



ENGINEERING

Tel 919.647.0000 Fax 919.715.0067

MIKE CAUSEY, INSURANCE COMMISSIONER & STATE FIRE MARSHAL
BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

April 24, 2019

Leon Skinner
City of Raleigh
PO Box 590
Raleigh, NC 27602-0590

**RE: Raleigh, NC
2018 NC Building Code, Section 1203.5.1.2, Openings Below Grade
2018 NC Building Code, Section 1206.3, Courts
Contaminants from other sources in Courts**

Mr. Skinner:

This letter is in response to your 4/15/19 request for clarification of my formal interpretation dated 4/2/19. Your question, in my words, is:

"May the requirements of either 1203.5.1.2 or 1206.3 be used to provide adequate ventilation for removal of contaminants from other sources from an inner court?"

Section 1203.5.1.2 requires the perpendicular horizontal opening to be 1.5-times the depth from the top of this 5-story building to the lowest window opening. If the window opening into the court is 32-feet below the top of the building, then the depth of the court should be 48-feet to meet the ventilation requirement at the first story window. This method may not provide adequate ventilation for removal of contaminants from other sources in the court.

Section 1206.3 requires the court to be 6-feet in depth (+1-foot for each additional story = 6 + 4) assuming windows on each side of the court on this 5-story building. The length shall be 10-feet (+2-feet for each additional story = 10 + 8). Section 1206.3.2 further requires a horizontal air intake at the bottom of the court, if the court does not abut a yard or public way. This method may be used to assist in removal of contaminants from other sources in the court.

Either 1203.5.1.2 or 1206.3 may be used for court ventilation without contaminants from other sources. If contaminants from other sources are introduced into the court, then 1206.3.2 will apply to assist in removal of those contaminants from the court.

Please call if you have comments or questions.

Sincerely,

A handwritten signature in red ink, appearing to read "B. Gupton".

Barry Gupton, PE
Chief Code Consultant

cc: File
Audrey Krenitsky, JDavis Architects
Carl Martin, NCDOT

OFFICE OF STATE FIRE MARSHAL

1202 MAIL SERVICE CENTER | RALEIGH, NC 27699-1202 | WWW.NCDOI.COM/OSFM



City Of Raleigh
NORTH CAROLINA

April 15, 2019

Barry Gupton

Chief Code Consult

North Department of Insurance, Engineering Division

1202 Mail Service Center

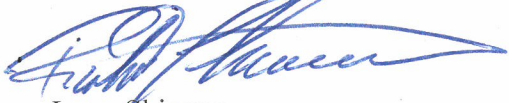
Raleigh, NC 27699-1202

Mr. Gupton:

I need to request a follow up to the formal interpretation you issued on April 2, 2019, referencing ventilation openings to an inner court yard. I understand the methodology behind your interpretation of worst-case scenario "underground", however we often deal with other hazards on a daily basis. Space in and around commercial buildings is valuable square footage and will be used to meet Federal, State and local requirements. We often see these court yards used for inground pools, exhaust for pool equipment rooms, fuel gas cooking/grilling equipment, etc. This adds another element to the problem of ventilation openings such as hazardous exhaust and carbon monoxide. In the past we have used NCDOT's web site interpretations, commentary and codes to determine this dead air/no air current would be looked at as "Contaminants Exhausted" per section 1203.5.2 of the 2018 NC Building Code. This section refers us to the Mechanical Code, Section 401.6, which requires exhaust. We have used the opening required by NCBC, Section 1206.3.2, to meet the intent of exhaust requirements which is usually achieved by an open horizontal exit from the court yard, however when doors are provided this will not meet the requirements of 10 square feet of air intake to provide fresh air and moving air currents.

We have inspected a number of these type buildings within our jurisdiction and have a few of them in the planning stages now for future build outs all with this thought process in mind to provide the highest level of life safety for the public using these court yards. Any clarification you may add as to whether we are meeting the intent of the code for contaminant air would be greatly appreciated.

Thank you in advance for your time,

A handwritten signature in blue ink, appearing to read "Leon Skinner", with a stylized flourish extending to the right.

Leon Skinner

Chief Building Official

City of Raleigh, Development Services



ENGINEERING

Tel 919.647.0000 Fax 919.715.0067

MIKE CAUSEY, INSURANCE COMMISSIONER & STATE FIRE MARSHAL
BRIAN TAYLOR, CHIEF STATE FIRE MARSHAL

April 2, 2019

Audrey Krenitsky
JDavis Architects
510 South Wilmington Street
Raleigh, NC 27601

RE: Raleigh, NC
2018 NC Building Code, Section 1203.5.1.2, Openings Below Grade
2018 NC Building Code, Section 1206.3, Courts

Ms. Krenitsky:

This letter is in response to your request for formal interpretation dated 3/19/19. Your question, in my words, is:

"Do the requirements of both 1203.5.1.2 and 1206.3 apply to ventilation openings to an inner court?"

Section 1203.5.1.2 requires the perpendicular horizontal opening to be 1.5-times the depth from the top of this 5-story building to the lowest window opening. If the window opening into the court is 32-feet below the top of the building, then the depth of the court should be 48-feet to meet the ventilation requirement at the first story window.

Section 1206.3 requires the court to be 6-feet in depth (+1-foot for each additional story = 6 + 4) assuming windows on each side of the court on this 5-story building. The length shall be 10-feet (+2-feet for each additional story = 10 + 8). Section 1206.3.2 further requires a horizontal air intake at the bottom of the court, if the court does not abut a yard or public way.

In conclusion, if the courtyard can comply with Section 1203.5.1.2, then 1206.3 will not apply with regards to ventilation. If Section 1203.5.1.2 cannot be met, then 1206.3 will apply.

Please call if you have comments or questions.

Sincerely,

A handwritten signature in red ink, appearing to read "Barry Gupton".

Barry Gupton, PE
Chief Code Consultant

cc: File
Leon Skinner, Raleigh
Carl Martin, NCDOT

OFFICE OF STATE FIRE MARSHAL

1202 MAIL SERVICE CENTER | RALEIGH, NC 27699-1202 | WWW.NCDOI.COM/OSFM

To: Barry Gupton, Chief Code Consultant
Office of State Fire Marshal, 1202 Mail Service Center
Raleigh, NC 27699-1202

From: Audrey Krenitsky
Senior Project Manager, JDavis Architects

Date: 3.19.19

Re: Request for Formal Interpretation:
Section 1206 and specifically 1206.3.2 Air Intake as it applies to "recreational courtyards"

Mr. Gupton,

I am writing for an interpretation from you on section 1206 as it applies to recreational courtyards, bounded on 4 sides by building walls (or a combination of walls and fences/railings), and typically included as exterior amenity spaces in multi-family projects. It is my interpretation that Section 1206, including section 1206.3.2, does not have to be applied to large recreational courtyard spaces as this is not the intent of the code.

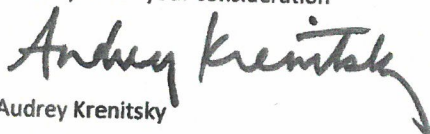
When I review the minimums required for the widths of the "courts" as found in both section 1206 and the corresponding commentary it leads me to believe that the intent of that portion of the code was not for it to be applied to a large recreational courtyard spaces but rather to small "court" opening between buildings more commonly seen in a more urban situation, designed to provide minimum opportunity for light and ventilation between closely spaced buildings and not designed as a space to be occupied.

The commentary for section 1206 makes it clear that the intent of this section is to outline minimum areas to provide natural light and ventilation, if applicable to the design. Section 1206.3 only requires a minimum of 6' width x 10' length for this purpose. The commentary examples also require much smaller areas than seen in a recreational courtyard. For example, a "yard" between 5 story buildings only requires a 9' x 16' area (144 square feet). 1206.1 and the sections that relate to air intake and chimney effect (1206.3.2) and drainage (1206.3.3) also seem to be reinforcing the interpretation that this section was not meant to be applied to large courtyard amenity spaces.

Recreational courtyards are typically in the 3800+ square foot range with typical minimum widths and lengths of 50' x 75', providing substantially more space than is being required by 1206. In my earlier correspondence with Carl Martin he discussed applying the requirements of 1203.5.1.2 Opening Below Grade as a standard for determining if enough space for ventilation, if applicable to the design, was being provided in the recreational courtyard. Again, in a typical amenity courtyard situation, this minimum is always substantially exceeded.

Please let me know if there is any further information you need from me to respond to this interpretation request.

Thank you for your consideration


Audrey Krenitsky

Enclosures:

- Section 1206 from the 2018 NC Building Code
- Section 1206 Commentary from the 2015 IBC code commentary
- Printed e-mail correspondence with Carl Martin on this matter

RALEIGH
PHILADELPHIA

510 S. Wilmington Street
Raleigh, NC 27601

P: (919) 835-1500

F: (919) 835-1510

jdavisarchitects.com

INTERIOR ENVIRONMENT

1205.4.1 **Controls.** The control for activation of the required *stairway* lighting shall be in accordance with NFPA 70.

1205.5 **Emergency egress lighting.** The *means of egress* shall be illuminated in accordance with Section 1008.1.

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*.

1206.3.1 **Court access.** Access shall be provided to the bottom of *courts* for cleaning purposes.

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*.

1206.3.3 **Court drainage.** The bottom of every *court* shall be properly graded and drained to a public sewer or other approved disposal system complying with the *International Plumbing Code*.

SECTION 1207 SOUND TRANSMISSION

1207.1 **Scope.** This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent *dwelling units* and *sleeping units* or between *dwelling units* and *sleeping units* and adjacent public areas such as halls, *corridors*, *stairways* or *service areas*.

1207.2 **Air-borne sound.** Walls, partitions and floor/ceiling assemblies separating *dwelling units* and *sleeping units* from

each other or from public or service areas shall have a sound transmission class of not less than 50, or not less than 45 if field tested, for air-borne noise when tested in accordance with ASTM E90. Penetrations or openings in construction assemblies for piping; electrical devices; recessed cabinets; bathtubs; soffits; or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. This requirement shall not apply to entrance doors; however, such doors shall be tight fitting to the frame and sill.

1207.2.1 **Masonry.** The sound transmission class of concrete masonry and clay masonry assemblies shall be calculated in accordance with TMS 0302 or determined through testing in accordance with ASTM E90.

1207.3 **Structure-borne sound.** Floor/ceiling assemblies between *dwelling units* and *sleeping units* or between a *dwelling unit* or *sleeping unit* and a public or service area within the structure shall have an impact insulation class rating of not less than 50, or not less than 45 if field tested, when tested in accordance with ASTM E492.

SECTION 1208 INTERIOR SPACE DIMENSIONS

1208.1 **Minimum room widths.** *Habitable spaces*, other than a kitchen, shall be not less than 7 feet (2134 mm) in any plan dimension. Kitchens shall have a clear passageway of not less than 3 feet (914 mm) between counter fronts and appliances or counter fronts and walls.

1208.2 **Minimum ceiling heights.** Occupiable spaces, *habitable spaces* and *corridors* shall have a ceiling height of not less than 7 feet 6 inches (2286 mm). Bathrooms, toilet rooms, kitchens, storage rooms and laundry rooms shall have a ceiling height of not less than 7 feet (2134 mm).

Exceptions:

1. In one- and two-family *dwelling*s, beams or girders spaced not less than 4 feet (1219 mm) on center shall be permitted to project not more than 6 inches (152 mm) below the required ceiling height.
2. If any room in a building has a sloped ceiling, the prescribed ceiling height for the room is required in one-half the area thereof. Any portion of the room measuring less than 5 feet (1524 mm) from the finished floor to the ceiling shall not be included in any computation of the minimum area thereof.
3. The height of *mezzanines* and spaces below *mezzanines* shall be in accordance with Section 505.1.
4. *Corridors* contained within a *dwelling unit* or *sleeping unit* in a Group R occupancy shall have a ceiling height of not less than 7 feet (2134 mm).
5. Ceiling mounted electrical fixtures shall be a minimum of 80 inches (2032 mm) above the finished floor unless mounted over a barrier that prevents occupants from traveling under the fixture.

exit access (such as corridors) and exits (such as enclosed stairways) at all times the building is occupied (see commentary, Section 1008.1).

