Project Delivery Method Handbook

DRAFT
For Public Comment

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Introduction

In 1978, the Department of Education & Early Development (DEED) began regulating school capital projects following passage of legislation amending then existing statutes to include a requirement to:

> *. . . review plans for construction of new public elementary and secondary schools and for additions to and major rehabilitation of existing public elementary and secondary schools and . . . determine and approve the extent of eligibility for state aid of a school construction project . . . . [AS 14.07.020 (11)]*

By 1981, DEED had taken over full responsibility for administering state aid for school capital projects from the Department of Transportation & Public Facilities. One of the key components in administering capital funding was to establish procedures for the procurement of construction services. By statute, political subdivisions of the state, including school districts in unorganized areas of the state, are exempt from the state's procurement code (ref. AS 14.08.101). Accordingly, and under its powers, DEED established some minimum provisions for the procurement of construction by regulation in 1983 (ref. 4 AAC 31.080).

These provisions reflect key elements of the state's procurement code, including:

- competitive sealed bids;
- minimum advertising and notice periods;
- processes for aggrieved bidders; and
- award to the low responsible bidder.

Although adequately advertised competitive sealed bids awarded to the low offeror form the basis of DEED's process, regulations included a provision to allow a school district to use a design/build contracting method with DEED approval and district compliance with any DEED directives.

DEED began to see an increasing interest in alternative construction delivery methods beginning with a project funded in July 1998 for an addition/renovation project in Buckland. Following that date and through mid-2003, the department acted on several requests for alternative construction delivery. In each case, under the provisions of regulations, DEED approved a request for a non-traditional delivery method with varying stipulations and under various titles such as CM/Multiple Prime, and Design Assist. ~~The table below shows a sample of these projects with the delivery method nomenclature used and the date of approval.~~

~~Buckand K-12 Addition/Renovation~~	~~CM/Multiple Prime~~	~~September 1998~~
~~Manokotak K-12 Replacement~~	~~Design-assist~~	~~June 14, 2000~~
~~Noorvik K-12 Addition/Renovation~~	~~Design-build Assigned~~	~~June 23, 2000~~
~~Chevak K-12 Replacement~~	~~Fast Track/Multiple Prime~~	~~April 16, 2001~~
~~Kiana K-12 Addition/Renovation~~	~~Design-build Assigned~~	~~August 29, 2001~~
~~Sherrod Elementary Replacement~~	~~Design-build Assigned~~	~~April 17, 2002~~
~~Ambler K-12 Replacement~~	~~Design-build Assigned~~	~~June 3, 2002~~
~~Teller K-12 Addition/Renovation~~	~~Design-assist~~	~~January 9, 2003~~
~~Eagle River High School~~	~~CM/GC~~	~~February 7, 2003~~
~~Tuluksak K-12 Replacement~~	~~Design-assist~~	~~March 13, 2003~~

Introduction (cont.)

~~Wendler MS Renovation Design-build March 28, 2003~~
Prior to ~~the~~that time period~~ of the projects listed~~, there was a series of design-build efforts in the Bering Strait School District. Primarily, these were accomplished on schools damaged or destroyed by fire and did not have direct state aid but were funded with insurance proceeds.

In addition to the Bering Strait experience, the Anchorage School District also has experience using the design-build delivery method on school projects. These projects include an elementary constructed with state aid, (Williwaw Elementary - 1993) and several projects without any state aid (ABC Elementary, Russian Jack Elementary and Government Hill Elementary).

The procurement results from ~~procurement~~ solicitations of projects approved for alternative delivery methods raised significant questions regarding procedures, competition, and prices. This led the Facilities staff at DEED to seek a "moratorium" on alternative construction delivery. The moratorium, ultimately not implemented, was intended to provide time for DEED and its constituents to sort out issues, apply lessons learned and develop a more coordinated, defensible and effective approach to alternative delivery methods and their approval.

Following is a list of concerns brought to light over the course of the prior years of activity:

- DEED had approval authority for design-build but had granted approval ad-hoc for other construction delivery variants, some not recognizable within industry norms.
- Design-build approvals had been granted for projects where design completion ranged from 50% to 99% complete.
- Design-build criteria packages establishing an *Owner's* performance requirements were noticeably absent; partially complete detailed designs were the substitute document.
- Design-build approvals had been granted for projects in which the *Owner* directed the use of a specific team of design professionals.
- Bid solicitations on comparable projects had resulted in no fewer than four and as many as eight offerors, however, three projects approved for design-build had only two offerors; the same two for each project.
- Bid solicitations on comparable projects in the same time periods had resulted in construction awards up to 35% below (approx. 12% average) the estimated construction cost~~,~~; however, projects approved for design-build had typically used all available design and construction funds.
- A project was approved for CM/GC where the proposed total construction cost was not a factor in the selection process.
- Factors not germane to the lowest cost to the state, or at best difficult to measure, were heavily influencing alternative project delivery procurement; primarily this related to the incorporation of local hire initiatives.
- Alternative delivery methods approved, which incorporated multiple prime contracts and *Owner*-procured materials, were fraught with expensive "corrections".

~~Ultimately, the moratorium was not implemented; this was primarily due to the concern that alternative delivery methods were needed to move more rapidly on the delivery of some school~~

~~projects. It was agreed to continue considering and approving alternative project delivery requests while striving to address some of the concerns noted earlier with additional stipulations from the department. With the continuance was a commitment on the part of the department to combine efforts with those of the Alaska Chapter CEFPI (Council of Educational Facility Planners, International) in hosting a workshop on alternative project delivery methods. The workshop was intended to serve as a platform on which to build sound policy and best practice in the area of project delivery methods.~~

~~One of the primary focuses of the workshop was how to formulate public policy (e.g., statutes, administrative code) that supported proper and effective use of alternative project delivery methods. Other states had implemented provisions to accomplish this task; a sample of some of these efforts is provided below:~~

- ~~The state of Florida has statutes applicable to school districts [278.055 (9)] dealing specifically with design-build regarding selection and use in delivering construction. These statutes provide for selection by competitive proposal (i.e., price) or by qualifications with the selected firm subsequently establishing a guaranteed maximum price and completion date.~~

- ~~The state of Texas has statutes applicable to school districts [271.119] dealing specifically with design-build. They provide for selecting a design-build firm in two phases. Phase one is a qualifications only step without regard to price. Phase two simply adds an interview step where offerors can respond to *Owner* requests for competence, schedule, costing methodology, etc. The statute requires the government entity to negotiate with the best-qualified offeror regarding the cost of the work.~~

- ~~The state of Georgia implemented procedures for counties and local governments [36-91-1] regarding the use of competitive sealed bids and competitive sealed proposals. Accordingly, the Georgia State Financing and Investment Commission (GSFIC) developed recommended guidelines for alternative project delivery that built on the statutory provisions for types of allowable solicitations.~~

A 2003 workshop jointly conducted by DEED and the Alaska chapter of the Association For Learning Environments (A4LE—previously CEFPI) laid the groundwork for this publication. In the public sector, the central issue in moving from a low-bid process to any of the alternative project delivery methods is the shift in influence that the public entity wields in the selection process. In the low-bid process, where the only significant factor differentiating between offerors is price, the *Owner* is essentially "blind" to factors of experience, capacity, personnel, political ties, etc. While this can occasionally result in selection of a less desirable contractor, it always provides an arms-length separation between the *Owner* and contractor selection. It essentially removes the possibility of undue influence. A secondary effect of the exclusive focus on price is that offerors are forced to become price-competitive. This generally serves to drive the initial cost to the *Owner* to the lowest level.

A move to alternative project delivery methods is a move toward *Owner* influence and subjectivity in the procurement of construction. It also provides conditions in which the cost of

the work is secondary and therefore potentially higher. However, the benefits to the *Owner* are numerous and are best summarized with the term "best value". All factors considered—cost, quality, experience, schedule, etc.—*Owners* are more likely to receive a product that meets all of their objectives using a project delivery method that incorporates both qualifications and cost.

For DEED, and other public entities, the need is to establish the proper balance between complete control of *Owners* to choose a "most favored" contractor and the complete lack of control by *Owners* with the choice made for them based on lowest initial cost. This handbook provides the guidance and provisions to meet those standards of care.

Ability to Use Alternative Project Delivery

Introduction

The Alaska Department of Education & Early Development strongly supports full and open competition among general and specialty contractors and their suppliers and service providers. The construction industry's health and integrity depends on every qualified firm having an equal opportunity to compete for work. Public owners must be diligent in honoring the public trust while searching for the most efficient and cost effective approaches to delivering construction projects. These efficiencies and cost effective methods are increasingly requiring innovation and flexibility. The public owners who choose alternative project delivery options must ensure the method chosen is properly and fairly used to serve the public interest and provides quality, cost-effective and timely construction. Whatever option is utilized, the selection process for both design services and construction should be consistent, open and competitive.

Of the delivery options discussed in this Handbook, none is prohibited by the laws of Alaska. However, given current state policy and statutory requirements, the "traditional" method of Design-Bid-Build will continue to be the method by which most construction will be performed in Alaska's school districts. This section of the handbook suggests that alternative project delivery options are appropriate for the public sector if the selection process is as open, fair, objective, cost-effective, and free of political influence as the traditional competitive bid method. Specific approval may be required for the use of an alternative delivery method on school projects incorporating state-aid. For instructions on how to get the necessary approvals, contact your agency procurement professionals or the State of Alaska, Department of Education & Early Development.

Alaska Statutes and Administrative Code

Alaska Statutes

Alaska statutes ~~P~~provide for innovative procurements under the state procurement code and include the provisions that such procurements be competitive and that they test best value.

> AS 36.30.308. Innovative procurements.
>
> (a) A contract may be awarded for supplies, services, professional services, or construction using an innovative procurement process, with or without competitive sealed bidding or competitive sealed proposals, in accordance with regulations adopted by the commissioner. A contract may be awarded under this section only when the chief procurement officer, or, for construction contracts or procurements of the state equipment fleet, the commissioner of transportation and public facilities, determines in writing that it is advantageous to the state to use an innovative **competitive procurement** process in the procurement of new or unique requirements of the state, new technologies, or to achieve **best value**.

Acknowledge that all school districts, whether in political subdivisions of the state or in regional education attendance areas, are exempt from the state's procurement code (excepting a few areas such as prevailing wage requirements) and may develop their own procurement policies.

AS 14.08.101. Powers. A regional school board may . . .

(3) determine its own fiscal procedures, including but not limited to policies and procedures for the purchase of supplies and equipment; the regional school boards are exempt from AS 37.05 (Fiscal Procedures Act) and AS 36.30 (State Procurement Code)

Alaska Administrative Code

Notwithstanding that recipient entities of funding administered under AS- 14.11 are exempt from the state procurement code, DEED has provided, through regulation, requirements for construction procurement. These requirements are based on those factors of procurement that are critical to a competitive process (e.g., advertising periods, bid protest periods, etc.). The regulations also establish that competitive sealed bids will be the normal procurement method but provide for other alternatives.

4 AAC 31.080. Construction and acquisition of public school facilities.

(a) A school district shall construct a public educational facility with money provided through a grant under AS 14.11.011 - AS 14.11.020 or shall construct a public educational facility that is eligible for reimbursement under AS 14.11.100 under a written contract awarded on the basis of competitive sealed bids. If the estimated construction cost is less than $100,000 or if it is in the best interests of the state, the school district may, with the approval of the commissioner, construct the educational facility itself using its own employees.

(b) The school district shall provide notice of its solicitation by advertisement in a newspaper of general circulation in this state at least three times before the opening of the offers. The first printing of the advertisement must occur at least 21 days before opening the offers. The department may approve a solicitation period shorter than 21 days when written justification submitted by the school district demonstrates that a shorter solicitation period is advantageous for a particular offer and will result in an adequate number of responses. A school district may provide additional notice by mailing its solicitation to contractors on any list it maintains, and any other means reasonably calculated to provide notice to prospective offerors.

(c) The school district shall provide for the administrative review of a complaint filed by an aggrieved offeror that allows the offeror to file a bid protest, within 10 days after notice is provided of intent to award the contract, requesting a hearing for a determination and award of the contract in accordance with the law. The school district shall provide notice to all interested parties of the filing of the bid protest.

(d) The award of a contract for the construction of an educational facility under this section must be made without regard to municipal ordinances or school board resolutions granting a preference to local offerors.

(e) The department may deny or limit its participation in the costs of construction for a project eligible for reimbursement under AS 14.11.100 if the school district does not comply with the requirements of this section. A school district that enters into a construction contract for a project authorized for construction under AS 14.11.020 that was awarded without competitive selection under this section may not receive money under its project agreement for the construction phase of the project.

(f) Nothing in this section precludes a school district from using an alternative construction delivery method as defined and described in the Project Delivery Method Handbook, ~~November, 2004~~current edition, adopted by reference, if the department approves the method in advance of any solicitation, the proposed method is in the state's best interest, and the school district concurs in any directives the department makes concerning the type of selection and award of the contract. The department may deny or suspend use of an alternative construction delivery method by a school district if the department concludes, based on substantial evidence, that use or repeated use of a delivery method by the school district has resulted or will result in limited competition or higher costs.

(g) A school district may, with prior approval by the department, purchase an existing facility for use as an education-related facility if

(1) a cost saving over new construction is achieved;

(2) the purchase price is arrived at through impartial negotiation and is supported by a real estate appraisal that meets accepted standards; and

(3) the purchase is in the best interests of the state and the school district.

(h) Notwithstanding (a) of this section, a school district may use any competitive procurement methodology for its solicitation for a public educational facility that is practicable under the circumstances to procure construction services that are estimated not to exceed $100,000, inclusive of labor and materials. A school district may not artificially divide or fragment a procurement so as to constitute a purchase under this subsection or to circumvent the selection procedures otherwise required by this section.

Overview of Project Delivery Options

Introduction

The purpose of this section is to establish a framework for understanding and selecting the appropriate project delivery option. It is critical to have consensus on a list of project delivery options and on the definition of each of the delivery options. Definitions of the options are discussed in this section and reiterated for quick reference in Appendix A. Understanding the differences in project delivery options requires an awareness of two independent factors, the structure of the *Owner's* prime contract(s) for the project and the provisions under which the selection of the project delivery entities (i.e., *Designer* and *Constructor*) are made. Each project delivery option is defined by a unique combination of *contract type* and *selection method*. Embedded in the definitions of each project delivery option, there are two basic terms that are used as selection-method differentiators for the alternative project delivery methods. These terms are *total construction cost* and *construction cost of work* (see sidebar).

Selection Differentiators

Construction Cost of Work is one of the three factors that comprise the Total Construction Cost:

Construction Cost of Work
+ General Conditions
+ Contractor's Fee

Total Construction Cost

It represents the "fixed" costs of labor and materials as provided for in the project scope. In addition to the Construction Cost of Work, the Total Construction Cost includes the contractor's General Conditions (i.e., its overhead—the cost of doing business) and the Contractor's Fee (i.e., its profit).

This handbook uses the definition of a "project delivery option" as a method of procurement by which the *Owner's* assignment of "delivery" risk and performance for design and construction has been transferred to another party or parties. These parties typically are a *Design* entity that takes responsibility for the design, and a *Construction* entity that takes responsibility for performance of construction. However, a key principle of alternative project delivery is that benefits are available to *Owners* when these traditionally distinct entities are strategically aligned or even merged. It is when these benefits outweigh the risks that an alternative project delivery method becomes advisable. The relationship between these parties and the *Owner* is the second determinant in establishing a project delivery option. While no further attempt to define the terms *designer* and *contractor* are necessary—the terms being well understood within the industry—the terms used to describe the alignment or merging of these entities is unique to the project delivery discourse. These terms (*Design-Build*, *CM/GC*, etc.) often become points of significant distraction when attempting to "debate" the merits of alternative project delivery. Fortunately, for the purposes of this handbook, the sole understanding of these terms need only occur within the context of how an *Owner* chooses to contract with the *Designer* and *Constructor* (see sidebar).

Contract Differentiators

Owner holds one contract for both Design & Construction = *Design-Build*
Owner holds separate contracts for Design & Construction = *CM/GC* or *Traditional*

Selection Method Factors

Overview of Project Delivery Options (cont.)

