

**Michigan Mechanical Code
Chapter 4 - Ventilation**

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SECTION 401 GENERAL	SECTION 401 GENERAL	
401.1 Scope. This chapter shall govern the ventilation of spaces within a building intended to be occupied. Mechanical exhaust systems, including exhaust systems serving clothes dryers and cooking appliances; hazardous exhaust systems; dust, stock and refuse conveyor systems; subslab soil exhaust systems; smoke control systems; energy recovery ventilation systems and other systems specified in Section 502 shall comply with Chapter 5.	401.1 Scope. This chapter shall govern the ventilation of spaces within a building intended to be occupied. Mechanical exhaust systems, including exhaust systems serving clothes dryers and cooking appliances; hazardous exhaust systems; dust, stock and refuse conveyor systems; subslab soil exhaust systems; smoke control systems; energy recovery ventilation systems and other systems specified in Section 502 shall comply with Chapter 5.	None
401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section 402.4.1.2 of the <i>International Energy Conservation Code</i> , the dwelling unit shall be ventilated by mechanical means in accordance with Section 403.	401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section R402.4.1.2 of the <i>International Energy Conservation Code</i> , the dwelling unit shall be ventilated by mechanical means in accordance with Section 403. Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407.	Adds requirement that Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407.
401.3 When required. Ventilation shall be provided during the periods that the room or space is occupied.	401.3 When required. Ventilation shall be provided during the periods that the room or space is occupied.	None
401.4 Intake opening location. Air intake openings shall comply with all of the following:	401.4 Intake opening location. Air intake openings shall comply with all of the following:	None
1. Intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot.	1. Intake openings shall be located not less than 10 feet (3048 mm) from lot lines or buildings on the same lot.	None

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<p>2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.2.1. Outdoor air intake openings shall be permitted to be located less than 10 feet (3048 mm) horizontally from streets, alleys, parking lots and loading docks provided that the openings are located not less than 25 feet (7620 mm) vertically above such locations. Where openings front on a street or public way, the distance shall be measured from the closest edge of the street or public way.</p>	<p>2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.3.1. Outdoor air intake openings shall be permitted to be located less than 10 feet (3048 mm) horizontally from streets, alleys, parking lots and loading docks provided that the openings are located not less than 25 feet (7620 mm) vertically above such locations. Where openings front on a street or public way, the distance shall be measured from the closest edge of the street or public way.</p>	<p>Changes reference section 501.2.1 to 501.3.1 – no technical change.</p>
<p>3. Intake openings shall be located not less than 3 feet (914 mm) below contaminant sources where such sources are located within 10 feet (3048 mm) of the opening.</p>	<p>3. Intake openings shall be located not less than 3 feet (914 mm) below contaminant sources where such sources are located within 10 feet (3048 mm) of the opening.</p>	<p>None</p>
<p>4. Intake openings on structures in flood hazard areas shall be at or above the elevation required by Section 1612 of the <i>International Building Code</i> for utilities and attendant equipment.</p>	<p>4. Intake openings on structures in flood hazard areas shall be at or above the elevation required by Section 1612 of the <i>International Building Code</i> for utilities and attendant equipment.</p>	<p>None</p>
<p>401.5 Intake opening protection. Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in louvers, grilles and screens shall be sized in accordance with Table 401.5, and shall be protected against local weather conditions. Louvers that protect air intake openings in structures located in hurricane-prone regions, as defined in the <i>International Building Code</i>, shall comply with AMCA 550. Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the <i>International Building Code</i>.</p>	<p>401.5 Intake opening protection. Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in louvers, grilles and screens shall be sized in accordance with Table 401.5, and shall be protected against local weather conditions. Louvers that protect air intake openings in structures located in hurricane-prone regions, as defined in the <i>International Building Code</i>, shall comply with AMCA 550. Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the <i>International Building Code</i>.</p>	<p>None</p>

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<p>TABLE 401.5 OPENING SIZES IN LOUVERS, GRILLES AND SCREENS PROTECTING AIR INTAKE OPENINGS</p> <table border="1"> <thead> <tr> <th align="center">OUTDOOR OPENING TYPE</th> <th align="center">MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS MEASURED IN ANY DIRECTION</th> </tr> </thead> <tbody> <tr> <td>Intake openings in residential occupancies</td> <td align="center">Not < 1/4 inch and not > 1/2 inch</td> </tr> <tr> <td>Intake openings in other than residential occupancies</td> <td align="center">> 1/4 inch and not > 1 inch</td> </tr> </tbody> </table> <p>For SI: 1 inch = 25.4 mm.</p>	OUTDOOR OPENING TYPE	MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS MEASURED IN ANY DIRECTION	Intake openings in residential occupancies	Not < 1/4 inch and not > 1/2 inch	Intake openings in other than residential occupancies	> 1/4 inch and not > 1 inch	<p>TABLE 401.5 OPENING SIZES IN LOUVERS, GRILLES AND SCREENS PROTECTING AIR INTAKE OPENINGS</p> <table border="1"> <thead> <tr> <th align="center">OUTDOOR OPENING TYPE</th> <th align="center">MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS MEASURED IN ANY DIRECTION</th> </tr> </thead> <tbody> <tr> <td>Intake openings in residential occupancies</td> <td align="center">Not < 1/4 inch and not > 1/2 inch</td> </tr> <tr> <td>Intake openings in other than residential occupancies</td> <td align="center">> 1/4 inch and not > 1 inch</td> </tr> </tbody> </table> <p>For SI: 1 inch = 25.4 mm.</p>	OUTDOOR OPENING TYPE	MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS MEASURED IN ANY DIRECTION	Intake openings in residential occupancies	Not < 1/4 inch and not > 1/2 inch	Intake openings in other than residential occupancies	> 1/4 inch and not > 1 inch	None
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<p>401.6 Contaminant sources. Stationary local sources producing airborne particulates, heat, odors, fumes, spray, vapors, smoke or gases in such quantities as to be irritating or injurious to health shall be provided with an exhaust system in accordance with Chapter 5 or a means of collection and removal of the contaminants. Such exhaust shall discharge directly to an <i>approved</i> location at the exterior of the building.</p>	<p>401.6 Contaminant sources. Stationary local sources producing air-borne particulates, heat, odors, fumes, spray, vapors, smoke or gases in such quantities as to be irritating or injurious to health shall be provided with an exhaust system in accordance with Chapter 5 or a means of collection and removal of the contaminants. Such exhaust shall discharge directly to an <i>approved</i> location at the exterior of the building.</p>	None												
SECTION 402 NATURAL VENTILATION	SECTION 402 NATURAL VENTILATION													
<p>402.1 Natural ventilation. <i>Natural ventilation</i> of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.</p>	<p>402.1 Natural ventilation. <i>Natural ventilation</i> of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.</p>	None												
<p>402.2 Ventilation area required. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated</p>	<p>402.2 Ventilation area required. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated.</p>	None												
<p>402.3 Adjoining spaces. Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining rooms shall be unobstructed and shall have an area not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.3 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.</p>	<p>402.3 Adjoining spaces. Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the opening to the adjoining rooms shall be unobstructed and shall have an area not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.3 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.</p>	None												

