



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

FEBRUARY/MARCH 2016

MEMORANDUM

MARKS: 100

This memorandum consists of 7 pages.

ANSWERS		
1	2	1
2	031 5836092	1
3	REPLACE FUEL TANKS	1
4	5 500	1
5	IBR	1
6	4	1
7	3	1
8	DEMOLISH/REMOVE	1
9	RAMP	1
10	BLUE	1
11	NO COLOUR	1
12	GULLEY	1
13	ADJACENT BUILDING/STRUCTURE	1
14	EAST	2
15	SPEED UP DRAWING PROCESS/ STANDARDISATION OF PRESENTATION	2
16	SCALE	1
17	271,3 m	2
18	82,28 m [calculation 1, answer 1, converted to metres 1]	3
19	318,2179 m ² [calculation 1, answer 1, metres ² 1]	3
20	<i>See below</i>	4

TOTAL: 30

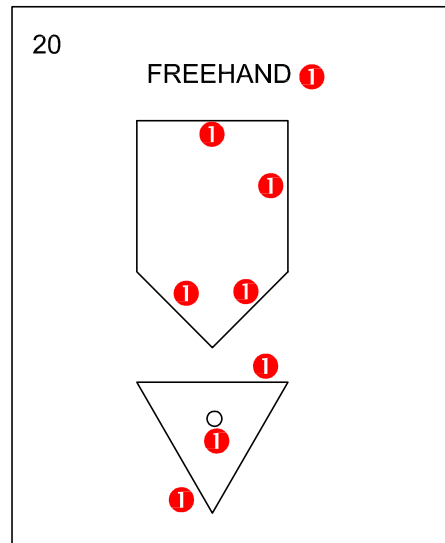
ANSWER 18
Show ALL calculations.

$$20,57 + 6,545 + 7,48 + 6,545 + 28,05 + 13,09 = 82,28 \text{ m}$$

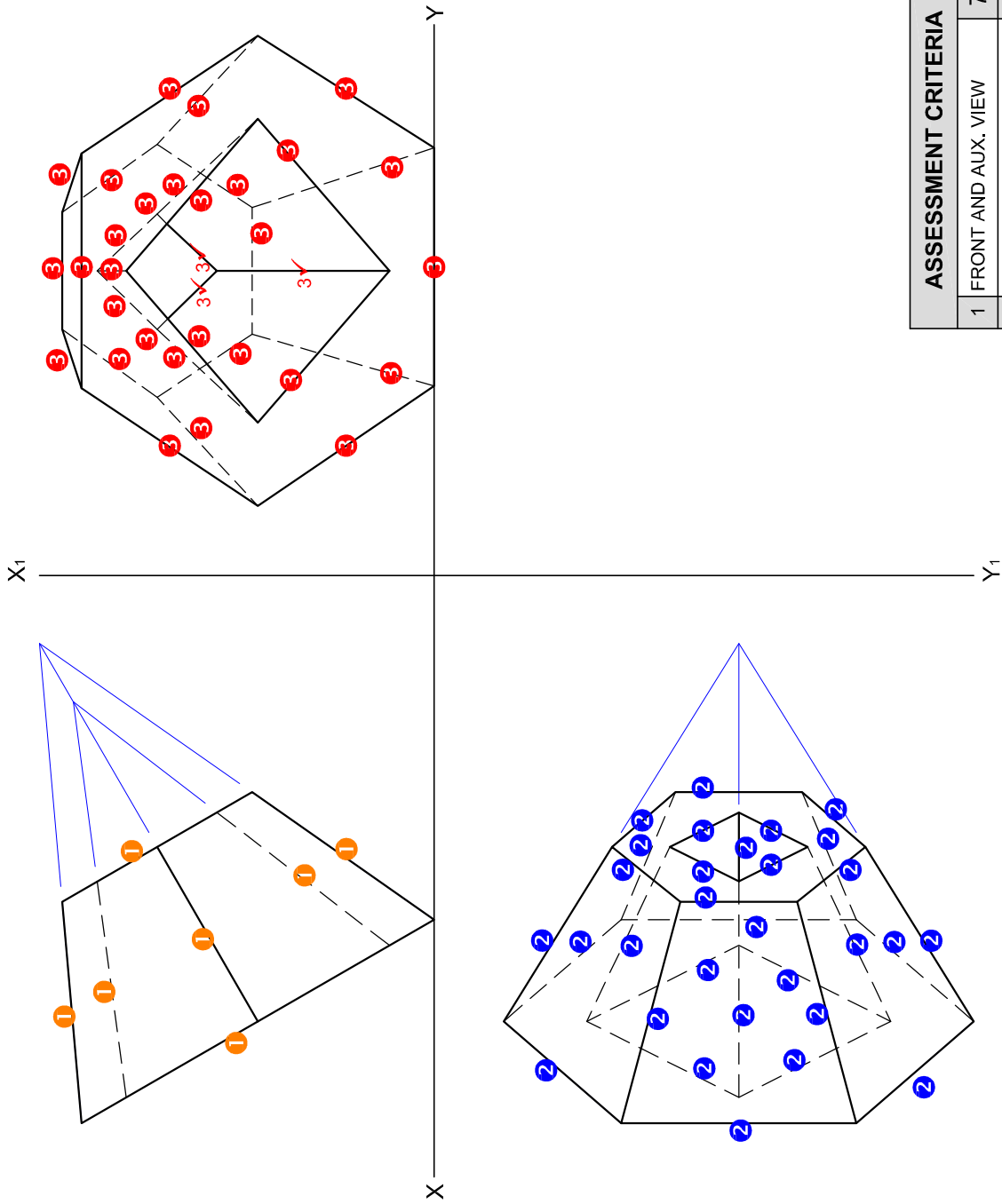
ANSWER 19
Show ALL calculations.

$$(20,57 \times 13,09) + (6,545 \times 7,48)$$

$$269,2613 + 48,9566$$

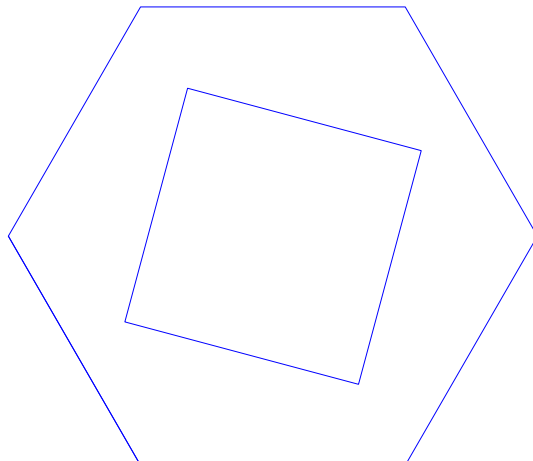
$$318,2179 \text{ m}^2$$


PAPER 1 QUESTION 1
GRADE 12
Feb.-Mar.
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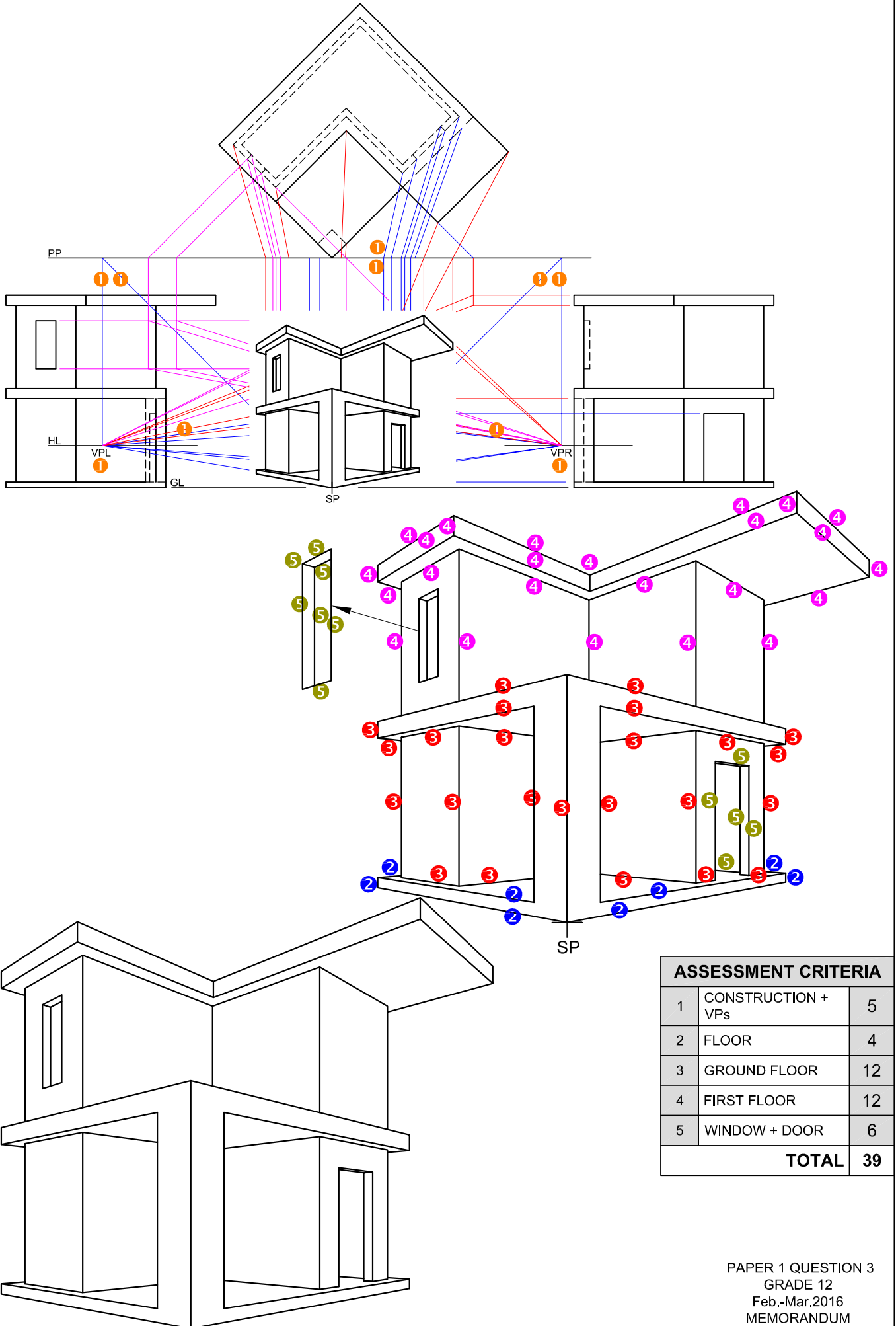
ASSESSMENT CRITERIA	
1	FRONT AND AUX. VIEW
2	TOP VIEW
3	LEFT VIEW
TOTAL	

7½
15
17½
40



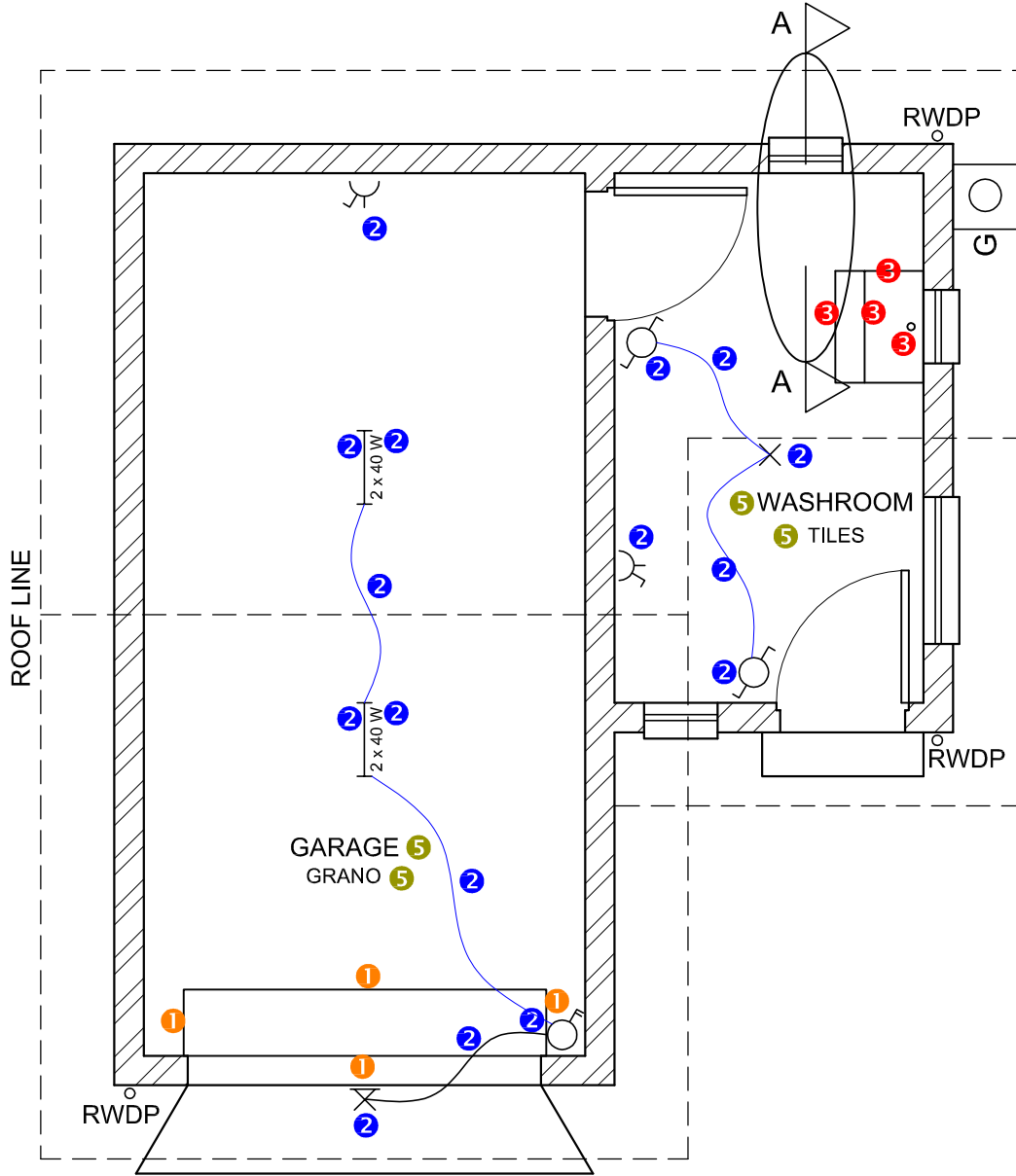
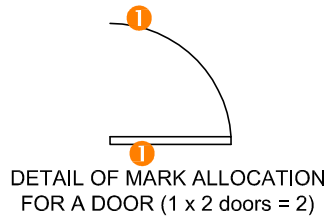
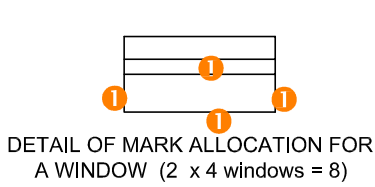
ANY ACCEPTABLE
CONSTRUCTION METHOD
USED FOR THE
AUXILIARY VIEW
1✓✓✓✓

PAPER 1 QUESTION 2
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ASSESSMENT CRITERIA		
1	CONSTRUCTION + VPs	5
2	FLOOR	4
3	GROUND FLOOR	12
4	FIRST FLOOR	12
5	WINDOW + DOOR	6
TOTAL		39

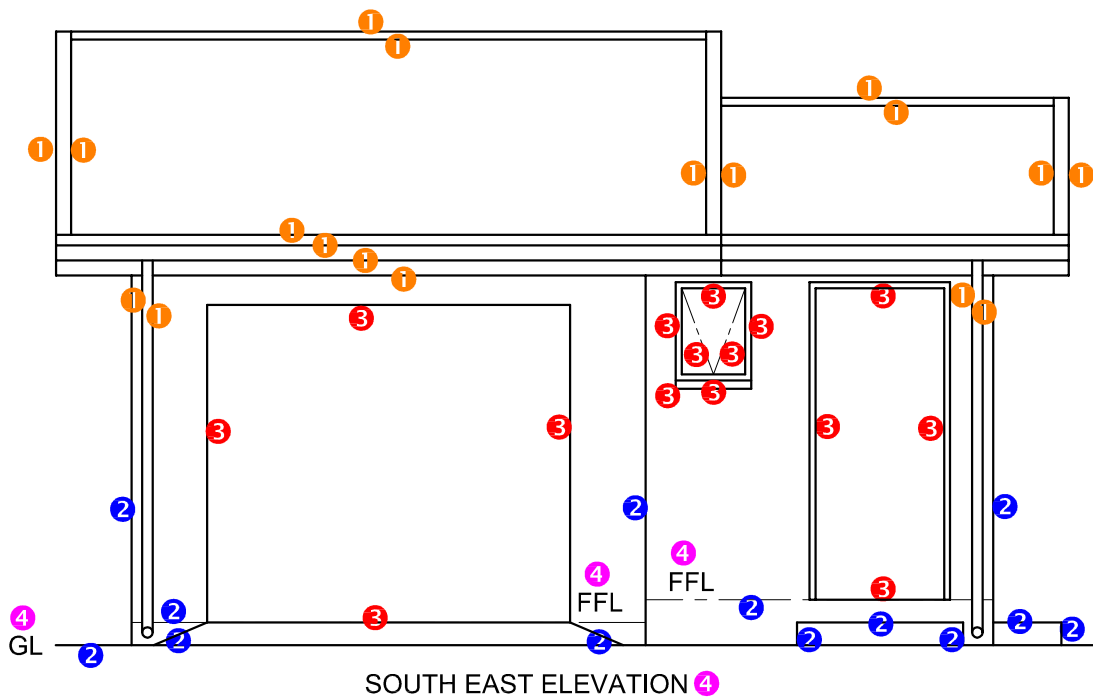
PAPER 1 QUESTION 3
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FLOOR PLAN
SCALE 1 : 50

ASSESSMENT CRITERIA		
FLOOR PLAN		
1	DOORS + WINDOWS	12
2	ELECTRICAL	8
3	FIXTURES	2
4	HATCHING	4
5	LABELS	2
SUBTOTAL		28

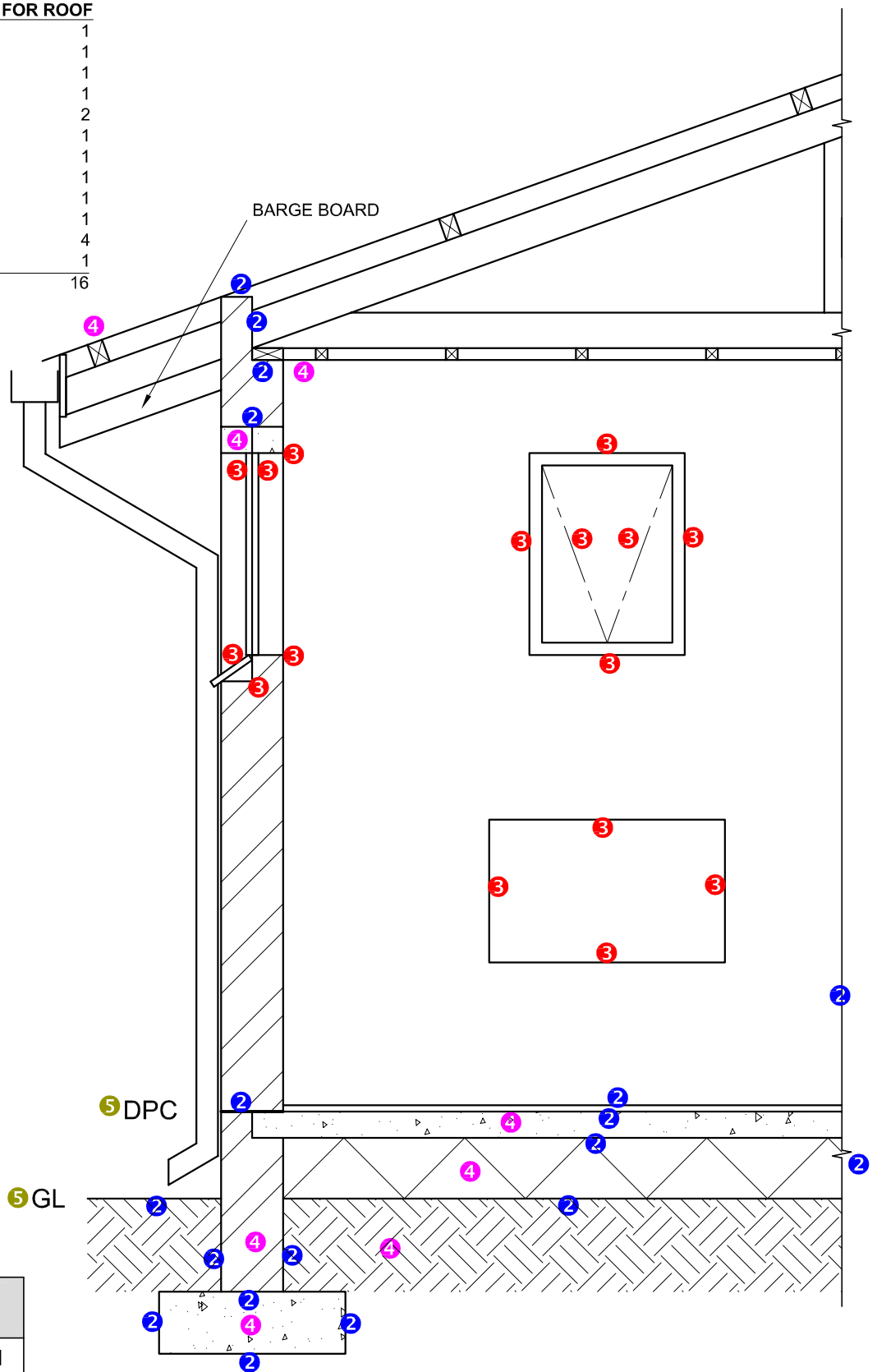
4 HATCHING ALLOCATION	
SANS COMPLIANT (TYPE)	2
HATCHING CORRECTLY APPLIED	2
TOTAL	4



ASSESSMENT CRITERIA		
SOUTH EAST ELEVATION		
1	ROOF + RWDP	9
2	WALLS + FFL + GULLEY + STEP + RAMP	6½
3	DOOR + WINDOW	7½
4	LABELS	2
SUBTOTAL		25

1. MARK ALLOCATION FOR ROOF

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLINS	1
D: PURLIN SPACING	1
E: TRUSS	2
F: FASCIA BOARD	1
G: BARGE BOARD	1
H: WALL PLATE	1
I: BRANDING	1
J: CEILING BOARD	1
K: RWDP	4
L: GUTTER	1
TOTAL	16



**DETAILED SECTION ON A-A
SCALE 1 : 20**

ASSESSMENT CRITERIA		
DETAILED SECTION		
1	ROOF DETAIL + RWDP	16
2	FOUNDATION + WALL + LINE BREAK	9
3	WINDOW + WASHTUB	8
4	HATCHING	4
5	LABELS	1
SUBTOTAL		38