

22 13 94

# MINISTRY OF EDUCATION

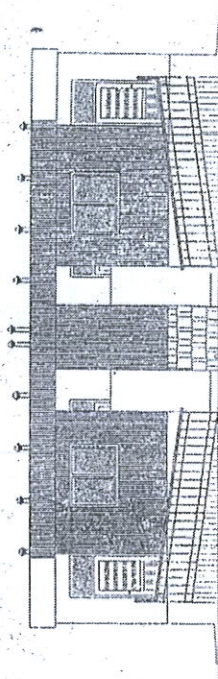
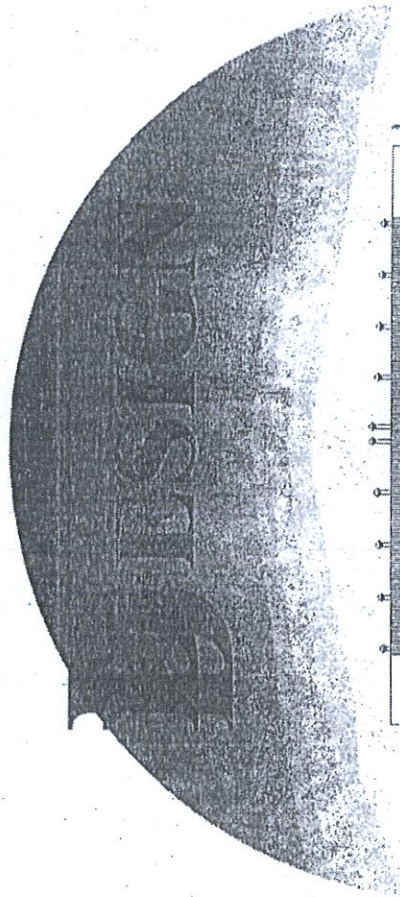
(MOE/ISD)

DEPARTMENT OF CONSTRUCTION / TECHNICAL SERVICES

(ISD)

## TYPICAL 10 LATRINE BRUNT BRICK I-BEAM

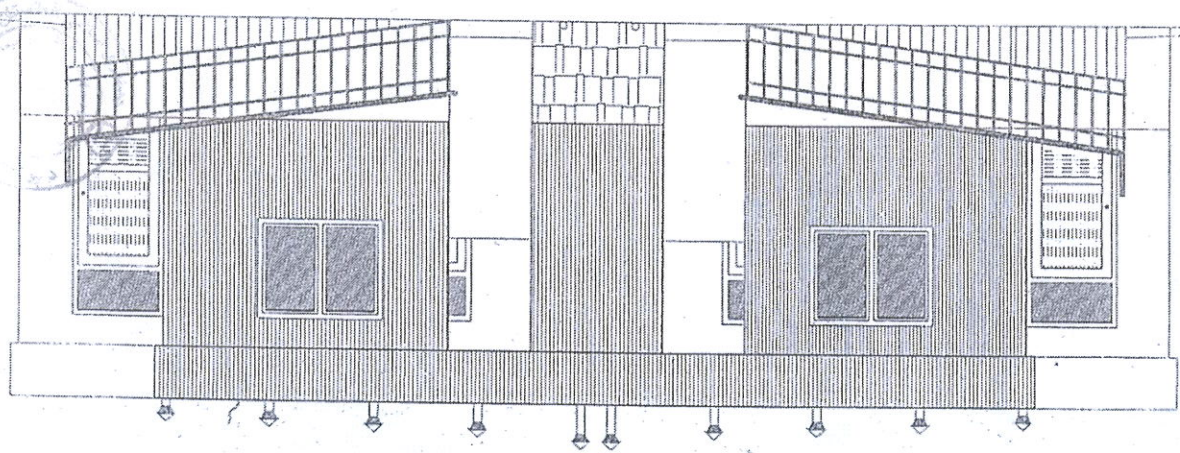
### ARCHITECTURE



2014 FEB

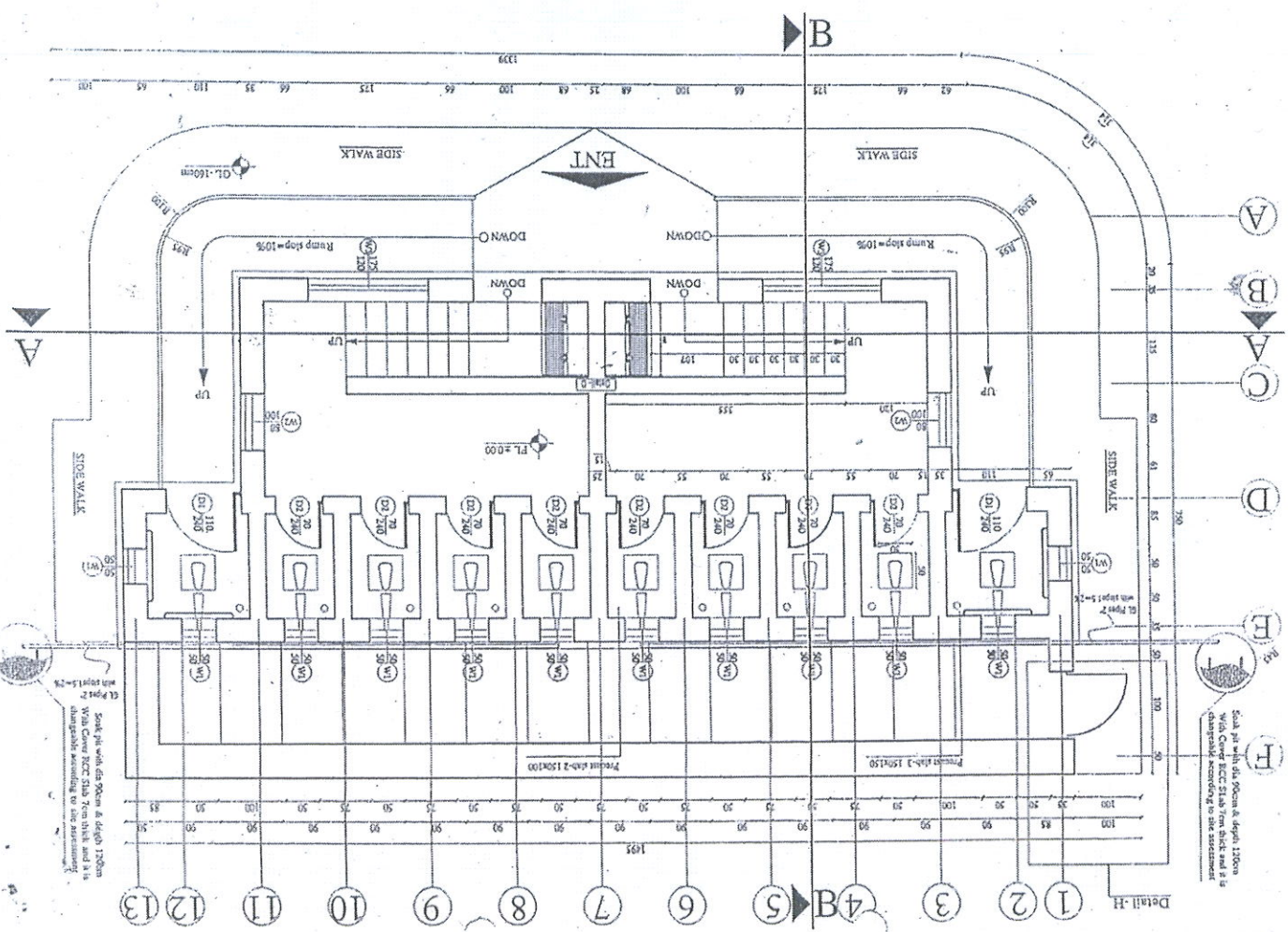
Note: All dimensions are in cm.

FRONT ELEVATION



GROUND FLOOR PLAN

Note: All dimensions are in cm.



Note:

