



**ORDINANCE NO. 20-05
SERIES OF 2020**

**APPROVING AMENDMENTS TO AVON MUNICIPAL CODE CHAPTER 7.28.020(g)
AND 15.28 FOR ELECTRIC VEHICLE CHARGING, AND CHAPTER 15.10.020 AND
15.26.020 FOR SOLAR-READY ROOFS AND INCREASED BOILER EFFICIENCY**

WHEREAS, pursuant to C.R.S. §31-15-103 and §31-15-104, and pursuant to the home rule powers of the Town of Avon (“Town”), the Town Council has the power to make and publish ordinances necessary and proper to provide for the safety, preserve the health, promote the prosperity, and improve the morals, order, comfort, and convenience of its inhabitants; and

WHEREAS, Town Council initiated a code text amendment application to promote building energy efficiency and require building improvements that facilitate solar readiness and electric vehicle charging infrastructure; and

WHEREAS, the code amendments are in conformance with Avon Comprehensive Plan Policies G.4.1 and G.4.3 referencing improved building efficiency; and

WHEREAS, the code amendments will help to reduce the carbon produced in Town thereby meeting Town’s adopted Climate Action Plan greenhouse gas reduction target of 25% by 2025, and minimum of 80% by 2050; and

WHEREAS, the Town Council finds that requiring electric vehicle charging, solar-ready roofs, and increased boiler efficiency will promote the health, safety and general welfare of the Avon community; and

WHEREAS, approval of this Ordinance on first reading is intended only to confirm that the Town Council desires to comply with the requirement of Section 6.5(d) of the Avon Home Rule Charter by setting a public hearing in order to provide the public an opportunity to present testimony and evidence and that approval of this Ordinance on first reading does not constitute a representation that the Town Council, or any member of the Town Council, has determined to take final action on this Ordinance prior to concluding the public hearing on second reading.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF AVON, COLORADO the following:

Section 1. Recitals Incorporated. The above and foregoing recitals are incorporated herein by reference and adopted as findings and determinations of the Town Council.

Section 2. Amendment to Chapter 7.28.020 - Computation of Parking and Loading Requirements. Chapter 7.28.020(g)(1) is hereby amended to read as follows with **underline** indicating language to be adopted:

7.28.020 (g) Computation of Parking and Loading Requirements

(1) Computation:

(i) Different Use Areas. Except as provided for in this Section, parking shall be calculated separately for each different use area in a building or on a site, including all accessory uses. Parking spaces for accessory uses not specifically identified in Table 7.28-2, Off-Street Parking, shall be assumed to be included in the principal use requirement.

(ii) Mixed Use Reduction. If the Director determines that a proposed use represents a combination of uses listed in Table 7.28-2, Off-Street Parking, a fifteen-percent reduction shall apply to the total parking calculation.

(iii) On-Street Parking. Where there is on-street parking abutting the front property line of any lot or parcel, the minimum off-street parking requirement may be reduced by the Director by one (1) space for each on street space located entirely or partially between two (2) lines formed by the extension (without turning) of the side lot lines of the lot or parcel into the street right-of-way. space for each on street space located entirely or partially between two (2) lines formed by the extension (without turning) of the side lot lines of the lot or parcel into the street right-of-way.

(iv) Electric Vehicle Parking. As required by Section 15.28, Electrical Vehicle Charging Standards, Avon Buildings and Construction, the quantity and location of EV parking spaces must be demonstrated at design review.

Section 3. Amendment to Chapter 15.10.010- International Residential Code. – Additions or modifications. Chapter 15.10.10 is hereby amended to read as follows underline indicating language to be adopted:

- a) Section 6.9 of the Town Charter provides that standards codes may be adopted by reference with amendments. The Town adopts the 2015 International Residential Code for One- and Two-Family Dwellings, excluding Chapters 36, 37, 38, 39 and 40 and including Appendix G and U.

Section 4. Amendment to Chapter 15.10.020 - International Residential Code. – Additions or modifications. Chapter 15.10.20 is hereby amended to read as follows with ~~strike-out~~ indicating language to be deleted and underline indicating language to be adopted:

The 2015 International Residential Code for One- and Two-Family Dwellings is amended and changed as described in Sections 15.10.030 through 15.10.1460 of this Chapter.

Section 5. Amendment to Chapter 15.26.020 - International Energy Efficiency Code. – Additions or modifications. Chapter 15.10.20 is hereby amended to read as follows with ~~strike-out~~ indicating language to be deleted and underline indicating language to be adopted:

The 2015 International Energy Conservation Code is amended and changed as described in Sections 15.26.030 through 15.26.046 of this Chapter.

