

**TOWN OF SUPERIOR
ORDINANCE NO. O-2
SERIES 2022**

AN ORDINANCE OF THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR ADOPTING THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE BY REFERENCE, IN ADDITION TO MAINTAINING THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE AS AN OPTION FOR RESIDENTIAL PROPERTIES IMPACTED BY THE 2021 MARSHALL FIRE

WHEREAS, Chapter 18 of the Superior Municipal Code establishes the Town's building regulations through the adoption by reference of various national and international building codes, including the International Energy Conservation Code;

WHEREAS, the Board of Trustees wishes to adopt the most recent version of the International Energy Conservation Code by reference, with amendments, as well as new Appendices CD and RD, to address electric vehicle readiness for commercial buildings; and

WHEREAS, the Board of Trustees wishes to provide an opt-out provision to the 2021 International Energy Conservation Code and build to the 2018 version of the International Energy Conservation Code for properties impacted by the 2021 Marshall Fire.

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF SUPERIOR, COLORADO, AS FOLLOWS:

Section 1. Section 18-9-10 of the Superior Municipal Code is hereby repealed in its entirety and reenacted as follows:

Sec. 18-9-10. – Adoption.

(a) Pursuant to C.R.S. § 31-16-202, the International Energy Conservation Code, 2021 edition (the "2021 IECC"), published by the International Code Council, 500 New Jersey Avenue NW, 6th Floor, Washington, DC 20001, is hereby adopted by reference, including Appendices CB and RB, and new Appendices CD and RD as set forth in Section 18-9-20. The subject matter of the IECC includes the design of energy-efficient building and energy-efficient mechanical, lighting and power systems for the purpose of protecting the public health, safety and welfare. The 2021 IECC, as amended in this Article, shall apply to all property within the Town except as provided in subsection (b) hereof.

(b) Pursuant to C.R.S. § 31-16-202, the International Energy Conservation Code, 2018 edition (the "2018 IECC"), published by the International Code Council, 500 New Jersey Avenue NW, 6th Floor, Washington, DC 20001, is hereby

adopted by reference. The subject matter of the 2018 IECC includes the design of energy-efficient building and energy-efficient mechanical, lighting and power systems for the purpose of protecting the public health, safety and welfare. The 2018 IECC, as amended in this Article, shall apply only to those residential properties within the Town impacted by the 2021 Marshall Fire, as indicated on the address list maintained by the Town Clerk's office, if the property owner determines that the 2018 IECC should apply rather than the 2021 IECC. The intent of this subsection is to allow the owner of a residential property impacted by the 2021 Marshall Fire to "opt out" of the 2021 IECC, as long as the residential property is still owned by the record owner(s) of the residential property as of December 30, 2021. Subsequent owners of the residential property shall not be eligible to "opt out" of the 2021 IECC.

Section 2. Section 18-9-20 of the Superior Municipal Code is repealed in its entirety and reenacted as follows:

Sec. 18-9-20. – Amendments.

- (a) The 2018 IECC is hereby amended as follows:
 - (1) Replace the last part of Sections C108.4 and R108.4 beginning with "liable to a fine...;" with the following: "subject to penalties as prescribed by law."
 - (2) Delete Section C109.3 in its entirety.
- (b) The 2021 IECC is hereby amended as follows:
 - (1) Amend Section C101.3 to include the following sentence after the first sentence: "Additionally, this code provides supplemental requirements, including ASHRAE 90.1, prescriptive- and performance-based pathways, and appendices that incorporate additional energy efficiency and greenhouse gas reduction resources including net zero energy buildings and electric vehicle infrastructure."
 - (2) Replace the last phrase of Sections C109.4 and R109.4 beginning with "subject to fines..." with the following: "subject to penalties as prescribed by law."
 - (3) Delete Section C110.3 in its entirety.
 - (4) Amend Section C202 by the addition of the following definitions, to appear in alphabetical order:
 - All-Electric Building:* A building that contains no combustion equipment, or plumbing for combustion equipment, installed with the building or building site.
 - Combustion equipment:* Any equipment or appliances used for space heating, service water heating, cooking, clothes drying or lighting that uses fuel gas or fuel oil.
 - (5) Amend Section 401.1.1 to read as follows:

Section 401.1.1. – Commercial buildings. Commercial buildings shall be all-electric buildings unless the fuel gas options of C403.3.2 and the additional electric infrastructure requirements of C405.14 are met.

