

Chapter 23.60 LOCAL AMENDMENTS TO THE INTERNATIONAL ENERGY CONSERVATION CODE 2018 EDITION

23.60.100 Local Amendments to the International Energy Conservation Code 2018 Edition.

The amendments to the 2018 edition of the International Energy Conservation Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Energy Conservation Code to which the amendments refer.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C102—23.60.C109 Delete sections.

Delete sections C102 through C109. Refer to the Anchorage Administrative Code.

23.60.C303.1.4 Insulation product rating.

Add the following exception:

Exception: A mean testing temperature of 40°F is acceptable for demonstrating compliance with this code.

(AO No. 2020-85, § 1, 10-27-20)

23.60. Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method.

Replace TABLE C402.1.3 with the following:

TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD^a CLIMATE ZONE 7 All Other and Group R	
Roofs - Insulation entirely above deck	R-30ci
Roofs - Metal Buildings ^b	R-13 + R-19
Roofs - Attic and Other	R-38
Walls - Above Grade - Mass ^g	R-15.2ci
Walls - Above Grade - Metal Building	R-19+ R-5.6ci

Walls - Above Grade - Metal Framed	R-13+ R-7.5ci
Walls - Above Grade - Wood framed and other	R-13+ R-7.5ci or R-21
Walls - Above Grade - Insulated Metal Wall Panels	R-20
Walls - Below Grade ^d	R-8ci
Floors - Mass ^e	R-15ci
Floors - Joist/Framing - Note: For framing cavities 12 inches or less in depth the entire cavity shall be filled with insulation.	R-30 wood framing R-38 metal framing
Floors - Slab-on-grade, unheated	R-8, extending 36" below
Floors - Slab-on-grade, heated	R-10, extending 36" below
Opaque Doors - Side hinge swinging ⁱ	R-2

- a. Assembly descriptions can be found in ANSI/ASHRAE/IESNA Appendix A.
- b. Where using R-value compliance method, a thermal spacer block having a minimum R-value of 5 shall be provided, otherwise use the U-factor compliance method in Table C402.1.4.
- c. Not used.
- d. Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for heated slabs.
- e. "Mass floors" shall be in accordance with Section C402.2.3.
- f. Not used.
- g. "Mass walls" shall be in accordance with Section C402.2.2.
- h. Not used.
- i. Not applicable to garage doors. See Table C402.1.4.

(AO No. 2020-85, § 1, 10-27-20)

23.60. Table C402.1.4 Opaque Thermal Envelope Assembly Maximum Requirements, U-factor Method.

Replace TABLE C402.1.4 with the following:

TABLE C402.1.4
OPAQUE THERMAL ENVELOPE
ASSEMBLY MAXIMUM REQUIREMENTS,
U-FACTOR METHOD^{a, b}

Climate Zone 7 All Other and Group R		
Component	Maximum Allowable Factor	ANSI/ASHRAE/IESNA 90.1 APPENDIX A Section Reference
Roofs - Insulation entirely above deck	U-0.032	A2.2
Roofs - Metal Buildings (W/R-5 Thermal Blocks)	U-0.049	A2.3
Roofs - Attic and Other	U-0.027	A2.4, A2.5
Walls Above Grade - Mass ^g	U-0.071	A3.1
Walls Above Grade - Metal Building	U-0.057	A3.2
Walls Above Grade - Metal Framed	U-0.064	A3.3
Walls Above Grade - Wood framed and other ^c	U-0.051	A3.4
Walls above Grade - Insulated Metal Panels	U-0.050	—
Below grade wall ^c	C-0.119	A4.2
Floors - Mass ^d	U-0.064	A5.2
Floors - Steel Joist/Framing	U-0.033	A5.3
Floors - Wood Joist/Framing	U-0.033	A5.4
Slab-on-grade Floors - Unheated	F-0.52	A6.3
Slab-on-grade Floors - Heated ^f	F-0.84	A6.3
Opaque side hinge swinging door	U-0.37	A7
Opaque garage door with less than 14% glazing	U-0.31	A7

- a. Where assembly U-factors, C-factors and F-factors are established in ANSI/ASHRAE/IESNA 90.1 Appendix A, such opaque assemblies shall be a compliance alternative where those values meet the criteria of this table, and provided the construction,

excluding the cladding system on walls, complies with the appropriate construction details from ANSI/ASHRAE/IESNA 90.1 Appendix A.

