



RESIDENTIAL BUILDING PERMIT PACKET

Submittal Checklist
Building Permit Application
Mechanical Permit Application
Water Tap Application
Permit Routing Sheet
Energy Information
Water Meter Information

October 2020



CITY OF CAÑON CITY

Building Department

P.O. Box 1460 • 128 Main Street
Cañon City, CO 81215-1460
(719) 276-5253 • Fax: (719) 269-9017

BUILDING PERMIT APPLICATION SUBMITTAL CHECKLIST

APPLICATION TYPE: RESIDENTIAL BUILDING

SUBMITTAL CHECKLIST *(Incomplete applications will not be accepted)*

The information listed here is to help you prepare a complete application for building in the City of Cañon City. These are the minimum requirements for the review of a building permit application. In some cases, more information than is listed here may be needed depending on the project and site specific issues.

If you are in doubt as to what will be needed for your project, please contact the Building Department. We are always happy to help!

REQUIRED FOR ALL APPLICATIONS SUBMITTED FOR RESIDENTIAL HOUSING

- Submittal Checklist.** Include a completed checklist with your application.
- Building Permit Application.** Include a completed and signed Building Permit Application form (*See Attachment: Building Permit Application*).
- Required Routing Sheet Approvals.** It is the responsibility of the permit applicant to secure approvals from the external agencies (fire dept., health dept., etc.) indicated on the Required Approvals Routing Sheet (*See Attachment: Routing Sheet*).
- Copy of Warranty Deed.** Title Commitment or other documentation showing property ownership. This should also include information about easements, etc.
- Improvement Location Certificate or Surveyed Site Plan.** Prepared and stamped by a surveyor licensed in the state of Colorado. Prior to first inspection, property must be pinned by a surveyor licensed in the state of Colorado and setbacks are to be dimensioned and verified by the surveyor in the field.
- Water Tap Application/Proof of Water.** This is to be submitted in the form of a paid receipt from the supplying water purveyor (Cañon City or Park Center Water District). This is to be submitted prior to applying for a building permit. The application for water from Cañon City can be found at www.canoncity.org. (*See also Attachments: Water Tap Application & Meter Pit Placement for New Construction*).
- Proof of Sewer or Septic.** This is to be submitted in the form of a paid receipt from the Fremont Sanitation District. Septic systems are to be reviewed and approved by Fremont County call 719-276-7460 for more information.

- **Site (plot) Plan.** For *residential development*, this includes carports, sheds over 120 square feet and fences. All site plans must be drawn to a legible scale for review and include the following:
 - Site orientation. (North arrow)
 - Legal description and property address.
 - Lot lines and property size in square feet.
 - Adjacent road and street names.
 - Easements, right of ways, building setbacks, water body setbacks, and building envelopes.
 - Proposed and existing utility improvements. (utility poles, transformers, culverts, etc.)
 - Proposed and existing structures.
 - Existing waterways and drainages and related Base Flood Elevations, Floodplain and Floodway delineation if applicable.
 - Drainage Plan – arrows indicating drainage direction and slope.
 - Sidewalk (public) – sidewalk min. width 5 feet. Thickness 6 inches adjacent to mountable curb.
 - Access driveways and their grades, sidewalks, parking, paving and curb cut locations.
 - Location of wells and individual sewage disposal systems.
 - Top of foundation wall elevation related to contours on site plan and adjacent street edge of pavement or top back of curb (Top of Foundation lowest elevation must be at least 1 foot above the highest point of the edge of pavement/top back of curb adjacent to the property).
 - Square footage of all structure footprints and external flatwork (sidewalks, driveways, patios, etc.)

- **Plans Prepared by an Architect or Engineer.** The signed and dated stamp/seal of the architect or engineer responsible for the preparation of the plans shall be applied directly to:
 - 1) each sheet of the reproduced drawings,
 - 2) addenda and revisions,
 - 3) cover, title page, and table of contents of specifications, and
 - 4) title page of engineering reports.

- **Floor Plan** to scale (preferably ¼" to the foot) showing:
 - a. Use of all rooms
 - b. Dimensions and square footage of each room including closets, etc.
 - c. Window and door sizes and locations and type (examples: slider, single hung, etc.)
 - d. Stair locations, state rise and run and number of risers, landing size.
 - e. Smoke/Carbon Monoxide detector locations.
 - f. Locations of fire rated walls. In residential this is the separation between the house and the garage.
 - g. Header sizes for doors, windows and any other openings.

- **Floor Framing Plan** showing:
 - a. Lumber size, grading and species. If plywood web joist are used state if TJI, BCI, LPI or other and which series (provide floor joist layout from manufacture).
 - b. Span from support to support.
 - c. On center spacing (12", 16", 19.2", 24")
 - d. Girder size supporting floor system (if applicable) could be a knee wall.
 - e. Header sizes for any openings (such as stairs to upper level, crawl space access).
 - f. Stair hole framing.

- **Elevation Drawings** showing:
 - a. All four sides (or all exposed elevations)
 - b. Windows and doors
 - c. Exterior wall coverings (Masonite siding, brick stucco, etc.)
 - d. Foundation ventilation opening. State size and free opening area.

- **Roof Framing Plan** showing:
 - a. Lumber size grade and species. If plywood web joist state if TJI, BCI, LPI, or other and which series.
 - b. On center spacing (12", 16", 19.2", 24")
 - c. If manufactured trusses are used, provide engineer's wet stamped details.
 - d. Provide roof plan showing truss layout. Show truss number and location on plan.
 - e. Show all roof bearing locations.
 - f. Show plan view of roof (as if you were looking down from above).

- **Drawings of Structural Details** such as:
 - a. Connections at post and beam, beam to wall, footing and post, ledger and wall.
 - b. Bathroom detail.
 - c. Stairs, guardrail and handrails. This would show stairs in profile.

- **Engineered Foundation.** Required on all new structures and additions except the following that are not in the Special Flood Hazard Area: one story residential detached garages not exceeding 800 square feet of floor area. Foundation plans must be prepared by a qualified registered professional engineer licensed in the State of Colorado. The foundation design must be site specific and include a soils investigation & lab analysis report.

- **Soils Investigation & Lab Analysis Report.** Foundation plans must be prepared by a qualified registered professional engineer licensed in the State of Colorado.

- **Mechanical Permit Application.** Include a completed and signed Mechanical Permit Application form (See also Attachment: Mechanical Permit Application).

- **Mechanical Plan** showing:
 - a. Location of mechanical equipment.
 - b. BTU input and output of all appliances.
 - c. Vent size of all appliances and copy of calculation if a multiple appliance event.
 - d. Combustion air opening sizes, location and calculations.
 - e. Provide ACCA Manual J, S & D (Energy Code).

- **Energy Code.** See Attachment: Energy Conservation Code Design, Submittal, Inspection, and Compliance Requirements.

- **Floodplain Development Permit.** This is required when the subject structure is located within the Special Flood Hazard Area. A permit application must be completed by a registered professional engineer licensed to do work in the state of Colorado. This permit application with all required elements must be submitted to the City Engineer for review and approval. Contact Engineering Department at 719-276-5291 to determine applicability.

- **Stormwater Drainage Easement.** When a development is traversed by a drainage way including, but not limited to, a watercourse, swale, channel, irrigation ditch, or stream, the owner shall execute an easement agreement for stormwater and/or drainage purpose(s) for the benefit of the City. The easement shall conform substantially to the banks of the drainage way with such width as will be necessary to fulfill the purpose(s) of the easement, as determined by the City, and the agreement shall grant the City the right to access adjacent property to perform any necessary acts related to the easement. If necessary, the City may require a survey of the easement and the costs of such survey shall be paid by the applicant. Wherever possible, it is desirable that the drainage be maintained by an open channel with landscaped stabilized banks and adequate width for conveyance for the 1% annual chance historic maximum potential volume of flow. Contact Engineering Department at 719-276-5291 to determine applicability.

- **Drainage, Erosion, Sediment & Control (DESC) Permit.** Contact Engineering Department at 719-276-5291 to determine applicability.

- **Right-of-Way Permit.** This is required for all work and encroachments in the public right-of-way such as sidewalk and driveway construction, culvert installation, landscaping that involves lane closure, dumpster placement, etc. Contact Engineering Department at 719-276-5291 to determine applicability.

- **Access Agreement.** This is required for projects adjacent to designated thoroughfares. Contact Engineering Department at 719-276-5291 to determine applicability.



CITY OF CAÑON CITY

Building Department

P.O. Box 1460 • 128 Main Street
Cañon City, CO 81215-1460
(719) 276-5253 • Fax: (719) 269-9017

BUILDING PERMIT APPLICATION

ALL INFORMATION REQUIRED

OWNER'S NAME: _____ DATE: _____

OWNER'S ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

OWNERS TELEPHONE NUMBER:() _____

JOB SITE ADDRESS: _____

PARCEL NUMBER: (CONTACT FREMONT COUNTY ASSESSORAT 719.276.7310) _____

LEGAL DESCRIPTION: _____

CONTRACTOR'S BUSINESS NAME: _____

CONTRACTOR'S LICENSE # _____ TELEPHONE NUMBER: _____

VALUATION OF WORK (INCLUDE LABOR AND MATERIALS): \$ _____

DETAILED DESCRIPTION OF WORK: _____

PROVIDE THE FOLLOWING INFORMATION IF SUBMITTING A SITE PLAN WITH APPLICATION:

1. LOCATION OF PROPOSED CONSTRUCTION AND EXISTING STRUCTURES.
2. SQUARE FOOTAGE AREA OF EACH BUILDING (INCLUDE SHEDS, CARPORTS, PATIOS, ETC.).
3. SET BACK DIMENSIONS FROM PROPERTY LINE FOR ALL STRUCTURES.
4. LOT DIMENSIONS / LOT SQUARE FOOTAGE.
5. STREETS, ALLEYS, EASEMENTS AND ANY OTHER "RIGHT OF WAY".
6. LOCATION OF WATER, SEWER, GAS AND ANY OTHER UNDERGROUND UTILITIES (IFKNOWN).

OWNER / CONTRACTOR

PRINT NAME

SIGNATURE

FOR OFFICE USE ONLY

ZONE DISTRICT: _____

PERMIT NUMBER: _____

LICENSED: (YES) _____ (NO) _____

URBAN RENEWAL: (YES) _____ (NO) _____

RESIDENTIAL SITE PLAN

Indicate North

I/WE HEREBY CERTIFY THAT THE PROPOSED CONSTRUCTION WILL CONFORM TO THE DIMENSIONS AND USES SHOWN ABOVE AND THAT NO CHANGES WILL BE MADE WITHOUT PRIOR APPROVAL FROM THE CANON CITY BUILDING DEPARTMENT.

PRINT NAME

SIGNATURE OF OWNER/CONTRACTOR

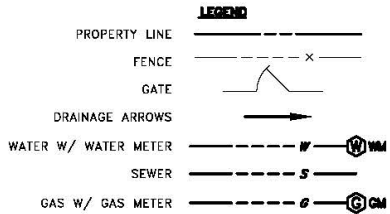
RESIDENTIAL SITE PLAN (EXAMPLE)

ADDRESS: _____

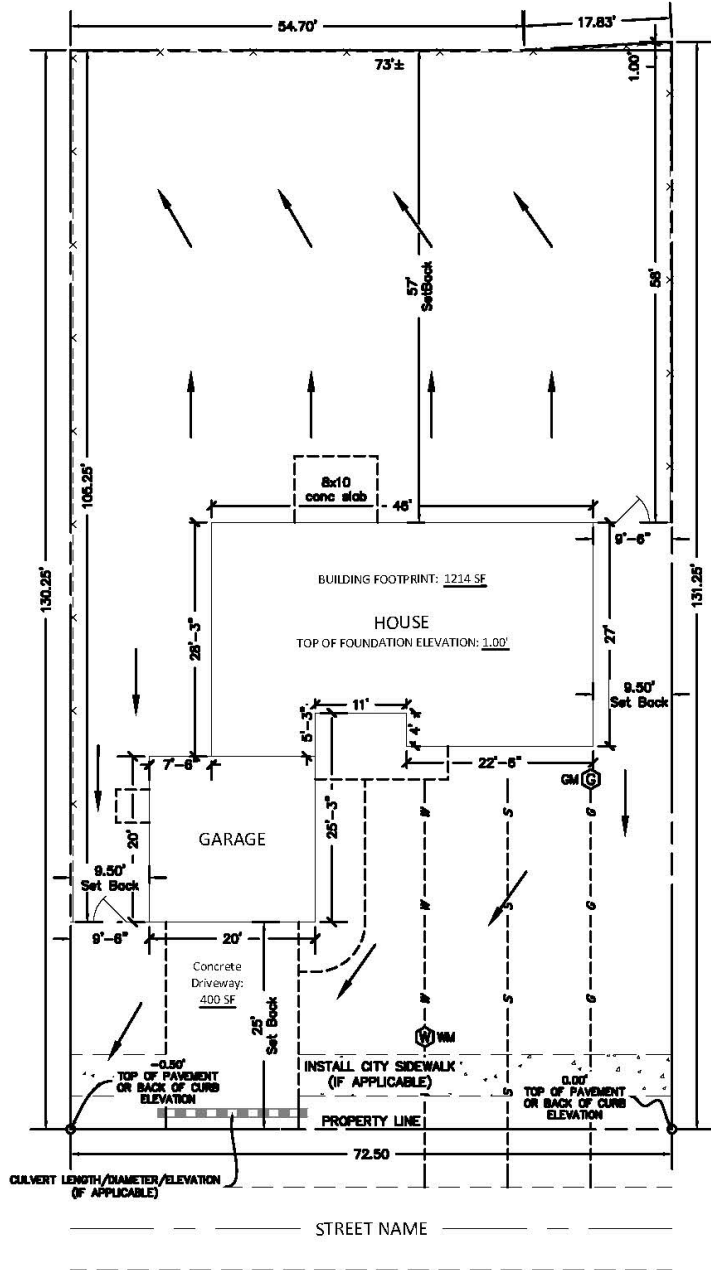
OWNERS: _____

**LEGAL DESCRIPTION:
(EXAMPLE)**

LOT 1, BLOCK 2, SOUTH SUBDIVISION.



NOTES: _____





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MECHANICAL PERMIT APPLICATION

Owner's Name: _____

Date: _____

Job Address: _____

Permit#: _____

Mech. Cont. _____

Phone #: _____

FEES:

For the Issuance of each Permit: \$22.00

For Issuing a Supplemental Permit: \$6.50

For installation or relocation of each forced-air or gravity-air type furnace or burner, including ducts and vents attached to such appliance, up to and including 100,000 BTU.

\$13.25 x _____ = \$ _____

For installation or relocation of each forced-air or gravity-type furnace or burner including ducts and vents attached to such appliance over 100,000 BTU.

\$16.25 x _____ = \$ _____

For installation or relocation of each floor furnace including the vent.

\$13.25 x _____ = \$ _____

For installation or relocation of each suspended heater, recessed wall heater or floor mounted unit heater.

\$13.25 x _____ = \$ _____

For installation, relocation or replacement of each appliance vent installed and not included in another permit.

\$6.50 x _____ = \$ _____

For repair, alteration or addition to each heating appliance, refrigeration unit, cooling unit, absorption unit, or heating, cooling absorption, or evaporative cooling system, including installation of controls regulated by this code.

\$12.25 x _____ = \$ _____

For installation or relocation of each boiler or compressor to and including three (3) horsepower or each absorption system to and including 100,000 BTU/H.

\$13.15 x _____ = \$ _____

For installation or relocation of each boiler or compressor over three horsepower to and including fifteen horsepower, or each absorption unit system between 100,000 BTU/H and including 500,000 BTU/H.

\$24.25 x _____ = \$ _____

For installation or relocation of each boiler or compressor over fifteen horsepower to and including thirty horsepower, or each absorption system over 500,000 BTU/H up to and including 1,000,000 BTU/H.

\$33.25 x _____ = \$ _____

For installation or relocation of each boiler or compressor over thirty horsepower to and including fifty horsepower, or for each absorption system over 1,000,000 BTU/H to and including 1,750,000 BTU/H.

\$49.50 x _____ = \$ _____

For the installation or relocation of each boiler or refrigeration compressor over fifty horsepower, or each absorption system over 1,750,000 BTU/H.

\$82.75 x _____ = \$ _____

For each air handling unit to and including 10,000 CFM, including ducts attached thereto. (Note: This does not apply to an air-handling unit, which is part of a factory-assembled appliance, cooling unit, evap. cooler or absorption unit otherwise permitted.)

\$9.50 x _____ = \$ _____

For each air handling unit over 10,000 CFM.

\$16.25 x _____ = \$ _____

For each evaporative cooler other than portable.

\$9.50 x _____ = \$ _____

For each ventilation fan connected to a single duct.

\$6.50 x _____ = \$ _____

For each ventilation system, which is not a portion of any heating or air-conditioning system authorized by a permit.

\$9.50 x _____ = \$ _____

For installation of each hood served by a mechanical exhaust, including the ducts for such hood.

\$9.50 x _____ = \$ _____

For installation or relocation of each domestic type incinerator.

\$16.25 x _____ = \$ _____

For installation or relocation of each, commercial or industrial type incinerator.

\$66.50 x _____ = \$ _____

For each appliance or piece of equipment regulated by this code but not classed in other appliance categories, or for which no other fee is listed in the IMC.

\$ 9.50 x _____ = \$ _____

**WHEN CHAPTER 24 IS APPLICABLE,
FEES FOR PROCESS PIPING SHALL BE AS FOLLOWS:**

For each Hazardous process piping system of from one to four outlets.

\$5.00 x _____ = \$ _____

For each system of five or more outlets. (Per outlet)

\$1.00 x _____ = \$ _____

For each non-hazardous process piping system of from 1 – 4 outlets.

\$2.00 x _____ = \$ _____

For each system with five or more outlets. (Per outlet)

\$0.50 x _____ = \$ _____

OTHER INSPECTIONS AND FEES:

Inspection outside normal business hours (min. charge: 2 hrs.)

\$44.25/hr x _____ = \$ _____

Re-inspection fees under provisions of Sec. 116.6, per inspection

\$44.25/hr x _____ = \$ _____

Inspections for which no fee is specifically indicated. (Min. Chg. ½ hr.)

\$44.25/hr x _____ = \$ _____

Additional plan review required because of changes, additions or revisions to approved plans. (Minimum charge: ½ hour)

\$44.25/hr x _____ = \$ _____

*or the total hourly cost to the City of Cañon City, whichever is greatest. This cost shall include supervision, overhead, equipment, hourly wages and fringe benefits of the employees involved.

Total of fees \$ _____



CITY OF CAÑON CITY

Engineering Department

P.O. Box 1460 • 128 Main Street
Cañon City, CO 81215-1460
(719) 269-9011 • Fax: (719) 269-9017

WATER TAP APPLICATION

FOR CONNECTION TO WATER SYSTEM

(PLEASE PRINT)

DATE: _____ SIZE OF TAP REQUESTED: _____

USE: RESIDENTIAL SINGLE NON-RESIDENTIAL MULTI-UNIT # UNITS _____

PROPERTY OWNER NAME: _____

SERVICE ADDRESS: _____

BILLING ADDRESS: _____

PHONE NUMBER: _____

EMAIL ADDRESS: _____

LEGAL DESCRIPTION OF PROPERTY TO BE SERVED: _____

Note: For taps larger than 1-inch, applicant will supply meter, meter pit, curbstop box (if applicable). For all services other than Single Family Residences a Testable Backflow Prevention Assembly is required and supplied by applicant.

SIGNATURE

OFFICIAL USE ONLY

Permit No. _____

(As a requirement of subdivision approval or tap approval)

WATER LINE EXTENDED OR ENLARGED/ AS-BUILT DELIVERED? YES NO N/A PAYMENT

MADE IN LIEU OF EXTENSION OR ENLARGEMENT? YES NO N/A

REBATE PAYMENT MADE? YES NO N/A

WATER SERVICE AGREEMENT REQUIRED & CONDITIONS MET? YES NO N/A

RECORDED PLAT RECEIVED? YES NO N/A

SIZE OF TAP APPROVED _____ WATER MAIN SIZE: _____

INSIDE OUTSIDE LPWD PUMP ZONE: I(A) I(B) I(C) II III

IMPACT FEE \$ _____ Notes: _____

REBATE FEE \$ _____

CASH-IN-LIEU FEE \$ _____

TAP FEE \$ _____

METER & PIT FEE \$ _____ **TOTAL FEE \$** _____

CITY ENGINEER DATE DATE PAID _____

RECEIPT # _____



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REQUIRED APPROVALS ROUTING SHEET

Project: _____ Permit #: _____
 Address: _____
 Lot: _____ Block: _____ Subdivision: _____
 Owner: _____ Contractor: _____
 Comments: _____

RESIDENTIAL WILL TAKE APPROXIMATELY 20 WORKING DAYS TO COMPLETE PRIOR TO ISSUANCE OF A BUILDING PERMIT. COMMERCIAL PLANS TYPICALLY TAKE APPROXIMATELY 24-30 WORKING DAYS FOR INITIAL REVIEW AND ROUTING. LARGE COMMERCIAL PROJECTS MAY REQUIRE A LONGER TIME TO PLAN REVIEW.

It is the responsibility of the building permit APPLICANT to secure the required approvals from the indicated departments. This must be accomplished prior to issuance of the building permit and for commercial projects again at the completion of the project prior to final inspection and/or issuance of the Certificate of Occupancy.

THE PROPERTY MAY NOT BE OCCUPIED UNTIL A FINAL INSPECTION IS DONE AND A CERTIFICATE OF OCCUPANCY IS ISSUED. FAILURE TO COMPLY COULD RESULT IN YOUR BEING CITED WITH A MISDEMEANOR IN ACCORDANCE WITH 15.04.040 OF THE CAÑON CITY MUNICIPAL CODE.

CORE APPLICATION ROUTING NECESSARY

Below are the primary routing approval signoffs. Please contact the Building Department to see if any can be eliminated. 719-276-5253

NOTE: PLANS SHOULD ACCOMPANY THIS ROUTING SLIP AND ADEQUATE TIME SHOULD BE AFFORDED TO THOSE ENTITIES FROM WHICH APPROVAL IS REQUESTED TO REVIEW THE PLANS.

