# **AIR BARRIER TESTING CE-96**

C402 –Building Envelope

**C402.5.1.2.3 Dwelling and sleeping unit enclosure testing.** The building thermal envelope shall be tested in accordance with ASTM E 779, ANSI/RESNET/ICC 380, ASTM E1827 or an equivalent method approved by the code official. The measured air leakage shall not exceed 0.30 cfm/ft (1.5 L/s m) of the testing unit enclosure area at a pressure differential of 0.2 inch water gauge (50 Pa). Where multiple dwelling units or sleeping units or other occupiable conditioned spaces are contained within one building thermal envelope, each unit shall be considered an individual testing unit and the building air leakage shall be the weighted average of all testing unit results, weighted by each testing unit's testing unit enclosure area. Units shall be tested separately with an unguarded blower door test as follows:

1. Where buildings have fewer than eight testing units, each testing unit shall be tested.

2. For buildings with eight or more testing units the greater of seven units or 20 percent of the testing units in the building shall be tested including a top floor unit, a ground floor unit, and a unit with the largest testing unit enclosure area. For each tested unit exceeds the maximum air leakage rate, an additional units shall be tested, including a mixture of testing unit types and locations.

2021 IECC – CONSENT AGENDA

CE92- SKYLIGHT

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**C402.4.2 Minimum skylight fenestration area.** In an enclosed space greater than 2,500 square feet (232 m ) in floor area, directly under a roof with not less than 75 percent of the ceiling area with a ceiling height greater than 15 feet (4572 mm), and used as an office, lobby, atrium, concourse, corridor, storage space, gymnasium/exercise center, convention center, automotive service area, space where manufacturing occurs, nonrefrigerated warehouse, retail store, distribution/sorting area, transportation depot or workshop, the total toplit daylight zone shall be not less than half the floor area and shall provide one of the following:

**Exception:** Skylights above daylight zones of enclosed spaces are not required in:

6. Spaces designed as storm shelters complying with ICC 500



STORM

### **CE169- LIGHTING CONTROLS**

#### C405 – Lighting and Power

C405.2.1 Occupant sensor controls. Occupant sensor controls shall be installed to control lights in the following space types:

#### <u>10. Corridors</u>

C405.2.1.1 Occupant sensor control function. Occupant sensor controls in warehouses shall comply with Section C405.2.1.2. Occupant sensor controls in open plan office areas shall comply with Section C405.2.1.3. Occupant sensor controls in corridors shall comply with Section C405.2.1.4 \_Occupant sensor controls for all other spaces specified in Section C405.2.1 shall comply with the following: C405.2.1.4 Occupant sensor control function in corridors. Occupant sensor controls in corridors shall uniformly reduce lighting power to not more than 50 percent of full power within 20 minutes after all occupants have left the space. Exception: Corridors provided with less than two foot-candles of illumination on the floot at the darkest

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# CE106 - OPERABLE OPENINGS INTERLOCKING

C402 –Building Envelope C403- Building Mechanical Systems

**C402.5.9 Operable openings interlocking.** Where occupancies utilize operable openings to the outdoors that are larger than 40 square feet in areae such openings shall be interlocked with the heating and cooling system so as to raise the cooling set point to 90 degrees or and lower the heating set point to 55 degrees when ever the operable opening is open. The change in heating and cooling setpoints shall occur within 10 minute of opening the operable opening.

#### **Exceptions:**

1 Separately zoned areas associated with the preparation of food contains appliances equipment that contributes to the HVAC loads of a restaurant or similar.

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. **C402.5.9.1 Operable controls.** Controls shall comply with Section C403.13.

**C403.13** Operable opening interlocking controls. The heating and cooling systems shall have controls that will interlock these mechanical systems to the set temperatures of 90 degrees for cooling and 55 degrees for heating when the conditions of Section C402.5.9 exist. The controls shall configure to shut off the systems entirely when the outdoor temperatures are below 90 degrees or above 55 degrees.

### CE129 – ENCLOSED PARKING GARAGE DETECTORS SPECIFIED

**C403.7.2 Enclosed parking garage ventilation controls** Enclosed parking garages used for storing or handling automobiles operating under their own power shall employ carbon monoxide detectors applied in **conjunction** with nitrogen dioxide detectors and automatic controls configured to stage fans or modulate fan average airflow rates to 50 percent or less of design capacity, or intermittently operate fans less than 20 percent of the occupied time or as required to maintain acceptable contaminant levels in accordance with International Mechanical Code provisions. Failure of contamination-sensing devices shall cause the exhaust fans to operate continuously at design airflow.

#### **Exceptions:**

1. Garages with a total exhaust capacity less than **8,000** <u>cfm</u> (3 775 L/s) with ventilation systems that do not utilize heating or mechanical <u>cooling and use occupant</u> <u>sensors to activate the full required ventilation rate.</u>



### CE199 – PARKING GARAGE LIGHTING CONTROL C405 – Lighting and Power

C405.2.7 Parking Garage Lighting Control. Parking garage lighting shall be controlled by an occupant sensor complying with Section C405.2.1.1 or a time-switch control complying with Section C405.2.2.1. Additional lighting controls shall be provided as follows:

1. Lighting power of each luminaire shall be automatically reduced by not less than 30% when there is no activity detected within a lighting zone for 20 minutes. Lighting zones for this requirement shall be no larger than 3600 ft

**Exception:** Lighting zones provided with less than 1.5 foot-candles of illumination on the floor at the darkest point with all lights on are not required to have automatic light reduction controls.

2. Where lighting for eye adaptation is provided at covered vehicle entrances and exits from buildings and parking structures, such lighting shall be separately controlled by a device that automatically reduces lighting power by at least 50% from sunset to sunrise.

3. The power to luminaires within 20 ft of perimeter wall openings or fenestration shall automatically reduce in response to daylight by at least 50%.

#### **Exceptions:**

1. Where the opening or fenestrationto-wall-ratio is less than 40% as viewed from the interior and encompassing the vertical distance from the driving surface to the lowest structural element.

2. Where the distance from the opening or fenestration to any exterior daylight blocking obstruction is less than onehalf the height from the bottom of the opening or fenestration to the top of the obstruction.

3. Where openings are obstructed by permanent screens or architectural elements restricting daylight entering the interior space.

CE209- PLANT GROWTH LIGHTING
C405 – Lighting and Power

C405.4 Lighting for plant growth and maintenance. Not less than 95 percent of the permanently installed luminaires used for plant

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growth and maintenance shall have a photon efficiency of not less than 1.6 µmol/J rated as defined in accordance with ANSI/ASABE S640.

#### CE216 – CONTROLLED RECEPTACLES C405 – Lighting and Power

C405.10 Automatic Receptacle Control The following shall have be automatically receptacle controls led complying with Section C405.10.1:

1.At least 50% of all 125 V, 15 and 20-amp receptacles installed in enclosed offices, conference rooms, rooms used primarily for copy or print functions, breakrooms, classrooms, and individual workstations, including those installed in modular partitions and module office workstation systems.

2.At least 25% of branch circuit feeders installed for modular furniture not shown on the construction documents.

C405.10.1 Automatic receptacle control function. Automatic receptacle controls shall comply with the following:

1. Either split controlled receptacles shall be provided, with the top receptacle controlled, or a controlled receptacle shall be located within 12 inches of each uncontrolled receptacle.

2. Shall be controlled by one of the following methods:

2.1. A scheduled basis using a time-of-day operated control device that turns receptacle power off at specific programmed times and can be programmed separately for each day of the week. The control device shall be configured to provide an independent schedule for each portion of the building of not more than 5000 ft2 and not more than one floor. The occupant shall be able to manually override an area for not more than two hours. Any individual override switch shall control the receptacles of not more than 5000 ft.

2.2. An occupant sensor control that shall turn receptacles off within 20 minutes of all occupants leaving a space.; or

2.3. An automated signal from another control or alarm system that shall turn receptacles off within 20 minutes after determining that the area is unoccupied.

3. All controlled receptacles shall be permanently marked in accordance with NFPA 70 and be uniformly distributed throughout the space.

4. Plug-in devices shall not comply.

**Exceptions:** Automatic receptacle controls are not required for the following:

1. Receptacles specifically designated for equipment requiring continuous operation (24/day, 365 days/year).

2. Spaces where an automatic control would endanger the safety or security of the room or building occupants.

3. Within a single modular office workstation, non-controlled receptacles are permitted to be located more than 12 inches, but not more than 72 inches from the controlled receptacles serving that workstation.



<u>C405.10</u> Energy Monitoring (Mandatory) New buildings with a gross conditioned floor area of 25,000 square feet or larger shall be equipped to measure, monitor, record and report energy consumption data in compliance with Section C406.10.1 through C406.10.5.

