

7.30.1.1 General Notes

- Builder must be licensed as a Class A Contractor in Virginia by DPOR.
- Responsible design professionals must be licensed in Virginia by DPOR as Architects and Professional Engineers.
- Design must conform to the scope as authorized by the CO-2.
- Design must conform to CPSM Chapter 4 - Technical Requirements.
- Design must conform to current VUSBC and handicapped accessibility standards.
- Must use all applicable CO-Forms, Contracts, etc for the project, including the CO-7 DB and CO-9 DB.
- If the Agency does not contract for a Value Engineering Study, the Agency must submit a written request to waive the VE Study requirement to the Director, Engineering and Buildings, if the project value exceeds \$5,000,000.
- The Agency arranges a "Pre-Design" meeting with BCOM to coordinate the documents that will be required for the building permit. Determine whether partial building permits will be issued.
- The Agency submits documents to BCOM for review and building permit. See Section 7.35.
- The Agency is required to contract for independent Structural and Special Inspections, paid for by the Agency separately from the D/B contract. See Appendix M for more information.
- The Work shall be inspected by other than the D/B Contractor, to assure conformance with the plans and specs – usually by the Agency's project inspector.
- Inspections by the State Fire Marshal are required.
- Inspections by BCOM are required.
- A Certificate of Use and Occupancy is required.

7.30.2 Design-Build Procurement – Prototype Building

The procedures for utilizing Design-Build procurement for a Prototype building are similar to the basic procedures above, except as follows:

Select a Prototype design to use (Plans and Specifications). Make the changes required for adapting to the specific site.

The Agency makes a presentation to the AARB for approval of the Prototype at the specific location.

7.31 CONSTRUCTION MANAGEMENT AT RISK (CM) PROCUREMENT PROCEDURES

Construction Management at Risk is another alternate construction delivery method. The Agency holds two contracts: a contract for professional A/E design services, and also a two-phase contract with the CM at Risk Contractor. See Sections 7.35 and 7.35.1.1. Refer to the DGS Forms Center for required forms and click on the link below for Construction Management procedures approved by the Secretary of Administration:

CONSTRUCTION MANAGER AT RISK PROCEDURE

7.31.1 Guidelines for Construction Manager "At Risk" Procurement – Basic Procedure

"CM at Risk" is Construction Management where the CM provides a Guaranteed Maximum Price (GMP) for the Construction and all related services and is "At Risk" for constructing the entire project within the GMP.

1. Construction Manager Selection: Selection and is structured into 2 phases: Pre-Qualification and Selection.

- a. **Pre-Qualification Criteria:** The evaluation committee shall develop a list of qualification criteria for inclusion in the Request for Qualification (RFQ). At a minimum, the qualification criteria shall include the following:
 1. Appropriately licensed and in good standing as a Class A General Contractor in the Commonwealth of Virginia.
 2. Ability to demonstrate the ability to obtain appropriate insurance coverage for the project.
 3. Appropriate bonding capacity.
 4. A listing of experience of at least three projects of similar scope, complexity, and delivery method including construction cost, schedule, and Owner or Architect representative's contact information.
 5. A list of at least three professional references including contact information.

- b. **Request for Qualifications:** The evaluation committee shall issue a Request for Qualifications in accordance with the procedure adopted by the Secretary of Administration and evaluate the responses to establish a pre-qualified list of proposers. The basis of selection shall be the Owner's evaluation of which Qualification Statements demonstrate the greatest conformance with the requirements set forth in the RFQ.