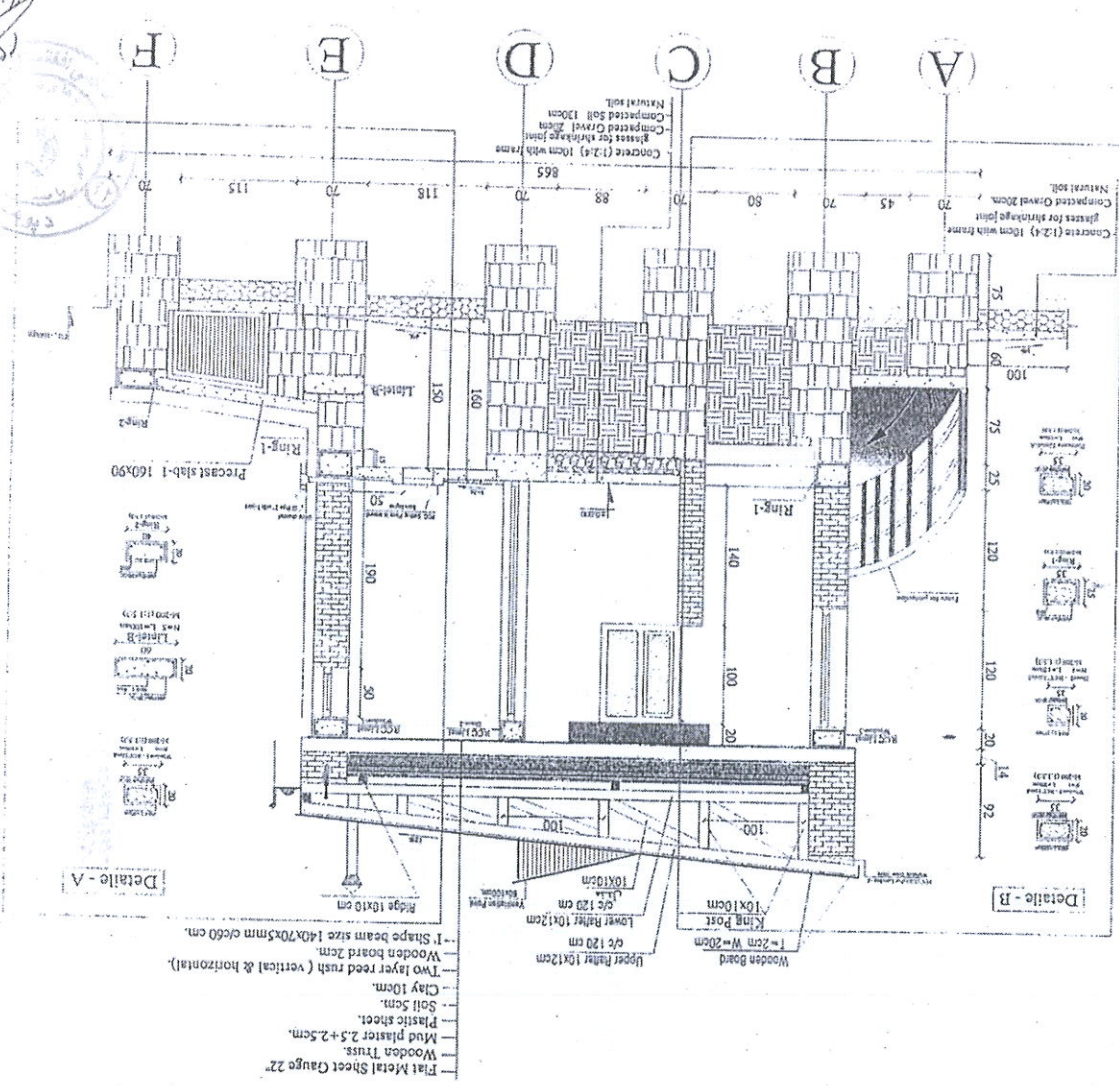
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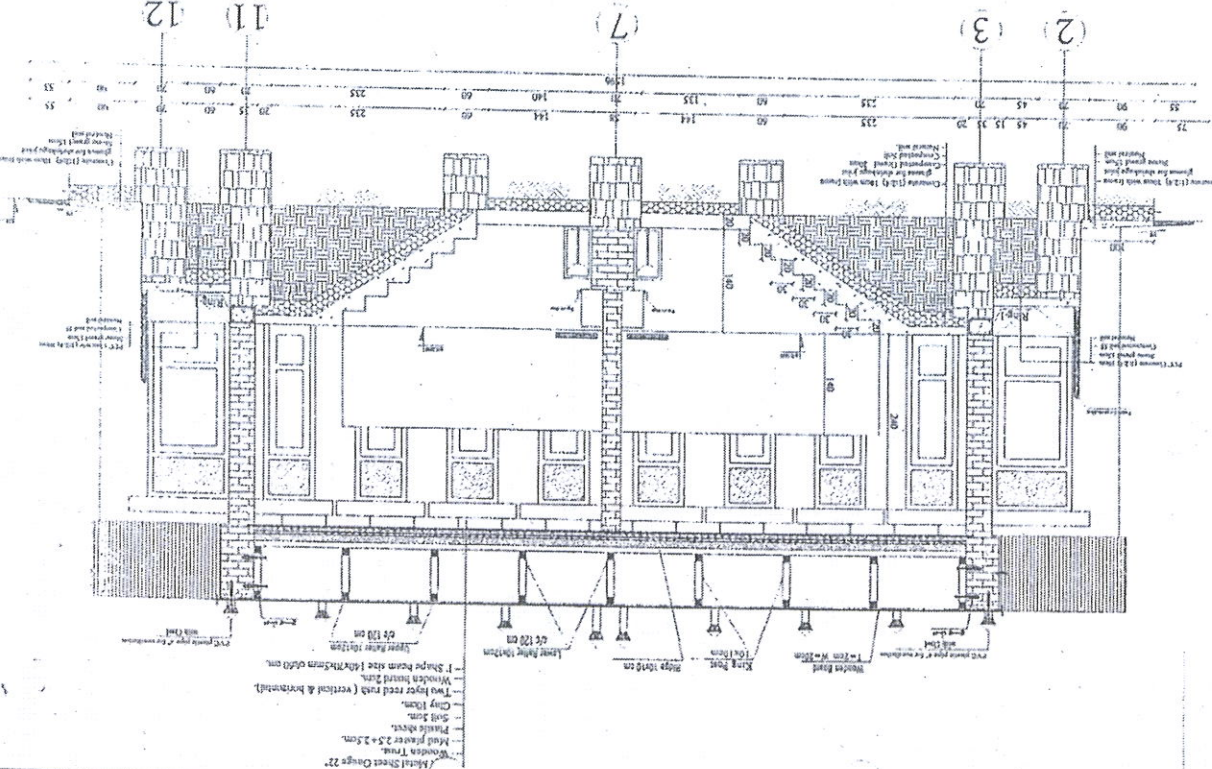
MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION  
IN AFGHANISTAN  
STANDARD SCHOOL DESIGN

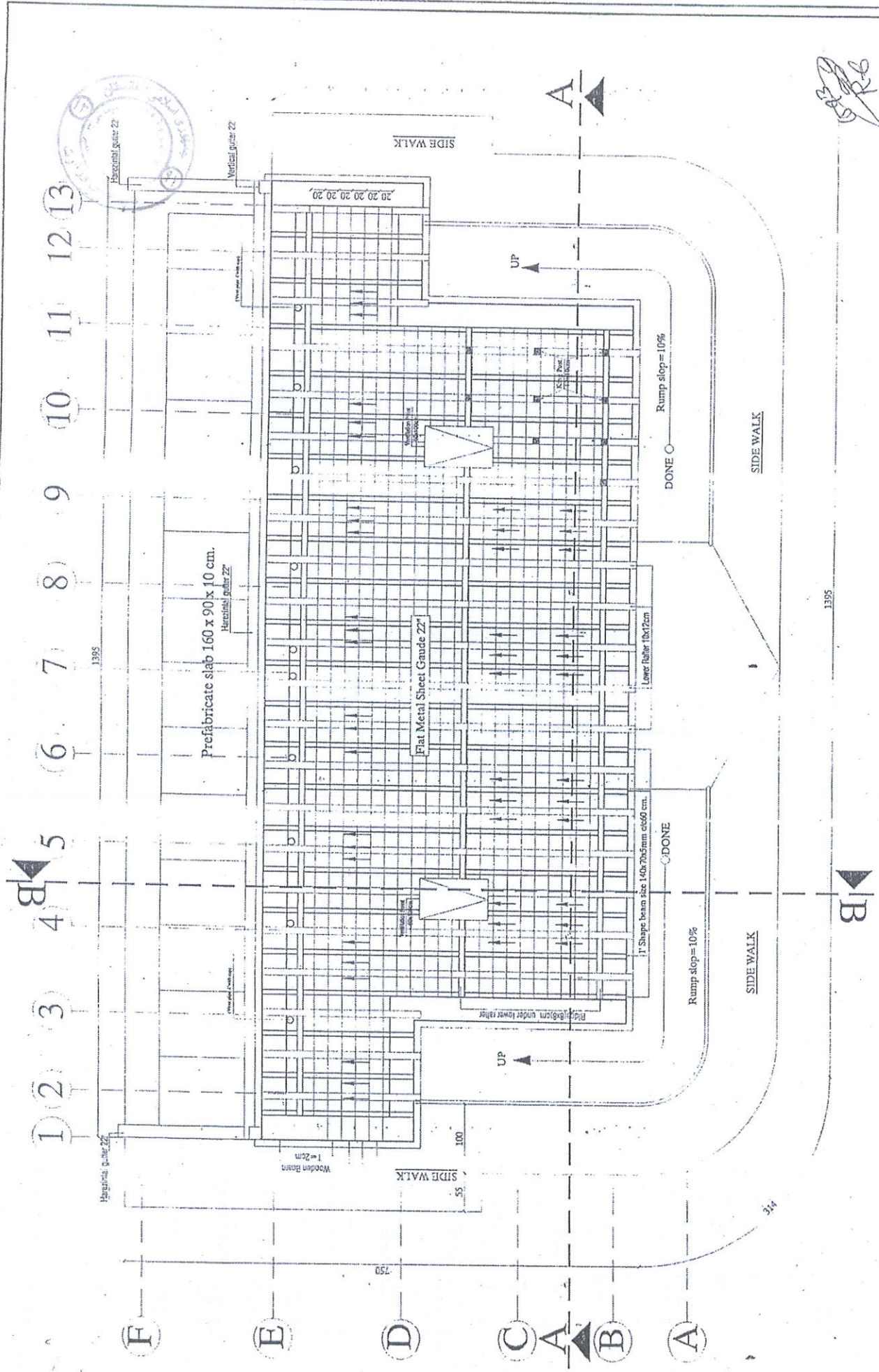
PROJECT NAME	DRAWING TITLE	SECTIONS A-A, B-B
10 LATRINE FROM BUILT BRICK BEAM ROOF		

SECTION B-B



SECTION A-A



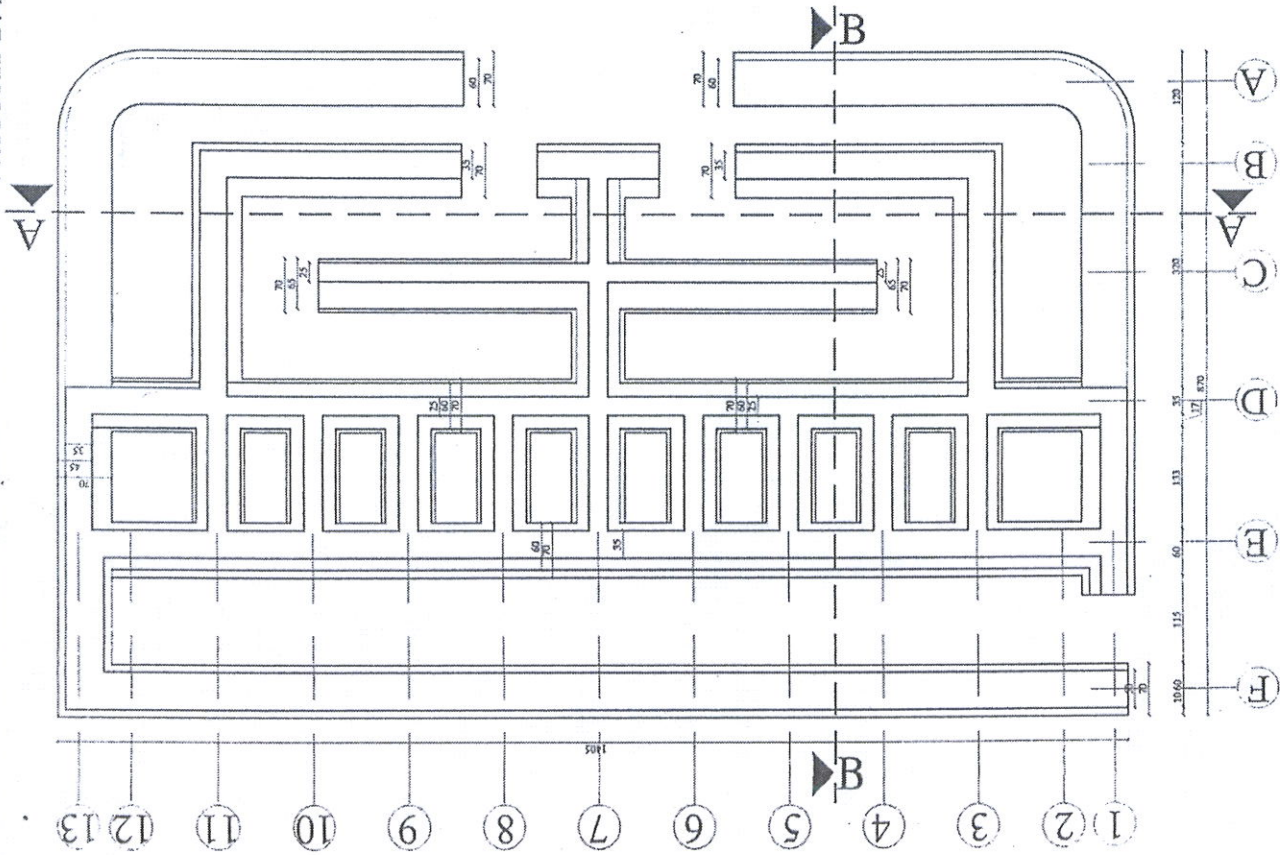


Note:  
All dimensions are in cm.

# ROOF PLAN

 <p>MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION IN AFGHANISTAN</p>	<p>STANDARD SCHOOL DESIGN IN AFGHANISTAN</p>	<p>ARCHITECTURE</p> <p>DESIGNED BY: ENG. S. BAKOOR CHECKED BY: ARCH. APPROVED BY: ENG. S. BAKOOR</p>	<p>TYPE: ARCHITECTURE</p> <p>SCALE: AS SHOWN ON DRAWING</p> <p>DATE: 22.03.14</p>	<p>PROJECT NAME: 10 LATRINE FROM BUNT BRICK I BEAM ROOF</p> <p>DRAWING TITLE: ROOF PLAN</p>
		<p>ARCHITECTURE</p> <p>DESIGNED BY: ENG. S. BAKOOR CHECKED BY: ARCH. APPROVED BY: ENG. S. BAKOOR</p>	<p>TYPE: ARCHITECTURE</p> <p>SCALE: AS SHOWN ON DRAWING</p> <p>DATE: 22.03.14</p>	

Handwritten signature and initials: R-6



Note:  
All dimensions are in cm.

## FUNDATION PLAN

MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

ARCHITECT/DESIGNER  
ON/ORD BY  
TECH- APPROVED BY/ENG BY/ARCH M/ARCH

APPROVED DOCUMENT/ENG AS/ARCH M/ARCH

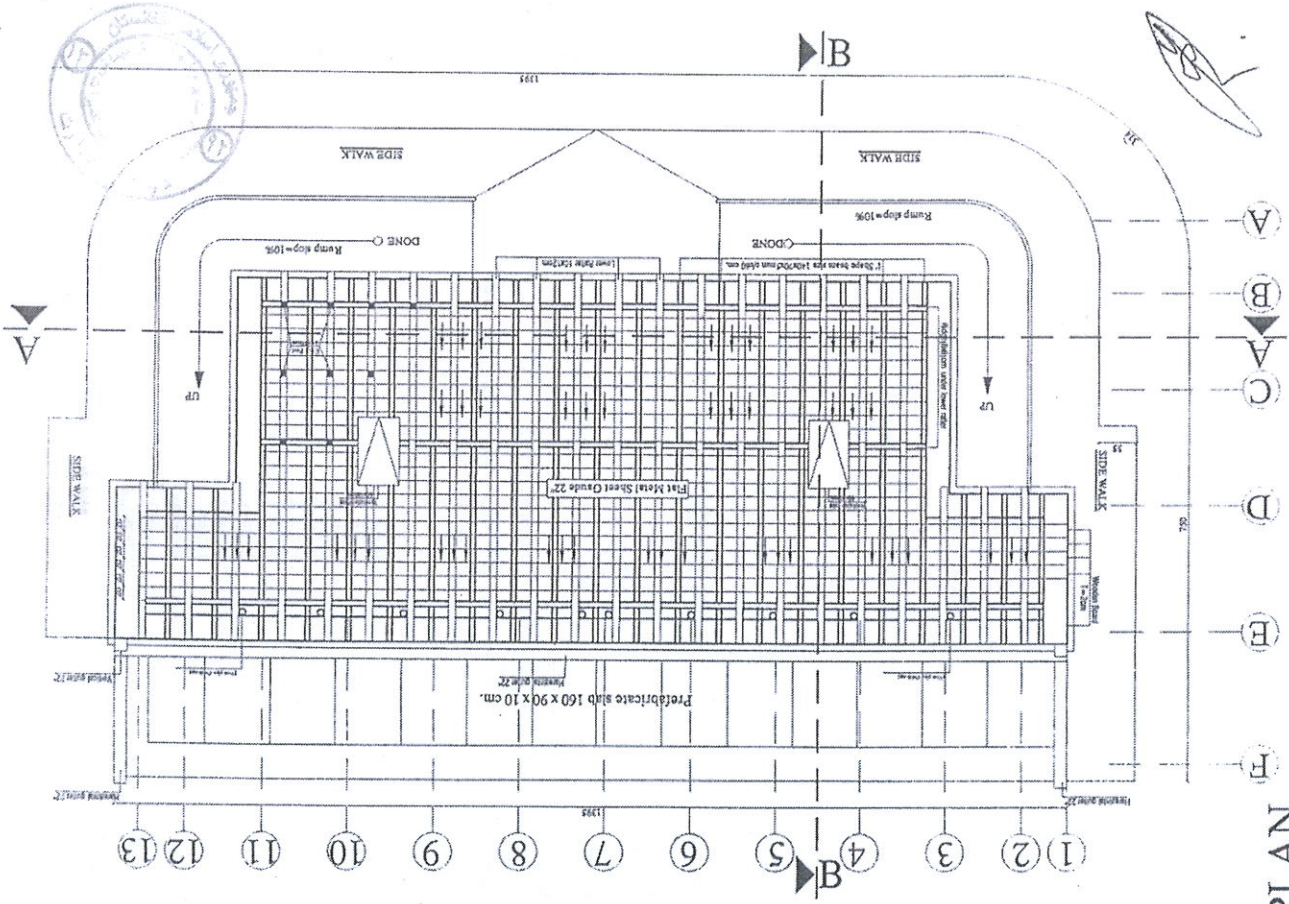
TYPE  
ARCHITECTURE

SCALE  
DATE

PROJECT NAME  
DRAWING TITLE

10 LATRINE FROM BUNT BRICK I BEAM ROOF.

ROOF PLAN AND FUNDATION PLAN



## ROOF PLAN

ARCHITECTURE

PROJECT NAME

DRAWING TITLE

10 LATRINE FROM BUNT BRICK I BEAM ROOF.

ROOF PLAN AND FUNDATION PLAN

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION

ARCHITECT/DESIGNER  
ON/ORD BY  
TECH- APPROVED BY/ENG BY/ARCH M/ARCH

Note:

Soak pit depth is related to underground water table and should be environmentally protected, meantime special attention is required for slope of pipes

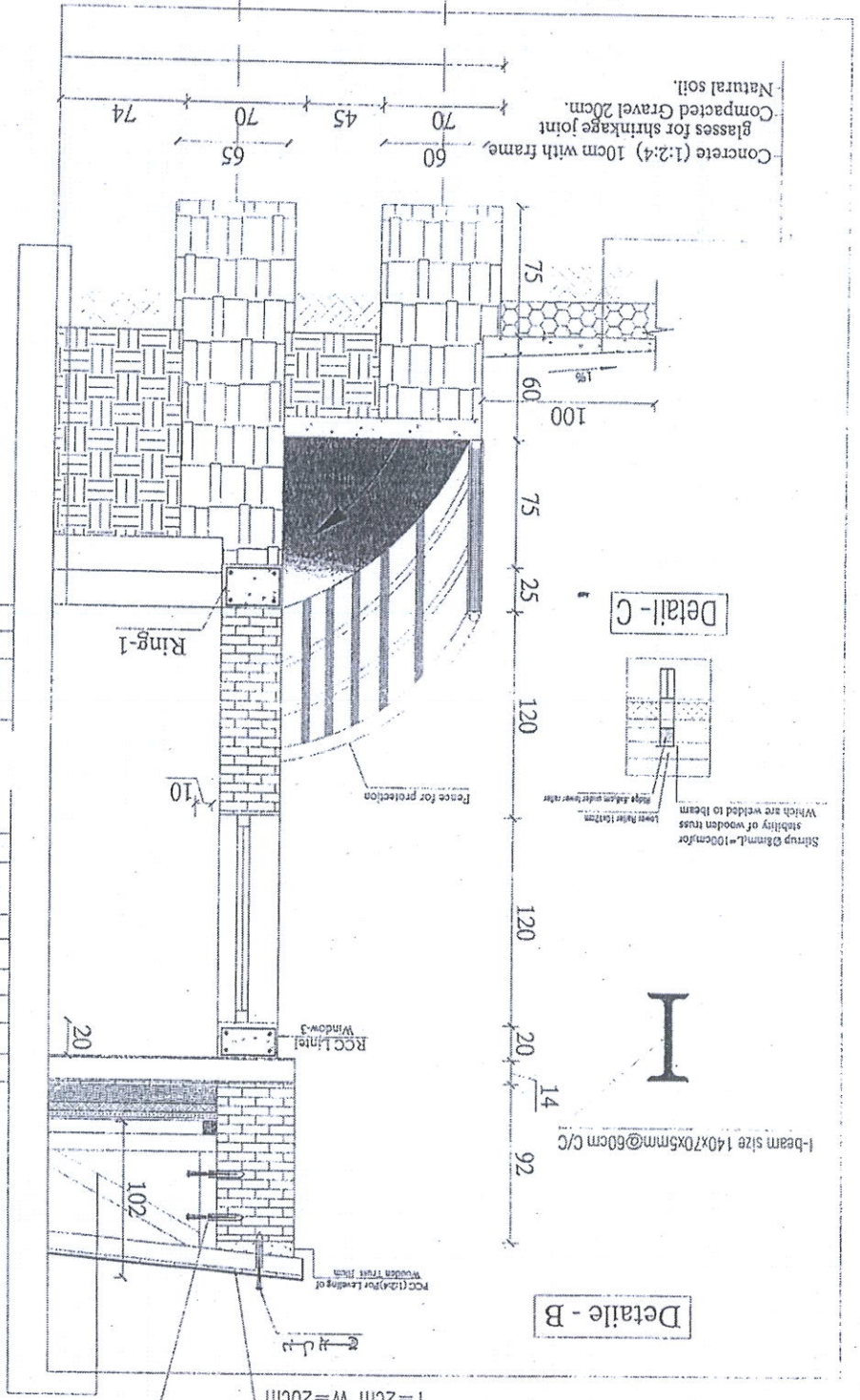
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# DETAILS

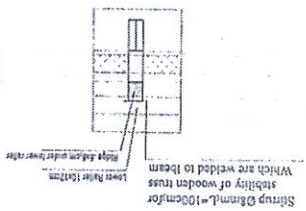
MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION  
STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

PROJECT NAME	10 LATRINE FROM BUILT BRICK BEAM ROOF
DRAWING TITLE	DETAILS

PROJECT NAME	10 LATRINE FROM BUILT BRICK BEAM ROOF
DRAWING TITLE	DETAILS



Detail - C



Strip 6mm, 100cm for stability of wooden truss which are welded to beam

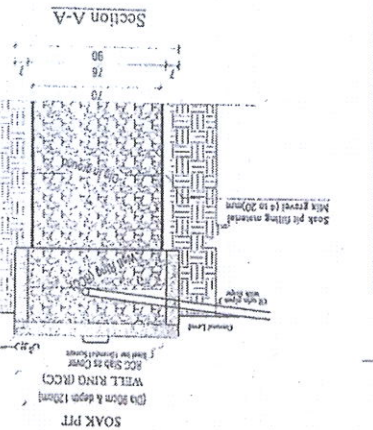
I-beam size 140x70x5mm@60cm C/C

Detail - B

King Post  
10x10cm  
Wooden Board  
T=2cm W=20cm

Concrete (1:2:4) 10cm with frame glasses for shrinkage joint  
Compacted Gravel 20cm  
Compacted Soil  
Natural soil

Flat Metal Sheet Gauge 22"  
Wooden Truss  
Mud plaster 2.5+2.5cm  
Plastic sheet  
Soil 5cm  
Clay 10cm  
Two layer reed rush  
(vertical & horizontal)  
Wooden board 2cm  
I-Shape beam size (140x70x5mm) c/c 60cm

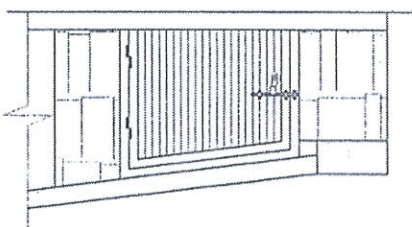


Section A-A

Soak pit filling material  
Mud plaster 2.5+2.5cm  
Plastic sheet  
Soil 5cm  
Clay 10cm  
Two layer reed rush  
(vertical & horizontal)  
Wooden board 2cm  
I-Shape beam size (140x70x5mm) c/c 60cm



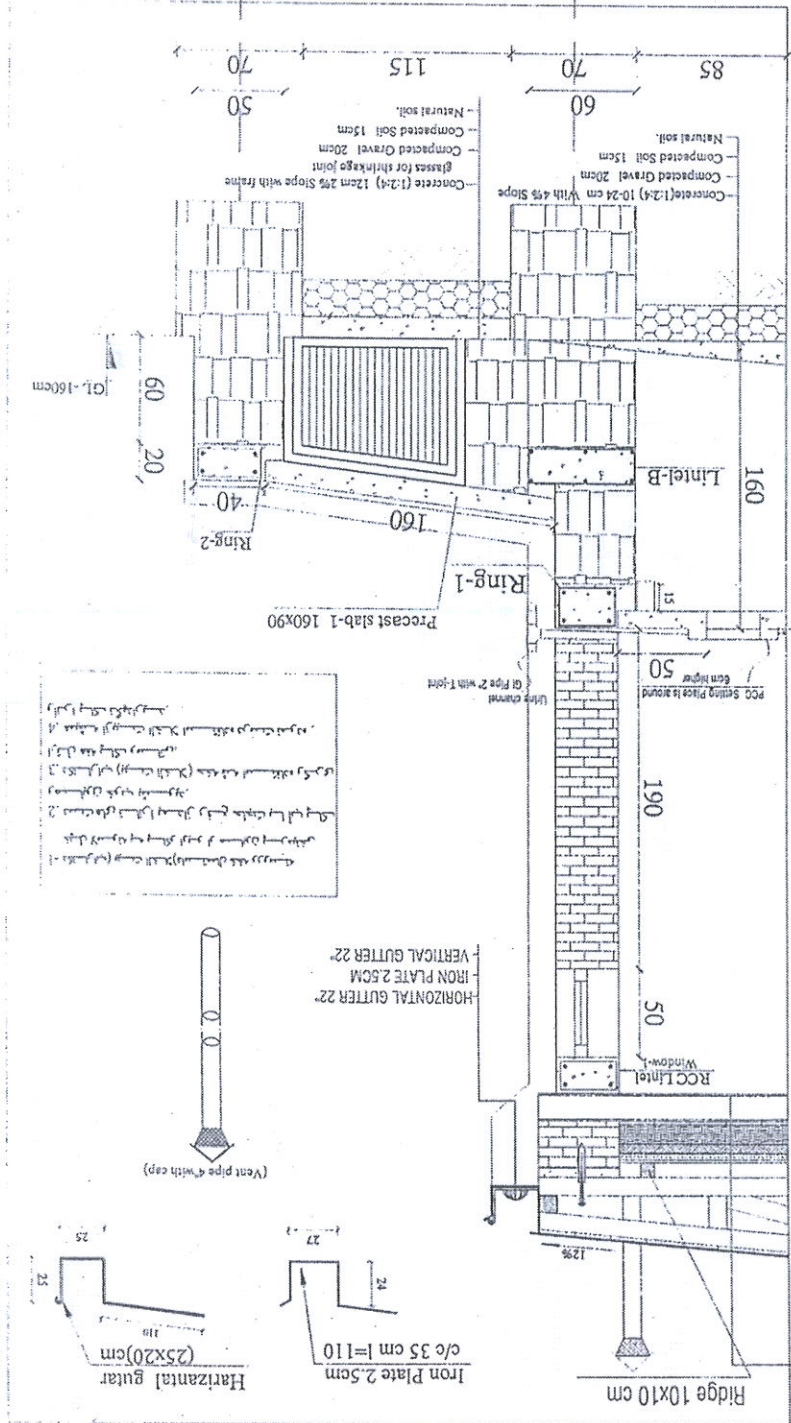
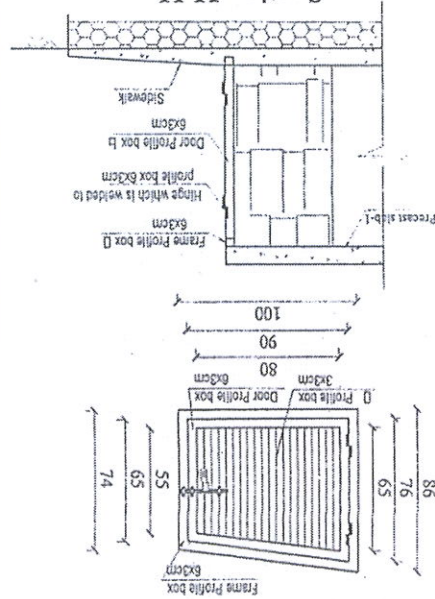
Soak pit



VIEW

Flat Metal Sheet Gauge 22"  
Wooden Truss  
Mud plaster 2.5+2.5cm.  
Plastic sheet.  
Soil 5cm.  
Clay 10cm.  
Two layer reed rush ( vertical & horizontal).  
Wooden board 2cm.  
I' Shape beam size 140x70x5mm/c60 cm.

## Section H-H



١٠  
١١  
١٢  
١٣  
١٤  
١٥  
١٦  
١٧  
١٨  
١٩  
٢٠

HORIZONTAL GUTTER 22"  
IRON PLATE 2.5CM  
VERTICAL GUTTER 22"

(Vent pipe 4" with cap)

Harizantal gitar  
(25x20)cm

Iron Plate 2.5cm  
c/c 35 cm l=110

Water tank (30x60x 105)cm

105

15 70

G.I. sheet 18G (125x400)CM

Tap d/c 40mm

G.I. sheet 18G (125x400)CM

50 15 70

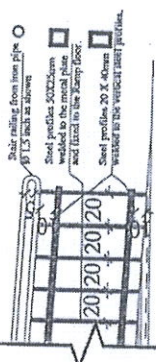
Detaile - D

G.I. sheet 24 G

Profil (700x40x40)mm  
C/C 50 cm tow layer

Hand wash basin  
from G.I. Iron Sheet 18G

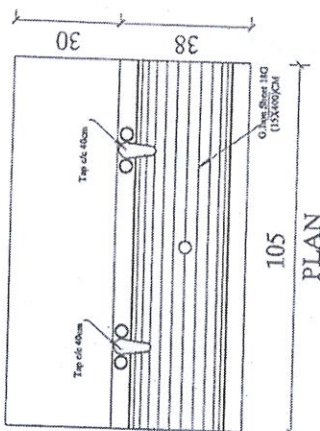
Profil (700x40x40)mm  
C/C 60 cm tow layer



