TOWN OF TIMNATH, COLORADO
ORDINANCE NO. 19, SERIES 2025

AN ORDINANCE ADOPTING BY REFERENCE THE INTERNATIONAL BUILDING CODE, 2024 EDITION, THE INTERNATIONAL RESIDENTIAL CODE, 2024 EDITION, THE INTERNATIONAL FUEL GAS CODE, 2024 EDITION, THE INTERNATIONAL PLUMBING CODE, 2024 EDITION, THE INTERNATIONAL MECHANICAL CODE, 2024 EDITION, THE INTERNATIONAL EXISTING BUILDING CODE, 2024 EDITION, THE INTERNATIONAL PROPERTY MAINTENANCE CODE, 2024 EDITION, THE INTERNATIONAL SWIMMING POOL AND SPA CODE, 2024 EDITION, AND THE INTERNATIONAL ENERGY CONSERVATION CODE, 2024 EDITION, PROMULGATED BY THE INTERNATIONAL CODE COUNCIL.

WHEREAS, the Town of Timnath (the "Town") is a home rule municipality operating under the Timnath Home Rule Charter (the "Charter") adopted on November 7, 2006, as amended and the Town's Municipal Code (the "Municipal Code"). Pursuant to the Charter, the Municipal Code and the authority given home rule municipalities, the Town may adopt and amend ordinances; and

WHEREAS, Sec. 31-16-202, C.R.S. allow local governmental entities to enact an ordinance which adopts any code by reference in whole or in part, and such primary code thus adopted may in turn adopt by reference, in whole or in part, any secondary codes described therein; and

WHEREAS, the Town of Timnath wishes to amend its Municipal Code to adopt by reference the International Building Code (2024 Edition); The International Residential Code for One– and Two–Family Dwellings (2024 Edition); The International Fuel Gas Code (2024 Edition); The International Plumbing Code (2024 Edition); The International Mechanical Code (2024 Edition); The International Existing Building Code (2024 Edition); The International Property Maintenance Code (2024 Edition); The International Swimming Pool and Spa Code (2024 Edition); and The International Energy Conservation Code (2024 Edition), all as Promulgated by the International Code Council, Inc, 4051 West Flossmoor Road, Country Club Hills, Illinois 60478-5795, with specified amendments to each, as set forth herein.

NOW, THEREFORE, THE COUNCIL OF THE TOWN OF TIMNATH, COLORADO, ORDAINS:

ARTICLE 1. The Town Council hereby adopts by reference the International Building Code (2024 Edition); The International Residential Code for One– and Two–Family Dwellings (2024 Edition); The International Fuel Gas Code (2024 Edition); The International Plumbing Code (2024 Edition); The International Mechanical Code (2024 Edition); The International Existing Building Code (2024 Edition); The International Property Maintenance Code (2024 Edition); The International Swimming Pool and Spa Code (2024 Edition); and The International Energy Conservation Code (2024 Edition), all as Promulgated by the International Code Council, Inc,

4051 West Flossmoor Road, Country Club Hills, Illinois 60478-5795, with specified amendments to each, as set forth herein.

ARTICLE 2. International Building Code

Sections 18-1-10 and 18-1-30 of Chapter 18 (Building Regulations), Article 1 (Building Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-1-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International* Building Code, 2024 edition, as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 35 inclusive and Appendix Chapter I, as if fully set out in this Article, with the additions, deletions, insertions and changes set forth in Section 18-1-30 below. The subject matter of the adopted code includes comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of buildings and structures for the purpose of protecting the public health, safety and general welfare.

Sec. 18-1-30 – Amendments

The code adopted herein is hereby modified by the following amendments:

(1) **IBC Section 101.1** IBC Section 101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IBC Section 101.4.3** IBC Section 101.4.3 (Plumbing) is amended by deletion of the last sentence.

(3) **IBC Section 101.4.5** IBC Section 101.4.5 (Fire prevention) is amended by replacing "International Fire Code" with "adopted fire code".

(4) **IBC Section 101.4.6** IBC Section 101.4.6 (Energy) is amended by replacing the words "International Energy Conservation Code" to "2024 International Energy Conservation Code".

(5) **IBC Section 103.1** IBC Section 103.1 (Creation of Enforcement Agency) is amended by adding "Town of Timnath" where indicated.

(6) **IBC Section 105.1** IBC Section 105.1 (Required) is amended by replacing the words "Building Official" with "Town of Timnath".

(7) **IBC Section 105.2** IBC Section 105.2 (Work exempt from permit) is amended by deleting:

a. Exception #1 and replacing with "One-Story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet, and the roof height does not exceed 10 feet above grade measured from a point directly outside the exterior walls of the structure."

b. Exception #2 is deleted in its entirety and replaced with "Fences not over 6 feet (2134mm) high. Swimming pool barriers of any height are not exempt from permits."

c. Adding Exception #14 "Shingle repair or replacement work not exceeding one square (100 square feet in area) of covering per building."

(8) **IBC Section 105.5** IBC Section 105.5 (Expiration) is amended by the deletion of this section in its entirety and replaced with "Every permit issued by the building official under the provisions of this code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be commenced, a new permit shall be first obtained to do so, and the fee therefor shall be one half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work, and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee."

(9) **IBC Section 109.4** IBC Section 109.4 (Work commencing before permit issuance) is deleted in its entirety and replaced with "Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits may be subject to an investigation fee established by the town. The amount of the investigation fee may be in the amount up to the amount of the permit fee that would normally be assessed for the specific type of construction activity, with any such investigation fee being *in addition to* all other required permit fees. The investigation fee shall be collected whether or not a permit is then subsequently issued.

(10) **IBC Section 109.6** IBC Section 109.6 (Refunds) is amended by deleting the section in its entirety and replacing the section with the following:

a. "The Town may authorize refunding of any fee paid hereunder which was erroneously paid or collected.
b. The Town may authorize refunding of not more than 80 percent (80%) of the permit fee paid when no work has been done under a permit issued in accordance with this code.
c. The Town may authorize refunding of not more than 80 percent (80%) of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or cancelled before any plan reviewing is done.

d. The Town shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment."

(11) **IBC Section 111.3** IBC Section 111.3 (Temporary occupancy) is amended by deleting the words "building official" in the first and second sentence and replacing it with "Town".

(12) **IBC Section 113.1** IBC Section 113.1 (General) is amended by deleting the last two sentences and inserting the following:

a. "The members of the Board of Appeals shall be comprised of the members of the Town Council."

(13) **IBC Section 113.3** IBC Section 113.3 (Qualifications) is amended by deleting the section in its entirety.

(14) **IBC Section 114.2** IBC Section 114.2 (Notice of Violation) is amended by adding "Notice of Violations shall be delivered in accordance with section 109.4 through 109.4.2 of the 2024 IPMC" after the last paragraph.

(15) **IBC Section 202** IBC Section 202 (Definitions) is amended by the addition of the following:

a. "Sleeping Room" (Bedroom) is any enclosed habitable space within a dwelling unit, which complies with the minimum room dimension requirements of IBC Section 1208 and contains a closet, an area that is useable as a closet, or an area that is readily convertible for use as a closet. Living rooms, family rooms and other similar habitable areas that are so situated and designed so as to clearly indicate these intended uses, shall not be interpreted as sleeping rooms.

(16) **IBC Section 310.4.1** IBC Section 310.4.1 (Care Facilities within a Dwelling) is amended by adding "Except as in provided in C.R.S. § 26-6-104.5 (concerning family childcare homes)" as the first paragraph.

(17) **IBC Section 915.2.1** IBC Section 915.2.1 (Dwelling units) The first paragraph is amended as follows; Carbon monoxide detection shall be installed in dwelling units within 15 feet of each separate sleeping area.

(18) **IBC Section 1015.2** IBC Section 1015.2 (Where required) is amended by the addition of a second paragraph inserted before the exceptions as follows:

a. "All area wells, stair wells, window wells and light wells attached to any building that are located less than 36 inches (914.4 mm) from the nearest intended walking surface and deeper than 30 inches (762 mm) below the surrounding ground level, creating an opening greater than 24 inches (610 mm) measured perpendicular from the building, shall be protected with guardrails

conforming to this section around the entire opening, or be provided with an equivalent barrier."

(19) **IBC Section 1015.8** IBC Section 1015.8 (Window openings) is amended by changing the first paragraph to:

a. Windows in group R-2 and R-3 buildings including dwelling units, where the bottom of the clear opening of an operable window is located less than 24 inches (609 mm) above the finished floor and more than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, shall comply with the following;

(1) **IBC Section 1015.9** IBC Section 1015.9 (Below Grade Openings) Below grade openings in all R-2 and R-3 Occupancies

a. "All area wells, stair wells, window wells and light wells attached to any building that are located less than 36 inches (914 mm) from the nearest intended walking surface and deeper than 30 inches (762 mm) below the surrounding ground level, creating an opening greater than 24 inches (610 mm) measured perpendicular from the building, shall be protected with guardrails conforming to this section around the entire opening, or be provided with an equivalent barrier.

b. Exceptions:

(2) The access side of stairways need not be protected.

(3) Area and window wells provided for emergency escape and rescue windows may be protected with approved grates or covers that comply with Section R310.4 of this code.

(4) Covers and grates may be used over stairways and other openings used exclusively for service access or for admitting light or ventilation."

(5) **IBC Section 1031.2** IBC Section 1031.2 (Where required) is amended by the deletion of exception #5.

(6) **IBC Section 1031.3.1** IBC Section 1031.3.1 (Minimum Size) is amended by the deletion of the exception.

(7) **IBC Section 1031.5.1** IBC Section 1031.5.1 (Minimum size) is amended as follows;

a. "For all building permits issued after the effective date of the 1997 UBC Adoption, all escape and rescue windows requiring a window well pursuant to the International Residential Code shall comply with the dimension requirements set forth in this section, whether or not said escape or rescue window is located in a sleeping room.

b. With regard to building permits issued prior to the effective date of the 1997 UBC Adoption, for additions to or alterations of existing buildings or structures, any window well with a finished sill height below adjacent ground level shall be deemed in compliance with the Town's regulations if said window well meets the dimensions set forth in the 1991 Edition of the Uniform Building Code, previously in effect in the Town."

(8) **IBC Section 1301.1.1** IBC Section 1301.1.1 (Criteria) is amended by replacing "International Energy Conservation Code" with the "2024 International Energy Conservation Code".

(9) **IBC** Section **1507.2.1** IBC Section 1507.2.1 (Deck Requirements) is amended by adding a second sentence "Gaps in solidly sheathed or plank decking shall not exceed 1/8 inch".

(10) **IBC** Section **1608.2** IBC Section 1608.2 (Ground Snow Loads) shall be established using the most current ASCE 7 Hazard Tool, but shall not be less than 30 psf.

(11) **IBC Section 1609.3** IBC Section 1609.3 (Basic Wind Speed) is amended by replacing with:
The basic design wind speed, V, in mph, for the determination of the wind loads shall be 100 miles per hour (3-second gust) for risk category I, 105 miles per hour (3-second gust) for risk category II, 110 miles per hour (3-second gust) for risk category III, and 115 miles per hour (3-second gust) for category IV structures.

(12) **IBC Section 1612.3** IBC Section 1612.3 (Establishment of flood hazard areas) is amended by the insertion of "Town of Timnath where indicated in [Name of Jurisdiction] and the date of the latest flood insurance study for the town ____/____/____, where indicated in [Date of Issuance].

(13) **IBC Section 1809.5** IBC Section 1809.5 (Frost Protection) is amended to clarify #1 "Extending below the frost line of the locality" to specifically state the frost line is 30 inches.

ARTICLE 3. International Residential Code

Sections 18-2-20 and 18-2-30 of Chapter 18 (Building Regulations), Article 2 (International Residential Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-2-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Residential* Code, 2024 edition, as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 43 inclusive and Appendix BE, as if fully set out in this Article, with the additions, deletions, insertions and changes set forth in Section 18-2-30 below. The subject matter of the adopted code includes comprehensive provisions and standards regulating the erection, construction, enlargement, alteration, repair, moving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance

of buildings and structures for the purpose of protecting the public health, safety and general welfare.

