KANSAS CITY MISSOURI

kcmo.gov/planning

CITY PLANNING & DEVELOPMENT

Plans Review Submittal Requirements – One and Two-Family Dwellings
Information Bulletin No. 100

Purpose:

The purpose of this document is to advise applicants of the information needed for city staff to properly evaluate a permit application for your residential project. It is the goal to evaluate your project for code compliance and to clarify discrepancies in the plan review rather than transferring problems to the field, resulting in time delays at critical times in the project and unnecessary, costly reconstruction.

Submissions:

All applications shall be made online via our online system CompassKC, for guidance and tutorials about CompassKC please review our help guides at www.kcmo.gov/compasskc.

Submittal Review:

Upon submission of a complete application, the turn around goal for plans review is seven (7) business days for the first and any successive submissions.

When is Plan Review Required?

Plan reviews are required for work on one- and two-family residences where the work is in accordance with the provisions of the 2018 International Residential Code and 2021 International Energy Conservation Code, with the following exceptions:

- Construction, removal, or relocation of non-load bearing walls.
- Installation of roof sheathing and lightweight roof coverings.
- Installation of doors and windows not exceeding 4 feet in width in load bearing walls.
- Construction of new closets and bathrooms which do not include construction, removal, or relocation of a load bearing wall.
- Basement finishes which do not include structural modifications – see *Information Bulletin IB132*.
- Repair in-kind including minor structural repairs such as replacement of a few joists/studs/rafters.
- Electrical services less than 400 amps and not involving a generator – see *Information Bulletin IB160*.*
- Replacement of existing private sewage disposal septic tank – see *Information Bulletin IB105*.*
- Uncovered, conventional light-framed constructed, open porches and decks (site plan/survey required for permit application – see checklist, *Section B*)
- Residential swimming pools – *see Information Bulletin IB119*.

*Do not submit mechanical/electrical/plumbing plans unless these exceptions are met.

When plans are not required, the applicant shall submit a written scope of work that describes in detail the work to be performed for permit – see *Building Permit Exempt Work*.

Plans, engineering calculations, diagrams and other data shall comply with the *2018 International Residential Code and 2021 International Energy Conservation Code*, as further modified by the Kansas City Building and Rehabilitation Code, Code of Ordinances Chapter 18 (see online at www.kcmo.gov/planning).

Required Minor Subdivisions for Lot Splits or Re-platting

Building plans may be submitted for review to initiate the review process otherwise but permits cannot be issued until platting and/or Minor Subdivision requirements have been met. Please make certain that these processes have been completed before making application for a permit.

Master Plans**

If there is a house type that an applicant would like to build repeatedly, an applicant will not be required to resubmit building plans with each permit application. The applicant will be required to submit the survey or site plan for each lot on which the master plan is to be built. Approved master plans will only have to be revised and resubmitted when a new code edition is adopted which may alter code requirements, or when there is a revision to the house plans. Master plans may include options for details such as bay windows, 3rd car garage, etc. – provided that the option does not require substantial changes to the framing of the primary structure or load paths, in which case a separate master plan would be required.

Master Plans shall have the phrase "Master Plan" on all pages (preferably in the title block). Please assign the master plan a name or number for ease of reference. Once the master plan is approved, future building permits may be obtained by submitting a survey or site plan and the Master Plan number with the permit application (when applying via CompassKC, submit a permit application as a 'sub-record' under of the CompassKC 'plan case' for the master plan).

Certified Plans**

As a customer service initiative, plans certified by a Missouri-registered professional engineer and/or architect as meeting all requirements of applicable Kansas City building codes and ordinances will be accepted. See *Information Bulletin IB103* for further details, and the required certification form. The certification form shall be completed, sealed, and submitted with the initial plan submittal when using this option. The turnaround goal for certified plans is five (5) business days.

**Master Plans and Certified Plans are not allowed if any part of a structure, including projections, is within five feet of a property line.

