



THE DENSITY DILEMMA: NAVIGATING FIRE FLOW & SPRINKLER REQUIREMENTS IN PART 9 INFILL

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OBJECTIVES

CODE

Establish building code requirements for sprinklers

WATER SUPPLY

Determining adequate water supply for fire services

STANDARDS

Identify appropriate sprinkler standards

DESIGN

Understand requirements for professional design

INSPECT

Learn what is required to inspect drawings and installations

BUILDING CODE

ESTABLISH BUILDING CODE REQUIREMENTS FOR SPRINKLERS



Sprinkler systems are not explicitly required in Part 9



There may be times when sprinkler systems are advantageous




There may be other code requirements or bylaws that trigger the requirement for sprinkler systems



BUILDING CODE

- Part 9 does not contain the requirements for sprinklers when used, it refers to Part 3
- When Part 9 refers to Part 3 it is still considered as Part 9
- 9.10.1.3.(8) refers to 3.2.5.12. to 3.1.5.15. and 3.2.5.17.
- These sections deal with Automatic Sprinkler Systems, Combustible Sprinkler Piping, Sprinklered Service Space, Fire Department Connections, and Protection from Freezing

WATER SUPPLY



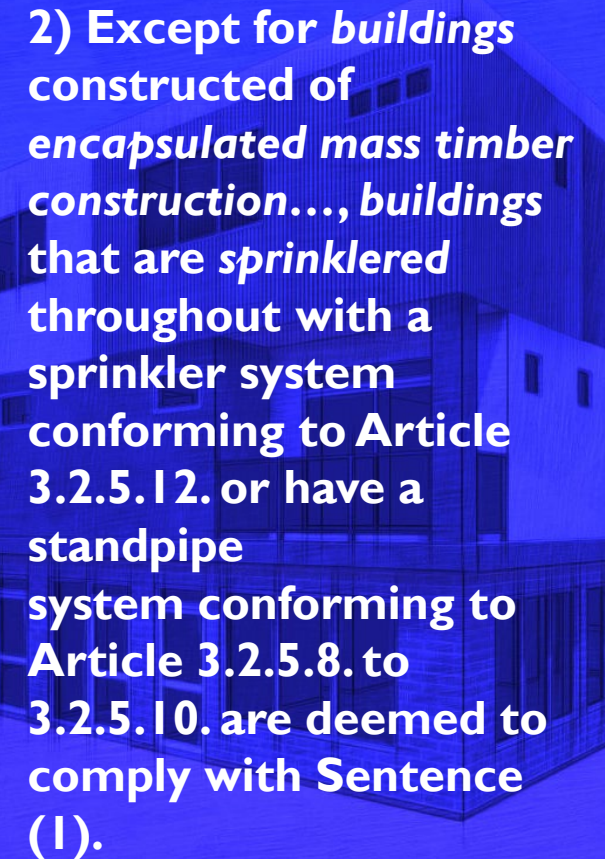
1) Every building shall be provided with an adequate water supply for firefighting.

BCBC 3.2.5.7.

Every building shall have adequate water supply for firefighting

Sprinklered buildings meet the requirement

Buildings with Standpipes meet the requirement

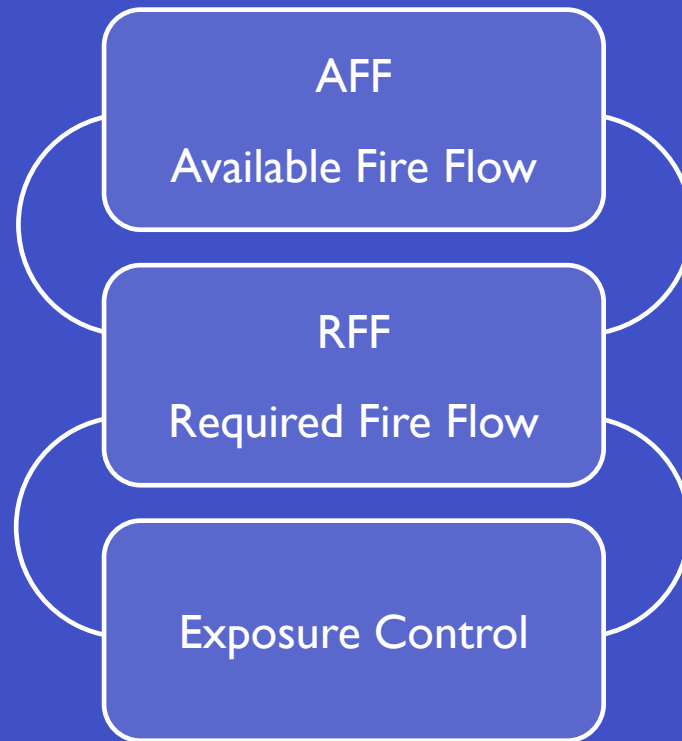


2) Except for buildings constructed of encapsulated mass timber construction..., buildings that are sprinklered throughout with a sprinkler system conforming to Article 3.2.5.12. or have a standpipe system conforming to Article 3.2.5.8. to 3.2.5.10. are deemed to comply with Sentence (1).

WATER SUPPLY



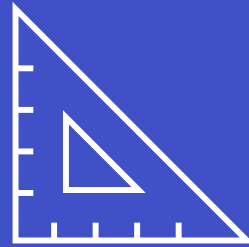
**BCBC 3.2.5.7. &
A-3.2.5.7.(I)**





STANDARDS

BCBC 3.2.5.12.



NFPA 13

Part 9 Buildings classified as:
Group D
Group E
Group F2
Group F3



NFPA 13R

Group C
Up to 3 storeys in building height

Care Occupancies up to 10 residents



NFPA 13D

Group C
Single Family Homes
Duplexes
Non-stacked Multifamily

Care Occupancies up to 2 suites and 5 residents



STANDARDS

NFPA 13D

- Life safety
- No property protection
- 10-minute duration*
- Combustible Piping/Pex
- Sprinkler heads in living areas only**
- No pumps or tanks required
- Well water permitted to supply

NFPA 13R

- Life safety
- Some property protection
- 30-minute duration
- Combustible Piping/Pex
- Pumps or Tanks required



DESIGN

The BC Building Code does not require professional design NFPA 13D and NFPA 13R Sprinkler Systems

(BC Building Code Interpretation Committee June 14, 2022 File no: 18-0189)

2.2.7.1. Application

1) The requirements of this Subsection apply to

a) buildings within the scope of Part 3 of Division B,

b) buildings within the scope of Part 9 of Division B that are designed with common egress systems for the occupants and require the use of firewalls according to Article 1.3.3.4. of Division A, and

c) the following, in respect of buildings within the scope of **Part 9** of Division B other than buildings described in Clause (b),

i) **structural components that are not within the scope of Part 9** of Division B (See Note A-2.2.7.1.(1)(c)(i).),

ii) **geotechnical conditions at building sites that fall outside the scope of Part 9** of Division B,

iii) **sprinkler systems designed to NFPA 13**, “Installation of Sprinkler Systems”, and

iv) **standpipe and hose systems designed to NFPA 14**, “Installation of Standpipe and Hose Systems”.

WATER FLOW