(6) Amend Section C403.3.2 to read as follows:

Section C403.3.2. – HVAC/fuel fired equipment performance requirements. Unless built all-electric, all new combustion equipment shall comply with the more efficient HVAC equipment performance of Sections C406.2, C406.2.3 and C406.2.4 and the additional electric infrastructure requirements in Section C405.14. A mechanical compliance certificate demonstrating compliance with Section C406.2.3 or C406.2.4 shall be required for all HVAC, fuel fired and Service Water Heating equipment. The efficiency shall be verified through certification or an approval certification program or, where a certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer. Where multiple rating conditions or performance requirements are provided, the equipment shall satisfy all stated requirements. Where components, such as indoor or outdoor coils, from different manufacturers are used, calculations and supporting data shall be furnished by the designer that demonstrates that the combined efficiency of the specified components meets the requirements herein. (Tables C403.2.(1) through (16) are expressly retained and remain applicable to HVAC equipment performance).

Exceptions:

- a. Factory, laboratory, and high hazard occupancy combustion equipment, except for HVAC and domestic water heating.
- b. Commercial kitchens.
- c. Other combustion equipment approved by the building official based on demonstration by the applicant that compliance with this Section is not feasible and the equipment proposed is the most efficient appliance reasonably available.

(7) Amend Section C405.5.3 to read as follows:

Section C405.5.3. – Gas lighting. Gas fired lighting appliances are not permitted.

(8) Add a new Section C405.14 to read as follows:

Section C405.14 Additional electric infrastructure. Combustion equipment shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the appliance or equipment and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric appliance, equipment or end use with an equivalent equipment capacity. The electrical junction box

and electrical panel shall have labels stating: "For future electric equipment."

Exceptions:

1. Industrial and manufacturing uses.
2. Combustion equipment and end uses serving individual dwelling units or sleeping units complying with Section R404.5.

(9) Amend Section C406 to read as follows:

Add Section C406.1.2 Buildings containing fuel burning appliances. Buildings containing fuel burning appliances that must also comply with Section C403.3.2 shall not use any options chosen for compliance with that section towards the points requirements required in C406.1.

(10) Amend Section C505.1 to read as follows:

C505.1. – General. Where the use in a space changes from a use in Table C405.3.2(1) or C405.3.2(2) to another use in Table C405.3.2(1) or C405.3.2(2), the installed lighting wattage shall comply with Section C405.3. Where the space undergoing a change in occupancy or use is in a building with a fenestration area that exceeds the limitations of Section C402.4.1, the space is exempt from Section C402.4.1 provided that there is not an increase in fenestration area.

Exception: Egress doors with fenestration are allowed to bring total fenestration percentages over the allowed maximum amount of vertical fenestration.

(11) Amend Section R101.3 to include the following sentence after the first sentence: "Additionally, this code provides supplemental requirements, including prescriptive- and performance-based pathways, and appendices that incorporate additional energy efficiency and greenhouse gas reduction resources including net zero energy buildings and electric vehicle infrastructure."

(12) Amend Section R202 by the addition of the following definitions, to appear in alphabetical order:

All-Electric building: A building that contains no combustion equipment, or plumbing for combustion equipment, installed in the building or on the building site.

Combustion equipment: Any equipment or appliance used for space heating, service water heating, cooking, clothes drying or lighting that uses fuel gas or fuel oil.

(13) Amend Section R401.2 to read as follows:

Section R401.2. – Application. Residential buildings shall be all-electric buildings unless the fuel gas options of R403.7 and the additional electric infrastructure requirements of R404.5 are met.

Exception: Additions, alterations, repairs and changes of occupancy to existing buildings complying with Chapter 5.

(14) Amend Section R402.4.1.2 to read as follows:

Section R402.4.1.2. – Testing. All new buildings, dwelling units, and additions over 500 square feet that are heated or cooled shall be tested for air leakage.

