

**AN ORDINANCE OF THE CITY OF SEAGOVILLE, TEXAS**

**ORDINANCE NO. 09-2019**

**AN ORDINANCE OF THE CITY OF SEAGOVILLE, TEXAS, AMENDING THE CODE OF ORDINANCES BY AMENDING CHAPTER 21, ARTICLE 21.02, DIVISION 4, ENERGY CONSERVATION CODE, SECTIONS 21.02.151 AND 21.02.152 TO PROVIDE FOR THE ADOPTION OF THE INTERNATIONAL ENERGY CONSERVATION CODE, 2018 EDITION, AND THE AMENDMENTS THERETO; PROVIDING A PENALTY OF FINE NOT TO EXCEED TWO THOUSAND DOLLARS (\$2,000.00); PROVIDING FOR SEVERABILITY; PROVIDING A SAVINGS CLAUSE; PROVIDING A REPEALING CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, the International Code Council (ICC) has developed a set of comprehensive and coordinated international model construction codes (known generally as the "International Codes") which includes the International Energy Conservation Code; and

**WHEREAS**, the City of Seagoville has been involved in the development process of the International Codes, through participation with the North Texas Chapter of the International Code Council and through the regional review process by the Regional Codes Coordinating Committee of the North Central Texas Council of Governments (NCTCOG); and

**WHEREAS**, the creation of the 2018 editions of the International Codes by the ICC was in conjunction with the International Conference of Building Officials (ICBO); and

**WHEREAS**, the 2018 editions of the International Codes, including the International Energy Conservation Code, have been reviewed by the NCTCOG and City staff; and

**WHEREAS**, the City's building and construction codes are intended to be updated periodically, with the 2018 editions of the International Codes, including the Energy Conservation Code, being the most current published building and construction codes for which local amendments have been developed; and

**WHEREAS**, the City Council of the City of Seagoville has determined that it is in the best interest of the citizens of the City of Seagoville to adopt the 2018 edition of the International Energy Conservation Code and to adopt local amendments to said code in order to account for unique local practices and/or conditions relating to the design and construction of structures within the City;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SEAGOVILLE, TEXAS:**

**SECTION 1.** That Chapter 21 of the Seagoville Code of Ordinances be, and the same is, hereby amended by replacing Article 21.02, Division 4, Energy Conservation Code, Sections

21.02.151 and 21.02.152 to provide for the adoption of the International Energy Conservation Code, 2018 Edition, which shall read as follows:

**“ARTICLE 21.02 TECHNICAL AND CONSTRUCTION CODES AND STANDARDS**

....

**Division 4. Energy Conservation Code**

**Sec. 21.02.151 Adopted**

There is hereby adopted by the city the International Energy Conservation Code, 2018 edition, for regulating the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use or maintenance of the building envelope, mechanical, lighting and power systems in the city, and providing for the issuance of permits and collection of fees therefor; and each and all of the regulations, provisions, conditions and terms of such International Energy Conservation Code, 2018 edition, published by the International Code Council on file in the office of the city secretary are hereby referred to, adopted and made a part hereof as if fully set out in this article.

**Sec. 21.02.152 Amendments**

The energy conservation code adopted in this article shall be subject to the exceptions and amendments to the International Energy Conservation Code, 2018 edition, as follows:

Sections C101.4.2 and R101.4.2; add subsections to read as follows:

**C101.4.2/R101.4.2 Historic buildings.** Any building or structure that is listed in the state or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource with a national register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the national or state registers of historic places either individually or as a contributing building to a historic district by the state historic preservation officer of the Keeper of the National Register of Historic Places, shall comply with the provisions of this code.

**Exception:** Whenever a provision or provisions shall invalidate or jeopardize the historical designation or listing, that provision or provisions may be exempted.

Sections C102.1 and R102.1; add subsections to read as follows:

**C102.1.2 Alternative compliance.** A building certified by a national, state, or local accredited energy efficiency program and determined by the energy systems laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the code official, be considered in compliance. The United States Environmental Protection Agency’s Energy Star Program certification of energy code equivalency shall be considered in compliance.

**R102.1.2 (N1101.4.1) Alternative compliance.** A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance. Regardless of the program or the path to compliance, each 1- and 2-family dwelling shall be tested for air and duct leakage as prescribed in Section R402.4.1.2 (N1102.4.1.2) and R403.3.3 (N1103.3.3) respectively.

Sections C202 and R202 (N1101.6); add the following definitions:

**GLAZING AREA.** Total area of the glazed fenestration measured using the rough opening and including sash, curbing or other framing elements that enclose conditioned space. Glazing area includes the area of glazed fenestration assemblies in walls bounding conditioned basements. For doors where the daylight opening area is less than 50 percent of the door area, the glazing area is the daylight opening area. For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

**PROJECTION FACTOR.** The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

Section R202 (N1101.6); add the following definition:

**DYNAMIC GLAZING.** Any fenestration product that has the fully reversible ability to change its performance properties, including U-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

Table 402.1.2 (N1102.1.2) Insulation and Fenestration Requirements by Component; the Fenestration U-factor for Climate Zone 3 is amended as follows:

| CLIMATE ZONE | FENESTRATION U-FACTOR |
|--------------|-----------------------|
| 3            | 0.32 0.35             |

Table 402.1.4 (N1102.1.4) Equivalent U-Factors; the Fenestration U-factor for Climate Zone 3 is amended as follows:

| CLIMATE ZONE | FENESTRATION U-FACTOR |
|--------------|-----------------------|
| 3            | 0.32 0.35             |

Section R402.3.2 (N1102.3.2) Glazed fenestration SHGC; amend by adding a paragraph and table following the exception to read as follows:

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table R402.1.2 shall be reduced by using the multipliers in Table R402.3.2 SHGC Multipliers for Permanent Projections.

**Table R402.3.2 SHGC Multipliers for Permanent Projections <sup>a</sup>**

| Projection Factor | SHGC Multiplier (all Other Orientation) | SHGC Multiplier (North Oriented) |
|-------------------|---|----------------------------------|
| 0 - 0.10          | 1.00                                    | 1.00                             |
| >0.10 – 0.20      | 0.91                                    | 0.95                             |
| >0.20 – 0.30      | 0.82                                    | 0.91                             |
| >0.30 – 0.40      | 0.74                                    | 0.87                             |
| >0.40 – 0.50      | 0.67                                    | 0.84                             |
| >0.50 – 0.60      | 0.61                                    | 0.81                             |
| >0.60 – 0.70      | 0.56                                    | 0.78                             |
| >0.70 – 0.80      | 0.51                                    | 0.76                             |
| >0.80 – 0.90      | 0.47                                    | 0.75                             |
| >0.90 – 1.00      | 0.44                                    | 0.73                             |

<sup>a</sup> North oriented means within 45 degrees of true north.

Section R402.4.1.2 (N1102.4.1.2) Testing; add a last paragraph to read as follows:

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

Section R402.4.1; add new subsection and table to read as follows:

**R402.4.1.3 (N1102.4.1.3) Testing option – ACH tradeoff.** As an option to the air leakage rate set out in Section R402.4.1.2 (N1102.4.1.2), 1- and 2-family homes meeting all of the listed criteria below and the *thermal envelope* requirements in Table R402.4.1.3 (N1102.4.1.3) will be considered compliant when tested and verified as having an air leakage rate to not less than or equal to four air changes per hour when tested and reported in accordance with the testing standards and reporting criteria listed in Section R402.4.1.2 (N1102.4.1.2).

The compliance equivalency is limited as follows:

1. Limited to a conditioned floor area between 1,000 and 6,000 square feet.
2. Limited to between 2 to 6 bedrooms.
3. Assumes all ductwork and mechanical equipment is located in the unconditioned attic.
4. Assumes typical wood framing in the walls and roof, and
5. Assumes one of the following heating/cooling systems:
  - a. All electric system with a heat pump for heating, or
  - b. A system with electric cooling and natural gas heating.

Dwellings using electric resistance strip heating do not qualify for this tradeoff.

