



Capital
Development
Board

Building a Better Illinois



DESIGN AND CONSTRUCTION MANUAL

JANUARY 2024



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INTRODUCTION

Welcome to the 2024 edition of CDB's design and construction guide for architects and engineers.

In 2002, the Design and Construction Manual was created so that all project phase requirements - from design through closeout - were included in one manual, so the A/E has one main reference to look to. The legal language, insurance requirements, and a skeleton description of the A/E duties and responsibilities are included in the PSA, but the DCM is the "working document" for the A/Es. Revisions were made in 2009 with periodic supplements.

There are no major changes to the content of this edition of the DCM. We have corrected a few things overlooked in the last edition and have made some changes reflecting administrative and legislative changes. These include:

- Article 2
 - Clarification of applicability of building codes and requirements for CDB projects.
 - Additional statutory requirements reflective of newer legislation.
 - Descriptions of Illinois Works Apprenticeship Initiative requirements.
 - Explanation of the Art-in-Architecture program.
- Article 3
 - Updated civil design policies including standards for geotechnical and contaminated soil testing.
 - Updated structural design requirements, policy for building risk category, and updated codes and references.
 - Design policies for plumbing, heating, ventilation and electrical have been updated to reflect new legislation and the current state of practice.
- Article 6
 - Revision to policy regarding spare parts to apply to institutional and residential facilities.
- Article 7
 - Revisions to reflect updated Division 00 Specifications
- Article 22
 - Clarification of record drawing procedures
- Appendix 1
 - Descriptions of new legislation including the Green Building Act, Energy Efficient Building Act, Procurement of Domestic Products Act, and the Bird-Safe Buildings Act
- Some documents included in the appendices of the previous version of the DCM have been removed and are now located in the Reference Library on CDB's website.

DESIGN AND CONSTRUCTION MANUAL UPDATES

(errata page for future updates)

Article 1 BASIC INFORMATION

- 1.1 **General.** This guide has been prepared for use with the 2009 Standard Documents for Construction (SDC) and the 2024 A/E Professional Services Agreement (PSA).
- 1.2 **Website.** All CDB manuals and forms are available on CDB’s Internet site (<https://cdb.illinois.gov/>).
- 1.3 **Benchmarks.** The A/E is required to provide or obtain surveys essential to the design and construction of the project as a basic service. The A/E is responsible for obtaining its own benchmarks, location of utilities and topographical information for establishing building and site improvement locations.
- 1.4 **Meeting Minutes.** The A/E shall record minutes of all meetings held throughout the course of the project and distribute copies to participants and other project team members as directed by the CDB PM within seven (7) calendar days. Minutes shall be recorded for all significant meetings, including but not limited to:
 - A. Orientation/Fee Negotiation
 - B. Design Submittal Review
 - C. Pre-Bid
 - D. Pre-Construction
 - E. Construction Progress/Pay
 - F. Substantial Completion
 - G. Final Acceptance
- 1.5 **Monthly Progress Reports.** The A/E shall submit monthly progress reports of design/construction activities to the CDB Project Manager. Failure to submit monthly reports may result in delay to the A/E’s progress payments. The report shall include:
 - A. Activities completed since last report, items pending from last report
 - B. Projected progress
 - C. Comparison of schedule and actual progress
 - D. Decisions or information required
 - E. Pending Change Order report (construction phase) and RFP log
 - F. RFI Log
- 1.6 **A/E Pay Requests**
 - A. Design Phase: The A/E may submit a pay request upon completion of each phase of work as outlined in the A/E PSA. The A/E may request to be paid on a monthly basis. In either case, the A/E must submit to the PM proof of satisfactory progress, commensurate with the payment requested.
 - B. Bid Phase: The A/E may submit a pay request upon completion of all requirements for bidding phase, including submittal of the Bid Document CD incorporating all addenda. See Article 10.
 - C. Construction Phase: The A/E may submit a pay request monthly; the amount of basic services fee payment is based on overall completion of project
 - D. Contract Administration Fee (CAF): If applicable, the CAF shall be billed on the first pay request. The A/E will send a check for the CAF to CDB Fiscal before submitting the second pay request. If the CAF is increased by a contract modification, the A/E will bill the increase in CAF on the first pay request after approval of the modification and send the CAF check to CDB Fiscal before submitting the next pay request.

- E. The A/E should obtain multiple proposals for reimbursable work performed by others and submit to CDB upon request.
 - 1. A/E shall provide at least two quotes from local vendors as backup for in-house printing reimbursement.
 - 2. All plan deposits not returned to bidders shall be credited to the printing reimbursable account and reported with the A/E's regular pay requests.

- F. The pay request package shall include:
 - 1. Invoice-Voucher (CDB Form C-13) **completed** and signed by the A/E.
 - 2. The A/E Payment Request Breakdown (PRB) Form completed based upon the terms of the PSA and updated to reflect current status.
 - 3. Back-up in the form of itemized invoices; breakdown of hours and/or work performed; proof of payment for previously invoiced reimbursable items, including Additional Services; and other associated documentation.
 - 4. On-Site Representative Summary form when payment for observation is requested. Include all on-site hours on the form and indicate whether in fulfillment of basic services or on-site observation. Backup in the form of Daily Reports for each day or partial day of observation by each observer must be in the PM's possession. The A/E must submit verification of each observer's direct wage expense (DWE) by copy of a payroll check stub or by the payroll information form.

Article 2 CODES AND STATUTORY REQUIREMENTS

2.1 **General.** The A/E shall comply with all State and Federal requirements governing the design of the project and this agreement.

2.2 **Building Codes.**

A. All projects shall be designed in accordance with the following codes:

1. Fire Prevention and Safety Rules including National Fire Protection Association (NFPA) 101, Life Safety Code. Consult the State Fire Marshal's office to determine the adopted edition.
2. Comply with NFPA 70, National Electric Code latest edition or the edition referenced by the IBC. Projects in the City of Chicago shall comply with the Chicago Electrical Code or NFPA 70, whichever is more stringent.
3. Comply with NFPA 72 National Fire Alarm and Signaling Code in effect at the time bidding documents are issued.
4. Illinois Energy Conservation Code. Starting July 1, 2024 the Illinois Stretch Energy Code will apply to all buildings.
5. Illinois Plumbing Code. Consult the Illinois Department of Public Health to determine the most current edition.
6. 2018 Illinois Accessibility Code and 2010 Americans with Disabilities Standards for Accessible Design (2010 ADA Standards), whichever is more stringent.
7. All projects outside the City of Chicago shall be designed in compliance with the International Building Code (IBC), current edition or most recent preceding edition (published by the International Code Council, 200 Massachusetts Ave. NW, Suite 250, Washington, DC 20001). The A/E shall document any additional building code requirements that are more stringent than the IBC and confer with CDB on which requirement to follow. Projects within the City of Chicago shall be designed in compliance with the current edition of the Chicago Building Code.
8. Projects may be designed in compliance with the International Existing Building Code, current edition or most recent preceding edition when it is applicable.

B. Approval by CDB is required for designs which deviate from required codes. In design documents, when “approval by local authority” or “authority having jurisdiction” is referenced, substitute CDB for the local authority.

C. Bid documents shall be prepared in accordance with codes in effect at the start of program analysis. Codes shall be mutually agreed upon by CDB and the using agency in consultation with the A/E, and shall be identified in the program analysis submittal.

D. The A/E shall provide code analysis with each review submittal. Code analysis shall be included on the bid documents and record documents. The Code Analysis Template is available on the CDB Website in the Reference Library.

2.3 **Illinois Building Related Requirements.** To assist the A/E in determining which codes might be applicable to a project, a Directory of Illinois Construction-Related Statutes and Rules which lists statutory requirements relative to state construction is available from the CDB web site <https://cdb.illinois.gov/business/codes/buildingcodesregulations.html>). This directory also includes a table of primary codes/standards/specifications for State of Illinois Building Requirements. Use of this directory does not absolve the A/E from its responsibility for determining what codes are applicable.

2.4 **Special Statutory Requirements**

- A. The following are statutory requirements that may impact the project. This list is not exhaustive. Some of these requirements are unique to State projects.
- B. The A/E, in cooperation with CDB, shall review the project and determine if any of these statutory requirements apply.
- C. Major statutory requirements include:
 - 1. Illinois Energy Efficient Building Act
 - 2. Farmland Preservation Act
 - 3. Endangered Species Act
 - 4. Wetlands Policy Act
 - 5. Historic Preservation Act
 - 6. Archeological and Paleontological Resources Protection Act
 - 7. Steel Products Procurement Act
 - 8. Clean Water Act
 - 9. Art-in-Architecture
 - 10. Green Building Act
 - 11. Domestic Products Act
 - 12. Bird-Safe Buildings Act
- D. Refer to [Appendix 1](#) for a more complete description of these requirements.

2.5 **Design Policies.** CDB has adopted certain design policies in force at the time of execution of this agreement. The A/E shall determine the policies required for the project and obtain the current policy from the CDB.

- A. **Flood Plain Construction Policy.** In response to Executive Order 2006-05, CDB has adopted the following policies. Assistance may be requested from IDNR Office of Water Resources.
 - 1. All development shall comply with all requirements of the National Flood Insurance Program (44 C.F.R. 59, 60, and 65) and with all requirements of 17 Illinois Administrative Code 3700 or 17 Illinois Administrative Code 3708, whichever is applicable.
 - 2. All new Critical Facilities shall be located outside of the floodplain. Where this is not practicable, Critical Facilities shall be developed with the lowest floor elevation equal to or greater than the 500-year frequency flood elevation.
 - 3. All new buildings shall be developed with the lowest floor elevation equal to or greater than the Flood Protection Elevation or structurally dry floodproofed to at least the Flood Protection Elevation (one foot above the applicable base flood or 100-year frequency flood elevation).
 - 4. Modifications, additions, repairs or replacement of existing structures may be allowed so long as the new development does not increase the

floor area of the existing structure by more than twenty (20) percent or increase the market value of the structure by fifty (50) percent, and does not obstruct flood flows.

5. The A/Es shall submit a statement with the PA/DD submittal affirming compliance with the Flood Plain Construction Policy.

B. **Roofing Program Policy.** A comprehensive CDB roofing handbook, sample specifications, and a list of acceptable manufacturers that must be utilized for all projects which include new roofs, re-roofing, or modifications, including penetrations, of existing roofs is available on the CDB website. The handbook addresses single and multi-ply membrane roofing and metal roofing and decking.

C. **Asbestos Abatement and other Hazardous Pollutants.** A comprehensive manual ([Project Manual Workbook for Asbestos, Lead, UST and PCB](#)) including estimating worksheets, requirements for inspection and sampling, abatement design and design review procedures, and complete bidding and construction phase procedures is available on the CDB website in the Reference Library.

D. **Buy Illinois Program.** CDB is encouraging contractors to voluntarily procure products manufactured in Illinois and will be tracking the value of the Illinois products used on state construction projects for a report to the Governor and General Assembly. To assist the contractors in this process:

1. When suitable products are available, the A/E will include Illinois products, as defined below, in the specifications (typically only when products are specified by manufacturers, product names, and/or numbers).
2. Illinois products, when specified, are to be identified with (IL) before the manufacturer's name. Materials specified by standards and/or codes and not by manufacturer will not be highlighted as Illinois products.
3. CDB has established a directory of products manufactured in Illinois which are used in the construction industry. To qualify as an Illinois product, the product must be manufactured, fabricated or assembled within the State of Illinois. The directory is available at:
<https://cdb.illinois.gov/professionalgrowth/buyillinoisdirectory.html>.

E. **Prohibited Products Policy.** The following products are prohibited from use on all CDB projects:

1. Asbestos and asbestos containing material (ACM)
2. Fire retardant treated (FRT) wood products in structural applications
3. Chlorofluorocarbons (CFC).
4. Polychlorinated Biphenyl (PCB)
5. Lead Based Coatings
6. Fire suppression systems using ozone depleting halons

2.6 **Permits.** The A/E shall design to the standards necessary to receive permits from state and federal agencies having jurisdiction over any aspect of the project (including, but not limited to: US EPA, IEPA, IDNR, IDPH, and USACE) and is responsible to submit for and obtain such permits.

2.7 **Federally Funded Projects.** Certain projects may be funded in full or in part with federal funds which may have specific restrictions. On federally funded projects, standards of the federal agency may supplement or take precedence. The CDB PM and the A/E will work together to determine special requirements.

- 2.8 **Build America, Buy America.** For Federally Funded Projects, domestic content procurement preferences specified in the Build America, Buy America Act, P.L. 117-58 § 70914, must be met. Domestic content procurement preference means that all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For steel and iron, all manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States. Manufactured products must be manufactured in the United States and the cost of the components of the manufactured product that are mined, produced or manufactured in the United States must be greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation. For construction materials, all manufacturing processes for the construction materials must occur in the United States.

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project.

The A/E shall notify CDB as soon as practical in the event that:

- i. applying the domestic content procurement preference would be inconsistent with the public interest;
- ii. the types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
- iii. the inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall project by more than 25 percent.

Additional guidance on the requirements and exemptions may be found in 2 C.F.R. 184 and OMB Memo, M-24-02 Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure (October 25, 2023). The A/E shall maintain and provide documentation supporting the above so that the State may request an exception from the Federal Awarding entity.

2.9 **Art-in-Architecture Program**

- A. **General.** The Art-in-Architecture (AIA) program, administered by the Capital Development Board, provides “for the promotion and preservation of the arts by securing suitable works of art for the adornment of public buildings constructed or subjected to major renovation by the State or which utilize State funds, and thereby reflecting the diverse cultural heritage of Illinois, with emphasis on the works of Illinois artists.” 20 ILCS 3105/14(a).
- B. **Website.** All AIA information, including the AIA Policy and Procedure Manual, is available at <https://cdb.illinois.gov/professionalgrowth/art.html>.
- C. **Program Applicability.** The following criteria must be met for a project to be subject to the requirements of the AIA program:
 1. The project must have a total budget of \$1,000,000 or over.
 2. It must be a public building, and art must be in a place accessible to the public.

3. The art must be located in a permanent structure primarily intended for human services or occupations.
 4. Rehabilitation, renovation and repair projects qualify if they meet the above criteria (A) – (C) AND the work impacts the entire structure and not a single subsystem. Items such as roof repair, window replacement, HVAC projects and asbestos/hazardous material abatement are not applicable.
- D. **Exemptions.** Projects not eligible for the AIA program include correctional facilities, mental health facilities, buildings and yards used for maintenance, and animal barns.
- E. **Using Agency Steering Committee.** The Using Agency Steering Committee represents the interest of the using agency. Its mission is to ensure that the local voice is well represented. It provides one voting member to the Fine Art Review Committee. As representative for the user, the A/E, CDB project manager, and the AIA coordinator are also part of the Committee and provide technical and resource information.
- F. **Fine Art Review Committee.** As defined in legislation, the Fine Art Review Committee (FARC) is appointed on a project-by-project basis to review and recommend artists and/or works of art for final selection by the Chair of the Illinois Arts Council (20 ILCS 3105/14). The AIA Coordinator organizes the group and meetings. The FARC is subject to the Open Meetings Act (5 ILCS 120), and FARC members must complete State of Illinois Ethics Training.
- The FARC consists of:
 A/E
 Illinois Arts Council Agency designee
 Illinois State Museum designee
 Using Agency designee
 AIA Coordinator (non-voting)
- G. **Additional Responsibilities.** The A/E shall cooperate by:
1. Attending Using Agency Steering Committee meetings.
 2. Attending all Fine Art Review Committee meetings as set forth in statute.
 3. Providing CDB necessary documents, drawings, renderings, specifications, product data, etc. to assist the artist in the design and installation of the artwork.
 4. Attending meetings with CDB, the artist, and user to coordinate work.
 5. Reviewing artwork shop drawings.
 6. Provide on-site observation and report field conditions as necessary to coordinate artwork installation.
 7. Attend the substantial completion inspection of the artwork.
- H. **Compensation.** The A/E shall be compensated as an Additional Service as identified in Appendix A of the Professional Services Agreement. Compensation will include all services required in the above-mentioned Sections F and G. Terms of the compensation will be as outlined in the Professional Services Agreement, Article 4.6.

Article 3 DESIGN GUIDELINES

3.1 **General.** Most CDB projects are funded with State of Illinois 25-year Bond Funds. Therefore, building systems and materials incorporated into our projects are required to have an average life span of 25 years or longer. CDB recognizes that some items, such as roofing materials and mechanical equipment, will not achieve 25-year life spans. Other systems and materials, such as building shells, etc. must then be designed and specified to exceed a 25-year life span.

3.2 **Green Building Requirements**

A. For all new buildings and major renovation projects (defined as 40% of the replacement cost of the building or more), the project shall comply with the requirements in the Green Buildings Act (20 ILCS 3130). Projects that are 10,000 square feet and over, must achieve a minimum of United States Green Building Council’s LEED silver certification or an equivalent standard including but not limited to a two-globe rating from the Green Building Initiative. Projects under 10,000 square feet shall be designed to meet these same standards but certification will not be required.

B. The A/E shall design all new buildings and major renovations to incorporate maximum LEED points within practical, scope and budgetary limits.

C. Buildings that are not comfort conditioned shall be exempted from these standards.

D. Waivers will be granted when an applicant can demonstrate that meeting the standards causes:

1. An unreasonable financial burden, taking into account the operating and construction costs over the life of the building and the total cost of ownership of the building;
2. An unreasonable impediment to construction;
3. An impairment of the principal function of the building; or
4. A compromise to the historic nature of the structure.

E. For all CDB projects, when a green building certification is being sought, a LEED or other green building rating checklist shall be completed and submitted with all design submittal phases. For those projects where no certification is required, a LEED or other green building rating checklist shall be completed and submitted with the 100% design submittal. For any criterion on the checklist that do not apply to the project, “N/A” should be noted.

3.3 **Division of the Work.** As determined by CDB, projects may be designed as single or multiple prime. For all projects, the A/E shall divide the work into at least five distinct trade contracts as required by CDB and in accordance with the Illinois Procurement Code. They are:

1. General
2. Plumbing
3. Heating
4. Ventilation
5. Electrical

This division shall be clear, concise and comprehensive. All work must be explicitly assigned to a particular trade contract. The A/E shall not include any clause or provision

in the contract documents that attempts to assign any of the work by common trade practice, by indirect linkage, etc.

