

CHAPTER 3

SUBMITTAL REQUIREMENTS AND PROCEDURES FOR PLAN REVIEW

<u>Content</u>	<u>Page</u>
A. Introduction	3 - 1
B. Basic Submittal Rules	3 - 2
C. Schematic Plan Submittal	3 - 5
D. Preliminary Plan Submittal	3 - 6
E. Optional 65% Intermediate Plan Submittal.....	3 - 8
F. Final Plan Submittal	3 - 10
G. Additional Requirements for Projects of State Agencies & Departments, Public Postsecondary Education, PSCA and Similar Authorities	3 - 17

A. INTRODUCTION

Plans and specifications for all projects under the jurisdiction of the State Building Code must be submitted to the Technical Staff for review. The scope of this review is determined by the applicability of the adopted codes to the project (see Chapter 2, Section E) and whether or not the project will be supervised and administered by the Technical Staff. Sections B through F of this Chapter establish the submittal requirements and procedures that are typical for all projects, and Section G establishes additional requirements that apply when a project is to be supervised and administered by the Technical Staff. The project’s funding source usually determines the jurisdiction of the State Building Code and DCM’s involvement during construction; therefore, **it is paramount that the design professional identify the Awarding Authority's/Owner’s source(s) of funding from the onset.**

Before proceeding with the requirements of this chapter, it is recommended that:

1. The design professional and Awarding Authority/Owner of a project involving the erection of PRE-ASSEMBLED BUILDINGS OR PORTABLE CLASSROOMS first refer to Project Appendix A-1 for special procedures related to such projects.
2. The Awarding Authority/Owner considering acquisition of a facility through a LEASED OR LEASED-PURCHASE AGREEMENT first refer to Project Appendix A-2 for special procedures related to such building acquisitions.
3. The design professional of other project types first refer to the "Summary of DCM Project Requirements" in Project Appendix A to obtain a general understanding of DCM's authority, requirements, and procedures applicable to the proposed project.

B. BASIC SUBMITTAL RULES

1. PRE-BID REVIEW AND APPROVAL REQUIRED

Submissions of plans and specifications to the Technical Staff shall be made, and final approval obtained, prior to the receipt of bids to ensure that the Technical Staff's comments are incorporated into the bid documents.

2. USE OF DCM (BC) PROJECT NUMBER

- a. DCM utilizes a database document management system in which all documents relative to a project are recorded under a seven-digit Division of Construction Management (former Building Commission) Project Number [Example: DCM (BC) #2019300]. Upon receipt of the first document related to a project, the DCM will assign a project number, establish a project record, and notify the design professional of the assigned project number. **All project related correspondence and documents subsequently submitted to DCM must clearly display the DCM (BC) Project Number.**
- b. For purposes of DCM's records and tracking, the scope of a project is defined by the scope of work covered by the O/A Agreement, regardless of how many bid packages and construction contracts required to execute the "project". Therefore, the DCM (BC) Project Number assigned to the O/A Agreement will typically cover all resulting bid packages and construction contracts. When the scope of an O/A Agreement involves improvements to be made at several different schools within a school system, each bid package prepared and each construction contract performed will be recorded and tracked under the DCM (BC) Project Number assigned to the O/A Agreement. If the scope of an O/A Agreement is expanded by Amendment resulting in additional bid packages and construction contracts, the additional bid packages and contracts will be recorded and tracked under the DCM (BC) Project Number originally assigned to the O/A Agreement. Exception: If the locations of a multiple-location project are in different DCM Inspector territories, then multiple DCM (BC) Project Numbers may be assigned.

3. DCM Form B - 1: TRANSMITTAL OF PLANS AND/OR SPECIFICATIONS

This form is listed in Appendix B of this manual and under "Forms - Plan Review Submittals" of DCM's website www.dcm.alabama.gov and is to be used when submitting plans and/or specifications to DCM regardless of the project type, funding source, or type of plan review required. Furnish all applicable information requested on the form. Incomplete forms will result in the submittal not being accepted.

4. NAME OF PROJECT

When the design professional and Awarding Authority/Owner assign a name to a project, it should be easily identifiable with the design documents to be produced and work to be performed. This is particularly important for projects of multiple bid

packages and construction contracts. Such names as "Re-roofing of Various Schools of the XYZ Board of Education" are usually followed by the production of bid documents with titles that offer no relationship to the project name and confusion ensues. Include Owner and Lead Design Professional project numbers, phases and bid package numbers, if any.

