Issued: April 2020

Authorised: Superintendent Built Environment Branch

ORG 6: Booster Assemblies - Hydrant and Sprinkler

1. Intent

A fire hydrant and/or sprinkler system booster assembly should be positioned where it is immediately identifiable and accessible on arrival to a building for firefighters to augment the system/(s) if required.

2. Operational Requirement

The FES Commissioner requires the following:

i. booster assemblies must always be located at the front, or on approach to the building and be installed as required by National Construction Code (NCC) and applicable Australian standards. E.g. AS 2419.1 for hydrants,
ii. a booster cabinet must be openable by a standard 'booster key',
iii. the preference of DFES is for the hydrant riser in a multi-storey building to be a 'wet' system,
iv. firefighting pumps and water tanks should be connected to the hydrant and sprinkler systems when the onsite firefighting water supply (quantity, flows and pressure) to hydrants and sprinklers does not comply with the applicable Australian standards or as agreed to by DFES,
v. booster assemblies must be within 10m of the proposed appliance hardstand when lay flat hose is required and 4.5m when a storz connection is required for a water tank supply,
vi. the storz connection cannot be the water tank supply connection for a booster assembly in replacement of providing onsite pumps except as allowed for in the deemed to satisfy provisions of the NCC,
vii. hydrant and sprinkler block plans must be installed and up to date at all times.

Consultation with the DFES Built Environment Branch is required for any deviations from the above or if clarification is required.

3. Reason

Where a source of immediate and suitable water supply (quantity, flow and pressure) to effect fire suppression in a building is not provided it will be unsafe for firefighters to enter the building and/or advance within it to where the fire and trapped persons may be located.

DFES firefighters expect an immediate suitable water supply to be available on arrival. The first arriving crew's standard operating procedures do not generally support the additional requirement to immediately boost a system. Redirecting firefighters to that task delays the ability to put water on the fire or commence search and rescue of trapped occupants. If firefighters are required to boost a hydrant or sprinkler system it will cause delays before a suitable water supply is available for firefighting operations. A 'dry' riser

increases the delay and is why a ‘wet’ system is always the preference. Refer to OR 4 for further information.

Should delays result in a fire growing to a size where it may become uncontrollable, additional firefighting resources will be required before safe and effective operations can be performed. Additional resources may not be immediately available, particularly in regional areas.

4. Risk Management

DFES defines risk as: ‘The threat that an event or activity adversely affects our ability to achieve business and operational objectives or the failure to exploit opportunities to maximise stakeholder value.’

In the event of a building fire, there is a *high* risk that the provision of a poorly designed, installed or maintained booster assembly will:

i. allow unnecessary spread of fire through additional fire compartments of a building,
ii. present limitations on the ability of firefighters to access the location of the fire or trapped occupants,
iii. inhibit the ability of occupants to access escape routes,
iv. cause injury and death to occupants and/or firefighters,
v. increase damage to environment and heritage values.

The FES Commissioner’s Operational Requirements are designed to help manage the risk.

5. Resources

Additional DFES booster assembly information for building owners, authorities having jurisdiction and fire safety practitioners is available in DFES technical notes and operational requirement documents:

https://www.dfes.wa.gov.au/regulationandcompliance/buildingplanassessment/pages/publications.aspx

6. References

AS 2419.1 (2005) Fire hydrant installations system design, installation and commissioning, Standards Australia, Strathfield, NSW, Australia.

DFES Enterprise Risk Management Procedure (2018) Version1, Enterprise Risk.

National Construction Code Series (as amended) Volume One Building Code of Australia ‘Class 2 to 9 Buildings’, Australian Building Codes Board, ACT, Australia.