<u>DEPARTMENT</u>	<u>APPROVAL PRIOR TO ISSUANCE OF PERMIT</u> Approval Date: Authorized	<u>APPROVAL PRIOR TO FINAL OR C/O</u> Approval Date: Authorized
City Engineer	_____	*See attached final checklist
City Planning & Zoning	_____	_____
County Health Department*	_____	_____
Fire District	_____	_____
Water Department*	_____	_____

**for commercial applications only*

City Engineer	Adam Lancaster	719.269.9011	Fax 719.269.9017	128 Main Street, Cañon City, CO 81212
Planning & Zoning	Patrick Mulready	719.276.5294	Fax 719.269.9017	128 Main Street, Cañon City, CO 81212
County Health	Amy Jamison	719.276.7450	Fax 719.276.7451	201 N. 6 th Street, Cañon City, CO 81212
Fire District	Dave Del Vecchio	719.275.8666	Fax 719.275.1486	1475 N. 15 th Street, Cañon City, CO 81212
Water Department	Cole Mock	719.276.5263	Fax 719.269.9034	1525 S. 9 th Street, Cañon City, CO 81212

FINAL CHECKLIST – CITY ENGINEER

APPLICATION TYPE: RESIDENTIAL BUILDING • FINAL ROUTING SIGN-OFF

The information listed here is to help you prepare complete submittals for sign-off by the Engineering Department in obtaining final sign off of building permit and/or Certificate of Occupancy in the City of Cañon City. These are the minimum requirements for the final review and approval. In some cases, more information than is listed here may be needed depending on the project and site specific issues. If you are in doubt as to what will be needed for your project, please contact the City Engineer.

(Incomplete submittals will not be accepted)

PROJECT ADDRESS: _____

 **INSPECTIONS REQUIRED BY ENGINEERING DEPARTMENT**

For *Residential Building Permits:*

Top of foundation: wall elevation (Top of Foundation lowest elevation must be at least 1 foot above the highest point of the edge of pavement/top back of curb adjacent to the property) *prior to concreteplacement.*

Inspection Date

Inspector Signature

Site grading and drainage improvements.

Inspection Date

Inspector Signature

Culvert Installation.

Not applicable

Inspection Date

Inspector Signature

Site Stabilization.

Inspection Date

Inspector Signature

Right-of-Way Improvements: Sidewalk, curb, gutter, etc.

Not applicable

Inspection Date

Inspector Signature

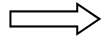
Floodplain Development Permit Compliance: Flood vents, etc.

Not applicable

Inspection Date

Inspector Signature

FINAL CHECKLIST – CITY ENGINEER cont...



SUBMITTALS REQUIRED BY ENGINEERING DEPARTMENT

Floodplain Development Permit.

Not applicable

Compliance Certification: must be completed by a registered professional engineer licensed to do work in the state of Colorado.

Approval Date

Approver Signature

Elevation Certificate (As-Built): must be completed by a registered professional engineer or land surveyor licensed to do work in the state of Colorado

Approval Date

Approver Signature

Drainage, Erosion, Sediment & Control (DESC) Permit: close out and paid fees.

Not applicable

Approval Date

Approver Signature

Right-of-Way Permit: close out and paid fees.

Not applicable

Approval Date

Approver Signature



CITY OF CAÑON CITY

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Energy Conservation Design, Submittal, Inspection, and Compliance 2006 International Energy Conservation Code

The City of Cañon City Building Department has adopted the 2006 International Energy Conservation Code, effective July 1, 2008. All references to the energy code requirements in the International Residential Code have been deleted. This handout will summarize the new submittal requirements for energy code compliance. This applies to building permits for all new residential projects, including detached one and two family homes, townhomes, and multi-family projects.

There are three design paths that the designer can take to show compliance with these codes. Option #1 is the Prescriptive Path per IECC Chapter 4; Option #2 is the Total UA Alternative Path per IECC 402.1.4; and Option #3 is the Simulated Performance Alternative Path per IECC Section 404.

Option #1 – Prescriptive Path

IECC Chapter 4 has the requirements for the prescriptive path. The plans need to show the following information. All information shall be per tables within Chapter 4 using zone 5.

1. **Insulation.** Provide all insulation "R" values, materials, and locations to be installed (walls, ceilings, cantilever floors, floors over garage, crawl space, basement walls, etc.) per Section 402.2 and Table 402.1.1. The exact location of the building thermal envelope that corresponds with this information shall be delineated on the plans, details, and section views.

Please note that the cavity insulation shall be completely in direct contact with the floor sheathing at cantilevers or in floors located above garages.

