

SULIT



KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN KEJURUTERAAN AWAM

PEPERIKSAAN AKHIR

SESI II : 2022/2023

DCQ40204 : BUILDING WORKS MEASUREMENT 4

TARIKH : 21 JUN 2023

MASA : 2.30 PTG – 4.30 PTG (2 JAM)

Kertas ini mengandungi **TUJUH (7)** halaman bercetak.

Bahagian A: Subjektif (2 soalan)

Bahagian B: Subjektif (4 soalan)

Dokumen sokongan yang disertakan : Lampiran, Kertas Dimensa, Kertas
Billing dan Lukisan

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

SECTION A : 50 MARKS**BAHAGIAN A : 50 MARKAH****INSTRUCTION:****ARAHAN :**

This section consists of **TWO (2)** subjective questions. Answer **ALL** questions.

Seksyen ini mengandungi DUA (2) soalan subjektif. Jawab SEMUA soalan.

Notes :**Nota :**

1. Taking off refers to the rules in Standard Method of Measurement for Building Works Second Edition (SMM2).

Pengiraan hendaklah merujuk kepada Kaedah Pengukuran Kuantiti Piawai Edisi Kedua (SMM2).

2. Candidate is allowed to make any assumption if the information given in the drawing is inadequate.

Pelajar boleh membuat andaian yang munasabah jika maklumat di dalam lukisan tidak memadai.

3. Marks will be given for the knowledge of the subject and systematic setting of dimensions, adequacy and accuracy of description and dimensions.

Markah akan diberikan berdasarkan pengetahuan tentang subjek dan dimensi yang sistematik, kecukupan dan ketepatan penerangan dan dimensi.

QUESTION 1**SOALAN 1****Table A1/ Jadual A1**

Type	No of pile caps	No of pile point	Others
P1	8	1	• 150mm diameter bakau pile with supply length 3.00m. • Estimate penetration depth shall be 8.00m • Head and shoe shall be mild steel with size 150mm diameter and 5kg. • P6 ONLY shall be 80 degree raking pile. • Allow 2 nos random load test (50KN working load per pile and shall be maintain for 24 hours) - 1 no. on 3 pile group - 1 no. on a single pile
P2	15	2	
P3	3	3	
P4	5	4	
P5	5	5	
P6	4	6	

Based on the Table A1, answer all the questions below.

Berdasarkan Jadual A1, jawab semua soalan di bawah.

- CLO1 (a) Describe Clause E.5.1 for piling works.
Huraikan Fasal E.5.1 untuk kerja-kerja cerucuk.
- [5 marks]
[5 markah]
- CLO1 (b) Prepare a quantity measurement for piling works related to E.7 only.
Sediakan pengukuran kuantiti bagi kerja-kerja cerucuk yang berkaitan dengan Fasal E.7 sahaja.
- [10 marks]
[10 markah]
- CLO1 (c) Prepare a quantity measurement for raking pile related to E.5.3 only.
Sediakan pengukuran kuantiti bagi cerucuk condong yang berkaitan dengan Fasal E.5.3 sahaja.
- [10 marks]
[10 markah]

QUESTION 2**SOALAN 2**

Based on the Drawing No. **DCQ40204/FA/BS/01-05**, answer the questions below.

*Berdasarkan Nombor Lukisan **DCQ40204/FA/BS/01-05**, jawab semua soalan di bawah.*

- CLO1 (a) Describe the section related to the measurement of pipe fittings.
Terangkan seksyen yang berkaitan dengan pengukuran lekapan paip.
[5 marks]
[5 markah]
- CLO1 (b) Prepare a quantity measurement for soil pipe (Pipe only).
Sediakan pengukuran kuantiti bagi paip najis (Paip Sahaja).
[10 marks]
[10 markah]
- CLO1 (c) Prepare a quantity measurement for builders work in connection with soil, waste and vent pipe.
Sediakan pengukuran kuantiti bagi kerja-kerja pembina yang berkaitan dengan kerja paip najis, paip buang dan paip pengudaraan.
[10 marks]
[10 markah]

SECTION B : 50 MARKS
BAHAGIAN B : 50 MARKAH

INSTRUCTION:
ARAHAN:

This section consists of **FOUR (4)** subjective questions. Answer **TWO (2)** questions only.

