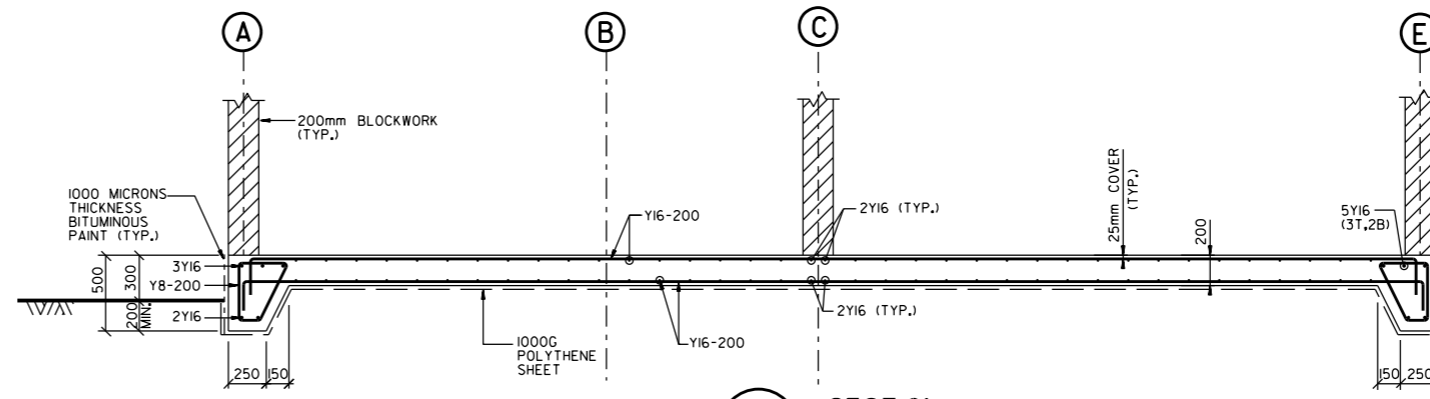
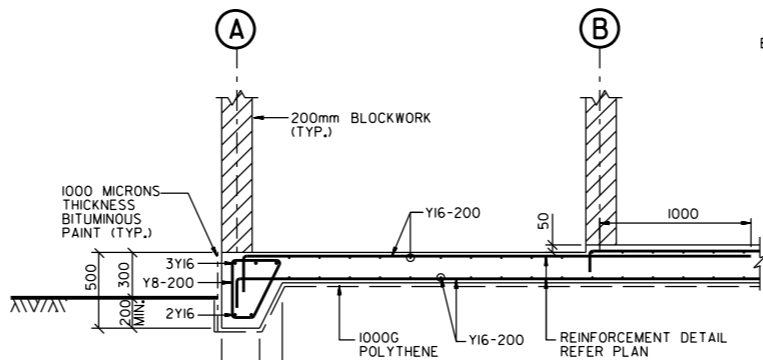


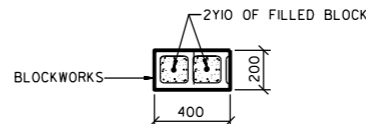
RAFT FOUNDATION PLAN
SCALE 1:100



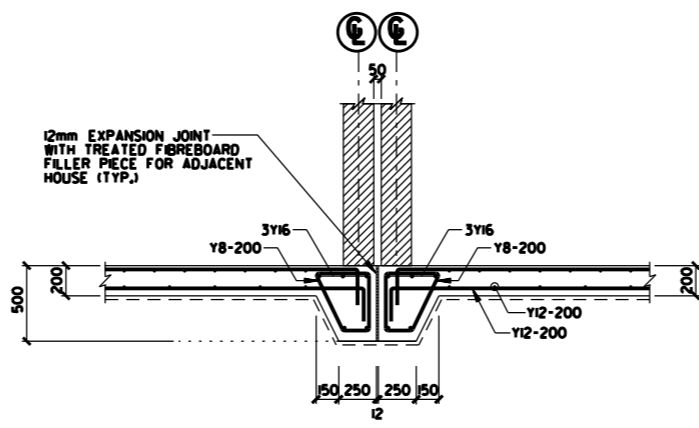
SECTION 1-1
SCALE 1:50



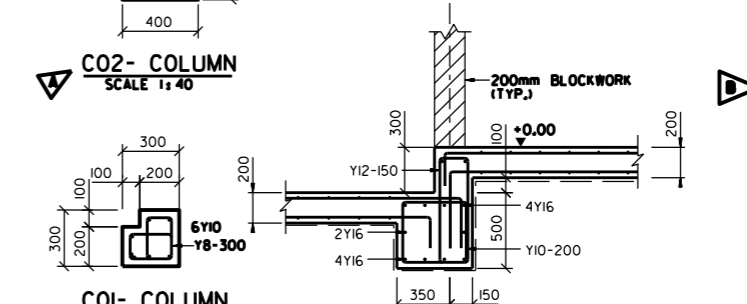
SECTION 3-3
SCALE 1:50



SECTION 5-5
SCALE 1:50

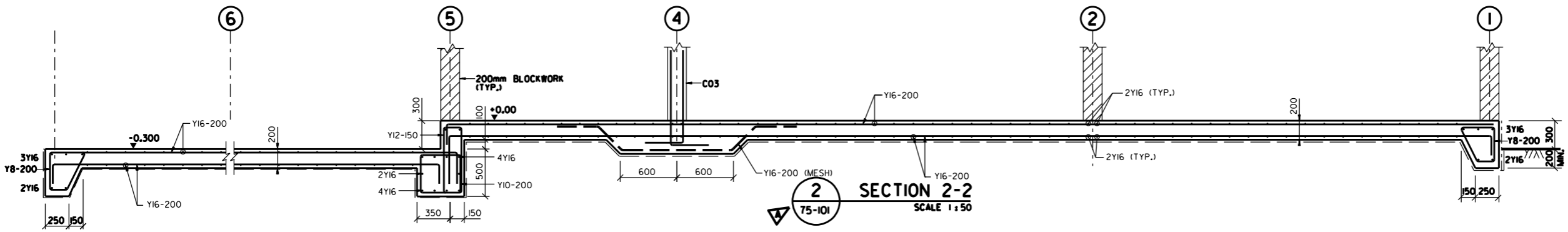


SECTION DETAIL OF HOUSE ATTACHMENT (RAFT FOUNDATION AT SAME LEVEL)
SCALE 1:50



SECTION DETAIL OF HOUSE ATTACHMENT (RAFT FOUNDATION AT DIFFERENT LEVELS)
SCALE 1:50

SECTION 4-4
SCALE 1:50



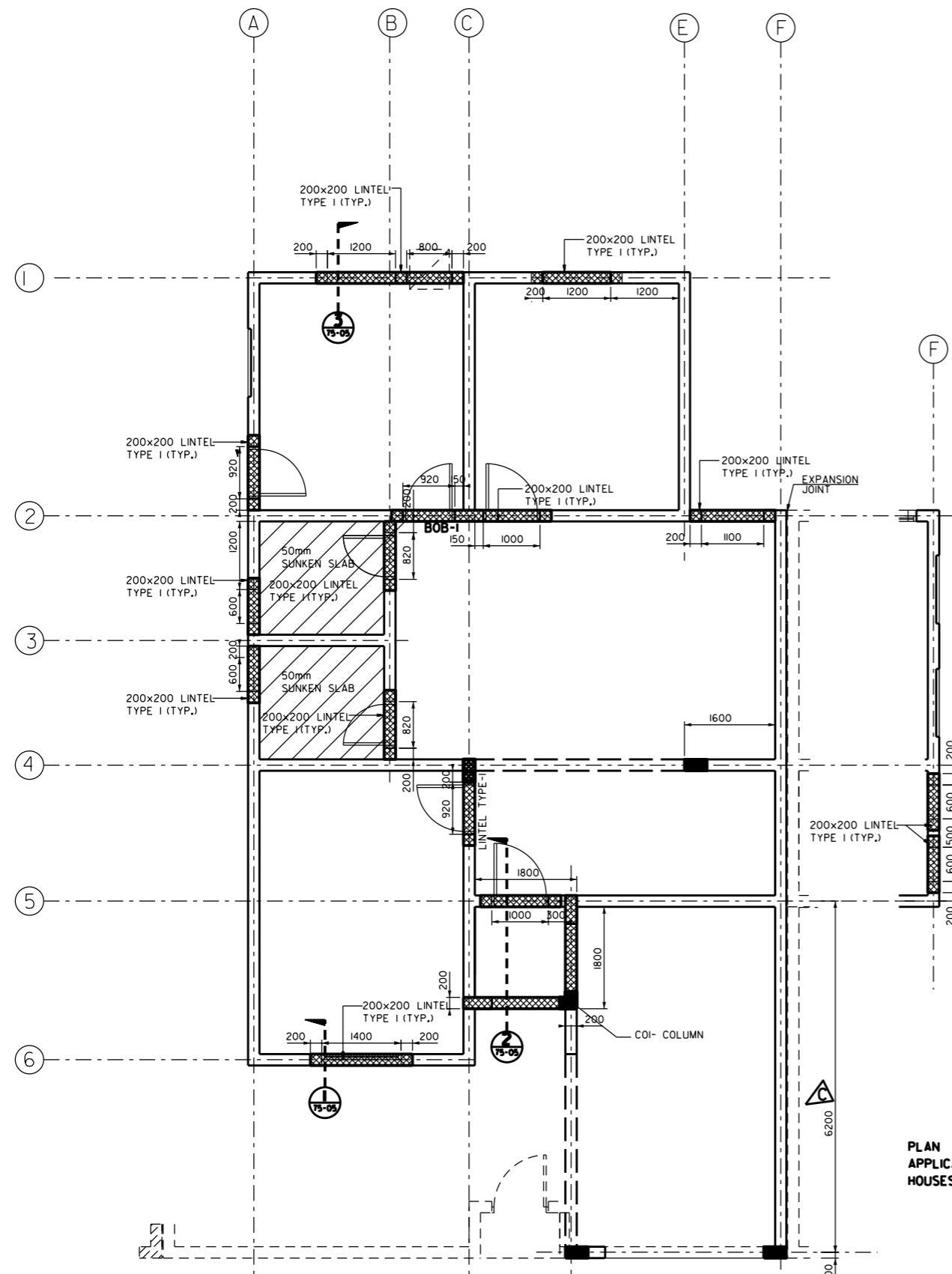
SECTION 2-2
SCALE 1:50

- NOTES**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MOWH SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.
 - FOUNDATIONS ARE DESIGNED FOR A BEARING CAPACITY OF 150 KN/m².
 - FOUNDATIONS ARE DESIGNED FOR FUTURE 3rd FLOOR EXTENSION.
 - WHERE THE GROUND BEARING CAPACITY IS LESS THAN THE ABOVE, AN ALTERNATIVE DESIGN SHALL BE MADE BY THE ENGINEER.
 - CONCRETE TO FOUNDATIONS SHALL BE GRADE 45/20 SRC TO MOWH SPECIFICATION.
 - REINFORCEMENT IN THE FOUNDATION WILL BE HIGH YIELD STEEL DENOTED 'Y' TO BS 4449 GRADE 460 OR ASTM 615 GRADE 60.
 - MINIMUM COVER TO REINFORCEMENT IN FOUNDATIONS TO BE 50mm, UNLESS OTHERWISE STATED.
 - IN AREAS WHICH HAVE VEGETATION, TOP SOIL SHOULD BE EXCAVATED AND REMOVED TO A MINIMUM DEPTH OF 200mm AND THE FORMATION COMPACTED PRIOR TO ADDING THE FILL. THIS WORK SHOULD BE CARRIED OUT AS PER ENGINEER'S INSTRUCTION. (SEE SPECS CL 2.5)
 - FORMWORK - THE CONTRACTOR SHALL USE FORMWORK IN THE CONSTRUCTION OF ALL FOUNDATIONS.
 - T = TOP BARS
B = BOTTOM BARS
 - ALL EXTERNAL WALLS SHOULD BE LOAD BEARING INSULATED BLOCKS WITH MINIMUM STRENGTH OF 7 N/mm².

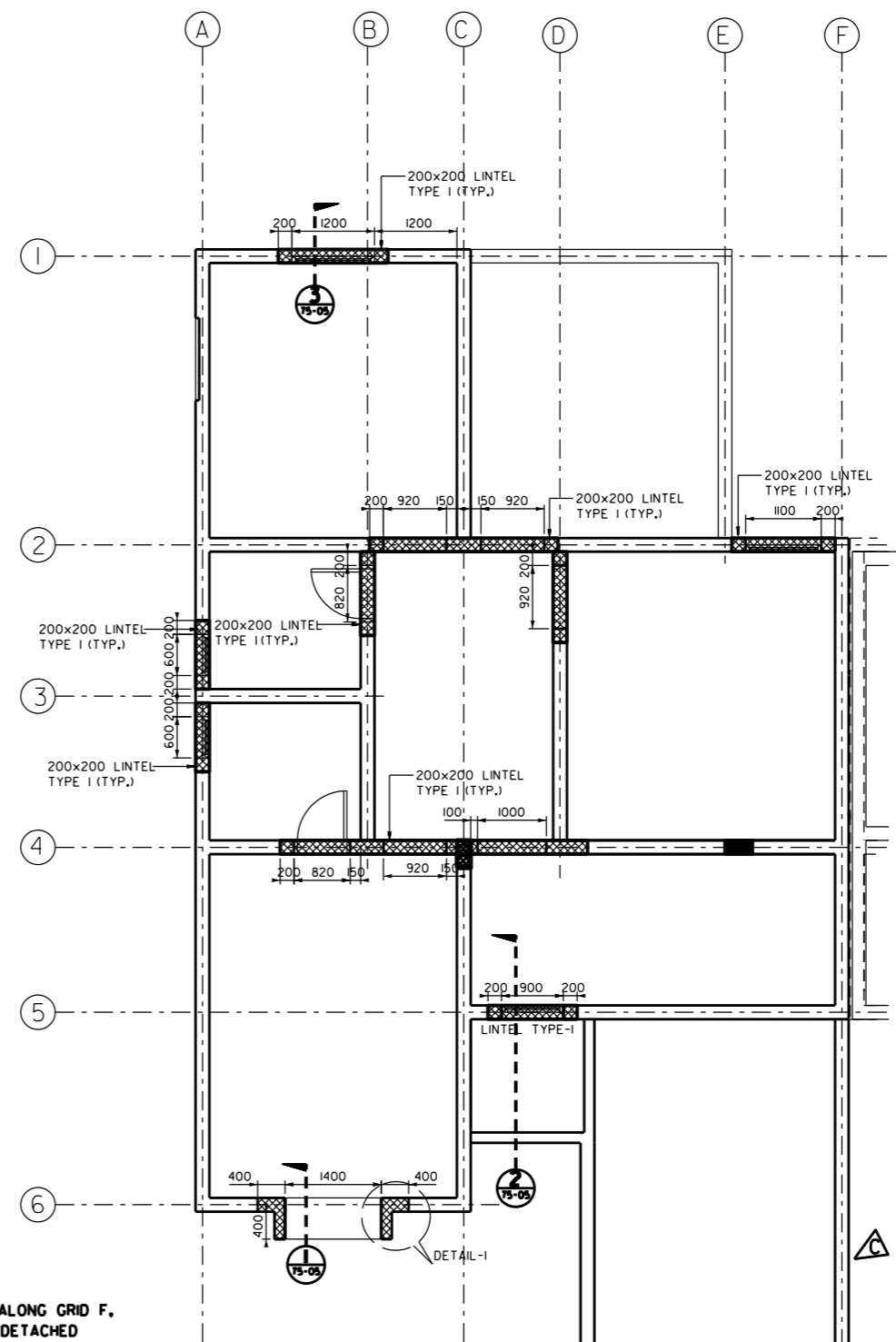
APPD/DATE	REVISIONS
SEP.2014	STORE DOOR LOCATION REVISED.
MAY.2014	REVISED AS SHOWN
SEPT. 2012	REVISED AS SHOWN ON DRAWING.
APRIL 2012	ISSUED FOR LUMP SUM CONTRACT

مملكة البحرين
 وزارة الإسكان
 KINGDOM OF BAHRAIN
 MINISTRY OF HOUSING

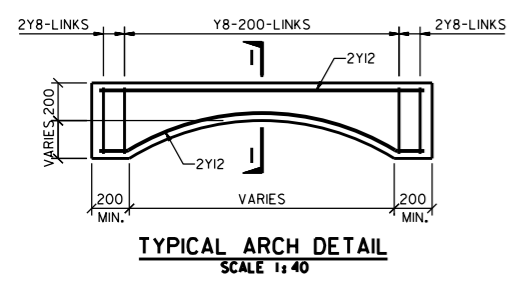
إدارة تخطيط وتصميم المشاريع الإسكانية
HOUSING PROJECTS PLANNING & DESIGN DIRECTORATE
PROJECT NAME: HOUSE TYPE T8
RAFT FOUNDATION PLAN, SECTIONS & R.C. DETAILS
 DESIGNED: UBAIZA / المصمم: رئيس التصميم الهندسي
 CHECKED: FARZANA / المراجع: رئيس التصميم
 DRAWN: MOHAMMED / الرسم: مهندس
 SCALE: 1:50, 1:100 / مقياس الرسم
 SHEET NUMBER: T8 - 75 - 01 / رقم الرسم
 DATE: MAY.2010 / التاريخ



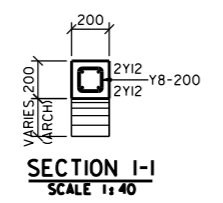
1 LINTELS - GROUND FLOOR LEVEL
75-02
SCALE 1:100



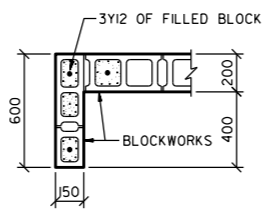
2 LINTELS - FIRST FLOOR LEVEL
75-02
SCALE 1:100



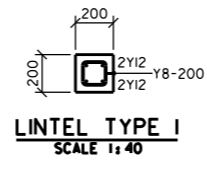
TYPICAL ARCH DETAIL
SCALE 1:40



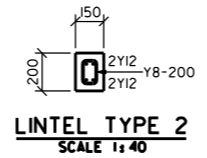
SECTION I-I
SCALE 1:40



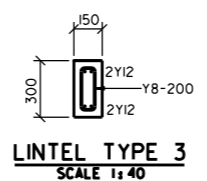
DETAIL I (PLAN)
SCALE 1:40



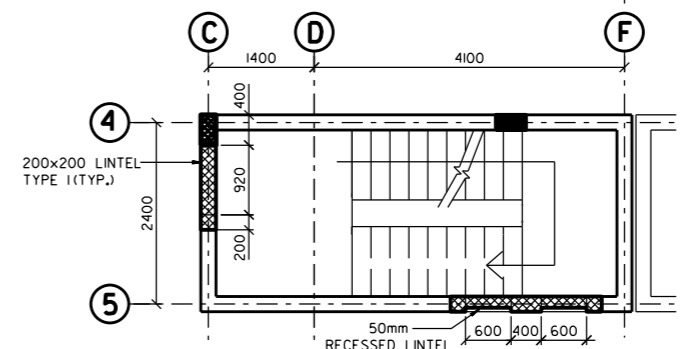
LINTEL TYPE 1
SCALE 1:40



LINTEL TYPE 2
SCALE 1:40



LINTEL TYPE 3
SCALE 1:40



3 LINTEL - ROOF LEVEL (PART PLAN)
75-02
SCALE 1:100

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. REINFORCEMENT WILL BE HIGH YIELD STEEL AS PER BS 4449 OR AS PER ASTM 615 GRADE 60.
3. CONCRETE TO BE GRADE C35/20 WITH ORDINARY PORTLAND CEMENT.
4. MINIMUM COVER TO REINFORCEMENT TO BE 35mm.
5. MINIMUM BEARING TO BE 200mm HOLLOW BLOCKWORK TO BE FILLED SOLID WITH CONCRETE GRADE C35/20 UNDER THE BEARING.
6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MOH SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.
7. THIS DRAWING TO BE READ IN CONJUNCTION WITH STRUCTURAL DRG. NO. T8-75-05.

APPD./DATE	REVISIONS
SEP.2014	GARAGE DETAIL ADDED
MAY.2014	REVISED AS SHOWN
SEPT.2012	GARAGE ADDED. REVISED AS SHOWN IN THE DRAWING.
APRIL 2012	ISSUED FOR LUMP SUM CONTRACT

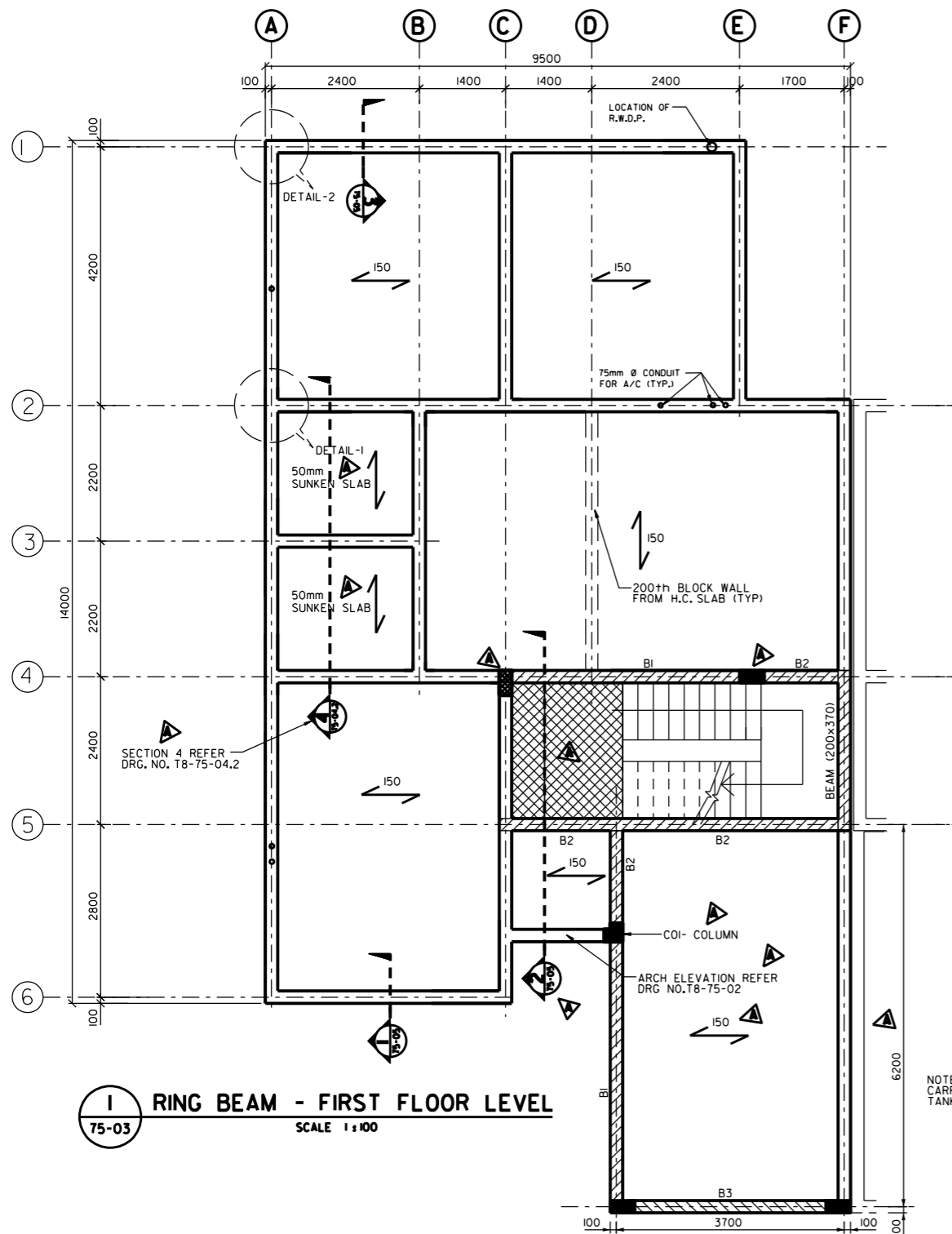

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 HOUSING PROJECTS PLANNING &
 DESIGN DIRECTORATE

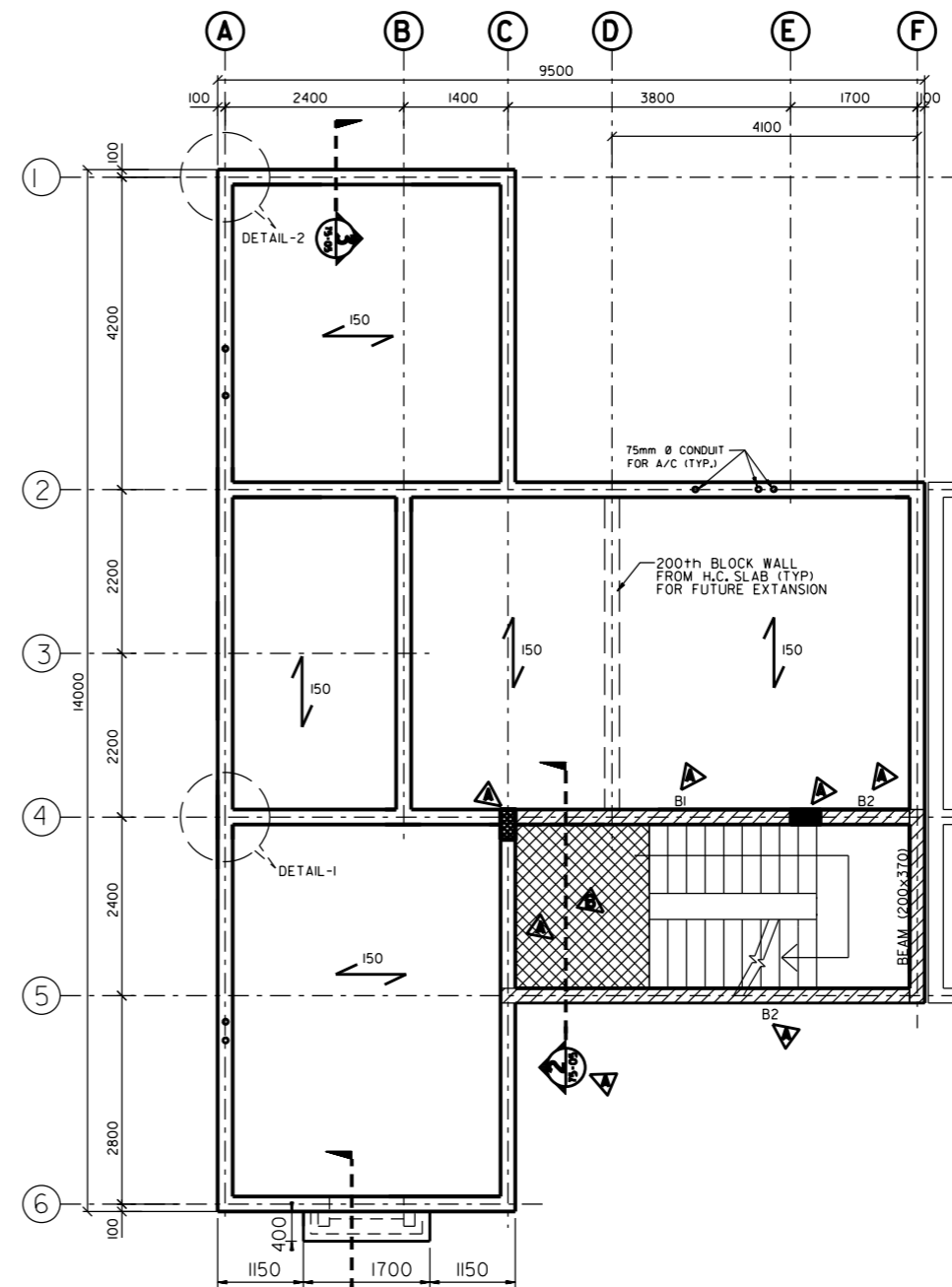
PROJECT NAME: **HOUSE TYPE T8**

LINTEL LAYOUTS AND R.C. DETAILS

DESIGNED	المصمم	HEAD ENGINEERING DESIGN	رئيس التصميم الهندسي
CHECKED	المراجع	FARZANA ANJAD	رئيس التصميم
APPROVED	الرسام	MOHSAAN ANJAD, S	رئيس التصميم
SCALE	مقياس الرسم	1:40, 1:100	التاريخ
DRAWING NUMBER	رقم الرسم	T8 - 75 - 02	APR. 2012

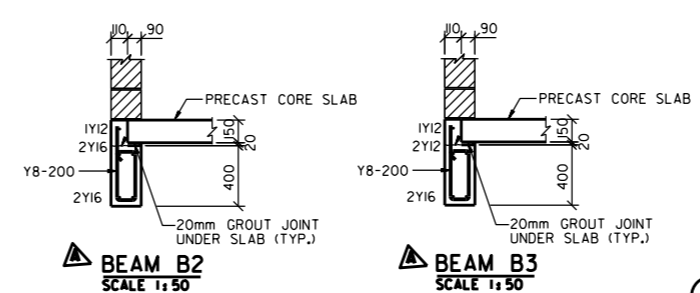


1 RING BEAM - FIRST FLOOR LEVEL
75-03 SCALE 1:100



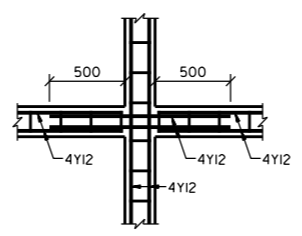
2 RING BEAM - ROOF LEVEL
75-03 SCALE 1:100

NOTE: HOLLOW CORE SLAB MUST BE DESIGNED TO CARRY THE LOADS OF BLOCK WORK AND WATER TANK AS INDICATED ON STRUCTURAL / ARCHITECTURAL DRGS

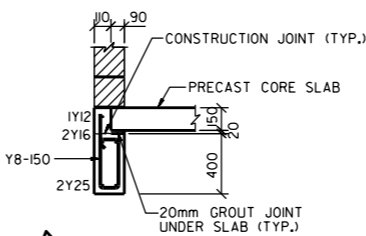


BEAM B2
SCALE 1:50

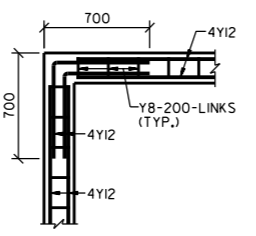
BEAM B3
SCALE 1:50



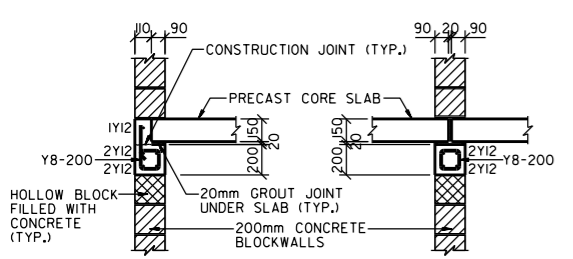
DETAIL-3
SCALE 1:50



DETAIL-1
SCALE 1:50



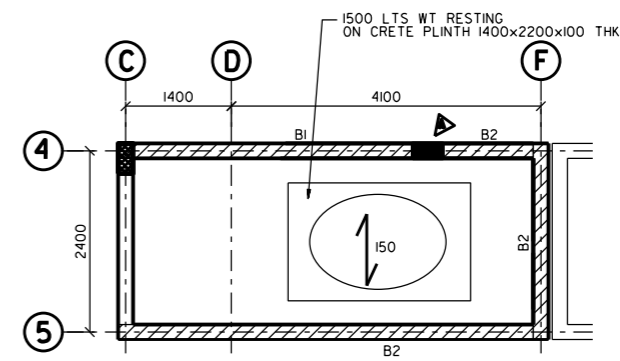
DETAIL-2
SCALE 1:50



TYPICAL EXTERNAL RING BEAM DETAIL
SCALE 1:50

TYPICAL INTERNAL RING BEAM DETAIL
SCALE 1:50

TYPICAL REINFORCEMENT DETAILS OF RING BEAM (PLAN)



3 RING BEAM - ROOF OF STAIRCASE
75-03 SCALE 1:100

- NOTES**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
 - REINFORCEMENT WILL BE HIGH YIELD STEEL AS PER BS 4449 OR AS PER ASTM 615 GRADE 60.
 - CONCRETE ABOVE DPC LEVEL SHALL BE GRADE C35/20 OPC.
 - COVER TO REINFORCEMENT TO BE 35mm FOR BEAMS.
 - MINIMUM LAP FOR REINFORCEMENT COMPRESSION AND TENSION MEMBERS TO BE 40 X BAR DIAMETER.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MOWH SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.
 - FUTURE 3rd FLOOR EXTENSION ALL HOLLOW CORE SLABS TO SPAN IN THE SAME DIRECTION AS THE ROOF SPAN.
 - THE DESIGN OF PRECAST SLABS SHALL COMPLY WITH THE FOLLOWING:
1. MOWH SPECIFICATIONS FOR TRADITIONAL HOUSES, (JULY '87) SEC.3
2. LOADING CHARACTERISTIC:
a) SLAB WEIGHT = * KN/m²
b) SCREED + FINISHED = 1.20 KN/m²
c) PARTITIONS OR TILES = 1.50 KN/m²
d) SUPERIMPOSED FLOOR LOAD = 2.00 KN/m²
e) SUPERIMPOSED ROOF LOAD = 2.00 KN/m²
* SUBJECT TO DESIGN
 - THE SLABS MUST CARRY BLOCKWORK INTERNAL PARTITIONS AS LOCATED ON THE ARCHITECTURAL LAYOUT DRAWINGS THE FOLLOWING WEIGHT SHOULD BE USED IN THE DESIGN:
a) 100mm HOLLOW BLOCK = 2.1 KN/m²
b) 150mm HOLLOW BLOCK = 2.4 KN/m²
c) 200mm HOLLOW BLOCK = 3.0 KN/m²
 - ALL BEAMS MUST REST ON BLOCKS FILLED WITH CONCRETE GRADE C35/10.
 - FOR WALL SECTION DETAILS REFER TO DRG. NO. D8-75-05.
 - DETAIL OF THE JOINTS BETWEEN THE PRECAST SLABS AND ALL OTHER STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE PRECAST SUPPLIER AND CONTRACTOR.

APPROVAL	REVISIONS
SEPT.2014	BEAM B2 REMOVED FROM STAIRCASE AT ROOF LEVEL.
SEPT.2012	GARAGE ROOF ADDED. REVISED AS SHOWN IN THE DRAWING.
APRIL 2012	ISSUED FOR LUMP SUM CONTRACT
APPROVAL	REVISIONS

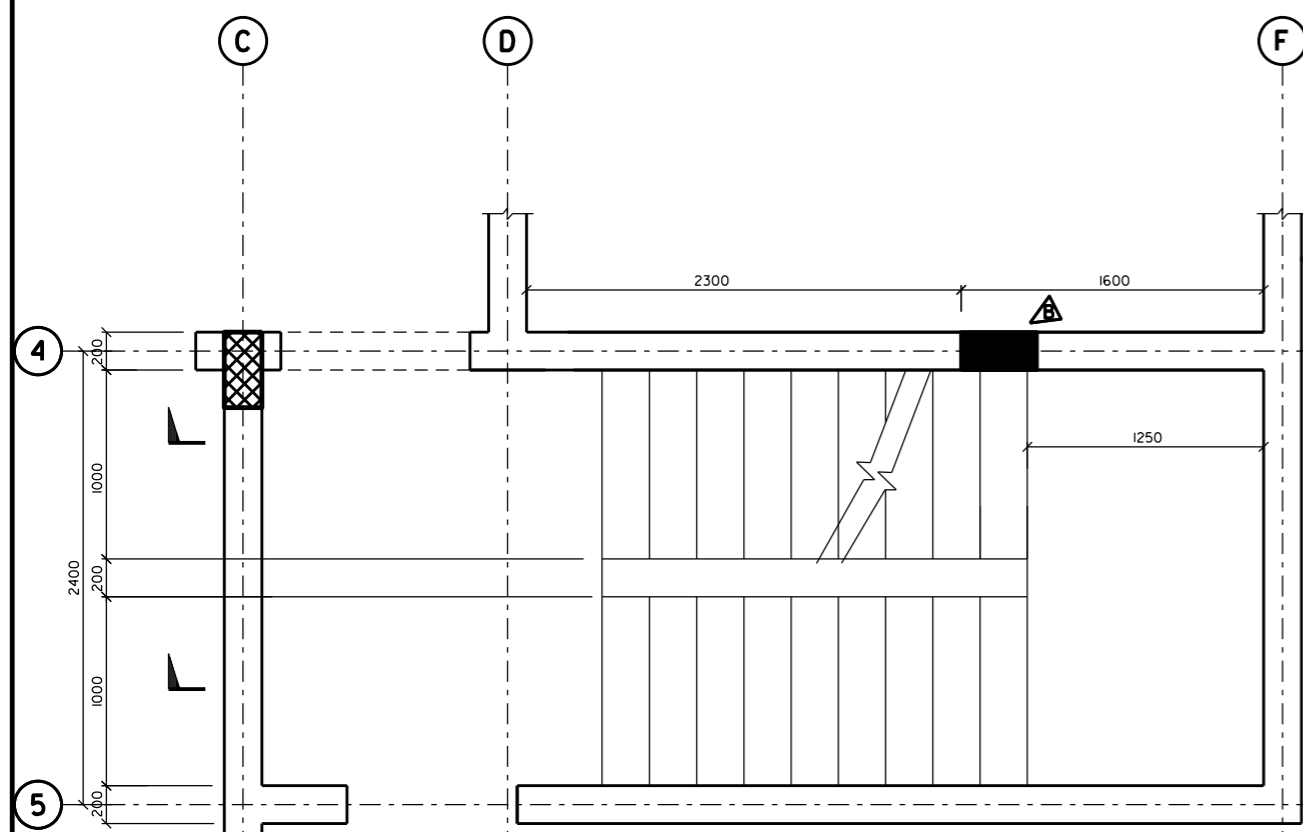
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HOUSING PROJECTS PLANNING & DESIGN DIRECTORATE

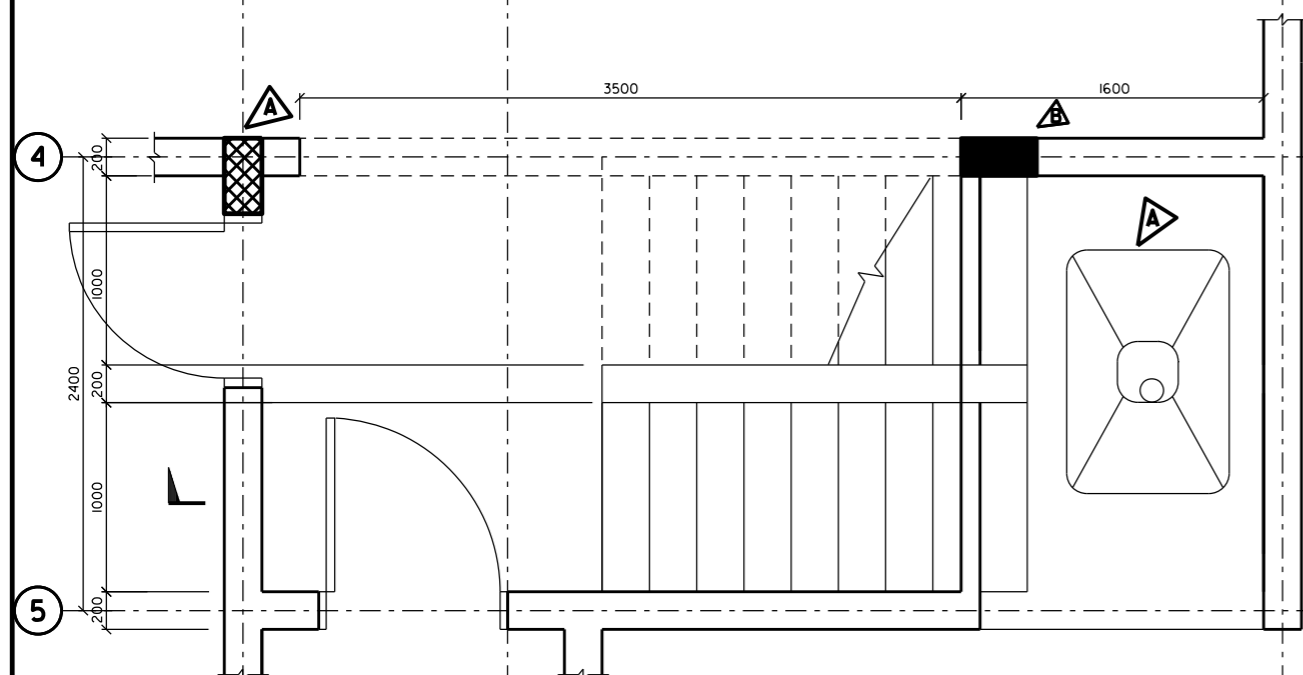
PROJECT NAME: **HOUSE TYPE T8**

رئيس التصميم الهندسي: **HEAD ENGINEERING DESIGN**
المصمم: **UNAIZA**
المراجع: **FARZANA**
رئيس التصميم: **MOHAMMAD**

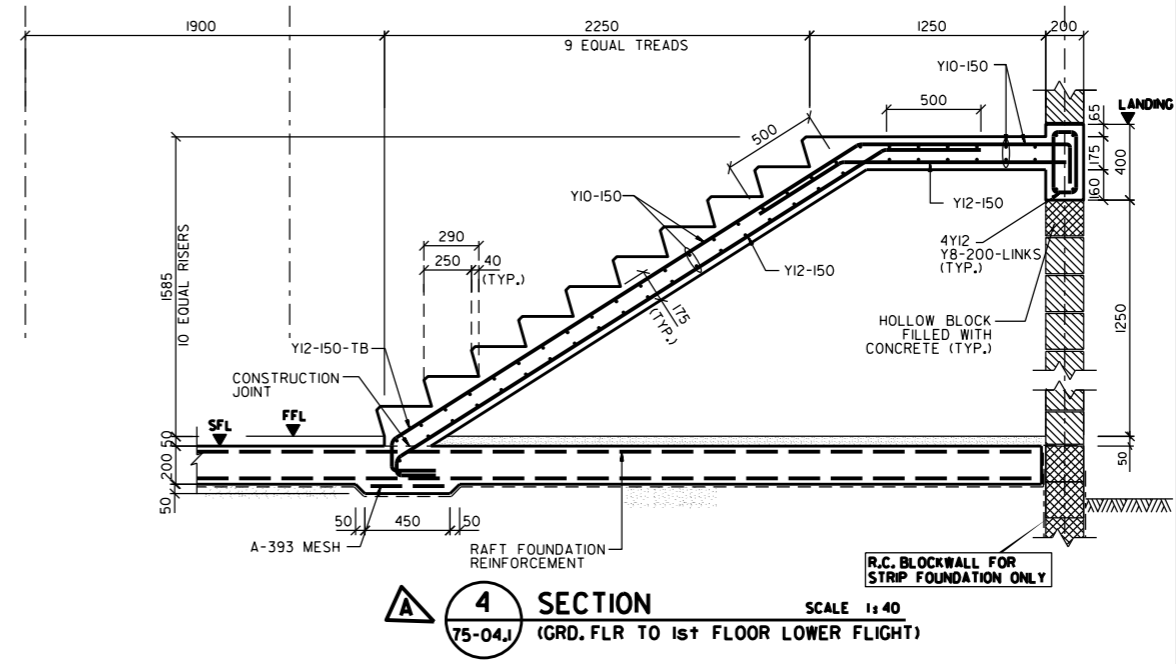
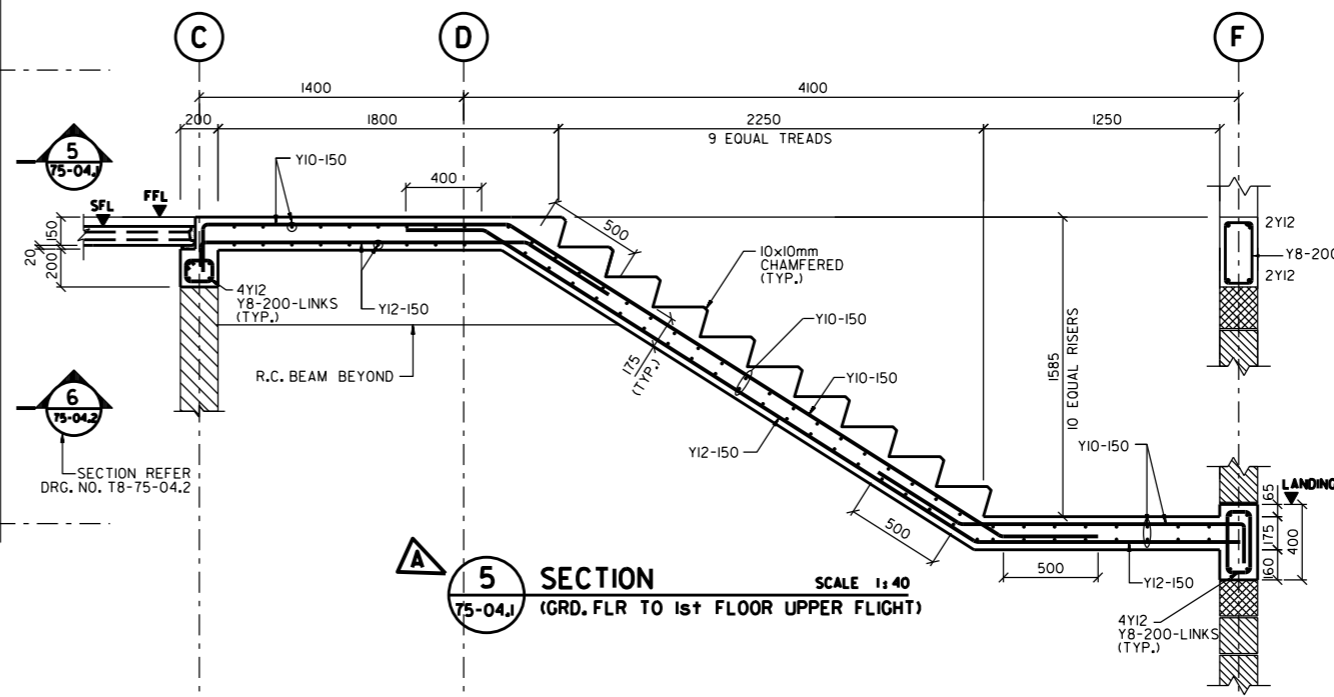
مقاييس الرسم: **SCALE 1:50, 1:100**
رقم الرسم: **T8-75-03**
التاريخ: **APR. 2012**



2 FIRST FLOOR STAIRCASE PLAN
SCALE 1:40



1 GROUND FLOOR STAIRCASE PLAN
SCALE 1:40



- NOTES**
- 1) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
 - 2) REINFORCEMENT TO BE HIGH YIELD STEEL DENOTED 'Y' TO BE GRADE 40 AS PER BS 4449 OR GRADE 60 AS PER ASTM 615.
 - 3) REINFORCEMENT TO BE CUT & BENT IN ACCORDANCE WITH BS 4466.
 - 4) ALL MATERIALS AND WORKMANSHIP TO COMPLY WITH THE MOWH SPECIFICATIONS.
 - 5) MINIMUM COVER TO REINFORCEMENT TO BE 30mm.
 - 6) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MOWH SPECIFICATIONS & ARCHITECTURAL STAIRCASE DRAWING.
 - 7) Y12-300-B

- BARS POSITION
 - SPACING
 - BAR DIAMETER
 - TYPE OF STEEL
- T = TOP BARS
B = BOTTOM BARS
TB = TOP TO BOTTOM BARS
BT = BOTTOM TO TOP BARS
- 8) DETAIL OF THE JOINTS BETWEEN THE PRECAST SLABS AND ALL OTHER STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE PRECAST SUPPLIER AND CONTRACTOR.
 - 9) SFL = STRUCTURAL FLOOR LEVEL.
FFL = FINISHED FLOOR LEVEL.

MAY.2014	COLUMN C03 ADDED	A
SEPT. 2012		A
APRIL 2012	ISSUED FOR LUMP SUM CONTRACT	
APPD/DATE	REVISIONS	

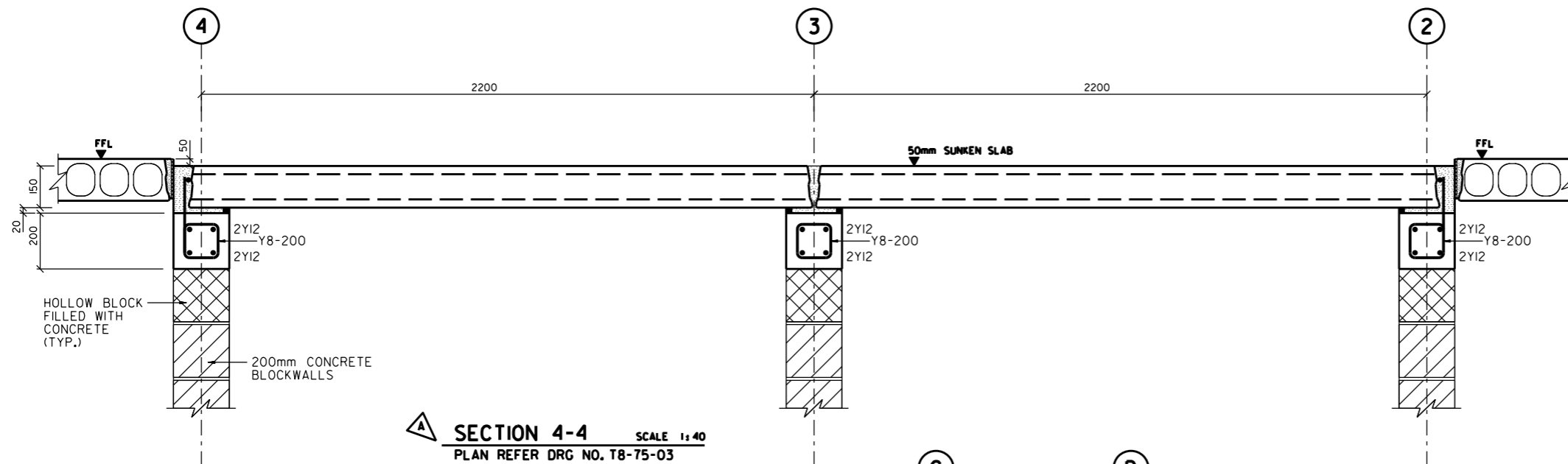
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KINGDOM OF BAHRAIN
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إدارة تخطيط وتصميم
المشاريع الإسكانية
HOUSING PROJECTS PLANNING & DESIGN DIRECTORATE

