



City of Jacksonville – Planning and Development Building Inspections Division

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MINIMUM DRAWING STANDARDS REQUIRED FOR BUILDING PLAN REVIEW SUBMITTALS

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PURPOSE

In an effort to obtain more consistency in our plan review procedures, the following criteria has been developed as a guide for design professionals and related interested parties, in order to assist them in the preparation of drawings and specifications for obtaining a building permit for construction.

GENERAL REQUIREMENTS

Two sets of specifications and drawings, with sufficient clarity and detail to indicate the nature and character of the work shall accompany the application for a building permit.

Drawings and specifications shall contain information in the form of graphic drawings and sketches, notes or other written descriptions, indicating the quality of materials, where quality is essential to conformity with the technical codes.

Information shall be specific and the technical codes shall not be cited as a whole or in part in lieu of providing specific details.

The terms “legal”, “in accordance or compliance with the code”, “as approved by the Building Official”, or equivalents shall not be used as substitutes for specific information.

All information, drawings, specifications and accompanying data shall bear the legible full name and signature of the professional architect and/or engineer responsible for the design along with his/her seal indicating State of Florida registration. All seals and signatures shall be applied in accordance with the Florida Administrative Code and the design professional’s state board.

The drawings and specifications shall be in compliance with the codes presently adopted by the State of Florida.

As a minimum, regardless of the size of the project, the drawings shall display a graphic representation of the total intent of the construction project. It is mandatory that all disciplines be provided if their work is included in the project. If no work of a particular discipline is being performed, then it must be clearly stated on the lead sheet of the drawings. Please remember, the design professionals preparing the plans have spent considerable time and are very familiar with the project. The plan reviewer only gets a few hours at most to review the project. If the intent is not clear, or if you are not revising/adding any MEP work, but don’t say so, we’re going to ask for it, and it will delay your review. All drawings shall show code compliance. The drawings shall provide sufficient details and notes so as to convey the construction methods, materials and scope of the work to be accomplished. The drawings shall be prepared in conformity with established principles of architectural and engineering documents in accordance to industry standards. They shall be legible and drawn to scale. The minimum sheet size shall be 11” x 17”.

Each submittal shall include the following on all sheets:

- Project name and address;
- Name of architect and/or engineer of record clearly printed in the title block of applicable sheets;
- Architect of record shall individually sign and date and affix State of Florida seal on cover sheet and all sheets of architectural drawings;
- Engineer(s) of record shall individually sign and date and affix State of Florida seal on cover sheet and every sheet of his/her disciplines drawings;

GENERAL REQUIREMENTS, continued

- Each sheet shall be numbered;
- Each sheet shall include the latest issue date of that sheet, including revision date;
- The graphic scale of each drawing shall be indicated;
- North arrow for each plan view drawing.
- Minimum lettering size shall be 1/8" high and legible.

Additionally, each project shall include on the lead title sheet or appropriate discipline sheet (civil, landscape, demolition, architectural, structural, mechanical, plumbing, electrical, fire protection, specialty) a symbols legend, abbreviations legend, vicinity map and site location plan. Each project, regardless of size, shall include on the lead architectural sheet a detailed building and fire code analysis indicating specific codes under which the project was designed and listing all code related items and information required to complete a plan review for purpose of issuing a building permit.

Each project shall include a Life Safety Plan(s) for the entire floor or floors of the proposed construction.

For projects where existing facilities are being altered, any alteration that affects or could affect the usability of or access to an area containing a primary function shall be made so as to ensure, to the maximum extent feasible, the path of travel to the altered area and the restrooms, drinking fountains serving the altered area, are readily accessible to individuals with disabilities, unless such alterations are disproportionate to the overall alterations in terms of cost and scope. Where alterations are made to provide an accessible path of travel to altered areas are deemed disproportionate to the overall alteration (when the cost exceeds 20 percent of the cost of the alteration to the primary function area) each accessible feature or element shall be clearly indicated on the drawings and a monetary value shall be assigned to it along with the total actual or estimated construction cost of the project. This may be provided in table format.

