

AMENDMENTS TO THE 2024 INTERNATIONAL ENERGY CONSERVATION CODE

4-9-2: AMENDMENTS TO THE 2024 INTERNATIONAL ENERGY CONSERVATION CODE

The following sections of the 2024 International Energy Conservation Code, adopted by reference as set forth in Section 4-9-1, are amended as follows:

CHAPTER 1 [CE] ADMINISTRATION

C101.1 Title. These regulations shall be known as the “Mesa Energy Code,” hereinafter referred to as “this code.”

A new **Section C101.1.1 International Code References** is added as follows:

C101.1.1 International Code References. Within the technical codes and the referenced codes and standards therein, specific references to the following International Codes shall be deemed and interpreted to mean the specific City of Mesa Codes as listed herein:

1. International Building Code (IBC) is redefined as Mesa Building Code (MBC)
2. International Fire Code (IFC) is redefined as Mesa Fire Code (MFC)
3. International Residential Code (IRC) is redefined as Mesa Residential Code (MRC)
4. International Mechanical Code (IMC) is redefined as Mesa Mechanical Code (MMC)
5. International Fuel Gas Code (IFGC) is redefined as Mesa Fuel Gas Code (MFGC)
6. International Existing Building Code (IEBC) is redefined as Mesa Existing Building Code (MEBC)
7. International Plumbing Code (IPC) is redefined as Mesa Plumbing Code (MPC)
8. International Swimming Pool and Spa Code (ISPSC) is redefined as Mesa Swimming Pool and Spa Code (MSPSC)
9. International Energy Conservation Code (IECC) is redefined as Mesa Energy Conservation Code (MECC).

Sections C101.4 through C110.4 are deleted in their entirety. Any reference to C101.4 through C110.4 shall comply with the Mesa Administrative Code (Mesa City Code, Title 4, Chapter 1).

CHAPTER 4 COMMERCIAL ENERGY EFFICIENCY

C401.2.1 International Energy Conservation Code. Commercial buildings shall comply with one of the following:

1. **Prescriptive Compliance.** The Prescriptive Compliance option requires compliance with Sections C402 through C406 and Section C408. Dwelling units and sleeping units in Group

R-2 buildings shall be deemed to be in compliance with this chapter, provided that they comply with Section R406.

2. Simulated Building Performance. The Simulated Building Performance option requires compliance with Section C407.

Exceptions:

1. Additions, alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.
2. Compliance with the provisions of Section C408 is optional.

C401.2.2 ASHRAE 90.1. Commercial buildings shall comply with the requirements of ANSI/ASHRAE/IES 90.1.

Exception: Compliance with the provisions of Section C408 is optional.

A new **Section C401.2.3 Industrial Buildings** is added as follows:

C401.2.3 Industrial Buildings. Industrial buildings containing unique uses and processes that may conflict with the Energy Conservation Code. The Building Official may grant exemptions from Mesa Energy Conservation Code requirements for buildings or improvements due to unique or specialized processing systems or components, such as prefabricated paint booths or assembly line enclosures.

Sections C405.12 through 405.15 are deleted in their entirety.

C406.1 Compliance. Buildings shall comply as follows:

1. Buildings with greater than 50,000 square feet (4,645 m²) of conditioned floor area shall comply with Section C406.1.1.
2. Buildings with greater than 100,000 square feet (9,290 m²) of conditioned floor area shall comply with Sections C406.1.1 and C406.1.2.
3. Build-out construction greater than 50,000 square feet (4,645 m²) of conditioned floor area that does not have final lighting or final HVAC systems installed under a prior building permit shall comply with Section C406.1.1.2.

Exceptions: Core and shell buildings where not less than 20 percent of the net floor area is without final lighting or final HVAC that comply with all of the following:

1. Buildings with greater than 5,000 square feet (465 m²) of conditioned floor area shall comply with Section C406.1.2.
2. Portions of the building where the net floor area is without final lighting or final HVAC shall comply with Section C406.1.1.2.

3. Portions of the building where the net floor area has final lighting and final HVAC systems shall comply with Section C406.1.1.

CHAPTER 5 [CE] EXISTING BUILDINGS

C502.2 Change in Space Conditioning. Any nonconditioned or low-energy space that is altered to become conditioned space shall be required to comply with Section C502.

Exceptions: Core and shell buildings where not less than 20 percent of the net floor area is without final lighting or final HVAC that comply with all of the following:

1. Where the component performance alternative in Section C402.1.4 is used to comply with this section, the proposed UA shall be not greater than 110 percent of the target UA.
2. Where the simulated building performance option in Section C407 is used to comply with this section, the annual energy cost of the proposed design shall be not greater than 110 percent of the annual energy cost otherwise permitted by Section C407.2.
3. A lawfully occupied space with evaporative cooling being converted to air conditioning when the roof assembly is fully insulated.

C502.3.7 Additional Energy Efficiency Credit Requirements. Additions shall comply with sufficient measures from Sections C406.2 and C406.3 to achieve not less than 50 percent of the number of required efficiency credits from Table C406.1.1(1) based on building occupancy group and climate zone. Where a project contains multiple occupancies, credits from Table C406.1.1(1) for each building occupancy shall be weighted by the gross floor area to determine the project weighted average energy credits required. Accessory occupancies shall be included with the primary occupancy group for purposes of this section. Alterations to the existing building that are not part of the addition, but are permitted with an addition, shall be permitted to be used to achieve the required credits.

