

Street Hydrants

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1. PURPOSE

The purpose of this guideline is to provide further guidance for building surveyors in determining a building permit application which includes the proposal of a street fire hydrant for the purpose of total or partial coverage to a building.

This guideline also intends to provide a degree of guidance to designers of buildings and structures to ensure they can fulfill their statutory obligations under Section 28 of the *Occupational Health and Safety Act 2004 (OHS Act)*.

2. BACKGROUND

Historically, AS 2419.1-1994 permitted designers to adopt street fire hydrants if the fire hydrant was a dual outlet stand pipe, with each outlet being individually valve controlled and the outlets themselves located between 750mm and 1200mm above the ground.

The majority of street type fire hydrants within the Fire Rescue Victoria (FRV) fire district are of the single-outlet ground ball, pillar or L type variety and therefore the Fire Rescue Commissioner's report and consent was required when these types of hydrants were proposed in an application for building permit. The Regulation 129 report and consent process allows the Fire Rescue Commissioner to assess the building's fire safety design. During the assessment process, consideration is given to the factors associated with utilising firefighting water from a street fire hydrant. These considerations may be directly related to the effectiveness of brigade intervention, firefighter health and safety and appliance protection.

AS 2419.1-2005 fire hydrant installations currently allows external hydrant coverage from single and double street fire hydrants, and therefore the above matters and more may not receive the full consideration they require.

Currently, a Regulation 129 application may not be required and therefore FRV would not necessarily be consulted on the matter.

3. CRITERIA AND CRITERIA ASSESSMENT

Where a building design proposes to adopt street hydrant installations to satisfy the requirements of the Building Code of Australia 2019, there are a number of factors that need to be considered.

3.1. CAN THE USE OF A STREET HYDRANT BE CONSIDERED?

A street hydrant **cannot** be assumed as providing total or partial coverage to a building that is proposed to incorporate, or currently incorporates, a fire brigade booster in a fire hydrant system.

Note: the Fire Rescue Commissioner consent under Building Regulation 129 must be obtained where the above circumstance is proposed or exists (AS 2419.4 S 2.1.1).

3.2. WILL THE STREET HYDRANT PROVIDE FOR EFFECTIVE FIREFIGHTING?

Where street hydrants are proposed to provide partial or total coverage to a building, they must comply with AS 2419.1 for flow, pressure and location. Any proposed variation to the requirements of the applicable parts of these sections must be approved by the Fire Rescue Commissioner under Building Regulation 129 report and consent.

Note: as the use of street hydrants is only allowable where there is a compliant pressure and flow, the hydrant performance must be determined through a test, or through the interpretation of reliable water authority data, prior to any decision on the adequacy of the street hydrant. Building surveyors, designers and building owners alike must be aware of the likelihood of potential future reductions in the mains supply, which could cause non-compliance with the requirements for pressure and flow. The relevant water authority should be consulted for advice on this matter prior to any decision on the adequacy of the system.

3.3. WILL THE STREET HYDRANT PROVIDE A SAFE WORKING ENVIRONMENT FOR FIREFIGHTERS?

As detailed in AS 2419.1, consideration should be given to the location of the street hydrant to enable safe fire brigade access and hose laying. This consideration is separate and additional to the requirements of location under AS 2419.2205 Section 3.2.2.

If the street hydrant is intended to provide total or partial coverage to a building, it is reasonable to expect the hydrant location presents no additional risks normally accepted during firefighting activities.

To determine if the location of a street fire hydrant will provide a safe and risk-free working environment, designers and/or building surveyors should consider the following assessment criteria below. Where consideration of these points yields a **no response**, then the street hydrant location is considered by the Fire Rescue Commissioner to represent an unsafe work site for firefighters:

1. Is the street fire hydrant located in a safe and accessible location to the building?
2. Is the street fire hydrant clearly visible from either side of the road?
3. Is the street fire hydrant in working order?
4. Is the distance between street fire hydrants consistent with FRV *Fire Safety Guideline GL-27 – Planning Guidelines for Emergency Vehicle Access and Minimum Water Supplies within the Metropolitan Fire District*?
5. If more than one street fire hydrant is required to achieve coverage, are those street hydrants connected to a town main having minimum diameter of less than 100mm?
6. Is the street fire hydrant situated on the roadway?
7. Is the street fire hydrant situated where it cannot be obstructed by parked cars?

If, however, the designer or building surveyor believes that the street hydrant and its location represents no greater risk to firefighters than a complying onsite external fire hydrant system, the designer or building surveyor should seek a written opinion from the Fire Rescue Commissioner prior to the design finalisation and/or issue of the building permit.

4. MAINTENANCE AND ONGOING PROVISION

Section 165(4) of the *Water Act 1989* (VIC) details the obligations of councils, water authorities and building owners in respect to providing, installing, marking and maintaining all fire street hydrants. The relevant water authority is responsible for keeping all street hydrants in working order, provide marker and ensure water is available at all times (except in emergencies or water shortages). However, the costs associated with the providing, installing, marking and maintaining can be the responsibility of any of the three parties and is specific to the circumstances under which the street hydrant is provided.

Building surveyors who approve building designs that rely on fire hydrants to achieve the fire hydrant coverage requirements of AS 2419.1-2005 are requested to impose the following conditions on the relevant building permit, occupancy permit or certificate of final inspection documentation.

Street Fire Hydrant Approval Conditions

- As the relevant building surveyor has approved the use of the street fire hydrant to provide coverage to the building, it is the onus of the building owner to verify and document the presence of the street fire hydrant on a six monthly basis for the life of the building.
- If, for any reason, the street fire hydrant becomes unavailable for use in its approved position, the building owner must notify the Fire Rescue Commissioner without delay. The Fire Rescue Commissioner will then determine an alternative means of satisfying the hydrant coverage provisions of AS 2419.1-2005 and checked on a six monthly basis.
- The street fire hydrant must be identified as per the FRV Fire Safety Guideline *GL-29 – The Identification for Street Fire Hydrants for Firefighting Purposes* for the life of the building.

Additionally, the resulting maintenance determinations/schedule should also include a provision to ensure verification of the presence of the street hydrant identification markings occurs on a six monthly basis.

5. REFERENCES AND FURTHER INFORMATION

Building Act 1993

Building Regulations 2018

Designing Safer Buildings and Structures, 1st Edition, December 2005, WorkSafe Victoria

Fire Rescue Victoria Act 1958 (Formerly known as the Metropolitan Fire Brigades Act 1958)

Occupational Health and Safety Act 2004

Standards Australia 1994, System design, installation and commissioning, AS 2419.1, Standards Australia, Sydney

Standards Australia 2005, Fire hydrant installations system design, installation and commissioning, AS 2419.1, Standards Australia, Sydney

Water Act 1989 (VIC)

Note: *this is a controlled document and may only be modified by authorised personnel after review by FRV Fire Safety Advisory Group.*