



Australian Government

CPCCSH3002 Fabricate and assemble shopfront structures

Release: 1

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Modification History

Release 1.

This version first released with CPC Construction, Plumbing and Services Training Package Version 2.

Revised unit of competency. Replaces superseded non-equivalent CPCCSH2002A Use aluminium sections for fabrication and CPCCSH3002A Set out and fabricate shopfront commercial entries bulkheads and component fittings.

Application

This unit of competency specifies the outcomes required to set out, fabricate and assemble component parts that form a total shopfront structure, including the commercial frontage and entry and bulkheads. It covers fixing on component fittings. It also covers the use of both computer numerically-controlled (CNC) and static machines to fabricate components; assembling the structure off site to ensure correct fit; and preparing for transport to the shopfitting site, including partial disassembly of large structures.

The unit supports shopfitters who fabricate commercial entries for street fronts, shopping centres, commercial and industrial buildings for both internal and external applications. These tasks may include working with others and as a member of a team.

Licensing, legislative, regulatory or certification requirements apply to this unit of competency in some States. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

Pre-requisite Unit

Nil

Competency Field

Shopfitting

Unit Sector

Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.

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|---|--|-----|---|
| 1 | Undertake on-site measurements. | 1.1 | Job requirements are obtained, confirmed and applied to planning. |
| | | 1.2 | Site drawings are assessed and site is accessed according to client and workplace requirements. |
| | | 1.3 | Datums and gridlines or reference points are located and confirmed using site plans and levelling techniques . |
| | | 1.4 | Surrounding structures and surfaces are checked for plumb, level, line and square. |
| | | 1.5 | Measurements are taken of internal width and height, if applicable, and are recorded. |
| | | 1.6 | Inconsistencies in dimensions, layout or location of structure outside the specified tolerances are noted and reported to appropriate personnel. |
| | | 1.7 | Position of proposed frames and fittings are marked out on surrounding surfaces using non-permanent markers. |
| | | 1.8 | Glazier is notified of site measurements for glass. |
| 2 | Plan and prepare to produce shopfront structure. | 2.1 | Off-site work area is inspected, conditions and hazards are identified and reported as required, and health and safety requirements are confirmed with relevant personnel and applied to planning. |
| | | 2.2 | Detailed working drawings are prepared from design drawings according to workplace procedures. |
| | | 2.3 | Tools and equipment are selected to carry out tasks according to job requirements, checked for serviceability, and faults are rectified or reported before starting work. |
| | | 2.4 | Materials appropriate to the work application are identified, efficient cutting plan and list are prepared, and quantity requirements calculated according to job requirements. |
| | | 2.5 | Materials are obtained, prepared, safely handled and located ready for use. |
| | | 2.6 | Components are set out according to workplace |

procedures.

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|---|--|---|
| 3 | Fabricate components of shopfront structure. | <p>3.1 Static machines are used to produce specified component parts according to job requirements.</p> <p>3.2 CNC machine is programmed to produce specified component parts according to manufacturer specifications.</p> <p>3.3 CNC machine program operations are tested in dry run simulation mode, and alarm settings and program are edited where required using the control station.</p> <p>3.4 Specified work pieces are produced using CNC machine automatic mode according to manufacturer specifications.</p> <p>3.5 Where required, straight or curved lines are cut in small sections of glass according to job specifications.</p> <p>3.6 Components parts are checked for correct measurements and compliance with quality requirements according to workplace procedures.</p> |
| 4 | Assemble components of shopfront structure. | <p>4.1 Appropriate area is selected and material components are laid out for assembly.</p> <p>4.2 Framework is assembled, with overall dimension checked for conformity to location and design, and using appropriate fixings and fasteners.</p> <p>4.3 Frame is checked for square and adjusted where required.</p> <p>4.4 Areas are laminated where required and fittings are fixed to components according to job requirements.</p> |
| 5 | Prepare for transport to work site. | <p>5.1 Shopfront components that are too large for transport to work site or too heavy for safe lifting are disassembled into smaller sections.</p> <p>5.2 Packaging requirements for separate components and sections are identified and arranged.</p> <p>5.3 Components and sections are labelled and placed in</p> |

appropriate area of work site for collection.

- 5.4 Assembly diagram is numbered and located for inclusion in delivery instructions.

6 Clean up.

- 6.1 Waste and unwanted material are disposed of safely.
- 6.2 Unused materials are stored or stacked.
- 6.3 Tools and equipment are cleaned, maintained and stored according to workplace requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Learning skills to:	• apply previous experience of CNC and static machine capabilities and CNC programs when selecting machines and editing programs for new tasks • recognise minor faults and problems with CNC and static machine operation, and select and apply appropriate action.
Numeracy skills to:	• determine efficient cutting strategies to minimise waste.
Oral communication skills to:	• use questioning to identify and confirm job requirements • interact with workplace personnel and contribute to safe and efficient component production.
Reading skills to:	• read and interpret a range of familiar workplace documentation, including job safety analyses (JSA), safe work method statements (SWMS), drawings and specifications.
Writing skills to:	• record site measurements • clearly and legibly mark components to assist with efficient assembly • complete workplace documentation, including equipment fault reports.

