

CHAPTER 3

PROJECT PLANNING

3.1 RELATED STATUTORY AUTHORITY

- 3.1.1 SC Code § 11-35-1510 provides methods of source selection for awarding state contracts.
- 3.1.2 SC Code § 11-35-1530 provides conditions for use and process for using competitive sealed proposals
- 3.1.3 SC Code § 11-35-3005 provides project delivery methods for the procurements relating to infrastructure facilities.
- 3.1.4 SC Code § 11-35-3015 assigns source selection methods to project delivery methods.
- 3.1.5 SC Code § 11-35-3023 allows for pre-qualification on state construction.
- 3.1.6 SC Code § 11-35-3024 provides additional procedures applicable to procurement of certain project delivery methods.
- 3.1.7 SC Code § 11-35-3030 provides detailed information on bond and security required for state construction.
- 3.1.8 SC Code § 11-35-3037 provides other forms of security an agency may use on a construction project.
- 3.1.9 SC Code § 29-6-250 requires labor and material payment bonds be provided to the agency for contracts in excess of fifty thousand dollars. The bond must be secured by cash or must be issued by a surety company licensed in the State with an "A" minimum rating of performance as stated in the most current publication of "Best Key Rating Guide, Property Liability". If the contract is for less than one hundred thousand dollars, the governmental body may permit the use of a "B+" rated bond if it justifies that use in writing.

3.2 STRATEGIC PLANNING

Infrastructure construction projects should be the culmination of systematic planning starting with a multi-year (typically five years) Comprehensive Permanent Improvement Plan (CPIP). This CPIP should fit into the Agency's strategic plan and the strategic plan should support the need for each facility improvement on the capital projects plan. Thus, project planning should start with the Agency's strategic planning and development of a CPIP.

3.3 DEFINING/PROGRAMMING THE PROJECT

- 3.3.1 Once a project is conceived, it must be defined. A project is defined by answering a series of questions:
 - A. Why is the project being undertaken?
 - B. What will the function of the facility be?
 - C. What amenities and other features must be included in the facility?
 - D. What are the aspirations of the Agency for the project?
 - E. Where will the facility be located?
 - F. Are local governmental approvals such as zoning permits required?
 - G. Does the project impact or involve existing facilities?
 - H. When does the Agency need the facility and what is its likely cost?
 - I. How will the Agency finance the project?
- 3.3.2 The process of analyzing the agency's needs and defining the project is commonly called Programming.
 - A. A well-conceived and defined program is critical to the start and completion of a successful project.
 - B. Some agencies have the capability to program certain projects using their employees, while others will almost always need to contract with a consultant to provide programming assistance.
 - C. While OSE guidance is available, each agency will need to decide for itself whether programming assistance is needed for the particular project at hand.
- 3.3.3 If the agency must acquire land to site the project, it will need to follow the procedures set forth in Chapter 10 - Real Property of this manual.

3.4 SELECTING A PROJECT DELIVERY METHOD

3.4.1 Once the agency has defined the scope, schedule, budget, and means of financing for its project, the agency is ready to select the project delivery method. The Procurement Code requires the agency to make a written determination of the project delivery method that will be most advantageous for the State for the specific project at hand. The following are project delivery methods authorized by statute:

- A. Design-Bid-Build
- B. Construction Management at-Risk (CM-R) also known as CM/Constructor (CM/C);
- C. Operations and Maintenance;
- D. Design-Build (DB);
- E. Design-Build-Operate-Maintain (DBOM);
- F. Design-Build-Finance-Operate-Maintain (DBFOM); and
- G. Any other combination of design, construction, finance, and services for operation and maintenance the State Fiscal Accountability Authority (SFAA) or State Engineer may authorize.

3.4.2 Project Delivery Options Translator

- A. It is normal to find different parties with different understandings concerning what each of the terms used above means. For this reason, some jurisdictions have adopted a project delivery method translator, a version of which is published below. This translator does not include finance, operations, and maintenance additions to the design-build project delivery method.
- B. For the Procurement Code’s definition of each authorized selection method, see SC Code § 11-35-2910.