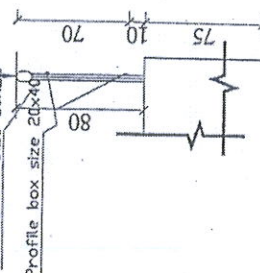
ISOMETRIC VIEW

SAID ELEVATION

VIEW ELEVATION

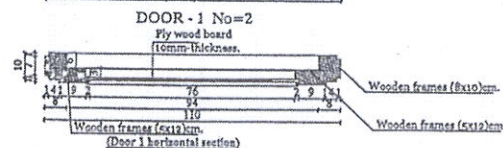
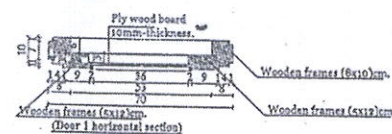
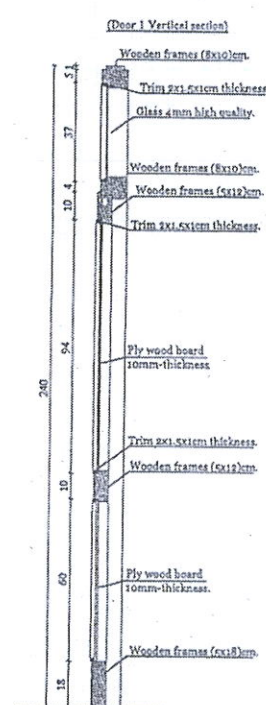
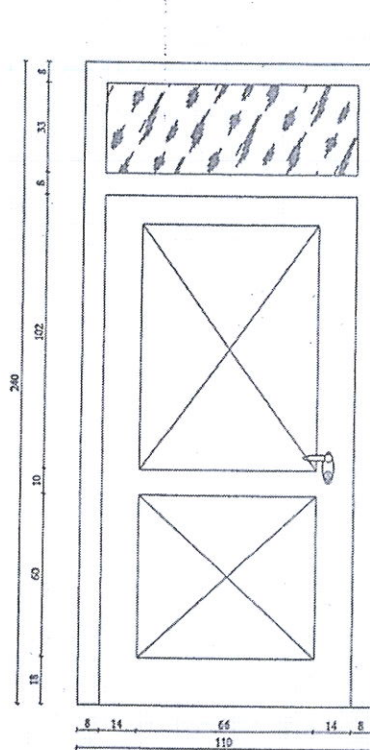
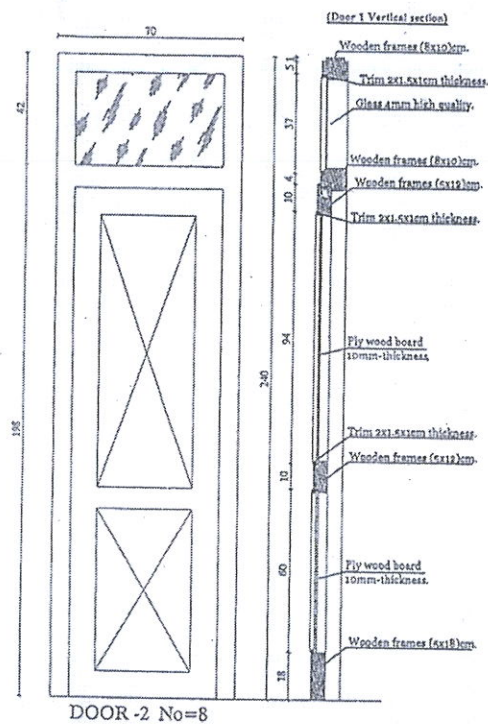
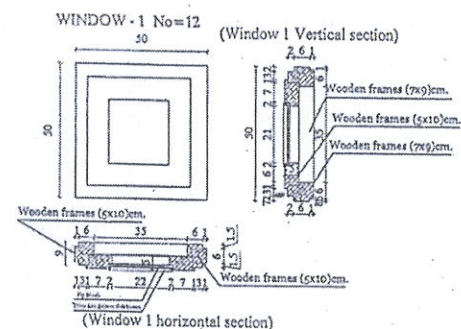
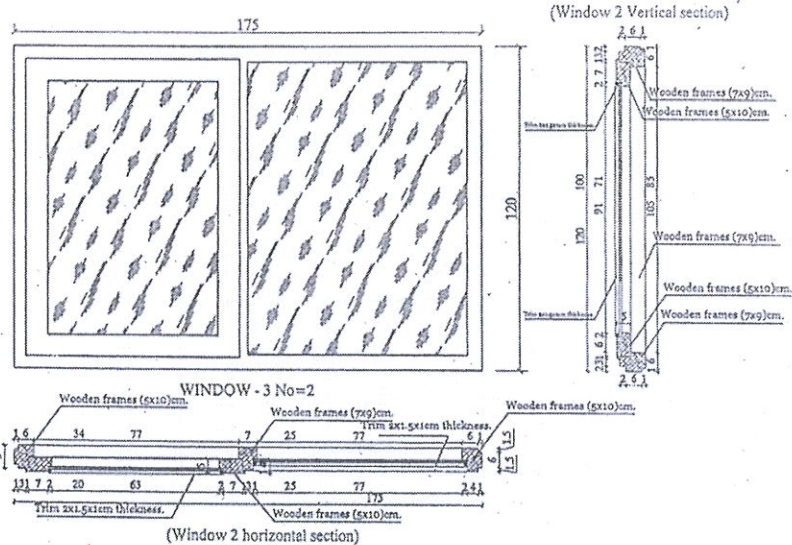
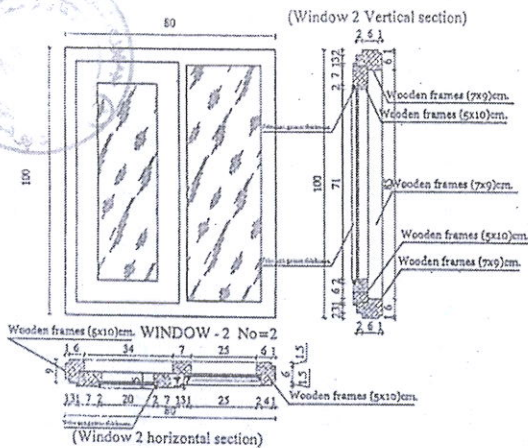


Stair railing from iron pipe  $\varnothing$  1.5 inch  
as shown  
Profile box size 50x25  
Profile box size 20x40



DETAILS FOR WATER TANK

	MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION	STANDARD SCHOOL DESIGN IN AFGHANISTAN	APPROVED BY CHECKED BY TECH. APPROVED BY	DRAWING NO. AS SHOWN (A3) DATE	PROJECT NAME DRAWING TITLE	10 LATRINE FROM BUNT BRICK I BEAM ROOF. DETAILS OF WATER TANK AND FENCE	A'



MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION



STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

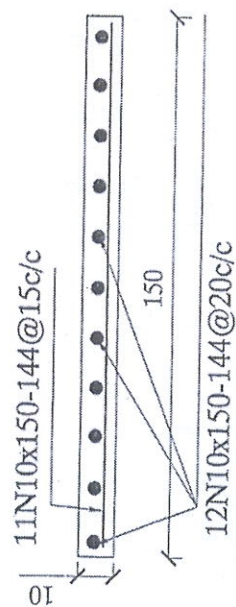
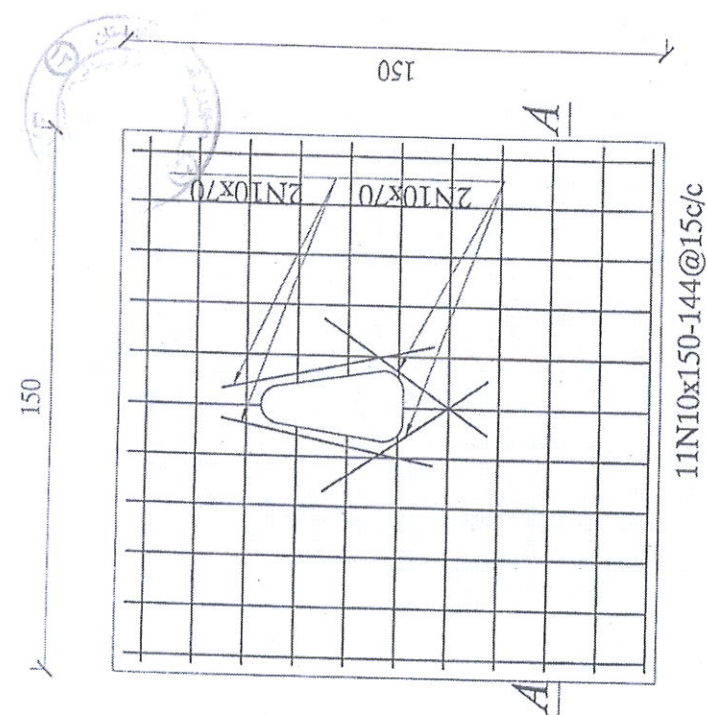
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ENGINEER: ANWAR HADJI  
DATE: 2.11.2014  
SCALE: AS SHOWN (1:8)  
CODE: 1000-012

PROJECT NAME: 10 LATRINE FROM BUNT BRICK I BEAM ROOF.  
DRAWING TITLE: DETAILS

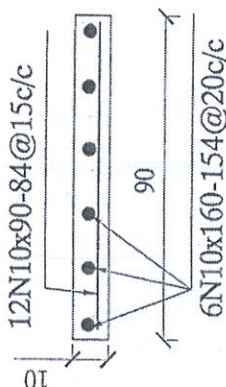
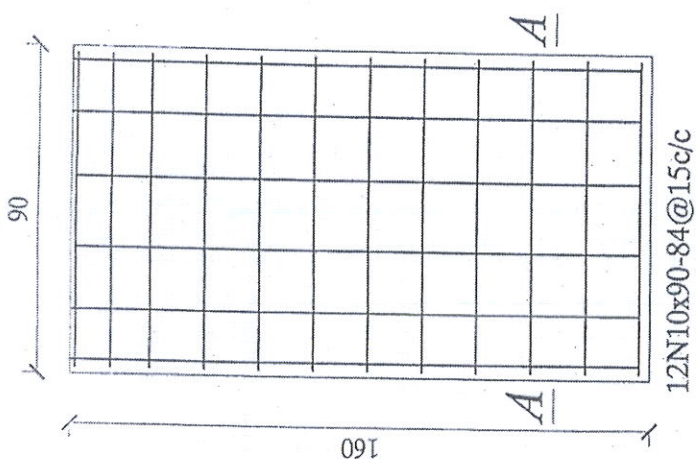
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DRAWING TITLE: DETAILS

PROJECT NAME: 10 LATRINE FROM BUNT BRICK I BEAM ROOF.  
DRAWING TITLE: DETAILS

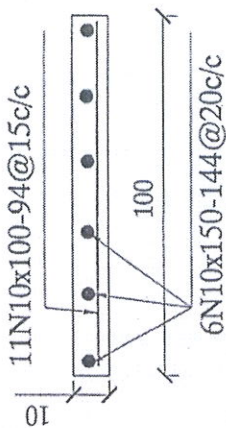
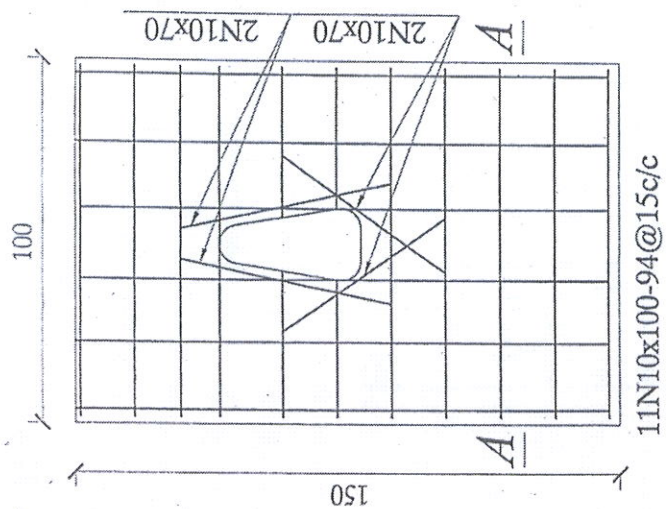
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DRAWING TITLE: DETAILS