Minimum Plan Submittal Requirements

A Minimum Plan Submittal for a new structure, addition, and renovation shall include, but is not limited to:

A. General Requirements

Yes No N/A

☐ ☐ ☐ Submitted in electronic format as a single pdf document and uploaded to the plan case via CompassKC.

☐ ☐ ☐ The survey or site plan submitted as a separate pdf document from the building plans.

☐ ☐ ☐ Drawn to scale, of sufficient clarity to indicate the nature and extent of work proposed and shown in detail the design will conform to the provisions of applicable codes, ordinances, rules, and regulations.

☐ ☐ ☐ Plan details must note applicable code: 2018 IRC & 2021 IECC.

☐ ☐ ☐ A general description/narrative of the work proposed.

☐ ☐ ☐ Dimensions on all plan views in feet and inches.

☐ ☐ ☐ First page of a plan set with the total number of pages noted, or a table of contents.

☐ ☐ ☐ Total square footage of house, each floor, the garage, decks, and covered decks on the front page. Include finished square footage (new homes), renovation square footage (interior remodel), and/or additional finished square footage (basement finish/addition) on the plan.

☐ ☐ ☐ An architect's or engineer's seal is not required on plans, except where engineered features are incorporated into the design (an engineered feature is one that does not conform to the prescriptive provisions of the 2018 International Residential Code, e.g., structural slab, retaining wall, etc.). The sealed plan sheets representing the engineered features shall be accompanied by sealed calculations verifying the design. The calculations shall be sealed in accordance with Missouri State Statutes.

☐ ☐ ☐ Calculations provided in a separate pdf document from the plans.

B. Survey or Site Plan (also known as "Plot Plan")

Beginning January 1, 2024, a staked survey is required: All new structures, additions (including vertical), and changes (expansion or reduction) to the exterior envelope of a structure shall be accompanied by a sealed land survey showing the existing and new construction per requirements defined in this document.

Exceptions – the following will require a site plan but not a sealed survey:

1. One- and Two-Family Residential open deck greater than five feet from a property line, as determined by KCMO GIS or other vetted documentation.
2. One- and Two-Family Residential dwellings and their accessory structures greater than ten feet from a property line, as determined by KCMO GIS or other vetted documentation.

The survey or site plan shall be a scaled drawing of the property and is to include the following:

Yes No N/A

☐ ☐ ☐ Correct street address.

☐ ☐ ☐ North arrow and scale.

☐ ☐ ☐ Legal description of the property, including applicable minor subdivision approval number for lots created without a subdivision plat.

☐ ☐ ☐ Location and dimensions of all property lines.

☐ ☐ ☐ Platted building setback lines and easements. These may be found either on a mortgage survey or at the County Recorder's Office. CPD Permit Staff may also have records in some cases.

☐ ☐ ☐ Site drainage for stormwater control, including all drainage easements and swales required by the engineered development plan, and general information regarding drainage flow direction (such as drainage arrows or spot elevations).

☐ ☐ ☐ Dimensions of buildings and distances to other buildings on the same property, other improvements, and property lines.

☐ ☐ ☐ All building projections beyond the foundation walls (roof soffits, bay windows, cantilevered floor areas, balconies, etc.). Include following statement on survey/site plan: "Plan includes all building projections beyond the foundation walls."

☐ ☐ ☐ Location of the public rights-of-way adjacent to the property. Label all streets with full street name.

☐ ☐ ☐ Location of off-street parking and driveway(s).

☐ ☐ ☐ Material of the parking space(s) and driveway(s) (gravel only where expressly allowed by the Zoning & Development Code Section 88-420).

☐ ☐ ☐ The percentage of the front yard and/or street-side yard covered by impervious materials.

