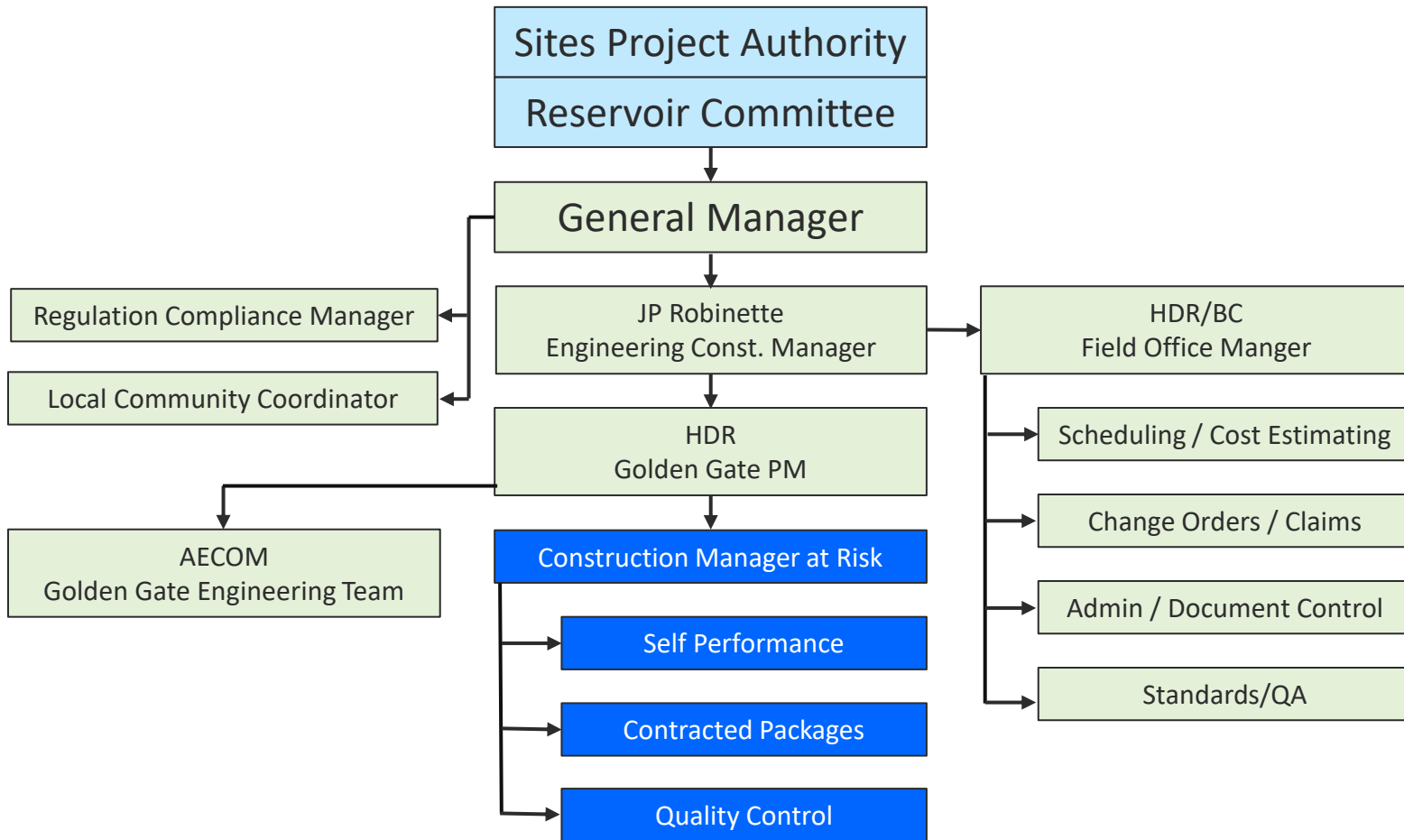
**Total Construction Organizational Chart**  
Q2 2025 to 2033



Total Authority FTEs = 21

Legend:  FTE     Consultant

# Golden Gate Dam Org Chart



# Guaranteed Maximum Price (GMP)

- Negotiated price for a set scope of work
- Development of CMAR's Procurement Plan
  - Owner Approves Plan
  - Breaks work into defined scopes that will be turned into a GMP
    - Can consist of self performed work or sub-contracted work
  - Example of potential GMPs for GG Dam
    - Early out Package – Mobilization, trailer complex, construction utilities, site access
    - Excavation and Bypass facilities
    - Curtain Grouting
    - Foundation & Dam

# Who does the work?

## Self Perform Work

The CMAR contractor performs the work with labor and equipment directly hired and obtained

The cost of work is built up of quantity and production rates for materials, labor, and equipment for the given scope of work

An Independent Cost Estimate (ICE) is developed by the Authority

## Sub Contracted Work

The CMAR Contractor manages the work of a sub-contractor

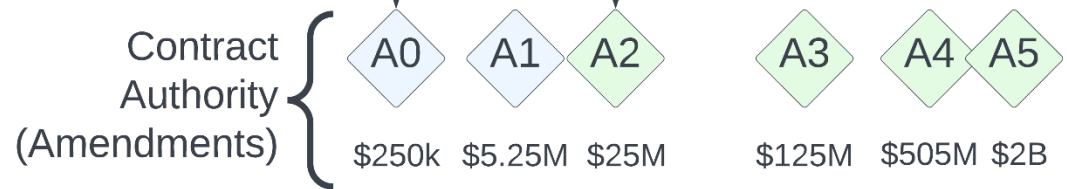
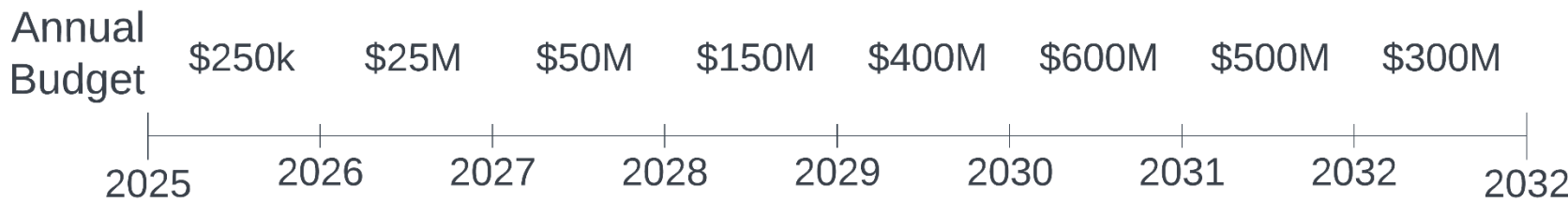
The cost of work is determined through a bidding process for a given scope of work

The CMAR is responsible for the Sub-contractor performance and quality of work

GMP can be a combination of both Self Performed and Sub-Contracted work

# Sites CMAR Example, Annual Budget and Contract Authority

Conceptual, For Discussion Only



Pre-Construction Contract

Amend in Construction

Contract Authority (Amendments)



Questions?