Seksyen ini mengandungi EMPAT (4) soalan subjektif. Jawab DUA (2) soalan sahaja.

QUESTION 1
SOALAN 1

Based on the Drawing No. **DCQ40204/SHEET PILE/01**, answer all the questions below.

Berdasarkan Nombor Lukisan DCQ40204/SHEET PILE/01, jawab semua soalan di bawah.

- CLO1 (a) Prepare a quantity measurement for U-Wide Type Interlocking Sheet Pile related to clause E.5.5.c only.
Sediakan pengukuran kuantiti bagi U-Wide Type Interlocking Sheet Pile berkaitan dengan klause E.5.5.c sahaja.
[8 marks]
[8 markah]
- CLO1 (b) Conclude a bill of quantities complete with a measurement for Hat 900 Type Interlocking Sheet Pile.
Rumuskan satu senarai kuantiti lengkap dengan pengukuran untuk Hat 900 Type Interlocking Sheet Pile.
[17 marks]
[17 markah]

QUESTION 2**SOALAN 2**

Based on the Drawing No. **DCQ40204/FA/BS/01-05**, answer the questions below.

Berdasarkan Nombor Lukisan DCQ40204/FA/BS/01-05, jawab semua soalan di bawah.

CLO1

- (a) Prepare a quantity measurement for water tank support.

Sediakan pengukuran kuantiti untuk penyokong tangki air.

[8 marks]

[8 markah]

CLO1

- (b) Conclude a bill of quantities complete with a measurement for the supply pipe from water tank to Bath 3 only.

Rumuskan satu senarai kuantiti lengkap dengan pengukuran untuk paip bekalan dari tangki air ke Bilik Air 3 sahaja.

[17 marks]

[17 markah]

QUESTION 3**SOALAN 3**

Based on Drawing No. **DCQ40204/FA/BS/01-05**, answer ALL the questions below.

Berdasarkan Lukisan No. DCQ40204/FA/BS/01-05, jawab SEMUA soalan di bawah.

CLO1

- (a) Prepare a quantity measurement for concrete in the construction of table top at the wet areas.

Sediakan pengukuran kuantiti untuk konkrit dalam pembinaan meja konkrit di kawasan basah.

[8 marks]

[8 markah]

- (b) Conclude a bill of quantities complete with a measurement for sanitary fittings.

Rumuskan satu senarai kuantiti lengkap dengan pengukuran untuk lekapan kebersihan.

[17 marks]

[17 markah]

QUESTION 4**SOALAN 4**

Based on the Drawing No. **DCQ40204/FA/BS/01-05**, answer all the questions below.

*Berdasarkan Lukisan No. **DCQ40204/FA/BS/01-05**, jawab semua soalan di bawah.*

CLO1

- (a) Prepare a quantity measurement for meter box, distribution board, earthing and electrical testing.

Sediakan pengukuran kuantiti bagi kotak meter, papan agihan, pembumian dan ujian pemasangan elektrik.

[8 marks]

[8 markah]

CLO1

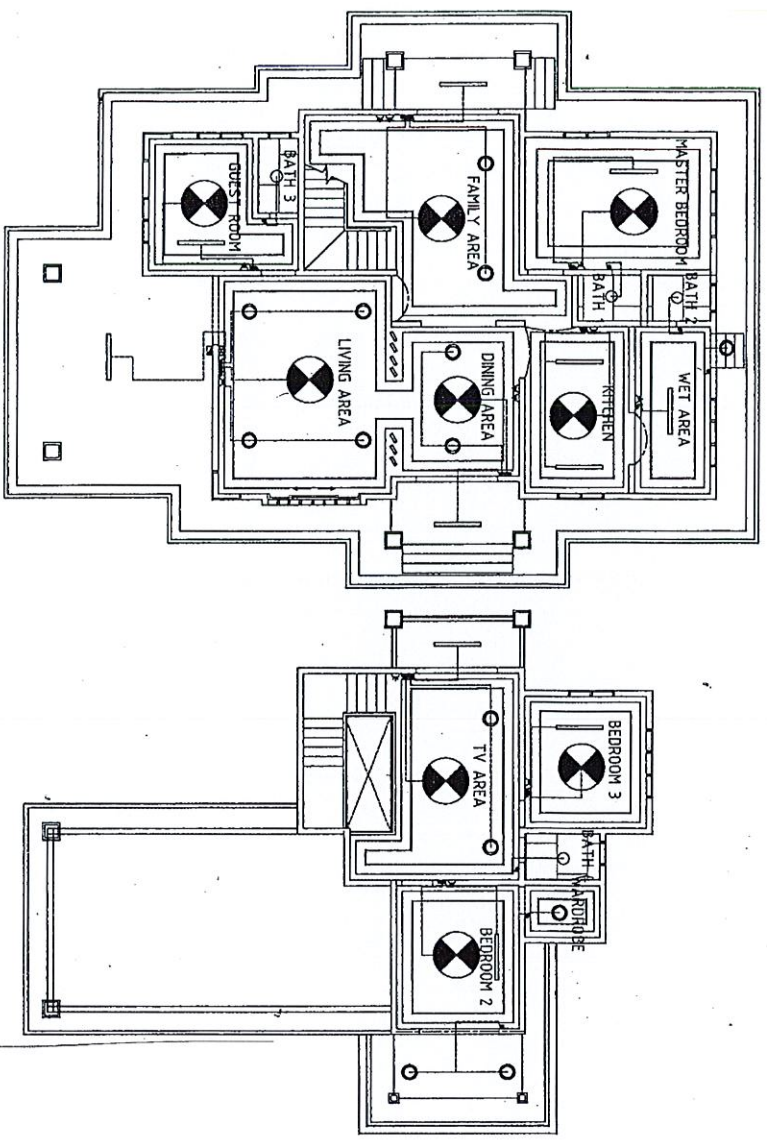
- (b) Conclude a bill of quantities complete with a measurement for electrical fittings and wiring only.

Rumuskan satu senarai kuantiti lengkap dengan pengukuran untuk lekapan elektrik dan pendawaian sahaja.

[17 marks]

[17 markah]

SOALAN TAMAT



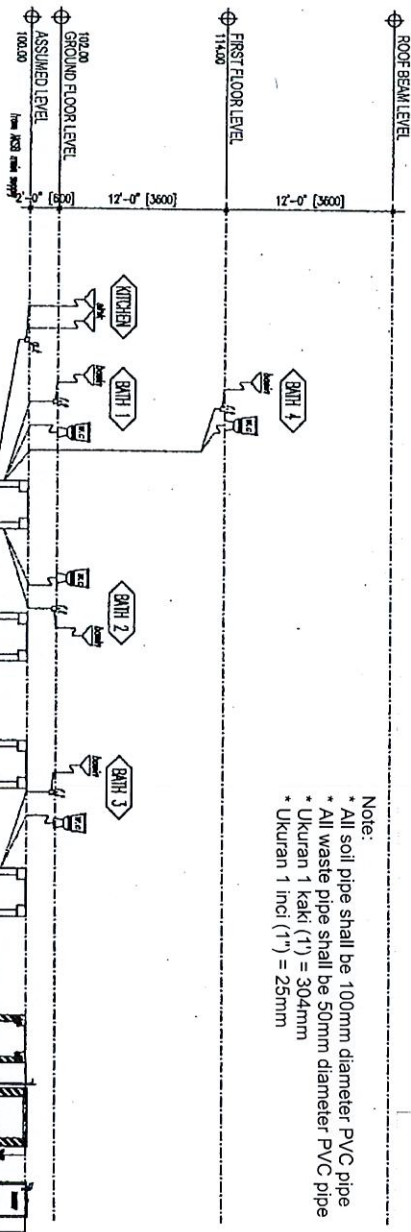
1 DIAGRAM ELECTRICAL & CEILING LAYOUT
NOT TO SCALE

2 DIAGRAM ELECTRICAL & CEILING LAYOUT
NOT TO SCALE

ELECTRICAL COMPONENT

SYMBOL	ELECTRICAL LEGEND	PER UNIT NO OF QUANTITY
	Distribution fuse box	1
	Meter box	1
	Fluorescent light fitting	11
	Down light down fitting	14
	Ceiling light point	4
	One way switch	31
	Ceiling fan	9
	13 AMP socket outlet	11

