OSFM
NC DEPT OF INSURANCE
STATE FIRE MARSHAL

BRIAN TAYLOR
STATE FIRE MARSHAL

January 5, 2026

Mr. Matthew J. Ansley
ISG - Architect + Engineering + Environmental + Planning
510 S. Wilmington Street
Raleigh, NC 27601

RE: Placement of Swimming Pool in Open Space for Frontage Increase per 2018 North Carolina Building Code (NCBC) Section 506.3

Dear Mr. Ansley,

This letter responds to your request for a formal interpretation from the Office of State Fire Marshal (OSFM) dated October 3, 2025, and received by OSFM the same day. Your request seeks clarification on the following:

As stated in relevant parts of the documentation received in the request:

"As noted in the 2018 NC Code Commentary section 506.3, the allowable area of the building is allowed to be increased when it has a certain amount of 'FRONTAGE' on streets (public ways) or open spaces, since this provides access to the structure by fire service personnel. Furthermore, this 30'+ open space reduces the exposure to & from adjacent structures. We believe the pool (filled with water) & pool deck (concrete) is an 'open space' meeting the requirements of 506.3 & we believe that providing Knox Boxes on the pool gates allows fire department access to the open space to fight a fire on the side of the building facing the pool. If necessary, we believe the pool water could actually be used to help fight a fire as a source of water & this is even a requirement in some codes in California. As indicated in 506.3, we are not required to have a fire lane on all sides of the building to utilize 'FRONTAGE INCREASE' but rather required to provide fire department access to pull hoses and fight a fire. Therefore, we believe a pool & pool deck is an 'open space' if wider than 30' & if Knox boxes are provided on the pool gates the fire department should have access & we meet all the requirements of 506.3. Does NCDOI / OSFM agree a pool & pool deck can be allowed in the 30' open space of 506.3 if pool gates are provided with Knox boxes to allow fire department access to that side of the building within the 30'?"

Remarks:

Code sections cited in this letter refer to the 2018 edition of the North Carolina Building Code (NCBC) unless otherwise noted.

Attachment A, a copy of your request for formal interpretation dated October 3, 2025, is attached to this letter for reference.

Attachment B includes supporting documents, including a site plan showing the swimming pool location and a code reference to Section 506.3 from the NCBC.

Code Analysis:

2018 NCBC Section 506.3 – Frontage increase states:

> **506.3 Frontage increase.** Every building shall adjoin or have access to a public way to receive an area factor increase based on frontage. Area factor increase shall be determined in accordance with Sections 506.3.1 through 506.3.3.

Comment: This section establishes that an area factor increase is permitted only when the building adjoins or has access to a public way or open space meeting the criteria in Sections 506.3.1 through 506.3.3. The required access must be functional, enabling fire department personnel to effectively approach the building and conduct emergency operations across the open space.

2015 IBC Commentary on Section 506.3 (Applicable to 2018 NCBC) states:

> The allowable area of a building is allowed to be increased when it has a certain amount of frontage on streets (public ways) or open spaces, since this provides access to the structure by fire service personnel, a temporary refuge area for occupants as they leave the building in a fire emergency and reduced exposure to and from adjacent structures.

Comment: The commentary describes the frontage increase as a compensatory safety benefit predicated on the open space providing three functions: (1) fire department access and operational space (including hose deployment), (2) temporary refuge for evacuating occupants, and (3) reduced exposure hazard. Impairment of any of these functions by a permanent site feature disqualifies the affected perimeter from frontage credit. These functions must be continuously and safely available during emergency operations; features that negate any one of these functions compromise the basis for the frontage increase.

2018 NCBC Section 506.3.1 – Minimum percentage of perimeter states:

> **506.3.1 Minimum percentage of perimeter.** To qualify for an area factor increase based on frontage, a building shall have not less than 25 percent of its perimeter on a public way or open space. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane.

Comment: This section mandates that the open space used for the increase must be accessible from a fire lane or street, ensuring that fire department apparatus and personnel can actually reach the "open" side of the building to perform their duties.

2018 NCBC Section 506.3.2 – Minimum frontage distance states:

506.3.2 Minimum frontage distance. To qualify for an area factor increase based on frontage, the public way or open space adjacent to the building perimeter shall have a minimum distance (*W*) of 20 feet (6096 mm) measured at right angles from the building face to any of the following:

1. The closest interior lot line.
2. The entire width of a street, alley or public way.
3. The exterior face of an adjacent building on the same property.

Where the value of *W* is greater than 30 feet (9144 mm), a value of 30 feet (9144 mm) shall be used in calculating the building area increase based on frontage, regardless of the actual width of the public way or open space. Where the value of *W* varies along the perimeter of the building, the calculation performed in accordance with Equation 5-5 shall be based on the weighted average calculated in accordance with Equation 5-4.