**Exception:** Individual tenant spaces are not required to comply with this section provided the space has its own utility services and meters and has less than 5,000 square feet of conditioned floor area.

C405.10.1 Electrical energy metering. For electrical energy, including all electrical energy supplied to the building and its associated site, including but not limited to site lighting, parking, recreational facilities, and other areas that serve the building and its occupants, meters or other measurement devices shall be provided to collect energy consumption data for each end-use category required by Section C405.10.2.

C405.10.2 End-use metering categories. Meters or other approved measurement devices shall be provided to collect energy use data for each end-use category indicated in Table 405.10.2. Where multiple meters are used to measure any end-use category, the data acquisition system shall total all of the energy used by that category. Not more than 5 percent of the measured load for each of the end-use categories indicated in Table 405.10.2 shall be permitted to be from a load that is not within that category.

#### Exceptions:

<u>1.HVAC and water heating equipment serving only an individual dwelling unit shall not require end-use metering.</u>
 <u>2.End-use metering shall not be required for fire pumps, stairwell pressurization fans or any system that operates only during testing or emergency.</u>

3.End-use metering shall not be required for an individual tenant space having a floor area not greater than 2,500 square feet where a dedicated source meter complying with Section C405.10.3 is provided.



TABLE C405.10.2 ENERGY USE CATEGORIES

LOAD CATEGORY	DESCRIPTION OF ENERGY USE
<u>Total HVAC</u> <u>System</u>	Heating, cooling and ventilation including, but not limited to fans, pumps, boilers, chillers, and water heating. Energy used by 120 volt equipment, or by 208/120 volt equipment that is located in a building where the main service is 480/277 volt power, is permitted to be excluded from Total HVAC system energy use.
Interior Lighting	Lighting systems located withing the building.
Exterior Lighting	Lighting systems located on the building site but not within the building.
Plug Loads	Devices, appliances and equipment connected to convenience receptacle outlets.
Process Loads	Any single load that is not included in a HVAC, lighting or plug load category and that exceeds 5 percent of the peak connected load of the whole building including, but not limited to data centers, manufacturing equipment and commercial kitchens.
Building Operations and other miscellaneous loads	The remaining loads not included elsewhere in this table including, but not limited to, vertical transportation systems, automatic doors, motorized shading systems, ornamental fountains, ornamental fireplaces, swimming pools, in-ground spas, and snow- melt systems.

**C405.10.3 Meters.** Meters or other measurement devices required by this section shall be configured to automatically communicate energy consumption data to the data acquisition system required by Section C405.10.4. Source meters shall be allowed to be any digital-type meter. Lighting, HVAC, or other building systems that can monitor their energy consumption shall be permitted instead of meters. Current sensors shall be permitted, provided that they have a tested accuracy of plus or minus 2 percent. Required metering systems and equipment shall have the capability to provide at least hourly data that is fully integrated into the data acquisition system and graphical energy report in accordance with Sections C405.10.4 and C405.10.5.

C405.10.4 Data acquisition system A data acquisition system shall have the capability to store the data from the required meters and other sensing devices for minimum of 36 months. The data acquisition system shall have the capability to store real-time energy consumption data and provide hourly, daily, monthly, and yearly logged data for each end-use category required by Section C405.10.2.

C405.10.5 Graphical energy report A permanent and readily accessible reporting mechanism shall be provided in the building that is accessible by building operation and management personnel. The reporting mechanism shall have the capability to graphically provide the energy consumption for each end-use category required by Section C405.10.2 at least every hour, day, month, and year for the previous 36 months.

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### ADDITIONAL ENERGY PACKAGES – CURRENT LOOK

#### SECTION C406 ADDITIONAL EFFICIENCY PACKAGE OPTIONS

#### C406.1 Requirements.

Buildings shall comply with at least one of the following:

- 1. More efficient HVAC performance in accordance with Section <u>C406.2</u>.
- 2. Reduced lighting power density system in accordance with Section C406.3.
- 3. Enhanced lighting controls in accordance with Section <u>C406.4</u>.
- 4. On-site supply of renewable energy in accordance with Section C406.5.
- 5. Provision of a dedicated outdoor air system for certain HVAC equipment in accordance with Section <u>C406.6</u>.
- 6. High-efficiency service water heating in accordance with Section <u>C406.7</u>.

#### C406.1.1 Tenant spaces.

Tenant spaces shall comply with Section <u>C406.2</u>, <u>C406.3</u>, <u>C406.4</u>, <u>C406.6</u> or <u>C406.7</u>. Alternatively, tenant spaces shall comply with Section <u>C406.5</u> where the entire building is in compliance.

# SECTION C406 – THE NEW LOOK AND CONTENT

#### SECTION C406 ADDITIONAL EFFICIENCY <u>REQUIREMENTS</u> PACKAGE OPTIONS

**C406.1** Requirements. Additional energy efficiency credit requirements. Buildings shall comply New buildings shall achieve a total of 10 credits from Tables C406.1(1) through C406.1(5) where the table is selected based on the use group of the building. Where a building contains multiple use groups, credits from each use group shall be weighted by floor area of each group to determine the weighted average building credit. Alternatively, credits shall be calculated in accordance with the relevant subsection of C406. Credits from the tables or calculation shall be achieved where a building complies with one or more of the following:

- 1. More efficient HVAC performance in accordance with Section C406.2.
- 2. Reduced lighting power in accordance with Section C406.3.
- 3. Enhanced lighting controls in accordance with Section C406.4.
- 4. On-site supply of renewable energy in accordance with Section C406.5.
- 5. Provision of a dedicated outdoor air system for certain HVAC equipment in accordance with Section C406.6.
- 6. High-efficiency service water heating in accordance with Section C406.7.
- 7. Enhanced envelope performance in accordance with Section C406.8.
- 8. Reduced air infiltration in accordance with Section C406.9

# **NEW TABLES**

#### TABLE C406.1(1) Additional Energy Efficiency Credits for Group B Occupancy

#### TABLE C406.1(2) Additional Energy Efficiency Credits for Group R and I Occupancies

Sub-section / Climate Zone:	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>6 A</u>	<u>6 B</u>	<u>7</u>	<u>8</u>
C406 .2.1: 5% Heating Eff Imprv.	<u>NA</u>	NA	<u>NA</u>	<u>1</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>1</u>							
C406 .2.2: 5% Cooling Eff Imprv.	<u>6</u>	<u>6</u>	<u>5</u>	<u>5</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>
C406 .2.3: 10 % Heating Eff Imprv.	NA	<u>NA</u>	NA	NA	<u>NA</u>	NA	NA	<u>1</u>	NA	NA	2	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	NA	<u>1</u>
C406 .2.4: 10 % Cooling Eff Imprv.	<u>11</u>	<u>12</u>	<u>10</u>	<u>9</u>	<u>7</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>6</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>3</u>
C406 .3: Reduced Light Power	<u>9</u>	<u>8</u>	<u>9</u>	9	<u>9</u>	<u>9</u>	<u>10</u>	<u>8</u>	9	9	7	<u>8</u>	<u>8</u>	<u>6</u>	<u>7</u>	7	<u>6</u>
C406 .4: Enh. Digital Light Ctrl	<u>2</u>	<u>2</u>	<u>2</u>	2	<u>2</u>	<u>2</u>	<u>2</u>	2	2	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>
C406 .5.1: On-site Renewable Egy.	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	9	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>						
C406 .6 : Dedicated OA Sys (DOAS)	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>3</u>	2	<u>7</u>	<u>4</u>	<u>5</u>	<u>3</u>
C406 .7.2: Recovered/Renew SWH	<u>NA</u>	NA	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA							
C406 .7.3: Eff fossil fuel SWH b	NA	<u>NA</u>	NA	NA													
<u>C406 .7.4: Heat Pump SWH <sup>b</sup></u>	<u>NA</u>	NA	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA							
C406 .8: Enhanced Envelope Perf	<u>1</u>	<u>4</u>	<u>2</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>NA</u>	<u>7</u>	<u>4</u>	<u>5</u>	<u>10</u>	<u>7</u>	<u>6</u>	<u>11</u>	<u>10</u>	<u>14</u>	<u>16</u>
C406 .9: Reduced Air Infiltration	2	<u>1</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>1</u>	NA	<u>8</u>	<u>2</u>	<u>3</u>	<u>11</u>	<u>4</u>	<u>1</u>	<u>15</u>	<u>8</u>	<u>11</u>	<u>6</u>

Sub-section / Climate Zone:	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>6 A</u>	<u>6 B</u>	<u>7</u>	<u>8</u>
C406 .2.1: 5% Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>
C406 .2.2: 5% Cooling Eff Imprv.	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>NA</u>
C406 .2.3: 10 % Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA	<u>1</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>4</u>
C406 .2.4: 10 % Cooling Eff Imprv.	<u>5</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
C406 .3: Reduced Light Power	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>						
C406 .4: Enh. Digital Light Ctrl	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>													
C406 .5.1: On-site Renewable Egy.	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>7</u>	<u>8</u>	<u>8</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>						
C406 .6 : Dedicated OA Sys (DOAS)	<u>3</u>	<u>4</u>	3	<u>3</u>	<u>4</u>	<u>2</u>	<u>NA</u>	<u>6</u>	3	<u>4</u>	<u>8</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>7</u>	<u>11</u>	<u>12</u>
C406 .7.2: Recovered/Renew SWH	<u>10</u>	<u>9</u>	<u>11</u>	<u>10</u>	<u>13</u>	<u>12</u>	<u>15</u>	<u>14</u>	<u>14</u>	<u>15</u>	<u>14</u>	<u>14</u>	<u>16</u>	<u>14</u>	<u>15</u>	<u>15</u>	<u>15</u>
C406 .7.3: Eff fossil fuel SWH	<u>5</u>	<u>5</u>	<u>6</u>	<u>6</u>	<u>8</u>	<u>7</u>	<u>8</u>	8	8	9	<u>9</u>	<u>9</u>	<u>10</u>	<u>10</u>	<u>9</u>	<u>10</u>	<u>11</u>
<u>C406 .7.4: Heat Pump SWH</u>	<u>6</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>												
C406 .8: Enhanced Envelope Perf	<u>3</u>	<u>6</u>	<u>3</u>	<u>5</u>	<u>4</u>	<u>4</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>3</u>	<u>5</u>	<u>4</u>	<u>6</u>	<u>6</u>
C406 .9: Reduced Air Infiltration	<u>6</u>	<u>5</u>	<u>3</u>	<u>11</u>	<u>6</u>	<u>4</u>	<u>NA</u>	<u>7</u>	<u>3</u>	<u>3</u>	<u>9</u>	<u>5</u>	<u>1</u>	<u>13</u>	<u>6</u>	<u>8</u>	<u>3</u>

# **NEW TABLES**

### TABLE C406.1(3) Additional Energy Efficiency Credits for Group E Occupancies

#### TABLE C406.1(4) Additional Energy Efficiency Credits for Group M Occupancy

Sub-section / Climate Zone:	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>6 A</u>	<u>6 B</u>	<u>7</u>	<u>8</u>
C406 .2.1: 5% Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>4</u>
C406 .2.2: 5% Cooling Eff Imprv.	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>NA</u>
C406 .2.3: 10 % Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	NA	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>3</u>	4	<u>3</u>	<u>4</u>	<u>3</u>	<u>5</u>	<u>7</u>
C406 .2.4: 10 % Cooling Eff Imprv.	<u>7</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>
C406 .3: Reduced Light Power	<u>8</u>	<u>8</u>	<u>8</u>	<u>9</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>8</u>	<u>9</u>	<u>8</u>	<u>7</u>	<u>8</u>	<u>7</u>	<u>7</u>
C406 .4: Enh. Digital Light Ctrl	<u>2</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>										
C406 .5.1: On-site Renewable Egy.	<u>6</u>	<u>6</u>	<u>5</u>	<u>5</u>													
C406 .6 : Dedicated OA Sys (DOAS)	<u>NA</u>	NA	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>						
C406 .7.2: Recovered/Renew SWHª	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>													
<u>C406 .7.3: Eff fossil fuel SWH ª</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>5</u>
<u>C406 .7.4: Heat Pump SWH <sup>a</sup></u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
C406 .8: Enhanced Envelope Perf	<u>3</u>	<u>7</u>	<u>3</u>	<u>4</u>	<u>2</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>NA</u>	<u>4</u>	<u>3</u>	<u>6</u>	<u>9</u>
C406 .9: Reduced Air Infiltration	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	NA	<u>NA</u>	<u>NA</u>	NA	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>NA</u>	NA	<u>4</u>	<u>1</u>	<u>4</u>	<u>3</u>

