

SULIT



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

JABATAN KEJURUTERAAN AWAM

PEPERIKSAAN AKHIR

SESI II: 2021/2022

DCQ30154: BUILDING WORK MEASUREMENT 3

TARIKH : 4 JULAI 2022

MASA : 2.30 PM – 4.30 PM (2 JAM)

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

Bahagian A: Struktur (3 soalan)

Bahagian B: Esei (1 soalan)

Dokumen sokongan yang disertakan : 5 Set Lukisan

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

Notes:**Nota:**

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

Pengukuran kuantiti hendaklah merujuk kepada Standard Method of Measurement of Building Works Second Edition (SMM2)

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

Calon dibenarkan untuk membuat andaian sekiranya maklumat yang diberi di dalam lukisan adalah tidak mencukupi.

SESI II: 2021/2022

SECTION A: 75 MARKS**BAHAGIAN A: 75 MARKAH****INSTRUCTION**

This section consists of **THREE (3)** structure essay questions. Answer **ALL** questions.

ARAHAN

*Bahagian ini mengandungi **TIGA (3)** soalan esei berstruktur. Jawab **SEMUA** soalan.*

QUESTION 1**SOALAN 1**

CLO 1
C2

- (a) By referring to Section S.17 & S.18, prepare a complete description of Ceiling Works (types of ceiling finishes: Fibrous Plasterboard Ceiling).

Dengan merujuk kepada seksyen S.17 & S.18, sediakan satu keterangan kerja yang lengkap bagi Kerja-Kerja Siling (jenis kemasan siling: Siling 'Fibrous Plasterboard' / Siling Kapur).

[3 Marks]

[3 Markah]

CLO 1
C3

- (b) By referring to the Drawing No. **DCQ30154/INTERNAL FLOOR FINISHES/SA/Q1/01**, prepare the quantities measurement for **Dry Kitchen & Bedroom 1 Only**, based on items below:

*Merujuk kepada Lukisan No. **DCQ30154/INTERNAL FLOOR FINISHES/SA/Q1/01**, sediakan pengukuran kuantiti bagi **Dapur Kering & Bilik Tidur 1 Sahaja**, berdasarkan item kerja seperti di bawah:*

Table (Qb)-Taking Of List

<i>Item</i>	<i>Description</i>	<i>unit</i>
1.	Bed and Backing Works	
	a) Floor Finishes (Dry Kitchen & Bedroom 1) <i>Kemasan lantai (Dapur Kering & Bilik Tidur 1)</i>	?
	b) 50mm drop (Dry Kitchen) <i>50mm tinggi bendul (Dapur Kering)</i>	?
	c) 100mm high skirting (Bedroom 1) <i>100mm tinggi kambi (Bilik Tidur 1)</i>	?
2.	Tiling Works	
	a) Floor Finishes (Dry Kitchen & Bedroom 1) <i>Kemasan lantai (Dapur kering & Bilik Tidur 1)</i>	?
	b) 50mm drop (Dry Kitchen) <i>50mm tinggi bendul (Dapur Kering)</i>	?
	c) 100mm high skirting (Bedroom 1) <i>100mm tinggi kambi (Bilik Tidur 1)</i>	?

[14 Marks]

[14 Markah]

CLO 1
C4

- (c) With the aid of measurement, conclude all measured quantities in **Question 1(b)** as the bill of quantities.

Dengan bantuan pengukuran, rumuskan semua kuantiti terukur dalam Soalan 1(b) sebagai senarai kuantiti

[8 Marks]

[8 Markah]

QUESTION 2**SOALAN 2**CLO 1
C2

- (a) Determine the section and clause for the items as referred below:

Tentukan seksyen dan klausa bagi item yang dirujuk seperti di bawah:

<i>Items</i>	<i>Section & Clause</i>
i. Disposal Excavated Material <i>Bahan-bahan buangan daripada pengorekan</i>	?
ii. Excavation <i>Pengorekan</i>	?
iii. Disposal of Water <i>Pembuangan air</i>	?

[3 Marks]

[3 Markah]

CLO 1
C3

- (b) By referring to the Drawing No. **DCQ30154/EARTHWORKS/SA/Q2/01**, prepare the quantities measurement average depth of cutting and filling using Weighted Average Method. Coverage area are from grid point **A2, A3, A4, B2, B3, B4, B5, C2, C3, C4 & C5 Only**.

Merujuk kepada Lukisan No. DCQ30154/EARTHWORKS/SB/Q2/01, sediakan pengukuran kuantiti purata kedalaman pemotongan dan penambahan dengan menggunakan Kaedah Pengorekan Purata Pemberatan. Kawasan yang terlibat adalah dari titik grid A2, A3, A4, B2, B3, B4, B5, C2, C3, C4 & C5 Sahaja

[14 Marks]

[14 Markah]

CLO 1
C4

- (c) With the aid of measurement, conclude all measured quantities in **Question 2(b)** as the bill of quantities.

Dengan bantuan pengukuran, rumuskan semua kuantiti terukur dalam Soalan 2(b) sebagai senarai kuantiti

[8 Marks]

[8 Markah]

QUESTION 3**SOALAN 3**CLO 1
C2

- (a) Clarify the differences of measurement unit between sand blinding and concrete blinding based on SMM2.

Terangkan perbezaan unit bagi pengukuran item alas pasir dan alas konkrit berdasarkan SMM2.

[3 Marks]

[3 Markah]

CLO 1
C3

- (b) By referring to the Drawing No. **DCQ30154/RETAINING WALL/SA/Q3/01**, prepare the quantities measurement of the following items

*Merujuk kepada Lukisan No. **DCQ30154/RETAINING WALL/SA/Q3/01**, sediakan pengukuran kuantiti bagi item berikut.*

<i>item</i>	<i>Description</i>	<i>unit</i>
1	Formwork (wall, based & beam) <i>Kotak bentuk (dinding, lantai & rasuk)</i>	?
2.	Concrete (wall, based & beam) <i>Konkrit (dinding, lantai & rasuk)</i>	?
3.	Concrete Blinding (under beam) <i>Konkrit alas (bawah rasuk)</i>	?

[14 Marks]

[14 Markah]

CLO 1
C4

- (c) With the aid of measurement, conclude all measured quantities in **Question 1(b)** as the bill of quantities.

*Dengan bantuan pengukuran, rumuskan semua kuantiti terukur dalam **Soalan 1(b)** sebagai senarai kuantiti*

[8 Marks]

[8 Markah]

SECTION B: 25 MARKS**BAHAGIAN B: 25 MARKAH****INSTRUCTION**

This section consists of **ONE (1)** structure essay questions. Answer all the questions.

ARAHAN

Bahagian ini mengandungi **SATU (1)** soalan esei berstruktur. Jawab semua soalan.

QUESTION 1**SOALAN 1**

CLO 1
C3

- (a) By referring to the Drawing No. **DCQ30154/BASEMENT/SB/Q1/01-02 & 02-02**, Prepare the quantities measurement of the following items:

Merujuk kepada Lukisan No. DCQ30154/BASEMENT/SB/Q1/01-02 & 02-02, ukur kuantiti bagi item berikut.

<i>item</i>	<i>Description</i>	<i>unit</i>
1.	Concrete works (wall & slab only) <i>Kerja-kerja konkrit (dinding & lantai sahaja)</i>	?
2.	Lean concrete (under slab only) <i>Konkrit alas (di bawah lantai sahaja)</i>	?
3.	Hardcore <i>Hadkor</i>	?

[15 Marks]

[15 Markah]

CLO 1
C4

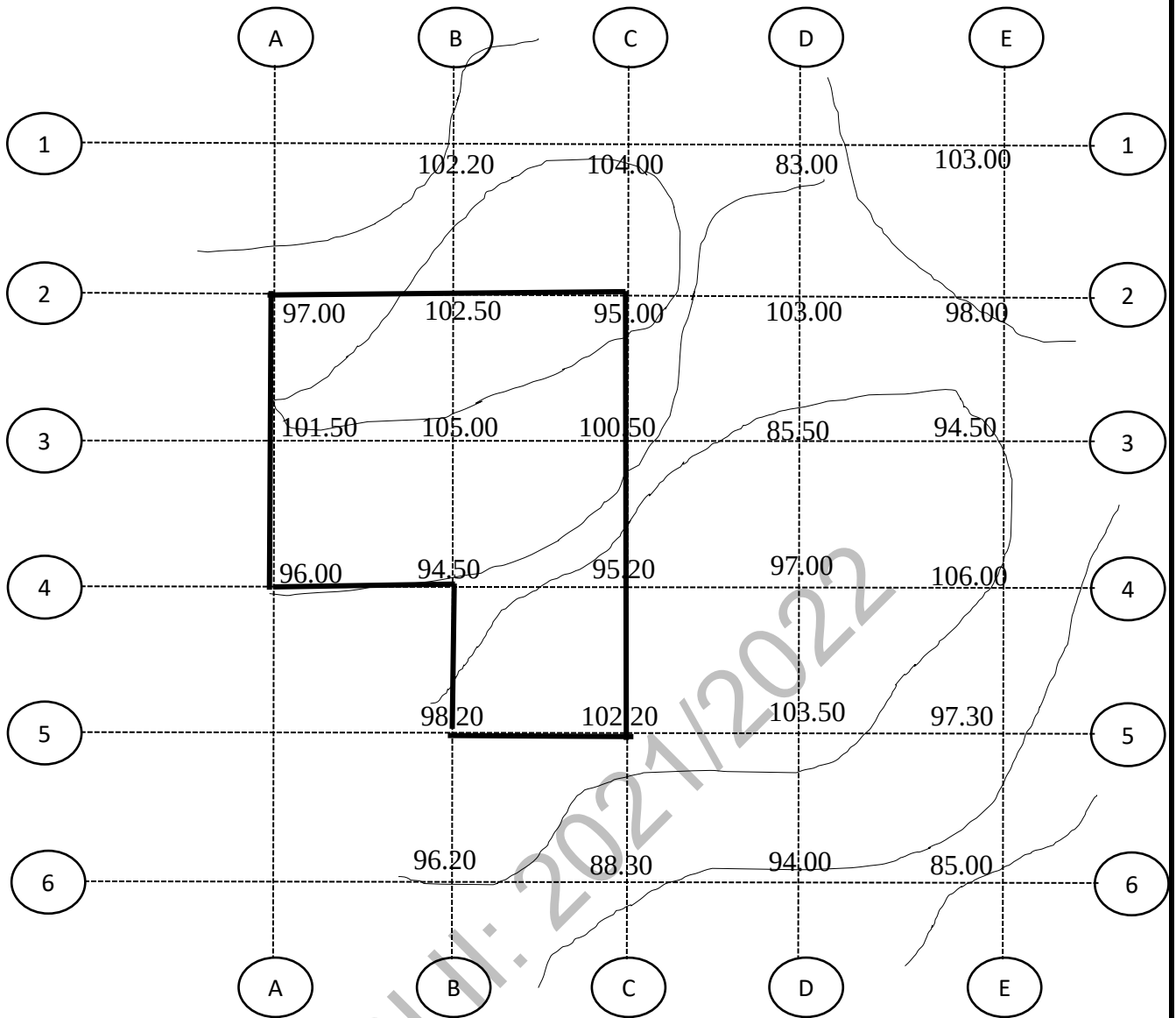
- (b) With the aid of measurement, conclude all measured quantities in question 1(b) as the bill of quantities.

Dengan bantuan pengukuran, rumuskan semua kuantiti terukur dalam soalan 1(b) sebagai senarai kuantiti

[10 Marks]

[10 Markah]

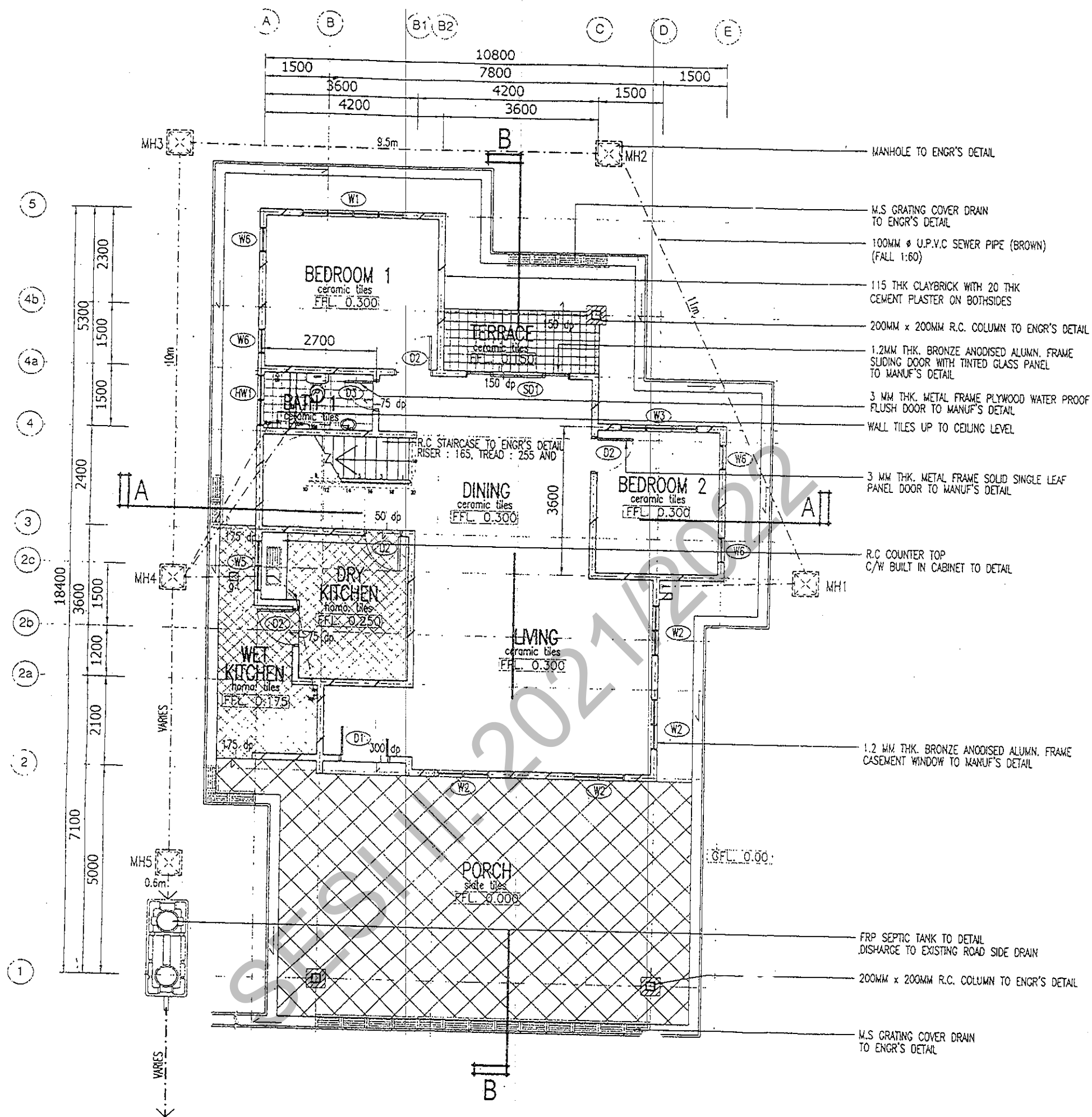
SOALAN TAMAT



SPECIFICATION:-

1. All grid dimension 5m x 5m
2. Proposed platform level: 100.00
3. Excavation for top soil is not required
4. All level shown are original ground level
5. All excavation strictly within site boundary
6. Allow 10% for excavation in rock
7. Excavated material shall be reuse for filling work after selected and treated.

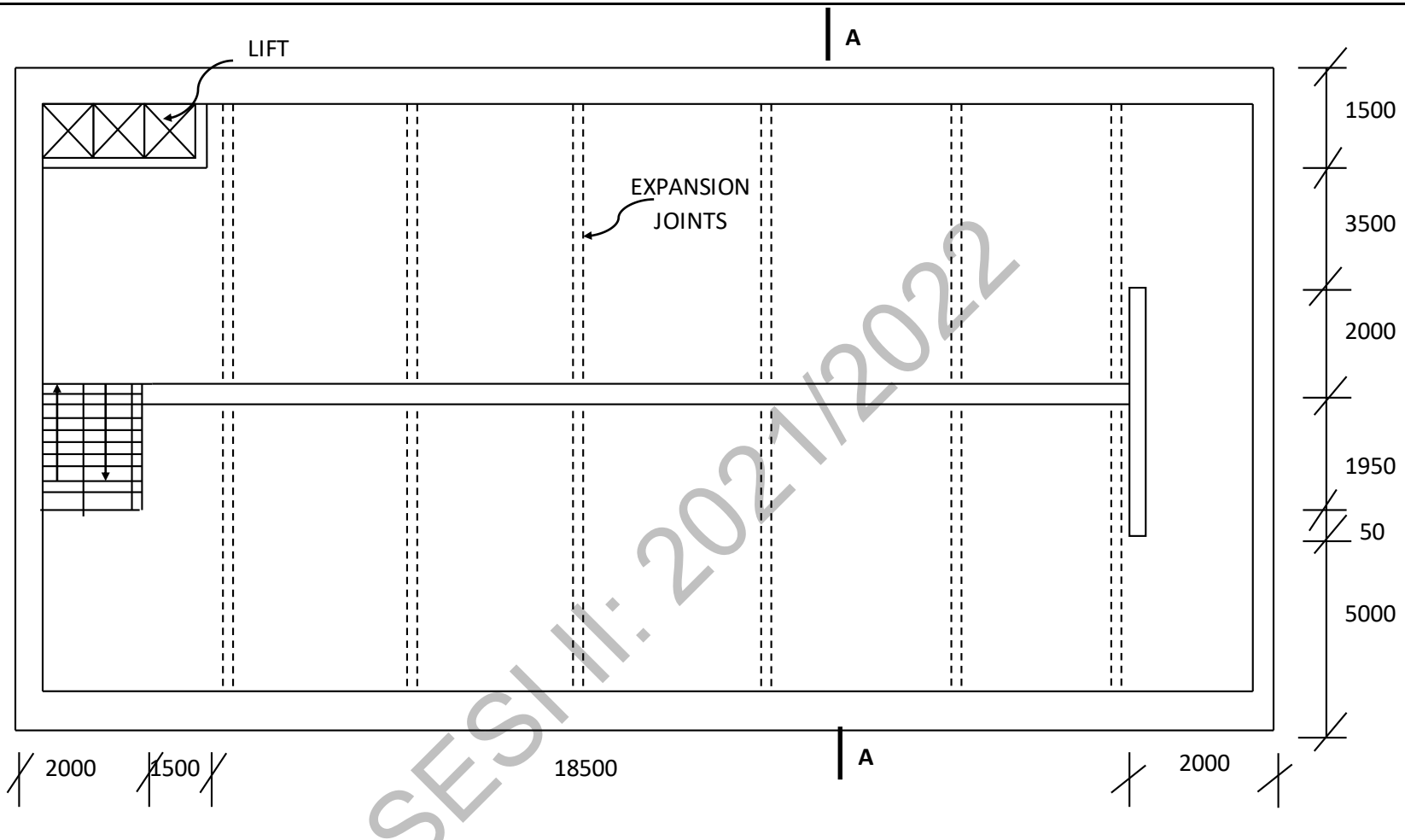
DRAWING NO: DCQ30154/EARTHWORKS/SA/Q2/01
(N.T.S)



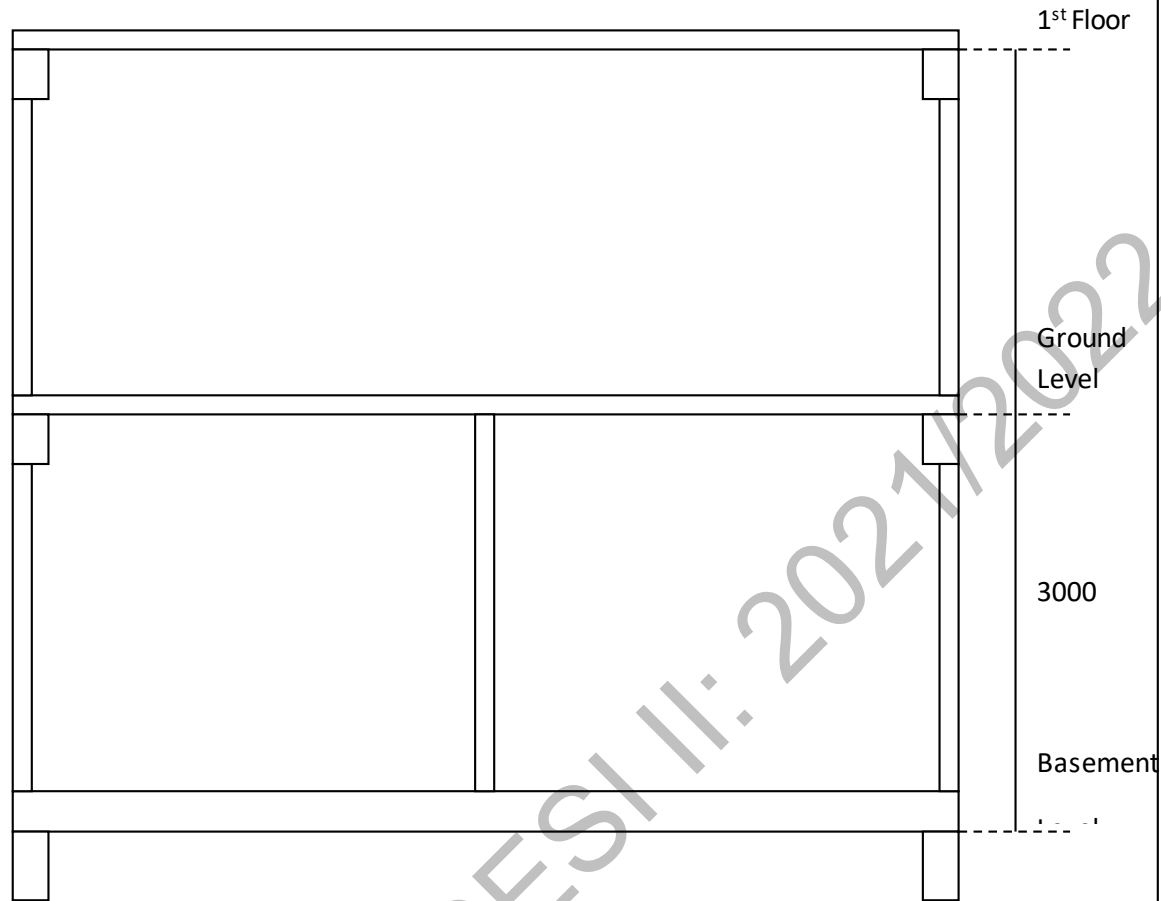
SPECIFICATION NOTES

1. Tile size:
 - a) homogenous tile = 300mm x 300mm x 6mm tick
 - b) ceramic tile = 600 x 300 mm x 8mm tick
 - c) non slip ceramic tile (at bath) = 300mm x 300mm x 6mm thick
2. Door size:
 - a) D1 - 3000mm x 2100mm
 - b) D2 - 2000mm x 2100mm
 - c) D3 - 900mm x 2000mm
 - d) SD1 - 4000mm x 2300mm
2. Drawing Scale = 1: 100

DRAWING NO: DCQ30154/FLOOR FINISHES/SA/Q1/01



DRAWING NO: DCQ30154/BASEMENT/SB/Q1/01-02
LAYOUT PLAN
(NOT TO SCALE)

