REINFORCED CONCRETE

1.1 THE COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS (FC) SHALL NOT BE LESS THAN 21N/sq mm (3000psi) COMPRESSIVE STRENGTH SHALL BE DETERMINED BY TESTS OF STANDARD 6x 12 inch CYLINDER. (EQUIVALENT TO 25 N/sqmm CUB)

1.2 SULPHATE RESISTIN CEMENT (TYPE-5)SHALL BE USED IN ALL CONCRETE WORKS IN CONTACT WITH EARTH OR BELOW D. P. C. LEVEL

1.3 REINFORCING STELL SHALL CONFORM TO ASTM A615, A616 OR A617,ALL BARS SHALL BE GRADE 60 FY=410 Mpa=60000psi

1.4 PLACING OF REINFORCEMENT SHALL BE ACCORDING TO ACI 315-74 DETAILING MANUAL

1.5 MINIMUM COVER OVER BARS

1.5.1	SLABS	25mm
1.5.2	BEAMS &GIRDERS	40mm
1.5.3	COLUMNS	40mm
1.5.4	WALLS INTERIOR	25mm
1.5.5	EXTERIOR FACES OF WALLS	40mm

1.6 MINIMUM BAR SPASING

1.6.1 IN GENERAL CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE NOT LESS THAN BAR DIAMETER OR 25mm

1.6.2 CLEAR DISTANCE BETWEEN LAYERS OF BARS TO BE NOT LESS THAN 25mm AND THE UPPER TO BE DIRECTLY OVER THE LOWER BARS

1.6.3 IN COLUMNS CLEAR SPASING TO BE 1.5 BAR DIAMETEROR 40mm

1.7 CONSTRACTION JOINTS SHALL BE LOCATED AT MIDDLE OF SLABS

1.8 MINIMUM LAP LENGTH UNLESS NOTED ON DRAWINGS SHALL BE AS FOLLOWS

1.8.1 FOR BAR DIM(mm)	10	12	16	18	20	22	25
LAP LENGTH(mm)							
IN COLUMN	400	500	600	650	700	800	900
ELSE WHERE	400	600	700	800	900	1000	2000

1.8.2 LAP **OF(SLAB AND BEAM**) OF
TOP BARS AT MID SPAN
BOTTOM BARS AT SUPPORTS

1.9 VERTICAL REINFORCEMENT IN COLOMNS

1.9.1 WHERE LONGITUDINAL BARS ARE **OFFSET** AT A SPLICE **THE SLOPE OF THE INCLINED PORTION SHALL NOT EXCEED (1:6) (HORIZONTAL:VERTICAL)**

1.9.2 WHERE COLUMN FACES ARE OFSEET 75mm OR MORE SPLICES OF VERTICAL BARS ADJACENT TO THE OFFSET FACES SHALL BE MADE BY SEPARATE DOWELS OVER LAPPED AS SPECIFIED ABOVE

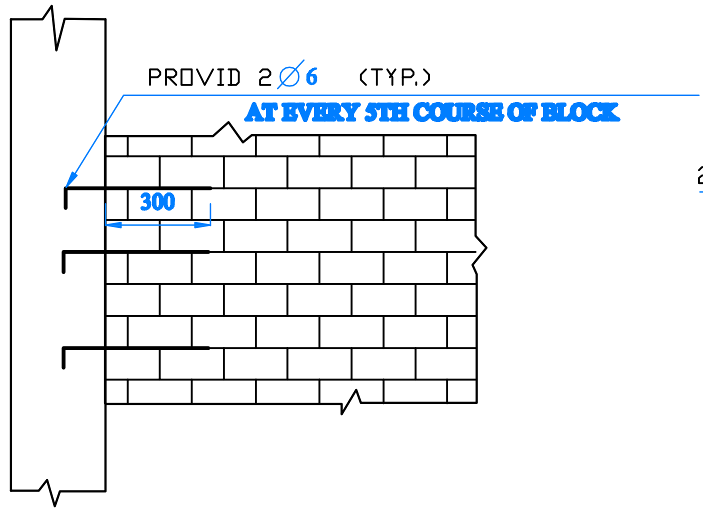
1.9.3 IN TIED COLUMNS THE AMOUNT OF REINFORCEMENT SPLICED BY LAPPING SHALL NOT EXCEEDED A RATIO OF 50 % OF TOTAL REINFORCEMENT AT ANY 120mm LENGTH **OF COLUMN**

1.9.4 CHANGING OF REINFORCEMENT BETWEEN FLOORS WHERE SUCH SITUATION OCCURS THE REINFORCEMENT IN THE COLUMN BELOW WHERE NEED TO BE STOPPED OFF SHALL BE CUT OFF AT DISTANCE 75mm BELOW FLOOR LEVEL

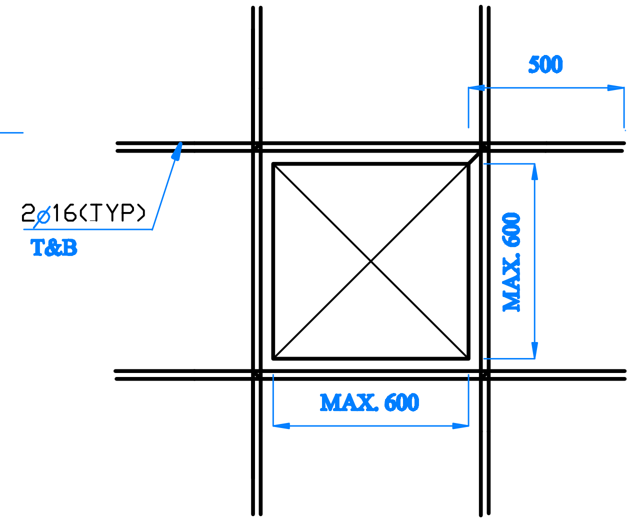
1.9.5 WHERE LONGITUDINAL BARS OFFSET PROVIDE 4 TIES SPACED AT 100mm THESE TIES SHALL BE PLACED BEFORE THE POINT OF BEND.

1.10.1 BEARING CAPACITY =15 TON/M^2
ACCORDING TO N.C.C.L REPORT NO 1/1/60.

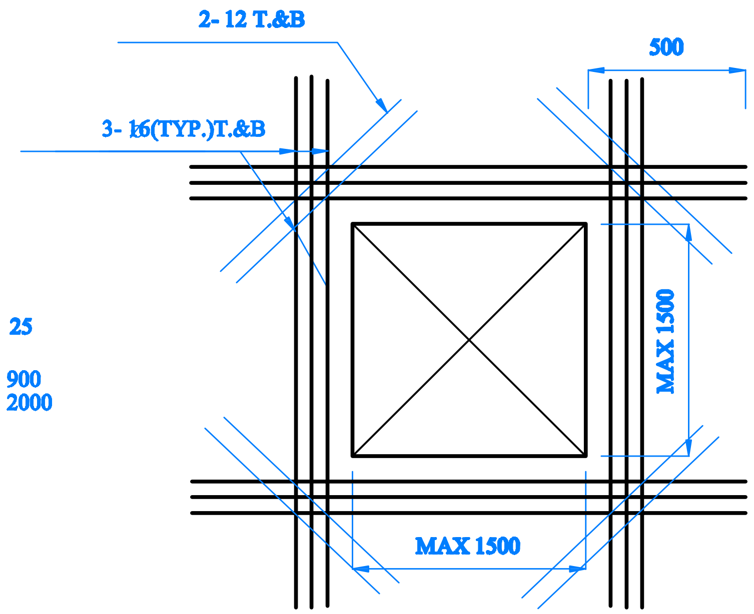
1.10.2 SWELLING PRESSURE =8.3 $TON/M.^2$



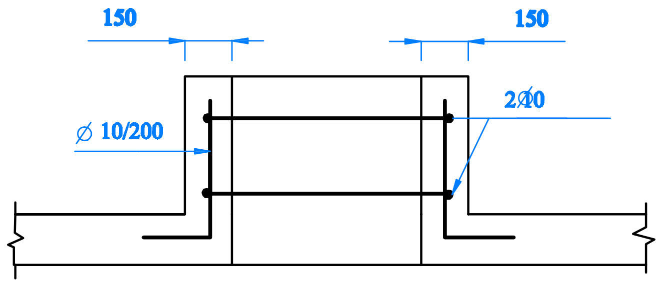
CONECTION BETWEEN BLOCK WALL AND R.C. COLUMN



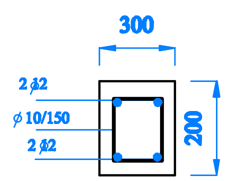
TYPICAL REINF. AROUND ALL OPENNINGS UP TO 600



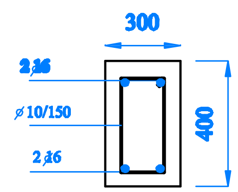
TYPICAL REINF. AROUND ALL OPENNINGS UP TO 1500



TYPICAL UP STAND DEATIAL ROOF OPENNINGS



SEC. IN TYP. LINTEL FOR SPAN UP TO 2.5m



SEC. IN TYP. LINTEL FOR SPAN UP TO 5.0m

NOTES:
ASSUMED BEARING CAPACITY : 8 TON/m

	DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

job Architect Engineer WALEED K. AL- ABDALEE

job Title
مدرسة ابتدائيـــــة
نموذجيـــة سـعة 12 صـف

Drawing Title
General Notes

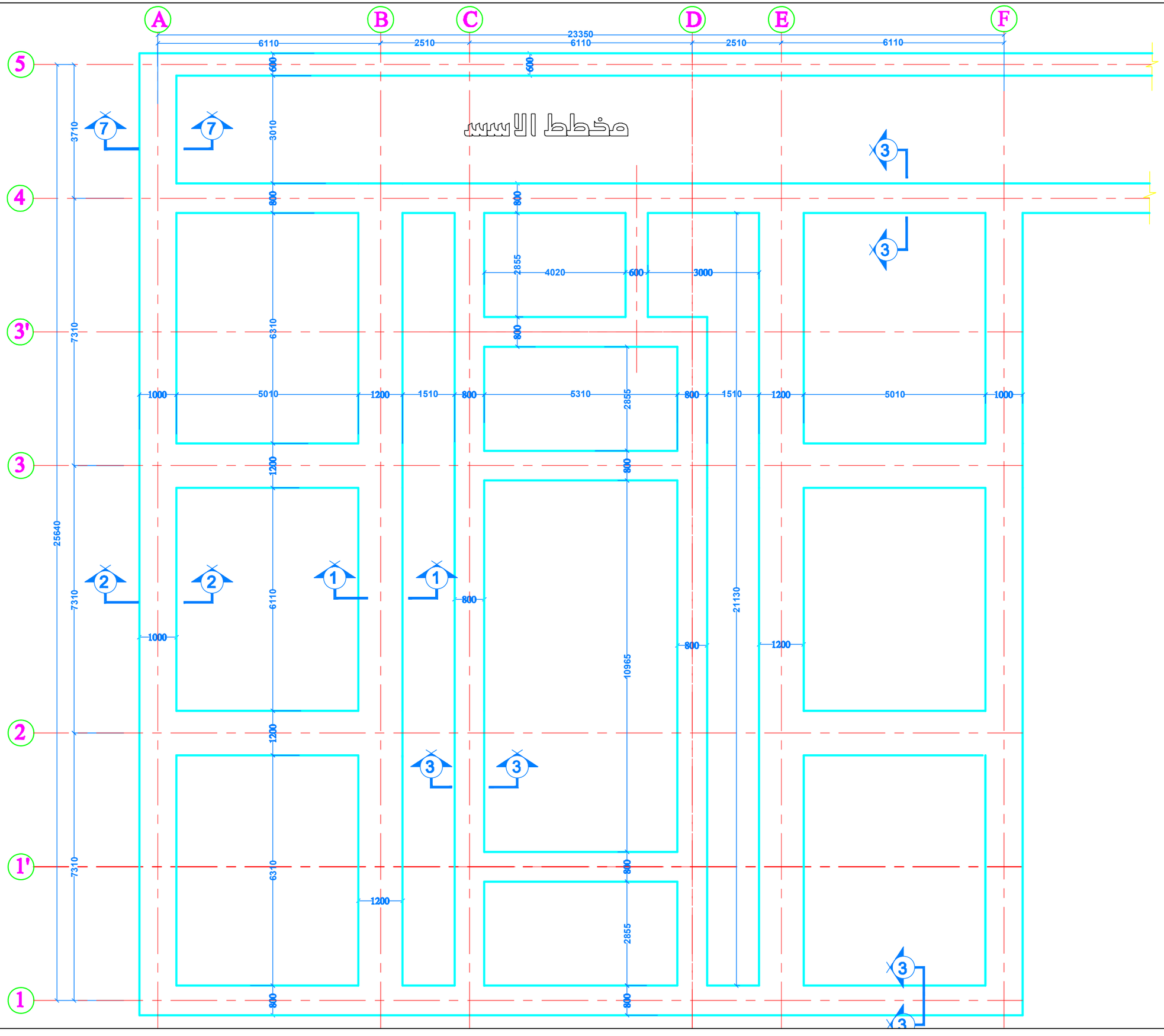
job No.