Sec. 18-2-30. - Amendments.
The code adopted herein is hereby modified by the following amendments:

(1) **IRC Section R101.1** IRC Section R101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IRC Section R103.1** IRC Section 103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

(3) **IRC Section R105.1** IRC Section R105.1 (Required) is amended by replacing the words "building official" with "Town of Timnath".

(4) **IRC Section R105.2** IRC Section R105.2 (Work Exempt from Permit) is amended by deleting;

a. Exception #1 and replacing with "One-Story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet, and the roof height does not exceed 10 feet above grade measured from a point directly outside the exterior walls of the structure."

b. Exception #2 is deleted in its entirety and replaced with "Fences not over 6 feet (2134mm) high. Swimming pool barriers of any height are not exempt from permits.

c. Exception #10 is deleted in its entirety and replaced with "Shingle repair or replacement work not exceeding one square (100 square feet in area) of covering per building."

(5) **IRC Section 105.5** IRC Section 105.5 (Expiration) is amended by the deletion of this section in its entirety and replaced with "Every permit issued by the building official under the provisions of this code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit shall be first obtained to do so, and the fee therefor shall be one half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work, and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee."

(6) **IRC Section R108.5** IRC Section R108.5 (Refunds) is amended by deleting the section in its entirety and replacing the section with the following:

a. "The Town may authorize refunding of any fee paid hereunder which was erroneously paid or collected.

b. The Town may authorize refunding of not more than 80 percent (80%) of the permit fee paid when no work has been done under a permit issued in accordance with this code.

c. The Town may authorize refunding of not more than 80 percent (80%) of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or cancelled before any plan reviewing is done.

d. The Town shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment."

(7) **IRC Section R108.6** Section R108.6 (Work commencing before permit issuance) is deleted in its entirety and replaced with "Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits may be subject to an investigation fee established by the Town. The amount of the investigation fee may be in the amount up to the amount of the permit fee that would normally be assessed for the specific type of construction activity, with any such investigation fee being *in addition to* all other required permit fees. The investigation fee shall be collected whether or not a permit is then subsequently issued."

(8) **IRC Section R109.1.5** IRC Section R109.1.5 (Other inspections) is amended by the addition of a new subsection as follows:

R109.1.5.2 Insulation Inspection Inspection of the structure shall be made following installation of the wall, ceiling and floor insulation and exterior windows and before wall coverings are installed.

(9) **IRC Section R112.1** IRC Section R112.1 (General) is amended by deleting the last three sentences and inserting the following:

a. "The members of the Board of Appeals shall be comprised of the members of the Town Board."

(10) **IRC Section R112.3** IRC Section R112.3 (Qualifications) is amended by deleting this section in its entirety.

(11) **IRC Section R113.2** IRC Section R113.2 (Notice of Violation) is amended by adding "Notice of Violations shall be delivered in accordance with section 109.4 through 109.4.2 of the 2024 IPMC" after the last paragraph.

(12) **IRC Section R202** IRC Section R202 (Definitions) is amended by addition of the following:

a. "Sleeping Room" (Bedroom) is any enclosed habitable space within a dwelling unit, which complies with the minimum room dimension requirements of IRC Sections R304 and R305 and contains a closet, an area that is useable as a closet, or an area that is readily convertible for use as a closet. Living rooms, family rooms and other similar habitable areas that are so situated and designed so as to clearly indicate these intended uses, shall not be interpreted as sleeping rooms.

(13) **IRC Table R301.2 (1)** IRC Table R301.2 (1) is completed to provide the following:

Table R301.2 (1)
Climatic and Geographic Design Criteria
*NOTE: Insert the dates of the currently effective FIRM and/or date of adoption entering NFIP

GROUND SNOW LOAD[o]	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
	Speed[d] (mph)	Topographic effects[k]	Special wind region[l]	Windborne debris zone[m]		Weathering[a]	Frost line depth[b]	Termite[c]				
30 psf	115 mph	NO	YES	NO	B	Severe	30 inches	Slight to moderate	YES	—	1000	45
MANUAL J DESIGN CRITERIA SHALL BE SITE SPECIFIC												
Elevation			Altitude correction factor[n]	Coincident wet bulb	Indoor winter design relative humidity	Indoor winter design dry-bulb temperature			Outdoor winter design dry-bulb temperature		Heating temperature difference	
Latitude			Daily range	Summer design gains	Indoor summer design relative humidity	Indoor summer design dry-bulb temperature			Outdoor summer design dry-bulb temperature		Cooling temperature difference	

(14) **IRC Section R302.2.2** IRC Section R302.2.2 (Common Walls) is amended by deleting option #2

(15) **IRC Section R309.2** IRC Section R309.2 (One-two family dwellings automatic fire sprinklers) is amended by the deletion of this section in its entirety.

(16) **IRC Section 311.3** IRC Section 311.3 (Location) The first paragraph is amended as follows: Carbon monoxide detection shall be installed in dwelling units within 15 feet of each separate sleeping area.

(17) **IRC Section R319.1** IRC Section R319.1 (Emergency Escape and Rescue Openings) is amended by the deletion of the first paragraph and replaced with "All windows located in basements, habitable attics and sleeping rooms shall meet all the requirements of section R310.1 through R310.2.2".

Exception #3 Is deleted in its entirety.

(18) **RC Section R319.2.1** IRC Section R319.2.1 (Minimum size) is amended by the deletion of the exception.

(19) **IRC Section R319.4** IRC Section R319.4 (Area wells) is amended by the addition of the following:
"For all building permits issued after the effective date of the 1997 UBC Adoption, all escape and rescue windows requiring a window well pursuant to the International Residential Code shall comply with the dimension requirements set forth in this section, whether or not said escape or rescue window is located in a sleeping room.

With regard to building permits issued prior to the effective date of the 1997 UBC Adoption, for additions to or alterations of existing buildings or structures, any window well with a finished sill height below adjacent ground level shall be deemed in compliance with the Towns regulations if said window well meets the dimensions set forth in the 1991 Edition of the Uniform Building Code, previously in effect in the town."

(20) **IRC Section R319.4.2** IRC Section R319.4.2 (Ladder and steps) is amended by the addition of the following exception to read as follows:

"Exception: Only one window well ladder shall be required in an unfinished basement."

(21) **IRC Section R321.1** IRC Section R321.1 (Guards required) is amended by the addition of a third paragraph as follows:

"All area wells, stair wells, window wells and light wells attached to any building that are located less than 36 inches (914 mm) from the nearest intended walking surface and deeper than 30 inches (762 mm) below the surrounding ground level, creating an opening greater than 24 inches (610 mm) measured perpendicular from the building, shall be protected with guardrails conforming to this section around the entire opening, or be provided with an equivalent barrier.

(22) **IRC Section R401.2** IRC Section R401.2 (Requirements) is amended by the addition of the following:

"All new Group R Division 3 occupancy foundations shall be designed and the construction drawings stamped by a Colorado registered design professional. The foundation design must be based on an engineer's soils report. The drawings must be noted with the engineering firm's name, specific location for design and soils report number. A site certification prepared by State of Colorado registered design professional is required for setback verification on all new Group R Division 3 occupancies."

(23) **IRC Section R402.2.2** IRC Section R402.2.2 (Exterior concrete) Concrete Slab Installation Requirements, with respect to all New Dwellings and all repair and replacement work performed under warranty for all new dwellings, all exterior concrete flatwork including but not limited to porches, patios, sidewalks, driveways, and steps shall be reinforced with a minimum 10 gauge welded wire mesh or other acceptable reinforcement approved by the building official.

(24) **IRC Section R405.1** IRC Section R405.1 (Concrete or masonry foundations) is amended with the addition of the following after the first sentence: All foundation drains shall be designed and inspected by a State of Colorado registered design professional.

(25) **IRC Section R502.6**. IRC Section R502.6 (Bearing) is amended to read as follows:

(26) "The ends of each joist, beam or girder shall have not less than 1 1/2 inches (38 mm) of bearing on wood or metal, have not less than 3 inches of bearing (76 mm) on masonry or concrete or be supported by *approved* joist hangers. Alternatively, the ends of joists shall be supported on a 1-inch by 4-inch (25 mm by 102 mm) ribbon strip and shall be nailed to the adjacent stud. The bearing on masonry or concrete shall be direct, or a sill plate of 2- inch-minimum (51mm) nominal thickness shall be provided under the joist, beam or girder, or a maximum of 2-inch solid steel shims with a minimum thickness each of 1 inch (25.4 mm) shall be provided under the joist, beam or girder." Individual shims shall not be stacked greater than ¼ inch under any single beam. Wood shims shall NOT be allowed. The sill plate shall provide a minimum nominal bearing area of 48 square inches (30 865 mm2)."

(27) **IRC Section R905.2.4.2** Section R905.2.4.2 (Impact Resistance of Asphalt shingles) Asphalt shingles shall be Class 4 impact resistant and tested in accordance with UL 2218 and installed in accordance with the manufacture's installation instructions.

Exception:

1. When existing asphalt shingles are less than class 4 impact resistant, and the owner wishes to replace with the existing asphalt shingles with tiles of a similar color or tile, and there are no class 4 impact resistant shingles available that are similar in color or style of the existing asphalt shingles, the Building Official may approve alternate materials that are less then class 4 impact resistant, however, the Building Official will impose the highest class of impact resistance that are available that match the color or style of the existing asphalt shingles. If no impact resistant materials are available, the Building Official may approve non-impact resistant materials if the alternate materials meet all other applicable requirements of the code.

(28) **IRC Section M1502.4.6** IRC Section M1502.4.6 (Duct Length) is amended by deleting "Through M1502.4.6.3" from the first paragraph.

(29) **IRC Section M1502.4.6.2** IRC Section M1502.4.6.2 (Manufactures instructions) is deleted in its entirety.

(30) **IRC Section G2415.12** IRC Section G2415.12 (Minimum burial depth) is amended by the addition of the following: All plastic fuel gas piping shall be installed a minimum of 18 inches (457 mm) below grade.

(31) **IRC Section G2415.12.1** IRC Section G2415.12.1 (Individual outside appliances) is deleted in its entirety.

(32) **IRC Section G2417.4.1** IRC Section G2417.4.1 (Test pressure) is amended by changing 3 psig to 10 psig.

(33) **IRC Section G2417.4.2** IRC Section G2417.4.2 (Test Duration) is amended by replacing "10 Minutes" with "15 Minutes".

(34) **IRC Section P2503.5.1** IRC Section P2503.5.1 (Rough plumbing) is amended by deleting the first paragraph and replacing with "DWV systems shall be tested on completion of the rough piping installation by water or air with no evidence of leakage."

(35) **IRC Section P2603.5.1** IRC Section P2603.5.1 (Sewer depth) is amended by filling in both areas where indicated to read "12 inches (305 mm)".

(36) **IRC Section P2913** IRC Section P2913 (Reclaimed Water systems) is deleted in its entirety.

(37) **IRC Section P3103.1** IRC Section P3103.1 (Roof extension) is amended by replacing the words "6 inches" with "12 inches".

(38) **IRC Appendix Chapter BE (Radon Control Methods)** IRC Appendix Chapter BE (Radon Control Methods) is deleted in its entirety, and amended as follows;

a. **BE103.5 Passive submembrane depressurization system.**
In *buildings* with *crawl space* foundations, the following components of a passive *submembrane depressurization system* shall be installed during construction.
Exception: *Buildings* in which an *approved* mechanical *crawl space ventilation* system or other equivalent system is installed.

b. **BE103.5.1 Ventilation.**

Crawl spaces shall be provided with vents to the exterior of the *building*. The minimum net area of ventilation openings shall comply with Section R408.1.

c. **BE103.5.2 Soil-gas-retarder.**
The soil in *crawl spaces* shall be covered with a continuous layer of minimum 6-mil (0.15 mm) polyethylene *soil-gas-retarder*. The ground cover shall be lapped not less than 12 inches (305 mm) at joints and shall extend to all foundation walls enclosing the *crawl space* area.

d. **BE103.5.3 Vent pipe.**
A plumbing tee or other *approved* connection shall be inserted horizontally beneath the sheeting and connected to a 3- or 4-inch-diameter (76 or 102 mm) fitting with a vertical vent pipe installed through the sheeting.

e. **BE103.6 Passive subslab depressurization system.**

In *basement* or slab-on-grade buildings, the following components of a passive *subslab depressurization system* shall be installed during construction.

f. **BE103.6.1 Vent pipe.**

A minimum 3-inch-diameter (76 mm) ABS, PVC or equivalent gastight pipe shall be embedded horizontally into the subslab aggregate or other permeable material before the slab is cast. A "T" fitting or equivalent method shall be used to ensure that the pipe opening remains within the subslab permeable material and extend and terminate above the slab a minimum of 6 inches.