Exceptions:

1. Buildings in Group U (Utility and Miscellaneous), Group S (Storage), Group F (Factory), Group H (High-Hazard).
2. Additions less than 50,000 square feet (4,645 m²) and less than 50 percent of existing floor area.
3. Additions that do not include the addition or replacement of equipment covered by Tables C403.3.2(1) through C403.3.2(16) or Section C404.2.
4. Additions that do not increase conditioned space.
5. Where the addition alone or the existing building and addition together comply with Section C407.

CHAPTER 1 [RE] ADMINISTRATION

R101.1 Title. These regulations shall be known as the “Mesa Energy Conservation Code,” hereinafter referred to as “this code.”

R101.2 Scope. This code applies to the design and construction of detached one- and two-family dwellings and multiple single-family dwellings (townhouse) and Group R-2, R-3, R-4 and R-5 buildings.

Sections R101.4 through R110.4 are deleted in their entirety.

A new **Section R102 Testing and Inspection Protocol** is added as follows:

R102 Testing and Inspection Protocol

R102.1 RESNET Testing and Inspection Protocol. The Residential Energy Services Network (RESNET) Home Energy Rating System Standard (RESNET HERS) for third party testing and inspections shall be deemed to meet the requirements of sections R402.5.1, R402.5.1.2 and R403.3.7 and shall meet the following conditions:

1. Third party testing and inspection shall be completed by RESNET certified Raters or Rating Field Inspectors and shall be subject to RESNET Quality Assurance Field Review Procedures.
2. Sampling in accordance with Chapter 6 of the RESNET HERS standards shall be performed by Raters or Rating Field Inspectors Working under a RESNET Accredited Sampling Provider.
3. Third Party Testing is required for the following items:
 - a. R402.5.1 – Building Envelope – Thermal and Air Barrier Checklist.
 - b. R402.5.1.2 – Testing – Air Leakage Rate.
 - c. R403.3.7 – Sealing – Duct Tightness.
 - d. Any other testing and inspections required under the code.
4. Alternate testing and inspection programs and protocols shall be allowed when approved by the Building Code Official.

CHAPTER 4 [RE] RESIDENTIAL ENERGY EFFICIENCY

Table R402.5.1.1 Air Barrier, Air Sealing and Insulation Installation^a is partially amended to read as follows:

TABLE R402.5.1.1 AIR BARRIER, AIR SEALING AND INSULATION INSTALLATION^a		
COMPONENT	AIR BARRIER CRITERIA	INSULATION CRITERIA
Rim joists	Rim joists shall include an air barrier. The junctions of the rim board to the sill plate and the rim board and the subfloor shall be air sealed, unless the air barrier is provided elsewhere.	Rim joists shall be insulated so that the insulation maintains permanent contact with the exterior rim board.

R403.6.3 Testing. Mechanical ventilation systems shall be tested and verified to provide the minimum ventilation flow rates required by Section R403.6, in accordance with ANSI/RESNET/ICC 380. Where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

Exceptions:

1. Kitchen range hoods that are ducted to the outside with ducting having a diameter of 6 inches (152 mm) or larger, a length of 10 feet (3028 mm) or less, and not more than two 90-degree (1.57 rad) elbows or equivalent shall not require testing.
2. A third-party test shall not be required where the ventilation system has an integrated diagnostic tool used for airflow measurement, and a user interface that communicates the installed airflow rate.
3. Where tested in accordance with Section R403.6.4, testing of each mechanical ventilation system is not required.
4. Local exhaust systems.

Sections R404.2 through R404.3.1 are deleted in their entirety.

CHAPTER 5 [RE] EXISTING BUILDINGS

R501.2 Compliance. Additions, alterations, repairs or changes of occupancy to, or relocation of, an existing building, building system or portion thereof shall comply with Section R502, R503, R504 or R505, respectively, in this code and the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in the International Building Code, International Existing Building Code International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Residential Code and NFPA 70, as applicable. Changes where unconditioned space is changed to conditioned space shall comply with Section R501.6.

APPENDIX RE ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

RE101.2.1 Quantity. New one- and two-family dwellings and townhouses with a designated attached or detached garage or other on-site private parking provided adjacent to the dwelling unit shall be provided with one EV capable, EV ready or EVSE space per dwelling unit. R-2

occupancies or allocated parking for R-2 occupancies in mixed-use buildings shall be provided with 15 percent EV capable spaces, or EV ready spaces and 5 percent EVSE spaces of the dwellings units or automobile parking spaces, whichever is less.

Exceptions:

1. Where the local electric distribution entity certifies in writing that it is not able to provide 100 percent of the necessary distribution capacity within 2 years after the estimated certificate of occupancy date, the required EV charging infrastructure shall be reduced based on the available existing electric distribution capacity.
2. Where substation is approved that meeting the requirements of Section RE101.2.5 will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the builder or developer by more than \$450 per dwelling unit.