**Table R402.4.1.3 (N1102.4.1.3)<sup>a</sup>**

| <b>Envelope Component</b> | <b>Option #1</b>      | <b>Option #2</b>      |
|---------------------------|-----------------------|-----------------------|
| R402.4 Air Leakage        | < 4 ACH50             | < 4 ACH50             |
| Wall Insulation R-value   | R13 + R3 <sup>b</sup> | R13 + R3 <sup>b</sup> |
| Fenestration U-factor     | < 0.32                | < 0.32                |
| Fenestration SHGC         | < 0.25                | < 0.25                |
| Ceiling R-value           | > R49                 | > R49                 |
| Duct Insulation R-value   | R8                    | R6                    |
| Radiant Barrier Required  | No                    | Yes                   |

<sup>a</sup> Except for the values listed in the table, all other mandatory code provisions are applicable.

<sup>b</sup> The first value listed is the R-value of cavity insulation while the second value is the R-value of the continuous insulation or insulated siding.

Section R402.4.1: add new subsections to read as follows:

**R402.4.1.4 Testing options for R2 multifamily dwelling units.** As an option to the air leakage rate set out in Section R402.4.1.2, multifamily dwelling units will be considered compliant when tested and verified as having an air leakage rate to the air leakage rate set out in either Section R402.4.1.4.1 or Section R402.4.1.4.2 when tested and reported in accordance with the testing standards and reporting criteria listed in Section R402.4.1.2

**R402.4.1.4.1 Total air leakage rate for interior multifamily dwelling units.** Interior multifamily dwelling units with a measured, “unguarded” total air leakage result of 5.3 ACH50 or less shall be considered compliant.

**R402.4.1.4.2 Total air leakage rate for corner multifamily dwelling units.** Corner multifamily units with a measured, “unguarded” total leakage result of less than 5.0 ACH50 shall be considered compliant.

**R402.4.1.5 Sampling options for R2 multifamily dwelling units.** For buildings having three or more dwelling units, a minimum of 15% of the dwelling units in each building must be tested as required by Section R402.4.1.2. Prior to beginning sampling for testing, “Initial Testing” is required for each multifamily property. “Initial Testing” shall consist of the 3<sup>rd</sup> party testing contractor performing the required tests on at least three consecutive dwelling units. Test results from the “Initial Testing” must satisfy minimum code requirements before sampling is permitted. Dwelling units selected for the “Initial Testing” must be within the same building. Dwelling units selected for “Initial Testing” shall not be included in a “sample group” or counted toward the minimum 15% of dwelling units tested. The building official shall randomly select the three dwelling units for “Initial Testing.” The building official may delegate the random selection to the designated 3<sup>rd</sup> party testing contractor.

**R402.4.1.5.1 Sample group Identification and Sampling.** The builder shall identify a “sample group” which may be a building, floor, fire area or portion thereof. All of the dwelling units within the “sample group” must be at the same stage of construction and must be ready for testing. The building official shall randomly select at least 15% of

dwelling units from each “sample group” for testing. The building official may delegate the random selection to the designated 3<sup>rd</sup> party testing contractor. If each tested dwelling unit within a “sample group” meets the minimum code requirements, then all dwelling units in the “sample group” are considered to meet the minimum code requirements.

Before a building may be deemed compliant with the testing as required, each “sample group” must be deemed compliant with the minimum code requirements. The sum total of all of the tested dwelling units across all “sample groups” shall not be less than a minimum of 15% of the dwelling units in a building.

**R402.4.1.5.2 Failure to Meet Code Requirement(s).** If any dwelling units within the identified “sample group” fail to meet a code requirement as determined by testing, the builder will be directed to correct the cause(s) of failure, and 30% of the remaining dwelling units in the “sample group” will be randomly selected for testing by the building official, or third-party testing contractor, regarding the specific cause(s) of failure. If any failures occur in the additional dwelling units, all remaining dwelling units in the sample group must be individually tested for code compliance.

A multifamily property with three failures within a 90-day period is no longer eligible to use the sampling protocol in that community or project until successfully repeating "Initial Testing." Sampling may be reinstated after at least three consecutive dwelling units are individually verified to meet all code requirements.

A Certificate of Occupancy may not be issued for any building until testing has been performed and deemed to satisfy the minimum code requirements on the dwelling unit(s) identified for testing.