DRG No. ST/00

REVISION SUFFIX

CL/SFB

SCALE	DATE	DRAWING	CHECKED
Not to SCALE	3/10/2004	waleed al - abdalee	



NOTES:
ASSUMED BEARING CAPACITY : 8 TON/m

	DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer: WALEED K. AL- AIDALEE

Job Title:
مدرسة ابتدائيـــــة
نموذجيـــة ســعة 12 صف

Drawing Title:
مخطط الاســس للصـــــفوف

Job No.:

DRG No.: ST/01

REVISION SUFFIX:

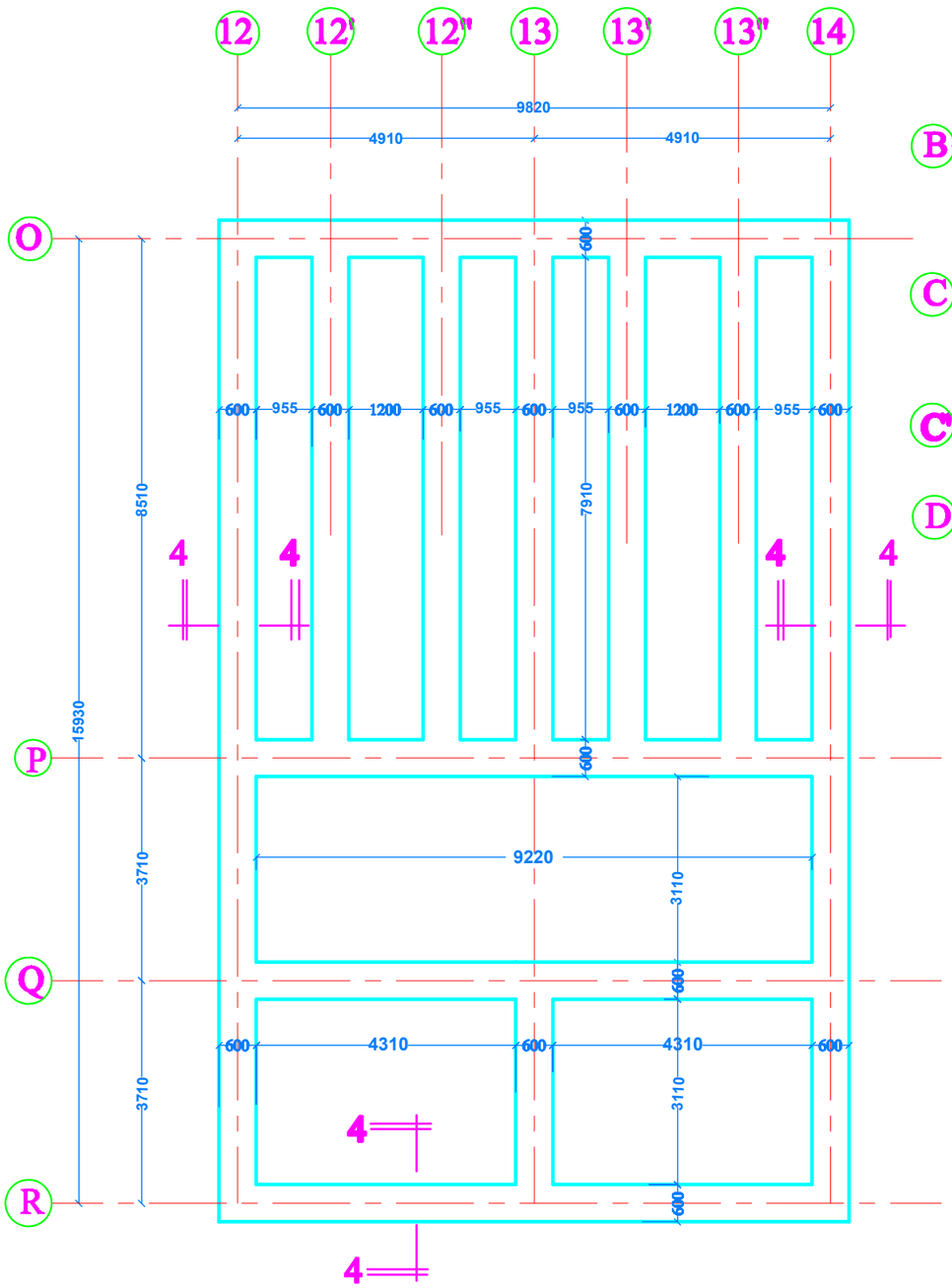
C/S/FB:

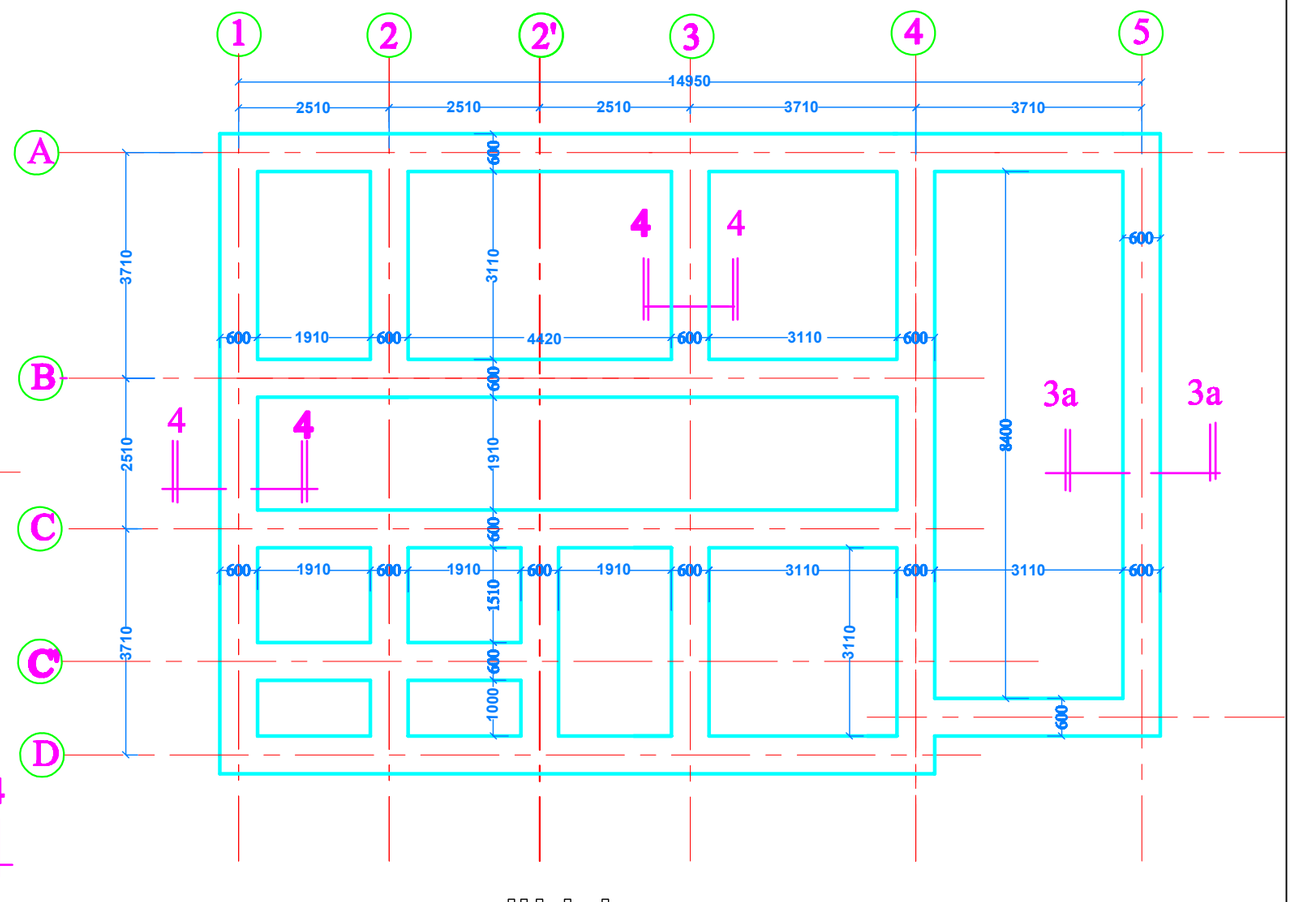
SCALE: 1/100

DATE: 2/10/2011

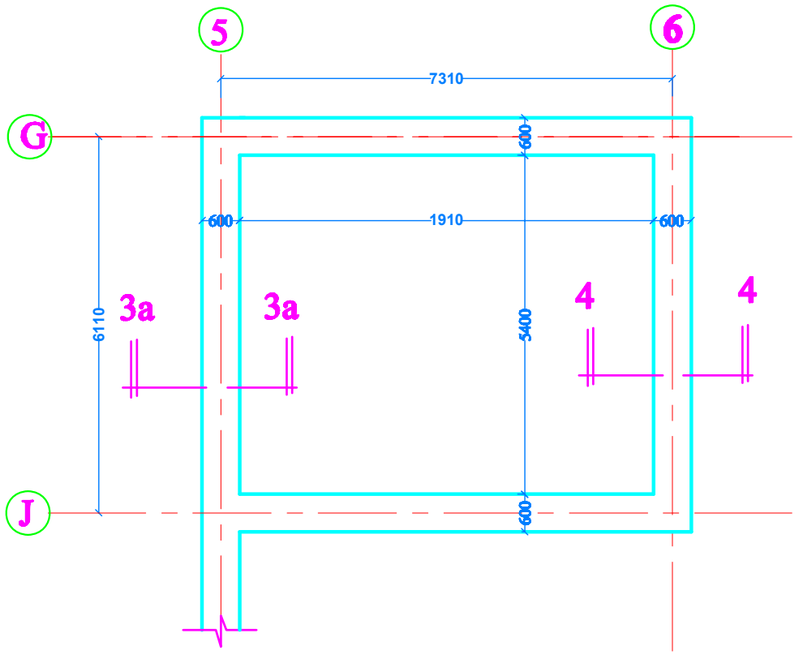
DRAWING: waleed al - aidalee

CHECKED:





مخطط الاسس



	DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer: WALEED K. Al- ABDALEE

Job Title: مدرسة ابتدائيـــة نموذجيـة سـعة 12 صف

Drawing Title: مخطط الاسـس

Job No.		DRG No.	ST/02
CL/SFB		REVISION SUFFIX	
SCALE 1/100	DATE 2/10/2004	DRAWING waleed al - abdalee	CHECKED

A B C D E F

5` 5 4 3 2 1

6110 2510 23350 6110 2510 6110

3710 7310 25640 7310 7310

SAME AS OTHER SIDE

Ø10@300 ADD.
Ø10@300 BOTT.
Ø10@300 ADD.
Ø12@300 ADD.
Ø10@300 ADD.
Ø10@300 ADD.
Ø12@300
Ø16@300
Ø12@300 ADD.
Ø12@300 ADD.
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Ø10@300 TOP
Ø10@300 BOTT.
Ø12@300 ADD.
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Ø12@300
Ø16@300
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Ø12@300 ADD.
Ø10@300 ADD.
Ø12@300
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Ø12@300 ADD.
Ø12@300 ADD.
Ø10@300 ADD.
Ø12@300
Ø10@300

مخطط تسليح صبة الطابق الاول

DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer: WALEED K. Al- ABDALEE

Job Title: مدرسة ابتدائيـــة نموذجيـة سـعة 12 صف

Drawing Title: مخطط تســـليح صـبة الطـابق الارضـي للصـــفوف

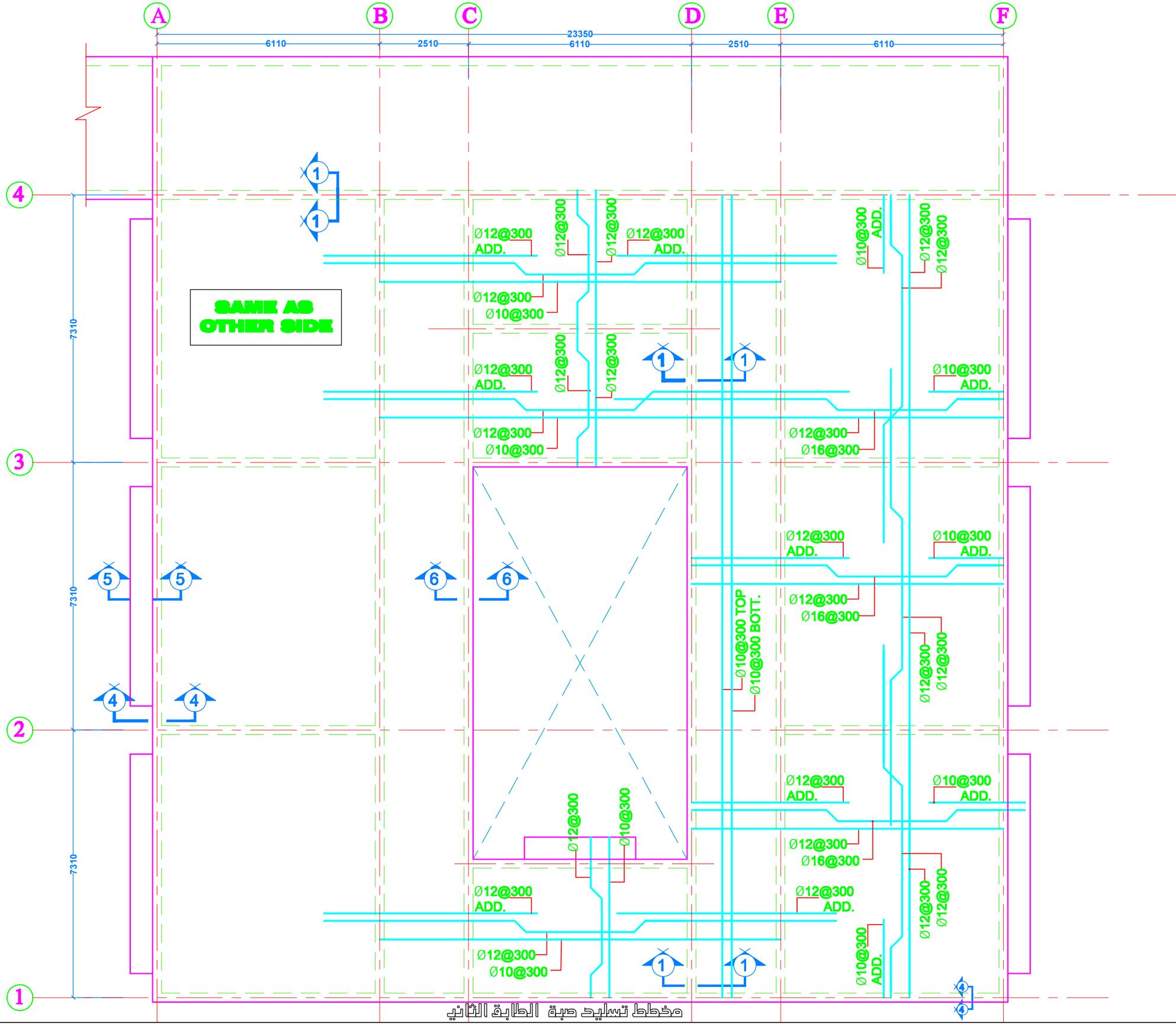
Job No.

DRG No. ST/03

REVISION SUFFIX

CL/SFB

SCALE 1/100 | DATE 2/04/2014 | DRAWING waleed al - abdalee | CHECKED



DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect/ Engineer: WALEED K. Al- AIDALEE

Job Title: مدرسة ابتدائيـــــة نموذجيـــة سـعة 12 صـف

Drawing Title: مخطط تســـــليح صـــبة الطـــابق الاول للصـــــفوف

Job No.

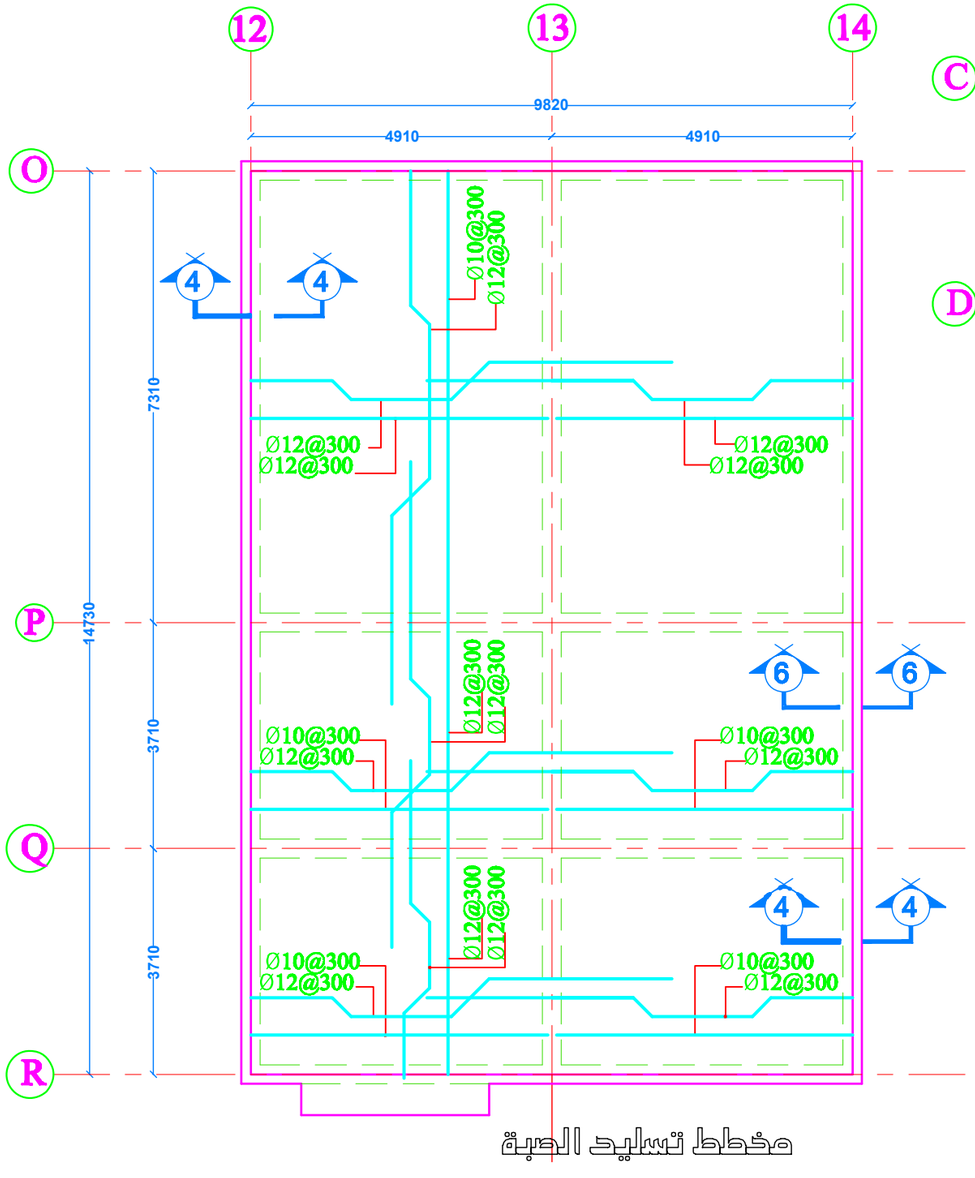
Dwg No. ST/04

SCALE 1/100

DATE 3/10/2011

DRAWING waleed al - aidalee

CHECKED



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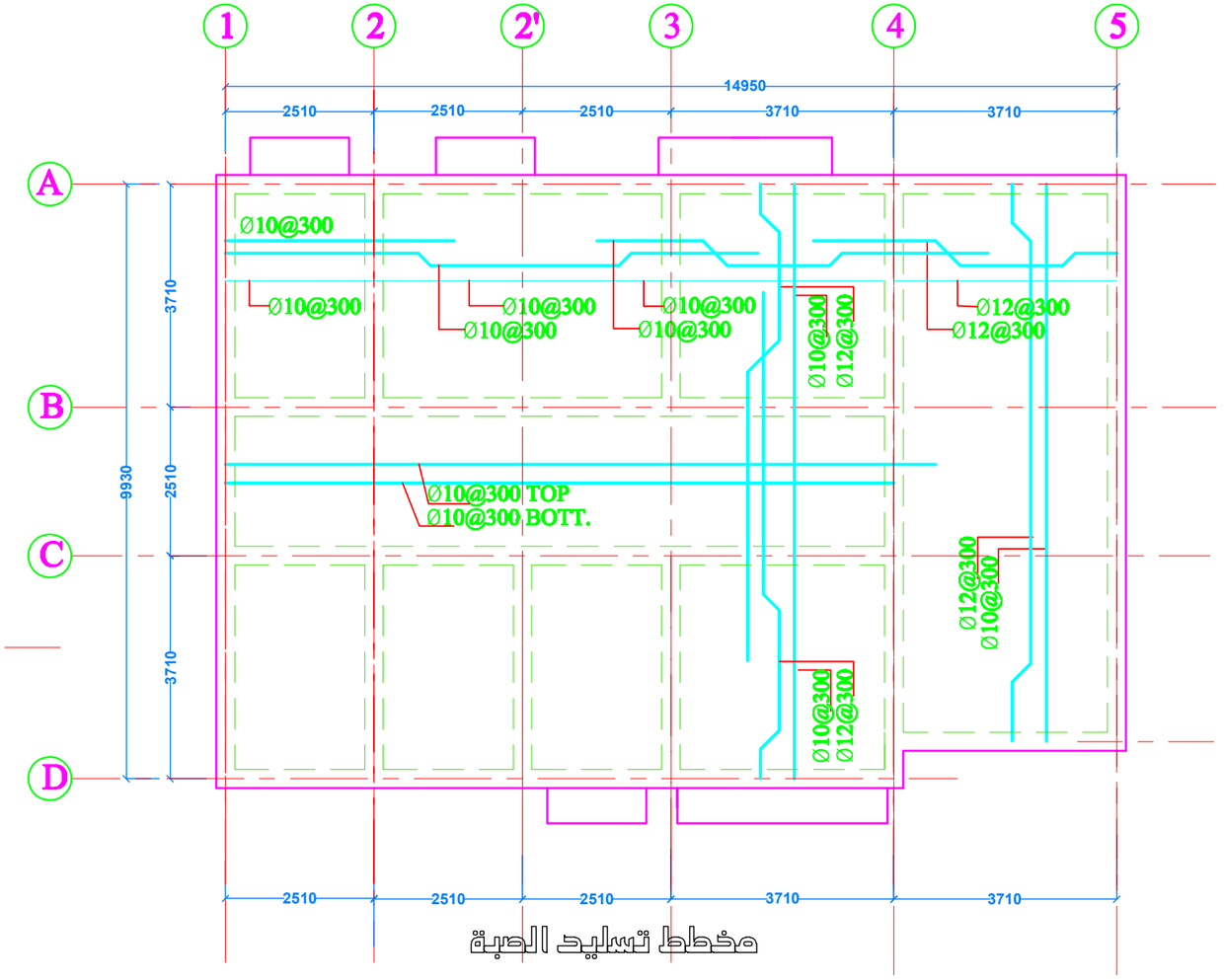

