



Australian Government

Department of Education, Employment and Workplace Relations

CPCCCA3002A Carry out setting out

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to identify site boundaries and survey indicators, and establishing, measuring and setting up profiled set outs for buildings and structural components of building work.

Application of the Unit

Application of the unit This unit of competency supports achievement of skills to set out for a range of construction activities, including the positioning of a building and associated structures on a site, which includes working with others and as a member of a team.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	<p>1.1. Work instructions, including plans, specifications, quality requirements and operational details, are obtained, confirmed and applied from relevant information for planning and preparation.</p> <p>1.2. Safety (OHS) requirements are followed in accordance with safety plans and policies.</p> <p>1.3. Signage and barricade requirements are identified and implemented.</p> <p>1.4. Tools and equipment selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.</p> <p>1.5. Material quantity requirements are calculated in accordance with plans, specifications and quality requirements.</p> <p>1.6. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.</p> <p>1.7. Environmental requirements are identified for the project in accordance with environmental plans and statutory and regulatory authority obligations, and are applied.</p>
2. Identify and indicate site boundaries.	<p>2.1. Survey pegs at corners of site are located and identified in accordance with job drawings, specifications and site topography.</p> <p>2.2. String lines are set accurately into position to identify site boundary markings in accordance with site plan and survey pegs.</p>
3. Set out first line for building alignment.	<p>3.1. Measurements of building line from boundary or existing building are determined from site drawings for setting out.</p> <p>3.2. Approximate position and length of line, plus building clearance measurement at each end, are determined for hurdle location in accordance with site plan and survey pegs.</p> <p>3.3. Pegs and hurdles/profiles are installed approximately level across and between one another with adequate provision to mark footing width on hurdle/profile in accordance with job drawings and specifications.</p> <p>3.4. Location for line is accurately marked with nails on hurdles/profiles and line is set taut into position to</p>

ELEMENT	PERFORMANCE CRITERIA
4. Set out right angled corners.	<p>true alignment with boundary in accordance with job drawings and specifications without error.</p> <p>4.1. Corner of building is determined on set building line to true measurement from adjacent boundary and marked with peg in accordance with job drawings and specifications.</p> <p>4.2. Right angle is set up to line from corner peg using triangulation principles.</p> <p>4.3. Hurdles/profiles are installed to approximate level of other hurdles and line is set taut to right angled alignment.</p>
5. Install other building lines.	<p>5.1. Hurdles for remaining building lines are installed to appropriate locations, approximately level with established hurdles in accordance with job drawings and specifications.</p> <p>5.2. Measurements for remaining building lines are accurately marked and nailed on hurdles to dimensions from site drawings.</p> <p>5.3. String lines are set taut into position to nailed locations on hurdles in accordance with job drawings and specifications.</p>
6. Building lines are checked for square.	<p>6.1. Diagonal measurements are checked for square and lines are adjusted to provide square relationship within 5mm tolerance over minimum diagonal length of 15m.</p> <p>6.2. Measurements are checked for accuracy.</p>
7. Clean up.	<p>7.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.</p> <p>7.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

REQUIRED SKILLS AND KNOWLEDGE

Required skills

Required skills for this unit are:

- communication skills to:
 - determine requirements
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - follow instructions
 - read and interpret:
 - documentation from a variety of sources
 - plans, specifications and drawings
 - report faults
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- numeracy skills to apply measurements and make calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
 - use a range of mobile technology, such as two-way radio and mobile phones
 - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- application and requirements for line, level and plumb in construction projects
- basic construction processes
- basic mathematical techniques associated with setting out
- construction plan, symbols and construction terminology
- construction terminology
- job safety analysis (JSA) and safe work method statements
- processes for interpreting engineering drawings and sketches
- processes for setting out
- project quality requirements
- setting out techniques
- site and equipment safety (OHS) requirements
- site isolation and traffic control responsibilities and authorities
- types, characteristics, technical capabilities and limitations of setting out devices.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan, OHS regulations and state and territory legislation applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools and equipment
- communicate and work effectively and safely with others
- set out a full size L shape building on a relatively level site to specifications.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions
- tools and equipment appropriate to applying

EVIDENCE GUIDE

safe work practices

- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

EVIDENCE GUIDE

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions where specified
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements pertaining to setting out
- relevant Australian standards
- safe work procedures related to setting out
- signage
- verbal or written and graphical instructions

RANGE STATEMENT

<p><i>Planning and preparation</i> include:</p>	<ul style="list-style-type: none"> • work bulletins • work schedules. • work site inspection • equipment defect identification • assessment of conditions and hazards • determination of work requirements.
<p><i>Safety (OHS)</i> is to be in accordance with state or territory legislation, regulations, organisational safety policies and procedures, and project safety plan and may include:</p>	<ul style="list-style-type: none"> • handling of materials • hazard control • hazardous materials and substances • safe operating procedures, including the conduct of operational risk assessment and treatments associated with: <ul style="list-style-type: none"> • earth leakage boxes • lighting • power cables, including overhead service trays, cables and conduits • restricted access barriers • surrounding structures • traffic control • trip hazards • work site visitors and the public • working at heights • working in confined spaces • working in proximity to others • working with dangerous materials • organisational first aid • personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices • use of firefighting equipment • use of tools and equipment • workplace environment and safety.
<p><i>Materials</i> include:</p>	<ul style="list-style-type: none"> • nails • pegs • timber.
<p><i>Environmental requirements</i> include:</p>	<ul style="list-style-type: none"> • clean-up protection • noise and dust • waste management.
<p><i>Site topography</i> includes:</p>	<ul style="list-style-type: none"> • flat • sloping

RANGE STATEMENT

- Site boundary markings* include:
- steep.
 - building built on line
 - fence built on line
 - survey pegs.
- Setting out* includes:
- footings, including:
 - pad
 - posts
 - slab
 - strip
 - stumps
 - residential buildings, commercial buildings and other structures.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area