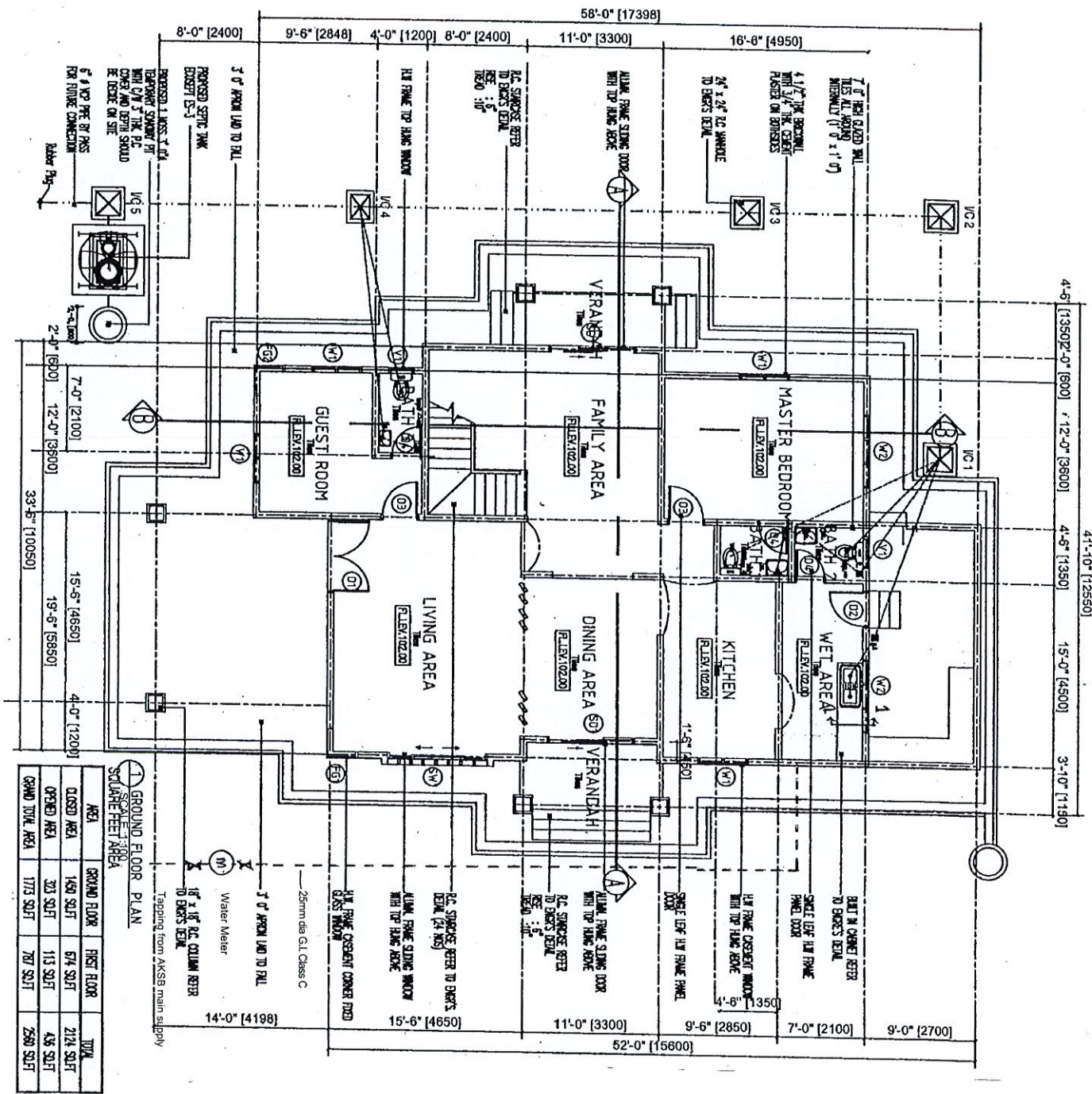
- Note:
- * All soil pipe shall be 100mm diameter PVC pipe
 - * All waste pipe shall be 50mm diameter PVC pipe
 - * Ukuran 1 kaki (1') = 304mm
 - * Ukuran 1 inci (1") = 25mm