ARTICLE 4. International Mechanical Code

Sections 18-4-10 and 18-4-30 of Chapter 18 (Building Regulations), Article 1 (International Mechanical Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-4-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Mechanical* Code, 2024 edition, as published by the International Code Council, Inc., 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 15 inclusive, as if fully set out in this Article, with the additions, deletions, insertions and changes set forth in Section 18-4-30 below. The subject matter of the adopted code includes comprehensive provisions and standards relating to the erection, installation, alteration, repair, relocation, replacement, addition to, use or maintenance of heating, ventilating, cooling and refrigeration systems, incinerators or other miscellaneous heat-producing appliances within the Town for the purpose of protecting the public health, safety and general welfare.

Sec. 18-4-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **IMC Section 101.1** IMC Section 101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IMC Section 103.1** IMC Section 103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

ARTICLE 5. Fuel Gas Code

Sections 18-7-10 and 18-7-30 of Chapter 18 (Building Regulations), Article 7 (Fuel Gas Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-7-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Fuel Gas Code*, 2024 Edition, as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 8 inclusive, as if fully set out in this Article, with the additions, deletions, insertions and changes as set forth in Section 18-7-30 below. The subject matter of the adopted code concerns regulations to provide minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation and safety to life and property from fire and other hazards attributed to the built environment; and to provide safety to firefighters and emergency responders during emergency operations.

Sec. 18-7-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **IFGC Section 101.1** IFGC Section 101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IFGC Section 103.1** IFGC Section 103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

(3) **IFGC Section 404.12** IFGC Section 404.12 (Minimum burial depth) is amended by the addition of the following: All plastic fuel gas piping shall be installed a minimum of 18 inches (457 mm) below grade.

(4) **IFGC Section 404.12.1** IFGC Section 404.12.1 (Individual Outdoor appliances) is amended to read: :Individual lines to outdoor lights, grills and other appliances shall be

installed not less than 18 inches (457 mm) below finished grade, provided that such installation is approved and is installed in locations not susceptible to physical damage."

(5) **IFGC Section 406.4.1** IFGC Section 406.4.1 (Test pressure) is amended by changing 3 psig to 10 psig.

(6) **IFGC Section 406.4.2** IFGC Section 406.4.2 (Test duration) is amended by changing the second paragraph to read; "When testing a system having a volume less than 10 cubic feet or a system in a single-family dwelling, the test duration shall be not less than 15 minutes".

ARTCILE 6. International Plumbing Code

Sections 18-5-10 and 18-5-30 of Chapter 18 (Building Regulations), Article 5 (Plumbing Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-5-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Plumbing Code*, 20248 edition, as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 13 inclusive, as if fully set out in this Article, with the additions, deletions, insertions and changes set forth in Section 18-5-30 below. The subject matter of the adopted code includes comprehensive regulations governing materials, installation methods and other matters pertaining to plumbing for the purpose of protecting the public health, safety and general welfare.

Sec. 18-5-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **IPC Section 101.1** IPC Section 101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IPC Section 103.1** IPC Section 103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

(3) **IPC Section 305.4.1** IPC Section 305.4.1 (Sewer depth) is amended by filling in both areas where indicated to read "12 inches (305 mm)".

(4) **IPC Section 312.3** IPC Section 312.3 (Drainage and vent air test) is amended by deleting the first paragraph.

(5) **IPC Section 903.1.1** IPC Section 903.1.1 (Roof extension unprotected) is amended by inserting the number "12" (152.4 mm) where indicated.

(6) **IPC Section 1304** IPC Section 1304 (Reclaimed Water Systems) is amended by deletion of this section in its entirety.

ARTICLE 7. Energy Conservation Code

Sections 18-9-10 and 18-9-30 of Chapter 18 (Building Regulations), Article 9 (Energy Conservation Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-9-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Energy Conservation Code*, 2024 Edition, as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 6 Residential including Appendix CK Colorado Model Electric and Solar Ready Code-Commercial and Appendix RM Colorado Model Electric and Solar Ready Code-Residential inclusive, as if fully set out in this Article, with the additions, deletions, insertions and changes as set forth in Section 18-9-30 below.

Sec. 18-9-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **IECC Section C101.1** IECC Section C101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IECC Section C103.1** IECC Section C103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

(3) **IECC Section C105.6.2** IECC Section C105.6.2 (Compliance Documentation) is amended by deleting this section in its entirety.

(4) **IECC Section C109.1** IECC Section C109.1 (General) is amended by deleting the last three paragraphs and inserting the following:
"The members of the Board of Appeals shall be comprised of the members of the Town Board."

(5) **IECC Section C109.3** IECC Section C109.3 (Qualifications) is amended by the deletion of this section in its entirety.

(6) **IECC Section C405.2.8.1** IECC Section C405.2.8.1 (Demand Response lighting controls function) is amended by adding "Where installed" at the beginning of the first sentence.

(7) **IECC Section C405.2.10.2** IECC Section C405.2.10.1 (Sleeping units in congregate living facilities) is amended deleting #2 and replacing with;:
"Each unit shall have a manual control by the entrance that turns off all lighting and where installed, switched receptacles in the unit, except for lighting in bathrooms and kitchens. The manual control shall be marked to indicate its function."

(8) **IECC Section C405.15** IECC Section C405.15 (Renewable energy systems) is amended by deleting this section in its entirety.

(9) **Appendix CK Colorado Model Electric and Solar Ready Code-Commercial**

Chapter 1 Scope and Administration

SECTION 101 SCOPE AND GENERAL REQUIREMENTS.

101.1 Title. This code shall be known as the **Electric Ready and Solar Ready Code** of Colorado and shall be cited as such. It is referred to herein as "this code".

101.2 Scope. This code applies to all buildings and dwelling units, and the buildings' sites and associated systems and equipment.

101.3 Intent. This code shall regulate the design and construction of buildings to prepare new buildings for solar photovoltaic or solar thermal, electric vehicle charging infrastructure, and electrification of building systems. This code is intended to provide flexibility and balance upfront construction costs with the future cost to retrofit buildings to accommodate these systems. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

101.4. Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

101.4.1 Residential Buildings. *Residential buildings* must comply with the Residential Chapters of this code.

101.4.2 Commercial Buildings. *Commercial buildings* must comply with the Commercial Chapters of this code.

SECTION 102 WAIVER AND VARIANCE. Is amended by deleting this section in its entirety.

SECTION 103 CONSTRUCTION DOCUMENTS.

103.1 General. Construction documents and other supporting data shall be submitted in one or more sets, or in a digital format where allowed by the *code official*, with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

> **Exception**: The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

103.2 Information on Construction Documents. Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems, and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Location and size of the *solar-ready zone.*
2. Structural design loads of roof dead load and roof live load.
3. Pathways for routing of conduit from the *solar-ready zone* to the electrical service panel.
4. Number and location of *EV capable light spaces.*
5. Number and location of *EV capable spaces.*
6. Number and location of *EV ready spaces.*
7. Number and location of *EVSE installed spaces.*
8. Locations of conduit and termination points serving the aforementioned parking spaces.
9. Location for condensate drainage where *combustion equipment* for space heating and water heating is installed.

103.3 Examination of Documents. The *code official* shall examine or cause to be examined the accompanying documents and shall ascertain whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances. The *code official* is authorized to utilize a registered design professional, or other *approved* entity not affiliated with the building design or construction, in conducting the review of the plans and specifications for compliance with the code.

103.3.1 Approval of Construction Documents. When the *code official* issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "Reviewed for Code Compliance". Such *approved*

construction documents shall not be changed, modified, or altered without authorization from the *code official*. Work shall be done in accordance with the *approved* construction documents. One set of "Reviewed for Code Compliance" construction documents shall be retained by the *code official*. The other set shall be returned to the applicant, kept at the site of work, and shall be open to inspection by the *code official* or a duly authorized representative.

103.3.2 Previous Approvals. This code shall not require changes in the construction documents, construction, or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned; except that the *code official* is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each.

103.3.3 Phased Approval. The *code official* shall have the authority to issue a permit for the construction of part of a solar ready, EV ready, or electric ready installation before the construction documents for the entire system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire solar ready, EV ready, or electric ready installation will be granted.

l03.4 Amended Construction Documents. Changes made during construction that are not in compliance with the *approved* construction documents shall be resubmitted for approval as an amended set of construction documents.

103.5 Retention of Construction Documents. One set of *approved* construction documents shall be retained by the *code official* for a period of not less than 180 days from the date of completion of the permitted work, or as required by state or local laws.

103.6 Building Documentation and Closeout Submittal Requirements. The construction documents shall specify that the documents described in this section be provided to the building owner or owner's authorized agent within 90 days of the date of receipt of the certificate of occupancy.

Exception: *Residential buildings.*

103.6.1 Record Documents. Construction documents shall be updated to convey a record of the completed work. Such updates shall include mechanical, electrical, and control drawings that indicate all changes to size, type, and location of components, equipment, and assemblies.

103.6.2 Compliance Documentation. Compliance documentation and supporting calculations shall be delivered in one document to the building owner as a part of the project record documents or manuals, or as a standalone document. This document shall include the specific energy code edition utilized for compliance determination for each system.

SECTION 104 INSPECTIONS.

104.1 General. Construction or work for which a permit is required shall be subject to inspection by the *code official*, his or her designated agent or an *approved agency*, and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain visible and/or able to be accessed for inspection purposes. Neither the *code official* nor the jurisdiction shall be liable for expenses entailed in the removal or replacement of any material, product, system or building component required to allow an inspection to validate compliance with this code.

104.2 Required Inspections. The *code official*, his or her designated agent or an approved *agency*, upon notification, shall make the inspections set forth in Sections 104.2.1 through 104.2.4.

104.2.1 Solar Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. The location and size of the *solar-ready zone* or the capacity of an installed on-site renewable energy system.
2. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel that are properly labeled.

104.2.2 Electric Vehicle Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. *EV* power transfer infrastructure requirements.
2. Electrical equipment associated with each parking space type, including branch circuits, conduit and/or raceway, junction boxes, receptacles, and *EVSE* are properly labeled and installed.
3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled, if applicable.

104.2.3 Electric Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. Branch circuits, conduit and/or raceway, wiring, junction boxes, and receptacles for *future electric equipment* or appliances are properly labeled and installed, as applicable.
2. Reserved physical space for *future electric equipment* or appliances. 3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled.

104.2.4 Final Inspection. The final inspection shall include verification of the installation and proper labeling of all requirements of this code.

104.3 Reinspection. A building shall be reinspected where determined necessary by the *code official*.

104.4 Approved Inspection Agencies. The *code official* is authorized to accept reports of third-party inspection agencies not affiliated with the building design or construction, provided that such agencies are *approved* as to qualifications and reliability relevant to the building components and systems that they are inspecting.

104.5 Inspection Requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the *code official* when work is ready for inspection. It shall
be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

104.6 Reinspection and Testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made to achieve compliance with this code. The work or installation shall then be resubmitted to the *code official* for inspection and testing.

SECTION 105 NOTICE OF APPROVAL.

105.1 Approval. After the prescribed inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the *code official*.

105.2 Revocation. The *code official* is authorized to suspend or revoke, in writing, a notice of approval issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise, or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 106 VALIDITY.

106.1 General. If a portion of this code is held to be illegal or void, such a decision shall not affect the validity of the remainder of this code.

SECTION 107 REFERENCED STANDARDS.

107.1 General. The codes and standards referenced in this code shall be listed in Section **107.2**, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference.

107.2 Referenced Codes and Standards. The codes and standards referenced in this code are as follows:

1. International Building Code
    a. Chapter 3

b. Chapter 11
2. International Energy Conservation Code
3. International Fire Code
4. International Residential Code
5. National Electrical Code Article 625
6. UL2202 and 2594

107.2.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

107.2.2 Provisions in Referenced Codes and Standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

107.3 Applications of References. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section, or provision of this code.

107.4 Other Laws. The provisions of this code shall not be deemed to nullify any provisions of local, state, or federal law.

SECTION 108 STOPWORK ORDER.

108.1 Authority. Where the *code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *code official* is authorized to issue a stop work order.

108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property, the owner's authorized agent, or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

108.3 Emergencies. Where an emergency exists, the *code official* shall not be required to give a written notice prior to stopping the work.

108.4 Failure to Comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to fines established by the Town of Timnath.

SECTION 109 BOARD OF APPEALS.

109.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the *code official* relative to the application and interpretation

of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be the town board of Timnath.

109.2 Limitations on Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall not have the authority to waive the requirements of this code.

109.3 Qualifications. Is amended by the deletion of this section in its entirety.

Chapter 2 Definitions

SECTION 201 GENERAL.

201.1 Scope. Unless stated otherwise, the following words and terms in this code shall have the meanings indicated in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural, and the plural includes the singular.

201.3 Terms Defined in Other Codes. Terms that are not defined in this code but are defined in the International Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Energy Conservation Code, or International Residential Code shall have the meanings ascribed to them in those codes.

201.4 Terms not Defined. Terms not defined by this chapter or the codes listed under 201.3 shall have ordinarily accepted meanings such as the context implies.

SECTION 202 GENERAL DEFINITIONS.

APPROVED. Acceptable to the *code official.*

APPROVED AGENCY. An established and recognized agency that is regularly engaged in conducting tests or furnishing inspection services, or furnishing product certification, where such agency has been approved by the *code official.*

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

COMBUSTION EQUIPMENT. For this code, any equipment or appliance used for space heating, service water heating, cooking, clothes drying or lighting that uses *fuel gas* or fuel *oil.*

COMMERCIAL BUILDING. For this code, all commercial buildings and R-Occupancies covered by the International Building Code.

CORE AND SHELL. The first phase of a commercial project that has the outer building envelope constructed and may contain interior lighting and heating and has not received a permanent Certificate of Occupancy.

DIRECT CURRENT FAST CHARGER (DCFC) EVSE. Equipment capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the electric *vehicle*.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, including but not limited to, passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a building electrical service, *EVSE*, a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current. Off-road, self-propelled electric mobile equipment, including but not limited to, industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, and boats are not considered electric vehicles.

ELECTRIC VEHICLE CAPABLE LIGHT SPACE (EV CAPABLE LIGHT SPACE). A designated vehicle parking space that has conduit and/or raceway installed to support future implementation of *electric vehicle* charging installation and has sufficient physical space adjacent to the existing electrical equipment for future electric upgrades.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated vehicle parking space that has the electric panel capacity and conduit and/or raceway installed to support future implementation of *electric vehicle* charging.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). A designated vehicle parking space that has the electric panel capacity, raceway wiring, receptacle, and circuit overprotection devices installed to support future implementation of *electrical vehicle* charging.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). An *electric vehicle* charging system or device that is used to provide electricity to a plug-in *electric vehicle* or *plug-in hybrid electric vehicle*, is designed to ensure that a safe connection has been made between the electrical grid and the vehicle, and is able to communicate with the vehicle's control system so that electricity flows at an appropriate voltage and current level.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE INSTALLED SPACE). A vehicle parking space that is provided with a dedicated *EVSE* connection.

FIRST TENANT FINISH. The first tenant finish(es) in a new structure or *core and shell* building that is credited towards meeting the requirements of this Chapter.

FUEL GAS. A natural gas, manufactured gas, liquefied petroleum gas, or mixtures of these gasses.

FUEL OIL. Kerosene or any hydrocarbon oil having a flash point of not less than 100°F (38°C).

FUTURE ELECTRIC EQUIPMENT. Equipment or appliances necessary to support future all-electric space and water heating, cooking, or clothes drying.

PLUG-IN HYBRID ELECTRIC VEHICLE. An *electric vehicle* having a second source of motive power.

RESIDENTIAL BUILDING. For this code, one- and two-family dwellings and townhouses as defined in the International Residential Code.

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for future installation of a solar photovoltaic system or solar thermal system.

Chapter 3 Electric Ready

PART 2 COMMERCIAL ELECTRIC READY (Part 1 Residential is found in Residential provisions)

SECTION CE301 SCOPE

CE301.1 General. These provisions shall be applicable for all new buildings, additions, and *first tenant finish* permits.

CE301.1.1 First Tenant Finishes. In the case that a *first tenant finish* to a commercial *core and shell* building or unfinished space is credited towards meeting the requirements of this Chapter, the *code official* shall not issue a Certificate of Occupancy to the tenant until the requirements of Section CE302 are met.

SECTION CE302 ADDITIONAL ELECTRIC INFRASTRUCTURE

CE302.1 Additional Electric Infrastructure. *Combustion equipment* in *commercial buildings* shall meet the electric infrastructure requirements of Sections CE302.2 or CE302.3.

Exceptions:

1. Interior fireplaces that do not serve as a primary source of heating.
2. Exterior fireplaces and fire pits.
3. Additions to buildings that do not provide new space-heating equipment will not be required to provide additional electrical infrastructure to the existing space-heating equipment.

CE302.2 Commercial Buildings Less than 10,000 sq. ft. and all R-Occupancies. *Commercial buildings* that have a gross floor area of less than 10,000

sq. ft., and all R occupancies four stories or greater in height above grade plane of any size, shall comply with Sections CE302.2.1 through CE302.2.5.

CE302.2.1 Combustion Equipment. *Combustion equipment* shall be provided with all of the following:

1. A dedicated, appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances.

    1.1 Electrical infrastructure serving future electric space heating shall comply with CE302.2.1.1

    1.2 Electrical infrastructure serving future electrical water heating equipment shall comply with Section CE302.2.1.2

    1.3 Electrical infrastructure serving future electric cooking equipment or clothes drying equipment shall be sized to serve a comparable capacity to mee the heating load.

2. An electric receptacle or junction box that meets the requirements of Section CE302.2.5 and is connected to the electrical panel through the branch circuit. Each electrical receptacle or junction box shall have reasonable access to the *combustion equipment* or dedicated physical space for *future electric equipment* with no obstructions other than the current *combustion equipment*.

    Exception: Conduit installed with a pull string to a location of a future transformer or future electrical panel with service size determined at the time of a future permit.

3. Where *combustion equipment* is used for space or water heating, dedicated space shall be provided for all *future electric equipment*, including an electric resistance backup coil for ducted systems. Physical space occupied by existing combustion equipment shall be permitted to count towards satisfying the physical space requirement, where approved by the code official.

    Exception: Buildings with installed air conditioning systems are not required to provide additional dedicated physical space for an outdoor heat pump.

CE302.2.1.1 Space heating electric infrastructure sizing. Electric infrastructure for future electric space heating equipment shall be sized to accommodate not less than one of the following:
An electrical capacity not less than the nameplate space heating combustion equipment heating capacity multiplied by the value in Table CE302.2.1.1, in accordance with Equation 4-39.

VAs = Qcom × Ps Equation 4-39

VAs = The required electrical capacity of the electrical infrastructure in volt-amps.

Qcom = The nameplate heating capacity of the combustion equipment in kBtu/h.

Ps = The VA per kBtu/h from Table C410.3.2.1.1.1 in VA/kBtu/h.

An electrical capacity not less than the peak space heating load of the building areas served by the space heating combustion equipment, calculated in accordance with Section C403.1.1, multiplied by the value for the 99.6 percent design heating temperature in Table CE302.2.1.1, in accordance with Equation 4-40.

VAs = Qdesign × Ps Equation 4-40

VAs = The required electrical capacity of the electrical infrastructure in volt-amps.

Qdesign = The 99.6 percent design heating load of the spaces served by the combustion equipment in kBtu/h.

Ps = The VA per kBtu/h from Table CE302.2.1.1 in VA/kBtu/h.

An approved alternate design that uses no energy source other than electricity or on-site renewable energy.

Table E302.2.1.1 Alternate Electric Space Heating Equipment Conversion Factors (VA/kBtu/h)

99.6% Heating Design Temperature	Ps
Temperature Range (°F)	VA/kBtu/h
>50+	N/A
>45 and ≤50	94
>40 and ≤45	100
>35 and ≤40	107
>30 and ≤35	115
>25 and ≤30	124
>20 and ≤25	135
>15 and ≤20	149
>10 and ≤15	164
>5 and ≤10	184
>0 and ≤5	210
>-5 and ≤0	243
>-10 and ≤-5	289
>-15 and ≤-10	293

CE302.2.1.2.2 Water heating electric infrastructure sizing. An individual 240-volt branch circuit with an ampacity of not less than 30 shall be provided for future electric water heating equipment with a capacity of not more than 75,000 Btu/h (22 kW). Electric infrastructure for future electric water heating equipment with a capacity of greater than 75,000 Btu/h (22 kW) shall be sized to accommodate one of the following:

An electrical capacity not less than the combustion equipment water heating capacity multiplied by the value in Table CE302.2.1.2 plus electric capacity to serve recirculating loads as shown in Equation 4-41.

$VAw = (Qcapacity \times Pw) + [Qrecirc \times 293(VA/(Btu/h))]$ Equation 4-41

VAw = The required electrical capacity of the electrical infrastructure in volt-amps.

Qcapacity = The nameplate heating capacity of the combustion equipment in kBtu/h.

Pw = The VA per kBtu/h from Table CE302.2.1.2 in VA/kBtu/h.

An alternate design that complies with this code, where approved by the code official, and uses no energy source other than electricity or on-site renewable energy.

Table CE302.2.1.2 Alternate Electric Water Heating Equipment Conversion Factors (VA/kBtu/h)

99.6% Heating Design Temperature	Pw
Temperature Range (°F)	VA/kBtu/h
>55 and ≤60	118
>50 and ≤55	123
>45 and ≤50	129
>40 and ≤45	136
>35 and ≤40	144
>30 and ≤35	152
>25 and ≤30	162
>20 and ≤25	173
>15 and ≤20	185
>10 and ≤15	293
>5 and ≤10	293
>0 and ≤5	293
≤0	293

CE302.2.2 Electrical Panel Space. The electrical panel shall have reserved physical space for a minimum two-pole or three-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances. The physical space in the electrical panel for each circuit breaker shall be sized with sufficient breaker capacity to meet the electrical demand of the *future electric equipment* or appliance that is sized to serve a comparable capacity to meet the heating load.

CE302.2.3 Labeling. The junction box or receptacle and the dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled for their intended use.

CE302.2.4 Adjacency. The electrical receptacle or junction box must be provided within 3 feet of the *combustion equipment* or appliances or within 3 feet of the dedicated physical space for *future electric equipment* or appliances.

> **Exception:** For *combustion equipment* dedicated to space or water heating, the electrical receptacle or junction box shall be located not more than 6 feet from the *combustion equipment* or the dedicated physical space for *future electric equipment*.

CE302.2.5 Condensate Drain. Where *combustion equipment* dedicated to space heating and water heating is installed, a location shall be provided for condensate drainage.

CE302.3 Commercial Buildings 10,000 sq. ft. or Greater. All *commercial buildings* that have a gross floor area of 10,000 sq. ft. or greater shall comply with the following requirements.

> **Exception**: R-occupancies four stories or greater in height above grade plane shall comply with CE302.2.

CE302.3.1 Combustion Equipment or Appliances. All *combustion equipment* shall be provided with the following:

1. A junction box that is located in the same physical space as the *combustion equipment* and is reasonably accessible, and that is connected to the electrical panel by continuous conduit and/or raceways.
2. Dedicated electrical panel space for an appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances.

   2.1. Electrical capacity sizing for future electric space heating equipment shall comply with CE302.2.1.1.

   2.2 Electrical capacity sizing for future electric water heating equipment shall comply with Section C302.2.1.2.

   2.3 Electrical infrastructure serving future electric cooking equipment or clothes drying equipment shall be sized to serve a comparable capacity to meet the heating load.

3. Where *combustion equipment* is used for space and water heating, dedicated physical space shall be provided for all *future electric equipment*. Physical space occupied by existing combustion equipment shall be permitted to count towards satisfying the physical space requirement, where approved by the code official.

