

City of Cañon City Building Department
128 Main Street P.O. Box 1460
Cañon City CO 81215-1460
(719) 269-9011 Fax (719) 269-9017
Direct Phone Line (719) 276-5292

Information Submittal Checklist

The following information shall be submitted to the Cañon City Building Department prior to issuance of a building permit.

1. **Plot plan** as provided by the building department to be completed. Plans submitted with plot plan not on the city form will also be accepted as long as all information as required on city form is provided.
2. **Copy of Warranty Deed, Title Commitment or other documentation showing ownership.** This should also include information on easements, etc.
3. **Floor plan** to scale (preferably 1/4" 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 (example: slider, single hung, etc.)
 - d. Stair locations, state rise and run and number of risers, landing size.
 - e. Smoke 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.
4. **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.
 - 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 kneewall.
 - e. Header sizes for any openings (such as at stairs to upper level, crawl space access).
 - f. Stair hole framing.
5. **Elevation drawing** showing:
 - a. All four sides
 - b. Windows and doors
 - c. Exterior wall covering (masonite siding, brick stucco, etc.)
 - d. Foundation ventilation opening. State size and free opening area.
6. **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 this plan.
 - e. Show all roof bearing locations.
 - f. Show plan view of roof. (As if you were looking down from above).
7. Provide 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 handrail. This would show the stairs, etc. in profile.

8. Mechanical plan showing
 - a. Location of mechanical equipment.
 - b. BTU input and output of all appliances
 - c. Vent size of all appliance's and copy of calculation if a multiple appliance vent.
 - d. Combustion air opening sizes, location and calculations.

In addition to the above required information the following will be required to be submitted as applicable when a new structure or addition is being built.

Engineered foundation. Required on all new structures and additions except for one story residential detached garages not exceeding 800 square feet of floor area and one story detached commercial storage buildings not exceeding 400 square feet of floor area. This must be done by a registered professional engineer or architect licensed in the state of Colorado. The foundation design will be site specific and include as part of the submittal the soils investigation report and lab analysis of soils report.

Proof of water. This is to be submitted in the form of a paid receipt from the supplying water purveyor. This could be the City of Cañon City, Park Center or in some instances a well permit.

Proof of sewer or septic. This is to be shown in the form of a paid receipt from the Fremont Sanitation District. Septic systems are to be reviewed and approved by the Fremont County Health Officer. Sid Darden may be contacted at the Fremont County Courthouse. (719) 276-7460.

Floodplain Development Permit. This is required when the subject structure is located within a recognized floodplain. A proper permit must be completed by a registered professional engineer licensed to do work in the State of Colorado. This permit application must then be submitted to the City Engineer for his review and approval.

Off Street Parking Plan. This plan must be submitted to the City Planner for review and approval. As a minimum the information must show the access to the parking, the type of paved surface if required and the number of handicap parking spaces.

Energy Code. See attached Energy Conservation Code Design, Submittal, Inspection and Compliance Handout for submittal criteria.

Required Routing Sheet Approvals. It is the responsibility of the building permit applicant to secure the required approvals from the departments indicated on the Required Approvals Routing Sheet.

The above information is the minimum that is to be submitted. More information may be required as necessary by the Building Official. Plans will be reviewed in the order that they are received. Normal time frame for review of single family dwellings will be a maximum of 15 working days. Commercial plans will of course take longer.

If there are any questions please feel free to contact Greg Hutchison, Building Official for the City of Cañon City between the hours of 8:00AM and 9:00AM Monday through Friday. If you cannot come in during this time frame please call and I will attempt to schedule a time to meet.



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Building Department

February 15, 2005

NOTICE TO CONTACTORS EFFECTIVE IMMEDIATELY

All new applications for building permits for new structures, excluding decks and slabs, shall provide a drainage plan showing, as a minimum, the following information:

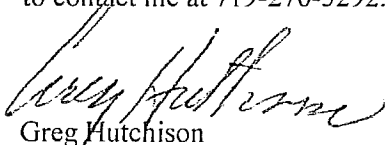
1. Elevation of curb height or edge of road at its highest point adjacent to the lot.
2. Elevation of top of foundation wall or top of slab.
3. Arrows showing direction of flow of proposed drainage including its destination.
4. Relative elevations of proposed finish grades and drainage, sufficient to show that the lot will drain to an approved drainage device. For example the street, ditch, etc.

This drawing shall be drawn to scale (note scale on drawing) or be adequately dimensioned and have an arrow indicating north. This to insure that the top of any exterior foundation extends above the street gutter at the point of discharge or the inlet of an approved drainage device a minimum of 12 inches plus 2%. See Section 403.1.7.3 of the International Residential Code, 2006 Edition. Alternate elevations are permitted subject to the approval of the Building Official, provided it can be demonstrated that required drainage to the point of discharge and away from the structure is provided at all locations on the site.

Effective immediately, swales or some other method shall be provided of sufficient depth and width to eliminate the water from the applicant's site from encroaching on the adjacent neighbor's lot in any direction during a normal rainfall. This swale may be shared between property owners. In this instance, a letter of agreement shall be submitted along with the application signed by the involved property owners.

Inspection of final grade shall be done by the City Engineering Department prior to final inspection or issuance of a Certificate of Occupancy proving that the final grading has been established in accordance with the elevations as shown on the drawing submitted with the application for building permit and approved by the Engineering Department. Commercial buildings must have these elevations certified by a registered professional engineer or land surveyor.

The above information is considered a minimum. Additional information may be requested as necessary to be determined by the City Engineer or the Building Official. If there are any questions or comments, please feel free to contact me at 719-276-5292.



Greg Hutchison
Building Official

Revised 9/3/08



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Building Department

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

The City of Cañon City Building Division has adopted the 2006 International Energy Conservation Code, effective July 1, 2008. 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 fire places 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.”

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. In addition a letter from the contractor or owner certifying that the duct system etc. has been designed in accordance with ACCA Manual D and other referenced manuals shall be provided to the building department to be kept on file.

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 Right-J8, Nitec HVAC Wizard, and Elite RHVAC and Adtek AccuLoads..

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 desire, 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 calculations 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 and D calculations 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 6 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 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.
3. 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.

4. 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 A-4-5 of Manual J.
Altitude Correction Factor (ACF):	83
Moisture Content:	68.2
Air Density:	0.063
Wind Velocity Value:	15 mph for heating (Page 177
Wind Velocity Value:	7.5 mph for cooling of Manual J)