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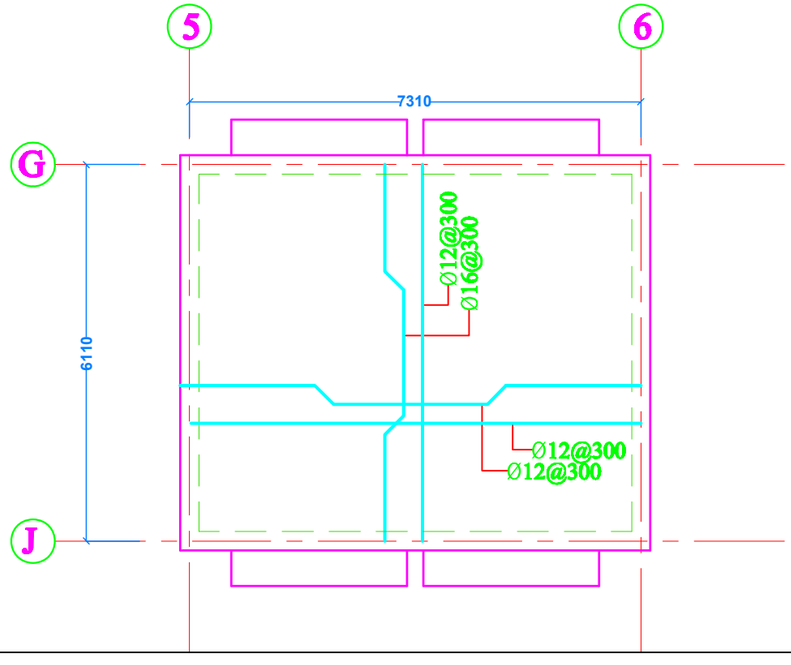


		DATE	INIT REVISIONS

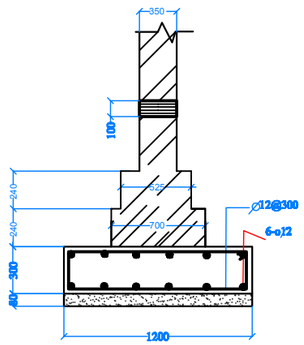
MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer: WALEED K. AL- ABDALEE

Job Title
مدرسة ابتدائيـــــة
نموذجيـــة ســعة 12 صف

Drawing Title
مخطط تســـــليح الســـقوف

Job No.		DRG No. ST/05
C.I/FB		REVISION SUFFIX
SCALE 1/100	DATE 3/30/2004	DRAWING waleed al - abdalee / CHECKED



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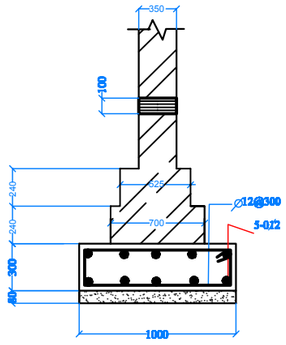
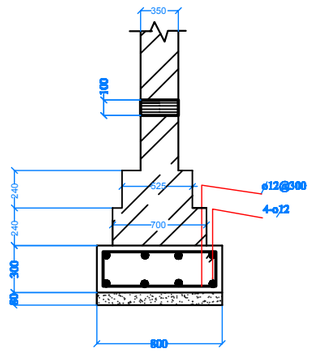
SCALE 1-20



SECTION 2-2

SCALE 1-20



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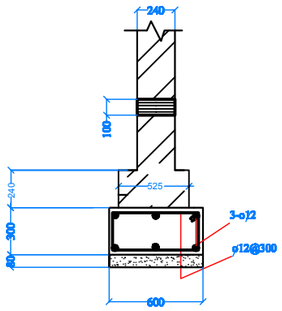
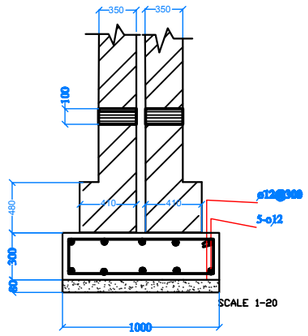


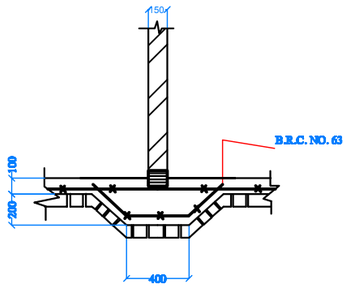
SECTION 4-4

SCALE 1-20



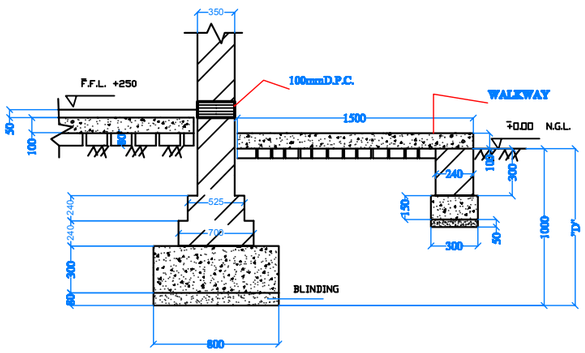
SCALE 1-20

SECTION 5-5



TYPICAL SECTION THROUGH PARTITION WALL

SCALE 1-20

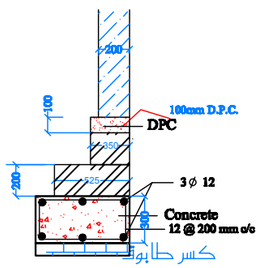


TYPICAL SEC . OF WALKWAY

SCALE 1-20

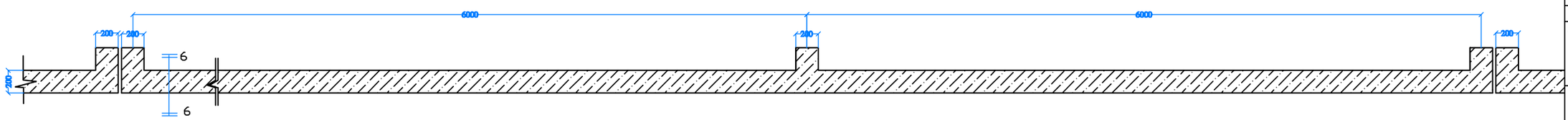
FENCE TYPICAL PLAN

EXPANSION JOINT EVERY 12.0m MAX. SCALE 1-20



SECTION 6-6

SCALE 1-20



NOTES

راجع الملاحظـات العامـة

مخطط ST-00

NOTES

ما يلـــي أضـــافة للملاحظـــات العامـة يـرعى

1- يتـم الاعتمـاد على المواصـــفات العامـه المحددة من قبـل المـركز القومـي للمختـــبرات الانشـــائية أعتمـادا على تقـــرير فحـص التربـــه على ان لا يقـل عن 60 سم بـاي حال من الاحوال ضروري اعتمـاد التوصـــيات الوارده فـي تقـــارير فحوصـــات التربـــه بخصـــوص نوعيـة الخرســاته ونسـبة المزج فيهـا والاحتياطـات الواقيـة للخرســاته من الاملاح المتواجـده فـي التربـــة واللاتـــي يقررهـا المركز القومـي للمختـــبرات الانشـــائية ينتخـب ابعـاد وتســـاليح المقـاطع حسب تحمل التربـــه فـي موقع بنـاء المدرسـة وفـي الجدول

ملاحظة

المقـاطع الموجودة فـي هذه اللوحـة محدده لتحمـل تربـة مقدارها 8 طن / المـتر المـربع ويكـون سمك الاسـاس 40 سم بـدلا من 30 سم فـي الـترب الجبســـية او الرخوه

	DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer: WALEED K. AL- AIDALEE

Job Title:
مدرسة ابتدائيـــة
نموذجيـة سـعة 12 صف

Drawing Title:
مقـاطع الاســس بنـــاء طـابوق

Job No.:

