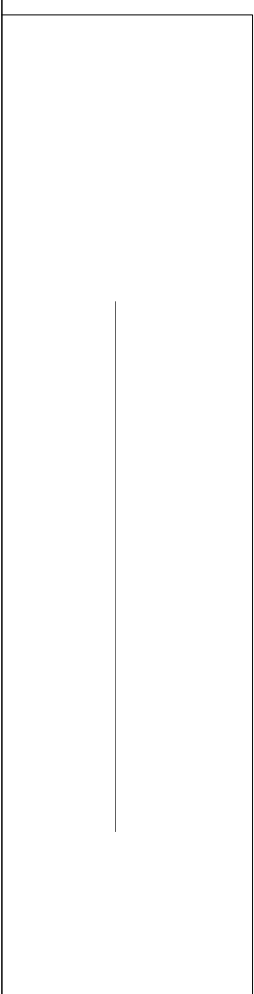


PROPOSED DESIGN
OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR



LIST OF DRAWINGS

ARCHITECTURAL DRAWINGS		ELECTRICAL DRAWINGS			
SR.NO	DESCRIPTION	DRG. NO.	SR.NO	DESCRIPTION	DRG. NO.
1	SITE PLAN	A-01	17	GROUND FLOOR BEAM PLAN	S-07
2	GROUND FLOOR PLAN	A-02	18	GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN	S-08
3	FRONT ELEVATION	A-03	19	GROUND FLOOR SLAB TOP REINFORCEMENT PLAN	S-09
4	REAR ELEVATION	A-04	20	COLUMN DETAIL	S-10
5	SECTION AT A-A	A-05	21	BEAM DETAIL	S-11
6	PLINTH PROTECTION, RAIN WATER PIPE, AND ROOF TREATMENT DETAILS	A-06			
7	PLAN OF WHITE BOARD & M.S STEEL SHELVES	A-07			
8	DOOR WINDOW DETAIL	A-08			
9	RAMP DETAILS	A-09			
10	TOP ROOF PLAN	A-10			
STRUCTURAL DRAWINGS			ELECTRICAL DRAWINGS		
			22	GENERAL NOTES	E-01
11	GENERAL NOTES	S-01	23	APPROVED MANUFACTURE LIST	E-02
12	GENERAL NOTES	S-02	24	LEGEND	E-03
13	FOUNDATION PLAN	S-03	25	GROUND FLOOR PLAN	E-04
14	FOUNDATION SECTION DETAIL	S-04	26	GROUND FLOOR DIMENSION PLAN	E-05
15	GROUND FLOOR COLUMN LAYOUT PLAN	S-05	27	SECTION	E-06
16	PLINTH BEAM PLAN	S-06	28	EARTHING DETAIL PLAN	E-07
			29	MAIN DISTRIBUTION BOARD	E-08
			30	LOAD CALCULATION	E-09

CLIENT:



UNHCR
The UN Refugee Agency

SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN/HADDER
ARCHITECT

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOKS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LIST OF DRAWINGS

DATE

SEP 2023

SCALE

DRG.NO.

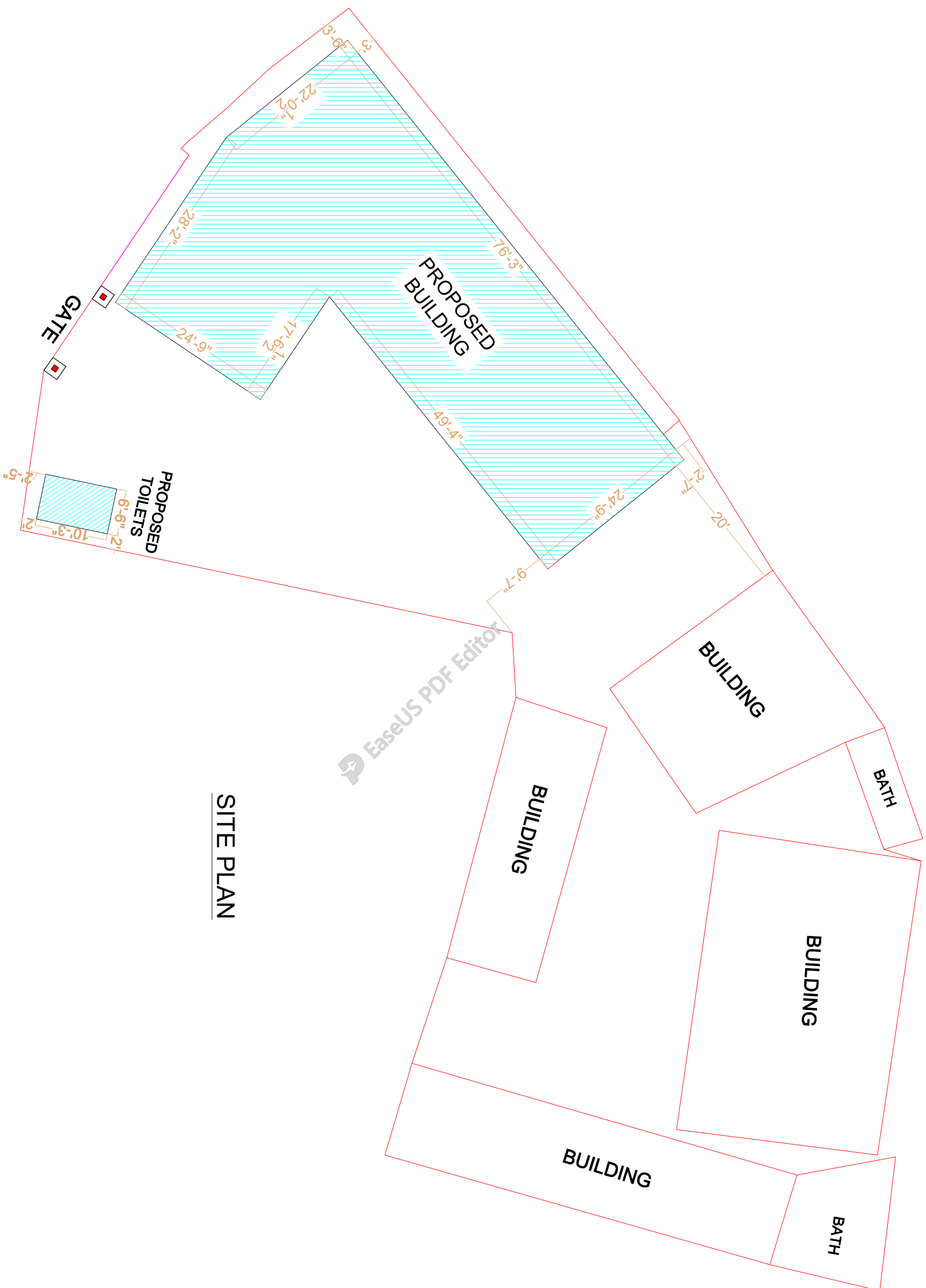
A-00

Designed By

MARWAT KHAN OR AKZAI
(B.Arch/D.CET Karachi)
(M.Arch/UBET, Lahore)

Checked By

Approved By



SITE PLAN

CLIENT:

