



Islamic Republic of Afghanistan

Ministry of Rural Rehabilitation and Development

Engineering Department



There are a total of 31 typical school designs, including boundary walls and latrines, have been developed by design engineers from the Ministry of Education (MOE) and the Ministry of Rural Rehabilitation and Development (MRRD), with technical support by the non-governmental organization Danish Assistance to Afghan Rehabilitation and Technical Training (DAARTT) appointed by the World Bank.

The designs have been made for 6, 8 and 10 classroom schools in combinations with different material for walls (stone, burnt brick, compressed, stabilized earth blocks (SCEB) and mud), different types of roof (I-beam (flat and vaulted), RCC, pre-cast RCC, truss roof (wooden and metal)), different degrees of reinforcement for resistance of seismic events, and with clear heights of 300cm (for relatively warm areas) or 275cm (for relatively cold areas, or disaster risk areas where more stability is required). In addition, designs for Latrine Blocks and Boundary walls have also been developed.

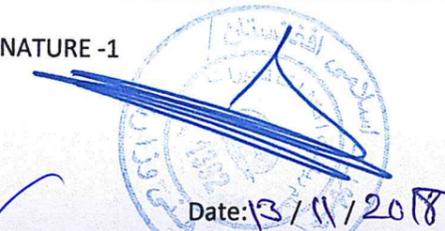
Type	S.No	Drawing Title	Prepared by	Date Prepared
General	G	Aprovel Cover Page	DAARTT	08.11.2018
	G0	General Notes DRR	Dr. Halim	22.07.2018
Architecture	G	Cover Sheet	Ziaurahman Zia	12.08.2018
	G	Drawing List	Ziaurahman Zia	12.08.2018
	G	General Notes	Ziaurahman Zia	12.08.2018
	A01	Ground Floor Plan	Ziaurahman Zia	12.08.2018
	A02	Furniture Plan	Ziaurahman Zia	12.08.2018
	A03	Pavement Plan	Ziaurahman Zia	12.08.2018
	A04	Front Elevation	Ziaurahman Zia	12.08.2018
	A05	Back Elevation	Ziaurahman Zia	12.08.2018
	A06	Side Elevation	Ziaurahman Zia	12.08.2018
	A07	Section A-A	Ziaurahman Zia	12.08.2018
	A08	Section B-B	Ziaurahman Zia	12.08.2018
	A09	Roof Plan	Ziaurahman Zia	12.08.2018
	A10	Plan & section with detail of 12 Rump hand railing	Ziaurahman Zia	12.08.2018
	A11	Plan & section & Elevation of Black Board	Ziaurahman Zia	12.08.2018
	A12	Details of Door	Ziaurahman Zia	12.08.2018
	A13	Details of windows	Ziaurahman Zia	12.08.2018
	A14	Details & section of Door & windows	Ziaurahman Zia	12.08.2018
	A15	Detail of Floor PCC Concrete	Ziaurahman Zia	12.08.2018
	A16	Detail of (5,6)	Ziaurahman Zia	12.08.2018
	A17	Detail of (3,4)	Ziaurahman Zia	12.08.2018
	A18	Detail of (1,2)	Ziaurahman Zia	12.08.2018
A19	Detail of (7,8,9,10)	Ziaurahman Zia	12.08.2018	
A20	Details of 13 Flower pot	Ziaurahman Zia	12.08.2018	
A21	Detail of 14 Chimney Cup	Ziaurahman Zia	12.08.2018	
Structure	01	Cover Sheet	Eng. Rahim	Jun-18
	02	General Notes	Eng. Rahim	Jun-18
	03	Foundation Plan	Eng. Rahim	Jun-18
	04	Foundation Details	Eng. Rahim	Jun-18
	05	Reinforcement Bars of ring Beams on stone masonry and R.B NO : 3	Eng. Rahim	Jun-18
	06	Structure walls	Eng. Rahim	Jun-18
	07	Shuttering plan for Roof Slab	Eng. Rahim	Jun-18
	08	Roof RCC Rings and Beams plan	Eng. Rahim	Jun-18
	09	Reinforcement bars of ring beams No:1-2	Eng. Rahim	Jun-18
	10	Reinforcement bars of ring beams No:4,5,6	Eng. Rahim	Jun-18
	11	Beams no: 1-2 : Detail	Eng. Rahim	Jun-18
	12	Beams no: 3-4 : Detail	Eng. Rahim	Jun-18
	13	Reinforcement bars plan for Roof slab	Eng. Rahim	Jun-18
	14	Reinforcement bars of ring beams No:7 and Parapet Details	Eng. Rahim	Jun-18
Electrical	E1	Specifications and Equipment's	Eng. Abdul Qader	07.08.2018
	E2	Power Plan	Eng. Abdul Qader	07.08.2018
	E3	Socket Plan	Eng. Abdul Qader	07.08.2018
	E4	Electric instrument Details	Eng. Abdul Qader	07.08.2018

The above drawings have to be read in conjunction with the Technical Specifications, Note on application of EQRA designs and the Categorization of EQRA provinces. The authorized signatories from the following ministries / organization have affixed their signatures on this note on (insert date) as a token of their approval for the use of the above drawings for construction of schools and facilities planned under EQRA.

6 CLASSROOM

BURNT BRICK WALL

RCC ROOF H=2.75 M

Signed by Mr. <u>Abdul Momin Road</u> who is duly authorized by the Minister of Education to sign on behalf of the Ministry of Education to certify that the above drawings meet the functional and space requirements of the Ministry of Education for schools and other supporting facilities.	SIGNATURE -1  Date: 13/11/2018
Signed by Mr. <u>Eng. Shukurwali</u> who is duly authorized by the Minister of Rural Rehabilitation and Development (MRRD) to sign on behalf of the Ministry of Rural Rehabilitation and Development (MRRD) to certify that the above drawings meet the architectural, structural and electrical safety norms in Afghanistan.	SIGNATURE -1  Date: 13/11/2018
Signed by Mr. <u>Eng. M. M. P. Ayub</u> who is duly authorized by the Danish Assistance to Afghan Rehabilitation and Technical Training (Daartt) to sign on their behalf to certify that the above drawings have been prepared under their guidance and can be adopted for construction.	SIGNATURE -1  Date: 13/11/2018

G
 Aprovel cover sheet

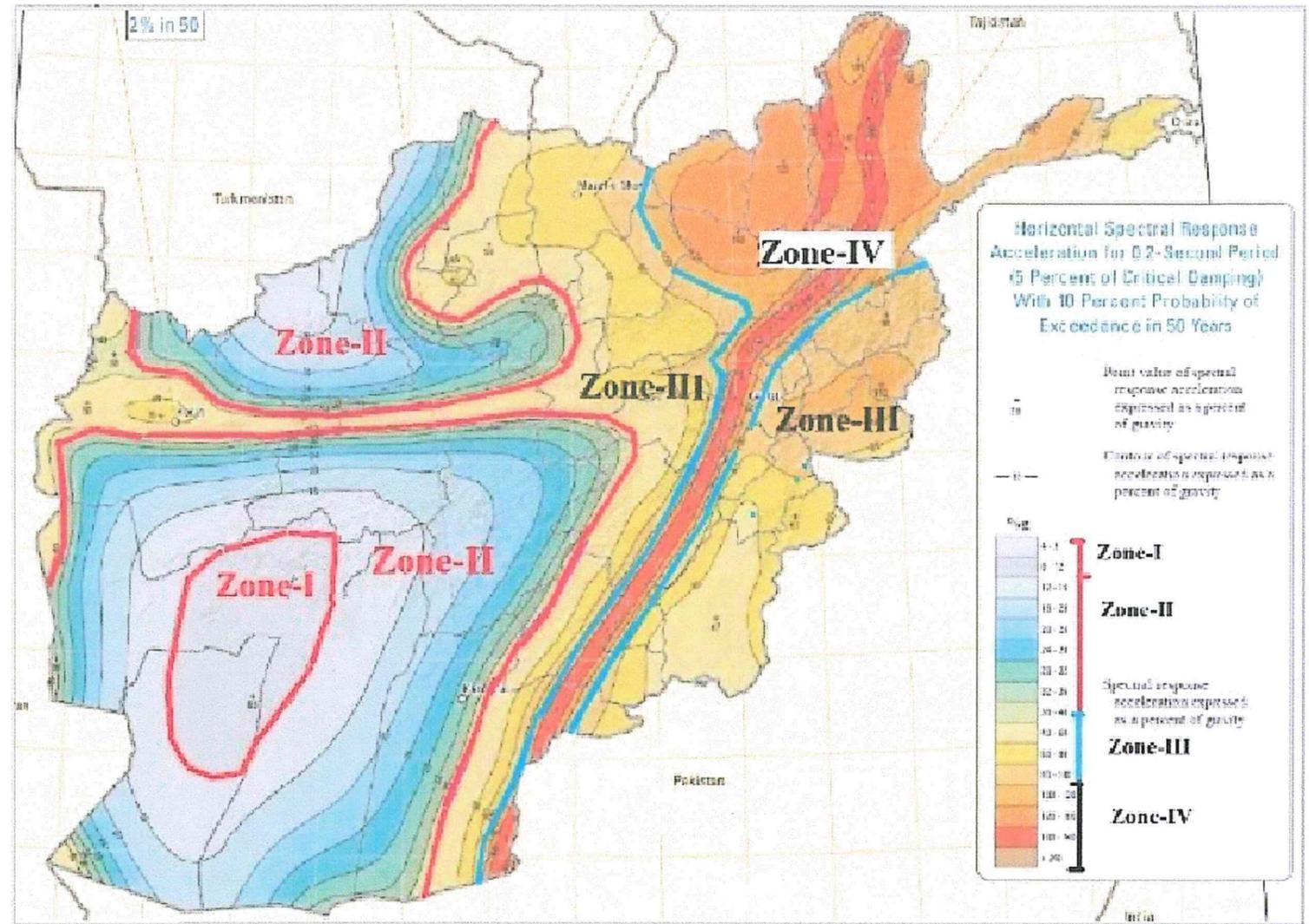
EARTHQUAKE ZONES

LIST OF PACKAGES

6- CLASSROOM PACKAGES	ZONE-I	ZONE-II	ZONE-III	ZONE-IV
1- Burnt brick wall with RCC roof H275cm	[√]	[√]	[√*]	[X]
2- Burnt brick wall with RCC roof H300cm	[√]	[√]	[√*]	[X]
3- Burnt brick wall with vaulted roof H275cm	[√]	[√]	[√*]	[X]
4- Burnt brick wall with vaulted roof H300cm	[√]	[√]	[√*]	[X]
5- Burnt brick wall with PreCast roof H300cm	[√]	[√]	[√*]	[X]
6- Stone Masonry wall with RCC roof H275cm	[√]	[√]	[√*]	[X]
7- Stone Masonry wall with RCC roof H300cm	[√]	[√]	[√*]	[X]
8- Burnt Brick wall with RCC roof DRR	[√]	[√]	[√]	[√]
9- Mud wall with vaulted roof H300cm	[√]	[√]	[√*]	[X]
10- SCEB20 wall with vaulted roof H275cm	[√]	[X]	[X]	[X]
11- SCEB25 wall with vaulted roof H275cm	[√]	[√]	[X]	[X]

8- CLASSROOM PACKAGES	ZONE-I	ZONE-II	ZONE-III	ZONE-IV
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3- Burnt brick wall with vaulted roof H275cm	[√]	[√]	[√*]	[X]
4- Burnt brick wall with vaulted roof H300cm	[√]	[√]	[√*]	[X]
5- Burnt brick wall with PreCast roof H300cm	[√]	[√]	[√*]	[X]
6- Stone Masonry wall with RCC roof H275cm	[√]	[√]	[√*]	[X]
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8- Burnt Brick wall with RCC roof DRR	[√]	[√]	[√]	[√]
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IMPORTANT NOTE:

- 1- SCEB20 construction should not be carried out in Zones II , III, and IV.
- 2- SCEB25 construction should not be carried out in Zones III, and IV.

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Islamic Republic of Afghanistan
 Ministry of Rural Rehabilitation and Development
 Engineering Department



**ARCHITECTURAL
 DRAWINGS**

6 CLASS ROOM

**BURNT BRICK WALL
 RCC ROOF H=2.75 M**



G
 00 COVER SHEET FOR 6 CLASS ROOM RCC SLAB
 SCALE: A3



MINISTRY OF EDUCATION DEPARTMENT
 OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
 AFGHANISTAN

ARCHITECT/DESIGN ZIAURAHMAN ZIA
 PREPLANNED & CHECKED BY DAARTT
 TECH- APPROVED BY

Combined technical team MOE/MRRD/DAARTT
 SCALE AS SHOWN (A3)
 DATE 12/08/2018

PROJECT NAME 6 Classroom Burnt Brick RCC Slab H-275

DRAWING TITLE Ground Floor Plan (cover sheet)

SHEET NO.



6 CLASS ROOM

Burnt Brick wall
RCC Slab H=275

Support member	Ziaurahman Zia	
Design by	M.Rahim	
Check & Review by	DAARTT	
Approved by	MINISTRY OF EDUCATION	

DRAWINGS LIST

ARCHITECT LIST

SHEET NUMBER	SHEET NAME
01	DRAWINGS LIST FOR 6 CLASS ROOM PRECAST SLAB
02	SYMBOLS & GENERAL NOTE
A1	GROUND FLOOR PLAN
A2	FURNITURE FLOOR PLAN
A3	PAVEMENT PLAN
A4	FRONT ELEVATION
A5	BACK ELEVATION
A6	SIDE ELEVATION
A7	SECTIONS A-A
A8	SECTIONS B-B
A9	ROOF PLAN OF 6 CLASS ROOM PRECAST SLAB
A10	PLAN & SECTION WITH DETAILS OF 13 RUMP HAND RAILING
A11	PLAN & SECTION & ELEVATION OF BLACK BOARD
A12	DETAILS OF DOORS
A13	DETAILS OF WINDOWS
A14	DETAILS & SECTION OF DOORS & WINDOWS
A15	DETAILS 11 & SECTION OF FLOOR PCC CONCRETE
A16	DETAILS OF (5,6)
A17	DETAILS OF (3,4)
A18	DETAILS OF (1,2)
A19	DETAILS OF (7,8,9,10)
A20	DETAIL OF 13 FLOWERS POT
A21	DETAIL OF 14 CHIMNEY CUP

G
01 DRAWINGS LIST FOR 6 CLASS ROOM RCC SLAB
SCALE: A3



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN	ZIAURAHMAN ZIA	Combined technical team	MOE/MRRD/DAARTT	PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275	SHEET NO. 
PREPLANNED & CHECKED BY	DAARTT	SCALE	AS SHOWN (A3)	DRAWING TITLE	Ground Floor Plan (Drawing desk)	
TECH-APPROVED BY		DATE	12/08/2018			

General Notes for architecture designs of Schools for EQRA program

- The designs of 6, 8 and 10 classroom schools which are to be built under EQRA program was basically prototype designs with due consideration given to economy, safety, with the use local materials.
- The designs are made with due consideration of the norms and standards used by the ministry of education of Afghanistan.
- These designs are intended to be mainly built by the local communities and therefore they have been made very simple and easy to be built.
- These designs must undergo a site adaptation process after the site selection is complete for them. So a proper site plan with the help of the relevant manuals and the guidelines made for the site selection and design shall be prepared before the construction starts at site.
- These designs shall be used based on the verified site conditions and the assignment table for the types of design prepared based on the categorization of the 17 provinces.
- If any difficulties are arising in the process of construction, it has to be brought to the notice of the design engineers before bringing any changes to the designs or the use of materials.
- All dimensions are given in millimeters unless otherwise specified.
- All doors and windows are to be built in accordance with the details given in the drawings.
- The dimensions of doors and windows are given as finished dimensions, the builders shall consider an appropriate opening size when doing the brickworks.
- While construction the builders shall not scale the drawings and shall refer to the given dimensions

GENERAL SYMBOLS		
	Polystyrene	عایق حرارت
	Stone Elevation	سنگ درنما
	Exposed concrete	نمای کانتکریتی
	Direction of window	مسیر باز شدن کلکین
	Chimney pipe	دود کش بخاری
	Level in plan	ارتفاع در پلان
	Stone fired	قطع دیوار سنگی
	Elevation	عنصر نماها
	Section	قطع
	RCC Concrete	کانکریت سیخ دار
	Center line	خط محوری
	Building entrance	ادخال تعمیر
	Direction of stair	مسیر زینه
	Ramp hand railing	کتاره
	Compacted soil	خاک تپک شده
	Gravel	سنگ دریایی
	Mortar	شفته کانکریت
	PCC Concrete	کانکریت بدون سیخ
	Finished level	سطح تمام شده
	Moisture insulation	عایق رطوبت
	Window mark	علامت کلکین
	Door mark	علامت دروازه
	Orientation	سمت یابی
	White Glass	شیشه در مقطع
	White Glass	درخت درنما

G
02
GENERAL NOTE AND SYMBOLS
SCALE: A3



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN
ZIAURAHMAN ZIA
PREPLANNED &
CHECKED BY
DAARTT
TECH- APPROVED BY

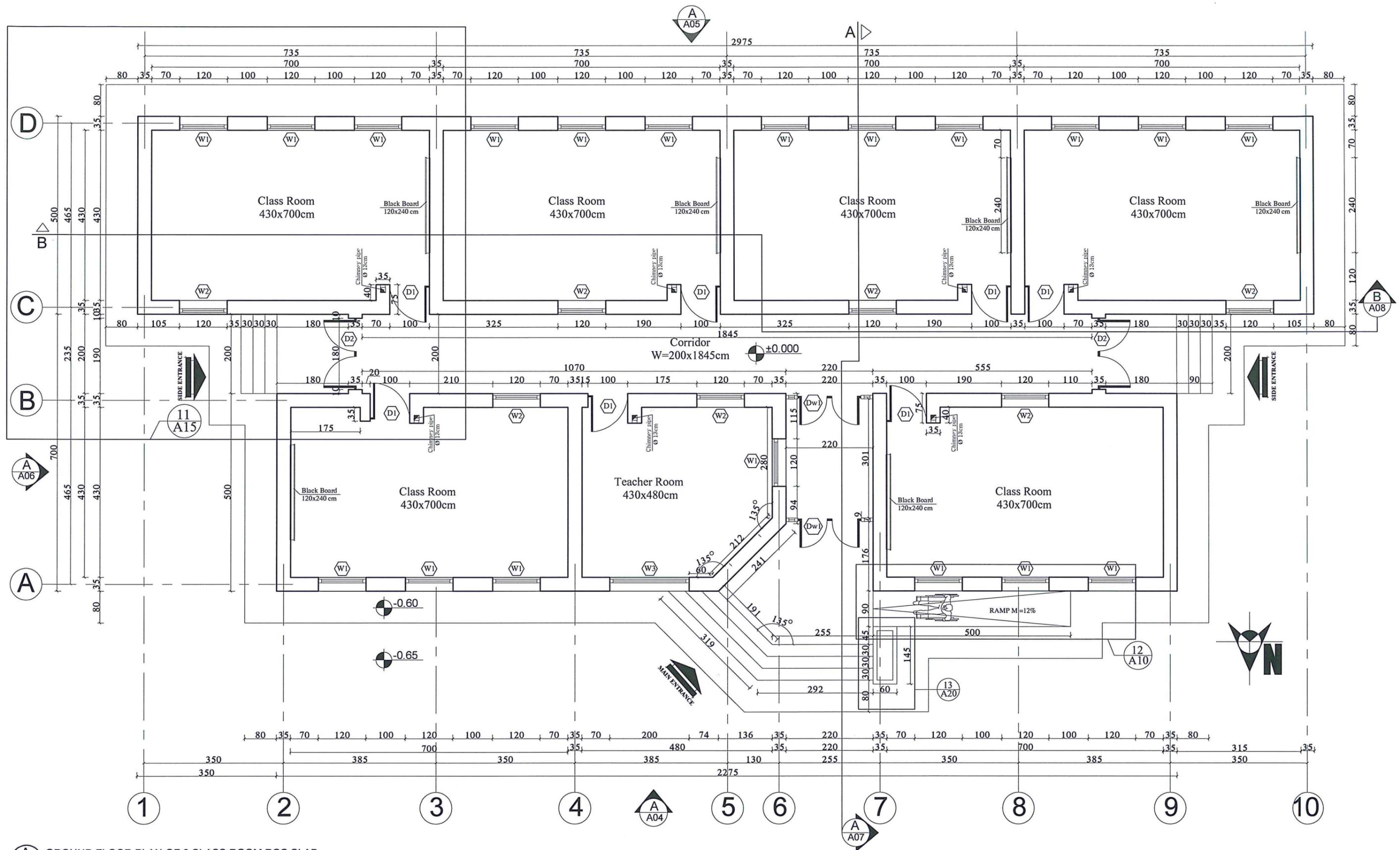
Combined technical
team
MOE/MRRD/DAARTT
SCALE
AS SHOWN (A3)
DATE
12/08/2018

PROJECT NAME
6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE
Ground Floor Plan

SHEET NO.

G
02

G
02



A
01 GROUND FLOOR PLAN OF 6 CLASS ROOM RCC SLAB
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN
PREPLANNED &
CHECKED BY
TECH- APPROVED BY

ZIAURAHMAN ZIA
DAARTT



Combined technical
team
SCALE
DATE

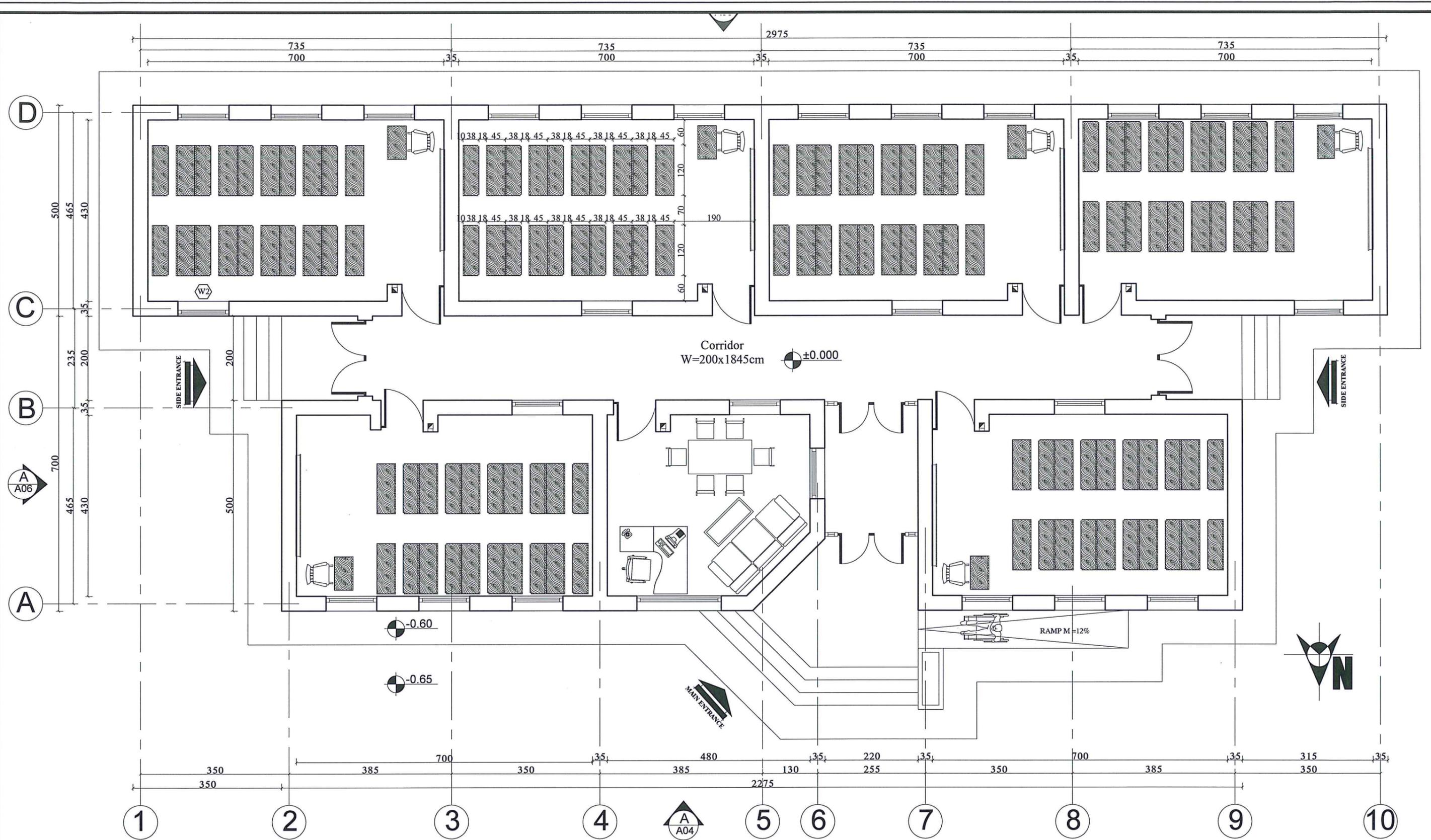
MOE/MRRD/DAARTT
AS SHOWN (A3)
12/08/2018

PROJECT NAME
DRAWING TITLE

6 Classroom Burnt Brick RCC Slab H-275
Ground Floor Plan

SHEET NO.

A01
21



A
02 FURNITURE PLAN OF 6 CLASS ROOM RCC SLAB
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN
PREPLANNED &
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TECH- APPROVED BY

ZIAURAHMAN ZIA
DAARTT

Combined technical
team
SCALE
DATE

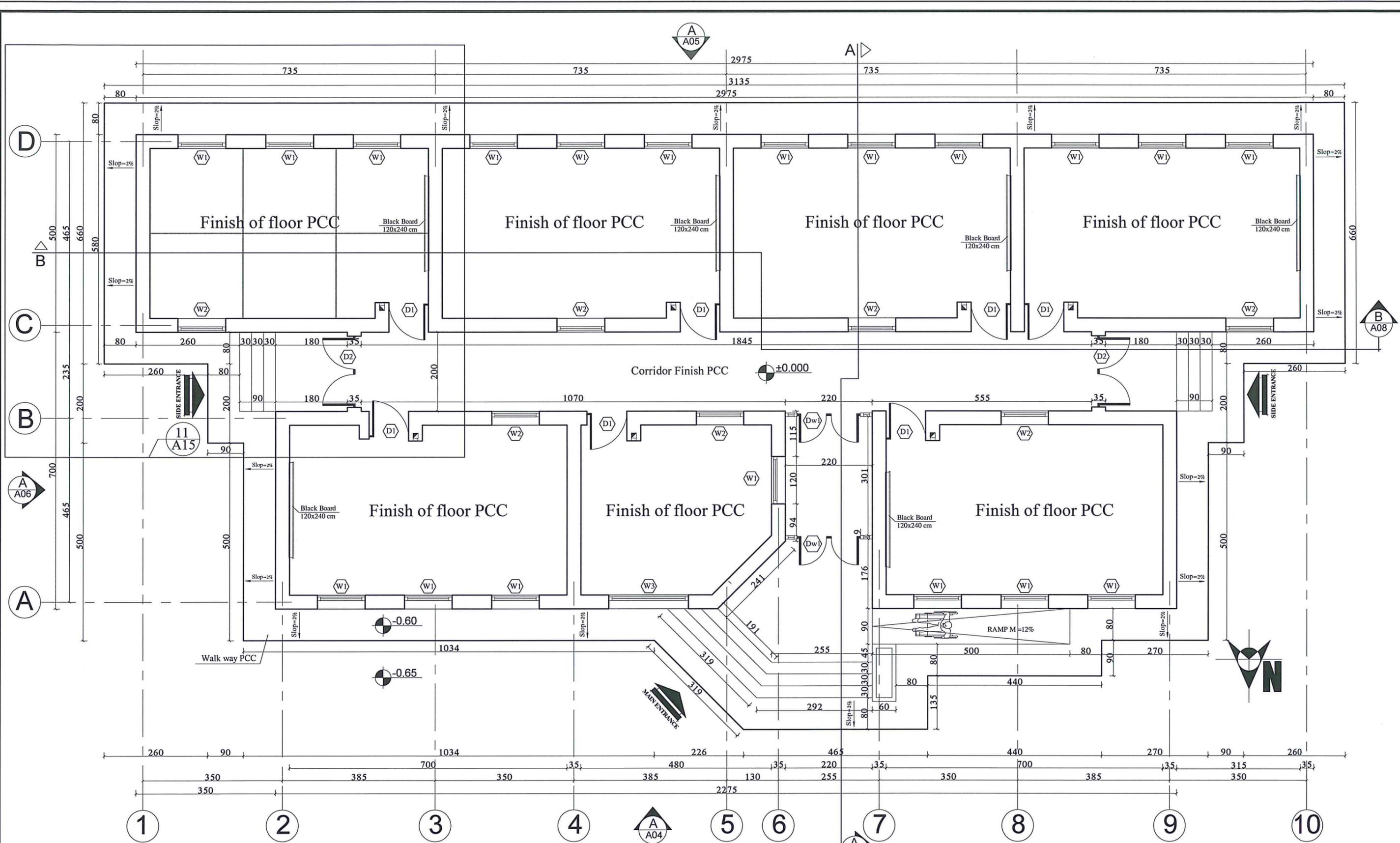
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AS SHOWN (A3)
12/08/2018

PROJECT NAME
DRAWING TITLE

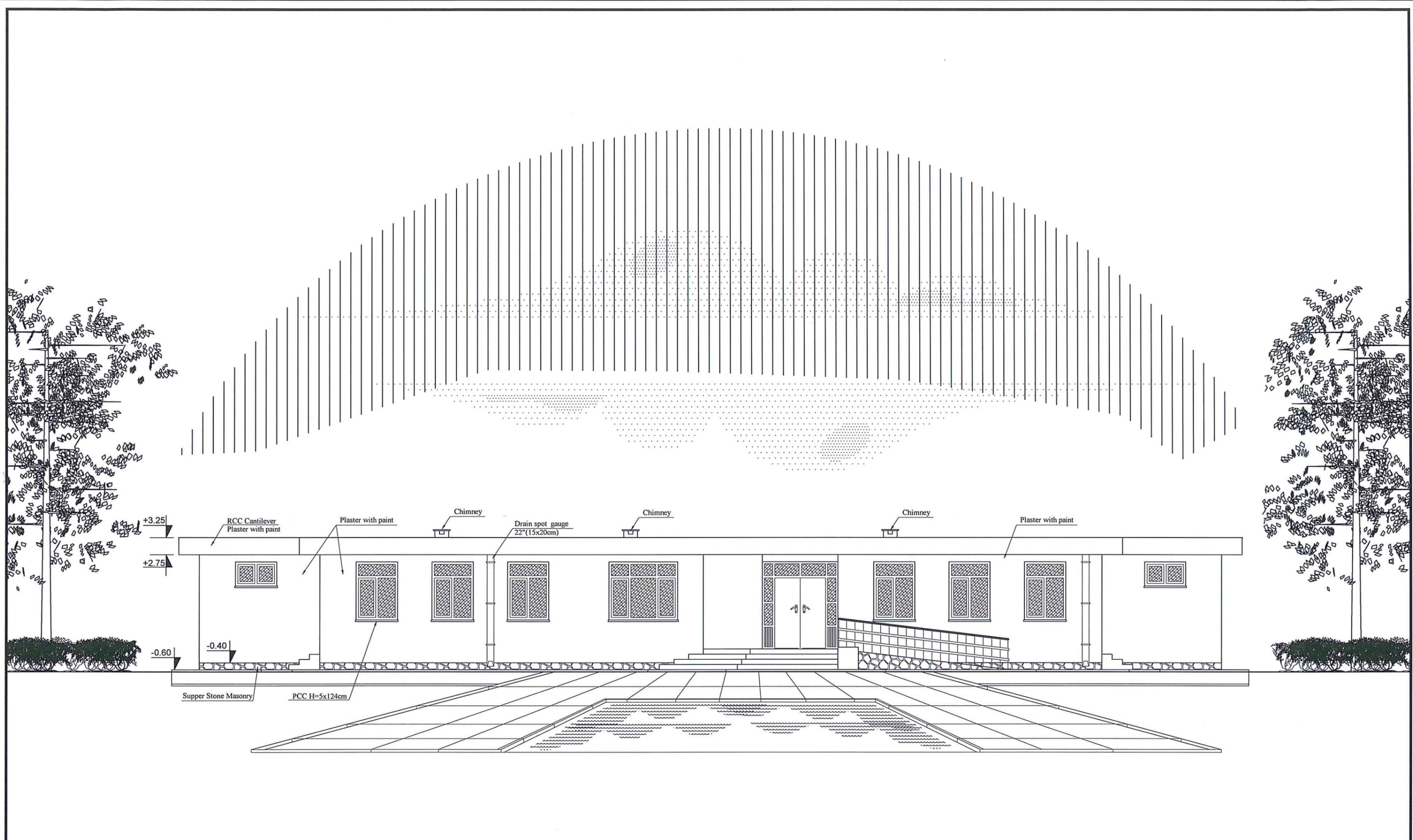
6 Classroom Burnt Brick RCC Slab H-275
Furniture Plan

SHEET NO.

A02
21



A 03 PAVEMENT PLAN OF 6 CLASS ROOM RCC SLAB
SCALE: NO SCALE



A FRONT ELEVATION OF 6 CLASS ROOM RCC SLAB
04 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

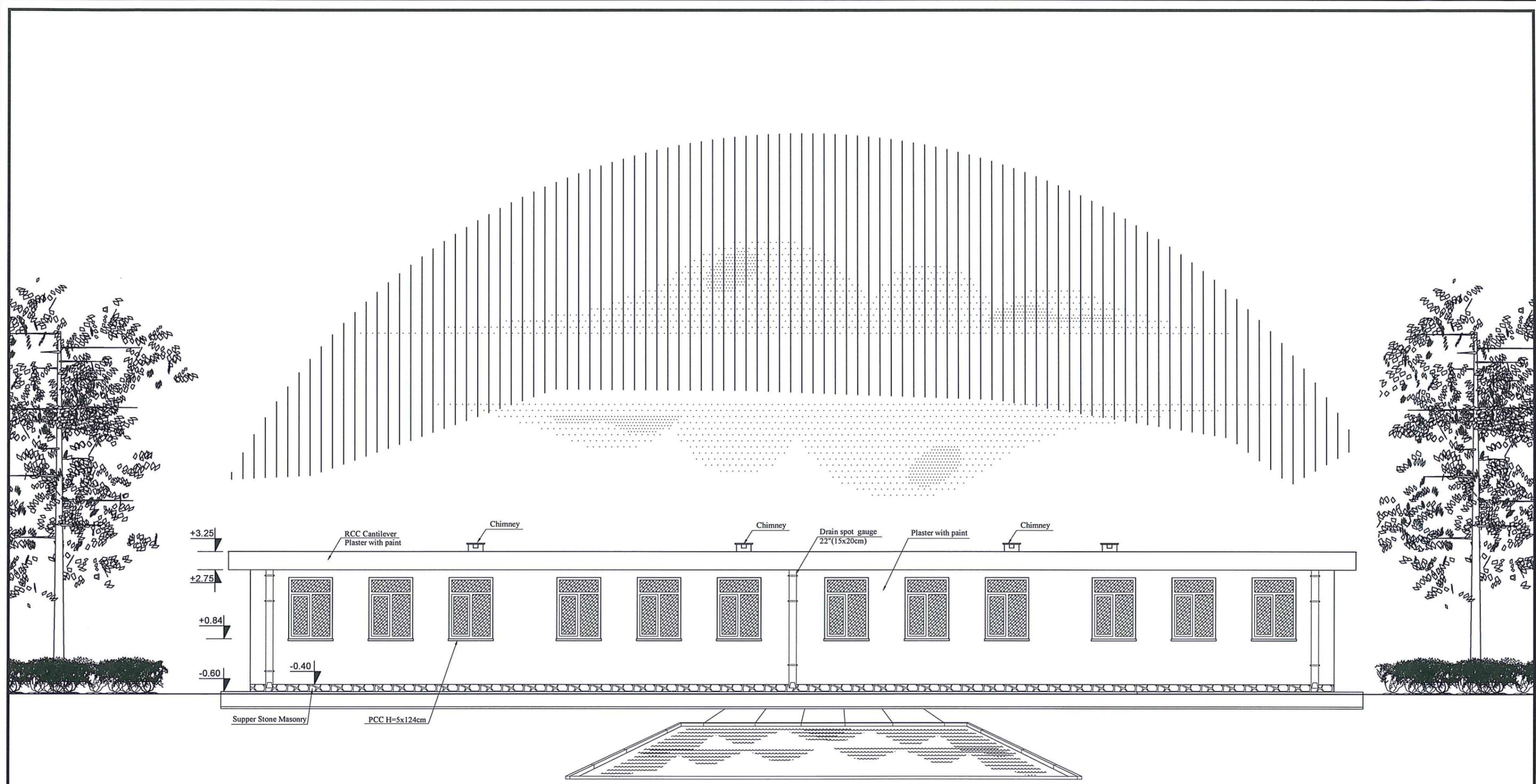
ARCHITECT/DESIGN	ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY	DAARTT
TECH- APPROVED BY	

Combined technical team	MOE/MRRD/DAARTT
SCALE	AS SHOWN (A3)
DATE	12/08/2018

PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE	Front Elevation

SHEET NO.

A04
21



A BACK ELEVATION OF 6 CLASS ROOM RCC SLAB
05 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

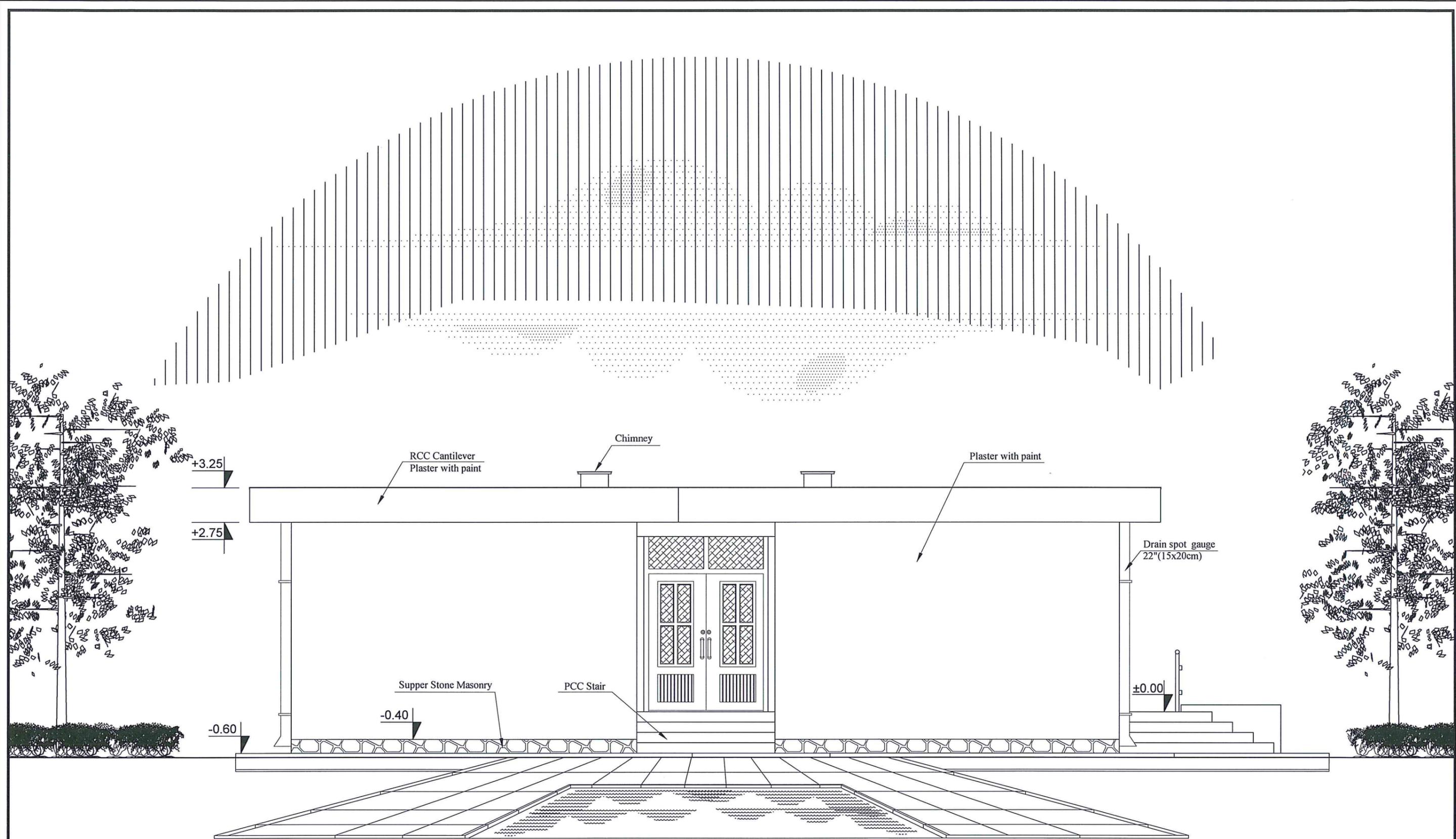
ARCHITECT/DESIGN	ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY	DAARTT
TECH- APPROVED BY	

Combined technical team	MOE/MRRD/DAARTT
SCALE	AS SHOWN (A3)
DATE	12/08/2018

PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE	Back Elevation

SHEET NO.

A05
21



Side Elevation

A SIDE ELEVATION OF 6 CLASS ROOM RCC SLAB
06 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

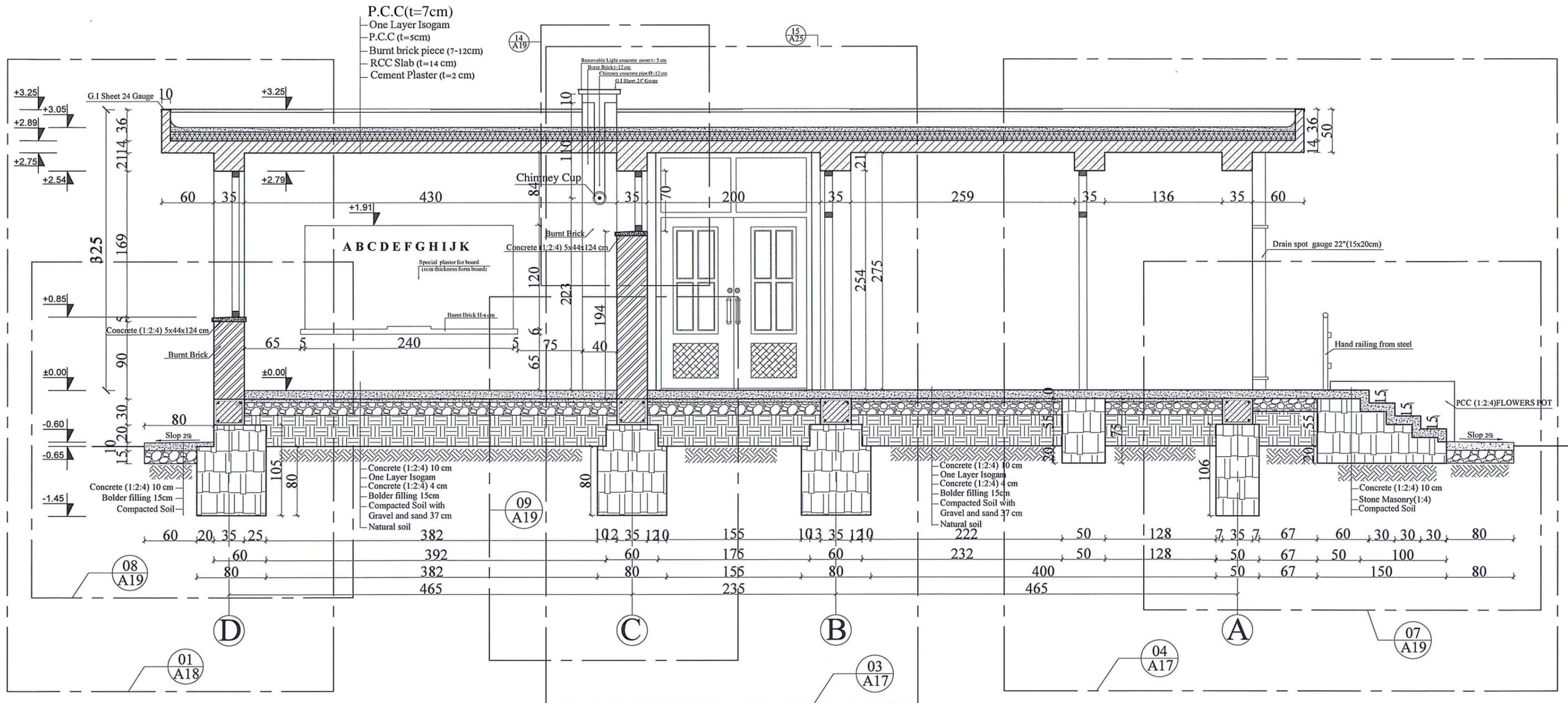
ARCHITECT/DESIGN	ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY	DAARTT
TECH- APPROVED BY	

Combined technical team	MOE/MRRD/DAARTT
SCALE	AS SHOWN (A3)
DATE	12/08/2018

PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE	Side Elevation

SHEET NO.

A-06
21



A SECTION A-A OF 6 CLASS ROOM RCC SLAB
 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



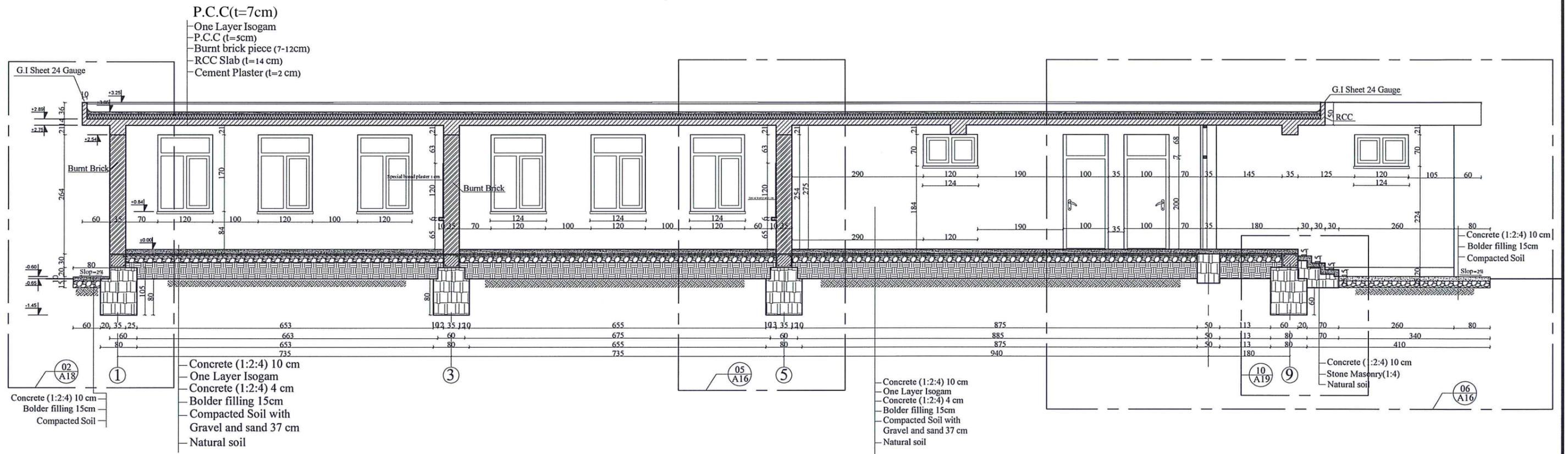
PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN	ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY	DAARTT
TECH- APPROVED BY	

Combined technical team	MOE/MRRD/DAARTT
SCALE	AS SHOWN (A3)
DATE	12/08/2018

PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE	Section A-A

SHEET NO.	A07 21
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A SECTION B-B OF 6 CLASS ROOM RCC SLAB
08 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN ZIAURAHMAN ZIA
 PREPLANNED & CHECKED BY DAARTT
 TECH- APPROVED BY

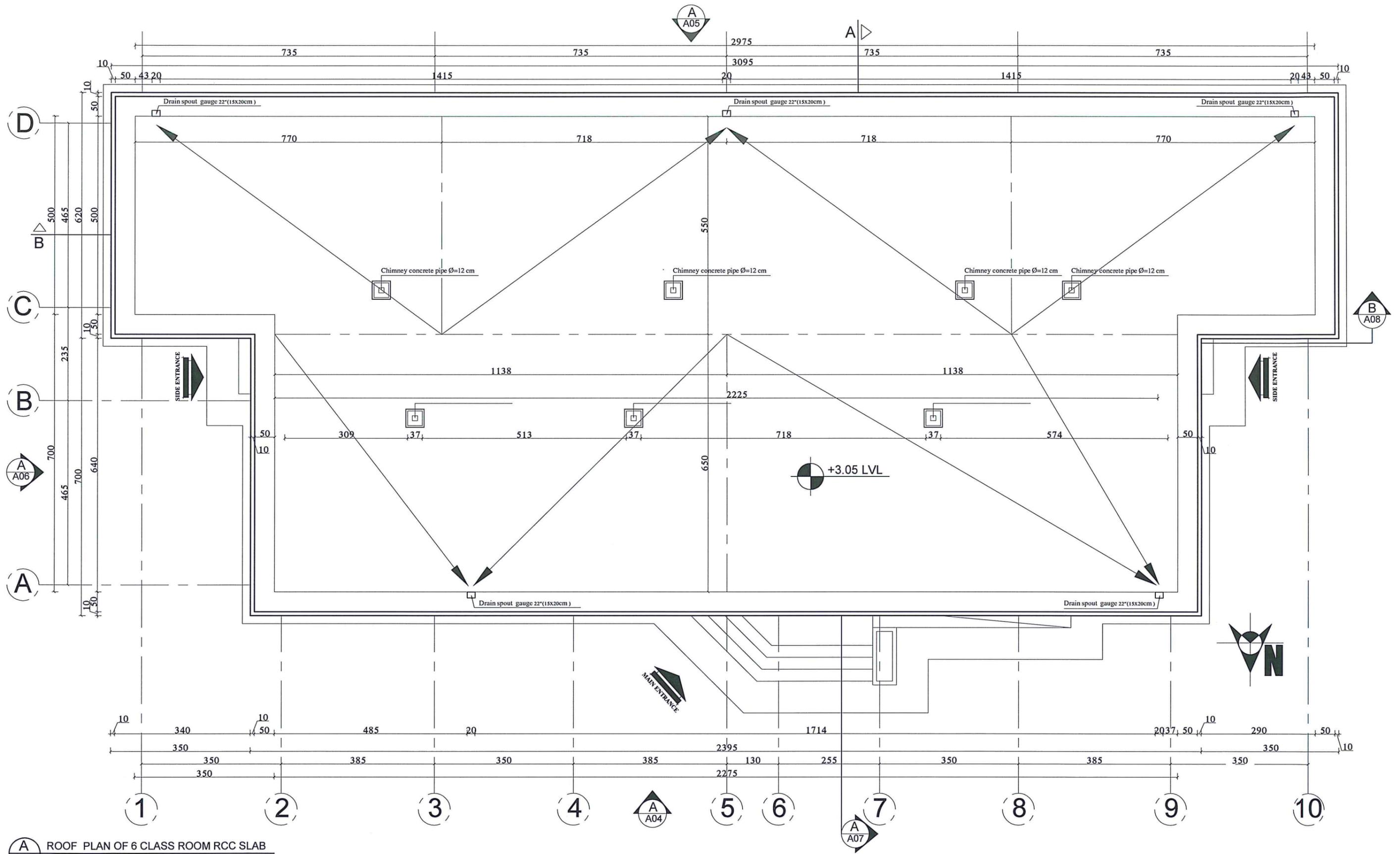
Combined technical team
 MOE/MRRD/DAARTT
 SCALE AS SHOWN (A3)
 DATE 12/08/2018

PROJECT NAME
 DRAWING TITLE

6 Classroom Burnt Brick RCC Slab H-275
 Section B-B

SHEET NO.

A08
21



A
09 ROOF PLAN OF 6 CLASS ROOM RCC SLAB
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

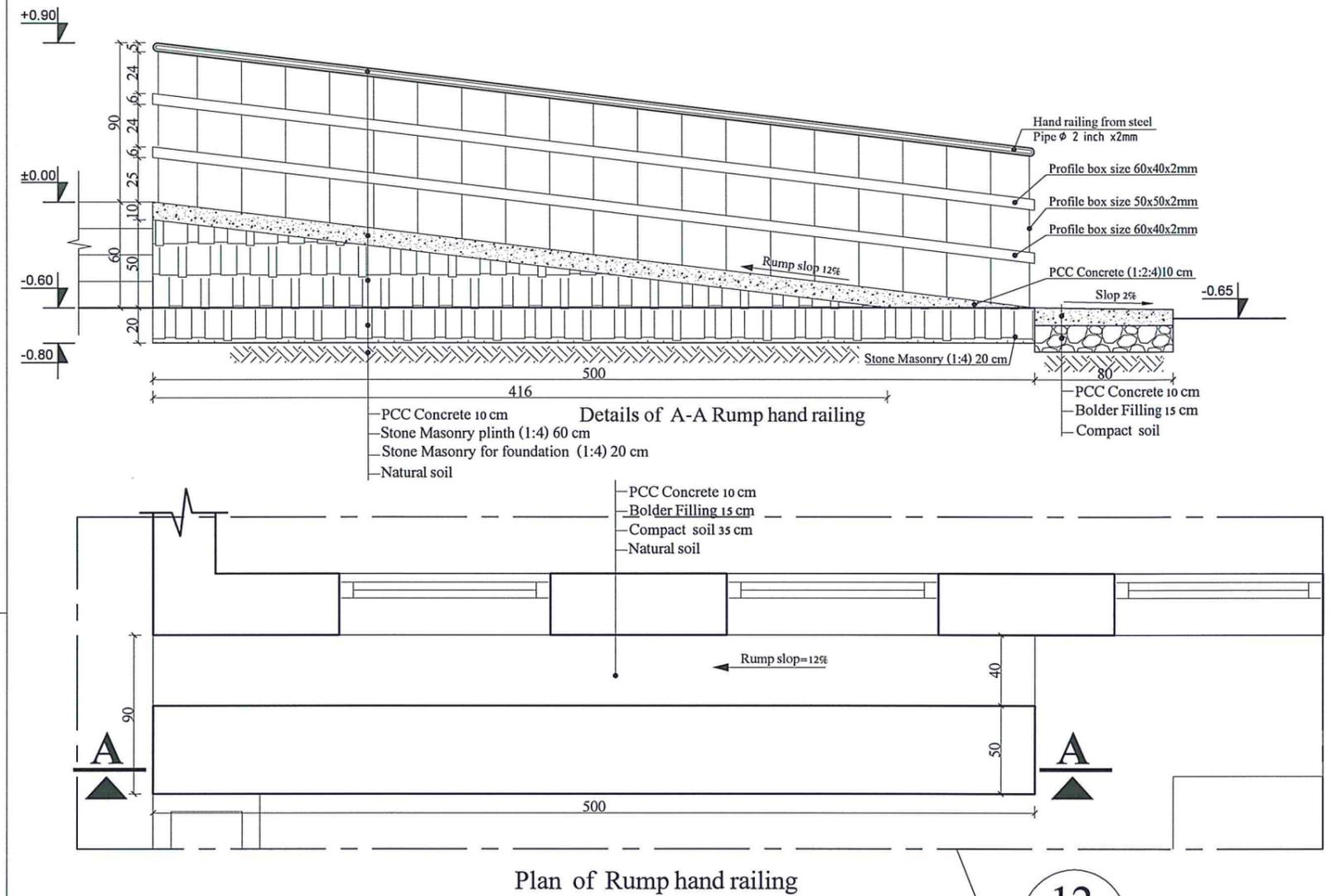
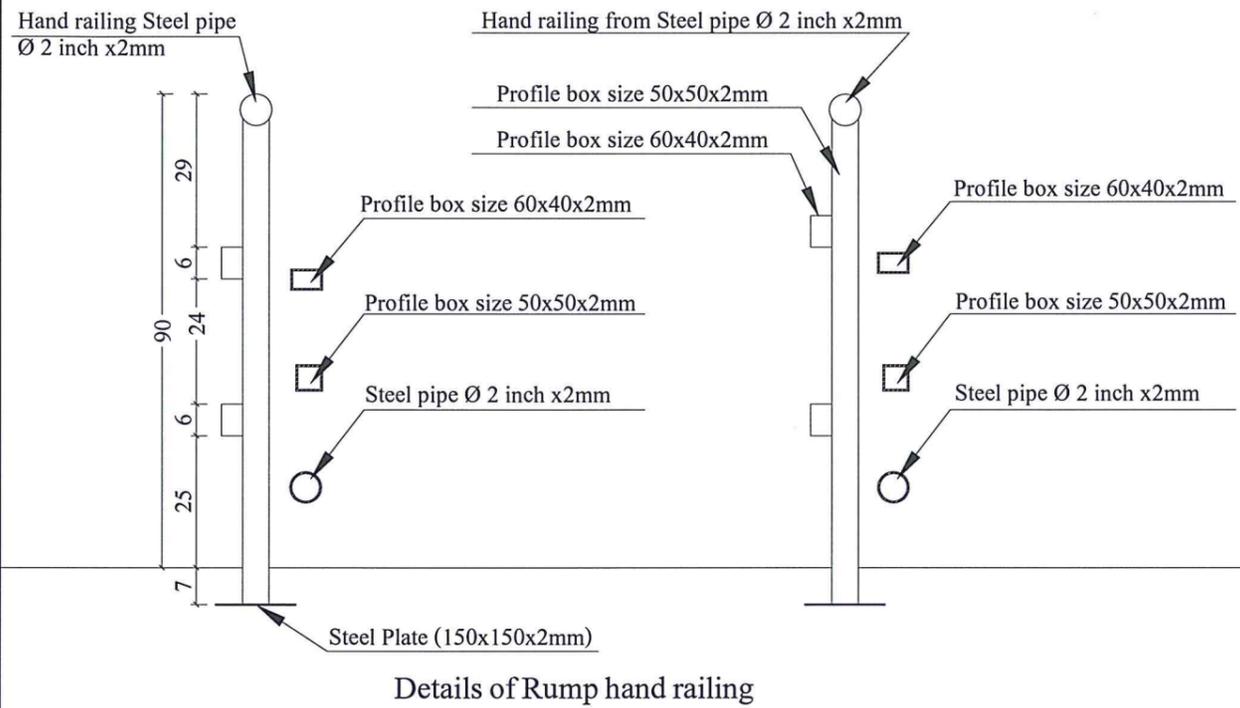
ARCHITECT/DESIGN	ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY	DAARTT
TECH-APPROVED BY	

Combined technical team	MOE/MRRD/DAARTT
SCALE	AS SHOWN (A3)
DATE	12/08/2018

PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE	Roof Plan

SHEET NO.

A
09
21



12
A01

A
10 PLAN & SECTION WITH DETAILS OF 12 RUMP HAND RAILING
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY DAARTT
TECH- APPROVED BY

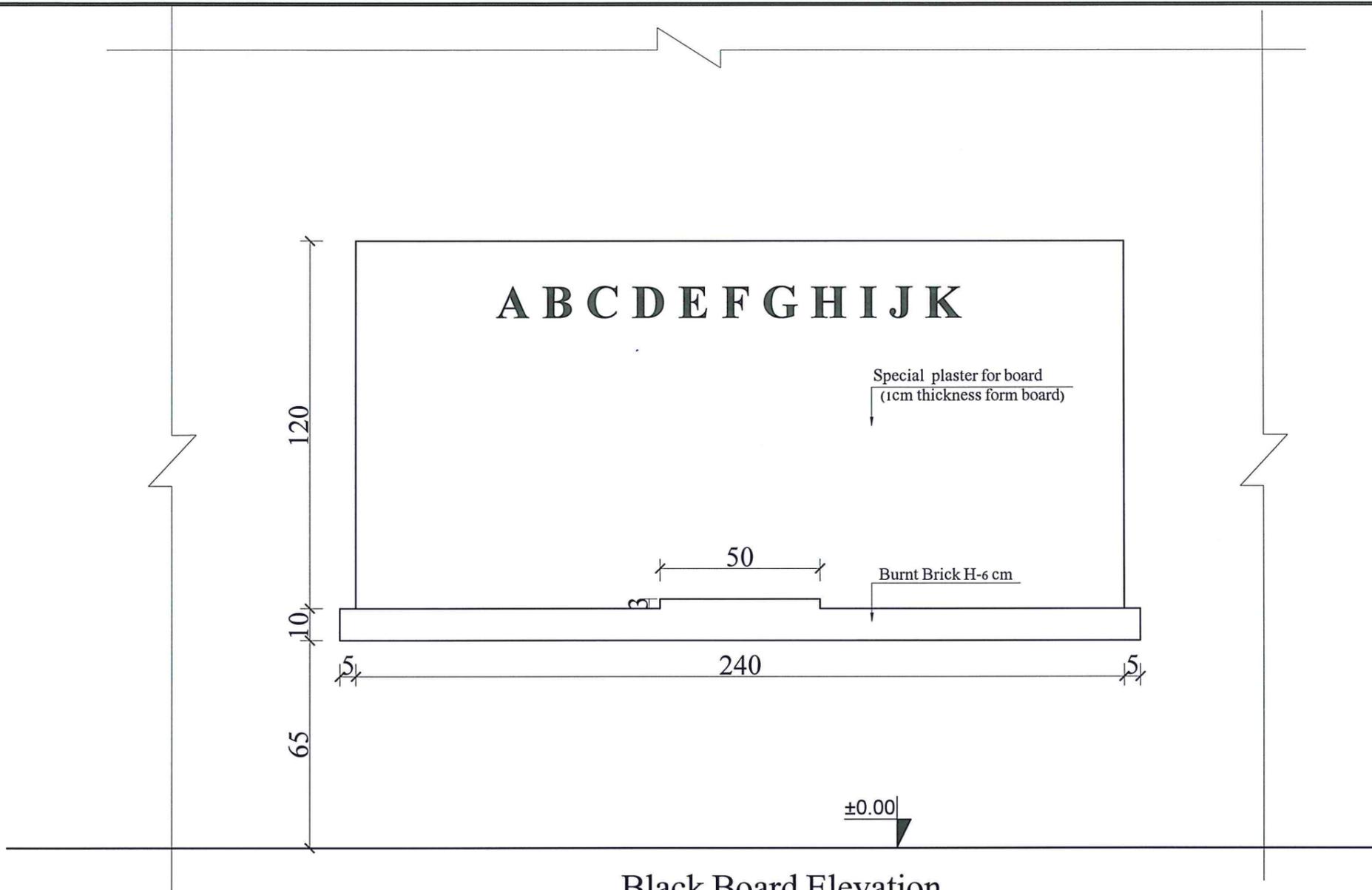
Combined technical team

MOE/MRRD/DAARTT
SCALE AS SHOWN (A3)
DATE 12/08/2018

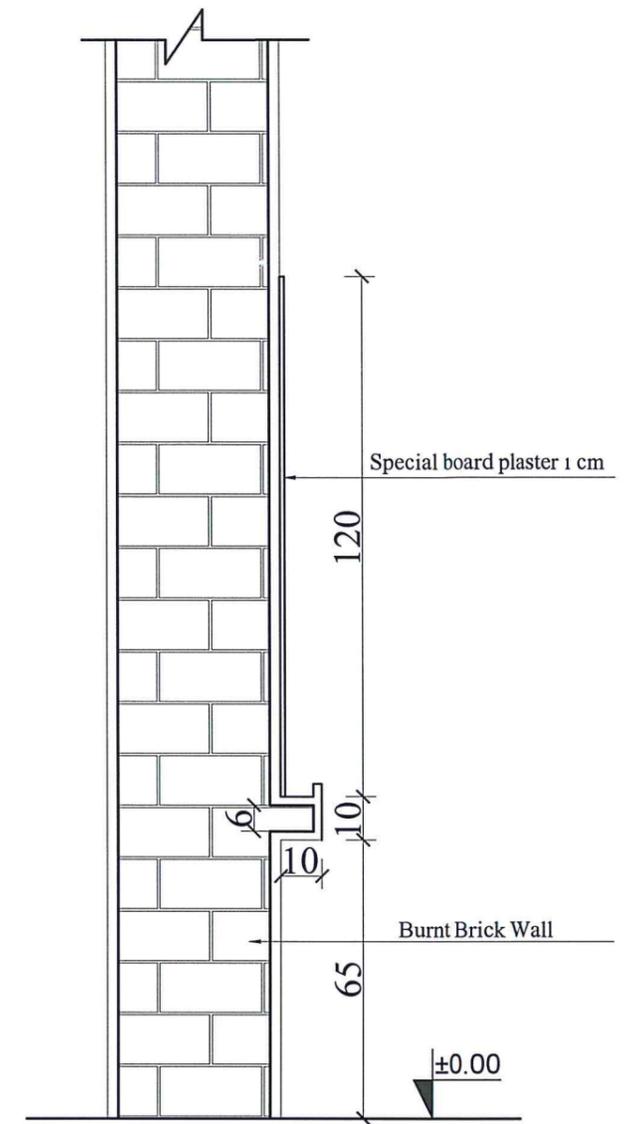
PROJECT NAME 6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE Plan & Section with Details of 12 Rump Hand railing

SHEET NO.

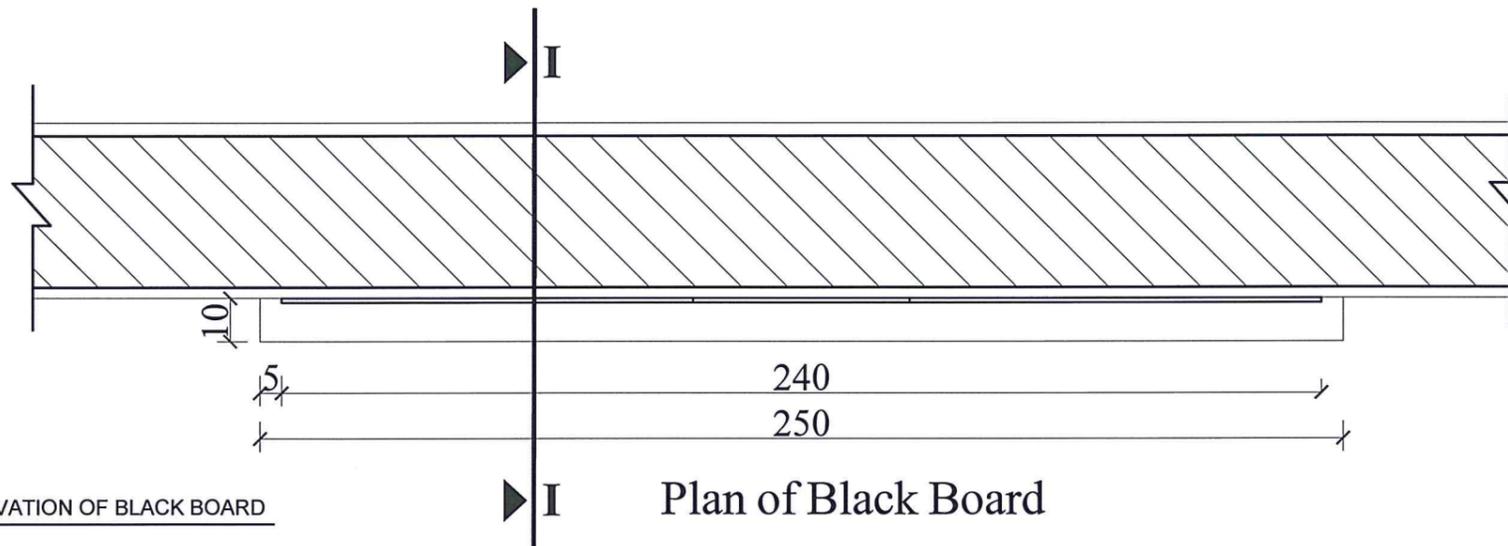
10
21



Black Board Elevation



Section of I-I Black Board



Plan of Black Board

A 11 PLAN & SECTION & ELEVATION OF BLACK BOARD
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

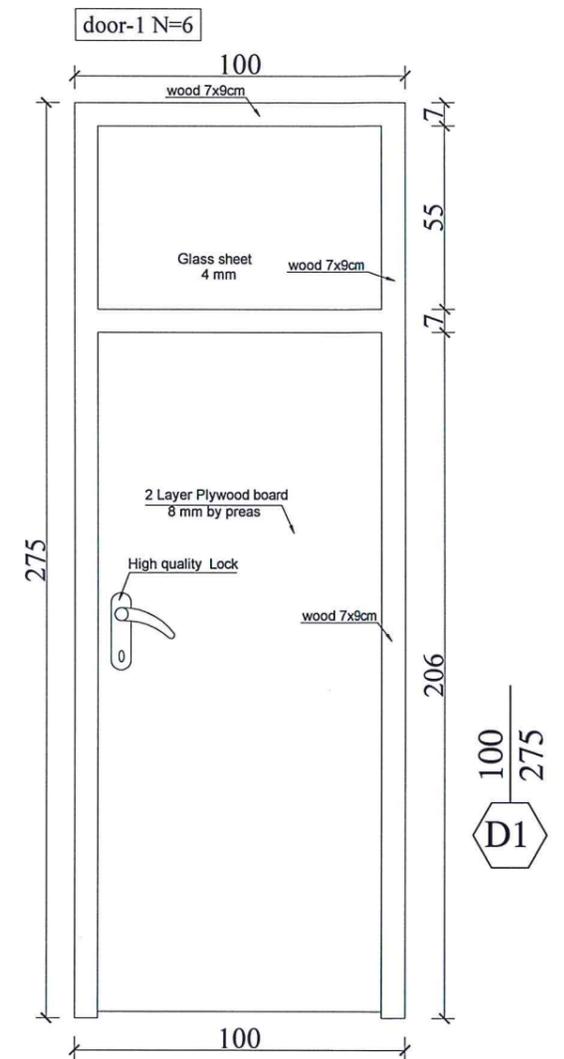
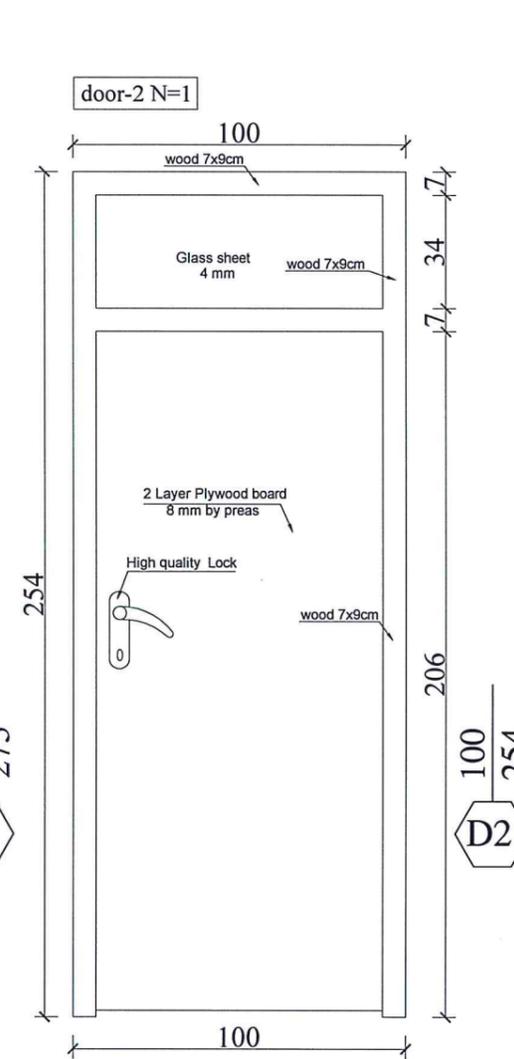
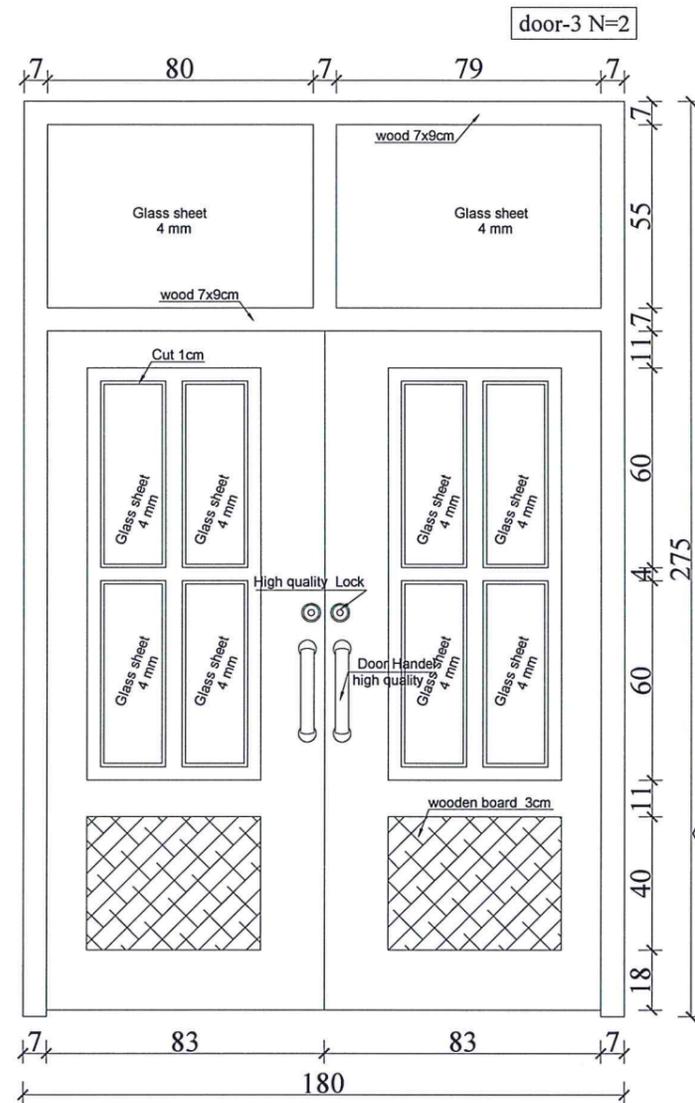
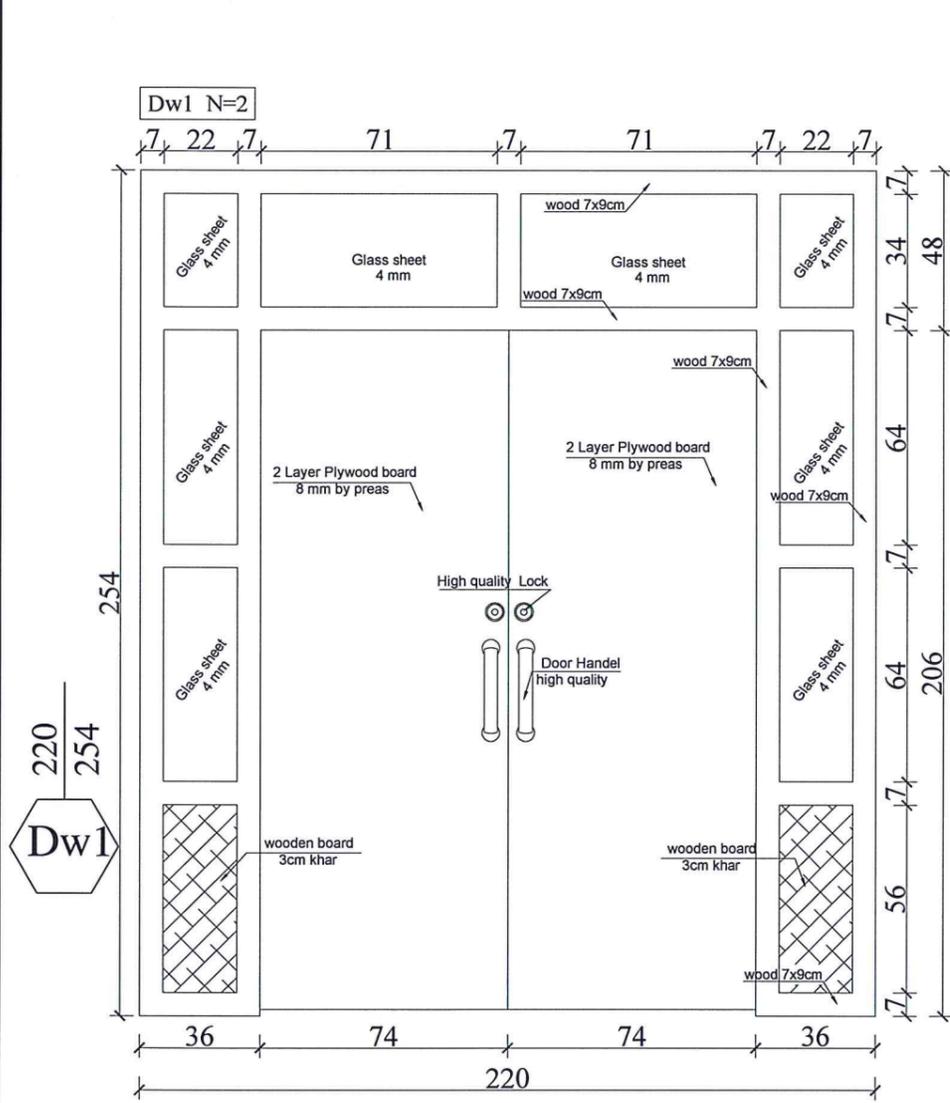
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TECH-APPROVED BY

Combined technical team MOE/MRRD/DAARTT
SCALE AS SHOWN (A3)
DATE 12/08/2018

PROJECT NAME 6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE Plan & Section & Elevation of Black Board

SHEET NO.

A11
21



A DETAILS OF DOORS
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY DAARTT
TECH- APPROVED BY

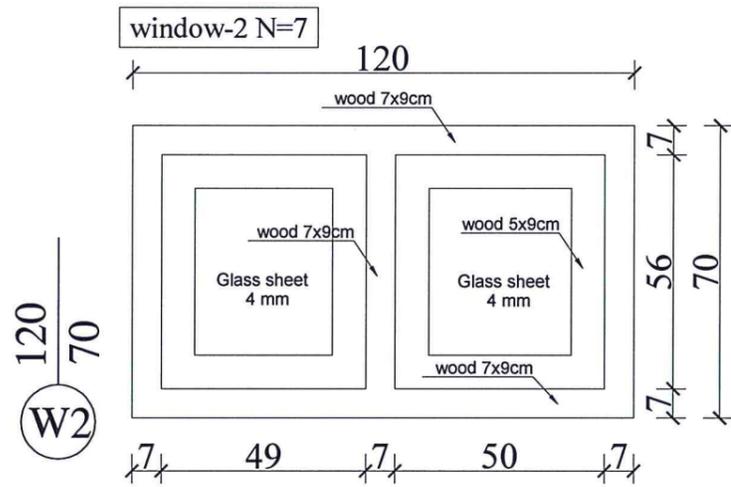
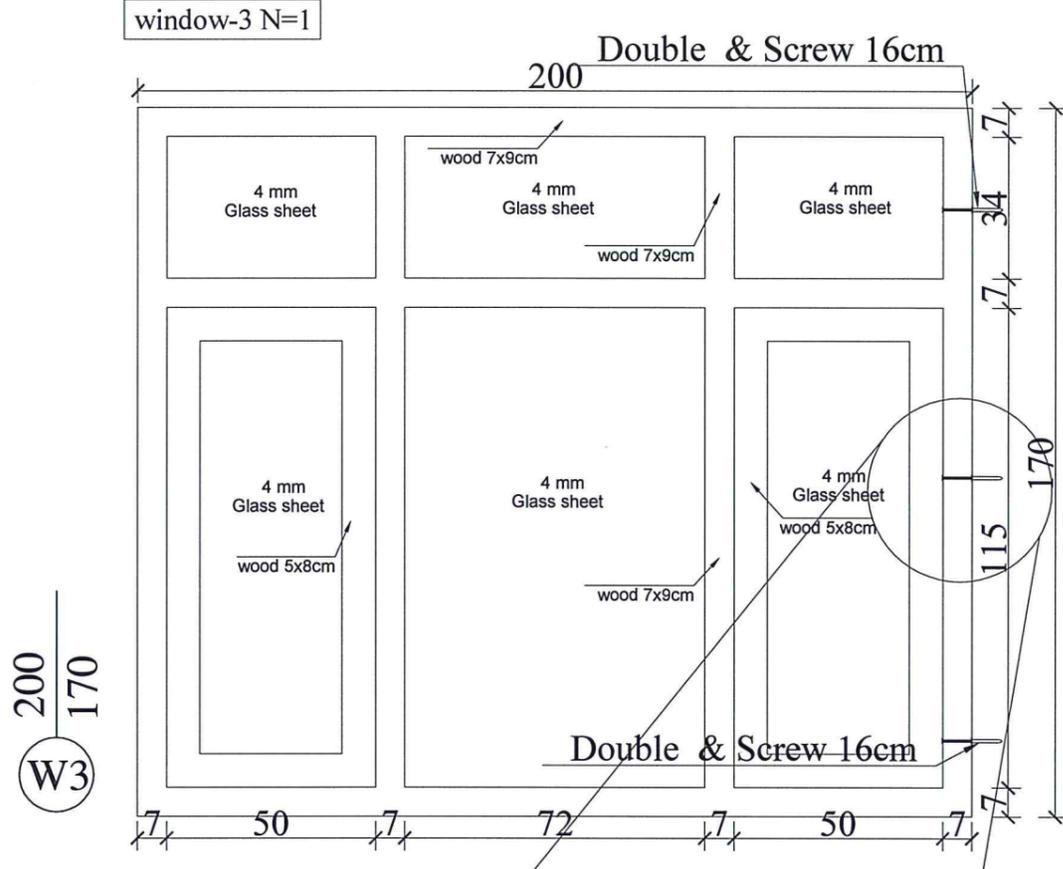
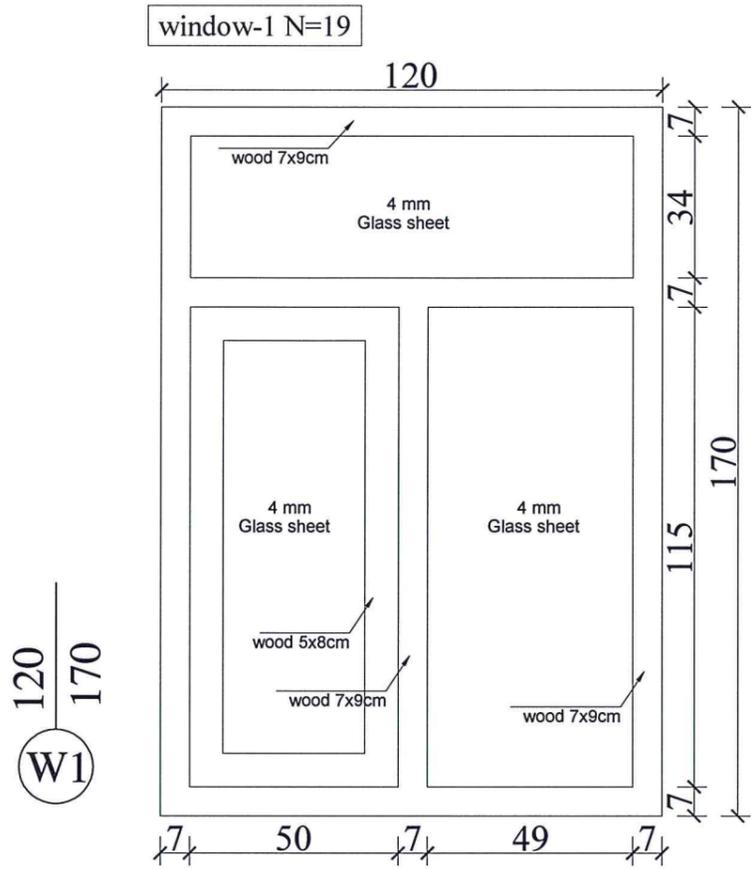
Combined technical team MOE/MRRD/DAARTT
SCALE AS SHOWN (A3)
DATE 12/08/2018

PROJECT NAME 6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE Details of Doors

SHEET NO. A12/21

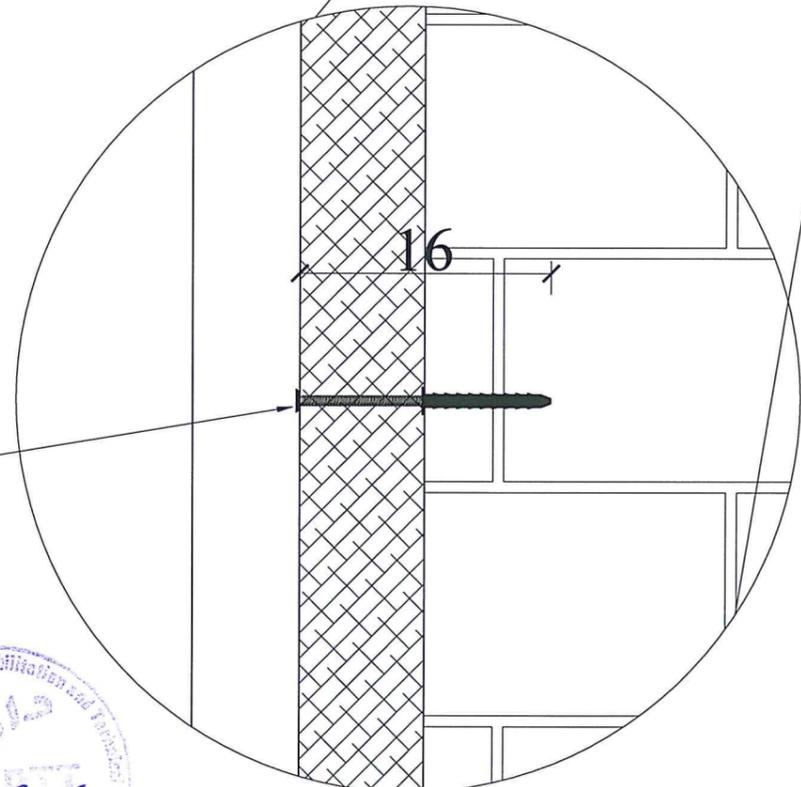
SHEET NO. A12/21

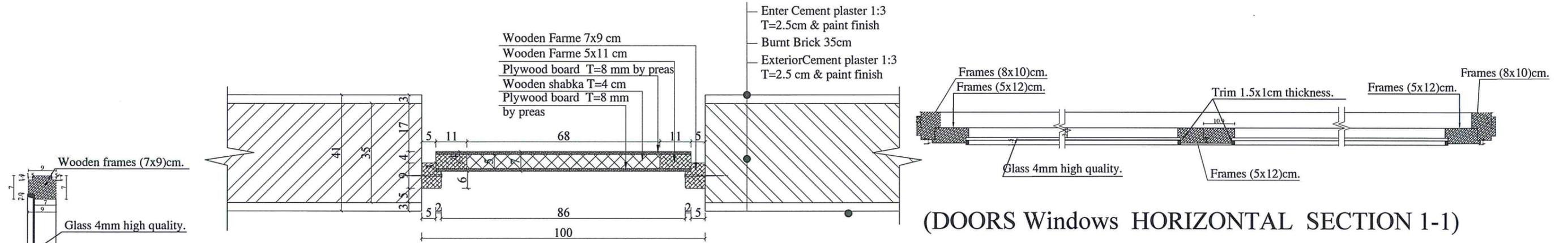
SHEET NO. A12/21



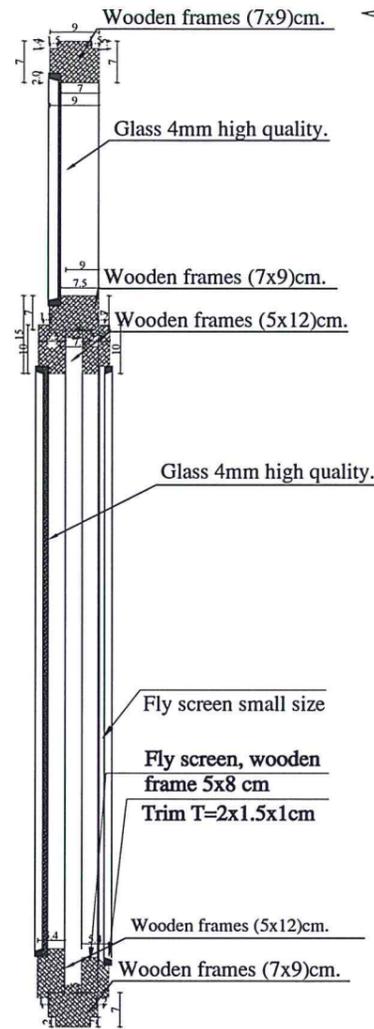
Detail of Window

Double & Screw
Ø10mmL= 16cm

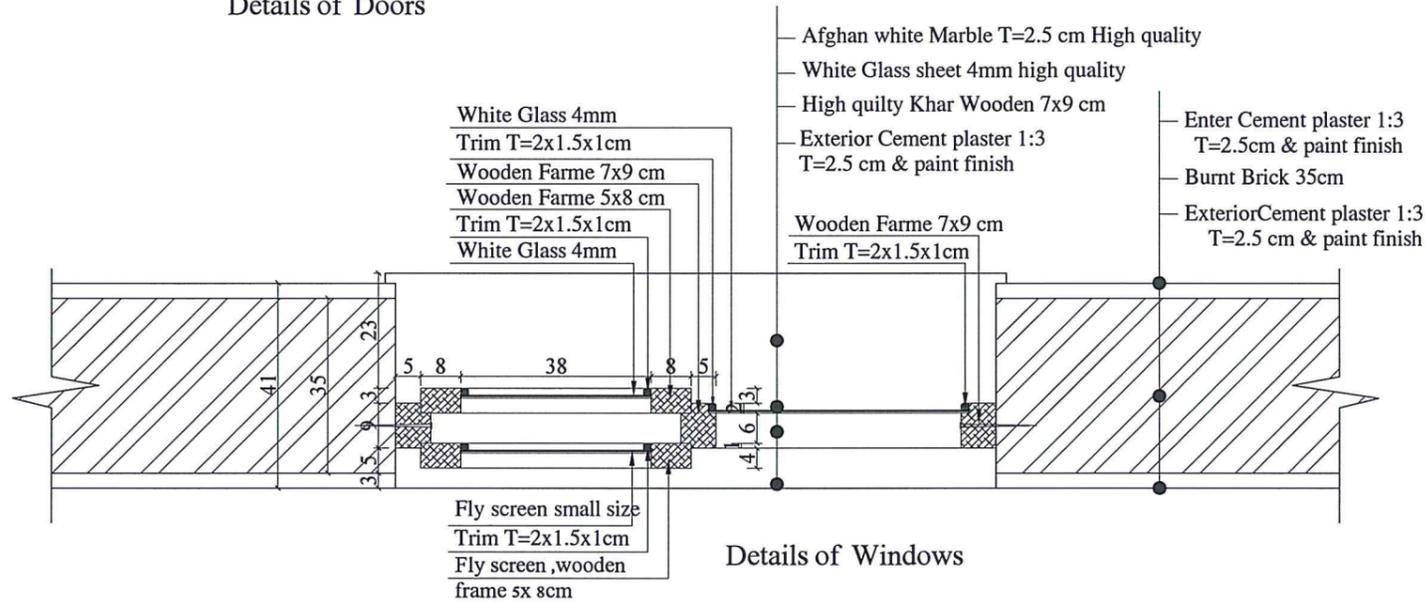




(DOORS Windows HORIZONTAL SECTION 1-1)

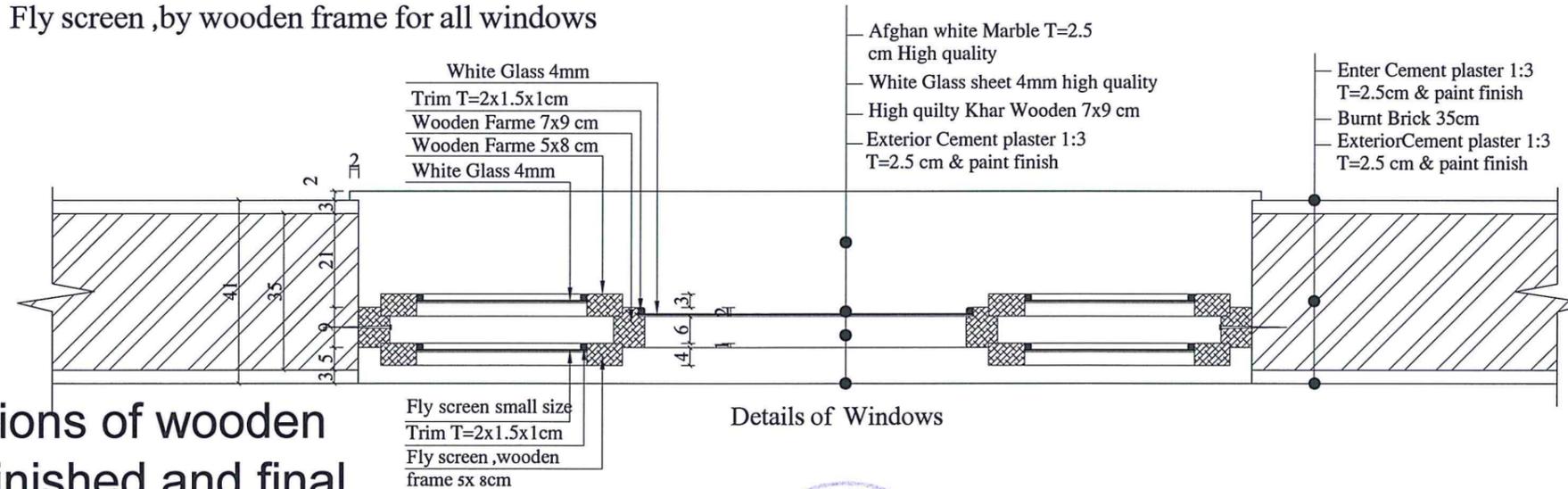


(WINDOWS VERTICAL SECTION 2-2)



Details of Windows

Fly screen ,by wooden frame for all windows



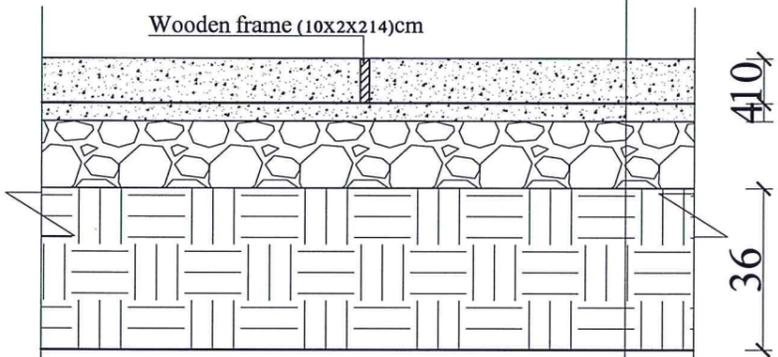
Details of Windows

Note: The dimensions of wooden members are as finished and final dimensions.

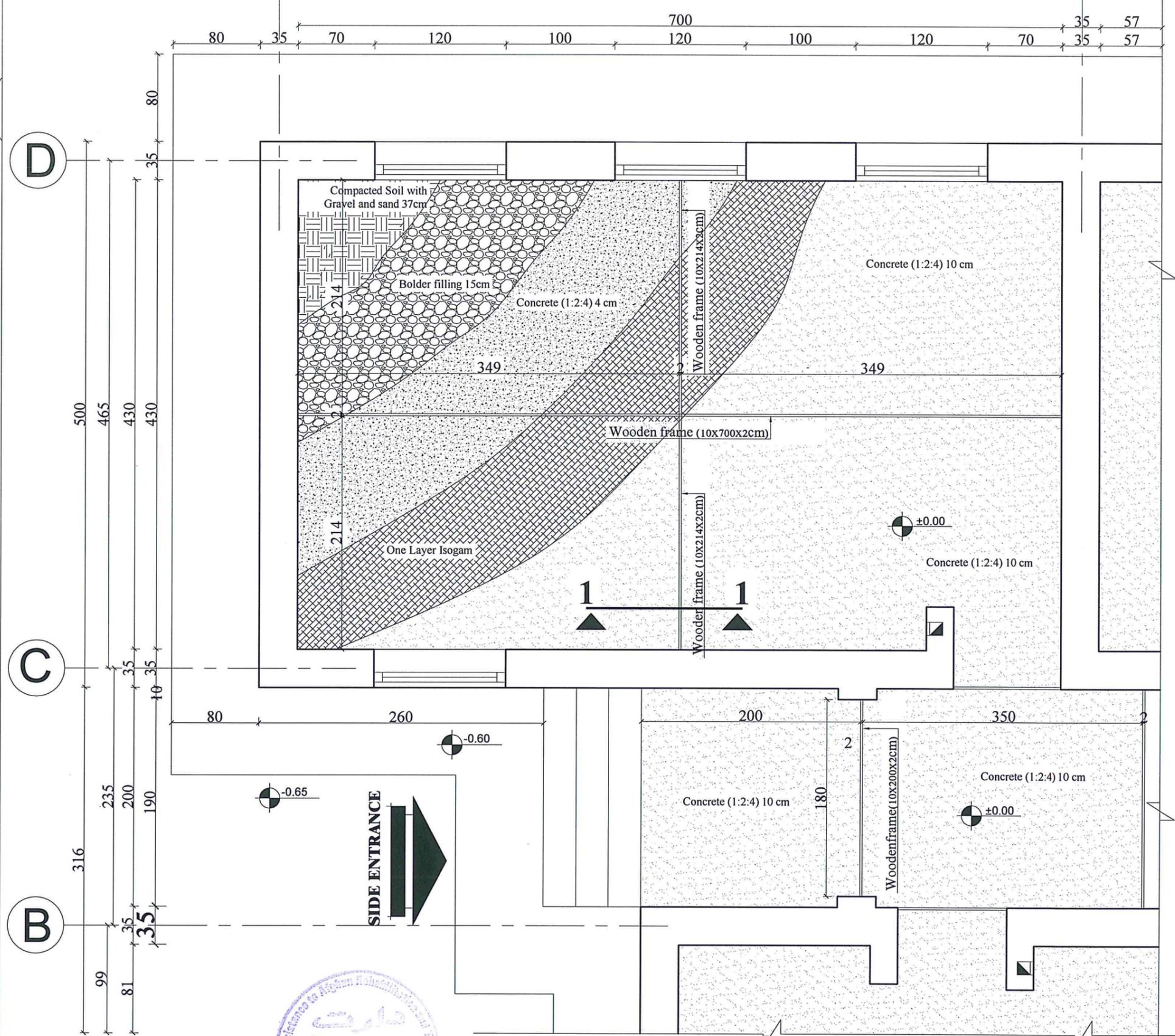


MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION	PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN	ARCHITECT/DESIGN	ZIAURAHMAN ZIA	COMBINED TECHNICAL TEAM	MOE/MRRD/DAARTT	PROJECT NAME	6 CLASSROOM BURNT BRICK WALL WITH RCC SLAB, H=2.89	SHEET NO.	A14 19
		PREPLANNED & CHECKED BY	DAARTT		SCALE		AS SHOWN (A3)		
		TECH- APPROVED BY			DATE	2018-05-29			

Concrete (1:2:4) 10 cm
 One Layer Isogam
 Concrete (1:2:4) 4 cm
 Bolder filling 15cm
 Compacted Soil with Gravel
 and sand 37cm
 Natural soil



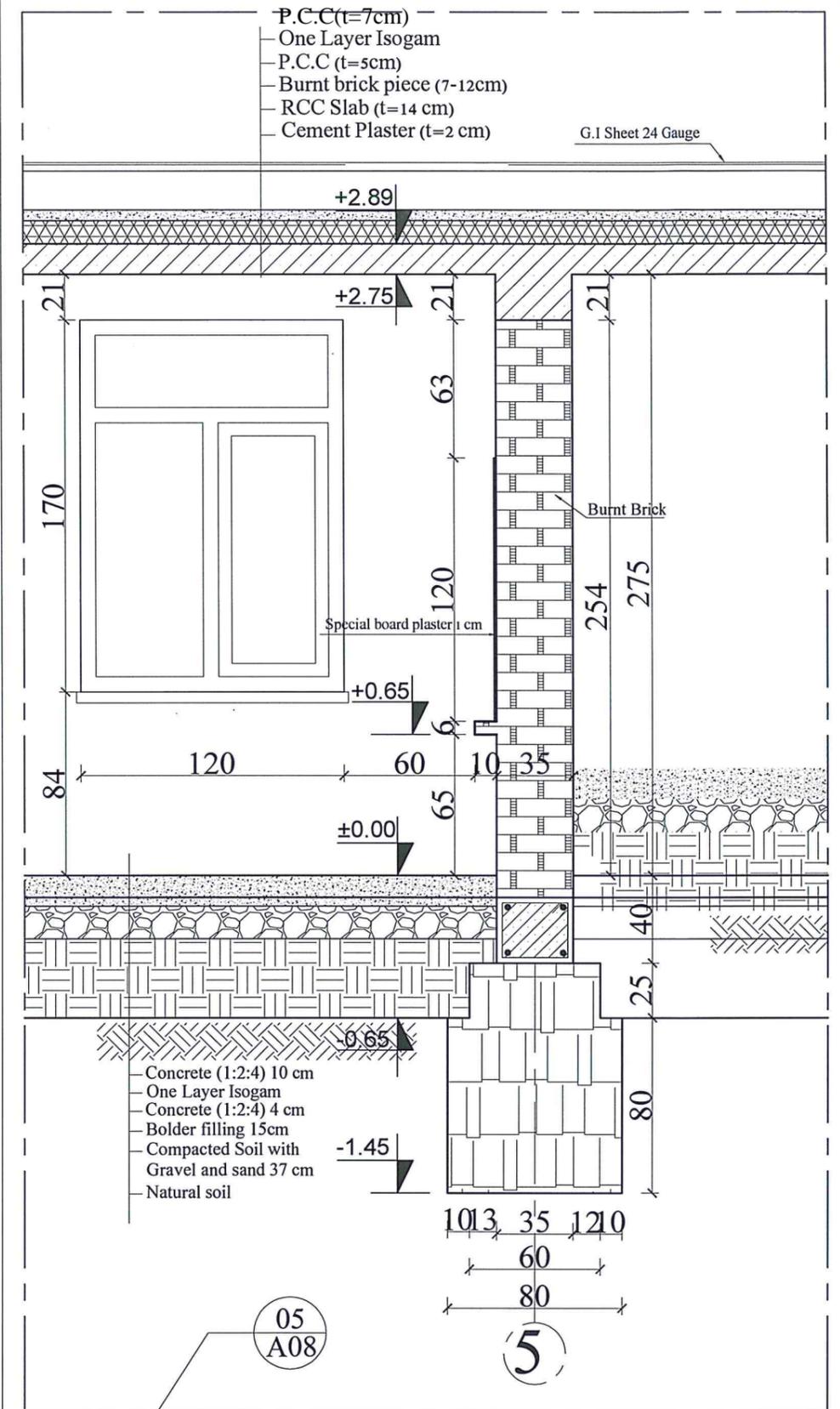
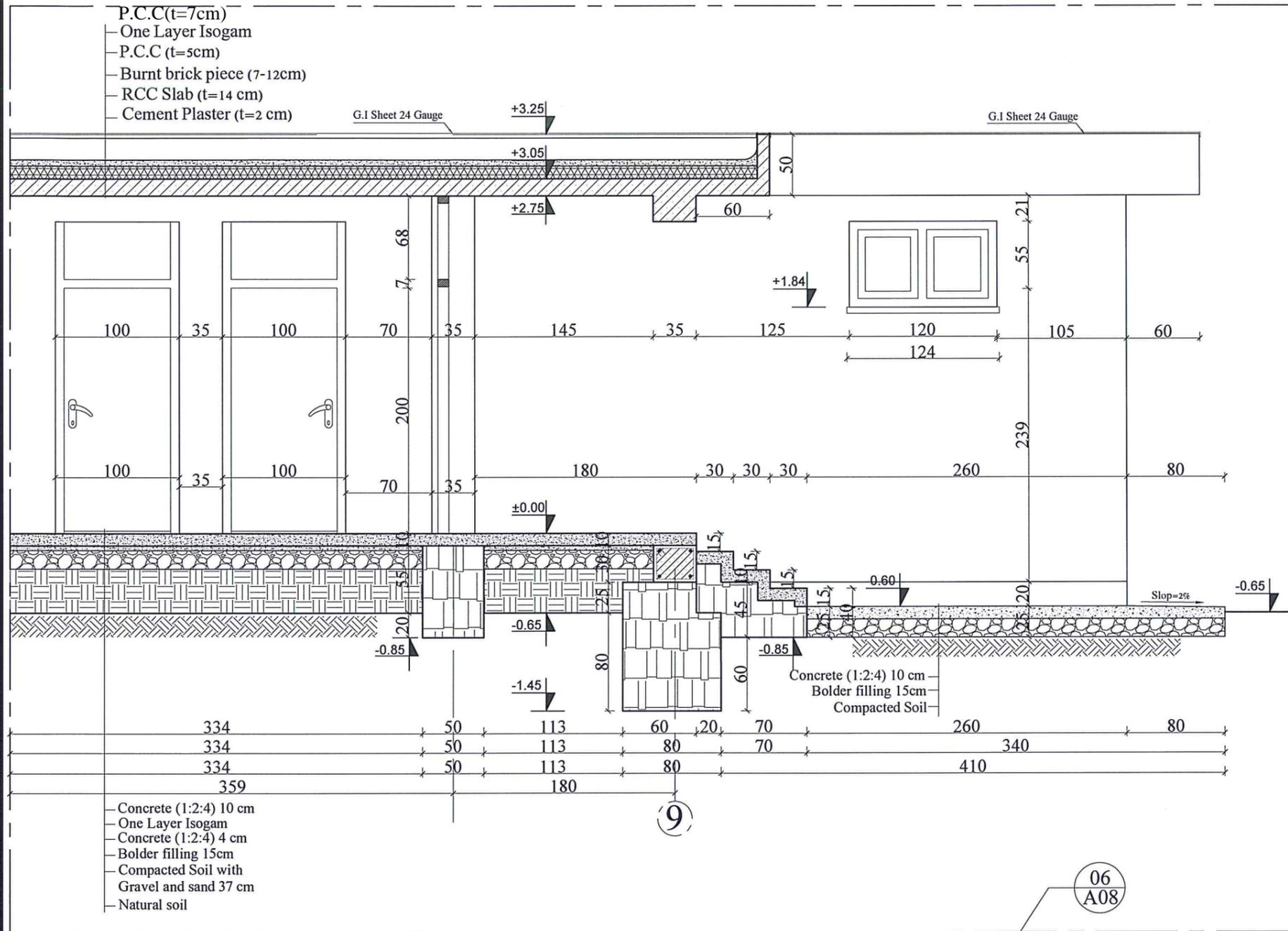
**Section of 1-1
 Floor PCC Concrete**



Details of Floor PCC Concrete



	MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN	ARCHITECT/DESIGN	ZIAURAHMAN ZIA	COMBINED TECHNICAL TEAM	MOE/MRRD/DAARTT	PROJECT NAME	6 CLASSROOM BURNT BRICK WALL WITH RCC SLAB, H=2.89	SHEET NO.	A15 19		
		PREPLANNED & CHECKED BY	DAARTT	SCALE	AS SHOWN (A3)					DRAWING TITLE	DETAILS OF FOOR PCC
		TECH- APPROVED BY		DATE	2018-05-29						



A
 16
 DETAILS OF (5,6)
 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
 OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
 AFGHANISTAN

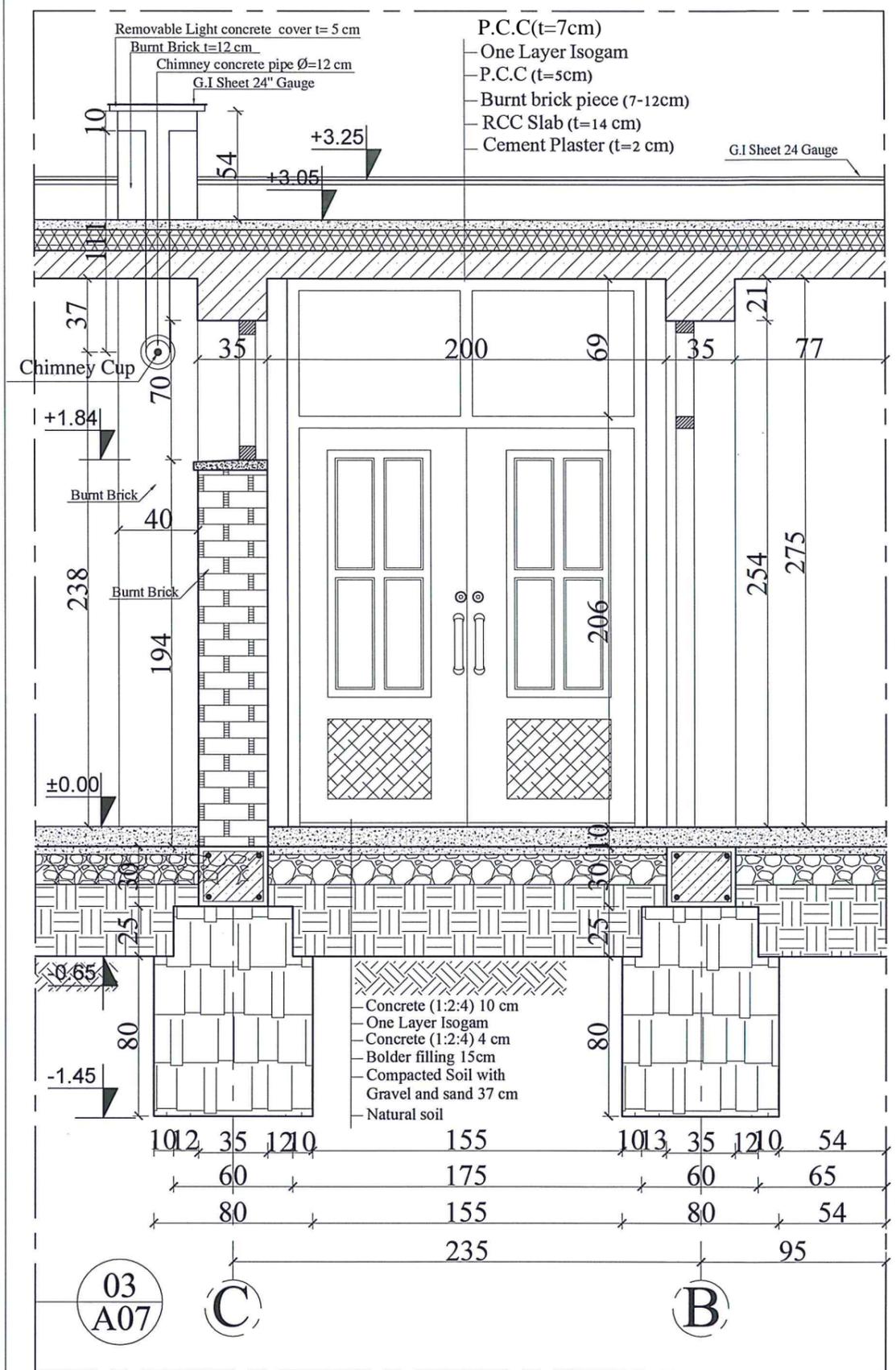
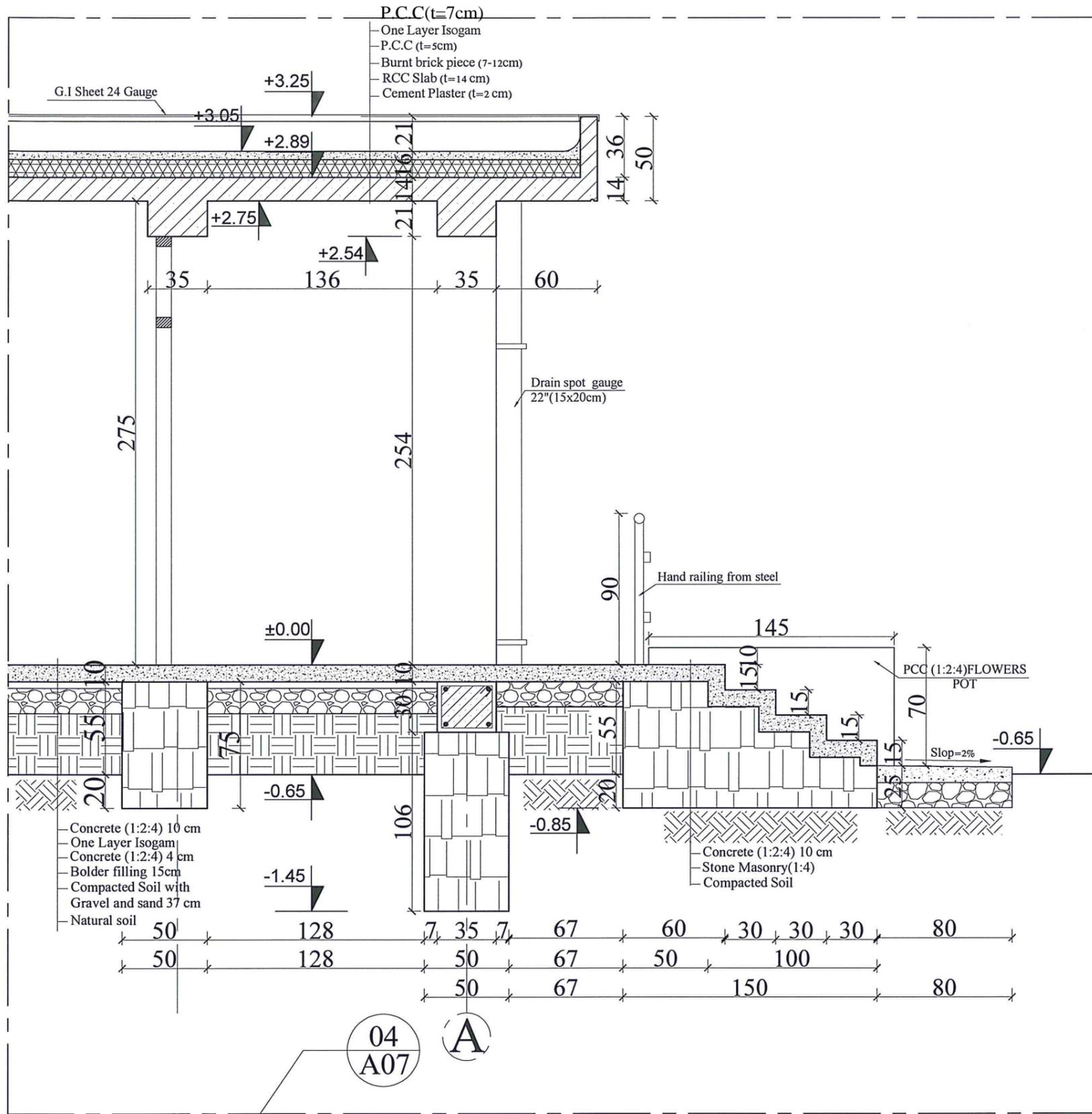
ARCHITECT/DESIGN
 ZIAURAHMAN ZIA
 PREPLANNED &
 CHECKED BY
 DAARTT
 TECH- APPROVED BY

Combined technical
 team
 MOE/MRRD/DAARTT

SCALE
 AS SHOWN (A3)
 DATE
 12/08/2018

PROJECT NAME
 6 Classroom Burnt Brick RCC Slab H-275
 DRAWING TITLE
 Details of (5,6)

SHEET NO.
 A16
 21



A
17
DETAILS OF (3,4)
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



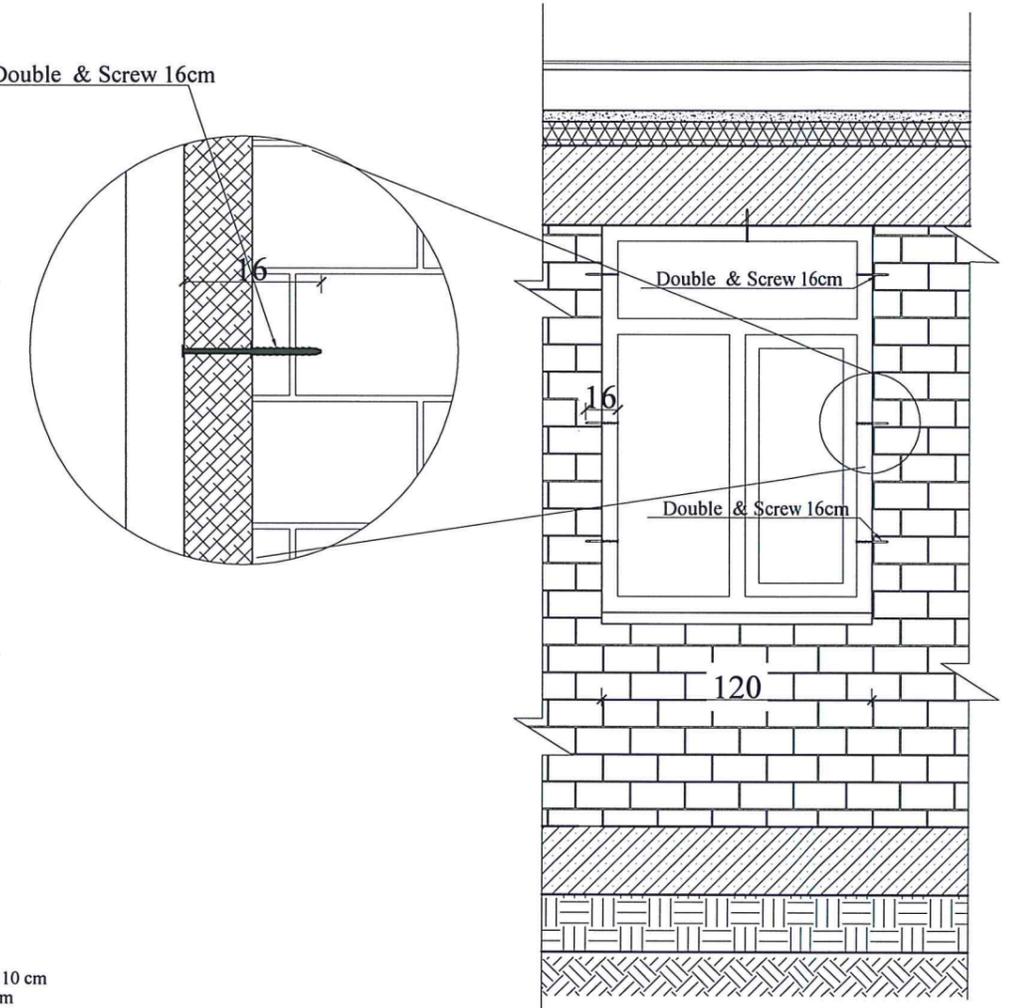
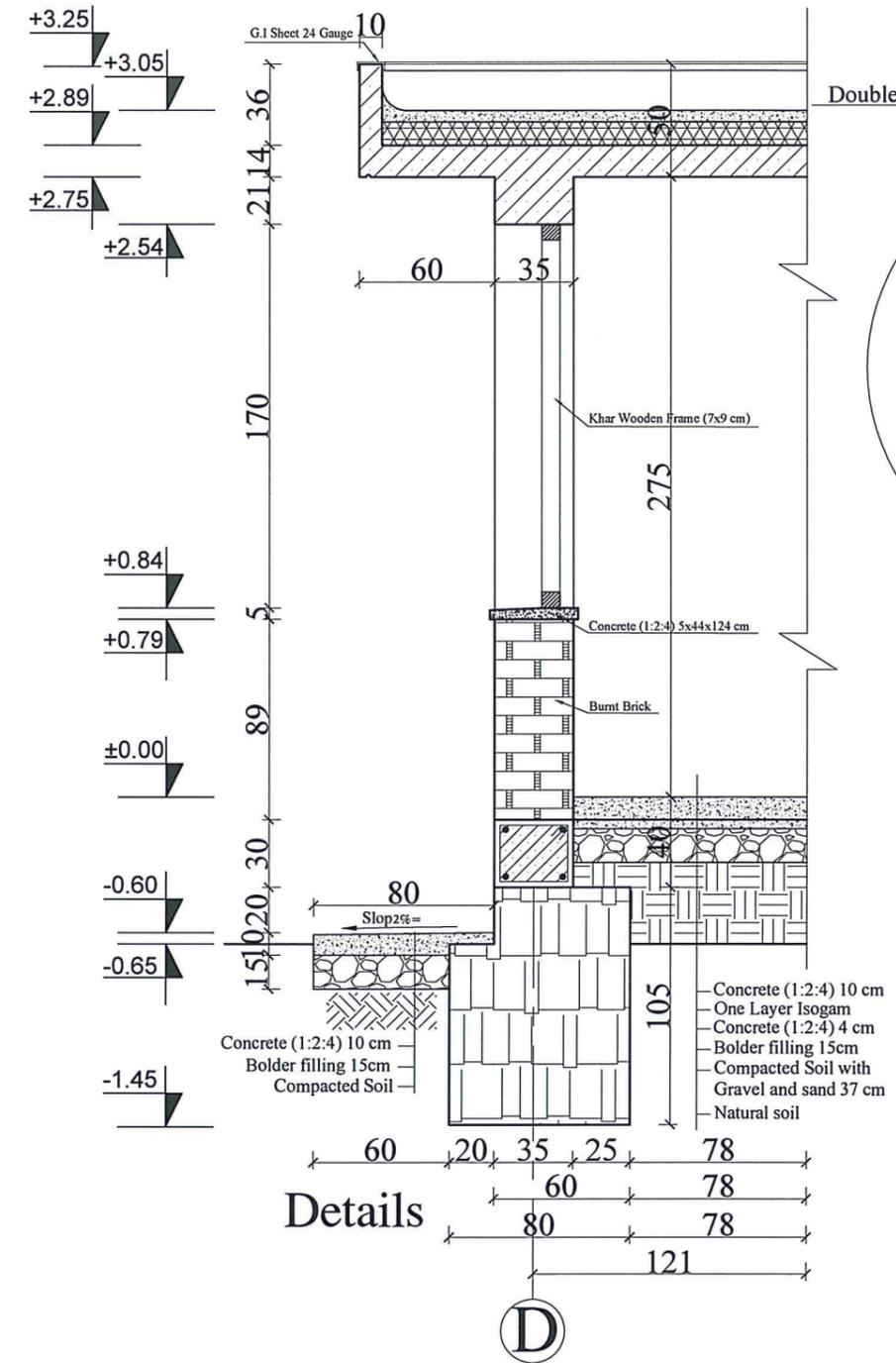
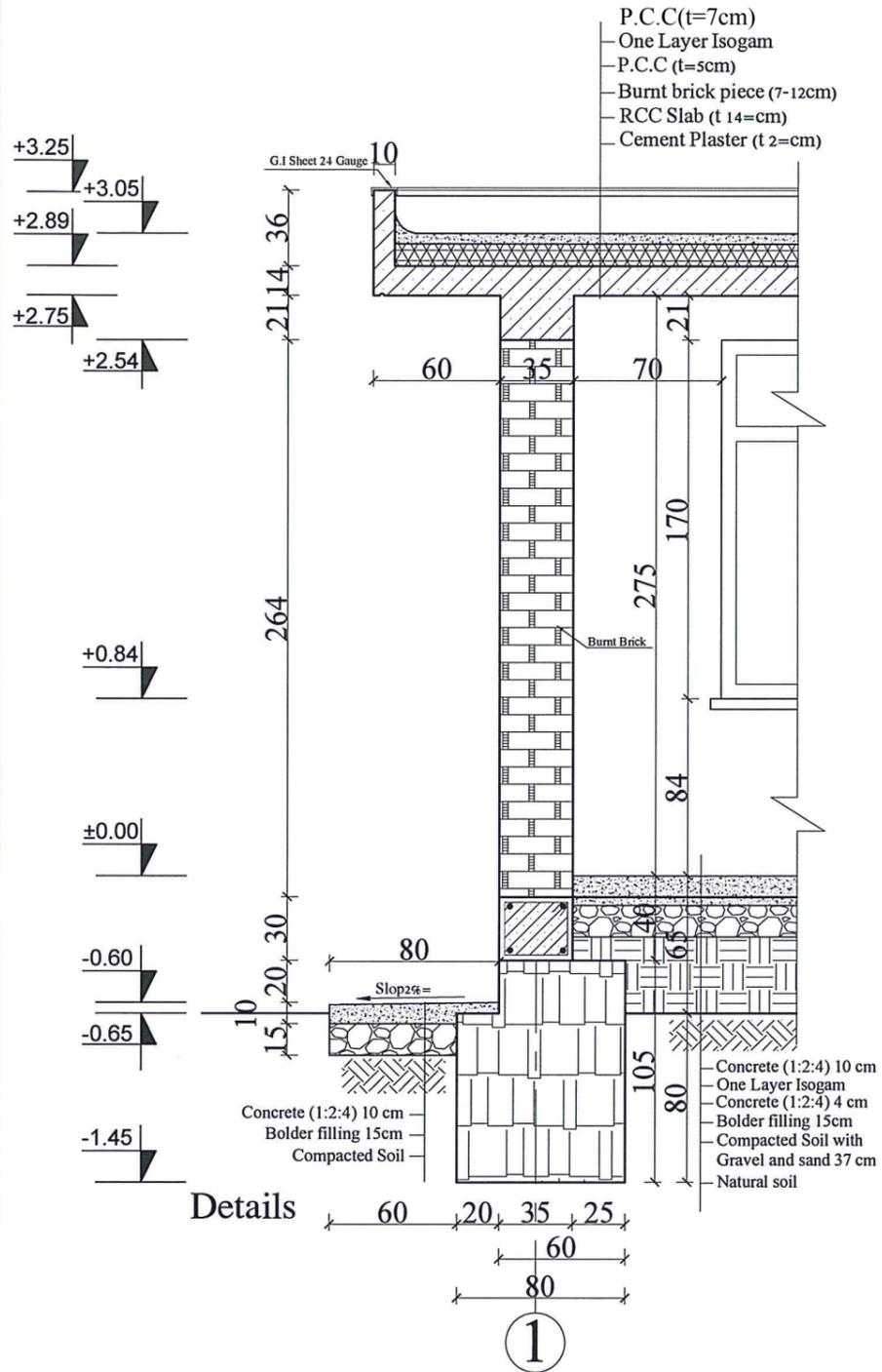
PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN
ZIAURAHMAN ZIA
PREPLANNED &
CHECKED BY
DAARTT
TECH- APPROVED BY

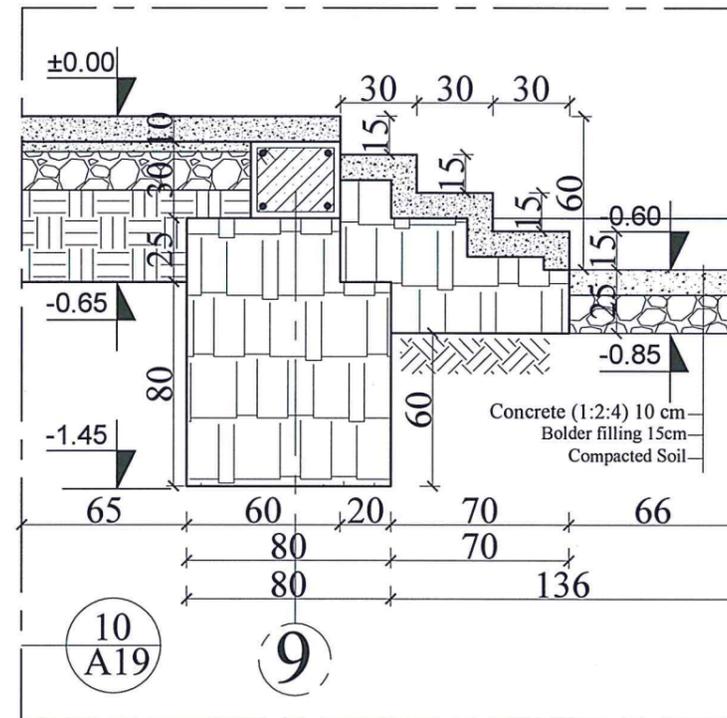
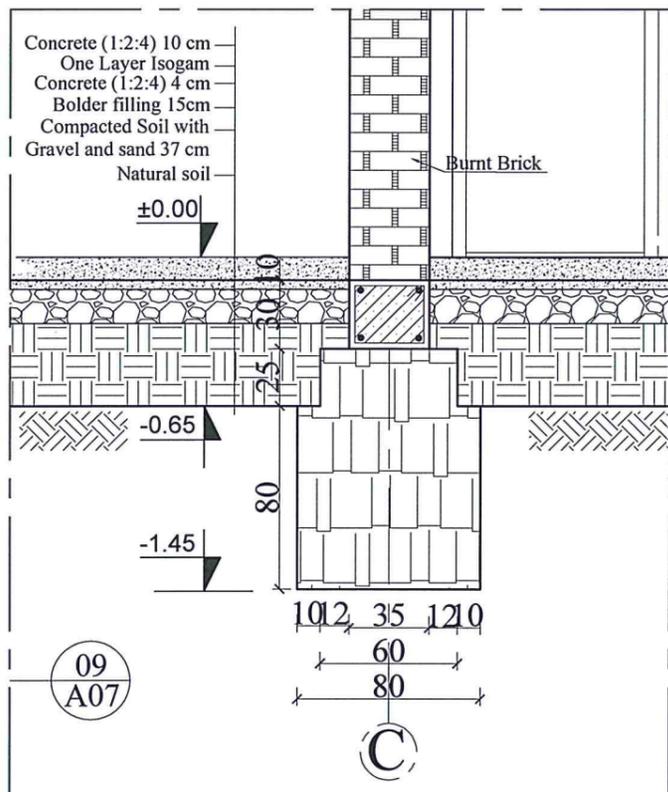
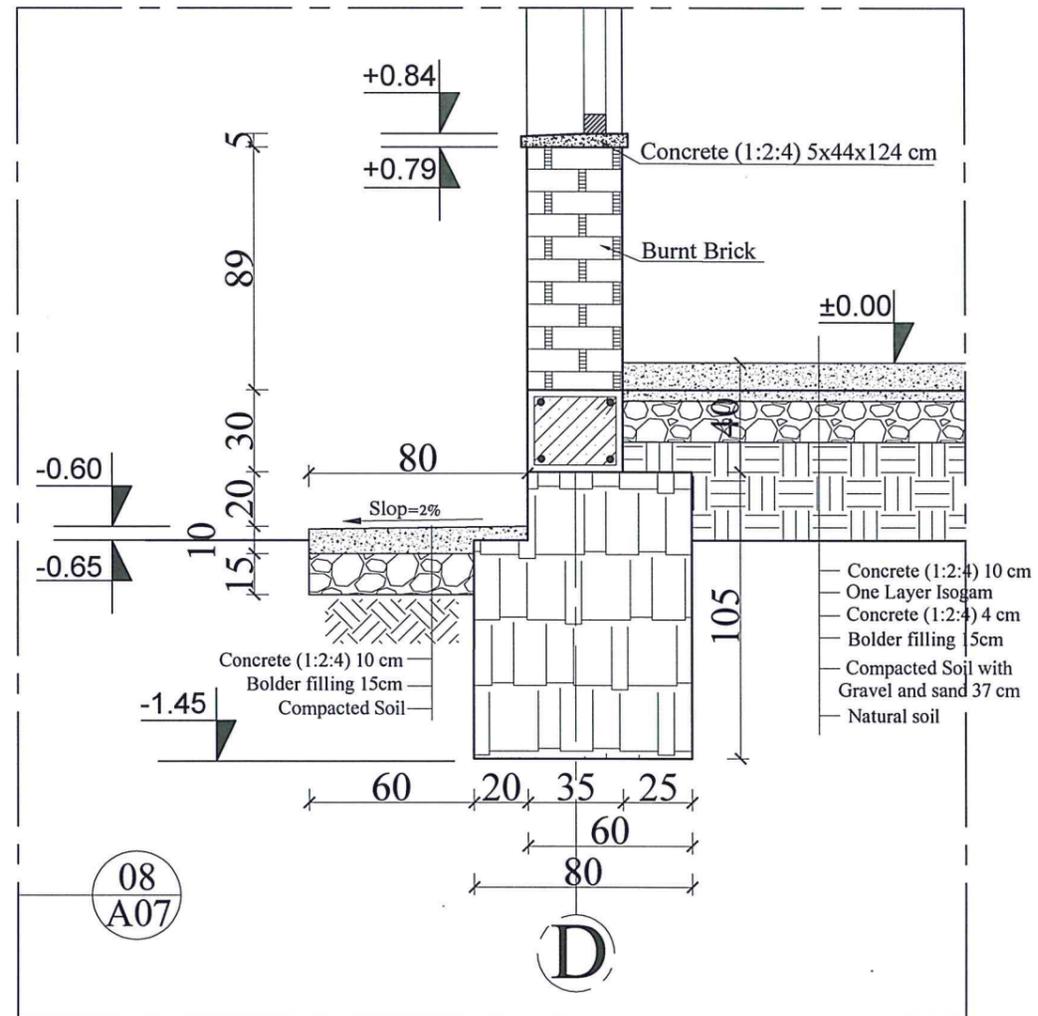
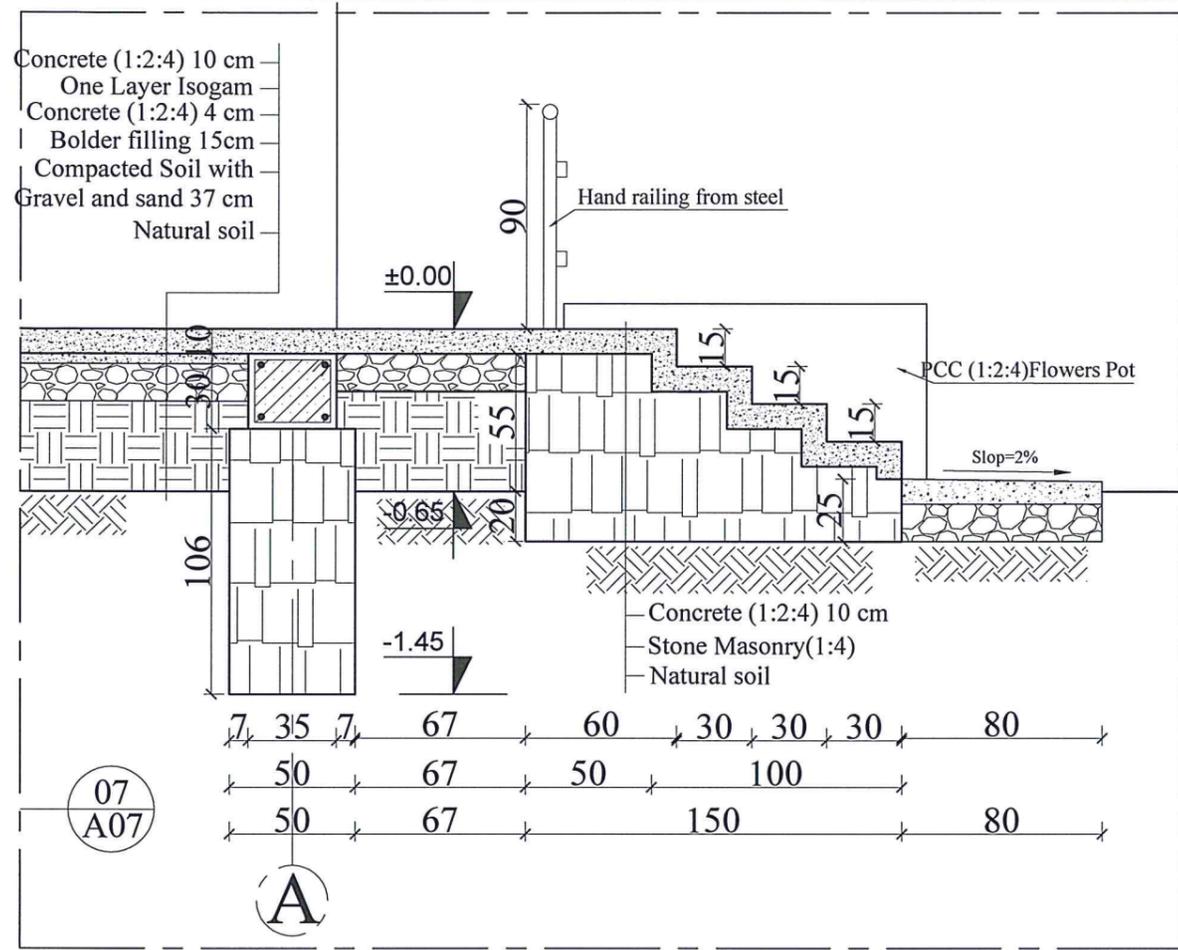
Combined technical
team
MOE/MRRD/DAARTT
SCALE
AS SHOWN (A3)
DATE
12/08/2018

PROJECT NAME
6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE
Details of (3,4)

SHEET NO.
A17
21



Detail M



A
19 DETAILS OF (7,8,9,10)
SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN
PREPLANNED &
CHECKED BY
TECH- APPROVED BY

ZIAURAHMAN ZIA
DAARTT

Combined technical
team
SCALE
DATE

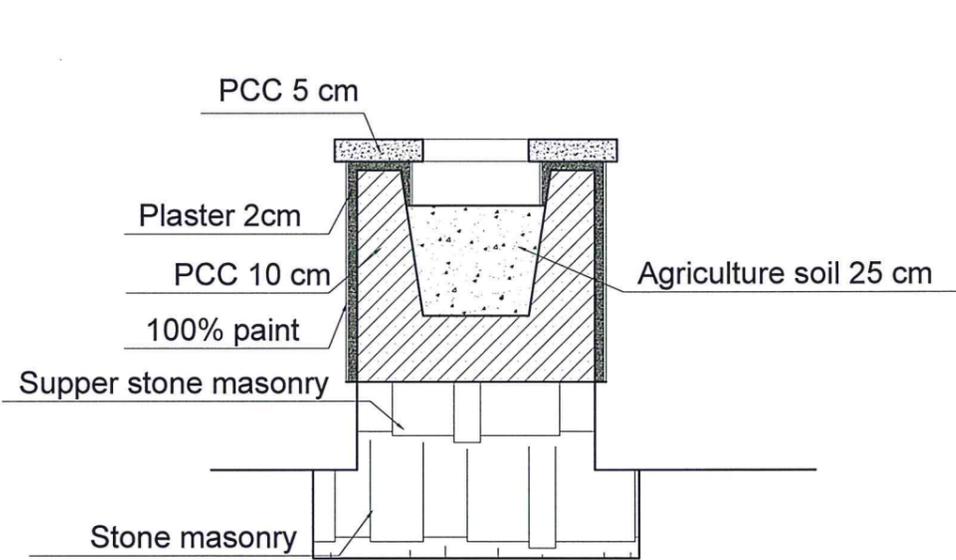
MOE/MRRD/DAARTT
AS SHOWN (A3)
12/08/2018

PROJECT NAME
DRAWING TITLE

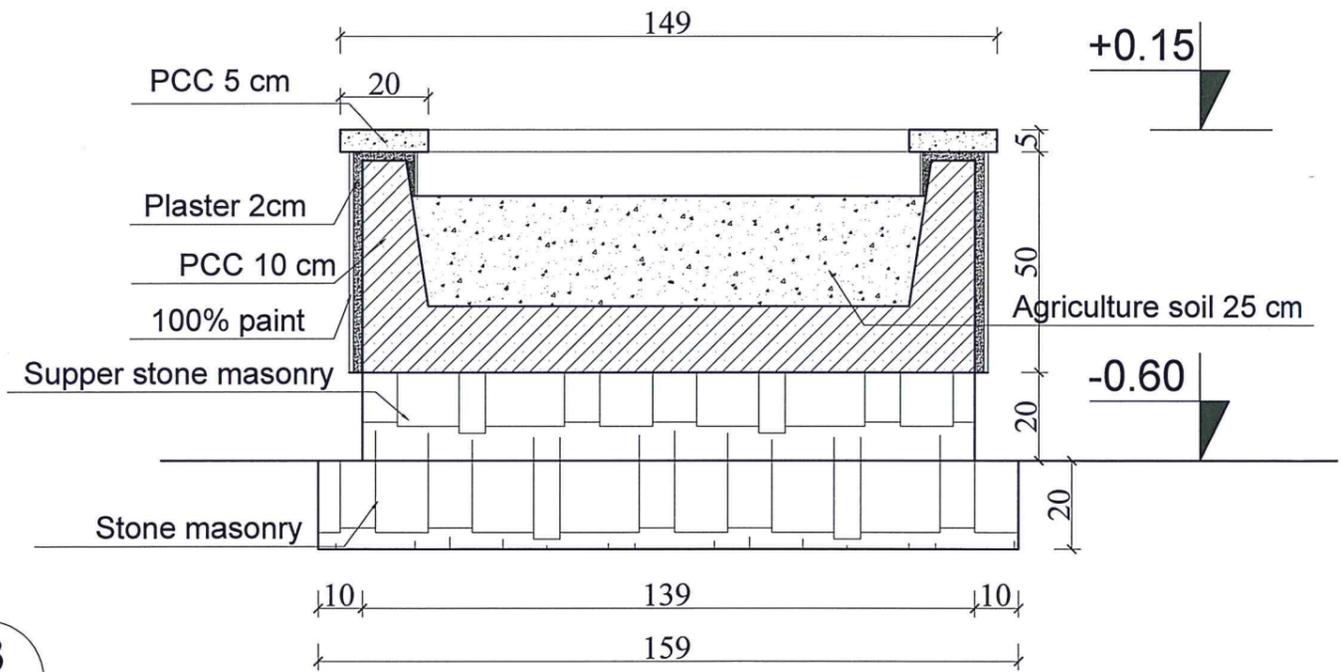
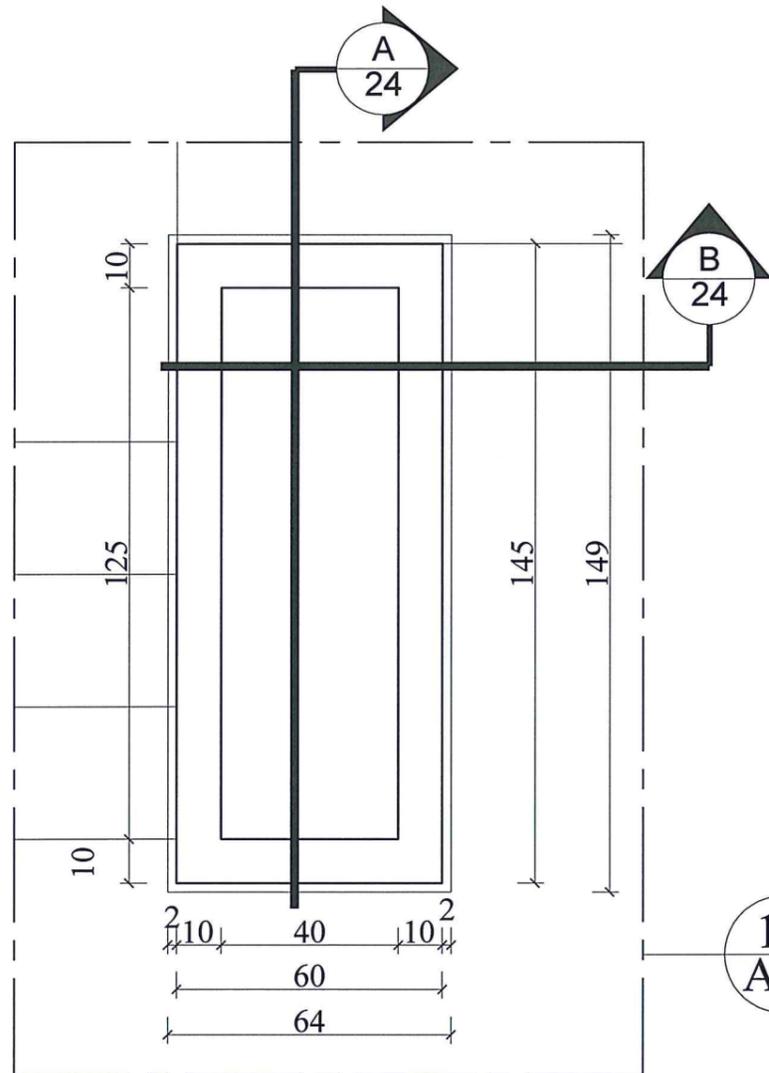
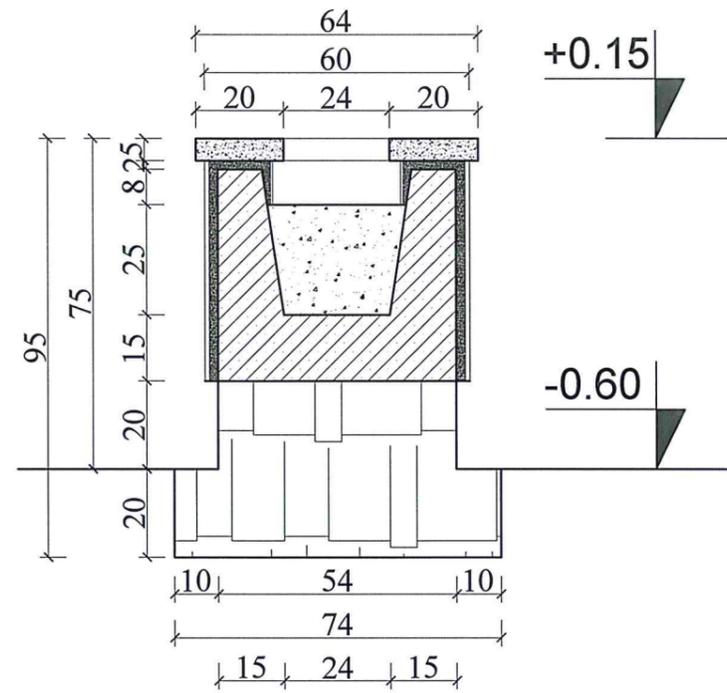
6 Classroom Burnt Brick RCC Slab H-275
Details of (7,8,9,10)

SHEET NO.

A19
21



Sec.B-B



Sec.A-A

A
 20
 DETAILS OF 13 FLOWERS POT
 SCALE: NO SCALE



MINISTRY OF EDUCATION DEPARTMENT
 OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
 AFGHANISTAN

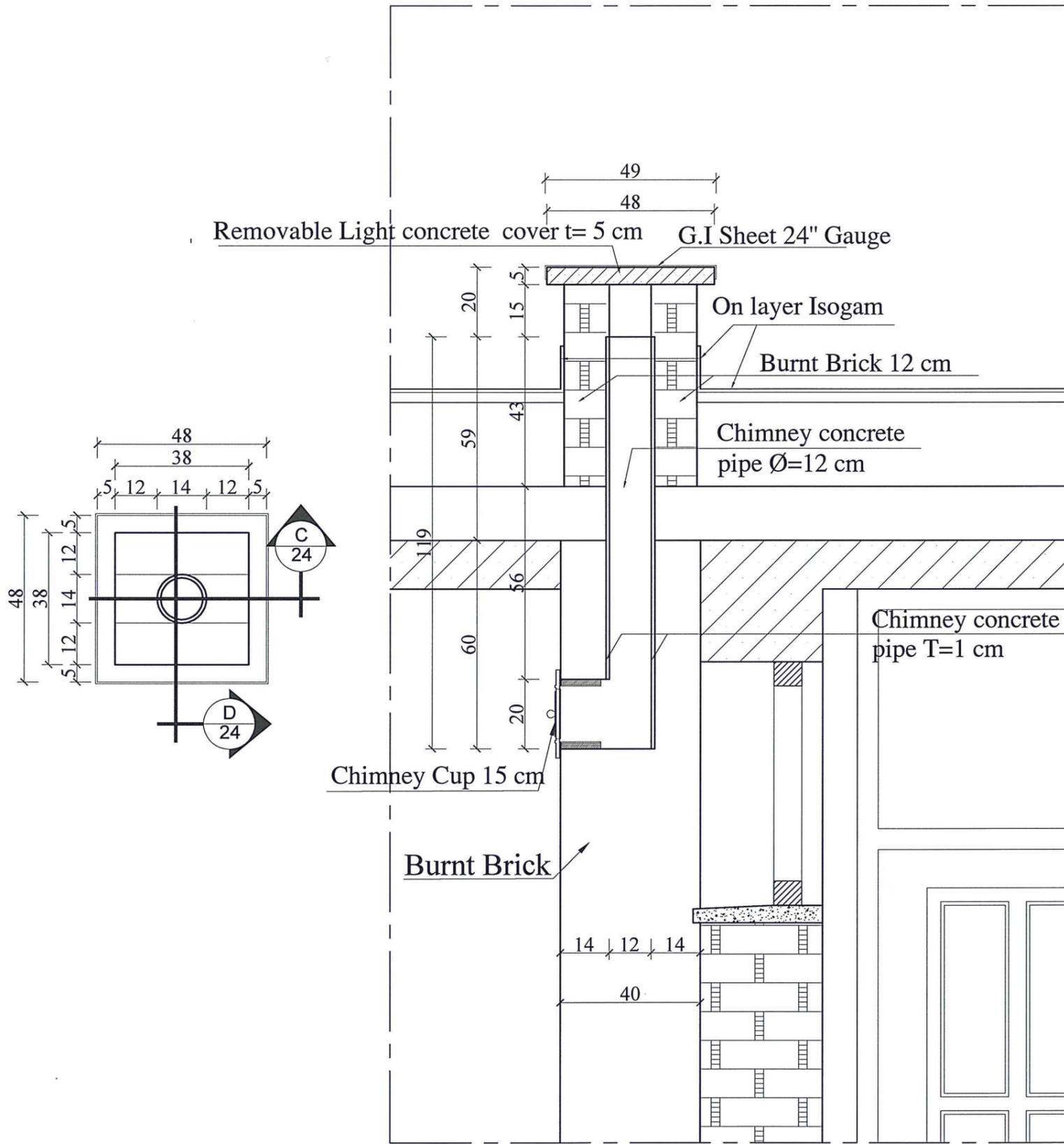
ARCHITECT/DESIGN	ZIAURAHMAN ZIA
PREPLANNED & CHECKED BY	DAARTT
TECH- APPROVED BY	

Combined technical team	MOE/MRRD/DAARTT
SCALE	AS SHOWN (A3)
DATE	12/08/2018

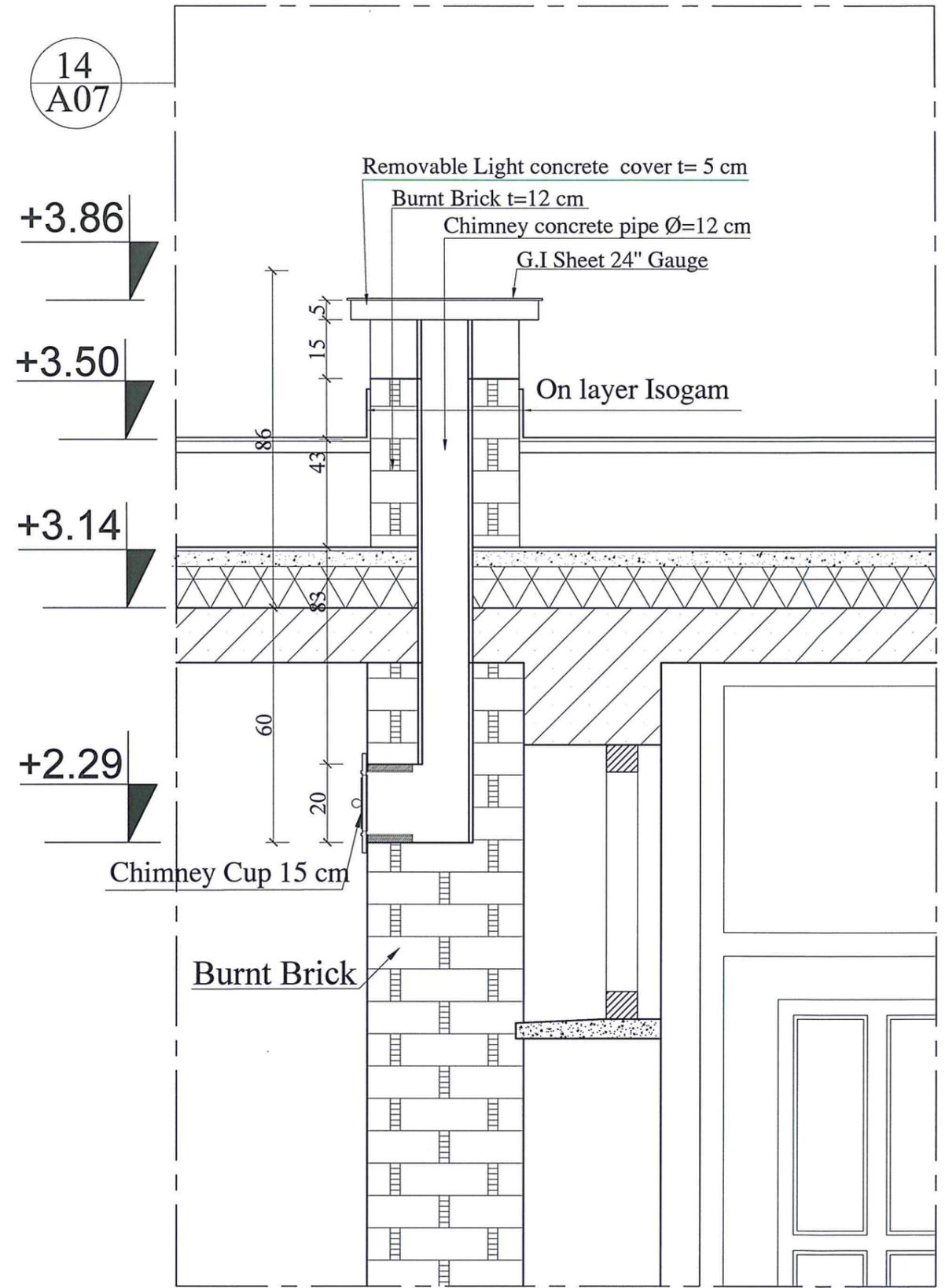
PROJECT NAME	6 Classroom Burnt Brick RCC Slab H-275
DRAWING TITLE	Details of 13 Flowers Pot

SHEET NO.

A
 20
 21



Sec.D-D



Sec.C-C

A
21
DETAILS OF 14 CHIMNEY CUP
SCALE: NO SCALE

Structural Drawings

6-Classrooms, one story school building with Brick Masonry load bearing walls Height= +2.89

Date: Jun-2018

Drawing Sheet list

No	Sheet Title	Sheet Number	Remarks
1	COVER SHEET	1	
2	GENERAL NOTES	2	
3	FOUNDATION PLAN	3	
4	FOUNDATION DETAILS	4	
5	REINFORCEMENT BARS OF RING BEAMS ON STONE MASONRY PLINTH AND RING BEAM NO: 3	5	
6	STRUCTURAL WALLS	6	
7	SHUTTERING PLAN FOR ROOF SLAB	7	
8	ROOF RCC RINGS AND BEAMS PLAN	8	
9	REINFORCEMENT BARS OF RING BEAMS NO:1-2	9	
10	REINFORCEMENT BARS OF RING BEAMS NO: 4-5-6	10	
11	BEAMS NO: 1-2	11	
12	BEAMS NO: 3-4 AND RING BEAM DETAILS	12	
13	REINFORCEMENT BARS PLAN FOR ROOF SLAB	13	
14	REINFORCEMENT BARS OF RING BEAM NO: 7 AND PARAPET DETAIL	14	

Logo and other informations



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

STRUCTURAL/DESIGN
PREPLANNED &
CHECKED BY
TECH- APPROVED BY

DAARTT

[Handwritten signature]

Combined technical
team
SCALE
DATE

MOE/MRRD/DAARTT
AS SHOWN (A3)
JUN-2018

PROJECT NAME
DRAWING TITLE

SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
COVER SHEET

SHEET NO.

01
14

تبصره

عمومی:

- تمام مواد باید دارای جنسیت عالی و خوب باشد قبولی مواد مربوط انجنیر ساحه کارمیباشد و باید مطابقت به نقشه داشته باشد انجنیر ساحه کار مسولیت تمام کارات راکه تحت کنترول ميباشد دارد
- در حصه تعديل نقشه با انجنیر دیزاین کننده مشوره گردد
- پروسه کار پروژه از شروع تا ختم توسط انجنیر ساختمان مراقبت گردد
- در صورتیکه به کود ساختمانی افغانستان (ASC) و کودها و ستندرهاى مربوطه آن دسترسى باشد جهت معلومات و وضاحت بیشتر برای کانکریت به فصل پنجم و برای معموره به فصل هفتم و همچنان برای بارهای وارده به بخشهای 306-312 کود ساختمانی افغانستان مراجعه شود

تهداب و کرسی:

- مقاومت خاک ($1,5 \text{ gk/cm}^2$) برای دیزاین تهداب ها در نظر گرفته شده است
- پارچه سنگ معدن کوهی که در تهداب استفاده میشود مارک ان از 400 کمتر نباشد بطور عموم از 5 الی 40 کیلوگرام وزن داشته و درای اشکال مختلف باشد؛ مقاوم سخت بادوام در مقابل حالات جوی مقاومت داشته قابلیت برداشت فشار و تحمل سایش راداشته باشد؛ متراکم بوده در مقابل تیزابیت مقاومت داشته در زخوردگی خرابی ونرمی نداشته وزن مخصوص سنگ از 2.5 کم نباشد و در 24 ساعت تحت آب بیش از 5% فیصد آب را جذب نکند قابلیت کار یاشکل گیری داشته در مقابل آتش زود متاثر نگردد و همچنان سنگ معدن کوهی باشد و سنگ روی دره که بی کیفیت باشد مورد استفاده قرار نگیرد؛ در نیش ها از سنگ های شکل داده شده دورویه کار گرفته شود؛ قوی ترین و بزرگترین سنگ ها باید در پایین قسمت روی زمین وزاویه ها و کنج ها کارگرفت؛ سنگ ها باید در مصالح خوابانیده شده و توسط چکش بالای ان کوبیده شود؛ سمت های بیرونی و داخلی کنج ها و تمام خلاها توسط مصالح پر کاری گردد؛ قسمت های پیش روی و عقب سنگ کاری همزمان کارگردد؛ از سنگ پارچه های خورد باید جهت جابجا نمودن سنگ های بزرگ کارگرفته شود؛ چهار جاینت یا درزمایه نباید در یک قطار کارگردند از درزهای طویل بین دوسنگ جلوگیری بعمل آید؛ در قسمت فوقانی دیوار از سنگ های کارگرفته شود کبه دیوار شکل هموار بدهند.
- مارک مخلوط مصالح 300 با تناسب (1:4) باشد نسبت مقدار آب و سمنت مراعات گردد و باید کوشش شود همان اندازه مصالحه تیار گردد که در ظرف نیم ساعت استعمال گردد و باید بطور دوامدار توسط بیلچه خوب تاو بالاگردد؛ مصالح سنگ کاری باید غلیظ باشد استعمال گردد هرگز در داخل سنگ کاری از مصالح ابگین کار نگیرید؛ مقدار حجم مصالحه در سنگکاری باید 35% الی 40 فیصد باشد سنگ ها خوب بافت داده شود و درزهای سنگ ها باید خوب توسط مصالحه پرگردد؛ پروسه سنگکاری بعد از هر 60 سانتی متر لیول و یا آب تراز و گردد و بعداً قطار بعدی شروع گردد در قسمت اب زدن کانکریت و غیره امورات باید توجه جدی معطوف گردد تا مراحل تعاملات کیمیاوی سخت شدن کانکریت بخوبی تکمیل گردد سطح بالایی کانکریت بطور دایم حد اقل در محیط سرد 28 شبانه روز و در محیط گرم 14 شبانه روز مرطوب نگهداری گردد در تمام امور ساختمانی که از سمنت استفاده میشود برای مدت بیشتر از 14 یوم نظر به شرایط جوی و اقلیمی آب پاشی متداوم صورت گیرد تا عنصر مقاومت پروژوی خود را حاصل نماید

سیخ آهنکانکریت:

- سیخ های با مقاومت سنجشی ($\text{Grade:40, Fy=2800kg/cm}^2$) درگزدمکها و؛ با مقاومت سنجشی ($\text{Grade:60, Fy=4200kg/cm}^2$) در عناصر آهنکانکریتی محاسبه شده است. قشر محافظوی برای سیخ ها درپوشش از 1.5 سانتی متر و در گادرها از 2.5 سانتی متر کمتر نباشد
- سیخ های مورد استفاده باید عاری از زنگ زده گی باشد

دیوارهای وزن بردار:

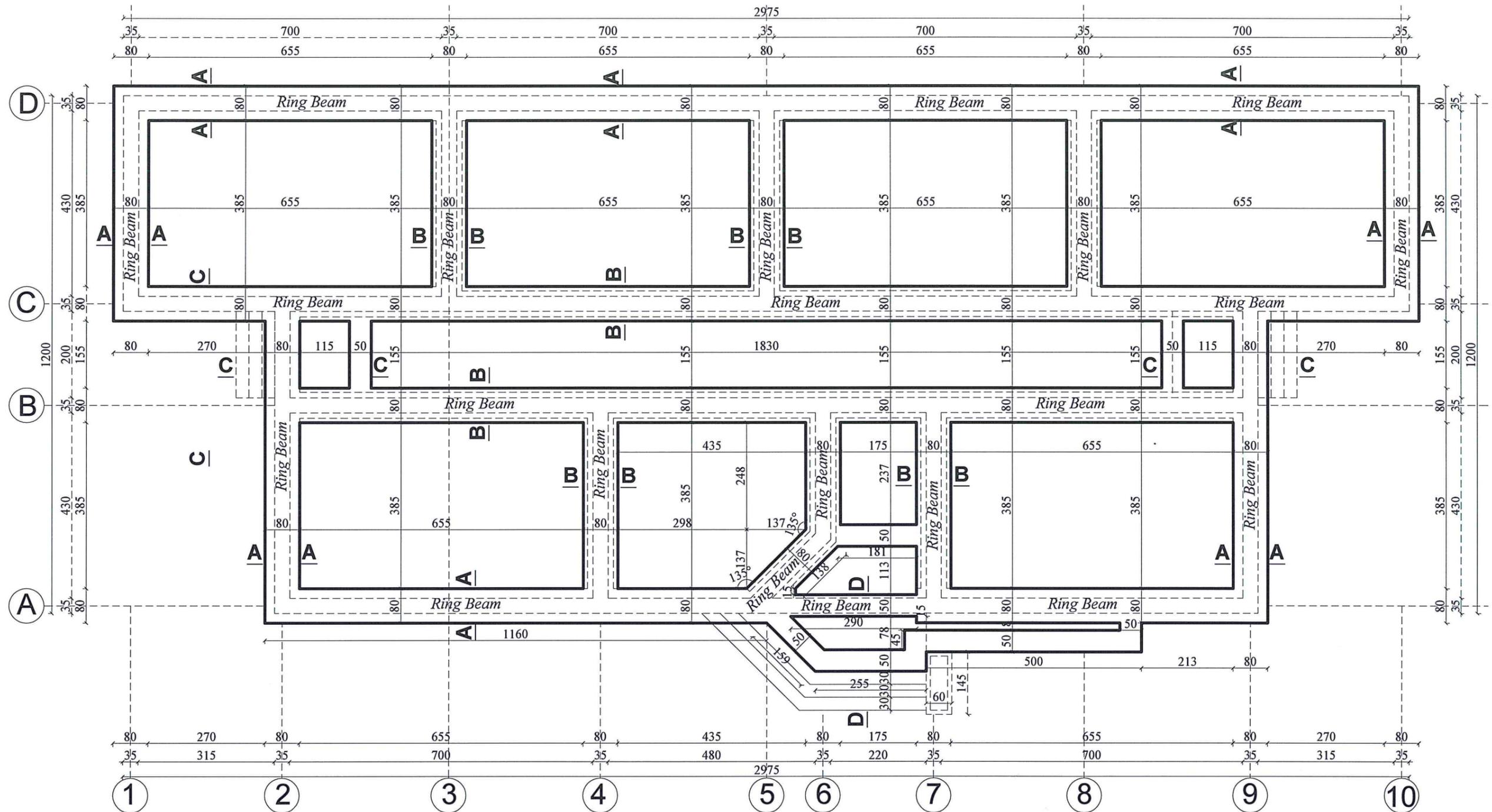
- ازینکه دیوارها در تمام پروژه وزن بردار ميباشند بدین معنی اولاً تمام دیوارها اعمار و تکمیل گردد بعداً بالای ان قالببندی رینگ بیم و سلبها کارمیشود که دیوارها وظیفه انتقال وزن تمام عناصر رابه تهداب دارند از خشت های درجه اول بامارک 140 باید استفاده گردد برای خشت کاری از مصالح سمنت وریگ مارک 300 یاتنا سب (1:4) استفاده شود و مقدار حجم مصالحه در خشت کاری باید 28% فیصد باشد. قبل از استفاده در بین اب برای 24 ساعت نگهداری گردد تا قابلیت جذب اب رابه اندازه کافی داشته باشد در صورتیکه از اثر جذب اب خشت ها شاریده گی پیدا کند قابل استعمال نمی باشد؛ فواصل بین خشت کاری دیوار باید 8 ملی متر باشد و این فاصله خشت ها که با مصالح پر میگردد نباید از یک سانتی متر اضافه گردد زیرا این کار مقاومت دیوار را کم میسازد؛ بعد از هر سه قطار خشت کاری دیوار باید ذریعه شاول چک گردد تا اطمینان حاصل گردد که دیوار درست کار شده. خشت کاری باید دارای بافت باهم باشد یعنی نصف خشت بالای یک خشت و نصف خشت بالای خشت دیگر از قطار پایینی قرارگیرد و این خشت ها باید خط عمود را ایجاد ننماید که این کار باید درکنج ها تطبیق گردد
- ریگ مورد ضرورت مصالحه باید عاری از خاک؛ گل و مواد عضوی باشد ریگ بقسم نخودی بوده 40 فیصد ان سایز یک الی سه ملی متر دارا باشد و به هیچ صورت فیصدی خاک از 5 فیصد تجاوز ننماید ریگ و سمنت باید باهم خوب مخلوط گردد و بازم قابل یادآوری است که مصالحه باید اضافه تراز نیم ساعت بعد ازینکه اب بالای ان مخلوط گردد استفاده گردد در غیران فقط ریگ میگردد.
- پلستر دیوارهای داخلی و خارجی از مصالح سمنت وریگ با مارک M400 با تناسب (1:3) استفاده شود

کانکریت:

- مارک کانکریت سیخدار در تمام عناصر انحنایی (M:200) با تناسب 1:1.5:3 ميباشد
- آب های مورد استفاده برای مخلوط کانکریت پاک و تازه بوده شور و نمکی نباشد مقدار و اندازه اب مربوط به مارک مصالحه و کانکریت ميباشد که برای مارک 200 - 0.209 m³ متر مکعب برای مارک 300 - 0.251 m³ تعیین گردیده؛ آبدی برای تهیه نمودن رطوبت کافی و بوجود آوردن پروسه آبدی سمنت لازمی ميباشد تا در آغاز کار ریخت سازی باید شروع گردد هر قدر آبدی وقت بیشتر را دربرگیرد همان اندازه کیفیت کانکریت از دیاد میابد از رویش های (اب پاشی نمودن؛ غرقه سازی؛ پوش کردن توسط خریطه های سمنت و پلاستیک اگر خطر شبنم موجود باشد در ان صورت آبدی کمتر صورت گرفته و توسط مواد عایق مانند خریطه های خالی سمنت و سبزه پوش گردد.
- سمنت مورد استفاده باید دارای مارک 400 تازه و پورتلند باشد
- قالب ها قبل از استفاده باید خوب چرب کاری شود
- ریگ و جغل قبل از استفاده باید شستشو گردد؛ باید ریگ دانه دار استفاده گردد هرگز ریگ میده دانه استفاده نگردد.
- در مخلوط کانکریت جغل کرش نوع دریایی با سورت های الی قطر 2.5 سانتی متر استفاده گردد و از جغل کرش نوع صخره ای یا کوهی استفاده نشود
- حین کانکریت ریزی و بیراتور استفاده گردد و باید توسط افراد مسلکی پروسه متراکم سازی انجام شود
- قالب های عناصر انحنایی به هیچ وجه قبل از 18 روز دور نگردد



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FOUNDATION PLAN

متراکم نمودن خاک ها :

آماده ساختن اساس های تحت تهاداب ها متشکل از یک تعداد پروسه های میباشد که عبارت انداز :

- تامین تماس بین اساس وقاعده درتمام سطح ان مطابق نشانه ها ولبول ها

- بلند بردن توان باربرداری خاک اساس الی کمیت پروژه وی آن ؛ اساسی ترین پروسه ها درانتهای آماده ساختن اساس عبارت از تراشیدن پاک کاری کف حفره و ترانشی ؛ متراکم نمودن اساس ؛ آب پاشی ویا خشک نمودن خاک درجریان متراکم نمودن خاک ها .

- اگر اساس ها طبیعتاً ضعیف ویا ازجمله خاک های ریزینده باشند درآن صورت توان باربرداری آنها توسط متراکم نمودن بلند برده شود ولی اگر ملاحظه گردید که اساس تا عمق 1.5 الی 2 متر ضعیف ویا ریزینده بوده دران صورت موضوع رایبه دیزاینر درمیان گذاشته تا از تدابیر ویژه ویستر سازی مصنوعی بادر نظر داشت نورم ها وقواعد انجنیری استفاده شود ؛ متراکم نمودن اساس دراوقات سرد سال باید به سرعت اجرا گردد تا وقتیکه درجه حرارت کمتر از 20+ درجه سانتی گرید نباشد ختم گردد وسطح آماده شده از یخ زدن توسط بوریا ویاتات وغیره چیز ها پوشانیده ومحافظت گردد؛ برای پرکاری دوباره اساس ازکلوخ های یخ بسته برای پروسه پرکاری تهاداب و فرش ها وغیره مجاز نمی باشد باید ازتناسب مناسب ریگ ؛ خاک و چغل خشک استفاده گردد .



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

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TECH- APPROVED BY

DAARTT

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Combined technical
team
SCALE
DATE

MOE/MRRD/DAARTT
AS SHOWN (A3)
JUN-2018

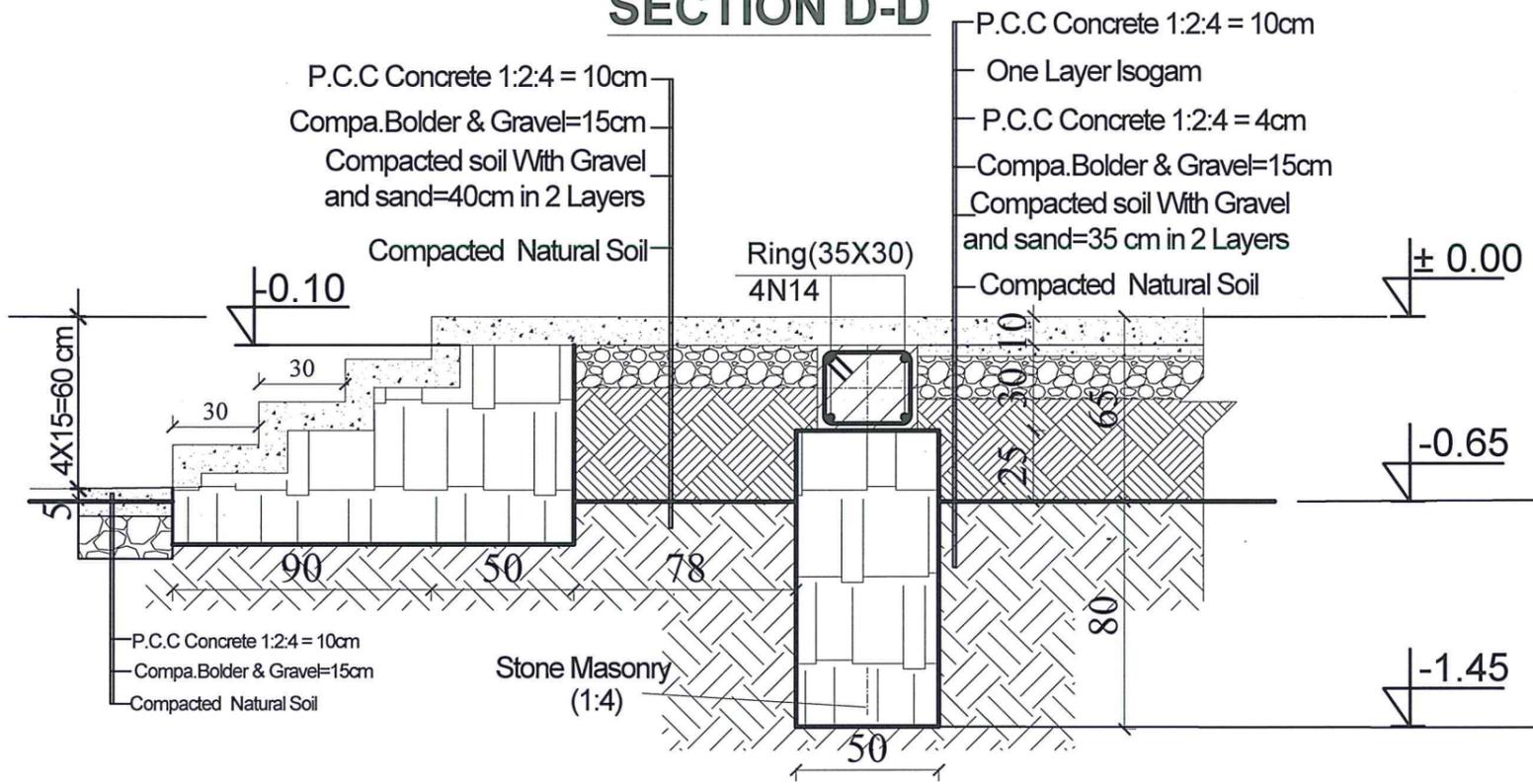
PROJECT NAME
DRAWING TITLE

SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
FOUNDATION PLAN

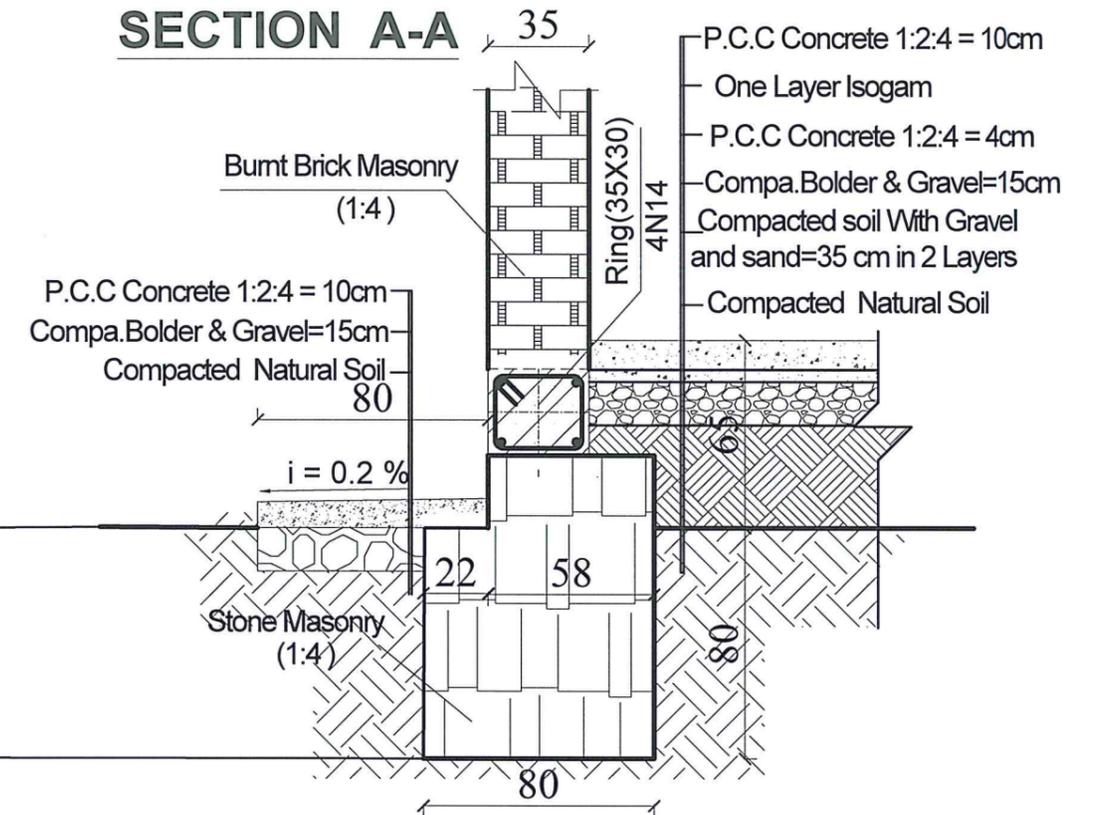
SHEET NO.

03
14

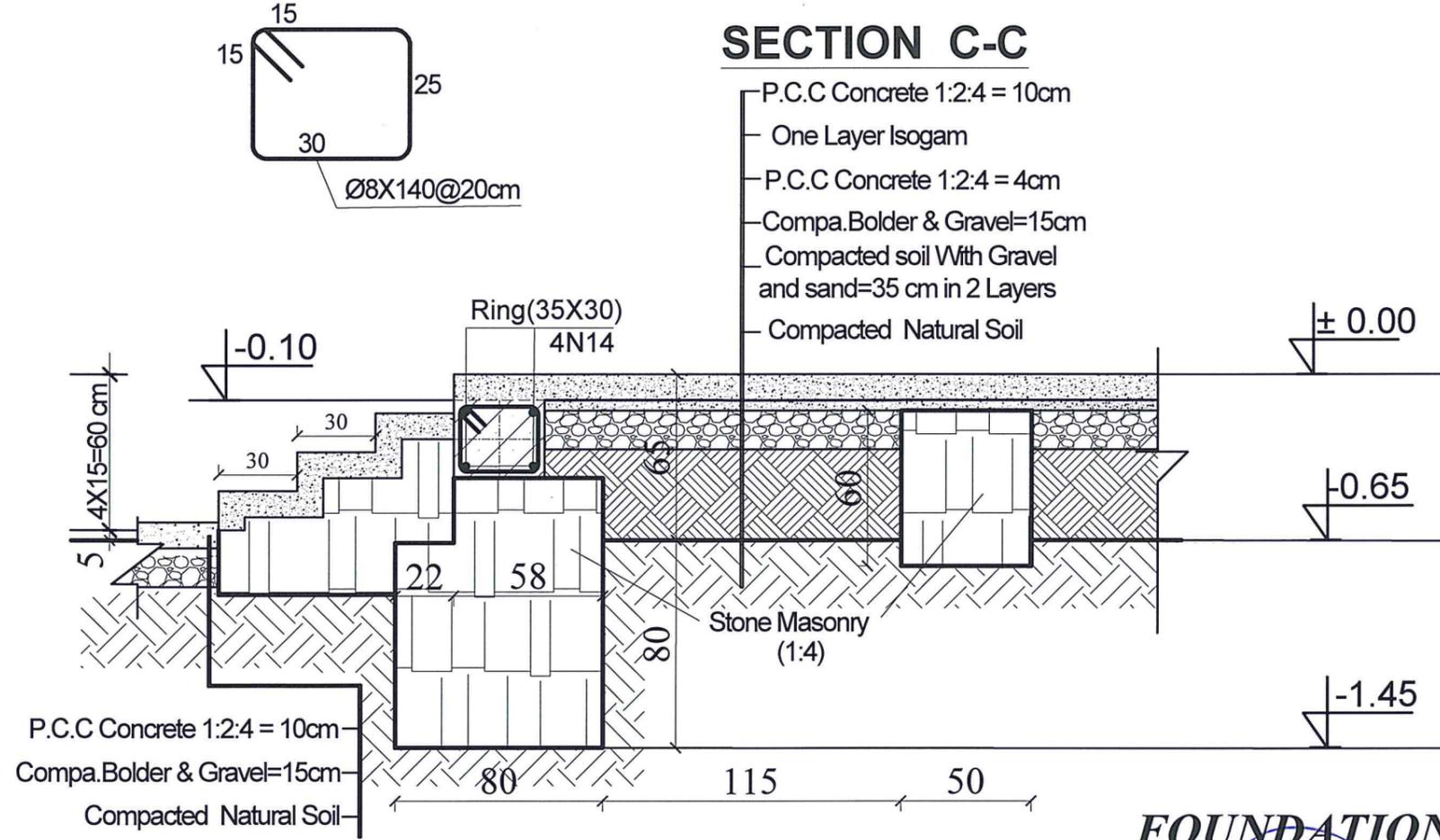
SECTION D-D



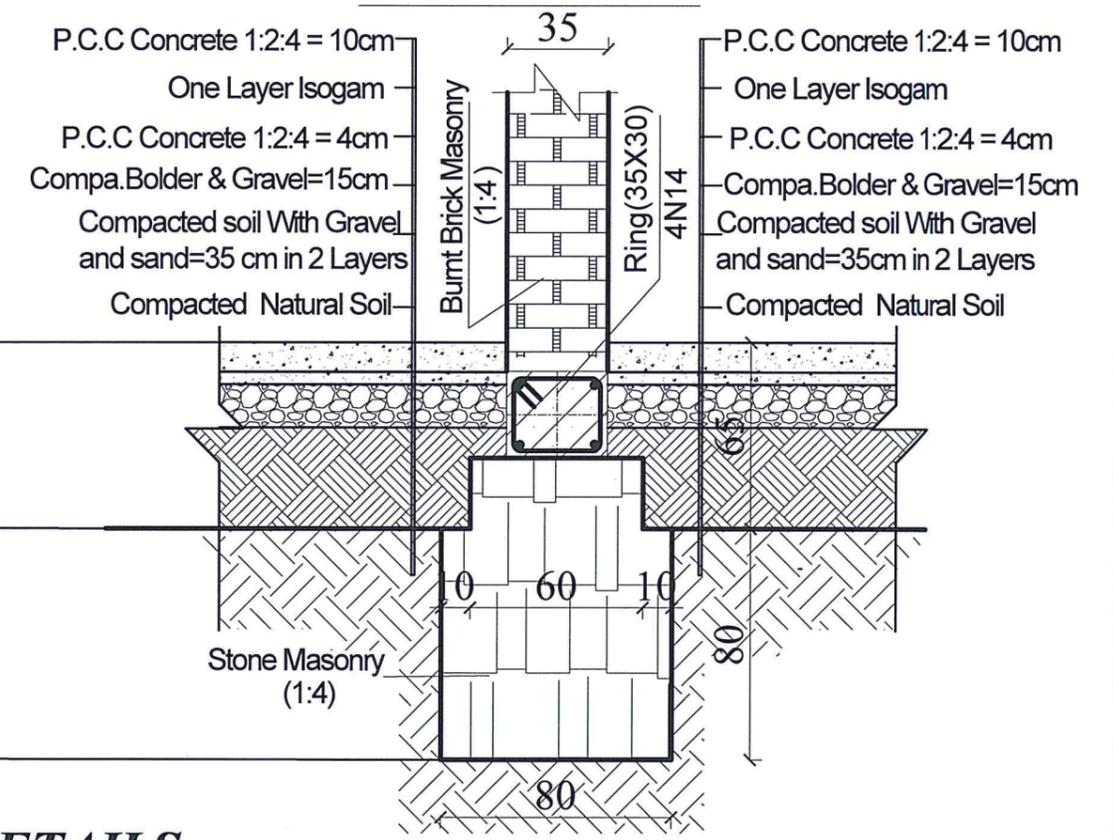
SECTION A-A



SECTION C-C



SECTION B-B



FOUNDATION DETAILS



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



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DATE

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JUN-2018

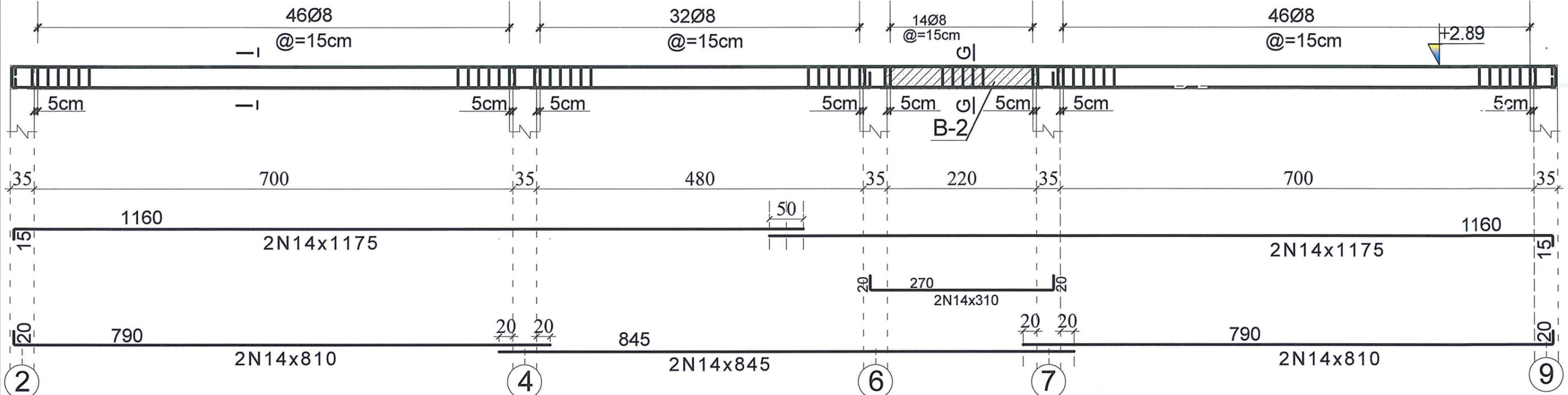
PROJECT NAME
DRAWING TITLE

SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
FOUNDATION DETAILS

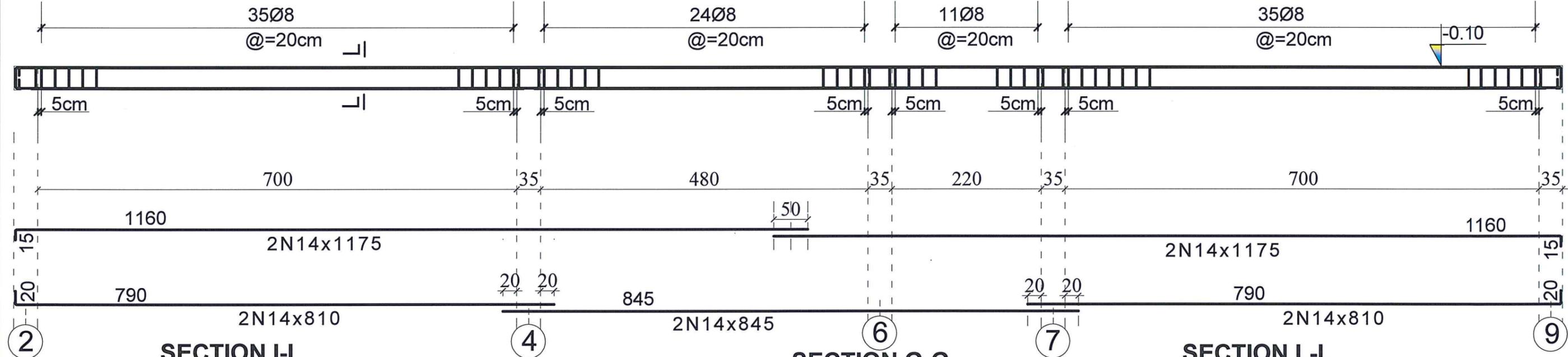
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04
14

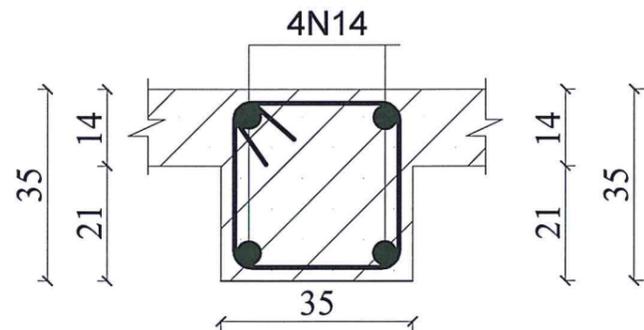
REINFORCEMENT BARS OF RING BEAMS No .3



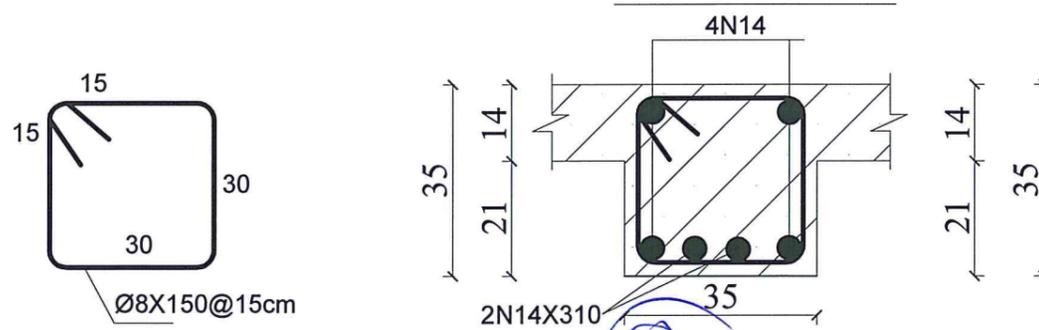
REINFORCEMENT BARS OF RING BEAMS ON STONE MASONRY OF PLINTH



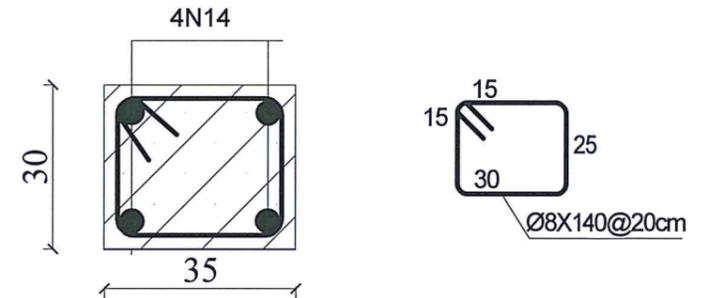
SECTION I-I

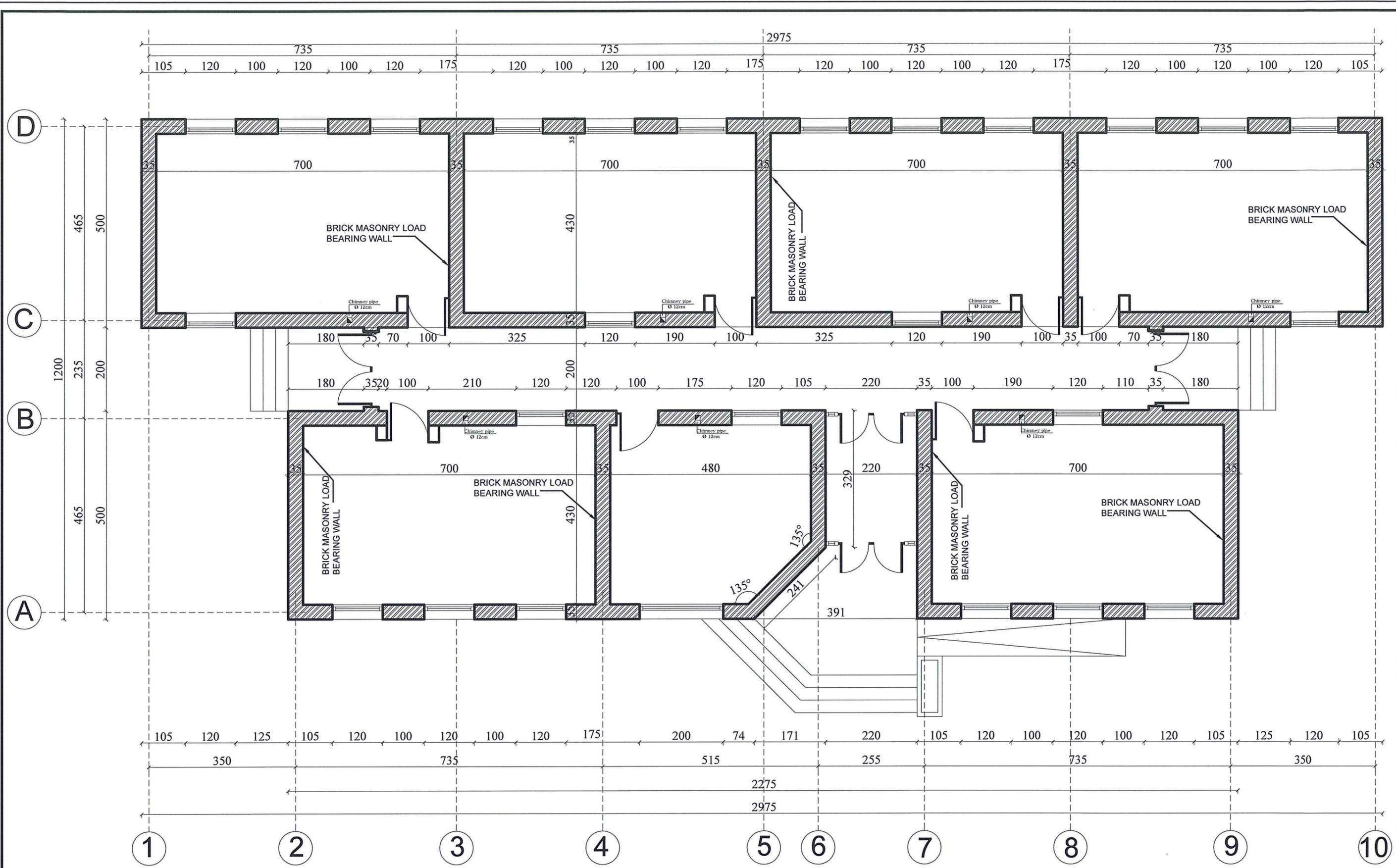


SECTION G-G

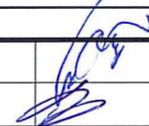
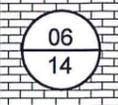


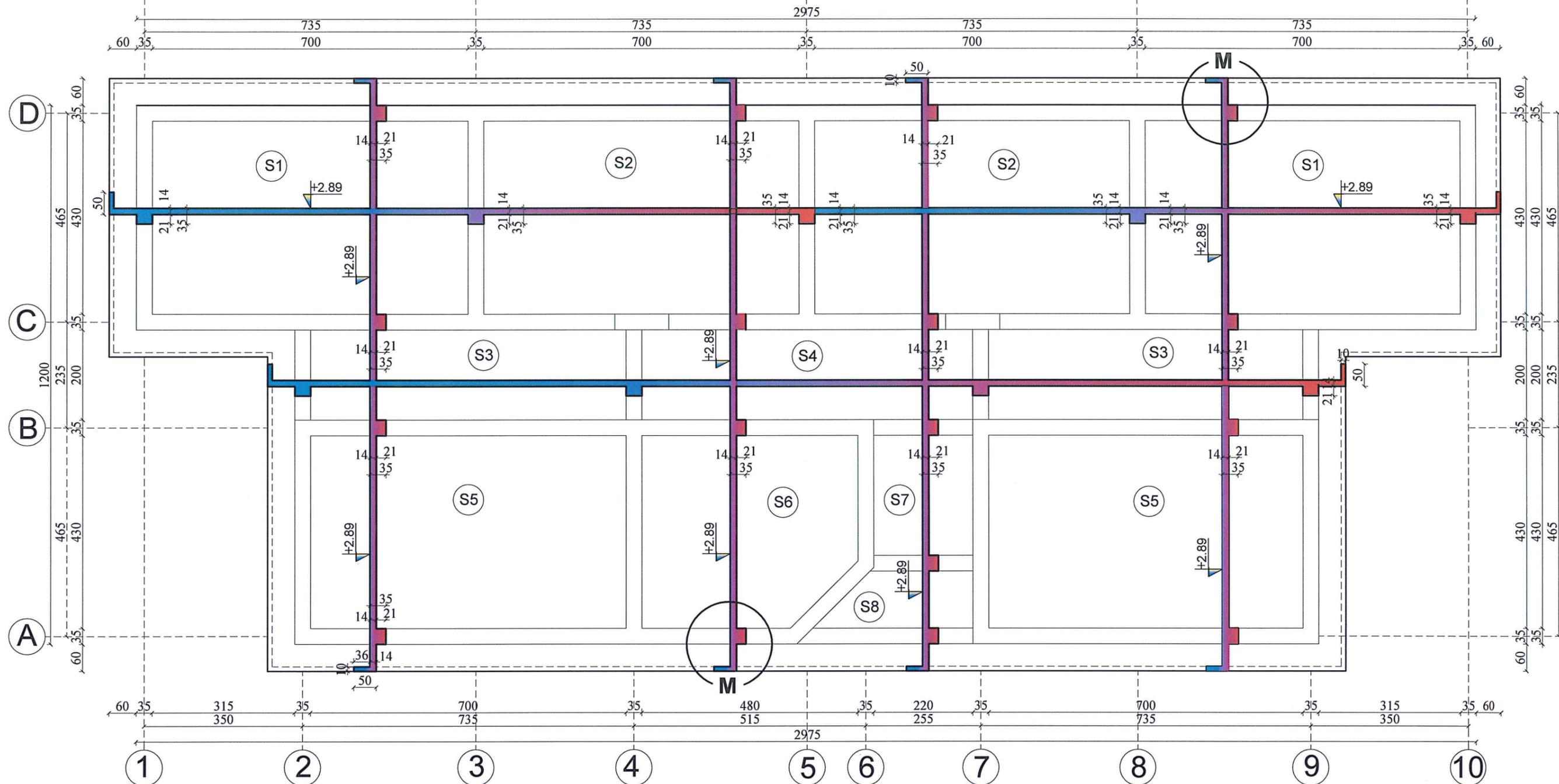
SECTION L-L





STRUCTURAL WALLS PLAN

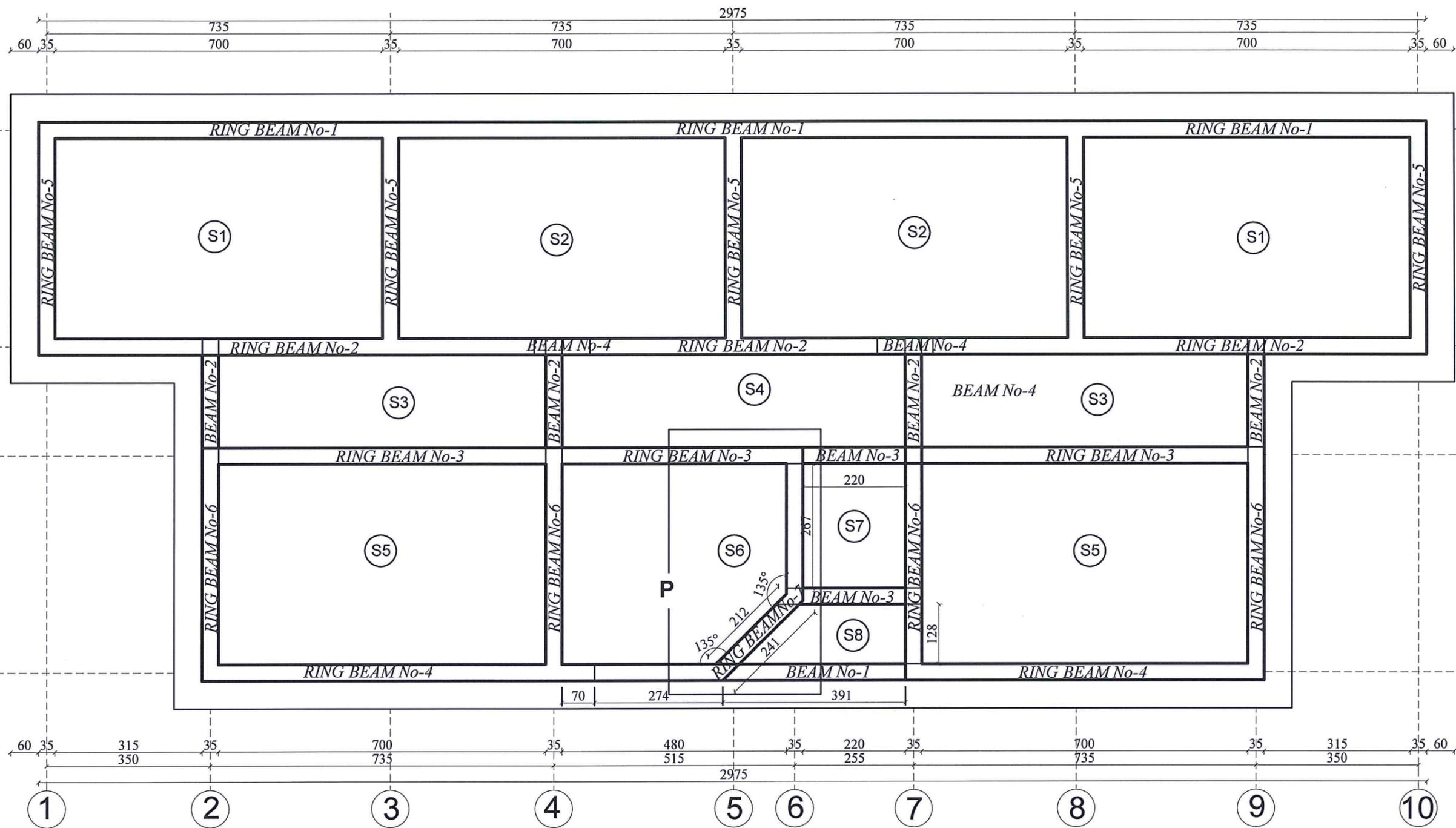
 MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION	 PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN	STRUCTURAL/DESIGN PREPLANNED & CHECKED BY TECH- APPROVED BY	DAARTT 	Combined technical team SCALE DATE	MOE/MRRD/DAARTT AS SHOWN (A3) JUN-2018	PROJECT NAME DRAWING TITLE	SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL HIGHT=+2.89 STRUCTURAL WALLS	SHEET NO.	



SHUTTERING PLAN FOR ROOF SLAB

نوت:

قابندی یا شکل که در آن سیخ ها و مخلوط کاتکریت برای بدست آوردن عنصر کاتکریتی و آهن کاتکریتی جابجا میشود ؛ قابندی میتواند ورقه های فولادی ضد زنگ به ضخامت 1.5 الی 6 ملی متر که توسط زاویه ها و شویپر ها تقویه شده باشد که این ورقه ها در داخل قالب های چوبی استعمال میشود ؛ اجزای چوبی پوشش ها و گادر ها ؛ تیرچه ها بشکل چوکت های که متشکل از تخته های کف که وزن مخلوط کاتکریت را برداشته و فشار کناری مخلوط کاتکریت را امتحیل شده ؛ ضخامت این تخته ها نباید کمتر از 3 سانتی باشد . مواد محکم کننده برای قالب های چوبی عبارت از میخ ها به قطر 2 الی 6 اینچ و به فاصله 5 الی 15 سانتی متر باشد در غیر آن در تخته ها درز پیدا میشود ؛ بولت ها به قطر 1 الی 2.5 سانتی برای اتصال تخته های اجزای قالب ها و ساختن گیرا های ساختمانی از فولاد گول به قطر 12 الی 19 ملی متر و بطول 250 الی 300 ملی متر برای اتصالات دستک ها و چار تراش ها ؛ سیم تاب های داده شده به قطر 4 الی 6 ملی متر . چوب چار تراش ؛ چوب دستک که به طول آره شده باشد و همچنان انواع چوب های که برای قابندی استفاده میشود عبارت از چوب کاج ؛ چوب ناچو ؛ صنوبر و فانه ها ؛ گاهی از چوب بلوط و یا چوب باتکس میسازد از چوب چنار برای قالب ها کمتر استفاده میشود ؛ از چوب سفیدار و عرعر برای قابندی توصیه نمیگردد زیرا شدیداً تاب میخورند ؛ چوب های که دارای نواقص باشد استعمال آن مجاز نیست مثلاً زخ ها ؛ تاب خورده گی در انشای خشک شدن سریع تخته ها و تاب خورده گی کلز آنها ؛ کرم خورده گی ؛ حشرات خورده گی ؛ پوسیده گی ؛ صدمه توسط سمارق بسیار خطرناک میباشد که باید استفاده نشود . اساساً انتخاب مواد قالب ها مربوط قابلیت دفعات لازمی استعمالی آنها میشود ؛ قالب های چوبی برای عناصر یکریخت 3-5 و حتی 10 مرتبه استعمال میشود و قالب های فلزی تا 100 و پیاپیستر استفاده میشود . لازم است تا میخ ها در طرف لشم یعنی سطوح که مستقیماً با کاتکریت در تماس است کوبیده شود درز بین تخته های چوب خشک تا 3 ملی متر مجاز است و باید روی تخته های که به طرف کاتکریت ریزی قرار داده میشود رنده شده گی باشد .



ROOF RCC RINGS AND BEAMS PLAN



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

STRUCTURAL/DESIGN
PREPLANNED &
CHECKED BY
TECH- APPROVED BY

DAARTT

Combined technical
team
SCALE
DATE

MOE/MRRD/DAARTT
AS SHOWN (A3)
JUN-2018

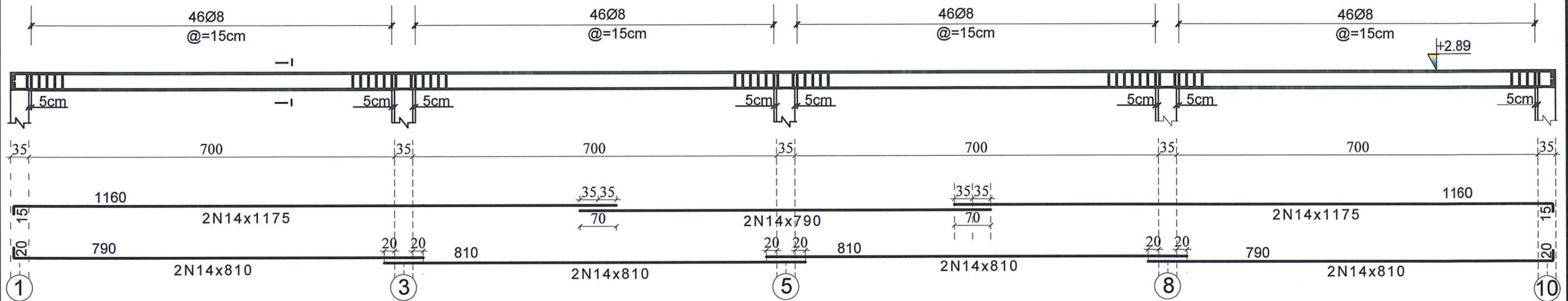
PROJECT NAME
DRAWING TITLE

SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
ROOF RCC RINGS AND BEAMS PLAN

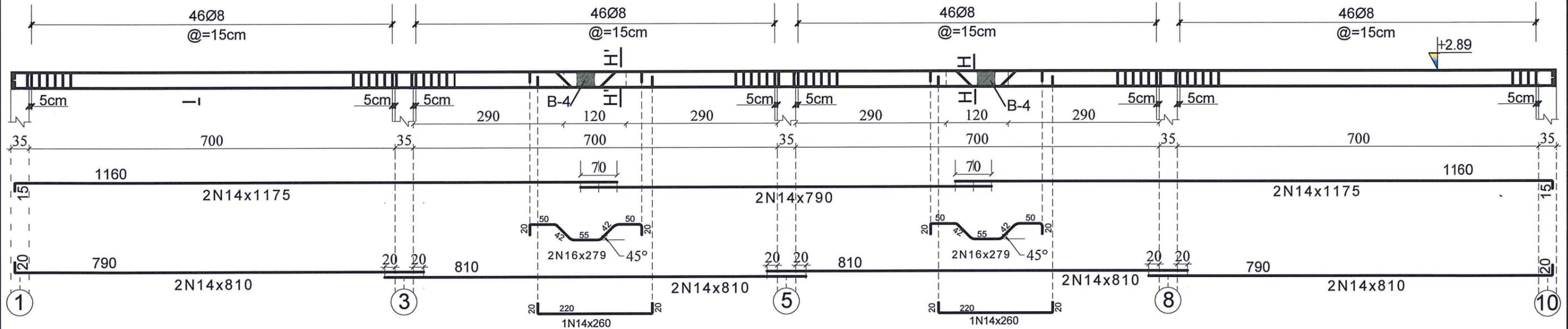
SHEET NO.

08
14

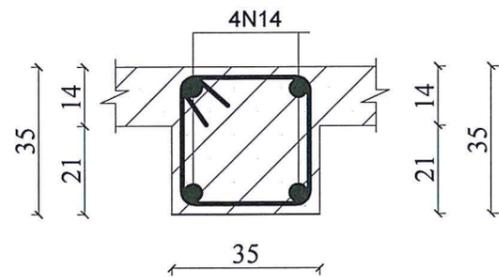
REINFORCEMENT BARS OF RING BEAMS No .1



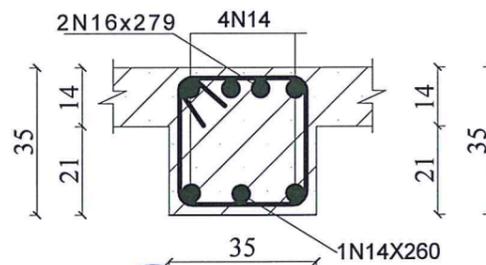
REINFORCEMENT BARS OF RING BEAMS No .2



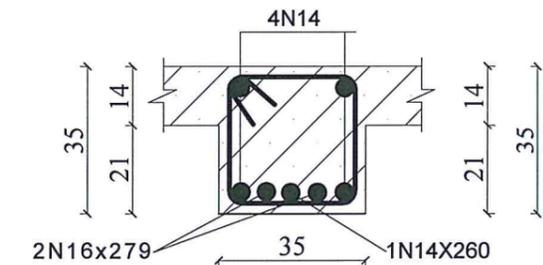
SECTION I-I



SECTION H'-H'



SECTION H-H



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PROJECT NAME
DRAWING TITLE

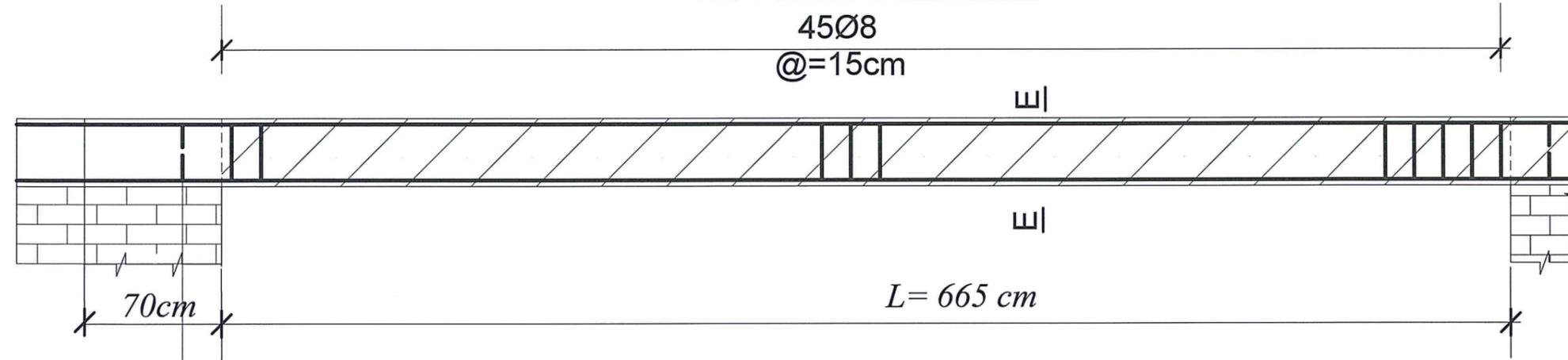
SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
REINFORCEMENT BARS OF RING BEAMS NO : 1-2

SHEET NO.

09
14

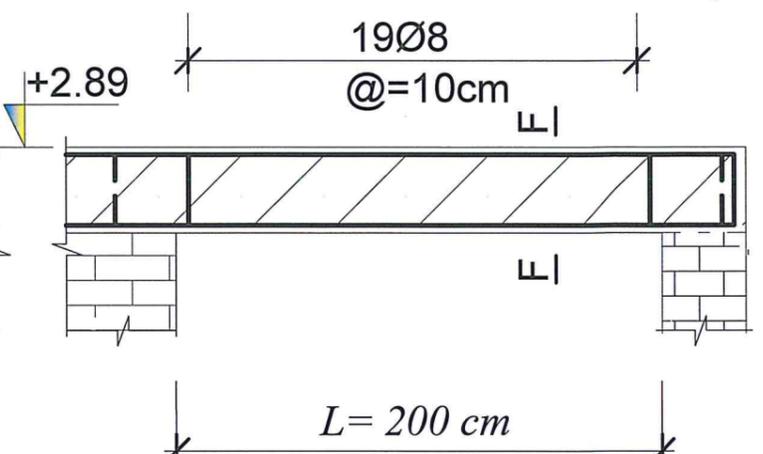
BEAM No1(1Nrs)

45Ø8
@=15cm



BEAM No2(4Nrs)

19Ø8
@=10cm



2N14 (Ring steel bar)

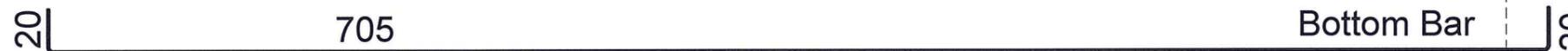
705

TopBar



705

Bottom Bar



2N16x745

2N14 (Ring steel bar)

2N14 (Ring steel bar)

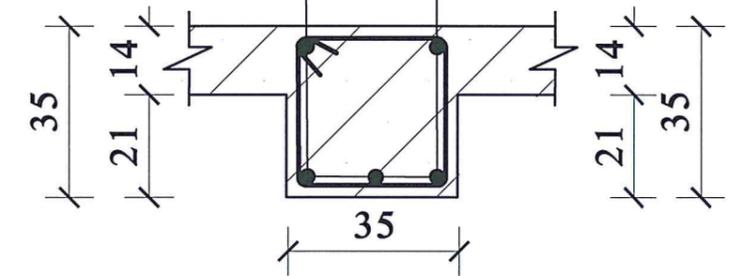
250

1N14x290

2N14 (Ring steel bar)

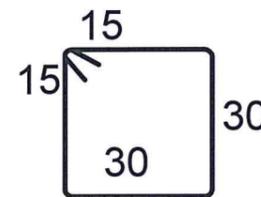
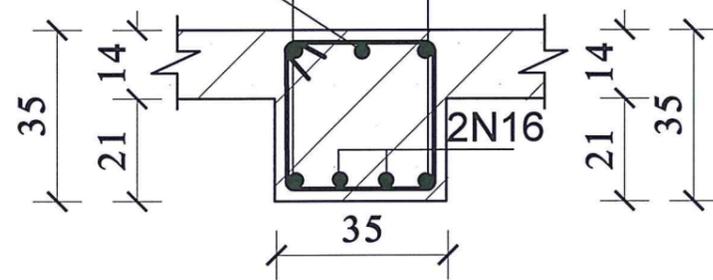
SECTION F-F

5N14



SECTION E-E

1N16 4N14



Ø8X150@15cm



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PROTOTYPE SCHOOL DESIGN IN
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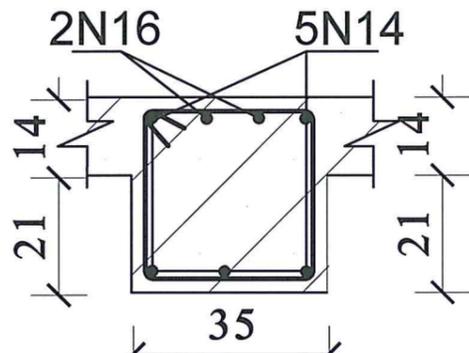
PROJECT NAME
DRAWING TITLE

SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
BEAMS No 1-2 :DETAILS

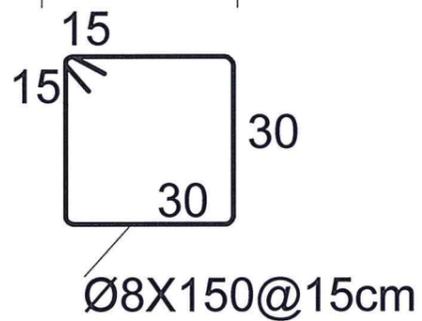
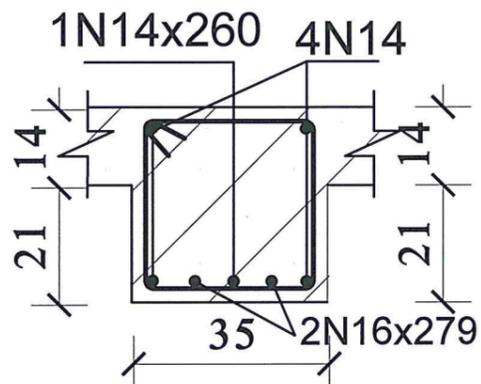
SHEET NO.

11
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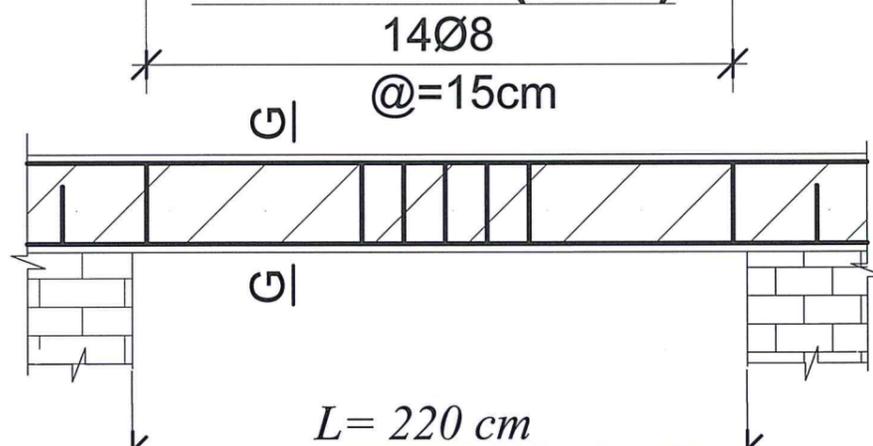
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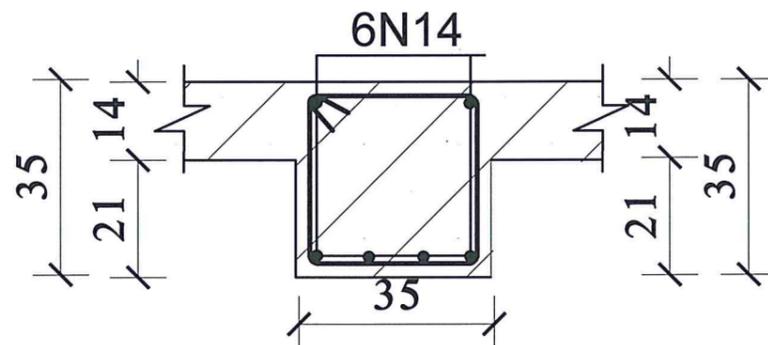
SECTION H-H



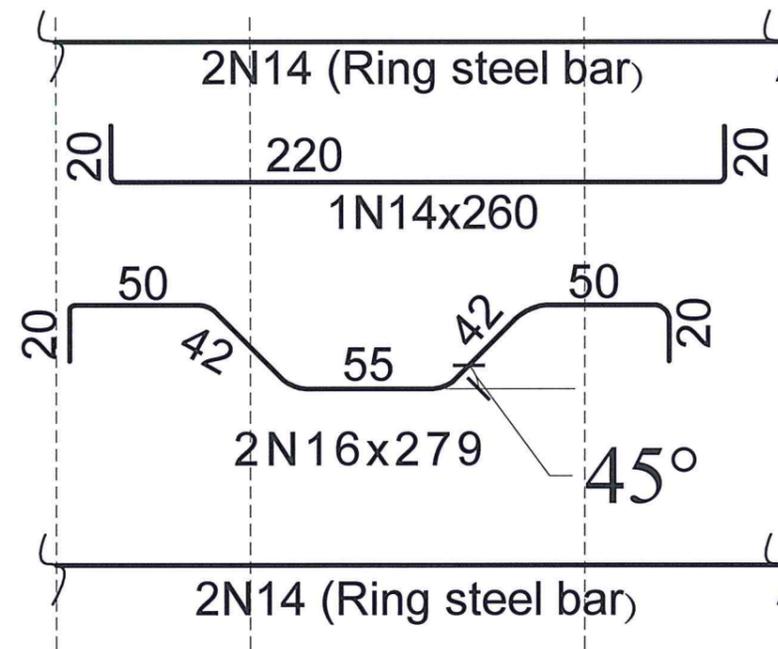
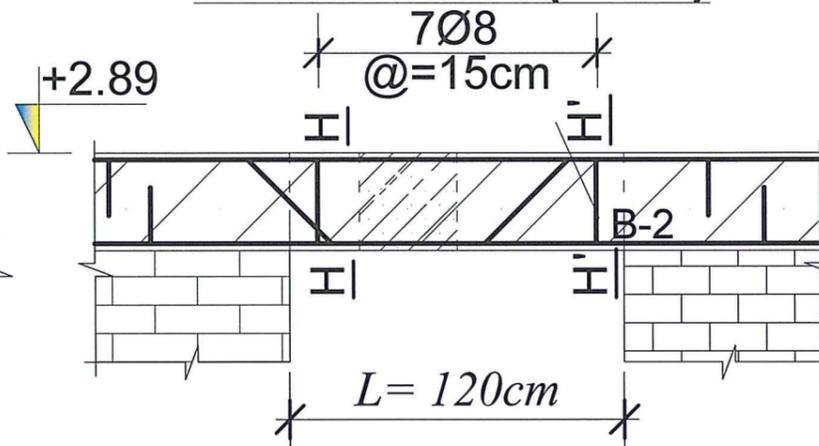
BEAM No3(2Nrs)



SECTION G-G



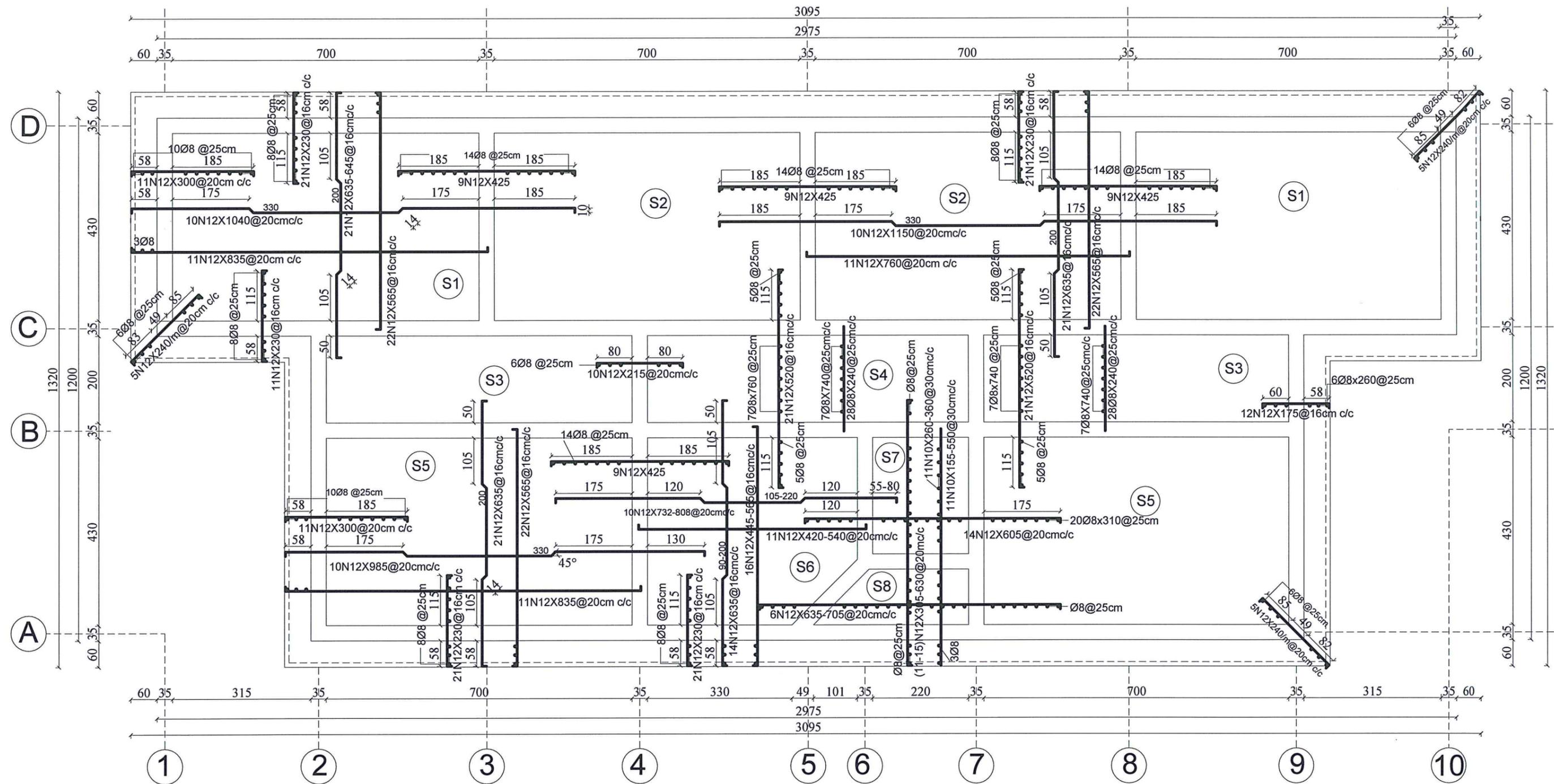
BEAM No 4 (2Nrs)



BEAMS DETAILS



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REINFORCEMENT BARS PLAN FOR ROOF SLAB



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

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DAARTT

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SCALE
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JUN-2018

PROJECT NAME
DRAWING TITLE

SIX CLASSROOM BURNT BRICK-RCC SLAB SCHOOL
HIGHT=+2.89
REINFORCEMENT BARS PLAN FOR ROOF SLAB

SHEET NO.

13
14

SPECIFICATION OF ELECTRICAL EQUIPMENT FOR ONE FLOOR 6 CLASS

O	DESCRIPTION	SIGNS	UNIT	PIECES	REMARKS
	LED surface mounting fixture 18 X 18 X 4 cm 25W 220V 50hz		No	33	
2	Two pole switches 10 Amps under plaster good quality		No	6	
3	Single pole switches 10 Amps under plaster good quality.		No	6	
	Socket out let single phase 16 Amp under plaster .		No	25	
	PANEL BOARD or Distribution Box 30 x 45cm 22 gauge		No	1	
	WIRE (1 x 2.5) mm ² for lighting.		M	560	
	WIRE (1 x 4)mm ² for sockets.		M	450	
	PVC conduit 1" or 25mm		M	350	
	PVC conduit 3" or 75mm including fittings		M	30	
0	(Cu) Cable (3 x 25) mm ² or (2 x 25)mm ² + (1 x 25)mm ²		M	30	
1	Grounding rod (Cu) 2.5 m length (Ø=16) mm diameter		Set	1	
2	Single device gnag (Boxes)		No	40	
3	MCB 63 Apms for distribution box Two port (Single Phase)		No	1	
4	Joint box .		No	15	
5	Circuit breaker 20 Amp for power receptacle		No	8	
6	Circuit breaker 10 Amp for lighting		No	8	

NOTES

- 1-Sockets: Vico or equivalent, 400mm from the floor from door side 250mm .
- 2-Switches: Vico or equivalent 1200mm from the floor from the door side 250mm.
- 3-Joint boxes: 400mm from the roof in line with switches and sockets.
- 4-Conduit: PVC goal type semi-flexible.
- 5-All conduit must be in the plaster.
- 6-All bulbs,switches and sockets which are in moisture& out door must be water prove type.
- 7-Lighing circuit is extendable with 2.5mm² wire, single circuit.
- 8-Power circuit is extendable with 4mm² wire, single circuit.
- 9-Distribution box single phase wiring capacity of 36 circuit breakers 22 gauge.
- 10-Circuit Breakers: Vico or Equivalent
- 11-S1- Single Pole Switch
- 12-S2-Two Pole Switch
- 13-PB Penal Board.
- 14-CB Circuit Breaker.
- 15-All connection must have plastic joint.
- 16-R.C.B.O Residual Circuit Breaker Over Current.
- 17-Amp Amperes.
- 18-W Watt.
- 19-Hz Hertz.
- 20-Resistase of grounding should be not more then 25 Ohm per Nic code.
- 21-All wire in Penal board must have mark 1,2,3..Whaich show the Circuit numbers.
- 22-All wire in penal boards must be in plastic cover.

SPECIFICATION OF ELECTRICAL EQUIPMENT



MINISTRY OF EDUCATION DEPARTMENT
OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN
AFGHANISTAN

ARCHITECT/DESIGN
PREPLANNED &
CHECKED BY
TECH- APPROVED BY

Ab.QADIR
DAARTT

Signature

Combined technical
team
SCALE
DATE

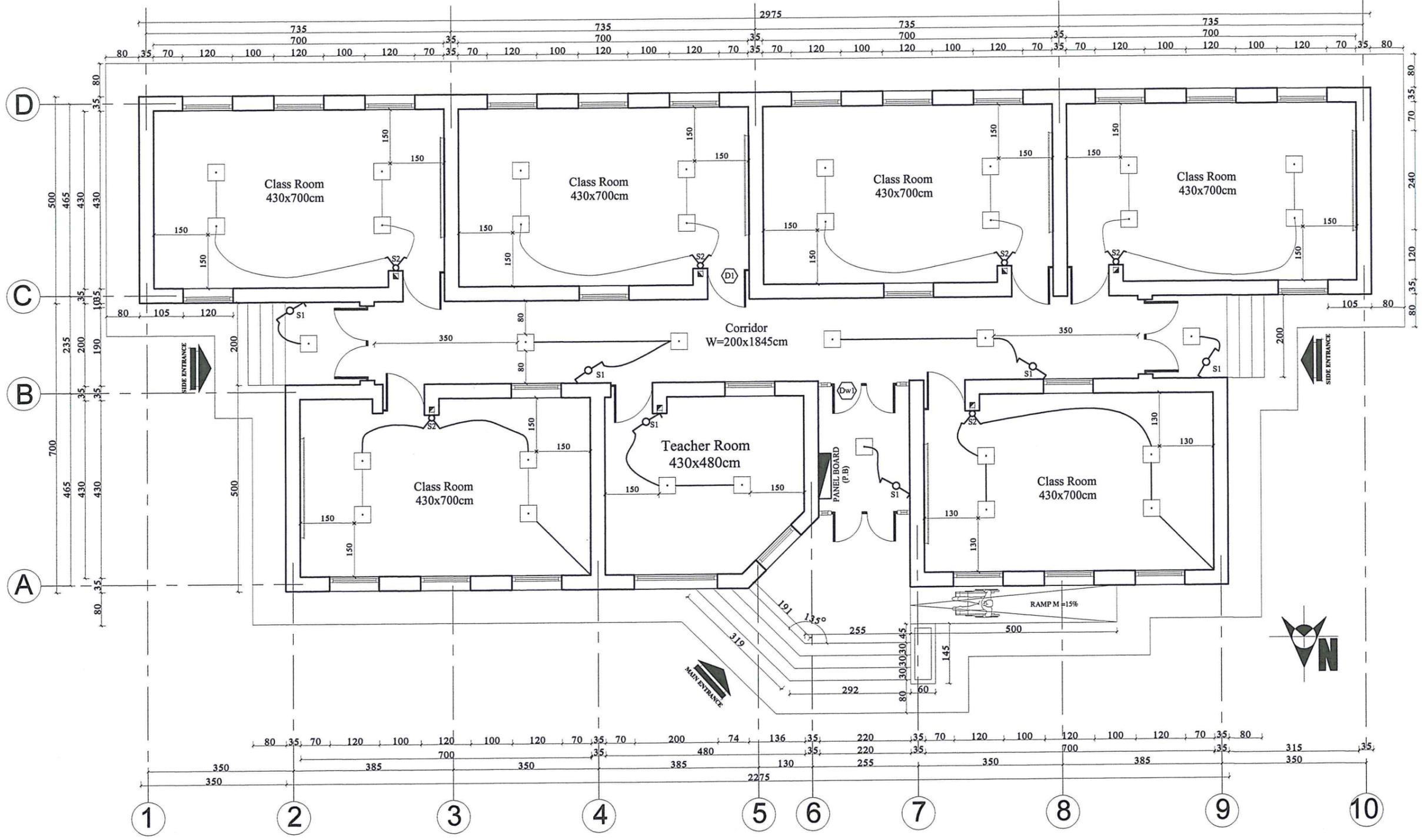
MOE/MRRD/DAARTT
AS SHOWN (A3)
22/07/2018

PROJECT NAME
DRAWING TITLE

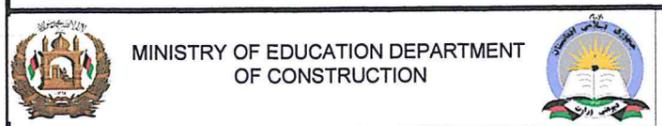
6 CLASSROOM SCHOOL BURNT BRICK WALL RCC ROOF H=2.75M
SPECIFICATION AND EQUIPMENTS

SHEET NO.

E1
4



GROUND FLOOR POWER PLAN



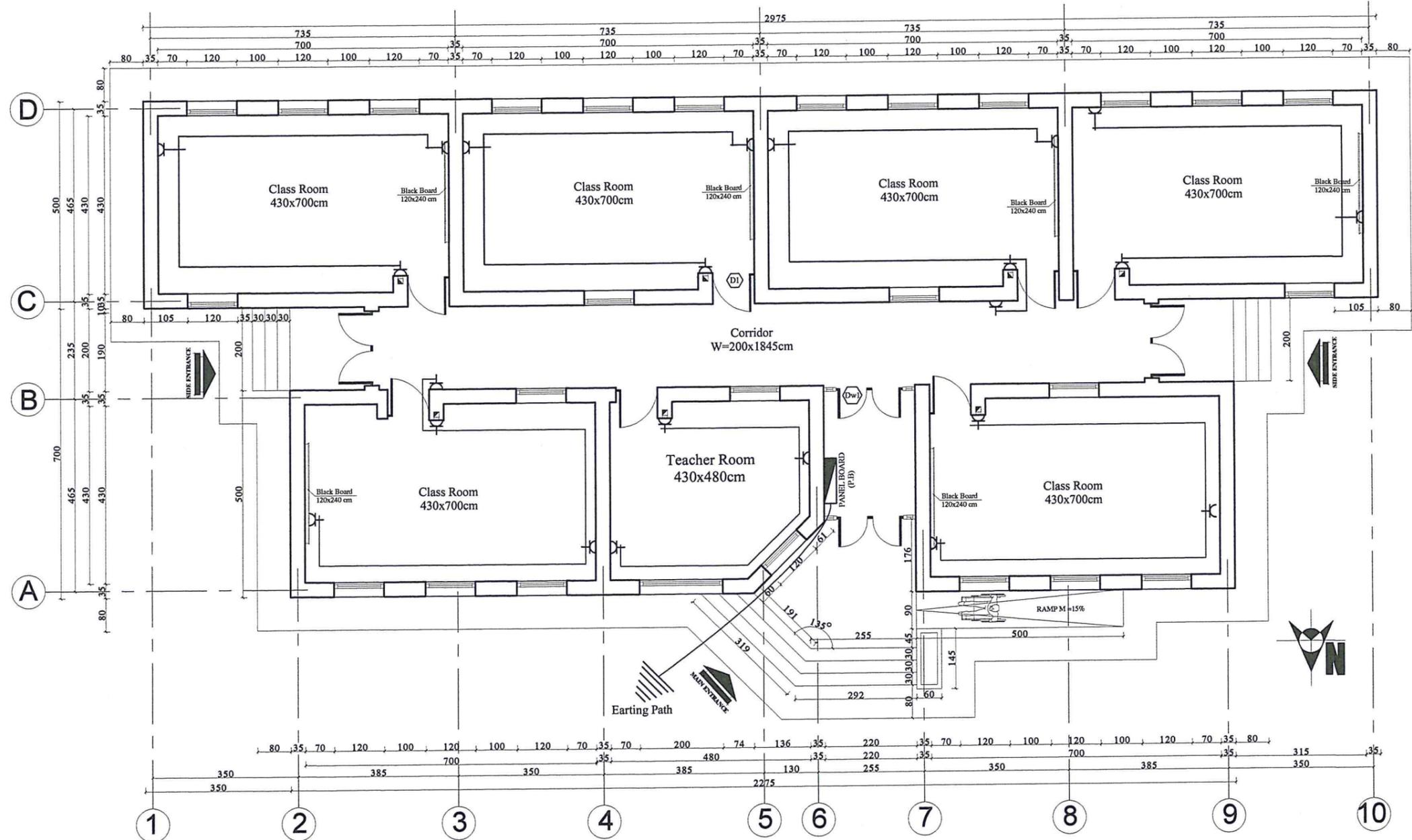
MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION

PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN	Ab.QADIR	Combined technical team	MOE/MRRD/DAARTT
PREPLANNED & CHECKED BY	DAARTT	SCALE	AS SHOWN (A3)
TECH- APPROVED BY		DATE	22/07/2018

PROJECT NAME	6 CLASSROOM SCHOOL BURNT BRICK WALL RCC ROOF H=2.75M
DRAWING TITLE	POWER PLAN

SHEET NO. E2
4



GROUND FLOOR SOCKET PLAN



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN
PREPLANNED & CHECKED BY
TECH- APPROVED BY

Ab.QADIR
DAARTT

(Signature)

Combined technical team
SCALE
DATE

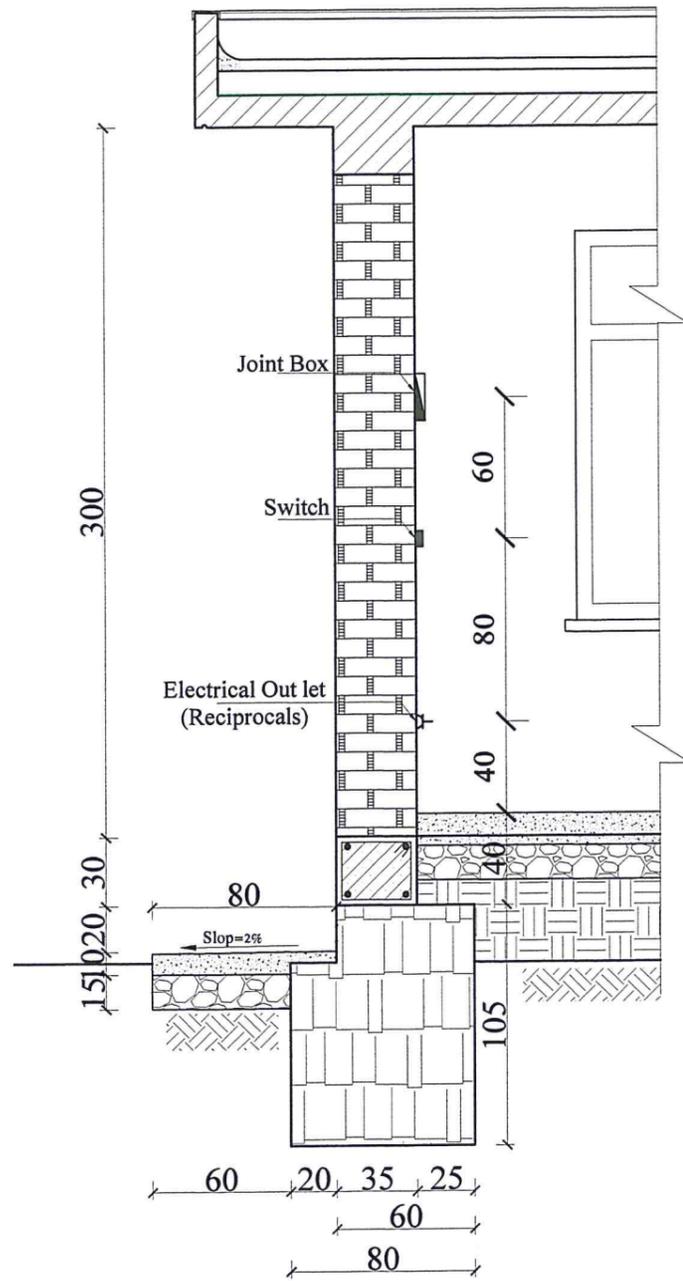
MOE/MRRD/DAARTT
AS SHOWN (A3)
22/07/2018

PROJECT NAME
DRAWING TITLE

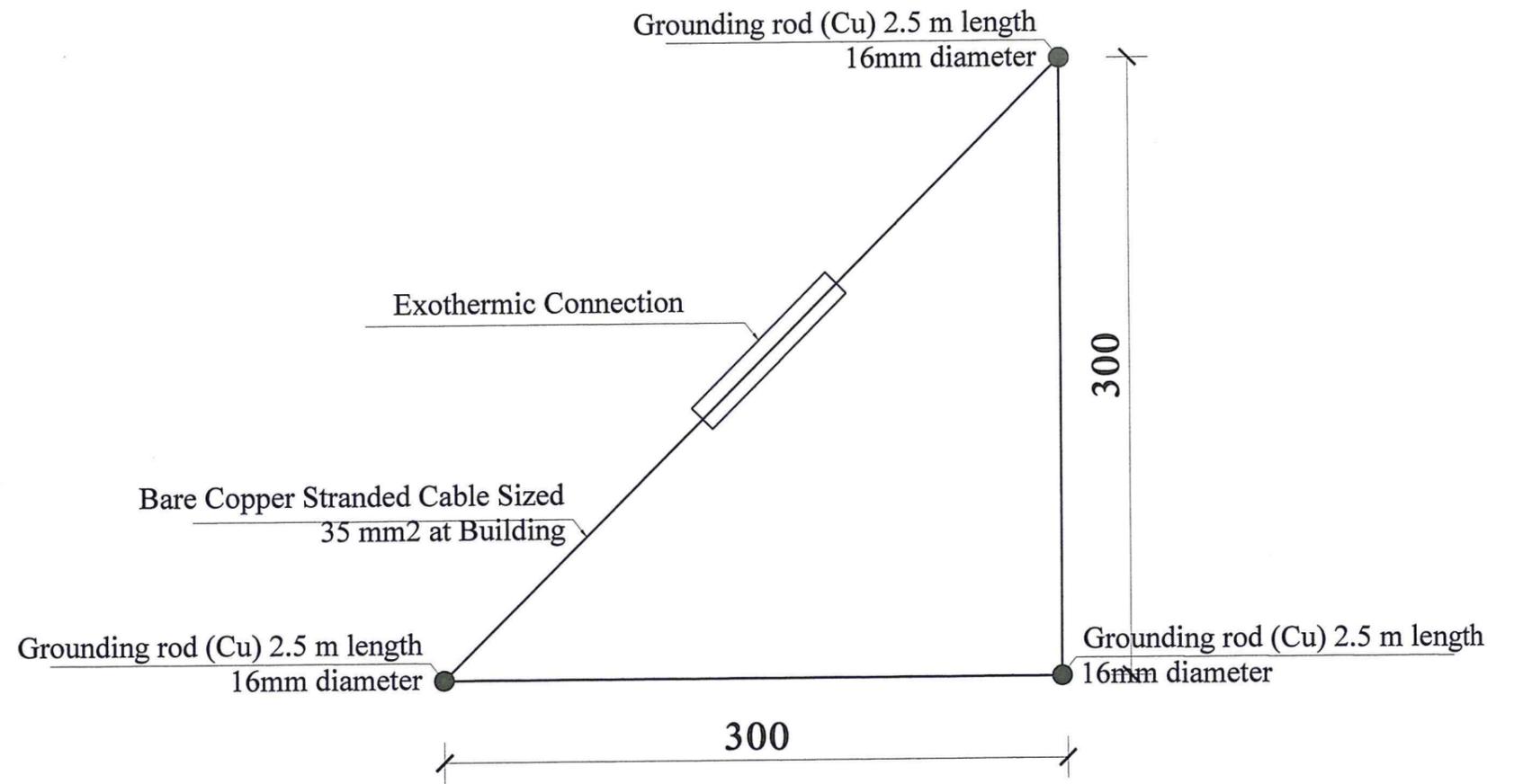
6 CLASSROOM SCHOOL BURNT BRICK WALL RCC ROOF H=2.75M
SOCKET PLAN

SHEET NO.

E3
4



ELECTRICAL INSTRUMENT DETAIL



EARTHEN PATH



MINISTRY OF EDUCATION DEPARTMENT OF CONSTRUCTION



PROTOTYPE SCHOOL DESIGN IN AFGHANISTAN

ARCHITECT/DESIGN	Ab.QADIR	Combined technical team	MOE/MRRD/DAARTT
PREPLANNED & CHECKED BY	DAARTT	SCALE	AS SHOWN (A3)
TECH- APPROVED BY		DATE	22/07/2018

PROJECT NAME	6 CLASSROOM SCHOOL BURNT BRICK WALL RCC ROOF H=2.75M
DRAWING TITLE	ELECTRIC INSTRUMENT DETAIL

SHEET NO.