$W = (L_1 \times w_1 + L_2 \times w_2 + L_3 \times w_3 \ldots)/F$ (Equation 5-4)

where:

W (Width: weighted average) = Calculated width of public way or open space (feet).

L_n = Length of a portion of the exterior perimeter wall.

w_n = Width (≥ 20 feet) of a public way or open space associated with that portion of the exterior perimeter wall.

F = Building perimeter that fronts on a public way or open space having a width of 20 feet (6096 mm) or more.

Exception: Where a building meets the requirements of Section 507, as applicable, except for compliance with the minimum 60-foot (18 288 mm) *public way* or *yard* requirement, and the value of *W* is greater than 30 feet (9144 mm), the value of *W* shall not exceed 60 feet (18 288 mm).

Comment: The 20-foot minimum width is a functional dimension intended to provide adequate room for fire department operations, hose deployment, and a safe refuge zone for occupants. Permanent obstructions within this width that prevent these functions disqualify that portion of the perimeter.

Conclusions:

1. A swimming pool represents a permanent, significant change in grade and surface that is inherently non-traversable, creating a physical hazard regardless of its state. When filled with water, the pool acts as an impassable body of water that prevents the "access by fire service personnel" and "hose deployment" required by the code; conversely, when empty, the pool basin constitutes a significant vertical fall hazard and a physical obstruction that prevents the safe movement of personnel and eliminates the "temporary refuge area" required for fleeing occupants. Therefore, the portion of the perimeter obstructed by the pool (including its surrounding deck required for circulation) does not qualify for frontage increase credit.

2. While some jurisdictions (e.g., certain California codes) may recognize pools as potential drafting sources, the 2018 NCBC contains no such provision, and frontage credit under Section 506.3 is based solely on usable open space, not alternative water supply.
3. Providing Knox boxes on pool enclosure gates satisfies North Carolina Fire Code requirements for rapid access through secured gates but does not overcome the obstruction created by the pool itself. Fire personnel, once through the gate, would still be unable to utilize the pool area for required emergency operations.
4. To legitimately claim a frontage increase, the swimming pool must be located entirely outside the required 20- to 30-foot open space zone. If the pool remains within this zone, the obstructed segments of the building perimeter must be excluded from the weighted average width (*W*) calculation in accordance with Equation 5-4.

Please contact our office if you have further questions or comments.

Sincerely,

Pak Keung Yip, PE
Chief Code Consultant
North Carolina Office of State Fire Marshal

cc: File
Nathan Childs, NCDOJ, counsel for NC Building Code Council, nchilds@ncdoj.gov
Nicki Shaffer, NCDOJ, counsel for NC Residential Code Council, wshaffer@ncdoj.gov
David Rittlinger, NCOSFM, Division Chief - Code and Interpretations, david.rittlinger@ncdoi.gov

ATTACHMENT A

(see attached pdf)

APPENDIX E
APPEALS
NORTH CAROLINA
BUILDING CODE COUNCIL

1429 Rock Quarry Road, Suite 105
Raleigh, North Carolina 27610
(919) 647-0008
david.rittlinger@ncdoi.gov

APPEAL TO NCDOI/NCBCC **Hearing Date** _____ / _____ / _____

GS 153A-374, GS 160A-434
Formal Interpretation by NCDOI_____
Appeal of Local Decision to NCDOI_____

GS 143-140, GS 143-141
Appeal of Local Decision to NCBCC_____
Appeal of NCDOI Decision to NCBCC_____

APPELLANT Matthew J. Ansley **PHONE (** 919 **)** 612 **-** 8032 **x** _____
REPRESENTING ISG - Architecture + Engineering + Environmental + Planning
ADDRESS 510 S. Wilmington Street
CITY Raleigh **STATE** NC **ZIP** 27601
E-MAIL Matt.Ansley@ISGInc.com **FAX (** _____ **)** _____ **-** _____

North Carolina State Building Code, Volume 2018 **- Section** 506.3, 506.3.1 & 506.3.2

REQUEST ONE:
[X] Formal Interpretation by NCDOI
[ ] Appeal of Local Decision to NCDOI
[ ] Appeal of Local Decision to NCBCC
[ ] Appeal of NCDOI Decision to NCBCC

Type or print. Include all background information as required by the referenced General Statutes and the attached policies. Attach additional supporting information.

We have a swimming pool located next to the building and we proposed "Knox Boxes" be placed on the pool gates to allow fire department access. We have discussed this with the Town of Chapel Hill & with Mr. Senada of OSFM & have been told that the pool fence and the pool gates prevent fire department access around the building & the swimming pool cannot be located in this "open space" & therefore the "***FRONTAGE INCREASE***" per 506.3 cannot be used for our R2/NFPA 13R building (Fire Area A). We proposed providing Knox Boxes at the pool gates to allow Fire Department access similar to secured building entries, fire pump rooms, fire sprinkler rooms, roof access conditions and fire command centers but were told "Knox Boxes" did not meet code requirements for FD access in 506.3 and therefore the "***FRONTAGE INCREASE***" per 506.3 could not be applied to a building or fire area where a pool and pool deck surrounded by pool fence was placed against the building.

REASON:

As noted in the 2018 NC Code Commentary section 506.3, the allowable area of the building is allowed to be increased when it has a certain amount of "***FRONTAGE***" on streets (public ways) or open spaces, since this provides access to the structure by fire service personnel. Furthermore, this 30'+ open space reduces the exposure to & from adjacent structures. We believe the pool (filled with water) & pool deck (concrete) is an "open space" meeting the requirements of 506.3 & we believe that providing Knox Boxes on the pool gates allows fire department access to the open space to fight a fire on the side of the building facing the pool. If necessary, we believe the pool water could actually be used to help fight a fire as a source of water & this is even a requirement in some codes in California. As indicated in 506.3, we are not required to have a fire lane on all sides of the building to utilize "***FRONTAGE INCREASE***" but rather required to provide fire department access to pull hoses and fight a fire. Therefore, we believe a pool & pool deck is an "open space" if wider than 30' & if knox boxes are provided on the pool gates the fire department should have access & we meet all the requirements of 506.3. ***Does NCDOI / OSFM agree a pool & pool deck can be allowed in the 30' open space of 506.3 if pool gates are provided with Knox boxes to allow fire department access to that side of the building within the 30'?***

Signature _____ **DATE:** 10/3/2025 **FORM 3/14/17**

Yip, Pak

From: Matt Ansley <Matt.Ansley@ISGInc.com>
Sent: Friday, October 3, 2025 5:46 PM
To: Yip, Pak; Rittlinger, David B
Cc: Senada, Hany A; Evan Leinbach; Chris Hall; Bill Egan
Subject: [External] Request for Formal Interpretation - Appendix E - Section 506.3 - Building area frontage increase question
Attachments: BCC-Appeals-and-Formal-Interpretations_Signed.pdf; Site-Plan-Exhibit.pdf; 2018-NCSBC-Code-Commentary-Section-506.3.pdf; RE_ _External_ Permit review - Building area frontage increase question.msg

Dear Mr. Rittlinger & Mr. Yip,

Hopefully I am submitting this correctly. We are requesting a formal Interpretation on a code question regarding whether a swimming pool is allowed to be placed in the 30' open space area of 506.3 for purposes of "FRONTAGE INCREASE" and if knox boxes are allowed on the pool gate for FD access. We have provided a signed Appendix E per the instructions we read online. We have also provided a site plan clip as well as the relevant sections of the code commentary we have been studying. See list of attachments at the bottom of this email. We think the attached site plan clearly shows the condition we are asking about which we face on many of our R2 apartment buildings nearly all of which have swimming pools.

Can you let us know if (1) this is the correct way to submit this, (2) if you have any questions and (3) when we might be able to expect an answer? We understand these things take some time but having a ball-park idea of when this might be heard and responded to would be greatly appreciated.

Thank you very much!
Matt.

Attachments...

1) *Appendix E*
2) *Site plan clip of the area in question*
3) *Commentary on 506.3*
4) *Email exchange with Mr. Senada.*

ISG

Matt Ansley
Business Unit Executive, Residential + Mixed Use
Employee Owner

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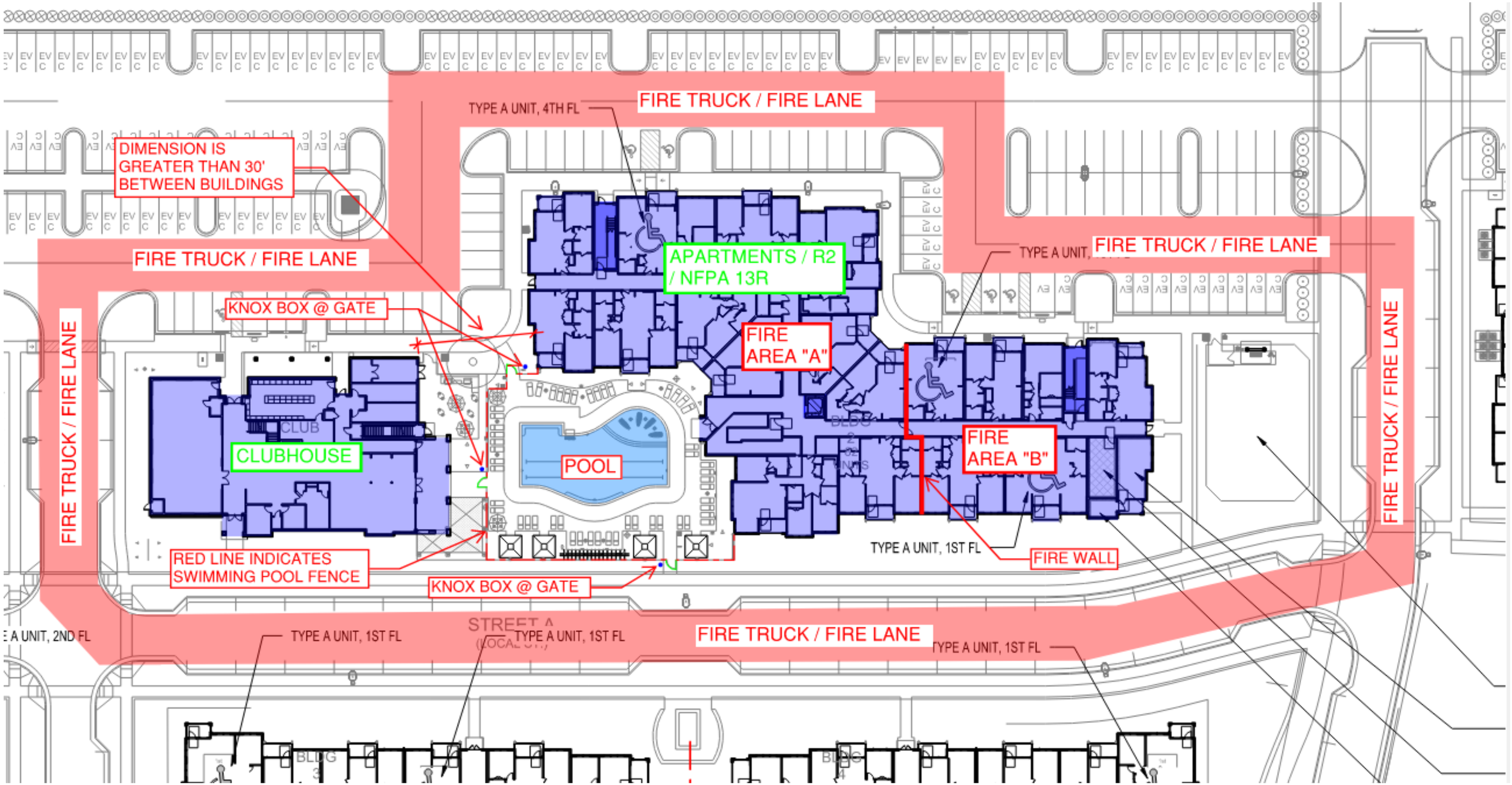
ATTACHMENT B

(see attached pdf)


TYPE A UNIT, 4TH FL
FIRE TRUCK / FIRE LANE
DIMENSION IS GREATER THAN 30' BETWEEN BUILDINGS
FIRE TRUCK / FIRE LANE
APARTMENTS / R2 / NFPA 13R
KNOX BOX @ GATE
FIRE AREA "A"
TYPE A UNIT,
FIRE TRUCK / FIRE LANE
FIRE TRUCK / FIRE LANE
CLUBHOUSE
POOL
FIRE AREA "B"
TYPE A UNIT, 1ST FL
FIRE WALL
RED LINE INDICATES SWIMMING POOL FENCE
KNOX BOX @ GATE
FIRE TRUCK / FIRE LANE
TYPE A UNIT, 2ND FL
TYPE A UNIT, 1ST FL
TYPE A UNIT, 1ST FL
TYPE A UNIT, 1ST FL

Example 2: Sprinklered, four-story Type IIB building, no frontage increase.

First story: Group B occupancy—20,000 square feet (1858 m²)
Group M occupancy—25,000 square feet (3159 m²)

Second story: Group A-3 occupancy—4,000 square feet (372 m²)
Group B occupancy—41,000 square feet (3809 m²)

Third story: Group B occupancy—15,000 square feet (1394 m²)
Group S-1 occupancy—15,000 square feet (1394 m²)
Group F-1 occupancy—15,000 square feet (1394 m²)

Fourth story: Group B occupancy—10,000 square feet (929 m²)
Group S-2 occupancy—35,000 square feet (3252 m²)

The first story does not qualify as an accessory or nonseparated occupancy. As separated occupancies, the ratio on the story is 0.96 [(20,000/69,000) + (25,000/37,500)].