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Initiative and enterprise skills to:	• respond to workplace challenges, including short timeframes and material delivery delays, and put ideas into action to overcome issues and meet project schedules.

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Job requirements</i> must include:	• job specifications for setting out, fabricating and assembling shopfront components, including: • material quantity requirements • details of the components to be produced and the production methods to be used • quality requirements for the completed work • timeframe for completion • JSA or SWMS for tasks • workplace procedures incorporating requirements of relevant legislation, regulations, codes and Australian standards • workplace and work site environmental and sustainability requirements, including: • clean-up management • dust and noise management • waste management.
<i>Levelling techniques</i> must include using:	• laser level • spirit level.
<i>Health and safety requirements</i> must include:	• selection, correct fitting, and use of personal protective equipment (PPE) prescribed under legislation, regulations and workplace policies and practices

- emergency procedures, including:
 - evacuation
 - first aid
 - location and use of firefighting equipment
- hazard identification and risk control procedures
- safe operating procedures, including:
 - safety data sheets (SDS)
 - manufacturer specifications
 - manual handling techniques
 - requirements for:
 - lighting
 - work site visitors and the public
 - working in proximity to others
 - selection and use of tools and equipment
- reporting of health and safety issues, hazards, accidents and incidents
- duty of care
- identifying, safe handling, securing and labelling of hazardous materials.

Tools and equipment must include ten or more of the following:

- air compressor and hoses
- chalk lines
- chisels, including cold chisels
- clamps
- grinders
- hammers
- hand saws
- laser levels
- measuring tapes and rules
- power drills
- power leads
- power planers
- routers
- sanders
- sash cramps
- saw stools
- screwdrivers
- set spanners
- squares.

Materials must include:

- aluminium
- glass
- timber
- special finishes.

Setting out of components must include one or more of the following:

- computer generated set-out
- manual set-out
- either full size or rod.

Static machines must include one or more of the following:

- bench grinders
- thicknessers/jointers
- panel saws.

Fixings and fasteners must include three or more of the following:

- bolts and nuts
- screws
- glues
- metal brackets
- self-tapping screws
- silicones
- speciality adhesives and tapes.

Fittings must include one or more of the following:

- closers
- handles
- stops.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCSH3002 Fabricate and assemble shopfront structures

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Performance Evidence

A person who demonstrates competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit, and must fabricate and assemble all components for two commercial shopfronts, each of a minimum size of 4000 by 3600 mm.

The frontage must include the entry, bulkheads and component fittings and must be constructed using the following materials: aluminium, glass timber and at least one special finish.

In doing the above work, the person must:

- comply with health and safety regulations applicable to workplace operations
- apply organisational quality procedures and processes in the context of setting out and fabricating a shopfront
- identify details and specifications of nominated shopfronts to be set out
- accurately apply tools and equipment to set out and mark location of frame material thickness and components
- during a site measure, accurately use measuring devices to read and record dimensions, plumb and level
- from site measurement data, identify inconsistencies in dimensions, plumb and level recorded for notification to appropriate personnel
- identify and select prepared materials for components
- safely and accurately prepare each component for assembly
- select and use appropriate processes, tools and equipment for assembling components
- safely and efficiently use tools and equipment
- safely and efficiently assemble components to form framework for shopfront
- accurately fit component fittings to locations
- complete assembly free of scratches, dents and blemishes
- safely and efficiently disassemble components and fittings, identify for delivery, and include assembling instructions
- identify typical faults and problems that occur and action required to rectify them
- communicate with others to ensure safe and effective workshop operations.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- content of and terms and symbols used in shopfront design drawings
- contents of and terms used in job safety analyses (JSA) and safe work method statements (SWMS) for tasks
- types of aluminium, glass and timber shopfront construction materials and their characteristics
- requirements of Australian standard AS 1288 Glass in buildings
- measuring and levelling processes relating to setting out and checking lineal measurements and levels of surfaces
- measuring and squaring processes relevant to lineal measurements for framework
- organisation's quality assurance requirements relating to fabricating and assembling shopfront structures
- workplace and equipment safety requirements, including safe operating procedures for the use of computer numerically-controlled (CNC) and static machines and tools and equipment.

Assessment Conditions

Suitable assessment of performance requires:

- equipment and tools:
 - as listed in the range of conditions
 - suitable personal protective equipment
- materials:
 - as specified in the performance evidence
- specifications:
 - AS 1288 Glass in buildings
 - job requirements
 - JSA
 - safety data sheets (SDS)
 - SWMS
- physical conditions:
 - manufacturing workshop with CNC and static machines
- relationship with client:
 - liaison with client may be required
- relationships with team members and supervisor:
 - work may be performed as part of a team
- timeframe:
 - according to job requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

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