**PROJECT DELIVERY OPTIONS TRANSLATOR –
DEFINING CHARACTERISTICS OF EACH OPTION**

Design & Construction Services Combined in One Contract	No	No	No	Yes	Yes
Cost of Work a Selection Criteria	Yes	Yes	No	Yes	No
Total Construction Cost Sole Selection Criteria	Yes	No	No	No	No
↓	↓	↓	↓	↓	↓
Common Names Used	Design-Bid-Build - Competitive Sealed Bids	CM-R/ CM Constructor – Competitive Cost Proposal	CM-R/CM Constructor – Competitive Qualifications Proposal (Note: Agency must have strong written justification for approval to make Selection that does not consider fee as a factor.)	Design-Build – Competitive Cost Proposal	Design-Build – Competitive Qualifications Proposal (Note: Code places severe limitations on selection that does not consider price as a factor)
↓	↓	↓	↓	↓	↓
Insert Your Own Name for Each Method					

3.4.3 Agency Assessment of Project and Selection of Project Delivery Method

- A. The Agency should make the determination for which project delivery method to use as soon as sufficient information is available to make an informed decision. This may be either before or after initial establishment of the Permanent Improvement Project (PIP) with the Joint Bond Review Committee (JBRC) and SFAA. Often this will be at the completion of programming.
- B. The Agency must select the method “which is most advantageous to the State and results in the most timely, economical, and successful completion, of the project”. In selecting the method, the Agency must carefully assess the requirements the project must satisfy and other characteristics that would be in the best interest of the State. The Agency assessment must consider and answer who, what, where, when, why, and how questions regarding factors related to the infrastructure facility and how these factors support one delivery method over another. The following specific factors are set forth in the Procurement Code:
 - 1. Facility
 - a. What type of infrastructure facility or service is the Agency acquiring?
 - b. What are the size, scope, complexity, and technological difficulty of the infrastructure facility?
 - c. To what extent are design requirements for the infrastructure facility known, stable, and established in writing?
 - 2. Location of Facility
 - a. What are the attributes the site must have?
 - b. What sites are available?
 - c. Are there unique characteristics of available sites that would impact project?
 - 3. Time Deadlines
 - a. What is the earliest date on-site work can start?
 - b. What is the deadline for completion of the infrastructure facility?
 - c. Does the Agency have critical intermediate deadlines between start and completion of the project?
 - 4. Financing to support design, construction, operations, maintenance, repairs, and demolition over the facility life cycle including:
 - a. What are the projected life cycle costs?
 - b. What are the potential sources of funding for these costs?
 - c. What is the projected cash flow requirement?
 - 5. Available Project Delivery Methods
 - a. What are the comparative advantages and disadvantages of each method for the infrastructure facility?
 - b. How the Agency may appropriately configure and apply each method to fulfill the Agency’s requirements for the infrastructure facility?
 - c. What project delivery methods has the Agency used on similar infrastructure facilities in the past and what were the results?
 - 6. Decision making and administrative services
 - a. Which State personnel are available to the Agency to make decisions and administer the project and what are their relevant experiences, skills, and abilities?
 - b. To what extent can the Agency appropriately assign decision-making and administration to designers, builders, CM-Rs, DBs, DBOMs, DBFOMs, peer reviewers, or operators?
 - c. To what extent can the Agency appropriately assign decision-making and administration to outside consultants, including construction managers agent (CM-A)?
- C. The Procurement Code designates Design-Bid-Build as an appropriate project delivery method for any infrastructure facility project except Guaranteed Energy, Water, or Wastewater Savings contracts (GEWWS). Except in the case of GEWWS contracts, an Agency may choose Design-Bid-Build as the source selection method for a project without further project specific justification; however, a written determination must still be prepared on Project Delivery Method Determination – Design-Bid-Build (SE-300) and placed in the procurement file. The Agency’s recommendation is automatically approved by the Office of State Engineer.

- D. A determination of project delivery method for guaranteed energy, water, or wastewater savings contracts is not necessary as the delivery method is dictated by the nature of guaranteed energy, water, or wastewater savings contracts (i.e. DB or a permutation of DB).

3.4.4 Selecting a Source Selection Method

The source selection method is the method the Agency will use to procure design and construction services. The Procurement Code prescribes source selection methods for most project delivery methods. These methods are as follows:

- A. Design-Bid-Build
1. Architect-engineer, construction management, and land surveying services procured using qualification based selection procedures of SC Code § 11-35-3220.
 2. Construction services procured using competitive sealed bidding as provided in SC Code § 11-35-1520.
- B. Construction Management at Risk (CM-R)
1. Architect-engineer and land surveying services procured using qualification based selection procedures of SC Code § 11-35-3220.
 2. CM-R procured using competitive sealed proposals as provided in SC Code § 11-35-1530 or competitive sealed bidding as provided in SC Code § 11-35-1520. While the Procurement Code does allow procurement of the CM-R using competitive sealed bidding, OSE finds it difficult to imagine the circumstances under which this would be advantageous to the State since bidding would require a complete or nearly complete design negating many of the benefits of this delivery method.
- C. Operations and Maintenance – Any source selection method allowed by SC Code § 11-35-1510.
- D. Design-Build (DB) – Competitive sealed proposals as provided in SC Code § 11-35-1530.
- E. Design-Build-Operate-Maintain (DBOM) – Competitive sealed proposals as provided in SC Code § 11-35-1530.
- F. Design-Build-Finance-Operate-Maintain (DBFOM) - Competitive sealed proposals as provided in SC Code § 11-35-1530.
- G. Any other combination of design, construction, finance, and services for operation and maintenance SFAA or State Engineer may authorize pursuant to SC Code § 11-35-3005(2) - Any source selection method allowed by SC Code § 11-35-1510.