- A. If the A/E estimate for an individual trade is less than \$100,000 , that trade’s work may be combined with another trade. The A/E shall discuss with and obtain concurrence from the CDB PM before combining trades in the bidding documents.
 - B. Documents shall not reference a "mechanical contractor." Documents shall refer specifically to the individual Plumbing, Heating, Ventilating, or Sprinkler contractors.
 - C. The required five trade contracts may be expanded as appropriate for the project. The A/E shall confer with the PM for the appropriate contract trade designations. Some examples of additional designations are:
 - 1. General/Roofing
 - 2. General/Paving
 - 3. Asbestos Abatement
 - 4. Sprinkler
 - 5. Test and Balance
 - 6. Temperature Control/Building Automation
 - 7. Electrical/Communications
 - D. Project Manual. The trade contracts and the work assigned to each shall be described in Paragraph 1.1 of each specification section (as illustrated in [Article 8](#)).
 - E. Drawings. An appropriate letter identification (as described in [Article 9](#)) shall be used on the drawings to designate separate contracts within the project.
 - 1. ‘M’ **shall not** be used as a drawing letter identification.
 - 2. If work of a trade other than that indicated by the drawing letter designation is depicted on a drawing, that work must be clearly noted and distinguished from the other work on the drawing.
- 3.4 **Competitive Product Selection.** It is the responsibility of the A/E to select and specify products. The A/E shall write specifications that are explicit, realistic, and non-restrictive.
- A. Products shall be specified by manufacturer and model number with a minimum of three manufacturers named who make comparable products. When available, specifications shall include Illinois manufacturers labelled as such. The A/E may include more than three manufacturers if all products are considered to be of equal quality.
 - B. The A/E may request approval from CDB to prepare a performance specification for a specific material or equipment item when that product or system can be specified by reference to commonly accepted standards such as ASTM, IEEE, NEMA, etc. Performance specifications are allowable only on commodity-type products with multiple manufacturers producing similar items, such as lumber, structural steel members, piping, etc.
 - C. The use of the phrases “or approved equal”, “similar products manufactured by...”, and “equal products manufactured by...”, or any similar phrase in the bidding documents is prohibited.

- D. Only those products named in the bidding documents or approved by written change order shall be approved for installation, and the language shall so state. Do not use the phrase “includes, but is not limited to” the following products or manufacturers.
 - E. Products or systems cannot be sole or dual sourced unless the A/E receives written approval from CDB to specify fewer than three sources.
 - 1. Requests for single or dual sourcing may be initiated by the A/E or the using agency and shall be in writing, addressed to the PM. The A/E shall review and make recommendations, in writing, to CDB for any using agency requests. It is recommended that requests be anticipated as soon as practicable and made prior to the 50% design submittal.
 - 2. Each request shall include justification for the request, including a cost/benefit analysis that establishes that the product or system is economically procurable from only one manufacturer and a comparison of the value of the sole (or dual) sourced item(s) to the total value of the project.
 - 3. Generally, approvals will not be given for aesthetic desirability alone unless CDB determines that the circumstances of the design (such as a desire to match existing features) justifies such approval.
 - 4. A request must be made for each product for each project even if CDB has approved a similar request in the past. A new request does not need to be made for Phase 2 (or subsequent) phase of a project for the use of a product approved as a single source in Phase 1, provided the work is similar in both phases.
 - 5. Where sole sourcing has been approved by CDB for use in the bidding documents because it is meant to be restrictive, the language shall state that no substitutions will be acceptable.
- 3.5 **Specified Contractors.** The A/E shall not specify a restrictive list of acceptable contractors or subcontractors for furnishing and installation of any component or system without the written approval of the CDB Construction Administrator. Although their equipment may be acceptable, the firm may not be a responsible contractor. Determination of contractor responsibility is the province of CDB. The A/E shall submit a written request to the PM indicating the system or component of the work for which the A/E desires to specify a list of furnishing and installing contractors. This request shall indicate the justification for specifying the installing firms. CDB may direct the A/E to publicly solicit additional qualified firms.
- 3.6 **Contractor Qualifications.** When installing contractor competence could affect a significant portion of the work, the A/E shall include criteria in the specifications to ensure that the installing contractor is competent. These criteria may include experience, size of previous projects, certification by industry recognized associations, or any other relevant factor. The A/E shall include language requiring submittal of documentation of these criteria before the CSV will be approved.
- 3.7 **Project Construction Duration.** The A/E shall determine the construction duration based on complexity of the design, site availability, material procurement duration, season of construction start and end, needs of the using agency, and any other relevant circumstances. When requested by CDB, the A/E shall provide written evidence to support their estimate of the construction duration.

3.8 **Sequence of Construction.** The A/E shall recommend a sequence of construction for all unusual conditions, such as rehabilitation of existing structures, underpinning of existing foundation, constructing openings through existing construction work such as wall or floors.

3.9 **Utilities.**

- A. The A/E is responsible for design coordination with the utility company and assisting CDB in drafting utility agreements. The A/E shall develop load requirements, contact the respective utilities to determine how that load can be accommodated and what procedures the utility will require for the connection, and determine where and by whom the connections will be made. Failure of the A/E to coordinate with applicable utilities shall constitute an omission to the A/E.
- B. The A/E shall locate all utility connection points on the drawings. If a connection must be made to a public utility, the A/E shall include name and phone number of the person at the utility familiar with the facility/project.

3.10 **Civil**

- A. Any project site larger than one acre must have a storm water discharge permit under NPDES. The A/E shall follow IEPA guidelines including design of a SWPPP and inclusion of the NOI and NOT with the appropriate specification section. Additional information is available in [Appendix 1](#).
- B. The A/E shall use the current edition of the IDOT Standard Specifications for Road and Bridge Construction including Supplemental Specifications and Recurring Special Provisions for site work including roads, bridges and miscellaneous concrete. Provide reference to appropriate articles when applicable.
- C. The A/E may use the latest edition of Illinois Society of Professional Engineers (ISPE) Standard Specifications for Water and Sewer Main Construction in Illinois for preparing water and sewer specifications. Provide reference to appropriate sections as applicable. Copies of the latest edition are available from ISPE, 100 East Washington Street, Springfield, IL, 62701.
- D. The A/E shall comply with local regulations for storm water piping or retention and notify CDB at program analysis if there is an absence of local governing agency criteria.
- E. Parking lots shall be designed to accommodate a minimum five-year storm.
- F. Buildings shall be protected from the effects of a 100-year storm and located above the 500-year flood plain.
- G. New grading plan shall consider adequate site drainage including building and paved areas, and shall consider erosion and sediment control.
- H. Geotechnical and Environmental Studies
 - 1. Geotechnical Testing and Reports
 - a. For a new building, addition, or other project requiring excavation and removal of soil, the A/E and/or their geotechnical consultant shall investigate and present a report which considers the engineering implications of all available

information and data. This shall include the review of available documents such as aerial photography; USDA/SCS reports; topographic, pedologic, bedrock surface, geologic and quaternary deposits maps; and other pertinent studies which have been completed for and near the project site. The report shall also document existing weather conditions when the samples are taken and special features of the area such as slope cuts, quarries, gravel pits, strip mines, springs, and caverns. The report shall include a separate section describing any treatments necessary to provide a stable platform for the construction. All soil and subgrade recommendations must be specific to certain locations, lengths, depths, and types of treatment that the designer can use to calculate plan quantities.

b. The locations and sampling frequencies for subgrade borings shall be at such intervals as to allow the identification of all soil types, the water table elevation, and bedrock that would impact the proposed project. In areas or sites where the building footprint will be located, minimum soil borings per the table below or as recommended by the A/E in coordination with their geotechnical consultant shall be provided. The A/E shall also provide an additional boring for each specialty feature such as elevator pits, deep basements, concentrated heavy loads, and locations where deep fill or irregular subsurface conditions have been discovered.

c. Soil boring requirements and testing for roadway, civil structure, or parking lot design shall follow IDOT's Geotechnical Manual or as recommended by the A/E in coordination with their geotechnical consultant. The A/E shall provide one additional boring for each major specialty feature such as storm water detention systems. The borings should, at a minimum, extend through the pavement through the sub-base to sound material.

BUILDING FOOTPRINT SIZE	SUGGESTED BORING REQUIREMENT
Less than 5,000 SF	Minimum 2 borings
5,000 SF to 20,000 SF	2 to 4 borings
20,000 SF to 40,000 SF	4 to 6 borings
40,000 to 60,000 SF	1 boring per 10,000 SF, plus 1 boring for each 400 LF of building perimeter
Over 60,000 SF	1 boring per 10,000 SF, plus 1 boring for each 500 LF of building perimeter
Specialty Feature	1 boring per specialty feature listed above
Test for Contamination	1 test per 10,000 SF building footprint per disturbed layer
References	NAVFAC DM7.01, Chapter 2.

ROADWAY OR PARKING LOT	SUGGESTED BORING REQUIREMENT
Road, parking lot, or civil structure	Minimum 2 borings plus 1 per 10,000 SF of improvement
Specialty Feature	1 boring per specialty feature listed above
Test for Contamination	1 test per 10,000 SF of improvement per disturbed layer
References	IDOT Geotechnical Manual, Dec 2015, Revised Dec. 2020, or latest edition.

2. Environmental Testing and Reports

- a. For a new building, addition, or other project requiring excavation and removal of soil, the A/E and/or their geotechnical consultant shall investigate and present a report on previous use and owners of the site for the past 100 years as part of the PA/DD submittal package. This is also known as an IEPA Level 1 investigation. If a Level 1 investigation yields suspicion of contaminated material, then a Level 2 investigation is warranted and shall be performed to determine and delineate those soils which cannot be disposed of in a CCDD or standard landfill.
 - b. If hazardous chemicals or other contaminants are found such that soil would be required to be disposed of as a 'special waste' or a 'hazardous waste' during the soil boring process, sufficient borings and tests shall be made to delineate the area and depth of the 'special waste' or 'hazardous waste' soil with a minimum of one boring per 1500 square feet or as recommended by the A/E.
 - c. The soil report shall include specific recommendations for use or disposal of soils, and clearly describe limitations on use or disposal of 'special waste' or 'hazardous waste' soil.
- I. Use IDOT Standard Specifications for Road and Bridge Construction for specifying measurement and disposal of soils (e.g. 202.07 and 669.10).
 - J. The compaction requirements and bearing limits of soils and fill material shall be based on the recommendation of the geotechnical consultant or structural engineer.
 - K. Only ACI or ASTM standards shall be specified in Division 03 "Concrete" specifications, except as otherwise approved for IDOT projects, which shall be governed by IDOT's Standard Specifications and Design Manual for concrete as noted in [Article 3.10 B.](#) above.
 - L. Fire hydrants shall be located within 10 feet of a road or a fire lane and at least 50 feet from the building. Any point on the perimeter of any building shall be covered with a maximum hose length of 300 feet.
 - M. The use of coal-tar based or high polycyclic aromatic hydrocarbon sealant products in pavements is prohibited.

3.11 Architectural

- A. Include building expansion and control joints at intervals determined by the design criteria and the shape of the building, but not to exceed 200 feet. Provide complete expansion joints between existing and new structures.
- B. All masonry shall be designed in accord with building code requirements for masonry structures (ACI 530) and standards set forth by the Brick Industry Association (BIA) technical notes.
- C. Metal stud exterior wall systems with brick veneer.

1. These systems are not allowed for use in state buildings unless approved by CDB.
 2. If brick veneer and metal stud wall systems are to be considered for design, the following requirements apply:
 - a. A cost analysis comparison with other wall systems is required with Program Analysis.
 - b. The A/E shall calculate location of dewpoint within the wall, and verify that dewpoint falls within the cavity or brick veneer. The A/E shall submit these calculations to CDB for review with the PA/DD submittal.
 3. Upon approval by CDB, the design shall include a 2-inch air gap behind the brick, the brick will not act as part of the structural lateral resistance system, metal studs and the exterior wall sheathing shall limit the out of plane wall deflections at service load levels to exceed BIA recommendations of 1/600, and the metal studs shall be galvanized at G90 standards. An air barrier shall be installed on the outside face of the exterior sheathing. The insulation shall be placed on the outside face of the exterior sheathing. Masonry flashing shall seal to the wall to preclude water from entering the wall space below the flashing. Metal two-piece masonry ties shall be attached soundly to the studs per building code.
 4. If included in the project, metal stud exterior wall systems with brick veneer will be considered “Critical Work Items” (see [Article 6.5K.1](#) and [Article 15.1](#)).
- D. Provide roofing design in compliance with CDB’s Roofing Program Handbook.
- E. The use of sloped glazing is discouraged.
- F. The use of curved wall construction is discouraged.
- G. Exterior Insulation and Finish System (EIFS) shall not be used unless approved by CDB.

3.12 Structural

- A. Design for optimum use of materials. Allowable Stress Design or Load and Resistance Factor Design in steel or timber, Allowable Stress Design or Strength Design in masonry, and ultimate strength design in concrete construction shall be considered for more economical and efficient use of materials.
- B. Submit design calculations for structural design when requested by CDB.
- C. Design roof drainage slope into the structural system for all new buildings. See CDB’s Roofing Program Handbook.
- D. Include Structural notes on design drawings in accordance with IBC 1603.
- E. State buildings which are administrative (including National Guard armories, State Police headquarters, Emergency Operation facilities), residential (including hospitals, skilled care), or institutional facilities (including K-12 schools, prisons, mental health centers) shall be considered essential facilities for assignment of importance factors.

IDOT buildings used for vehicle storage, if they are identified by IEMA as part of a statewide emergency plan to be utilized for emergency maintenance or inspection

of essential routes, shall be considered essential facilities for assignment of importance factors.

State buildings in the community college system or state university system that accommodate the congregation of students shall be considered assembly structures for assignment of importance factors.

F. Durability:

Reinforcement in concrete structures which are exposed to outdoor condition, exterior walls and slabs, concrete subjected to frequent wet conditions, and buried structures shall be epoxy coated.

G. Seismic design requirements:

1. The A/E shall use the International Building Code to calculate seismic design requirements for all structures (unless the local code is more stringent).

In accordance with International Building Code, use Maximum Considered Earthquake (MCE) Ground Motion parameters as specified in Chapter 16 and follow code procedure to determine S_{DS} and S_{D1} values.

2. The A/E will verify project location within the county and will be conservative if using linear interpolation for seismic values.
3. Seismic design criteria will be included with the submittal for the Design Development phase.
4. The A/E will ensure the seismic performance Seismic Design Category, the Spectral Response Coefficients S_{DS} and S_{D1} , the Site Class, the Basic Seismic-Force Resisting System, the Design Base Shear, and the Analysis Procedure are added to the structural notes on the drawings. Component importance factors should be listed for piping, ductwork, power distribution, or other building systems included in the project. Attachments for curbs or other roof mounted equipment, as well as any required restraints or bracing for essential systems and components, must be detailed in the project documents.

H. Snow load design requirements. In accord with the applicable building codes; with the following modifications: Roofs for new buildings shall be designed to support a snow load using a Ground Snow Load Factor P_g of 30 psf in Northern Illinois (Peoria and north), 25 psf in Central Illinois (south of Peoria through Carbondale), and 20 psf in Southern Illinois (south of Carbondale).

I. Applicable Codes and Standards:

1. Minimum Design Loads and Associated Criteria for Buildings and Other Structures – ASCE/SEI 7.
2. Building Code Requirements for Reinforced Concrete - ACI 318.
3. Steel Construction Manual - AISC.
4. Specification for Structural Steel Buildings – AISC.
5. Seismic Design Manual – AISC.
6. North American Specifications for the Design of Cold-Formed Steel Structural Members – AISI S100.
7. Structural Welding Code AWS.

8. Steel, AWS D1.1.
9. Sheet Steel, AWS D1.3.
10. National Design Specification for Wood Construction with Supplemental Design Values for Wood Construction - NDS.
11. Special Design Provisions for Wind and Seismic – NDS.
12. Building Requirements and Specification for Masonry Structures – TMS 402/602.
13. Specifications for the Design and Construction of Load-Bearing Concrete Masonry - NCMA.
14. Recommended Practice for Engineered Brick Masonry - BIA.
15. Metal Building Systems-Metal Building Mfg. Association.
16. Code of Recommended Standard Practice for Composite Deck, Form Deck, and Roof Deck Construction - SDI Design Manual.
17. Standard Specification for Steel Joists, Including Load and Weight Tables, SJI.
 - a. Open Web-Type K Series.
 - b. Long Span and Deep Long Span-Type LH and DLH Series.
 - c. Joist Girders.
 - d. Certification that fabricator is a member in good standing with SJI. Requirement for certification may be waived by CDB if circumstances warrant.
18. When project design includes pre-cast concrete, the A/E shall include the Precast/Prestressed Concrete Institute Plant Certification Program in the appropriate sections of the specifications. If amount of pre-cast concrete is minor, this requirement may be waived by CDB.
19. LRFD Guide Specifications for the Design of Pedestrian Bridges – AASHTO.

3.13 **Plumbing**

- A. Specify dielectric insulating unions between all dissimilar metals.
- B. Specify insulation thickness per latest adopted edition of the Illinois Energy Conservation Code.
- C. Show **all** piping on drawings (domestic water, waste and vent, pumped waste, roof drain, storm and sanitary sewers - if part of plumbing contract, water service - if part of plumbing contract, natural gas piping, etc.). Do not call for piping in the specifications if not shown on the drawings. Clearly define who provides the water meter (utility company or contractor). Also, contact all utility companies that will be involved in the project to determine their requirements.
- D. See ASHRAE *Application Handbook* for seismic design requirements for piping systems. Consult IBC to determine when seismic supports are necessary. See [Article 3.12 G](#).
- E. Prepare and submit calculations for fixture counts/occupancy requirements according to the Illinois State Plumbing Code and the local building code requirements. Provide fixtures according to the more stringent of the requirements.
- F. The use of pipe heat tracing systems in lieu of pumped recirculation systems must be approved by CDB.
- G. Design roof drains in accordance with requirements of the locally adopted code. Built-in gutters are subject to approval by CDB.

- H. Place rooftop piping and conduit on factory fabricated pipe supports. Consult CDB Roofing Program Handbook for height requirements. Wood blocking is not acceptable.
- I. Sprinkler Systems shall be designed in compliance with NFPA 13 and the Illinois State Plumbing Code.
 - 1. The water line and water hydrants outside the building and entering the building, including the backflow preventer, are plumbing work. Sprinkler work begins at the outlet of the backflow preventer.
 - 2. Design sprinkler work as a separate bid where it is a major portion of a project. When specifying matching fire protection components, include cabinet, hose, extinguisher, etc. in the general contract.
 - 3. All sprinkler designs shall include flow testing from the nearest hydrant when bidders are required to size the system.
- J. Any testing of the plumbing system shall be specified as part of the plumbing contractor's portion of the work.

3.14 Heating

- A. Refrigerants/Halons. Specifications should be written for the refrigerant offering the best life cycle cost commensurate with engineering judgment as to industry trends. Consult with the CDB project manager for current guidance.
- B. When specifying chillers, condensing units, heat pumps, roof top units, and other types of air conditioning and refrigeration equipment, include a minimum warranty of 5 years from the time of substantial project completion for parts and labor on the compressors. See Standard Documents for construction (SDC) Section 01 78 36 for more information.
- C. See ASHRAE *Application Handbook* for seismic design requirements for piping systems. Consult IBC to determine when seismic supports are necessary. See [Article 3.12 G](#).
- D. Specify dielectric insulating unions between all dissimilar metals.
- E. List the pressures and temperatures associated with each class (high, medium, low) of steam or hot water. Specify the **correct** (material, pressure rating and temperature rating) type of piping, fittings and valves for each class of steam, condensate return or hot water.
- F. Specify insulation thickness per latest adopted edition of the Illinois Energy Conservation Code.
- G. The use of pipe heat tracing systems (instead of adding glycol to the piping system) for chilled water piping located outside must be approved in writing by CDB.
- H. HVAC temperature controls and building automation systems shall comply with the applicable edition of the Illinois Energy Conservation Code.
- I. Mount rooftop equipment on a curb or on supports that provide a minimum of 24" clearance above the roof. Avoid interior angles to facilitate flashing. Consult CDB Roofing Program Handbook.

