

**ORDINANCE NO. 2024-030**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF WOLFFORTH, TEXAS, AMENDING CHAPTER 3, ARTICLE XIII – ENERGY CONSERVATION CODE OF THE CODE OF ORDINANCES BY ADOPTING THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE, PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR THE REPEAL OF ORDINANCES IN CONFLICT HERewith; PROVIDING FOR PUBLICATION; AND PROVIDING FOR AN EFFECTIVE DATE.**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF WOLFFORTH, TEXAS, THAT:**

Part 1. Enacted

THAT, Chapter 3, Article XIII ENERGY CONSERVATION CODE of the Code of Ordinances is hereby amended by amending Sec. 3.13.001, which shall read as follows:

**Sec. 3.13.001 Adopted**

The International Energy Conservation Code, 2021 edition, as published by the International Code Council, is hereby adopted by reference as the city energy conservation code as fully set out in this article with the additions, deletions, insertions and changes as follows.

**Amendments-Commercial**

(a) Interior design conditions. Section C302.1 is hereby deleted in its entirety.

(b) Minimum skylight fenestration area. Section C402.4.2 is hereby amended with additional text that reads:

The minimum skylight fenestration area is not a mandatory guideline but more as a recommendation. Decisions for use shall be determined by the design professional or acting representative.

(c) Building envelope performance verification. Section C402.5.1.5 is hereby amended to read as follows:

C402.5.1.5 Building envelope performance verification. The installation of the continuous air barrier shall be verified by the *code official, a registered design professional or approved agency* in accordance with the following:

1. A review of the construction documents and other supporting data shall be conducted to assess compliance with the requirements in Section C402.5.1.
2. Inspection of continuous air barrier components and assemblies shall be conducted during construction while the air barrier is still accessible for inspection and repair to verify compliance with the requirements of Section C402.5.1.4.

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(d) Dwelling and sleeping unit enclosure testing. Section C402.5.2 is hereby deleted in its entirety.

(e) Building thermal envelope testing. Section C402.5.3 is hereby deleted in its entirety.

(f) Operable openings interlocking. Section C402.5.11 is hereby amended to read as follows:

C402.5.11 Operable openings interlocking. Where occupancies utilize operable openings to the outdoors that are larger than 40 square feet (3.7 m<sup>2</sup>) in area, such openings shall be interlocked with the heating and cooling system so as to raise the cooling setpoint to 90°F (32°C) and lower the heating setpoint to 55°F (13°C) whenever the operable opening is open. The change in heating and cooling setpoints shall occur within 10 minutes of opening the operable opening.

Exceptions:

1. Separately zoned areas associated with the preparation of food that contain appliances that contribute to the HVAC loads of a restaurant or similar type of occupancy.
2. Warehouses that utilize overhead doors for the function of the occupancy, where approved by the *code official*.
3. The first entrance doors where located in the exterior wall and are part of a vestibule system.
4. The building does not have a building management system.

(g) Fault detection and diagnostics. Section C403.2.3 is hereby deleted in its entirety.

(h) Deadband. Section C403.4.1.2 is hereby amended to read as follows:

C403.4.1.2 Deadband. Where used to control both heating and cooling, *zone* thermostatic controls shall be configured to provide a temperature range or deadband of at least 2°F (1.1°C) within which the supply of heating and cooling energy to the *zone* is shut off or reduced to a minimum.

Exceptions:

1. Thermostats requiring manual changeover between heating and cooling modes.
2. Occupancies or applications requiring precision in indoor temperature control as approved by the *code official*.

(i) Heated or cooled vestibules. Section C403.4.1.4 is hereby deleted in its entirety.

(j) Economizers. Section C403.5 is hereby amended to read as follows:

C403.5 Economizers. If a cooling system includes either an air or water economizer it shall comply with Sections C403.5.1 through C403.5.4.

Table C403.5(1) and Table C403.5(2) are hereby deleted in their entirety.

