



City of St. Robert Planning & Development

January 26, 2012

Re: ICC Plan Review Policy and Procedure

The building department no longer processes building plans and construction documents for submittal to ICC for plan review. Forwarding of the plans and all expenses are the responsibility of the Developer/Owner.

Specific criteria have been established and the following steps must be completed and all fees paid to the City of Saint Robert prior to the issuance of nonresidential building permits. These steps are procedural and may not be waived.

1. Prior to sending plans to ICC, the builder/owner must schedule a Pre-Construction meeting with the Building, Zoning and Public Works Departments. This meeting will be scheduled by calling the Permit Clerk at (573) 451-2000, ext. 1120.
2. The builder/owner shall have his designated representative forward all necessary building plans, construction specifications and all other necessary documentation to the International Code Council (ICC) for review. (See attached form for contact information.)
3. All projects must clear the zoning review process prior to any building permit application being accepted.
4. Upon completion of the ICC plan review the builder/owner shall then submit the following documentation to the St. Robert Building Department. Any omissions of the below listed documentation will delay the approval of the building permit being sought.
 - a. One (1) copy of the original building plans submitted to the ICC for review. The plans being submitted must bear the review stamp and ICC reviewing official's endorsement initials.
 - b. One (1) copy of the completed ICC plan review written findings summary.
 - c. Two (2) copies of all amended drawings and/or change directives that comply with the final ICC plan review findings.
 - d. Two (2) copies of the written project specifications.
 - e. One completed building permit application and supporting electrical load calculation worksheet.
5. Once plans are submitted to ICC for review, an In-Part Permit for foundation work only can be submitted to the Building Department for approval by the Building Official. To apply for an In-Part Permit the following items must be submitted and approved before the in-part permit is issued. Issuance of the in-part permit is at the discretion of the Building Official. *Note: Total responsibility is on the builder/property owner/applicant for any changes to completed work from the In-Part due to the ICC Plan Review.
 - a. One (1) set of identical plans that have been sent to ICC for review.
 - b. One (1) completed new construction building permit application; filled out correctly.

Upon submittal of all required information stated above, the Building Official shall review all revisions, amendments or changes. If all is found code compliant and all permit/P.W. fees are paid, all infrastructure have been completed, inspected and approved, Storm water documentation submitted and approved, an in-part or full building permit shall be issued. Please allow 7-10 working days for review and processing.

Sincerely,

Rodney Ramsay, CBO
City of St. Robert
Building Official

**CONSTRUCTION DOCUMENTS NEEDED FOR
A THOROUGH PLAN REVIEW**

PRELIMINARY BUILDING REVIEW - one set of the following:

Architectural/engineering design development drawings indicating size of the building, Use Group, and Type of Construction. Drawings to include building plans and sections with means of egress, fire separation assembly locations and fire protection systems proposed

Soil boring and geotechnical recommendations report

Foundation structural calculations

BUILDING REVIEW - one set of the following:

Complete architectural/structural plans

Site plan, including distance to lot lines

Soil boring and geotechnical recommendations report, including the description and bearing value

Structural calculations or other substantiation of structural performance

General specifications

Fire-resistance rated assembly specifications

COMPLETE REVIEW (Building, Mechanical, Plumbing and Electrical) - two sets of the following:

The documentation needed for a Building Review

Complete Mechanical plans and specifications

Complete Plumbing plans and specifications

Complete Electrical plans and specifications

SPRINKLER REVIEW - one set of the following:

Complete Sprinkler plans and calculations, including design calculations, current flow test and material/equipment specifications

ACCESSIBILITY REVIEW - one set of the following unless requested with a review for another discipline, then two sets are required:

Complete architectural/structural plans

General Specifications

ENERGY REVIEW - an additional set of the following documents in addition to any documents required for disciplines listed above

Complete architectural plans, site plan and general specifications

Design conditions (interior and exterior) consistent with local climate

Envelope design method, including supporting calculations and documentation

Complete mechanical plans, specifications and equipment schedules

Complete plumbing plans and specifications

Complete electrical plans and specifications

Interior lighting design method, including supporting calculations and documentation

Lighting fixture and control schedules (building interiors and exteriors)

NOTE: Construction documents should be signed, sealed and dated by the registered design professional in accordance with the professional registration laws of the state in which the project is to be constructed.

