

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 : 2024/2025

DCQ 40204 : BUILDING WORKS MEASUREMENT 4

TARIKH : 18 MEI 2025

MASA : 8.30 PAGI – 10.30 PAGI (2 JAM)

Kertas ini mengandungi **LAPAN (8)** halaman bercetak

Bahagian A : Subjektif (2 soalan)

Bahagian B : Subjektif (4 soalan)

Dokumen sokongan yang disertakan : Buku SMM 2, Kertas Dimensa, Kertas
Billing dan Lukisan

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

Notes:**Nota:**

- (a) Measurement of work is based on Malaysian Standard Method of Measurement Works 2nd edition (SMM2).

Pengukuran kerja adalah berdasarkan Kaedah Standard Malaysia Pengukuran Kerja edisi ke-2 (SMM2).

- (b) Student is allowed to make any reasonable assumption if the information given in the drawings are inadequate.

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

- (c) 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.

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

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

ARAHAN :

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

QUESTION 1**SOALAN 1**

Based on Drawing No: **DCQ40204/SHEETPILE/01**, answer all the questions below.

Berdasarkan Lukisan No: DCQ40204/ SHEETPILE/01, jawab semua soalan di bawah.

- CLO1 (a) Referring to SMM2, describe Sections E.5.1 and E.5.2 that are related to steel sheet piles.

Merujuk kepada SMM2, huraikan Seksyen E.5.1 dan E.5.2 berkaitan dengan cerucuk kepingan keluli.

[5 marks]

[5 markah]

- CLO1 (b) Prepare a quantity measurement for piling works related to Sections E.5.5.a and E.5.8 only.

Sediakan pengukuran kuantiti bagi kerja-kerja cerucuk yang berkaitan dengan Seksyen E.5.5.a dan E.5.8 sahaja.

[10 marks]

[10 markah]

- CLO1 (c) Prepare a quantity measurement for piling works related to Section E.5.5.c only.

Sediakan pengukuran kuantiti bagi kerja-kerja cerucuk yang berkaitan dengan Seksyen E.5.5.c sahaja.

[10 marks]

[10 markah]

QUESTION 2**SOALAN 2**

Based on Drawing No: **DCQ40204/BS/01** to **DCQ40204/BS/04**, answer the questions below.

*Berdasarkan Lukisan No: **DCQ40204/BS/01** hingga **DCQ40204/BS/04**, jawab semua soalan di bawah.*

- CLO1 (a) Explain **TWO (2)** quantity measurement methods of trench excavation to lay service pipes.

Terangkan dengan jelas kaedah pengukuran kuantiti untuk penggalian peparit untuk meletakkan paip perkhidmatan.

[5 marks]
[5 markah]

- CLO1 (b) Prepare a quantity measurement for the excavation to lay service pipes and water tank support.

Sediakan pengukuran kuantiti bagi kerja penggalian peparit untuk meletakkan paip perkhidmatan dan penyokong tangki air.

[10 marks]
[10 markah]

- CLO1 (c) Prepare a quantity measurement for riser main pipe and pipe fittings, from the water meter to the kitchen sink.

Sediakan pengukuran kuantiti untuk 'riser main pipe' dan lekapan paip dari meter ke sinki dapur.

[10 marks]
[10 markah]

SECTION B : 50 MARKS**BAHAGIAN B : 50 MARKAH****INSTRUCTION:**

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

ARAHAN :

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

QUESTION 1**SOALAN 1**

Based on Drawing No: **DCQ40204/BOREPILE/01**, answer all questions below.

Berdasarkan Lukisan No: DCQ40204/BOREPILE/01, jawab semua soalan di bawah.

- CLO1 (a) Prepare a quantity measurement for isolated bored pile and contiguous bored pile related to Section E.5.4.b only.

Sediakan pengukuran kuantiti kerja untuk “isolated bored pile” dan “contiguous bored pile” bagi seksyen berkaitan dengan E.5.4.b sahaja.