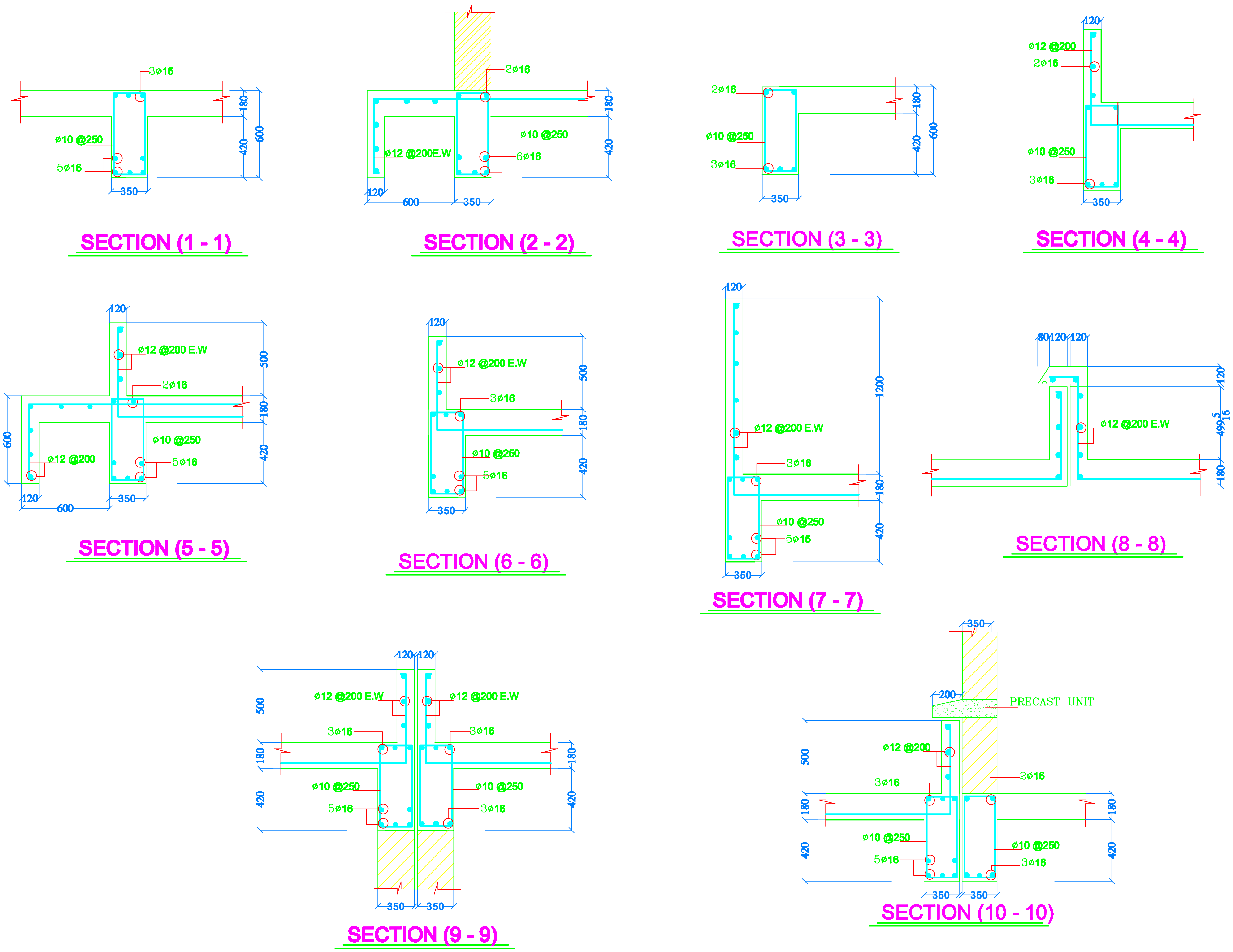
DRG No.: ST/06

SCALE: 1/40

DATE: 2/10/2021

DRAWING: waleed al - aidalee

CHECKED:



	DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

job Architect Engineer WALEED K. AL- ABDALEE

job Title

مدرسة ابتدائيـــــة
نموذجيـــة سـعة 12 صـف

Drawing Title

تســــــليح الجســور

job No.	DRG No. ST/07
CL/SFB	REVISION SUFFIX

SCALE	DATE	DRAWING	CHECKED
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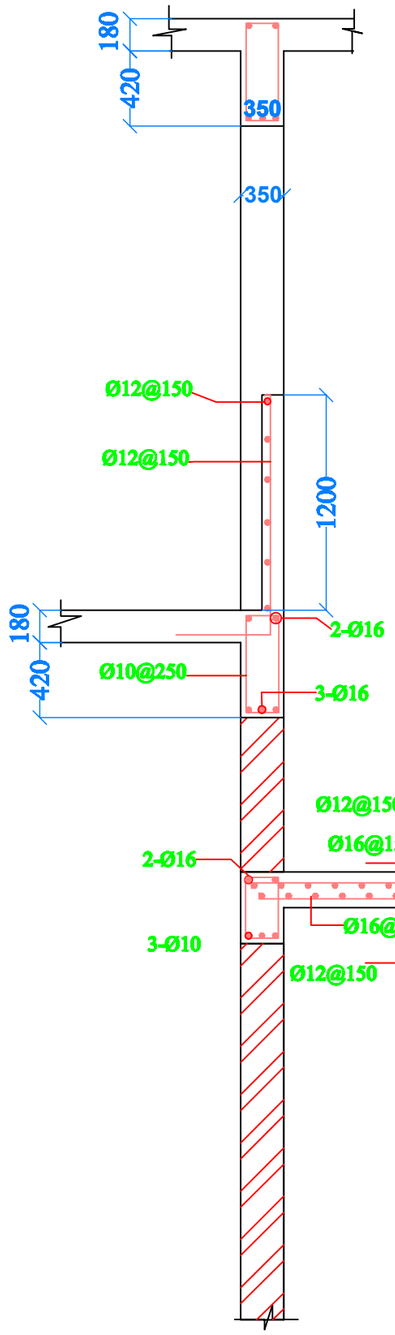
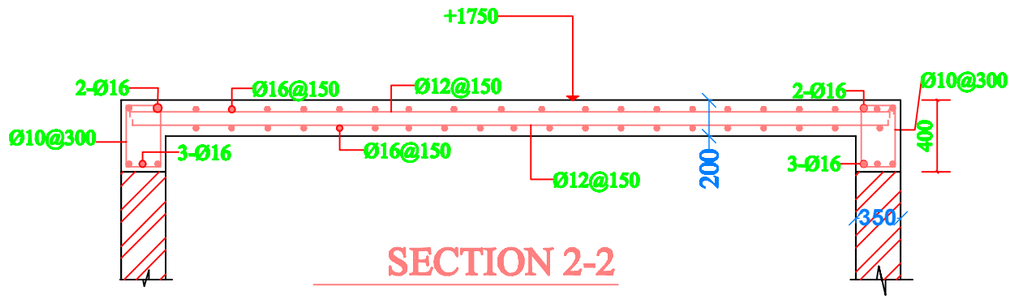
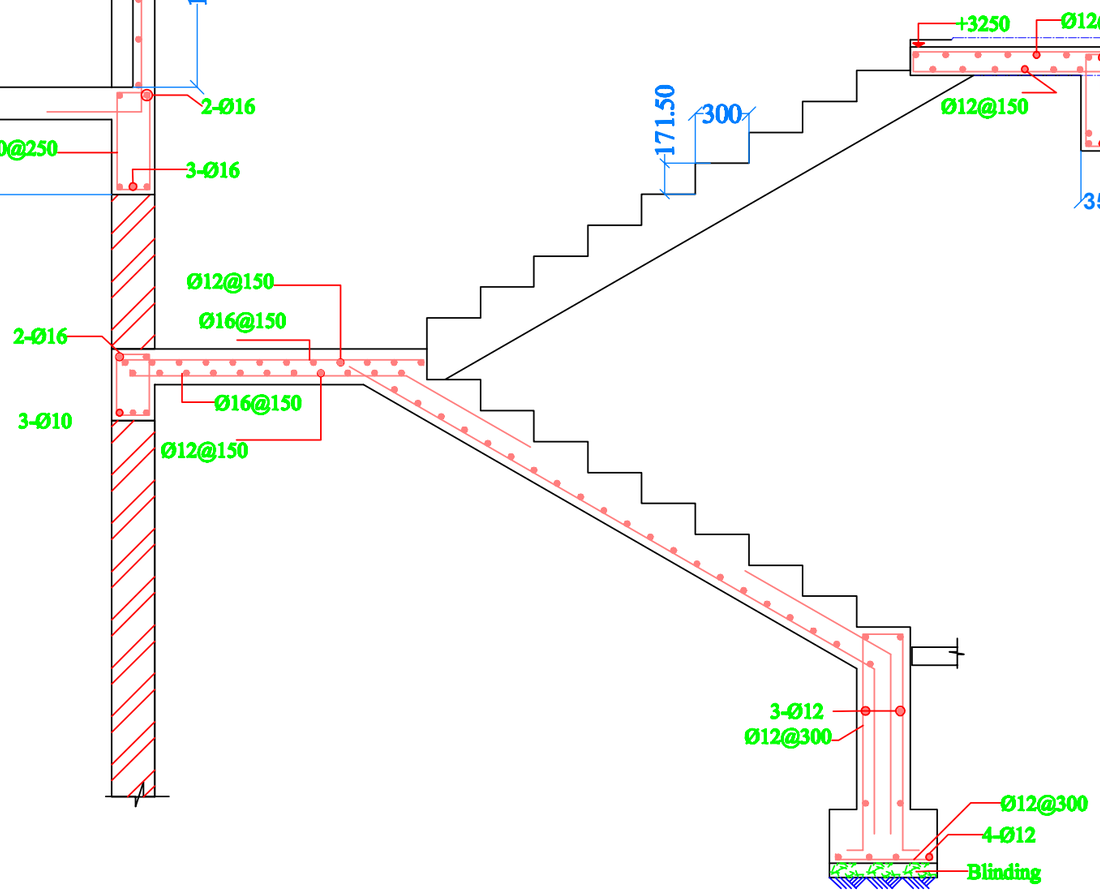
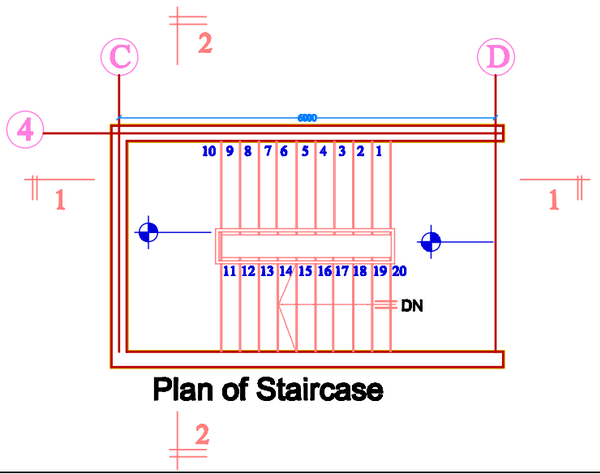




SECTION 2-2





Plan of Staircase

DATE	INIT	REVISIONS

MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer: WALEED K. Al- AIDALEE

Job Title: مدرسة ابتدائيـــــة نموذجيـــة سـعة 12 صف

Drawing Title: تســـــليح الـدرج

Job No.

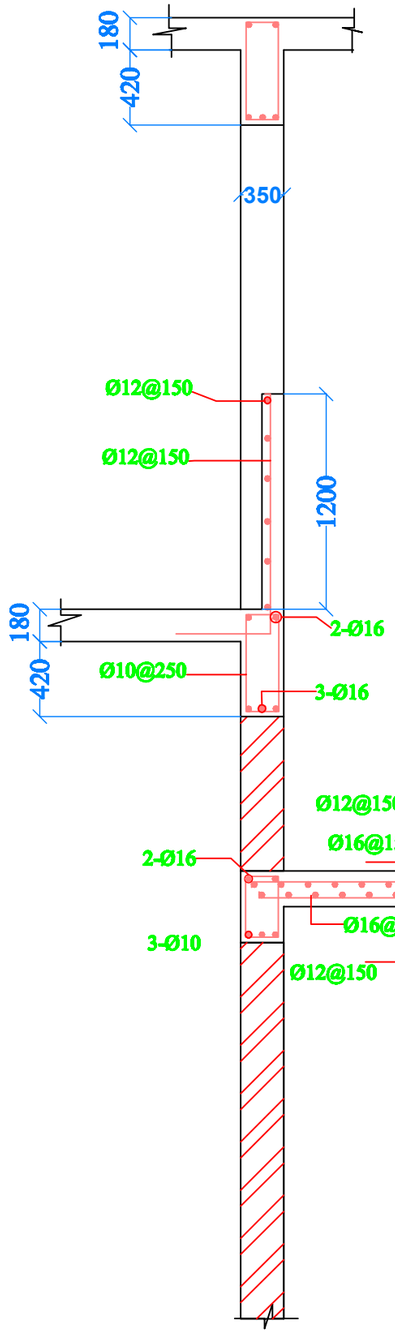
DRG No.: ST/08

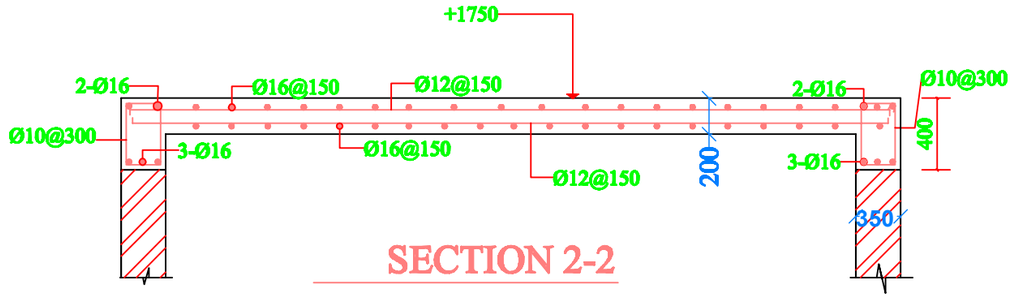
REVISION SUFFIX

CL/SFB

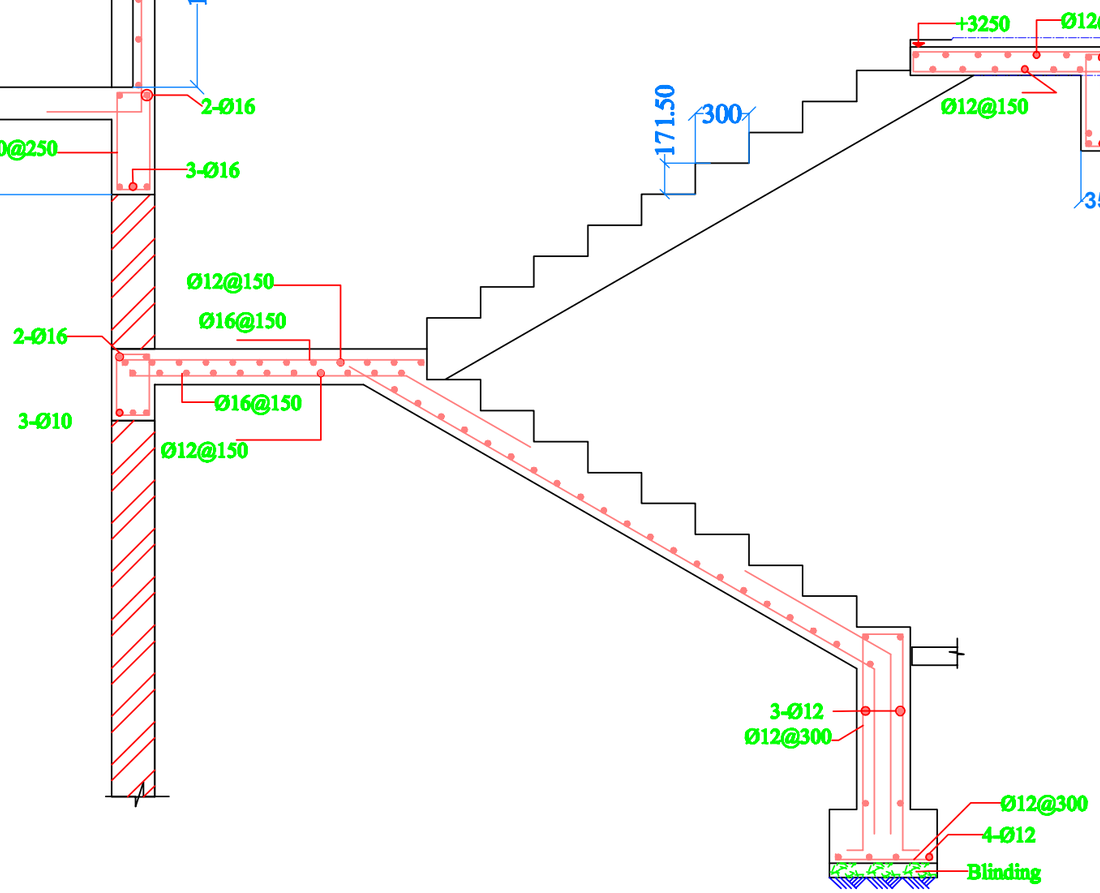
SCALE: 1/100-1/25 | DATE: 2/10/2014 | DRAWING: waleed al - aidalee | CHECKED

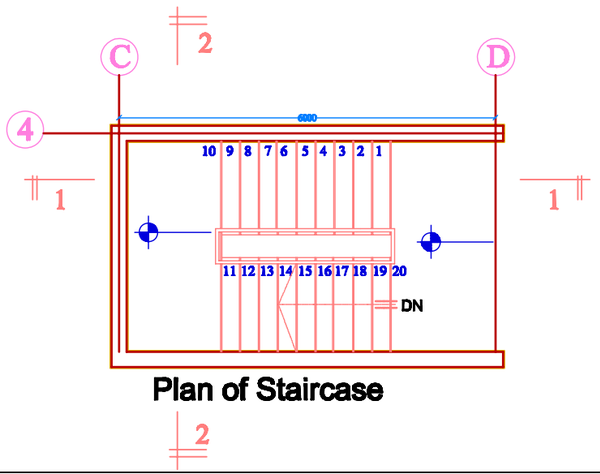
NOTES:
ASSUMED BEARING CAPACITY : 8 TON/m





SECTION 2-2





Plan of Staircase

DATE	INIT	REVISIONS

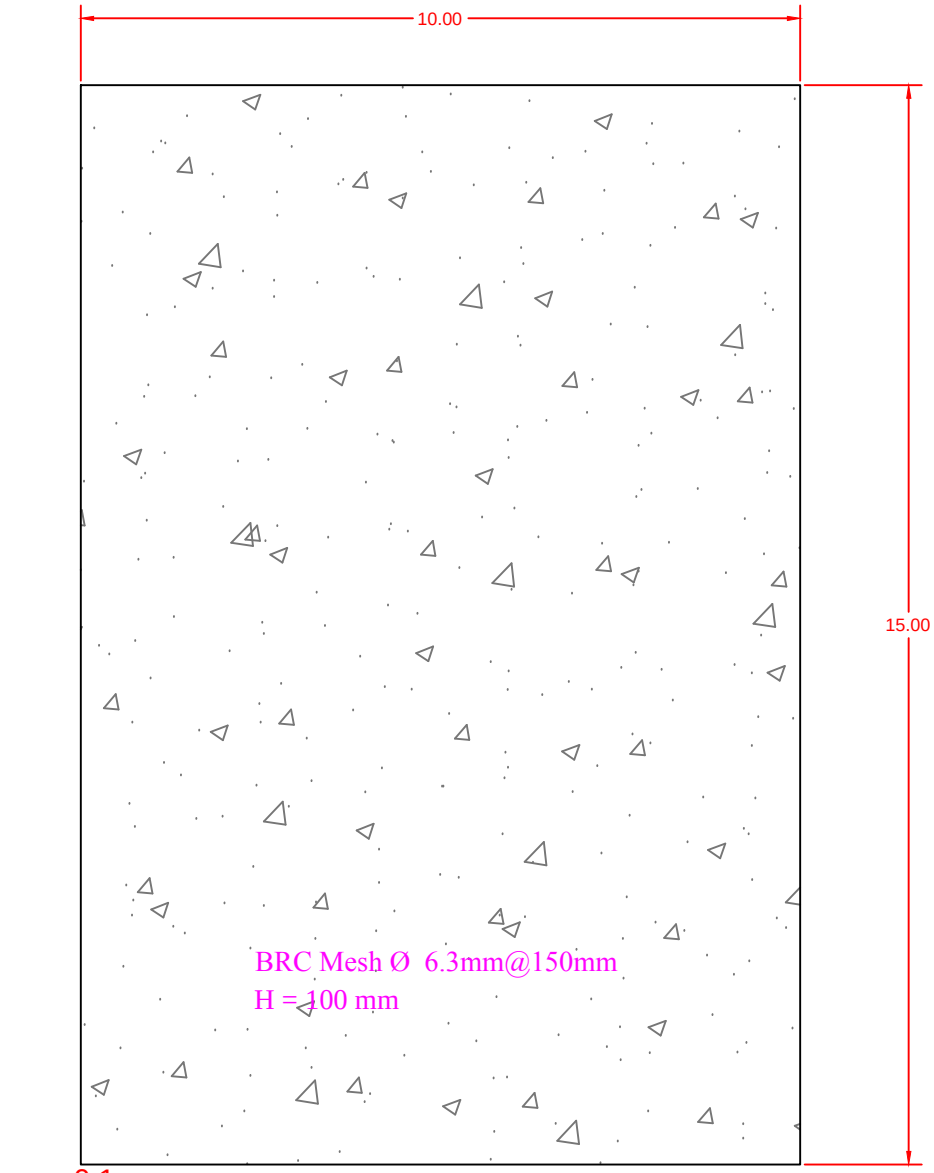
MINISTRY OF HOUSING & CONSTRUCTION
NATIONAL CENTER FOR ENGINEERING CONSULTANCY

Job Architect Engineer

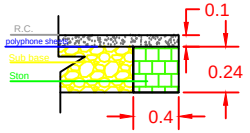
Job Title
مدرسة ابتدائيـــــة
نموذجيـــة ســعة 12 صف

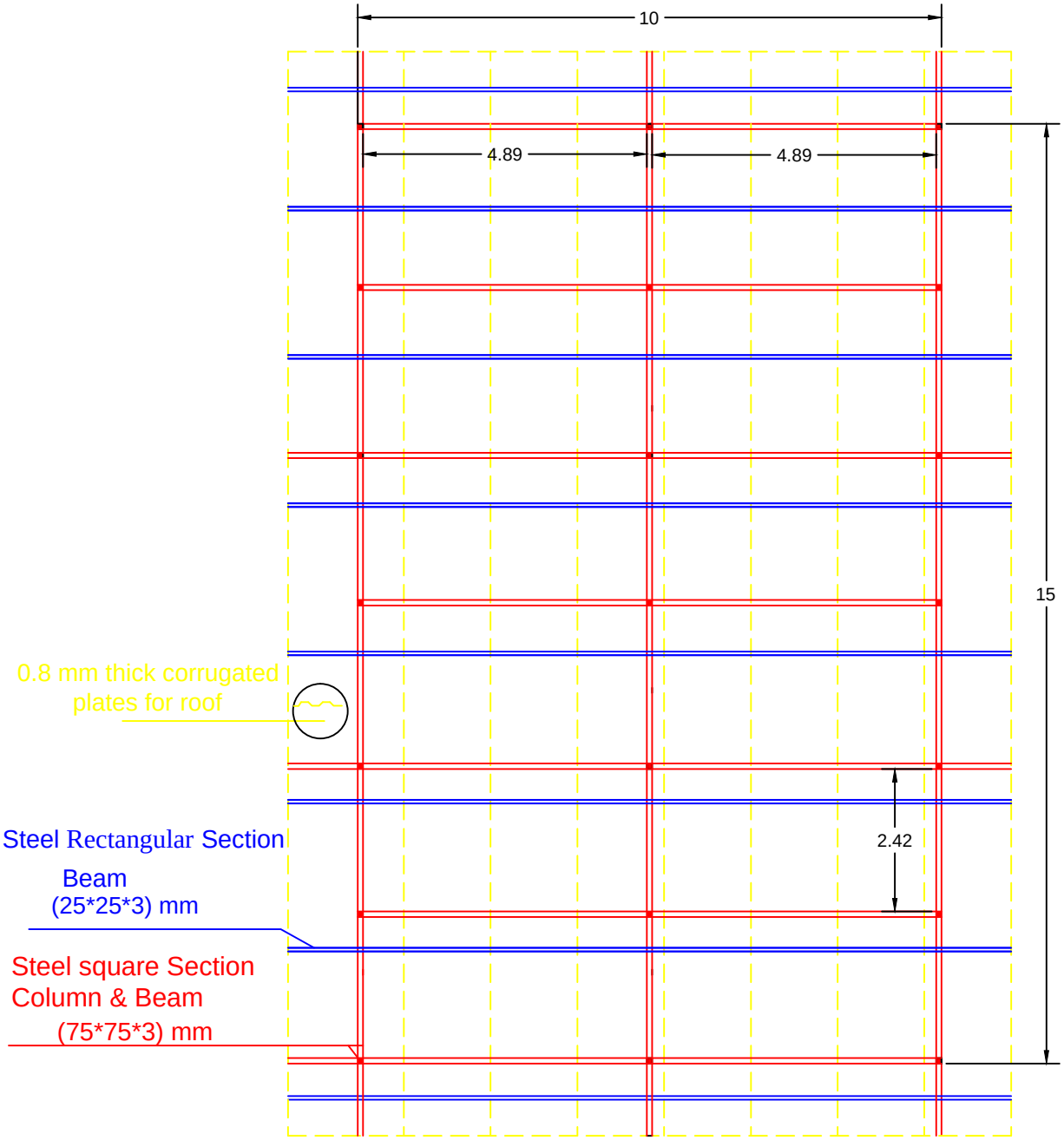
Drawing Title
تســـــليح الـدرج

Job No.	DRG No.
CL/SFB	REVISION SUFFIX
SCALE 1/100-1/10	DATE
DRAWING	CHECKED

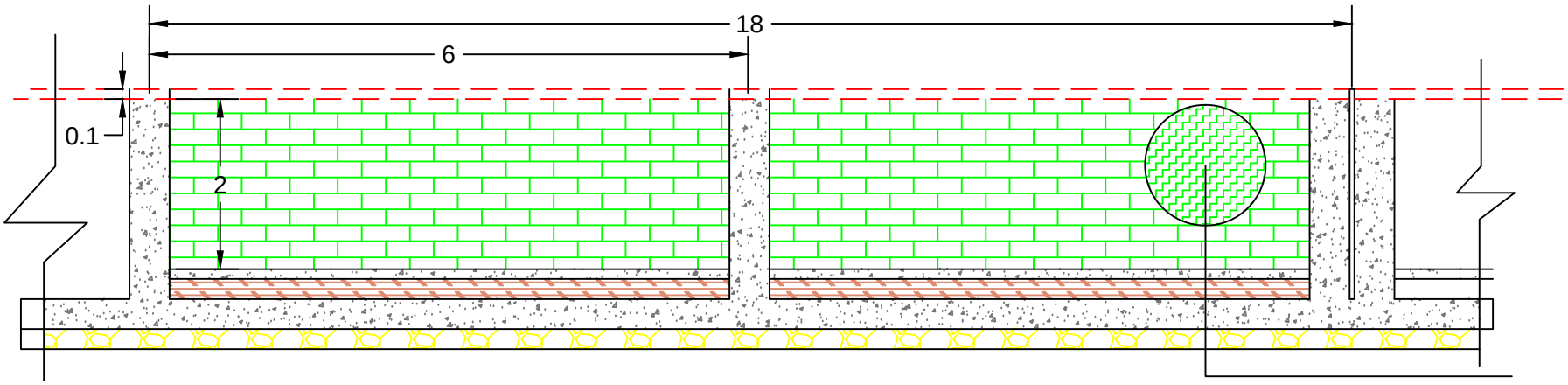


Base concrete For steel sunshade roof

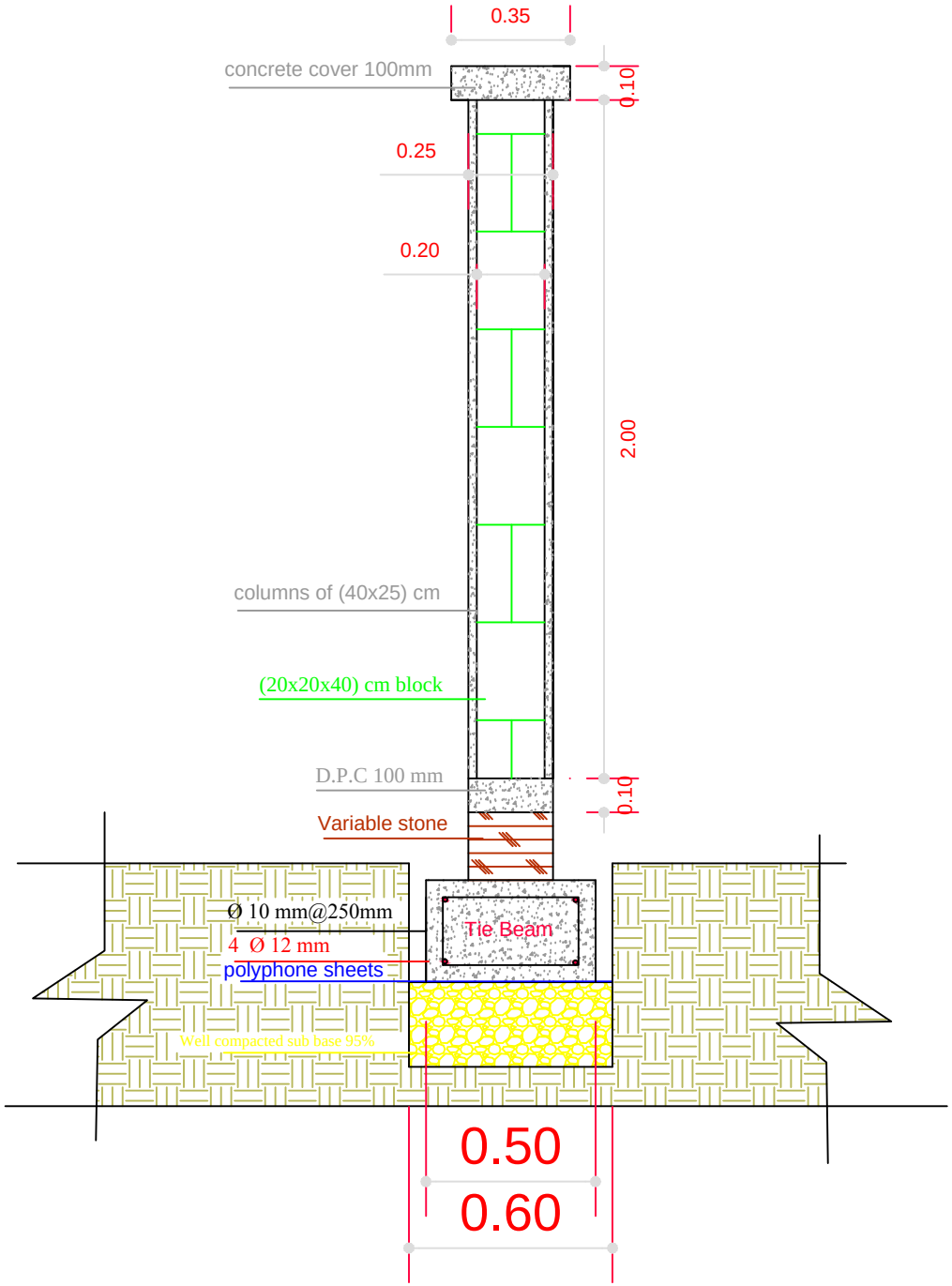




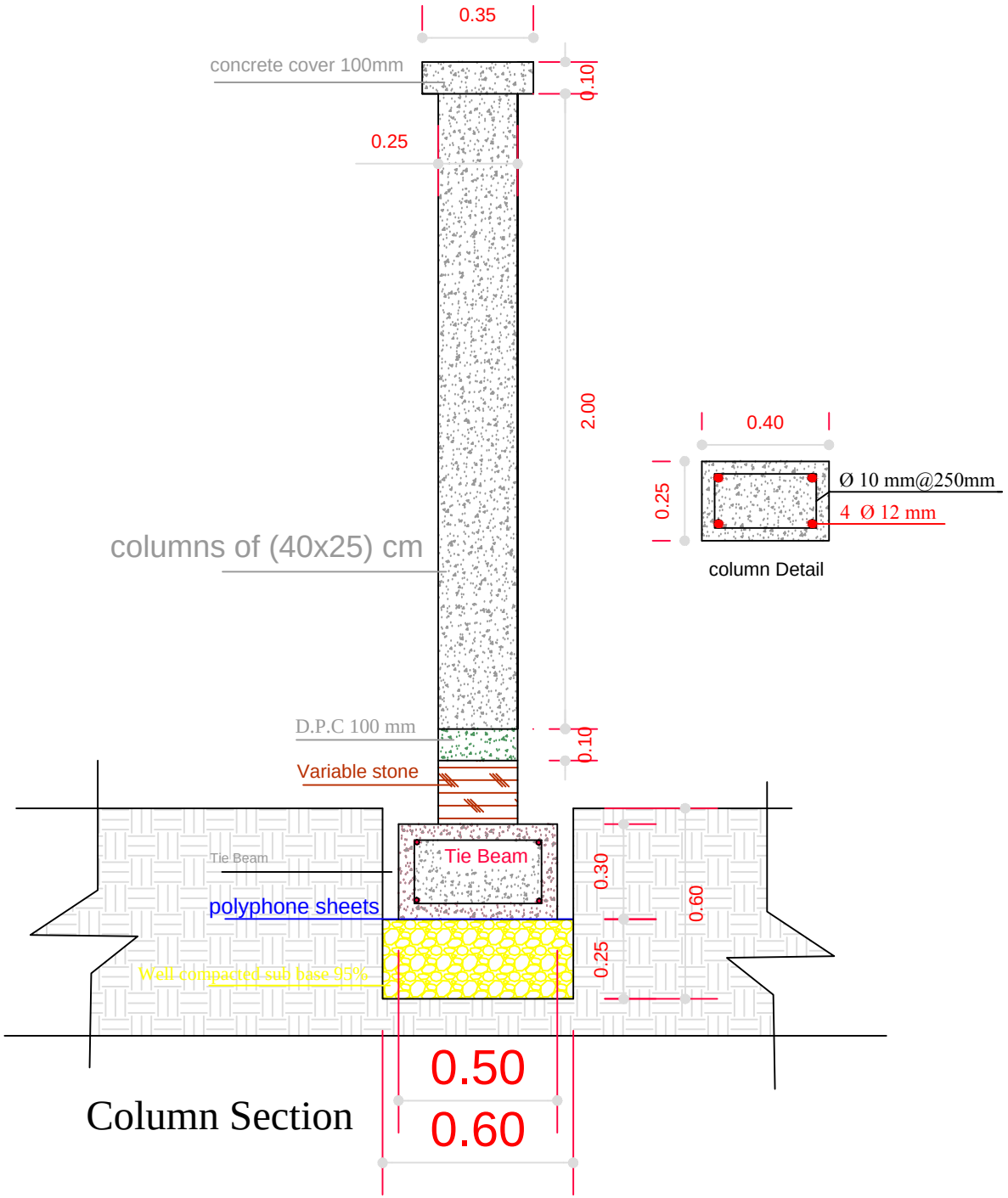
steel sunshade roof



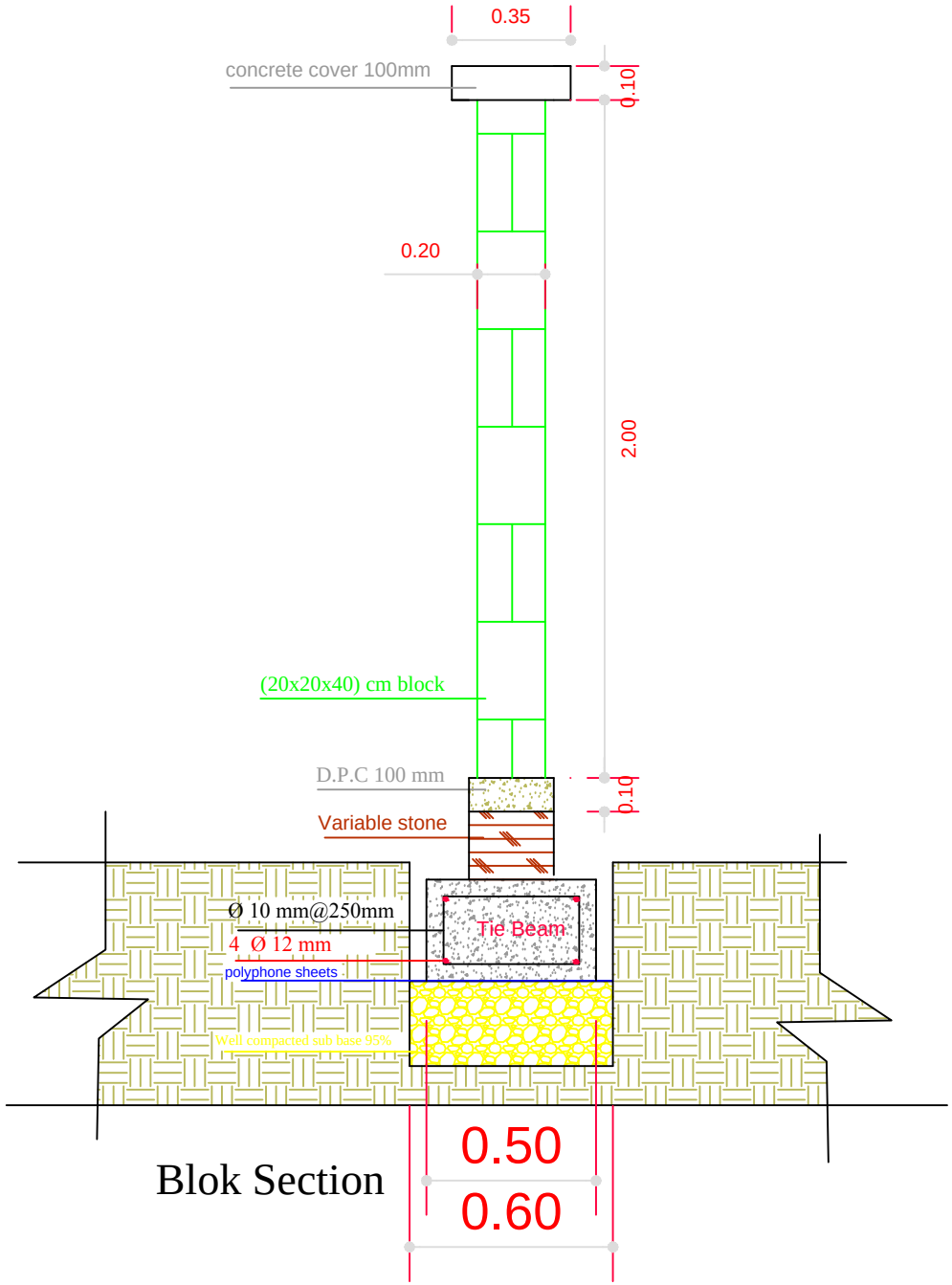
Front View



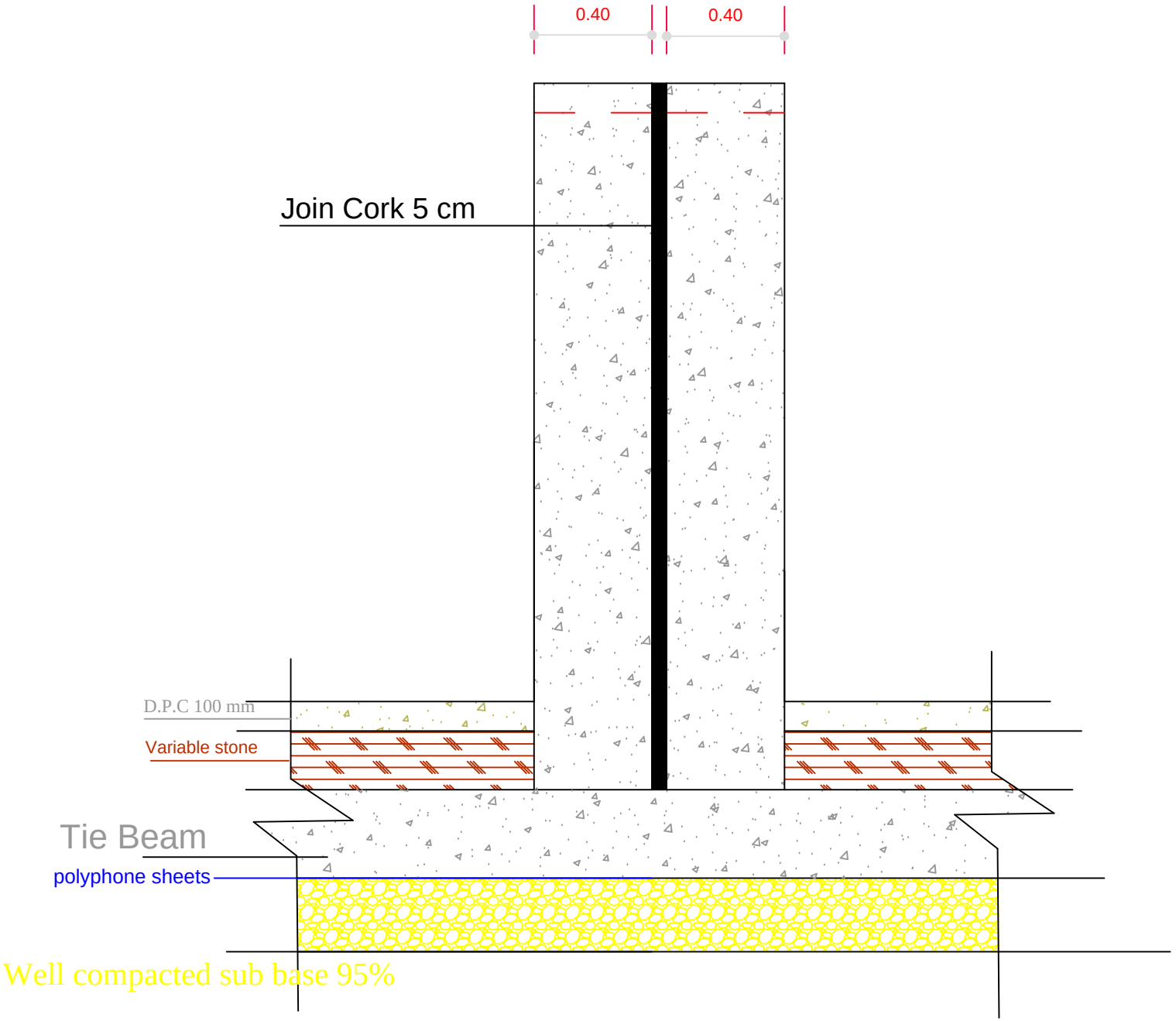
Column Section & Blok Section



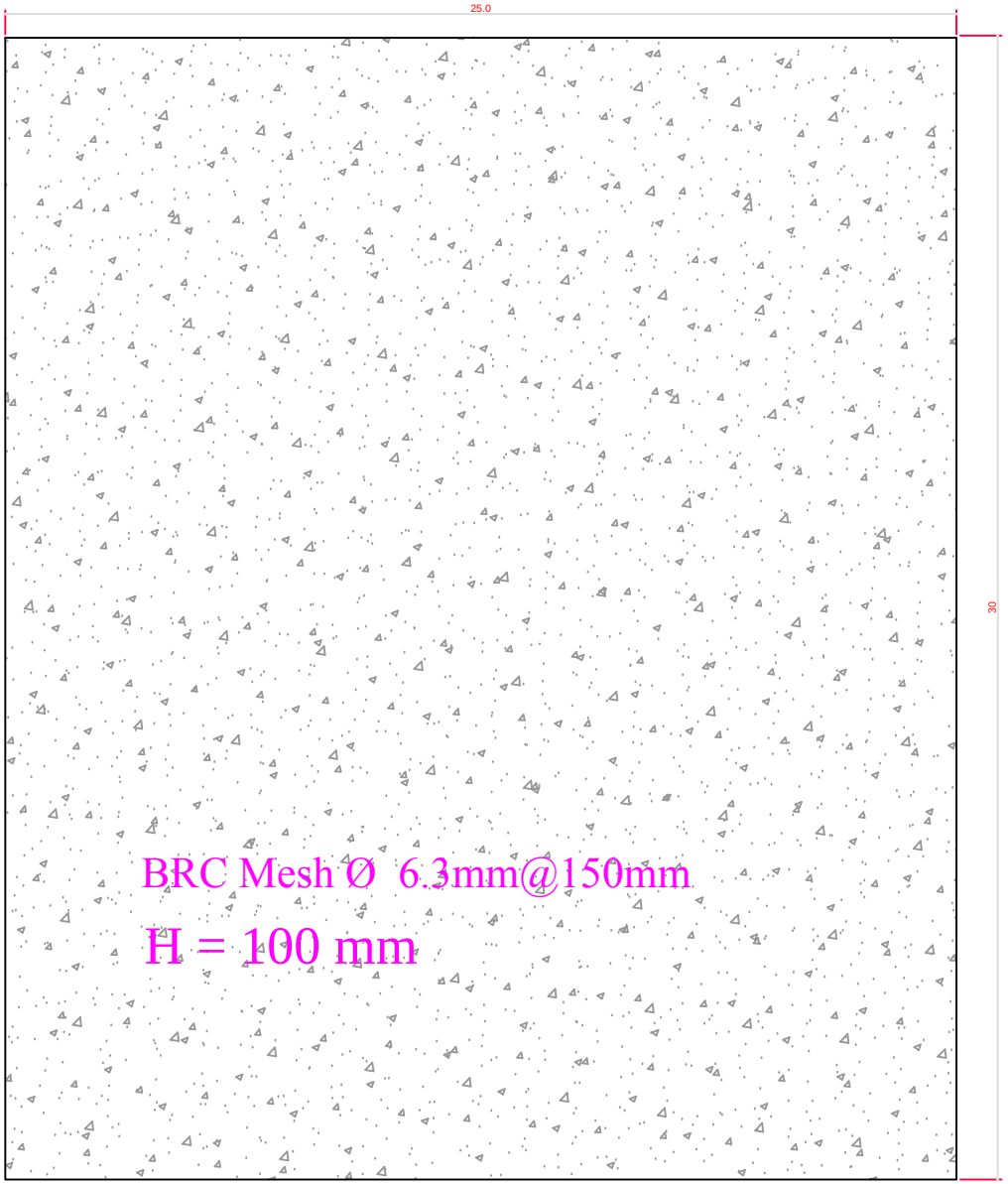
Column Section



Blok Section

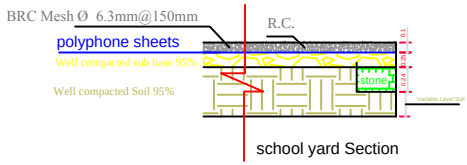


Double Column Section


25.0
30
BRC Mesh Ø 6.3mm@150mm
H = 100 mm


polyphone sheets

school yard


BRC Mesh Ø 6.3mm@150mm
polyphone sheets
Well compacted sub base 95%
Well compacted Soil 95%
R.C.
stone
school yard Section