The second story is larger than that permitted for a Group A-3 occupancy; however, since the Group A-3 occupancy is less than 10 percent of the area of the second story, it qualifies as an accessory occupancy if subsidiary to the Group B occupancy. The ratio on the story is 0.65 (45,000/69,000).

The third story qualifies as a nonseparated occupancy, since the allowable area per story for the most restrictive occupancy [Group F-1; 46,500 square feet (4320 m²)] is larger than the actual area on any individual story. The ratio of the floor is 0.97 (45,000/46,500).

The fourth floor qualifies as a nonseparated occupancy, since the allowable area per floor for the most restrictive occupancy [Group B; 69,000 square feet (6410 m²)] is larger than the actual area on any individual story. The ratio of the story is 0.65 (45,000/69,000).

The aggregate sum of the ratios is 3.23 (0.96 + 0.65 + 0.97 + 0.65). Since the aggregate sum of the ratios exceeds three, Type IIB construction would not be permitted without further modification. Options would be to increase the construction type or increase the open frontage.

506.2.4.1 Group H-2 or H-3 mixed occupancies. For a building containing Group H-2 or H-3 occupancies, the allowable area shall be determined in accordance with Section 508.4.2, with the sprinkler system increase applicable only to the portions of the building not classified as Group H-2 or H-3.

❖ This section is a reminder that Group H-2 or H-3 occupancies are allowed in mixed occupancy buildings, but that there is no advantage for sprinklers. Therefore, Table 506.2 has the same area factors for nonsprinklered and sprinklered buildings for H-2 or H-3 construction. See the commentary to Section 506.2.2.1.

506.3 Frontage increase. Every building shall adjoin or have access to a public way to receive an area factor increase based on frontage. Area factor increase shall be determined in accordance with Sections 506.3.1 through 506.3.3.

❖ The allowable area of a building is allowed to be increased when it has a certain amount of frontage on streets (public ways) or open spaces, since this provides access to the structure by fire service personnel, a temporary refuge area for occupants as they leave the building in a fire emergency and a reduced exposure to and from adjacent structures. Sections 506.3.1 through 506.3.3 describe how this increase for frontage is determined.

506.3.1 Minimum percentage of perimeter. To qualify for an area factor increase based on frontage, a building shall have not less than 25 percent of its perimeter on a public way or open space. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane.

❖ There is no requirement in the code that buildings have at least 25 percent of their perimeter on a public way or open space. However, in order to qualify for an area increase, a building must have more than 25 percent of its perimeter on a public way or open space having a minimum width of at least 20 feet (6096 mm) (see Section 506.3.2). When the calculations are done, the maximum percent increase for a fully open perimeter (full frontage—the entire perimeter fronts on a public way or open space) is 75 percent. Width is measured at right angles to the perimeter walls as set forth in Section 506.3.2, but open frontage is not the same as fire separation distance. Fire separation distance, as defined in Section 202, is measured to the centerline of public ways or to an imaginary line between buildings on the same lot. Open space can include the total width of the public way as well as the total open space between buildings on the same lot. "Public way" is a defined term.

If a structure is divided into two or more buildings by fire walls complying with Section 706, the area modifications allowed by Section 506 must be determined based on each separate building within the structure. This especially comes into play in determining increases allowable based on frontage. The fire wall is essentially the perimeter wall for that side of the building and must be included in determining the *P* in Equation 5-5. Since there is another building on the other side of the fire wall, this portion of the perimeter is not considered fronting on a public way or yard and, therefore, is not included in *F* [see Commentary Figure 506.3.1(1)].

This section requires that an open space that is not a public way be on the same lot or dedicated for pub-

lic use, and it must have access from a street or an approved fire lane in order to contribute to the frontage increase.

The requirement that the open space be on the same lot is so that the owner or the jurisdiction can control the space that is assumed to be open for purposes of the area increase. One cannot encumber a neighbor's property with a requirement that the space will always remain unoccupied.

Any part of the perimeter that is not accessible to the fire department by means of a street or fire lane cannot be considered open for the purposes of this section. For instance, if the back side of a building on a narrow lot cannot be reached by means of a fire lane on one side of the building (and there is no alley or street at the back), that portion of the perimeter is not considered open for purposes of frontage increase, even if there is actual open space exceeding 20 feet (6096 mm) in width. See Commentary Figure 506.3.1(2) as an illustration of this limitation.

