



Australian Government

Department of Education, Employment and Workplace Relations

CPCCCM2001A Read and interpret plans and specifications

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to read and interpret plans and specifications relevant to construction operations. It includes the identification of types of plans and drawings and their functions, the recognition of commonly used symbols and abbreviations, the identification of key features and specifications on a site plan, the comprehension of written job specifications and the recognition of document status and amendment detail.

Application of the Unit

Application of the unit This unit of competency supports achievement of basic reading and interpretation of plans and specifications commonly used in the construction industry.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

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. Identify types of drawings and their functions. | <p>1.1. Main types of <i>plans and drawings</i> used in the construction sector of the industry are identified.</p> <p>1.2. <i>Key features</i> and functions of each type of drawing are identified.</p> <p>1.3. <i>Quality requirements</i> of company operations are recognised and adhered to.</p> <p>1.4. <i>Environmental requirements</i> and controls are identified from job plans, specifications and environmental plan.</p> |
| 2. Recognise amendments. | <p>2.1. Title panel of <i>project documentation</i> is checked to verify latest amendments to drawing.</p> <p>2.2. Amendments to <i>specifications</i> are checked to ensure currency of <i>information</i> and conveyed to others where appropriate.</p> |
| 3. Recognise commonly used symbols and abbreviations. | <p>3.1. Construction symbols and abbreviations are recognised.</p> <p>3.2. Legend is located on project drawings, and symbols and abbreviations are correctly interpreted.</p> |
| 4. Locate and identify key features on a site plan. | <p>4.1. Orientation of the plan with the site is achieved.</p> <p>4.2. Key features of the site are identified and located.</p> <p>4.3. Access to site is gained and services, main features, contours and datum are identified.</p> |
| 5. Identify project requirements. | <p>5.1. Dimensions for project and nominated locations are identified.</p> <p>5.2. Construction types and dimensions for nominated locations are identified.</p> <p>5.3. Environmental controls and locations are identified.</p> <p>5.4. Location, dimensions and tolerances for ancillary works are identified.</p> |
| 6. Read and interpret job specifications. | <p>6.1. Job specifications are identified from drawings, notes and descriptions.</p> <p>6.2. Standards of work, finishes and tolerances are identified from the project specifications.</p> <p>6.3. <i>Material attributes</i> are identified from specifications.</p> |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills for this unit are:

- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret:
 - documentation from a variety of sources
 - drawings and specifications
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication, such as hand signals
- identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials
- numeracy skills to apply measurements and make calculations, including heights, areas, volumes and grades
- 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:

- basic calculations of heights, areas, volumes and grades
- commonly used construction symbols and abbreviations
- construction terminology
- drawing conventions
- features of plans and elevations, including direction, scale, key, contours, symbols and abbreviations
- job safety analysis (JSA) and safe work method statements
- key features of formal job specifications
- processes for application of scales in plan preparation and interpretation
- project quality requirements
- site and equipment safety (OHS) requirements
- techniques for orienting/confirming the orientation of a plan.

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
- communicate and work effectively and safely with others
- for a minimum of two different projects, read and interpret the project plans, including:
 - confirmation of amendment status and drawings confirmed 'for construction'
 - orientation of plans to the ground
 - six key features on both the plan and the site
 - confirmation of six items of information from the title block of the project plans
 - six construction dimensions, levels and locations from the project plans
 - six ancillary works dimensions, levels and locations from the project plans
- for a minimum of two formal specifications, identify the dimensions, material requirements and processes to be followed.

Context of and specific resources for assessment

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

EVIDENCE GUIDE

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 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:

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- 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
- 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.

Plans and drawings include:

- construction plans
- cross-sectional plans
- dimensions and notes
- illustrations
- longitudinal plans

RANGE STATEMENT

| | |
|---|--|
| | <ul style="list-style-type: none">• project specifications• site plans• structural detail and specification providing illustrations and dimensions. |
| <i>Key features</i> of plans and specifications include: | <ul style="list-style-type: none">• characteristics• compatibility• construction• location• pattern dimension• quantities• sizes• type of product or service. |
| <i>Quality requirements</i> include relevant regulations, including: | <ul style="list-style-type: none">• Australian standards• internal company quality policy and standards• manufacturer specifications, where specified• workplace operations and procedures. |
| <i>Environmental requirements</i> include: | <ul style="list-style-type: none">• clean-up management• waste management. |
| <i>Project documentation</i> includes: | <ul style="list-style-type: none">• contracts• drawings• schedule of rates• specifications• standard procedures and practices• supplementary specifications• work schedules. |
| <i>Specifications</i> include: | <ul style="list-style-type: none">• detail relating to materials and quality of work, quality assurance, nominated subcontractors, and provision of site access/facilities• details relating to performance, including:<ul style="list-style-type: none">• characteristics• material types• standards of work• tolerances• treatments and finishes. |
| <i>Information</i> includes: | <ul style="list-style-type: none">• diagrams or sketches and graphics• instructions issued by authorised organisational or external personnel• manufacturer specifications and instructions• maps |

RANGE STATEMENT

- material safety data sheets (MSDS)
 - memos
 - organisation work specifications and requirements.
 - plans and specifications
 - regulatory and legislative requirements pertaining to operations and the environment
 - relevant Australian standards
 - safe work procedures related to construction site operations
 - signage
 - verbal or written and graphical instructions
 - work bulletins
 - work schedules.
- Material attributes* include:
- characteristics
 - construction requirements
 - treatments and finishes
 - types.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area