CE302.3.2 Electrical Panel Space. The electrical panel shall have reserved physical space for a minimum two-pole or three-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances. The physical space in the electrical panel for each circuit breaker shall be sized with sufficient breaker capacity to meet the electrical demand of the *future electric equipment* or appliance that is sized to serve a comparable capacity to meet the heating load.

CE302.3.3 Labeling. The dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled "For future electric equipment".

CE302.3.4 Physical Space. Dedicated physical space shall be provided for additional electric equipment, including but not limited to transformers and cabinets, necessary for electrical service to *future electric equipment* or appliances.

Chapter 4 Solar Ready

PART 2 COMMERCIAL SOLAR READY (Part 1 Residential Solar Ready is in the residential provisions)

SECTION CS401 SCOPE

CS401.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

SECTION CS402 SOLAR-READY ZONE

CS402.1 General. A *solar-ready zone* shall be located on the roof of all new commercial *buildings* that are oriented between 110 and 270 degrees of true north or have low-sloped roofs. *Solar-ready zones* shall comply with Sections CS402.2 through CS402.7.

Exceptions:

1. A building with a permanently installed, on-site renewable energy system that meets the following criteria.

a. The system produces the energy output equivalent to covering 40 percent of the net roof area with solar photovoltaic calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or setback areas as required by the International Fire Code.

b. The system is located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building, on the building premises, on covered parking, or another *approved* location installed with the building project and under the same property ownership.

2. A building with a *solar-ready zone* that is shaded for more than 70 percent of daylight hours annually.
3. A building where a licensed design professional certifies that the incident solar radiation available to the building is not suitable for a *solar-ready zone*.
4. A building where a licensed design professional certifies that the *solar ready zone* area required by Section CS402.3 cannot be met because of extensive rooftop equipment, skylights, vegetative roof areas, or other obstructions.

CS402.2 Construction Document Requirements for a Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

CS402.3 Solar-Ready Zone Area. The total *solar-ready zone* area shall not be less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or setback areas as required by the International Fire Code. The *solar-ready zone* shall be a single area or smaller, separated sub-zone areas. For sloped roofs, each sub-zone area shall be not less than 200 square feet (18.6m^2) and no side of any rectangular area shall be less than 11 feet (3.35m) in length. For low-sloped or flat roofs, each sub-zone area shall be not less than 330 square feet (30.7 m^2), with a minimum length running generally north to south of 15 feet (4.57m) and a minimum length running generally east to west of 22 feet (6.7m) and no side of any rectangular area shall be less than 11 feet (3.35m) in length.

The *solar-ready zone* shall be located on the roof or overhang of the building or on the roof or overhang of another structure located within 250 feet of the building, on the building premises, on covered parking, or another *approved* location installed with the building project and under the same property ownership.

CS402.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights, and roof-mounted equipment.

CS402.5 Roof Loads and Documentation. The structural design loads for roof dead load and roof live load shall be indicated on the construction documents.

CS402.6 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to an electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

CS402.7 Electrical Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have a reserved space to allow installation of a dual-pole circuit breaker for future solar electric. This space shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

PART4 COMMERCIAL SOLAR PANEL CAPACITY

SECTION CS410 SCOPE

CS410.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

CS410.2 Electric Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have sufficient reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

> **Exception:** A building that already must comply with the solar ready provisions in Chapter 4 or that has a permanently installed on-site renewable energy system that provides electricity to the building's electrical system.

Chapter 5 Electric Vehicle Ready

PART 2 COMMERCIAL ELECTRIC VEHICLE READY (Part 1 Residential Electric Vehicle Ready found in residential provisions)

SECTION CV501 SCOPE

CV501.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION CV502 ELECTRIC VEHICLE POWER TRANSFER INFRASTRUCTURE

CV502 Electric Vehicle Power Transfer Infrastructure. Where new parking is provided for *commercial buildings,* it shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections CV502.1 through CV502.9.

CV502.1 Quantity. The number of required *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces* shall be determined in accordance with this Section and Table CV502.1 based on the total number of provided vehicle parking spaces and shall be rounded up to the nearest whole number. This includes all covered parking under carports or detached garages.

CV502.1.1 Where more than one parking lot is provided on a building site, the number of provided vehicle parking spaces required to have *EV* power transfer infrastructure shall be calculated separately for each parking lot.

CV502.1.1.1 R-2 Occupancies, as defined in Chapter 3 of the International Building Code, shall use the total parking requirement for the entire development to determine the *EV* power transfer infrastructure requirements using Table CV502.1.

CV502.1.1.2 Space Type Substitutions. Commercial buildings shall be permitted to substitute EV parking spaces required in Table CV502.1 in accordance with Sections CV502.1.2 through CV502.1.5

CV502.1.2 DC Fast Charging For *commercial buildings* that install a *DCFC EVSE,* each *DCFC EVSE* installed shall be permitted to be substituted for other space types as follows:

1. *Commercial buildings* other than R-2 Occupancies shall be permitted to substitute up to 10 spaces when the building provides a minimum of 20 percent of parking spaces as a combination of *EV Capable*, *EV ready*, or EVSE *installed spaces*.
2. R-2 Occupancies shall be permitted to substitute up to 5 spaces when the building provides a minimum of 60 percent of parking spaces as a combination of *EV Capable light, EV Capable, EV ready*, or *EVSE installed spaces*.

CV502.1.2.1 Level 1 EV Charging. Group R-2 occupancies with greater than 10 vehicle parking spaces that install Level 1 EVSE installed paces in accordance with Section CV502.6.2 shall be permitted to substitute one (1) Level 2 EVSE installed space or Level 2 EV ready space required to comply with Section CV502.4 or Section CV502.6, when the following have been met:

a. Three (3) Level 1 EVSE installed spaces installed for every Level 2 EVSE installed space or Level 2 EV ready space.
b. Not greater than 50 percent of the Level 2 EVSE installed spaces or EV ready spaces required in Table CV502.1 are permitted to be substituted for Level 1 EVSE installed spaces.

CV502.1.3 Excess EVSE Installed Spaces. *EVSE installed spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV ready spaces*, *EV capable spaces*, and *EV capable light spaces*.

CV502.1.4 Excess EV Ready Spaces. E*V ready spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV capable spaces* and *EV capable light spaces*.

CV502.1.5 Excess EV Capable Spaces. *EV capable spaces* that exceed the minimum requirements of this section are permitted to be used to meet the minimum requirements for *EV capable light spaces*.

CV502.1.6 Attached Garages. All attached garages with direct connection to a dwelling unit will be required to have one *EV ready space*.

Table CV502.1: EV Power Transfer Infrastructure Requirements

Building Type / Space Type	Level 2 EVSE Installed Space	Level 2 EV Ready Space	Level 2 EV Capable Space	Level 2 EV Capable Light Space
All *commercial buildings*, except for R-2 occupancies, with 15 or less parking spaces.	0	20% of spaces (not fewer than 2)	0	0
Commercial buildings, except for R-2 occupancies, with greater than 15 parking spaces.	2% of spaces	8% of spaces	10% of spaces	10% of spaces
R-2 occupancies with 10 or less parking spaces	0	15% of spaces	10% of spaces	10% of spaces
R-2 occupancies with greater than 10 parking spaces.	5% of spaces	15% of spaces	10% of spaces	30% of spaces

CV502.2 Level 2 EV Capable Light Spaces. Each *EV capable light space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable light space* and shall be capped. *EV capable light* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. Installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. Dedicated physical space to accommodate all equipment necessary for electrical service to future *EVSE*.
4. The routing of the raceway and/or conduit must be noted on the construction documents and the raceway shall be permanently and visibly marked "EV CAPABLE" at the load center and termination point locations.

CV502.3 Level 2 EV Capable Spaces. Each *EV capable space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable space* and shall be capped. *EV capable* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. The installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. The electrical panel or other electrical distribution equipment to which the raceway and/or conduit connects shall have sufficient dedicated space and spare electrical capacity to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
4. The termination point of the conduit and/or raceway and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 8.3 kVA (40A 208/240V) for each *EV capable space*.

CV502.4 Level 2 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle or junction box located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle is installed adjacent to and between both parking spaces.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).
3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment (EVSE)."

Exception: Level 1 EV ready spaces that are substituted for Level 2 EV ready spaces in accordance with Section CV502.1.2.1 shall comply with Section CV502.6.2

CV502.5 Level 2 Electric Vehicle Supply Equipment (EVSE). All *EVSE* shall meet all of the following requirements:

1. The installed *EVSE* shall meet one of the following requirements:
   a. A power capacity of at least 6.2 kVa (or 30A at 208/240V) and has the ability to connect to the internet.
   b. An inductive charging system for battery-powered *electric vehicles* that:
      i. Is ENERGY STAR certified; and
      ii. Has the ability to connect to the internet.
2. An *electric vehicle* charging system shall be wall-mounted or pedestal style and may provide multiple cords to connect with *electric vehicles*.
3. An *electric vehicle* charging system shall be listed and labeled for *EV* charging and must comply with the current version of Article 625 of the National Electrical Code.

CV502.6 Level 2 EVSE Installed Spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple *EVSE installed spaces*. Each *EVSE* installed serving either a single *EVSE installed space* or multiple *EVSE installed spaces*, shall comply with all of the following:

1. Have a minimum charging rate in accordance with Section CV502.7.
2. Be located within 3 feet of each *EVSE installed space* it serves.
3. Be installed in accordance with Section CV502.8.
4. Have a minimum circuit capacity of 8.3 kVA (40A 208/240V).
5. Must meet the requirements of Section CV502.5.

Exception: Level 1 EVSE installed spaces that are substituted for Level 2 EV ready spaces or EVSE installed spaces in accordance with Section CV502.1.2.1 shall comply with Section CV502.6.2.

CV502.6.2 Level 1 EVSE Installed Spaces. Each Level 1 EVSE installed space shall have a branch circuit that complies with all of the following:

a. Terminates at a receptacle located within 3 feet of each Level 1 EVSE installed space it serves.
b. Has a minimum circuit capacity of 1.8kVA (15A 120V).
c. The electrical panel, electrical distribution equipment directory, and all receptacles or enclosures shall be marked "Level 1 Electric Vehicle Supply Equipment (EVSE)."

CV502.7 EVSE Minimum Charging Rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE installed spaces* and controlled by an energy management system providing load management, be capable of simultaneously sharing each *EVSE installed space* at a minimum charging rate of no less than 3.3 kVA.

Exception: Level 1 EVSE installed in accordance with Section CV502.6.2.

CV502.8 EVSE Installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

CV502.9 Accessible EV Parking Spaces. For Level 2 EVSE installed spaces required by Table CV502.1, a minimum of 5 percent (not less than one space) shall be van accessible spaces in accordance with Section 1107.2.2 of the International Building Code (IBC). In addition, 5 percent (not less than one space) of the total vehicle parking spaces required by Table C502.1 to be Level 2 EV ready, EV capable, or EV capable light spaces shall meet one of the following:

a. Be van accessible parking spaces in accordance with Section 1107.2.2 of the International Building Code.
b. Have the electrical infrastructure that is required by Section CV502.2 for EV capable light spaces or CV502.3 for EV capable spaces or Section CV502.4 for EV ready spaces and be configured so that future EVSE shall be capable of serving van accessible parking spaces.

CV502.10 Identification. Construction documents shall designate all *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces,* and indicate the locations of raceway and/or conduit and termination points serving them. The circuits or spaces reserved for *EVSE installed spaces, EV ready spaces,* and *EV capable spaces* shall be clearly identified in the panel or subpanel directory. The raceway and/or conduit for *EV ready spaces, EV capable spaces* and *EV capable light spaces* shall be clearly identified at both the panel or subpanel and the termination point at the parking space.

IECC Residential Provisions:

Chapter 1:

R101.1 Title is amended by the addition of the term "Town of Timnath" where indicated.

Section R102.1 Creation of enforcement agency is amended by adding "Town of Timnath" where indicated.

R103.2 Appointment. Is amended by the deletion of this section in its entirety.

Chapter 4:

R405.2 Simulated building performance compliance.