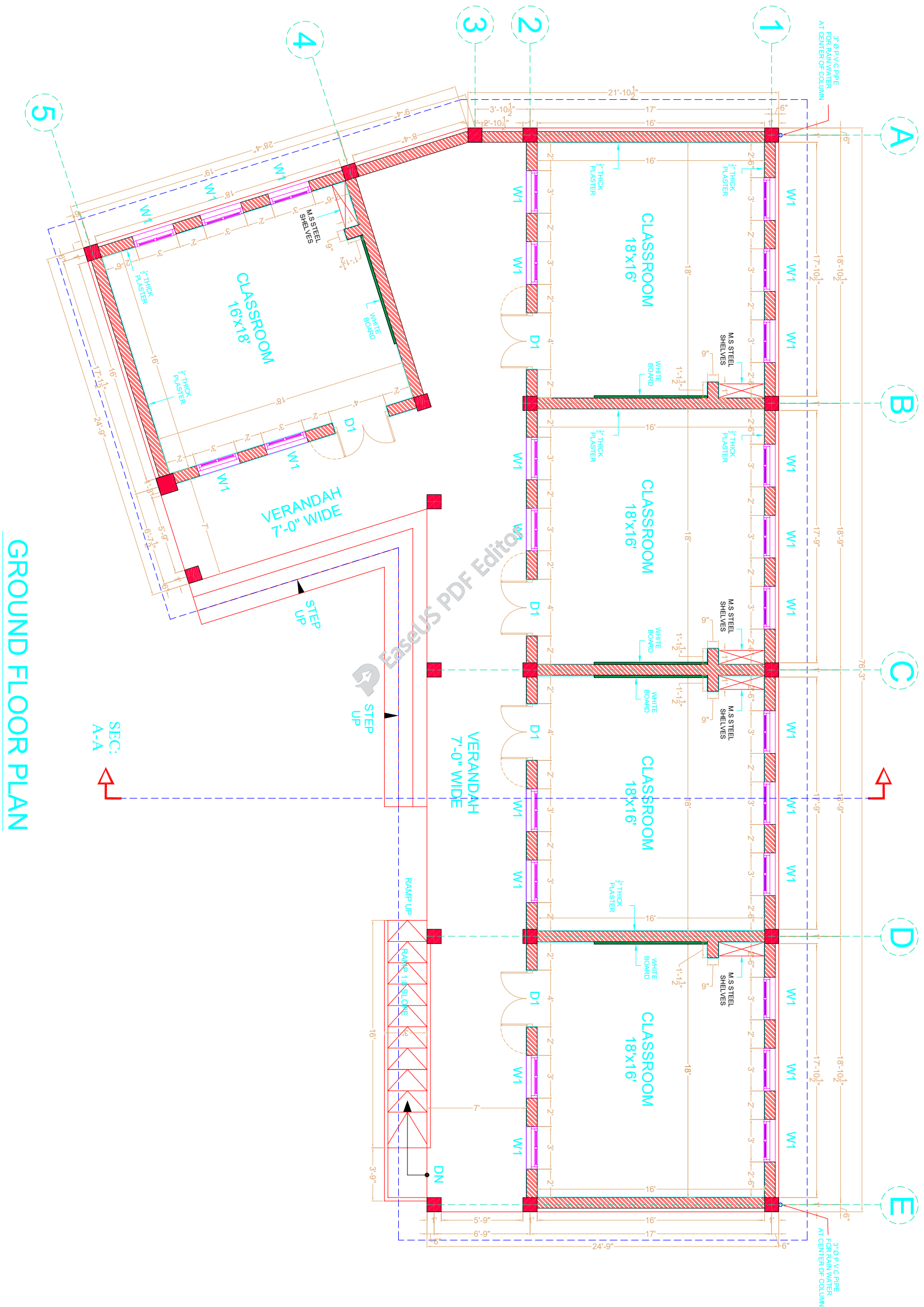


SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	ARCHITECT
	Designed By	MARWAT KHAN ORAKZAI (B.Arch.D.C.E.T Kanah)
	Checked By	(M.Arch.UET Lahore)
	Approved By	

PROJECT:		
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE:	SITE PLAN	
DATE	SCALE	DRG.NO.
SEP 2023		A-01



GROUND FLOOR PLAN

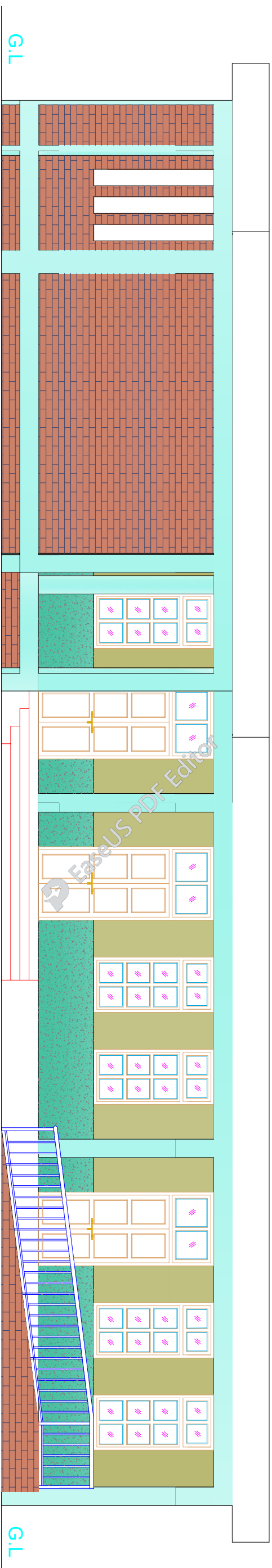
CLIENT:




SCHOOL NAME

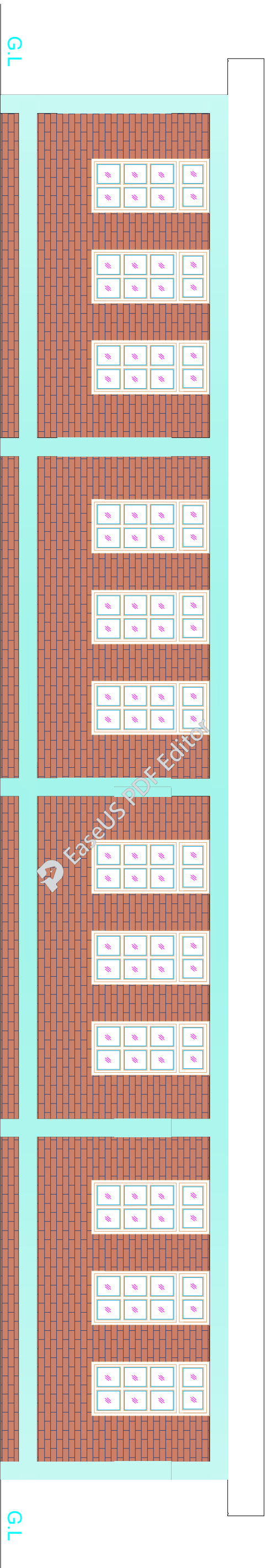
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	ARCHITECT	PROJECT:
	FAHAD KHAN KHAN HADIR	MARWAT KHAN ORAKZAI (Architect License)	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By		TITLE:
	Checked By		GROUND FLOOR PLAN
	Approved By		DATE: SEP 2023
			SCALE
			DRG. NO. A-02




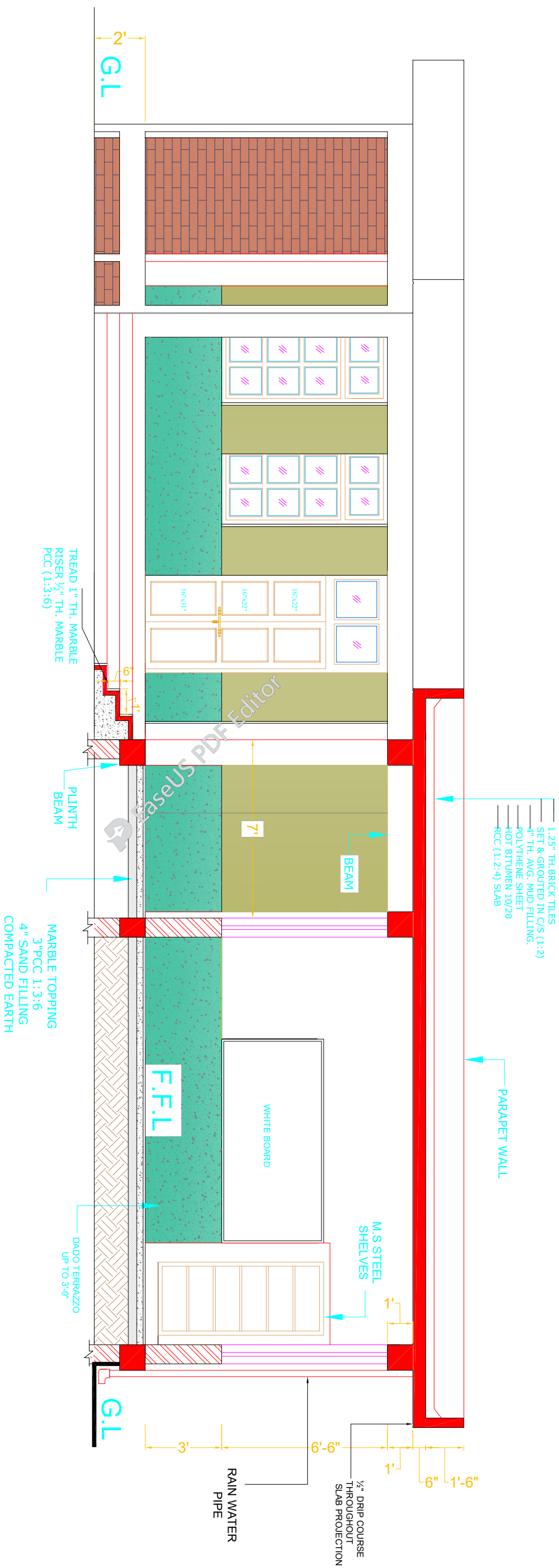
FRONT ELEVATION

CLIENT:  The UN Refugee Agency		SCHOOL NAME PSC-294-BASU MAIRA DISTRICT HARIPUR	
Date of Revision		Prepared By FARID KHAN KHAN HAIDER ARCHITECT	
Designed By MARWAT KHAN ORAKZAI (B.Archd.C.E.T Karachi) (M.Archd.UET Lahore)		Checked By	
Approved By		PROJECT: PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES TITLE: FRONT ELEVATION	
DATE SEP 2023	SCALE	DRG.NO. A-03	



REAR ELEVATION

<p>CLIENT:</p>		<p>SCHOOL NAME</p> <p style="text-align: center;">PSC-294-BASU MAIRA DISTRICT HARIPUR</p>			
 <p>UNHCR The UN Refugee Agency</p>					
		<p>Date of Revision</p>		<p>Prepared By</p>	
				<p>Designed By</p>	
				<p>Checked By</p>	
				<p>Approved By</p>	
		<p>ARCHITECT</p> <p style="text-align: center;">FARID KHAN KHANHAIDR</p>		<p>PROJECT:</p> <p style="text-align: center;">PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES</p>	
		<p>ARCHITECT</p> <p style="text-align: center;">MARWAT KHAN ORAKZAI (B.Arch.D. CETI Karachi) (M.Arch. UET, Lahore)</p>		<p>TITLE:</p> <p style="text-align: center;">REAR ELEVATION</p>	
		<p>DATE</p> <p style="text-align: center;">SEP 2023</p>		<p>SCALE</p>	
				<p>DRG.NO.</p> <p style="text-align: center;">A-04</p>	



SECTION AT A-A

CLIENT:

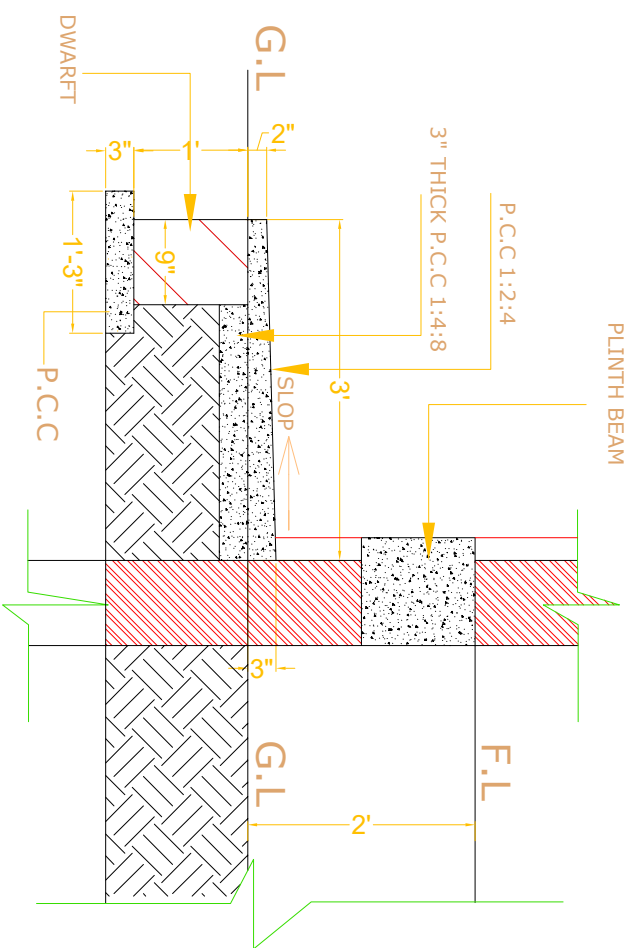


SCHOOL NAME

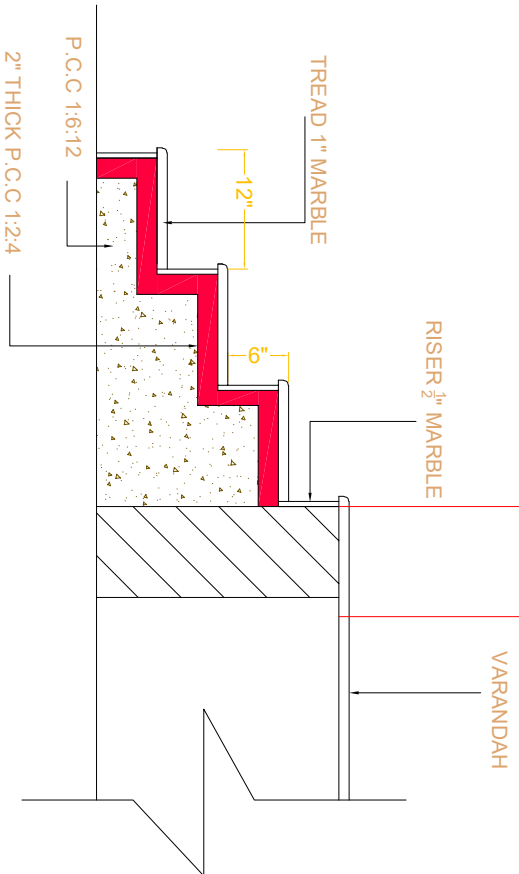
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	ARCHITECT
	FARID KHAN KHAN HADIR	MARWATI KHAN ORAKZAI (B.Arch, D.C.E.T Karachi) (M.Arch, U.E.T, Lahore)
	Designed By	
	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		A-05
TITLE:			
SECTION AT A-A			

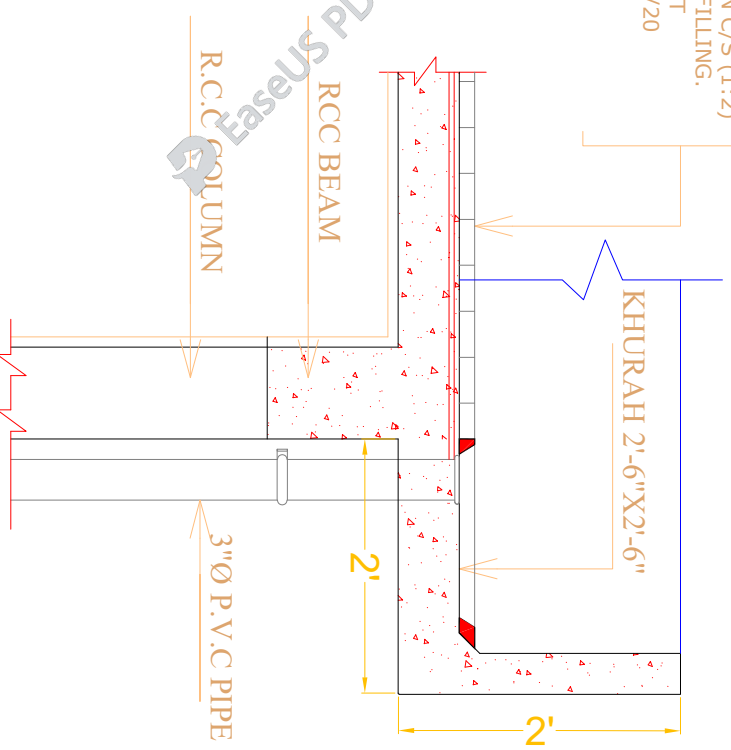


PLINTH PROTECTION



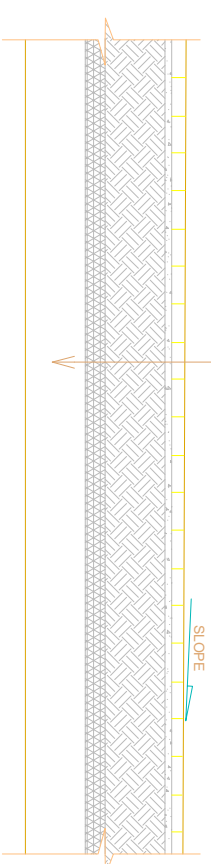
VERANDAH STEPS DETAILS

1.25" TH. BRICK TILES
SET & GROUTED IN C/S (1:2)
4" TH. AVG. MUD FILLING.
POLYTHENE SHEET
HOT BITUMEN 10/20
RCC (1:2:4) SLAB

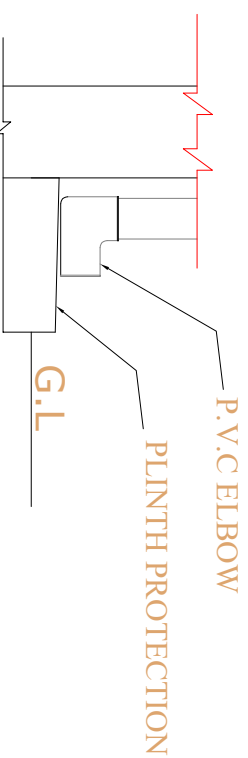


ROOF TREATMENT

1.25" TH. BRICK TILES
SET & GROUTED IN C/S (1:2)
4" TH. AVG. MUD FILLING.
POLYTHENE SHEET
HOT BITUMEN 10/20
RCC (1:2:4) SLAB



RAIN WATER PIPE DETAIL



SCHOOL NAME

Date of Revision

Prepared By

ARCHITECT
HABIB KHAN
KHAN HANIDR

PROJECT:
PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/ REHABILITATION OF SITES

Designed By

ARCHITECT
MARWATI KHAN ORAKZAI
(B. Arch, D.C.E.T, Karachi)
(M. Arch, UET, Lahore)