(k) Economizer fault detection and diagnostics. Section C403.5.5 is hereby deleted in its entirety.

(l) Demand control ventilation. Section C403.7.1 is hereby amended to read as follows:

C403.7.1 Demand control ventilation. Demand control ventilation (DCV) shall be provided for all single-zone systems required to comply with Sections C403.5 through C403.5.3 and spaces larger than 500 square feet (46.5 m<sup>2</sup>) and with an average occupant load of 25 people or greater per 1,000 square feet (93 m<sup>2</sup>) of floor area, as established in Table 403.3.1.1 of the International Mechanical Code, and served by systems with one or more of the following:

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1. An air-side economizer.
2. Automatic modulating control of the outdoor air damper.
3. A design outdoor airflow greater than 3,000 cfm (1416 L/s).

Exceptions:

1. Systems with energy recovery complying with Section C403.7.4.2.
  2. Multiple-zone systems without direct digital control of individual zones communicating with a central control panel.
  3. Multiple-zone systems with a design outdoor airflow less than 1,200 cfm (566 L/s).
  4. Spaces where more than 75 percent of the space design outdoor airflow is required for makeup air that is exhausted from the space or transfer air that is required for makeup air that is exhausted from other spaces.
  5. Spaces with one of the following occupancy classifications as defined in Table 403.3.1.1 of the *International Mechanical Code*: correctional cells, education laboratories, barber, beauty and nail salons, and bowling alley seating areas.
- (m) Ventilation air heating control. Section C403.7.3 is hereby deleted in its entirety.
- (n) Operable opening interlocking controls. Section C403.14 is hereby amended to read as follows:

C403.14 Operable opening interlocking controls. The heating and cooling systems shall have controls that will interlock these mechanical systems to the set temperatures of 90°F (32°C) for cooling and 55°F (12.7°C) for heating when the conditions of Section C402.5.8 exist. The controls shall configure to shut off the systems entirely when the outdoor temperatures are below 90°F (32°C) or above 55°F (12.7°C), unless the building does not have a building management system.

(o) Maximum allowable pipe length method. Section C404.5.1 is hereby amended to read as follows:

C404.5.1 Maximum allowable length method. The maximum allowable piping length from the nearest source of heated water to the termination of the fixture supply pipe shall be in accordance with the following. Where the piping contains more than one size of pipe, the largest size of pipe within the piping shall be used for determining the maximum allowable length of the piping in Table C404.5.1.

1. For a public lavatory faucet, use the "Public lavatory faucets" column in Table C404.5.1.
2. For all other plumbing fixtures and plumbing appliances, use the "Other fixtures and appliances" column in Table C404.5.1.

#### **TABLE C404.5.1 PIPING VOLUME AND MAXIMUM PIPING LENGTHS**

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NOMINAL PIPE SIZE (inches)	VOLUME (liquid ounces per foot length)	MAXIMUM PIPING LENGTH I (feet)	
		Public lavatory faucets	Other fixtures and appliances
1/4	0.33	10	50
5/16	0.5	10	50
3/8	0.75	10	50
1/2	1.5	10	43
5/8	2	10	32
3/4	3	10	21
7/8	4	10	16
1	5	10	13
1 1/4	8	8	8
1 1/2	11	6	6
2 or larger	18	4	4

For SI: 1 inch= 25.4 mm, 1 foot= 304.8 mm, 1 liquid ounce= 0.030 L, 1 gallon= 128 ounces.

(p) Maximum allowable pipe volume method. Section C404.5.2 is hereby deleted in its entirety.

(q) Circulation systems. Section C404.6. 1 is hereby amended to read as follows:

C404.6.1 Circulation systems. Heated-water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermo-syphon circulation systems shall be prohibited. Circulation pump shall be controlled by a seven-day time clock, aqua stat, or a combination of both devices.

(r) Lighting controls. Section C405.2 is hereby amended to read as follows:

C405.2 Lighting controls. Lighting systems shall be provided with controls that comply with one of the following:

1. Lighting controls as specified in Sections C405.2.1 through C405.2.7.
2. Luminaire level lighting controls (LLLC) and lighting controls as specified in Sections C405.2. 1, C405.2.5 and C405.2.6. The LLLC luminaire shall be independently capable of:
  - 2.1. Monitoring occupant activity to brighten or dim lighting when occupied or unoccupied, respectively.
  - 2.2. Monitoring ambient light, both electric light and daylight, and brighten or dim artificial light to maintain desired light level.
  - 2.3. For each control strategy, configuration and reconfiguration of performance parameters including; bright and dim setpoints, timeouts, dimming fade rates, sensor sensitivity adjustments, and wireless zoning configurations.

Exceptions: Lighting controls are not required for the following:

1. Areas designated as security or emergency areas that are required to be continuously lighted.
2. Interior exit stairways, interior exit ramps and exit passageways.

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3. Emergency egress lighting that is normally off.

4. Areas deemed by owner/operator to be a potential health, safety or security issue.

(s) Occupant sensor control function in warehouse storage areas. Section C405.2.1.2 is hereby deleted in its entirety.

(t) Occupant sensor control function in open plan office areas. Section C405.2.1.3 is hereby deleted in its entirety.

(u) Occupant sensor control function in corridors. Section C405.2.1.4 is hereby deleted in its entirety.

(v) Daylight-responsive controls. Section C405.2.4 is hereby amended to read as follows:

C405.2.4 Daylight-responsive controls. Daylight-responsive controls complying with Section C405.2.4.1 shall be provided to control the general lighting within daylight zones in the following spaces:

1. Spaces with a total of more than 150 watts of general lighting within sidelit daylight zones complying with Section C405.2.4.2.

2. Spaces with a total of more than 150 watts of general lighting within toplit daylight zones complying with Section C405.2.4.3.

Exceptions: Daylight responsive controls are not required for the following:

1. Spaces in health care facilities where patient care is directly provided.

2. Sidelit daylight zones on the first floor above grade in Group A 2 and Group M occupancies.

3. New buildings where the total connected lighting power calculated in accordance with Section C405.3.1 is not greater than the adjusted interior lighting power allowance ( $LPA_{adj}$ ) calculated in accordance with Equation 4-9.  $LPA_{adj} = [LPA_{norm} \times (1.0 - 0.4 \times UDZFA/TBFA)]$

(Equation 4-9)  $LPA_{adj}$  = Adjusted building interior lighting power allowance in watts.  
 $LPA_{norm}$  - Normal building lighting power allowance in watts calculated in accordance with Section C405.3.2 and reduced in accordance with Section C406.3 where Option 2 of Section C406.1 is used to comply with the requirements of Section C406.

$UDZFA$  = Uncontrolled daylight zone floor area is the sum of all sidelit and toplit zones, calculated in accordance with Sections C405.2.4.2 and C405.2.4.3, that do not have daylight responsive controls.  $TBFA$  = Total building floor area is the sum of all floor areas included in the lighting power allowance calculation in Section C405.3.2.

(w) Daylight-responsive control function. Section C405.2.4.1 is hereby amended to read as follows:

C405.2.4.1 Daylight-responsive control function. Where required, *daylight-responsive controls* shall be provided within each space for control of lights in that space and shall comply with all of the following:

1. Lights in *toplit daylight zones* in accordance with Section C405.2.4.3 shall be controlled independently of lights in sidelit daylight zones in accordance with Section C405.2.4.2.

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2. *Daylight responsive controls* within each space shall be configured so that they can be calibrated from within that space by authorized personnel.
3. Calibration mechanisms shall be in a location with *ready access*.
4. *Daylight responsive controls* shall dim lights continuously from full light output to 15 percent of full light output or lower.
5. *Daylight responsive controls* shall be configured to completely shut off all controlled lights.
6. When occupant sensor controls have reduced the lighting power to an unoccupied setpoint in accordance with Sections C405.2.1.2 through C405.2.1.4, daylight responsive controls shall continue to adjust electric light levels in response to available daylight but shall be configured to not increase the lighting power above the specified unoccupied setpoint.
7. Lights in *sidelit daylight* zones in accordance with Section C405.2.4.2 facing different cardinal orientations [within 45 degrees (0.79 rad) of due north, east, south, west] shall be controlled independently of each other.

Exceptions:

1. Within each space, up to 150 watts or lighting within the sidelit daylight zone is permitted to be controlled together with lighting in a sidelit daylight zone facing a different cardinal orientation.

(x) Sidelit daylight zone. Section C405.2.4.2 is hereby amended to read as follows:

C405.2.4.2 Sidelit daylight zone. The sidelit daylight zone is the floor area adjacent to vertical *fenestration* that complies with all of the following:

1. Where the fenestration is located in a wall, the sidelit daylight zone shall extend laterally to the nearest full-height wall, or up to 1.0 times the height from the floor to the top of the fenestration, and longitudinally from the edge of the fenestration to the nearest full-height wall, or up to 0.5 times the height from the floor to the top of the fenestration, whichever is less, as indicated in Figure C405.2.4.2(1).
2. Where the fenestration is located in a rooftop monitor, the sidelit daylight zone shall extend laterally to the nearest obstruction that is taller than 0.7 times the ceiling height, or up to 1.0 times the height from the floor to the bottom of the fenestration, whichever is less, and longitudinally from the edge of the fenestration to the nearest obstruction that is taller than 0.7 times the ceiling height, or up to 0.25 times the height from the floor to the bottom of the fenestration, whichever is less, as indicated in Figures C405.2.4.2(2) and C405.2.4.2(3).
3. The area of the fenestration is not less than 24 square feet (2.23 m<sup>2</sup>).
4. The distance from the fenestration to any building or geological formation that would block access to daylight is greater than one-half of the height from the bottom of the fenestration to the top of the building or geologic formation.
5. The visible transmittance of the fenestration is not less than 0.20.
6. The projection factor (determined in accordance with Equation 4-5) for any overhanging projection that is shading the fenestration is not greater than 1.0 for

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fenestration oriented 45 degrees or less from true north and not greater than 1.5 for all other orientations.

- (y) Building façade and landscape lighting. Section C405.2.7.2 is hereby deleted in its entirety.
- (z) Parking garage lighting control. Section C405.2.8 is hereby deleted in its entirety.
- (aa) Automatic receptacle control. Sections C405.11-405.11.1 is hereby deleted in their entirety.
- (bb) Energy monitoring. Sections C405.12-C405.12.5 is hereby deleted in their entirety.
- (cc) Mechanical systems and service water-heating systems commissioning and completion requirements. Section C408.2 is hereby amended to read as follows:  
C408.2 Mechanical systems and service water-heating systems commissioning and completion requirements. Prior to the final mechanical and plumbing inspections, the completion of the systems adjusting and balancing shall be completed with the provisions of this section.
- (dd) Commissioning plan. Section C408.2.1 is hereby deleted in its entirety.
- (ee) Preliminary commissioning report. Section C408.2.4 is hereby deleted in its entirety.
- (ff) Acceptance of report. Section C408.2.4.1 is hereby deleted in its entirety. (gg) Copy of report. Section C408.2.4.2 is hereby deleted in its entirety.
- (gg) Copy of report. Section C408.2.4.2 is hereby deleted in its entirety.
- (hh) Functional testing. Section C408.3.1 is hereby amended to read as follows:  
C408.3.1 Functional testing. Prior to passing final inspection, 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 and C408.3.1.2 for the applicable control type.