5. QUANTITY OF DOCUMENTS REQUIRED

Hardcopy:

In general, one hard copy of contract design documents is required for each submittal for review. **Note: multiple sheets are to be bound; the maximum weight limit of any bound set of plans is 25 pounds. A set over 25 pounds will not be accepted.** Exception: Responses to Project Comment Letters without full sized-plans, and/or addenda and ASIs without full-sized plans may be emailed to planreview@realproperty.alabama.gov without submitting a hardcopy to DCM, provided the pdfs will print legibly on letter-sized paper and is less than 25 pages total per email; DCM will print these items for review.

Electronic Files:

In addition to a hardcopy, a pdf of contract design documents is required for each non-Schematic and non-Preliminary submittal for review. Email pdfs of the entire submittal as an attachment or in a download link to planreview@realproperty.alabama.gov. Pdfs may also be submitted to DCM on a CD or jump drive along with the hardcopy submittal; please note the emailed route is preferred to CDs and jump drives. Non-Schematic and Non-Preliminary reviews can commence following DCM's receipt of pdfs and any other required items.

6. PLAN REVIEW FEE REQUIRED

See User Fees page at www.dcm.alabama.gov to calculate and pay required plan review fees. See Chapter 1, Section G of this Manual for additional guidance.

7. PHASES OF DESIGN SUBMITTAL

Generally, all projects require a minimum of three phases or levels of plan submittal: schematic, preliminary, and final. At the Awarding Authority/Owner's request, an optional 65% intermediate review may be performed. The requirements for each phase are described below and are intended to minimize changes in design development to accommodate DCM requirements. Revised final submittals will be required for projects not receiving approval of initial final submittals. Schematic and preliminary submittals are not required for small projects of limited scope (such as minor alterations, re-roofing projects, parking lots and re-grading, HVAC or electrical renovations) or projects for which DCM's review is for compliance with accessibility standards only.

8. REVIEW TIME

In scheduling the design of a project, design professionals should allow 30 days for DCM's review of each design phase. All submittals are reviewed in order of receipt.

9. REGISTRATION SEALS

The specifications and drawings of the **FINAL** plan submittal shall bear seals of registration satisfying the following requirements:

- a. **Project Manual Cover, Index and Specifications**: The project manual cover shall bear the Alabama seal of registration of the primary design professional who prepared them or under whose supervision they were prepared. The technical specifications shall also bear the seal of the engineer (signed and dated) who prepared them. The seal may occur on the project manual cover, the project manual index or on the specification.
- b. **Drawings**: Architectural drawings shall bear the Alabama seal of registration of the Architect who prepared them or under whose supervision they were prepared. Engineering drawings shall bear the Alabama seal of registration (must be signed and dated) of the Engineer who prepared them or under whose supervision they were prepared.
- c. **Disciplines of Engineering**: The field of specialization of the Engineer whose seal and Alabama registration number appears on an engineering drawing must be in the phase of work, or discipline of engineering, represented on the drawing. Engineers affixing their seal and registration number to drawings in multiple engineering disciplines must provide written evidence of qualification through education and experience to indicate proficiency in the disciplines of engineering represented in the drawings. The absence of such evidence may result in disapproval of the entire set of design documents.
- d. **Full Professional Team Required**: Typical projects require specialty engineering by the structural, civil, mechanical, and electrical disciplines. While architects and engineers may claim to be doing work in the other's field which is only "incidental to the work", the use of a full professional team on projects under the jurisdiction of the State Building Code is required. Any question as to whether or not an element of design is "purely incidental " will be resolved by decision of the Director.

10. SUBMITTAL REVIEWS AND APPROVALS

- a. The Technical Staff will review the submitted plans and specifications for compliance with the State Building Code. The results of the review will be provided as written review comments to the submitting design professional and project Awarding Authority/Owner. **The design professional and/or Awarding Authority/Owner must provide a detailed response indicating compliance with each project review comment.**
- b. Changes made to plans and specifications after final approval, including but not limited to, addenda, architect's supplemental instructions (ASI), change orders, value engineering, etc. upon publication shall be submitted to the Technical Staff

for review to confirm compliance with the State Building Code. Written response by the Technical Staff to these submittals will be emailed as a Project Comment Letter to the Owner, Lead Design Professional and DCM Inspector. All of a project's addenda must be approved by Technical Staff before a project's construction contract will be reviewed.

11. CERTIFICATION OF LEGALITY

The Technical Staff's approval of plans, specifications, change orders, or related materials submitted for public construction and improvement projects does not constitute certification that the documents or project comply with the state's competitive bid laws. The responsibility for this certification rests with the Awarding Authority/Owner and its legal advisor.