☐ ☐ ☐ Location, width, and length of proposed public sidewalk and drive approach.
Note: The width of the driveway at the property line is a minimum of 7.5' and a maximum of 22'. [For unimproved streets (i.e., no curb, gutter, or storm sewer), a drainage culvert shall be provided under the drive approach in accordance with adopted City Standards. CPD Land Development Division, 5th floor of City Hall, (816) 513-2551, may assist with culvert sizing questions. Approximate elevation contour maps are available on the 'parcel viewer' map available on the City's website www.kcmo.gov.]

☐ ☐ ☐ Information regarding any variance approvals that may have been received through the Board of Zoning Adjustment.

☐ ☐ ☐ Proposed location of sanitary sewer and water service lines.

C. Floodplain. If the regulatory 100-year floodplain per current FEMA maps is located anywhere on the parcel, the site plan shall be sealed by a registered professional architect, engineer, or land surveyor and contain the following floodplain information:

Yes No N/A

☐ ☐ ☐ The location and elevation of the boundary of the 100-year Regulatory Floodplain.

☐ ☐ ☐ The location and elevation of the boundary of the "one-foot freeboard."

☐ ☐ ☐ The elevation of the lowest floor (including basement) in the structure.

☐ ☐ ☐ The elevation of lowest grade adjacent to the structure.

☐ ☐ ☐ All elevations shall be based on the North American Vertical Datum 1988 - NAVD 1988 (as provided by most current FEMA maps).

Information regarding regulatory floodplain maps and GIS mapping of the regulatory floodplain may be found on the City Planning & Development department's website.

If any development or construction occurs within the area of the current FEMA 100-year floodplain plus one-foot freeboard, then a *Floodplain Development Permit* is required. See *Information Bulletin IB120*, Procedure for Obtaining A Floodplain Development Permit, for application information.

D. Energy Conservation. Please see *Information Bulletin IB171-RE* for required information to be included on plans. Absence of Energy Code Analysis sheet(s) (as required by IB171) will result in a voided plan.
Note: please be aware that using foam insulation requires compliance with R316 (see surface burning characteristics, thermal barrier, and specific requirements).
Foam insulation may not be used inside a fire-resistance rated assembly unless it is part of the listing.

E. Foundation Plan. This is a scaled drawing of the proposed building foundation and shall include the following:

Yes	No	N/A	
☐	☐	☐	A plan view of the building foundation system, including footings for covered decks and porches.
☐	☐	☐	Footing dimensions and footing reinforcement.
☐	☐	☐	Foundation wall height, thickness, and reinforcement.
☐	☐	☐	Garage Slab and Foundation Wall Details in accordance with *Information Bulletin IB114*.
☐	☐	☐	Basement egress openings details including height of sill above finished floor per IRC R310.1.
☐	☐	☐	Footings meet or exceed a minimum frost depth of 36 inches. The soil load- bearing capacity shall be presumed to be 2,000 psf or less.
☐	☐	☐	Compressive strength of concrete (f'c) to be used (2,500 – 3,500 psi minimum depending on location) and air-entrainment.
☐	☐	☐	Basement slab thickness and slab reinforcement.
☐	☐	☐	Type of vapor barrier to be used under slabs below grade.
☐	☐	☐	Foundation drainage in accordance with Section R405, Foundation Drainage.
☐	☐	☐	Size, spacing, and embedment depth of Anchor bolts per code.
☐	☐	☐	Foundation walls enclosing below grade space shall be damp-proofed (or waterproofed) per IRC R406.1.
☐	☐	☐	Details and design calculations as a retaining wall for foundation walls that do not have lateral support at top (i.e., connection to the floor structure) and supporting more than 48" of unbalanced fill per IRC R404.1.1 #2.

F. Floor Plan. These are scaled drawings of the proposed building Floor(s) and shall include the following:

Yes	No	N/A	
☐	☐	☐	A plan view of each floor level of the building, including the basements, attics, and/or mezzanines.
☐	☐	☐	Existing and proposed floor plans for renovations/additions.

☐ ☐ ☐ Dimensions for each room and architectural features, e.g., hallways, stairways, etc.

