



Australian Government

Department of Education, Employment and Workplace Relations

FPICOT3218B Quote and interpret from manufactured timber product plans

Release: 1

FPICOT3218B Quote and interpret from manufactured timber product plans

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to manually prepare quotations, interpret plans and layouts and detail tasks and materials for simple trusses and/or frames and/or floors

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPICOT3218A Quote and interpret from manufactured timber product plans

Application of the Unit

Application of the unit

The unit involves quoting and interpreting from manufactured timber product plans in a timber and wood products production setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

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. Interpret plans and loading conditions	<p>1.1. Applicable <i>Occupational Health and Safety (OHS)</i>, environmental, <i>legislative</i> and <i>organisational requirements</i> relevant to the manual preparation of quotes for simple <i>trusses</i> and/or frames and/or floors are identified and followed</p> <p>1.2. Plans and <i>work requirements</i> are identified, interpreted and <i>assessed</i></p> <p>1.3. Drawing views and notes are interpreted and other design requirements and restrictions are identified and followed</p> <p>1.4. Additional information and data is obtained from <i>appropriate personnel</i> and <i>other sources</i></p> <p>1.5. Functional and pictorial images of structure, simple trusses and/or frames and/or floors are created based on work requirements</p> <p>1.6. <i>Communication</i> with others is established and maintained in line with OHS and organisational requirements</p>
2. Undertake manual quote of roof and floor trusses	<p>2.1. Roof truss types are selected to meet work requirements and common industry spacings of trusses and their components are imposed on the plan to define structure</p> <p>2.2. <i>Layouts</i>, spacing and sizing of individual structural members are progressively determined in line with work requirements</p> <p>2.3. Quantities for bracing and ancillaries for roof trusses are <i>calculated</i> and documented</p> <p>2.4. <i>Floor truss information</i> and details are interpreted from plan documentation</p> <p>2.5. Appropriate floor trusses are selected from the range of certified standard designs</p> <p>2.6. Quotation for roof and floor trusses is prepared, checked and recorded in line with workplace procedures</p>
3. Undertake manual detailing of roof and floor trusses	<p>3.1. <i>Design details</i> are reviewed and revised without compromising truss or structure strength</p> <p>3.2. Structure layout drawings and truss <i>assembly drawings</i> are produced in line with work</p>

ELEMENT**PERFORMANCE CRITERIA**

- requirements and manufacturing requirements
- 3.3. Component cutting detail is produced in line with manufacturing requirements and schedules
- 3.4. Design records are reviewed for design integrity, completeness and consistency in line with workplace and applicable certifying authority standards
- 3.5. Roof and floor truss *installation package* is assembled in line with workplace procedures and *industry standards*
4. Undertake manual quote and detailing of wall frames
- 4.1. Lengths of wall frames are measured from plans and dimensions calculated appropriate to timber sizes
- 4.2. Quotation for wall frames including costing per unit length is prepared, checked and recorded in line with workplace procedures
- 4.3. Timber type and species for wall frames is selected appropriate to *material* availability and work requirements
- 4.4. Design of wall frames for fabrication is calculated from plans and specifications, and assembly drawings are produced in line with work order and manufacturing requirements
- 4.5. Component cutting detail is produced in line with manufacturing requirements and schedules
- 4.6. Design records are reviewed for design integrity, completeness and consistency in line with workplace and applicable certifying authority standards
- 4.7. Wall frames installation package is assembled in line with workplace procedures and industry standards
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Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- The ability to comply with applicable legislation, regulations, standards, codes of practice and established safe practices and procedures for quoting and interpreting from manufactured timber product plans
- Technical skills sufficient to locate, interpret and apply relevant information and specifications in written, diagrammatic and/or verbal form; to produce realistic quotes and practical designs suitable for manufacture, and to safely quote and detail trusses and frames using manual methods
- Communication skills sufficient to use appropriate communication and interpersonal techniques with colleagues and others; to accurately record and report workplace information and maintain documentation
- Literacy skills sufficient to interpret and apply common industry terminology and convey information in written, sketch and/or verbal form
- Numeracy skills sufficient to select appropriate mathematical processes to calculate dimensions and measure lengths and spans
- Problem solving skills sufficient to identify problems and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for quoting and interpreting from manufactured timber product plans
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for quoting and interpreting from manufactured timber product plans
- Applications of building and structural regulations and site policies and procedures
- Procedures for preparing design, detailing and quotations for trusses and/or frames and/or floors
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment relevant to quoting and interpreting from manufactured timber product plans, and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- Appropriate mathematical procedures for the use of scientific calculators, scale rules and tables; and for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

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

A person who demonstrates competency in this unit must be able to provide evidence that they can accurately interpret plans to accurately quote and detail trusses and/or frames and/or floors using manual methods in line with industry and organisational requirements

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

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to quoting and interpreting from manufactured timber product plans
- following organisational policies and procedures relevant to quoting and interpreting from manufactured timber product plans
- applying effective communication techniques and safe work practices in the work area
- interpreting plans, specifications and loading conditions
- quoting and detailing trusses and/or frames and/or floors
- producing realistic estimates and practical designs suitable for manufacture
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to quoting

Context of and specific resources for assessment

EVIDENCE GUIDE

and interpreting from timber manufactured product plans

Method of assessment

- specifications and work instructions
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge
- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

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

RANGE STATEMENT

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.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- manual handling including shifting, lifting and carrying

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures

RANGE STATEMENT

- ethical standards
 - recording and reporting requirements
 - equipment use and maintenance and storage requirements
 - environmental management requirements including waste disposal, recycling and re-use guidelines
- Trusses** may include
- roof trusses
 - floor trusses
- Work requirements** may include:
- loading requirements
 - applicable codes
 - common industry practices
 - specific customer preferences
 - transport regulations
 - fabricating limitations
- Assessment** may include assessment of:
- concentrated loads and externally applied loads (wind, surround structures, common or special building usage)
 - requirements for columns, beams and lintels
 - dimensions defining geometry and loading of individual trusses and frames
- Appropriate personnel** may include:
- supervisors
 - clients
 - colleagues
 - line management
 - software support engineers
- Other sources** may include:
- suppliers
 - manufacturers
 - architect
 - builder
 - local council
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to

RANGE STATEMENT

- individual social and cultural differences
- control of tone of voice and body language
- of roof trusses are carried out manually (tables and scientific calculator)
- Layouts**
- Calculations** may include:
 - quantities of timber for trusses and/or frames and/or floors
 - quantities of ancillaries and bracing
 - costing of materials and labour
- Floor truss information** may include:
 - span
 - spacing
 - cantilever
 - floor loading
 - end support
- Design details** may include:
 - timber component species
 - type
 - cross-section
 - grade
 - length and cutting angles
 - nail plate and other joining hardware sizes
 - marking requirements
- Assemblies** quoted and detailed may be:
 - wooden roof and floor trusses and wall frames and beams for solid brick, brick veneer and timber frame domestic houses and light commercial structures, structural and non structural
- Assembly drawing**
 - details for truss and frame may include design assumptions regarding supporting and tying components
- Installation packages** may include:
 - roof and floor truss assembly drawings, design information, site and certifying authority standards
 - wall frame assembly drawings, design information, installation information guides
- Industry standards** may include:
 - Australian standards
 - international standards
 - nail plate provider standards
- Material** may include:
 - timber of available species and solid or laminated types
- may include timber of available species and solid or laminated types

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical