



Australian Government

MEM09203 Measure and sketch site information

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM09203A Measure and sketch site information.

Application

This unit of competency defines the skills and knowledge required to take measurements and collect and record all relevant information from a site to direct drafting work.

This unit is suitable for those working within a computer-aided design (CAD) or drafting work environment and includes preparation of a freehand sketch that details a range of relevant information to be used in detailed drawings or design work. It also covers taking accurate measurements using a compass and straight edge and applying geometric construction methods.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Drawing, drafting and design

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications
2. Prepare for site visit	2.1 Verify and comply with work, legislative and organisational requirements relevant to conducting site visits 2.2 Confirm project brief and visit objectives

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	2.3 Arrange site visit in accordance with SOPs 2.4 Prepare measuring equipment and materials
3. Assess and record site features	3.1 Record details of a visual assessment of physical position, layout, access and location and establish site references 3.2 Record visual assessment of site structure and materials 3.3 Record visual assessment of services 3.4 Record observation of other details that may impact on project 3.5 Obtain any relevant site information or documentation
4. Take site measurements	4.1 Measure site features required by project brief 4.2 Ensure required measurements are obtained and verified with calculations 4.3 Access and use work information, technology and resources to complete work 4.4 Minimise impact of work on the environment
5. Produce sketch of site	5.1 Produce sketch to proportion 5.2 Apply correct sketching techniques and line construction to the sketch 5.3 Apply all dimensions and notations
6. Apply geometric construction methods	6.1 Sketch geometric shapes using correct construction techniques 6.2 Obtain tangent points using correct techniques 6.3 Apply line work using line types and media in accordance with standard industry drawing practice
7. Document site details	7.1 Complete isometric sketches that illustrate site details 7.2 Gather and document additional site information to inform further work 7.3 Use correct symbols and standard drawing conventions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Range of Conditions

This field allows for different 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.

Specifications include one or more of the following:	• job sheets • work instructions.
Required materials and equipment include one or more of the following:	• measuring equipment • camera • drawing paper, pencils and eraser • compass • straight edge • chalk • string.
Calculations include one or more of the following:	• area • perimeter • volume • mass • scales and ratios (ingredients/elements and triangulation) and addition • subtraction • multiplication and division processes.
Other details include one or more of the following:	• vegetation • surrounding objects or structures • access for vehicles • any other conditions which may impact on the project.
Standard drawing conventions include:	• use of correct dimensioning technique • accurate line types Plus one or more of the following: • use of correct sectioning technique • identification of cutting plane • appropriate view positions • use of correct symbols • provision of suitable number of views

	• use of correct scales • neat presentation.
Drawing techniques include one or more of the following main points:	• orthogonal projection: • first angle projection • third angle projection • projection symbol • preferred system of projection in Australia • number of views • relationship of views • pictorial sketching: • isometric • orthogonal (cabinet and cavalier) • pictorial • sheet format: • borders and title blocks • application of projection symbol • drawing sheets and sizes • lettering styles • Australian Standards • dimensioning: • unidirectional dimensioning • aligned dimensioning • projection and dimension lines • arrow heads • dimension placement • sectioning: • types of sections • required section views • placement of views • cutting planes • labelling of cutting planes and section views.
Drawing constructions include one or more of the following:	• isometric axes • isometric angles • isometric lines • non-isometric lines • isometric circles: • four centre method • ordinate method • sectioning isometric shapes.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM09203A Measure and sketch site information.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>