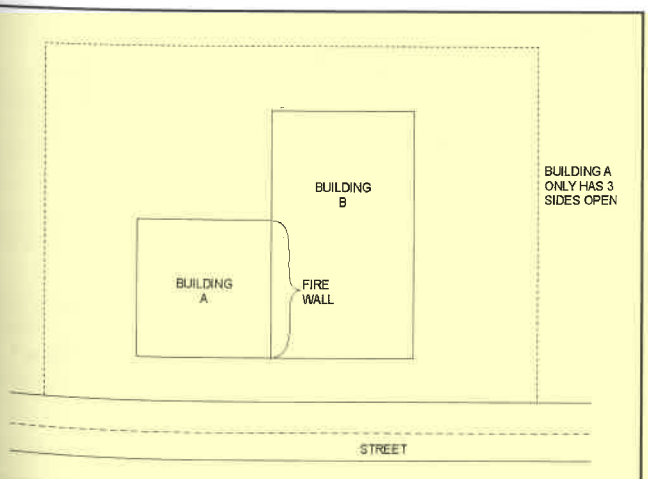
This section does not require that a fire lane or street extend immediately adjacent to every portion of the perimeter that is considered open for purposes of the increase. Rather, access by a fire lane must be provided up to the open side such that fire department personnel can approach the side and pull hoses across the open area to fight a fire, and no corner of the building will impede the use of hoses and equipment on that side of the building. The following examples demonstrate this point.

Example 1: In Commentary Figure 506.3.1(2), the south and east side of the building facing the street can be considered open perimeter (frontage). The north side of the building cannot be considered open perimeter for purposes of the increase, since it is not accessible from the street or a fire lane. Even though the 20-foot-wide yard can be included in open frontage because it does not provide a fire lane to the rear of the building, the 100-foot yard cannot be included.

Example 2: In Commentary Figure 506.3.1(3), all sides of the building are considered open perimeter (frontage) for purposes of the increase. Access up to each side of the building is provided by means of a fire lane or street.

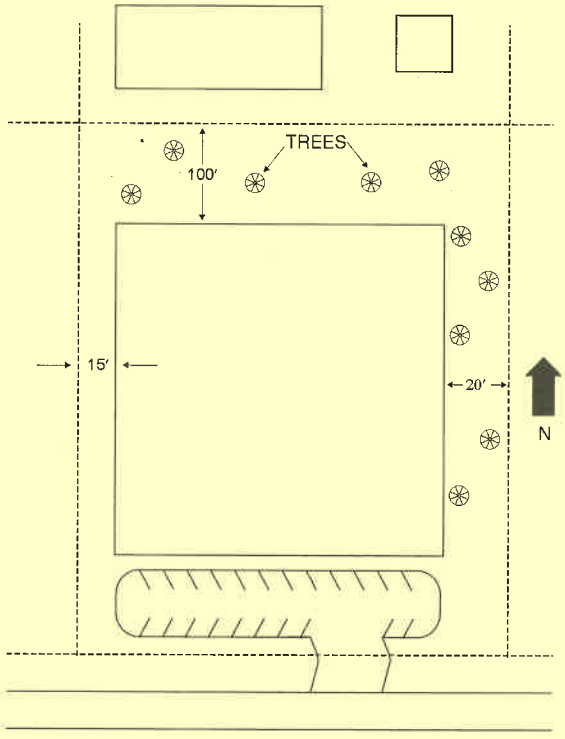
Section 503 of the *International Fire Code*® (IFC®) specifies that access roads extend to within 150 feet (45 720 mm) of all portions of the exterior walls of a building. However, there are exceptions that would permit the omission of such roads under certain circumstances. One such exception is for buildings equipped throughout with an automatic sprinkler system where the fire code official is permitted to extend the 150-foot (45 720 mm) limit.

The IFC also stipulates that the access roads must be at least 20 feet (6096 mm) in unobstructed width, although it also gives the building official authority to require greater widths if necessary for effective firefighting operations. The type of surface necessary for the approved fire lane is determined by the local building official with input from the fire department, but the road must be capable of supporting the imposed loads of fire apparatus and be surfaced so as to provide all-weather driving capabilities.



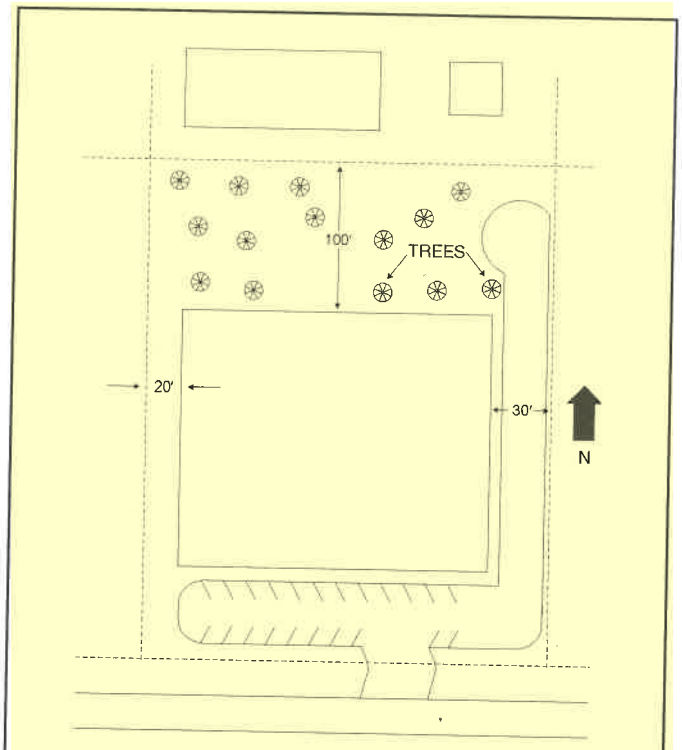
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