12. DISPOSITION OF SUBMITTED DOCUMENTS

- a. Schematic and preliminary plans and specifications will be retained by the Technical Staff until receipt and review of the final bid documents at which time these documents will be destroyed.
- b. Final or revised final plans and specifications will be retained by the Technical Staff for a period of not less than five (5) years after completion of the project, or a period as may be prescribed by the Alabama Department of Archives & History. At the expiration of this period these documents may be destroyed.
- c. Project documents such as transmittal letters, comment letters, project-related correspondence, contracts, reports, etc., shall be retained by the Technical Staff for a period not less than seven (7) years after completion of the project, or a period as may be prescribed by the Alabama Department of Archives & History. At the expiration of this period, these documents may be destroyed.

C. SCHEMATIC PLAN SUBMITTAL

1. Schematic drawings are required to be submitted for approval before development into larger scale preliminary plans. This is intended to avoid unnecessary work by the design professional on planning schemes which might not meet the approval of the Awarding Authority/Owner or DCM.
2. Should major changes be required in schematic drawings after they have been reviewed and approved by DCM, it is recommended that revised schematic drawings be submitted.
3. The schematic submittal must include the following (review is limited to the following):
 - a. **Site Plan:** Pertinent information concerning topography and other factors influencing the design, such as existing buildings, property limits, existing utilities, etc.

- b. **Floor Plans:** Showing room arrangement, descriptive room/area designations, and gross square footage of each floor. Plans should be at a scale normally not less than 1/16" = 1'- 0".
- c. **Elevations:** If available.
- d. **Source of Funding:** Identify the Awarding Authority's/Owner's source of funding (federal, state, local, private, etc.).

D. PRELIMINARY PLAN SUBMITTAL

- 1. Preliminary plan review phase shall not be considered complete until the preliminary plans are approved by the Technical Staff. The Technical Staff will confirm that preliminary review comments have been sufficiently addressed in the final plan submittal. Where extensive changes in the preliminary plans are required for approval, the comment letter will state that resubmittal is required.
- 2. Preliminary plans should be drawn at the scale intended for the final plans (see Section F, Final Plan Submittal).
- 3. The preliminary plans must contain or be accompanied with the following (review is limited to the following):
 - a. **Written Correspondence** addressing each comment of a schematic project comment letter.
 - b. **Fire Protection/Life Safety Plan:** A plan of each floor on which the following information is shown or stated:
 - (1) Square foot floor area(s) per space with room identification
 - (2) Type of proposed construction per Code classification (Type I, Type II, etc.)
 - (3) Fire rated walls
 - (4) Mixed occupancy walls
 - (5) Exit access corridors
 - (6) Tenant wall separations
 - (7) Horizontal exits
 - (8) Compliance with International Building Code Tables 504.3, 504.4, 506.2, 508.4, 601 and 716.5 (these are subject to periodic changes of numbers, locations, etc.) regarding:
 - (a) Allowable building height in feet above grade plane
 - (b) Allowable number of stories above grade plane
 - (c) Allowable area factor in square feet
 - (d) Required separation of occupancies (hours)
 - (e) Fire resistance rating requirements for building element (hours)

- (f) Opening fire protection assemblies, ratings and markings
 - (9) Compliance with International Building Code Table 2902.1 regarding Minimum Number of Required Plumbing Fixtures
 - (10) Exit signs with directional arrows and area of refuge signs
 - (11) If the project includes an addition to an existing building:
 - (a) Condition and extent of the existing building's fire protection/life safety features
 - (b) Area and type of construction as per Code classification of the existing building
 - (c) Locations of existing fire division walls
 - (d) Locations of existing toilets and exits
 - (12) For all existing buildings in close proximity to the new project:
 - (a) Assumed property lines between facing walls of new and existing buildings
 - (b) Facing walls that are exterior bearing or non bearing
 - (c) Fire resistance of facing walls
 - (d) Percentage of openings in existing and new facing walls
 - (e) Compliance with International Building Code, Table 602 (this is subject to periodic change of number, location, etc.) regarding: Fire-Resistance Rating Requirements For Exterior Walls Based on Fire Separation Distance.
 - (f) Storm shelter occupant load calculations where applicable
- c. **Site Plan** drawn to the scale that will be used in the final plans and accurately showing:
- (1) Overall dimensions
 - (2) Adjoining streets and property lines
 - (3) North arrow and graphic scale
 - (4) Contours (existing and proposed)
 - (5) Floor elevations of proposed and existing work
 - (6) Intended locations of future work or additions
 - (7) Walks, drives, or other features relative to the work including slopes and cross-slopes of accessible routes
 - (8) Locations and critical elevations of utilities, wells, disposal fields, etc.
 - (9) Existing and/or proposed new fire hydrants, PIV sprinkler lead-ins, valves, backflow preventer, FDC, etc.
 - (10) Benchmark(s)
 - (11) Parking facilities and accessible parking spaces
 - (12) Easements
 - (13) Trees and other natural obstructions that may conflict with underground site work
 - (14) Indicate, on the site plan, the extent of floodplains, where applicable, with all intended improvements. Contact The Alabama Department of Economics and Community Affairs, Office of Water Resources, for additional information. It is highly recommended that approval from ADECA-OWR be obtained prior to proceeding to the final design.