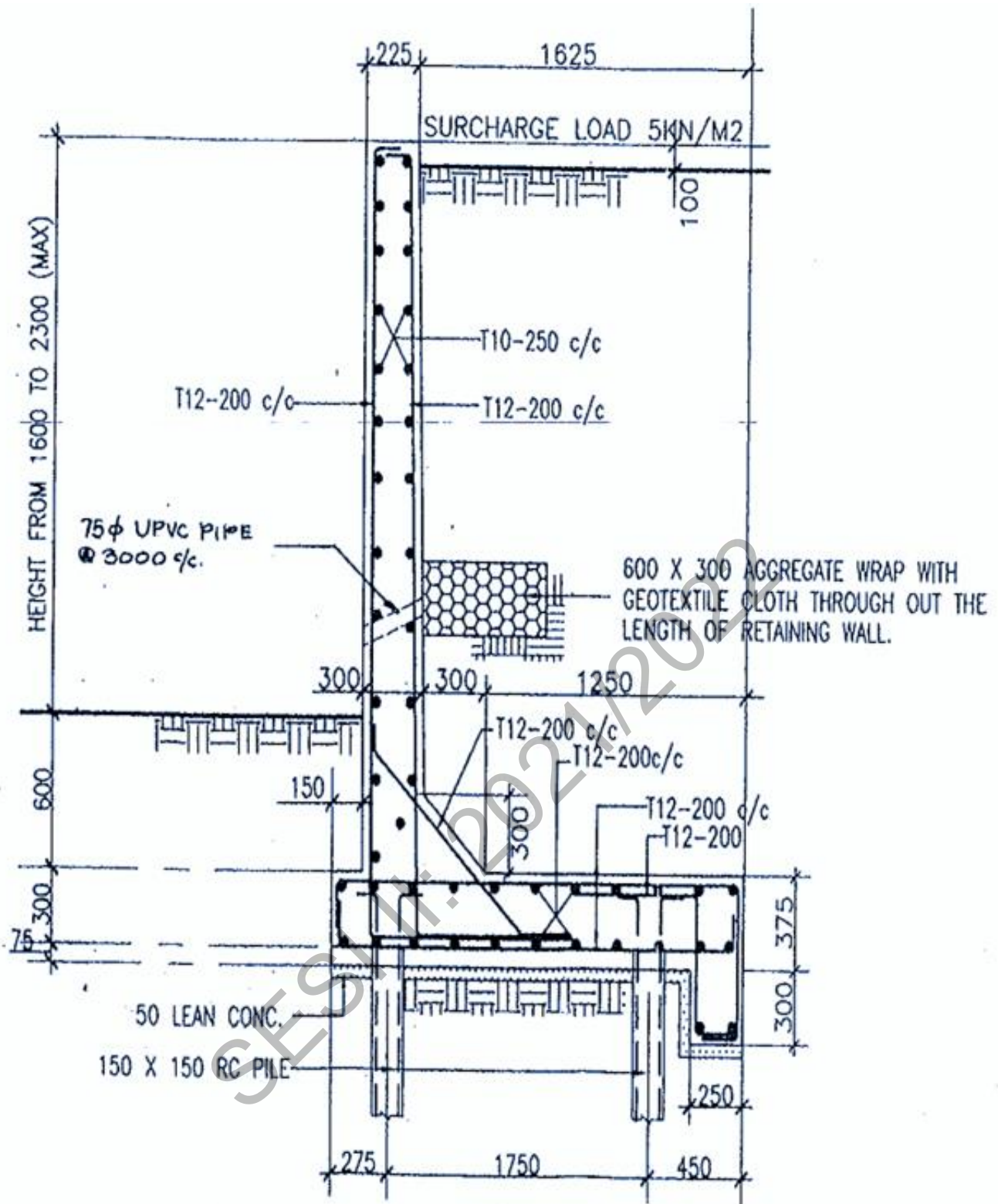


**SPECIFICATION NOTES:
BASEMENT/DETAILS**

1. Thickness of external concrete wall shall be 300mm grade 30
2. Thickness of internal concrete wall shall be 150mm grade 30
3. Thickness of basement slab shall be 150mm.
4. Size of ground floor beam shall be 350x350mm.
5. Size of basement beam shall be 350x450mm.
6. Two layer of fabric reinforcement BRC No. A7 embedded into mass concrete basement slab.
7. Two layer of fabric reinforcement BRC No. A7 embedded into mass concrete basement external concrete wall.
8. 10mm dia. Bonding tie at every edge of brick wall connected to concrete wall.
9. Damp proof membrane laid under ground slab.
10. Damp proof course laid under brick wall and external concrete wall.
11. All concrete cover shall be 50mm thick.
12. Thickness of lean concrete shall be 50mm-grade 20
13. Thickness of hardcore shall be 150mm.

DRAWING NO: DCQ30154/BASEMENT/SB/Q1/02-02

SECTION A-A
(NOT TO SCALE)



Notes:

1. Drawing Not To Scale
2. Concrete wall shall be grade 30
3. Lean concrete shall be grade 20
4. All reinforcement used is from High Tensile Stell unless otherwise stated
5. Length of Proposed Retaining Wall is 30M

DRAWING NO: DCQ30154/RETAINING WALL/SA/Q3/01