Figure 506.3.1(1)
FRONTAGE INCREASE—FIRE WALL



For SI: 1 foot = 304.8 mm.

Figure 506.3.1(2)
ACCESS TO OPEN SPACE



For SI: 1 foot = 304.8 mm.

Figure 506.3.1(3)
ACCESS TO OPEN SPACE

506.3.2 Minimum frontage distance. To qualify for an area factor increase based on frontage, the public way or open space adjacent to the building perimeter shall have a minimum distance (W) of 20 feet (6096 mm) measured at right angles from the building face to any of the following:

1. The closest interior lot line.
2. The entire width of a street, alley or public way.
3. The exterior face of an adjacent building on the same property.

Where the value of W is greater than 30 feet (9144 mm), a value of 30 feet (9144 mm) shall be used in calculating the building area increase based on frontage, regardless of the actual width of the public way or open space. Where the value of W varies along the perimeter of the building, the calculation performed in accordance with Equation 5-5 shall be based on the weighted average calculated in accordance with Equation 5-4.

$$W = (L_1 \times w_1 + L_2 \times w_2 + L_3 \times w_3 \ldots)/F \qquad \textbf{(Equation 5-4)}$$

where:

W (Width: weighted average) = Calculated width of public way or open space (feet).

L_n = Length of a portion of the exterior perimeter wall.

w_n = Width (≥ 20 feet) of a public way or open space associated with that portion of the exterior perimeter wall.

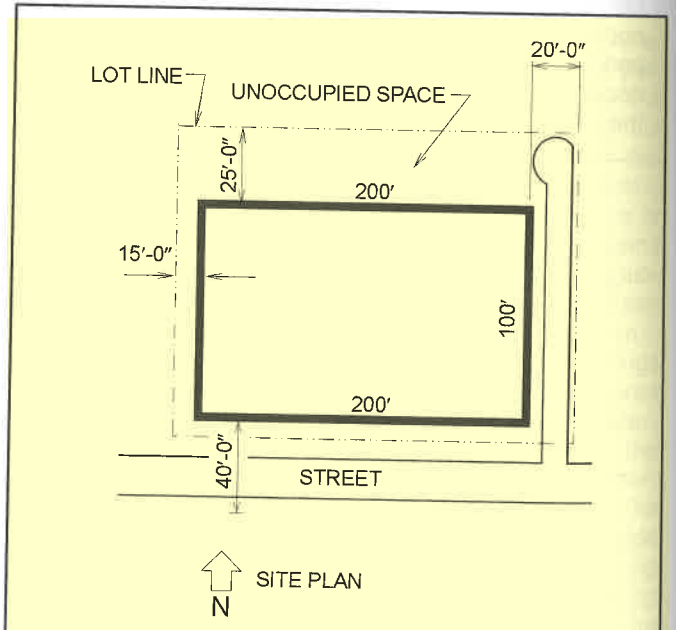
F = Building perimeter that fronts on a public way or open space having a width of 20 feet (6096 mm) or more.

Exception: Where a building meets the requirements of Section 507, as applicable, except for compliance with the minimum 60-foot (18 288 mm) *public way* or *yard* requirement, and the value of W is greater than 30 feet (9144 mm), the value of W shall not exceed 60 feet (18 288 mm).

❖ The amount of area increase (that is, the value of I_f in Section 506.3.3) will vary depending on the minimum width of the open space used in the frontage increase calculation. The general requirement is that the value of W must equal at least 20 feet (6096 mm) and cannot exceed 30 feet (9144 mm). The value of W is the weighted average of the portions of the wall and each open space when the width of the open space is between 20 and 30 feet (6096 and 9144 mm). Except as provided in the exception, the width of open space used in this calculation cannot exceed 30 feet (9144 mm) even when part of the open space is wider than 30 feet (9144 mm). See the following two examples illustrating this requirement. Example 1 also illustrates the use of Equation 5-4 in the determination of the weighted average W.

