higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

QUANTITY SURVEYING N6

(2050026)

27 November 2024 (X-paper)
09:00–13:00

REQUIREMENTS: **Dimension paper (BOE 8/12)**
Abstract paper (BOE 8/10)
Billing paper (BOE 8/11)

Candidates must use their own unmarked copy of *Standard System of Measuring Building Work*.

Calculators may be used

This question paper consists of 4 pages and 4 addenda.

141Q1E2427

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
QUANTITY SURVEYING N6
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. Start each question on a new page.
5. All the work for QUESTIONS 2.1–2.2 and 4 must be done on the ANSWER BOOK.
6. All the work for QUESTIONS 1, 2.3 and 3 must be done on the appropriate sheets provided.
7. All loose sheets must be numbered correctly and placed in sequence inside the ANSWER BOOK.
8. Candidates must strictly apply the rules and methods as stipulated in the Standard System of Measuring Builders Work.
9. Use only a black or blue pen.
10. Write neatly and legibly.

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QUESTION 1

ADDENDUM A (attached) shows the plan view and a vertical cross section of an open stand to be levelled to the height of 85,700 meters from the datum height.

1.1 Do the waste calculations of all the areas. Reference the areas with the given alphabetical letter on the plan view drawing. (11)

1.2 Measure the bulk excavation item of the areas to be 'cut' to the required level. (7)

1.3 Measure items of the areas to be 'filled' to the required level. (7)

[25]

QUESTION 2

2.1 Define *arbitration*. (2)

2.2 List FOUR examples of spot items. (4)

2.3 List any FOUR attendees in a typical building site meeting. (Any 4 × 1) (4)

2.4 ANNEXURE B (attached) shows the front view, vertical and horizontal sections of a solid timber window with two sashes and one fixed light. ADDENDUM C (attached) shows the measurements for this window. Remove ADDENDUM C, insert your examination number at the top and hand in at the end of the exam

2.4.1 Square only the paint and glazing items. (3)

2.4.2 Abstract the paint and glazing items. (5)

2.4.3 Draw up a bill for the painting and glazing trades. (7)

[25]

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QUESTION 3

ADDENDUM D shows the plan view layout of a manhole sewer system, a vertical cross section of a manhole. Measure only the work as required in QUESTIONS 3.1, 3.2 and 3.3.

Specifications:

- 110 mm u-pvc plastic drain pipe.
- 110 mm pvc plastic stub-stack pipe 1,5 meters high.
- 110 mm pvc plastic vent cowl.
- Universal p-trap gulley with grid cover.
- Allow the provisional of R1500,00 for the sewer connection.

3.1 Measure the sewer pipework including the two gulleys. (12)

3.2 Measure the vent pipe to include the plain bend, 300 mm below the ground level. (7)

3.3 Measure the municipal connection. (6)
[25]

QUESTION 4

4.1 Calculate the total cost to cast a concrete foundation 10 meters long, 0,600 meters wide and 0,230 meters thick.

- Ratio mix 1:3:6
- Cement pocket 50 kg/ 1506 = 0,033lt.
- Allow a waste factor of 54%.
- 50 kg pocket of cement costs R90,00/bag.
- Cost of sand = R300,00/m^3
- Cost of stone = R450,00/m^3
- Labour cost = R32,00/hour.
- 3 labourers take 3 hours to mix and place 1 m^3 of concrete.
- Allow 15% for value added tax and 25% for profit. (20)

4.2 Calculate the amount of concrete blocks in 1 m^2 of blockwork. The dimensions of the block is 390 × 190 × 140. Allow 10 mm for the mortar joint. (5)
[25]

TOTAL: 100

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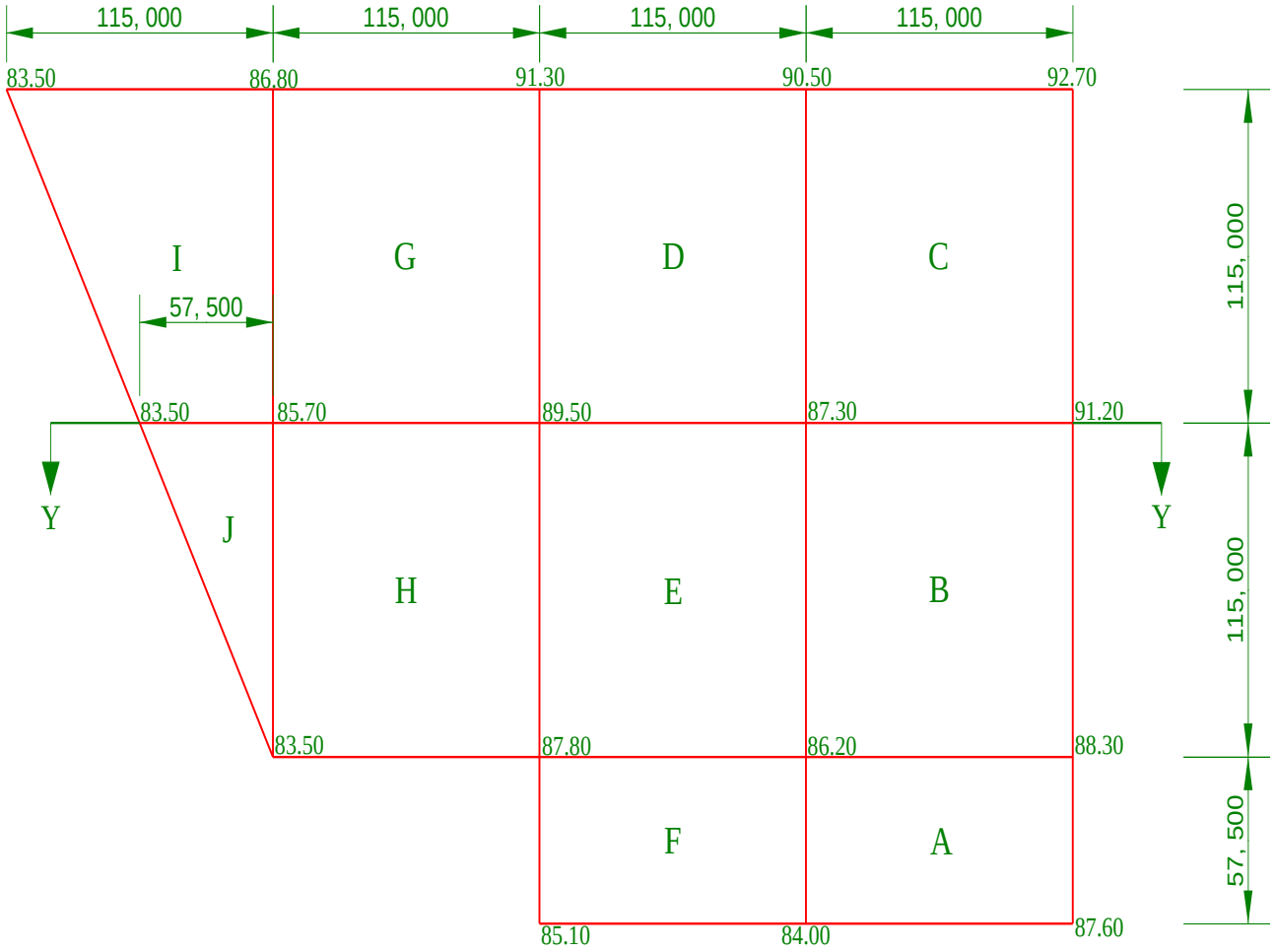
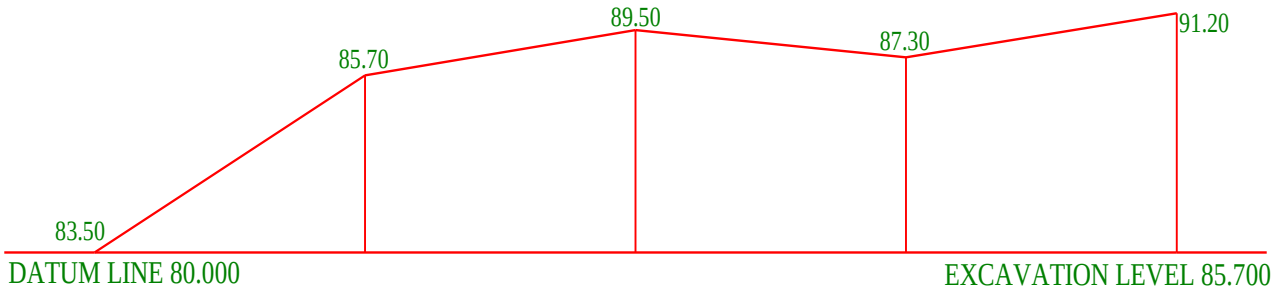
ADDENDUM A



PLAN



SECTION Y-Y

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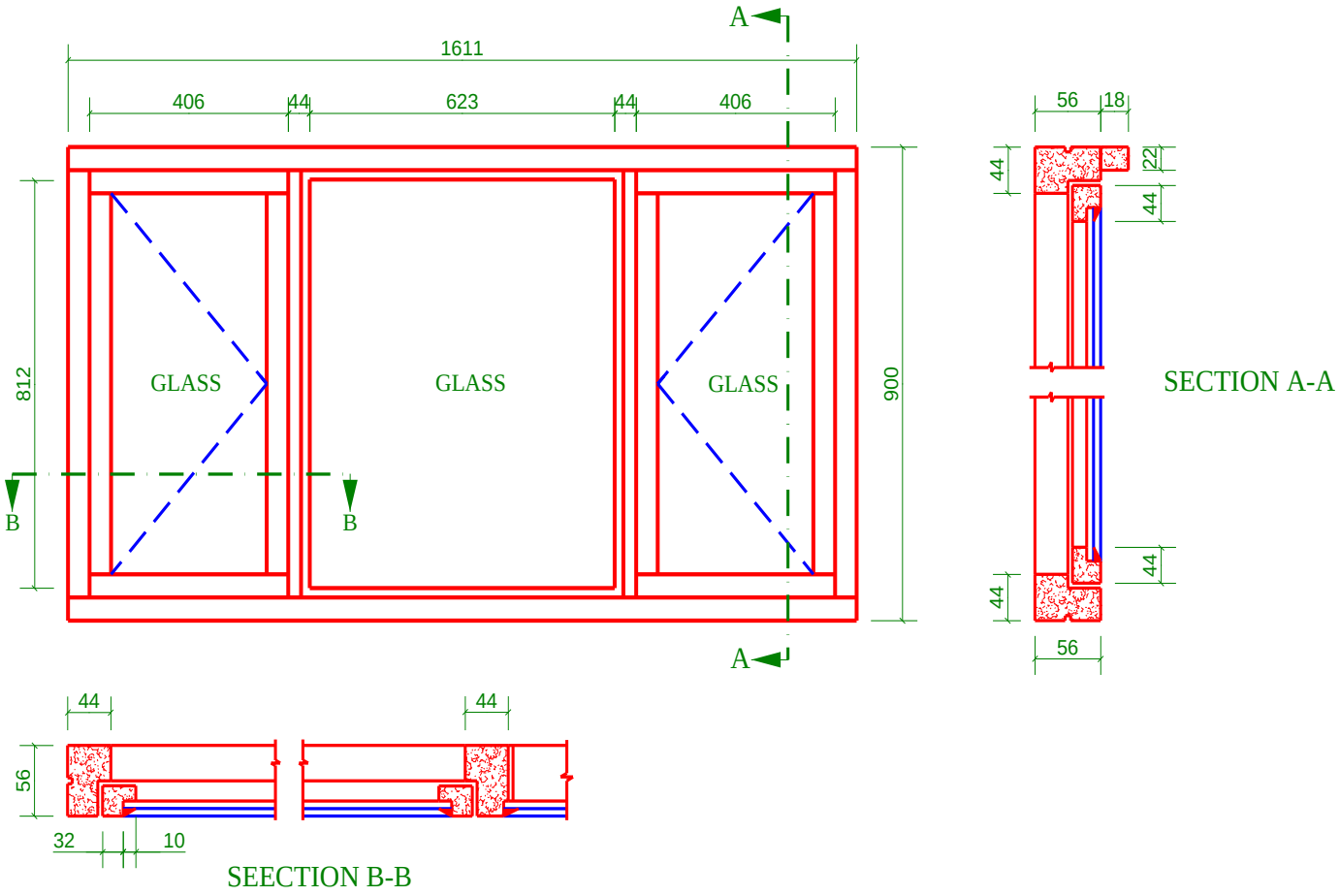
ADDENDUM B