Sub-section / Climate Zone:	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>6 A</u>	<u>6 B</u>	<u>7</u>	<u>8</u>
C406 .2.1: 5% Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>3</u>	4
C406 .2.2: 5% Cooling Eff Imprv.	<u>5</u>	<u>6</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	NA
C406 .2.3: 10 % Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>5</u>	<u>3</u>	<u>6</u>	<u>8</u>
C406 .2.4: 10 % Cooling Eff Imprv.	<u>9</u>	<u>12</u>	<u>9</u>	<u>8</u>	<u>6</u>	<u>6</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>1</u>	2	<u>3</u>	<u>NA</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>
C406 .3: Reduced Light Power	<u>13</u>	<u>13</u>	<u>15</u>	<u>14</u>	<u>16</u>	<u>14</u>	<u>17</u>	<u>15</u>	<u>15</u>	<u>14</u>	<u>12</u>	<u>14</u>	<u>14</u>	<u>16</u>	<u>16</u>	<u>14</u>	12
C406 .4: Enh. Digital Light Ctrl	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA													
C406 .5.1: On-site Renewable Egy.	<u>8</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>6</u>								
C406 .6 : Dedicated OA Sys (DOAS)	<u>3</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>4</u>
C406 .7.2: Recovered/Renew SWH	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA													
C406 .7.3: Eff fossil fuel SWH	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA													
<u>C406 .7.4: Heat Pump SWH</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	NA													
C406 .8: Enhanced Envelope Perf	<u>4</u>	<u>6</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>1</u>	<u>6</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>4</u>	<u>6</u>	<u>5</u>	<u>8</u>	<u>9</u>
C406 .9: Reduced Air Infiltration	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>NA</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>7</u>	<u>3</u>	<u>6</u>	<u>3</u>

a. For schools with showers or full service kitchens

# **NEW TABLES**

#### <u>TABLE C406.1(5)</u> Additional Energy Efficiency Credits for Other<sup>a</sup> Occupancies

Sub-section / Climate Zone:	<u>1A</u>	<u>1B</u>	<u>2A</u>	<u>2B</u>	<u>3A</u>	<u>3B</u>	<u>3C</u>	<u>4A</u>	<u>4B</u>	<u>4C</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>6 A</u>	<u>6 B</u>	<u>7</u>	<u>8</u>
C406 .2.1: 5% Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>
C406 .2.2: 5% Cooling Eff Imprv.	<u>5</u>	<u>5</u>	<u>4</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
C406 .2.3: 10 % Heating Eff Imprv.	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>5</u>	<u>5</u>
C406 .2.4: 10 % Cooling Eff Imprv.	<u>8</u>	<u>9</u>	<u>8</u>	<u>7</u>	<u>5</u>	<u>5</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	2
C406 .3: Reduced Light Power	<u>8</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>10</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>7</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>7</u>
C406 .4: Enh. Digital Light Ctrl	<u>2</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	1										
C406 .5.1: On-site Renewable Egy.	<u>8</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>								
C406 .6 : Dedicated OA Sys (DOAS)	<u>3</u>	<u>4</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>3</u>	<u>3</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>7</u>	<u>5</u>	<u>7</u>	<u>6</u>
C406 .7.2: Recovered/Renew SWHb	<u>10</u>	<u>9</u>	<u>11</u>	<u>10</u>	<u>13</u>	<u>12</u>	<u>15</u>	<u>14</u>	<u>14</u>	<u>15</u>	<u>14</u>	<u>14</u>	<u>16</u>	<u>14</u>	<u>15</u>	<u>15</u>	<u>15</u>
C406 .7.3: Eff fossil fuel SWH b	<u>5</u>	<u>5</u>	<u>6</u>	<u>6</u>	<u>8</u>	<u>7</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>10</u>	<u>10</u>	<u>9</u>	<u>10</u>	<u>11</u>
<u>C406 .7.4: Heat Pump SWH b</u>	<u>6</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>												
C406 .8: Enhanced Envelope Perf	<u>3</u>	<u>6</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>5</u>	<u>5</u>	<u>4</u>	<u>7</u>	<u>6</u>	<u>9</u>	<u>10</u>
C406 .9: Reduced Air Infiltration	<u>3</u>	<u>2</u>	<u>2</u>	<u>4</u>	<u>4</u>	<u>2</u>	NA	<u>6</u>	<u>2</u>	<u>2</u>	<u>6</u>	<u>4</u>	<u>1</u>	<u>10</u>	<u>5</u>	<u>7</u>	<u>4</u>

#### a. Other occupancy groups include all Groups except for Groups B, R, I, E, and M

b. For occupancy groups listed in C406.7.1

ADDITIONAL TEXT IN SECTIONS FOR REQUIREMENTS

# THANK YOU!

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