



BRIAN TAYLOR
STATE FIRE MARSHAL

February 19, 2025

Mr. Joe Beck
Johnson Controls Fire Protection
540 Civic Blvd.
Raleigh, NC 27610

RE: 2018 NCBC Section 903.3.1.1 NFPA 13 sprinkler systems and NFPA 13-2013 8.15.7 Exterior Projections.

Mr. Beck:

This letter is in response to your request for a formal interpretation from the Office of State Fire Marshal ("OSFM") dated 11/18/24 and received by OSFM the same day. This delayed formal response letter serves to complete the documentation you requested. Thank you for your patience in waiting for this formal interpretation response while our office handled other commitments over the last several months, including disaster recovery efforts in WNC. Requests are addressed below in the order in which they are posed.

Stated in relevant parts:

"Applicable Codes - 2018 NC Building Code Edition, 2013 NFPA 13 Section 903.3.1.1 requires that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section. There are a list of exempt locations in section 903.3.1.1.1. NFPA 13 contains various sections also exempting sprinklers in certain locations such as noncombustible exterior projections with no combustible storage below. (8.15.7) Code commentary in the building code indicates these types of NFPA 13 omissions are acceptable but the local fire personnel question the validity of the commentary as being a part of the code itself.

Is it the conclusion that only exempt locations in the building code are applicable when describing a building or structure as being fully protected with sprinklers or when properly applied, are exempt locations in NFPA 13 also allowed without the building losing its designation as fully sprinklered?"

Remarks:

Attachment A is comprised of the request for formal interpretation as well as all supporting information submitted with the request.

OFFICE OF STATE FIRE MARSHAL

1202 MAIL SERVICE CENTER | RALEIGH NC 27699 -1202 | TEL 919.647.0000 | FAX 866.851.6508 | NCOSFM.GOV

Code Analysis: Where NFPA 13 sprinkler systems are installed, they shall be installed in accordance with 2018 North Carolina Building Code (NCBC) Section 903.3.1, 903.3.1.1, 903.3.1.2 and NFPA 13.

[F] 903.3 Installation requirements. *Automatic sprinkler systems* shall be designed and installed in accordance with Sections 903.3.1 through 903.3.8.

[F] 903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Section 903.3.1.1 unless otherwise permitted by Sections 903.3.1.2 and 903.3.1.3 and other chapters of this code, as applicable.

[F] 903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an *automatic sprinkler system* in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Sections 903.3.1.1.1 and 903.3.1.1.2.

[F] 903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an *approved* automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from a room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. A room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. A room or space where sprinklers are considered undesirable because of the nature of the contents, where *approved* by the fire code official.
3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a *fire-resistance rating* of not less than 2 hours.
4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Fire service access elevator machine rooms and machinery spaces.
6. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008.

.....



Conclusions: Where differences occur between the code and NFPA 13, the code applies. NFPA 13 contains the minimum requirements for the design and installation of automatic water sprinkler systems and exposure protection sprinkler systems. The requirements contained in the standard include the character and adequacy of the water supply and the selection of sprinklers, piping, valves and all of the materials and accessories. The extent of coverage and distribution of sprinklers is based on the NFPA 13 standard. Numerous conditions exist in the standard where sprinklers are specifically required and also where they may or may not be located. Once it is determined that the sprinkler system is to be in accordance with NFPA 13, that standard must be reviewed for installation details.

For example, exterior spaces such as combustible canopies are required to be equipped with sprinklers according to Section 8.15.7 of NFPA 13 where the canopy extends for a distance of 4 feet (1219 mm) or more. Sprinklers may be omitted from exterior projections exceeding 4 feet (1219 mm) if at least one of the three exceptions listed in Section 8.15.7.3 are applicable if approved by the fire code official.

8.15.7* Exterior Projections.

8.15.7.1

Unless the requirements of [8.15.7.2](#), [8.15.7.3](#), or [8.15.7.4](#) are met, sprinklers shall be installed under exterior projections exceeding 4 ft (1.2 m) in width.