- c. The evaluation committee will send Request for Proposals (RFP) to the pre-qualified firms and request submission of formal proposals from them. All RFP's shall request the following information:
 1. A lump sum fee for Pre-construction Services in accordance with the scope of services included in the RFP.
 2. A General Conditions Fee based upon an anticipated duration set by the Agency detailed in a specific listing of General Conditions items and their associated cost. (See worksheet DGS-30-468).
 3. An Insurance and Taxes Fee expressed as a rate (percentage) to include all insurance costs such as general liability insurance, builder's risk insurance, payment and performance bonds, and any other insurance costs that are required by the contract and any taxes such as local business licenses or other taxes that are required for the completion of the work expressed as a percentage. The Insurance and Taxes Fee is to be inclusive of all items, other than design or CM contingencies, CM Fee, or General Conditions Fee, that will be included in addition to the cost of the work in establishing the Guaranteed Maximum Price and the final contract value.
 4. A CM/GC Fee to include all home office expenses, overhead and profit during the construction phase of the Contract.

- d. The agency shall NOT request budget estimates as a part of the RFP response.

- e. Selection of the Construction Manager based upon the RFP responses' conformance with the criteria contained within the RFP and shall be made in accordance with the procedures adopted by the Secretary of Administration.

- f. The CM Fee and the Preconstruction Services Fee shall be evaluated based upon the sum of those fees and not individually.

2. **Construction Manager at Risk Contracts:** The CM at Risk contracts are structured into two phases:

- a. Phase 1: Pre-Construction Phase Services: These services are subject to the *Terms and Conditions for Non-Professional Services* and will be performed for a stipulated or fixed amount.
 - o Use form CO-9 – CM (1)
 - o The Phase 1 contract is associated with the work of the CM at Risk prior to the start of construction activities.
 - b. Phase 2: Construction Phase Services: These services are contingent upon the CM at Risk providing an agreeable GMP to the Owner.
 - o Use form CO-9 – CM (2)
 - o The Part 2 contract is associated with the work of the CM at Risk during the construction portion of the project.
 - c. In the event of phased permitting where the drawings and specifications are not complete for portions of the project, but where early release packages have been bid and permitted, the agency shall use form CO-9CM (ER) for the release of the work for those packages. Early release packages shall be established based upon approved working drawings for the work of that package and the value of the early release shall serve as an interim GMP for the work pending the full GMP for the project. The intermediate packages shall correspond with the partial permits being issued (example: clearing & grubbing, grading, or site utilities) or shall be for long lead items that need to proceed in order to maintain the project schedule (example: mill orders for structural steel). The early release packages are allowed provided permission has been granted by the Director, Division of Engineering and Buildings and that the agency acknowledges that if the Final GMP exceeds the approved budget (See Form DGS-30-299 on the Forms Center), the agency shall find alternate agency funds to supplement the allotted funding or identify scope of work that can be eliminated to reduce the project cost without impacting the program function or code compliance of the building. See Appendix C for guidance in complying with this requirement.
3. If a GMP cannot be agreed upon, the Contract for Phase 1 is concluded and the Agency would not enter into a Phase 2 contract with the CM at Risk. At this point in the process, the documents are substantially complete; and after review and approval by the Director, Division of Engineering and Buildings, the project may be Bid using standard competitive sealed bidding to the pre-qualified CM at Risk proposers or the Agency may entertain a GMP from the other pre-qualified CM at Risk proposers if factors remain that sustain the benefit of the CM at Risk process.

7.31.1.1 General Notes

- The CM firm must be licensed in Virginia by DPOR as a Class A Contractor.
- If the Agency does not contract for a Value Engineering Study, the Agency shall submit a written request (to waive the VE Study requirement) to the Director, Engineering and Buildings.
- Have "Pre-Construction" meeting with BCOM to coordinate the documents that will be required for the Building Permit and whether partial permits will be issued for early phases of the work.
- Submit documents to BCOM for Review and Building Permit.
- The Agency is required to contract for independent Structural and Special Inspections, paid for by the Agency separately from the CM contract. See Appendix M for further information.
- The work must be inspected by other than the CM "AT RISK" Contractor to assure conformance with the plans and specs – usually by the Agency's Project Inspector.

- Inspections by BCOM and State Fire Marshal's Office Representatives are required.
- A Certificate of Occupancy is required.
- Must use all applicable CO- Forms and Contracts for the project.
- Must use an MOU Template (DGS-30-465) but made project specific.