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<p>Exception: Exterior openings required for ventilation shall be permitted to open into a thermally isolated sunroom addition or patio cover, provided that the openable area between the sunroom addition or patio cover and the interior room has an area of not less than 8 percent of the floor area of the interior room or space, but not less than 20 square feet (1.86 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.</p>	<p>Exception: Exterior openings required for ventilation shall be permitted to open into a thermally isolated sunroom addition or patio cover, provided that the openable area between the sunroom addition or patio cover and the interior room has an area of not less than 8 percent of the floor area of the interior room or space, but not less than 20 square feet (1.86 m²). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.</p>	None
<p>402.4 Openings below grade. Where openings below grade provide required <i>natural ventilation</i>, the outside horizontal clear space measured perpendicular to the opening shall be one and one-half times the depth of the opening. The depth of the opening shall be measured from the average adjoining ground level to the bottom of the opening.</p>	<p>402.4 Openings below grade. Where openings below grade provide required <i>natural ventilation</i>, the outside horizontal clear space measured perpendicular to the opening shall be one and one-half times the depth of the opening. The depth of the opening shall be measured from the average adjoining ground level to the bottom of the opening.</p>	None
<p>SECTION 403 MECHANICAL VENTILATION</p>	<p>SECTION 403 MECHANICAL VENTILATION</p>	
<p>403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or <i>exhaust air</i>. The amount of supply air shall be approximately equal to the amount of return and <i>exhaust air</i>. The system shall not be prohibited from producing negative or positive pressure. The system to convey <i>ventilation air</i> shall be designed and installed in accordance with Chapter 6.</p>	<p>403.1 Ventilation system. Mechanical ventilation shall be provided by a method of supply air and return or <i>exhaust air</i> except that mechanical ventilation air requirements for Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane shall be provided by an exhaust system, supply system or combination thereof. The amount of supply air shall be approximately equal to the amount of return and <i>exhaust air</i>. The system shall not be prohibited from producing negative or positive pressure. The system to convey <i>ventilation air</i> shall be designed and installed in accordance with Chapter 6.</p>	<p>Adds requirement that mechanical ventilation air requirements for Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane be provided by an exhaust system, supply system or combination thereof.</p>

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<p>403.2 Outdoor air required. The minimum outdoor airflow rate shall be determined in accordance with Section 403.3. Ventilation supply systems shall be designed to deliver the required rate of outdoor airflow to the <i>breathing zone</i> within each <i>occupiable space</i>.</p>	<p>403.2 Outdoor air required. The minimum outdoor airflow rate shall be determined in accordance with Section 403.3.</p>	<p>Moves requirement that Ventilation supply systems be designed to deliver the required rate of outdoor airflow to the <i>breathing zone</i> within each <i>occupiable space</i> to §403.3.1.1</p>
<p>Exception: Where the <i>registered design professional</i> demonstrates that an engineered ventilation system design will prevent the maximum concentration of contaminants from exceeding that obtainable by the rate of outdoor air ventilation determined in accordance with Section 403.3, the minimum required rate of outdoor air shall be reduced in accordance with such engineered system design.</p>	<p>Exception: Where the <i>registered design professional</i> demonstrates that an engineered ventilation system design will prevent the maximum concentration of contaminants from exceeding that obtainable by the rate of outdoor air ventilation determined in accordance with Section 403.3, the minimum required rate of outdoor air shall be reduced in accordance with such engineered system design.</p>	<p>None</p>
<p>403.2.1 Recirculation of air. The outdoor air required by Section 403.3 shall not be recirculated. Air in excess of that required by Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:</p>	<p>403.2.1 Recirculation of air. The outdoor air required by Section 403.3 shall not be recirculated. Air in excess of that required by Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:</p>	<p>None</p>
<p>1. Ventilation air shall not be recirculated from one <i>dwelling</i> to another or to dissimilar occupancies.</p>	<p>1. Ventilation air shall not be recirculated from one <i>dwelling</i> to another or to dissimilar occupancies.</p>	<p>None</p>
<p>2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces.</p>	<p>2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces.</p>	<p>None</p>

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3. Where mechanical exhaust is required by Note b in Table 403.3, recirculation of air from such spaces shall be prohibited. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.	3. Where mechanical exhaust is required by Note b in Table 403.3.1.1, recirculation of air from such spaces shall be prohibited. Recirculation of air that is contained completely within such spaces shall not be prohibited. Where recirculation of air is prohibited, all air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.1.1.	Allows recirculation of air that is contained completely within spaces where mechanical exhaust is required by Note b of referenced table.
4. Where mechanical exhaust is required by Note g in Table 403.3, mechanical exhaust is required and recirculation is prohibited where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces.	4. Where mechanical exhaust is required by Note g in Table 403.3.1.1, mechanical exhaust is required and recirculation from such spaces is prohibited where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces. Recirculation of air that is contained completely within such spaces shall not be prohibited.	Allows recirculation of air that is contained completely within spaces where mechanical exhaust is required by Note g of referenced table.
403.2.2 Transfer air. Except where recirculation from such spaces is prohibited by Table 403.3, air transferred from occupiable spaces is not prohibited from serving as <i>makeup air</i> for required exhaust systems in such spaces as kitchens, baths, toilet rooms, elevators and smoking lounges. The amount of transfer air and <i>exhaust air</i> shall be sufficient to provide the flow rates as specified in Section 403.3. The required outdoor airflow rates specified in Table 403.3 shall be introduced directly into such spaces or into the occupied spaces from which air is transferred or a combination of both.	403.2.2 Transfer air. Except where recirculation from such spaces is prohibited by Table 403.3.1.1, air transferred from occupiable spaces is not prohibited from serving as <i>makeup air</i> for required exhaust systems in such spaces as kitchens, baths, toilet rooms, elevators and smoking lounges. The amount of transfer air and <i>exhaust air</i> shall be sufficient to provide the flow rates as specified in Section 403.3.1.1. The required outdoor airflow rates specified in Table 403.3.1.1 shall be introduced directly into such spaces or into the occupied spaces from which air is transferred or a combination of both.	None
	403.3 Outdoor air and local exhaust airflow rates. Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane shall be provided with outdoor air and local exhaust in accordance with Section 403.3.2. All other buildings intended to be occupied shall be provided with outdoor air and local exhaust in accordance with Section 403.3.1.	Adds requirements for Group R-2, R-3, and R-4 occupancies three stories and less.
	403.3.1 Other buildings intended to be occupied. The design of local exhaust systems and ventilation systems for outdoor air for occupancies other than Group R-2, R-3 and R-4 three stories and less above grade plane shall comply with Sections 403.3.1.1 through 403.3.1.5.	Adds requirements for Group R-2, R-3, and R-4 occupancies three stories and less.

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<p>403.3 Outdoor airflow rate. Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate determined in accordance with this section. The occupant load utilized for design of the ventilation system shall not be less than the number determined from the estimated maximum occupant load rate indicated in Table 403.3. Ventilation rates for occupancies not represented in Table 403.3 shall be those for a listed <i>occupancy</i> classification that is most similar in terms of occupant density, activities and building construction; or shall be determined by an <i>approved</i> engineering analysis. The ventilation system shall be designed to supply the required rate of <i>ventilation air</i> continuously during the period the building is occupied, except as otherwise stated in other provisions of the code.</p>	<p>403.3.1.1 Outdoor airflow rate. Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate, determined in accordance with this section. In each occupiable space, the ventilation system shall be designed to deliver the required rate of outdoor airflow to the <i>breathing zone</i>. The occupant load utilized for design of the ventilation system shall be not less than the number determined from the estimated maximum occupant load rate indicated in Table 403.3.1.1. Ventilation rates for occupancies not represented in Table 403.3.1.1 shall be those for a listed <i>occupancy</i> classification that is most similar in terms of occupant density, activities and building construction; or shall be determined by an <i>approved</i> engineering analysis. The ventilation system shall be designed to supply the required rate of <i>ventilation air</i> continuously during the period the building is occupied, except as otherwise stated in other provisions of the code.</p>	<p>Adds requirement formerly included in §403.2 regarding supply of outdoor air.</p>
<p>With the exception of smoking lounges, the ventilation rates in Table 403.3 are based on the absence of smoking in occupiable spaces. Where smoking is anticipated in a space other than a smoking lounge, the ventilation system serving the space shall be designed to provide ventilation over and above that required by Table 403.3 in accordance with accepted engineering practice.</p>	<p>With the exception of smoking lounges, the ventilation rates in Table 403.3.1.1 are based on the absence of smoking in occupiable spaces. Where smoking is anticipated in a space other than a smoking lounge, the ventilation system serving the space shall be designed to provide ventilation over and above that required by Table 403.3.1.1 in accordance with accepted engineering practice.</p>	<p>None</p>
<p>Exception: The occupant load is not required to be determined based on the estimated maximum occupant load rate indicated in Table 403.3 where <i>approved</i> statistical data document the accuracy of an alternate anticipated occupant density.</p>	<p>Exception: The occupant load is not required to be determined based on the estimated maximum occupant load rate indicated in Table 403.3.1.1 where <i>approved</i> statistical data document the accuracy of an alternate anticipated occupant density.</p>	<p>None</p>

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Table 403.3 Minimum Ventilation Rates	Table 403.3.1.1 Minimum Ventilation Rates <ol style="list-style-type: none">1. Deletes Ventilation Rates for Hospitals, Nursing, and Convalescent Homes2. Adds Occupant Densities for Hotels, Motels, Resorts and Dormitories3. Deletes “Garages, separate of each dwelling” Occupancy Classification under Private Dwellings, Single & Multiple	

