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basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

NOVEMBER 2017

MARKING GUIDELINES

MARKS: 200

**This Marking guidelines consists of 7
pages.**

	ANSWERS	
1	LUKE	1
2	STAND 7392	1
3	8789	1
4	30 m or 30	1
5	1,2 m (unit m must be shown) or 1200 mm or 1200	1
6	2	1
7	INSPECTION EYE	1
8	8 or 9	1
9	50 m or 50	1
10	140 l ³ / CUBIC LITRE or 140 (2 marks) 2 x 70 (1 mark)	2
11	ORANGE RIVER or RIVER	1
12	SECURITY FENCE or FENCE	1
13	(50 YEAR) FLOOD LINE	1
14	NORTH POINT	1
15	BROWN	1
16	SOUTH EAST or SE	2
17	6,2 m or 6,2 (2 marks) 6200 or 6200 mm (1 mark)	2
18	735,23 m (calculation 1, answer 1, decimal correct 1)	3
19	1991,25 m ² (calculation 1, answer 1, metre ² 1)	3
20	See below	4

TOTAL: 30

ANSWER 18
Show ALL calculations.

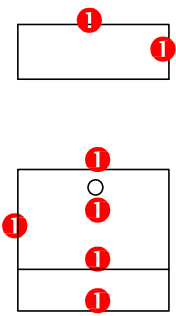
$$\begin{aligned}
 &L+L+L+L \\
 &=143,560+223,910+143,890+223,870 \\
 &= 735,23 \text{ m}
 \end{aligned}$$

ANSWER 19
Show ALL calculations.

$$\begin{aligned}
 &(L \times B)+(L \times B)+(L \times B) \\
 &=(19,5 \times 28,5)+(21 \times 24)+(27 \times 34,5) \\
 &= 1991,25 \text{ m}^2
 \end{aligned}$$

20

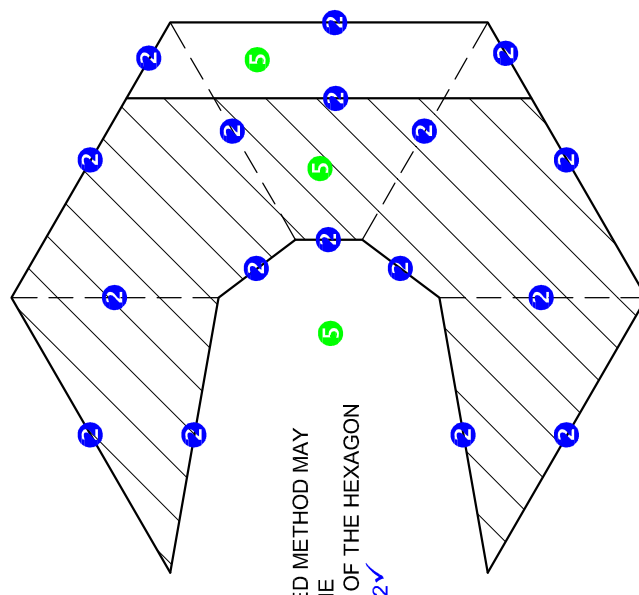
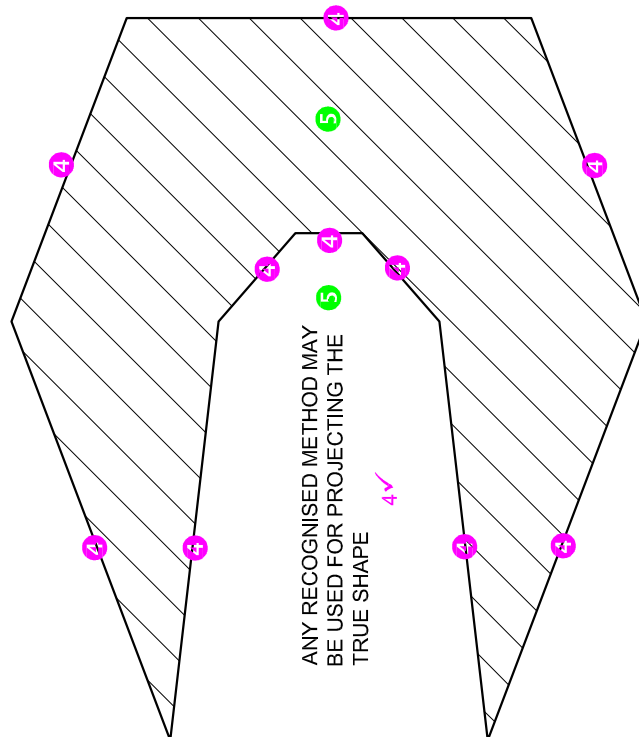
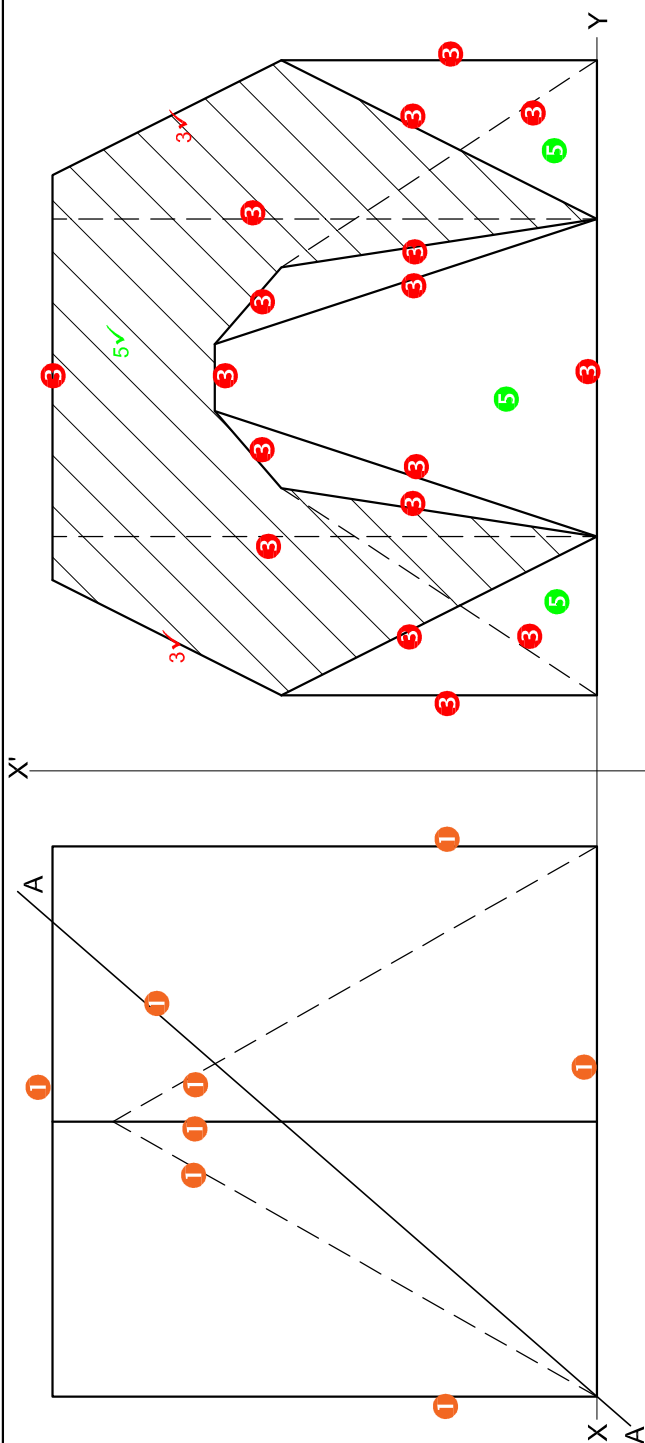
FREEHAND ①



The diagram shows two freehand drawings. The top drawing is a simple rectangle with a small circle on its top edge, marked with red 1s. The bottom drawing is a more complex shape, possibly a cross-section of a building, with a central vertical line and horizontal lines, marked with red 1s for each part.

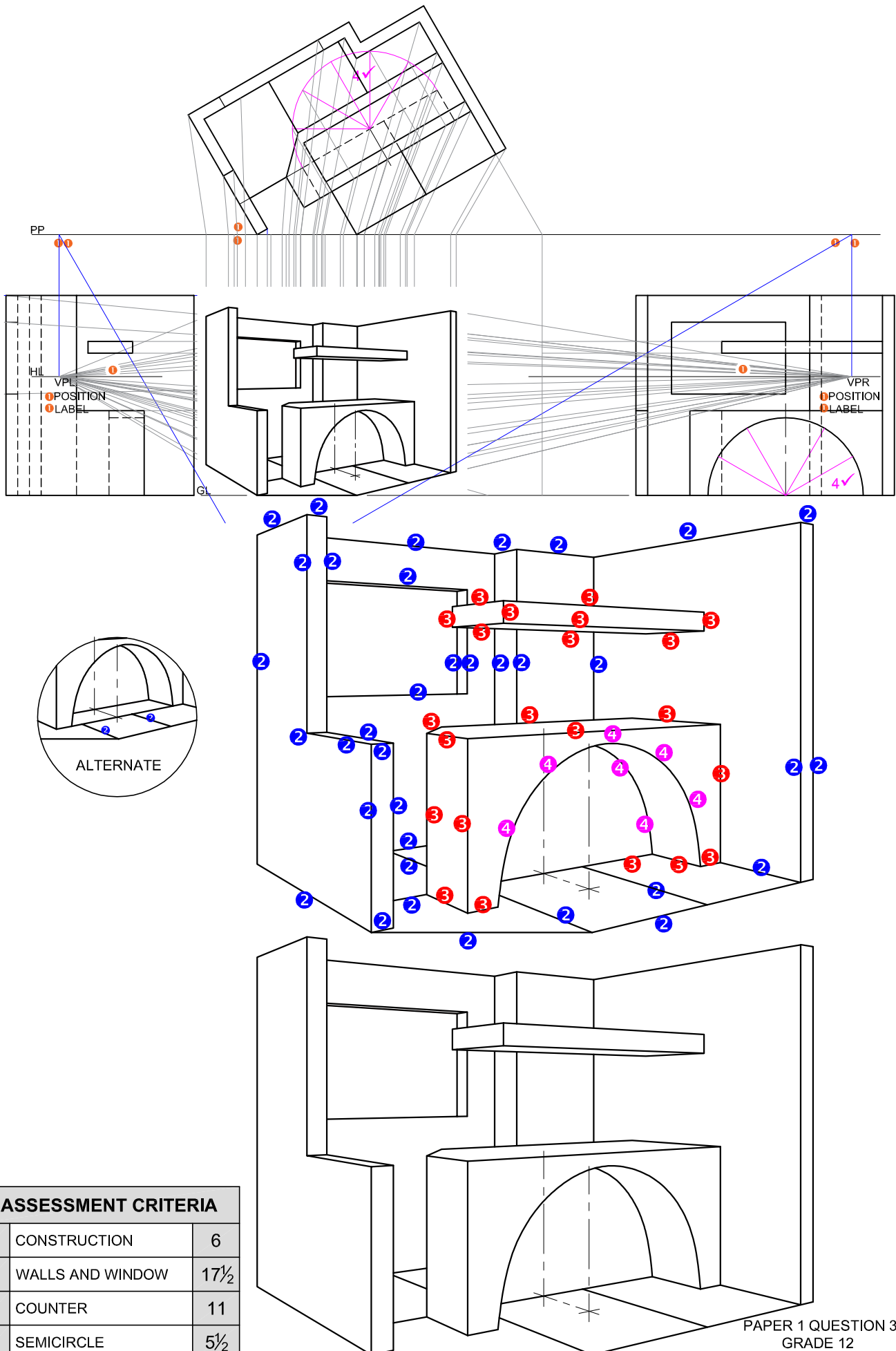
PAPER 1 QUESTION 1
GRADE 12
NOVEMBER 2017
MARKING GUIDELINES

ASSESSMENT CRITERIA	
1 FRONT VIEW	4
2 SECTIONAL TOP VIEW	9½
3 SECTIONAL LEFT VIEW	10½
4 TRUE SHAPE	6
5 HATCHING	5
TOTAL	
35	



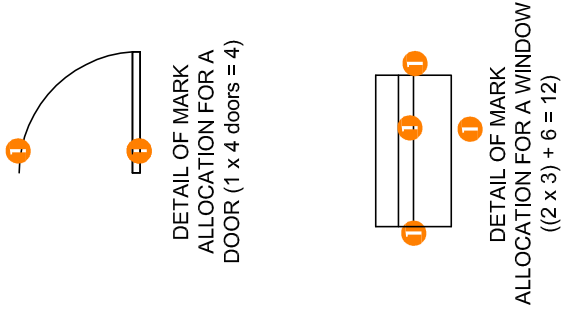
ANY RECOGNISED METHOD MAY
BE USED FOR THE
CONSTRUCTION OF THE HEXAGON
2✓

ANY RECOGNISED METHOD MAY
BE USED FOR PROJECTING THE
TRUE SHAPE
4✓

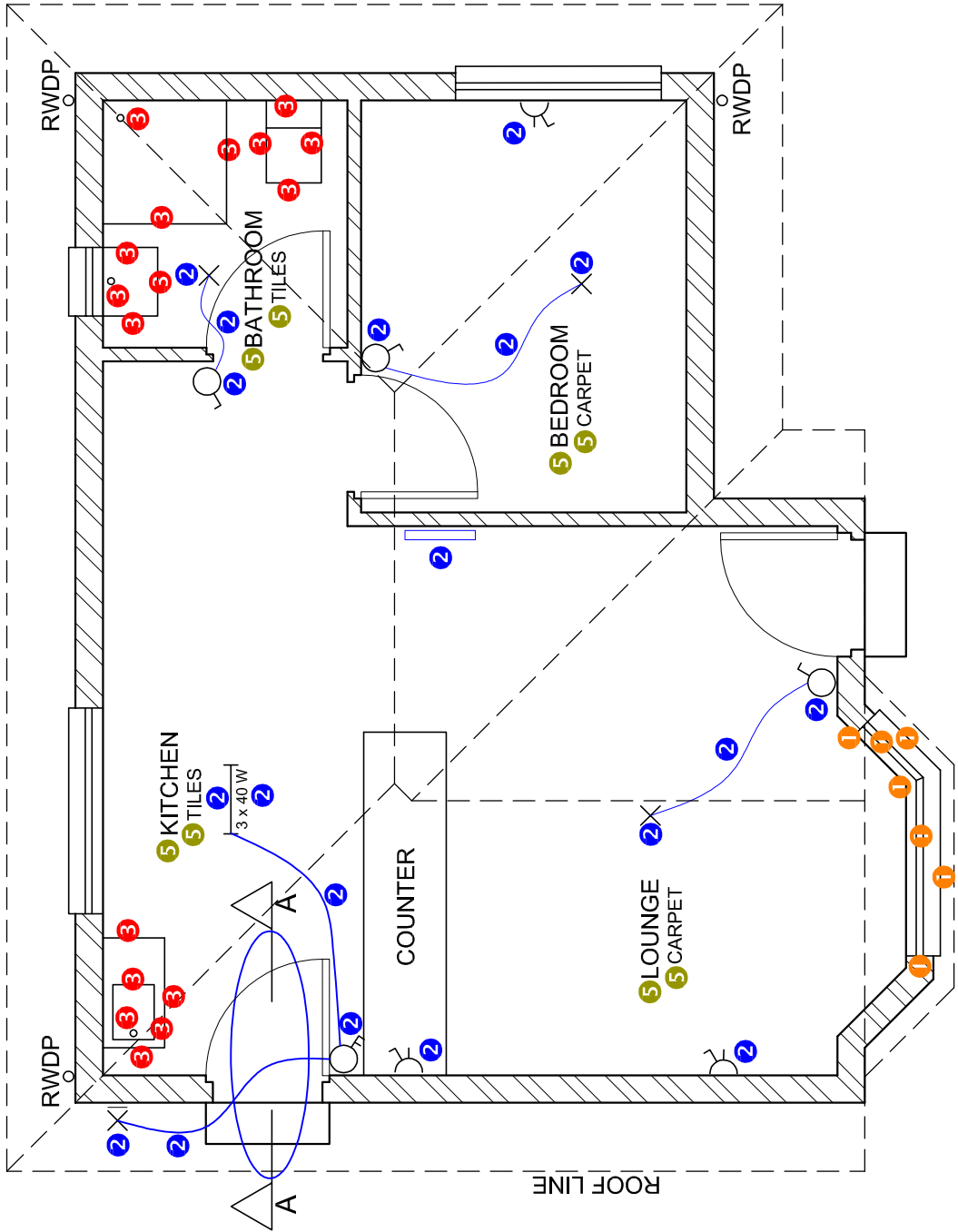
**ASSESSMENT CRITERIA**

1	CONSTRUCTION	6
2	WALLS AND WINDOW	17½
3	COUNTER	11
4	SEMICIRCLE	5½
TOTAL		40

PAPER 1 QUESTION 3
GRADE 12
NOVEMBER 2017
MARKING GUIDELINES



FLOOR PLAN	
POSSIBLE	
1 DOORS + WINDOWS	13½
2 ELECTRICAL	9½
3 FIXTURES	8½
4 HATCHING	3
5 LABELS	4
SUBTOTAL	38½

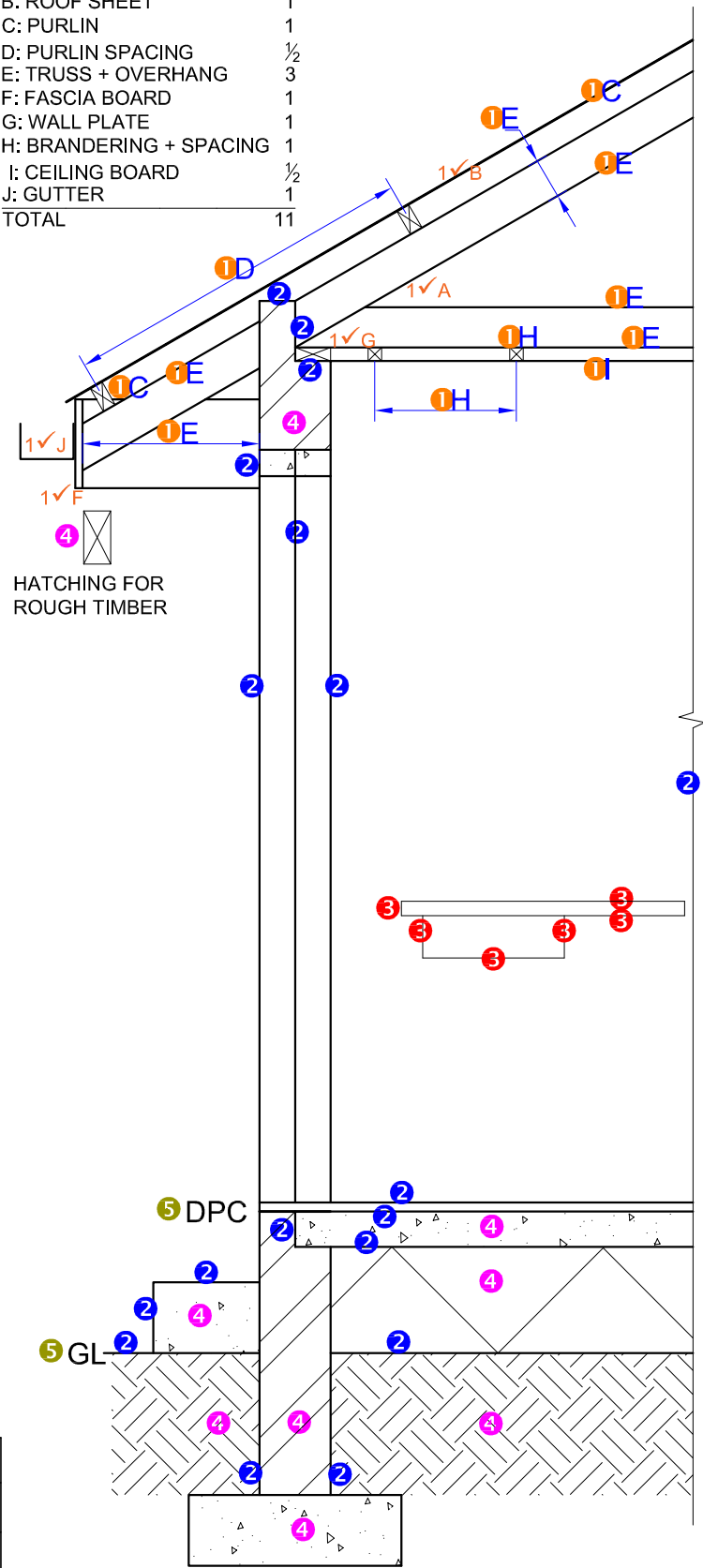


FLOOR PLAN
SCALE 1 : 50

4 HATCHING ALLOCATION	
SANS COMPLIANT (TYPE)	1
HATCHING CORRECTLY APPLIED	2
TOTAL	3

MARK ALLOCATION FOR ROOF (1)

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN	1
D: PURLIN SPACING	1/2
E: TRUSS + OVERHANG	3
F: FASCIA BOARD	1
G: WALL PLATE	1
H: BRANDERING + SPACING	1
I: CEILING BOARD	1/2
J: GUTTER	1
TOTAL	11



DETAILED SECTION		
1	ROOF DETAIL	11
2	FOUNDATION + WALL + DOOR	9
3	SINK	3
4	HATCHING	4 1/2
5	LABELS	1
SUBTOTAL		28 1/2

DETAILED SECTION A-A
SCALE 1 : 20

