
UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Pertama
Sidang Akademik 2005/2006

November 2005

RMG 336 – Ukur Bahan 1

Masa: 3 jam

Sila pastikan bahawa kertas peperiksaan ini mengandungi **ENAM** muka surat yang tercetak sebelum anda memulakan peperiksaan ini.

Kaedah pengukuran perlu berdasarkan kepada prinsip-prinsip dalam Kaedah Ukuran Standard bagi Kerja Bangunan Edisi Kedua (SMM2).

Jawab **SEMUA** soalan.

- 2 -

1. Anda diberi 1 keping lukisan iaitu lukisan KSS/1 yang menunjukkan kerja substruktur untuk sebuah bangunan stor. Anda dikehendaki mengukur semua item kerja substruktur termasuk:-
 - (a) Kerja pengorekan dan pembuangan
 - (b) Kerja konkrit dan papan acuan untuk:-
 - (i) asas
 - (ii) rasuk bawah (*ground beam*)
 - (iii) lantai bawah (*ground slab*)
 - (iv) tiang sambut (*column stump*)
 - (v) semua kerja-kerja yang berkaitan

Pengukuran besi tetulang tidak diperlukan. Skala adalah seperti tertera di lukisan.

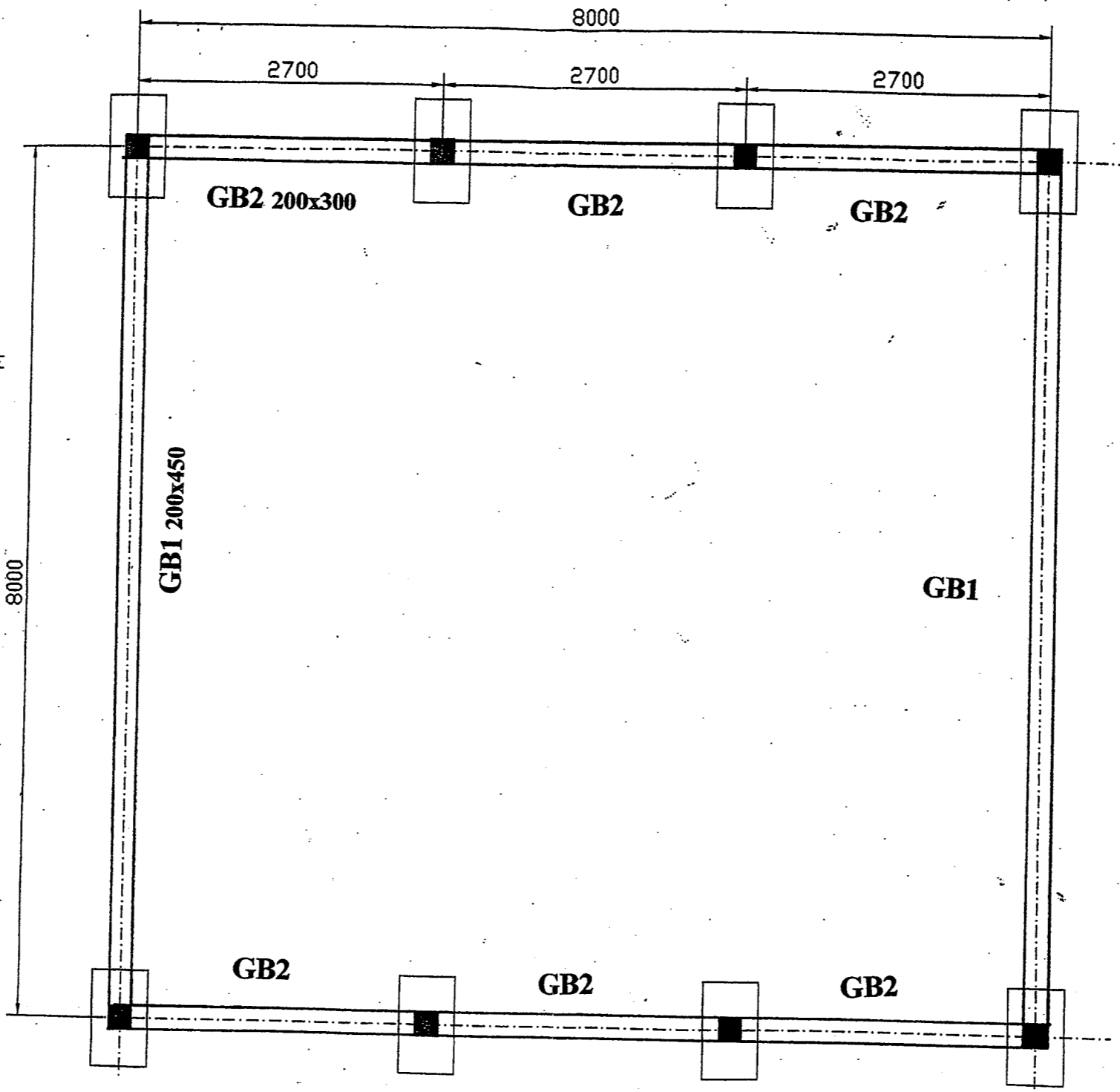
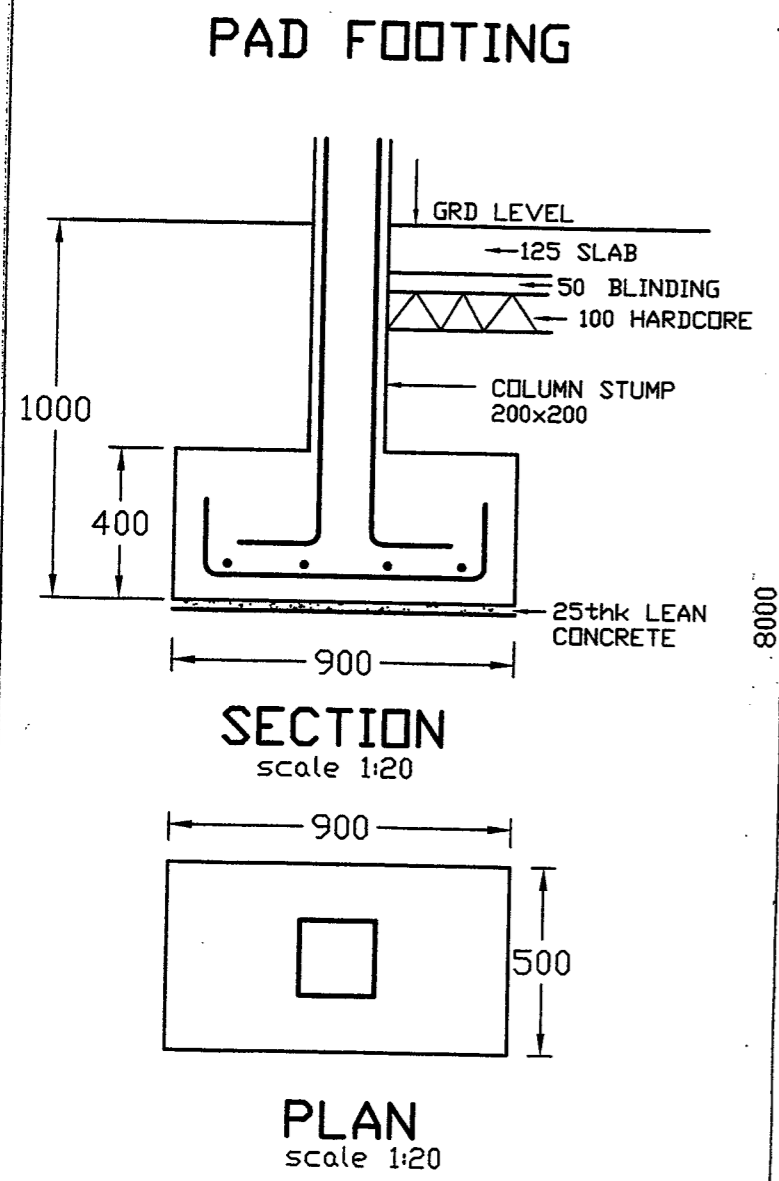
(50 markah)

2. Sila ukurkan kerja-kerja pemasangan pintu dan tingkap dengan berpandukan kepada lukisan-lukisan DW1, DW2 dan DW3.

(50 markah)

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RQK 337
UKUR BAHAN 2
LUKISAN NO: KSS/1



- GENERAL NOTES :**
- THESE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND M & E DRAWINGS AND ANY DISCREPANCY SHOULD BE NOTIFIED IMMEDIATELY TO THE S.O. BEFORE COMMENCING WORK.
 - CONCRETE SHALL BE OF GRADE 25 N/mm² IN COMPLIANCE TO BS. 8110:1985.
 - PORTLAND CEMENT USED SHALL COMPLY TO BS. 12.
 - COARSE AND FINE AGGREGATES SHALL COMPLY TO BS. 882.
 - REINFORCEMENT STEEL SHALL COMPLY WITH BS. 4449, BS.4482 OR BS.4483. REINFORCEMENT SHALL BE CUT AND/OR BENT IN ACCORDANCE WITH BS. 4466.
 - YIELD STRESSES FOR REINFORCEMENT STEEL SHALL BE AS FOLLOWS :
 HIGH YIELD STEEL.....480 N/mm²
 MILD STEEL.....250 N/mm²
 STEEL FABRIC.....485 N/mm²
 - CLEAR CONCRETE COVER TO MAIN BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE INDICATED :
 FOOTING.....50 mm
 GROUND BEAMS, STUMPS
 SUBSTRUCTURAL WALLS.....40 mm
 SUPERSTRUCTURAL BEAMS.....25 mm
 SUPERSTRUCTURAL SLABS.....20 mm
 COLUMNS.....25 mm
 SUPERSTRUCTURAL WALLS.....20 mm
 - ALL CONCRETE SHALL BE PROPERLY VIBRATED WITH AN APPROVED MECHANICAL VIBRATORS.
 - EXCAVATED FOUNDATIONS AND STEEL REINFORCEMENT SHALL BE APPROVED BY THE ENGINEER BEFORE PLACING OF CONCRETE.
 - UNLESS OTHERWISE STATED, 50mm LEAN CONCRETE SHALL BE PROVIDED BENEATH ALL SUBSTRUCTURAL WORKS.
 - UNLESS STATED OTHERWISE, BASIC LAP LENGTH SHALL BE :-

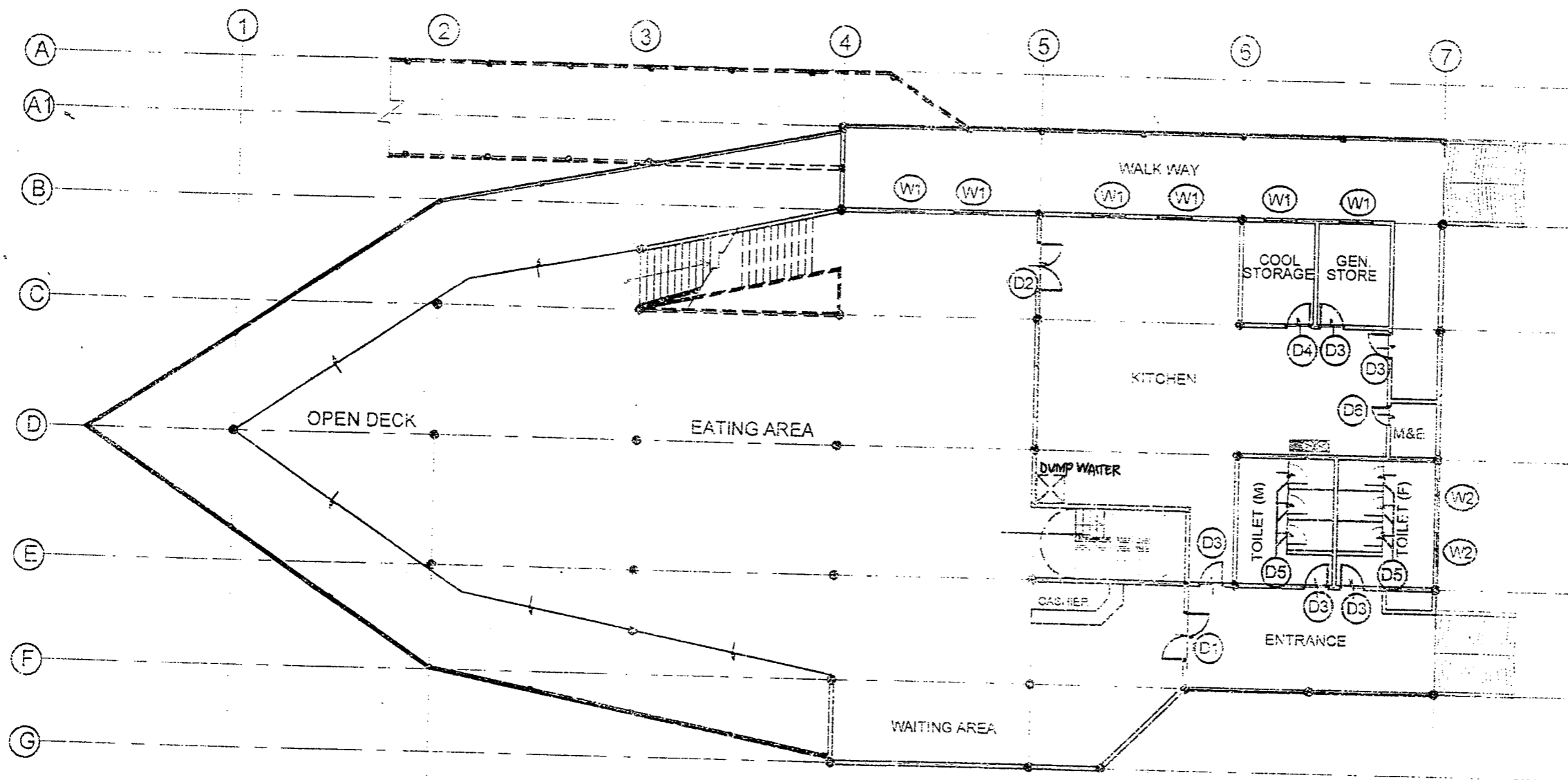
TYPE OF STEEL	COMPRESSION	TENSION
MILD STEEL	39 D	39 D
H.T STEEL	40 D	40 D

- STIFFENERS SHALL BE PROVIDED AT 3.05m MAXIMUM TO ALL BRICKWALLS, AS FOLLOWS :

FINISHED BRICKWALL THICKNESS (mm)	STIFFENER SIZE (mm x mm)	STIFFENER REINFORCEMENT
140	125 x 125	4T10 & R6 @ 150
240	225 x 225	4T12 & R6 @ 150

- 'COB' DENOTES COLUMN ON BEAM.
- 'COW' DENOTES COLUMN ON WALL.
- ALL DIMENSIONS SHOWN ARE IN MILLIMETRES.
- ALL BEAM DIMENSIONS READ AS WIDTH x DEPTH.
- LENGTH OF R.C. PILE (150x150) SHALL BE 28m UNLESS OTHERWISE STATED.