Section 6. Amendment to Chapter 15.10.150 - Solar-Ready; and Chapter 15.26.050-Solar-Ready. Chapter 15.10.150 and 15.26.050 are hereby amended to read as follows with ~~strike-out~~ indicating language to be deleted and underline indicating language to be adopted:

Code Language: 2015 IECC Appendix RB & IRC Appendix U

RB103.1/U103.1 General

New detached one- and two-family dwellings and multiple single-family dwellings (townhouses) with not less than 600 square feet of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RB103.2 through RB103.8.

Exceptions:

1. New residential buildings with a permanently installed on-site renewable energy system.
2. A building with a solar-ready zone that is shaded for more than 70 percent of daylight hours.

RB103.2 / U103.2 Construction document requirements for solar-ready zone.

Construction documents shall indicate the solar-ready zone.

RB103.3 / U103.3 Solar-ready zone area.

The total solar-ready zone area shall not be less than 300 square feet exclusive of mandatory access or set back areas as required by the International Fire code. New multiple single-family dwellings (townhouses) three stories or less in height above grade plane with a total floor area less than or equal to 2,000 square feet per dwelling shall have a solar-ready zone area of not less than 150 square feet. The solar-ready zone shall be composed of areas not less than 5 feet in width and not less than 80 square feet exclusive of access or set back areas as required by the International Fire code.

RB103.4 / U103.4 Obstructions.

Solar-ready zones shall be free from obstructions, including but not limited to vents, chimneys, and roof-mounted equipment.

RB103.5 / U103.5 Roof Load Documentation.

The structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

RB103.6 / U103.6 Interconnection pathway.

Construction documents shall indicate pathways for routing of conduit or plumbing from the solar-ready zone to the electrical service panel or service hot water system.

RB103.7 / U103.7 Electrical service reserved space. ~~The main electrical service panel shall have a reserved space to allow installation of a dual circuit breaker for future solar electric installation and shall be labeled “For Future Solar Electric “. The reserved space shall be poisoned at the opposite (load) end from the input feeder location or main circuit location.~~

The primary Electrical service installed must be a minimum of a 200-amp all-in-one solar ready load center for one and two family dwellings or townhouses. The supply conduit must be a minimum of 2 inches.

RB103.8 / U103.8 Construction documentation certificate.

A permanent certificate, indicating the solar-ready zone and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

Section 7. Amendment to Chapter 15.10.160 - More Efficient Furnace and Boiler Equipment for Residential and Commercial . Additions or modifications; Chapter 15.10.160 is hereby amended to read as follows with **underline** indicating language to be adopted:

Code Language: 2015 IRC

N1103.7 (R403.7) Equipment sizing and efficiency rating (Mandatory). Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed. All Gas fired boilers and furnaces shall have a minimum efficiency of 92% AFUE. A condensate riser with a trap attached to the drain system must have neutralizer draining into the sanitary sewer system.

Section 8. Amendment to Chapter 15.26.060 - International Energy Conservation Code. – Additions or modifications. Chapter 15.26.060 is hereby amended to read as follows with **strike-out** indicating language to be deleted and **underline** indicating language to be adopted:

Code Language: 2015 IECC

TABLE 403.2.3(4)

WARM-AIR FURNACES AND COMBINATION WARM-AIR FURNACES/AIR-CONDITIONING UNITS, WARM-AIR DUCT FURNACES AND UNIT HEATERS, MINIMUM EFFICIENCY REQUIREMENTS

EQUIPMENT TYPE	SIZE CATEGORY (INPUT)	SUBCATEGORY OR RATING CONDITION	MINIMUM EFFICIENCY	TEST PROCEDURE
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Warm-air furnaces, gas fired	<225,000 Btu/h	-	78% AFUE -92% AFUE or 80% Et	DOE 10 CFR Part 430 or ANSI Z21.47
	≥ 225,000 Btu/h	Maximum capacity	80% Et -92% Et	ANSI Z21.47
Warm-air furnaces oil fired	<225,000 BTU/h	-	78% AFUE -92% AFUE or 80% Et	DOE 10 CFR Part 430 or UL 727
	≥ 225,000 Btu/h	Maximum capacity	81% Et -92% Et	UL 727
Warm-air duct furnaces, gas fired	All capacities	Maximum capacity	80% Et -92% Et	ANSI Z83.8
Warm-air unit heaters gas fired	All capacities	Maximum capacity	80% Et -92% Et	ANSI Z83.8
Warm-air heaters, oil fired	All capacities	Maximum capacity	80% Et -92% Et	UL 731