INTERNATIONAL CODE COUNCIL PLAN REVIEW SERVICES GENERAL REQUIREMENTS

Cover Letter

A letter (or ICC transmittal form) authorizing ICC to perform the Plan Review is required. ICC performs plan reviews for the ICC *International Code* series (Building, Mechanical, Plumbing and Energy Conservation), the legacy codes (BOCA, ICBO and SBCCI) as well as Electrical, Sprinkler and Accessibility reviews based on the applicable referenced standards. Be sure to indicate the applicable code series, discipline and edition year to be reviewed. Also, local amendments which modify the applicable code requirements (if any), should be submitted with a directive for ICC to incorporate the amendments in the Plan Review.

Preliminary Building Review

For fast track projects and others such as permit application requests for a foundation permit where a complete set of building plans and specifications are not available, you may want to consider an ICC Preliminary Building Review. This is a two-step Plan Review with the first step consisting of a review of code parameters such as minimum type of construction, preliminary means of egress, fireresistance construction requirements, foundation design, and fire protection system requirements. Once the design drawings and specifications are completed, the entire package can then be re-submitted for a comprehensive Final Building Plan Review. The fee for this service is assessed at 50 percent of the Building Plan Review for the first submittal with the remaining 50 percent assessed at the Final Building Plan Review.

Plans and Specifications

The Plan Review will reflect the extent and completeness of the submitted documents. For a listing (by discipline) of the plans, specifications, and engineering details which should be submitted, [click here](#).

If the Plan Review request is for a single discipline, please provide one set of the necessary documentation. However, in an effort to facilitate the Plan Review process, please submit two complete sets of materials when requesting multiple disciplines in addition to a Building Review. The construction documents along with a letter or the ICC transmittal form should be sent to one of the [ICC District Offices](#).

Completed Plan Review

Upon completion, you will be sent a comprehensive ICC Plan Review. This review will include a copy of the ICC Plan Review Record which identifies the code sections evaluated and a report identifying the deficiencies found in the review. In all cases, you are encouraged to review the completed Plan Review and call us directly if you have any questions concerning the review. Our invoice for the Plan Review fee will follow shortly after the completed review is sent to you.

**INTERNATIONAL CODE COUNCIL
PLAN REVIEW SERVICES
BUILDING PLAN REVIEW REQUIREMENTS**

Building Plan Reviews are based on the specified edition of the International Building Code or one of the legacy building codes. In order to perform a thorough Building Plan Review, the following specifications, drawings and details should be submitted:

1. Complete signed and sealed (as required by applicable laws) architectural plans, structural plans and material specifications of all work.
2. A site plan including the following information:
 - a. Size and location of all new construction and all existing structures on the site.
 - b. Distances from lot lines.
 - c. Established street grades and proposed finish grades.
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. Proposed type of construction of the building.
 - c. Fully dimensioned drawings to determine areas and building height.
 - d. Adequate details and dimensions to evaluate means of egress, including occupant loads for each floor, exit arrangement and sizes, corridors, doors, stairs, etc.
 - e. Exit signs/means of egress lighting, including power supply.
 - f. Accessibility scoping provisions.
 - g. Description and details of proposed special occupancies such as a covered mall, high-rise, mezzanine, atrium, public garage, etc.
 - h. Adequate details to evaluate fireresistive construction requirements, including data substantiating required ratings.
 - i. Details of plastic, insulation, and safety glazing installation.
 - j. Details of required fire protection systems.
4. Structural plans, specifications, and engineering details to include:
 - a. Soils report indicating the soil type and recommended allowable bearing pressure and foundation type.
 - b. Signed and sealed structural design calculations which support the member sizes on the drawings.
 - c. Local design load criteria, including: frost depth; live loads; snow loads; wind loads; earthquake design data; other special loads.
 - d. Details of foundations and superstructure.
 - e. Provisions for required special inspections.
 - f. Applicable construction standards and material specifications (i.e., masonry, concrete, wood, steel, etc.).