3. For all dwelling units, the annual energy cost of the proposed design shall be less than or equal to 85 percent of the annual energy cost of the standard reference design. For each dwelling unit with greater than 5000 square feet of living space located above grade plane, the annual energy cost of the dwelling unit shall be reduced by an additional 5 percent of annual energy cost of the standard reference design. Energy prices shall be taken from an approved source, such as the US Energy Information Administration's State Energy Data system prices and expenditures reports. Code official shall be permitted to require time-of-use pricing in energy cost calculations.

Appendix RL Colorado Model Electric and Solar Ready Code-Residential

Chapter 1 Scope and Administration

SECTION 101 SCOPE AND GENERAL REQUIREMENTS.

101.1 Title. This code shall be known as the **Electric Ready and Solar Ready Code** of Colorado and shall be cited as such. It is referred to herein as "this code".

101.2 Scope. This code applies to all buildings and dwelling units, and the buildings' sites and associated systems and equipment.

101.3 Intent. This code shall regulate the design and construction of buildings to prepare new buildings for solar photovoltaic or solar thermal, electric vehicle charging infrastructure, and electrification of building systems. This code is intended to provide flexibility and balance upfront construction costs with the future cost to retrofit buildings to accommodate these systems. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

101.4. Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

101.4.1 Residential Buildings. *Residential buildings* must comply with the Residential Chapters of this code.

101.4.2 Commercial Buildings. *Commercial buildings* must comply with the Commercial Chapters of this code.

SECTION 102 WAIVER AND VARIANCE. Is amended by the deletion of this section in its entirety.

SECTION 103 CONSTRUCTION DOCUMENTS.

103.1 General. Construction documents and other supporting data shall be submitted in one or more sets, or in a digital format where allowed by the *code official*, with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

> **Exception**: The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

103.2 Information on Construction Documents. Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems, and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Location and size of the *solar-ready zone.*
2. Structural design loads of roof dead load and roof live load.
3. Pathways for routing of conduit from the *solar-ready zone* to the electrical service panel.
4. Number and location of *EV capable light spaces.*
5. Number and location of *EV capable spaces.*
6. Number and location of *EV ready spaces.*
7. Number and location of *EVSE installed spaces.*
8. Locations of conduit and termination points serving the aforementioned parking spaces.
9. Location for condensate drainage where *combustion equipment* for space heating and water heating is installed.

103.3 Examination of Documents. The *code official* shall examine or cause to be examined the accompanying documents and shall ascertain whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances. The *code official* is authorized to utilize a registered design professional, or other *approved* entity not affiliated with the building design or construction, in conducting the review of the plans and specifications for compliance with the code.

103.3.1 Approval of Construction Documents. When the *code official* issues a permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "Reviewed for Code Compliance". Such *approved* construction documents shall not be changed, modified, or altered without authorization from the *code official*. Work shall be done in accordance with the *approved* construction documents. One set of "Reviewed for Code Compliance" construction documents shall be retained by the *code official*. The other set

shall be returned to the applicant, kept at the site of work, and shall be open to inspection by the *code official* or a duly authorized representative.

103.3.2 Previous Approvals. This code shall not require changes in the construction documents, construction, or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned; except that the *code official* is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each.

103.3.3 Phased Approval. The *code official* shall have the authority to issue a permit for the construction of part of a solar ready, EV ready, or electric ready installation before the construction documents for the entire system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire solar ready, EV ready, or electric ready installation will be granted.

l03.4 Amended Construction Documents. Changes made during construction that are not in compliance with the *approved* construction documents shall be resubmitted for approval as an amended set of construction documents.

103.5 Retention of Construction Documents. One set of *approved* construction documents shall be retained by the *code official* for a period of not less than 180 days from the date of completion of the permitted work, or as required by state or local laws.

103.6 Building Documentation and Closeout Submittal Requirements. The construction documents shall specify that the documents described in this section be provided to the building owner or owner's authorized agent within 90 days of the date of receipt of the certificate of occupancy.

Exception: *Residential buildings.*

103.6.1 Record Documents. Construction documents shall be updated to convey a record of the completed work. Such updates shall include mechanical, electrical, and control drawings that indicate all changes to size, type, and location of components, equipment, and assemblies.

103.6.2 Compliance Documentation. Compliance documentation and supporting calculations shall be delivered in one document to the building owner as a part of the project record documents or manuals, or as a standalone document. This document shall include the specific energy code edition utilized for compliance determination for each system.

SECTION 104 INSPECTIONS.

104.1 General. Construction or work for which a permit is required shall be subject to inspection by the *code official*, his or her designated agent or an *approved agency*, and such construction or work shall remain visible and able to be accessed for inspection purposes until

approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain visible and/or able to be accessed for inspection purposes. Neither the *code official* nor the jurisdiction shall be liable for expenses entailed in the removal or replacement of any material, product, system or building component required to allow an inspection to validate compliance with this code.

104.2 Required Inspections. The *code official*, his or her designated agent or an approved *agency*, upon notification, shall make the inspections set forth in Sections 104.2.1 through 104.2.4.

104.2.1 Solar Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. The location and size of the *solar-ready zone* or the capacity of an installed on-site renewable energy system.
2. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel that are properly labeled.

104.2.2 Electric Vehicle Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. *EV* power transfer infrastructure requirements.

2. Electrical equipment associated with each parking space type, including branch circuits, conduit and/or raceway, junction boxes, receptacles, and *EVSE* are properly labeled and installed.

3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled, if applicable.

104.2.3 Electric Ready. Inspections shall verify all of the following as required by this code, *approved* plans, and specifications:

1. Branch circuits, conduit and/or raceway, wiring, junction boxes, and receptacles for *future electric equipment* or appliances are properly labeled and installed, as applicable.

2. Reserved physical space for *future electric equipment* or appliances. 3. Electrical capacity and reserved physical space for circuit breakers in the main electrical service panel are properly labeled.

104.2.4 Final Inspection. The final inspection shall include verification of the installation and proper labeling of all requirements of this code.

104.3 Reinspection. A building shall be reinspected where determined necessary by the *code official*.

104.4 Approved Inspection Agencies. The *code official* is authorized to accept reports of third-party inspection agencies not affiliated with the building design or construction, provided that such agencies are *approved* as to qualifications and reliability relevant to the building components and systems that they are inspecting.

104.5 Inspection Requests. It shall be the duty of the holder of the permit or their duly authorized agent to notify the *code official* when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

104.6 Reinspection and Testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made to achieve compliance with this code. The work or installation shall then be resubmitted to the *code official* for inspection and testing.

SECTION 105 NOTICE OF APPROVAL.

105.1 Approval. After the prescribed inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the *code official.*

105.2 Revocation. The *code official* is authorized to suspend or revoke, in writing, a notice of approval issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise, or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 106 VALIDITY.

106.1 General. If a portion of this code is held to be illegal or void, such a decision shall not affect the validity of the remainder of this code.

SECTION 107 REFERENCED STANDARDS.

107.1 General. The codes and standards referenced in this code shall be listed in Section 107.2, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference.

107.2 Referenced Codes and Standards. The codes and standards referenced in this code are as follows:

1. International Building Code
    a. Chapter 3
    b. Chapter 11
2. International Energy Conservation Code
3. International Fire Code
4. International Residential Code

5. National Electrical Code Article 625
6. UL2202 and 2594

107.2.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

107.2.2 Provisions in Referenced Codes and Standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

107.3 Applications of References. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section, or provision of this code.

107.4 Other Laws. The provisions of this code shall not be deemed to nullify any provisions of local, state, or federal law.

SECTION 108 STOPWORK ORDER.

108.1 Authority. Where the *code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *code official* is authorized to issue a stop work order.

108.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property, the owner's authorized agent, or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

108.3 Emergencies. Where an emergency exists, the *code official* shall not be required to give a written notice prior to stopping the work.

108.4 Failure to Comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to fines established by the Town of Timnath.

SECTION 109 BOARD OF APPEALS.

109.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the *code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be the town board of Timnath.

109.2 Limitations on Authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of

construction is proposed. The board shall not have the authority to waive the requirements of this code.

109.3 Qualifications. This is amended by the deletion of this section in its entirety.

Chapter 2 Definitions

SECTION 201 GENERAL.

201.1 Scope. Unless stated otherwise, the following words and terms in this code shall have the meanings indicated in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural, and the plural includes the singular.

201.3 Terms Defined in Other Codes. Terms that are not defined in this code but are defined in the International Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Energy Conservation Code, or International Residential Code shall have the meanings ascribed to them in those codes.

201.4 Terms not Defined. Terms not defined by this chapter or the codes listed under 201.3 shall have ordinarily accepted meanings such as the context implies.

SECTION 202 GENERAL DEFINITIONS.

APPROVED. Acceptable to the *code official.*

APPROVED AGENCY. An established and recognized agency that is regularly engaged in conducting tests or furnishing inspection services, or furnishing product certification, where such agency has been approved by the *code official.*

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

COMBUSTION EQUIPMENT. For this code, any equipment or appliance used for space heating, service water heating, cooking, clothes drying or lighting that uses *fuel gas* or fuel *oil.*

COMMERCIAL BUILDING. For this code, all commercial buildings and R-Occupancies that are covered by the International Building Code.

CORE AND SHELL. The first phase of a commercial project that has the outer building envelope constructed and may contain interior lighting and heating and has not received a permanent Certificate of Occupancy.

DIRECT CURRENT FAST CHARGER (DCFC) EVSE. Equipment capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the electric *vehicle*.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, including but not limited to, passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a building electrical service, *EVSE*, a rechargeable storage battery, a fuel cell, a photovoltaic array, or another source of electric current. Off-road, self-propelled electric mobile equipment, including but not limited to, industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, and boats are not considered electric vehicles.

ELECTRIC VEHICLE CAPABLE LIGHT SPACE (EV CAPABLE LIGHT SPACE). A designated vehicle parking space that has conduit and/or raceway installed to support future implementation of *electric vehicle* charging installation and has sufficient physical space adjacent to the existing electrical equipment for future electric upgrades.

ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE). A designated vehicle parking space that has the electric panel capacity and conduit and/or raceway installed to support future implementation of *electric vehicle* charging.

ELECTRIC VEHICLE READY SPACE (EV READY SPACE). A designated vehicle parking space that has the electric panel capacity, raceway wiring, receptacle, and circuit overprotection devices installed to support future implementation of *electrical vehicle* charging.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). An *electric vehicle* charging system or device that is used to provide electricity to a plug-in *electric vehicle* or *plug-in hybrid electric vehicle*, is designed to ensure that a safe connection has been made between the electrical grid and the vehicle and is able to communicate with the vehicle's control system so that electricity flows at an appropriate voltage and current level.

ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE INSTALLED SPACE). A vehicle parking space that is provided with a dedicated *EVSE* connection.

FIRST TENANT FINISH. The first tenant finish(es) in a new structure or *core and shell* building that is credited towards meeting the requirements of this Chapter.

FUEL GAS. A natural gas, manufactured gas, liquefied petroleum gas, or mixtures of these gases.

FUEL OIL. Kerosene or any hydrocarbon oil having a flash point of not less than 100°F (38°C).

FUTURE ELECTRIC EQUIPMENT. Equipment or appliances necessary to support future all-electric space and water heating, cooking, or clothes drying.

PLUG-IN HYBRID ELECTRIC VEHICLE. An *electric vehicle* having a second source of motive power.
RESIDENTIAL BUILDING. For this code, one- and two-family dwellings and townhouses as defined in the International Residential Code.

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for future installation of a solar photovoltaic system or solar thermal system.

Chapter 3 Electric Ready

PART 1 RESIDENTIAL ELECTRIC READY

SECTION RE301 SCOPE

RE301.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

SECTION RE302 ADDITIONAL ELECTRIC INFRASTRUCTURE

RE302.1 Additional Electric Infrastructure. *Combustion equipment* in *residential buildings* must meet the requirements of Sections RE302.2 through RE302.6.

Exceptions:

1. Interior fireplaces that do not serve as a primary source of heating.
2. Exterior fireplaces and firepits.

RE302.2 Combustion Equipment. *Combustion equipment* shall be provided with all of the following:

1. A dedicated, appropriately phased branch circuit sized to accommodate *future electric equipment* or appliances to serve a comparable capacity to meet the heating load.

1.1 The branch circuits serving future electric clothes drying equipment and cooking equipment shall be sized with a rating not less than 240 volts and not less than 30 amperes.

2. An electric receptacle or junction box that meets the requirements of Section RE302.5 and is connected to the electrical panel through the branch circuit. Each electrical receptacle or junction box shall have reasonable access to the combustion *equipment* or dedicated physical space for *future electric equipment* with no obstructions other than the current *combustion equipment*.

3. Where *combustion equipment* is used for space or water heating, dedicated physical space shall be provided for *future electric equipment,* including an electric resistance backup coil for ducted systems, if applicable. Physical space occupied by existing combustion equipment shall be permitted to count towards satisfying the physical space requirement, subject to approval by the code official.

Exception: Dwelling units with installed air conditioning systems are not required to provide additional dedicated physical space for an outdoor heat pump.

RE302.3 Electrical Panel Space. The electrical panel shall have a reserved space for a minimum two-pole circuit breaker for each branch circuit provided for *future electric equipment* or appliances.

RE302.4 Labeling. The junction box or receptacle and the dedicated circuit breaker space serving *future electric equipment* or appliances in the electrical panel shall be labeled for their intended use.

RE302.5 Adjacency. The electrical receptacle or junction box must be provided within 3 feet of the *combustion equipment* or appliances, or within 3 feet of the dedicated physical space for *future electric equipment* or appliances.

> **Exception:** For *combustion equipment* dedicated to space or water heating, the electrical receptacle or junction box shall be located not more than 6 feet from the *combustion equipment* or the dedicated physical space for *future electric equipment*.

RE302.6 Condensate Drain. Where *combustion equipment* for space heating and water heating is installed, a location shall be provided for condensate drainage.

Chapter 4 Solar Ready

PART 1 RESIDENTIAL SOLAR READY.

SECTION RS401 SCOPE.

RS401.1 General. These provisions shall be applicable for new buildings, and major renovations and additions.

SECTION RS402 SOLAR READY ZONE.

RS402.1 Solar-Ready Zone for Single Family and Townhouses. New *residential buildings* with not less than 600 square feet of roof area oriented between 110 degrees and 270 degrees of true north or that is a low sloped roof, shall comply with Sections RS402.2 through RS402.8.

> **Exceptions**:
> 1. New detached one- and two-family dwellings and townhouses with a permanently installed on-site renewable energy system that provides electricity to the dwelling unit's electrical system.
> 2. A detached one- or two-family dwelling or townhouse where all areas of the roof that would otherwise meet the requirements of Section RS402 are in full or partial shade for more than 70 percent of daylight hours annually.

RS402.2 Construction Document Requirements for Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

RS402.3 Solar-Ready Zone Area. The total *solar-ready zone* area for each detached one- or two-family dwelling or townhouse shall be not less than 300 square feet exclusive of mandatory access or setback areas as required by the International Fire Code. 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 setback areas as required by the International Fire Code.

Exception: New townhouses three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet of conditioned space per townhouse unit shall have a *solar-ready zone* area of not less than 150 square feet.

RS402.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including but not limited to, vents, chimneys, and roof-mounted equipment.

RS402.5 Shading. The *solar-ready zone* shall be set back from any existing or new permanently affixed object on the building or site that is located south, east, or west of the *solar-ready zone,* a distance not less than two times the object's height above the nearest point on the roof surface. Such objects include, but are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees, and roof plantings either existing at the time of permit application or planned for on the construction documents.

RS402.6 Roof Load Documentation. The structural design loads of roof dead load and roof live load shall be clearly indicated on the construction documents.

RS402.7 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to the electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

RS402.8 Electrical Service Reserved Space. The main electrical service panel shall have sufficient reserved space to allow the installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

RS402.9 Construction Documentation Certificate. A permanent certificate, indicating the *solar-ready zone* and other requirements of this Part, shall be posted near the electrical distribution panel, water heater, or other conspicuous location.

RS402.10 Solar-Ready Zone for Multifamily. New *Group R*-2, R-3, and R-4 *buildings* three stories or less in height above *grade plane* that have a roof oriented between 110 and 270 degrees of true north or have low-sloped roofs shall have a solar-ready zone that complies with Sections RS402.10.1 through RS402.10.6.

Exceptions:

1. A *building* with a permanently installed, on-site renewable energy system that meets the following criteria:
    1. The system produces the energy output equivalent to covering 40 percent of the net roof area with solar photovoltaic calculated as the horizontally projected

gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or setback areas as required by the International Fire Code.

2. The system is located on the roof or overhang of the *building* or on the roof or overhang of another structure located within 250 feet of the *building*, on the *building site*, on covered parking, or another *approved* location installed with the *building* project and under the same property ownership.

2. A *building* with a *solar-ready zone* that is shaded for more than 70 percent of daylight hours annually.
3. A *building* where a licensed design professional certifies that the incident solar radiation available to the *building* is not suitable for a *solar-ready zone*.
4. A building where a licensed design professional certifies that the *solar-ready zone* area required by Section RS402.10.2 cannot be met because of extensive rooftop equipment, skylights, vegetative roof areas, or other obstructions.

RS402.10.1 Construction Document Requirements for Solar-Ready Zone. Construction documents shall indicate the *solar-ready zone*.

RS402.10.2 Solar-Ready Zone Area. The total *solar-ready zone* area shall not be less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas, and mandatory access or setback areas as required by the International Fire Code. The *solar-ready zone* shall be a single area or smaller, separated sub-zone areas. For sloped roofs, each sub-zone area shall be not less than 200 square feet (18.6m^2) and no side of any rectangular area shall be less than 11 feet (3.35m) in length. For low-sloped or flat roofs, each sub-zone area shall be not less than 330 square feet (30.7m^2), with a minimum length running generally north to south of 15 feet (4.57m) and a minimum length running generally east to west of 22 feet (6.7m) and no side of any rectangular area shall be less than 11 feet (3.35m) in length. The *solar-ready zone* shall be located on the roof or overhang of the *building* or on the roof or overhang of another structure located within 250 feet of the *building*, on the building *site*, on covered parking, or another *approved* location installed with the *building* project and under the same property ownership.

RS402.10.3 Obstructions. *Solar-ready zones* shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights, and roof-mounted equipment.

RS402.10.4 Roof Loads and Documentation. The structural design loads for roof dead load and roof live load shall be indicated on the construction documents.

RS402.10.5 Interconnection Pathway. Construction documents shall indicate at least one potential pathway for routing of conduit and/or raceway from the *solar-ready zone* to an electrical service panel and shall be labeled as "Potential Pathway" on the construction documents.

RS402.10.6 Electrical Service Reserved Space. The main electrical service panel shall have a minimum bus bar rating of not less than 200 amps. The main electrical service panel shall have a reserved space to allow installation of a dual pole circuit breaker for future solar

electric. This space shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

PART 3 RESIDENTIAL SOLAR PANEL CAPACITY (part 2 commercial solar panel capacity is found in the commercial provisions)

SECTION RS410 SCOPE

RS410.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

RS410.2 Electric Service Reserved Space. The main electrical service panel shall have sufficient reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

> **Exception**: A dwelling unit that already must comply with the solar ready provisions in Chapter 4 or that has a permanently installed on-site renewable energy system that provides electricity to the dwelling unit's electrical system.

Chapter 5 Electric Vehicle Ready

PART 1 RESIDENTIAL ELECTRIC VEHICLE READY

SECTION RV501 SCOPE

RV501.1 General. These provisions shall be applicable for all new buildings, and major renovations and additions.

RV502 Electric Vehicle Power Transfer Infrastructure for Single Family and Townhouses. New vehicle parking spaces for one-*and two-family dwellings and townhouses* shall be provided in accordance with Sections RV502.1 and RV502.3.

RV502.1 One- and Two-family Dwellings and Townhouses. Each dwelling unit with a dedicated attached or detached garage or other onsite designated parking provided for the dwelling unit shall be provided with one *EV ready space* per dwelling unit.

RV502.2 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle, located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle for the electrical facilities of this section is installed adjacent to and between both parking spaces.
   Exception: A receptacle shall not be required if a hard-wired EVSE is installed.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).

3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment".

RV502.3 Identification. Construction documents shall designate the *EV ready space* and indicate the locations of raceway and/or conduit and the termination points serving them. The circuits or spaces reserved in the electrical panel for *EV ready spaces* shall be clearly identified in the panel or subpanel directory.

RV502.4 Electric Vehicle Power Transfer Infrastructure for Multifamily. Where new parking is provided for *Group R*-2, R-3, and R-4 buildings three stories or less in height above *grade plane*, it shall be provided with electric vehicle power transfer infrastructure in accordance with Sections RV502.4.1 through RV502.4.13.

RV502.4.1 Quantity. The number of required *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces* shall be determined in accordance with this section and Table RV502.4.1 based on the total number of provided vehicle parking spaces and shall be rounded up to the nearest whole number. This includes all covered parking under carports or detached garages.

Table RV502.4.1 EV Power Transfer Infrastructure Requirements

Building Type/Space Type	Level 2 EVSE Installed Spaces	Level 2 EV Ready Spaces	Level 2 EV Capable Spaces	Level 2 EV Capable Light Spaces
Group R-3 and R-4 occupancies three stories or less in height above grade plane, with 15 or fewer parking spaces	0	20% of spaces (not fewer than 2)	0	0
Group R-3 and R-4 occupancies three stories or less in height above grade plane, with greater than 15 parking spaces	2% of spaces	8% of spaces	10% of spaces	10% of spaces
Group R-2 occupancies three stories or less in height above grade plane with 10 or fewer parking spaces	0	15% of spaces	10% of spaces	10% of spaces
Group R-2 occupancies three stories or less in height above grade plane with greater than 10 parking spaces	5% of spaces	15% of spaces	10% of spaces	30% of spaces

RV502.4.1.1 Multiple Parking Lots. Where more than one parking lot is provided on a *building site* for *Group R*-3 or R-4 *buildings*, the number of provided vehicle parking spaces required to have *EV* power transfer infrastructure shall be calculated separately for each parking lot. *Group R*-2 *buildings* shall use the total parking requirement for the entire development to determine the *EV* power transfer infrastructure requirements of Table RV502.4.1.

RV502.4.2 Space Type Substitutions. *Group R*-2, R-3, and R-4 *buildings* three stories or less in height above grade plane shall be permitted to substitute *EV* parking spaces required in Table RV502.4.1 in accordance with Sections RV502.4.5 through RV502.4.7

RV502.4.2.1 DC Fast Charging. For *Group R*-2, R-3, R-4 buildings that install DCFC EVSE, each DCFC EVSE installed shall be permitted to be substituted for other space types as follows:

1. *Group R*-3 and R-4 buildings shall be permitted to substitute up to 10 spaces when the *building* provides a minimum of 20 percent of parking spaces as a combination of *EV capable*, *EV ready*, or *EVSE installed spaces*.
2. *Group R*-2 buildings shall be permitted to substitute up to 5 spaces when the *building* provides a minimum of 60 percent of parking spaces as a combination of *EV capable light*, *EV capable*, *EV ready*, or *EVSE installed spaces*.

RV502.4.2.2 Level 1 EV Charging. Group R-2 occupancies with greater than 10 vehicle parking spaces that install Level 1 EVSE installed spaces in accordance with Section RV502.4.9 shall be permitted to substitute one (1) Level 2 EVSE installed space or Level 2 EV ready space required to comply with Section RV502.4 or RV502.6, when the following have been met:

1. Three (3) Level 1 EVSE installed spaces installed for every Level 2 EVSE installed space or Level 2 EV ready space.

2. Not greater than 50 percent of the Level 2 EVSE installed spaces or EV ready spaces required in Table RV502.4.1 are permitted to be substituted for Level 1 EVSE installed spaces.

RV502.4.2.3 Excess EVSE Installed Spaces. *EVSE installed spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV ready spaces*, *EV capable spaces*, and *EV capable light spaces*.

RV502.4.2.4 Excess EV Ready Spaces. *EV ready spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV capable spaces* and *EV capable light spaces*.

RV502.4.2.5 Excess EV Capable Spaces. *EV capable spaces* that exceed the minimum requirements of this section are permitted to be used to meet minimum requirements for *EV capable light spaces*.