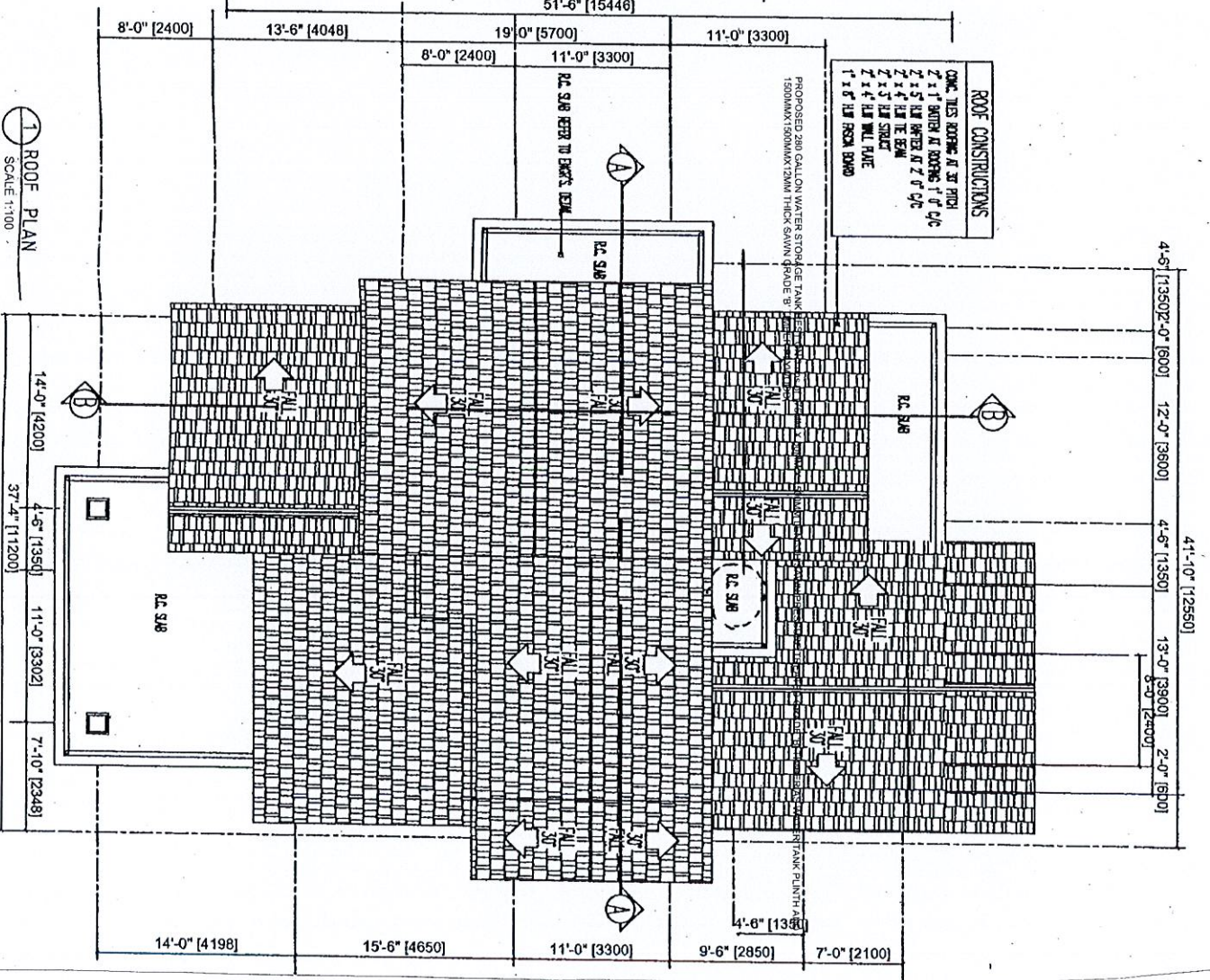