**TABLE C403.2.3(5)
MINIMUM EFFICIENCY REQUIREMENTS: GAS- AND OIL-FIRED BOILERS**

EQUIPMENT TYPE	SUBCATEGORY OR RATING CONDITION	SIZE CATEGORY (INPUT)	MINIMUM EFFICIENCY	TEST PROCEDURE
Boilers, hot water	Gas-fired	<300,000 Btu/h	80% AFUE 92% AFUE	10 CFR Part 430
		≥ 300,000 Btu/h And ≤ 2,500,000 Btu/h	80% Et -92% Et	10 CFR Part 431
		> 2,500,000 Btu/h	82% Et -92% Et	
	Oil-fired	<300,000 Btu/h	90% AFUE 92%	10 CFR Part

			<u>AFUE</u>	430
		≥ 300,000 Btu/h And ≤ 2,500,000 Btu/h	82% Et <u>92% Et</u>	10 CFR Part 431
		> 2,500,000 Btu/h	84% Et <u>92% Et</u>	
Boilers, steam	Gas-fired	<300,000 Btu/h	75% Et <u>92% Et</u>	10 CFR Part 430
	Gas-fired -all, except natural draft	≥ 300,000 Btu/h And ≤ 2,500,000 Btu/h	79% Et <u>92% Et</u>	10 CFR Part 431
		> 2,500,000 Btu/h	79% Et <u>92% Et</u>	
	Oil-fired	<300,000 Btu/h	80% AFUE <u>92% AFUE</u>	10 CFR Part 430
		≥ 300,000 Btu/h And ≤ 2,500,000 Btu/h	81% Et <u>92% Et</u>	10 CFR Part 431
		> 2,500,000 Btu/h	81% Et <u>92% Et</u>	

Section 9. Amendment to Chapter 15 - Electric Vehicle Charging Standards. Chapter 15.28 is hereby enacted to read as follows with **underline** indicating language to be adopted:

15.28 – Electrical Vehicle Charging Standards

15.28.010 - Intent and Purpose.

The purpose of the Electric Vehicle (EV) Charging Standards is to accommodate the growing need for electric vehicles.

15.28.020 – Definitions

As used in this Chapter, the following terms shall have the meaning indicated:

Electric Vehicle Supply Equipment (EVSE) Installed means the installation of a Level 2 EV charging station.

EV Capable means the installation of electrical panel capacity with a dedicated branch circuit and a continuous raceway from the panel to the future EV parking spot(s).

EV Ready means the installation of electrical panel capacity and raceway with conduit to terminate in a junction box or 240-volt charging outlet.

Level 2 means an EVSE capable of charging at 30 amperes or higher at 208 or 240 VAC. An EVSE capable of simultaneously charging at 30 amperes for each of two vehicles shall be counted as two Level 2 EVSE.

Level 3 means an EVSE with technology known as DC fast charging, charging through a 480V direct current plug.

15.28.030 – Applicability

The standards in this Chapter apply to all new residential R3 (single family, duplex, townhouse) and all new non-residential, mixed use, and/or multi-family exterior energy uses.

15.28.040 Electric Vehicle Charging

The building shall be provided with electric vehicle charging in accordance with this section and the National Electrical Code. When parking spaces are added or modified without an increase in building size, only the new parking spaces are subject to this requirement

(a). R3 occupancies. Structures shall be provided with EV charging in accordance with Table 1. Calculations for the number of spaces shall be rounded up to the nearest whole number. All Electric Vehicle Supply Equipment (EVSE) Installed, EV Ready and EV Capable Spaces are to be included in the calculation for the number of minimum vehicle spaces required, as provided by the applicable article of the Avon Development Code as amended below.

Table 1. Residential EV Requirements

	<u>Number of EV Capable Spaces</u>	<u>Number of EVSE Ready Spaces</u>	<u>Number of EVSE Installed Spaces</u>
<u>1 to 6 spaces</u>	<u>None</u>	<u>1</u>	<u>None</u>
<u>7 or more spaces</u>	<u>15% of spaces</u>	<u>10% of spaces</u>	<u>5% of spaces</u>

(b) All non-residential and mixed-use occupancy groups. Structures shall be provided with EV charging in accordance with Table 2. Calculations for the number of spaces shall be rounded up to the nearest whole number. All EVSE Installed, EV Ready and EV Capable Spaces are to be included in the calculation for the number of minimum vehicle spaces required, as provided by the Avon Development Code.