Another key aspect related to the use of any project delivery option is the procurement and selection process to be followed, particularly as it relates to the construction services. There are two basic public procurement processes: competitive sealed bid and competitive sealed proposal. Under *competitive sealed bids*, the selection is made solely based on price (which must be clearly defined), with the award going to the responsible and responsive bidder submitting the lowest price. *Competitive sealed proposals* on the other hand require the use of evaluation factors that may or may not include price elements (i.e., cost, fee, etc.) as part of the evaluation criteria.

Under the two basic procurement processes, there are three selection methods that may be followed with proposals and one for bids.

For proposals:

- Qualifications (excluding any cost factors)
- Qualifications and Costs Factors (excluding the *Construction Cost of Work*)
- Qualifications and *Construction Cost of Work*

For bids:

- *Total Construction Cost* (excluding any qualifications)

A Word About "Price"

To appreciate the explanation of the difference between Competitive Sealed Bids and the two types of Competitive Sealed Proposals (cost and qualifications), it is helpful to have an understanding of the Total Project Cost.

Total Construction Cost
+ Design Fees

Total Design & Construction Cost
+ Balance of Project Costs

Total Project Cost

It is recommended that caution be used any time the word "price" is used and further clarification be offered to better determine which of the element(s) of the Total Project Cost is being referred to when the word price is mentioned.

Contract Type Factors

The contract type component of the project delivery options is related to the number of primary contracts for design and construction, and the basic services provided. The three primary contract types are defined with their distinguishing characteristics as follows:

- *Designer & General Contractor* (two prime contracts, one with each entity, *Designer* and *Constructor* with the GC contract after design is complete).
- *Designer & Construction Manager/General Contractor* (two prime contracts, *CM/GC* contract may provide for design related management services (e.g., cost estimating, constructability review, etc.) prior to construction).
- *Designer/Constructor* (single contract for design and construction with one entity).

The Matrix: Selection Method and Contract Type

Conceivably, any contract type can be implemented with any selection method. However, some combinations may not be practical, desirable, or prudent in most circumstances. The dual decisions to (a) use a particular contractual arrangement, and (b) use any of the four selection methods should be made concurrently. As discussed in the following section, **Project Delivery Method Selection Criteria & Processes**, the decision must also consider several *Owner* and project related critical factors such as:

- The desired contractual and working relationship between the parties
- The timing and scope of services to be provided
- The timing and extent of detailed project information available to support the procurement/selection process.

Given the above, the balance of this section of the handbook discusses those combinations of contract type and selection method that yield project delivery methods suitable for the public procurement arena and that are accepted by the Alaska Department of Education & Early Development. Also, for the sake of simplicity, titles for each project delivery option are introduced that most closely align industry terminology with the department's goals for each of the delivery options. For example, the traditional public sector delivery method of having separate design and construction contracts, and where the contractor is selected by evaluating the lowest *total construction cost* offered, is most commonly referred to as **Design-Bid-Build**.

The complete list of project delivery options treated in this handbook, along with the corresponding selection method is:

1. **Design-Bid-Build** – competitive sealed bids (D-B-B)
2. **Construction Management/General Contractor** – competitive best value of cost and qualifications (CM/GC BV)
3. **Construction Management/General Contractor** – competitive qualifications (CM/GC QBS)
4. **Design-Build** – competitive best value of cost and qualifications (D-B BV)
5. **Design-Build** – competitive qualifications (D-B QBS)
6. **Design-Build** – competitive sealed bids or proposals (D-B Bid)

Many who are primarily familiar with Design-Bid-Build think of Design-Build as the only "alternative" delivery option. Several states' attempts ~~(ref. the **Introduction** in this handbook for Texas, Florida)~~ at legislating alternative project delivery have been very successful in adding one or two options to the traditional list of one (Design-Bid-Build). Few it seems, however, have included all the options very clearly.

Again, since there are no industry standard definitions, everyone has chosen a slightly different set of characteristics to define various delivery options. The **Project Delivery Option Matrix** (see following page) takes this to its simplest form and identifies the characteristics that this handbook uses to uniquely define each option. Each individual can take any delivery option, test it against these criteria, insert their own names and they will be able to align the name of their method with the names chosen for use by DEED for review and approval of project delivery options listed in the matrix. If a contract type and selection method cannot be categorized as a version of these six basic options, the reader is encouraged to contact DEED/Facilities for clarification and assistance.

The following discussion provides the definitions chosen for each of the project delivery options. In order to have a definition that works in as many situations as possible, DEED limited the number of characteristics used to define each option to three unique variables. By having a unique combination of these three defining variables, each delivery option is "uniquely" defined.

Overview of Project Delivery Options (cont.)

There are many "other" characteristics that apply to each of these options. Some of these "other" characteristics are typical characteristics of a particular delivery option but are not used in this handbook as a "unique" defining characteristic. The following example explains why:

> *Pre-construction Services*—work provided by a *Constructor* prior to construction start—are typically provided with the CM/GC project delivery option. Are preconstruction services essential to the definition of this delivery option? Could one use CM/GC, hiring a contractor based on criteria other than low price, after the design is already complete and the need for preconstruction services no longer required? Would this still be CM/GC? Based on the definition used in this handbook, the answer is yes.
>
> If pre-construction services were a "unique" characteristic, then you would have to have two types of CM/GC, one with and one without preconstruction services. This would not be right or wrong. The challenge would be where to stop. The more characteristics used to define a delivery option, the more "unique" combinations and thus, the more delivery options you would end up with on your list.

The goal was to keep the definitions used in this handbook as broad, as essential, as possible so they will work with most industry accepted definitions. Therefore, for purposes of this handbook, characteristics such as preconstruction services are considered to be one of the "other" characteristics (though typical) of CM/GC, but not a "unique" defining characteristic of CM/GC.

Finally, before describing in detail the consensus delivery methods being made available for school capital projects through this handbook, it is appropriate to acknowledge three other project variants. The first, Force Account, is an alternate delivery methods sometimes seen in Alaskan projects. The second, Multiple Prime Contracts, is a project strategy which, ultimately, will use one or more of the project delivery options described in this handbook. The third, Construction Management, has two common variations and is a project or program management strategy.

Force Account, sometimes referred to as In-House on projects with small scopes, is a project delivery method in which there is neither a solicitation nor a contract between parties performing design and construction. Under this delivery method, the *Owner* serves as the *Constructor* and uses labor from its own forces—or direct-hired to supplement its forces—to complete the work. Since, under this delivery method, all risk is borne by the *Owner*, it is best used only on low-risk projects. DEED regulations provide for approval of Force Account or In-House project execution if the estimated cost is less than $100,000, or if it is determined to be in the best interest of the state (ref. 4 AAC 31.080(a).

Multiple Prime Contracts is a project strategy that, in response to issues in the project environment, divides a project into discrete project elements or project phases and uses separate solicitations and contracts for each. Care must be taken to coordinate these contracts well. This project strategy can result in increased risk to the *Owner* when the work of one *Designer* and/or *Constructor* must be relied on by another to perform their work. DEED has no regulations prohibiting this project strategy but each work element must be procured in compliance with regulations. (See page 23 for additional discussion of this strategy.)

Overview of Project Delivery Options (cont.)

Construction Management is a project or program management strategy. Construction Management professionals—often also Architects and Engineers—serve Owners in managing individual projects or entire capital project programs. The two most common contract structures for construction management services are CM-Advisor and CM-At Risk. A CM-Advisor serves as the Owner's principal agent to advise or manage all process over the life of the project regardless of the delivery method used. Alaska statutes (AS 14.11.020) provide for construction management activity on school capital projects with state-aid and implement some restrictions on the cost of this service as a portion of the project's appropriation. Under a CM-At Risk contract, the Owner not only uses a construction manager in the project development phases but also assigns that CM a construction performance role—essentially making that CM the legal equivalent of a general contractor or *Constructor*. There is inadequate statutory and regulatory authorization for awarding a CM-At Risk contract which ensures fair, open, and competitive selection for construction elements of a school project or projects. **As such, CM-At Risk contracts are not permitted for use on projects with funding under AS 14.11.**

There are three Yes/No toggles in the delivery option determination matrix, three questions that when answered in the affirmative or negative, provide the project delivery options from which an Owner may select. The combination of factors combines to create six, and only six, options under which a school capital project may be delivered. The three questions are these—

1. Are the *Designer* and *Constructor* contracts combined (or separate)?
2. Is the *Construction Cost of Work* a selection criteria?
3. Is the *Total Construction Cost* the sole selection criteria?

~~and t~~The resulting delivery options are as shown in the following **Project Delivery Options Matrix**.

DEED Project Delivery Option Matrix

SELECTION METHOD	CONTRACT TYPES: DESIGNER & CONSTRUCTOR (w/SEPARATE CONTRACTS)	CONTRACT TYPES: DESIGNER/CONSTRUCTOR (ONE CONTRACT)
Competitive Sealed Bid (Low Bid) — ***Total Construction Cost* is sole criteria for selection**	**Design-Bid-Build**	**Design-Build-Bid**
Competitive Cost Proposal (Best Value) — ***Total Construction Cost* weighted with other factors for selection**	**CM/GC Best Value (BV)**	**Design-Build Best Value (BV)**
Competitive Qualifications Proposal (Qualifications Based Selection) — ***Total Construction Cost* is not a factor for selection**	**CM/GC QBS**	**Design-Build QBS**

Overview of Project Delivery Options (cont.)

In the following discussion, the unique combination of characteristics is listed for each project delivery option along with some "other" characteristics that are typical of each option but not defining. An overview of the typical phases of each delivery option is also covered.

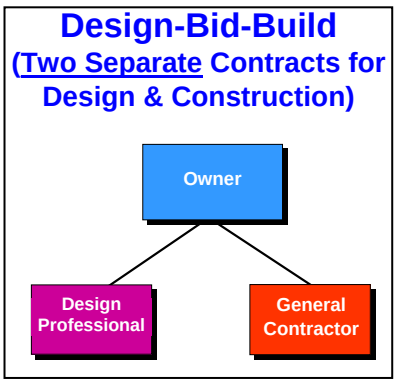
Defining Design-Bid-Build – Unique Characteristics of (D-B-B)
Design-Bid-Build is the most common project delivery option. It is often referred to as the "traditional" method. For school projects in Alaska with a state contribution, Design-Bid-Build is the default delivery method. All other project delivery options require a specified approval.

There are three prime players: *Owner*, *Designer*, and *Constructor* (general contractor)

The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	NO
Is the *Construction Cost of Work* a selection criteria?	YES
Is the *Total Construction Cost* the sole selection criteria?	YES

Contractor selection: Based on *Total Construction Cost* with the award going to the lowest responsible and responsive bidder.



Design-Bid-Build – Other Characteristics

- Relationship of Phases: linear sequencing of each of the project phases
- Ability to Bring *Constructor* on Board During Design: **No**
- Risk Allocation: Design risk (quality) allocated to *Designer*; Construction risk (cost and schedule) allocated to general contractor after design is complete and completion of bid and award phase; *Owner* is responsible for adequacy and completeness of design.

Phases – Design-Bid-Build

- Planning – The scope of the project and expectations of quality are established by the *Owner* and any consultants it may need. A delivery option is selected and corresponding budget and schedule are also established.
- Design – When the Planning has been completed, the *Owner* selects and engages the design team for the design and preparation of construction documents.
- Award – When design documents are complete, they are used for construction bidding. A *Constructor* is selected based on the lowest responsible and responsive price and construction cost commitments are made.
- Construction – The *Owner* contracts for construction with the general contractor and the project is built.
- Occupancy – After the construction of the entire project has been completed, the *Constructor* leaves the site to allow for move-in (installation of *Owner*-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

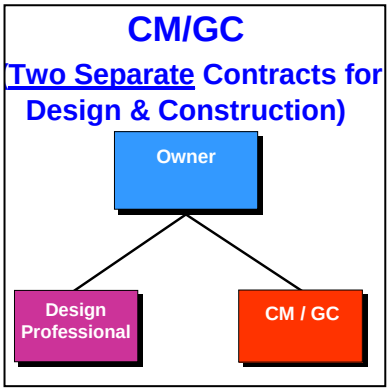
Overview of Project Delivery Options (cont.)

Defining Construction Manager/General Contractor Best Value – Unique Characteristics of CM/GC BV

There are three prime players: *Owner*, *Designer* and *Constructor* (manager-general contractor)

The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	**NO**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**NO**



CM/GC selection: Based on a best value weighting of *Total Construction Cost* with other factors; the award goes to the CM/GC that best meets the predefined qualifications and cost selection criteria.

CM/GC Best Value – Other Characteristics

- Relationship of Phases: can accommodate overlapping of each of the project phases
- Ability to Bring Constructor on Board During Design: **Yes**
- Risk Allocation: Design risk (quality) allocated to *Designer*; Construction risk (cost and schedule) allocated to CM/GC at the time of selection based on the design documents at the point in time of the selection. *Owner* is responsible for adequacy and completeness of design.

Phases – CM/GC Best Value

- Planning – The scope of the project and expectations of quality are established by the *Owner* and any consultants it may need. A delivery option is selected and corresponding budget and schedule are also established.
- Design – When the Planning has been completed, the *Owner* selects and engages the design team for the design and preparation of construction documents.
- Award – Generally prior to the completion of design documents, a CM/GC is selected based on a combination of price and qualifications and a guaranteed maximum price for construction is established at selection.
- Construction – The *Owner* contracts for construction with the CM/GC who then contracts with the various trade contractors using cost as the primary selection criteria. The CM/GC can be available during the final design phase to assist in constructability and budget reviews. Work can begin as soon as phased construction documents are completed.
- Occupancy – After the construction of the entire project has been completed, the *Constructor* leaves the site to allow for move-in (installation of *Owner*-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

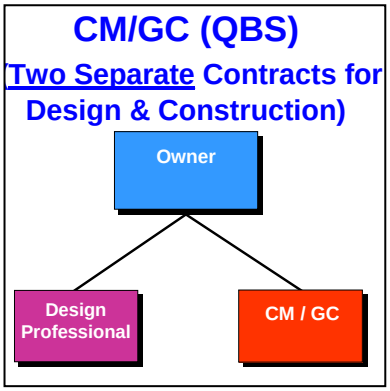
Overview of Project Delivery Options (cont.)

Defining Construction Manager/General Contractor Qualifications Based Selection – Unique Characteristics of CM/GC QBS

There are three prime players: *Owner*, *Designer* and *Constructor* (manager-general contractor)

The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	**NO**
Is the *Construction Cost of Work* a selection criteria?	**NO**
Is the *Total Construction Cost* the sole selection criteria?	**NO**



CM/GC selection: Qualifications based; does not incorporate any weighting for the *Construction Cost of Work*. Rather, selection is based on weighting of predefined criteria with the award going to the offeror that best meets the predefined criteria; selection criteria ~~may~~ must include ~~some~~ weighting of some cost factors at 50% unless otherwise approved by DEED. Typically these include *General Conditions* or *Fee* costs~~.~~

CM/GC QBS – Other Characteristics

- Relationship of Phases: can accommodate overlapping of each of the project phases
- Ability to Bring *Constructor* on Board During Design: **Yes**
- Risk Allocation: Design risk (quality) allocated to *Designer*; Construction risk (cost and schedule) allocated to CM/GC after design is complete enough to allow all parties to mutually agree. *Owner* is responsible for adequacy and completeness of design.

Phases – CM/GC QBS

- Planning – The scope of the project and expectations of quality are established by the *Owner* and any consultants it may need. A delivery option is selected and a corresponding budget and schedule are also established.
- Design - When the Planning has been completed, the *Owner* engages the design team for the design and preparation of construction documents for the project.
- Award – Generally prior to the completion of the design documents, a CM/GC is selected based on the qualifications of the CM/GC. The cost of the CM/GC's *Fee* and *General Conditions* may also be a consideration.
- Construction – The *Owner* contracts for construction with the CM/GC who then contracts with the various trade contractors based on selection criteria agreed upon by the *Owner*. The CM/GC can be available during the final design phase to assist in constructability and budget reviews. Work can begin as soon as phased construction documents are completed. The establishment of the Guaranteed Maximum Price or Lump Sum can be postponed until more complete design and cost information is available.
- Occupancy – After the construction of the entire project has been completed, the *Constructor* leaves the site to allow for move-in (installation of *Owner*-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

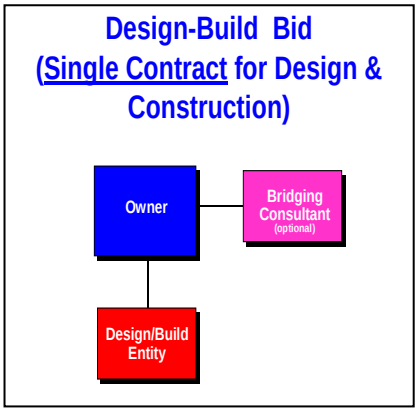
Overview of Project Delivery Options (cont.)