7.31.2 Pre-Construction Phase

The Preconstruction Period shall include the following meetings and deliverables along with any other items indicated in the CM Contract for Pre-Construction Phase Services (CO-9CM(1)):

Project Kick-off Meeting

Meeting including the Agency Project Manager, A/E, CM at Risk, and other personnel as required.

The following items shall be addressed as part of the meeting:

- o Status of project drawings/specifications.
- o Schedule constraints.
- o Key building components.
- o Key site limitations or work rules related to the project.
- o Project budget.
- o Each team member's roles and responsibilities.

Project Schedule

With input from the Owner and A/E, the CM shall produce a CPM project schedule for use by the project team during the pre-construction phase of the project. The CM shall update this schedule on a monthly basis (at a minimum) or as the project requires. The project schedule shall include:

- o Key milestones.
- o A construction schedule projecting the major construction activities' sequence and durations
- o Activities indicating the production of design documents for the various stages of design and phases of permitting.
- o The various activities related to the CM at Risk's preconstruction effort such as completion of the cost studies, solicitation of bids, and development of the GMP.
- o Activities and major decisions that are the responsibility of the Owner.

Progress Meetings

Meetings shall be held on a monthly basis (at minimum) or as the project requires. The following items shall be addressed as part of the meeting:

- o Status of project drawings/specifications
- o Schedule status
- o Outstanding issues related to key building components or systems.
- o Any changes in site limitations or work rules related to the project.
- o Project budget status
- o Project savings opportunities.

7.31.3 Construction Phase

The Construction Phase shall include the following meetings and deliverables along with any other items indicated in the CM Contract for Construction Period Services (CO-9CM(2)):

The CM shall coordinate and manage the Work to be performed by all of the subcontractors through to project completion and final acceptance, including punch-list work. The CM shall be responsible for keeping the project on schedule, and ensuring that the subcontractors furnish materials and perform the work according to the construction documents.

The following is a partial list of contract administration activities that the CM shall perform in cooperation with the A/E and commissioning agent for all subcontracts:

- Keeping records
- Reporting progress

- Controlling schedules
- Conducting meetings
- Processing submittals
- Processing progress payments
- Coordinating/scheduling/monitoring safety
- Inspecting
- Monitoring testing
- Responding to requests for information (RFI's)
- Processing contract change orders
- Maintaining as-built drawings
- Performing photographic services
- Performing other services
- Coordination of construction sequences and phases
- Generation and presentation to the Owner of construction phasing
- Confirm existing conditions
- Coordination and scheduling of owner provided inspection forms

7.31.3.1 Record Keeping

Examples of documents and files to be maintained (but not limited to) are:

- Correspondence
- Annotated submittals, including approved shop drawings, product data, and samples
- Formal and pending contract change orders and directives with documentation
- Value engineering change proposals
- Claims and supporting documentation
- Minutes from progress meetings
- Budget records to include invoices and supporting documentation
- Documentation of all clarifications and decisions
- Documentation of all dust, noise, fumes or vibrations complaints and their resolution
- Inspection and progress reports
- CM's monthly status reports
- Construction Trade, material, and equipment contracts/purchase orders
- Construction drawings and specifications updated on a current basis to record changes and selections made
- Addenda
- Permits, certificates, and governmental approvals
- Phone logs and memos
- Expense records
- Warranties and guarantees
- Project photographs
- Commissioning paperwork and certifications
- Record Drawings

7.31.3.2 Progress Reporting

The CM will submit bi-weekly reports to the Owner's Project Manager and A/E on the status of construction, including updated copies of all logs maintained at the site for change orders, claims, submittals, etc. The CM will submit monthly reports by the 5th working day of each month in 8 1/2" x 11" format including the following information:

- Update of the master Project schedule with analysis
- Inspection report, list of inspections that the Contract Documents require, and deficiencies, delays, and omissions
- Summary of outstanding and potential problems and issues, including notices of intent to file claims
- Summary of issues resolved, decisions reached, clarifications, instruction, commissioning etc.

- Submittal log
- Progress photos
- Minutes from meetings held during the month
- CM Contingency log
- Change Order Proposal(COP) log
- Request for Information(RFI) log

7.31.3.3 Schedule Control

The CM shall generate, at Project's beginning, a master Project schedule chart. This schedule shall break down all CM and subcontractor Project activities through substantial completion in accordance with the requirements of the General Conditions (CO-7CM). It shall also include Owner activities which impact the schedule and the Owner's occupancy requirements. It shall be kept up to date to reflect construction phasing and commissioning activities.

The CM shall continuously monitor actual progress against the schedule and identify any delays or potential delays. If the CM encounters or anticipates delays, it will recommend recovery actions to the Owner's Project Manager to mitigate the delays and implement approved, remedial measures.

7.31.3.4 Progress Meetings

Progress Meetings shall be held a minimum of two times per month, or more often as the Owner's Project Manager deems necessary to facilitate the efficient completion of the project. Normally the following will attend the progress meetings:

- Owner's Project Manager
- Owner's Inspector
- CM Project Manager and CM Superintendent
- A/E representative(s)
- Subcontractor superintendent(s) - As needed
- Facilities Operations and Maintenance representative(s) - As needed
- Parking Services representative (parking permitting) – As needed
- Campus Police representative (security/traffic control) – As needed

A typical agenda for the progress meetings is as follows:

- Progress update
- Commissioning status
- Schedule update w/ upcoming activities (next 30 days/critical dates)
- Submittal status
- RFI status
- Change Order Proposal (COP) log
- Change Order Log
- CM contingency status
- Payment request review
- Issues / old and new
- New Business

The CM shall prepare and promptly distribute minutes from each meeting to the Owner, A/E, and Subcontractors

7.31.3.5 Inspection

The CM shall have the overall responsibility for scheduling, coordinating, and inspecting all of the subcontractors' workmanship, materials, and equipment to ensure conformity with requirements of the contract documents (including the contract drawings and specifications, subsequent contract change orders, and approved submittals).

The CM will make quality determinations based on the records and inspections to ensure complete contract compliance, to protect the Owner against defects, deficiencies, omissions, and delays. Throughout construction the CM will maintain an up-to-date "rolling punch list" of defects, deficiencies, delays, and omissions as well as corrective actions taken. The CM will prepare and maintain inspection reports according to the CPSM's inspection and acceptance requirements.

7.31.3.6 Coordinate / Monitor Testing

Under direct contract to the Owner the independent certified testing company(s) will be responsible for conducting the required verification tests, retaining all samples, and for submitting test results to the Owner, A/E, and CM. The CM will review the Subcontracts, identify all tests required by the Contract Documents to be performed by the testing company(s), and prepare a complete testing schedule. The Commissioning Agent will be integral to the generation of this schedule. The CM's responsibilities with regard to testing shall include:

- Coordination with testing agency for scheduling of test
- Verifying that tests are conducted as scheduled
- Witnessing tests selected by the CM, A/E, Commissioning Agent and Owner's Project Manager
- Reviewing test and retesting results and documenting with Contract Documents
- Retaining test and retesting records
- Summarizing significant test results in progress reports
- Notifying immediately the Owner of test failures and, with A/E, planning corrective actions
- Overseeing corrective actions and retesting until issue resolution

7.31.3.7 Requests for Information.

The CM shall coordinate responses from the CM, A/E, and Owner to the Subcontractors' requests for information. The CM will consult with the A/E on technical matters, including requests for interpretations of the meaning and intent of the drawings and specifications, or with the Owner on administrative matters. The CM is responsible for facilitating information requests to keep response times to a minimum. The CM will maintain copies of the final answers to information requests as part of the Project records.