TITLE:
PLINTH PROTECTION, RAIN WATER PIPE,
AND ROOF TREATMENT DETAILS

Checked By

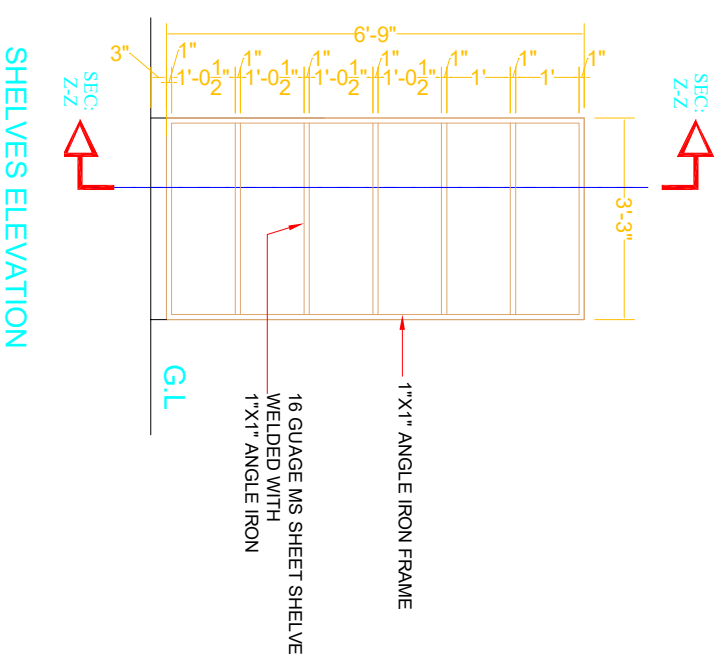
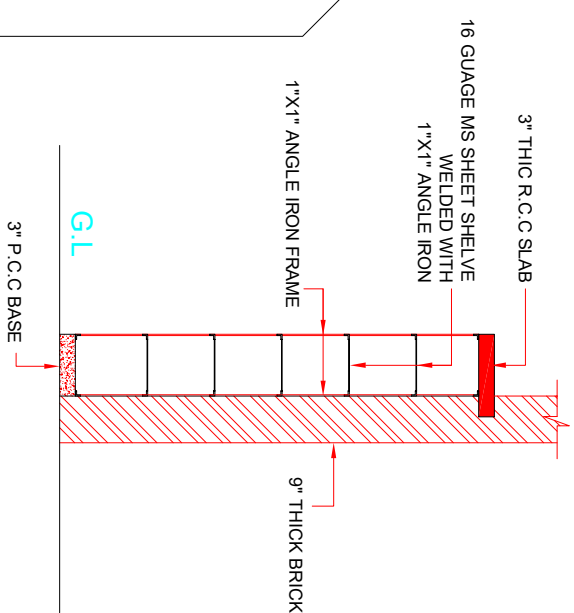
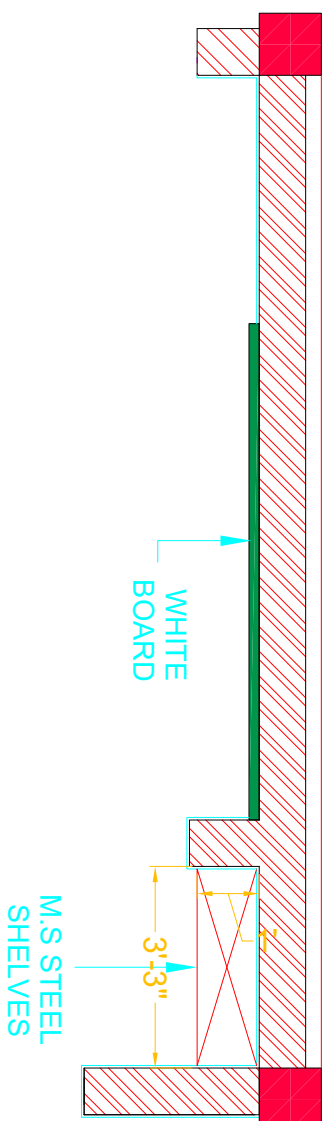
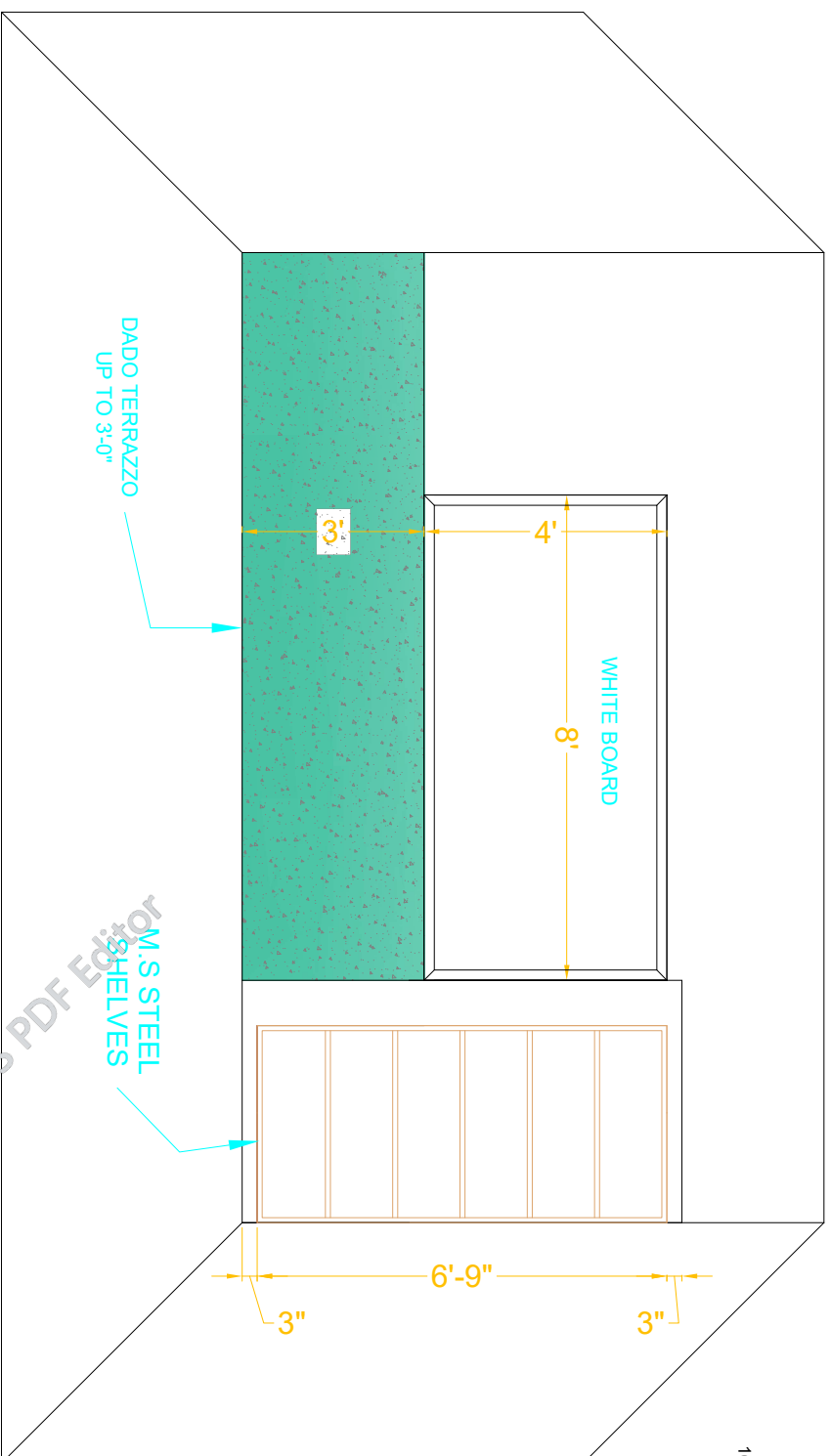
Approved By

DATE
SEP 2023

SCALE

DRG. NO.

A-06



CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KIANNI HANIDER
ARCHITECT

Designed By

MARWAT KHAN ORAKZAI
(B.Arch, C.E.T. Karachi)
(M.Arch, UET, Lahore)