- J. Place rooftop piping and conduit on factory fabricated pipe supports. Consult CDB Roofing Program Handbook for height requirements. Wood blocking is not acceptable.
- K. When not included in the A/E's contract, testing and balancing may be specified as part of the contractor's work or as a separate contract.

3.15 **Ventilation**

- A. Specify insulation thickness per latest adopted edition of the Illinois Energy Conservation Code.
- B. Ductwork:
 - 1. Underfloor duct systems must be approved in writing by CDB. The A/E's written request shall include groundwater evaluation, water table location, and a description of the engineering controls necessary to prevent moisture from entering the system.
 - 2. Fiberboard ductwork shall not be specified.
 - 3. Reference SMACNA duct gauges for all ductwork.
 - 4. See SMACNA manuals and ASHRAE *Application Handbook* for information on seismic design of ventilation systems. Consult IBC to determine when seismic supports are necessary. See [Article 3.12 G](#).
- C. When specifying condensing units, heat pumps, roof top units, and other types of air conditioning equipment, include a minimum warranty of 5 years from the time of substantial project completion for parts and labor on the compressors. See Standard Documents for Construction (SDC) Section 01 78 36 for more information.
- D. HVAC temperature controls shall comply with the applicable edition of the Illinois Energy Conservation Code.
- E. Mount rooftop equipment on a curb or on supports that provide a minimum of 24" clearance above the roof. Avoid interior angles to facilitate flashing. Consult CDB Roofing Program Handbook. Attachments for roof mounted systems and equipment shall comply with the local wind loads from the IBC.
- F. Place rooftop piping and conduit on factory fabricated pipe supports. Consult CDB Roofing Program Handbook for height requirements. Wood blocking is not acceptable.
- G. When not included in the A/E's contract, testing and balancing may be specified as part of the contractor's work or as a separate contract.

3.16 **Electrical.**

- A. Electrical power and lighting systems shall comply with the Illinois Energy Conservation Code or local ordinance, whichever is more stringent.
- B. The A/E to provide details and specifications that are applicable to the project, having the correct voltage, circuit elements, products, and wiring methods for the particular work at hand. Assignment of responsibility for disconnect of existing

electrical equipment should be specified. Specifications, notes and symbols that do not apply to the particular project shall not be included.

- C. The A/E shall perform the load analysis calculations necessary to determine service size, panel and transformer capacities. Calculations will be made available to CDB upon request.
- D. Short circuit, overcurrent device coordination and arc flash studies shall be performed in accordance with NFPA and IEEE standards by an Illinois licensed professional engineer. The studies shall be reviewed by the A/E. The accepted copy of the studies shall be submitted to CDB.
- E. Transient voltage surge suppression shall be provided in the main disconnect in all buildings. Additional transient protection shall be provided for sensitive electronic equipment.
- F. Illumination levels listed in the I.E.S. Lighting Handbook shall be used.
- G. All transformers shall comply with the current U.S. Department of Energy Efficiency Levels.
- H. Select service voltages to minimize energy losses and reduce service ampacities. The use of 480Y/277 volt system is encouraged. When large capacity service equipment is required, the service disconnect should be located in a separate enclosure or vertical section to allow distribution sections to be completely de-energized for service.
- I. Controls for lighting, motors and other systems shall be shown on the drawings.
- J. Conduit:
 - 1. Electrical Metallic Tubing fittings shall be Steel Compression Type only.
 - 2. All cable shall be installed in conduit. (Exceptions may be made on a case by case basis. The A/E to submit request and justification no later than 50% review submittal.)
 - 3. Minimum conduit size shall be 3/4", 1/2" for single switch legs only.
 - 4. Install an equipment grounding conductor in all conduits.
 - 5. Telecommunications wiring may be installed without conduit when specifically requested by the Using Agency.
- K. Panel Boards:
 - 1. Provide at least three spare conduits, stubbed into an accessible ceiling space, for each flush mounted panel board.
 - 2. Provide a minimum of 10% spare breaker space and load capacity.
 - 3. Spare breakers shall not exceed 10% of the available poles in the panel.
 - 4. All panel boards and distribution equipment shall be fully rated. (Series rated equipment shall not be allowed.)
- L. Lighting:
 - 1. The use of solid state lighting is encouraged and shall be tested and labeled in accordance with IESNA LM-79 and LM-80.
 - 2. Light fixtures shall have a minimum warranty of 5 years from the time of substantial project completion.

- M. Lamps and ballasts shall be recycled by a company that specializes in lamp and ballast recycling. Contact the Department of Central Management Services I-Cycle Program for information on recycling requirements and vendors with state contracts.
 - N. Cable Testing:
 - 1. When medium voltage cable testing is required, specify that it shall be performed by a firm employed by the A/E with the contractor assisting.
 - 2. If a fault in a cable, splice, termination, etc. is noticed during testing, the fault shall be cleared, necessary repairs or replacement made, and the cable retested.
 - O. Telecommunications or radio equipment for State facilities (other than universities and colleges) generally falls under the jurisdiction of the Department of Innovation & Technology (DoIT). For universities and colleges, telecommunications or radio equipment fall under the jurisdiction of the university or college. Please consult CDB's website for specific requirements.
 - 1. Consult with the telephone company to establish network point of presence (NET POP) at the building (for a single building facility) or at a common distribution point for a multi-building complex.
 - 2. Consult with PM early in design to determine if telephone system beyond NET POP will be provided by using agency, DoIT, or as part of project. The PM will coordinate with DoIT and the A/E to ensure information is shared.
 - 3. Consult with DoIT during the design phase to determine their telecommunications requirements.
- 3.17 **Alternate Bids.** The A/E shall prepare the bidding documents to include all elements of the work. When the total scope exceeds the design budget, CDB may direct the A/E to evaluate the components of the design, in conjunction with CDB and the Using Agency, and move any portion not essential to the function of the project to an alternate bid.
- A. Alternate bids may not be included in the project without prior approval of the PM.
 - B. Alternate bids are intended to complete the original scope of work.
 - C. Alternate bids shall be developed in manageable dollar values. No more than three alternates shall be developed unless approved by CDB.
 - D. Alternates must be clearly defined by trade and work item in the specifications and on the drawings.
 - E. All alternate bids shall be clearly identified on the Proposed Project Cost Budget form.
- 3.18 **Unit Prices.**
- A. The use of unit prices is discouraged.

- B. CDB must approve the use of unit prices in any construction contract prior to 100% design submittal.
- C. When unit prices are used, it is preferable that they be extended to, and included in, the contractor's base bid. The A/E shall establish a baseline quantity for inclusion in the base bid.
- D. CDB may allow unit prices to be utilized that are not included in the base bid and is for informational purposes only. At the discretion of CDB, the A/E may be required to write a justification why the unit prices should not be included in the base bid.
- E. Unit price estimates shall include overhead, profit and all related costs (e.g. demolition, debris removal, additional supports, time) within the unit price.
- F. The A/E shall utilize CDB's sample specification section 01 22 00 Unit Prices when unit prices are incorporated into the project.

Article 4 PROJECT BUDGET AND ESTIMATING

- 4.1 **General.** Estimating is an integral part of the design process. No design, or phase of design, is complete without the related detailed estimate.
- 4.2 **Construction Budget.** The construction budget is the balance of funds available for construction after subtracting the value of the A/E’s contract and any miscellaneous items (such as Art-in Architecture or moveable equipment) required by state statute or CDB policy from the total project budget.
- 4.3 **Design Budget.** The design budget is set at 90% of the construction budget; 10% of the construction budget shall be set aside for the project contingency. The A/E shall make all requests to exceed the 90% threshold in writing to the PM and include appropriate documentation, including a detailed estimate. Evaluation of such request shall be at the Regional Manager level and the A/E shall be notified in writing of the result.
- 4.4 **Proposed Project Cost Budget Form.** The A/E shall use the Proposed Project Cost Budget form (PPCB) to show the distribution of the project costs. The PM shall furnish the A/E any miscellaneous costs to be deducted from the project budget for inclusion on this form. This form is to be used as a summary of project costs and updated and submitted with each design review phase. This form does not satisfy the requirement of a detailed construction cost estimate as described herein.
- 4.5 **Contract Administration Fee (CAF).** The CAF is required for **each** construction contract. The CAF shall be estimated as set forth in the CDB PPCB form as three percent (3%) of the base bid estimate plus all the alternate estimates rounded **down** to the next hundred dollars.
- 4.6 **Estimates.** Estimates of probable construction costs shall be prepared at each stage of the project design phase. The A/E shall submit these estimates with each review submittal. These estimates shall be prepared in greater detail as the design progresses.
 - A. At program analysis, the estimate may be presented as scope items and their anticipated cost. Parameter based estimating is acceptable at this phase. For example:
 - 1. Install fire detection system \$5.00 per bldg gsf
 - 2. Replace bituminous paving \$15.00 per sy
 - B. At the intermediate phases of the design, estimates can be based on components of the work. Components costs as illustrated in R.S. MEANS Square Foot Costs or Assemblies Cost Data manuals is the level of detail required at these stages of design development. For example:
 - 1. Roofing, built-up tar and gravel \$1.65 per sf of roof
 - 2. 2-1/2 inch bituminous overlay \$4.50 per sy paving
 - 3. 6 inch aggregate base \$8.75 per sy paving
 - C. At the 100% design review, the estimate shall be fully itemized and detailed at a level equal to R.S. MEANS Construction Cost manual. The costs as reported by R.S. MEANS are not endorsed by CDB and are used only as an example.
 - D. When project design stages are combined, the A/E shall provide the more detailed estimate level of the combined stages.
 - E. At every stage, include the estimated CAF and 10% contingency in the budget estimate.

Article 5

PROGRAM ANALYSIS AND DESIGN DEVELOPMENT PHASE

5.1 Project Scope.

- A. CDB will supply a project scope statement.
- B. For new construction and major rehabilitation projects, CDB may provide a program statement describing proposed program activities, space requirements, and equipment needs.
 - 1. When a movable equipment line item is included in the budget, the responsibility for specifying, purchase and installation is that of the using agency and/or the Department of Central Management Services.
 - 2. The A/E shall cooperate by providing the using agency with the dimensional, color, finish, etc. information necessary to specify any equipment not included in the CDB project.
- C. The A/E will utilize the information above as the basis of their design effort.

5.2 CDB Review Checklist. CDB Review Checklists for Program Analysis, Design Development and 50% Design submittals are available on the CDB website in the Reference Library.

- A. The A/E and CDB PM together will determine the relevant sections of the checklist to be completed for the project.
- B. The A/E will submit the appropriate checklist with each submittal.
- C. The A/E will review the submittal and checklist and mark each item on the checklist as either included or not relevant to the project.
- D. Submittals without the appropriate checklist will be rejected.

5.3 Program Analysis Phase.

- A. Review and coordinate the data contained in the project scope statement, consult with designated representatives of CDB and the using agency when required and visit the project site to obtain a thorough understanding of the existing conditions and the project.
- B. If the project is eligible for Art-in-Architecture funds, consult with the CDB Art-in-Architecture Coordinator and the Using Agency to determine how artwork will be part of the project.
- C. Provide a program analysis report containing the coordinated project scope supplemented by all other information necessary to form a complete basis for the project design, including field verification of any information provided by CDB and the Using Agency.
- D. Requirements for the program analysis submittal vary with the scope of the project, but generally include the following:
 - 1. Narratives and diagrams required to show all program functions, off-site elements, and their relationships. Provide flow diagrams showing the

movement of persons (visitors, staff and residents) and traffic when appropriate.

2. Space itemization including: function and size (show as net assignable sq. ft./area), number and classification of occupants, type and quantity of fixed and movable equipment (noting required utilities), special environmental and/or system requirements.
 3. Total of all program areas including a percentage allowance for circulation, mechanical and maintenance functions.
 4. Code analysis report indicating all regulatory agencies, permits, building codes, and standards that apply to the project. Include in this report an action checklist indicating all required regulatory agency reviews and permits. A Code Analysis Template is available on the CDB Website in the Reference Library for use in developing the code analysis information. The information included in the Code Analysis Template is required for every submittal.
 5. For renovation projects, the A/E shall provide a statement of the status of asbestos inspections and/or abatement. The A/E shall review the asbestos inspection report and/or management plan. Provide a listing of the type and quantity of materials tested positive that will be disturbed. Note also any materials listed as “assumed” to be positive for containing asbestos and indicate the quantity of samples proposed to be taken and tested to verify the “assumed” condition. CDB Form 9 as provided in the [A/E Manual of Procedures for Asbestos Inspections and Management Plans](#) (and on the website) is an acceptable format for this purpose. The A/E may copy Form 9 from the management plan for each area to be disturbed. If new (previously unsurveyed) ACM (asbestos containing material) is discovered, the A/E must complete Form 9 for that ACM.
 6. Opinion of probable construction costs including asbestos abatement in scope itemization format per [Article 4.6 A](#) and the PPCB form.
 7. Estimated duration of project construction schedule including asbestos abatement.
 8. Completed Program Analysis checklist.
 9. Completed LEED checklist (if applicable).
- E. Resolve, in consultation with CDB and the using agency, any discrepancies in the project scope or budget prior to proceeding to the next design phase.

5.4 Schematic Design

- A. When provided for in Appendix A to the agreement, the A/E shall prepare up to three design studies for review and consideration by CDB and the Using Agency, either as part of Program Analysis or as a separate phase.
- B. Design studies may include written alternatives, drawings, or other documents as appropriate. Drawings can be sketch format, single line drawings or other as appropriate to illustrate basic information. Submittal shall include written analysis of the advantages and disadvantages of each alternative.

- C. Provide PPCB form and cost estimates for each schematic design study in project component format per [Article 4.6 B](#).
- D. Provide LEED checklist for each schematic design study (if applicable).
- E. Design Development will be based on the alternative accepted by CDB and the User, as modified by their comments during the review process.

5.5 Design Development Phase.

- A. Prepare design development submittal based on the program analysis (and accepted schematic design). Submittal shall illustrate the resolution of all building and site elements. Fix and illustrate the scope, scale and relationship of the project components for structural, mechanical and electrical systems. Identify materials and specify performance characteristics and quality standards.
- B. Requirements for the design development submittal vary with the scope of the project, but generally include the following:
 - 1. Project Manual:
 - a. Table of Contents
 - b. Section 01 11 00
 - c. Specification section outlines for each anticipated specification section
 - d. Unedited master specification sections are not acceptable as an outline specification
 - 2. Site Plan. Locate each building, existing and finished contours, ground floor elevations, roads, walks, parking areas, utilities (existing, new, and relocated), other site construction, and limits of the construction zone. (Coordinate any proposed interruptions to services, roads, etc. with the Using Agency.)
 - 3. Estimate of probable construction cost per [Article 4.6 B](#) and a PPCB form.
 - 4. Current project schedule.
 - 5. Life Cycle Cost Analysis if requested by CDB, or for each alternative energy or building system proposed by the A/E.
 - 6. A statement indicating compliance with the Illinois Energy Conservation Code.
 - 7. An area analysis tabulation comparing the net and gross square footage with those provided in the Program Analysis Phase.
 - 8. Floor Plans. Identify room numbers, names, and mechanical spaces.
 - 9. All elevations showing finishes, window and door styles, etc.
 - 10. Vertical building sections.
 - 11. Location and type of primary structural members.
 - 12. Utility service requirements, including temporary service.

13. Basic plumbing layouts and fixtures.
 14. Basic HVAC systems and their major components.
 15. Basic layouts of lighting, power, fire alarm, emergency systems, security systems, exit signs, and communication/technology systems.
 16. Fixed equipment in tabular form with utility connection requirements noted.
 17. Identify areas requiring acoustical treatment.
 18. Model or rendering if included in the contract.
 19. Completed or updated LEED checklist (if applicable).
 20. BIM model if included in the contract.
 21. Completed Design Development checklist.
- C. The A/E shall not proceed beyond design development phase until provided with a written statement from CDB and the using agency signifying acceptance of the proposed design. This acceptance statement shall note all agreed upon revisions to the design development submittal.

Article 6

BIDDING DOCUMENT PREPARATION

- 6.1 **General.** The A/E shall prepare the bidding documents (Project Manual, Drawings and Addenda) based on the accepted design development submittal in conformance with applicable statutes and administrative rules, including the Illinois Procurement Code and CDB Rules and Regulations.
- 6.2 **Application of Professional Seals.**
- A. Bidding documents shall contain a legible seal with signature, date signed and license expiration date of the architect, structural engineer and/or professional engineer responsible for the document or under whose supervision the document was prepared.
 - 1. Date signed is the date the documents are finalized for printing and the architect or engineer seals and signs the documents.
 - 2. The architect or engineer's license expiration date must be later than the date the documents are signed (e.g. license must be current when signing documents).
 - B. The cover sheet and each sheet of the drawings shall be sealed in the manner prescribed above. All disciplines must seal the cover sheet.
 - C. Project manuals shall be sealed by the design professional responsible for the overall coordination of the project. If more than one design professional has responsibility for portions of the work, additional seals may be provided on the cover or on a separate sheet immediately following the table of contents. Each design professional responsible for portions of the work must provide their seal either on the cover or a separate sheet following the cover sheet.
- 6.3 **Design Firm Registration Number.** The Illinois Department of Financial and Professional Regulation requires that all technical submissions prepared by a design firm contain the design firm registration number. This number shall be placed under the firm name on the cover of the project manual and on each sheet of the drawings.
- 6.4 **Permits.**
- A. The A/E shall apply for any required state or federal (IEPA, IDNR, Corps of Engineers, etc.) permits. As stated in [Article 2.6](#), the A/E must comply with all regulations of state and federal agencies necessary to obtain such permits. It is the A/Es responsibility to ensure that such permits are received in a timely fashion so as not to delay construction.
 - B. When specifically directed by CDB, the A/E shall provide the local authority (or authorities, where more than one local authority has jurisdiction) with sufficient design documents as it may require for purposes of review and/or issuance of permits if applicable.
 - C. The A/E shall provide CDB with all review correction notices or comments issued by the local authority. When directed by CDB, the A/E shall make corrections to the documents and resubmit to the local authority for review and/or issuance of permits if applicable.