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<p>Table 403.3 Footnotes</p> <p>a. Based upon <i>net occupiable floor area</i>.</p> <p>b. Mechanical exhaust required and the recirculation of air from such spaces is prohibited (see Section 403.2.1, Item 3).</p> <p>c. Spaces unheated or maintained below 50°F are not covered by these requirements unless the occupancy is continuous.</p> <p>d. Ventilation systems in enclosed parking garages shall comply with Section 404.</p> <p>e. Rates are per water closet or urinal. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.</p> <p>f. Rates are per room unless otherwise indicated. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.</p> <p>g. Mechanical exhaust is required and recirculation is prohibited except that recirculation shall be permitted where the resulting supply airstream consists of not more than 10 percent air recirculated from these spaces (see Section 403.2.1, Items 2 and 4).</p> <p>h. For nail salons, each nail station shall be provided with a <i>source capture system</i> capable of exhausting not less than 50 cfm per station.</p>	<p>Table 403.3.1.1 Footnotes</p> <p>a. Based upon <i>net occupiable floor area</i>.</p> <p>b. Mechanical exhaust required and the recirculation of air from such spaces is prohibited. Recirculation of air that is contained completely within such spaces shall not be prohibited (see Section 403.2.1, Item 3).</p> <p>c. Spaces unheated or maintained below 50°F are not covered by these requirements unless the occupancy is continuous.</p> <p>d. Ventilation systems in enclosed parking garages shall comply with Section 404.</p> <p>e. Rates are per water closet or urinal. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.</p> <p>f. Rates are per room unless otherwise indicated. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be permitted only where the exhaust system is designed to operate continuously while occupied.</p> <p>g. Mechanical exhaust is required and recirculation from such spaces is prohibited except that recirculation shall be permitted where the resulting supply airstream consists of not more than 10 percent air recirculated from these spaces. Recirculation of air that is contained completely within such spaces shall not be prohibited (see Section 403.2.1, Items 2 and 4).</p> <p>h. For nail salons, each manicure and pedicure station shall be provided with a <i>source capture system</i> capable of exhausting not less than 50 cfm per station.</p> <p>Exhaust inlets shall be located in accordance with Section 502.20. Where one or more required source capture systems operate continuously during occupancy, the exhaust rate from such systems shall be permitted to be applied to the exhaust flow rate required by Table 403.3.1.1 for the nail salon.</p>	<p>See highlighted verbiage.</p>

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<p>403.3.1 Zone outdoor airflow. The minimum outdoor airflow required to be supplied to each zone shall be determined as a function of <i>occupancy</i> classification and space air distribution effectiveness in accordance with Sections 403.3.1.1 through 403.3.1.3.</p>	<p>403.3.1.1.1 Zone outdoor airflow. The minimum outdoor airflow required to be supplied to each zone shall be determined as a function of <i>occupancy</i> classification and space air distribution effectiveness in accordance with Sections 403.3.1.1.1 through 403.3.1.1.3.</p>	None
<p>403.3.1.1 Breathing zone outdoor airflow. The outdoor airflow rate required in the <i>breathing zone</i> (V_{bz}) of the <i>occupiable space</i> or spaces in a zone shall be determined in accordance with Equation 4-1.</p> $V_{bz} = R_p P_z + R_a A_z \quad \text{(Equation 4-1)}$ <p>where: A_z = Zone floor area: the <i>net occupiable floor area</i> of the space or spaces in the zone. P_z = Zone population: the number of people in the space or spaces in the zone. R_p = People outdoor air rate: the outdoor airflow rate required per person from Table 403.3. R_a = Area outdoor air rate: the outdoor airflow rate required per unit area from Table 403.3.</p>	<p>403.3.1.1.1 Breathing zone outdoor airflow. The outdoor airflow rate required in the <i>breathing zone</i> (V_{bz}) of the <i>occupiable space</i> or spaces in a zone shall be determined in accordance with Equation 4-1.</p> $V_{bz} = R_p P_z + R_a A_z \quad \text{(Equation 4-1)}$ <p>where: A_z = Zone floor area: the <i>net occupiable floor area</i> of the space or spaces in the zone. P_z = Zone population: the number of people in the space or spaces in the zone. R_p = People outdoor air rate: the outdoor airflow rate required per person from Table 403.3.1.1. R_a = Area outdoor air rate: the outdoor airflow rate required per unit area from Table 403.3.1.1.</p>	None
<p>403.3.1.2 Zone air distribution effectiveness. The zone air distribution effectiveness (E_z) shall be determined using Table 403.3.1.2.</p>	<p>403.3.1.1.1.2 Zone air distribution effectiveness. The zone air distribution effectiveness (E_z) shall be determined using Table 403.3.1.1.1.2.</p>	None

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<p align="center">TABLE 403.3.1.2 ZONE AIR DISTRIBUTION EFFECTIVENESS^{a,b,c,d,e}</p> <table border="1"> <thead> <tr> <th align="center">AIR DISTRIBUTION CONFIGURATION</th> <th align="center">E_z</th> </tr> </thead> <tbody> <tr> <td>Ceiling or floor supply of cool air</td> <td align="center">1.0^f</td> </tr> <tr> <td>Ceiling or floor supply of warm air and floor return</td> <td align="center">1.0</td> </tr> <tr> <td>Ceiling supply of warm air and ceiling return</td> <td align="center">0.8^g</td> </tr> <tr> <td>Floor supply of warm air and ceiling return</td> <td align="center">0.7</td> </tr> <tr> <td>Makeup air drawn in on the opposite side of the room from the exhaust and/or return</td> <td align="center">0.8</td> </tr> <tr> <td>Makeup air drawn in near to the exhaust and/or return location</td> <td align="center">0.5</td> </tr> </tbody> </table> <p>For SI: 1 foot = 304.8 mm, 1 foot per minute = 0.00506 m/s, °C = [(°F) - 32]/1.8.</p> <p>a. "Cool air" is air cooler than space temperature. b. "Warm air" is air warmer than space temperature. c. "Ceiling" includes any point above the breathing zone. d. "Floor" includes any point below the breathing zone. e. "Makeup air" is air supplied or transferred to a zone to replace air removed from the zone by exhaust or return systems. f. Zone air distribution effectiveness of 1.2 shall be permitted for systems with a floor supply of cool air and ceiling return, provided that low-velocity displacement ventilation achieves unidirectional flow and thermal stratification. g. Zone air distribution effectiveness of 1.0 shall be permitted for systems with a ceiling supply of warm air, provided that supply air temperature is less than 15°F above space temperature and provided that the 150-foot-per-minute supply air jet reaches to within 4½ feet of floor level.</p>	AIR DISTRIBUTION CONFIGURATION	E _z	Ceiling or floor supply of cool air	1.0 ^f	Ceiling or floor supply of warm air and floor return	1.0	Ceiling supply of warm air and ceiling return	0.8 ^g	Floor supply of warm air and ceiling return	0.7	Makeup air drawn in on the opposite side of the room from the exhaust and/or return	0.8	Makeup air drawn in near to the exhaust and/or return location	0.5	<p align="center">TABLE 403.3.1.1.1.2 ZONE AIR DISTRIBUTION EFFECTIVENESS^{a,b,c,d}</p> <table border="1"> <thead> <tr> <th align="center">AIR DISTRIBUTION CONFIGURATION</th> <th align="center">E_z</th> </tr> </thead> <tbody> <tr> <td>Ceiling or floor supply of cool air</td> <td align="center">1.0^e</td> </tr> <tr> <td>Ceiling or floor supply of warm air and floor return</td> <td align="center">1.0</td> </tr> <tr> <td>Ceiling supply of warm air and ceiling return</td> <td align="center">0.8^f</td> </tr> <tr> <td>Floor supply of warm air and ceiling return</td> <td align="center">0.7</td> </tr> <tr> <td>Makeup air drawn in on the opposite side of the room from the exhaust and/or return</td> <td align="center">0.8</td> </tr> <tr> <td>Makeup air drawn in near to the exhaust and/or return location</td> <td align="center">0.5</td> </tr> </tbody> </table> <p>For SI: 1 foot = 304.8 mm, 1 foot per minute = 0.00506 m/s, °C = [(°F) - 32]/1.8.</p> <p>a. "Cool air" is air cooler than space temperature. b. "Warm air" is air warmer than space temperature. c. "Ceiling" includes any point above the breathing zone. d. "Floor" includes any point below the breathing zone. e. Zone air distribution effectiveness of 1.2 shall be permitted for systems with a floor supply of cool air and ceiling return, provided that low-velocity displacement ventilation achieves unidirectional flow and thermal stratification. f. Zone air distribution effectiveness of 1.0 shall be permitted for systems with a ceiling supply of warm air, provided that supply air temperature is less than 15°F above space temperature and provided that the 150-foot-per-minute supply air jet reaches to within 4½ feet of floor level.</p>	AIR DISTRIBUTION CONFIGURATION	E _z	Ceiling or floor supply of cool air	1.0 ^e	Ceiling or floor supply of warm air and floor return	1.0	Ceiling supply of warm air and ceiling return	0.8 ^f	Floor supply of warm air and ceiling return	0.7	Makeup air drawn in on the opposite side of the room from the exhaust and/or return	0.8	Makeup air drawn in near to the exhaust and/or return location	0.5	<p>Deletes definition of Makeup Air</p>
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<p>403.3.1.3 Zone outdoor airflow. The zone outdoor airflow rate (V_{oz}), shall be determined in accordance with Equation 4-2.</p> $V_{oz} = \frac{V_{bz}}{E_z} \quad \text{(Equation 4-2)}$	<p>403.3.1.1.3 Zone outdoor airflow. The zone outdoor airflow rate (V_{oz}), shall be determined in accordance with Equation 4-2.</p> $V_{oz} = \frac{V_{bz}}{E_z} \quad \text{(Equation 4-2)}$	<p>None</p>																												

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<p>403.3.2 System outdoor airflow. The outdoor air required to be supplied by each ventilation system shall be determined in accordance with Sections 403.3.2.1 through 403.3.2.3 as a function of system type and zone outdoor airflow rates.</p>	<p>403.3.1.1.2 System outdoor airflow. The outdoor air required to be supplied by each ventilation system shall be determined in accordance with Sections 403.3.1.1.2.1 through 403.3.1.1.2.3 as a function of system type and zone outdoor airflow rates.</p>	None
<p>403.3.2.1 Single zone systems. Where one air handler supplies a mixture of outdoor air and recirculated return air to only one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Equation 4-3.</p> $V_{ot} = V_{oz} \quad \text{(Equation 4-3)}$	<p>403.3.1.1.2.1 Single zone systems. Where one air handler supplies a mixture of outdoor air and recirculated return air to only one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Equation 4-3.</p> $V_{ot} = V_{oz} \quad \text{(Equation 4-3)}$	None
<p>403.3.2.2 100-percent outdoor air systems. Where one air handler supplies only outdoor air to one or more zones, the system outdoor air intake flow rate (V_{ot}) shall be determined using Equation 4-4.</p> $V_{ot} = \sum_{all\ zones} V_{oz} \quad \text{(Equation 4-4)}$	<p>403.3.1.1.2.2 100-percent outdoor air systems. Where one air handler supplies only outdoor air to one or more zones, the system outdoor air intake flow rate (V_{ot}) shall be determined using Equation 4-4.</p> $V_{ot} = \sum_{all\ zones} V_{oz} \quad \text{(Equation 4-4)}$	None
<p>403.3.2.3 Multiple zone recirculating systems. Where one air handler supplies a mixture of outdoor air and recirculated return air to more than one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Sections 403.3.2.3.1 through 403.3.2.3.4.</p>	<p>403.3.1.1.2.3 Multiple zone recirculating systems. Where one air handler supplies a mixture of outdoor air and recirculated return air to more than one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Sections 403.3.1.1.2.3.1 through 403.3.1.1.2.3.4.</p>	None

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<p>403.3.2.3.1 Primary outdoor air fraction. The primary outdoor air fraction (Z_p) shall be determined for each zone in accordance with Equation 4-5.</p> $Z_p = \frac{V_{oz}}{V_{pz}} \quad \text{(Equation 4-5)}$ <p>where: V_{pz} = Primary airflow: The airflow rate supplied to the zone from the air-handling unit at which the outdoor air intake is located. It includes outdoor intake air and recirculated air from that air-handling unit but does not include air transferred or air recirculated to the zone by other means. For design purposes, V_{pz} shall be the zone design primary airflow rate, except for zones with variable air volume supply and V_{pz} shall be the lowest expected primary airflow rate to the zone when it is fully occupied.</p>	<p>403.3.1.1.2.3.1 Primary outdoor air fraction. The primary outdoor air fraction (Z_p) shall be determined for each zone in accordance with Equation 4-5.</p> $Z_p = \frac{V_{oz}}{V_{pz}} \quad \text{(Equation 4-5)}$ <p>where: V_{pz} = Primary airflow: The airflow rate supplied to the zone from the airhandling unit at which the outdoor air intake is located. It includes outdoor intake air and recirculated air from that air-handling unit but does not include air transferred or air recirculated to the zone by other means. For design purposes, V_{pz} shall be the zone design primary airflow rate, except for zones with variable air volume supply and V_{pz} shall be the lowest expected primary airflow rate to the zone when it is fully occupied.</p>	None
<p>403.3.2.3.2 System ventilation efficiency. The system ventilation efficiency (E_v) shall be determined using Table 403.3.2.3.2 or Appendix A of ASHRAE 62.1.</p>	<p>403.3.1.1.2.3.2 System ventilation efficiency. The system ventilation efficiency (E_v) shall be determined using Table 403.3.1.1.2.3.2 or Appendix A of ASHRAE 62.1.</p>	None

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<p>TABLE 403.3.2.3.2 SYSTEM VENTILATION EFFICIENCY^{a,b}</p> <table border="1"> <thead> <tr> <th align="center"><i>Max (Z_p)</i></th> <th align="center"><i>E_v</i></th> </tr> </thead> <tbody> <tr><td align="center">≤ 0.15</td><td align="center">1</td></tr> <tr><td align="center">≤ 0.25</td><td align="center">0.9</td></tr> <tr><td align="center">≤ 0.35</td><td align="center">0.8</td></tr> <tr><td align="center">≤ 0.45</td><td align="center">0.7</td></tr> <tr><td align="center">≤ 0.55</td><td align="center">0.6</td></tr> <tr><td align="center">≤ 0.65</td><td align="center">0.5</td></tr> <tr><td align="center">≤ 0.75</td><td align="center">0.4</td></tr> <tr><td align="center">> 0.75</td><td align="center">0.3</td></tr> </tbody> </table> <p>a. <i>Max (Z_p)</i> is the largest value of <i>Z_p</i> calculated using Equation 4-5 among all the zones served by the system. b. Interpolating between table values shall be permitted.</p>	<i>Max (Z_p)</i>	<i>E_v</i>	≤ 0.15	1	≤ 0.25	0.9	≤ 0.35	0.8	≤ 0.45	0.7	≤ 0.55	0.6	≤ 0.65	0.5	≤ 0.75	0.4	> 0.75	0.3	<p>TABLE 403.3.1.1.2.3.2 SYSTEM VENTILATION EFFICIENCY^{a,b}</p> <table border="1"> <thead> <tr> <th align="center"><i>Max (Z_p)</i></th> <th align="center"><i>E_v</i></th> </tr> </thead> <tbody> <tr><td align="center">≤ 0.15</td><td align="center">1</td></tr> <tr><td align="center">≤ 0.25</td><td align="center">0.9</td></tr> <tr><td align="center">≤ 0.35</td><td align="center">0.8</td></tr> <tr><td align="center">≤ 0.45</td><td align="center">0.7</td></tr> <tr><td align="center">≤ 0.55</td><td align="center">0.6</td></tr> <tr><td align="center">≤ 0.65</td><td align="center">0.5</td></tr> <tr><td align="center">≤ 0.75</td><td align="center">0.4</td></tr> <tr><td align="center">> 0.75</td><td align="center">0.3</td></tr> </tbody> </table> <p>a. <i>Max (Z_p)</i> is the largest value of <i>Z_p</i> calculated using Equation 4-5 among all the zones served by the system. b. Interpolating between table values shall be permitted.</p>	<i>Max (Z_p)</i>	<i>E_v</i>	≤ 0.15	1	≤ 0.25	0.9	≤ 0.35	0.8	≤ 0.45	0.7	≤ 0.55	0.6	≤ 0.65	0.5	≤ 0.75	0.4	> 0.75	0.3	None
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<p>403.3.2.3.3 Uncorrected outdoor air intake. The uncorrected outdoor air intake flow rate (V_{ou}) shall be determined in accordance with Equation 4-6.</p> $V_{ou} = D \sum_{all\ zones} R_p P_z + \sum_{all\ zones} R_a A_z$ <p style="text-align: right;">(Equation 4-6)</p> <p>where: D = Occupant diversity: the ratio of the system population to the sum of the zone populations, determined in accordance with Equation 4-7.</p> $D = \frac{P_s}{\sum_{all\ zones} P_z}$ <p style="text-align: right;">(Equation 4-7)</p> <p>where: P_s = System population: The total number of occupants in the area served by the system. For design purposes, P_s shall be the maximum number of occupants expected to be concurrently in all zones served by the system.</p>	<p>403.3.1.1.2.3.3 Uncorrected outdoor air intake. The uncorrected outdoor air intake flow rate (V_{oi}) shall be determined in accordance with Equation 4-6.</p> $V_{ou} = D \sum_{all\ zones} R_p P_z + \sum_{all\ zones} R_a A_z$ <p style="text-align: right;">(Equation 4-6)</p> <p>where: D = Occupant diversity: the ratio of the system population to the sum of the zone populations, determined in accordance with Equation 4-7.</p> $D = \frac{P_s}{\sum_{all\ zones} P_z}$ <p style="text-align: right;">(Equation 4-7)</p> <p>where: P_s = System population: The total number of occupants in the area served by the system. For design purposes, P_s shall be the maximum number of occupants expected to be concurrently in all zones served by the system.</p>	None
<p>403.3.2.3.4 Outdoor air intake flow rate. The outdoor air intake flow rate (V_{oi}) shall be determined in accordance with Equation 4-8.</p> $V_{oi} = \frac{V_{ou}}{E_v}$ <p style="text-align: right;">(Equation 4-8)</p>	<p>403.3.1.1.2.3.4 Outdoor air intake flow rate. The outdoor air intake flow rate (V_{oi}) shall be determined in accordance with Equation 4-8.</p> $V_{oi} = \frac{V_{ou}}{E_v}$ <p style="text-align: right;">(Equation 4-8)</p>	None