7.31.3.8 Photography

The CM is responsible for procuring at its expense; construction photographs of items that may be the subject of Subcontractor claims, or that require documentation. The photographer will label each photograph with at least the following:

- Project, Building, City, State
- Name of Construction Trade Contractor
- Date and time taken
- Description of weather conditions
- Subject matter and view point
- Name of CM, photographer, and observer, if any

7.31.3.9 Project Commissioning

The Owner shall engage a third-party commissioning agent to conduct an enhanced commissioning of building systems. Prior to this, the CM shall coordinate a systematic process to ensure that the mechanical, electrical and plumbing (MEP), audio-visual and all other systems are fully functional in accordance with the design intent generated by the Project documents and the Owner's operational needs, and the personnel charged with maintaining and operating them are trained (not merely familiarized) to perform operation and maintenance. The CM shall work with the A/E to coordinate and implement a systematic process to ensure that the mechanical, electrical and plumbing (MEP), audio-visual and all other designated systems are fully operational and compliant with the contract documents.

The personnel charged with maintaining and operating them shall be trained to the point that they are fully capable of operating and maintaining the building systems to perform in accordance with the Project's design intent and the Owner's operational needs.

The CM will ensure that the Subcontractors have a complete understanding of the systems testing and commissioning requirements placed on them by the contract through the A/E. This includes, but is not limited to, providing single-line diagrams and sequences of operations as required.

7.31.3.10 Project Close-Out

The CM shall secure and transmit to the A/E all warranties, operations and maintenance manuals, and similar submittals required by the Contract Documents, for approval by the A/E, before delivery to the Owner. The CM shall also deliver all keys, record documents, and maintenance stocks to the Owner.

7.32 PUBLIC PRIVATE EDUCATION FACILITIES AND INFRASTRUCTURE ACT OF 2002 (PPEA) PROCUREMENT PROCEDURES

Procedures for the PPEA procurement methods can be found on the DGS Website. Projects utilizing PPEA still require inspection by BCOM and must comply with the VUSBC. The agency is strongly encouraged to include CPSM technical or procurement standards in the Comprehensive Agreement to ensure the overall quality and lifecycle costs are in accordance with the agency's goals and procurement is in accordance with the standards set by the agency are maintained.

7.33 OTHER SPECIAL CONSTRUCTION DELIVERY METHODS

7.33.1 Energy Performance-Based Contract (ESCO)

Procedures for the ESCO procurement methods can be found on the DGS Website. Projects utilizing ESCO still require inspection by BCOM and must comply with the VUSBC.

7.33.2 Purchases & Installation of Facility-Related Equipment

One of the Capital Project/Non-Capital Project classifications listed in Section 7.2 must be used based upon the size of the project and the funding source. Comply with definition of construction vs. non-construction procurement and associated requirements of the CPSM and APSPM as they apply. (Section 7.2.6) Refer to Chapter 4 and Appendix P for permitting requirements. No construction work is to be procured under the APSPM procedures,

7.34 PREQUALIFICATION PROCEDURES

An agency may prequalify contractors for a particular construction project and limit consideration of bids or proposals to prequalified contractors (Code of Virginia, §2.2-4317). The procedures contained in this Section shall be used for prequalification of contractors for a particular construction project. The agency may prequalify general contractors or selected subcontractors or both. Any prequalification of contractors and/or subcontractors shall be conducted in accordance with the procedures stipulated in this Section and Code of Virginia, §2.2-4317, and sufficiently in advance of the bid receipt date to allow potential contractors a fair opportunity to complete the process.

7.34.1 Objective

The objective of prequalification shall be to qualify as many contractors as possible to bid on the proposed work. Prequalification is most frequently used for projects with sophisticated building systems, a unique site or constructability issue or where project scheduling or sequencing is critical.

The bar chart in Figure 7.34.1 depicts reasonable timeframes for elements of the prequalification process. Shorter times may be used, provided they are consistent with the intent of the minimum