(15) Amend Section R403.7 to read as follows:

Section R403.7. – Equipment sizing and efficiency rating. All conditioned new buildings and additions greater than 500 square feet shall have heating and cooling equipment that is 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. In addition to complying with Section R404.6, new and replacement electrical 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. New gas heating equipment shall comply with the following efficiencies:

a. Gas furnaces shall have a minimum of 96% efficiency, or be not less than the Federal minimum efficiency requirements, and shall also include one additional option from Section R408.

b. Gas boilers shall have a minimum of 90% AFUE, or be not less than the Federal minimum efficiency requirements, and shall also include one additional option from Section R408.

c. On demand water heaters shall have a greater than 0.92 uniform energy factor, or be not less than the Federal minimum efficiency requirements, and shall also include one additional option from Section R408.

d. Gas-fired storage water heaters that are less than or equal to 55 gallons shall have a uniform energy factor greater than or equal to 0.64 for medium draw pattern systems or greater than or equal to 0.68 for high draw pattern systems. Gas-fired storage water heaters that are greater than 55 gallons shall have a uniform energy factor greater than or equal to 0.78 for medium draw pattern systems or greater than or equal to 0.80 for high draw pattern systems. Alternately, gas-fired storage water heaters shall be not less than the Federal minimum efficiency requirements and shall also include one additional option from Section R408.

Exception: Solid fuel stoves/gas fireplaces, outdoor fire pits, gas stoves and ovens.

(16) Amend Section R404.1.1 to read as follows:

Section R404.1.1. – Fuel gas lighting. Fuel gas lighting systems are prohibited.

(17) Add a new Section R404.5 to read as follows:

Section R404.5. – Additional electric infrastructure. Combustion equipment shall be installed to meet the additional electric infrastructure requirements of this Section.

Section R404.5.1. – Combustion equipment and end uses. Combustion equipment shall be provided with a dedicated, appropriately phased circuit that shall have a minimum amperage requirement for a comparable electric appliance, equipment or end use, an electrical receptacle or junction box that is connected to the electric panel, and conductors of adequate capacity within 6 feet (1829 mm) of the appliance or equipment. Each such circuit shall have ready access with no obstructions. A reserved circuit breaker space shall be installed in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled for each circuit. Both ends of the unused conductor or conduit shall be labeled "For Future Electric Equipment" and be electrically isolated.

(18) Add "including new multiple-family dwellings containing three or more units, but excluding townhouses, and major commercial alterations" after "new construction" in Appendix CB Section CB101.1.

(19) Amend Appendix CB Section CB102 by the addition of the following definition, to appear in alphabetical order:

Major commercial alteration. A commercial building upon which work is being conducted where the work area exceeds 50% of the aggregate area of the building.

(20) Add Appendix CD to read as follows:

**APPENDIX CD
EV READINESS – COMMERCIAL**

Section CD100. – Purpose and intent. The purpose and intent of this Appendix CD is to advance the installation of EV charging infrastructure. Including these measures during initial commercial construction and major commercial alterations substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

Section CD101. – Applicability. This Appendix CD shall apply to new construction and major commercial alterations. Notwithstanding the foregoing, this Appendix CD shall not apply to:

- a. A complete application for building permit for new commercial construction or major commercial alterations submitted on or before the effective date of the Town's ordinance adopting this Appendix CD, if the permit is issued with 180 days after the application was filed with the Town or within an additional period of time authorized by the building official;
- b. A commercial development that, as of the effective date of the Town's ordinance adopting this Appendix CD, has a valid building permit

in effect, if all applicable building permit fees have been paid, such development project is confined to the limits, provisions, and conditions of its existing Town approvals, and such building permit does not expire or is not otherwise invalidated;

c. A residential development that, as of the effective date of the Town's ordinance adopting this Appendix CD, has a valid building permit in effect, if all applicable building permit fees have been paid, such development project is confined to the limits, provisions, and conditions of its existing Town approvals, and such building permit does not expire or is not otherwise invalidated; and

Section CD102. – Definitions.

Electric vehicle ("EV"): A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

EV Capable space: A designated parking space that is provided with conduit sized for a 40-amp, 208/240-Volt dedicated branch circuit from a building electrical panel board to the parking space and with sufficient physical space in the same building electrical panel board to accommodate a 40-amp, dual-pole circuit breaker.