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

PLAN OF WHITE BOARD &
M.S STEEL SHELVES

DATE

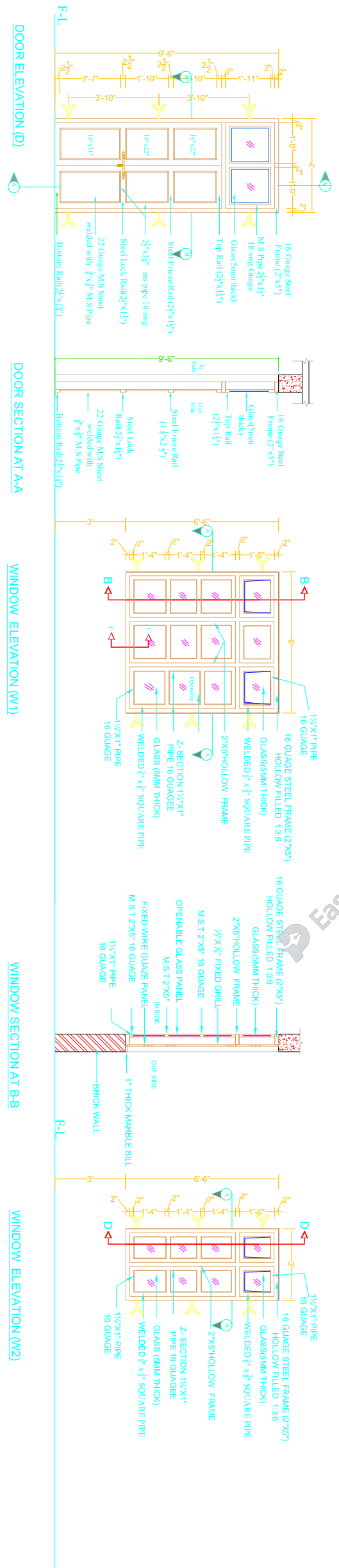
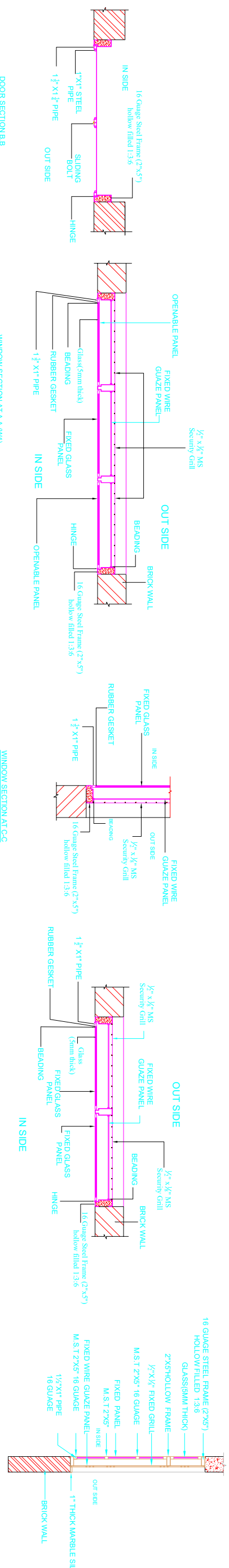
SEP 2023

SCALE

DRG.NO.

A-07

SCHEDULE OF OPENING			
TYPE	SIZE	S-LEVEL	DESCRIPTION
D1	4'-0" X 9'-6"	0'-0"	STEEL
W1	3'-0" X 6'-6"	3'-0"	STEEL



CLIENT: _____

SCHOOL NAME: **PSC-294-BASU MAIRA DISTRICT HARIPUR**

PROJECT: **PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES**

DOOR WINDOW DETAILS

DATE: **SEP 2023** SCALE: _____ DRG.NO: **A-08**

Prepared By: **FARID KHAN KHAN HANIDER** ARCHITECT

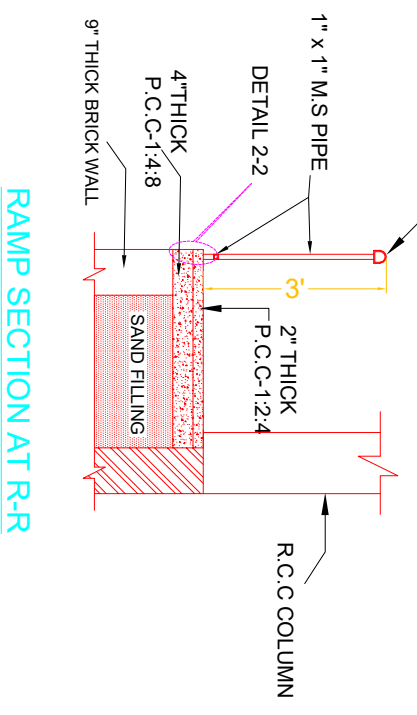
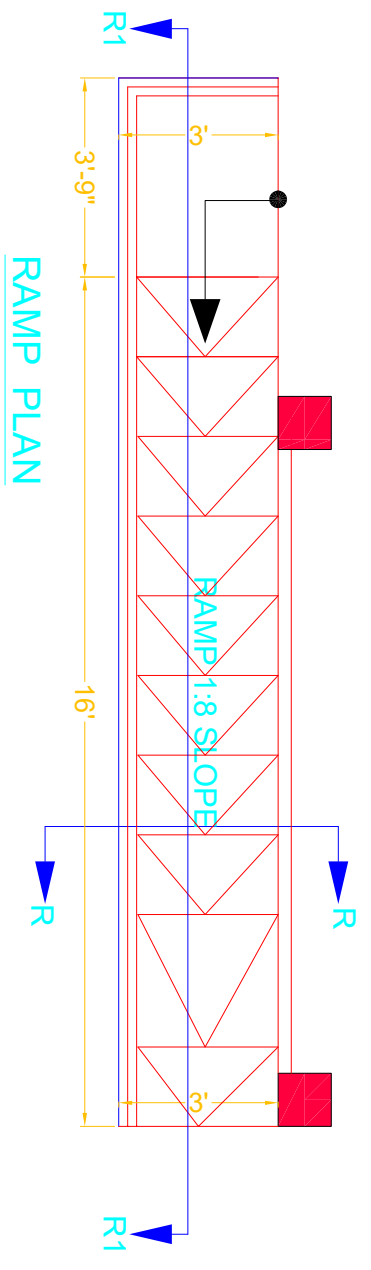
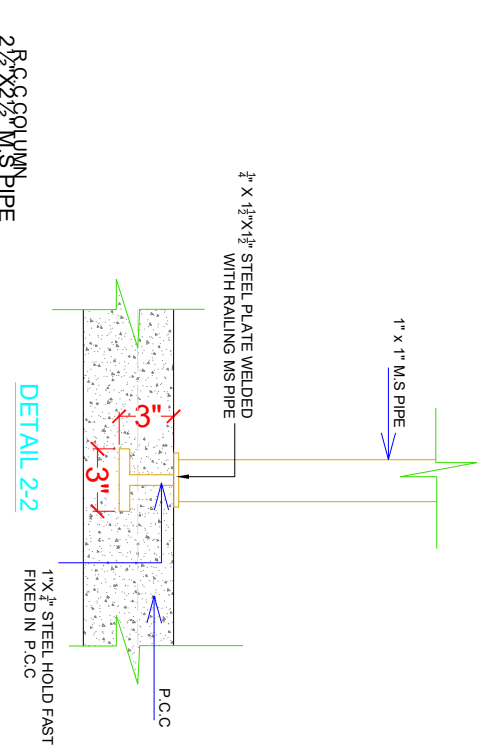
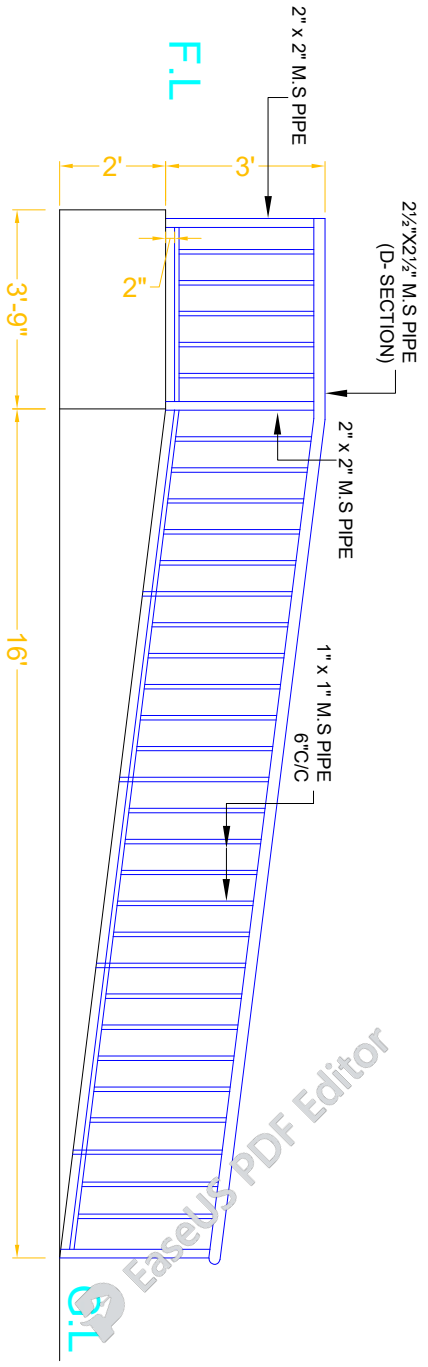
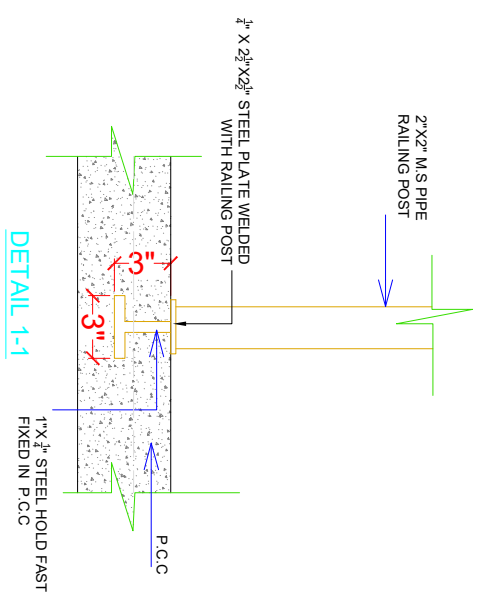
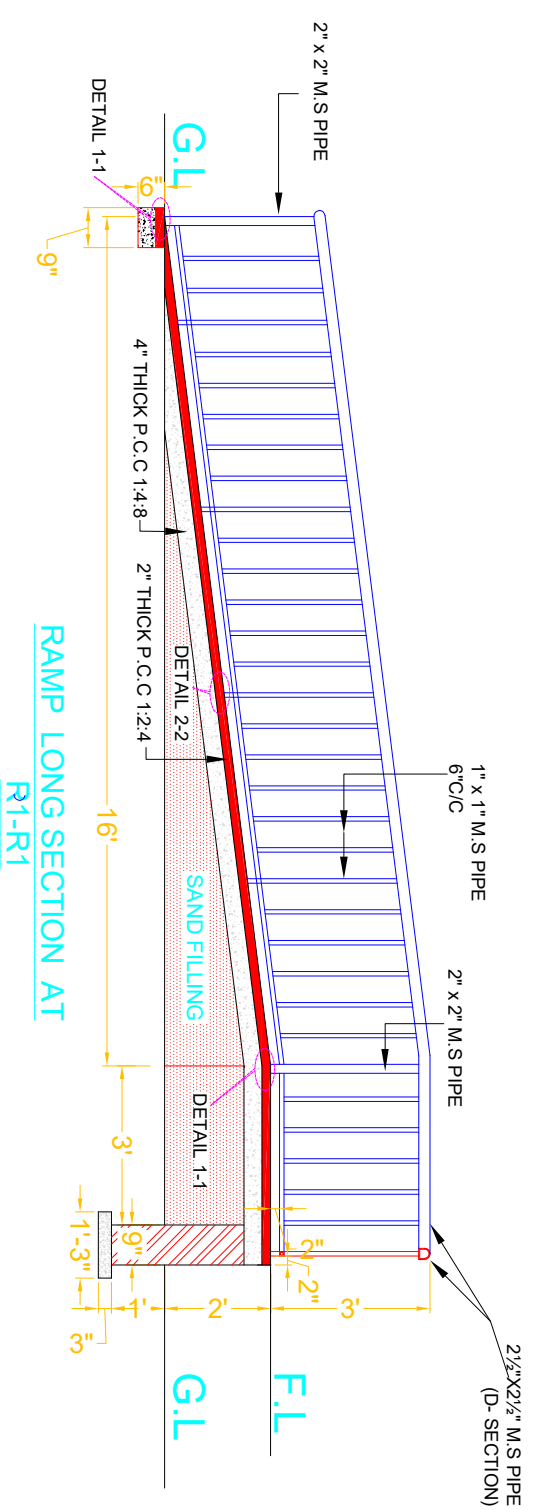
Designed By: **MARWAT KHAN OR ARZAM (B.Arch.D.C.E.T Karachi)** (M.Arch.UET, Lahore)