**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.

These provisions are intended to regulate those exterior areas of a building or structure that are supposed to supply required natural light or ventilation to interior spaces. These requirements are intended to increase the likelihood that the exterior walls are provided with enough adjacent open space to allow the required light and ventilating air to freely enter the exterior wall openings. These exterior areas are defined as "Courts" and "Yards." Courts and yards must be open, uncovered and on the same lot as the building.

They may be either partly or wholly enclosed by the building. Requirements are provided in Section 1206, which regulates the minimum width, area, air intake and drainage of courts and yards. The requirements of Sections 1206.2 through 1206.3.3 do not apply if artificial ventilation and lighting is provided for the spaces opening onto the court or yard in accordance with Section 1203.1 or 1205.1. See Commentary Figure 1206.1 for examples of courts and yards.

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.

A yard is distinguished from a court by the definitions in Chapter 2 (see commentary, Chapter 2). A court is bounded on at least three sides by exterior building walls or similar enclosing devices, whereas a yard is

typically located between a building and a lot line and is open on at least two sides or ends (see Commentary Figure 1206.1).

The required width of a yard is measured perpendicular from the face of the wall to the opposing wall on the other side of the yard. A five-story building would be required to have a yard at least 6 feet (1829 mm) in width [3 feet (914 mm) plus 1 foot (305 mm) for each story three through five]. A 20-story building is required to have a yard at least 15 feet (4572 mm) [3 feet (914 mm) plus 1 foot (305 mm) for each story three through 14]. The last sentence of the section simply requires a minimum yard width of 15 feet (4572 mm) for all buildings over 14 stories in height. If the building is adjacent to a court rather than a yard, the requirements of Section 1206.3 apply. Neither Section 1206.2 nor 1206.3 is applicable if artificial lighting and ventilation is provided for spaces facing the yard or court in accordance with Sections 1203.1 and 1205.1. Note that the stories are measured 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.

"Courts" are defined in Chapter 2 as being bounded on no less than three sides by walls or other enclosing construction. A court adjacent to a five-story building would be required to have a width measured perpendicular from the wall facing the court of at least 6 feet (1829 mm) when required openings are on one wall and 9 feet (2743 mm) when required openings are on opposite walls [3 feet (914 mm) plus 1 foot (305 mm) for each story three through five, or 6 feet (1829 mm) plus 1 foot (305 mm) for each story on all sides, the required minimum length would be 16 feet (4877 mm) [10 feet (3048 mm) plus 2 feet (610 mm) for each story three through five]. The last sentence simply requires all buildings higher than 14 stories to have a minimum court width of 15 feet (4572 mm) without opposing required openings, a minimum width of 18 feet (5486 mm) where required openings oppose each other and a minimum length of 34 feet (10363 mm) if bounded on all sides [width equals 3 feet (914 mm) or 6 feet (1829 mm) plus 1 foot (305 mm) for each story three through 14, and length equals 10 feet (3048 mm) plus 2 feet (610 mm) for each story three through 14]. The requirements of this section are not applicable if artificial lighting and ventilation are provided for spaces facing the court in accordance with Sections 1203.1 and 1205.1. Note that the stories are measured above grade plane.

See Commentary Figure 1206.3 for examples of court dimensions.

1206.3.1 Court access. Access shall be provided to the bottom of courts for cleaning purposes.

Courts must be accessed for maintenance. Clearly, a court intended to be a source of ventilation air must be maintained in a manner conducive to its purpose.

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.

This section is applicable only to courts that are bounded on all four sides by walls or other construction. A fully bounded court takes on characteristics similar to a chimney during summer weather when the building mass is heated from the daytime sun. In order for a fully bounded court to function as an efficient source of natural ventilation, the bottom of the court must have a source of fresh air (similar to a chimney). This source of fresh air is supplied through the required opening of 10 square feet (0.93 m²) connected directly to a street or yard. The requirements of this section are not applicable if artificial lighting and ventilation are provided for spaces facing the court in accordance with Sections 1203.1 and 1206.1.