☐ ☐ ☐ Label the use of each room/space (including basements, attics, and/or mezzanines).

☐ ☐ ☐ Identify furnace and water heater location(s) (G2406).

☐ ☐ ☐ Identify interior load bearing walls (R602).

☐ ☐ ☐ Show size and spacing of proposed floor and ceiling framing members, show entire member from bearing point to bearing point; provide grade and species of lumber or indicate minimum allowable extreme fiber stress (Fb) and modulus of elasticity (E) to be used for framing members. Provide dimensions and/or specifications for other types of structural elements used, e.g., steel framing, microlams, glulam, etc. Framing information may be shown on floor plans or on separate framing plans.

☐ ☐ ☐ If pre-engineered wood trusses are used in floor framing, provide individual truss design drawings which identify all information per IRC 502.11.4, sealed by an Engineer registered in the state of Missouri. A truss layout plan shall be provided (if the house plan is engineered, the truss layout plan shall include the 'acceptance/shop stamp' showing approval by the building engineer-of-record).

☐ ☐ ☐ Provide I-joist design information, layout plan, and installation instructions by the manufacturer. (If the house plan is engineered, the I-joist layout plan shall include the 'acceptance/shop stamp' showing approval by the building engineer-of-record.)

☐ ☐ ☐ Provide details of connections for ledgers (floor and ceiling) per requirements of IRC Tables 507.9.1.3(1), 507. 9.1.3(2), Figures 507. 9.1.3(1) and 507. 9.1.3(2).

☐ ☐ ☐ Show that all cantilevers will have at least a 3:1 back span and how this element supports all imposed loads.

☐ ☐ ☐ A minimum of two joists under each bearing wall or more where necessary to support the imposed loads.

G. Ceiling Plan. These are scaped drawings of the proposed building ceiling(s) and shall include the following:

Yes No N/A

☐ ☐ ☐ Size and spacing of proposed ceiling framing members.

☐ ☐ ☐ Dimensions to bearing points.

☐ ☐ ☐ Entire member from bearing point to bearing point.

☐ ☐ ☐ Grade and species of lumber, or indicate minimum F_b and E, to be used for framing members.

☐ ☐ ☐ Dimensions and/or specifications for other types of structural elements used, e.g., microlams, glulam, etc.

H. Roof Plan. These are scaled drawings of the proposed roof(s), including covered decks and porches, and shall include the following:

Yes No N/A

☐ ☐ ☐ A note the roof is designed for 20psf roof snow load (minimum).

☐ ☐ ☐ Type of roof covering to be used.

☐ ☐ ☐ Size and spacing of proposed roof framing members.

☐ ☐ ☐ Dimensions to bearing points (including hips, valleys, and structural roof support members).

☐ ☐ ☐ Entire member from bearing point to bearing point.

☐ ☐ ☐ Grade and species of lumber, or indicate minimum F_b and E, to be used for framing members.

☐ ☐ ☐ Dimensions and/or specifications for other types of structural elements used, e.g., steel framing, microlams, glulam, etc.

☐ ☐ ☐ If pre-engineered wood trusses are used in roof framing, provide individual truss design drawings which identify all information per IRC 802.10.1, sealed by an Engineer registered in the state of Missouri. A truss layout plan shall be provided (if the house plan is engineered, the truss layout plan shall include the 'acceptance/shop stamp' showing approval by the building engineer-of-record).

☐ ☐ ☐ Show required ceiling joist or rafter tie connection between rafters, or a ridge beam. Show required collar ties or ridge straps. Note compliance with sections R802, R802.4, R802.5, R802.5.2, and R802.11. (Ceiling joists can also serve as rafter ties.)

I. **Elevations.** These are scaled drawings of the proposed builds as viewed from each side and shall include the following:

Yes No N/A

☐ ☐ ☐ Size and location of doors, windows, and exterior wall openings. Note on plans that garage doors meet ANSI/DASMA 108 for 115 MPH requirements.