3.4.5 Written Determination of Appropriate Project Delivery Method

- A. After selecting the most advantageous project delivery method, the Agency must prepare a written report (determination) signed by the Agency Head which sets forth the facts and considerations leading to the selection of the particular method. This determination must:
1. Describe the selected project delivery method;
 2. Describe the source selection method (See Section 3.4.4 above);
 3. Describe any additional procurement procedures (See Section 3.5 for allowed additional procedures);
 4. Describe the types of performance security selected (See Section 3.6 and Chapter 2); and
 5. Set forth the facts and considerations leading to these selections:
 - a. Address factors discussed in Section 3.4.3 above including why other delivery methods are either not practical or not advantageous to the State;
 - b. Set forth basis for selecting source selection method (if by statute, cite the statute);
 - c. Set forth basis for selecting additional procurement procedures; and
 - d. Set forth basis for selecting performance security (if by statute, cite the statute).
- B. The written determination must meet the requirements set forth in Sloan v. Greenville County, 356 S.C. 531, 590 S.E.2d 338 (Ct. App. 2003). The Agency will find the Sloan decision posted at https://procurement.sc.gov/files/Sloan_v._Greenville_School_Dist_%5B98-CP-23-2816%5D.pdf. Under Sloan, the determination must fulfill two purposes:
1. It must effectively inform the State Engineer and, by extension, SFAA, why the selected method of contract administration works to the Agency and the State's best advantage for the project at issue, and
 2. It must provide the citizens of South Carolina a window into the Agency's "decision-making process – safeguarding the quality and integrity of the contract awards through public accountability." "If the written determination provides sufficient factual grounds and reasoning for the ... public to make an informed, objective review of these decisions, then it has accomplished its purpose." Sloan.

- C. The Agency must submit the signed written determination to the State Engineer along with a request to use the alternative method. The State Engineer has ten days to review and determine his position with respect to the proposed method. If the State Engineer disagrees with the agency, the State Engineer shall provide written notification to SFAA and the agency stating the reasons for contesting the selected method. SFAA shall make the final decision as to the approved method of construction contracting.

3.5 SELECTING ADDITIONAL PROCUREMENT PROCEDURES

3.5.1 After, or in conjunction with, selecting the project delivery and source selection method, the Agency should determine if it wants to use additional construction procurement procedures permitted by the Procurement Code. These procedures include pre-qualification of contractors and subcontractors, short listing of offerors, and stipends.

3.5.2 Approval to Pre-Qualify Bidders/Offerors and Sub-Bidders/Offerors

- A. Agencies may request approval from OSE to limit participation in a solicitation for construction to those businesses, including potential subcontractors that are prequalified.
- B. The Agency may submit its written request to OSE for approval of pre-qualification as a part of the written determination of project delivery method discussed above.
- C. The request must include a description of the general scope of work to be acquired, the deadline for submission of information, and how businesses may apply for consideration.
- D. If OSE approves pre-qualification of bidders/offerors, OSE must supervise the pre-qualification process.
- E. If the selected project delivery method is Design-Bid-Build, the Agency must demonstrate that the construction will exceed \$10 million or that the project is so unique in nature or involves such special circumstances that pre-qualification is necessary or otherwise warranted. For DB, DBOM, and DBFOM projects, the Agency must show that cost of preparing proposals is sufficiently high in view of the size, estimated price, and complexity of the procurement as to justify pre-qualifying offerors.
- F. The Procurement Code does not specifically discuss pre-qualifying offerors for CM-R services; however, applying the standards for justifying pre-qualification of bidders/offerors for DB or Design-Bid-Build services provides a reasonable framework for justifying pre-qualification of CM-R offerors.
- G. Pre-qualification for Design-Bid-Build and DB have significant differences regarding the limits an Agency may place on the number of businesses it pre-qualifies. In the context of Design-Bid-Build, the Agency may not use pre-qualification to exclude otherwise qualified (responsible) firms from competition by limiting competition to a predetermined number of the highest ranked offerors. The Agency must solicit proposals from all businesses that meet the published minimum requirements.
- H. In the context of DB, pre-qualifying offerors is essentially a method of short listing. Using only the criteria set forth in the request for qualifications, the Agency ranks each business from most qualified to least qualified. The basis of the ranking is determined in writing. The Agency then selects a predetermined number of the highest ranked businesses from which it will solicit proposals. OSE recommends the Agency select a minimum of three businesses. If fewer than two businesses are pre-qualified, the Agency must cancel the pre-qualification process. The determination regarding how many offers to solicit is not protestable.
- I. In determining whether or not to pre-qualify bidders and/or sub-bidders, the Agency must keep in mind that certain decisions made in the prequalification process are protestable. For instance, on a Design-Bid-Build project, the determination that a particular contractor is not qualified is protestable on the grounds that the Agency's decision is "clearly erroneous, arbitrary, capricious, or contrary to law". On a DB project, the determination that one offer is more highly qualified than another is protestable on the same grounds.
- J. The actual process of pre-qualifying offerors is addressed in Chapter 11 or 12 (depending on the selected project delivery method) of this manual and the Pre-Qualification Handbook.