6.5 **Reviews.**

- A. The PM will schedule design review submittals and/or review meetings required by the agreement.
- B. Documents shall be submitted for review to CDB and the Using Agency at the stages of completion (DD, 50% and/or 75%) set forth in Appendix A of the PSA and at final completion (100%). The A/E shall provide electronic submittals as requested and/or up to ten (10) sets of review documents for CDB and Using Agency for each review.
- C. Each submittal will contain (at a minimum), the Project Manual, Drawings, updated LEED checklist (when applicable), detailed cost estimate and PPCB form. When an in-progress review is required by the agreement, the A/E shall include with the submittal package a “CDB Review Checklist” suitably marked by the A/E as to the topics to be reviewed per [Article 5.2](#).
- D. The review of documents by CDB does not constitute a complete and exhaustive review. CDB reviews the documents for general compliance with the program objectives, design standards, contract requirements and budget. CDB may also review for cost effective design, energy conservation, competitive bidding procedures, operating and maintenance costs, and general compliance with applicable codes, rules and regulations. CDB’s acceptance of the documents does not relieve the A/E of its responsibilities as a design professional.
- E. The Using Agency and other applicable regulatory agencies may review the documents for compliance with scope and design intent.
- F. Review comments prepared by CDB, the Using Agency and/or regulatory agencies will be provided to the A/E at or prior to the review meetings. When a meeting is not required, comments will be transmitted to the A/E by the PM.
- G. CDB will, in writing or at the review meeting, provide notice of the acceptance of the review documents or issue instructions regarding required resubmittal. If the required corrections are minor, CDB may conditionally accept and authorize the A/E to proceed to the next review phase. When documents are not accepted, a resubmittal will be required. In this instance, the A/E shall repeat the review stage (including another review meeting) at no additional compensation. The A/E may not be paid for completion of a design stage until the majority of the design document submittal for that stage has been accepted by the reviewers.
- H. CDB reserves the right to back charge the A/E if excessive 100% re-reviews are required. If more than two 100% reviews are required, the A/E’s prequalification status may be affected.
- I. The A/E shall ensure that all key design staff and consultants attend the review meeting(s).

- J. Following the reviews, the A/E shall:
 - 1. Prepare meeting minutes indicating issues discussed/resolved.
 - 2. Provide CDB with a written response to all review comments and questions within 14 calendar days.
 - 3. Copy reviewers on meeting minutes and responses to review comments.
- K. The 100 percent bidding documents submittal will include a final code analysis/regulatory review action checklist, copies of all permits and approvals, proposed list of critical work (below), energy code compliance forms, explanation of factors used in determining specified construction duration and executed utility agreements, as applicable.
 - 1. The A/E shall compile a list of work they have determined to be critical and submit it for CDB and Using Agency review at the 100% completion stage of design. The submittal shall include justification of the need for on-site representation, the A/E staff responsible for observing the work and an estimate of the duration/frequency of the observation with the resulting cost and overall impact on the on-site representation budget. CDB, the A/E and Using Agency will reach consensus regarding the critical work list items.
 - 2. Utility agreements are contracts between CDB and a utility company for the installation or relocation of utility service facilities in conjunction with a CDB project to be maintained by either the utility company or the customer (Using Agency). The A/E shall review such agreements to determine that the required utility service/equipment has been provided for the project and shall include the associated costs in the summary of proposed project costs.

6.6 Project Manual.

- A. Specifications shall be written as directions to the contractor and shall be in CDB outline format as per the example in Section 8.7 and Appendix 2. Please note that in all sample sections in this manual, items noted with an asterisk must be edited by the A/E to suit the requirements of the current project.
- B. Written product specifications shall be included in the Project Manual and shall not be duplicated on the drawings.
- C. All material specifications shall be included in the Project Manual.
- D. Soil boring logs must be provided in the Project Manual.
- E. CDB has prepared draft specification sections for the A/E's use on selected project types such as roofing and pre-engineered buildings. Please contact your project manager for the current versions of these specifications if required for your project.
- F. Except as required by code, provision of spare parts, "attic stock", and/or maintenance services shall not be included in the bidding documents except as permitted below.
 - 1. At facilities that conduct 24/7 operations, where residents cannot be easily relocated such as DOC, DHS, and DVA facilities, a limited amount of

1. Drawings bound into the Project Manual shall be noted as such in section 00 01 15 and shall be located after the last technical specification section.
 2. All drawings shall comply with the requirements of this section. When bound into the Project Manual, a cover sheet is not required.
- D. Minimum scales of drawings, unless approved otherwise by the PM, shall be:
1. Site Plan 1" = 30'
 2. Floor and Roof Plan 1/8" = 1'0"
 3. Temperature Control 1/16" = 1'0" (Schematics, not to scale, may be acceptable)
- E. All sheets shall contain a graphic scale (one for each different scale used on that sheet) and a north arrow. North shall be consistent between all sheets.
- F. Minimum acceptable lettering size is 3/32 inch, adequately spaced and legible.
- G. Line weights and other techniques shall be used appropriately to clearly communicate the work required and to delineate new work from existing conditions.
- H. Match lines shall be used to identify portions of buildings or sites shown on separate sheets. Match lines shall be consistent throughout drawing set.
- I. Other Drawing Requirements:
1. All floor plans and partial floor plans shall show consistent column grid line indications, room names and numbers and shall be to the same scale. Building elevations and sections shall also indicate column grid lines. Larger scale plans of special areas such as toilets (including elevations), lecture rooms, stairs, kitchens, shall be provided as necessary to show details of the work.
 2. The elevation of the finished floor shall be indicated under the title for each floor level (all disciplines).
 3. All details shown on drawings shall be applicable to the project. Details shall be drawn to scale.
 4. Designation for sections, details, etc. shall denote detail and sheet number on which it is detailed.
 5. Items shown on the drawings that are not a part of the contract shall be labeled as NIC (not in contract).
 6. Assign a number or name to all rooms, corridors, etc. for reference purposes. Names are preferred if they do not cause drawing congestion. For buildings, use the CDB building inventory number as assigned and the common name for the building. Ensure that numbers and names are identical for all drawings.
 7. Clearly identify and show all work involved in demolition, alternate bids, removals, abandonment, or other activities associated with the project.

8. A key plan in the lower right-hand corner of the drawing shall be used to locate a building, a portion of a building or portion of a site in relation to the larger unit.
 9. All work shown is assumed to be new unless stated otherwise. Do not use the word "Proposed" on contract drawings when referring to required work. Existing items pertinent to the project may be marked as "existing" to avoid confusion with new work. Future work shall be shown only where necessary to coordinate with current project and shall always be noted as "NIC".
 10. Show all known asbestos-containing material (ACM) locations where the contractors' activities could accidentally damage the ACM. Include a note stating that this material is known or assumed to contain asbestos, that the workmen should exercise extreme caution to avoid damaging the material, that any accidental damage should be immediately reported to the A/E, coordinating contractor (when applicable), and/or the facility's designated asbestos person and that if the material is damaged during the course of the work, the contractor will be required to reimburse CDB for any costs incurred which may include A/E services.
- J. All drawings shall be labeled for the appropriate division of work as set forth in [Article 9](#).

Article 7

PREPARATION OF DIVISION 00 AND 01 SECTIONS

- 7.1 **Prototypes.** Sample specifications or prototypes for the following items are available on CDB's website. The A/E is to review the prototypes and edit, complete, and/or adapt them as necessary to the specific requirements of the project.
- 7.2 **Cover.** Professional seals and signatures shall comply with the current requirements of the various professional practice acts. Other notes or certifications required by authorities having jurisdiction shall also be shown. List CDB building numbers for buildings affected by the project.
- 7.3 **00 01 10 Table of Contents.** The numbering of sections or schedules through division 1 substantially complies with the latest CSI Master Format. Note that CDB has added certain sections required by our bidding process and other procedures. For spec sections in divisions 2 onwards the A/E should use the latest CSI Master Format numbering.
- 7.4 **00 01 15 Drawings, Schedules, & Details Listing.** Section 00 01 15 of the project manual shall contain a listing of all drawings, schedules, books and details issued separately or as part of the project manual. Note that all documents shall bear the same date of issuance as the project manual.
- 7.5 **00 11 13 Advertisement for Bids.** The A/E shall obtain the proposed bid opening date from the project manager prior to preparing the advertisement for bids.
- 7.6 **00 31 32 Soil Report.** When soil reports are provided as part of the A/E services they should be inserted into the manual as part of section 00 31 32.
- 7.7 **00 41 00 Bid Forms.** Documents 00 41 00 through 00 41 09 collectively are known as the Bid Forms or the Bid Package.
- A. **Changes.** If one or more of the forms in the bid package require a change by addendum, the A/E shall reissue a complete set of the bid package with the addendum. Each page shall be marked: "Revised per Addendum No. X". The addendum will be prepared and issued as described in [Article 10.5](#).
- B. **00 41 00 Bid Form.**
1. The bid forms shall clearly indicate the project number and the contract trade.
 2. If unit prices are to be used, the bid form shall make it clear that unit price work shall be included in the base bid, unless specifically approved otherwise by CDB.
 3. The A/E shall list on each trade bid form **all** the alternates for the that trade. The A/E shall refer to the A/E Note contained within the prototypical section 01 23 00 or [Article 7.15](#) for the use and numbering of alternates.
 4. The certifications and bidder agreements on the bid form are not to be added to, deleted in whole or in part, or modified in any manner.
- C. **00 41 01 Subcontractor Requirements.** This form includes information of known subcontractors with an annual contract value over \$100,000.

- D. **00 41 04 Bidder's Employee Utilization Form, DHR PC-2.** This is a **required** form. CDB will forward to the A/E the appropriate completed PC-2 forms for each trade to be bid. These forms must be included in the bid package.
 - E. **00 41 05 Contract Requirements for Minority/Women/Veteran/Persons with Disabilities Business Participation.** This form is **required** with all bids.
 - F. **00 41 06 Bid Bond Form.** Bid bonds must be submitted on CDB's bid bond form. It is the A/E's responsibility to include these forms in the bid package.
 - G. **00 41 07 Product Substitution Form.** This form must be included in all bid packages for the bidder's use.
 - H. **00 41 08 Standard Business Terms and Conditions.** This form is required in accordance with the Illinois Procurement Code.
 - I. **00 41 09 Certifications and Disclosures.** This form must be submitted in all bid packages and can be fulfilled with either Forms A/Vendor Disclosure, standard paper method, or Forms B/IPG Active Registered Vendor Disclosure, using an Illinois Procurement Gateway Registration Number.
- 7.8 **00 43 42 Federal Funding.** Where projects are wholly or partially funded by the Federal Government, Section 00 43 42 shall be included in the project manual along with all applicable federal exhibits required. See the CDB project manager for specific exhibits necessary.
- 7.9 **00 43 43 Prevailing Wage Rates.** Applicable wage rate information may be obtained from either the CDB project manager or the IDOL Website (<https://labor.illinois.gov/laws-rules/conmed/current-prevailing-rates.html>). The rates for the specific county(s) where the project is located shall be inserted into the project manual in section 00 43 43.
- 7.10 **00 43 44 Illinois Works Jobs Program Act.** The A/E shall consult with the CDB project manager to determine the contractor's apprenticeship goals based on appropriated funds and estimated project cost.
- 7.11 **00 91 ** Addendum.** This section should be used in the event that there is an addendum to modify the original bidding documents.
- 7.12 **01 11 00 Project Summary**
- A. **General.** Section 01 11 00 not only summarizes the work associated with the project but also establishes division of the work by construction contract, sets the time duration of the construction contracts, defines bidding requirements, and specifies any special general condition requirements of the project.
 - B. **Preparation.** Preparation of Section 01 11 00 requires careful consideration of project needs and characteristics and should be completed in consultation with CDB's project manager and a representative of the using agency. No additions may be made to this section without the express permission of the Project Manager.
 - C. **Relationship to Standard Documents for Construction.** Section 01 11 00 augments and supplements the Standard Documents for Construction (SDC). Certain articles of the SDC require information to be in the project manual to be complete in their requirements. These are required paragraphs in Section 01 11 00. Other articles may be modified in the project manual and are optional paragraphs

in Section 01 11 00. It is important that the A/E read and understand the Standard Documents for Construction before preparing this section.

- D. **Listing of Required and Optional Paragraphs.** Below are the instructions for the required and optional paragraphs included in Section 01 11 00. When optional paragraphs are not used, the paragraphs shall be renumbered consecutively. Optional paragraphs are *italicized*.
- E. **Paragraph 1 STANDARD DOCUMENTS FOR CONSTRUCTION.** This **required** paragraph specifies the edition of the Standard Documents that applies to the project. The edition specified shall be the one listed on the signature page of the PSA unless directed otherwise by the project manager.
- F. **Paragraph 2 GENERAL PROJECT INFORMATION.** This paragraph is composed of three **required** subparagraphs.
1. **Para 2.A DESCRIPTION.** This subparagraph shall briefly describe the work to be performed. The description should not duplicate the detailed description of systems or materials in the technical specification sections.
 2. **Para. 2.B EXISTING CONDITIONS.** This subparagraph shall briefly describe any existing conditions that may affect the work. This section would include any working hour restrictions, site or building access restrictions, scheduling any down time for mechanical systems, etc. This subparagraph is not for soil conditions or to place into the work any undisclosed conditions that might be encountered. If there are no existing conditions that require specifying, so state.
 3. **Para. 2.C RELATED WORK.** This subparagraph shall include any work related to these contracts which affects the contractors' work. This would include utility agreements, other current or future projects at the site, etc. If there are no related work items, so state.
- G. **Paragraph 3 CONTRACT TIME.** This **required** paragraph establishes the contract time for the entire project and/or each contract individually. See [Article 3.7](#) regarding construction duration.
1. Contract time will be specified in two blocks - construction from Authorization to Proceed through Substantial Completion and close-out activities from Substantial Completion through Final Acceptance. Sufficient time for pre- and post-construction activities (e.g. mobilization, procurement) must be added to the estimated construction duration to determine the construction time. Confer with your CDB project manager for help in estimating these activities.
 2. There are three options for specifying the contract time:
 - a. The first (standard) option requires Substantial Completion to be achieved in a set number of consecutive calendar days from the Authorization to Proceed and Final Acceptance to be achieved in a set number of consecutive calendar days from Substantial Completion.
 - b. The second option requires the contractor to achieve Substantial Completion by a certain date and Final Acceptance to be achieved in a set number of consecutive calendar days from Substantial Completion. This is to be used only when there are

- external constraints on the completion of the project, e.g. beginning of school semester, yearly closing of asphalt plants.
- c. The third option is for projects that must be fully completed by the August following the close of the fiscal year in order for payment to be made from that fiscal year's appropriation.
3. When asbestos abatement precedes the contract work the contract time will begin when the building or space is available to the contractor (e.g. "The contractor shall complete all work through Substantial Completion in accord with the contract within *_____ consecutive calendar days from *the date of Final Air Clearance in Room XX"). Consult with your project manager regarding contract time for multi-phase projects.
- H. **Paragraph 4 CONTRACT(S).** This **required** paragraph specifies the division of the project work into contracts by trade. Division of the work shall comply with [Article 3.3](#).
- I. **Paragraph 5 PRE-BID CONFERENCE.** Provide time, date and location of pre-bid meeting. The pre-bid meeting may be made mandatory **only** with the written permission of the PM. The A/E must request approval for a mandatory pre-bid conference in writing. Notification of all mandatory pre-bid conferences must also be included in the advertisement for bid (00 01 13).
- J. **Paragraph 6 CONTRACT ADMINISTRATION FEE.** This is a **required** paragraph. The A/E shall calculate the contract administration fee (CAF) for each trade contract listed in [Paragraph 4](#) in accordance with [Article 4.5](#), and include the amount here.
- K. **Paragraph 7 BID SECURITY.** This is a **required** paragraph and shall be included in all project manuals as provided.
- L. **Paragraph 8 BUILDER'S RISK INSURANCE, DESIGNATED PURCHASER.** This is a **required** paragraph. The A/E shall designate the contractor who is to provide the builder's risk insurance for the project, usually the coordinating contractor. There is an option for no builder's risk insurance which is to be used **only** with the written approval of the project manager.
- M. **Paragraph 9 PROCUREMENT OF DOMESTIC PRODUCTS ACT.** This is a **required** paragraph. A determination is made by the A/E in consultation with the purchasing agency whether the project is or is not too complex or have too numerous of products to state whether there is a preference allowed to meet the Procurement of Domestic Products Act, which promotes materials manufactured in the United States or Illinois.
- N. **Paragraph 10 BID PREFERENCE FOR ILLINOIS BUSINESSES.** This is a **required** paragraph. The applicability of this provision depends in part on whether there is federal funding and federal requirements that conflict with a bid preference for Illinois businesses. It shall be stated whether this is applicable.
- O. **Paragraph 11 LIQUIDATED DAMAGES.** This is an optional paragraph and shall be used only with the written consent of the project manager. CDB discourages use of liquidated damages. Refer to Article 00 72 75 of the Standard Documents for Construction.
- P. **Paragraph 12 SITE SECURITY.** This is an optional paragraph. The paragraph shall be included in Section 01 11 00 when the work is to be performed at a secure

facility (e.g. a prison). The A/E shall review this requirement with the using agency and the project manager.

- Q. **Paragraph 13 PROJECT IDENTIFICATION SIGN.** This is an optional paragraph. The A/E shall include when required. The A/E shall provide size and location of the sign on the drawings and have the wording approved by CDB prior to issuing to the contractor.
 - R. **Paragraph 14 FIELD OFFICES.** This is an optional paragraph. The A/E shall include when required after consultation with the project manager. If the using agency has existing space for field offices, coordinate with the using agency and include in Section 01 11 00.
 - S. **Paragraph 15 VALUE MANAGEMENT.** This is an optional paragraph. Generally it should be included in all project manuals unless the Project Manager specifically directs otherwise.
 - T. **Paragraph 16 EXCESS FACILITY CHARGES.** This is an optional paragraph. It will be used when new connections are being made for permanent utilities.
- 7.13 **01 11 01 Supplement to SDC and SDC-CM.** This section is required as a replacement and/or addition to certain articles from the 2006 and 2009 Standard Documents for construction.
- 7.14 **01 22 00- Unit Prices.** The A/E shall include this section if unit prices are to be included in the bids. Unit price work must be listed in the appropriate specification section as well as on the bid form and in this section. Use of unit priced work must be approved in writing by CDB.
- 7.15 **01 23 00- Alternates.** The A/E shall include this section if alternate bids are to be included with the base bids.
- A. Alternate bids shall be clearly and completely specified in this section. Alternate bids must also be noted in the relevant technical specification section(s) and on the drawings.
 - B. Alternate bids may not be included in the project without permission of the PM.
 - C. For multiple prime delivery projects, each contract to be bid that has work in the same alternate shall have the same alternate designation number following the trade designation letter. For example, three alternates - the first involving the General and Electrical contractors, the second the Plumbing contractor only, and the third all three contractors - would be numbered G-1/E-1, P-2, and G-3/P-3/E-3.
 - D. Alternate bids will be awarded in numerical order, unless modified by addendum.
- 7.16 **01 31 00- Coordination, Supplemental to the SDC.** This is an optional section that supplements the basic requirement for coordination included in Article 01 31 00 of the SDC. This section may be used to modify, add to, or delete the requirements of Article 01 31 00 if that paragraph does not meet the project requirements.
- 7.17 **01 32 00 - Construction Schedule, Non-CPM Option.** This is an optional section that complements Article 01 32 00 of the SDC which requires the use of a critical path method of scheduling the project. CPM is required on all projects, unless otherwise allowed by the project manager.