- b. Where U-factors have been established by testing in accordance with ASTM C1363, such opaque assemblies shall be a compliance alternative where those values meet the criteria of this table. The R-value of continuous insulation shall be permitted to be added to or subtracted from the original tested design.
- c. Where heated slabs are below grade, below-grade walls shall comply with the U-factor requirements of above-grade mass walls.
- d. "Mass floors" shall be in accordance with Section C402.2.3.
- e. Not used.
- f. The first value is for perimeter insulation and the second value is for full slab insulation.
- g. "Mass walls" shall be in accordance with Section C402.2.2.

(AO No. 2020-85, § 1, 10-27-20)

23.60. Table C402.4 Building Envelope fenestration Maximum U-Factor and SHGC Requirements.

Replace TABLE C402.4 with the following:

TABLE C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS CLIMATE ZONE 7	
U-factor - Vertical fenestration, framing materials other than metal with or without metal reinforcement or cladding	0.35
U-factor - Vertical fenestration, metal framing with or without thermal break - Curtain wall/storefront	0.40
U-factor - Vertical fenestration, metal framing with or without thermal break - Entrance Doors	0.80
U-factor - Vertical fenestration, metal framing with or without thermal break - All other - Including operable windows, fixed windows and non-entrance doors	0.45
SHGC - Vertical fenestration, oriented more than 45 degrees from true north, PF<25	0.45
SHGC - Vertical fenestration - PF≥0.25	No Requirement
U-factor - Skylights - Glass or plastic	0.60
SHGC - Skylights - Glass or plastic	No Requirement

(AO No. 2020-85, § 1, 10-27-20)

23.60.C402.2.1 Roof assembly.

Add the following sentence:

When eave vents are installed, baffling of the vent openings shall be provided to deflect the incoming air above the surface of the insulation.

Add the following exception:

4. Continuously insulated tapered roof assemblies with an average R-value of not less than that specified in Table C402.2 and having not less than R-12.5 at each roof drain location.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C402.2.4 Slabs-on-grade perimeter insulation.

Revise the exception to read as follows:

Exception: Where the slab-on-grade floor is greater than 36 inches below the finished exterior grade and the below grade wall is insulated in accordance with section C402.2.5, perimeter insulation is not required.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C402.2.5 Below-grade walls.

Amend section C402.2.5 by adding the following sentence:

In new construction, the minimum required R-value of insulating material shall be installed on the exterior side of the wall.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.3.1 Equipment and system sizing (Mandatory).

Amend section C403.3.1 by adding exception number 3 as follows:

3. Single unit heating systems with less than 25 percent excess capacity.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.4.1.4 Heated or cooled vestibules (Mandatory).

Amend section C403.4.1.4 to read as follows:

Vestibule heating systems shall be controlled by a thermostat located in the vestibule.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.4.2.1 Thermostatic setback (Mandatory).

Delete section C403.4.2.1.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.4.2.3 Automatic start (Mandatory).

Delete section C403.4.2.3.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.4.4 Part load controls.

Amend section C403.4.4 by deleting "and cooling demand" from Item No. 1, and revising exception #4 to read as follows:

4. Hydronic heating systems serving domestic hot water generation equipment or other equipment that requires a consistent supply temperature or flow may override temperature setback and/or flow controls in this section.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.5 Economizers (Prescriptive).

Amend the first sentence in item No. 2 to read as follows:

2. Individual fan systems with a cooling capacity greater than or equal to 120,000 Btu/h in buildings having other than a Group R occupancy.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.5.4.1 Design capacity.

Amend section C403.5.4.1 by deleting "indirect evaporation and".

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.7.2 Enclosed parking garage ventilation controls (Mandatory).

In the last sentence, replace "cause the exhaust fans to operate continuously at design airflow" with "trigger audible, visible or automation system alarm".

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.7.4 Energy recovery ventilation systems (Mandatory).

Revise the second sentence to read as follows:

The energy recovery system shall be configured to provide a change in the enthalpy or sensible heat of the outdoor air supply of not less than 50 percent of the difference between the outdoor air and return air enthalpies or sensible heats.

Amend the exception by revising condition Number 8 to read as follows:

8. For each system where the largest source of air exiting the building at a single location at the building exterior is less than 75 percent of the design outdoor airflow rate.

