

Amendment 8 to Council Bill No. 24-2025

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Legislative Day 10

Date: July 7, 2025

Amendment No. 8

(This Amendment increases efficiency standards for HVAC systems for renovations and additions)

On page 56, in line 26 insert the following:

“(11) SECTION R503.1.2.3 DUCT SYSTEM LEAKAGE.

DELETE SECTION R503.1.2.3 “DUCT SYSTEM LEAKAGE,” AND REPLACE WITH THE FOLLOWING:

R503.1.2.3 DUCT SYSTEM LEAKAGE. WHERE AN ALTERATION INCLUDES ANY OF THE FOLLOWING,

DUCT SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH SECTION R403.3.7 AND SHALL HAVE A

TOTAL LEAKAGE LESS THAN OR EQUAL TO 12.0 CUBIC FEET PER MINUTE (339.9 L/MIN) PER 100

SQUARE FEET (9.29 M²) OF CONDITIONED FLOOR AREA:

1. TWENTY-FIVE PERCENT OR MORE OF THE REGISTERS THAT ARE PART OF THE DUCT SYSTEM ARE RELOCATED.

2. TWENTY-FIVE PERCENT OR MORE OF THE TOTAL LENGTH OF ALL DUCTWORK IN THE DUCT SYSTEM IS RELOCATED.

3. THE TOTAL LENGTH OF ALL DUCTWORK IN THE DUCT SYSTEM IS INCREASED BY 25 PERCENT OR MORE.

4. COOLING SYSTEM ALTERATIONS COMPLYING WITH SECTION R503.1.2.5.2.1.

EXCEPTION:

1. IF TOTAL LEAKAGE EXCEEDS 12.0 CUBIC FEET PER MINUTE (339.9L/MIN) AND IT IS NOT POSSIBLE TO REDUCE LEAKAGE THROUGHOUT THE DUCT SYSTEM, ALL ACCESSIBLE LEAKS SHALL BE SEALED AND VERIFIED THROUGH A VISUAL INSPECTION AND A SMOKE TEST BY AN APPROVED PARTY.

2. DUCT SYSTEMS LOCATED ENTIRELY INSIDE A *CONDITIONED SPACE* IN ACCORDANCE WITH SECTION R403.3.4.

(15) SECTION R503.1.2.5

IMMEDIATELY AFTER SECTION R503.1.2.4, INSERT THE FOLLOWING:

R503.1.2.5 COOLING SYSTEMS. WHEN AN *ALTERATION* OF AN EXISTING SPACE CONDITIONING SYSTEM INCLUDES THE INSTALLATION OR REPLACEMENT OF AN AIR-CONDITIONER, THE ALTERED SYSTEM SHALL COMPLY WITH EITHER SECTION R503.1.2.5.1 OR SECTION R503.1.2.5.2.

R503.1.2.5.1 HEAT PUMP. A HEAT PUMP SHALL BE CONFIGURED TO BE THE PRIMARY HEATING SOURCE AND SIZED ACCORDING TO SECTION R403.7. SUPPLEMENTAL HEATING MAY BE PROVIDED BY A GAS FURNACE OR ELECTRIC RESISTANCE HEATING.

EXCEPTION: WHERE THE REQUIRED CAPACITY OF A HEAT PUMP TO MEET THE SYSTEM SIZING REQUIRED BY R403.7 IS AT LEAST 12,000 BTU/H MORE THAN EITHER:

A. THE REQUIRED CAPACITY OF AN AIR CONDITIONER TO MEET THE DESIGN COOLING LOAD, OR

B. THE CAPACITY OF THE EXISTING AIR CONDITIONER,

THEN THE HEAT PUMP SHOULD BE SIZED TO MEET THE GREATER OF THESE TWO CAPACITIES. DOCUMENTATION OF THE EXISTING AIR CONDITIONER'S CAPACITY AND THE HEATING AND COOLING LOAD CALCULATIONS PER R403.7 SHALL BE *APPROVED* BY THE *CODE OFFICIAL* IN ORDER FOR THIS EXCEPTION TO APPLY.

R503.1.2.5.2 AIR CONDITIONER. AN AIR CONDITIONER SHALL MEET ALL THE REQUIREMENTS OF EITHER SECTION R503.1.2.5.2.1 OR SECTION R503.1.2.5.2.2

R503.1.2.5.2.1 SYSTEMS WITH EXISTING DUCT DISTRIBUTION SYSTEMS. SYSTEMS WITH EXISTING DUCT DISTRIBUTION SYSTEMS SHALL COMPLY WITH ALL OF THE REQUIREMENTS OF THIS SECTION. MULTISPEED COMPRESSOR SYSTEMS OR VARIABLE SPEED COMPRESSOR SYSTEMS SHALL VERIFY AIR FLOW (CFM/TON) AND FAN EFFICACY (WATT/CFM) FOR SYSTEM OPERATION AT THE MAXIMUM COMPRESSOR SPEED AND THE MAXIMUM AIR HANDLER FAN SPEED.

- a. THE DUCT SYSTEM MEASURED AIR LEAKAGE SHALL MEET THE REQUIREMENTS OF SECTION R503.1.2.3.
- b. AIRFLOW SHALL BE GREATER THAN OR EQUAL TO 300 CFM PER TON OF NOMINAL COOLING CAPACITY THROUGH THE RETURN GRILLES IN EVERY CONTROL MODE.
- c. AIR-HANDLING UNIT FAN EFFICACY SHALL BE LESS THAN OR EQUAL TO 2.2 CFM/W.
- d. THE AIRFLOW RATE AND FAN EFFICACY REQUIREMENTS IN THIS SECTION SHALL BE CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING IN ACCORDANCE WITH SECTION R403.6.3.

EXCEPTIONS:

1. SYSTEMS UNABLE TO COMPLY WITH THE MINIMUM AIRFLOW RATE OR AIR-HANDLING UNIT FAN EFFICACY REQUIREMENTS SHALL DEMONSTRATE COMPLIANCE BY INSTALLING A SYSTEM THERMOSTAT THAT COMPLIES WITH SECTION R408.2.8.
2. GAS FURNACE AIR-HANDLING UNITS MANUFACTURED PRIOR TO JULY 3, 2019 SHALL COMPLY WITH A FAN EFFICACY VALUE LESS THAN OR EQUAL TO 0.58 W/CFM AS CONFIRMED BY FIELD VERIFICATION AND DIAGNOSTIC TESTING IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN R403.6.3.
- e. INSULATION SHALL BE INSTALLED ON THE CEILING PLANE LOCATED BETWEEN CONDITIONED SPACE AND ATTIC SPACE OUTSIDE THE THERMAL ENVELOPE IN ACCORDANCE WITH SECTION R402. LUMINAIRES NOT RATED FOR INSULATION CONTACT MUST BE REPLACED OR RETROFITTED AS SPECIFIED BY SECTION R402.5.4.

EXCEPTIONS:

1. DWELLING UNITS WITH AT LEAST R-38 EXISTING INSULATION INSTALLED AT THE CEILING LEVEL.

2. DWELLING UNITS WHERE THE ALTERATION WOULD DIRECTLY CAUSE THE
DISTURBANCE OF ASBESTOS UNLESS THE ALTERATION IS MADE IN
CONJUNCTION WITH ASBESTOS ABATEMENT.

3. DWELLING UNITS WITH KNOB AND TUBE WIRING LOCATED IN THE ATTIC.

4. WHERE THE ACCESSIBLE SPACE IN THE ATTIC IS NOT LARGE ENOUGH TO
ACCOMMODATE THE REQUIRED R-VALUE, THE ENTIRE ACCESSIBLE SPACE
SHALL BE FILLED WITH INSULATION PROVIDED SUCH INSTALLATION DOES
NOT VIOLATE SECTION 806.3 OF THE *INTERNATIONAL RESIDENTIAL CODE*.

f. AIR SEAL ALL ACCESSIBLE AREAS OF THE CEILING PLANE BETWEEN CONDITIONED
SPACE AND ATTIC SPACE OUTSIDE THE THERMAL ENVELOPE INCLUDING ALL JOINTS,
PENETRATIONS AND OTHER OPENINGS THAT ARE POTENTIAL SOURCES OF AIR
LEAKAGE BY CAULKING, GASKETING, WEATHER-STRIPPING OR OTHERWISE SEALING
TO LIMIT INFILTRATION AND EXFILTRATION.

EXCEPTIONS:

1. DWELLING UNITS WITH AT LEAST R-38 EXISTING INSULATION INSTALLED AT
THE CEILING LEVEL.

2. DWELLING UNITS WHERE THE ALTERATION WOULD DIRECTLY CAUSE THE
DISTURBANCE OF ASBESTOS UNLESS THE ALTERATION IS MADE IN
CONJUNCTION WITH ASBESTOS ABATEMENT.