Defining Design-Build Bid – Unique Characteristics

There are two prime players: The *Owner* and the *Design-Builder*. [The *Designer* (architect) and the *Constructor* (general contractor) are combined into one entity.]

The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	**YES**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**YES**



Design-Builder selection: Based on *Total Design and Construction Cost* with the award going to the lowest responsible and responsive bidder.

D-B Bid – Other Characteristics

- Relationship of Phases: Can accommodate overlapping of each of the project phases
- Ability to Bring *Constructor* on Board During Design: **Yes**
- Risk Allocation: Design risk (quality) and Construction risk (cost and schedule) allocated to *Design-Builder* at the time of selection based on design criteria at the point in time of the selection. *Design-Builder* is responsible for adequacy and completeness of design and subsequently the entire project; *Owner* is responsible for adequacy of design criteria.

Phases – D-B Bid

- Planning – The scope of the project and expectations of quality are established by the *Owner* and any consultants it may need. A delivery option is selected and a corresponding budget and schedule are also established.
- Bridging - Hiring a consultant (optional) to assist in developing the design to some point without completing the final design, and then allowing another firm, usually a design-build entity, to complete the design is referred to as bridging. The initial design firm is often referred to as the "bridging architect" and the firm completing the design is the architect of record and assumes the liability for the design.
- Design – Based on a set of design criteria provided by the *Owner* (which should be extensive if using this option), *Design-Builder* prepares phased construction documents. *Constructor* component of the *Design-Builder* is available during this period for constructability and budget reviews.
- Award – Concurrent award of both the design and construction phases. Lump Sum is established at selection.
- Construction – *Design-Builder* selects trade contractors, usually with cost as the primary selection criteria. Construction can begin as soon as phased construction documents are available.
- Occupancy – After the construction of the entire project has been completed, the *Constructor* leaves the site to allow for move-in (installation of *Owner*-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

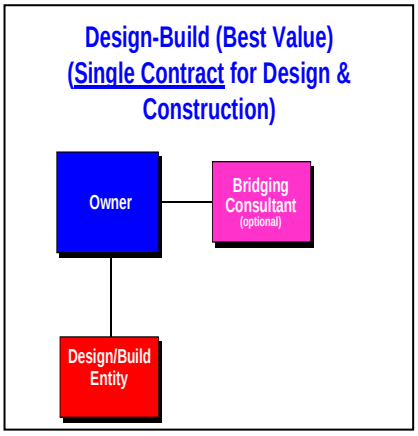
Overview of Project Delivery Options (cont.)

Defining Design-Build Best Value – Unique Characteristics of D-B BV

There are two prime players: The *Owner* and the *Design-Builder*. [The *Designer* (architect) and the *Constructor* (general contractor) are combined into one entity.]

The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	**YES**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**NO**



Design-Builder selection is based on some weighting of *Total Construction Cost* including the *Construction Cost of Work* with the award going to the Design/Builder that best meets the predefined qualifications and cost selection criteria.

Design-Build BV – Other Characteristics

- Relationship of Phases: Can accommodate overlapping of the project phases
- Ability to Bring *Constructor* on Board During Design: **Yes**
- Risk Allocation: Design risk (quality) and Construction risk (cost and schedule) allocated to *Design-Builder* at the time of selection based on design criteria and building requirements at the point in time of the selection. *Design-Builder* is responsible for adequacy and completeness of design and subsequently the entire project; *Owner* is responsible for adequacy of design criteria.

Phases – Design-Build BV

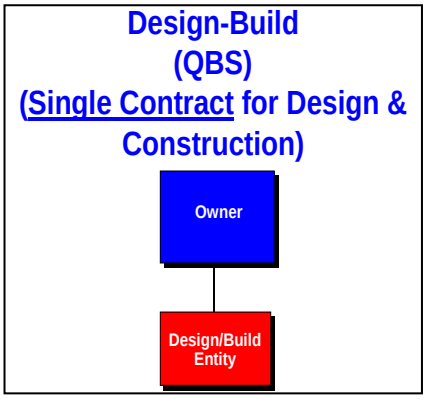
- Planning – The scope of the project and expectations of quality are established by the *Owner* and any consultants it may need. A delivery option is selected and a corresponding budget and schedule are also established.
- Bridging – Hiring a consultant (optional) to assist in developing the design to some point without completing the final design is referred to as bridging. The initial design firm is often referred to as the "bridging architect" and the firm completing the design is the architect of record and assumes the liability for the design.
- Design – Based on a set of design criteria provided by the *Owner*, *Design-Builder* prepares phased construction documents. *Constructor* component of the *Design-Builder* is available during this period for constructability and budget reviews.
- Award – Concurrent award of both the design and construction phases. Guaranteed Maximum Price is usually established at selection.
- Construction – *Design-Builder* selects trade contractors, usually with cost as the primary selection criteria. Construction can begin as soon as phased construction documents are available.
- Occupancy – After the construction of the entire project has been completed, the *Constructor* leaves the site to allow for move-in (installation of *Owner*-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

Defining Design-Build Qualifications Based Selection – Unique Characteristics of D-B QBS

There are two prime players: The *Owner* and the *Design-Builder*. [The *Designer* (architect) and the *Constructor* (general contractor) are combined into one entity.]

The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	**YES**
Is the *Construction Cost of Work* a selection criteria?	**NO**
Is the *Total Construction Cost* the sole selection criteria?	**NO**



Design-Builder selection is not based on any weighting of the *Construction Cost of Work*. Rather selection is based on weighting of predefined criteria, with the award going to the *Design-Builder* that best meets the predefined selection criteria. Selection criteria may include some weighing of *General Conditions Costs* and/or *Fee*.

Design/Build QBS – Other Characteristics

- Relationship of Phases: Can accommodate overlapping of the project phases.
- Ability to Bring *Constructor* on Board During Design: **Yes**
- Design risk (quality) and Construction risk (cost and schedule) allocated to *Design-Builder* at the time of selection based on design criteria and building requirements at the point in time of the selection. *Design-Builder* is responsible for adequacy and completeness of design and subsequently the entire project; *Owner* is responsible for adequacy of design criteria.

Phases – Design-Build QBS

- Planning – The scope of the project and expectations of quality are established by the *Owner* and any consultants it may need. A corresponding budget and schedule are also established.
- Design – Based on a set of design criteria provided by the *Owner*, *Design-Builder* prepares phased construction documents. *Constructor* component of the *Design-Builder* is available during this period for constructability and budget reviews. *Owner* and review agencies can participate in the process.
- Award – Concurrent award of both the design and construction phases. Establishment of Guaranteed Maximum Price or Lump Sum can be postponed until more accurate scope and cost information are available.
- Construction – *Design-Builder* selects trade contractors, usually with *Owner* input. Construction can begin as soon as phased construction documents are available.
- Occupancy – After the construction of the entire project has been completed, the *Constructor* leaves the site to allow for move-in (installation of *Owner*-furnished equipment and furnishings) and occupancy. If arrangements are made in advance, certain areas of the project (partial occupancy) can be occupied prior to the completion of the entire project.

Delivery Method Selection Criteria & Processes

Introduction

Having established a project delivery method vocabulary, the next step is to determine which of the options is most appropriate for a particular project. While no project delivery option is perfect, one option may be better suited than another based on the unique requirements for a particular project. This handbook does not assume there is only one acceptable option for project delivery. The requirements for each project should be evaluated to determine which of the various options would most likely produce the best outcome for the state and the school district or municipality/borough.

Prior to starting the process to select the most appropriate project delivery method it would be advisable to review again, your entities' ability to choose among those listed in the previous section. Administrative code or policy within a given entity may also determine which project delivery options may be used. A review of pertinent laws, rules, regulations and policies early in the life of a project is also strongly recommended in order to allow time to obtain approval for use of an alternative project delivery method.

For example, regulations promulgated by the Department of Education & Early Development require that all contracts over $100,000 be awarded based on competitive sealed bids unless an alternative construction delivery method is approved and the department concurs in advance of any solicitation the proposed delivery method is in the state's best interest.

To be able to recommend the most appropriate option, experience in going through the thought-process of applying the factors outlined in this section is essential. It is even better, and widely considered to be good practice, to use the counsel of a group of trusted advisors who can help to ensure that all the factors and their interrelationships can be as fully evaluated as possible.

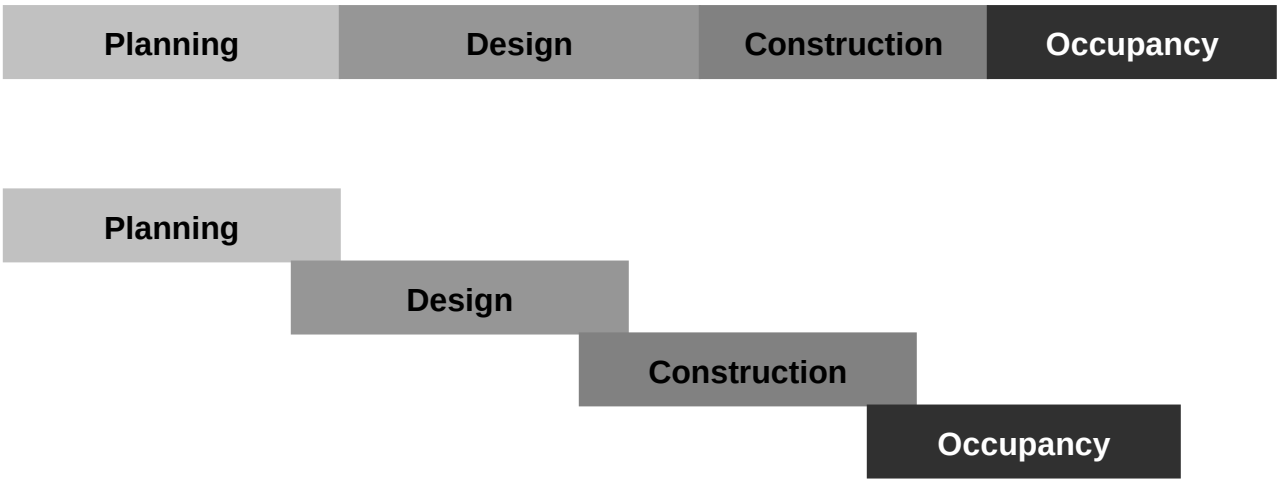
~~Your~~ T~~t~~rusted advisors should be experienced not only in going through the thought-process of applying the major factors, but ideally would be experienced with implementing all of the different delivery options. Everyone is biased based on his or her individual experiences. ~~Your~~ An advisor~~s~~ should be able to admit ~~their~~ his or her prejudices based on their experiences and then set them aside to help ~~you~~ evaluate which delivery option is in the best interest of ~~your~~ a particular project.

The Project Environment

The recipient entity of state aid for school construction through DEED should consider the environment in which the project is taking place. It should assess the major factors influencing the project in question and then consider the requirements of the project in light of the unique characteristics of each of the identified project delivery options. By properly assessing these influences, the entity requesting approval from the department will not only be able request a specific delivery option, but will also be able to answer the question, "Why am I recommending this particular delivery option?"

Delivery Method Selection Criteria & Processes (cont.)

Every project occurs in the context of a unique environment, an environment consisting of a variety of both physical and philosophical factors. This environment bears greatly on the successful maturation of a project. That maturation occurs in four typical phases: planning, design, construction and occupancy. These can occur sequentially or may be overlapped (see illustration).



The main characteristics of a project's environment consist of: its schedule, the need and ability to establish and define its scope, the resources available to the project, the risks associated with the project, and the external constraints placed on the project.

Part of the project environment is the associated risks. The risks associated with the design and construction process are generally not affected by the chosen project delivery method. However, the timing and the allocation of the risk does vary depending on the project delivery method. Therefore, each delivery option provides a different approach to allocating the risks and typically will result in timing differences in transferring the various risks. Any first time user of any project delivery option is cautioned to be sure they understand these differences.

The degree of risk assumed by the *Designer* and/or *Constructor* should be directly proportional to the cost associated with the project. The risk(s) associated with a construction project should be allocated to the party with the best ability to control and manage that risk. The purchase and the requirement for purchase of insurance coverage is just one way in which *Owners*, *Designers*, and *Constructors* try to allocate and controls some of the risk.

In selecting the appropriate delivery method, a thorough review of the potential risks and their allocation should be performed. The *Owner* should evaluate its ability and willingness to assume the risk inherent to the option selected. To accomplish this, each of the relevant major factors should be reviewed and considered.

Although identifying and coping with the factors in a project's environment is both complex and an ongoing task until completion is achieved, the focus of this handbook is primarily project initiation not project execution. We will use the luxury of this focus to narrow our determination

of primary factors from the overall project environment to those that bear most directly on determining the "best" project delivery method. We are further assisted in this effort by one of the external factors for school construction projects receiving state aid. This external factor is that the Design-Bid-Build project delivery option is the standard project delivery method for school construction projects. However, we can recognize there are some primary factors affecting particular projects that might eliminate this delivery method or make it untenable without significantly increasing risk.

Establishing Determining Factors

This handbook groups the *Primary Factors* into five categories as shown in the table below:

Need Factors		Success Factors		
Schedule/ Necessity to Overlap Phases	**Ability to Define the Project Scope/Potential for Changes**	***Owner's* Internal Resources & Philosophy**	**Desire for a Single Contract or Separate Contracts**	**Regulatory/ Legal or Funding Constraints**
Tight Project Milestones or Deadlines	Scope Definition	Ability or Desire to Define and Verify Program & Design Content/Quality	Ability or Desire to Take Responsibility for Managing the Design	Regulatory and Statutory Requirements
Amount of Overlap of Design & Construction Phases	Potential for Changes During Construction	Experience with the Particular Delivery Method & Forms of Contracts	Ability or Desire to Eliminate Responsibility for Disputes Between Designer and Builder	State Budget and Funding Cycles
	Need/Desire for the Contractor's Input During Design	Ability to Participate in Multiple Trade Contractor/Supplier Evaluations		
	Flexibility to Make Design Changes After Construction Cost Commitments	Desired Contractual Relationship and Ability to Recoup Savings		

These are certainly not all that need to be considered but addressing these *Primary Factors* will guide the selection of the most appropriate delivery option. Furthermore, addressing these early in the project cycle will increase the chances for a successful project.

The first two categories are grouped as *Need Factors*. These factors determine the need to move away from the Design-Bid-Build delivery method established as the standard delivery method for projects administered by EED. Entities requesting approval for an alternative project delivery method must "prove out" in these categories regardless of their desire or preference for a delivery method other than Design-Bid-Build. The remaining three categories are grouped as *Success Factors*. These are the elements of the project environment that can determine how likely a project is to succeed in using an alternative project delivery method and which of the delivery

options is most appropriate. Many of these are tied to the *Owner's* ability to execute the project in a non-traditional method. Following an acceptance by DEED that a need to move away from the department's standard delivery method has been established, the requesting entity must demonstrate it both has chosen and that it has the ability to manage the factors of the project environment aligned with the successful implementation of the alternative delivery option being considered.

Selecting a Delivery Method

Although there are a number of factors in making a decision concerning which project delivery option to recommend, by the time a few *primary factors* are applied, it becomes apparent which options are least appropriate. By the process of elimination, the most appropriate option(s) can be determined.

For each factor, there is a *Critical Question* that should be considered. Grouped within the five categories, each *primary factor* is listed along with its critical question, appropriate commentary and the ramifications associated with the answer. *Need factors* are addressed first.

NEED FACTOR: Schedule/Necessity to Overlap Phases

Primary Factor: *Tight Project Milestones or Deadlines*

Critical Question: *Is overlap of design and construction phases necessary to meet schedule requirements?*

Discussion: Schedule is always a consideration on construction projects and will often drive the selection of the project delivery option. During the planning phase, a preliminary schedule should be developed. This master schedule will include an estimated duration for each phase of the project: needs assessment, project identification, planning, design, award, construction, and occupancy.

Simultaneously, the school district entity should evaluate their required date for occupancy. Comparing this date to the date generated from early versions of the preliminary master schedule will indicate whether any acceleration or overlapping of any of the phases may be required. "Traditional" Design-Bid-Build is inherently a linear, sequential process as opposed to Design-Build or CM/GC, each of which is capable of overlapping of the phases in the design and construction process.

Ramifications: If the project requires a schedule that can only be maintained by overlapping of the design and construction phases, then one of the alternative delivery options should be considered.

Primary Factor: *Amount of Overlap of Design and Construction Phases*

Critical Question: *Is there time to complete the Design Development stage of the design prior to starting construction?*

Discussion: Assuming it has already been determined that a traditional linear approach to the design and construction phases will not work, and some overlapping of the two phases is necessary, the next question is, "How much overlap of the design and construction is required?" If the construction start date is dictated by the construction completion date, and is required to be very early in the design process (e.g., during the Schematic or early Design Development stages), then the *Owner* should understand the additional responsibility and risk it may be taking by retaining the design responsibility and holding the design contract.

Other factors such as available resources to manage the design, experience with managing the aggressive decision making that will be required, and the possibility of being placed in between the *Designer* and the *Constructor* would all be closely related to the evaluation of this factor.

Ramifications: If the project requires that construction start early in the design process, then who is taking responsibility for managing the design and the timely completion of the design needs to be considered. Transferring the design risk to the party responsible for construction may be a reason to consider using Design-Build in lieu of CM/GC.

NEED FACTOR: Ability to Define the Project Scope/Potential for Changes

Primary Factor: *Scope Definition*

Critical Question: *Is the scope of work difficult to define?*

Discussion: Each District/Municipality is unique and will have special requirements that could have a major impact on determining the proper method of delivery. Similarly, the complexity of the project and the ability to fully define the scope, early in the process, could also have an impact on determining the appropriate project delivery option.

The three points in any project where the need to define the scope become critical are:

1. Prior to selection of a constructor
2. After selection of a constructor but prior to establishing quality, cost, and schedule
3. After establishing quality, cost, and schedule

Each delivery option will require different levels of scope definition at each of these critical points. The inability to fully define scope early in the process will have a direct impact upon the *Owner's* ability to manage scope and cost increases later in the project.

Ramifications: If it would be difficult to produce a set of drawings and specifications that will fully describe the work in question (e.g., a renovation of an existing building), then one of the qualifications based selection options should be considered.

Primary Factor: *Potential for Changes During Construction*

Critical Question: *Is there a significant potential for changes during the construction phase?*

Discussion: Whenever the scope is difficult to define or other issues tend to indicate that there is a high potential for changes during the construction phase, careful consideration should be given on how this will be handled. If one of the competitive cost delivery options (D-B-B, CM/GC BV, D-B BV) is used, as much of the work as possible should be quantified before a lump sum cost is agreed upon. In an environment of high uncertainty, one of the competitive qualifications options (CM/GC QBS, D-B QBS) should be considered.

Ramifications: If the scope of the project is likely to change during construction, then one of the qualifications based delivery options may be more appropriate. An example might be a project where the tenants are unknown or likely to change. In this example, the identification of the tenants may be a cause for required changes throughout all phases of the project including during the construction phase.

Primary Factor: *Need/Desire for the Contractor's Input During Design*

Critical Question: *Is input from a Constructor during design required or desired?*

Discussion: Throughout a project, the *Owner* will make decisions based on their definition of value. What varies from one project delivery option to another is who (which team member) is providing the information and when are they providing it during the project sequence.

This handbook looks at two broad types of information provided: 1) Design Solution and 2) Constructability (including cost and schedule review of design solutions). What differs with each delivery option is who is providing the information and when are they brought on board. Also, when the information is being provided, and whether the information is intended to be provided at specific points in time or continuously throughout the process will depend on which delivery option is chosen.

There are many times when the demands of the project are unique or difficult to quantify. In these instances, the option of having the *Constructor* on board during the design phase can be of value. The *Constructor* can assist in schedule development and monitoring, in constructability and budget reviews, in factoring in current market conditions, and in locating and procuring long lead equipment items and trade contractors necessary for the work.

If there are significant schedule, budget or constructability issues, it can be helpful for the decision maker to review these issues during the design phase. Many times the *Designer* does not have the range of experience in the actual construction of a project to adequately address these issues. However, it should be noted that it is possible to hire a consultant to perform these tasks that will leave the agency open to all of the delivery methods and enable management and development of the scheme prior to commitment to a *Constructor*.

Ramifications: If the assistance of the *Constructor* is desired during the design phase to assist in defining the scope, constructability reviews, schedule determination, or budget confirmation, then one of the alternative delivery options should be considered.

Primary Factor: *Flexibility to Make Design Changes After Construction Cost Commitments*

Critical Question: *Are your design and scope requirements fully defined?*

Discussion: The cost of making changes throughout a construction project increases as the project develops. In the worst case this would include needing to make changes to work already in place. In an ideal situation, the design should be developed to the point where the scope of works is known and the amount of changes can be reasonably predicted before commitment to a *Constructor*.

Where the design is used as the basis for selection of the *Constructor* in a competitive cost environment, its completeness will be a key factor in the successful cost management of the project once a commitment has been made to a contractor, regardless of whether construction has started.

Ramifications: It is important when selecting your project delivery method to consider how tightly the scope of work can be defined and review whether design flexibility is required during the construction process. If a significant amount of flexibility is required after commitment to a contractor, then a qualifications based selection method might be more appropriate than one of the competitive cost methods.

SUCCESS FACTOR: *Owner's* Internal Resources & Philosophy

Primary Factor: *Ability or Desire to Define and Verify Program and Design Content/Quality*

Critical Question: *Will the Owner utilize outside resources to verify quality?*

Discussion: The *Owner's* assurance that there is a responsible person designated to verify quality during construction will relate directly to the *Owner's* in-house resource availability, and to what party the *Owner* assigns the role of project management on each specific project. How much direct influence an *Owner* has on how the quality is defined and verified will be affected by the decision of which option is chosen.

The *Owner's* definition of quality must be identified and communicated for the record early in the process. The quality of a construction project can be characterized by the following:

- *Functional quality* – the ability of the facility space to meet the *Owner's* program requirements (as well as code and safety requirements)
- *Systems quality* – the ability of the various building systems to meet the *Owner's* defined needs

- *Aesthetic (scope) quality* – the level of design and finish as defined in the design documents
- *Workmanship quality* – the physical execution of the design

All of these are closely related. How they are defined and verified should be considered when determining which project delivery option to use.

In the standard Design-Bid-Build delivery option, the definition of quality is heavily dependent upon the architect's ability to understand and translate the *Owner's* needs. In the CM/GC delivery options, this task is still assigned to the architect, though with assistance from the contractor. In Design-Build the *Design-Builder* assumes these duties. Production of quality during the construction phase is, in every option, the primary responsibility of the *Constructor*, but the verification of that quality will vary between the options. The architect, as the *Owner's* representative, is responsible in Design-Bid-Build and CM/GC. The *Owner* assumes this role in Design-Build.

Ramifications: If in-house resources are not available, extra caution should be taken when using Design-Build. If Design-Build is desired and in-house resources are not available, outside resources should be engaged to assist in verifying that the quality desired by the *Owner* is incorporated.

Primary Factor: *Experience with the Particular Delivery Method and Forms of Contracts*

Critical Question: *Are agency in-house personnel experienced in alternative delivery options or, if not, will in-house personnel be augmented by other agency or contracted personnel?*

Discussion: The responsibility for success on every school construction project ultimately rests with the entity executing the project. Thus, the responsibility for overseeing and managing the entire process resides with the *Owner*. A "project manager" typically handles the process, whether formalized or not. For a typical school project, this responsibility can be fulfilled in one of several ways including:

1. In-house resources
2. Another state agency (i.e., DOT/PF)
3. A third-party consultant

One factor to consider is the level of expertise and experience of the *Owner* embarking on the construction project. In deciding which project delivery option and form of contract to recommend, the availability of *Owner* staff resources and experience is a major consideration. Some entities perform construction routinely and have capable and available staff to manage all phases of the project. Others seldom involve themselves in construction and thus will need to obtain experienced assistance.

Obtaining assistance for the *Owner* from a third party project or program manager in certain circumstances may be considered. There are unique requirements for the school construction

process. This should be taken into consideration when evaluating the use of third-party resources.

Ramifications: Regardless of the delivery option selected, if the *Owner* is inexperienced in management of a capital outlay program, assistance should be obtained by contracting with an experienced professional or by making arrangements for assistance from another state agency that has that experience.

Primary Factor: *Ability to Participate in Multiple Trade Contractor/Supplier Evaluations*

Critical Question: *Does the Owner need the ability to participate in the selection and evaluation of trade contractors or suppliers?*

Discussion: There may be instances where the *Owner* has a direct interest in the selection and evaluation of subcontractors or suppliers for a portion or the majority of the work. For example, the *Owner* may have a complex security system within a building that will require development with a particular subcontractor.
Instances may also occur where many elements of the project scope require development, particularly in a fast track environment, and a relationship is required that offers a high degree of flexibility in choice and cost transparency from the subcontractor via the contractor.

Ramifications: Where the input required is limited to specific trades or suppliers it is important to ensure the *Owner's* bid documents are structured in such a way to allow control over individual elements, in which case any of the delivery options could suit the *Owner's* requirements. However, if the *Owner* requires a high degree of flexibility across many elements of the project, or the level of control is anticipated but unknown, then a competitive qualifications selection option will afford the *Owner* greater control and cost transparency.

Primary Factor: *Desired Contractual Relationship and Ability to Recoup Savings*

Critical Question: *Does the Owner wish to have a complete and timely access to all of the Contractor's Information?*

Discussion: How the *Owner* selects the construction entity and the resulting contractual relationship created will affect what information is required to be provided and when. For example, whether or not the recipient entity and their consultants are participants in the specialty contractor and vendor selection process and the information shared during this process, will be a direct result of the contractual relationship created. Access to all available information may or may not be necessary or desired. The *Owner* should be aware that the selection of a project delivery option and the resulting contractual relationship would likely affect the manner in which information may be required to be provided.

Legally, a fiduciary relationship arises automatically in several situations, however the specific form of fiduciary relationship contemplated in this document is the one arising when a person or firm has a duty to act for another on matters falling within a contractual relationship. More

specifically, a person or entity acting in a fiduciary relationship to the *Owner* owes the *Owner* the duties of good faith, trust, confidence, and candor, and must exercise a high standard of care in managing money and property.

A *Constructor* selection based solely on *Total Construction Cost* will generally result in a contractual relationship that is not a fiduciary one. This will affect the timing of the availability of information and the ability of the *Owner* to make use of that information. If the construction entity is not on board during the design (typical in Design-Bid-Build when cost is the only consideration), collaboration at this stage is not an issue. If, however, some contractor involvement during the design phase is needed, a *best value* selection that includes considerations other than *Total Construction Cost*, can be used in selecting the *CM/GC* or the *Design-Builder*. Nonetheless, the contractual relationship developed is generally very similar to Design-Bid-Build concerning access to information.

A *qualifications based selection* (i.e., the *Construction Cost of Work* not a factor at the time of selection) will create a fiduciary relationship. This also allows complete and timely access to the contractor's information. If the project scope is difficult to define, or matching the scope to the project budget is anticipated to be difficult, then having a collaborative process could prove to be advantageous. In such situations, a qualifications-based selection might be more appropriate.

Ramifications: If the project necessitates an open, collaborative relationship among the parties, then a *qualifications based selection* should be considered.

SUCCESS FACTOR: Desire for a Single Contract or Separate Contracts

Primary Factor: *Ability or Desire to Take Responsibility for Managing the Design*

Critical Question: *Does the Owner have in-house design resources qualified to oversee design professionals, and does the Owner have the ability to commit sufficient resources to design management?*

Discussion: Some recipient entities may have professional staff capable of providing quality oversight of design professionals for the *Owner*. The *Owner* must make an honest self-assessment, taking into account factors regarding complexity of the project and competing obligations of in-house staff, to determine realistically whether the agency is capable of design management.

Given self-assurance in agency ability, the agency can then consider the practicality of any desire to take on the responsibility for providing design management. If the project is of such unique function that the *Owner* has greater knowledge of its design intent than the agency thinks could be translated reliably into a design without intimate involvement of the district or municipality's own staff, then the *Owner* should consider holding a separate contract with the design professional. However, if the desire exists, the *Owner* must consider its commitment to provide the necessary resources.

Ramifications: Ability and desire to manage the design of a project are both reasons to consider holding separate contracts for design and construction, and argue against Design-Build.

Primary Factor: *Ability or Desire to Eliminate Responsibility for Disputes Between Designer and Builder*

Critical Question: *Does the Owner desire to hold a single entity responsible for coordination, collaboration, and productivity for the entire project?*

Discussion: A completed project is the result of extensive coordination of talent and resources. The skill sets of the *Designer* are not the same as those of the *Constructor*. Viewpoints and interpretations differ, as do personalities, agendas, ethics, and levels of responsibility.

Although holding separate contracts allows the *Owner* to manage the project through the leverage of direct legal relationships with the *Designer* and with the *Constructor*, the *Owner* takes on the responsibility for resolving disputes between the other two parties. If the *Owner* has the greater desire to transfer that responsibility than to use his contractual leverage, its tool is the single contract with an integrated contractual delivery method—Design-Build.

Ramifications: The integrated nature of Design-Build, with its single contract, allows the *Owner* to hold a single entity responsible for the project and keeps disputes between the *Designer* and the *Constructor* in-house with the *Design-Builder*. The trade-off is the loss of *Owner* leverage penetrating separately to the differing skill sets and corresponding work products.

SUCCESS FACTOR: Regulatory/Legal or Funding Constraints

Primary Factor: *Regulatory and Statutory Requirements*

Critical Question: *Do laws, rules, regulations, etc., permit the use of an alternative project delivery method?*

Discussion: The statutory and regulatory basis for use of alternative project delivery methods on school construction projects has already been set out in an earlier portion of this publication.

The local requirements, under which a District/Municipal entity undertaking a project operates, may ultimately be the deciding factor in selecting the project delivery option. While the statutes, regulations and policies of the Departments of Administration (DOA) and Transportation & Public Facilities (DOT/PF) govern the procurement process for most State agencies, political subdivisions of the state may adopt their own laws, rules, regulations, and policies. While it is generally safe to say that the "standard" method of *Design-Bid-Build* is an acceptable method for all District/ Municipal entities, a review of the pertinent laws, rules,

regulations, and policies early in the life of the project is strongly recommended in order to allow time to obtain approval for use of an alternative project delivery option. Regulations within a given locality may also determine which project delivery option can be used.

For school capital projects that incorporate state aid through the Department of Education & Early Development, regulations require that all contracts be awarded based on competitive sealed bids unless an alternative delivery option is approved by the commissioner. The commissioner will base a decision on the rationale provided by the requesting agency and the factors discussed in this handbook.

Ramifications: The decision on what delivery option is most appropriate must be made early in the planning phase of the project and properly documented so that sufficient time and justification can be prepared to gain approval for an alternative delivery option if that option is most appropriate.

Primary Factor: *State Budget and Funding Cycles*

Critical Question: *Is funding available for construction at initiation of design?*

Discussion: The State's budget and funding cycle could have an impact on the timing, sequencing and a subsequent recommendation of a project delivery option. There are three funding combinations for design and construction addressed by this handbook. One is complete project funding that would include design and construction funding all at one time. The second is phased project funding, which is one funding for design, and a second separate funding for construction. The third, is phased construction funding which is one funding for design and then funding of multiple components of construction each funded separately.

Ramifications: While any of the options will work with complete project funding, any phasing of the funding can have a major impact on the decision of which option to select. For example, without complete project funding, Design-Build is not feasible.

Summary

With a list of options and list of major factors to consider, the goal is to determine through a process of elimination, "Which project delivery options are least appropriate to recommend on my project?"

The order in which the *primary factors* are applied by DEED in the review and approval process is illustrated in the ***DEED Alternative Project Delivery Approval Flowchart*** shown in Appendix B. An assessment of the *Need Factors* is applied to the project, any one of which may drive the need to use an alternate project delivery method. Next, the *Success Factors* are applied. These factors reflect judgments that must be made regarding the ability of *Owners* to be successful in implementing a particular delivery method. You should consider the input of several advisers who have experience going through this process. This experience will enable the *Owner* to understand the consequences of managing the project under the various delivery options.

