



Australian Government

CPCSFS5009 Create detailed designs for fire systems' water supplies

Release: 1

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Modification History

- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
- Supersedes and is equivalent to CPCSFS5009A Create detailed designs for fire systems' water supplies. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the outcomes required to obtain, process and set up drawings for the detailed design of water supplies for fire systems. The unit also involves assessing and selecting component requirements, setting out the locations of components and creating final notated drawings.

This unit of competency supports the role of fire systems designers with responsibility for creating detailed designs for water supplies for fire systems.

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-requisite Unit

Nil.

Unit Sector

Plumbing and Fire Services

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
1 Confirm water-based fire systems designs.	1.1 Request, receive, name and file relevant project drawings and documentation according to workplace procedures.
	1.2 Confirm details and dimensions and to assess water supply installation risks and constraints.
	1.3 Notate the exact location of fire system components on detailed design drawings according to relevant codes and

- standards.
- 1.4 Name, file and back up the detailed design drawings according to workplace procedures.
 - 2 Calculate pipe sizes and pump and tank requirements.
 - 2.1 Determine the initial fire flow demands for the site based on the occupancy classifications.
 - 2.2 Analyse water flow and pressure test results to establish the minimum levels of available supply in accordance with local jurisdictional requirements.
 - 2.3 Determine and analyse the town main water capabilities for the fire services serving the site to identify if fire pumps and fire tanks are required.
 - 2.4 Consider options for cost-effective and efficient solutions with reference to manufacturer specifications for the performance of components and according to workplace policies.
 - 3 Lay out the water supply design.
 - 3.1 Identify methodologies used in making town main connections.
 - 3.2 Determine and notate the most efficient and workable layout and location of water supply components on the drawings according to workplace procedures.
 - 3.3 Calculate, check and notate dimensions on the drawings according to relevant codes and standards and component manufacturer's recommendations and workplace procedures.
 - 3.4 Determine the locations of backflow prevention devices and their accessibility.
 - 3.5 Review proposed locations of booster connections with local fire authority.
 - 4 Submit drawings for approval and finalise design process.
 - 4.1 Submit water supply design drawings to relevant personnel within the scheduled timeframe.
 - 4.2 Make or negotiate required amendments to design drawings as required.

- 4.3 Process and distribute final approved design drawings according to relevant codes and standards and component manufacturer's recommendations workplace requirements.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCSFS5009A Create detailed designs for fire systems' water supplies.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>