2. **Fenestration.** Provide all fenestration U factors per Section 402.3 and Table 402.1.1. This will apply for all glazing in windows and doors. If the U-values differ from window to window, please be clear which unit is intended for each location.
3. **Air Leakage.** Provide details on how all areas listed in Section 402.4 will be protected against air leakage. Please pay attention to the areas behind fireplaces and knee walls in attics. Verify that all windows, skylights, swinging doors, and sliding glass doors will meet the maximum air infiltration rate per Section 402.4.2. Verify that all recessed lighting will meet the requirements of Section 402.4.3.
4. **Moisture Control.** Show all moisture control details per Section 402.5. Provide details for locations of vapor retarders. See also requirements for the location of the thermal envelope.
5. **Duct Insulation.** Indicate duct insulation per Section 403.2.1. Provide details to show R-8 for supply and return ducts in attics and crawl spaces or R-6 for ducts in floor trusses – please note the exception for ducts located completely inside the building thermal envelope.

6. **Duct Sealing.** Indicate duct sealing methods per Section 403.2.2. Provide details for method of duct sealing to be used. Note that the Code requires that “duct joints shall be made substantially air tight.” The definition for substantially air tight is maximum duct leakage of 10% for ducts within the building envelope and 5% for ducts outside the building envelope.
7. **HVAC Equipment Sizing.** ACCA Manual J 8th edition calculation package shall be based on the orientation of the home on the building lot for custom homes. We will allow the builder to do calculations based on worst-case scenario for master plans. These calculations need to be done for all of the options if these options add or change room layout scenarios or fenestration details. Calculations shall show the size of the appliances: furnace and air conditioner condenser – make and model for both. Include the performance data for the equipment used. ACCA Manual J requires that ACCA Manual S be used for the equipment selection. A letter certifying that the duct work has been sized in accordance with ACCA Manual D must be submitted.

These calculations shall be based on the design parameters shown on the last page of this handout. These design parameters will not be allowed to be changed for any reason. Currently there are only these 4 approved software choices: Wrightsoft, Nitec, Adtek and Elite.

Option #2 – Total UA Alternative Path

IECC Section 402.1.4 contains the requirements for the total UA alternative path. This allows the builder to show compliance by providing a copy of the REScheck calculations. The applicant shall show compliance with the 2006 IECC when using this option.

The submitted REScheck printout shall show all of the following specific information:

- Orientation of each individual wall;
- Insulation types, R-values, and whether continuous or cavity;
- Accurate square footage; and
- Accurate window and door sizes and the specific wall in which they are located, along with the U factor and SHGC factor (solar heat gain coefficient) for this glazing.

Builders who have master plans shall provide the “best case” and the “worst case” orientation for the REScheck (based on the orientation of the exterior walls). The plans examiner will check the differences and verify if the builder can just submit the “worst case” orientation when submitting future master plan permits. With this total UA option, the performance piece of the 2006 REScheck software cannot be used because: the 2006 REScheck provides a performance simulation, not how the house actually performs; the simulation does not include HVAC, duct leakage or design. If a performance option is desired, the builder may use 2006 IECC Section 404 (see Option #3).

In addition to the REScheck the builder shall also supply the following information:

1. Air leakage details per Section 402.4.1. See required details listed in Option #1 above.
2. Moisture control details per Section 402.5. See required details listed in Option #1 above.
3. Duct sealing methods per Section 403.2.2. See required details listed in Option #1 above.
4. Manual J and Manual D certification letter as listed in Option #1 above.

Option #3 – Simulated Performance Alternative Path

This option is available per IECC Section 404. Please be aware that IECC Section 404.2 also requires compliance with the mandatory requirements of Sections 401 (General), 402.4 (Air leakage), 402.5 (Moisture control), 402.6 (Maximum Fenestration U-factor and SHGC), and 403 (Systems).

We will accept software tools which have RESNET (Residential Energy Services Network) accreditation, commonly known as a HERS rating. A building plans rating, completed by an accredited RESNET rater shall be submitted at time of permit application or master plan review. This document shall be site specific for custom homes; we will allow builders to submit one for each model (with all various options) for initial review. The building shall submit a copy of this approved building plans rating with each new permit application. Every house will be required to get a HERS rating which will be compared to the initially approved master Plan Rating.

This option requires the builder to provide on-site third party inspections by an accredited RESNET rater.

The building plans rating document shall include the following:

1. Inspection checklist documenting the building component characteristics of the proposed design.
2. Accurate square footage.
3. Mechanical system features.
4. Name of individual completing report.
5. Name and version of the compliance software tool.
6. Name of individual who will do the field inspections and issue the final rating.

Additional information shall be submitted to verify compliance with:

1. Duct sealing methods – see details in Option #1.
2. Moisture control details – see details in Option #1.
3. Air leakage details – see details in Option #1.
4. Manual J calculations and manual D letter as shown in Option #1.

At the time of final inspection, the submitted Home Energy Rating System (HERS) report shall show a passing score. Currently a HERS score of 100 is equivalent to the 2006 IECC. A certificate of occupancy will not be issued if the HERS score is greater than 100. **Please note that the City of Cañon City Building Division is still required to do on-site insulation and air barrier inspections with this option, see item 5 below.**

Inspection and Compliance Requirements For Options #1 and #2:

1. The builder shall call for an insulation inspection and we will also check all air leakage and moisture control details as called out on approved plans.
2. The builder shall provide a Balance Report at time of final inspection that verifies that the airflow meets the calculations submitted at time of permit issuance. This report shall show the following: static pressure at final (total static should not be more than the manufacturers' listing and add supply, return, AC coil and filter for total static pressure, total flow and room to room flows. Rooms to room pressures are not to exceed 3 pa (Pascal), which is the industry standard. If outside air is introduced into the system or if the structural floor is provided with exhaust fans, these flows shall be measured to determine if they are performing as designed.

3. The builder shall post a permanent certificate in an approved location in the house. The approved location is on a wall nearest the furnace. This certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor), ducts outside conditioned spaces and U factors and solar heat gain coefficients (SHGC) for fenestration. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the type and efficiency of heating, cooling and service water heating equipment.
4. The builder shall provide a copy of the REScheck if using Option #2 or fenestration list if using Option #1 on site for inspector doing rough inspection and insulation inspections. The builder shall leave the National Fenestration Rating Council (NFRC) labels on all windows and doors with glazing at time of rough inspections so inspectors can verify the glazing requirements.
5. Please note that City of Cañon City Building Division is also required to do an insulation and air barrier inspection if using Option #3 (Performance path – HERS Rating). The builder shall have a copy of the insulation requirements from the RESNET master plan rating calculations on site for this inspection.

CITY OF CAÑON CITY DESIGN PARAMETERS	
Outdoor Design Conditions per Table 1A ACCA Manual J Eighth Edition	
Elevation:	5.320
Latitude:	38° North
Winter heating 99% Dry Bulb:	5° F
Summer Cooling 1% Dry Bulb:	94° F
Coincident Wet Bulb:	62° F
Design Grains Difference at 50% RH:	=30
Daily Range:	H
Relative Humidity:	50% winter and summer
Interior Design Temperature for Heating:	70° default
Interior Design Temperature for Cooling:	75° F
Heating Temperature Difference (HTD):	65° F
Cooling Temperature Difference (CTD):	19° F
Cooling Load Temperature Difference (CLTD):	21° F
SHGC:	SHGC taken directly from sticker on glass.
While not required per Table 402.1.1 of the IECC the SHGC is still required data for Manual J.	If not known, either use default per 2006 IECC Table 102.2(3) or equation $SHGC = .87 \times SC$ (shading coefficient) under A4-5 of Manual J.
Altitude Correction Factor (ACF):	83
Moisture Content:	68.2
Air Density:	0.063
Wind Velocity Value:	15 mph for heating
Wind Velocity Value:	7.5 mph for cooling



CITY OF CAÑON CITY

Water Department

1525 S. 9th Street
Cañon City, CO 81212
(719) 269-9022

METER PIT PLACEMENT FOR NEW CONSTRUCTION

Meter Pits for new residential structures are to be placed at the location where the service line has been stubbed into the lot during subdivision development. Builders are encouraged to identify the location of the water tap prior to layout of the structure on the lot to avoid any possible conflict such as a concrete driveway. If the decision is made to install the driveway where the meter pit is to be set then accommodations will have to be designed into the driveway slope to provide a flat area so that the meter pit is set per Water Department specifications.

In addition the Water Department shall inspect each meter pit at the time of the installation. Once the installation of the meter pit has been completed the inspection will be documented and signed off on to protect the work of the individual who originally installed the meter pit. It will be the responsibility of the Builder/Owner to make sure that the meter pit is kept protected once it has been installed. Should the meter pit incur damage after it has been installed it will be the responsibility of the Builder/Owner to notify the Water Department of the damage. The Water Department shall inspect the meter pit and determine what needs to be done to repair the damage at the Builder/Owner's expense.

If there are any questions please contact Cole Mock, City of Cañon City Water Distribution Supervisor at 719-269-9022.