For example, the need to accelerate the schedule may be cited as one of the primary reasons Design-Bid-Build is not the best option. There are circumstances, however, where breaking the project into multiple prime bid packages, each being design-bid-build, is a perfectly reasonable option. Having someone with the experience and understanding of how to manage such a process, and the risks associated with it, could offer valuable guidance as to many of the pros and cons of delivering a specific project using the multiple prime contractor variant of the Design-Bid-Build project delivery method.

As the factors are considered, how they relate to the ***DEED Project Delivery Option Matrix*** (p. 12) demonstrates which options have been eliminated. Since every project is unique, which factors apply and the weight they need to be given is also unique on every project. A group of trusted advisers should be able to use the benefit of their experience to assist the *Owner* in determining which factors should carry the most weight and ultimately which of these six options is most appropriate for each particular project.

Implementing Project Delivery Methods

Introduction

Just selecting the "right" delivery option is not enough. There are numerous details to be addressed in order to ensure the desired results are achieved. Requests For Proposals (RFPs) that clearly spell out expectations and match the right selection criteria with the right project delivery option are examples of the type of issues that must be addressed when implementing any project delivery method. Entities looking for assistance with these issues will benefit from the following information.

Considerations for Solicitation and Award

Using the ***DEED Project Delivery Options Matrix***, *Primary Factors* and ***DEED Alternative Project Delivery Approval Flowchart***, entities requesting an approval of an alternative delivery method under 4 AAC 31.080(f) will need to provide the following evidence and supporting documents~~:~~.

Concurrence Items (Required prior to approval of alternative project delivery method)

- Provide a resolution from the municipal/borough entity or school board authorizing the requested alternative project delivery method; if municipal/borough code approves the use of the requested delivery method, a copy of that code can substitute for a dedicated resolution.
- Provide a document supporting the requested alternative project delivery method as being in the best interest of the state; address:
  - How the alternative delivery method effort will result in lower project costs/increased value to the state (be specific);
  - How quality standards will be maintained; and
  - How unknown conditions will be accounted for.
- Provide the name and qualifications of the *Owner's* project manager for the alternative delivery method process (list specific experience in the requested delivery method).
- Describe the basic process leading up to the award of the alternative delivery method contract (establish how competitive selection will be achieved).

Upon approval of an alternative delivery method under 4 AAC 31.080(f), directives will be issued by the department applicable to each individual project. These directives will be based on the following factors, some of which are required and will be applied to each project approved for an alternative delivery method and some of which are discretionary and will be applied as needed by the department to either increase the likelihood of a successful project or establish a stronger determination of "best interest" for the state:

Required Alternative Project Delivery Directives

- The alternative project delivery solicitation will occur under competitive, sealed proposals or, in the case of Design-Build-Bid, sealed bids.
- The RFP must contain the following information:
  - The aggrieved offeror protest provision meeting requirements of 4 AAC 31.080~~-~~(c);
  - Identification of project bonding, insurance, and prevailing wage requirements; and
  - Identifications of the required project warranty period.
- The solicitation RFP and supporting documents including, but not limited to 1) a cost estimate based on the RFP documents and prepared by a qualified cost estimator showing the

anticipated construction cost to be at or below the budgeted amount, 2) the proposed scoring criteria, 3) positions held by evaluation team members, and 4) a copy of the agreement by which the work is to be undertaken, including any general conditions, supplementary conditions, and other project documents that the agreement will incorporate by reference must be approved by the department prior to advertising.

- The RFP evaluation team will include maximum of five members and ~~will~~ must include a Facilities staff member from DEED if determined to be appropriate by the Facilities Manager; evaluation team meetings may be in person or by telephone.
- A majority of the evaluation team must be experienced facilities professionals; the non-majority may consist of educators, board members or other elected/appointed officials, or other interested parties.
- The contract awarded must either be a *guaranteed maximum price* (GMP) or fixed price contract (allowances for cost savings may be incorporated).
- Sealed cost proposals will be provided separate from the responses to remaining proposal items and will be reviewed only after all other evaluation elements are finalized.
- Provisions for local hire as an evaluation criteria or contract performance requirement are excluded (ref. State of Alaska Attorney General advice dated February 18, 2004).

Additional Alternative Project Delivery Directives

- The RFP will require a guaranteed maximum price (GMP) from each offeror with a breakdown of costs by EED CostFormat, Level 2.
- For Best-Value selections, consideration of cost as a selection criterion will incorporate an evaluation of both the GMP and an evaluation of the offeror's *General Conditions* and *Fees*. The GMP will constitute at least 50% of the possible scoring with all cost factors constituting at least 60% of the possible scoring.
- For QBS selections, the RFP will require objectively calculated cost factors to include the *Pre-construction* cost, *General Conditions* costs and the constructor's *Fee* to combine for at least 50% of the available points.
- ~~Sealed cost proposals will be provided separate from the responses to remaining proposal items and will be reviewed only after all other evaluation elements are finalized~~
- An independent cost estimator will be retained and a cost estimate will be prepared for the work prior to negotiation of the lump-sum~~p~~ contract.
- A separate scoring factor will be included in the evaluation criteria to evaluate the offeror's plans/abilities to incorporate the resulting facility into a preventive maintenance and facility management program.
- Designs will be completed to between 40% and 60% prior to solicitation and will contain: design standards, necessary drawings, material specifications, performance specifications, project constraints, and other information relevant to the project (this directive will become required for any request for Design-Build).
- Identification of project documentation (i.e. software, manufacturer's literature, product warranties, product operating handbooks, inventory of installed equipment, maintenance cycles, etc.) required to establish an effective preventative maintenance and facility management program as defined by AS 14.11.011(b)(4) will be included in the RFP.
- Mandated evaluation criteria and weighting as selected from Appendix C.
- Restrictions on the use of a two-step selection process.

- Review of RFP by the district's attorney.
- For projects including site as a criteria, provide site parameters and site selection criteria.
- In accordance with 4 AAC 31.025, sufficient interest via a deed or lease will be established for the proposed site prior to advertising.
- *Owner* representation must be provided by one of the following methods:
  - The *Owner* must provide a dedicated project manager with suitable experience and credentials to establish criteria, perform inspections and enforce *Owner* requirements;
  - The *Owner* must contract for project management/*Owner* representation by consultant (subject to the provisions of statutory limitations on fees – AS 14.11.020, and professional services procurement requirements – 4 AAC 31.065); or
  - The design team is to be retained by the district under a separate contract from that of the general contractor and will act on the *Owner's* behalf.
- All construction materials that are to be installed by the contractor are to be purchased by the contractor; the recipient (i.e. municipality/borough/school district) shall not purchase and/or stock pile materials that are to be utilized by the contractor as part of the project construction.
- The price component will be factored such that the difference between the lowest cost proposal and other proposals grows at a rate of twice the proportionate differential between offers (a sample of that formula is depicted below).

Total GMP Points = 300 ~~–~~ x (~~Proposer's~~ Lowest Received GMP / ~~Lowest Received~~Proposer's GMP) ~~x –~~ 200

[where 100 is the maximum points available for the GMP]

Conclusion

The environment in which a project is initiated may necessitate an *Owner* to take specific, intentional steps toward setting its course in order to achieve a successful project. Those steps include assessing the project delivery method most likely to result in a project that meets scope, schedule and budget constraints.

This handbook builds on an analysis of historic use of alternative project delivery methods on school projects in Alaska. It provides both a framework for clear discussion of the options and a process of evaluation whereby an *Owner* may, in conjunction with trusted advisers, determine the appropriateness of using an alternative delivery method.

Stipulations and directives for various delivery methods are included for use once a best-interest determination has been made in favor of an alternative method. These directives are intended to keep the process of selecting construction entities for public capital projects funded with state aid through the Department of Education & Early Development open and fair.

Sources

1. *Project Delivery Options – Understanding Your Options*; Atlanta, GA; Georgia State Financing and Investment Commission, 2003.

2. *Project Delivery Options – Selecting the Appropriate Project Delivery Option*; Atlanta, GA; Georgia State Financing and Investment Commission, 2003.

Appendix A

Glossary

CM/GC Best Value

This is the construction manager as general contractor (at-risk) method. This method is defined by the use of separate design and construction contracts where the cost of the work is a selection criteria and the total construction cost is not the sole selection criteria.

CM/GC QBS

This is the construction manager as general contractor (at-risk) method with a variation of the selection process. This method is defined by the use of separate design and construction contracts where the cost of the work is not a selection criteria nor is the total construction cost the sole selection criteria.

Competitive Sealed Bid

A standard solicitation provision whereby an offeror's price proposal is transmitted in a sealed envelope for consideration at a bid opening for comparison with other offerors. This solicitation method is the default method under DEED regulation.

Competitive Sealed Proposal

An alternative solicitation process whereby factors other than, or in addition to price are solicited for consideration. Offeror's are usually scored by a selection panel. This solicitation method is allowed under DEED regulation when supported as being in the state's best interest.

Constructor

The entity in a capital project responsible for the construction of a facility or infrastructure project (as differentiated from "contractor" which can be any entity providing a product or service).

Constructor's Fees

The component of a Constructor's Total Construction Cost that are above its direct and indirect costs (i.e., its profit); usually expressed as a percentage of those costs.

Construction Cost of Work

The fixed costs of labor and materials as provided for in the project scope.

Contract Type

The type of contractual arrangement between *Owners*, Designers and Constructors. Contract Type is one of the two determinants, Selection Method being the other, of a project delivery method.

Critical Question

The central question for each Primary Factor in the decision making process related to selection of the most beneficial project delivery method. Answers to critical questions are used to move through the *Alternative Project Delivery Approval Flowchart* to determine delivery options that best match a project's environment.

Designer

The entity in a capital project responsible for the design of a facility or infrastructure project and the documentation of that design for use by the Constructor.

Design-Bid-Build

Often referred to as the "traditional" project delivery method. This method is defined by the use of separate design and construction contracts where the cost of the work is a selection criteria and the total construction cost is the sole selection criteria.

Design-Build Best Value

This is normal design-build. This method is defined by the use of a combined design and construction contract where the cost of the work is a selection criteria and the total construction cost is not the sole selection criteria.

Design-Builder

A term used to identify the entity contractually responsible to the *Owner* for both the Design and Construction of a capital project.

Design-Build Low Bid

This is a specific variation of the design-build project delivery method. This method is defined by the use of a combined design and construction contract where the cost of the work is a selection criteria and the total construction cost is the sole selection criteria.

Design-Build QBS

This is normal design-build with a variation on the selection process. This method is defined by the use of a combined design and construction contract where the cost of the work is not a selection criteria nor is the total construction cost is the sole selection criteria.

~~Fees~~

~~The component of a Constructor's Total Construction Cost that are above its direct and indirect costs (i.e., its profit); usually expressed as a percentage of those costs.~~

General Conditions

The component of a Constructor's Total Construction Cost that account for its cost of doing business that are not direct costs for materials and labor on a capital project (i.e., its overhead); usually itemized by category such as "home office", insurance, etc. but can be expressed as a percentage of direct costs.

General Contractor

The contractual entity responsible to an *Owner* for the delivery (execution) of a facility or infrastructure project. Subcontractors work under the authority of the General Contractor but do not have a direct contractual relationship with the *Owner*.

Need Factors

The subset of Primary Factors that drive an *Owner's* need to explore and/or use alternative project delivery methods. These factors pertain to challenges related to a projects schedule and scope definition.

Owner

The entity in a facility or infrastructure project that will issue contracts and direct work related to the design and construction and make payments following performance; the *Owner* is normally also the end user of the project.

Pre-construction Services

Services provided by a Constructor to support of the Designer in finalizing a project's design prior to the commencement of construction. Typical services include cost estimating, constructability reviews, schedule analysis, value analysis, phased construction, etc.

Primary Factors

The group of key factors of a project's environment that test both the need to move from Design-Bid-Build delivery and the *Owner's* likelihood of success using an alternative project delivery option.

Project Delivery Options Matrix

The matrix of basic options for the delivery of construction projects which results from the combination of selection methods (3 possible) and contract types (2 possible). This matrix yields six unique combinations understood to encompass all project delivery methods and their variants.

Qualifications Based Selection

A method of selecting a Constructor where the Total Construction Cost is not a factor for selection. Under this method, constructors are primarily evaluated based on the qualifications they have that would indicate their ability to succeed on a particular project.

Selection Method

The method by which an *Owners* will select the Constructor for a capital project. Differentiation of Selection Methods hinges on the role of the Total Construction Cost in the selection process. Selection Method is one of the two determinants, Contract Type being the other, of a project delivery method.

Success Factors

The subset of Primary Factors that drive assess an *Owner's* ability use alternative project delivery methods. These factors pertain to challenges related to resources, philosophy and legal constraints.

Total Construction Cost

A Constructor's price for the execution of a facility or infrastructure project inclusive of the Construction Cost of Work (direct costs), General Conditions (overhead) and Fee (profit). Often solicited by *Owner's* as a lump sum or guaranteed maximum price.

Total Design and Construction Cost

The combination of Total Construction Cost and design fees for which an *Owner* is responsible on a capital project.

Traditional Method

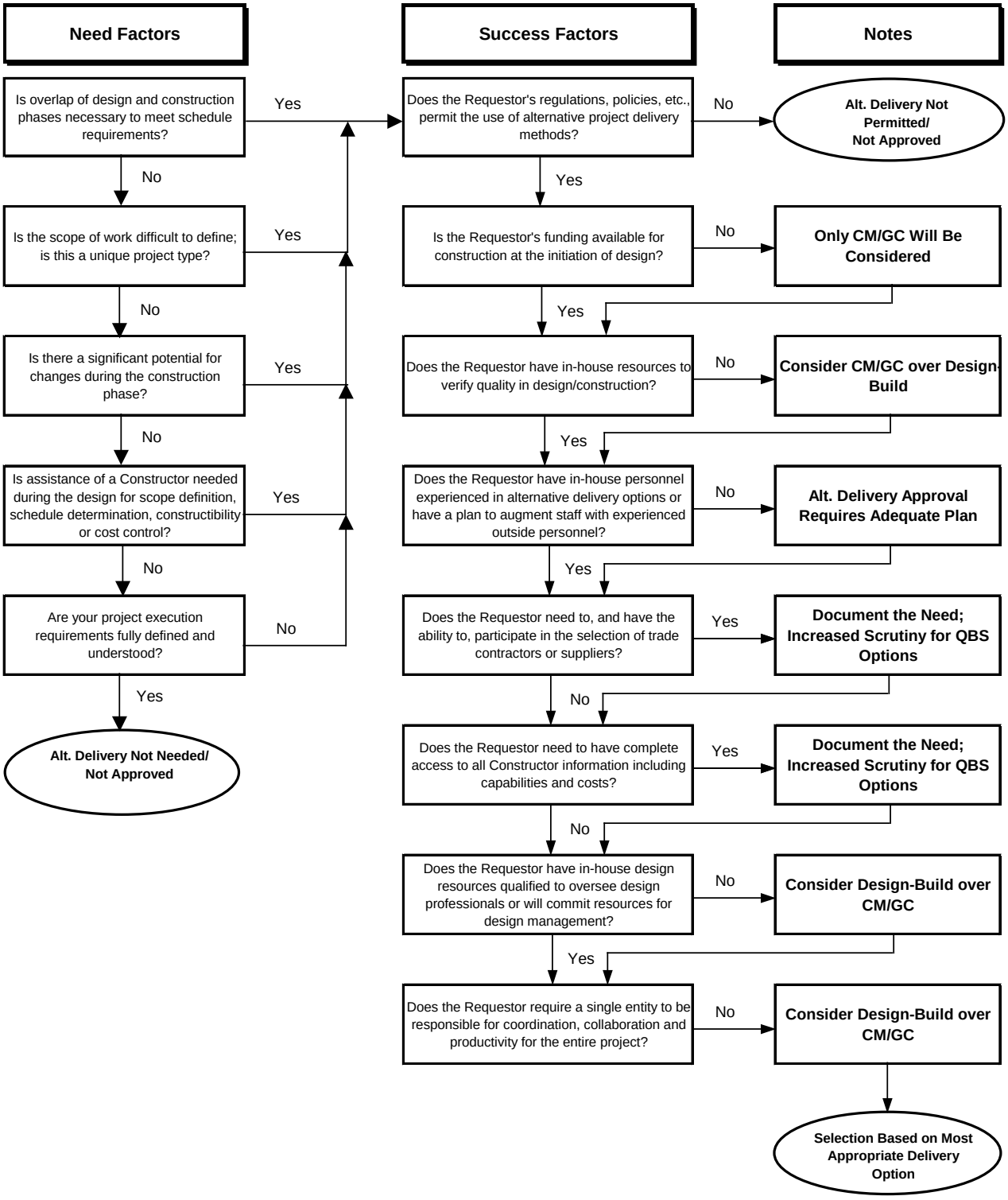
A term synonymous with the Design-Bid-Build project delivery method; also known as low bid.

Unique Characteristics

The features of a project delivery option that set it apart from all other options. Unique Characteristics result from assessing the Contract Type and Selection Method of a project delivery method.

Appendix B

DEED Alternative Project Delivery Approval Flowchart



Appendix C

Sample Evaluation Criteria

Preconstruction Services Experience	Range: 5-10%

Describe your firm's approach to the following preconstruction responsibilities: Design review and commentary, document coordination, constructability review and commentary, cost estimating, value engineering, site logistics, and subcontract preparation and packaging. Provide two or more examples of the range of pre-construction services your firm has provided on previous design-assist projects or projects with a guaranteed maximum price (GMP Projects). Describe the manner in which pricing and constructability services will be provided for areas of work normally subcontracted by the proposer.

Value Engineering/Project Estimating	Range: 5-10%

Describe your value engineering process and how you work with the design team to help reduce construction and life cycle facility costs. Explain your method of estimating the costs of construction during the design process before design documents are complete.

Design Assist/GMP Experience	Range: 10-15%

Provide a summary of projects of this type completed in the last 5 years. Describe your experience, providing details regarding your firms' specific contractual roles and responsibilities. Include the names, addresses, and phone numbers of *Owner* and Architect references for each project. Describe your experience working on a team approach with the *Owner*, Architect and other consultants to achieve the best facility possible within the established time frame and budget.

School Construction Experience	Range: 10-30%

Identify all of the school construction projects performed by the Proposer in the last 5 years where the Proposer has acted as a constructor (either as a General Contractor or a Design/ Builder). Provide names, addresses and phone numbers of *Owner* and Architectural references on projects listed. Highlight *[sub-arctic]* experience.

Project Team	Range: 5-15%

Describe the proposed Contractor's team, including the specific roles and responsibilities of each member. An organization chart would be helpful. Include the staffing requirements and identification of key personnel. Provide separate lists for the preconstruction and construction phases. Provide qualifications for the key individuals including history of employment, education, experience, and any other information the selection committee might find useful in evaluating the project team.

Management Plan	Range: 10-30%

Summarize how the proposer will staff and organize this particular project. Include information on the anticipated level of effort during the construction document design phase, estimating process, and construction quality control procedures. Outline work that will likely be accomplished via subcontract vs. proposer's own forces during the construction phase. Comment on the proposer's review of the attached proposed project schedule and their capacity to meet schedule. Address any significant scheduling issues and potential for partial completion/partial occupancy scenarios.

Quality Control	Range: 5-10%

Provide a summary of your firm's approach to quality control during construction. Include a description of the quality control organization you plan to employ and the authority assigned to the different level of quality control responsibility.

Preconstruction Fee	Range: 5-10%

Stipulated sum for all services to be provided until completion of Construction Document Phase.

GMP	Range: 50-65%

The guaranteed maximum price (GMP) with a breakdown of costs by EED CostFormat or Construction Specification Institute Division.

Overhead & Profit for Change Order Work	Range: 5-8%

The Overhead & Profit percentage that the contractor will apply to the cost of work directed by change order to arrive at the total cost of the change order work.

References	Range: 5-8%

Include at least two *Owner* and two A/E references from similar projects included and described in the AIA Document 305– Contractor's Qualification Statement.

Contractor's Qualifications/Financial Capabilities	Range: 10-30%

Summarize the proposer's current and anticipated workload from _____ - _____. Include a description of projects, dollar values of construction for which the proposer is responsible, either as a prime or subcontractor, and bonding and insurance capacity available for the referenced period. Provide copy of contractor's State of Alaska Business License. Provide list of legal claims pending or settled over the past five years, either *Owner* or contractor initiated.

Maintenance and Management Plan	Range: 3-8%

Provide information on proposer's experience and implementation of the preventative maintenance and facility management program required by AS 14.11.011(b)(4).

Current and Projected Workload	Range: 5-10%

What has been your annual volume (in dollars) of construction for the past five years? What is your anticipated volume for the current year? What is your plan for the next two years?

Appendix D

Alternative Project Delivery Approval
REVIEW CHECKLIST

District:
Project/School:
Project Delivery Option Requested:

Item	Requirement	Checked	Comments
	Need Factors		
	Tight project milestones or deadlines	❒	
	Amount of overlap of design and construction phases	❒	
	Scope definition	❒	
	Potential for changes during construction	❒	
	Need/desire for the contractor's input during design	❒	
	Flexibility to make design changes after construction cost commitments	❒	
	Success Factors		
	Ability or desire to define and verify program & design content/quality	❒	
	Experience with the particular delivery method & forms of contracts	❒	
	Ability to participate in multiple trade contractor/supplier evaluations	❒	
	Desired contractual relationship and ability to recoup savings	❒	
	Concurrence Items		
	Provide a resolution supporting the requested project delivery method	❒	
	Request must address how the alternative delivery method will result in lower project costs/increased value to the state	❒	
	Request must address how quality standards will be maintained	❒	
	Request must address how unknown conditions will be accounted for	❒	
	Provide name and qualifications of the Owner's project manager for the alternative delivery method process (list specific experience)	❒	
	Describe the basic process leading up to the award of the contract (establish how competitive selection will be achieved)	❒	
	Possible Directives*-see pages 31-33 of project delivery method handbook*		
	6 month approval expiration	❒	

Printed: 08/09/17 Alternative Project Delivery Approval Checklist.doc Page 1 of 1
Reviewed by: _____

Alternative Project Delivery Procurement
REVIEW CHECKLIST

District:
School:
Project Name/Number:

Item	Requirement	Checked	Comments
	RFP Review		
1	RFP incorporates design standards and project description items	❒	
2	Evaluation criteria includes a fixed price (e.g., LS or GMP)	❒	
3	Evaluation criteria clear and sets cost at 50% or greater weight	❒	
4	Provisions for a PM plan are incorporated in evaluation criteria	❒	
5	Owner representation clear; as either independent design team, qualified owner staff or consultant	❒	
6	Contract agreements anticipated for use are included in RFP	❒	
7	Advertising period of 21 days or longer	❒	
8	At least three publishing dates	❒	
9	Sealed proposals requested with award to most qualified offeror	❒	
10	Provisions to negotiate final cost and move to other ranked offerors (QBS/ Pre-construction Services)	❒	
11	Provisions for award protest within 10 days included	❒	
12	Bid bonds provided for	❒	
13	Performance/Payment bond provided for	❒	
14	Notice that the project requires compliance with AS 36.05.070, prevailing wage rates	❒	
15	Contractor's liability insurance included in agreement	❒	
16	Notice that the project requires compliance with AS 36.15.010, use of local forest products required wherever practicable	❒	
17	Local hire encouragement is not mentioned	❒	
18	GMP will be submitted in a separate sealed envelope	❒	

Printed: 08/09/17 Alt. Delivery RFP Checklist Page 1 of 2
Reviewed by: _____

Appendix E

District Logo

[Project Name]

Project Delivery Options Analysis

XYZ School District

Date: [Month, Day, Year]

PROJECT MANAGER	[Name] [Title] XYZ School District [City], Alaska
CONTRIBUTORS	[Name] [Title] XYZ School District [Name] [Company] [City], Alaska

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APPENDICES

APPENDIX A **1-3**

Gantt Chart Schedules

APPENDIX B **1**

Delivery Methods Flow Chart

Executive Summary

Background

In [Month, Year], the XYZ School District submitted a capital project to the Alaska Department of Education & Early Development for FYXX funding consideration. The project, entitled [Project Title], received funding through DEED and the district entered into a Project Agreement with the following final scope:

- ***[Copy from Project Agreement]***

Purpose

The purpose of this document is to evaluate project delivery method options available under Department of Education & Early Development provision and select the delivery method that had the greatest influence on the success of the [Project Name] project. This evaluation identified six alternative delivery methods as described in the DEED publication Project Delivery Methods Handbook but focuses primarily on [number] alternatives. These are summarized as follows [select from among those below as extracted from the DEED handbook]:

Design-Bid-Build

Design-Bid-Build is the most common project delivery option. It is often referred to as the "traditional" method. For school projects in Alaska with a state contribution, Design-Bid-Build is the default delivery method. All other project delivery options require a specified approval.

There are three prime players: *Owner*, *Designer* and *Constructor* (general contractor). The relationship of these parties is depicted in the graphic at the right.

A standard three-question test can be applied to determine, from these relationships, whether a delivery option falls into the Design-Bid-Build category. Those three questions and their results are as follows:

Are the *Designer* and *Constructor* contracts combined?	**NO**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**YES**

Under this delivery method, selection of the *Constructor* is based on a *Total Construction Cost* with the award going to the lowest responsible and responsive bidder.

Construction Manager/General Contractor—Best Value

CM/GC—BV is the next most common project delivery option. It allows the *Owner* to maintain control throughout the design process but provides for the early involvement of a "best qualified" *Constructor*. For school projects in Alaska with a state contribution, CM/GC is an alternate delivery method and requires a specified approval by both school boards and DEED.

There are three prime players: *Owner*, *Designer* and *Constructor* (general contractor). The relationship of these parties is depicted in the associated graphic.

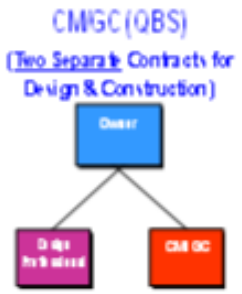
The standard three-question test can be applied to determine, from these relationships, whether a delivery option falls into the CM/GC category. Those three questions and their results are as follows:

Are the *Designer* and *Constructor* contracts combined?	**NO**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**NO**

Under this delivery method, selection of the *Constructor* is based on a best value weighting of *Total Construction Cost* with other factors; the award goes to the CM/GC that best meets the predefined qualifications and cost selection criteria.

Construction Manager/General Contractor – QBS

CM/GC—QBS is a lesser used project delivery option. It allows the *Owner* to maintain control throughout the design process while providing for the early involvement of a "best qualified" *Constructor* without regard to the construction cost of work. For school projects in Alaska with a state contribution, CM/GC–QBS requires that cost elements other than the Cost of Work provide 50% of the evaluation. CM/GC-QBS is an alternate delivery method and requires a specified approval by both the recipient entity and DEED.



There are three prime players: *Owner*, *Designer* and *Constructor* (manager-general contractor). The relationship of these parties is depicted in the graphic at the right.

The standard three-question test can be applied to determine, from these relationships, whether a delivery option falls into the CM/GC category. Those three questions and their results are as follows:

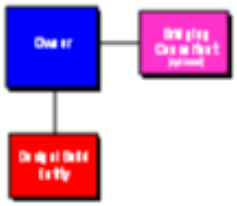
Are the *Designer* and *Constructor* contracts combined?	**NO**
Is the *Construction Cost of Work* a selection criteria?	**NO**
Is the *Total Construction Cost* the sole selection criteria?	**NO**

CM/GC selection: Qualifications based; does not incorporate any weighting for the *Construction Cost of Work*. Rather, selection is based on weighting of predefined criteria with the award going to the offeror that best meets the predefined criteria; selection criteria must include weighting of some cost factors at 50% unless otherwise approved. Typically these include *General Conditions* or *Fee* costs.

Design-Build Bid

Design-Build—Bid is a niche project delivery option. It requires a level of *Owner* sophistication to exercise quality control throughout the design and construction process. However, its simplicity is ideal for *Owners* with clearly documented standards but relatively few management resources. It also provides for the early involvement of a "best qualified" *Constructor/ Designer*. For school projects in Alaska with a state contribution, Design-Build is an alternate delivery method and requires a specified approval by both school boards and DEED.

Design-Build Bid
(Single Contract for Design & Construction)



There are two prime players: The *Owner* and the *Design-Builder*. [The *Designer* (architect) and the *Constructor* (general contractor) are combined into one entity.]

The three-question test has the following result:

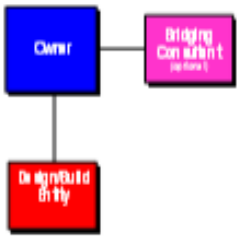
Are the *Designer* and *Constructor* contracts combined?	**YES**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**YES**

Design-Builder selection: Based on *Total Design and Construction Cost* with the award going to the lowest responsible and responsive bidder.

Design-Build—Best Value

Design-Build—BV is the least common of the three primary project delivery options. It requires a level of *Owner* sophistication to exercise quality control throughout the design and construction process. However, its simplicity is ideal for *Owners* with clearly documented standards but relatively few management resources. It also provides for the early involvement of a "best qualified" *Constructor/ Designer*. For school projects in Alaska with a state contribution, Design-Build is an alternate delivery method and requires a specified approval by both school boards and DEED.

Design-Build (Best Value)
(Single Contract for Design & Construction)



There are three prime players: *Owner*, *Designer* and *Constructor* (general contractor). The relationship of these parties is depicted in the graphic at the right.

The standard three-question test can be applied to determine, from these relationships, whether a delivery option falls into the Design-Build category. Those three questions and their results are as follows:

Are the *Designer* and *Constructor* contracts combined?	**YES**
Is the *Construction Cost of Work* a selection criteria?	**YES**
Is the *Total Construction Cost* the sole selection criteria?	**NO**

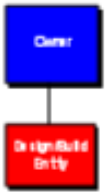
Under this delivery method, selection of the *Design/Builder* is based on some weighting of *Total Construction Cost* including the *Construction Cost of Work* with the award going to the Design/Builder that best meets the predefined qualifications and cost selection criteria.

Design-Build—QBS

Design-Build—QBS is a lesser used project delivery option. It requires a level of *Owner* sophistication to exercise quality control throughout the design and construction process. However, its simplicity is ideal for *Owners* with clearly documented standards but relatively few management resources. It also provides for the early involvement of a "best qualified" *Constructor/Designer*. For school projects in Alaska with a state contribution, Design-Build–QBS requires that cost elements other than the Cost of Work provide 50% of the evaluation. Design-Build—QBS is an alternate delivery method and requires a specified approval by both the recipient entity and DEED.

There are two prime players: The *Owner* and the *Design-Builder*. [The *Designer* (architect) and the *Constructor* (general contractor) are combined into one entity.]

Design-Build
(QBS)
(Single Contract for Design & Construction)



The three-question test has the following result:

Are the *Designer* and *Constructor* contracts combined?	**YES**
Is the *Construction Cost of Work* a selection criteria?	**NO**
Is the *Total Construction Cost* the sole selection criteria?	**NO**

Design-Builder selection is not based on any weighting of the *Construction Cost of Work*. Rather selection is based on weighting of predefined criteria, with the award going to the *Design-Builder* that best meets the predefined selection criteria. Selection criteria must include weighting of some cost factors at 50% unless otherwise approved. Typically these include *General Conditions* or *Fee* costs.

Delivery Options Evaluation Process

Using the Department of Education & Early Development's *Project Delivery Methods Handbook*, the district's project manager assessed a series of Determining Factors. These factors are established by DEED and include items related to a project's schedule, the ability of the district to define the scope of the project and potential for changes, the district's internal resources available to execute the project and its preference for structuring contracts and finally, any regulatory or legal constraints. Primary considerations under each of these categories were reviewed and evaluated, the results of which are included in the later sections of this document. [Optional: In an effort to confirm the basis of assumptions, particularly regarding possible project schedules and construction methods, the project manager also interviewed specialists with experience in these areas. These are listed in the contributor's section of the study's acknowledgements.}

Results

This analysis indicates the [Project Name] project has a high likelihood of success under the [enter method] project delivery method. However, the anticipated success of this method is dependent on the following factors:

A. [List/discuss any schedule-related issues.]

B. [List/discuss any budget-related issues.]

C. [List/discuss any scope-related issues.]

Project Delivery Options

The XYZ School District reviewed the following matrix of project delivery options—each defined by a unique combination of *contract type* and *selection method*—discussed in the Department of Education & Early Development's (DEED) *Project Delivery Methods Handbook* .