☐ ☐ ☐ Exterior wall water-resistive barrier in wall section or on plan per IRC R703.2.

☐ ☐ ☐ Exterior sheathing material and size (R703).

☐ ☐ ☐ Continuous studs between floor and roof/ceiling diaphragm per IRC R602.3 or provide design from Design Professional.

☐ ☐ ☐ On each elevation view, height to ridge from grade, and height of each floor level including basement. These values must be shown to determine building height.

☐ ☐ ☐ Basement wall elevations shown for the site condition with the maximum wall exposure addressed in the design plans.

J. **Structural Details.**

Yes No N/A

☐ ☐ ☐ Size and spacing of wall framing members.

☐ ☐ ☐ Grade and species of lumber, or indicate minimum F_b and E, to be used for framing members.

☐ ☐ ☐ Dimensions and/or specifications for other types of structural elements used. (Framing information may be shown on elevations, floor plans, or on separate framing plans.)
Note: in bearing walls, studs which are not more than ten feet in length shall be spaced not more than is specified in Table R602.3(5) for the corresponding stud size. Those studs greater than ten feet in length shall be designed by a professional engineer or registered architect if not meeting requirements of Table R602.3(6).

☐ ☐ ☐ Location, size, and material of all beams, girders, and vertical supports.

☐ ☐ ☐ Transfer of roof and floor loads (including point loads) through the various structural elements in the building to a foundation capable of supporting these loads.

☐ ☐ ☐ Demonstrate the structural adequacy in such situations as offset bearing walls, cantilevered beams, and vaulted ceilings.

☐ ☐ ☐ Thickness and reinforcement for any raised concrete slab or any concrete slab on fill material that exceeds 24 inches of compacted sand or gravel or 8 inches of compacted soil. This may entail a design which includes a combination of grade beams, piers, reinforced slab, and pier footings designed to sustain live loads of 30psf (sleeping areas), 40psf (living areas), or 50psf (garages; also 2000 lb. concentrated load). Designs for these structural slabs shall be prepared and sealed by a professional engineer or registered architect. *Information Bulletin IB114* contains standard drawings which may be used, where applicable, in plans submittal in lieu of providing an engineered design.

☐ ☐ ☐ Size of all beams, headers, and columns used. Steel columns will be a minimum of schedule 40.

☐ ☐ ☐ Connections and specific connector for all major structural components on plans.

☐ ☐ ☐ For solar panel systems, show attachments and structural members used for attachment (e.g., rafters) can support and resist all gravity and wind uplift load due to the panels.

☐ ☐ ☐ Braced wall lines, note methods per IRC bracing naming convention, the location of the braced wall panels, and nailing pattern per method being used, and detail the type of wind bracing used. Show required blocking above/below braced wall lines. Lateral bracing methods are not required to be shown for open decks, including covered decks with no enclosing walls other than insect screening. Lateral bracing methods shall be shown for all enclosed decks or sunrooms. This bracing must be on a continuous foundation unless another engineered solution is presented. In lieu of the prescriptive requirements of the 2018 International Residential Code, CPD will accept the use of the APA – The Engineered Wood Association "Whole House Wall Bracing" (www.apawood.org).

☐ ☐ ☐ Analyses and designs using computer software shall be permitted, provided design assumptions, applicable codes, user input, and computer-generated output, most recent update and summary are submitted. Model analysis shall be permitted to supplement calculations. All information requested in this section, at a minimum, shall be provided. If formulas are not available, sample calculations verifying the software output shall be provided. National software that has been thoroughly vetted by an approved agency may be allowed without formulas (such a RISA), but a summary is still required. In-house written programs will require formulas. This includes all excel type spreadsheets.

☐ ☐ ☐ Provide design calculations for walls over 10' in height (R602.3(5)).

K. Additional Details and Notes.

Yes No N/A

☐ ☐ ☐ Note where safety glazing is installed; size, location, and type of windows used to satisfy bedroom, basement, and attics egress requirements.