8.15.7.2*

Sprinklers shall be permitted to be omitted where the exterior projections are constructed with materials that are noncombustible, limited-combustible, or fire retardant-treated wood as defined in NFPA 703.

8.15.7.3

Sprinklers shall be permitted to be omitted from below the exterior projections of combustible construction, provided the exposed finish material on the exterior projections are noncombustible, limited-combustible, or fire retardant-treated wood as defined in NFPA 703, and the exterior projections contain only sprinklered concealed spaces or any of the following unsprinklered combustible concealed spaces:

- (1) Combustible concealed spaces filled entirely with noncombustible insulation
- (2) Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists so as to create enclosed joist spaces 160 ft³ (4.5 m³) or less in volume, including space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered attic [see [11.2.3.1.4\(4\)\(d\)](#)]
- (3) Concealed spaces over isolated small exterior projections not exceeding 55 ft² (5.1 m²) in area

8.15.7.4

Sprinklers shall be permitted to be omitted from exterior exit corridors when the exterior walls of the corridor are at least 50 percent open and when the corridor is entirely of noncombustible construction.

8.15.7.5*

Sprinklers shall be installed under exterior projections greater than 2 ft (0.6 m) wide over areas where combustibles are stored.

Section 903.3.1.1.1 allows the omission of sprinkler protection in certain locations if an approved automatic fire detection system is installed. Buildings in compliance with one of the six listed conditions would still be considered fully sprinklered throughout in compliance with the code and NFPA 13 and thus are eligible for all applicable code alternatives, exceptions or reductions if approved by the fire code official.

Because installation is required to be in accordance with NFPA 13, if the standard allows for the omission of sprinklers in any location, then the building is still considered as sprinklered throughout, if approved by the fire code official.



**OFFICE OF STATE
FIRE MARSHAL**
NC DEPARTMENT OF INSURANCE

Sincerely,

David Rittlinger, PE, LEED AP
Division Chief – Codes & Interpretations
North Carolina Office of State Fire Marshal

cc: Nathan Childs, NCDOJ, counsel for NC Building Code Council, nchilds@ncdoj.gov
Nicki Shaffer, NCDOJ, counsel for NC Residential Code Council, wshaffer@ncdoj.gov
Pak Yip, NCOSFM, Chief Code Consultant, pak.yip@ncdoj.gov

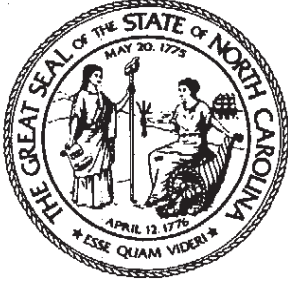




ATTACHMENT A

(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 Joe Beck **PHONE** (804) 691 - 3640 **x** _____
REPRESENTING Johnson Controls Fire Protection
ADDRESS 540 Civic Blvd
CITY Raleigh **STATE** NC **ZIP** 27610
E-MAIL beck3je@msn.com **FAX** (_____) _____ - _____

North Carolina State Building Code, Volume _____ - Section _____

REQUEST ONE: Formal Interpretation by NCDOI Appeal of Local Decision to NCBCC
 Appeal of Local Decision to NCDOI 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.

Applicable Codes - 2018 NC Building Code Edition, 2013 NFPA 13
 Section 903.3.1.1 requires that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section. There are a list of exempt locations in section 903.3.1.1.1. NFPA 13 contains various sections also exempting sprinklers in certain locations such as noncombustible exterior projections with no combustibile storage below. (8.15.7) Code commentary in the building code indicates these types of NFPA 13 omissions are acceptable but the local fire personnel question the validity of the commentary as being a part of the code itself.

REASON:

Is it the conclusion that only exempt locations in the building code are applicable when describing a building or structure as being fully protected with sprinklers or when properly applied, are exempt locations in NFPA 13 also allowed without the building losing its designation as fully sprinklered.

Signature  **DATE:** 11/18/24 **APPEAL TO NCDOI/NCBCC**
FORM 3/14/17