This guideline is developed by the Tri-chapter Uniform Code Committee and is intended to enhance regional consistency in application and enforcement of the Building Code. Please verify acceptance of this guideline with your local building department prior to its application.

ISSUE(S):

What is the minimum outside horizontal clear space to provide natural ventilation for above grade parking garage openings onto a yard or court? CBC Section 406.5.2.1 specifies the requirements of outside horizontal clear space for below grade parking garage to provide natural ventilation but not for the above grade parking garage. Several other codes sections related to general natural ventilation requirements are CBC 406.5.2, 1203.5.2, 1203.5.3, 1206, and CMC table 403.7 footnote 3; none of these sections specify the minimum outside horizontal clear space to provide natural ventilation for above grade parking garages where openings onto yards or courts.

PROPOSED GUIDELINE:

1. To provide natural ventilation for above grade parking garages where openings onto yards or courts are bounded by walls of three or more sides, the following must be provided:
   a. The minimum horizontal clear space of a yard or court must be 10 feet for one story buildings, 15 feet for two stories buildings, and 20 feet for buildings three stories or more; and
   b. Provide an air intake where required per CBC 1206.3.2 for courts.

2. Smaller court sizes could be reviewed through an Alternate Means and Materials of Construction (AMMC) application process for compliance with CBC Section 1203.5.2 to remove contaminants in naturally ventilated spaces. Pollution dilution calculations by a licensed Mechanical Engineer are required as part of the AMMC application to show compliance with ANSI/ASHRAE Standard 62.1-2013.

CODE REFERENCES: 2016 California Building Code

SECTION 202 Definitions

COURT. An open, uncovered space, unobstructed to the sky, bounded on three or more sides by exterior building walls or other enclosing devices.

YARD. An open space, other than a court, unobstructed from the ground to the sky, except where specifically provided by this code, on the lot on which a building is situated.

SECTION 406 Motor-Vehicle-Related Occupancies
406.5.2 Openings. For natural ventilation purposes, the exterior side of the structure shall have uniformly distributed openings on two or more sides. The area of such openings in exterior walls on a tier shall be not less than 20 percent of the total perimeter wall area of each tier. The aggregate length of the openings considered to be providing natural ventilation shall be not less than 40 percent of the perimeter of the tier. Interior walls shall be not less than 20 percent open with uniformly distributed openings.

Exception: Openings are not required to be distributed over 40 percent of the building perimeter where the required openings are uniformly distributed over two opposing sides of the building.

406.5.2.1 Openings below grade. Where openings below grade provide required natural ventilation, the outside horizontal clear space shall be one and one-half times the depth of the opening. The width of the horizontal clear space shall be maintained from grade down to the bottom of the lowest required opening.

SECTION 1203.5 Natural ventilation

1203.5.2 Contaminants exhausted. Contaminant sources in natural ventilated spaces shall be removed in accordance with the California Mechanical Code and the California Fire Code.

1203.5.3 Openings on yards or courts. Where natural ventilation is to be provided by openings onto yards or courts, such yards or courts shall comply with Section 1206.

SECTION 1206 YARDS OR COURTS

1206.1 General. This section shall apply to yards and courts adjacent to exterior openings that provide natural light or ventilation. Such yards and courts shall be on the same lot as the building.

1206.2 Yards. Yards shall be not less than 3 feet (914 mm) in width for buildings two stories or less above grade plane. For buildings more than two stories above grade plane, the minimum width of the yard shall be increased at the rate of 1 foot (305 mm) for each additional story. For buildings exceeding 14 stories above grade plane, the required width of the yard shall be computed on the basis of 14 stories above grade plane.

1206.3 Courts. Courts shall be not less than 3 feet (914 mm) in width. Courts having windows opening on opposite sides shall be not less than 6 feet (1829 mm) in width. Courts shall be not less than 10 feet (3048 mm) in length unless bounded on one end by a public way or yard. For buildings more than two stories above grade plane, the court shall be increased 1 foot (305 mm) in width and 2 feet (610 mm) in length for each additional story. For buildings exceeding 14 stories above grade plane, the required dimensions shall be computed on the basis of 14 stories above grade plane.

1206.3.2 Air intake. Courts more than two stories in height shall be provided with a horizontal air intake at the bottom not less than 10 square feet (0.93 m²) in area and leading to the exterior of the building unless abutting a yard or public way.