

# WATERTOWN ELEMENTARY SCHOOLS

SCHOOL BUILDING COMMITTEE MEETING:  
FEBRUARY 6, 2019



## **Types of Public Construction Delivery:**

### **Procurement methods available for School Construction in Massachusetts**

#### **1. Design-Bid-Build (DBB) under M.G.L Ch. 149**

- **Traditional approach**
- **Project bid once design documents are 100% complete**
- **Lowest “eligible and responsive” bidder awarded project**
- **Contract is based on a Lump Sum basis**

#### **2. Construction Management at Risk (CMR) under M.G.L 149A**

- **Enacted under Construction Reform Law of 2004**
- **CMR hired early in the design process**
- **CMR selection is based on qualifications and proposals**
- **Contract is based on a Guaranteed Maximum Price (GMP)**
- **Open book accounting**

## **Key Differences Between Design Bid Build and Construction Manager at Risk Delivery:**

### **1. Design-Bid-Build**

**With D-B-B you are purchasing a building in accordance with a set of plans and specifications**

**Best suited for less complicated projects that are budget sensitive but are not schedule sensitive and subject to change**

### **2. Construction Management at Risk**

**With CMR you are hiring a professional service firm which manages the construction of buildings**

**Best suited for projects that are time sensitive, challenging to define or subject to potential changes and projects that require high construction oversight due to complicated site logistics and phases**

## DESIGN-BID-BUILD (Ch. 149)

### - PROs -

- Design changes easily accommodated prior to start of construction
- Design is complete prior to construction award
- Construction cost is fixed at contract award
- Low bid cost, maximum competition
- Relative ease of implementation
- Maximum Owner control of design/construction
- Using prequalification process limits poor contractors from bidding

### - CONs -

- No contractor input in design, planning or value engineering (VE)
- Owner has little to no say in the selection of the individuals who will supervise the project
- Design and construction are sequential, limited ability for early work packages
- Construction cost unknown until contract award, may require redesign and rebid if bids exceed budget
- Limited pool of contractors have DCAM capacity to bid a job of Watertown's size
- Prone to changes and claims which may increase the final project cost

## CONSTRUCTION MANAGEMENT AT RISK (Ch. 149A)

### - PROs -

- Ability to prequalify and select the CM and the team of individuals who will be part of the team
- CM participates in the trade sub-contractor prequalification process
- CM will review the plans and limit drawing/specification inconsistencies
- Better cost control through early cost estimates and CM ownership of construction budget
- Ability to “fast track;” may start construction before design completion, reducing project schedule
- CM will recruit trade bidders
- CM will provide assistance with project phasing and logistics

### - CONs -

- Approval required by the Office of the Inspector General
- Need clear definition of CM and A/E roles
- Cost of CM services including pre-construction (adds 2-3% to initial cost)
- Contingency and allowance level
- CM has little real “risk.”

## **Key Advantages of Construction Manger at Risk:**

- **Team Approach**
  - **CM process based on relationships and teamwork**
  - **CM motivation is project success because future work is tied to references and past experience**
  - **Cost reimbursement structure and fixed fee promotes CM as advocate of Owner**
- **Cost Factors**
  - **CM involvement in pre construction to assist design team in maintaining budget and optimizing value/constructability**
  - **Fee set at time of contract award**
  - **Continuous cost feedback and control**
  - **Open book accounting and purchasing**
  - **Ability to obtain GMP earlier in the process**

## **Key Advantages of Construction Manger at Risk:**

- **Schedule Consideration**
  - **CM provides input on planning and logistics integration into design**
  - **Opportunity for pre-purchase of equipment or other long lead items**
  - **Early CM engagement allows fast track approach and early bid packages**
- **Subcontracting**
  - **CM leads subcontractor bidding and manages process**
  - **CM involvement in Trade Subcontractor prequalification**
  - **Trade Subcontractors know the CM before submitting qualifications/bids**
  - **Early involvement and knowledge helps mitigate gaps in purchase scope**
  - **Ability for CM to create specific scopes of work for subcontractors as basis of bidding**

## **Key Advantages of Construction Manger at Risk:**

- **Quality**
  - **CM selection process is based on qualifications, experience, proposed team and success on past projects**
  - **Ability to interview and meet proposed team through the selection process prior to award of contract**
  - **CM early involvement in project leads to greater understanding of complex logistics and design details**
  - **Review of constructability during design phase utilizes builder's knowledge of means and methods and subcontractor abilities to ensure a design that will result in a "buildable" high quality product**
  - **Confirmation of existing conditions and provide exploratory services**



## **Steps for Approval of CMR Delivery Method through Office of Inspector General:**

- **Obtain authorization from the governing body for the use of CMR method**
- **Prepare application including the following information:**
  - **Project description and determined that the use of construction management at risk is appropriate for the building project**
  - **Plan and procedures on how the project will be managed**
  - **Reporting and record keeping systems**
  - **Project organization chart**
- **Submit the Application to the Inspector General for consideration.**
- **IG has 60 days from receipt of complete application to approve or deny request**

## **Steps for Prequalification and Selection of Construction Manger at Risk:**

- **Establish prequalification committee (OPM, Designer, at least two public representatives)**
- **Prepare and advertise RFQ**
- **Evaluate responses and prequalify at least three CMs**
- **Establish a selection committee (can be same as prequalification committee)**
- **Prepare RFP and distribute to prequalified firms**
- **Receive, evaluate and rank proposals (interviews are permitted if conducted with all proposers)**
- **Negotiate non-fee terms with selected proposer and award contract**

# WATERTOWN ELEMENTARY SCHOOLS

## **Recent Listings of Construction Manger at Risk approvals by OIG:**

- **10/11/18 Bristol County Agricultural School, District - Est'd Value \$73.2m**
- **10/10/18 Framingham Fuller Middle School – Est'd Value \$98.2m**
- **08/14/18 Lincoln Elementary School – Est'd Value \$93m**
- **08/10/18 Shrewsbury Beal Elementary School – Est'd Value \$94.4m**
- **08/10/18 Danvers Smith elementary School – Est'd Value \$56m**
- **07/02/18 Holyoke HB Lawrence Middle School – Est'd Value \$59.3m**
- **04/11/18 Fall River Durfee High School – Est'd Value \$263.5m**
- **03/12/18 Belmont High School – Est'd Value \$310.8m**
- **01/12/18 Pentucket Regional MS/HS – Est'd Value \$155.5m**
- **01/11/18 Springfield Brightwood/Lincoln Elementary School – Est'd Value \$78m**
- **01/10/18 Brookline HS Project A – Est'd Value \$75.2m**
- **01/10/18 Brookline HS Project B – Est'd Value \$74.4m**