SAFEbuilt inc.

COMMERCIAL BUILDING PLAN REQUIREMENTS

Information contained in the drawings and specifications shall be at least the following:

A. Site plan drawn to scale showing the actual dimensions of the property, street address, lot number, property lines, building location(s), number of units, setbacks, easements, flood plains, buffers, retaining walls, and other information needed to determine if City Ordinances and Building Codes are being observed. The Building Official may require a boundary line survey prepared by a qualified surveyor. If applicable the City will require:

1) As built foundation drawings showing the distance from the face of the finished wall to the property line are required if the proposed structure is within one (1) foot of any building setback, easement, buffer, or other site feature that restricts the structure's location.
2) Finish Floor Elevation certificates are required on any habitable structure built on a lot of record that includes or abuts any portion of a flood plain.

B. Commercial Building Plan Requirements: applicant must submit at least three copies of the building plans, drawn at a legible scale. Such plans shall include legible details, drawings, and notes that sufficiently describe the work being done and must clearly show building and fire codes compliance. The plans shall include at least the following:

1) Title Page listing:
a. Project name
b. Project address
c. Owners name, address and phone numbers
d. Designers and consultants names, addresses, and phone numbers
e. Design code summery
f. Construction type
g. Occupancy types
h. Building height and area (show modifications with calculations)
i. Fire protection
j. Egress information
k. Number of stories
l. Square footage per floor
m. Room-by-room occupancy classification and occupant loads
n. Brief description of the work
o. Plan page index

2) Dimensioned, detailed foundation plans showing footings, walls, slabs, etc. with typical sect ions and elevations showing building Code compliance.

3) Dimensioned, detailed architectural floor plan for each level. Must show the use of each room, size and location of doors and windows, corridors, paths of egress, etc.
4) Listing number, description and testing agency of all fire resistant rated assemblies, head wall assemblies, penetration protections, etc.
5) Complete structural drawings including design assumptions.
6) Complete mechanical, electrical, plumbing, low voltage, and fire protection plans and specifications.
7) Elevation views of all sides of the structure.
8) One or more building sections showing typical structural details of the foundation, slab, floors, walls, roof, insulation, stairs, guard rails, handrails, etc.
9) Georgia Energy code Compliance report.
10) Other information as required to show compliance or for clarification of the project scope. This may be required by the City
11) A listing of the "Special Inspections" as required.

MECHANICAL PLAN REVIEW REQUIREMENTS:

Mechanical Plan Reviews are based on the specified edition of the International Mechanical Code as referenced by the DCA. In order to perform a thorough Mechanical Plan Review, the following specifications, drawing and details should be submitted as applicable:

1. Complete signed and sealed (as required by applicable laws) plans and specifications of all heating, ventilating and air conditioning work.
2. Complete information on all the mechanical equipment and materials including listing, labeling, installation and compliance with specified quality control standards.
3. Details on the HVAC equipment including the equipment capacity (Btu/h input), controls, equipment location, access and clearances.
4. A ventilation schedule indicating the outdoor air rates, the estimated occupant load/1,000 ft2, the floor area of the space and the amount of outdoor air supplied to each space.
5. The location of all outdoor air intakes with respect to sources of contaminants.
6. Duct construction and installation methods, flame spread/smoke development ratings of materials, flexible air duct and connector listing and duct support spacing.
7. Condensate disposal, routing of piping, and auxiliary and secondary drain systems.
8. Required exhaust systems, routing of ducts, and termination to the exterior.
9. Complete details of all Type I and II kitchen hoods, grease duct construction and velocity, clearance to combustibles, and fire suppression system.
10. Details of all duct penetrations through fire resistance rated assemblies including shaft, fire dampers and smoke damper locations.
11. Method of supplying combustion air to all fuel fired appliances, the location and size of openings, and criteria used to size the openings.
12. Details on the vents used to vent the products of combustion from all fuel burning appliances including the type of venting system, the sizing criteria required for the type of vent, and the routing of the vent.
13. Boiler and water heater equipment and piping details including safety controls and distribution piping layout. (Boilers are inspected by the State).

14. Details on the type of refrigerant, calculations indicating the quantity of refrigerant, and refrigerant piping material and the type of connections.
15. Complete details on the gas piping system including materials, installation, valve locations, sizing criteria, and calculations (i.e., the longest run of piping, the pressure and pressure drop).

ELECTRICAL PLAN REVIEW REQUIREMENTS:

Electrical Plan Reviews are based on the specified edition of the National Electrical Code as referenced by the DCA. In order to perform a thorough Electrical Plan Review, the following specifications, drawings and details are required, as applicable:

1. Complete signed and sealed (as required by applicable laws) plans and specifications of all electrical work.
2. Labeling criteria of all electrical equipment.
3. Lighting floor plan including electrical circuits indicating conduit and wiring sizes.
4. Power floor plans including electrical circuits indicating conduit and wiring sizes, equipment and disconnect switches.
5. Exit sign/means of egress lighting location and power supply.
6. Single line diagram including the available fault current and bus bracing.
7. Panel board schedule.
8. Lighting fixture schedule.
9. Symbol schedule and diagrams
10. Specifications to include requirements for:
    a. Raceway and conduit with fittings.
    b. Wire and cable.
    c. Electrical boxes, fittings and installation.
    d. Electrical connections.
    e. Electrical wiring devices.
    f. Circuit and motor disconnects.
    g. Hangers and supporting devices.
    h. Electrical identification.
    i. Service entrance and details.
    j. Over current protection.
    k. Switchboards.
    l. Grounding.
    m. Transformers.
    n. Panel boards.
    o. Motor control centers.
    p. Lighting fixtures

PLUMBING PLAN RVIEW REQUIREMENTS:

Plumbing Plan Reviews are based on the specified edition of the ICC International Plumbing Code as referenced by the DCA. In order to perform a thorough Plumbing Plan Review, the following specifications, drawings and details should be submitted, as applicable:

1. Complete signed and sealed (as required by applicable laws) plans and specifications of all plumbing work.

2. Plumbing fixture specifications including identification of the applicable referenced quality control standards and the maximum flow rates for the plumbing fixtures.
3. The basis for the number of plumbing fixtures provided including the occupant load used, the use group, and fixture rate from the plumbing code.
4. Complete dimensions for bathrooms, the location of plumbing fixtures and the wall and floor surface materials.
5. Site plan which indicates the routing of the sanitary, storm and water service with the burial depths for all sewers and water service.
6. Water distribution system sizing criteria and calculations.
7. Water supply and distribution piping plan showing the incoming water supply, distribution piping, pipe size, the location of water hammer arrestors and the location of the valves.
8. The location of all backflow presenters, the type of backflow presenters provided for each piece of equipment or outlet and the specified quality control standards referenced in the code.
9. Drainage system piping plan showing the layout of all piping, of plumbing fixtures and the location of cleanouts.
10. Riser diagram(s) of the drain, waste and vent piping including the building drain, all horizontal branches and the connections and layout of all fixtures. Pipe sizes, direction of flow, grade of horizontal piping, drainage fixture loads and the method of venting all plumbing fixtures.
11. The location of all indirect waste connections, standpipes, grease traps and separators.
12. Complete details of the water heater, the method of supplying tempered water to accessible fixtures and the temperature and pressure relief valve discharge.
13. Complete details of the method of draining storm water from the roof including calculations to verify pipe and/or gutter sizes, the location of all roof drains and the roof area that each group of roof drains is intended to serve and an independent secondary roof drainage system.
14. Piping material specifications to verify compliance with the specified quality control standards for all sanitary, storm and potable water piping (e.g.,ASTM B88 for copper pipe), the type of joints and connections for all piping, the pipe hanger support spacing and details of anchorage and bracing.

ENERGY PLAN REVIEW REQUIREMENTS:

Commercial Energy Plan Reviews are based on the Georgia Standard Energy Conservation Code. For the Energy Plan Review, the following specifications, drawings and details are required in addition to a Georgia Energy Code Compliance Report.

ENVEOPE:

1. Architectural plans and specifications to include:
    a. Description of uses and the proposed use groups(s) for all portions of the building.
    b. Thermal performance of envelope components.
    c. Fenestration performance details (U-factor, SC, SHGC, VLT, air leakage rates, etc.).
    d. Fully dimensioned drawings to determine gross and net areas of all envelope components.
    e. Details of vapor barrier and insulation installation, caulking, gasketing, weather-stripping, and other means of sealing joints, cracks, holes and penetrations in the building envelope.
    f. ENVSTD output (where applicable).

2. Design conditions (interior and exterior) consistent with local climate.

ELECTRICAL POWER AND LIGHTING

1. Complete plans and specifications of all electrical work.
2. Riser diagram(s) of the distribution system indicating:
   a. Check metering provisions for individual dwelling units.
   b. Subdivision of feeders by end use: 1)Lighting, 2)HVAC, 3)SWH and systems over 20 kw.
3. Lighting fixture schedule(s) depicting location, fixture lamps, ballasts, ballast specifications, fixture input watts, fixture wiring methods, power factor, etc.
4. Lighting plan(s) for building exteriors including total exterior Connected Lighting Power (CLP).
5. Lighting and power floor plans for building interiors including total interior CLP.
6. LTGSTD output (where applicable).
7. Interior and exterior means of lighting control.
8. Electric motor schedule including type, HP and efficiencies.

MECHANICAL SYSTEMS AND EQUIPMENT

1. Mechanical equipment data, plans and specifications of all mechanical work including:
   a. Equipment type, capacity (Btuh) and efficiency (peak and part-load).
   b. System design air flow rates (cfm).
   c. Details of equipment/system sizing.
   d. System and/or zone control capabilities including terminal device schedule, provisions humidity control (where applicable) and the corresponding testing of system controls.
   e. Provisions for automatic setback/shutdown.
   f. Indicate supply and exhaust systems to have automatic shutoff or volume reduction dampers.
   g. Energy consumed by fans in the form of an Air Transport Factor (ATF) and pumps.
2. Economizers (air or water) including provisions for integrated control.
3. Duct construction and system static pressure(s), including provisions for sealing.
4. Duct and/or hydronic-piping lining and insulation materials.
5. Provisions for air and/or hydronic system balancing.
6. Boiler and water heater equipment and piping details including safety controls and distribution piping layout.

SERVICE WATER HEATING (SWH)

1. SWH equipment data including type, capacity and efficiency.
2. SWH pipe insulation, thickness, conductivity and vapor retarder (where appropriate).

3. Water conservation requirements.

4. Energy conservation measures for swimming pools (where applicable).

ACCESSIBILITY PLAN REVIEW REQUIREMENTS:

Accessibility Plan Reviews are based on the Georgia Accessibility Code (Fire Marshal's Rules 120-3-20 Accessibility). In order to perform a thorough Accessibility Plan Review, the following specifications, drawings and details are required.

1. Complete signed and sealed (as required by applicable laws) architectural plans and material

Specifications of all work. Details and plans drawn to scale with sufficient clarity, details and dimensions to show the nature and extent of the work proposed.

2. A site plan including the following information:
   a. Size and location of all new construction and all existing structures on the site.
   b. Location of any recreational facilities (i.e., pool, tennis courts, etc.)
   c. Established street grades and proposed finished grade.
   d. Accessible parking, other locations of public access to the facility, accessible exterior Routes and locations of accessible entrances.
3. Architectural plans and specifications to include:
   a. Description of uses and the proposed use group(s) for all portions of the building. The Design approach for mixed-uses (as applicable).
   b. Fully dimensioned drawings to determine areas and building height, including occupant Loads for each floor, exit arrangement and sizes, corridors, doors, stairs, areas of refuge, Etc.
   c. Adequate details and dimensions to evaluate the accessible route to areas required to be Accessible , including corridors, doors, protruding objects, maneuvering clearances, clear Floor space at fixtures and controls, etc.
   d. Accessibility provisions including but not limited to access to services, seating, listening Systems, accessible fixtures, elevators, work surfaces, etc.
   e. Accessible plumbing facilities and details.
   f. Tactile signage provided.
   g. Details of required fire protection systems.

SPRINKLER PLAN REVIEW REQUIREMENTS:

Sprinkler Plan Reviews are based on the specified edition of the applicable NFPA 13 standard as referenced by the Georgia State Fire Marshal's Rules. In order to perform a thorough Sprinkler Plan Review, the following items are required as a separate submittal to the Fire Marshal:

1. Complete signed and sealed (as required by applicable laws) plans and specifications for the Sprinkler system and related equipment.
2. Description and locations of uses within the building.
3. Design details in accordance with the appropriate reference standard (i.e. NFPA 13, 130, 13R)
4. Design calculations indicating the discharge requirements of the system with evaluation of the Arrangement and source of the water supply.
5. Results of a current flow test indicating the location and date of the test.
6. Working drawings indicating all pipe sizes and the spacing between branch lines and Sprinklers on the branch line.
7. Material specifications and equipment specifications. All materials used should be verified They are installed in accordance with their listing.