**INTERNATIONAL CODE COUNCIL
PLAN REVIEW SERVICES
MECHANICAL PLAN REVIEW REQUIREMENTS**

Mechanical Plan Reviews are based on the specified edition of the International Mechanical Code or legacy mechanical codes. In order to perform a thorough Mechanical 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 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.
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).

**INTERNATIONAL CODE COUNCIL
PLAN REVIEW SERVICES
PLUMBING PLAN REVIEW REQUIREMENTS**

Plumbing Plan Reviews are based on the specified edition of the ICC International Plumbing Code or legacy plumbing codes. 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 preventers, the type of backflow preventers 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.

**INTERNATIONAL CODE COUNCIL
PLAN REVIEW SERVICES
ELECTRICAL PLAN REVIEW REQUIREMENTS**

Electrical Plan Reviews are based on the specified edition of the National Electrical Code as referenced by the building code. In order to perform a thorough Electrical 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 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. Panelboard 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. Overcurrent protection.
 - k. Switchboards.
 - l. Grounding.
 - m. Transformers.
 - n. Panelboards.
 - o. Motor control centers.
 - p. Lighting fixtures.

**INTERNATIONAL CODE COUNCIL
PLAN REVIEW SERVICES
SPRINKLER PLAN REVIEW REQUIREMENTS**

Sprinkler Plan Reviews are based on the specified edition of the applicable NFPA 13 standard as referenced by the building code. In order to perform a thorough Sprinkler Plan Review, the following items should be submitted:

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, 13D, 13R) as referenced by the building code.
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 that they are installed in accordance with their listing.

**INTERNATIONAL CODE COUNCIL
PLAN REVIEW SERVICES
ACCESSIBILITY PLAN REVIEW REQUIREMENTS**

Accessibility Plan Reviews are based on the specified edition of the ICC/ANSI A117.1 standard as referenced by the building code. In order to perform a thorough Accessibility Plan Review, the following specifications, drawings and details should be submitted.

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.
 - c. Adequate details and dimensions to evaluate accessible means of egress, including occupant loads for each floor, exit arrangement and sizes, corridors, doors, stairs, areas of refuge, etc.
 - d. 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.
 - e. Accessibility provisions including but not limited to access to services, seating, listening systems, accessible fixtures, elevators, work surfaces, etc.
 - f. Accessible plumbing facilities and details.
 - g. Tactile signage provided.
 - h. Details of required fire protection systems.

Note: The ICC Accessibility Review will cover the scoping requirements in Chapter 11 and other accessibility related requirements mainstreamed throughout the applicable building code. Technical requirements covered will be based on the applicable edition of ICC/ANSI A117.1. Accessible and Usable Buildings and Facilities. Any local, state or federal accessibility provisions, laws or regulations are beyond the scope of this review.

INTERNATIONAL CODE COUNCIL ENERGY PLAN REVIEW REQUIREMENTS

Commercial Energy Plan Reviews are based on Chapter 7 of the IECC or the referenced edition of ASHRAE/IES 90.1-1989, *Energy Code for Commercial and High-Rise Residential Buildings* as applicable. In order to perform a thorough Energy Plan Review, the following specifications, drawings and details should be submitted:

ENVELOPE

1. Architectural plans and specifications to include:
 - a. Description of uses and the proposed use group(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, weatherstripping and other means of sealing joints, cracks, holes and penetrations in the building envelope.
 - f. ENVSTD output (where applicable).^a
2. Design conditions (interior and exterior) consistent with local climate.

ELECTRICAL POWER & LIGHTING^b

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.^a
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.^a

MECHANICAL SYSTEMS & 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 for humidity control (where applicable) and the corresponding testing of system controls.^a
 - 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.^a
2. Economizers (air or water) including provisions for integrated control.^a
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).

^a Commercial buildings and residential buildings greater than three stories in height only.

^b Multifamily residential buildings three stories or less in height; the non-dwelling-unit portions only.

