

No. 708

11 June 2004

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Building Construction

Registered by NSB 12, Physical Planning and Construction, publishes the following unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the unit standards upon which qualifications are based. The full unit standards can be accessed via the SAQA web-site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, Hatfield Forum West, 1067 Arcadia Street, Hatfield.

Comment on the unit standards should reach SAQA at the address ***below and no later than 13 July 2004***. All correspondence should be marked **Standards Setting – SGB Building Construction** and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. D Mphuthing
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JOE SAMUELS

Director: Standards Setting and Development



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

1

Develop a business vision and strategy

SAQA US ID	UNIT STANDARD TITLE		
115446	Develop a business vision and strategy		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	20

Specific Outcomes:**SPECIFIC OUTCOME 1**

Identify and analyse factors contributing to business purpose, direction and values.

SPECIFIC OUTCOME 2

Develop the vision and strategy.

SPECIFIC OUTCOME 3

Develop implementation plan.

SPECIFIC OUTCOME 4

Communicate and promote vision and strategy.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

2

Interpret and implement contracts

SAQA US ID	UNIT STANDARD TITLE		
115445	Interpret and implement contracts		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	7

Specific Outcomes:**SPECIFIC OUTCOME 1**

Understand and apply the Law of Contract.

SPECIFIC OUTCOME 2

Understand and apply the General Conditions of Contract.

SPECIFIC OUTCOME 3

Interpret and apply standardized and project specifications.

SPECIFIC OUTCOME 4

Interpret and apply tender and construction drawings.

SPECIFIC OUTCOME 5

Handle claims and disputes.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

3

Manage construction organizational assets

SAQA US ID	UNIT STANDARD TITLE		
115444	Manage construction organizational assets		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	5

Specific Outcomes:**SPECIFIC OUTCOME 1**

Identify and maintain an asset database.

SPECIFIC OUTCOME 2

Identify and implement maintenance requirements.

SPECIFIC OUTCOME 3

Review alternative asset and technology availability.

SPECIFIC OUTCOME 4

Control assets.

SPECIFIC OUTCOME 5

Monitor and evaluate asset usage.

SPECIFIC OUTCOME 6

Evaluate asset management in terms of organizational strategy.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

4

Manage construction projects

SAQA US ID	UNIT STANDARD TITLE		
115449	Manage construction projects		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	12

Specific Outcomes:**SPECIFIC OUTCOME 1**

Manage Resources on construction projects.

SPECIFIC OUTCOME 2

Manage Occupational Health and Safety on construction projects.

SPECIFIC OUTCOME 3

Manage Quality on construction projects.

SPECIFIC OUTCOME 4

Manage Construction Project Risks.

SPECIFIC OUTCOME 5

Manage Financial Aspects of Construction Projects.

SPECIFIC OUTCOME 6

Manage environmental aspects of construction projects.

SPECIFIC OUTCOME 7

Manage productivity on construction projects.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

5

Measure construction quantities

SAQA US ID	UNIT STANDARD TITLE		
115443	Measure construction quantities		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	16

Specific Outcomes:**SPECIFIC OUTCOME 1**

Interpret the project documentation with reference to quantities.

SPECIFIC OUTCOME 2

Demonstrate an understanding of the principles of measuring building and civil works.

SPECIFIC OUTCOME 3

Undertake the measurement of construction projects.

SPECIFIC OUTCOME 4

Prepare interim certificates and final account.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

6

Understand and apply Civil Engineering construction technology

SAQA US ID	UNIT STANDARD TITLE		
115454	Understand and apply Civil Engineering construction technology		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	30

Specific Outcomes:

SPECIFIC OUTCOME 1

Demonstrate an understanding of and apply civil engineering construction materials.

SPECIFIC OUTCOME 2

Demonstrate an understanding of civil engineering construction processes.

SPECIFIC OUTCOME 3

Understand and apply finishing processes and elements.

SPECIFIC OUTCOME 4

Demonstrate an understanding of civil engineering construction maintenance processes.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

7

Understand and apply building construction technology

SAQA US ID	UNIT STANDARD TITLE		
115442	Understand and apply building construction technology		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	20

Specific Outcomes:**SPECIFIC OUTCOME 1**

Demonstrate an understanding of the building construction process and associated technologies.

SPECIFIC OUTCOME 2

Understand and apply building sub-structure principles and methods.

SPECIFIC OUTCOME 3

Understand and apply building materials technology.

SPECIFIC OUTCOME 4

Understand and apply building super-structure principles and methods.

SPECIFIC OUTCOME 5

Understand and apply finishing processes and elements.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

8

Understand and apply electrical construction technology

SAQA US ID	UNIT STANDARD TITLE		
115456	Understand and apply electrical construction technology		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	30

Specific Outcomes:**SPECIFIC OUTCOME 1**

Demonstrate an understanding of electrical engineering processes and associated technologies.

SPECIFIC OUTCOME 2

Understand and apply electrical installation principles and methods.

SPECIFIC OUTCOME 3

Understand and apply electrical and electronic systems material technology.

SPECIFIC OUTCOME 4

Understand and interpret electrical, electronic and communication drawings and specifications.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

9

Understand and apply mathematical systems for commercial applications

SAQA US ID	UNIT STANDARD TITLE		
115453	Understand and apply mathematical systems for commercial applications		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	18

Specific Outcomes:**SPECIFIC OUTCOME 1**

Understand and apply linear algebra.

SPECIFIC OUTCOME 2

Understand and apply linear programming.

SPECIFIC OUTCOME 3

Understand and perform financial calculations.

SPECIFIC OUTCOME 4

Understand and apply differential calculus.

SPECIFIC OUTCOME 5

Understand and apply integral calculus.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

10

Understand and apply mechanical construction technology

SAQA US ID	UNIT STANDARD TITLE		
115447	Understand and apply mechanical construction technology		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	30

Specific Outcomes:

SPECIFIC OUTCOME 1

Demonstrate an understanding of mechanical engineering construction processes.

SPECIFIC OUTCOME 2

Understand and apply mechanical installation principles and methods.

SPECIFIC OUTCOME 3

Understand and apply mechanical systems material technology.

SPECIFIC OUTCOME 4

Understand and interpret mechanical drawings and specifications.

SPECIFIC OUTCOME 5

Understand and apply maintenance requirements.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

11

Understand and apply statistical techniques for business and research applications

SAQA US ID	UNIT STANDARD TITLE		
115448	Understand and apply statistical techniques for business and research applications		
SGB NAME		ABET BAND	PROVIDER NAME
SGB Building Construction		Undefined	
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 6	18

Specific Outcomes:**SPECIFIC OUTCOME 1**

Demonstrate an understanding of the organisation and presentation of data.

SPECIFIC OUTCOME 2

Understand and utilise probability theory and probability distributions.

SPECIFIC OUTCOME 3

Understand and apply statistical inference techniques.

SPECIFIC OUTCOME 4

Understand and apply correlation and regression analysis.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

12

Demonstrate an understanding of the management of construction projects in an international environment

SAQA US ID	UNIT STANDARD TITLE		
115451	Demonstrate an understanding of the management of construction projects in an international environment		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 7	15

Specific Outcomes:**SPECIFIC OUTCOME 1**

Demonstrate an understanding of the legal requirements for operation in an international environment

SPECIFIC OUTCOME 2

Demonstrate an understanding of the requirements to register and establish trading entity.

SPECIFIC OUTCOME 3

Demonstrate an understanding of the financial aspects of construction projects.

SPECIFIC OUTCOME 4

Demonstrate an understanding of the logistics of construction projects.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

13

Understand and apply Tunnelling technology and limited Mining operations techniques

SAQA US ID	UNIT STANDARD TITLE		
115452	Understand and apply Tunnelling technology and limited Mining operations techniques		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 7	20

Specific Outcomes:**SPECIFIC OUTCOME 1**

Demonstrate an understanding of and apply Tunnelling, and limited Mining operations.

SPECIFIC OUTCOME 2

Demonstrate an understanding of Tunnelling and limited Mining operation and associated technologies.

SPECIFIC OUTCOME 3

Understand and apply safety measures during Tunnelling and limited mining operations.

SPECIFIC OUTCOME 4

Demonstrate an understanding of tunnelling and limited mining operation maintenance.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

14

Understand and apply property development principles

SAQA US ID	UNIT STANDARD TITLE		
115455	Understand and apply property development principles		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 7	9

Specific Outcomes:

SPECIFIC OUTCOME 1

Demonstrate an understanding of the factors that impact on real estate development.

SPECIFIC OUTCOME 2

Demonstrate an understanding of the real estate development process.

SPECIFIC OUTCOME 3

Undertake a financial viability analysis for a real estate.

SPECIFIC OUTCOME 4

Produce and present a viability report for a real estate development.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

15

Understand and integrate construction project management principles

SAQA US ID	UNIT STANDARD TITLE		
115450	Understand and integrate construction project management principles		
SGB NAME	ABET BAND	PROVIDER NAME	
SGB Building Construction	Undefined		
FIELD DESCRIPTION		SUBFIELD DESCRIPTION	
Physical Planning and Construction		Physical Planning, Design and Management	
UNIT STANDARD CODE	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
PPC-PPD-0-SGB BC	Regular	Level 7	20

Specific Outcomes:**SPECIFIC OUTCOME 1**

Understand the principles of project management in relation to construction project management.

SPECIFIC OUTCOME 2

Receive construction project parameters from client.

SPECIFIC OUTCOME 3

Establish the project team.

SPECIFIC OUTCOME 4

Manage the implementation of the feasibility stage of a project.

SPECIFIC OUTCOME 5

Manage the execution of the design of a project.

SPECIFIC OUTCOME 6

Manage the planning and scheduling of multi-disciplinary project activities.

SPECIFIC OUTCOME 7

Manage the implementation of the construction phase.

SPECIFIC OUTCOME 8

Execute project close out.

SPECIFIC OUTCOME 9

Analyse and review project phases.

Specifications, agreements and policies and procedures: South African Bureau of Standards Specifications as applicable.

UNIT STANDARDS

(Note: A blank space after this line means that the qualification is not based on Unit Standards.)

	UNIT STANDARD ID AND TITLE	LEVEL	CREDITS	STATUS
Core	14426 Read, interpret and use construction drawings and specifications	Level 4	10	Registered
Core	14473 Develop and produce computer aided drawings	Level 4	4	Registered
Core	15136 Manage health and safety on a construction project	Level 5	6	Registered
Core	15137 Apply contract documentation	Level 5	10	Registered
Core	15138 Understand and apply structural principles	Level 5	7	Registered
Core	15139 Manage productivity on a construction project	Level 5	12	Registered
Core	15141 Manage construction resources	Level 5	10	Registered
Core	15142 Establish and maintain relationships with construction role players	Level 5	5	Registered
Core	15143 Manage human resources on a construction project	Level 5	7	Registered
Core	15144 Develop and manage quality systems and procedures on a construction project	Level 5	12	Registered
Core	15145 Prepare for a construction project	Level 5	15	Registered
Core	15146 Manage construction project administration	Level 5	8	Registered
Core	15147 Tender for construction projects	Level 5	12	Registered
Core	15148 Manage financial aspects of a construction project	Level 5	8	Registered
Core	15149 Survey and set out construction work areas	Level 5	15	Registered
Core	15161 Initiate testing and interpret test/lab results in civil construction	Level 5	4	Registered
Core	15162 Manage labour intensive construction projects	Level 5	8	Registered
Core	114656 Manage environment initiatives on a construction project	Level 6	6	Draft - Prep for P Comment
Core	115196 Establish, implement and control procurement processes	Level 6	12	Draft - Prep for P Comment
Core	115199 Administer construction projects	Level 6	5	Draft - Prep for P Comment
Core	115443 Measure construction quantities	Level 6	16	Draft - Prep for P Comment
Core	115444 Manage construction organizational assets	Level 6	5	Draft - Prep for P Comment
Core	115445 Interpret and implement contracts	Level 6	7	Draft - Prep for P Comment
Core	115449 Manage construction projects	Level 6	12	Draft - Prep for P Comment
Elective	12996 Record, analyse and prepare cost information	Level 5	10	Registered
Elective	115442 Understand and apply building construction technology	Level 6	20	Draft - Prep for P Comment
Elective	115446 Develop a business vision and strategy	Level 6	20	Draft - Prep for P Comment
Elective	115447 Understand and apply mechanical construction technology	Level 6	30	Draft - Prep for P Comment
Elective	115454 Understand and apply Civil Engineering construction technology	Level 6	30	Draft - Prep for P Comment
Elective	115456 Understand and apply electrical construction technology	Level 6	30	Draft - Prep for P Comment
Elective	115450 Understand and integrate construction project management principles	Level 7	20	Draft - Prep for P Comment
Elective	115451 Demonstrate an understanding of the management of construction projects in an international environment	Level 7	15	Draft - Prep for P Comment
Elective	115452 Understand and apply Tunnelling technology and limited Mining operations techniques	Level 7	20	Draft - Prep for P Comment
Elective	115455 Understand and apply property development principles	Level 7	9	Draft - Prep for P Comment

Fundamental	115198 Understand and implement construction information technology systems	Level 6	9	Draft - Prep for P Comment
Fundamental	115448 Understand and apply statistical techniques for business and research applications	Level 6	18	Draft - Prep for P Comment
Fundamental	115453 Understand and apply mathematical systems for commercial applications	Level 6	18	Draft - Prep for P Comment