1206.3.3 Court drainage. The bottom of every court shall be properly graded and drained to a public sewer or other approved disposal system complying with the International Plumbing Code.

A court is an inherent water trap. A court that is not both graded and drained will accumulate water and remain in a saturated condition, which will promote an insanitary condition, including odors. Stagnant water is often a breeding ground for disease-carrying insects. Based on the design and nature of the soil after construction, paving the court may be the best solution to eliminate a problem.

**SECTION 1207
SOUND TRANSMISSION**

1207.1 Scope. This section shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent dwelling units and sleeping units or between adjacent public areas such as halls, corridors, stairways or service areas.

Since noise transmission can be quantified and affects the quality of life, the code incorporates regulations that address noise transmission in multiple-family residential construction, wherein the occupants may have no control over noise. The regulated components of construction are those through which noise is primarily transmitted.

1207.2 Air-borne sound. Walls, partitions and floor/ceiling assemblies separating dwelling units and sleeping units from

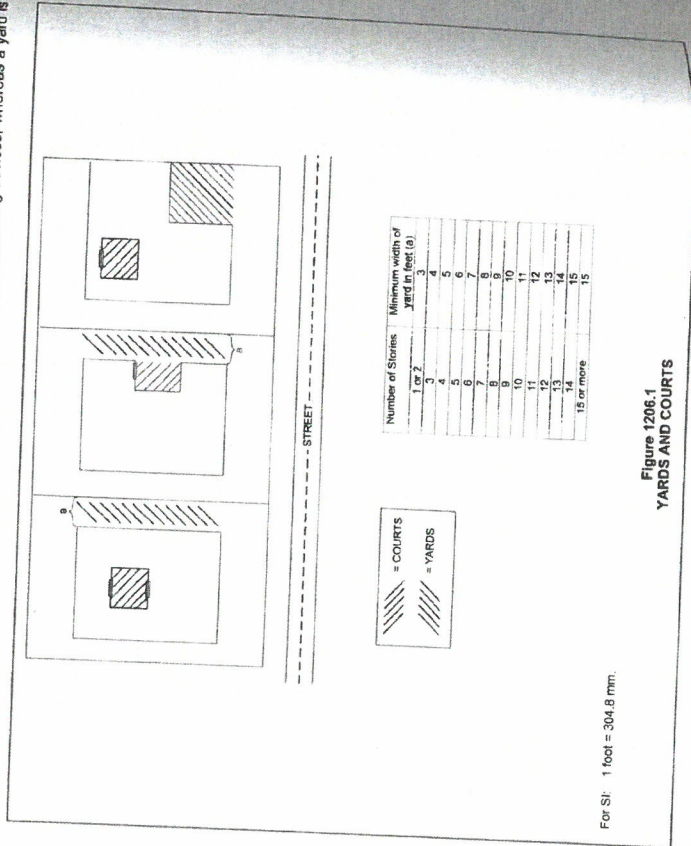


Figure 1206.1
YARDS AND COURTS

Audrey Krenitsky

From: Martin, Carl <Carl.Martin@ncdoi.gov>
Sent: Friday, March 15, 2019 7:39 AM
To: Audrey Krenitsky
Cc: Gupton, Barry
Subject: RE: Ventilation in courts question

Audrey,

2018 NC Administrative Code and Procedures, Section 203.2.1.2 indicates that appeals for a formal interpretation shall be made to the Chief Code Consultant for the Department of Insurance. Mr. Barry Gupton, PE would be that person. The request for formal interpretation should be submitted on your letter head and include all facts and attachments that you wish to submit as well as a copy of this email string. You should be specific with your request as the formal interpretation will only address what is requested and as requested.

Mr. Gupton's mailing address is the same as mine below, or you can submit the request by email, but the email should still include a copy of the request for formal interpretation on your letter head stationary as simple emails without the letter head stationary copy are considered informal interpretations.

Carl Martin
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0009

From: Audrey Krenitsky <audreyk@jdavisarchitects.com>
Sent: Thursday, March 14, 2019 3:37 PM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Cc: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Subject: [External] RE: Ventilation in courts question

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

Carl,

We have been asked for an "official interpretation" of what we have discussed in the e-mail below. Is this something you can provide?