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<p>403.4 Exhaust ventilation. Exhaust airflow rate shall be provided in accordance with the requirements in Table 403.3. Exhaust <i>makeup air</i> shall be permitted to be any combination of outdoor air, recirculated air and transfer air, except as limited in accordance with Section 403.2.</p>	<p>403.3.1.2 Exhaust ventilation. Exhaust airflow rate shall be provided in accordance with the requirements of Table 403.3.1.1. Outdoor air introduced into a space by an exhaust system shall be considered as contributing to the outdoor airflow required by Table 403.3.1.1.</p>	<p>Deletes reference to “exhaust makeup air” and refers instead to “outdoor air introduced ... by an exhaust system.</p>
<p>403.5 System operation. The minimum flow rate of outdoor air that the ventilation system must be capable of supplying during its operation shall be permitted to be based on the rate per person indicated in Table 403.3 and the actual number of occupants present.</p>	<p>403.3.1.3 System operation. The minimum flow rate of outdoor air that the ventilation system must be capable of supplying during its operation shall be permitted to be based on the rate per person indicated in Table 403.3.1.1 and the actual number of occupants present.</p>	<p>None</p>
<p>403.6 Variable air volume system control. Variable air volume air distribution systems, other than those designed to supply only 100-percent outdoor air, shall be provided with controls to regulate the flow of outdoor air. Such control system shall be designed to maintain the flow rate of outdoor air at a rate of not less than that required by Section 403.3 over the entire range of supply air operating rates.</p>	<p>403.3.1.4 Variable air volume system control. Variable air volume air distribution systems, other than those designed to supply only 100-percent outdoor air, shall be provided with controls to regulate the flow of outdoor air. Such control system shall be designed to maintain the flow rate of outdoor air at a rate of not less than that required by Section 403.3 over the entire range of supply air operating rates.</p>	<p>None</p>
<p>403.7 Balancing. The <i>ventilation air</i> distribution system shall be provided with means to adjust the system to achieve at least the minimum ventilation airflow rate as required by Sections 403.3 and 403.4. Ventilation systems shall be balanced by an <i>approved</i> method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.4.</p>	<p>403.3.1.5 Balancing. The <i>ventilation air</i> distribution system shall be provided with means to adjust the system to achieve not less than the minimum ventilation airflow rate as required by Sections 403.3 and 403.3.1.2. Ventilation systems shall be balanced by an <i>approved</i> method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.3.1.2.</p>	<p>Minor wording changes (highlighted)</p>
	<p>403.3.2 Group R-2, R-3 and R-4 occupancies, three stories and less. The design of local exhaust systems and ventilation systems for outdoor air in Group R-2, R-3 and R-4 occupancies three stories and less in height above grade plane shall comply with Sections 403.3.2.1 through 403.3.2.3.</p>	<p>Adds requirements for Group R-2, R-3 and R-4 occupancies, three stories and less.</p>

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	<p>403.3.2.1 Outdoor air for dwelling units. An outdoor air ventilation system consisting of a mechanical exhaust system, supply system or combination thereof shall be installed for each dwelling unit. Local exhaust or supply systems, including outdoor air ducts connected to the return side of an air handler, are permitted to serve as such a system. The outdoor air ventilation system shall be designed to provide the required rate of outdoor air continuously during the period that the building is occupied. The minimum continuous outdoor airflow rate shall be determined in accordance with Equation 4-9.</p> $Q_{OA} = 0.01A_{floor} + 7.5(N_{br} + 1) \quad \text{(Equation 4-9)}$ <p>where: Q_{OA} = outdoor airflow rate, cfm A_{floor} = floor area, ft² N_{br} = number of bedrooms; not to be less than one</p>	New Section
	<p>Exception: The outdoor air ventilation system is not required to operate continuously where the system has controls that enable operation for not less than 1 hour of each 4-hour period. The average outdoor air flow rate over the 4-hour period shall be not less than that prescribed by Equation 4-9.</p>	New Section
	<p>403.3.2.2 Outdoor air for other spaces. Corridors and other common areas within the conditioned space shall be provided with outdoor air at a rate of not less than 0.06 cfm per square foot of floor area.</p>	New Section