3. DWELLING UNITS WITH ATMOSPHERICALLY VENTED SPACE HEATING OR
WATER HEATING COMBUSTION APPLIANCES LOCATED INSIDE THE PRESSURE
BOUNDARY OF THE DWELLING UNIT.

**R503.1.2.5.2.2 ENTIRELY NEW OR COMPLETE REPLACEMENT DUCT SYSTEMS: SYSTEMS WITH
NEW OR COMPLETE REPLACEMENT OF DUCT SYSTEMS SHALL COMPLY WITH ALL OF THE
REQUIREMENTS OF THIS SECTION.**

a. IF THE AIR HANDLER AND DUCTS ARE LOCATED WITHIN AN ATTIC THAT IS OUTSIDE
THE THERMAL ENVELOPE, INSULATION SHALL BE INSTALLED ON THE CEILING PLANE
LOCATED BETWEEN CONDITIONED SPACE AND ATTIC SPACE OUTSIDE THE THERMAL

1 ENVELOPE IN ACCORDANCE WITH SECTION R402. LUMINAIRES NOT RATED FOR
2 INSULATION CONTACT MUST BE REPLACED OR RETROFITTED AS SPECIFIED BY
3 SECTION R402.5.4.

4 **EXCEPTIONS:**

5 1. DWELLING UNITS WITH AT LEAST R-19 EXISTING INSULATION INSTALLED AT
6 THE CEILING LEVEL.

7 2. DWELLING UNITS WHERE THE ALTERATION WOULD DIRECTLY CAUSE THE
8 DISTURBANCE OF ASBESTOS UNLESS THE ALTERATION IS MADE IN
9 CONJUNCTION WITH ASBESTOS ABATEMENT.

10 3. DWELLING UNITS WITH KNOB AND TUBE WIRING LOCATED IN THE VENTED
11 ATTIC.

12 4. WHERE THE ACCESSIBLE SPACE IN THE ATTIC IS NOT LARGE ENOUGH TO
13 ACCOMMODATE THE REQUIRED R-VALUE, THE ENTIRE ACCESSIBLE SPACE
14 SHALL BE FILLED WITH INSULATION PROVIDED SUCH INSTALLATION DOES
15 NOT VIOLATE SECTION 806.3 OF THE *INTERNATIONAL RESIDENTIAL CODE*.

16 b. AIR SEAL ALL ACCESSIBLE AREAS OF THE CEILING PLANE BETWEEN CONDITIONED
17 SPACE AND ATTIC SPACE OUTSIDE THE THERMAL ENVELOPE INCLUDING ALL JOINTS,
18 PENETRATIONS AND OTHER OPENINGS THAT ARE POTENTIAL SOURCES OF AIR
19 LEAKAGE BY CAULKING, GASKETING, WEATHER-STRIPPING OR OTHERWISE SEALING
20 TO LIMIT INFILTRATION AND EXFILTRATION.

21 **EXCEPTIONS:**

22 1. DWELLING UNITS WITH AT LEAST R-19 EXISTING INSULATION INSTALLED AT
23 THE CEILING LEVEL.

24 2. DWELLING UNITS WHERE THE ALTERATION WOULD DIRECTLY CAUSE THE
25 DISTURBANCE OF ASBESTOS UNLESS THE ALTERATION IS MADE IN
26 CONJUNCTION WITH ASBESTOS ABATEMENT.

- 1 3. DWELLING UNITS WITH ATMOSPHERICALLY VENTED SPACE HEATING OR
2 WATER HEATING COMBUSTION APPLIANCES LOCATED INSIDE THE PRESSURE
3 BOUNDARY OF THE DWELLING UNIT.”.

4 On page 58 in line 28, Insert the following:

5 **“SECTION 3.108 SEVERABILITY.**

6 IF ANY PROVISION OF THIS SUBTITLE OR THE APPLICATION THEREOF TO ANY PERSON OR
7 CIRCUMSTANCES IS HELD INVALID FOR ANY REASON IN A COURT OF COMPETENT JURISDICTION, THE
8 INVALIDITY DOES NOT AFFECT OTHER PROVISIONS OR ANY OTHER APPLICATION OF THIS SUBTITLE
9 WHICH CAN BE GIVEN EFFECT WITHOUT THE INVALID PROVISION OR APPLICATION, AND FOR THIS
10 PURPOSE THE PROVISIONS OF THIS ACT ARE SEVERABLE.”.