Thanks.

Audrey

AUDREY KRENITSKY, Senior Sector Manager | Senior Associate

510 S. Wilmington Street | Raleigh, NC 27601
t: (919) 835-1500 | f: (919) 835-1510

www.jdavisarchitects.com

From: Martin, Carl [<mailto:Carl.Martin@ncdoi.gov>]
Sent: Wednesday, February 27, 2019 1:05 PM
To: Audrey Krenitsky <audreyk@jdavisarchitects.com>
Cc: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Subject: RE: Ventilation in courts question

Correct.

Carl Martin
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0009

From: Audrey Krenitsky <audreyk@jdavisarchitects.com>
Sent: Wednesday, February 27, 2019 12:07 PM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Cc: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Subject: [External] RE: Ventilation in courts question

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

Carl,

To be clear, when you say *"If the courtyard can comply with 1203.5.1.2 then 1206.3 will not apply with regards to ventilation"* you are saying that if the 1203.5.1.2 parameters are met then 1206.3.2 Air Intake does not apply but 1206.3.1 Court Access and 1206.3.3 Court drainage does – correct?

Thanks,

Audrey

AUDREY KRENITSKY, Senior Project Manager |Senior Associate

510 S. Wilmington Street | Raleigh, NC 27601
t: (919) 835-1500 | f: (919) 835-1510

www.jdavisarchitects.com

From: Martin, Carl [<mailto:Carl.Martin@ncdoi.gov>]
Sent: Wednesday, February 27, 2019 11:55 AM
To: Audrey Krenitsky <audreyk@jdavisarchitects.com>
Cc: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Subject: RE: Ventilation in courts question

Audrey,

The interpretation remains the same; there are just different section references. If the courtyard can comply with 1203.5.1.2 then 1206.3 will not apply with regards to ventilation. If 1203.5.1.2 cannot be met then 1206.3 will apply.

FYI: 1206.3.1 and 1206.3.3 apply in either case.

Carl Martin
Chief Building Code Consultant



N.C. Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
919.647.0009

From: Audrey Krenitsky <audreyk@jdavisarchitects.com>
Sent: Wednesday, February 27, 2019 11:09 AM
To: Gupton, Barry <Barry.Gupton@ncdoi.gov>
Cc: Martin, Carl <Carl.Martin@ncdoi.gov>
Subject: [External] RE: Ventilation in courts question

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

Barry and Carl,

I am just checking in on the e-mail I sent earlier (below), please let me know if there is any additional information you need from me.

Thanks!

Audrey

AUDREY KRENITSKY, Senior Project Manager | Senior Associate

510 S. Wilmington Street | Raleigh, NC 27601
t: (919) 835-1500 | f: (919) 835-1510

www.jdavisarchitects.com

From: Audrey Krenitsky
Sent: Thursday, February 21, 2019 12:07 PM
To: 'Gupton, Barry' <Barry.Gupton@ncdoi.gov>
Cc: Martin, Carl <Carl.Martin@ncdoi.gov>
Subject: FW: Ventilation in courts question

Barry and Carl,

The question of the intent of section 1206 as it relates to apartment communities with enclosed courtyards has come up again on another project and I wanted to check back in on that. I have attached e-mail correspondence below that was

related to a project from a few years ago and with a new code in place I am making sure my recollection is correct and that there has been no change.

My approach to applying 1206 was given that such a small amount of space was being required (9'x 16'/144 sq ft) that the intent of that portion of the code was not for it to applied to a large recreational courtyard space that is more typically in the 3800+ sq ft range. Looking through the 2015 commentary does seem to still support this [attached - especially figure 1206.1 and the sections that relate to air intake and chimney effect (1206.3.2) and drainage (1206.3.3)] which seems to be considering a more urban situation with small portions of space between buildings and not large courtyard amenity spaces.

Please let me know your thoughts.

Thanks!