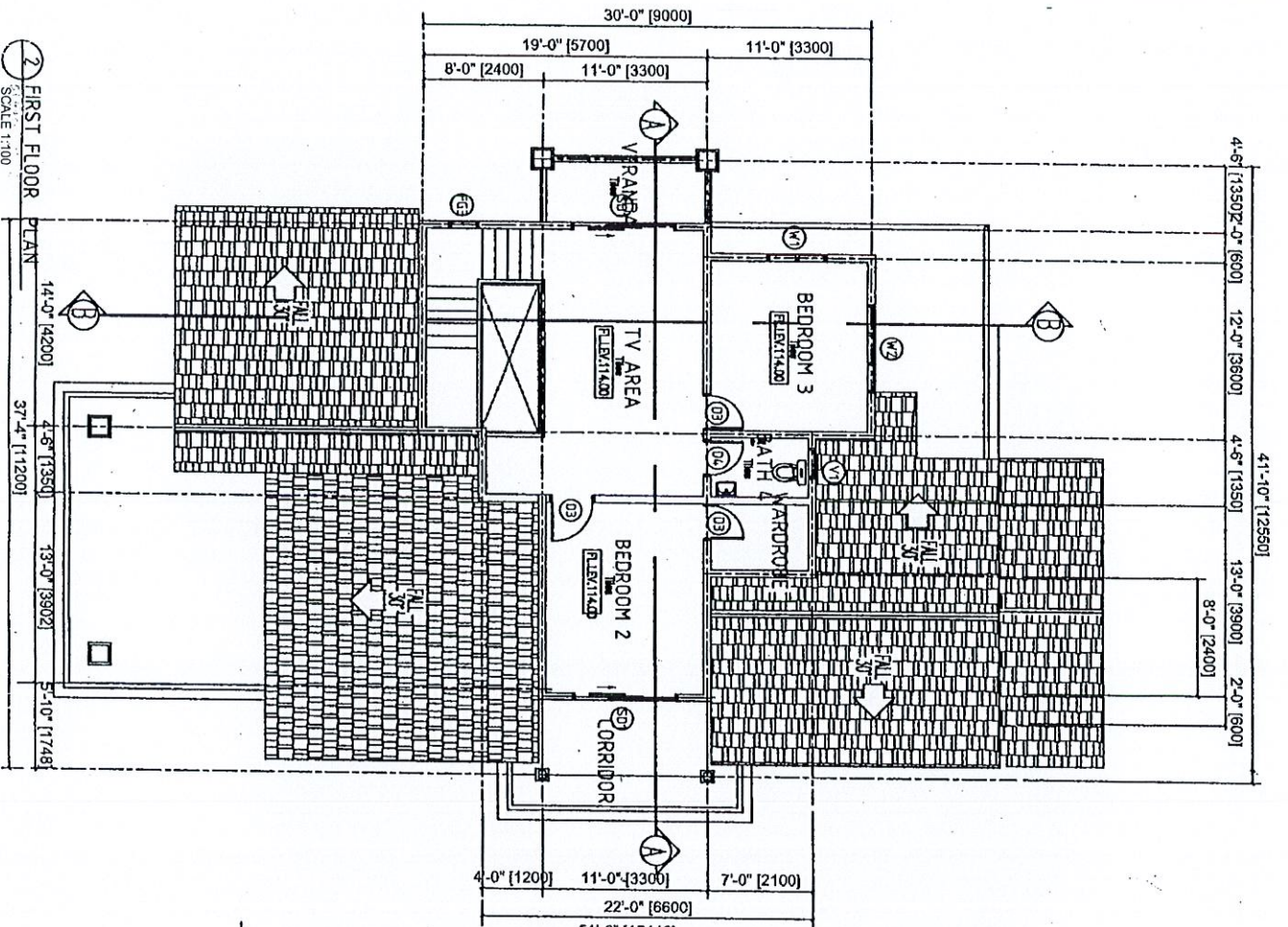


