



General Requirements for Residential Building Plans and Construction Documents

Applicable Building Codes:

2023 NEC

2021 IPC

2018 IRC

2018 EBC

2018 IPMC

2018 IFC

Submitted building plans for permit application should consist of the following information:

General Information:

- Project Site Address
- Owner's Name and contact information
- Contractor's name and contact information
- Plans can be submitted on minimum 8 1/2x11 or maximum 24x36 inch paper or can be delivered electronic copy to treynolds@ci.alamosa.co.us.

Site Plan page(s):

- Property lines, including any easements and rights of way
- Building footprints and square footage
- Setbacks of proposed and existing building from property lines
- Location/ distances of other existing building relative to new proposed building
- Driveways and dimensions
- Surrounding streets, sidewalk, curb, gutter
- Fence locations and heights

Windows:

- H- Factor
- Solar heat gain coefficient
- Window flashing details

Floor Plan page(s):

- Additions/Remodels (if applicable): If permit is for residential addition or remodel, then plan documents shall include names of existing rooms affected by remodel. Please included "Before and After" floor plan layout of existing parts of building (i.e. walls or windows to be removed and/or relocated).
- Wall layout with dimensions.
- Door and window locations & sizes.
- Type and locations of any required fire resistance rated construction used in the project. If the proposed project is not using prescriptive designs as allowed per IBC chapter 7, and identified as such, then applicant and/or designer shall identify the assemblies to be used from an approved testing agency, used to achieve the fire resistance rating of the proposed construction (UL, ETL, FM, GA, WP, WH, etc.) including joints in the assemblies.
- See also structural plan requirements for further details.

Floor Framing Plan page(s):

- Floor Joist layout (if applicable) to include Rim board, joist size, headers, girders, piers, columns, cantilevers, blocking as applicable.
- Pre-engineered Wood I-joist or plate truss design requires design professional documents.
- Fastener schedule.
- See also structural plan requirements for further details.

Roof Framing page:

- Roof plan showing roof surface and slope. Plan view.
- Pre-engineered Truss design (if applicable) shall accompany all sets of submitted construction documents for permit application. A engineered wet stamped final copy (as per section R802.10 IRC) will be required before framing inspection can be finalized.

Elevation drawing:

- Elevation of exterior wall and roof surfaces to include views from East, West, North, and South.

Electrical drawing:

- Shall include general lighting and outlet locations. Drawings may be diagrammatic only in nature for most projects. Professional design may be required for larger projects with complex electrical requirements.

Mechanical drawing:

- Mechanical documents are required for HVAC installations. A drawing may be diagrammatic only in nature for most projects. Manufacturer's installation guides and professional design may be required for larger projects with complex mechanical requirements.
- If applicable or upon request, provide Manual J, D, and S.

Energy Details:

- Residents Energy Certificate (RES Check) may accompany new construction permit applications.
 - Include details or descriptions of insulation R values as required.
 - Insulation materials and their R-values
 - Fenestration U-factors and SHGC
 - Area-weighted U-factors and SHGC calculations (if applicable)
 - Air sealing details
 - Building thermal envelope depiction
 - Flashing details as required by the IRC 703.4 and IBC 1404.4
 - Window flashing
 - Mechanical and service water heating system and equipment types, sized and efficiencies
 - Equipment and system controls
 - Duct sealing, duct and pipe insulation, and location
 - Mechanical system design criteria (Begins in Phase 2- July 1, 2024)
 - Provide an ACCA Manual J or other approved calculations for heating and/or cooling load (Begins in Phase 2- July 1, 2024)
 - Provide an ACCA Manual S for equipment sizing (Begins in Phase 2- July 1, 2024)
 - Provide an ACCA Manual D for duct design (Begins in Phase 2- July 1, 2024)
 - Documentation for mechanical ventilation, type of ventilation, CFM, and efficiency. (Begins in Phase 2- July 1, 2024)
 - Spray Foam Insulation (if applicable): *IF SPRAY FOAM IS TO BE USED OR SPRAY FOAM IS LATER DECIDED TO BE USED AFTER PERMIT APPROVAL AND START OF CONSTRUCTION, THEN APPLICANT/CONTRACTOR shall provide a Certificate of Installation from the Insulation installer at time of Insulation inspection.*
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Plumbing Plan:

- Plumbing plans are not required. However, it can be beneficial to layout plumbing diagram with framing plans for location requirements.

Structural Plan:

- Metal Building Manufacturers erection drawings (where applicable) **Note:** All Metal *pre-engineered building structures require design/signed/sealed/ by registered engineer erection drawing and matching foundation drawing.*
- All raised building foundation systems greater than 36 inches or pile supported foundations shall be designed/signed/sealed by registered architect or engineer. Foundation drawing shall include the following:
 - Foundation types, locations, sizes, depths, shapes, thickness, and materials (piers, piles, footings, walls, slabs, etc.)
 - Specifications for the type: mix ratio, and minimum compressive strength of concrete (where applicable).
 - Reinforcing details, specified strength or grade, placement and sizes;
 - Imbedded anchoring locations, size and depth;
 - Slab layout for recesses, void, and other irregularities;
- Framing/Building/Wall section plans (as applicable);
 - Floor and roof framing plans (as applicable);
 - Structural members - Materials used, sizes, and spacing;
 - Main Wind Force Resisting System- Sufficient detail provided to demonstrate that the structure has been designed to withstand the indicated design loads;
 - Locate lateral bracing, ties, clips, sheathing or other elements and materials used to reinforce or otherwise provide stability to the structure and provide continuous path for loads from roof to grade.
 - Anchorage details; Indicate types, locations, sizes and spacing;
 - Design loads must be included within the construction documents in a manner such that the design loads are clear for all parts of the structure.
 - Wall sections of each bearing wall condition, interior and exterior, to indicate a continuous load path through the structure from the roof to the foundation at each condition.
- Light Frame (wood) construction- plans are required to be signed/sealed by an architect or engineer with specific framing and bracing details when roof pitches exceed 12:12 or exterior wall heights exceed 10 feet between floor and ceiling plate heights.

The following items may not always be required to be provided within the plan drawings but will reduce plan review turnover time and reduce problems during field inspection if indicated on the drawings and made aware to owner/contractor:

- Windows in rooms used for sleeping indicated to meet minimum emergency escape and rescue opening sizes per IRC 310.
- Interior Finishes to meet flame spread/ Index requirements.
- Gas/ Solid Fuel burning fireplace or heater manufacturer's installation guides and requirements (clearances to combustibles).
- Plumbing diagrams