Amend the exception by adding condition number 12 as follows:

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12. Where the system does not operate continuously and is controlled only to operate under a safety operation such as carbon monoxide exhaust systems in garages.

Amend the exception by adding condition number 13 as follows:

13. Where it is demonstrated that simple economic payback is greater than 20 years. Market value equipment, construction and utility costs at the time of design shall be used to determine economic payback.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.7.7 Shutoff dampers (Mandatory).

Amend section C403.2.7.7 by adding exception number 4 as follows:

4. Motorized dampers shall not be required for exhaust systems where grease, lint, and similar particulates may accumulate on the damper and create a fire hazard.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.8.1 Allowable fan horsepower (Mandatory).

Amend section C403.8.1 by replacing 5 horsepower with 10 horsepower.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.8.3 Fan efficiency (Mandatory).

Amend section C403.8.3, Exception #1, by replacing 5 horsepower with 10 horsepower.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.11.2.3 High-pressure duct systems (Mandatory).

Amend section C403.11.2.3 by deleting the last sentence stating "Documentation shall be furnished by the designer demonstrating..."

(AO No. 2020-85, § 1, 10-27-20)

23.60.C403.11.3 Piping insulation (Mandatory).

Amend exception #5 to read as follows:

5. Strainers, valves, unions and system components other than piping.

Add exception #7 as follows:

7. Piping within baseboard radiation assemblies serving the zone requiring conditioning and piping that is intended to serve as a terminal heating device.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C404.4 Insulation of piping.

Amend exception #2 to read as follows:

2. Strainers, valves, unions and system components other than piping.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C404.5 Heated water supply piping.

Delete section C404.5.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C404.6.1 Circulation systems.

Add the following exception:

Exception: Circulation pumps may be controlled by manual control or time clocks.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C404.7 Demand circulation controls.

Delete section C404.7.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C405.1 General (Mandatory).

Amend the second paragraph to read as follows:

Compliance with section C405 may be achieved by one of the following:

1. Compliance with the interior lighting power requirements specified in Section C405.3. Compliance with Section C405.2 and Sections C405.4 through C405.9 is not required.
2. Compliance with lighting controls specified in Section C405.2 (as amended) and compliance with the interior lighting power requirements specified in Section C405.3 where the total connected interior lighting power is no greater than 125% of the interior lighting power allowance. Compliance with Sections C405.4 through C405.9 is not required.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C405.2.2.2 Light-reduction controls.

Amend section C405.2.2.2 by revising the exception as follows:

Exception: Light reduction controls are not required in:

- a) Daylight zones with daylight responsive controls complying with Section C405.2.3.
- b) Spaces that have only one luminaire with a rated power of less than 100 watts.

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- c) Spaces that use less than 0.6 watts per square foot.
 - d) Corridors, lobbies, restrooms and similar common spaces.
 - e) Equipment rooms, storerooms and similar normally unoccupied spaces.
 - f) Areas where HID lighting is used as the primary light source.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C405.2.3 Daylight-responsive controls.

Unless using daylight-responsive controls to comply with other provisions in this code, compliance with Section C405.2.3 is optional.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C405.2.4 Specific application controls.

Compliance with this section is not required.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C405.2.6 Exterior lighting controls.

Revise the first sentence to read as follows:

Exterior lighting systems shall be provided with controls that comply with Section C405.2.6.1 or Section C405.2.6.4.

Delete the second sentence.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C406 Additional Efficiency Package Options.

Delete section C406.

(AO No. 2020-85, § 1, 10-27-20)

23.60.C408.2 Mechanical systems and service water-heating systems commissioning and completion requirements.

Revise exception #1 to read as follows:

1. Mechanical systems serving buildings smaller than 20,000 square feet are exempt from the commissioning requirements in this section. These exempt systems shall be tested to ensure that control elements are calibrated, adjusted and in proper working condition.

(AO No. 2020-85, § 1, 10-27-20)

23.60.R101—23.60.R505 Residential Provisions.

Energy conservation provisions for residential buildings regulated by the International Residential Code (IRC) shall comply with IRC Chapter 11, as amended under Chapter 23.85. Energy conservation provisions for residential buildings regulated by the International Building Code (IBC) shall comply with the International Energy Conservation Code.

(AO No. 2020-85, § 1, 10-27-20)