- d. **Special Information** on soil conditions, unusual drainage, water supply, sewage problems, etc., affecting the design.
- e. **Floor Plans** showing locations, room titles, and size of rooms and showing corridors, stairs, doors, windows, plumbing fixtures, built-in equipment (such as lab., shop, kitchen, etc.), movable equipment and furniture where essential to show efficient planning, adjacent existing and future work, and orientation.
- f. **Elevations**, as necessary, and preferably at the same scale as the plans, showing the general design, relative grades, vertical dimensions, floor and ceiling heights, etc.
- g. **Typical Wall Section(s)**
- h. **Building Section(s)**, where necessary for clarity.

E. OPTIONAL 65% INTERMEDIATE PLAN SUBMITTAL

- 1. In addition to the Schematic, Preliminary and Final Review submittals, the Owner may request an Optional 65% Intermediate Review of all systems of plans and specifications that are less than 100% complete.
- 2. One Optional 65% Intermediate Plan Review is allowed per project.
- 3. The Optional 65% Intermediate submittal must contain or be accompanied with the following (review is limited to the following):
 - a. **Civil Utility:**
 - (1) Provide civil utility plans indicating existing and/or proposed new water mains, backflow preventers, sprinkler lead-ins, fire hydrants, PIVs, valves, and fire department connection.
 - (2) Fire apparatus access road.
 - b. **Fire Protection:**
 - (1) Fire protection entrance details.
 - (2) Sprinkler / standpipe riser details.
 - (3) Storm shelter projects complying with ICC 500.
 - (4) Sprinkler contractor shall be licensed through the State of Alabama Fire Marshal's Office. This requirement shall be included on plan notes and/or in the project manual.
 - (5) Fire protection project manual; submit any completed or partially completed sections.
 - c. **Fire Alarm:**
 - (1) Fire alarm legends.
 - (2) Fire alarm riser diagrams, mounting heights and details.

- (3) Fire alarm plans and specs.
- (4) Fire alarm contractor shall be licensed through the State of Alabama Fire Marshal's Office. This requirement shall be included on plan notes and/or in the project manual.

d. Mechanical:

- (1) Partially completed schedules for all proposed equipment.
- (2) HVAC, piping and controls legends as applicable.
- (3) Outside air ventilation calculations for sample and/or typical areas.
- (4) Details for proposed HVAC system, piping system and equipment.
- (5) Demolition drawings (where applicable) drawn to scale identifying ductwork & piping to be removed and existing to remain.
- (6) Minimum 1/8 inch scale HVAC floor plans with graphic scale, north arrow and room identification. Indicate sizes for main ducts. Provide room air distribution layout for representative samples of typical spaces.
- (7) Cross sections at minimum 1/4 inch scale showing HVAC, piping and equipment in congested areas.
- (8) Main piping system layout with sizes on separate floor plan drawings. Piping may be combined with HVAC plans for small projects.
- (9) Typical mechanical equipment room plans at minimum 1/4 inch scale.
- (10) Outside chilled water, condenser water and heating hot water piping layout.
- (11) For projects with storm shelters, identify shelter boundaries and proposed ICC-500 compliant design method.
- (12) Preliminary flow diagrams & control diagrams.
- (13) A list of proposed specification sections for the project. Submit any completed or partially completed sections.

e. Electrical:

- (1) Electrical legend.
- (2) Preliminary light fixture schedule.
- (3) Electrical site plan indicating underground primary and secondary feeders, pad mounted transformers, generators and site lighting.
- (4) Demolition drawings (where applicable) drawn to scale identifying electrical equipment, devices and light fixtures to be removed and existing to remain.
- (5) Minimum 1/8" inch scale electrical floor plans with graphic scale, north arrow and room identification. Indicate locations of light fixtures, control devices, receptacles and panelboards.
- (6) Preliminary power riser diagrams and panelboard schedules.
- (7) For projects with storm shelters, identify storm shelter boundaries and indicate proposed ICC-500 compliant design method.
- (8) List of proposed specifications sections. Submit any completed or partially completed sections.

f. Plumbing:

- (1) Partially completed plumbing fixture schedule and equipment schedules.
- (2) Plumbing legend and piping system/equipment details.

- (3) Demolition drawings (where applicable) drawn to scale identifying piping to be removed and existing to remain.
- (4) Minimum 1/8 inch floor plans with graphic scale, north arrow and room identification. Indicate plumbing fixture & equipment locations and main water & waste piping layout.
- (5) For projects with storm shelters, identify shelter boundaries and proposed ICC-500 compliant design.
- (6) Partial water and waste & vent riser diagrams. Include gas piping riser diagram where applicable.
- (7) A list of proposed specification sections for the project. Submit any completed or partially completed sections.

F. FINAL PLAN SUBMITTAL

1. General:

- a. **Written Correspondence** addressing each comment of the preliminary project comment letter shall be provided with the final submittal.
- b. **Complete Plans and Specifications**, covering all phases of the proposed building project, shall be submitted for approval. Plans and specifications shall not be submitted as final documents until they have been thoroughly checked by the design professional and consultants for completeness, accuracy, etc., and are ready to be issued to bidders. The submission of incomplete or unfinished documents may cause unnecessary delay or disapproval.
- c. **Registration Seals** - The project manual and drawings shall bear the Alabama seal of registration of the design professionals who prepared them as prescribed in Section B.9 of this chapter.
- d. **Prohibition of Sole Source Specification - NOT APPLICABLE TO PRIVATE PROJECTS.** Section 39-2-2(f) (Public Works Law) states the following:

"No Awarding Authority may specify in the plans and specifications for the improvement the use of materials, products, systems, or services by a sole source unless all of the following requirements are met:

- (1) Except for contracts involving the construction, reconstruction, renovation, or replacement of public roads, bridges, and water and sewer facilities, the Awarding Authority can document to the satisfaction of the State Division of Construction Management that the sole source product, material, system, or service is of an indispensable nature for the improvement, that there are no other viable alternatives, and that only this particular product, material, system, or service fulfills the function for which it is needed.
- (2) The sole source specification has been recommended by the architect or engineer of record as an indispensable item for which there is no other viable alternative.

- (3) All information substantiating the use of a sole source specification, including the recommendation of the architect or engineer of record, shall be documented and made available for examination in the office of the Awarding Authority at the time of advertisement for sealed bids."

When a sole source is specified, the Instructions To Bidders and the General Conditions of the Contract stipulate that the Bid/Contract Documents "...expressly provide that it is an approved sole source...". If the Technical Staff finds that a sole source is specified for a product, material, system, or service in non-compliance with §39-2-2(f), the submitted plans and specifications will not be approved.

- e. **Specified and "Approved Equal" Sources** - The Instructions To Bidders contain "Pre-bid Approval" procedures for additional sources included as specified sources. "Approved equal" sources are sources submitted by the contractor after contract award and proven by the contractor, to the satisfaction of the design professional, to be equal to or better than the specified sources. In the absence of an approved sole source, the Instructions To Bidders and the General Conditions of the Contract stipulate that identifying only one or two sources for a product, material, system, item of equipment, or service is intended to establish a required standard of performance, design, and quality, and "approved equal" sources will be accepted; listing three or more sources excludes "approved equal" sources unless the listing states that they will be accepted.

DCM **recommends** that three or more sources of a product, material, system, or service be identified whenever possible and that the standard "Pre-bid Approval" procedures be reviewed and modified, if necessary, to accommodate specific project needs.

2. ENERGY ANALYSIS SUBMITTAL:

An energy analysis is required for building envelope, mechanical and electrical systems to confirm compliance with the energy code currently adopted by DCM. COMcheck DOE program is an acceptable compliance method.

3. FINAL PLANS SHALL CONSIST OF:

- Vicinity Map(s)
- Site Plan(s)
- Life Safety Plan(s)
- Floor Plan(s)
- Roof Plan
- Elevation Drawings
- Building Sections
- Details and Detail Sections
- Foundation Plan(s)
- Structural or Framing Plans
- Plumbing Plans
- Mechanical Plans