### **Amendments-Residential**

- (a) Above code programs. Section RI 02.1.1 is hereby amended to read as follows:  
R102.1.1 Above code programs. The *code official* or other authority having jurisdiction shall be permitted to deem a national, state or local energy- efficiency program to exceed the energy efficiency required by this code. *Buildings approved* in writing by such an energy-efficiency program shall be considered in compliance with this code.
- (b) Information on construction documents. Section R103.2 is hereby deleted in its entirety.
- (c) Interior design conditions. Section R.302.1 is hereby deleted in its entirety.
- (d) Application. Section R401.2 is hereby amended to read as follows:  
R.401.2 Application. Residential buildings shall comply with either Sections R401.2.1, R401.2.2, R401.2.3 or R.401.2.4.  
Exception: Additions, alternations, repairs and changes of occupancy to existing buildings complying with Chapter 5.
- (e) Additional energy efficiency. Section R401.2.5 is hereby deleted in its entirety.
- (f) Maximum Assembly U-Factors<sup>3</sup> and Fenestration Requirements. Table 402.1.2 is amended to read as follows:

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**TABLE R402.1.2**  
**MAXIMUM ASSEMBLY U FACTORS<sup>8</sup> AND FENESTRATION REQUIREMENTS FOR**  
**CLIMATE ZONE 3**

Fenestration U-Factor	0.30
Skylight U-Factor	0.55
Glazed Fenestration SHGC <sup>d</sup>	0.25
Ceiling U-Factor	0.026
Wood Frame Wall U-Factor	0.084
Mass Wall U-Factor <sup>b</sup>	0.098
Floor U-Factor	0.047
Basement Wall U-Factor	0.360
Crawl Space Wall U-Factor	0.136

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

b. Mass walls shall be in accordance with Section R402.2.5. Where more than half the insulation is on the interior, the mass wall U-factors shall not exceed 0.12 in Climate Zone 3.

c. In Warm Humid locations as defined by Figure R301.1 and Table R301.1, the basement wall U-factor shall not exceed 0.360.

d. The SHGC column applies to all glazed fenestration.

Exception: In Climate Zones 0 through 3, skylights shall be permitted to be excluded fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.

(g) Insulation Minimum R-Values and Fenestration Requirements by Component. Table R402.1.3 is hereby amended to read as follows:

**Table R402.1.3**  
**INSULATION MINIMUM R-VALUES AND FENESTRATION REQUIREMENTS BY**  
**COMPONENTS**  
**FOR CLIMATE ZONE 3**

Fenestration U-Factor <sup>b,i</sup>	0.30'
Skylight <sup>b</sup> U-Factor	0.55
Glazed Fenestration SHGC <sup>b,e</sup>	0.25
Ceiling R-Value	38
Wood Frame Wall R-Value	13
Mass Wall R-Value <sup>i</sup>	8/13
Floor R-Value	19



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Basement <sup>c,g</sup> Wall R-Value	0
Slab <sup>d</sup> R-Value & Depth	0
Crawl Space <sup>c</sup> Wall R-Value	Sci or 13 <sup>f</sup>

a. R-values are minimums. U-factors and SI IGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation R-value of the insulation shall be not less than the R-value specified in the table.

b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

Exception: In Climate Zones O through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.

c. "Sci or 13" means R-5 continuous insulation (ci) on the interior or exterior surface of the wall or R-13 cavity insulation on the interior side of the wall.

d. R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation R-value for slabs as indicated in the table. The slab-edge insulation for heated slabs shall not be required to extend below the slab.

e. There are no SHGC requirements in the Marine Zone.

f. Basement wall insulation is not required in Warm Humid locations as defined by Figure R301.1 and Table R301.1.

g. The first value is cavity insulation; the second value is continuous insulation.

h. Mass walls shall be in accordance with Section R402.2.5. The second R-value applies where more than half of the insulation is on the interior of the mass wall.

i. A maximum U-factor of 0.32 shall apply in Climate Zones 3 through 8 to vertical fenestration products installed in buildings located either:

1. Above 4,000 feet in elevation, or
2. In windborne debris regions where protection of openings is required by Section R301.2.1.2 of the *International Residential Code*.

j. For impact rated fenestration complying with Section R301.2.1.2 of the *International Residential Code* or Section 1609.1.2 of the *International Building Code*, the maximum U-factor shall be 0.75 in Zone 2 and 0.65 in Zone 3.