Audrey

AUDREY KRENITSKY, Senior Project Manager |Senior Associate

510 S. Wilmington Street | Raleigh, NC 27601
t: (919) 835-1500 | f: (919) 835-1510

www.jdavisarchitects.com

From: Martin, Carl [<mailto:Carl.Martin@ncdoi.gov>]

Sent: Tuesday, February 09, 2016 8:43 AM

To: Audrey Krenitsky

Subject: RE: Ventilation in courts question

Audrey,

1203.1 states that ventilation can be provided by either natural or mechanical ventilation. If adequate ventilation is provided to the spaces facing the courtyard by the mechanical system then Section 1206.3.2 is not applicable.

Assuming that the court was or is indeed required for ventilation, I would suggest that Section 1203.4.1.2 – Openings Below Grade could be applied. If the requirements in 1203.4.1.2 are sufficient to provide ventilation to spaces below grade then it should be adequate to provide ventilation to a court. The measurements across the court should satisfy the requirement in Section 1203.4.1.2 in both directions to ensure air flow. If the widths required by 1203.4.1.2 cannot be provided then the requirements of Section 1206.3.2 must be met to provide adequate air flow in the court.

Carl Martin

Chief Building Code Consultant
Engineering Division
Office of State Fire Marshal
N. C. Department of Insurance
322 Chapanoke Road, Suite 200
Raleigh, NC 27603-3400
Tel: 919-661-5880 x225
Fax: 919-662-4414

From: Audrey Krenitsky [<mailto:audreyk@jdavisarchitects.com>]

Sent: Monday, February 08, 2016 3:50 PM

To: Martin, Carl <Carl.Martin@ncdoi.gov>
Subject: RE: Ventilation in courts question

Carl,

The unit windows meet the requirements of natural ventilation per 1203.4 but the mechanical systems for the units do not pull fresh air from the courtyard, that comes from the roof.

AUDREY KRENITSKY, Project Manager
www.jdavisarchitects.com
510 S. Wilmington Street | Raleigh, NC 27601
t: (919) 835-1500 | f: (919) 835-1510

From: Martin, Carl [<mailto:Carl.Martin@ncdoi.gov>]
Sent: Monday, February 08, 2016 2:53 PM
To: Audrey Krenitsky
Subject: RE: Ventilation in courts question

Audrey,

For purposes of clarity, are the windows in the court required for ventilation, or do the mechanical systems actually pull the air for the required ventilation from a source other than the courtyard?

Carl Martin

Chief Building Code Consultant
Engineering Division
Office of State Fire Marshal
N. C. Department of Insurance
322 Chapanoke Road. Suite 200
Raleigh, NC 27603-3400
Tel: 919-661-5880 x225
Fax: 919-662-4414

From: Audrey Krenitsky [<mailto:audreyk@jdavisarchitects.com>]
Sent: Monday, February 08, 2016 2:15 PM
To: Martin, Carl <Carl.Martin@ncdoi.gov>
Subject: Ventilation in courts question

Carl,

I have a question for you on the requirement of ventilation of courts. A current project we have is a 5 story type IIIA building with NFPA 13 sprinkler system of R2 occupancy. This building contains an enclosed center court with windows in residential units on all 4 sides.

According to the 2012 code and commentary for section 1206/yards or courts, the requirements of this section are "intended to increase the likelihood that the exterior walls are provided with enough adjacent open space to allow the required light and ventilating air to freely enter the exterior wall openings". To this end table 1206 sets minimum dimensions to ensure this. Below is the required minimum dimensions, along with the actual:

Table 1206 code required minimum with for 5 story bldg	Actual width provided	Table 1206 code required minimum length for 5 story bldg	Actual length provided
9'	46' (exceeds code minimum by 37')	16'	79' (exceeds code minimum by 63')

Given that the code minimum width and length dimensions are met and greatly exceeded it is our belief that the air intake provision of 1206.3.2 no longer applies since we are meeting the intent of the code by providing additional space within the court itself.

Please give us your opinion.

Thanks.

Audrey

AUDREY KRENITSKY, Project Manager

510 S. Wilmington Street | Raleigh, NC 27601
 t: (919) 835-1500 | f: (919) 835-1510

www.jdavisarchitects.com
[twitter](#) | [linked in](#) | [google+](#) | [facebook](#)

JDAVIS > DESIGN THAT CONNECTS.