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	<p>403.3.2.3 Local exhaust. Local exhaust systems shall be provided in kitchens, bathrooms and toilet rooms and shall have the capacity to exhaust the minimum airflow rate determined in accordance with Table 403.3.2.3.</p> <p align="center">TABLE 403.3.2.3 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR GROUP R-2, R-3, AND R-4 OCCUPANCIES</p> <table border="1"> <thead> <tr> <th align="center">AREA TO BE EXHAUSTED</th> <th align="center">EXHAUST RATE CAPACITY</th> </tr> </thead> <tbody> <tr> <td align="center">Kitchens</td> <td align="center">100 cfm intermittent or 25 cfm continuous</td> </tr> <tr> <td align="center">Bathrooms and toilet rooms</td> <td align="center">50 cfm intermittent or 20 cfm continuous</td> </tr> </tbody> </table> <p>For SI: 1 cubic foot per minute = 0.0004719 m³/s.</p>	AREA TO BE EXHAUSTED	EXHAUST RATE CAPACITY	Kitchens	100 cfm intermittent or 25 cfm continuous	Bathrooms and toilet rooms	50 cfm intermittent or 20 cfm continuous	New Section
AREA TO BE EXHAUSTED	EXHAUST RATE CAPACITY							
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Bathrooms and toilet rooms	50 cfm intermittent or 20 cfm continuous							
SECTION 404 ENCLOSED PARKING GARAGES	SECTION 404 ENCLOSED PARKING GARAGES							
<p>404.1 Enclosed parking garages. Mechanical ventilation systems for enclosed parking garages are not required to operate continuously where the system is arranged to operate automatically upon detection of carbon monoxide (CO) not to exceed 25 parts per million (ppm) and nitrogen dioxide (NO₂) not to exceed 3 ppm by approved automatic detection devices. Upon activation such systems shall operate for 30 minutes. R 408.30912a</p>	<p>404.1 Enclosed parking garages. Mechanical ventilation systems for enclosed parking garages are not required to operate continuously where the system is arranged to operate automatically upon detection of carbon monoxide (CO) not to exceed 25 parts per million (ppm) and nitrogen dioxide (NO₂) not to exceed 3 ppm by approved automatic detection devices. R 408.30912a</p>	Requires continuous operation of mechanical ventilation systems operated automatically upon detection of CO or NO ₂ .						
<p>404.1.1 Testing. Testing of detection devices shall be per manufacturer's installation instructions. All detectors shall be calibrated per the manufacturer's instructions at an interval not to exceed 1 year. R 408.30912a</p>	<p>404.1.1. Testing. Testing of detection devices shall be per manufacturer's installation instructions. All detectors shall be calibrated per the manufacturer's instructions at an interval not to exceed 1 year. R 408.30912a</p>							
<p>404.2 Minimum ventilation. Automatic operation of the system shall not reduce the ventilation airflow rate below 0.05 cfm per square foot (0.00025 m³/s • m²) of the floor area and the system shall be capable of producing a ventilation airflow rate of 0.75 cfm per square foot (0.0038 m³/s • m²) of floor area.</p>	<p>404.2 Minimum ventilation. Automatic operation of the system shall not reduce the ventilation airflow rate below 0.05 cfm per square foot (0.00025 m³/s • m²) of the floor area and the system shall be capable of producing a ventilation airflow rate of 0.75 cfm per square foot (0.0038 m³/s • m²) of floor area.</p>							

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<p>404.3 Occupied spaces accessory to public garages. Connecting offices, waiting rooms, ticket booths and similar uses that are accessory to a public garage shall be maintained at a positive pressure and shall be provided with ventilation in accordance with Section 403.3.</p>	<p>404.3 Occupied spaces accessory to public garages. Connecting offices, waiting rooms, ticket booths and similar uses that are accessory to a public garage shall be maintained at a positive pressure and shall be provided with ventilation in accordance with Section 403.3.1.</p>	
<p>SECTION 405 SYSTEMS CONTROL</p>	<p>SECTION 405 SYSTEMS CONTROL</p>	
<p>405.1 General. Mechanical ventilation systems shall be provided with manual or automatic controls that will operate such systems whenever the spaces are occupied. Air-conditioning systems that supply required <i>ventilation air</i> shall be provided with controls designed to automatically maintain the required outdoor air supply rate during occupancy.</p>	<p>405.1 General. Mechanical ventilation systems shall be provided with manual or automatic controls that will operate such systems whenever the spaces are occupied. Air-conditioning systems that supply required <i>ventilation air</i> shall be provided with controls designed to automatically maintain the required outdoor air supply rate during occupancy.</p>	
<p>SECTION 406 VENTILATION OF UNINHABITED SPACES</p>	<p>SECTION 406 VENTILATION OF UNINHABITED SPACES</p>	
<p>406.1 General. Uninhabited spaces, such as crawl spaces and attics, shall be provided with <i>natural ventilation</i> openings as required by the <i>International Building Code</i> or shall be provided with a mechanical exhaust and supply air system. The mechanical exhaust rate shall be not less than 0.02 cfm per square foot (0.00001 m³/s • m²) of horizontal area and shall be automatically controlled to operate when the relative humidity in the space served exceeds 60 percent.</p>	<p>406.1 General. Uninhabited spaces, such as crawl spaces and attics, shall be provided with <i>natural ventilation</i> openings as required by the <i>International Building Code</i> or shall be provided with a mechanical exhaust and supply air system. The mechanical exhaust rate shall be not less than 0.02 cfm per square foot (0.00001 m³/s • m²) of horizontal area and shall be automatically controlled to operate when the relative humidity in the space served exceeds 60 percent.</p>	
	<p>SECTION 407 AMBULATORY CARE FACILITIES AND GROUP I-2 OCCUPANCIES</p>	New Section
	<p>407.1 General. Mechanical ventilation for ambulatory care facilities and Group I-2 occupancies shall be designed and installed in accordance with this code and ASHRAE 170.</p>	New Section