SITE PLAN AND RELATED SITE INFORMATION

General site information for all projects, except for interior only work, shall include:

- The site plan shall indicate lot dimensions in feet; directional bearings in degrees; easements clearly delineated; names of all bounding and intersecting streets, roads and waterways; north arrow indicating true north and plan north if different.
- The site plan shall clearly indicate all existing features that are to remain, existing features to be removed, and all new features.
- Topographical data shall be indicated on a site information sheet and shall be shown at reasonable intervals. It shall include existing and new contour lines or spot elevations relative to established grades adjacent to property on all sides and along property lines.
- Existing and/or new finish floor elevations for existing and new structures shall be indicated on the plans.
- When required by Chapter 656, Part 12 Landscape and Tree Protection Regulations of the City Zoning Code, landscape plans and drawings shall be included with the project drawings and specifications for permitting purposes. As a minimum, they shall include the information required by 656.1217. Drawings prepared by a Florida registered Landscape Architect shall be originally signed dated and sealed in accordance to F.S. Chapter 481& Rule 61G10.
- All existing and new overhead and underground utility lines shall be clearly indicated on a site information sheet. Included shall be water, sanitary sewer, storm sewer, fire protection, irrigation, septic tank(s), electrical, cable, gas, telephone, wells, service meters and any other lines, above or below ground level, that convey services to the property, structures or items located within the limits of construction for the project.

ARCHITECTURAL DRAWINGS AND RELATED BUILDING INFORMATION

Architectural and building drawings shall contain sufficient information and detail so as to convey graphically, with notes, the plan layout of each space, including circulation and room sizes; construction methods and materials; and specific scope of construction work to be accomplished. The drawings shall include as a minimum:

- Floor plan(s) indicating space names, dimensions, partitions (delineating fire rated walls and doors), stairs and ramps with directional arrows (up/down), fixed equipment, wall sections and detail cuts, emergency egress windows and accessible toilet(s).
- Schedules indicating door size, type and hardware; window size and type; room finishes for floors, walls, base, wainscot and ceilings; wall types of construction, special equipment and fixtures.
- Exterior elevations of all sides of building indicating vertical elements and horizontal projections; doors, windows, louvers and other openings; materials for wall, roof and other elements; roof pitch; vertical distance between floors, finish grade elevations, and building height.
- New structural elements, sizes and location when separate structural drawings are not provided.
- Key plan indicating the portion of the building where the work is being performed.
- Building sections of every major wall/floor/roof condition indicating vertical dimensions and horizontal projection dimensions; exterior and interior wall, floor, and ceiling finishes; footing and foundation construction; all applicable structural elements; all fire proofing and fire stopping materials; insulation material; structural connectors and reinforcing; stairwells, elevator shafts, escalators; nail sizes and spacing for roof and wall sheathings; identify and cross reference each section detail cut on plans.
- Details of special conditions; features; connections; assemblies; floor, wall and roof intersection and framing; fire proofing/rating materials and construction; identify and cross reference each detail cut on plans, sections and elevations.
- Interior elevations of major or special conditions indicating vertical and applicable horizontal projecting dimensions; walls, bases, wainscots, doors, windows and special features materials identified.
- Reflected ceiling plans indicating ceiling materials; suspension system; lighting; HVAC grills, registers and diffusers; differences in vertical ceiling planes and soffits; special features or items.
- Roof plan(s) indicating roof surface materials; roof surface slope; drainage structures or devices such as roof drains, scuppers, gutters, rain leaders; roof mounted equipment such as HVAC equipment, personnel protection guards, sky lights, hatches, ladders; walkway pads; special equipment and devices; penthouses.
- Furnishings plan(s) when applicable, indicating all fixed and movable furniture, seating, tables, etc., that may impact safe exiting of spaces and the building in case of an emergency.
- Life safety plan(s) to indicate path and length of travel, vertical and horizontal, to safe exiting. Delineate all fire rated walls and doors and provide rating designation. Indicate rated ceilings where applicable. Emergency and exit lighting to be shown on Life Safety Plans.
- Information indicating compliance with the Florida Accessibility Code shall be clearly indicated on all applicable plans, elevations and details.
- UL label or approved testing laboratory listing number with applicable details for all fire/smoke rated assemblies.

STRUCTURAL DRAWINGS AND RELATED INFORMATION

Structural drawings shall contain sufficient information and detail so as to convey graphically, with notes, the plan layout for the various structural components for foundations, basements, floors, roofs and penthouses. This shall include, but not necessarily be limited to:

- Foundation plans and details.
- Floor framing plans and details.
- Roof framing plans and details.

STRUCTURAL DRAWINGS AND RELATED INFORMATION, continued

- The plan drawings, except for larger scale details, shall be drawn at the same scale and orientation as the architectural floor plans.
- All structural elements shall be clearly indicated, including sizes, reinforcing, connections, columns, beams, girders, rafters, trusses, decking, openings, blocking, bracing, sheathing, anchoring, dimensions and elevations.
- Sufficient section cuts and details, with appropriate notes, shall be included so as to define the complete structural scope and construction methods and materials for the project, including shear walls.
- Provide sufficient notes and calculations as necessary to describe the structural design used to comply with applicable building code. This shall include criteria for all loading conditions, including wind, soil bearing capacity, materials stress capacities, and similar design factors. Structural floor plans shall indicate live load design criteria.
- All sheets shall be individually signed, sealed and dated by a Florida registered engineer competent to practice structural engineering.

MECHANICAL DRAWINGS AND RELATED INFORMATION

Mechanical drawings shall contain sufficient information and detail so as to convey graphically, with notes, the plan layout and details for the various mechanical equipment and components for heating, ventilating and air conditioning (HVAC) systems, gas systems, compressed air systems, medical support systems and similar systems. This shall include, but not necessarily be limited to:

- Duct layout, including diffusers, grills, vents.
- Equipment location.
- Piping layout.
- Section cuts through building and related equipment.
- Large scale details of special conditions, connections, penetrations and similar construction requirements.
- The plan drawings, except for large-scale details, shall be drawn at the same scale and orientation as the architectural floor plans.
- Sufficient section cuts and details, with appropriate notes, shall be included so as to define the complete HVAC system scope of work and construction methods and materials for the project, including valves, piping and insulation.
- For commercial cooking facilities, a range hood system, complete with makeup air and exhaust systems shall be detailed and scheduled.
- All fire rated walls, partitions, ceilings and penetrations shall be indicated clearly on the mechanical plans.
- All fire dampers shall be indicated.
- Access for resetting fire dampers shall be indicated.
- Projects with roof mounted equipment shall have sufficient structural members and connections so as to safely carry the additional loads imposed by the equipment. (Appropriate structural drawings shall be signed and sealed by the structural engineer.)
- All sheets shall be signed individually, sealed and dated by a Florida registered engineer competent to practice mechanical engineering.
- Provide details, including calculations and schedules, for natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the Florida Building Code, Mechanical Chapter 4.

PLUMBING DRAWINGS AND RELATED INFORMATION

Plumbing drawings shall contain sufficient information and detail so as to convey graphically, with notes, the plan layout and details for the various plumbing piping, equipment and components for the plumbing system. This shall include, but not necessarily be limited to:

PLUMBING DRAWINGS AND RELATED INFORMATION, continued

- Sanitary piping layout, including riser diagrams complete with all drain, waste and vent connections, including sizes of all components. Provide a complete sanitary drain system layout that will also include the connection to the sewer, or on-site disposal system.
- Domestic water piping layout, including riser diagrams. Provide a complete water piping system, including sizing, that will also include the connection to the public water main, with metering, or an on-site water supply system.
- Location of all fixtures, fixture schedule and fixture count summary as per Florida Building Code Plumbing.
- Roof drains and piping layout with sizes and secondary means of discharging roof top rain water.
- The plan drawings, except for large-scale drawings, shall be drawn at the same scale and orientation as the architectural floor plans.
- Piping layouts, riser diagrams and details shall be included so as to define the complete plumbing system scope of work and construction methods and materials for the project, including valves and backflow preventers.
- All sheets shall be individually signed, sealed and dated by a Florida registered engineer competent to practice plumbing engineering.
- All sheets prepared by a contractor must have their name, address, and license number as required by the Building code.

ELECTRICAL DRAWINGS AND RELATED EQUIPMENT

Electrical drawings shall contain sufficient information and detail so as to convey graphically, with notes, the plan layout and details for the various wiring, equipment and components for the electrical, communications and data systems. This shall include, but not necessarily be limited to:

- Lighting fixtures layout, including circuits and fixture schedules.
- Power devices layout, including circuits and schedules.
- Communications devices layout, including schedules.
- Data (computer) devices layout, including schedules.
- Fire alarm and security devices layout, including schedules.
- The plan drawings, except for large-scale drawings, shall be drawn at the same scale and orientation as the architectural floor plans.
- Wiring diagram drawings shall include circuits, conductor and conduit sizes and types, panel sizes, service disconnect locations, and grounding showing the complete grounding electrode and conductor system.
- Provide complete building electrical load calculations that include all new and all existing loads presently on the service. Loads must be calculated according to the requirements of the National Electrical Code.
- Lighting plans shall indicate all electrical light fixtures, emergency lights, exit lights, switches, circuiting, including circuit sizes, branch circuit protection, and lighting panels.
- Power plans shall indicate all receptacles, smoke detectors, electrical equipment, including HVAC equipment, and service panel and disconnects.
- Include all panel schedules complete with circuit breaker configuration and sizing, panel load calculations, fixture schedules and special electrical equipment schedules.
- Layouts, risers, diagrams, details and schedules shall be included so as to define the complete electrical, communications, data, fire alarm and security systems scope of work and construction methods and materials for the project.
- Electrical plans must show the calculation of the maximum available fault current.
- All sheets shall be individually signed, sealed and dated by a Florida registered engineer competent to practice electrical engineering.

FIRE PROTECTION DRAWINGS AND RELATED INFORMATION

Fire protection drawings shall contain sufficient information and detail so as to convey graphically, with notes, the plan layout and details for the various fire protection systems.

For existing buildings, this shall include drawings or a complete description of existing fire alarm system, fire protection sprinkler system and related information so as to easily determine the level and adequacy of the existing fire protection system as it relates to the new construction work.

For new buildings or additions to existing facilities, this shall include plan drawings, at same scale and orientation as the architectural floor plans, indicating the type and location of all proposed sprinkler heads. Design criteria shall also be included with the permitting documents.

For commercial cooking facilities, a fire suppression system shall be indicated for the range hood system.

For all buildings, having a fire protection system or not, provide the test flow data for the nearest fire hydrant.

For all buildings, provide lightweight truss/floor signage as required noting the presence of light-frame truss type construction to warn persons conducting fire control and other emergency operations..

For projects that meet the criteria for a quality assurance for penetrations and joints program per NFPA 1 Chapter (12.3.2). Provide with submitted architectural plans a quality assurance plan detailing the quality assurance program prepared by the RDP.

Certified shop drawings of the fire protection sprinkler system shall be submitted to the Mechanical section for review by the Fire Marshall prior to issuing a Mechanical Permit.

SPECIFICATIONS

Specifications shall be provided for projects in order to define, the scope of work included; the quality of materials where they are essential to the conformity with the various technical codes; and methods of construction indicating how the materials are to be installed, assembled and erected to conform with the various technical codes.

For small projects, where this information can adequately be described, it may be included on the drawings. For larger projects that require more detail and written explanation as to scope, materials and methods of construction, written specifications in a loose leaf binder will be required. (Architect and engineers shall sign, seal and date the cover of the specifications.)

REVISIONS/CHANGES

It is not unusual that changes may become necessary to a project thus causing revisions to the drawings and specifications. Recognizing this, the following must be adhered to in order for the documents to be re-examined and approved by the Plans Examiner in an efficient and expeditious manner.

All drawing changes shall be made on the original sheets. No 8 ½" x 11" or supplementary sheets shall be accepted. All revisions and changes shall clearly stand out from the rest of the drawing on the sheet as a revision by way of completely encircling the change with "clouding".

The revision shall also be identified as to the sequence of revision by indicating a triangle with the revision sequence number within it and located adjacent to the cloud.

The revision date and revision sequence number shall also be indicated in a conspicuous location in the title block for each sheet on which a revision for that sequence occurs. For projects still in the initial review stage and permit pending, all sheets with revisions shall be inserted into each set of drawings. The original sheet(s) are to be removed from the set and discarded. Complete new sets of drawings will not be accepted.