

# Construction Management Benefits for Pennsylvania Public School Projects

## GENERAL BENEFITS

- Provides an advocate for the owner and a project expert with respect to Pennsylvania public K-12 projects
- Controls cost and schedule from design through completion
- Provides an opportunity to find cost savings and reductions that exceed the fees of the Construction Manager
- Coordinates the safety of students, staff, and general public on renovation projects and occupied sites
- Offers expert assistance to an owner in managing the design team (Architect/Engineers) and contractors
- Reduces the burden on existing staff, i.e. Facilities Director

As defined by the Construction Management Association of America, construction management is “a professional service that applies effective management techniques to the planning, design, and construction of a project from inception to completion for the purpose of controlling time, cost and quality.”

For Pennsylvania public schools, the services provided by an Agency Construction Manager (CM) are customized to a particular project. The CM can be an advocate for an owner; reduce burden on existing staff; manage the work of the design team and each of the prime contractors; and provide an owner with a project that meets their needs, is completed on-time, and stays within budget. Most importantly, the CM has a direct contract with the owner, similar to the architect and engineer.

The benefits of agency construction management services during the various phases of a project include the following:

### Pre-Construction (Design) Period

Using a CM as early as possible during this period provides the most opportunity for savings and cost reduction; CM fees for this portion of the work are low and quickly pay for themselves many times over.

- Independent check on program size (square foot/student) and cost of the building (\$/square foot) vs. other projects of similar size
- Independent cost estimates ensuring project stays on budget (important when the architect’s fees are based on construction cost)
- Independent budget and schedule validation for the project (master budget and master schedule)
- Expert estimators with specialists in architectural, civil, structural, mechanical, plumbing, fire protection, electrical and site work estimating
- Accurate cost estimates during the design period to allow for sound decision making by the administration and Board, which can include updated cost estimates during each design iteration

## WHEN TO CHOOSE A CM

When an owner is deciding whether or not to use a CM, it is very important to consider a few key points:

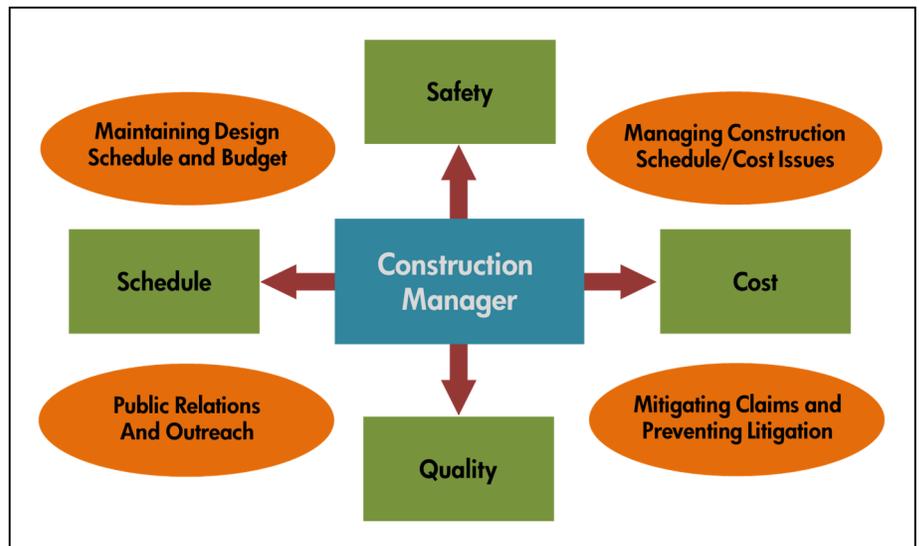
**Type of Project:** The owner should gauge the level of complexity and uniqueness of the project, and plan for maintaining the appropriate level of control.

**Size of Project:** The amount of outside assistance and number of project participants should correspond to the cost and size of the project. Obviously, the more complex and costly a project, the greater the need for professional management and advice.

**Owner Capabilities:** The owner should realistically assess its own in-house capabilities in evaluating how to manage a project.

**Time Considerations:** If the project needs to be constructed in a specific and potentially compressed time frame, the appropriate management service will be needed to execute that schedule.

- Assistance in cost savings and avoidance with soft costs (such as reducing professional fees, permit fees, printing costs, etc.)
- Suggested scope options to allow the budget to be maintained on bid day
- Value engineering to provide options for materials/equipment/systems selection that reduces costs without changing the function or level of quality of the installation
- Constructability reviews of the design during construction document stage to reduce change orders
- Expert assistance on phasing of construction to minimize impact on the learning environment
- Schedule management to maintain the project design bidding and construction schedule
- Front end documentation editing and/or writing to mitigate risk of claims and/or litigation
- Land development planning and permitting assistance
- Assist with selection of other project team professionals including RFP/selection processes, negotiating fees and terms of contracts and coordination of contracts among design team members



This chart demonstrates the challenges many owners face during a construction project.

## REYNOLDS SERVICES

Construction Management

Cost Control

Schedule Management

Building Commissioning

LEED Consulting

Energy Services

Fire, Wind, and Water  
Restoration

### Bid Period

Bid solicitation and bid strategy can be one of the best ways to reduce project costs.

- Bid documents (front-end specifications) that reduce an owner's risk during the project
- Bid strategy to determine appropriate number of Prime Contractors to increase savings without adding risk to the project for the owner (four prime vs. multiple prime)
- Bid solicitation to provide a high level of competition, resulting in bids that are under budget
- Bid solicitation to provide for local and regional contractors and vendors
- Special procurement method coordination, such as COSTARS, the Commonwealth's cooperative purchasing program

### Construction Period

A follow through of pre-construction planning that provides for quality, timely completion, mitigation of additional costs during construction and mitigation of claims (and therefore elimination of litigation).

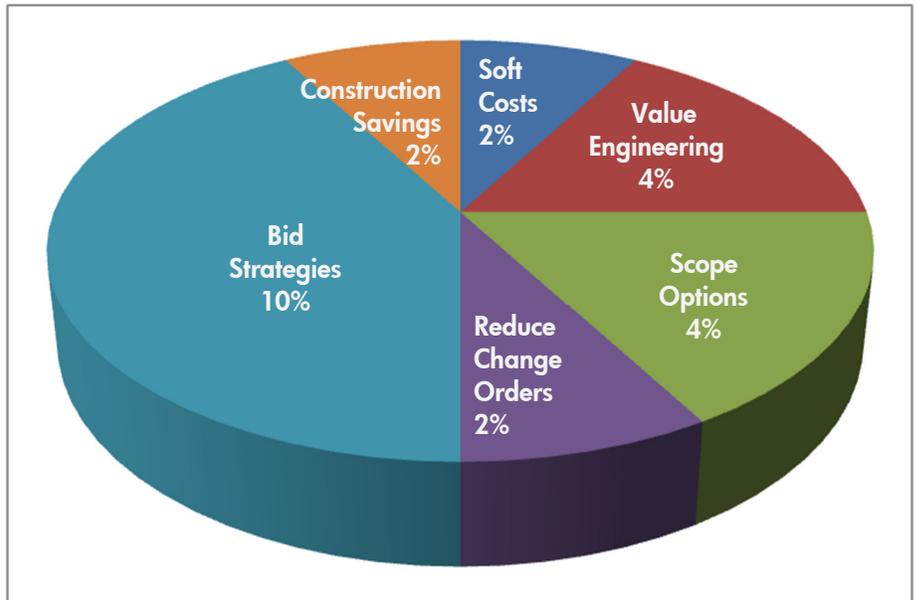
- Coordinate safety of students, staff, and general public (in an occupied building or site)
- Schedule and coordination control of the contractors
- Active mitigation of impacts on operations and environment, specifically the educational activities
- Active mitigation of added costs (change order reduction and elimination)
- Documentation of the project (focusing on pro-owner approach)
- Quality control oversight
- Management of payment and change order processes
- Develop a communications strategy and assist an owner with public relations

## Summary

It would be difficult to place a dollar value on quality and timely completion of any project, as it is difficult to place a value on an accurate estimate. Poor quality, project completion delays or over budget bid day scenarios must be avoided, and should be considered as basic expectations of a construction manager.

A CM should reduce costs on a project by an amount that exceeds their fee, thus providing value to the owner. Not only is this a good return on the owner's investment but it can be self-funding. Cost avoidance and savings are measurable. The pie chart, below, shows the impact that construction management methodology has on an owner's ability to avoid unnecessary costs and save money.

Agency CM provides an owner with an experienced and objective advocate that acts in an owner's best interests, guiding them through the construction project from initial concept to final construction closeout.



*A construction manager should seek to achieve project savings between 6% and 10%.*

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