[8 marks]

[8 markah]

- CLO1 (b) Conclude a bill of quantities, complete with its measurements for isolated bored pile and contiguous bored pile related to Sections E.5.6.a and E.5.6.c.

Rumuskan senarai kuantiti lengkap dengan pengukuran untuk “isolated bored pile” dan “contiguous bored pile” bagi seksyen berkaitan dengan E.5.a and E.5.6.c.

[17 marks]

[17 markah]

QUESTION 2**SOALAN 2**

Based on Drawing No: **DCQ40204/BS/01** to **DCQ40204/BS/04**, answer the questions below.

*Berdasarkan Lukisan No: **DCQ40204/BS/01** hingga **DCQ40204/BS/04**, jawab semua soalan di bawah.*

- CLO1 (a) Prepare a quantity measurement for imported marble, laid on the top and edge of the kitchen table top.

Sediakan pengukuran kuantiti untuk marmar import yang diletakkan di atas dan tepi meja dapur.

[8 marks]
[8 markah]

- CLO1 (b) Conclude a bill of quantities, complete with its measurements for water closet, shower, wash hand basin and kitchen sink.

Rumuskan senarai kuantiti lengkap dengan pengukuran bagi mangkuk tandas, pancuran, besin basuh tangan dan sinki dapur.

[17 marks]
[17 markah]

QUESTION 3**SOALAN 3**

Based on Drawing No: **DCQ40204/BS/01** to **DCQ40204/BS/04**, answer all questions below.

*Berdasarkan Lukisan No: **DCQ40204/BS/01** hingga **DCQ40204/BS/04**, jawab semua soalan di bawah.*

- CLO1 (a) Prepare a quantity measurement for trench excavation to receive a sanitary pipe.

Sediakan pengukuran kuantiti penggalian peparit untuk menerima paip sanitari.

[8 marks]

[8 markah]

- CLO1 (b) Conclude a bill of quantities, complete with its measurements for vent pipe, gully trap, gauge ball and sanitary pipe system test.

Rumuskan senarai kuantiti lengkap dengan pengukuran bagi paip pengudaraan, perangkap kelodak, bebola jejaring dan ujian terhadap sistem paip sanitari.

[17 marks]

[17 markah]

QUESTION 4**SOALAN 4**

Based on Drawing No: **DCQ40204/BS/01** to **DCQ40204/BS/04**, answer all questions below.

*Berdasarkan Lukisan No: **DCQ40204/BS/01** hingga **DCQ40204/BS/04**, jawab semua soalan di bawah.*

- CLO1 (a) Prepare a quantity measurement for built-in decorative box for lighting and trench excavation to receive the main cable.

Sediakan pengukuran kuantiti bagi binaan kekotak hiasan untuk pencahayaan dan penggalian peparit untuk menerima kabel utama.

[8 marks]

[8 markah]

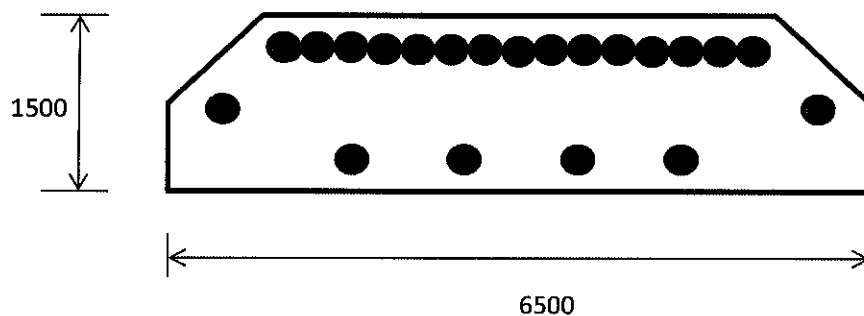
- CLO1 (b) Conclude a bill of quantities, complete with its measurements for electrical points, including wiring as shown in the electrical schedule.

Rumuskan senarai kuantiti lengkap dengan pengukuran bagi “electrical points” termasuk pendawaian seperti yang ditunjukkan di dalam jadual elektrik.

[17 marks]

[17 markah]

SOALAN TAMAT



PLAN OF ABUTMENT (NORTH)

TABLE 1

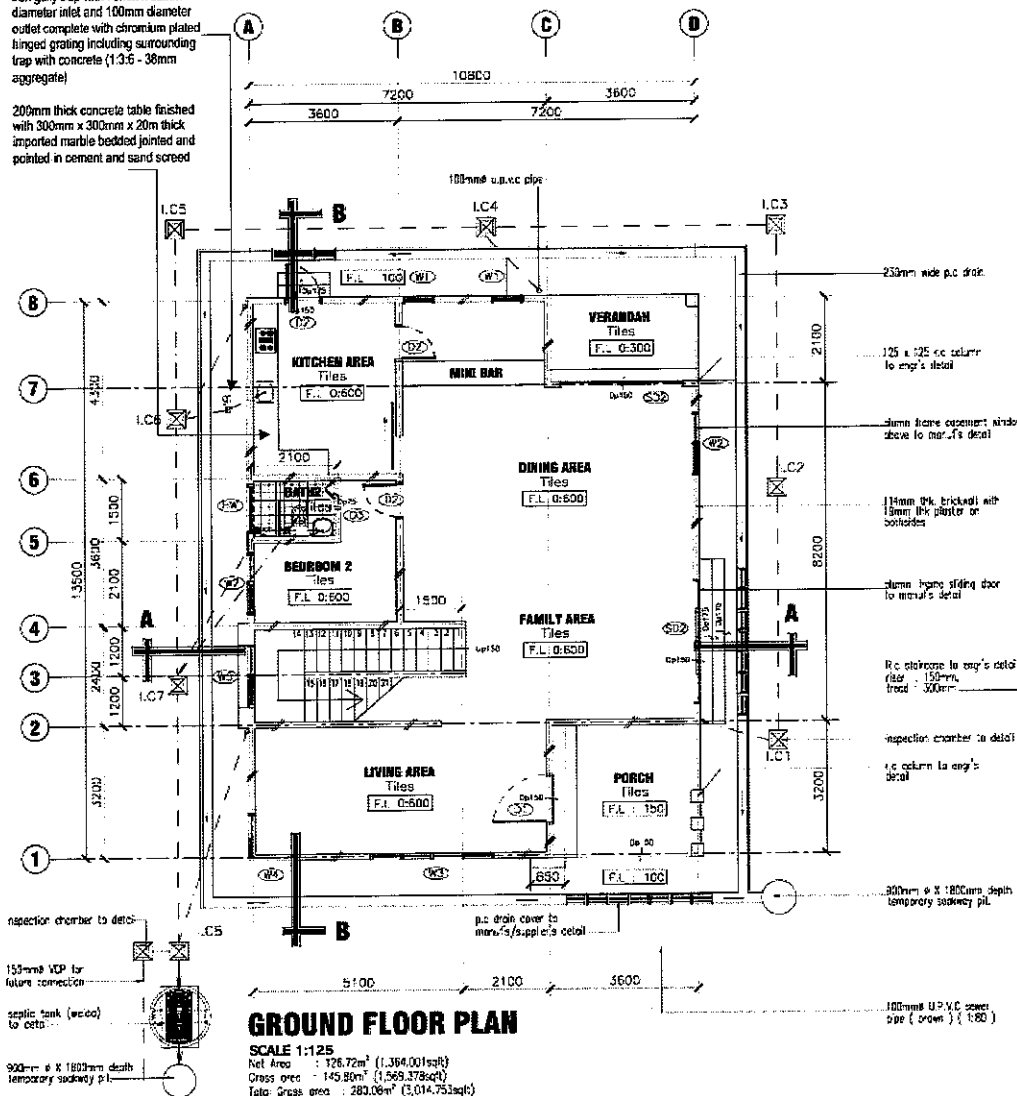
PILE DIAMETER (mm)	MAIN REINFORCEMENT	HELICAL LINKS	Estimate Length Of Pile (m)	Estimate Length from cut off Pile (m)	Max. Working Load (kN)
300	12-32mm diameter	12mm dia - 125mm c/c	13	12	1900