3.5.3 Additional Procedures Applicable to Design-Build, Design-Build-Operate-Maintain or Design-Build-Finance-Operate-Maintain

- A. If the Agency determines the cost of preparing proposals is high in view of the size, estimated price, and complexity of the project, the Agency may:
 1. pre-qualify offerors as discussed above,
 2. short list responsible offerors in accordance with provisions set forth in this manual, or,
 3. pay stipends to unsuccessful offerors.

- B. The decision to use these alternative procedures should be made at the time the Agency prepares its written determination of appropriate project delivery method.
- C. If the Agency determines it is appropriate to use one of the additional procedures, it should state so in the written determination of appropriate project delivery method and set forth the factors supporting its use.
- D. Short listing differs from pre-qualification in that it occurs after receipt of proposals rather than before. Under this process, the Agency would receive proposals from any interested business and short list a predetermined number of responsible offerors reasonably susceptible of being selected prior to any discussions.
- E. Stipends are intended to stimulate interest in a project among potential offerors by notifying them that the Agency will partially compensate unsuccessful offeror's for the significant cost of preparing a proposal.

3.6 SELECTING PERFORMANCE AND PAYMENT SECURITY

3.6.1 At the same time an Agency determines which project delivery method to use on a project, it must also determine the performance and payment security requirements for the project and set these requirements forth in its written determination of appropriate project delivery method.

- A. Performance security guarantees that the contractor will perform the work of the contract and payment security guarantees that the contractor will pay his subcontractors, suppliers, laborers, etc.
- B. Both performance and payment security are required in the amount of 100% of the contract price less the cost of operation, maintenance, and finance.
- C. The Agency may also require the contractor to provide operations and maintenance period security in the form of surety bonds and letters of credit covering cost of preventing infrastructure service interruptions for a period up to 12 months and the Agency may require written guarantees from a parent corporation securing re-procurement cost in the event of operations period default.

DELIVERY METHOD	CONTRACTOR	SECURITY REQUIRED	OPTIONAL SECURITY (Only required when Agency chooses this option)
Design-Bid-Build	General Contractor with contract \leq \$50,000	None	Performance Security \leq 100% contract price & Payment Security \leq 100% contract price.
	General Contractor with contract $>$ \$50,000	Performance Security = 100% contract price & Payment Security = 100% contract price.	N/A
CM-R	Construction Manager-at-Risk	Performance Security = 100% of construction phase Guaranteed Maximum Price (GMP). Payment Security=100% construction phase GMP	May require security for pre-construction phase work.
DB	Design-Builder	Performance Security = 100% of contract price & Payment Security = 100% of contract price (Contract Price includes design costs)	N/A
DBOM	Design-Build-Operator	Performance Security Performance Security = 100% of contract price less cost of operations and maintenance & Payment Security = 100% of contract price less cost of operations and maintenance.	Operations Phase performance bond; letter of credit to cover cost of preventing infrastructure service interruptions for a period up to 12 months; and/or parent corporation written guarantee securing re-procurement cost in contractor defaults during operations period.
DBFOM	Design-Build-Operator	Performance Security = 100% of contract price less cost of financing, operations, and maintenance & Payment Security = 100% of contract price less cost of financing, operations, and maintenance.	Operations Phase performance bond; letter of credit to cover cost of preventing infrastructure service interruptions for a period up to 12 months; and/or parent corporation written guarantee securing re-procurement cost in contractor defaults during operations period.