EED Project Delivery Option Matrix

SELECTION METHOD	CONTRACT TYPES: DESIGNER & CONSTRUCTOR (w/SEPARATE CONTRACTS)	CONTRACT TYPES: DESIGNER/CONSTRUCTOR (ONE CONTRACT)
Competitive Sealed Bid (Low Bid) *Total Construction Cost is sole criteria for selection*	Design-Bid-Build	Design-Build-Bid
Competitive Cost Proposal (Best Value) *Total Construction Cost weighted with other factors for selection*	CM/GC Best Value (BV)	Design-Build Best Value (BV)
Competitive Qualifications Proposal (Qualifications Based Selection) *Total Construction Cost is not a factor for selection*	CM/GC QBS	Design-Build QBS

The district recognizes that the default method established in regulation is the Design-Bid-Build delivery method, However, because it is a key principle of project management that benefits may be available to *Owners* when the traditionally distinct entities of the *Designer* and the *Constructor* are strategically aligned or even merged, XYZSD has undertaken to analyze the permissible alternative project delivery methods for possible use on it's [Project Name] Project (DEED #XX-XXX). This document provides the results of that analysis.

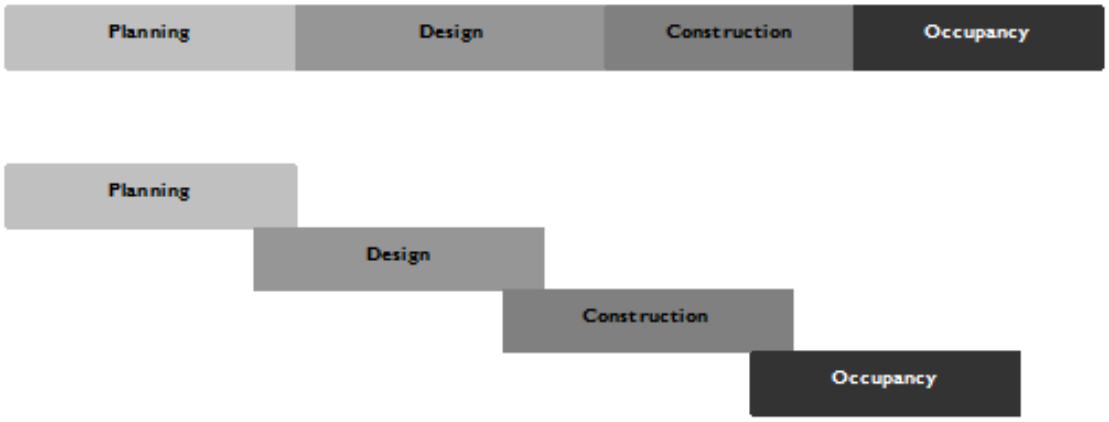
Having agreed to a set project delivery method options, the next step taken by XYZSD was to determine which of the options is most appropriate for the particular project under consideration. This analysis does not assume there is only one possible option for project delivery. However, while no one project delivery option is perfect, the district believes one option may be better suited than another based on the unique requirements for a particular project. The requirements for the [Project Name] project were evaluated to determine which of the various options would most likely produce the best outcome for the state and the school district.

As part of the analysis, the district implemented a variation of the DEED recommendation of establishing a "group of trusted advisors". This effort primarily consisted of gathering some expertise in areas of [list field(s)]. That knowledge,

combined with in-house expertise regarding the work effort and timelines related to project design and the education process, was used to provide the needed reality check on the determinations made under each delivery option.

The Project Environment

Every project occurs in the context of a unique environment, an environment consisting of a variety of both physical and philosophical factors. This environment bears greatly on the successful maturation of a project. That maturation occurs in four typical phases: planning, design, construction and occupancy. These can occur sequentially or may be overlapped (see illustration).



The main characteristics of a project's environment consist of its schedule, the need and ability to establish and define its scope, the resources available to the project, the risks associated with the project and the external constraints placed on the project.

Although identifying and coping with the factors in a project's environment is both complex and an ongoing task until completion is achieved, the focus of this analysis is primarily project initiation not project execution. The district will use the luxury of this focus to narrow our determination of primary factors from the overall project environment to those that bear most directly on determining the "best" project delivery method. The district is further assisted in this effort by one of the external factors for school construction projects receiving state aid. This external factor is that the Design-Bid-Build project delivery option is the standard project delivery method for school construction projects. However, if we can recognize there are some primary factors affecting particular projects that might eliminate this delivery method or make it untenable without significantly increasing risk, an alternative is provided for.

Determining Factors Analysis

Establishing Determining Factors

Need Factors		Success Factors		
Schedule/Necessity to Overlap Phases	Ability to Define the Project Scope/ Potential for Changes	*Owner's* Internal Resources & Philosophy	Desire for a Single Contract or Separate Contracts	Regulatory/Legal or Funding Constraints
Tight Project Milestones or Deadlines	Scope Definition	Ability or Desire to Define and Verify Program & Design Content/Quality	Ability or Desire to Take Responsibility for Managing the Design	Regulatory and Statutory Requirements
Amount of Overlap of Design & Construction Phases	Potential for Changes During Construction	Experience with the Particular Delivery Method & Forms of Contracts	Ability or Desire to Eliminate Responsibility for Disputes Between Designer and Builder	State Budget and Funding Cycles
	Need/Desire for the Contractor's Input During Design	Ability to Participate in Multiple Trade Contractor/Supplier Evaluations		
	Flexibility to Make Design Changes After Construction Cost Commitments	Desired Contractual Relationship and Ability to Recoup Savings		

The district's analysis groups the *Primary Factors* into five categories as shown in the table below, taken from the DEED Handbook:

By addressing these *Primary Factors*, the district was confident it could guide the selection of the most appropriate delivery option and increase the chances for a successful project.

The first two categories are grouped as *Need Factors*. These factors determine the need to move away from the Design-Bid-Build delivery method established as the standard delivery method for projects administered by DEED. In the following section, **Delivery Method Selection**, XYZSD will demonstrate how the project's environment establishes the need versus the desire or preference for a delivery method other than Design-Bid-Build. The remaining three categories are grouped as *Success Factors*. These are the elements of the project environment that can determine how likely a project is to succeed in using an alternative project delivery method and which of the delivery options is most appropriate. Many of these are tied to the XYZSD's ability to execute the project in a non-traditional method. Regardless of whether the project environment shows a need to move away from the department's standard delivery method or to apply the standard method, XYZSD will demonstrate it both has chosen and that it has the ability to manage the factors of the project

environment aligned with the successful implementation of the project delivery option selected.

Evaluating Determining Factors

For each factor, there is a *Critical Question* that should be considered. Grouped within the five categories, each *primary factor* is listed along with its critical question, appropriate commentary and the ramifications associated with the answer. *Need factors* are addressed first.

Need Factor #1: Schedule/Necessity to Overlap Phases

Primary Consideration: *Tight Project Milestones or Deadlines*

Critical Question: *Is overlap of design and construction phases necessary to meet schedule requirements?*

Discussion: [Enter information on project schedule.]

Schedules supporting the analysis offered can be reviewed in Appendix A.

Ramifications: [Summarize impacts of schedule discussion on this primary consideration.]

Primary Consideration: *Amount of Overlap of Design and Construction Phases*

Critical Question: *Is there time to complete the Design Development stage of the design prior to starting construction?*

Discussion: [Enter information on how overlap might address project schedule.]

Ramifications: Enter conclusions of schedule discussion on this Need Factor.]

Need Factor #2: Ability to Define the Project Scope/Potential for Changes

Primary Consideration: *Scope Definition*

Critical Question: *Is the scope of work difficult to define?*

Discussion: [Enter information on project scope definition.]

Ramifications: [Enter impacts of scope discussion on this primary consideration.]

Primary Consideration: *Potential for Changes During Construction*

Critical Question: *Is there a significant potential for changes during the construction phase?*

Discussion: [Enter information on project scope change potential.]

Ramifications: [Enter impacts of change discussion on this primary consideration.]

Primary Consideration: *Need/Desire for the Contractor's Input During Design*

Critical Question: *Is input from a Constructor during design required or desired?*

Discussion: [Enter information on how contractor input might address project scope issues.]

Ramifications: Enter conclusions of contractor input discussion on this primary consideration.]

Primary Consideration: *Flexibility to Make Design Changes After Construction Cost Commitments*

Critical Question: *Are your design and scope requirements fully defined?*

Discussion: [Enter information on how changes after cost commitments relate to project scope issues.]

Ramifications: Enter conclusions of changes to scope discussion on this primary consideration.]

Success Factor #1: Owner's Internal Resources & Philosophy

Primary Consideration: *Ability or Desire to Define and Verify Program and Design Content/Quality*

Critical Question: *Will the Owner utilize outside resources to verify quality?*

Discussion: In order to gain assurance that there is a responsible person designated to verify quality during construction, LKSD has been adding qualified staff to its Capital Projects Division. As of this date, the district employs personnel with engineering, architectural and construction backgrounds.

This is not to say that the current LKSD staff is fully experienced in managing quality issue under Design-build or CM/GC delivery methods. Primarily, the district has invested in developing project management tools utilizing the assistance of A/E teams.

In the standard Design-Bid-Build delivery option, the definition of quality is heavily dependent upon the architect's ability to understand and translate the *Owner's* needs. In the CM/GC delivery options, this task is still assigned to the architect, though with assistance from the contractor. In Design-Build the *Design-Builder* assumes these duties. Production of quality during the construction phase is, in every option, the primary responsibility of the *Constructor*, but the verification of that quality will vary between the options. The architect, as the *Owner's* representative, is responsible in Design-Bid-Build and CM/GC. LKSD has limited ability to assume this role in Design-Build.

Ramifications: Since in-house resources have limited experience, additional

resources may be needed prior to using Design-Build. However, LKSD is well staffed and suited to other delivery methods.

Primary Consideration: *Experience with the Particular Delivery Method and Forms of Contracts*

Critical Question: *Are agency in-house personnel experienced in alternative delivery options or, if not, will in-house personnel be augmented by other agency or contracted personnel?*

Discussion: The responsibility for success on this school construction project ultimately rests with the entity executing the project. Thus, the responsibility for overseeing and managing the entire process resides squarely with LKSD. A "project manager" has been assigned to handle this process.

Ramifications: Regardless of the delivery option selected, since the *district* is relatively experienced in management of a capital outlay program, assistance from outside resources is not likely to be needed.

Primary Consideration: *Ability to Participate in Multiple Trade Contractor/Supplier Evaluations*

Critical Question: *Does the Owner need the ability to participate in the selection and evaluation of trade contractors or suppliers?*

Discussion: Should design contracts indicate a schedule for bid documents by March 1, 2007 is impractical, the ability for LKSD to influence the timing and cost of subcontractors for both early site work and possibly piling purchase will be important. The current thinking is to accomplish this by directly securing those work elements on a competitive cost basis (i.e., multiple prime contracts held by the district). If a determination was made that fast-tracking the project through multiple prime contractors selected on a competitive cost basis presented substantial risk to the district and or the state, the district would propose an alternative delivery method which would give the district a level of participation and control in the critical areas.

Ramifications: Since the control over subcontractors is limited to specific trades or suppliers (e.g., site prep and piling procurement) versus the district requiring a high degree of flexibility across many elements of the project, it appears competitive cost selection could be used.

Primary Consideration: *Desired Contractual Relationship and Ability to Recoup Savings*

Critical Question: *Does the Owner wish to have a complete and timely access to all*

of the Contractor's Information?

Discussion: The district takes this consideration to be an added bonus of working in the collaborative project environment created by contract structures such as Design-build or CM/GC where the selection is made exclusive of the cost of construction or at a point where achieving such a selection criteria is not possible. At this point in the development of its capital project organization, the district is not in a position to drive a project to such a delivery method primarily for the purpose of gaining cost-control information. Although the project scope is not anticipated to be difficult to define, matching the scope to the project budget is anticipated to be somewhat difficult. A *qualifications based selection* would assist in this later area.

Ramifications: Since LKSD is not fully able to take advantage of an open, collaborative relationship among the parties for making financial decisions, then a *qualifications based selection* does not need to be considered under this factor.

Success Factor #2: Desire for a Single Contract or Separate Contracts

Primary Consideration: *Ability or Desire to Take Responsibility for Managing the Design*

Critical Question: *Does the Owner have in-house design resources qualified to oversee design professionals, and does the Owner have the ability to commit sufficient resources to design management?*

Discussion: LKSD has specifically retained professional staff capable of providing quality oversight of design professionals for this project. Given that assurance, the district has considered the practicality taking on the responsibility for providing design management and is comfortable that risk is not adverse. Although the project is not of such unique function that the district has greater knowledge of its design intent than could be translated reliably into a design without intimate involvement of the district's own staff, it still believes that holding a separate contract with the design professional is advantageous.

Ramifications: LKSD has both the ability and desire to manage the design of the project. Both are reasons to consider holding separate contracts for design and construction, and argue against Design-Build.

Primary Consideration: *Ability or Desire to Eliminate Responsibility for Disputes Between Designer and Builder*

Critical Question: *Does the Owner desire to hold a single entity responsible for coordination, collaboration, and productivity for the entire project?*

Discussion: LKSD acknowledges that a completed project is the result of extensive coordination of talent and resources. The skill sets of the *Designer* are not the same as those of the *Constructor*. Viewpoints and interpretations differ, as

do personalities, agendas, ethics, and levels of responsibility.

Although holding separate contracts, as discussed above, allows the district to manage the project through the leverage of direct legal relationships with the *Designer* and with the *Constructor*, the district takes on the responsibility for resolving disputes between the other two parties. The district has retained staff capable of executing this responsibility.

Ramifications: The integrated nature of Design-Build, with its single contract, would allows the District to hold a single entity responsible for the project and keep disputes between the *Designer* and the *Constructor* in-house with the *Design-Builder*. However, the district does not believe, for this project, that the trade-off in its loss of leverage penetrating separately to the differing skill sets and corresponding work products warrants such a delivery method.

Success Factor #3: Regulatory/Legal or Funding Constraints

Primary Consideration: *Regulatory and Statutory Requirements*

Critical Question: *Do laws, rules, regulations, etc, permit the use of an alternative project delivery method?*

Discussion: The statutory and regulatory basis for use of alternative project delivery methods on school construction projects has already been set out in the EED publication on which this analysis is based.

The local requirements and allowances for alternative delivery methods is not clearly specified in the district's current board policy manual. However, neither is there an exclusion.

For school capital projects such as the one in question, regulations require that all contracts be awarded based on competitive sealed bids unless an alternative delivery option is approved by the commissioner. The commissioner will base a decision on the rationale provided by the requesting agency which addresses the factors discussed in its handbook.

Ramifications: Since the decision on what delivery option is most appropriate is being made early in the planning phase of the project and properly documented so that sufficient time and justification can be prepared to gain approval for an alternative delivery option if that option is most appropriate, all options are being considered available.

Primary Consideration: *State Budget and Funding Cycles*

Critical Question: *Is funding available for construction at initiation of design?*

Discussion: The State's budget and funding cycle have not had an impact on the timing, sequencing and a subsequent recommendation of a project delivery option. Of the three funding combinations for design and construction addressed by the

EED handbook (i.e., complete project funding for both design and construction, phased project funding for design only, and phased construction funding) this project incorporates full funding. As such, all delivery options become available.

Ramifications: Any of the permitted delivery options will work with complete project funding.

Delivery Method Selection

Although there are a number of factors in making a decision concerning which project delivery option to recommend, by the time a few *primary factors* are applied, it becomes apparent which options are least appropriate. By the process of elimination, the most appropriate option(s) can be determined.

Having used the DEED matrix of options and worked through its list of major factors to consider, the district is able to determine through a process of elimination, "Which project delivery options are least appropriate to recommend on this project?"

The order in which the *primary factors* have been applied in our analysis is driven by the approval process as illustrated in the ***DEED Alternative Project Delivery Approval Flowchart*** shown in Appendix B. An assessment of the *Need Factors* was applied to the project, any one of which may drive the need to use an alternate project delivery method. Next, the *Success Factors* were applied. These factors reflect judgments that were made regarding the district's ability to be successful in implementing a particular delivery method.