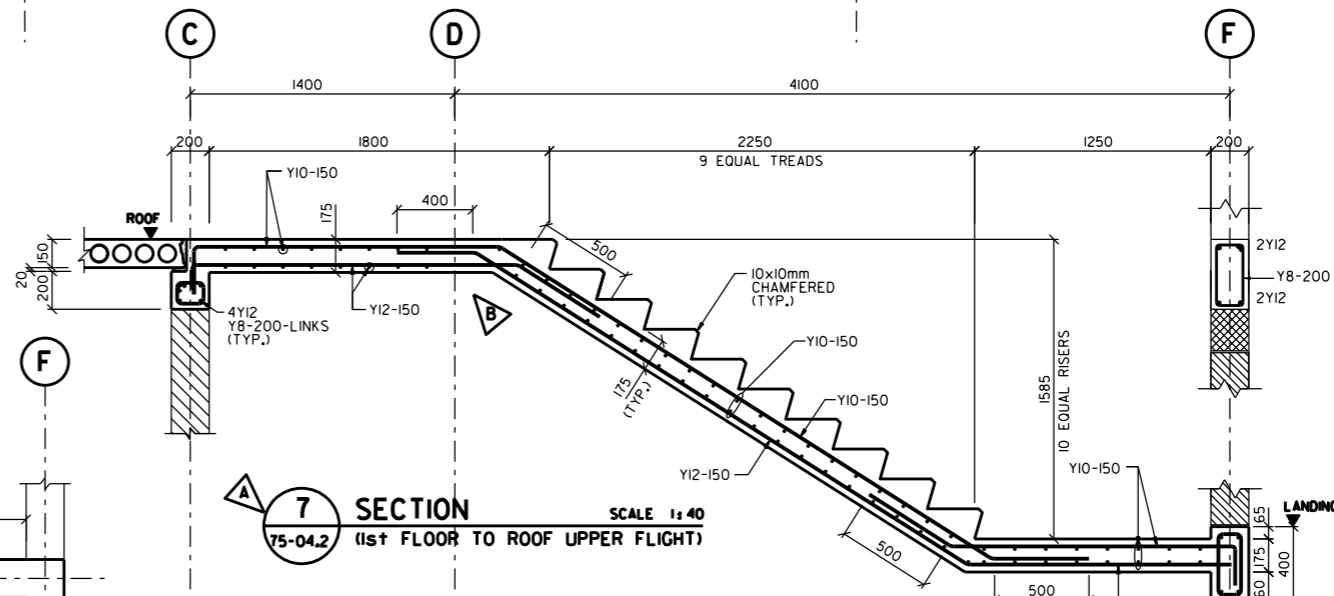
PROJECT NAME
HOUSE TYPE T8

STAIRCASE AND R.C. DETAILS

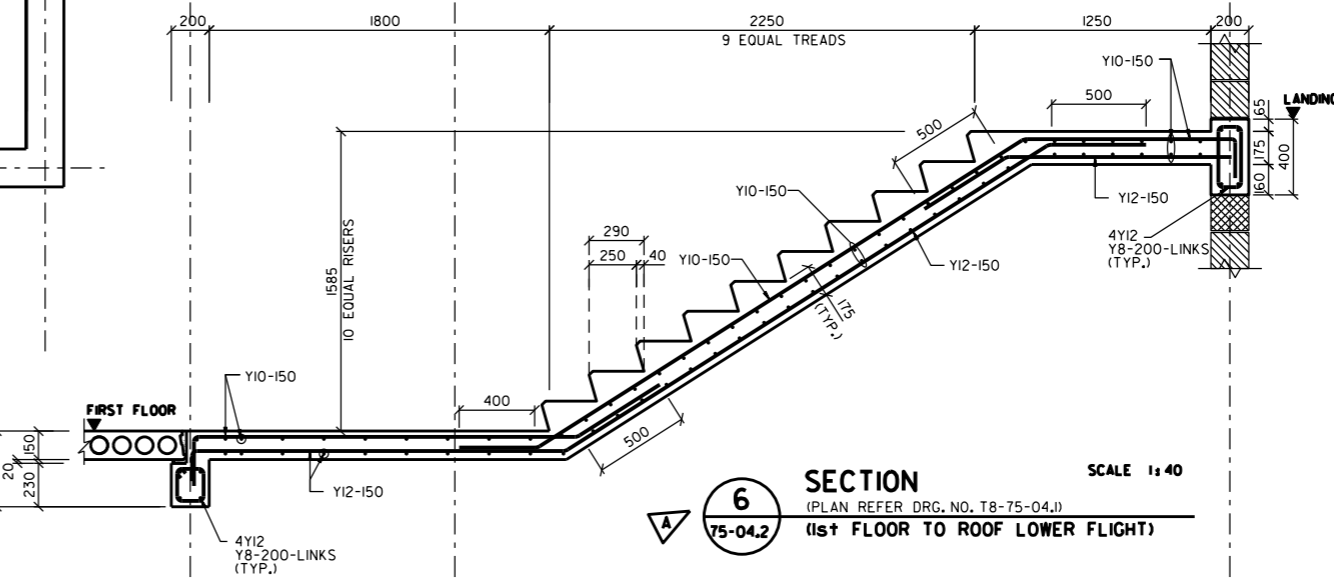
DESIGNED LINAIZA	HEAD ENGINEERING DESIGN	رئيس التصميم الهندسي
CHECKED FARZANA	FARZANA AHMED	رئيس التصميم
APPROVED MOHAMMED ANJAD,S	MOHAMMED ANJAD,S	مهندس ارشاد
SCALE 1:40	مقياس الرسم	DATE APRIL, 2012
DRAWING NUMBER T8 - 75 - 04.1	رقم الرسم	REVISION B



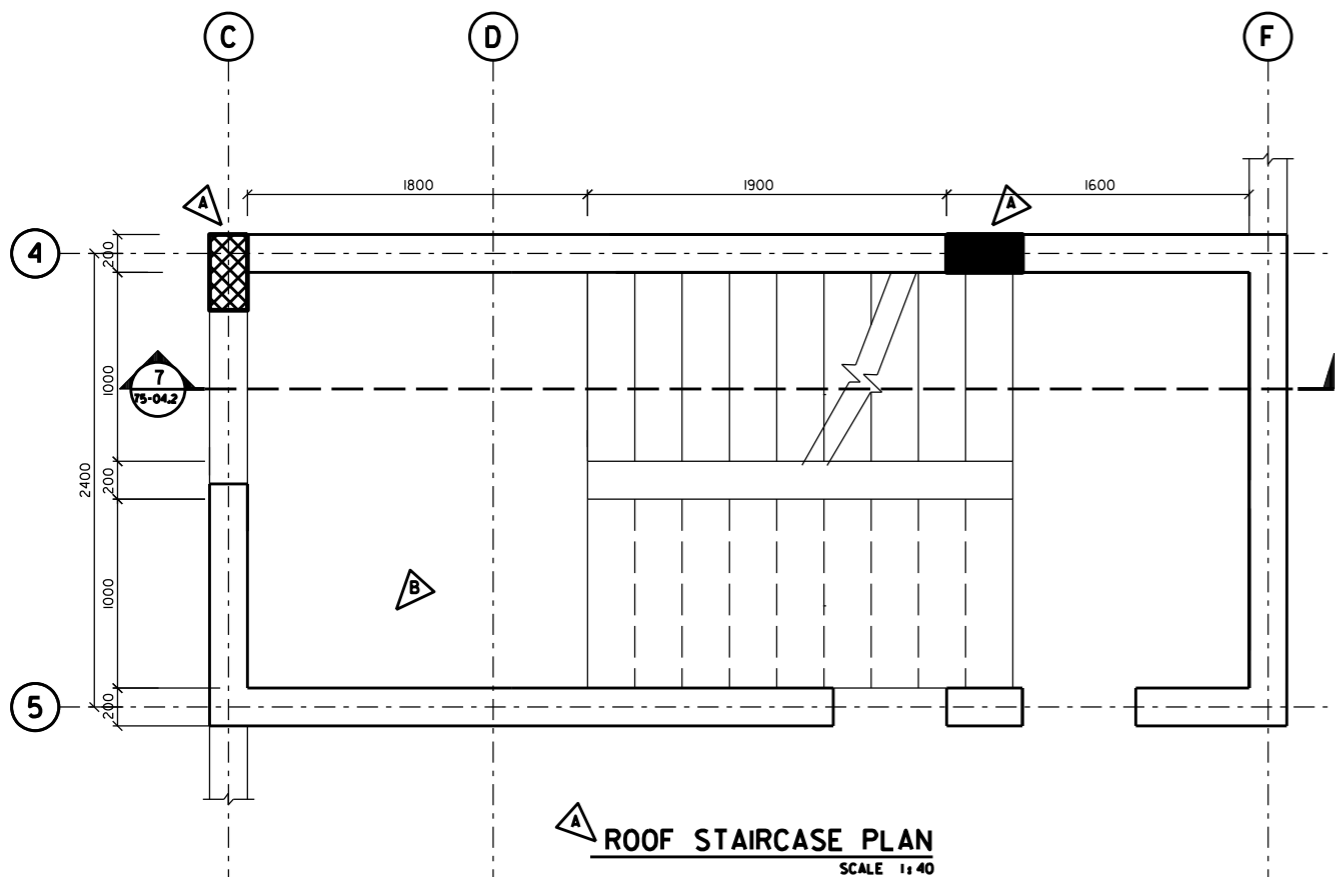
SECTION 4-4 SCALE 1:40
PLAN REFER DRG. NO. T8-75-03