3.6.2 Form of Required Performance and Payment Security

A. Performance Security

1. When the Procurement Code requires performance security, the contractor must provide a certified cashier's check or surety bond in an amount equal to 100% of the contract price less finance, operations, and maintenance costs, if any.
2. A performance bond must be issued by surety company
 - a. licensed in South Carolina;
 - b. having a minimum Best Rating of performance. "A" as stated in the most current publication of "Best Key Rating Guide, Property Liability"¹; and
 - c. having a financial strength rating of at least five (5) times that portion of the contract price that does not include operations, maintenance, and finance.
3. If the contractor provides a performance bond, the Surety must write the bond on the Performance Bond (SE-355).

B. Payment Security

1. When the Procurement Code requires payment security, the contractor must provide a certified cashier's check or surety bond in an amount equal to 100% of the contract price less finance, operations, and maintenance costs, if any.
2. A payment bond must be issued by surety company
 - a. licensed in South Carolina;
 - b. having a minimum Best Rating of performance "A" as stated in the most current publication of "Best Key Rating Guide, Property Liability"¹; and
 - c. having a financial strength rating of at least five (5) times that portion of the contract price that does not include operations, maintenance, and finance.
3. If the contractor provides a payment bond, the Surety must write the bond on the Labor and Material Payment Bond (SE-357).

3.6.3 Form of Optional Performance and Payment Security

- A. Contracts of \$50,000 or less** -: When security is required on construction of \$50,000 or less, security shall be in the form set forth in 3.6.2 above. However, the agency may, upon written justification and with the approval of OSE, allow the use of a "B+" rated bond.

B. Operations Phase Security

1. Performance Bond
 - a. The Agency may choose to require an operations period performance bond securing the timely, faithful, and uninterrupted performance of operations and maintenance services required under the contract.
 - b. An operations period performance bond must be in the amount of 100% of that portion of the contract price that includes the cost of operation and maintenance services during the period covered by the bond. When contract period for operation and maintenance will be longer than 5 years, an operations period performance bond of five years' duration, is acceptable provided that such bond is renewable by the contractor every five (5) years during the contract, and provided further, that the Agency must require the contractor to make a firm contractual commitment to maintain such bond in full force and effect throughout the contract term.
 - c. An operations period performance bond must be issued by a surety company
 - 1) licensed in South Carolina;
 - 2) having a minimum Best Rating of performance "A" as stated in the most current publication of "Best Key Rating Guide, Property Liability"¹; and
 - 3) having a financial strength rating of at least five (5) times that portion of the contract price that does not include operations, maintenance, and finance.

¹For Best Ratings, go to <http://www.ambest.com/home/default.aspx>. The Agency must register with the site to conduct a search. There is no cost to register.

2. Letters of Credits to Cover Interruptions in Operation
An Agency may choose to require an irrevocable letter of credit with a banking institution in this State that secures the timely, faithful, and uninterrupted performance of operations and maintenance services required under the contract, in an amount sufficient to cover 100% of the cost of performing such operation and maintenance services during the first 12 months of the contract with annual adjustments every year thereafter for the term of the contract.
3. Guarantees
An Agency may choose to require a written guarantee that secures the timely, faithful, and uninterrupted performance of operations and maintenance services required under the contract, in an amount that is sufficient to cover 100% of the cost of performing such operation and maintenance services during the contract period.

3.7 ESTABLISHING THE PROJECT

- 3.7.1 Once OSE has approved the selected project delivery method, the agency is ready to proceed with the next step, if the project is sufficiently large, in establishing a PIP by obtaining a Phase 1 approval from the JBRC.
- 3.7.2 The procedure for determining if a project needs to be established as a PIP and initiating a PIP is set forth in Chapter 2 through 5 of the Manual for Planning and Execution of State Permanent Improvements, Part I.
- 3.7.3 Phase 1 approval will allow the agency to define the project by developing the program, budget, and schedule.
 - A. If the selected project delivery method is Design-Bid-Build, the agency may continue under Phase 1 approval through the completion of schematic design prior to obtaining JBRC Phase 2 approval, which will allow the agency to proceed with complete design, bidding, and construction.
 - B. While the same is true if the agency selected CM-R, in such case, the agency may want to seek permission to hire the CM-R as a part of Phase 1 approval. This will enable the CM-R to provide valuable input during the development of the schematic design.
 - C. If the selected method is DB, DBOM, or DBFOM, the agency will, finish developing its design requirements under JBRC Phase 1 approval and then obtain JBRC Phase 2 approval to proceed with soliciting and contracting with a design-builder.