Table 2. Non-residential and Mixed-Use EV Requirements

	<u>Number of EV Capable Spaces</u>	<u>Number of EV Ready Spaces</u>	<u>Number of EVSE Installed Spaces</u>
<u>1 space</u>	<u>None</u>	<u>1</u>	<u>None</u>
<u>2 to 9 spaces</u>	<u>None</u>	<u>1</u>	<u>1</u>
<u>10 or more spaces</u>	<u>15% of spaces</u>	<u>10% of spaces</u>	<u>5% of spaces</u>
<u>Note: The number of electric vehicle supply equipment installed spaces may be reduced by up to five provided that the building includes not less than one parking space equipped with an EV Level III and not less than one electric vehicle ready space</u>			

15.28.050. Submittal Requirements.

Construction documents shall designate all EV capable spaces, EV ready spaces EVSE spaces, and EV supply equipment installed spaces, and indicate the locations of conduit, sizing, and termination points. The circuit breakers or circuit breaker spaces reserved for the EV capable spaces, EV ready spaces, and EV supply equipment installed spaces shall be clearly identified in the load center. The conduit for EV capable spaces shall be clearly identified at both the load center and the termination point at the parking space.

15.28.060. Accessible parking

Where new accessible parking is provided, at least one accessible parking space shall be EV Ready.

Section 10. Severability. If any provision of this Ordinance, or the application of such provision to any person or circumstance, is for any reason held to be invalid, such invalidity shall not affect other provisions or applications of this Ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this Ordinance are declared to be severable. The Town Council hereby declares that it would have passed this Ordinance and each provision thereof, even though any one of the provisions might be declared unconstitutional or invalid. As used in this Section, the term “provision” means and includes any part, division, **Ord 20-05 Chapter 7 and 15 Amendments April 28, 2020**

subdivision, section, subsection, sentence, clause or phrase; the term “application” means and includes an application of an ordinance or any part thereof, whether considered or construed alone or together with another ordinance or ordinances, or part thereof, of the Town.

Section 11. Effective Date. This Ordinance shall take effect thirty days after the date of final passage in accordance with Section 6.4 of the Avon Home Rule Charter.

Section 12. Safety Clause. The Town Council hereby finds, determines and declares that this Ordinance is promulgated under the general police power of the Town of Avon, that it is promulgated for the health, safety and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare. The Town Council further determines that the Ordinance bears a rational relation to the proper legislative object sought to be obtained.

Section 13. No Existing Violation Affected. Nothing in this Ordinance shall be construed to release, extinguish, alter, modify, or change in whole or in part any penalty, liability or right or affect any audit, suit, or proceeding pending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing which may have been incurred or obtained under any ordinance or provision hereby repealed or amended by this Ordinance. Any such ordinance or provision thereof so amended, repealed, or superseded by this Ordinance shall be treated and held as remaining in force for the purpose of sustaining any and all proper actions, suits, proceedings and prosecutions, for the enforcement of such penalty, liability, or right, and for the purpose of sustaining any judgment, decree or order which can or may be rendered, entered, or made in such actions, suits or proceedings, or prosecutions imposing, inflicting, or declaring such penalty or liability or enforcing such right, and shall be treated and held as remaining in force for the purpose of sustaining any and all proceedings, actions, hearings, and appeals pending before any court or administrative tribunal.

Section 14. Codification of Amendments. The codifier of the Town’s Municipal Code, Colorado Code Publishing, is hereby authorized to make such numerical and formatting changes as may be necessary to incorporate the provisions of this Ordinance within the Avon Municipal Code. The Town Clerk is authorized to correct, or approve the correction by the codifier, of any typographical error in the enacted regulations, provided that such correction shall not substantively change any provision of the regulations adopted in this Ordinance. Such corrections may include spelling, reference, citation, enumeration, and grammatical errors.

Section 15. Publication. The Town Clerk is ordered to publish this Ordinance in accordance with Chapter 1.16 of the Avon Municipal Code.

[SIGNATURE PAGE FOLLOWS]

INTRODUCED AND ADOPTED ON FIRST READING AND REFERRED TO PUBLIC HEARING on April 28, 2020 and setting such public hearing for May 12, 2020 at the Council Chambers of the Avon Municipal Building, located at One Hundred Mikaela Way, Avon, Colorado.

BY:

ATTEST:

Sarah Smith Hymes, Mayor

Brenda Torres, Town Clerk

ADOPTED ON SECOND AND FINAL READING on May 12, 2020.

BY:

ATTEST:

Sarah Smith Hymes, Mayor

Brenda Torres, Town Clerk

APPROVED AS TO FORM:

Paul Wisor, Town Attorney