☐ ☐ ☐ Basement egress window wells comply with IRC R310.2.

☐ ☐ ☐ Window fall protection per section R312.2.

☐ ☐ ☐ Rise and run, headroom clearance, and width of stairs; provide details for special stairs (e.g., spiral, winder, and circular.

☐ ☐ ☐ Fire separation wall between two-family (duplex) units and/or townhouse units details. **Complete fire resistance rated assembly design details shall be provided on the plans**.

☐ ☐ ☐ Garage separation details between attached garage and living space in the dwelling. Self-closing devices are required for garage to dwelling separation doors. (No openings are allowed between bedrooms and garage areas).

☐ ☐ ☐ Where construction may occur within five (5) feet of a property line, detail fire-rated construction for exterior walls, eaves, or other projections, or openings (as applicable). [KCBRC/IRC R302] **Complete fire resistance rated assembly design details to be provided on the plan**.

☐ ☐ ☐ Note conformance to the provisions of KCBRC/IRC R329 regarding building security.

☐ ☐ ☐ Note an accessible connection point will be provided to a concrete-encased electrode (e.g., 20' footing rebar) for the electrical service grounding electrode conductor ('ufer ground').

☐ ☐ ☐ Note carbon monoxide alarms will be provided in accordance with IRC Section R315 and smoke alarms per IRC Section R314.

Resubmittals

When resubmitting in response to plan review comments, address each discrepancy by the discrepancy item number. Resubmittals to plans review comments shall replace the entire pdf file. When submitting revisions in response to plan review comments or "changes to previously approved plans", clearly identify all changes on the plan documents (e.g., 'clouding', etc.).

Note: Per 18-20(c)(2) of the Municipal Code, a resubmittal fee may be assessed for incomplete resubmittals, when previously identified deficiencies remain uncorrected on subsequent submittals, or when items certified on the certified checklist are omitted.

Once Plans are Approved

After Review approval, an electronic copy of the "City Stamped" plan will be available to the applicant as an "Attachment" on CompassKC. The applicant can now obtain a permit for construction.

Changes to Previously Approved Plans

When submitting changes to plans that have already been approved (and permitted), only the sheets that have changes shall be submitted as a set of plans (1 PDF). There shall be a cover letter that details the changes to previously approved plans. The Plans Shall have all changes clearly identified (e.g., 'clouding', etc.)

Note: For a "Master Plan", when there is a change to the overall Master Plan set of plans, submit to the plan case; else submit a "one time change" to a specific house to the permit case (not the plan case).

Deferrals

Any design packages intended to be deferred must be identified as a deferral in the initial plans review stage. When submitting the deferred packages, they shall be submitted for review with a cover letter identifying that the submission is a submission of a deferred design package.

Note: Any items needed to begin work and structural packages for the main structure such as, but not limited to truss, I-joist, metal building, precast, etc., packages may not be deferred.

Note: For a "Master Plan," when there is a deferral to the overall Master Plan set of plans, submit to the plan case; else submit a site-specific deferral to the associated permit case (not the plan case).

Inspections

A complete set of City Stamped building plans (or master plan) and the City Stamped survey or site plan are required to be on the job site for all inspections with the following exceptions:

a) Backfill
b) Slab where backfill material does not exceed 24 inches of compacted sand or gravel or eight inches of compacted earth
c) Plumbing groundwork

Failure to provide the City Stamped plans on the job site for the inspector's use may result in a failed inspection and assessment of reinspection fees.

See *Information Bulletin IB104* – Building Inspections for One and Two-Family Dwellings.

Note: all outside or 3rd party inspections/reports must be received at least 5 business days prior to any Final Inspection or Final Inspection will not be scheduled.

Questions?

For any questions on this *Information Bulletin* or Plans Review process, please contact our Code Question line at codequestions@kcmo.org or 816-513-1511.