Notes

1. All dimension are in millimeters unless noted otherwise
2. Concrete shall be grade 30.
3. No enlarge base required.
4. Static load test on driven piles shall be twice the working load
5. Temporary casing shall be 20mm thick FSH-12 tubular steel for isolated pile only
6. Allow 10% of excavation in rock.

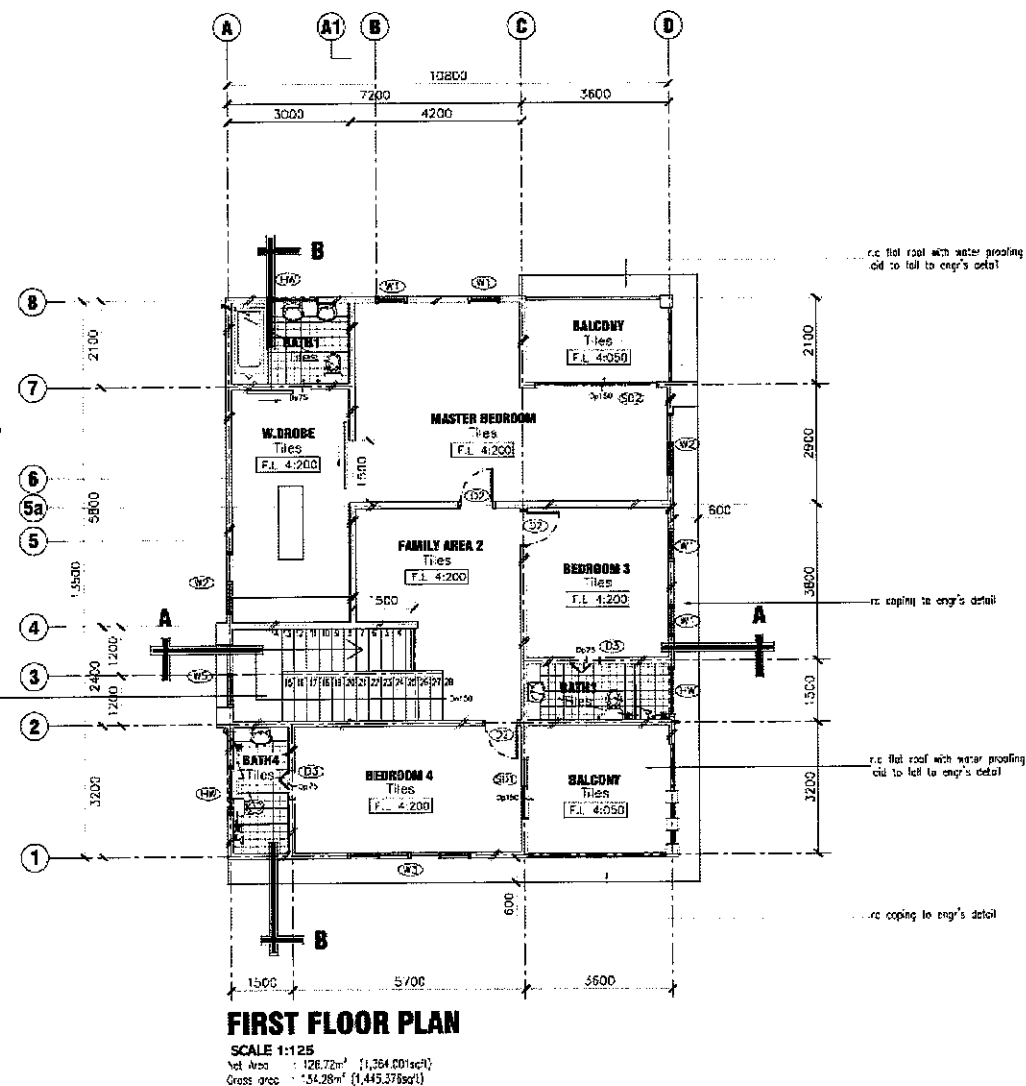
Project Title:-	Drawing Title:-	Drawing No:-	Scale :-
Proposed Construction and Completion of piling abutment at Bidara Bay, Kuala Selangor	PLAN	DCQ40204/BOREDPILE/01	Not To Scale

200mm thick concrete table finished with 300mm x 300mm x 20mm thick imported marble bedded jointed and pointed in cement and sand screed



GROUND FLOOR PLAN

SCALE 1:125
 Net Area : 126.72m² (1,364.001sqft)
 Gross area : 145.80m² (1,569.378sqft)
 Total Gross area : 283.06m² (3,014.753sqft)

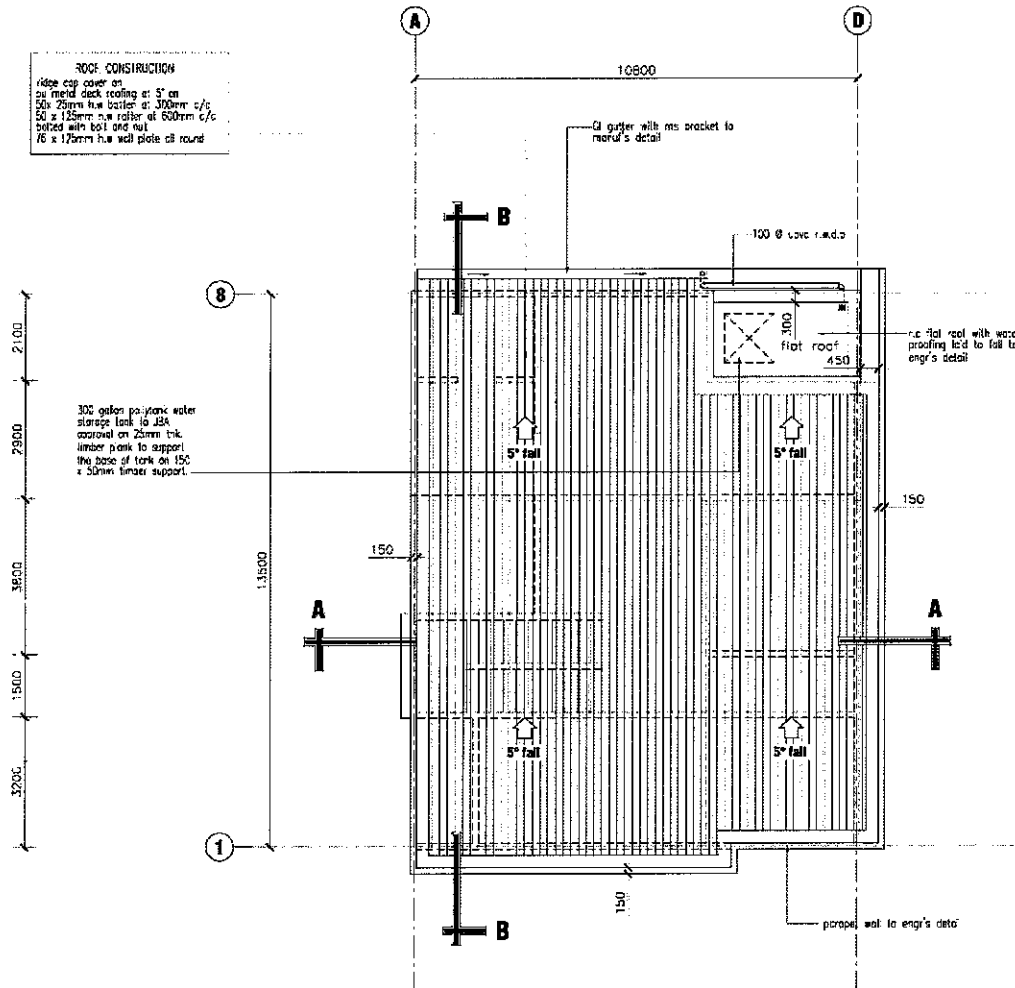


FIRST FLOOR PLAN

SCALE 1:125
 Net Area : 126.72m² (1,364.00sqft)
 Gross Area : 154.28m² (1,445.37sqft)

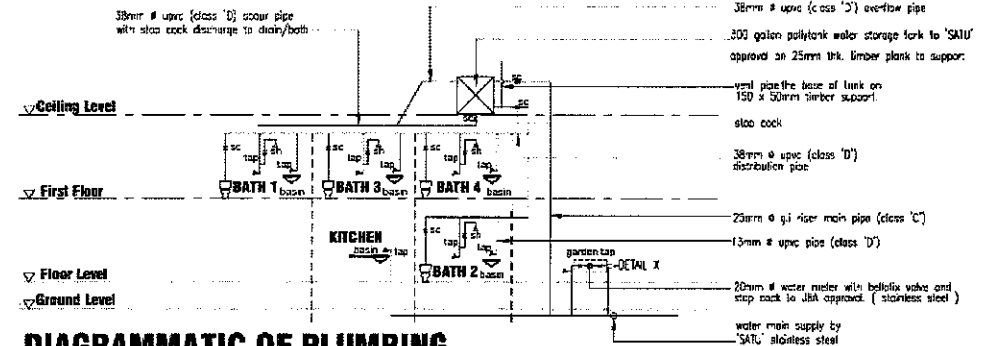
DRAWING NO:
DCQ40204/BS/02

ROOF CONSTRUCTION
 ridge cap cover on
 pu metal deck roofing at 5° on
 60 x 20mm h.w. battens at 300mm c/c
 50 x 15mm s.w. rafters at 600mm c/c
 bolted with bolt and nut
 76 x 175mm h.w. wall plate all round



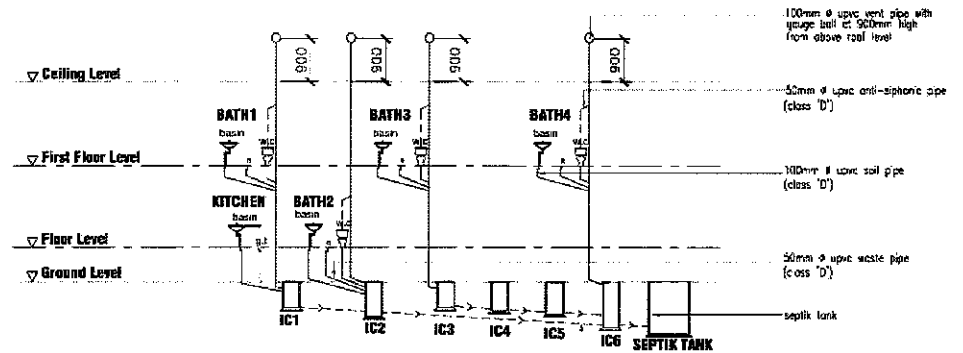
ROOF PLAN

SCALE 1:125



DIAGRAMMATIC OF PLUMBING LAYOUT

Not To Scale



DIAGRAMMATIC OF SANITARY LAYOUT

Not To Scale

DRAWING NO:
DCQ40204/BS/03