Example 1: In Commentary Figure 506.3.2(1), the value W = [(200 feet x 25 feet) + (100 feet x 20 feet) + (200 feet x 30 feet)]/500 feet = 26 feet (7925 mm).

Example 2: In Commentary Figure 506.3.2(2), the value of W would be 30 feet (9144 mm), since the minimum width of the open space that qualifies as open frontage is greater than 30 feet (9144 mm) on all



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

Figure 506.3.2(1)
FRONTAGE INCREASE—THREE SIDES

sides of this building. The reason the value of *W* must be taken at 30 feet (9144 mm) and not 50 feet (15 240 mm) is that this section sets an upper limit on the value of the *W*/30 term in Equation 5-5.

Typically, when multiple buildings are located on the same lot, an imaginary lot line must be established somewhere between the buildings in order to determine the fire separation distance. However, the value of *W* is defined as the width of the public way or open space, and is not dependent upon the fire separation distance. Therefore, for purposes of determining the value of *W* between buildings on the same lot, the entire distance between the buildings is permitted to be used, not solely the fire separation distance. Similarly, the entire width of a public way is used and not just the distance to the centerline of the public way. Such measurements are to be taken at right angles from the building.

The exception states that for certain buildings, the value of *W* divided by 30 is permitted to have a maximum value of 2.0. This exception applies to buildings that would be allowed to be unlimited in area in accordance with Section 507, save for the fact that the open area of 60 feet (18 288 mm) required by Section 507 is not met. Therefore, the weighted average of *W* would be calculated between 20 feet (6096 mm) and 60 feet (18 288 mm).

506.3.3 Amount of increase. The area factor increase based on frontage shall be determined in accordance with Equation 5-5:

$$I_f = [F/P - 0.25]W/30 \qquad \textbf{(Equation 5-5)}$$

where:

I_f = Area factor increase due to frontage.

F = Building perimeter that fronts on a *public way* or open space having minimum distance of 20 feet (6096 mm).

P = Perimeter of entire building (feet).

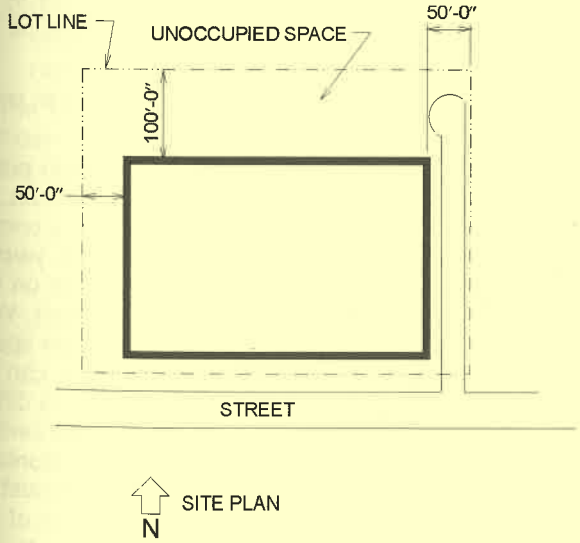
W = Width of *public way* or open space (feet) in accordance with Section 506.3.2.

❖ The terms that are used in Equation 5-5 have been discussed in the commentary to Sections 506.3.1 and 506.3.2. One additional example to demonstrate the application:

Example 1: Refer to Commentary Figure 506.3.3. In Equation 5-5, the term would have the following values:

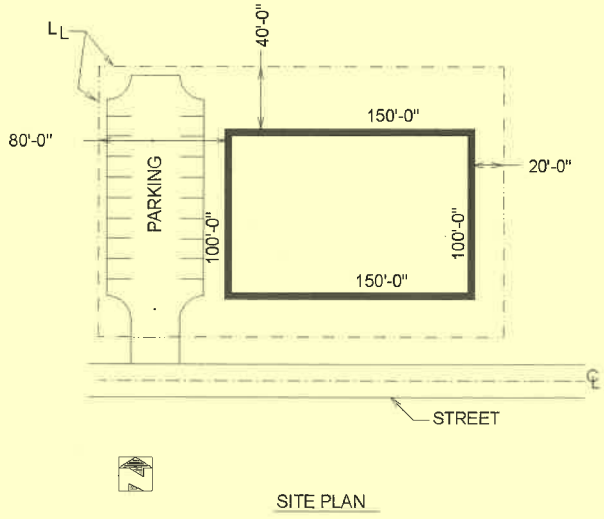
F = 500 feet (15 240 mm), since all sides of the building front on a public way or open space having 20 feet (6096 mm) minimum open width.

P = 500 feet (15 240 mm), the length of the entire perimeter.



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

Figure 506.3.2(2)
FRONTAGE INCREASE—FOUR SIDES



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

Figure 506.3.3
FRONTAGE INCREASE