- Fire Protection System Plans
 - Electrical Plans
 - Special Systems Plans
 - Energy Compliance Documents
- a. **Vicinity Map(s)**: Furnish on the first sheet of the drawings a Vicinity Map with direction and distances from the nearest town, city, or well-known community feature. The map should be of adequate scale and annotated with ample directions, so persons unfamiliar with the area may easily locate the job site.
- b. **Site Plan(s)**, drawn in sufficient scale, showing accurately and in detail:
- (1) Overall dimensions
 - (2) Adjoining streets and property lines
 - (3) North arrow and graphic scale
 - (4) Overall plan, orientation, and location of existing and proposed work; location to be shown by dimensions from existing reference points
 - (5) Contours (existing and proposed), including final grade elevations at all building corners and along building perimeters at such points as landings, walks, etc.
 - (6) Floor elevations of proposed and existing work
 - (7) Intended locations of future work or additions
 - (8) Walks, drives, or other features relative to the work including slopes and cross-slopes of accessible routes
 - (9) Locations and critical elevations of existing and proposed utilities, wells, disposal fields, etc.
 - (10) Benchmark(s)
 - (11) Parking facilities, including requirements for the physically handicapped.
 - (12) Soil investigation data (separate presentation of data may be referred to on Site Plan)
 - (13) Detailed electrical and mechanical data unless shown elsewhere on separate electrical and mechanical site plans.
 - (14) Easements
- c. **Life Safety Plan**: The life safety plan(s) submitted with the preliminary plans shall be updated and incorporated into the final plans.
- d. **Floor Plans**
- (1) Architectural "Working Drawings" of the floor plans of each floor should preferably be drawn at a scale of one-fourth inch per foot, but in no case less than one-eighth inch per foot.
 - (2) For large projects where the entire plan of the building cannot be shown on one sheet, a "Key Plan" shall appear on each of the working drawing plan sheets to designate the portion of the project to which each sheet applies.

- (3) Each architectural floor plan sheet must provide dimensions, room titles, north arrow, floor elevations, etc., for all the elements of that floor of the building and provide reference, by sheet number or symbols, to complementary data contained elsewhere in the drawings.
 - (4) Principal elements of the structural, mechanical, and electrical plans must be shown and noted where they influence the architectural plan.
 - (5) Drawings at a scale of not less than one-fourth of an inch must be furnished for congested areas, toilet rooms, and areas in which equipment, etc., must be accurately located.
 - (6) Electrical, mechanical, and structural plans should not (for clarity) be superimposed upon finished architectural floor plans.
- e. **Roof Plan:** The roof plan should be at the same scale as the floor plans, or at a scale sufficiently large, to present with clarity: materials used, locations of valleys, ridges, cants, saddles, crickets, gutters, down spouts; projections through the roof such as skylights, chimneys, exhaust ducts or vents, penthouses, etc., changes in roof elevation; direction and amount of slopes, or other significant conditions. A positive slope of not less than 1/4 inch per foot shall be provided for all roofs in new construction. Positive drainage is required for all re-roofing work. "Positive drainage" means no standing water on the roof 48 hours after a rain.
- f. **Elevation Drawings**
- (1) Elevations of all sides of the building, and other elevation drawings necessary to show all exterior wall surfaces, should be drawn to the same scale as the plans. These may be sectionalized to correspond to the plan sheets.
 - (2) In cases of very large projects, exception may be made and the use of a scale of not less than one-sixteenth inch to the foot may be used in order to show an entire elevation. If this is done, notations should be made to refer to the appropriate sectionalized plan drawings, and the necessary supplementary elevations provided at a scale of one-eighth inch to the foot. The elevations must clearly show the complete exterior and should include the following information: grade elevations, vertical dimension to floors, ceilings, roof slabs, materials, footings dotted-in and with noted elevation levels (if not clearly shown elsewhere), identification and scale.
- g. **Building Sections:** Building sections should be furnished to clearly show any special conditions, special and typical room elevations, stairs, corridors, furred spaces, equipment and fixture locations; floor, wall, ceiling and roof construction; dimensions, levels, thicknesses and finishes.

- h. Details and Detail Sections:** Details and detail sections must be furnished and drawn to a scale large enough for clarity. These shall clearly show typical and special wall construction; dimensions and levels from roof to footings; typical and special window heads, jambs, sills, mullions, etc.; typical and special door heads, jambs, sills, transoms; special construction conditions or special architectural features; cabinets, shelves, racks, wardrobes, chalkboards and tackboards, special equipment; stair risers, treads, landings, newels, rails, and construction features; typical and special trim.
- i. Foundation Plans**

 - (1) The foundation plans must be drawn at the same scale as the floor plans and contain sufficient information (or be supplemented by the necessary information in the form of large scale details, sections, schedules, notations, etc.) to indicate the size, shape, material, reinforcing, depths and elevations of footings and piers, columns, beams, walls, steps, slabs, openings, etc.; and all the dimensions necessary for the layout of the building.
 - (2) Foundation plans may be combined with limited basement plans if clarity is not sacrificed.
- j. Structural or Framing Plans:** Structural plans or framing plans must be furnished, drawn at the same scale as the architectural plans. These plans shall clearly locate, describe and dimension foundations, footing elevations, columns, beams, girders, joists, studs, bolts, anchors, slabs, and reinforcing; floor and roof construction; lintels, purlins, trusses, bridging, etc. They must be accompanied by sufficient details, schedules, and notes to completely describe all the structural elements. They must contain a table of design loads used in their preparation.
- k. Plumbing Plans**

 - (1) Plumbing plans must be furnished, drawn to scale no smaller than the architectural plans with minimum 1/8" lettering. Include north arrow and graphic scale on all plan drawings. They shall include layouts of storm drainage piping, sanitary waste and vent systems, complete water supply systems, and gas supply and distribution; water, waste, and vent riser diagrams; location of all plumbing fixtures and equipment, and sewage disposal system. Plans shall include all the necessary details, legends and fixture and equipment schedules. Include details for piping connections to fixtures and equipment and notes to fully and clearly describe the required work. They shall show pertinent floor elevations and grades and shall be accompanied by a plumbing site plan to show the location, type, size, and extent of exterior lines, connections, and equipment (provided this information is not shown elsewhere). Floor plans shall indicate room names and numbers as shown on the architectural plans.

- (2) Plumbing plans must be prepared in accordance with acceptable engineering practice, the International Plumbing Code as currently adopted in the State Building Code, the current Alabama Building Energy Code, and requirements of the State Department of Public Health for water supply and sewage disposal.
- (3) For projects involving demolition and/or renovation of existing systems, provide drawings adequately depicting the extent of the demolition, the extent of the existing system which is to remain (if any), and the location and method of connecting the existing and new systems.

I. Mechanical Plans

- (1) Mechanical plans shall be furnished, drawn at the same or larger scale as the architectural plans with minimum 1/8" lettering. Include north arrow and graphic scale on all plan drawings. Except on very simple installations, these plans must be separate from the plumbing plans. They must fully and clearly define the sizes, types, locations, grades and levels, and installation of all equipment, piping, and ductwork. Single line indication for ductwork is not acceptable; these shall be drawn to scale showing sizes of ducts, dampers, grilles, outlets, etc.
- (2) All mechanical equipment rooms must be drawn at a scale of not less than one-fourth inch per foot, accurately locating all equipment, duct, piping, and other system components, and identifying adequate space for access to equipment and components for maintenance. Sections through equipment rooms must be provided for congested areas.
- (3) Mechanical plans shall show rated capacity, efficiency, and operating conditions for all equipment; necessary details, legends, piping diagrams, and schedules; plumbing and electrical connections; system controls and other data to confirm compliance with the International Mechanical Code as currently adopted in the State Building Code, the current Alabama Building Energy Code, and applicable NFPA standards. Floor plans shall indicate room names and numbers as shown on the architectural plans.
- (4) For projects involving demolition and/or renovation of existing systems, provide drawings adequately depicting the extent of the demolition, the extent of the existing system which is to remain (if any), and the location and method of connecting the existing and new systems.
- (5) Outside air ventilation calculations must be indicated on the mechanical drawings.

m. Fire Protection Plans

- (1) Fire protection plans may be separate or combined with the plumbing plans. All areas to receive automatic sprinkler system protection shall be clearly identified as to hazard classification. At a minimum, plans shall indicate water supply to the building, outside control valve(s), fire department connection, sprinkler and standpipe risers, fire hose cabinets, and building zone control valve locations.
- (2) Provide enlarged plans, at a scale not less than one-fourth inch per foot, for fire pump installations. Plans shall indicate general layout of equipment and piping to verify adequate space for installation, operation, and maintenance and shall include fire pump, jockey pump, controllers, test header, ventilation fans, etc.

n. Electrical Plans: Electrical plans shall be furnished, drawn to the same scale, or larger, as the architectural plans with minimum 1/8" lettering. Except for very simple installations, the electrical plans shall be separate from the architectural plans and the plans of other disciplines. They shall be prepared in accordance with requirements of the National Electrical Code currently adopted in the State Building Code and designed to confirm compliance with the energy code currently enforced by DCM. At a minimum, the electrical plans shall:

- (1) Consist of lighting, power, fire alarm and auxiliary systems.
- (2) Show room names and numbers and north arrow as shown on the architectural plans, with door swings also shown on the lighting plans.
- (3) Show, using standard symbols and notations, all electrical equipment, devices and fixtures; all connections inside and outside; schematic representations of branch circuits indicating locations and sizes of all conduits and cables or wiring by schematic representation of branch circuits on floor plans; circuits noted by numbers; names and capacities of special outlets; location and details of switchboards, motor control centers, power panels, lighting panels, lighting control panels and other equipment; locations of fire alarm appliances and control panels; locations of auxiliary systems components.
- (4) Adequately depict the extent of any required demolition of existing electrical systems, the extent of existing systems to remain (if any) and location and method of connecting any existing and new systems (if required).
- (5) Be supported by electrical legends, details, single line diagrams, power riser diagrams, panel schedules and lighting fixture schedules.
- (6) Be coordinated with the specifications.

- o. **Special Systems Plans:** Special Systems plans must be sealed by a design professional registered in the State of Alabama. These plans include, but are not limited to, food service, audio visual, etc.

4. FINAL SPECIFICATIONS MUST MEET THE FOLLOWING CRITERIA:

- a. **Complete Specifications:** During review of the Final Submittal, the Technical Staff will refer to the project specifications as necessary for confirmation of code compliance and coordination with the plans. The specifications shall contain complete information to complement the drawings, fully describing and defining all equipment, materials, workmanship, methods, and procedures to be included in the contract or project. These specifications are to be finalized to the extent necessary for bidding; therefore, they must also include the required contract documents and descriptions of bid alternates, if any are proposed.
- b. **Project Specific:** The specifications shall be written for the particular project. Specifications having inapplicable, superfluous data or omissions are unacceptable. Specifications for separate, unrelated projects should not be combined.
- c. **"Front-end" Documents:** Section G below identifies those types of projects for which the project manual is required to include DCM's "front-end" documents (Advertisement for Bids, Instructions to Bidders, Contract, General Conditions, administrative forms, etc.). Projects that are not administered by DCM shall not use DCM's "front-end" documents without prior, written approval of the DCM Director. **FULLY LOCALLY-FUNDED, K-12 PROJECTS** are required to use State Department of Education (SDE) "front-end" documents, which are currently issued by DCM per SDE and are available on DCM's website www.dcm.alabama.gov/forms.aspx.

G. ADDITIONAL REQUIREMENTS for PROJECTS of STATE AGENCIES & DEPARTMENTS, PUBLIC POSTSECONDARY EDUCATION, PSCA and SIMILAR AUTHORITIES

This section sets forth submittal requirements, which are in addition to the preceding requirements and which apply to projects administered by DCM. The types of projects to which these requirements apply include projects of:

- STATE AGENCIES & DEPARTMENTS
- PUBLIC POSTSECONDARY EDUCATION
- PUBLIC SCHOOL & COLLEGE AUTHORITY (PSCA)
- ALABAMA BUILDING RENOVATION FINANCE AUTHORITY (ABRFA)
- ALABAMA CORRECTIONS INSTITUTION FINANCE AUTHORITY (ACIFA).
- ALABAMA MENTAL HEALTH FINANCE AUTHORITY (AMHFA)
- Other "authorities" established by legislative acts to fund specific construction

or improvement programs and which are assigned by legislative act or state Directors to DCM for administration and supervision.

1. SCHEMATIC PLAN REVIEW

No additional requirements.

2. PRELIMINARY PLAN REVIEW

In accordance with the O/A Agreement submit **estimated construction costs** and tentative budget breakdown to the Awarding Authority/Owner and to the DCM Project Architect, if assigned.

3. FINAL PLAN REVIEW

a. General:

- (1) **Updated Estimate of Construction Costs:** To insure that the design accommodates an award within funds available, the O/A Agreement requires the design professional to keep the Awarding Authority/Owner informed, in writing, of any design revisions that might be required to accommodate the Awarding Authority/Owner's budget or of any changes in the project cost estimate. If there have been changes to the estimate of construction costs submitted with the preliminary plans, the updated estimate is to be submitted to the Awarding Authority/Owner and to the DCM Project Architect, if assigned.

Coordination: The plans and specifications must be carefully checked and coordinated to insure that excessive and unwarranted change orders are eliminated. This should include double-checking the consultants' work, exposing areas in remodeling projects, carefully following the site information supplied by the Awarding Authority/Owner, and insuring that a complete soils investigation has been made.

b. Project Manual:

- (1) **Time of Completion:** A period of time for completion of construction and/or improvements shall be stated in calendar days. The time for completion should be reasonable and realistic and the design professional should inform the Awarding Authority/Owner accordingly.
- (2) **DCM "Front-end" Documents:** The project manual shall include DCM's "front-end" documents (Advertisement for Bids, Instructions to Bidders, Proposal Form, Accounting of Sales Tax, Bid Bond, Contract, Performance and Payment Bonds, General Conditions, administrative forms, etc.), which are listed in Appendix C of this Manual and available from DCM's website www.dcm.alabama.gov. Refer to Chapter 5 for acceptable methods of reproducing and supplementing these documents

and forms. Three specific forms may be altered before inclusion in project manuals; refer to Chapter 5 for specifics.

- (3) Roofing Specifications:** The roofing specifications shall contain specific language regarding a required Pre-Roofing Conference. Refer to Chapter 5 for the required language.
- c. Roofing Plan:** A positive slope of not less than 1/4 inch per foot shall be provided for all roofs in new construction. Positive drainage is required for all re-roofing work. "Positive drainage" means no standing water on the roof 48 hours after a rain.