SECTION 7 SCALE 1:40
(1st FLOOR TO ROOF UPPER FLIGHT)



SECTION 6 SCALE 1:40
(1st FLOOR TO ROOF LOWER FLIGHT)



ROOF STAIRCASE PLAN SCALE 1:40

- NOTES**
- 1) ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
 - 2) REINFORCEMENT TO BE HIGH YIELD STEEL DENOTED 'Y' TO BE GRADE 40 AS PER BS 4449 OR GRADE 60 AS PER ASTM 615.
 - 3) REINFORCEMENT TO BE CUT & BENT IN ACCORDANCE WITH BS 4466.
 - 4) ALL MATERIALS AND WORKMANSHIP TO COMPLY WITH THE MOWH SPECIFICATIONS.
 - 5) MINIMUM COVER TO REINFORCEMENT TO BE 30mm.
 - 6) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MOWH SPECIFICATIONS & ARCHITECTURAL STAIRCASE DRAWING.
 - 7) Y12-300-B
 - BARS POSITION
 - SPACING
 - BAR DIAMETER
 - TYPE OF STEEL
 - T = TOP BARS
B = BOTTOM BARS
TB = TOP TO BOTTOM BARS
BT = BOTTOM TO TOP BARS
 - 8) DETAIL OF THE JOINTS BETWEEN THE PRECAST SLABS AND ALL OTHER STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE PRECAST SUPPLIER AND CONTRACTOR.
 - 9) SFL = STRUCTURAL FLOOR LEVEL.
FFL = FINISHED FLOOR LEVEL.

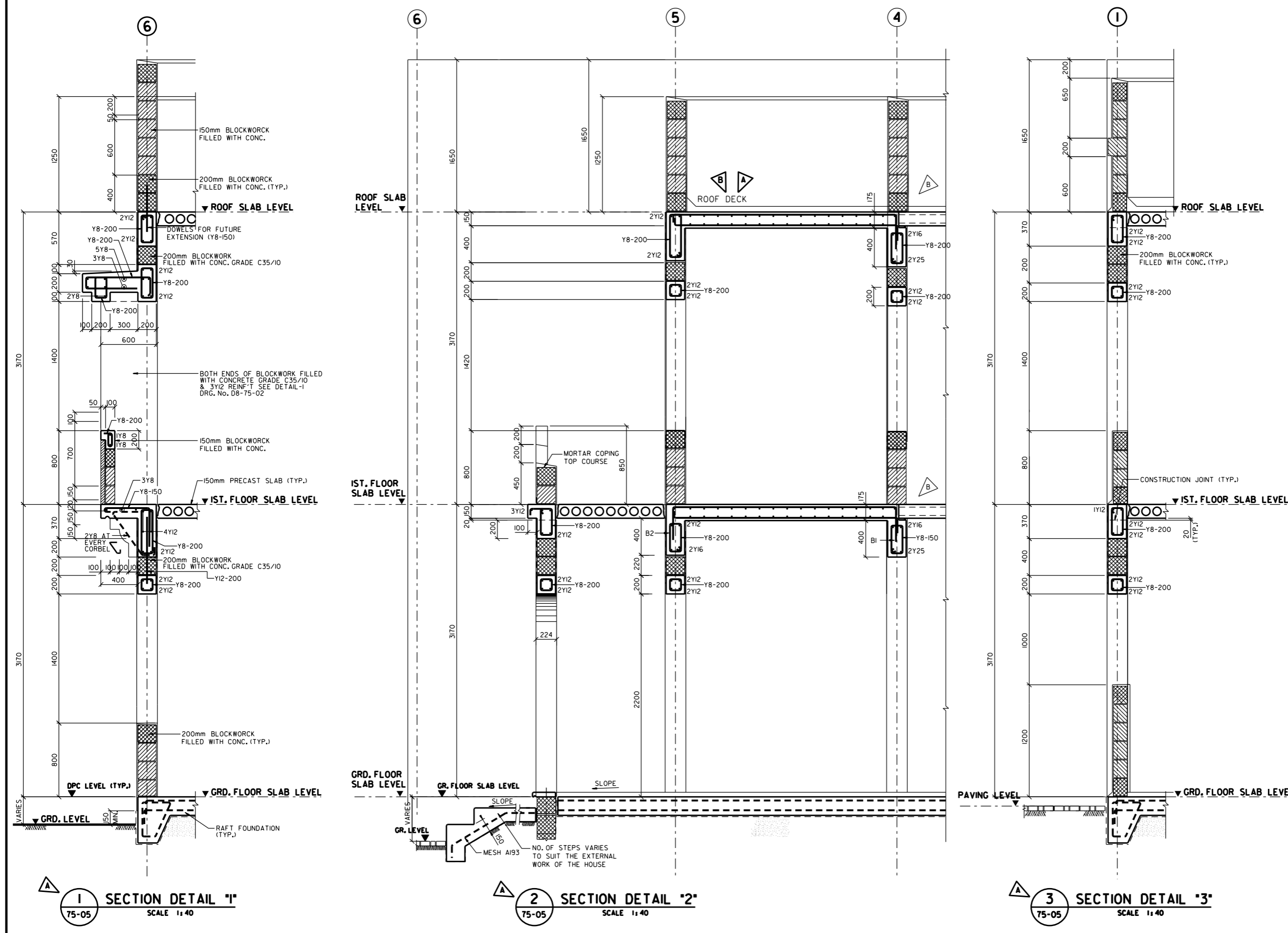
APPD/DATE	REVISIONS
MAY.2014	WASHING AND BEAM REMOVED FROM STAIRCASE ROOF.
SEPT. 2012	REINFORCEMENT DETAIL ADDED AND REVISED AS SHOWN.
APRIL 2012	ISSUED FOR LUMP SUM CONTRACT

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 HOUSING PROJECTS PLANNING &
 DESIGN DIRECTORATE

PROJECT NAME
HOUSE TYPE T8
 عنوان الرسمة
STAIRCASE AND R.C. DETAILS

DESIGNED LINAIZA	HEAD ENGINEERING DESIGN	رئيس التصميم الهندسي
CHECKED FARZANA	CHIEF DESIGN	رئيس التصميم
DRAWN/CAD MOHAMMAD/ANJAS	AMPL. DR. BAKER	
SCALE 1:40	مقياس الرسم	التاريخ APR. 2012
DRAWING NUMBER T8 - 75 - 04.2	رقم الرسم	التصميم B



- NOTES**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
 - REINFORCEMENT WILL BE HIGH YIELD STEEL GRADE 460 AS PER BS 4449 OR GRADE 60 AS PER ASTM 615.
 - MINIMUM COVER TO REINFORCEMENT TO BE 35mm.
 - CONCRETE TO BE GRADE C35/20 WITH ORDINARY PORTLAND CEMENT.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH MOWH SPECIFICATIONS.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
 - DETAIL OF THE JOINTS BETWEEN THE PRECAST SLABS AND ALL OTHER STRUCTURAL ELEMENTS SHALL BE THE RESPONSIBILITY OF THE PRECAST SUPPLIER AND CONTRACTOR.

APPD/DATE	REVISIONS
MAY.2014	SUNKEN SLAB REMOVED FROM STAIRCASE ROOF.
SEPT. 2012	REVISED AS SHOWN IN THE DRAWING
APRIL 2012	ISSUED FOR LUMP SUM CONTRACT



إدارة تخطيط و تصميم
المشاريع الإسكانية
HOUSING PROJECTS PLANNING & DESIGN DIRECTORATE

PROJECT NAME
HOUSE TYPE T8

عنوان الرسمة

WALL SECTIONS AND R.C. DETAILS

DESIGNED LINAIZA	HEAD ENGINEERING DESIGN	رئيس التصميم الهندسي
CHECKED FARZANA	المراجع	رئيس التصميم
DRAWN/CAD MOHAMMAD	الرسم	رئيس التصميم
SCALE 1:40	مقياس الرسم	التاريخ
DRAWING NUMBER T8 - 75 - 05	رقم الرسم	DATE OCT. 2014
		REVISION B