EV fast charger: EVSE with a minimum power output of 20kW.

EV Installed space: A parking space with EVSE capable of supplying a 40-amp dedicated branch circuit rated at 208/240 Volt from a building electrical panel board.

EV load management system: A system designed to allocate charging capacity among multiple EVSE at a minimum of 8 amps per charger.

EV Ready space: A parking space that is provided with one 40-amp, 208/240-Volt dedicated branch circuit for EVSE that is terminated at a receptacle, junction box, or EVSE within the parking space.

EV supply equipment ("EVSE"): The electrical conductor and associated equipment external to the EV that provide a connection between the premises wiring and the EV to provide EV charging.

Level II charging space: A parking space that is capable of charging an EV at 30 amperes or higher at 208/240 Volt from a building electrical panel board.

Major commercial alteration. A commercial building upon which work is being conducted where the work area exceeds 50% of the aggregate area of the building.

Section CD103. – Electric vehicle spaces for new construction and major commercial alterations. EV spaces shall be provided in accordance with this Section, the NEC and Table CD103.1. When the calculation results in a fractional parking space, the number shall be rounded up to the next whole number. When parking spaces are added or modified without an increase in building size or a major commercial alteration, only the new parking spaces are subject to this requirement.

The service panel or subpanel circuit directory shall identify the space(s) as EV Capable or EV Ready. The raceway location shall be permanently and visibly marked as EV Capable. The number of EV Capable spaces may be reduced by 4 spaces for each additional 1 EV Ready Space provided. Likewise, one EV fast charger space may substitute for 5 Level II charging spaces.

Table CD103.1

Total # of Parking Spaces	Minimum # of EV Ready Spaces	Minimum # of EV Capable Spaces	Minimum # of EVSE Installed Spaces
1 or more	20%	20%	10%

Section CD104. – Commercial multi-family (R-2), 4-stories or greater. EV ready spaces and EV capable spaces shall be provided in accordance with Table CD104.1. When the calculation of percent served results in a fractional parking space, the number shall be rounded up to the next whole number. The service panel or subpanel circuit directory shall identify the space(s) as EV Capable or EV Ready. The raceway location shall be permanently and visibly marked as EV Capable. The number of EV Capable spaces may be reduced by 4 spaces for each additional one EV Ready space provided.

Table CD104.1

Total # of Parking Spaces	Minimum # of EV Ready Spaces	Minimum # of EV Capable Spaces	Minimum # of EVSE Installed Spaces
1 or more	25%	50%	25%

Section CD105. – Disbursement. In commercial multi-family (R-2) complexes, 4 stories or greater, that contain multiple buildings, required EV Ready spaces and EV Capable spaces shall be disbursed throughout parking areas so that each building has access to the same number of spaces.

Section CD106. – Identification. Construction documents shall designate all EV Capable spaces, EV Ready spaces and EV Installed spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the EV Capable spaces, EV Ready spaces, and EV Installed spaces shall be clearly identified in the panel board directory. The conduit for EV Capable spaces shall be clearly identified at both the panel board and the termination point at the parking space.

Section CD107. – Accessible parking. Where new EV spaces and new accessible parking are both provided, parking facilities shall be designed so that at least one accessible parking space is an EV Ready space or EV Installed space.

Section CD108. – EV System Protection. All EV equipment shall be listed in all construction document submittals, and installed in accordance with NEC Article 625. The construction drawings shall illustrate how receptacles are protected from damage by vehicles, lawn and other equipment. Equipment shall also be placed to avoid trip hazards and obstruction of sidewalks and pedestrian access.

(21) Add Appendix RD to read as follows:

**APPENDIX RD
EV READINESS – RESIDENTIAL**

Section RD100. – Purpose and intent. The purpose and intent of this Appendix RD is to advance the installation of EV infrastructure. Including these measures during initial residential construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

Section RD101. – Applicability. This Appendix RD shall apply to new residential construction. Notwithstanding the foregoing, this Appendix RD shall not apply to:

- a. A completed application for building permit for new construction of, or major alteration to a single-family, two-family or multi-family residential dwelling of 3 stories or less that has been submitted on or before the effective date of the Town's ordinance adopting this Appendix RD, so long as the permit is issued with 180 days after the application was filed with the Town or within an additional period of time authorized by the building official;
- b. A residential development that, as of the effective date of the Town's ordinance adopting this Appendix RD, has a valid building permit in effect, so long as all applicable building permit fees have been paid, such development project is confined to the limits, provisions, and conditions of its existing Town approvals, and that such building permit does not expire or is not otherwise invalidated; and

Section RD102. – Definitions.