DW 1



PELAN ARAS BAWAH

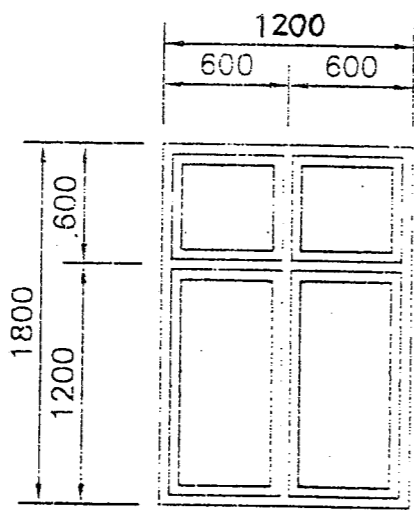
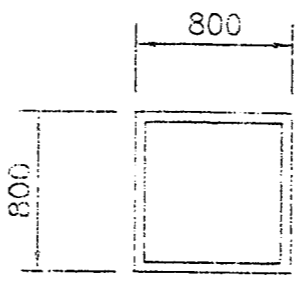
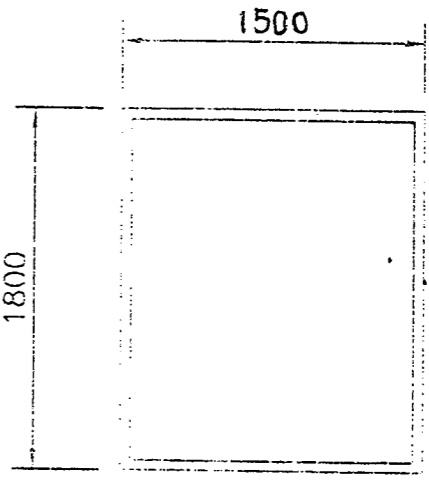
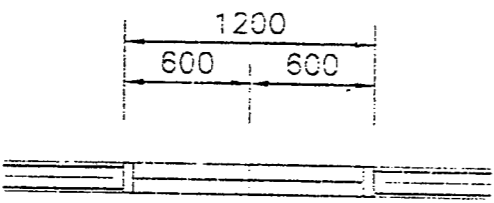

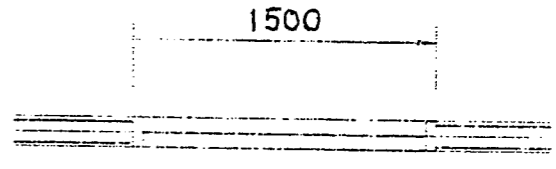
TENDER DRAWING

DW 2

ELEVATIONS						
PLAN						
DOOR TYPE	(D1)	(D2)	(D3)	(D4)	(D5)	(D6)
LOCATION	ENTRANCE	KITCHEN	TOILET, KITCHEN, GEN. STORE	COOL STORAGE	TOILET	M & E
IRONMONGERY	-	-	-	-	-	-
FINISHES	ALUM. FRAME GLASS DOOR WITH FIXED GLASS PANEL TO MANUF'S DET.	H.W. FRAME PLYWOOD FLUSH DOOR TO MANUF'S DETAIL	H.W. FRAME PLYWOOD FLUSH DOOR TO MANUF'S DETAIL	TO SPECIALIST DETAIL	H.W. FRAME PLYWOOD FLUSH DOOR TO DETAIL	TO SPECIALIST DETAIL
QUANTITIES	1 UNITS	1 UNITS	6 UNITS	1 UNITS	6 UNITS	1 UNITS

TECHNICAL DRAWING

DW 3

ELEVATIONS			
PLAN			
DOOR TYPE	(W1)	(W2)	(W3)
LOCATION	EATING AREA, KITCHEN	KITCHEN, TOILET, STAIRCASE	EATING AREA
IRONMONGERY	-	-	-
FINISHES	ALUM. FRAME CASEMENT WINDOW TO MANUF'S DETAIL	ALUM. FRAME TOP HUNG WINDOW TO MANUF'S DETAIL	ALUM. FRAME FIXED GLASS PANEL TO MANUF'S DETAIL
QUANTITIES	6 UNITS	18 UNITS	16 UNITS

REVISIONS