SEC A-A



SECA-A

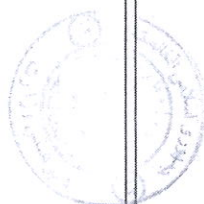
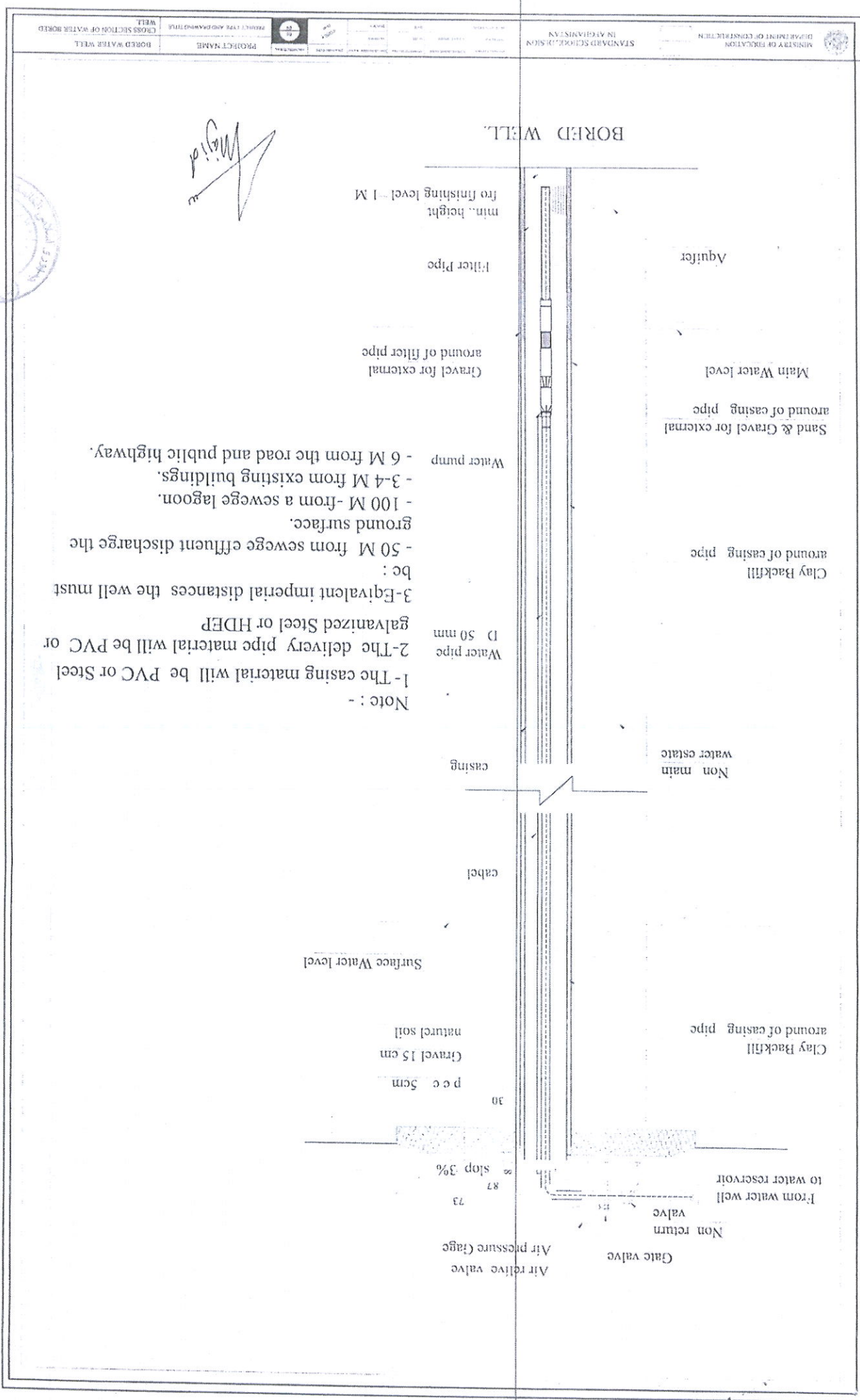


SEC A-A

Precast slab-2 150x100















Precast slab-1 160x90

Precast slab-3 150x150



*Majid*

# SPECIFICATION OF ELECTRICAL EQUIPMENT 100 METERS WELL

NO.	DESCRIPTION	SIGNS	UNIT	PIECES	REMARKS
1	SOLAR PANEL MADE IN INDIA 240 WATTS GOOD QUALITY		NO	12	
2	CHARGE CONTROLLER 48 VOLTS 30 AMPERES WITH WARRANTY OF ONE YEARS		NO	3	
3	ASIDE BATTERY 12 VOLTS 150 AMPERES GOOD QUALITY.		NO	4	
4	STAND FOR SOLAR PANEL.		SET	3	
5	WATER PUMP CONTROLLER SWITCH MODEL( QK121 series intelligent control) WITH ALL SENSORS.		NO	1	
6	Cable1x10mm <sup>2</sup> COPPER FOR CONNECTION OF GROUNDING ROD		M	35	
7	Cable1x25 mm <sup>2</sup> COPPER FROM SOLAR PANEL TO BATTERY.		M	150	TAKE 2 COLOR TO BE SAME AND EASY INSTALLATION.
8	WIRE 1(2x4) mm <sup>2</sup> COPPER FROM INVERTER TO WATER PUMP SWITCH.		M	30	
9	WIRE 1(3x4) mm <sup>2</sup> COPPER FROM water pump switch TO WATER PUMP.		M	140	
10	GROUNDING ROD 3M LENGTH, Ø20MM(COPPER)		NO	1	
11	LIGHTING PROTECTION ROD 1.5 M LENGTH, Ø19MM(COPPER).		NO	3	
12	INVERTER INPUT 48 VOLTS AND OUT PUT 220 VOLTS 5000VA CAPACITY HIGH QUALITY AND WARRANTY OF 1 YEAR.		NO	1	
13	PVC PIPE 1 INCH DIAMETER FOR CARING WATER FROM WELL TO RESERVOIR.		LSM		
13	Water pump SUBMERSIBLE1.5kw 1 PHASE 220 VOLTS		NO	1	

## Notes.

1. Use solar panel Made in India good quality.
2. Try solar panel should be near to the charge controller and batteries.
3. Use Charge controller made in India good quality with warranty of 1 years.
4. If distance between the solar panel and battery is 15 meter use wire 10mm<sup>2</sup> copper good quality.
5. If distance between the solar panel and battery is 25 meters use wire 16 mm<sup>2</sup> copper good quality.
6. If the water pump and switch distance is 96 to 150 meters use wire 2.5 mm<sup>2</sup>.
7. Wire of connection between batteries 16mm<sup>2</sup> copper good quality.
8. If inverter has charge controller 25Amps don need the charge controllers. Connect the solar wires in the inverter.
9. Use the switch of QK121 which is automatic and have 3 sensors, one for full of reservoir, one for empty of reservoir and one for the water pump protection.
10. At less water pump must be 7 meter in the water, (waterpump should be in the water at less 7 meters.
11. Solar panel must has stand (plastic, iron and etc) which will be adjustable according the angel of sun shine.
12. In drawing shown 2 solar panel can you joint 4 panel not problem.
13. If the invertors capacity like the drawing is not allowable use the big size of it, but must be the good quality.
14. Solar panel stand must be tide in the ground or that aria which solar panel located for prevent the damage of wend energy.
15. One person need for the operating and maintenance of the system. Operator must take a short term training about the solar system.
16. All panel should connect to the lighting protection rod and to grounding rod( solar panel's, charge controllers, and.
17. install 3 lightning protections rod, one in one stand, one in second stand and one in the 3th stand.
18. connect all lightning protections rod to gather and bring one cable to grounding rod.
19. This system is design for 15m<sup>3</sup> per day. If you need less water can use electricity for other equipments but the water pump must be disconnect from inverter. Don't use those electrical equipment which are more then 3.5KW. When water pump is working other equipments must be off.

SOLAR WATER PUMP FOR 100 METERS  
LEGEND AND NOTES

PROJECT NAME

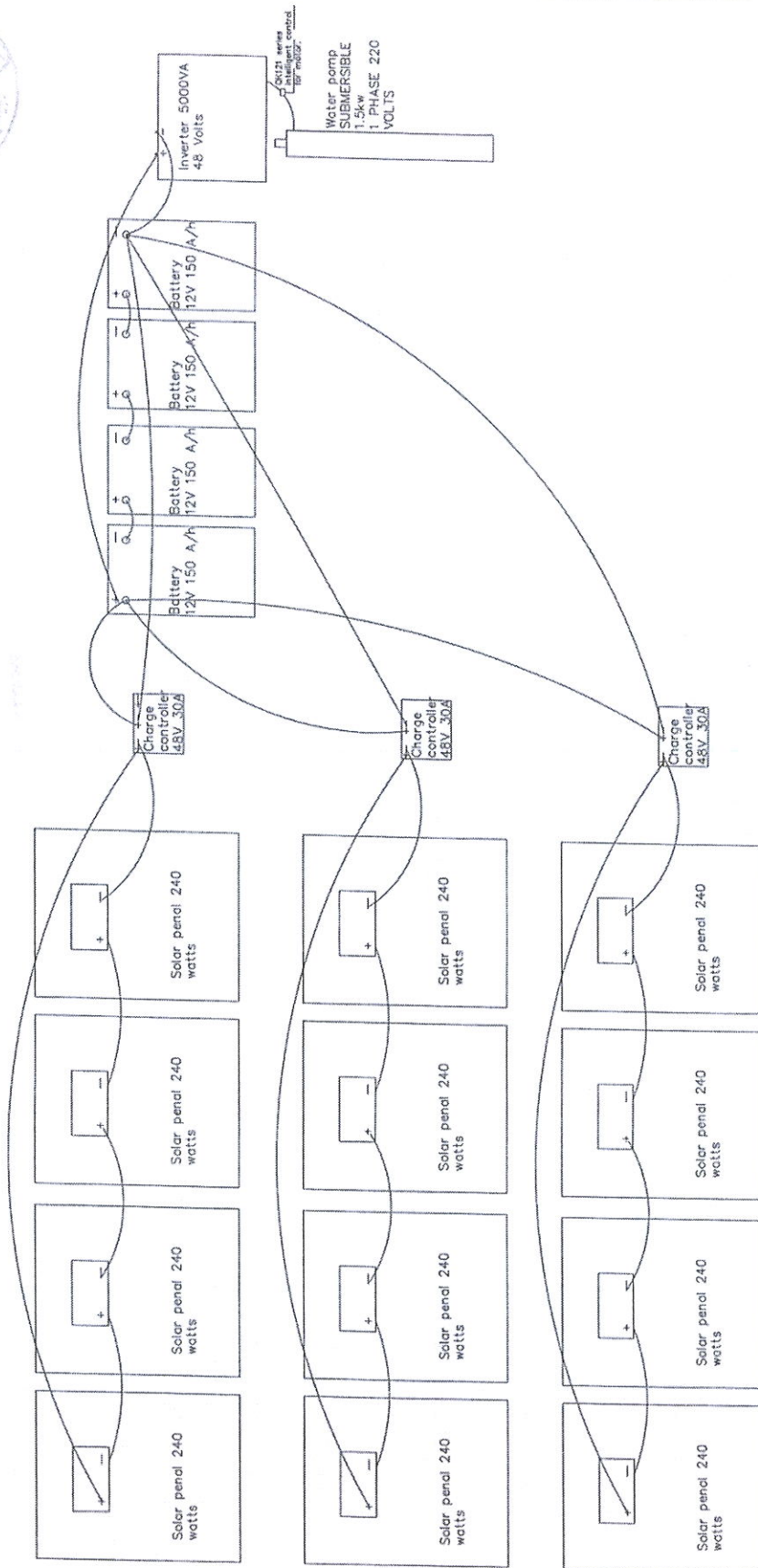
DRAWING TITLE

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN

MINISTRY OF EDUCATION  
DEPARTMENT OF CONTRACTION





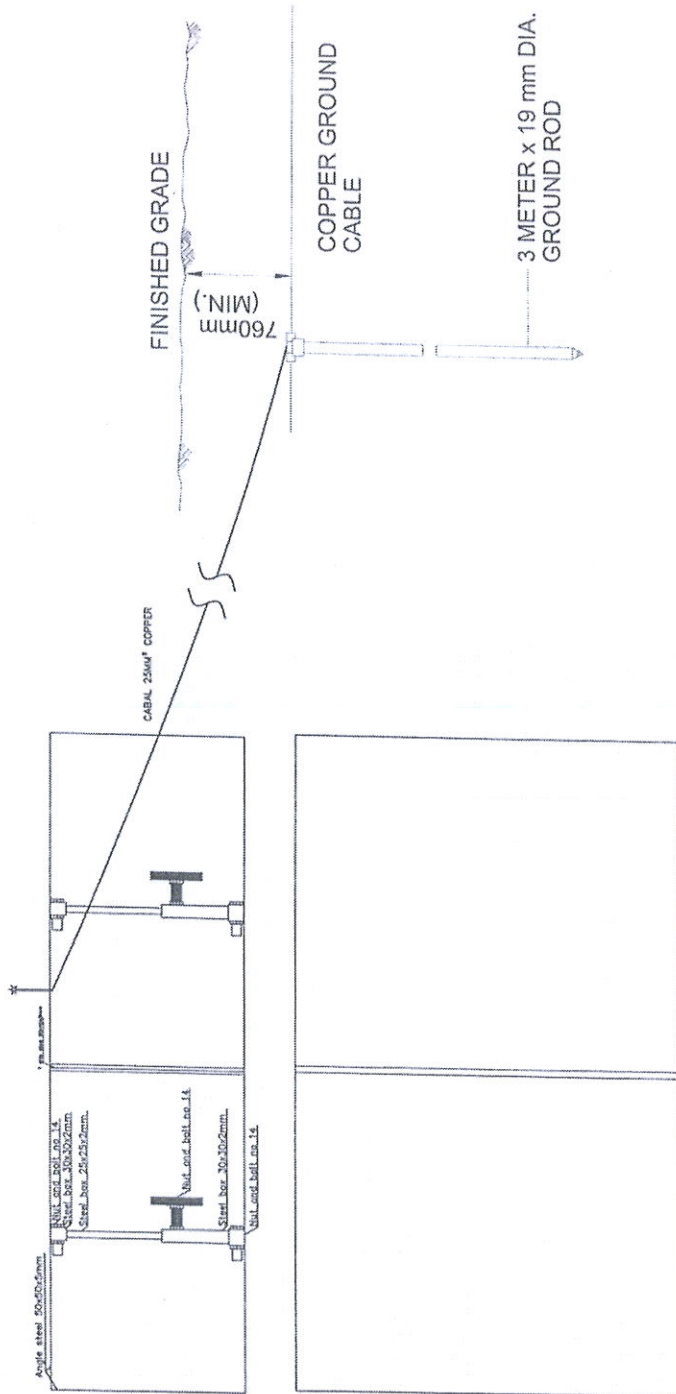
PROJECT NAME  
DRAWING TITLE

SOLAR WATER PUMP FOR 100 METERS  
PENAL STAND AND GROUNDING.

REVISION	DATE	BY	APP. BY	REASON
1				

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN



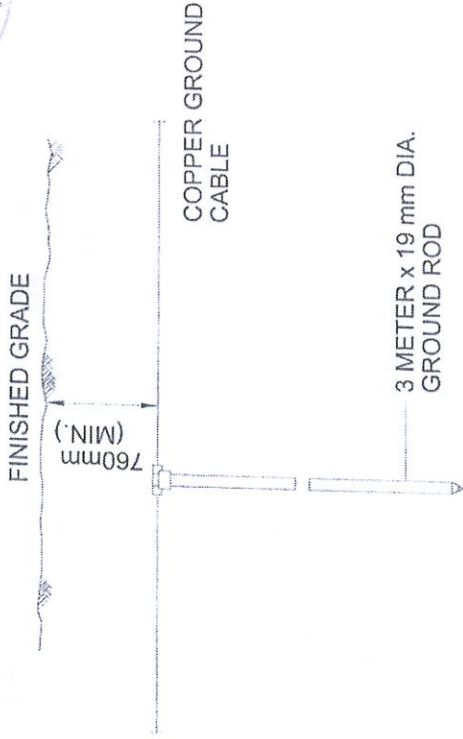


PROJECT NAME  
DRAWING TITLE

ELECTRICAL	SHEET No.	CONV. No.	TITLE	APPROVED SIGNATURE	SCALE	DATE

MINISTRY OF EDUCATION  
DEPARTMENT OF CONSTRUCTION  
STANDARD SCHOOL DESIGN  
IN AFGHANISTAN



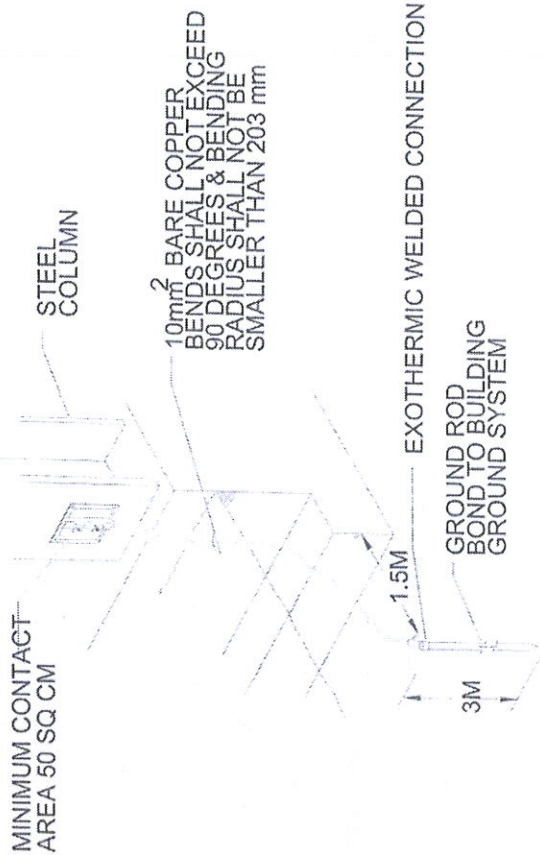


NOTES:

1. CONDUCTOR SIZE SHALL BE AS INDICATED ON PLANS.
2. EXOTHERMIC WELDS SHALL BE AS RECOMMENDED BY MANUFACTURER FOR THE SIZE OF CONNECTION AND MATERIAL INVOLVED. SEE DETAIL 5 ON SHEET SE-7.

BELOW GRADE GROUNDING ROD DETAIL

NOT TO SCALE



COLUMN GROUNDING DETAIL

NOT TO SCALE

PROJECT NAME  
DRAWING TITLE  
SOLAR WATER PUMP FOR 100 METERS  
GROUNDING.

ELECTRICAL

SHEET

NO.

CODE

NO.

REVISIONS

DATE

BY

DATE

APPROVED

DATE

SCALE

DATE

REVISIONS

DATE

BY

DATE

APPROVED

DATE

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REVISIONS

DATE

BY

DATE

APPROVED

DATE

SCALE

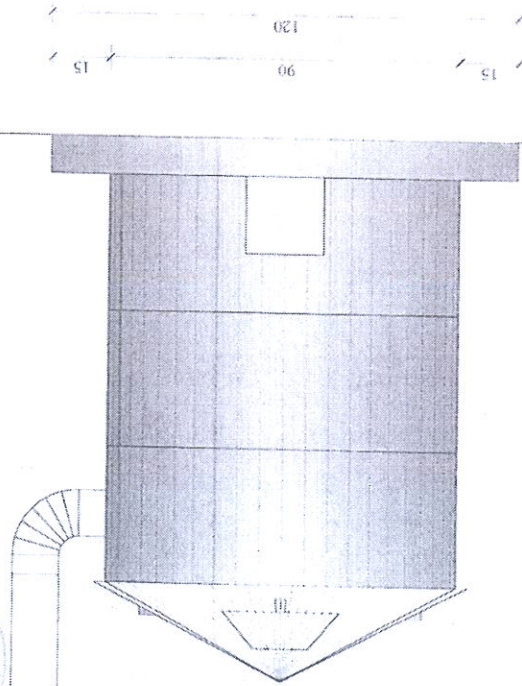
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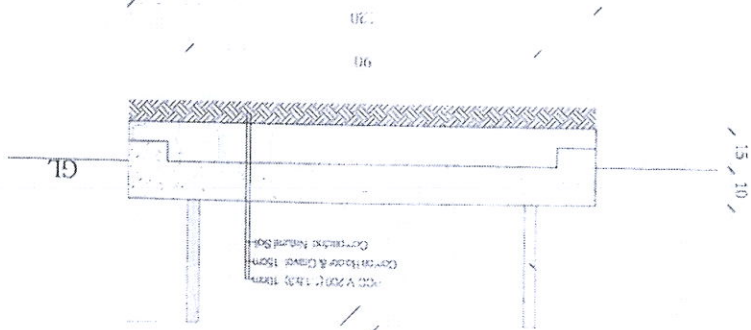
PROJECT NAME:  
DRAWING TITLE:

PCC GARBAGE Ø 90 CM  
View & detail

# ELEVATION

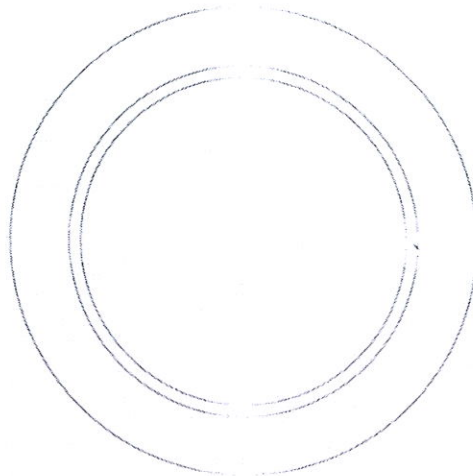


# SECTION



PCC Precast Garbage Ø 90 cm

# PLAN



PCC Precast Garbage Ø 90 cm

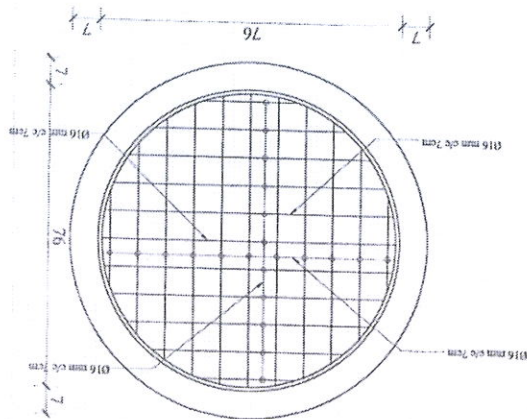
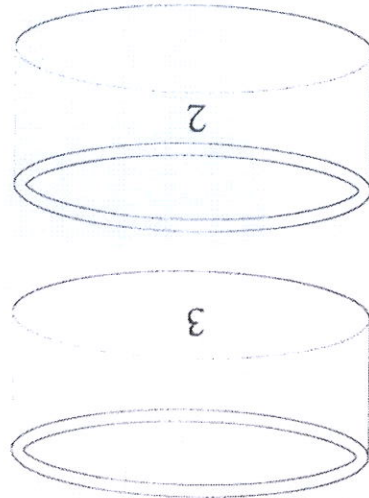
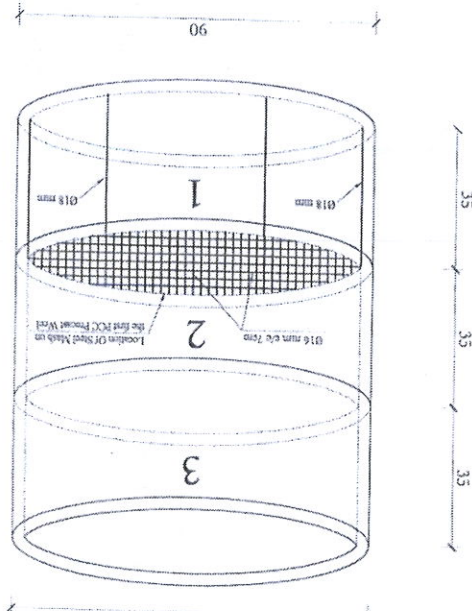
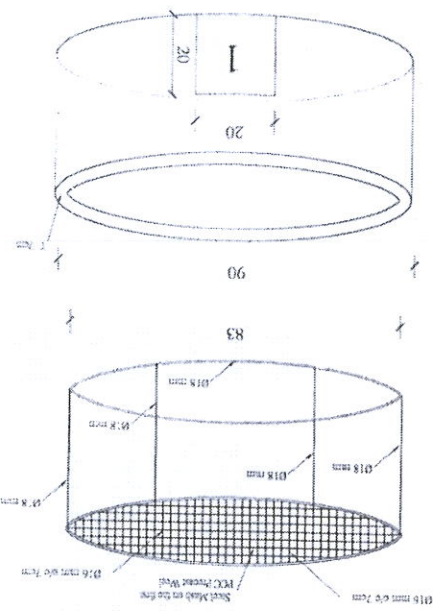
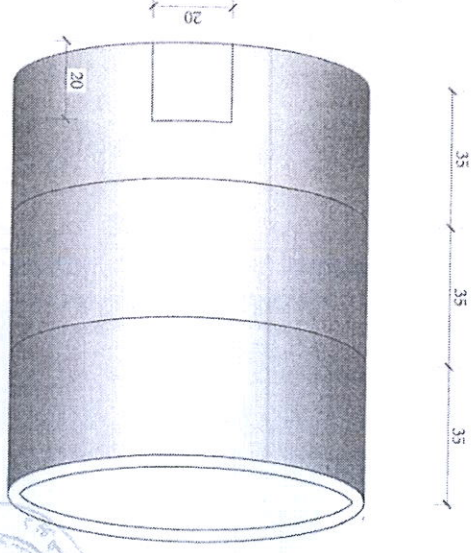
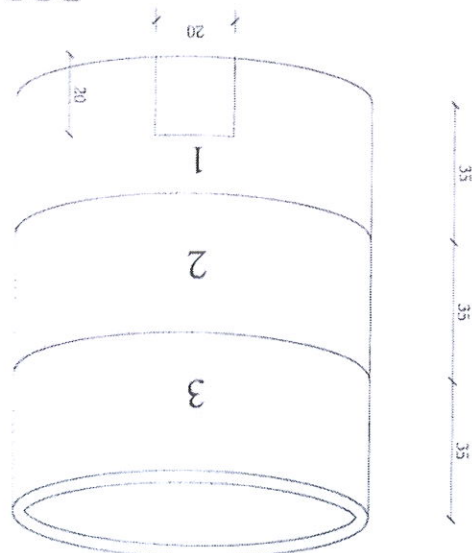
Garbage Collection point

PROJECT NO.	DATE	SCALE	DESIGNER	APPROVED BY	REVISION

PROJECT NAME  
DRAWING TITLE

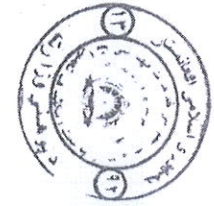
PCC GARBAGE Ø 90 CM  
plan view & detail

# PCC Precast Garbage Ø 90 cm (2)



OK  
1/1





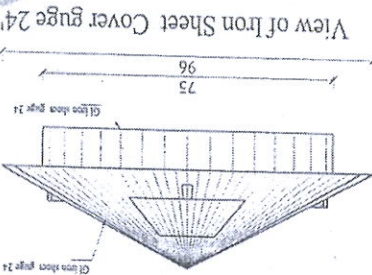
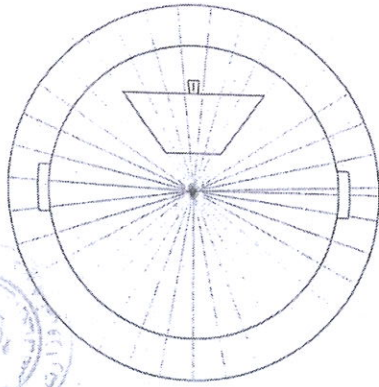
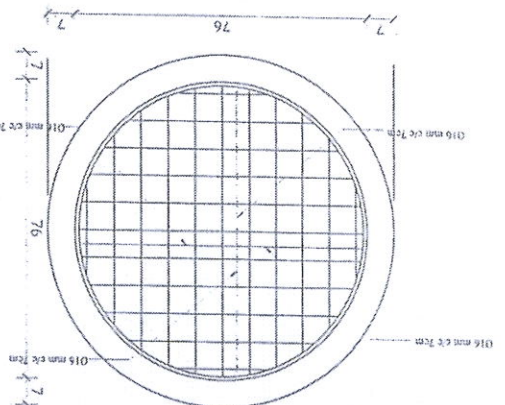
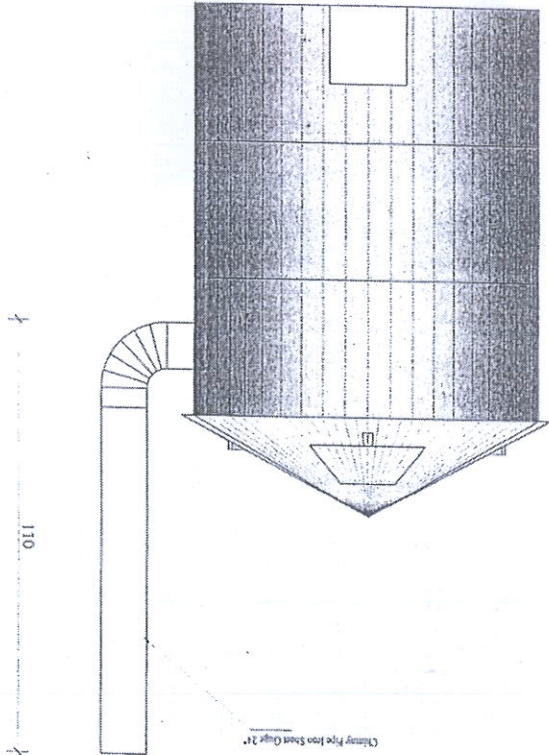
MINISTRY OF EDUCATION  
DEPARTMENT OF CONTRACTION

STANDARD SCHOOL DESIGN  
IN AFGHANISTAN



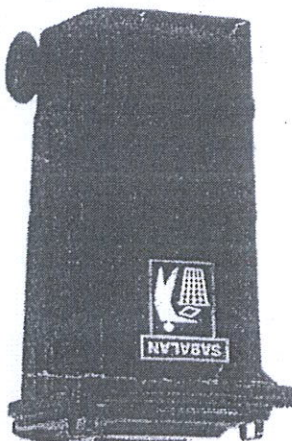
PROJECT NAME  
DRAWING TITLE

PCC GARBAGE Ø 90 CM  
View & detail



BASKET PRICE 3000 AFGHANIS. (1)

Code 201/240 Lit.



Plan of Iron Sheet Cover guge 24"

View of Iron Sheet Cover guge 24"