- 7.18 **01 32 23— Survey and Layout Data.** This section is required in order to designate contractor responsibility for grades, lines and levels needed for the work.
- 7.19 **01 32 33- Construction Photographs.** This is an optional section for use when progress photos are deemed appropriate and required by CDB.
- 7.20 **01 33 23 - Shop Drawings, Product Data, & Samples.** This is a required section if any submittals are required. If a large number of submittals is expected, a schedule of submittals is suggested instead of a list.
- 7.21 **01 35 16- Remodeling Project Procedures.** This is an optional section for appropriate projects.
- 7.22 **01 35 53- Security.** Specify responsibility for security and level required. Check with Using Agency and CDB PM for site specific requirements. Coordinate with Section 01 11 00 paragraph 12 Site Security.
- 7.23 **01 41 00 - Regulatory Requirements.** This section is required for all project manuals. The A/E shall edit this section leaving only those regulatory requirements that pertain to the work. Any regulatory requirements not listed that pertain to the project shall be added when appropriate, e.g. local codes. Be sure to include the date of the code for each code used in the project design.
- 7.24 **01 45 29 - Testing Laboratory Services, Supplemental to the SDC.** This section is required when construction phase testing will be provided by the A/E. Specify testing required. The A/E is to submit a list of proposed tests with the 50% submittal.
- 7.25 **01 51 00 - Temporary Utilities.** This section is generally included in all projects; however, it must be carefully written so as to be applicable to the specific project conditions. The A/E is to be sure to assign temporary utilities to the correct trade. The A/E may not specify temporary use of permanent systems without permission from PM.
- 7.26 **01 51 50 - Use of Existing Facilities.** This is an optional section intended for small projects.
- 7.27 **01 54 00 - Construction Aids.** This is an optional section and is to be used only with the express permission of CDB. The Standard Documents of Construction require that all contractors provide their own construction aids. If there is a need for one contractor to provide a common construction aid, request approval of such from the project manager.
- 7.28 **01 55 00 - Access Roads, Parking Areas, & Traffic Control.** This is an optional section to be used when restricted use of the project site is required.
- 7.29 **01 56 00 - Barriers.** Specify required construction barriers appropriate to the project.
- 7.30 **01 66 00 - Storage & Protection.** This is an optional section for use where there are restrictions on storage or where off-site storage may be contemplated. Use when appropriate.
- 7.31 **01 73 29 - Cutting & Patching.** This is an optional section that supplements the basic requirement for cutting and patching included in Article 01 73 29 of the SDC. This section may be used to modify, add to, or delete the requirements of Article 01 73 29, if that paragraph does not meet the project requirements.
- 7.32 **01 74 13 - Construction Cleaning.** Assign responsibility for cleaning and degree of cleaning required during the course of the project.

- 7.33 **01 74 23 - Final Cleaning.** This is a required section for the purpose of assigning responsibility for *final* cleaning.
- 7.34 **01 78 23 - Operating & Maintenance Data.** This is a schedule of the O & M data required to be submitted and complements Article 01 78 23 of the SDC. This is a required schedule if any O & M manuals are required.
- 7.35 **01 78 36 - Extended Warranties & Bonds.** This is a schedule of the extended warranties and bonds to be furnished by the contractors. This schedule complements Article 01 78 36 of the SDC. This schedule is required only if warranties or bonds with a warranty period longer than one year are specified. See SDC section 01 78 36.2 for required extended warranties.
- 7.36 **01 78 39 - Project Record Documents.** This is a required section to ensure that CDB receives suitable documents for record purposes.

Article 8 PREPARATION OF DIVISIONS 02 AND FOLLOWING

- 8.1 **Master Format.** The use of the Construction Specifications Institute’s (CSI) Master Format for specification titles and numbers is preferred by CDB for developing sections beginning with Division 02. Specifications developed using this edition of the DCM will use the 6 digit numbering format of CSI’s 2004 Master Format.
- 8.2 **CDB Format.** Please note that the first section of each specification section must follow CDB’s format ([Article 8.7](#) below) rather than the CSI format.
- 8.3 **Listing Sections.** Save space wherever possible. Do not list sections or sub-sections as “not applicable”. Just leave them out.
- 8.4 **Sub-headings.** Do not use a lone sub-heading in the outline if only one sub-heading applies. Begin text immediately following the heading.
- 8.5 **Abbreviations.** Do not spell out “Capital Development Board”, “Project Manager”, or “Architect/Engineer”. Once they are clearly identified, use “CDB”, “PM”, or “A/E”.
- 8.6 **Outline.** Break down sub-paragraphs using the following outline definition:

0.0

- A.
 - 1.
 - a.
 - 1)
 - a)

- 8.7 **Paragraph 1.1 Example.** Following is a guide for use in preparing Paragraph 1.1 of a technical specification section. Options are flagged with an asterisk (*). The A/E must insert appropriate data or information wherever there is an asterisk. Notes to the A/E are included where appropriate.

Section 1 General

1.1 WORK INCLUDES

- A. Base Bid: (* List each contractor who has work in this section)
 - 1. (*_____) Contractor:
 - a. (A/E: briefly summarize work in this section)
 - 2. (*Continue for any other contractor who has work under this section)
- B. Alternate Bids: (*) (A/E: list all alternate work applicable to this section by contractor and alternate number)
 - 1. (*_____) Contractor:
 - a. Alternate Bid (*letter) – (*1)
 - 1) (A/E: briefly summarize work)

2. (*Continue as appropriate)

C. Unit Prices: (*) (A/E: Describe unit price work applicable to this section)

1. (* _____) Contractor:

a. (A/E: briefly summarize work)

Article 9

PREPARATION OF DRAWINGS

- 9.1 **Cover Sheet.** Cover sheet shall be prepared per standard cover sheet available on the CDB Website.
- A. When appropriate for the project, include applicable building codes, building square footage, occupancy classification, type of construction and fire resistance rating.
 - B. On small projects, symbols and abbreviations may be listed on the cover page.
 - C. Edit symbol and abbreviations lists to include only those items used on the drawings.
 - D. List CDB Building Identification number(s) for each building affected by the project. CDB building numbers are available from the PM.
 - E. Cover sheets, drawing index sheets, and information sheets shall be designated: G.
- 9.2 **Civil Drawings.** Civil drawings shall include the following, as applicable to the project.
- A. Site development work, storm sewers, and landscaping shall be included in the general work contract. Water service and sanitary sewer may be included in either the general or plumbing work contract. Electrical and telecommunications service shall be included in the electrical contract.
 - B. New contours shall be labeled, and contrast with labeled existing contours. New contours shall indicate adequate drainage patterns. Each fifth contour shall be shown as an index contour.
 - C. Show all new topography, newly established levels and grades, existing structures, new structures, roadways, walks, location of nearest drainage/sewer connections, other identifiable features and areas to be seeded and landscaped. All structures and improvements which are to be removed under the construction contract shall be shown.
 - D. Profiles and cross sections shall be provided for all new roadways. Cross sections shall be provided for each type of sidewalk and curb design. Expansion joints shall be shown in plan view and details shall be provided of each joint type used.
 - E. Profiles shall be provided for all sewers. Show invert elevations of all sewers, manholes and catch basins. Show frame and grate elevations of all manholes and catch basins.
 - F. Show the Stormwater Pollution Prevention Plan (SWPP) and details for erosion and sediment control.
 - G. Standard drawing designations for civil work include:
 - 1. Civil C
 - 2. Fencing F
 - 3. Well Drilling WD
- 9.3 **Architectural Drawings.** Architectural drawings shall include the following, as applicable to the project.

- A. Plan of each floor and roof.
- B. Elevations of each facade.
- C. Longitudinal and transverse sections through entire building.
- D. Schedule of finishes, doors, and accessories.
- E. Roof plan showing high and low elevations; show exact slopes.
- F. Wall sections at relative elevations, including flashing details.
- G. Miscellaneous details, sections, and enlarged plans to effectively communicate the design.
- H. Reflected ceiling plans showing all ceiling elements visible on the ceiling, such as lighting fixtures, exit signs, speakers, detectors, diffusers, sprinkler heads, and suspended ceiling grids. All reflected ceiling plans must be coordinated between all applicable trades.
- I. Standard drawing designations for architectural work include:

1.	Architectural	A
2.	Carpet	CPT
3.	Painting	PNT
4.	Demolition	D

9.4 **Structural Drawings.** Structural drawings shall be separated from architectural work. Drawings shall include the following as appropriate for the project.

- A. Include the following information in general notes:
 - 1. Governing structural codes with year of edition.
 - 2. Design live, wind, earthquake and any loads required by code, or design coefficients used as a basis for structural design.
 - 3. Detailed breakdown of all loads associated with the structure so the load path calculations may be made.
 - 4. Net allowable soil bearing capacity.
 - 5. Strength of all structural materials.
 - 6. Other information required as a basis for structural evaluation.
- B. Show overall dimensions, center lines, location of members and offsets.
- C. Show all columns on grids.
- D. Schedule (as required) footings, columns, beams, girders, slabs, lintels, and reinforcement.
- E. Detail all special connections, assemblies, and expansion joints.
- F. Show connection details or required design reaction loads for all structural steel framing connections.
- G. For new construction, unless otherwise approved by CDB, design roof drainage slope into the structural system.

- H. Show elevations for top of beams and slabs; top and bottom of columns; bottom of footings, etc.
- I. Drawings must be sealed by a Structural Engineer or Architect licensed in the State of Illinois.
- J. Standard drawing designations for structural work include:
 - 1. Structural S

9.5 **Plumbing Drawings.** Plumbing drawings shall include the following as applicable to the project.

- A. Show where the work of others (contractors, utilities, existing work, etc.) stops and where the plumbing work begins.
- B. Show underground plumbing work on a footing plan or foundation drawing.
- C. Show all connections to all equipment (electrical, etc.) and note contractor responsible.
- D. Show piping over 12" to scale in double lines.
- E. Detail major plumbing equipment such as PRV stations, pumps, water heaters, flash tanks, and boilers showing valves, gauges, thermometers, unions, drains, etc.
- F. Show all work spaces (tube pull area, coil pull area, access space, etc.) for all equipment requiring same.
- G. Show all cleanouts on plumbing drawings.
- H. Show all valves, cocks, unions, strainers, gauges, traps, etc., on plan or in typical details.
- I. Schedule plumbing fixtures including kitchen equipment, drinking fountains, electric water coolers, water heaters and water treatment equipment. Schedules on drawings are preferred. The competitive product selection policies in Section 3.4 are applicable to the schedules.
- J. Provide waste and vent, hot and cold water riser diagrams; and isometrics for all plumbing fixtures or fixture groups. Number all fixture groups. Show air chambers on isometrics and shock absorbers where provided on multiple fixture groups in lieu of air chambers.
- K. Show and size all sprinkler mains and risers. Show all head locations. Specify code.
- L. Show all fire hose cabinets (provided by general contractor) on plumbing drawings or sprinkler system if a separate contract.
- M. Identify equipment provided by other contractors to be installed or connected by the plumbing contractor.
- N. Standard drawing designations for plumbing work include:
 - 1. Plumbing P

- 2. Pipe covering and insulation INSL
- 3. Sprinkler FP

9.6 **Heating Drawings.** Heating drawings shall include the following as applicable to the project.

- A. Show where the work of others (contractors, utilities, existing work, etc.) stops.
- B. Show all connections to all equipment (electrical, etc.).
- C. Show duct work or piping over 12" to scale in double lines.
- D. Clearly label High Pressure Steam, Medium Pressure Steam, Low Pressure Steam and Condensate Return piping (high, medium or low pressure). Clearly label High Temperature Hot Water, Medium Temperature Hot Water and Low Temperature Hot Water piping.
- E. Schedule equipment such as coils, pumps, chillers, cooling towers, boilers, unit heaters, convectors, air separators, radiation traps, etc. Include technical information (capacity, power requirements, motor sizes, etc.) only. Indicate each contractor's responsibilities where interface is required. The competitive product selection policies in Section 3.4 are applicable to the schedules.
- F. Detail major heating equipment such as pumps, coils, boilers, and chillers showing valves, gauges, thermometers, unions, drains, etc.
- G. Show all work spaces (tube pull area, coil pull area, access space, etc.) for all equipment requiring same.
- H. Where rooftop equipment is used, provide a roof plan showing all equipment (units, exhaust fans, cowls, etc.).
- I. Standard drawing designations for heating work include:
 - 1. Heating H
 - 2. Temperature Control/Building Automation TC

9.7 **Ventilating Drawings.** Ventilating drawings shall include the following as applicable to the project.

- A. Show where the work of others (contractors, utilities, existing work, etc.) stops.
- B. Show all connections to all equipment (electrical, etc.).
- C. Show duct work or piping over 12" to scale in double lines.
- D. Schedule equipment such as air handling units, fans, coils, diffusers, registers, grilles, pumps, unit heaters, convectors, air separators, radiation traps, etc. Include technical information (capacity, power requirements, motor sizes, etc.) only. Schedules on drawings are preferred. Indicate each contractor's responsibilities where interface is required. The competitive product selection policies in Section 3.4 are applicable to the schedules.
- E. Detail major ventilating equipment such as pumps, coils, chillers and air handling units showing gauges, thermometers, drains, etc.

- F. Show all work spaces (tube pull area, coil pull area, access space, etc.) for all equipment requiring same.
- G. Where rooftop equipment is used, provide a roof plan showing all equipment (units, exhaust fans, cowls, etc.).
- H. Show all devices (balancing dampers, fire dampers, turning vanes, extractors, splitters, etc.) and access panels on drawings for contractor providing them.
- I. Standard drawing designations for ventilating work include:
 - 1. Ventilating V
 - 2. Test and Balance T&B

9.8 Electrical Drawings

- A. Single line diagram with all primary and secondary distribution equipment and loads, including feeder identification with conductor and raceway size and type.
- B. Primary distribution equipment and all other loads located in plan view, with initial spatial coordination done by the design professional.
- C. Service entrance arrangements with the serving utility, made, confirmed, and noted by the design professional.
- D. Branch circuiting with voltage drop considerations, for both power and lighting, including switching, dimming, special controls, and home run designations.
- E. Mechanical equipment power requirements and physical locations, including special information as to who mounts, connects, tests, etc.
- F. Control diagrams and schematics revealing interactive relationships as well as operating logic for all systems. Information should be adequate to understand and install appropriate wiring.
- G. Provide a one line diagram for all special systems (e.g. Fire Alarm, Security, PA and Nurse Call Systems) specific to the project.
- H. Schedules of fixtures, panelboards, switchgear and other equipment, including sizes, types, styles, catalog numbers, and other pertinent characteristics.
- I. Provide the foot candle level and the watts per square foot for each room. Provide total wattage for building.
- J. Define equipment grounding system, including special requirements for telecommunications, interference shielding, isolated systems, filters, etc., when used. Verify compatibility with ground fault protection systems used.
- K. Schedule light fixtures and lamps. Include the type designation, the number, type, and size of lamps per fixture, and the accessories and methods necessary for mounting the type of fixture.
- L. Define lightning protection system, if applicable.

- M. Include electrical power, telecommunications and other electrical systems on the site drawings or combined site plans. Designate as the work of the electrical contractor.
- N. Completely circuit and define all work. Do not leave for contractor to design.
- O. Show a one-line diagram of power distribution, including emergency power distribution and ground fault protection. Use riser diagrams, if appropriate, to further define distribution.
- P. Show power distribution and special systems layouts separate from lighting layouts for clarity. Provide separate plans for each system.
- Q. Draw major items of electrical equipment such as switch gear, transformers, panels, lighting fixtures, etc., to scale, making sure that the largest of the three specified pieces of equipment will fit.
- R. Schedule motor control, including auxiliaries, overload protection, interlocking, etc.
- S. Show a detailed schedule for each panel board, switchboard, motor control center, etc. Include breaker size, fusible switch size, or fuse size, frame size and trip setting, usage of circuit, spares, spaces, connected load for each circuit, etc. Preferably, show schedule on the drawing depicting wiring from that unit.
- T. Identify equipment provided by another contractor to be wired by the electrical contractor.
- U. Fire Alarm Systems
 - 1. For projects with sprinkler systems, kitchen hood fire extinguishing systems, or other special systems, include the devices and circuiting to actuate the system. Duct smoke detectors, fan shutdown and smoke evacuation devices shall be considered part of the fire alarm system. Duct smoke detectors which are not readily accessible should be provided with remote controls.
 - 2. When fire alarm systems are provided, include both audible and visual alarms in compliance with the Illinois Accessibility Code.
- V. Standard drawing designations for electrical work include:

1.	Electrical	E	
2.	Fire Alarm		FA
3.	Security/Communications		COM

9.9 **Other Drawings.** Standard drawing designations for other work include:

- | | | |
|----|-------------------------|-----|
| A. | Equipment | EQP |
| B. | PCB Equipment Disposal | PCB |
| C. | UST Removal/Replacement | UST |
| D. | Asbestos Abatement | ASB |

Article 10 BIDDING PHASE

- 10.1 **General.** Upon CDB acceptance of 100% design documents, the A/E shall sign, seal and date each sheet of the drawings and the project manual with the same date. CDB PM approval, in writing, for release of bidding documents must be obtained by the A/E before printing and distributing documents to the public.
- 10.2 **Advertisement for Bids.** The Illinois Procurement Code (30 ILCS 500/1) requires that contracts shall be advertised at least 14 calendar days before the bid opening. The A/E shall provide the necessary information to the PM in a timely fashion.
- A. For small or single contract projects a single bid opening will be scheduled. For large projects, the bids for the coordinating contractor will usually be received one week following receipt of bids for the assigned contractors.
 - B. The advertisement for bids shall include the pre-bid meeting information. Mandatory attendance at the pre-bid conference shall be noted in the advertisement.
- 10.3 **Document Distribution.**
- A. The reproduction and distribution of bidding documents is the responsibility of the A/E. If more bidding documents are distributed than the number of sets listed in Appendix A of the agreement, the additional sets are reimbursable to the A/E. The A/E shall maintain an accurate record of all vendor provided printing costs. “In-House” printing of bid sets is permitted. CDB will reimburse for in-house printing based on area costs for vendor provided printing. The A/E shall provide at least two quotes from local vendors as backup with pay request.
 - B. The A/E shall distribute bid documents to all interested bidders, subcontractors, suppliers, etc. Each prospective bidder shall be provided with one loose copy of the bid forms, one CDB bid envelope addressed to the appropriate bid receipt location, and the “Bidder Check List”. The envelope and check list are available from CDB.
 - 1. CDB maintains a list of prequalified vendors on its website. Contractors not pre-qualified with CDB should be referred to CDB’s Contracts section.
 - 2. It is in the interest of the A/E to solicit competitive and multiple bids for each contract to avoid having to rebid or redesign the work. The A/E shall maintain a list of contractors contacted.
 - C. Plan holders shall make a reasonable plan deposit or be a member of a non-cash deposit program in accord with the advertisement for bids. Plan holders who return bidding documents in good condition within forty-five (45) calendar days of the bid opening shall have their deposit returned. The A/E will return the deposit within 10 days of receipt of bidding documents if the plans are in good reusable condition. The contractors awarded the work shall not be required to return their bidding documents but their deposits shall be returned to them. An accurate record of all deposits shall be kept by the A/E and submitted to the PM. All deposits not returned shall be credited to the A/E printing reimbursable account and reported with the A/E’s regular pay requests.
 - D. Plan holders shall not be charged handling and postage to obtain bidding documents. This is considered an overhead item in the A/E agreement. Postage

for additional sets above the number listed in Appendix A shall be a reimbursable to the agreement. Postage to return documents shall be at the plan holder's expense.