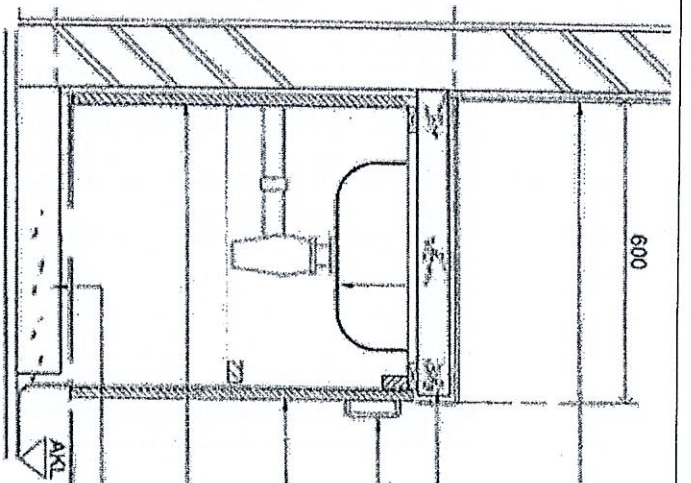
2 DIAGRAM SANITARY LAYOUT
NOT TO SCALE

Nota Syarat-syarat AM Pemasangan Paip.

1. Paip-paip perhubungan dari paip masuk MCB ke meter hendaklah dengan 1"-4" dalam minimum dari paip 61 beses 1" sahaja.
2. Paip yang dipasang dalam rumah hendaklah bertitik dari paip masuk 61 beses 1" & PVC beses 1" sahaja.
3. Paip-paip perhubungan yang hendaklah hendaklah dipasang dari paip 61 beses 1" & PVC beses 1" sahaja.
4. Paip-paip yang mempunyai paip hendaklah dengan 2"-4" dalam minimum dengan menggunakan paip dari paip 61 beses 1" sahaja.
5. Kerja-kerja pemasangan paip hendaklah dilakukan oleh tukang yang berlesen dengan Jabatan Bekalan Air.
6. Tiang paip hendaklah menggunakan paip MCB 3 inci sedalam kerja-kerja dipasang.
7. Setiap kerja-kerja terbitan hendaklah diberikan dan diberikan oleh MCB terbitan terbita sebelum dipasang.
8. Kesemua paip paip dari sink, basin dan sebagainya hendaklah mempunyai paip paip paip sebelum a paip ke bilik-paip.







150mm thick concrete base grade 25 finished with 600x600x8mm thk homogenous tile on 12mm thk cement screed (mass concrete)

SCALE 1:10



Sanitary fittings
 Note: The product specified is an architect's recommendation or equivalent. The Quantity Surveyor can compare with any brand of equivalent product.

Water closet	Potex Marino 841 6/3L Dual flush top press washdown close-coupled wc with concealed S trap in vitreous china c/w flushing mechanism fittings, pan connector and medium duty seat & cover in matching colour, size 860(L) x 352(W) x 720(H)mm (S trap: 250mm) DOE SS-2152+SS-6513 1/2" X 1/2" CP Brass Angle Valve + G1/2" X G1/2" X 300mm Stainless Steel Braided Hose 
Wash hand basin	Potex CH WB2010J Wall hung wash basin center tap hole, chain hole and with overflow in vitreous china c/w basin hangers size 388(L) x 458(W) x 188(H)mm DOE SS-2152+SS-6513 1/2" X 1/2" CP Brass Angle Valve + G1/2" X G1/2" X 300mm Stainless Steel Braided Hose 32mm plastic bottle trap, waste, plug & chain DOE NQ30 'Neu' NQ pillar tap with quarter-turn headwork and NQ single lever metal handle. 
Sink	DOE CF4020DEBSJD Cheliffine Stainless steel kitchen sink 1525mm x 500mm (80" x 20") double end bowl, In-set type, 180mm depth (reversible) c/w standard 40mm waste water outlet, plug & chain. 40mm plastic bottle trap, waste, plug & chain DOE NQ116 'Neu' NQ wall mounted kitchen sink tap with quarter-turn headwork and NQ single lever metal handle. 

Sanitary fittings
 Note: The product specified is an architect's recommendation or equivalent. The Quantity Surveyor can compare with any brand of equivalent product.

Bib Tap	DOE NQ36 'Neu' NQ bib tap with quarter-turn headwork and NQ single lever metal handle. 
Floor trap	DOE FT150SS DOE Stainless steel floor grating size 150mm x 150mm 
Shower rose	DOE DM71 Ball joint shower rose (1 model) - male shower rose with luxury arm - ABS chrome-plated. DOE NQ60 'Neu' NQ 1/2" F&F wall-flange stopcock with quarter-turn headwork and NQ single lever metal handle. 

