**Section 518.2170 Preparation of Drawings and Specifications – Submission Requirements**

Drawings and specifications shall be prepared by or under the immediate supervision of an architect registered in the State of Illinois. The requirements contained in this Section have been established for the guidance of the FEC and the architect to provide a standard method of preparation of drawings and specifications.

a) First Stage Submission – Design Development Drawings and Outline Specifications

1) The preliminary sketch plans shall indicate in detail the assignment of all spaces and the size of areas and rooms, and shall indicate in outline the fixed and movable equipment and furniture.

A) The plans shall be drawn at a scale sufficiently large to clearly present the proposed design and not exceed 30 x 42 inches.

B) The drawings shall include:

i) A plan of each floor, including the basement or ground floor;

ii) Roof plan;

iii) Plan showing roads, parking areas, sidewalks, etc., and elevations of all facades;

iv) Sections through the building;

v) All adjacent areas clearly labeled if addition or alteration; and

vi) Fire and smoke separation diagrams.

2) Outline specifications shall provide a general description of the construction, including finishes; acoustical material, its extent and type; extent of the conductive floor covering; heating and ventilating systems; and the type of elevators.

3) The total gross floor area and bed count shall be shown on the drawings.

4) A brief narrative of the proposed program shall be provided.

b) Second Stage Submission – Working Drawings and Specifications

All working drawings shall be well prepared so that clean and distinct prints may be obtained; drawings shall be accurately dimensioned and include all necessary explanatory notes, schedules and legends. Working drawings shall be complete and adequate for contract purposes. Separate drawings, not to exceed 30 x 42 inches, shall be prepared for each of the following branches of work: architectural, structural, mechanical and electrical, and shall include or contain the following:

1) Architectural Drawings

A) Site plan showing all new topography, newly established levels and grades, existing structures on the site (if any), new buildings and structures, roadways, walks, and the extent of the areas to be landscaped. All structures and improvements that are to be removed under the construction contract shall be shown;

B) Plan of each floor and roof;

C) Elevations of each facade;

D) Sections through building;

E) Elevators and dumbwaiters. Drawings delineating shaft details and dimensions, sizes of cab platforms and doors, travel distances, including elevation height of landings, pit sizes and machine rooms;

F) Laundry, laboratories, and similar areas shall be detailed at a scale to show the location, type, size and connection of all fixed and movable equipment;

G) Scale details as necessary; scale details to 1½ inch to the foot may be necessary to properly indicate portions of the work; and

H) Schedule of finishes.

2) Structural Drawings

A) Plans of foundations, floors, roofs and all intermediate levels shall show a complete design with sizes, sections, the relative location of the various members, and a schedule of beams, girders and columns.

B) Floor levels, column centers, and offsets shall be dimensioned.

C) Special openings and pipe sleeves shall be dimensioned or otherwise noted for easy reference.

D) Details of all special connections, assemblies and expansion joints shall be given.

E) Notes on design data shall include the name of the governing building code, values of allowable unit stresses, assumed live loads, wind loads, earthquake load, and soil-bearing pressures.

F) For special structures, a stress sheet shall be incorporated in the drawings showing:

i) Outline of structure;

ii) All load assumptions used;

iii) Stresses and bending moments separately for each kind of loading;

iv) Maximum stress and/or bending moment for which each member is designed, when not readily apparent from subsection (b)(3); and

v) Horizontal and vertical reactions at column bases.

3) Mechanical Drawings. These drawings with specifications shall show the complete heating, cooling and ventilation systems, plumbing, drainage, stand pipe and sprinkler systems.

A) Heating, Cooling and Ventilation

i) Radiators, coils and steam-heated equipment such as sterilizers, warmers and steam tables;

ii) Heating and steam mains and branches with pipe sizes;

iii) Diagram of heating and steam risers with pipe sizes;

iv) Sizes, types and heating surfaces of boilers, furnaces with stokers and oil burners, if any;

v) Pumps, tanks, boiler breeching and piping and boiler room accessories;

vi) Air conditioning systems with required equipment, water and refrigerant piping and ducts;

vii) Supply and exhaust ventilating systems with connections and piping; and

viii) Air quantities for all room supply and exhaust ventilating duct openings.

B) Plumbing, Drainage and Stand Pipe Systems

i) Size and elevation of street sewer, house sewer, house drains, street water main and water service into the building;

ii) Location and size of soil, waste, and vent stacks with connections to house drains, cleanouts, fixtures and equipment;

iii) Size and location of hot, cold and circulating mains, branches, and risers from the service entrance, and tanks;

iv) Riser diagram of all plumbing stacks with vents, water risers and fixture connections;

v) Gas, oxygen and similar piped systems;

vi) Standpipe and sprinkler systems; and

vii) All fixtures and equipment that require water and drain connections.

4) Electrical Drawings. Drawings shall show all electrical wiring, outlets and equipment that require electrical connections.

A) Electrical service entrance with switches and feeders to the public service feeders, characteristics of the light and power current, transformers and their connections if located in the building.

B) Location of main switchboard, power panels, light panels and equipment. Feeder and conduit sizes shall be shown with schedule of feeder breakers or switches.

C) Light outlets, receptacles, switches, power outlets and circuits.

D) Telephone layout showing service entrance, telephone switchboard, strip boxes, telephone outlets and branch conduits as approved by the telephone company. Where public telephones are used for inter-communication, a separate room and conduits for racks and automatic switching equipment shall be provided as required by the telephone company.

E) Nurse call systems with outlets for treatment rooms, duty stations, corridor signal lights, annunciators and wiring diagrams.

F) Doctors' call and doctors' in-and-out systems with all equipment wiring, if provided.

G) Fire alarm system with stations, signal devices, control board and wiring diagrams.

H) Emergency electrical system with outlets, transfer switch, source of supply, feeders and circuits.

I) All other electrically operated systems and equipment.

5) Additions to Existing Structures

A) Procedures and requirements for working drawings and specifications are to be followed, and the following information shall be submitted:

i) Type of activities within the existing building and distribution of existing treatment rooms, etc.;

ii) Type of construction of existing building and number of stories in height;

iii) Plans and details showing attachment of new construction to the existing structure; and

iv) Mechanical and electrical systems tying into existing system.

B) The Department may require submission of architectural drawings of all or any part of the existing structure if necessary for the Department's review.

6) Specifications. Specifications shall supplement the drawings and shall comply with the following:

A) The specifications shall fully describe, except where fully indicated and described on the drawings, the materials, workmanship, kind, sizes, capacities, finishes, and other characteristics of all materials, products, articles and devices.

B) The specifications shall include:

i) Cover or title sheet;

ii) Index;

iii) Invitation for bids;

iv) General conditions;

v) General requirements;

vi) Sections describing material and workmanship in detail for each class of work; and

vii) Bid form.

(Source: Amended at 33 Ill. Reg. 8317, effective June 4, 2009)