Electric vehicle ("EV"): A vehicle registered for on-road use, primarily powered by an electric motor that draws current from a rechargeable storage source that is charged by being plugged into an electrical current source.

EV Capable space: A designated parking space that is provided with conduit sized for a 40-amp, 208/240-Volt dedicated branch circuit from a building electrical panel board to the parking space and with sufficient physical space in the same building electrical panel board to accommodate a 40-amp, dual-pole circuit breaker.

EV fast charger: EVSE with a minimum power output of 20 kW.

EV Installed space: A parking space with EVSE capable of supplying a 40-amp dedicated branch circuit rated at 208/240 Volt from a building electrical panel board.

EV load management system: A system designed to allocate charging capacity among multiple EVSE at a minimum of 8 amps per charger.

EV Ready space: A parking space that is provided with one 40-amp, 208/2400-Volt dedicated branch circuit for EVSE that is terminated at a receptacle, junction box, or EVSE within the parking space.

EV supply equipment ("EVSE"): The electrical conductors and associated equipment external to the EV that provide a connection between the premises wiring and the EV to provide electric charging.

Level II charging space: A parking space that is capable of charging an EV at 30 amperes or higher at 208/240 Volt from a building electrical panel board.

Section RD103. – One- and two- family dwellings and townhouses. One EV Ready space shall be provided for each dwelling unit. The branch circuit shall be identified as EV Ready in the service panel or subpanel directory, and the termination location shall be marked as EV Ready. EV Ready spaces are not required where no parking spaces are required.

Section RD 104. – Residential multi-family dwellings (R-2), 3 stories or less. EV Ready spaces and EV Capable spaces shall be provided in accordance with Table RD104.1. When the calculation results in a fractional parking space, the number shall be rounded up to the next whole number. The service panel or subpanel circuit directory shall identify the space(s) as EV Capable or EV Ready. The raceway location shall be permanently and visibly marked as EV Capable. The required number of EV Capable shall be reduced by 4 spaces for each additional EV Ready space provided.

Table RD104.1

Total # of Parking Spaces	Minimum # of EV Ready Spaces	Minimum # of EV Capable Spaces	Minimum # of EVSE Installed Spaces
1 or more	25%	50%	25%

Section RD105. – Disbursement. In residential multi-family (R-2) complexes, 3 stories or less, that contain multiple buildings, required EV Ready spaces, EV Capable spaces and EV Installed spaces shall be disbursed throughout parking areas so that each building has access to the same number of spaces.

Section RD106. – Identification. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE.

Section RD107. – Accessible Parking. Where new EV spaces and new accessible parking are both provided, parking facilities shall be designed so that at least one accessible parking space is an EV Ready space or EV Installed space.

Section RD108. – EV System Protection. All EV equipment shall be listed in all construction document submittals and installed in accordance with NEC Article 625, to ensure safety of individuals and to the equipment. The construction drawings shall illustrate how receptacles are protected from damage by vehicles, lawn and other equipment. Equipment shall also be placed to avoid trip hazards and obstruction of sidewalks and pedestrian access.

Section 3. Severability. If any article, section, paragraph, sentence, clause, or phrase of this Ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this Ordinance. The Board of Trustees hereby declares that it would have passed this Ordinance and each part or parts hereof irrespective of the fact that any one or part or parts be declared unconstitutional or invalid.

Section 4. Safety. This Ordinance is deemed necessary for the protection of the health, welfare, and safety of the community.

Section 5. Effective Date. This Ordinance shall take effect 30 days following publication following adoption.

INTRODUCED, READ, PASSED AND ORDERED PUBLISHED this 28th day of February, 2022.



DocuSigned by:
Clint Folsom
03847D2E402D482...

Clint Folsom, Mayor

ATTEST:

Patricia Leyva
Patricia Leyva, Town Clerk