(h) Air leakage. Section R402.4 is hereby amended to read as follows:

R402.4 Air leakage. The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.4.

(i) Testing. Section R402.4.1.2 is hereby deleted in its entirety.

(j) Rooms containing fuel-burning appliances. Section R402.4.4 is hereby deleted in its entirety.

(k) Ducts located outside conditioned space. Section R403.3.1 on or before 7/1/2024 is hereby amended to read as follows:

*(unapproved draft)*

R.403.3.1 Ducts located outside conditioned space. Supply and return ducts in attics shall be insulated to a minimum of R-6. Supply and return ducts in other portions of the building shall be insulated to a minimum of R-6.

(l) Duct testing. Section R403.3.5 is hereby deleted in its entirety.

(m) Duct leakage. Section R.403.3.6 is hereby deleted in its entirety.

(n) Circulation systems. Section R.403.5.1.1 is hereby amended to read as follows:

R.403.5. I .1 Circulation systems. Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be a dedicated return pipe or a cold water supply pipe. Gravity and thermosyphon circulation systems shall be prohibited. Circulation pump shall be controlled by a seven-day time clock, aqua stat, or a combination of both devices.

(o) Testing. Section R403.6.3 is hereby deleted in its entirety.

(p) Covers. Section R403.10.3 is hereby deleted in its entirety.

(q) Lighting equipment. Section R404.1 is hereby amended to read as follows:

R404.1 Lighting equipment. Not less than 90 percent of the permanently installed lighting fixtures, excluding kitchen appliance lighting fixtures, shall contain only high-efficacy lighting sources.

(r) Exterior lighting. Section R404.1.1 is hereby deleted in its entirety.

(s) Interior lighting controls. Section R404.2 is hereby deleted in its entirety.

(t) Exterior lighting controls. Section R404.3 is hereby deleted in its entirety.

(u) ADDITIONAL EFFICIENCY PACKAGE OPTIONS. Section R408 is hereby deleted in its entirety.

## Part 2. Open Meetings Act

This meeting was open to the public as required by law and that public notice of the time, place, and purpose of said meeting was given as required.

## Part 3. Severability Clause

If any section, sub-section, clause, phrase, or portion of this ordinance shall be held unconstitutional or invalid by a court of competent jurisdiction, such section, sub-section, sentence, clause, phrase, or portion shall be deemed to be a separate, distinct and independent provision and such invalidity shall not affect the validity of the remaining portions.

## Part 4. Repeal

All ordinances or parts of ordinances and sections of any of the City Code of Ordinances in conflict with this Ordinance are hereby repealed.

## Part 5. Effect on Pending Proceedings

*(unapproved draft)*

That nothing in this legislation or in the Energy Conservation Code hereby adopted shall be construed to affect any suit or proceeding pending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Part 4 of this Ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this legislation.

Part 6. Publication

The City Secretary is authorized and directed to publish the caption and penalty prescribed by this ordinance in accordance with State Law.

Part 7. Enforcement

Any person, firm or individual who shall violate any of the provisions of this Ordinance shall be guilty of a misdemeanor, and upon conviction shall be fined not less than one dollar (\$1.00) or more than two thousand dollars (\$2,000.00) in accordance with Code of Ordinance Sec. 1.01.009. Each day the violation continues shall constitute a separate and distinct offense.

Part 8. Effective Date

This Ordinance shall be in force and effect from and after October 1, 2024.

CITY OF WOLFFORTH

\_\_\_\_\_  
CHARLES ADDINGTON II, MAYOR

ATTEST:

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Terri Robinette, City Secretary