RV502.4.3 Attached garages. All attached garages with direct connection to a *dwelling unit* will be required to have one Level 2 *EV ready space*.

RV502.4.4 Level 2 EV Capable Light Spaces. Each *EV capable light space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable light space* and shall be capped. *EV capable light* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. Installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. Dedicated physical space to accommodate all equipment necessary for electrical service to future *EVSE*.
4. The routing of the raceway and/or conduit must be noted on the construction documents and the raceway shall be permanently and visibly marked "EV CAPABLE" at the load center and termination point locations.

RV502.4.5 Level 2 EV Capable Spaces. Each *EV capable space* shall comply with all of the following:

1. A continuous raceway and/or conduit shall be installed between a suitable electrical panel or other electrical distribution equipment and terminate within 3 feet of the *EV capable space* and shall be capped. *EV capable* includes two adjacent parking spaces if the raceway and/or conduit terminates adjacent to and between both parking spaces.
2. The installed raceway and/or conduit shall be sized and rated to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
3. The electrical panel or other electrical distribution equipment to which the raceway and/or conduit connects shall have sufficient dedicated space and spare electrical capacity to supply a minimum of 208 volts and a minimum of 40-ampere rated circuits.
4. The termination point of the conduit and/or raceway and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 8.3 kVA (40A 208/240V) for each *EV capable space*.

RV502.4.6 Level 2 EV Ready Spaces. Each *EV ready space* shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle or junction box located within 3 feet of each *EV ready space* it serves. *EV ready* includes two adjacent parking spaces if the receptacle is installed adjacent to and between both parking spaces.
2. Has a minimum circuit capacity of 8.3 kVA (40A 208/240V).
3. The electrical panel, electrical distribution equipment directory, and all outlets or enclosures shall be marked "For future electric vehicle supply equipment (EVSE)."

Exception: Level 1 EV ready spaces that are substituted for Level 2 EV ready spaces in accordance with Section RV502.4.2.2 shall comply with Section RV502.4.9.

RV502.4.7 Level 2 Electric Vehicle Supply Equipment (EVSE). All *EVSE* shall meet all of the following requirements:

1. The installed *EVSE* shall meet one of the following requirements:
    1. A power capacity of at least 6.2 kVA (or 30A at 208/240V) and has the ability to connect to the internet.
    2. An inductive charging system for battery-powered *electric vehicles* that:
    3. Is ENERGY STAR certified; and
    4. Has the ability to connect to the internet.
2. An *electric vehicle* charging system shall be wall-mounted or pedestal style and may provide multiple cords to connect with *electric vehicles*.
3. An *electric vehicle* charging system shall be listed and labeled for *EV* charging and must comply with the current version of Article 625 of the National Electrical Code.

RV502.4.8 Level 2 EVSE Installed Spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple *EVSE installed spaces*. Each *EVSE* installed serving either a single *EVSE installed space* or multiple *EVSE installed spaces* shall comply with all of the following:

1. Have a minimum charging rate in accordance with Section RV502.4.10
2. Be located within 3 feet of each *EVSE installed space* it serves.
3. Be installed in accordance with Section RV502.4.11.
4. Have a minimum circuit capacity of 8.3 kVA (40A 208/240V).

Must meet the requirements of Section RV502.4.7.
Exception: Level 1 EVSE installed spaces that are substituted for Level 2 EV ready spaces or EVSE installed spaces in accordance with Section RV502.4.2.2 shall comply with Section RV502.4.9

RV502.4.9 Level 1 EVSE Installed Spaces. Each Level 1 EVSE installed space shall have a branch circuit that complies with all of the following:

1. Terminates at a receptacle located within 3 feet of each Level 1 EVSE installed space it serves.
2. Has a minimum circuit capacity of 1.8 kVA (15A 120V).
3. The electrical panel, electrical distribution equipment directory, and all receptacles or enclosures shall be marked "Level 1 Electric vehicle supply equipment (EVSE)."

RV502.4.10 EVSE Minimum Charging Rate. Each installed EVSE shall comply with one of the following:
Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
When serving multiple EVSE installed spaces and controlled by an energy management system providing load management, be capable of simultaneously sharing each EVSE installed space at a minimum charging rate of not less than 3.3 kVA.
Exception: Level 1 EVSE installed in accordance with Section RV502.4.9.

RV502.4.11 EVSE Installation. *EVSE* shall be installed in accordance with the National Electrical Code and shall be listed and labeled in accordance with UL 2202 or UL 2594.

RV502.4.12. Accessible EV Parking Spaces. For Level 2 EVSE installed spaces required by Table R409.5.3.1, a minimum of 5 percent (not less than one space) shall be van accessible spaces in accordance with Section 1107.2.2 of the International Building Code. In addition, 5

percent (not less than one space) of the total vehicle parking spaces required by Table RV502.4.1 to be Level 2 EV ready, EV capable, or EV capable light spaces shall meet one of the following:

1. Be van accessible parking spaces in accordance with Section 1107.2.2 of the International Building Code.
2. Have the electrical infrastructure that is required by Section RV502.4.4 for EV capable light spaces, Section RV502.4.5 for EV capable spaces, or Section RV502.4.6 for EV ready spaces be configured so that future EVSE shall be capable of serving van accessible parking spaces.

RV502.4.13 Identification. Construction documents shall designate all *EVSE installed spaces, EV ready spaces, EV capable spaces,* and *EV capable light spaces,* and indicate the locations of raceway and/or conduit and termination points serving them. The circuits or spaces reserved for *EVSE installed spaces, EV ready spaces,* and *EV capable spaces* shall be clearly identified in the panel or subpanel directory. The raceway and/or conduit for *EV ready spaces, EV capable spaces* and *EV capable light spaces* shall be clearly identified at both the panel or subpanel and the termination point at the parking space.

ARTICLE 8. <u>International Property Maintenance Code</u>

Sections 18-10-10 and 18-10-30 of Chapter 18 (Building Regulations), Article 10 (Property Maintenance Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-10-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Property Maintenance Code*, 2024 Edition, as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 8 inclusive, as if fully set out in this Article, with the additions, deletions, insertions and changes as follows set forth in Section 18-10-30 below.

Sec. 18-10-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **IPMC Section 101.1** IPMC Section 101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(2) **IPMC Section 102.3** IPMC Section 102.3 (Application of Other Codes) is amended by the deletion of the last paragraph.

(3) **IPMC Section 103.1** IPMC Section 103.1 (Creation of Agency) is amended by the addition of the term "Town of Timnath" where indicated.

(4) **IPMC Section 104.1** IPMC Section 104.1 (Fees) is amended by deleting the section in its entirety.

(5) **IPMC Section 106.1** IPMC Section 106.1 (General) is amended by deleting the second paragraph and inserting;

"The members of the Board of Appeals shall be comprised of the members of the Town Board."

(6) **IPMC Section 106.3** IPMC Section 106.3 (Qualifications) is amended by deleting the section in its entirety.

(7) **IPMC Section 302.3** IPMC Section 302.3 (Sidewalks and Driveways) is amended by the deletion of this section in its entirety.

(8) **IPMC Section 302.4** IPMC Section 302.4 (Weeds) is amended by deleting this section in its entirety.

(9) **IPMC Section 302.8** IPMC Section 302.8 (Motor Vehicles) is amended by deleting this section in its entirety.

(10) **IPMC Section 304.3** IPMC Section 304.3 (Premises Identification) is amended by deleting the 4th paragraph and replacing with "Numbers shall be a minimum 4 inches in height with a minimum stroke width of .5 inch."

(11) **IPMC Section 304.14** IPMC Section 304.14 (Insect Screens) is amended by the deletion of this section in its entirety.

(12) **IPMC Section 308** IPMC Section 308 (Rubbish and Garbage) is amended by the deleting this section in its entirety.

(13) **IPMC Section 309** IPMC Section 309 (Pest Elimination) is amended by the deletion of this section in its entirety.

ARTICLE 9 – Existing Building Code

Sections 18-8-10 and 18-8-30 of Chapter 18 (Building Regulations), Article 10 (Existing Building Code) of the Town Municipal Code are hereby amended to read as follows:

Sec. 18-8-10. - Adoption.

Pursuant to the provisions of Section 3.7 of the Charter, there is hereby adopted by reference thereto the *International Existing Building Code*, 2024 edition, as

published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 16 inclusive, as if fully set out in this Article, with the additions, deletions, insertions and changes as set forth in Section 18-8-30 below.

Sec. 18-8-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **International Existing Building Code** is amended by replacing all references to "International Fire Code" with "Adopted Fire Code".

(2) **IEBC Section 101.1** IEBC Section 101.1 (Title) is amended by the addition of the term "Town of Timnath" where indicated.

(3) **IEBC Section 103.1** IEBC Section 103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

(4) **IEBC Section 1401.2** IEBC Section 1401.2 **(**Conformance) is amended by deleting the section in its entirety and replacing it with the following: "Structures moved into or within the jurisdiction shall comply with the provision of this code for new structures."

ARTICLE 10. International Swimming Pool and Spa Code

Section 18-11-10 of Chapter 18 (Building Regulations), Article 1 (International Swimming Pool and Spa Code) of the Town Municipal Code is hereby amended to read as follows and new Sections 18-11-20 and 18-11-30 are hereby adopted as follows:

Sec. 18-11-10. - Adoption.

The International Swimming Pool and Spa Code, 2024 Edition as published by the International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478, Chapters 1 through 11 inclusive, is hereby adopted by reference as the Town of Timnath Swimming Pool and Spa Code as if fully set out in this Article, with the additions, deletions, insertions and changes set forth in Sec. 18-11-30.

Sec. 18-11-20. - Copy on file.

At least one copy of the International Swimming Pool and Spa Code, certified to be a true copy, has been and is now on file in the office of the Town Clerk and may be inspected by any interested person during regular business hours. The code as finally adopted shall be available for sale to the public through the office of the Town Clerk at a moderate price.

Sec. 18-11-30. - Amendments.

The code adopted herein is hereby modified by the following amendments:

(1) **ISPSC Section 103.1** ISPSC Section 103.1 (Creation of Agency) is amended by adding "Town of Timnath" where indicated.

ARTICLE 12. Penalties.

A new section 18-12-10 is added, which will read:

Sec. 18-12-10 – Penalties for Violations of the Land Use Code

It shall be unlawful to erect, construct, alter, extend, repair, move, remove, demolish or occupy any building or structure, in violation of any Building Regulations adopted or adopted by reference in this Chapter 18 of the Code, as amended herein, and the Town building official may issue a Notice of Violation in the event of such violation. Violations of such Building Regulations are enforceable as provided by law, including without limitation by the penalties set forth in Sec. 1-4-20 of this Code or in the specific code which has been violated.

ARTICLE 11. Severability. Should any one or more sections or provisions of this Ordinance or of any of the primary or secondary codes adopted by reference be judicially determined invalid or unenforceable, such judgment shall not affect, impair or invalidate the remaining provisions of this Ordinance or the codes adopted by reference hereby, the intention being that the various sections and provisions are severable.

ARTICLE 12 – EFFECTIVE DATE
This Ordinance shall take effect upon adoption at second reading, as provided by Section 3.5.5 of the Charter, but the code amendments and adoption of the updated codes shall take effect for enforcement purposes beginning January 1, 2026.

INTRODUCED, MOVED, ADOPTED BY THE TIMNATH TOWN COUNCIL ON FIRST READING, AND ORDERED PUBLISHED BY TITLE ON OCTOBER 14, 2025, AND SET FOR PUBLIC HEARING AND SECOND READING at 6:00 P.M. ON OCTOBER 28, 2025, AT THE TIMNATH ADMINISTRATION BUILDING, 4750 SIGNAL TREE DRIVE, TIMNATH COLORADO.

MOVED, SECONDED AND FINALLY ADOPTED ON SECOND READING FOLLOWING PUBLIC HEARING BY THE TIMNATH TOWN COUNCIL ON OCTOBER 28, 2025.

TOWN OF TIMNATH, COLORADO

Robert Axmacher, Mayor

ATTEST:

TOWN OF TIMNATH SEAL COLORADO

Milissa Peters, MMC
Town Clerk