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ADDENDUM C

	1,61		74 x 44 mm Meranti solid tbr. twice rebated & once grooved head	2/2	0,41 0,81		2Cts. clr. varnish to tbr. window sash.
2/	1,61 0,90		56 x 44 mm Meranti solid tbr. once rebated & once grooved. Cill	2/	0,74 0,34		3mm Thk. clr. float glass exce 0,1m² n.e. 0,5m².
			Stiles				
2/	0,90		56 x 44 mm Meranti solid tbr. Twice rebated.		0,64 0,83		Ditto, but exce. 0,5m² n.e. 2m².
			Mul.				
	2		406 x 812 mm Meranti tbr. Sash, side hunged.				
	5,02		Prime backs of frame. 2/1,611 + 2/0,900 = 5,022m				
	1,61 0,16 1,61		2Cts. clr. varnish to exposed tbr. of window.				
2/	0,14 0,90		Head = 2/44 + 74 = 0,162m				
2/	0,14 0,90 0,20		Cill & stiles = 2/44 + 56 = 0,144m Mullion = 2/44 + 2/56 = 0,200m				
			(1)				(2)

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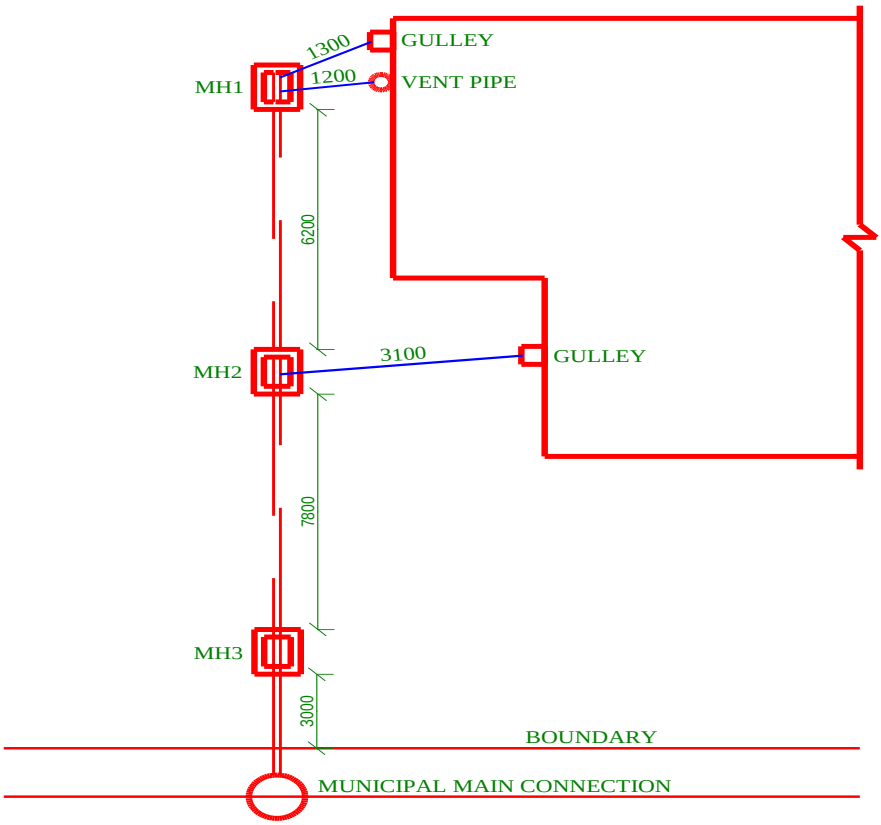
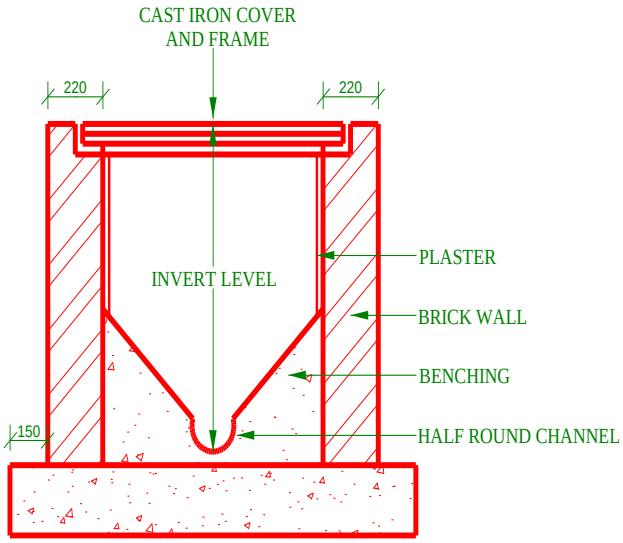
ADDENDUM D





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