INTERPRET AND DRAW SIMPLE WORKING DRAWINGS

UNIT CODE: CON/OS/MA/CC/02/4/A

UNIT DESCRIPTION

This unit deals with competencies required to interpret and draw simple working drawings. It entails interpreting working drawings, using drawing instruments, supplies and materials, applying isometric drawings and applying different types of scales

This standard applies in the Construction Industry.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function.	**PERFORMANCE CRITERIA** These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range***
1. Interpret working drawings	1.1 ***Working drawings*** are identified based on type**.** 1.2 Scale of the drawing is read based on the drawing. 1.3 Measurements are converted based on best practice. 1.4 Symbols are identified based on technical drawings standards.
2.Use drawing instruments, supplies and materials	2.1 ***Drawing instrumentsand supplies*** are identified and gathered based on job requirements. 2.2 Drawing instruments are used and maintained as per manufacturer's instructions. 2.3 Supplies and materials are used as per workplace policy. 2.4 Waste is disposed in due regard to environmental protection and conservation. 2.5 ***Personal Protective Equipment*** is used in line with occupational safety and health regulations.
3.Apply isometric drawings	3.1 ***Types of isometric drawings*** are identified based on international standards. 3.2 objects are in isometric as per the international standards 3.3 Principles of isometric drawing are applied in construction working drawings as per the international standards

4. Apply different types of scales	4.1 ***Scaled measurements*** are interpreted in accordance with international standards. 4.2 ***Scales*** are used in drawing simple details and drawings as per the interprated scale measurement 4.3 ***Measurements*** are transferred to the ground according to the working drawings.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	**Range**
1. Working drawings May include but not limited to:	• Architectural drawings • Structural drawings • Orthographic drawings • Schematic drawings • Isometric projections • Sectional drawings • Mechanical drawings • Scaffolding and shoring plans • Formwork drawings and details • Stone dressing details drawings • Finishing detail drawings • Electrical drawings
2. Personal Protective Equipment May include but not limited to:	• Hard hat / helmet • Dust Mask • Dust coat / coverall • Gloves • Safety boots • Gum boots • Reflector jackets

2. Symbols May include but not limited to:	• Architectural symbols • Piping / plumbing symbols • Electrical symbols • Mechanical symbols • Steelworks details symbols • Scaled measurements symbols • Site development symbols
3. Measurements May include but not limited to:	• Linear • Square-ness • Slope/gradient • Depth • Width • Level-ness
4.Scaled measurements May include but not limited to:	• Reducing scales • Enlarging scales
5.Drawing tools and instruments May include but not limited to:	• Drawing boards • T square • Set square • Blueprinting machine • Steel rule • Lettering stencil • Scale rule • Desktop computer • Printer • scanner • plotter
6. Drawing supplies and materials May include but not limited to:	• Drawing papers • Drawing pencils • Drawing sets • Masking tape • clips • Working drawing
7. Types of isometric drawings May include but not limited to:	• Cube • Cuboid • spherical

	• Cylindrical • Conical

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills:

The individual needs to demonstrate the following skills:

- Numeracy
- Drawing and sketching
- Visualizing
- Critical thinking
- Interpreting
- Tool handling
- Communication
- Inter personal
- Reading
- Analytical
- Measuring
- Team work
- Time management

Required knowledge:

The individual needs to demonstrate knowledge of:

- Working drawings
- Terms and symbols used in working drawings
- Types of lines used in working drawings.
- Common units of measurements,
- Taking measurements
- Conversion of units of measurement.
- Tools and materials for production a working drawing
- Developing a working drawing
- Interpretation of working drawings

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical aspects of competency	Assessment requires evidence that the candidate: 1.1 Demonstrated interpretation of the working drawings correctly. 1.2 Identified symbols of working drawings correctly 1.4 Identified types of working drawings in a construction site appropriately. 1.5 Identified types of isometric drawings correctly 1.6 Drew various objects in isometric correctly 1.7 Applied principles of isometric drawing appropriately 1.8 Interpreted scaled measurements correctly 1.9 drew simple details of a working drawing to scales accurately 1.10 Transferred measurements on the working drawings to the ground correctly.
2. Resource implications for competence certification	The following resources must be provided: 2.1Workplace location 2.2 Tools, and equipment for production of working drawings 2.3 Materials relevant production of working drawings. 2.4 A complete set of construction working drawings
3. Methods of Assessment	Competency may be assessed through: 3.1 Observation 3.2 Oral Questions 3.3 Third party report 3.4 Oral interview 3.5 project 3.6 Written tests 3.7 portfolio
4. Context for Assessment	Competency may be assessed through: 4.1 On – the –job 4.2 Off-the –job 4.3 During work placement setting
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended