higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

ARCHITECTURAL GRAPHICS AND TECHNOLOGY

(First paper)

NQF LEVEL 2

(12050622)

22 November 2023 (Y-paper)
13:00–17:00

REQUIREMENTS: A2 drawing sheet

This question paper consists of 5 pages.

239Q1N2322

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
ARCHITECTURAL GRAPHICS AND TECHNOLOGY
NQF LEVEL 2 PAPER 1
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Use both sides of the A2 drawing sheet.
5. All drawing work must be done in pencil.
6. All drawing work must comply with the relevant SANS (SABS) recommended codes.
7. Brick sizes should be taken as 220 × 110 × 75 mm.
8. All abbreviations and symbols must comply with the latest National Building Regulations and all relevant SANS (SABS) codes.
9. Use only a black or blue pen.
10. Write neatly and legibly.

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QUESTION 1

As a draughtsperson, you are required to draw to a scale of 1:10 a sectional view of a double-wall foundation and a portion of the wall.

The drawing must clearly show the following:

1.1 Concrete foundation 600 × 200

1.2 Brick footings

1.3 Damp-proof course (DPC)

1.4 Screed 25 mm

1.5 Concrete slab 75 mm

1.6 Compacted hardcore

1.7 NGL

1.8 Brick force

1.9 Interior plaster and skirting

Insert all the descriptions.
Dimension the concrete foundation.

Insert a suitable title and scale beneath the drawing. **[20]**

QUESTION 2

2.1 Draw to a scale of 1:10 the top view courses in a cavity wall.

The detailed drawing must show the following:

2.1.1 A two-brick T-junction and front view (7)

2.1.2 A two-brick corner (7)

NOTE: Use brick sizes as 220 × 110 × 75.

Insert a suitable title and scale beneath the drawing.

2.2 Draw to a scale of 1:10 the isometric view of the alternate top view courses of a corner junction between double-brick walls built in stretcher bond.

Insert a suitable title and scale beneath the drawing. (11)
[25]

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QUESTION 3

3.1 Draw to a scale of 1:100 the front and section AA view of a reinforced concrete lintel with the steel in position, spanning a 1 600-mm opening in a stretcher course wall.

Insert a suitable title and scale beneath the drawing. (15)

3.2 Draw to a scale of 1:100 the front view of a segmental arch constructed in axed bricks. It has a span of 1 500 mm and a rise of 200 mm.

Insert the following terms on the view:

3.2.1 Span

3.2.2 Key brick

3.2.3 Rise

3.2.4 Springer

3.2.5 Skewback

3.2.6 Voussoirs

3.2.7 Extrados

3.2.8 Intrados

Insert a suitable title and scale beneath the drawing. (15)
[30]

QUESTION 4

Copy the given site plan, using a scale of 1:200.

Insert the following terms on the section view:

4.1 Outline of the dwelling

4.2 Setting-off dimensions

4.3 Building lines

4.4 Border wall lengths

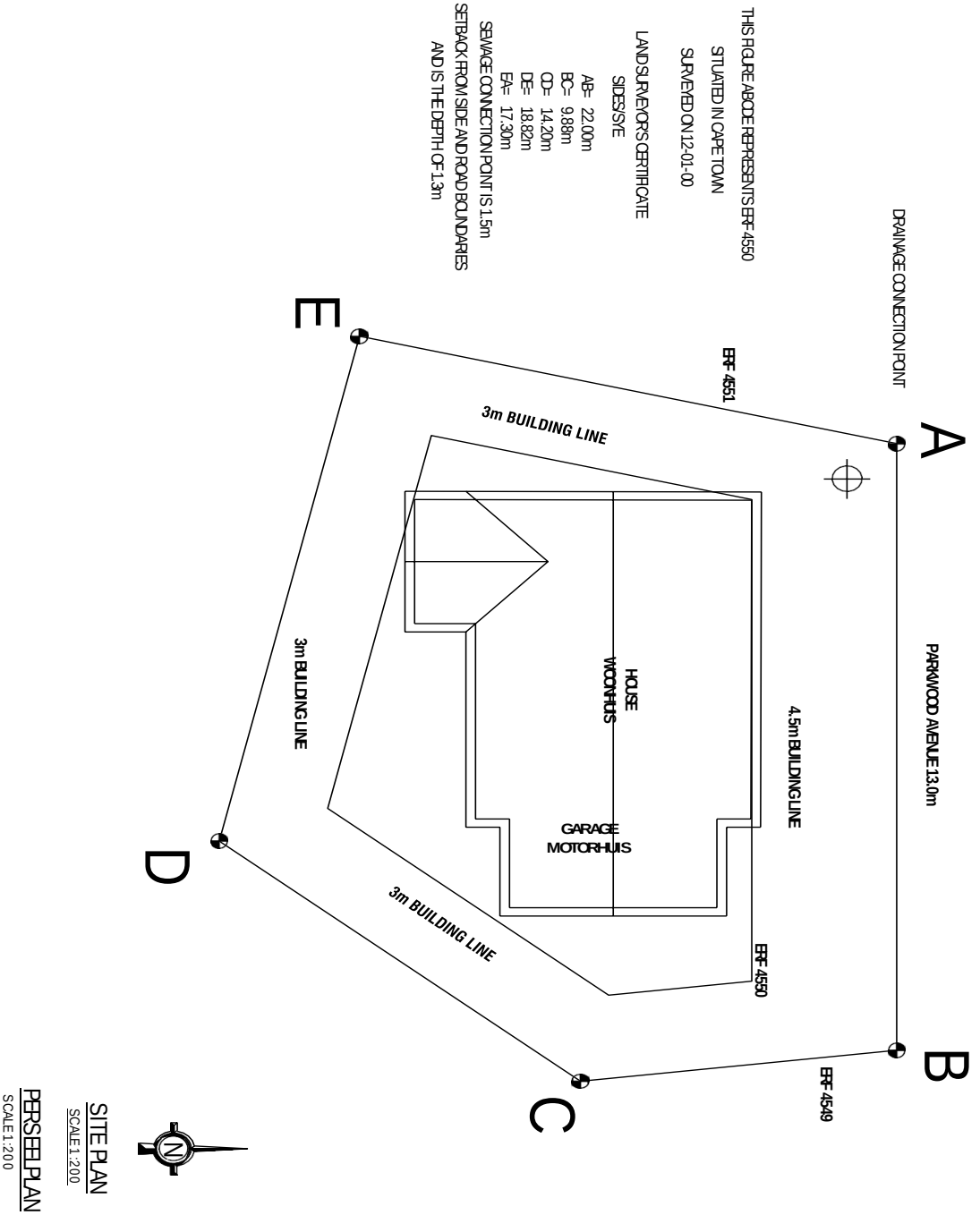
4.5 Street name

4.6 Drainage connection point

4.7 Erf numbers

4.8 Roof outline on dwelling

Insert a suitable title and scale beneath the drawing.



[25]

TOTAL: 100

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