- E. The following individuals and offices shall receive the bidding documents, or portions of the bidding documents. These individuals and offices shall be listed on the plan holder lists.
1. Plan Rooms. The A/E shall send complete sets of the bidding documents to all participating plan rooms and other organizations as prudent to solicit competitive bids and to make the bidding documents available to as many potential bidders, subcontractors, and suppliers as possible. PM may advise the A/E of additional distribution. All participating plan rooms are listed under procurement information on CDB's website.
 2. CDB Offices. Bidding documents shall be distributed to CDB personnel and sections as listed below:
 - a. PM - one set of bidding documents plus detailed estimate.
 - b. DCU section - one project manual
 - c. Archivist - one printed set of bid drawings and specifications and one set of drawings and specifications electronically, including all addenda. See [Article 22.2 B.](#) for detailed instructions on preparing the electronic submittal.
 - d. Contract Administration Division in the Springfield office: detailed estimate and all addenda (all projects);
 - e. Bid Officer in a Regional Office: project manual and detailed estimate plus all addenda (for projects bid in that location).
 3. Using Agency. Two sets of bidding documents (or as specified in PSA) including all addenda.
- 10.4 **Plan Holder Lists.** Periodically, the A/E shall submit to the PM the list of plan holders, including address, telephone number, fax number, email address, and the contract(s) the plan holder intends to bid. The A/E shall submit a final list of plan holders to the PM and CDB Bid Officer on each day bids are received.
- 10.5 **Addenda.** The A/E shall prepare all required addenda.
- A. CAF may not be changed by addendum, unless directed by CDB.
 - B. Technical clarifications and interpretations may only be made by addendum. No technical clarifications or interpretations are to be given to individual contractors outside the addendum process.
 - C. All addenda, including all revised drawings and sections, must be accepted by the PM prior to distribution to the plan holders. The A/E shall allow sufficient time for CDB review to fulfill the adequate notice requirement.
 - D. Distribution and Adequate Notice. All addenda shall be issued to all plan holders as required to ensure receipt no later than three (3) business days prior to the bid opening. The A/E shall use whatever delivery method is most prudent to ensure receipt. The A/E shall verify receipt of the addenda with each plan holder. When addenda are not issued in a timely manner, the bids will be unopened and the bid

opening date will be reposted for a minimum of 14 calendar days. Any additional costs incurred by the A/E for the reposting of the bids shall be at the A/E's expense.

- E. The A/E will consider written requests by prospective bidders to amend the bidding documents. Such requests should be received at least ten (10) calendar days prior to bid opening date and include a complete description of the desired change including any technical data and references for the A/E's evaluation. If a request is approved, the A/E will revise the bid documents by addendum. When requested, the A/E will provide to CDB a listing of the requests that were not approved.
- F. The addenda shall be numbered sequentially and dated.
- G. Addenda shall be prepared according to the Addendum format in the Reference Library on CDB's website. Addenda in any other format (e.g. on the firm's letterhead) will not be accepted.
 - 1. List all changes in order of specification sections and drawing numbers.
 - 2. The A/E shall not specify any sole or dual sourcing of an item in an addendum unless approved by CDB per [Article 3.4 E](#).
 - 3. If a bid form section requires a change, the A/E shall issue a complete set of that new bid form with the following information located in the lower right hand corner of each page: REVISED, ADDENDUM #(), (addendum date).
 - 4. Changes shall be clearly noted and identified (A, B, C, etc.) on the drawings. Make a notation in the revision column of the drawing indicating the change letter, the date of the change, and a brief description of the change. All changes are to be incorporated into the original drawing. Revised drawing page numbers shall be identified by addition of "R" to the number (e.g. A-3R).
 - 5. The A/E shall state the status of previously issued addenda.
- H. Pre-bid meeting minutes and bid tabulations are not to be issued as addenda. These are informational items and are to be distributed as such.

10.6 **Pre-Bid Meeting.**

- A. When a pre-bid meeting is scheduled, the A/E shall include the date, time, and location of the pre-bid meeting in the Advertisement for Bids (00 01 13). The pre-bid meeting will be scheduled by the CDB PM and will be held no less than seven calendar days prior to the day the bids are to be opened. The CDB PM will chair the pre-bid meeting.
- B. Typical agenda items in a Pre-Bid Meeting include introductions, CDB bidding process, Addenda, Fair Employment Practices, A/E questions, Using Agency comments, and a tour of the project site.
- C. With the consent of the PM, attendance at the pre-bid meeting may be mandatory for prospective bidders when specified in the project manual and in the advertisement for bids. The A/E shall submit the list of attendees to the PM. This list will be transmitted to CDB's Bid Officer. Bidders who do not attend a mandatory pre-bid meeting shall have their bids rejected.

- D. The A/E shall record the names, and the names and addresses of their respective firms, of all persons in attendance. The A/E shall also record the minutes of the pre-bid meeting, listing all questions and all responses to those questions.
 - E. Minutes of the meeting shall be issued to all plan holders and all persons attending the pre-bid meeting, but are not to be included as part of any addendum.
- 10.7 **Final Estimate.** Prior to the bid opening, the A/E shall submit a final detailed estimate of probable construction costs of the contracts being bid based on the bidding documents and all addenda.
- 10.8 **Bid Openings.**
- A. The A/E shall attend all bid openings for the project unless specifically excused by the PM.
 - B. The A/E shall have developed, in conjunction with the using agency and the PM, an order of priority to be used in awarding alternates. Unless an order of priority is established by addendum, alternates will be awarded in the order specified in the originally-issued bidding documents.
 - C. CDB shall post bid results on its website. CDB will provide the A/E with one set of bid tabulations at the bid opening. In the event the PM excused the A/E from attending the bid opening, the A/E shall obtain the bid results from CDB's website.
 - D. For projects which have a coordinating contractor, the A/E shall provide the assigned contractor bid tabulations to the coordinating contractor bidders within two business days. These bid tabulations are to be issued for informational purposes only and shall not be issued as an addendum.
- 10.9 **Bid Set Documents.**
- A. Prior to submitting the A/E's bid phase payment request, the A/E shall submit to CDB contract documents labeled "Issued for Bid" which contains all the bid documents including any addenda that were issued.
 - B. Document Requirements:
 - 1. A complete electronic set of "Issued for Bid" drawings and specifications are required.
 - 2. See CDB's "Electronic Submittal Policy for Bid Sets and As-Builts" on CDB's website for submittal requirements. This can be found at <https://cdb.illinois.gov/business/architectengineer.html>.
 - 3. See Article 6.2 for requirements regarding professional seals and electronic format.

Article 11 CONSTRUCTION CONTRACT AWARD

11.1 General.

- A. The A/E shall comply with CDB policy that discussions with bidders, news media, etc. not include any presumption of award until the award is decided by CDB.
- B. CDB may award construction contracts within 60 days receipt of the bid(s) or any other period stated in Section 01 11 00 of the Project Manual or CDB may request bidders to provide written consent to extend their bid beyond the 60 day period or the period stated in Section 01 11 00.

11.2 Bid Analysis. The A/E shall provide assistance to CDB to identify the apparent successful bidder or bidders.

- A. Review all product substitutions submitted in accordance with procedures set forth in the Standard Documents for Construction and provide CDB with a written recommendation to accept or reject the proposed substitution.
- B. Review all unit prices submitted and provide written evaluation and recommendation of acceptance or rejection.
- C. Review bid forms that contain additional verbiage supplied by the bidder. The A/E will be requested to attest whether, in the A/E's opinion, the additional verbiage does or does not constitute a qualifying statement applicable to the bid amount.
- D. When lowest bid received differs substantially from the other bids received or if the low bid deviates more than 10% (higher or lower) of the A/E's estimate, the A/E shall contact the low bidder and review the requirements of the project as it pertains to the bid. Report findings to the CDB Project Manager in writing.
- E. When single bids are received, the A/E shall provide the CDB Project Manager with a written explanation of all efforts used to obtain bidders, including plan rooms, and include an informed opinion addressing the reason(s) multiple bids were not received.
- F. When bids differ from the A/E's estimate by more than 10%, the A/E will provide a written explanation of the reasons for the difference.

11.3 Award Notification. CDB will notify the successful bidder(s) and the A/E of the award(s) by copy of the Notice of Award letter (NOA).

Article 12 PRE-CONSTRUCTION MEETING

- 12.1 This meeting will be scheduled by the CDB PM within 7 calendar days of the NOA. See Article 01 31 22 of the Standard Documents for Construction. Attendance is mandatory for the A/E, coordinating contractor, all assigned contractors, and Using Agency representatives. Attendance by sub-contractors and the A/E consultants is encouraged, but not mandatory unless requested by PM.
- 12.2 Agenda will consist of CDB discussion of construction procedures; pay request application procedures; and documentation to be supplied by contractors, sub-contractors and material suppliers in support thereof. **Contractor compliance with Diversity Contracting Unit (DCU) goals and programs will also be discussed.**
- 12.3 A/E on-site observation/representation shall be discussed as it may pertain to the specific requirements of the project.
- 12.4 The contractors will be advised of the A/E's critical work list items so that they can notify the A/E to make arrangements for on-site representation.
- 12.5 Requirements for A/E attendance during all field tests specified to be performed by the contractor as well as during installation of critical systems shall be discussed.
- 12.6 The A/E will explain requirements for submission of shop drawings, samples and product data.
- 12.7 The process for obtaining document interpretations and authority for same shall be delineated.
- 12.8 CDB and the using agency shall review requirements for logging site visits with the appropriate using agency authority at the facility.
- 12.9 Using agency may review facility access and specific safety/security procedures.

Article 13

MISCELLANEOUS CONSTRUCTION PHASE RESPONSIBILITIES

- 13.1 **Construction Documents.** The A/E shall issue documents stamped and dated "Issued for Construction" to the contractors. The contractors shall not commence work without the documents stamped and dated "Issued for Construction".
- A. Issued for Construction documents are bid sets (drawings and specs) that have been updated by the Architect to incorporate all addenda issued.
 - B. Each contractor will receive construction documents in the quantity determined by CDB up to a maximum of six sets. The contractor may purchase additional sets for a charge to cover reproduction and handling.
- 13.2 **Contractor and Tradesmen Licensing.** The contractors are responsible for any applicable licensing with the appropriate authority in accordance with the Contractor Licenses Section of the Standard Documents for Construction. The A/E shall receive and review all applicable licenses prior to that contractor or tradesman commencing any work.
- A. The A/E shall not knowingly allow any activity to commence or accept any work installed by a non-licensed firm or tradesman where licensure is required.
 - B. The A/E shall also receive and review all certificates called for by the specifications (e.g. welding certificate).
 - C. The A/E shall submit a list of all required licenses and certificates with copies of each of the required licenses and certificates attached to CDB.
- 13.3 **Contractor Submittals/Shop Drawings, Product Data, Samples.**
- A. The A/E shall review and monitor all required submittals for timeliness and conformance with the contract documents and project schedule. The A/E shall review and respond to submittals within 14 calendar days or time specified by CDB.
 - B. Each submittal shall be stamped, dated, and either initialed or signed by the reviewer. The reviewer shall provide clear instruction to the contractor of any corrective action to be taken.
 - C. The A/E shall only review those materials and equipment specified in the contract documents. The A/E shall not make changes in the contract requirements through the review of submittals.
 - D. The contractor may not submit and gain approval of material substitutions through the shop drawing review process. In this event, the A/E shall return the submittal without review and advise the contractor that he may request and initiate a material substitution change order in accordance with the substitution clause of the Standard Documents for Construction.
 - E. If in reviewing the submittal the A/E determines that contract changes are required, notify the CDB PM and request approval of the required changes prior to returning the submittal to the contractor. The submittal shall then be returned to the contractor with the note that a change order request is contemplated.
 - F. No activity requiring review of submittals may be started without A/E approval. The A/E shall notify the contractor to cease the activity until approval is obtained.

The contractor shall be liable to replace any work that is not in compliance with the subsequently reviewed submittal.

- 13.4 **Interpretations.** When requested by CDB or a contractor, the A/E shall provide interpretation of the contract documents, including, but not limited to, RFIs and ASIs. The A/E shall prepare and distribute supplementary drawings, specifications and instructions as necessary to communicate the interpretation. The A/E shall expedite all interpretations in such a manner as to not adversely affect the project schedule or sequence of work and to avoid the potential for a claim by the contractor.
- 13.5 **Construction Testing.** The A/E shall witness field tests, review and evaluate test reports and notify CDB of any deficiencies. A copy of all test results shall be provided to CDB. Field tests may be specified to be conducted by the contractor employing a testing firm to provide assistance and/or analysis, or conducted by the A/E employing a testing firm as a reimbursable expense to provide assistance and/or analysis.
- 13.6 **Contractor's Schedule of Values (CSV).**
- A. Each contractor is required to prepare the CDB CSV form and submit it to the A/E for review and approval prior to the first pay/progress meeting. This form is a detailed breakdown of the contract amount and is the basis for the Contractor's Affidavit and Sworn Statement (CASS) form of the progress payment requests.
 - B. The A/E shall review the CSV to ensure each item of work required for the contract is listed and all values are expressed in separate line-item costs for material and labor. The A/E may request the contractor provide sub-contracts and relevant documentation to substantiate the values indicated.
 - C. The A/E will also review to confirm that the contractor has properly noted "Buy Illinois" products, if any, on the CSV.
 - D. The Standard Documents for Construction requires that a percentage of the work be performed by the contractor's own forces. The A/E shall reject any contractor's schedule of values which does not comply with this requirement.
 - E. The CSV must be approved by the A/E, DCU technician (if applicable), and CDB PM prior to submission of the first pay request. The A/E, DCU technician (if applicable), and CDB PM must also approve all changes to the CSV during the course of the project.
- 13.7 **Contractors' Record Drawings.** The A/E shall review the contractors' record drawings monthly, prior to the pay/progress meeting, (or more often, if required by CDB) and notify CDB of any apparent failure to maintain up-to-date records in accordance with the contract documents. Contractors' pay requests may be held until record drawings are up to date.
- 13.8 **Claims and Disputes.**
- A. The A/E shall record any observed occurrence or work that might result in a claim for a change in contract time or amount. Any disputes or claims shall be referred directly to the CDB PM. The A/E shall enter the claim or dispute into a claims log and provide a current copy of the log to CDB at each monthly pay/progress meeting.
 - B. The A/E shall review each claim or dispute, including documentation of any time, money or other expenditure made in connection with it. The A/E shall provide a written response, interpretation, and recommendation for resolution to the claimant

and CDB. CDB shall make a final determination on all disputes unless removed to Alternative Dispute Resolution and/or the Courts.

C. While work is in progress, the A/E shall observe, measure and verify costs incurred that are related to the dispute. Immediately notify the CDB PM if additional on-site observation is required to monitor the disputed work.

13.9 **Construction Schedule.** The construction schedule is to be prepared by the coordinating contractor with the input and concurrence of all assigned contractors and submitted to the A/E prior to the first pay/progress meeting. The A/E shall review the schedule for conformance with the contract requirements. Schedules shall be in the format specified in the project manual and shall include submittals (shop drawings, product data and material samples), major equipment order and delivery dates, on-site construction activities, the A/E's critical work list items, commissioning activities, User training, and any other activities deemed important by the project team.

Article 14 OBSERVATION OF THE WORK

14.1 Basic Service

- A. As a basic service of the agreement, the A/E shall make periodic site visits as set forth herein and as is reasonably necessary in accordance with the complexity of the contracted work and the scheduled construction activities. The A/E shall observe the construction operations and report on the progress and quality of the work being performed to determine, in general, that the work is proceeding in accordance with the approved construction schedule and that the materials, finishes and workmanship are in accordance with the contract documents.
- B. The A/E is required to conduct site visits when contractors are present on the site and installing their respective trade work. Site visits shall be made by appropriately experienced personnel with specific knowledge of the project requirements as designed and specified. Unless otherwise agreed, minimum site visits shall be as set forth below for each trade contract included in the project through substantial completion providing sufficient work is being performed. **When minimal work is being performed, the A/E may make one all-inclusive project site visit in addition to the services provided in Article 14.1 C.**

<u>Fee Group</u>	<u>Combined General Work</u>	<u>Combined PHVE Work</u>
1 (R or N)	2 visits/month	4 visits/month
2 (R or N)	2 visits/month	2/visits/month
3 (R or N)	1 visit/month	1/visit/month

- C. Attendance at Pay/Progress meetings is a basic service and is not compensable as a reimbursable expense under Article 14.2, but may be used to fulfill the requirements for periodic site visits providing:
 - 1. Contractors are present on site and installing their respective trade work.
 - 2. Observation is provided by professionals experienced in the discipline of work they are observing with specific knowledge of the requirements of the project.
 - 3. Observation reports are filed in accordance with Article 14.3.
- D. CDB shall be notified immediately if, in the A/E’s opinion, the materials, finishes and/or workmanship do not conform to the contract documents, require special inspection or testing (beyond the specified requirements), or have been disapproved or rejected by the A/E.
- E. The A/E and the contractor shall be liable for the replacement and/or any damages incurred as a result of knowingly permitting non-specified material, or otherwise non-conforming work, to be incorporated into the project.

14.2 On-Site Representative. When included in the agreement as a reimbursable service expense, the A/E may provide one or more representatives on-site to facilitate the progress of the project and report on special conditions and critical installations as delineated herein.

- A. The duties of the on-site representative are exclusive of Article 14.1 A and are limited to:
 - 1. Observe installation of critical systems or components as set forth in Article 15.1.
 - 2. Observe and verify installed quantities of material specified in the project as an allowance or unit price quantity.

3. Observe specified field tests and CDB approved special testing recommended by the A/E as a result of observations provided in [Article 14.1 B](#).
 4. When specifically requested by CDB, or by a contractor with CDB concurrence, provide field clarification of document interpretations issued in accordance with [Article 13.4](#).
 5. Observe, measure and verify costs incurred by contractors related to any disputes or claims.
 6. Notify CDB and the A/E immediately with any concerns regarding material installation and workmanship.
- B. Prior to commencing the construction phase, the A/E shall submit the name, resume, and Direct Wage Expense (DWE) for each proposed on-site representative to the CDB PM for approval. CDB shall provide written acceptance or rejection of each person proposed.

14.3 **Observation Reports.**

- A. A written report shall be submitted to the CDB PM for each site visit made under basic services and each on-site representative's visit. Reports shall be submitted in a timely manner as the construction activity dictates. In no case shall the submission interval exceed 7 calendar days from the date of the site visit.
- B. CDB shall not provide any reimbursement for on-site representative visits without an observation report.
- C. CDB may withhold a portion of the construction phase fee if the A/E fails to provide observation reports as set forth herein.
- D. Each report shall include general and specific information regarding the project as follows:
 1. General Information
 - a. CDB Project Number
 - b. Project Name and Location
 - c. A/E Name and Phone Number
 - d. Report Preparers' Name
 - e. Coordinating Contractor's Name
 - f. Date of Site Visit
 - g. Date of Report
 - h. Report Number
 - i. Weather Conditions
 2. Specific Information
 - a. Purpose of Site Visit
 - b. Basic Services or On-Site Representative visit
 - c. Names of All Observers Present
 - d. Names of Contractors On-Site
 - e. Size of Each Contractor's Workforce
 - f. Nature and Location of Work Being Performed
 - g. Progress of the Work
 - h. Items Inspected
 - i. Problems Resolved
 - j. Verbal Interpretations Given to Contractor
 - k. Tests Witnessed/Performed
 - l. Site Visitors

- E. When directed by the CDB PM, the A/E shall provide copies of reports to the coordinating contractor, assigned contractors and Using Agency representative.

Article 15 COMMISSIONING ACTIVITIES

15.1 Critical Systems/Components.

- A. The A/E shall advise the CDB PM and Using Agency regarding on-site representation for observing specific work critical to the success of the project based on the list of critical work submitted to CDB and Using Agency at the 100% completion stage of design.
- B. CDB, the A/E and using agency will reach consensus regarding the submitted critical work list and advise the awarded contractors of the list at the Pre-Construction Meeting so that the A/E can be sufficiently notified and make arrangements for on-site representation.
- C. The A/E shall provide observation reports per [Article 14.3](#) of critical activities within 48 hours of the site visit to CDB, the coordinating and installing contractors and the Using Agency.
- D. Failure of the A/E to comply with the provisions of this Article will result in loss of on-site representation compensation effectively reducing the site visit to a fulfillment of the provisions of [Article 14.1 A](#).

15.2 Performance Testing and Start-up. The A/E shall be responsible for attesting that each contractor, as required by the contract documents, performed a thorough and systematic performance test and start-up of their respective work.

- A. Each general, mechanical, electrical and fire suppression element and the total system shall be tested in the presence of the A/E, all appropriate consultants, and the Using Agency prior to substantial completion of the project.
- B. When requested, and if not previously provided in the contract documents, the A/E shall provide the contractor with all design criteria and system design/operation concepts to facilitate performance testing and start-up.
- C. The A/E shall provide a report to CDB and the Using Agency no later than forty-five (45) calendar days prior to substantial completion, unless a different timeframe is authorized by CDB. In the report, the A/E shall attest that they have observed the performance testing and start-up process, and that each contractor has demonstrated that all systems comply with the requirements of the contract documents. The report shall include the test results and any changes and/or reconfiguration which may have occurred during the performance testing and start-up process.

15.3 Using Agency Training. The A/E shall attend the training sessions to observe and provide input regarding the operation and maintenance of the systems as designed.

Article 16 PAY/PROGRESS MEETINGS

- 16.1 Meeting dates are established by the CDB PM at the pre-construction meeting.
- 16.2 The meeting shall be attended by the CDB PM, any additional CDB staff as designated by the PM, the A/E project manager, the coordinating contractor, all assigned contractors, the Using Agency representative and, when requested by CDB, the on-site representative, design architect/engineer and consultants. The A/E representative attending the meeting must have signature authority.
- 16.3 Minimum agenda will consist of reviewing contractor's progress, noting projections for work to be completed in the next month and comparing this information to the current approved project construction and submittal schedule, discussing project problems and proposed contract changes (claims, RFI, and/or RFP logs), and reviewing and reconciling contractor's pay applications using CDB form CASS (Contractor's Affidavit and Sworn Statement).
- 16.4 Approximately one week prior to the pay/progress meeting, or as directed by the CDB project manager, the contractors will submit copies of the draft CASS and SML, if utilized, to the A/E, User, CDB PM and coordinating contractor.
- 16.5 The draft CASS and SML will be reviewed by the participants and corrected, as required. The corrected drafts will be signed by all participants. A copy of the CASS will be retained by each party as a record of any objections/approvals noted during the meeting.
- 16.6 Approximately one week before meeting, the A/E will verify that contractors are keeping record drawings up-to-date.

Article 17 REVIEW OF CONTRACTOR PAY REQUESTS

- 17.1 **General.** The A/E shall review and certify contractor’s applications for payment and maintain a record of payments and contract balances and all proposed and approved changes thereto. The A/E shall reconcile and maintain files for the CASS forms and contractor’s and subcontractor’s and/or supplier’s waivers of lien.

- 17.2 **Contractor's Affidavit and Sworn Statement (CASS).** The A/E will ensure that the CASS was completed by the contractor in accordance with the amounts on the draft CASS approved at the pay/progress meeting. This form must be dated, signed and notarized.

- 17.3 **Federal Certified Payroll.** On projects with Federal funding, contractors may be required to submit Federal Certified Payroll reports. The A/E will ensure that these reports are submitted by the contractors and transmitted to the proper authorities.

- 17.4 **Stored Material Log (SML), if applicable.**
 - A. Definition. Stored materials are materials purchased by the contractor, which are ready to be installed and which are either stored on or off the site.

 - B. The SML form must be submitted to the A/E for review. The A/E will inspect the stored materials and attest to their existence, security, and identification by initialing the items listed on the SML. This certification must be obtained by the contractor prior to the pay/progress meeting. The SML will be submitted each month until all stored materials are installed.

 - C. The value of stored material approved for payment shall be incorporated into the CASS.

 - D. Off site storage.
 - 1. CDB does not usually pay for materials stored out-of-state or at a manufacturer’s facility.

 - 2. All material stored off the site must be clearly tagged and labeled with the CDB project name and number and is to be available for inspection by the A/E, CDB and the Using Agency, upon reasonable notice.

 - 3. When material is stored off site, pay requests must be accompanied by a certificate of insurance for each off site storage location.

 - 4. If stored in a bonded warehouse, the contractor must provide the CDB project manager with a copy of the bond, along with the certificate of insurance.

 - 5. CDB will compensate the A/E up to 8 hours travel and review time to inspect off-site stored materials at the billable rate for on-site representation. If approved by CDB, longer travel times may be allowed for special storage needs. The A/E is not required to review material stored at a location which cannot be inspected within this 8-hour limit. The A/E may reject requests for compensation for stored material until such time the material is moved to a location within the 8-hour reimbursement limit.

17.5 **Partial Waivers of Lien.**

- A. All waivers must use the CDB Partial Waiver of Lien form and bear the signatures of the president or vice-president and secretary or assistant secretary. The corporate seal is not a required element.
- B. Contractor: A Partial Waiver of Lien for the full amount of the payment is required from the submitting contractor with each pay request.
- C. Subcontractors and suppliers: Waivers for subcontractors are not required with the first payment package, unless the contractor is requesting more than 50% of its total contract. Each subsequent payment package must include Partial Waivers of Lien from each subcontractor and supplier included in the immediately preceding payment package, in the amount of that prior payment.

17.6 **Invoice-Voucher** (Form C-13)

- A. If all above items have been submitted and are correct, the A/E will review the invoice-voucher for agreement with the CASS form approved at the pay/progress meeting and sign where indicated.
- B. Signatory must be a licensed architect or engineer.
- C. The A/E shall submit the completed, signed invoice package to the CDB PM.

Article 18 REVIEW OF REQUESTS FOR REDUCTION OF RETAINAGE

- 18.1 Contractors who have completed 50% of the project work and are in compliance with all project requirements (supervision, submittals, schedule, etc.) will have their retention reduced from 10% to 5%. CDB will be responsible for approving, processing and distributing the 10/5 RRR. Payment requests including the reduced retention amount may not be submitted until the 10/5 RRR is approved by CDB and must comply with [Article 18.5](#) below.
- 18.2 Under certain circumstances, the contractor may request a reduction in retainage to less than 5%. Any such request must follow the procedures below. The request for reduction in retainage shall be submitted 1 month prior to the payment request on which retention is reduced.
- 18.3 Request for Reduction of Retainage form (RRR). The contractor completes the top of this form and attaches the Surety Letter of Consent with power of attorney and jurat. The percentage of work completed is based on the contractor's approved payment applications. Stored materials, bonds and insurance are not included in this percentage.
- 18.4 The completed RRR is reviewed by the A/E and, if the contractor's performance is considered satisfactory, the reduction in retention must be approved by: the coordinating contractor, the architect/engineer, the Using Agency, and the CDB Project Manager. All parties must agree for the reduction to be approved.
- 18.5 For the pay request following approval of the RRR by CDB, the new retention percentage will be used to calculate the "total retained," automatically returning a portion of the previous retainage to the contractor in that payment request. All changes in retainage must be reflected on the CASS form.

Article 19

REVIEW OF REQUESTS FOR PROPOSAL AND CHANGE ORDER

- 19.1 A change order must be issued whenever it becomes necessary to modify any of the elements of a contract, which include scope, compensation, and time.
- 19.2 Specific procedures and standard CDB forms required for preparing and processing construction contract changes have been developed by CDB and are included in Procedures and Forms - Construction Phase manual.
- 19.3 Requests for a change may be initiated either verbally or in writing. Subcontractors' requests shall be directed to their contractor, assigned contractors to the coordinating contractor, and coordinating contractor to the A/E who, in turn, will notify the CDB PM of the request. Requests by the Using Agency or the A/E shall be made in writing to the CDB PM.
- 19.4 Only the CDB PM can authorize the A/E to prepare a Request for Proposal/Change Order (RFP/CO).
- A. The A/E shall provide an 'order of magnitude' level estimate for each proposed RFP/CO and submit to the PM within 10 calendar days of request.
 - B. If the A/E rejects a request for change, before or after issuing the RFP/CO, s/he must prepare a letter of explanation and copy the PM and the affected contractor(s).
 - C. CDB may require the A/E to prepare the RPF/CO over the A/E's objection.
- 19.5 The A/E shall prepare an RFP/CO for each contract affected by the proposed change including supplemental drawings and/or specifications to fully describe the change in the work.
- A. Each RFP/CO package should be self-explanatory.
 - B. The architect/engineer will complete the RFP/CO form through Section 5. Sufficient information must be provided in Sections 2, 3 and 4 on the front of the form to adequately describe the change and explain the reason for the change. Include attachments only as needed to adequately describe the change and its reason.
 - C. Sole and/or dual sourcing via change order is prohibited.
 - D. When requested by the CDB PM, the A/E shall submit a cover letter to the change order package explaining the need for the contract change.
 - E. The architect/engineer transmits two sets of the RFP/CO package for each contract to the coordinating contractor. One set is for the assigned contractor whose work is affected. One set is for the coordinating contractor.
- 19.6 Stringing of change orders (multiple change orders in small amounts addressing the same, or similar, problem), is prohibited.
- 19.7 Each assigned contractor submits one copy of their proposal package (including back-up for their own work as well as back-up for work performed by their subcontractors) to the coordinating contractor. When there is no assignment of contracts, the contractor submits one copy of its package to the architect/engineer.
- 19.8 The A/E shall review the contractor's proposal for completeness and conformance with the RFP/CO and contract documents. Where change orders require additional clarification or additional back-up, the A/E shall obtain such information from the contractors prior to forwarding the change order package to CDB. See Procedures and Forms - Construction Phase for detailed information on required forms and back-up. At a minimum, the A/E shall review RFP/COs for:

- A. Signatures of contractor, subcontractors and suppliers
 - B. Contractor's proposal meets and matches approved RFP language
 - C. CPBS form, summary computations form, labor wage breakdown sheet, and material back-up for contractor and subcontractors
 - D. Correct labor and material quantities, prices, and math
 - E. On a user requested change order, a letter of request on the user's letterhead or by email, signed by the user.
- 19.9 The A/E shall review and accept or reject the contractor's RFP/CO package within 5 business days of receipt, unless an extension is authorized by CDB. When the A/E has reviewed all back-up, quantities, prices and other data in the contractors' proposal and has found such to be reasonable and in conformance with the provisions of the Contract Documents, the A/E shall recommend issuance of a change order by completing Section 6 and signing the RFP/CO form. Signing the RFP/CO indicates that the A/E has completed a thorough review and that the RFP/CO is correct and acceptable. The A/E may be held responsible for problems resulting from their failure to provide proper and timely review of RFPs.
- 19.10 The A/E shall be responsible for obtaining the signatures of the using agency representative prior to forwarding the change order package to CDB. When the work of a change order has been divided between more than one contractor, all RFPs relating to that change order constitute a package.
- 19.11 When requested by CDB, the A/E and any consultants shall be required to attend Board meetings to explain and/or may be required to provide written explanation of any change orders presented for Board approval.

Article 20 SUBSTANTIAL COMPLETION

- 20.1 Substantial Completion occurs when CDB accepts the certification of the A/E that construction on the project or a designated portion thereof is sufficiently complete in accordance with the contract documents that it may be occupied or utilized for the use for which it is intended.
- 20.2 The contractor notifies the architect/engineer in writing that the work or a designated portion thereof is substantially complete and submits to the architect/engineer a list of incomplete items.
- 20.3 The architect/engineer will make a preliminary evaluation and, if in agreement with the contractor that the project is substantially complete, notify the CDB project manager to schedule a substantial completion inspection. The A/E should not recommend substantial completion if, based on the A/E's site visits and observer reports, the punch list would be excessive or critical elements of the project are not operational or incomplete.
- 20.4 The substantial inspection date will be scheduled by the architect/engineer and the CDB project manager after agreement that the project appears to be substantially complete. Notice for the inspection will be issued by the architect/engineer.
- 20.5 The architect/engineer will prepare a preliminary punch list prior to the scheduled inspection.
- 20.6 Attending the inspection will be:
 - A. The coordinating contractor
 - B. All assigned contractors
 - C. Architect/engineer
 - D. Architect/engineer's construction observer
 - E. Using agency representative
 - F. CDB project manager
- 20.7 The final punch list will be developed from the preliminary list submitted by the contractor and the A/E's list, with input from the using agency representative and the CDB project manager.
- 20.8 After the inspection, participants:
 - A. Discuss the punch list items and determine the final completion dates.
 - B. Discuss the date and time the using agency will take occupancy.
 - C. Review the using agency or contractor responsibilities for:
 - 1. Insurance
 - 2. Utilities
 - 3. Operation of mechanical, electrical and other systems
 - 4. Maintenance and cleaning
 - 5. Security
 - D. The A/E and contractor sign agreed upon punch list.
 - E. All participants complete and sign the Substantial Completion Form.
- 20.9 Each contractor will submit a Substantial Completion package which consists of the following:
 - A. Completed Guaranties, Warranties, Bonds form (GWB) and all warranties required by the specifications. Each contractor must also include its one-year warranty on

labor and materials for all work in their contract, unless a longer period is specified in the contract.

- B. Certificate of Operating and Training Instruction.
- C. One complete set of approved shop drawings.
- D. Operating and maintenance manuals and parts lists for equipment installed in the project in quantity specified.
- E. A written confirmation from the Using Agency for all materials turned over to the using agency.
- F. A list of all suppliers and subcontractors with complete names, addresses and telephone numbers of persons to be contacted for service and/or replacement of materials and equipment.

20.10 The architect/engineer reviews the submittals for accuracy and compliance with the contract documents, attaches the Certificate of Substantial Completion and the punch list and forwards the package to the CDB project manager.

- A. Review guarantees, warranties and bonds for coverage, start date and duration in accordance with the contract documents.
- B. Ensure that the contractors comply with the requirements of sections 01 78 23 and 01 78 36 of the Project Manual.
- C. Confirm that all extra material, salvaged material, and equipment specified in the contract documents which are the property of CDB are properly identified, delivered and stored. The A/E shall obtain and transmit signed receipts of such deliveries by the contractor to the authorized agency or the using agency accepting the delivery. Proper identification shall include the CDB project number; project specification number; description of the item and its purpose for use; name, address and phone number of the contractor who provided the item.

Article 21 FINAL ACCEPTANCE

- 21.1 Final acceptance is a condition which occurs when CDB accepts the certification of the architect/engineer that the contractor has complied with all requirements of the contract, and that the contractor is authorized to receive final payment in full including all retainage.
- 21.2 Final acceptance is dependent only on an individual contractor's performance and is not related to the other contractors' performance on a project. Upon completion of contractual obligations, each contractor's contract will be closed out. Due to the coordinating contractor's contractual obligations to the assigned contractors, the coordinating contractor usually will not be closed out prior to the other contractors.
- 21.3 To initiate close-out, the contractor notifies the architect/engineer, in writing, that:
 - A. All punch list items have been completed or corrected.
 - B. Contract documents have been reviewed and the project has been inspected for compliance with the contract.
 - C. Equipment and systems have been tested in the presence of the using agency representative and are operational.
 - D. The using agency's personnel have been instructed in the operation and maintenance of all equipment and systems.
 - E. The project is complete and ready for final inspection.
- 21.4 When the A/E considers the work is complete in accordance with contract requirements, the final acceptance and final payment submittal will be submitted and reviewed.
- 21.5 A formal final acceptance meeting may be held at the option of the CDB project manager. Verification of completion of the punch list will be made by the architect/engineer and the project manager. The final acceptance form will be signed at the meeting or forwarded by the A/E to the appropriate parties for signature.
- 21.6 The final close out package from each contractor to the architect/engineer consists of the following:
 - A. The final payment package:
 - 1. Invoice Voucher
 - 2. Revised CSV, if applicable. Marked as "FINAL"
 - 3. Contractors Affidavit and Sworn Statement (CASS)
 - 4. Contractors Final Declaration (CFD) with Power of Attorney
 - 5. Final Waivers of Lien from each subcontractor and supplier for the full amount of their contract (as shown on the current CSV) on CDB forms only.
 - B. Testing and balancing reports
 - C. Marked-up specifications and addenda
 - D. Project record documents (marked up prints)
 - E. Architect/Engineer Performance Evaluation (A/E-PE). (May be sent directly to the PM)
 - F. Contractor Performance Evaluations (CPE) on other contractors
 - G. Guarantees, Warranties and Bonds form and warranties for items on the punch list. GWB duration for all punch list items begins on the date of final acceptance.
 - H. Any items not submitted at Substantial Completion.

- 21.7 The architect/engineer reviews the submittal for completeness and accuracy and transmits to the CDB PM:
- A. FCP form with top part completed and signed by the A/E.
 - B. Certificate of Final Acceptance
 - C. The final payment package
 - D. Guarantees, Warranties and Bonds form and warranties for items on the Punch List
 - E. Copy of the transmittal letter to the using agency for O&M manuals, shop drawings, as-builts, etc.
 - F. Certificate of Operating and Training Instruction
 - G. CPE's and A/E-PE's completed by contractor
 - H. Contractor's Performance Evaluation form (by the A/E)
- 21.8 The Contractor Performance Evaluation Form (CPE) may be initiated at any time; however, it is usually submitted during the final close-out.

Article 22 A/E CLOSEOUT

22.1 A/E Final Close-out Package (FCP)

- A. After all contractors are closed out, the A/E may submit A/E-FCP and final pay request.
- B. A/E-FCP includes record documents, T & B reports, and hazardous material reports.

22.2 Record Construction Drawings. Prior to submitting the A/E’s final payment request, the A/E shall submit to CDB revised contract documents labeled “Record Drawings,” with a Record Drawing Date located in the Revisions section of the title block on all sheets. The Record Drawings shall show all changes reported by the contractor(s), all changes made by change orders or addenda, and any clarifications made by the A/E during construction.

- A. Document Requirements
 - 1. A complete electronic set of “Record Drawing” drawings and specifications are required.
 - 2. See CDB’s A/E Electronic Submittal Form located in the reference library on CDB’s website. CDB’s reference library can be found at <https://cdb.illinois.gov/business/library.html>.
- B. The electronic submittal shall be accompanied by the Record Drawing Certification Form located in the CDB Reference Library under “A/E Electronic Submittal Form”.
- C. The A/E will provide the CDB PM with one set of electronic record drawings and support files (consult with PM for delivery method); and a black line print paper copy for the Using Agency. Verify requirements with the CDB PM.
- D. For asbestos abatement projects and projects that included asbestos abatement, the A/E shall complete an Asbestos Abatement Project Summary Report. The report shall be submitted to the CDB PM (consult with PM for delivery method) within 60 calendar days of final clearance testing. The report format can be found in the Project Manual Workbook for Asbestos, Lead, UST and PCB on the website. Supplemental Sampling reports shall be submitted electronically for any sampling done as part of the project.

22.3 Final Payment. In addition to the construction related requirements in this section, the A/E’s final payment is dependent upon final resolution of any fee adjustments required by the agreement. The A/E is encouraged to resolve such issues early to expedite the final pay request.

- A. If a final modification is required to adjust basic fee or reimbursables (discuss with PM), the A/E will cooperate with CDB, provide required backup, and sign and return modification promptly.
- B. If some reimbursable line items remain unused, and a modification is not required to close out those line items (see PM), the A/E will provide CDB with a letter summarizing used and unused reimbursables and releasing any claim to the unused reimbursables.

Article 23

NINE MONTH INSPECTION

- 23.1 CDB shall notify the A/E who shall make arrangements with the Using Agency for an inspection of the contracted work nine months after substantial completion of the project. The A/E shall exercise care and judgment to determine corrective action to be taken under warranties or guarantees as opposed to abuse, misuse, normal wear and tear or lack of proper maintenance. The A/E shall provide a written report of the inspection to CDB and the using agency within seven calendar days. CDB will notify the contractor(s) of any required corrective action noted in the report.

APPENDICES

Appendix 1 STATUTORY REQUIREMENTS

1. **Energy Efficient Building Act.** The Energy Efficient Building Act, 20 ILCS 3125/1 et seq., is intended to reduce air pollutant emissions from energy consumption, moderate future peak electric power demand, ensure reliability of the electrical grid and an adequate supply of heating fuel, and control energy costs in the State of Illinois.
 - 1.1. CDB shall adopt the latest published edition of the International Code Council's International Energy Conservation Code within one year after its publication and may add supplements or amendments to apply to new buildings and portions of existing buildings to which additions, alterations, renovations or repairs are being applied.
 - 1.2. Buildings that do not use either electricity or fossil fuel for comfort conditioning and do not have an electrical service in excess of 100A shall be exempt from this Act.
 - 1.3. Starting July 1, 2024 all projects shall comply with the Illinois Stretch Energy Code, 20 ILCS 3125/55.
2. **Farmland Preservation Act.** The Farmland Preservation Act, 505 ILCS 75/1 et seq., seeks to “minimize the conversion of prime farmland that results from the direct or indirect effects of State programs...”. In compliance with that act, CDB has adopted an Agricultural Land Preservation Policy and a working agreement with the Department of Agriculture.
 - 2.1. No State funds may be committed for land acquisition or construction unless it is provided for in an exception in CDB's working agreement with the Department of Agriculture or until a study of the agricultural impact has been completed by the Department of Agriculture.
 - 2.2. If required, CDB shall notify the Dept. of Agriculture if the proposed project will lead to conversion of farmland to nonagricultural purposes. The A/E may be directed to mitigate the conversion to greatest extent possible. This policy does not affect the agreement and any effort involved is considered part of the basic services.
3. **Endangered Species Act.** The Illinois Endangered Species Protection Act, 520 ILCS 10/1 et seq., provides protection for the State's threatened or endangered flora and fauna. It is the public policy that all agencies, through a consultation process with the Department of Natural Resources, determine whether any action funded by CDB is “likely to jeopardize the continued existence of Illinois listed endangered and threatened species or are likely to result in the destruction or adverse modification of the designated essential habitat of such species...”. CDB may request the A/E to prepare or cause to be prepared a determination of the project impact on any endangered flora and fauna at the site. This study would be an additional service under the agreement.
4. **Wetlands Policy Act.** The Interagency Wetlands Policy Act of 1989, 20 ILCS 830/1 et seq., requires State agencies to avoid impacting wetlands. If impacts are unavoidable, compensation is required. This Act is administered by the Department of Natural Resources through administrative rules that the department has and may promulgate.
 - 4.1. Any CDB project having an adverse impact to a wetland is subject to compliance with this Act and the associated administrative rules. No project impacting a wetland shall commence without review and approval of the compensation plan by the Department of Natural Resources.
 - 4.2. The A/E shall prepare, or cause to be prepared, a wetland impact determination according to the administrative rules. In addition to the project identifying information, the A/E shall provide the alternative actions considered and the justification for the selected alternative that may or is likely to adversely impact a wetland.
 - 4.3. The A/E may be requested to prepare a wetlands compensation plan when the wetland determination which adversely impacts a wetland is approved. This plan must be developed in cooperation with the using agency and CDB.

- 4.4. If the project impacts a wetland, both the determination and the compensation plans must be approved by the Department of Natural Resources prior to commencement of the design.
- 4.5. The preparation of a wetland determination and compensation plan is an additional service to the agreement.
- 4.6. Use the technical procedures approved by or recommended by the Interagency Wetlands Committee.
 - A. Illinois Urban Manual
- 5. **Historic Resources Preservation Act.** The Illinois State Agency Historic Resources Preservation Act, 20 ILCS 3420/1 et seq., grants the Illinois Department of Natural Resources (DNR) certain jurisdiction over CDB projects.
 - 5.1. Any project that is subject to the provisions of this Act may require review for adverse effect by DNR early in the design process. The CDB PM shall provide the A/E with a copy of the IHPA Architectural/Engineering Review handout when applicable.
- 6. **Archaeological and Paleontological Resources Protection Act.** The Archaeological and Paleontological Resources Protection Act, 20 ILCS 3435/.01 et seq., regulates the exploring, excavating, and surveying of all such archaeological or paleontological resources on public land through the Department of Natural Resources (DNR). Archaeological resources are defined as any significant material remains or localities of past human life or activities. Paleontological resources are defined as any significant fossil or material remains. A permit from DNR is required before the exploration, excavation or collection of any resources protected by this Act is commenced.
 - 6.1. CDB may request the A/E to prepare, or cause to be prepared, an application for a permit from DNR when CDB believes that significant archaeological or paleontological resources exist on a project site. CDB may also request the A/E or its consultant to explore, survey, and collect information on the resources on the site. This would be an additional service to the agreement.
 - 6.2. If during the life of the project, archaeological or paleontological resources are unexpectedly discovered on the project site, the A/E shall issue directives to protect the resources and advise CDB immediately of the findings.
- 7. **Steel Products Procurement Act.**
 - 7.1. The Steel Products Procurement Act, 30 ILCS 565/1 et seq., requires that all contracts for the construction, reconstruction, or improvement of public works contain a provision that steel products used or supplied by the contract or a subcontract thereto, shall be manufactured or produced in the United States. Steel products means “products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated, or otherwise similarly processed, or processed by a combination of two or more such operations, from steel made in the United States by open hearth, basic oxygen, electric furnace, Bessemer or other steel making process.”
 - 7.2. The exceptions to the Act are:
 - A. Where the expenditure is less than \$500.
 - B. Where the Executive Director of CDB certifies in writing that:
 - 1. The specified product are not manufactured or produced in the United States in sufficient quantity to meet the project needs.
 - 2. The specified product cannot be manufactured or produced in the United States in necessary time to meet the project needs.
 - 3. Obtaining the product manufactured or produced in the United States would increase the cost of the contract by more than 10 percent.
 - C. When the application of the Act is not within the public interest.

- 7.3. The A/E shall select products for inclusion in the project specifications that meet the requirements of the Act.
- 7.4. The Act provides that CDB may not authorize payment to any contractor in violation of the Act.

8. Clean Water Act

- 8.1. All discharges of pollutants into waters of the United States are illegal unless they comply with a permit or with approved standards. ‘Pollutants’ includes solid waste, garbage, chemical wastes, discarded equipment, rock, and sand. ‘Waters of the United States’ includes any body of water that eventually reaches a navigable body of water by an overland route, including streams and ditches that may be dry for most of the year.
- 8.2. The Clean Water Act, 33 U.S.C. 1251 et seq., calls for two types of permits: NPDES (National Pollutant Discharge Elimination System) under Section 402 or the discharge of dredged and fill material permits under Section 404.
- 8.3. NPDES permits are required on construction sites when storm waters may carry soil or other pollutants into waters of the United States. NPDES permits are issued in Illinois by the Illinois Environmental Protection Agency (ILR 10).
- 8.4. For further information, contact the IEPA: 217/782-0610.

9. Art-in-Architecture Program

- 9.1. Section 14 of the Capital Development Board Act, 20 ILCS 3105/14, provides “for the promotion and preservation of the arts by securing suitable works of art for the adornment of public buildings constructed or subjected to major renovation by the State or which utilize State funds.”
- 9.2. For eligible projects, the Capital Development Board sets aside ½ of 1 percent of the amount authorized and appropriated for construction or reconstruction. The ½ of 1 percent is applied only to the state portion of the Capital Development Board construction appropriation.
- 9.3. Construction and renovation projects with an appropriation of \$1,000,000 or over are eligible for the AIA program. In addition, the building being constructed or renovated must be accessible to and used by the general public, and the artwork provided must be permanent, and in a prominent location

10. Green Buildings Act

- 10.1. The Green Buildings Act, 20 ILCS 3130/1 et seq., requires all new state-funded building construction and major renovation of existing facilities be designed to a minimum of silver certification by the Leadership in Energy and Environmental Design, two-globe rating in the Green Globes USA design program, or equivalent.
- 10.2. A new building with 10,000 contiguous square feet or more or a major renovation with a construction budget of 40% or more of the building’s current replacement cost is subject to the Act.
- 10.3. This Act only applies to buildings that are comfort conditioned. Agencies can apply for waivers in the case of unreasonable financial burden, impediment to construction, functional impairment of the building, or if standards would compromise the historic nature of the structure.
- 10.4. The A/E must provide documentation to confirm that LEED, Green Globes, or equivalent standards have been followed.

11. Procurement of Domestic Products Act

- 11.1. The Procurement of Domestic Products Act, 30 ILCS 517/1 et seq., requires each purchasing agency making purchases of procured products to promote the purchase of and give preference to

manufactured articles, materials, and supplies that have been manufactured in the United States or Illinois.

- 11.2. "Manufactured in Illinois" means, in the case of assembled articles, materials, or supplies, having been designed, finally assembled, processed, packaged, tested, or otherwise processed in Illinois in a manner that adds value, quality, or reliability.
- 11.3. "Manufactured in the United States" means, in the case of assembled articles, materials, or supplies, that design, final assembly, processing, packaging, testing, or other process that adds value, quality, or reliability occurs in the United States.
- 11.4. The Capital Development Board is exempt from requirements of this Act with respect to a specific project if (i) the project is too complex to identify the numerous individual procured products required for the project or (ii) the procured products required for the project are too numerous or complex to be able to efficiently assess the sites where manufactured.
- 11.5. The A/E shall make the determination whether the project can meet the requirements of the Procurement of Domestic Products Act or whether the exemption should apply. The A/E will then complete Paragraph No. 9 in Division 01 11 00 – Project Summary. If the A/E determines the promotion and preference for domestic products is applied to the project, Document 00 41 00 – Bid Form should include a choice for the bidder to request this preference. This determination will be submitted as part of the 100% design review submittal.

12. Bird-Safe State Buildings Act

- 12.1. The Bird-Safe State Buildings Act, 20 ILCS 405/405-317, is applicable to state buildings in cases of new construction, newly acquired buildings, and alterations of 50% or more of the façade of an existing building.
- 12.2. From the ground level to 40 feet, 90% of façade material shall not be composed of glass and above 40 feet, 60% of façade material shall not be composed of glass, or if glass is used it must satisfy at least one of the following criteria:
 - A. Use elements that preclude bird collision without obscuring vision, such as secondary facades, netting, screens, shutters, and exterior shades.
 - B. Ultraviolet patterned glass with UV-reflective or contrasting patterns visible to birds.
 - C. Patterns on glass designed in accordance with a rule that restricts horizontal spaces to less than 2 inches high and vertical spaces to less than 4 inches wide.
 - D. Opaque, etched, stained, frosted, or translucent glass.
- 12.3. All glass adjacent to atria or courtyards containing water features, plants and other materials attractive to birds shall meet the criteria in 11.2.
- 12.4. Outside lighting shall be appropriately shielded and minimized subject to security and other mission related requirements.

Appendix 2 TECHNICAL SPECIFICATION FORMAT

DIVISION – (*DIVISION NUMBER & TITLE)
Section – (*Section Number & Title)
(*Header at the top of the first page of each section)

1. GENERAL

1.1 WORK INCLUDES

A. Base Bid: (A/E: List each contractor who has work in this section)

1. (*_____) Contractor:
 - a. (A/E: briefly summarize work in this section)
2. (*Continue for any other contractor who has work under this section)

B. Alternate Bids: (*) (A/E: list all alternate work applicable to this section by contractor and alternate number)

1. (*_____) Contractor:
 - a. Alternate Bid (*letter)-(*1):
 - 1.) (A/E: briefly summarize work)
2. (*Continue as appropriate)

C. Unit Prices: (*) (A/E: Describe unit price work applicable to this section)

1. (*_____) Contractor:
 - a. (A/E: briefly summarize work)

1.2 RELATED WORK (*) (A/E Note: The following sub-sections should be closely coordinated with sub-section 1.1.)

A. Specified elsewhere: (A/E: List Sections that require direct coordination with this section. Do not include any General Condition or Division 00 & 01 Sections.)

B. Installed but furnished by others: (A/E: Specify who furnishes and who installs.)

1.3 Furnished, but installed by others: (A/E: Specify who furnishes and who installs.)

1.4 SYSTEM DESCRIPTION (*) (A/E: Use this to describe any special or complex building systems. Include definitions.)

1.5 QUALITY ASSURANCE (*) (A/E: Include any special qualifications for manufacturer, installer, supplier, etc., particularly where a performance specification is used for the product or its installation.)

- 1.6 REGULATORY REQUIREMENTS (*) (A/E: List special codes, national standards, etc. that apply to section. For individual product requirements, this information should be located in sub-section 2.)
- 1.7 ABBREVIATIONS (*) (A/E: List those unique to this section.)
- 1.8 SUBMITTALS (*) (A/E: Cross reference and include on Schedule 01 33 23.)
 - A. Shop drawings: (*)
 - B. Samples: (*)
 - C. Product data: (*)
 - 1. Manufacturer's catalogs: (*)
 - 2. Test reports: (*Source quality control)
 - 3. Certifications: (*ANSI, UL, FM, etc.)
 - D. Mock-up: (*)
 - E. Operating and maintenance data required. (*) (A/E: Coordinate with and include on Schedule 01 78 23.)

2. PRODUCTS

2.1 (*Item 1 – Title of material, product, equipment, etc.)

A. (*) (A/E: Describe as appropriate.)

- 1. Size
- 2. Color
- 3. Finish
- 4. Utility Requirements
- 5. Features
- 6. (*)

(A/E: Utilize one of the three following formats for specifying products, equipment, etc. Utilize the performance specification option only when necessary.)

B. Acceptable Products: (A/E: Minimum of 3 required without written approval from CDB. Matrix format preferred. List manufacturer's address and city only when not well known.)

Manufacturer (*Address, City)	Model, Product, Catalog No.
1. <u>*(IL)</u>	_____
2. _____	_____
3. _____	_____

*** OR ***

CDB (*Project Number)

(*Specify as Appropriate)

Article 1 (A/E: Provide competitive performance specification. Include form, fit and function characteristics. Specify post-award review requirements.)

* * * OR * * *

Article 2 (A/E: Specify national standard (ANSI, ASTM, etc.) to which product must comply.)

C. (A/E: Specify special requirements for fabrication, tolerances, etc.)

D. Special Warranty. In addition to that required by the Standard Documents for Construction: (A/E: Use this only for warranties beyond the Contractor's one-year guarantee.)

1. (*_____) Manufacturer (*)
2. (*_____) Contractor (*)

2.2 (*Item 2) (A/E: Continue for each material, product, equipment, etc.)

2.3 SCHEDULES (A/E do not duplicate schedules on Drawings and Specs.)

- A. Hardware.
- B. Paint.
- C. Color.
- D. Equipment.
- E. Lighting Fixture.
- F. (*)

3. EXECUTION

3.1 ENVIRONMENTAL CONDITIONS (A/E: Specify any special weather, temperature, ventilation, etc. conditions that must be considered for the performance of the work.)

3.2 SEQUENCING/SCHEDULING (A/E: Specify any special scheduling requirements of user, delivery, early occupancy, etc.)

3.3 REMOVAL OF EXISTING CONSTRUCTION (*)

A. Temporary removals: (*Remove, store, protect, recondition, replace in original location.)

B. Remove and relocate existing construction: (*)

C. Remove and dispose: (*)

3.4 PREPARATION (A/E: Be specific to avoid disputes.)

- A. Site clearing: (*)
- B. Fine grading: (*)
- C. Sanding: (*)
- D. Priming: (*)

- 3.5 (*INSTALLATION) (*APPLICATION) (*PERFORMANCE) (*ERECTION) (*)
- A. Methods (A/E: Do not tell the contractor how to do basic work. Where possible, reference national standard or trade association installation standards.)
 - B. Tolerances: (*)
- 3.6 FIELD QUALITY CONTROL (A/E: Specify who will take tests, when, and routing of results. Coordinate test requirements with applicable codes and the DCM.)
- A. Soils
 - B. Piles
 - C. Concrete
 - D. Piping Systems
 - E. Electrical Systems
 - F. High Voltage Cable
 - G. Special Inspections
 - H. (*Continue as appropriate.)
- 3.7 PROTECTION (A/E: Describe any special protection required; carpet, mechanical equipment, etc.)
- 3.8 CLEAN UP (A/E: Describe any special clean up requirements only)
- 3.9 CLOSEOUT (A/E: Specify if building or system commissioning is applicable to this section.)
- 3.10 EXTRA STOCK/SPARE PARTS (A/E NOTE: When financed by Bonds all extra stock or spare parts must meet bondability guidelines. The CDB restricts this to the following):
- A. Keys: (*All locksets. Specify type and quantity in accord with User Agency needs. Include master and submaster.)
 - B. Sprinkler System Accessories: (*Sprinkler heads, special wrench in cabinet. Quantity as required by Code, NFPA 13.)

END (*)