The depiction of the DEED Project Delivery Options Matrix showing the project delivery options eliminated as a result of the districts analysis is included on the following page.

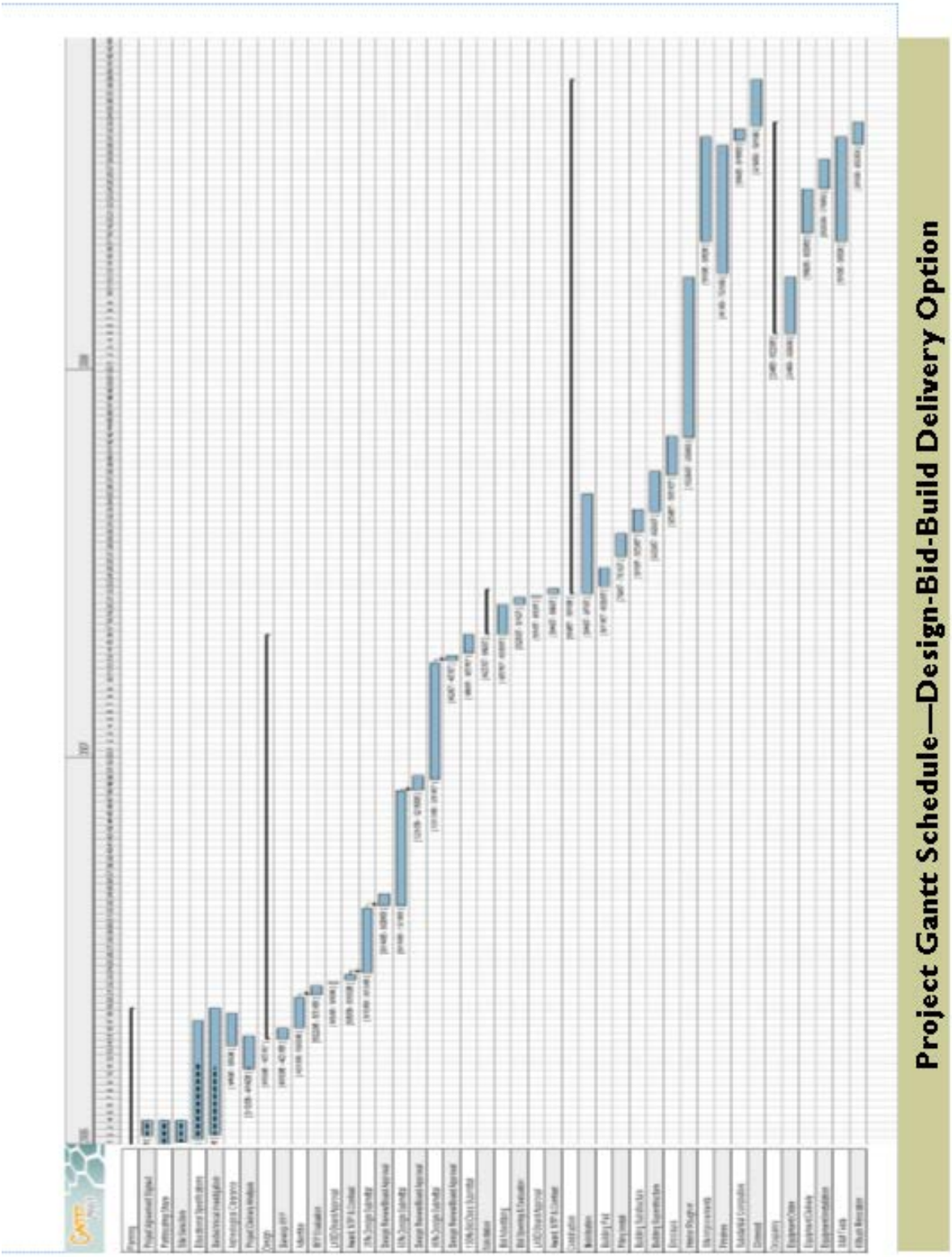
EED Project Delivery Option Matrix

SELECTION METHOD	CONTRACT TYPES: DESIGNER & CONSTRUCTOR (w/SEPARATE CONTRACTS)	CONTRACT TYPES: DESIGNER/CONSTRUCTOR (ONE CONTRACT)
Competitive Sealed Bid (Low Bid) *Total Construction Cost is sole criteria for selection*	Design-Bid-Build	Design-Build-Bid
Competitive Cost Proposal (Best Value) *Total Construction Cost weighted with other factors for selection*	CM/GC Best Value (BV)	Design-Build Best Value (BV)
Competitive Qualifications Proposal (Qualifications Based Selection) *Total Construction Cost is not a factor for selection*	CM/GC QBS	Design-Build QBS

[Note: Adjust markings above as required.]

In summary, the XYZ School District is proposing to use the [Enter name] project delivery method for the [Project Name] project. [Add additional support narrative as needed OR alternative outcomes based on information yet to be finalized or determined.]

Sample School Capital Project—Project Delivery Options Analysis



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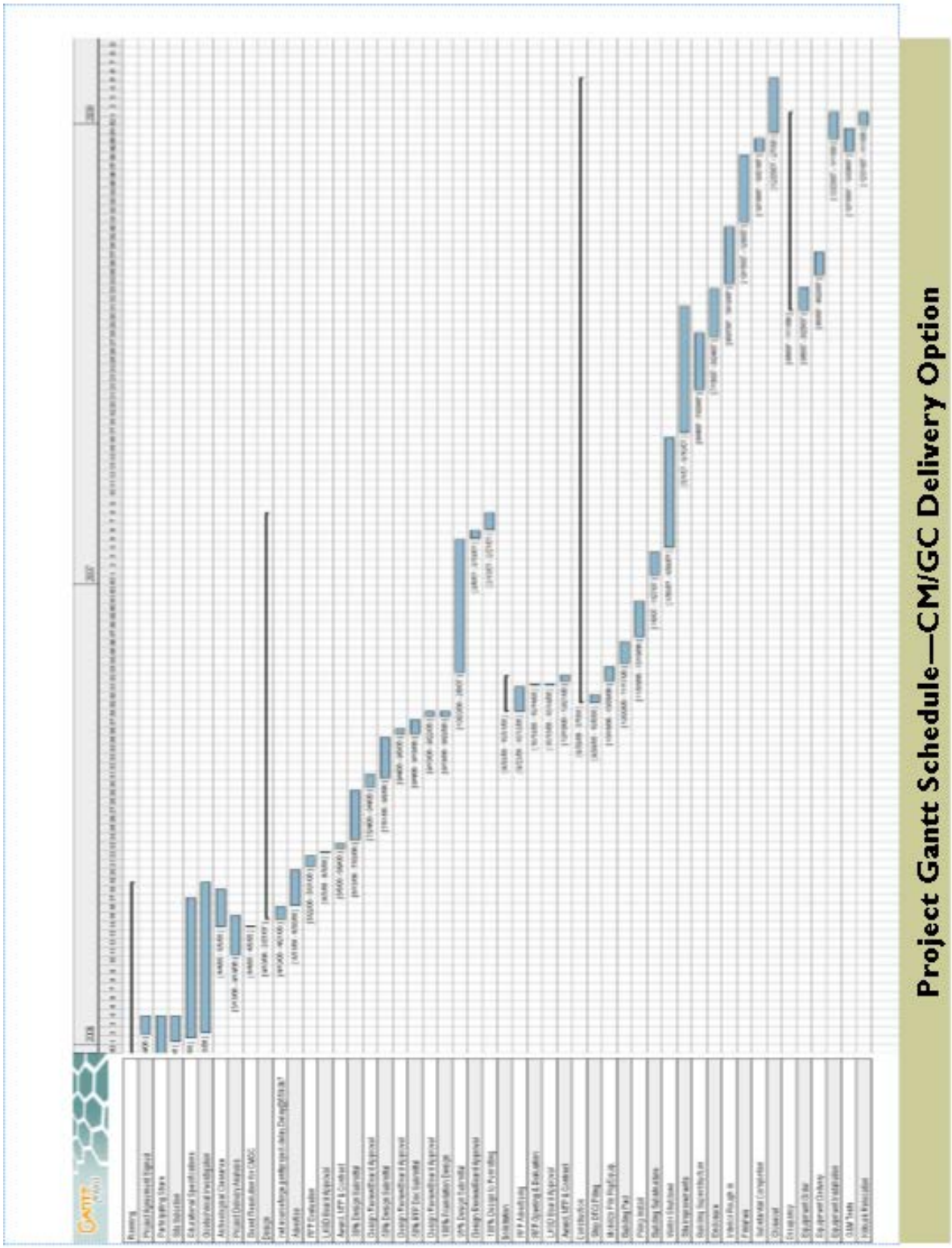
Sample School Capital Project—Project Delivery Options Analysis



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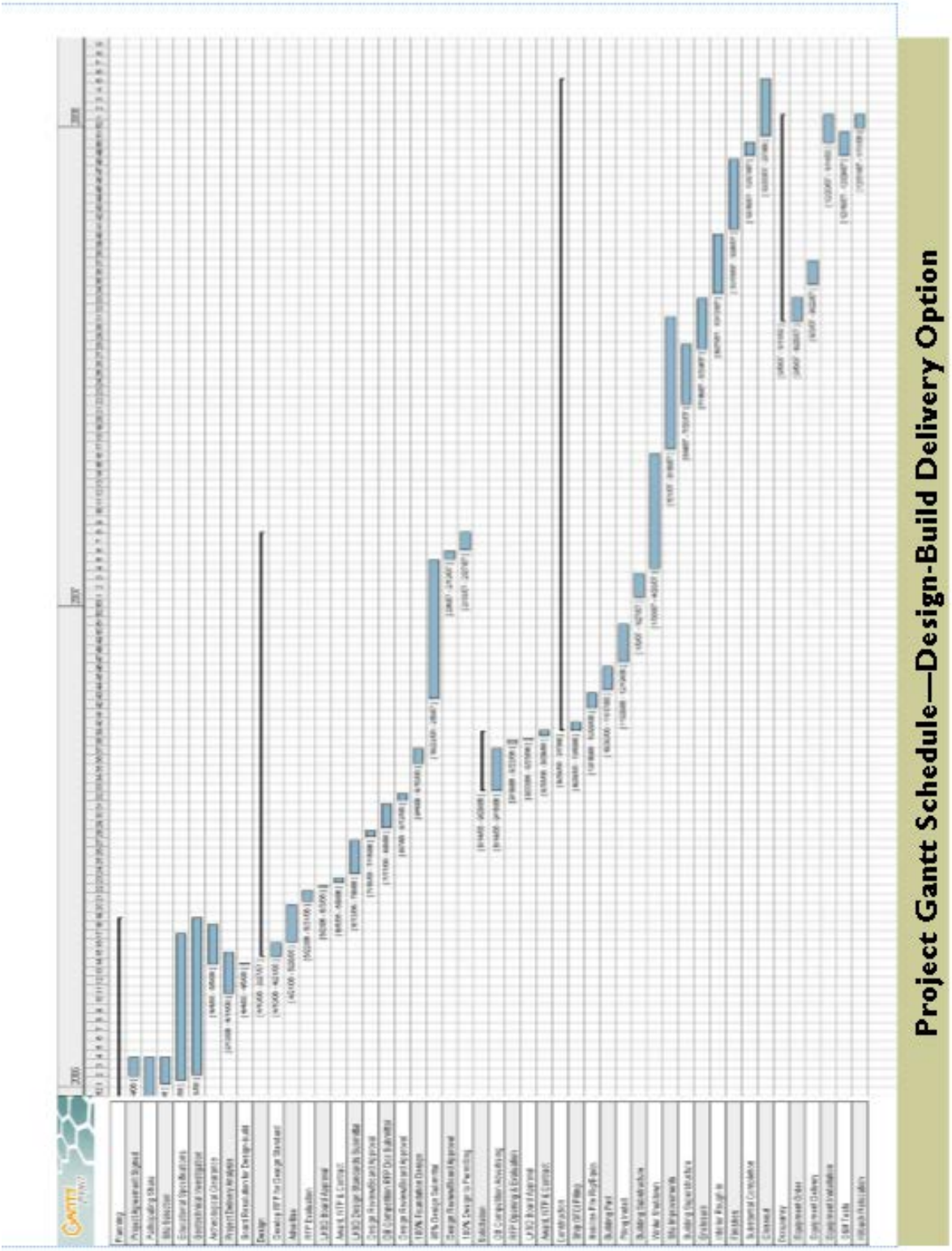
Sample School Capital Project—Project Delivery Options Analysis



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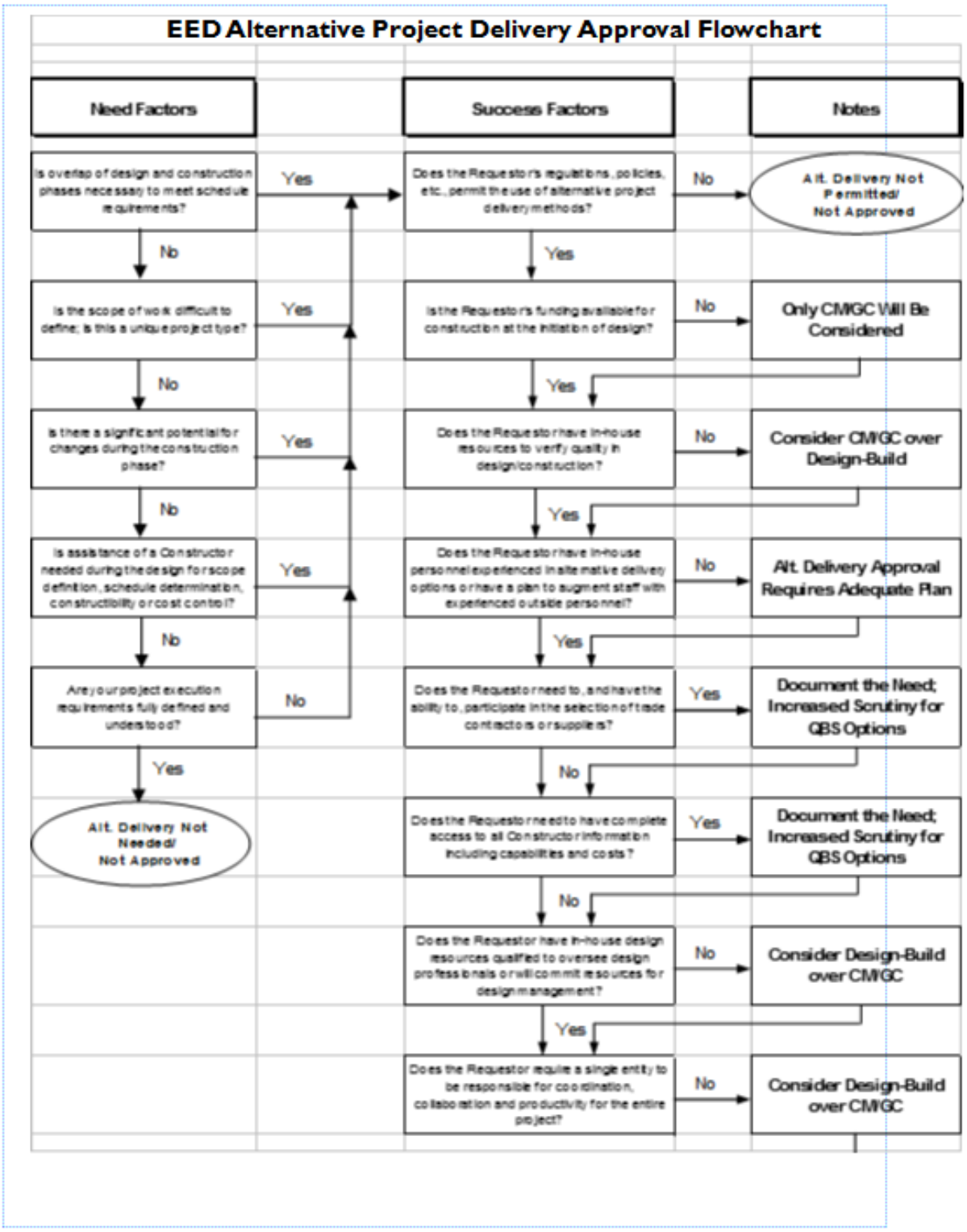
Sample School Capital Project—Project Delivery Options Analysis



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