Section R403.3.3 (N1103.3.3) Duct Testing (Mandatory); add a last paragraph to read as follows:

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

Section R403.3.4; add new subsection to read as follows:

**R403.3.4.1 Sampling options for R2 multifamily dwelling units.** For buildings having three or more dwelling units, a minimum of 15% of the dwelling units in each building must be tested as required by Section R403.3.3. Prior to beginning sampling for testing, “Initial Testing” is required for each multifamily property. “Initial Testing” shall consist of the 3<sup>rd</sup> party testing contractor performing the required tests on at least three consecutive dwelling units. Test results from the “Initial Testing” must satisfy minimum code requirements before sampling is permitted. Dwelling units selected for the “Initial Testing” must be within the same building. Dwelling units selected for “Initial Testing” shall not be included in a “sample group” or counted toward the minimum 15% of dwelling units tested. The building official shall randomly select the three dwelling units for “Initial Testing.” The building official may

delegate the random selection to the designated 3<sup>rd</sup> party testing contractor.

**R403.3.4.1.1 Sample group Identification and Sampling.** The builder shall identify a "sample group" which may be a building, floor, fire area or portion thereof. All of the dwelling units within the "sample group" must be at the same stage of construction and must be ready for testing. The building official shall randomly select at least 15% of dwelling units from each "sample group" for testing. The building official may delegate the random selection to the designated 3<sup>rd</sup> party testing contractor.

If each tested dwelling unit within a "sample group" meets the minimum code requirements, then all dwelling units in the "sample group" are considered to meet the minimum code requirements.

Before a building may be deemed compliant with the testing as required, each "sample group" must be deemed compliant with the minimum code requirements. The sum total of all of the tested dwelling units across all "sample groups" shall not be less than a minimum of 15% of the dwelling units in a building.

**R403.3.4.1.2 Failure to Meet Code Requirement(s).** If any dwelling units within the identified "sample group" fail to meet a code requirement as determined by testing, the builder will be directed to correct the cause(s) of failure, and 30% of the remaining dwelling units in the "sample group" will be randomly selected for testing by the building official, or third-party testing contractor, regarding the specific cause(s) of failure.

If any failures occur in the additional dwelling units, all remaining dwelling units in the sample group must be individually tested for code compliance.

A multifamily property with three failures within a 90-day period is no longer eligible to use the sampling protocol in that community or project until successfully repeating "Initial Testing." Sampling may be reinstated after at least three consecutive dwelling units are individually verified to meet all code requirements.

A Certificate of Occupancy may not be issued for any building until testing has been performed and deemed to satisfy the minimum code requirements on the dwelling unit(s) identified for testing.

Section C402.2.8/R402.2.14; add new subsections to read as follows:

**Section C402.2.8/R402.2.14 (N1102.2.14) Insulation installed in walls.** Insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

Section C403.7.4 Energy recovery ventilation systems (Mandatory); add exception #12 to read as follows:

12. Individual ventilation systems that serve an individual dwelling unit or sleeping unit.

Section C403.11.1 Duct and Plenum Insulation and Sealing (Mandatory); add second and third paragraphs after the exceptions to read as follows:

Environmental ducts and plenums installed in vertical chases, both supply and exhaust, where the ducts or plenums will not be accessible after construction completion, shall be leak tested in accordance with the SMACNA HVAC Air Leakage Test Manual to the installed ductwork class and pressure requirements.

Documentation shall be furnished demonstrating that representative sections totaling not less than 25 percent of the duct area have been tested and that all tested sections comply with the requirements of this section.

Section R404.1 (N1104.1); revised in its entirety to read as follows:

**Section R404.1 (N1104.1) Lighting equipment (Mandatory).** Not less than 90 75 percent of the lamps in permanently installed lighting fixtures or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

Section R405.2 (N1105.2); add exceptions to read as follows:

**Exceptions:**

1. For one and two family dwellings the maximum envelope leakage of 4 ACH50 is permitted provided the envelope leakage in the Standard Reference Design is 3 ACH50 and all other requirements of Section R405 are met, including all other mandatory measures. The annual energy cost or source energy usage of the Proposed Design must be equal to or less than that of the Standard Reference Design.
2. For multifamily or townhomes and buildings classified as Group R2 and Group R4 of three stories or less the maximum envelope leakage of less than 5 ACH50 is permitted provided the envelope leakage in the Standard Reference Design is 3 ACH50 and all other requirements of Section R405 are met, including all other mandatory measures. The annual energy cost or source energy usage of the Proposed Design must be equal to or less than that of the Standard Reference Design.

Section R405.6.2 (N1105.6.2); add the following sentence to the end of paragraph:

Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge®; ICF International Beacon Residential; Ekotrope, HERS Module; Right-Energy HERS; and IC3. Other performance software programs as listed by RESNET® and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

Section C405.9. Voltage drop in feeders; deleted in its entirety.

Table R406.4 (N1106.4) Maximum Energy Rating Index; amend to read as follows:

**Table R406.4 (N1106.4) <sup>1</sup>**  
**MAXIMUM ENERGY RATING INDEX**

| CLIMATE ZONE | ENERGY RATING INDEX |
|--------------|---------------------|
| 3            | 65                  |

<sup>1</sup> This table is effective until August 31, 2019.

**Table R406.4 (N1106.4) <sup>2</sup>**  
**MAXIMUM ENERGY RATING INDEX**

| CLIMATE ZONE | ENERGY RATING INDEX |
|--------------|---------------------|
| 3            | 63                  |

<sup>2</sup> The table is effective from September 1, 2019 to August 31, 2022.

**Table R406.4 (N1106.4) <sup>3</sup>**  
**MAXIMUM ENERGY RATING INDEX**

| CLIMATE ZONE | ENERGY RATING INDEX |
|--------------|---------------------|
| 3            | 59                  |

<sup>3</sup> This table is effective on or after September 1, 2022.

Section C408.3.1 Functional Testing; amend to read as follows:

**C408.3.1 Functional Testing.** Prior to passing final inspection, the *registered design professional or approved agency* shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed, and in proper working condition in accordance with the *construction documents* and manufacturer’s instructions. Functional testing shall be in accordance with Sections C408.3.1.1 through C408.3.1.3 for the applicable control type.”

**SECTION 2.** Any person, firm or corporation violating any of the provisions of this ordinance or the provisions of the Code of Ordinances of the City of Seagoville, Texas, as amended hereby, shall be deemed guilty of a misdemeanor and, upon conviction in the municipal court of the City of Seagoville, Texas, shall be subject to a fine not to exceed the sum of Two Thousand (\$2,000.00) dollars for each offense, and each and every day such offense shall continue shall be deemed to constitute a separate offense.

**SECTION 3.** That all provisions of the Ordinances of the City of Seagoville, Texas, in conflict with the provisions of this ordinance be, and the same are hereby, repealed, and all other provisions of the Ordinances of the City not in conflict with the provisions of this ordinance shall remain in full force and effect.

**SECTION 4.** That should any word, sentence, paragraph, subdivision, clause, phrase or section of this ordinance, or of the Code of Ordinances, as amended hereby, be adjudged or held to be void or unconstitutional, the same shall not affect the validity of the remaining portions of said ordinance or the Code of Ordinances, as amended hereby, which shall remain in full force and effect.

**SECTION 5.** An offense committed before the effective date of this Ordinance is governed by prior law and the provisions of the Ordinances of the City of Seagoville, as amended, in effect when the offense was committed and the former law is continued in effect for this purpose.

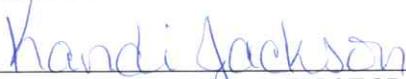
**SECTION 6.** That this ordinance shall take effect immediately from and after its passage as the law and charter in such cases provide.

**PASSED AND ADOPTED** by the City Council for the City of Seagoville at a meeting on the 28<sup>th</sup> day of January, 2019, at which a quorum was present, and for which due notice was given.

**APPROVED:**

  
\_\_\_\_\_  
DENNIS K. CHILDRESS, MAYOR

**ATTEST:**

  
\_\_\_\_\_  
KANDI JACKSON, CITY SECRETARY

**APPROVED AS TO FORM:**

  
\_\_\_\_\_  
VICTORIA W. THOMAS, CITY ATTORNEY  
(/cdb12/28/2018 TM105567)