Checked By: _____

Approved By: _____

Date of Revision: _____

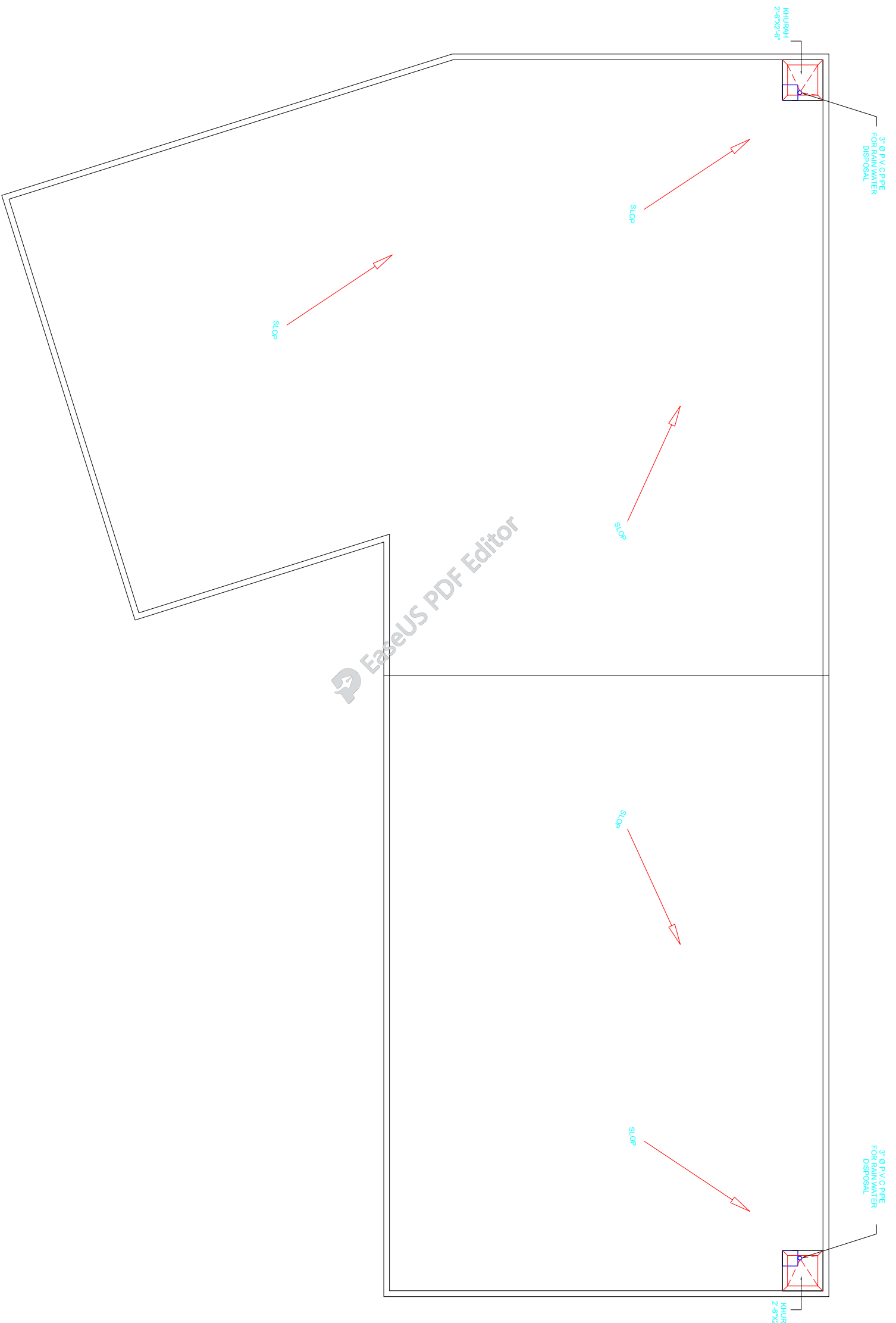





SCHOOL NAME

Date of Revision	Prepared By	ARCHITECT
	Designed By	MARKWAT KHAN OKARZAI (B.Arch, D.C.E.T Karachi) (M.Arch, UET, Lahore)
	Checked By	
	Approved By	

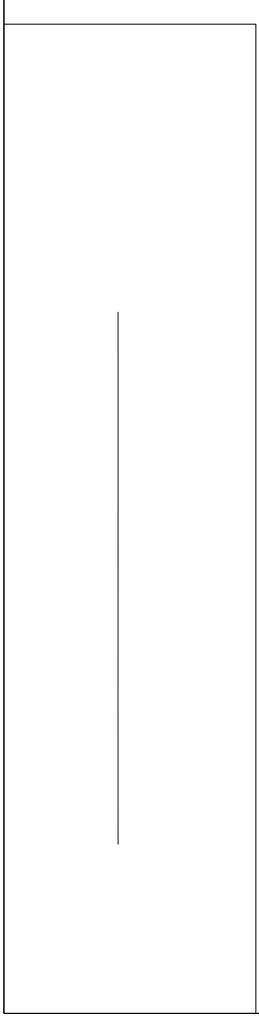
PROJECT:	PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
TITLE:	RAMP DETAILS
DATE	SEP 2023
SCALE	
DRG. NO.	A-09



TOP ROOF PLAN

CLIENT:  The UN Refugee Agency		SCHOOL NAME PSC-294-BASU MAIRA DISTRICT HARIPUR		Date of Revision	Prepared By FARID KHAN KHAN HADIR	PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/ REHABILITATION OF SITES
_____ _____		Designed By MARWAT KHAN ORAKZAI (B.Arch, D.C.E.T Kenesh) (M.Arch, UET Lahore)	Checked By	Approved By	TITLE: TOP ROOF PLAN	
_____ _____		DATE SEP 2023	SCALE	DRG. NO. A-10		

**PROPOSED DESIGN
OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR**





GENERAL

- 1. LEAD ALL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, GEOTECHNICAL, PLUMBING, MECHANICAL, ELECTRICAL & ANY OTHER RELEVANT DRAWINGS.
- 2. NOTES GIVEN IN THIS DRAWING ARE APPLICABLE TO ALL DRAWINGS UNLESS MENTIONED OTHERWISE. NOTES WRITTEN ON A DRAWING, SHALL BE APPLICABLE TO THAT PARTICULAR DRAWING ONLY UNLESS OTHERWISE CROSS-REFERRED.
- 3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SPECIFICATIONS OF THE CONTRACT DOCUMENTS. IN ABSENCE OF ANY SPECIFICATIONS, ALL MATERIALS & WORKMANSHIP SHALL CONFORM TO RELEVANT AC/BRITISH CODES AND SHALL BE SUBJECTED TO APPROVAL OF THE ENGINEER.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURES DURING CONSTRUCTION. HE SHALL ALSO VERIFY ALL DIMENSIONS AND LEVELS BEFORE EXECUTION OF WORK. ANY DISCREPANCY, ERROR OR OMISSION, IF FOUND, SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR CORRECTION AND APPROVAL.
- 5. THE CONTRACTOR SHALL CO-ORDINATE WITH VARIOUS SERVICES DRAWINGS FOR SIZES & LOCATION OF ALL STRUCTURAL MEMBERS, FLOORS, WALLS, OPENINGS, FLOOR FINISHES, PIPES ETC.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXECUTION OF DEWATERING SYSTEM WHERE SO REQUIRED DURING CONSTRUCTION.
- 7. ALL DIMENSIONS & LEVELS ARE IN FEET & INCHES.
- 8. DO NOT SCALE THE DRAWINGS. DIMENSIONS, GIVEN ON THE DRAWING, SHALL GOVERN.
- 9. ALL FABRICATION, PAINTING, ERECTION AND QUALITY CONTROL IS TO BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE AC/BRITISH SPECIFICATIONS.
- 10. BACKFILLING AROUND FOUNDATIONS AND WALLS SHALL BE WELL COMPACTED LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS.
- 11. IT IS STRONGLY RECOMMENDED TO RECONFIRM THE SITE PLAN BEFORE START OF EXECUTION AT SITE. THE SITE SHOULD BE EXAMINED FOR CLEARANCE WITH RESPECT TO LOCAL/SEISMIC HAZARDS.
- 12. THE CONTRACTOR SHALL INFORM THE ENGINEER ABOUT ANTICIPATED CONSTRUCTION LOADS IN THE STRUCTURE AND OBTAIN ENGINEER'S APPROVAL THEREOF BEFORE COMMENCING THE WORK.
- 13. THE CONTRACTOR SHALL VERIFY LAYOUT, CONFIGURATION, ALL DIMENSIONS AND LEVELS PERTAINING TO EXISTING WORKS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ADOPT ADEQUATE AND APPROPRIATE MEASURES SO AS NOT TO DAMAGE THE EXISTING WORKS.
- 14. THE CONTRACTOR SHALL EXERCISE UTMOST CARE AND PRECAUTION DURING THE WORKS, AGAINST ANY MISHAPS OR ACCIDENTS, FOR WHICH THE CONTRACTOR SHALL BE WHOLLY AND SOLELY RESPONSIBLE. THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ANY ACCIDENTS AND ANY LOSSES THEREFROM AND SHALL REPAIR AND RECTIFY THEM AT HIS OWN COST AND TIME.
- 15. ANY DEPARTURES/DEVIATIONS DESIRED FROM THE DESIGN OR SPECIFICATIONS, OR SOLUTIONS TO ANY PROBLEMS ENCOUNTERED, SHALL BE GOT APPROVED FROM THE ENGINEER PRIOR TO IMPLEMENTATION. UNAPPROVED DEPARTURES/DEVIATIONS MAY LEAD TO REJECTION/REPLACEMENT OF THE ENTIRE WORK AT THE CONTRACTOR'S COST.
- 16. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND BAR BENDING SCHEDULES. THE ENGINEER'S APPROVAL SHALL NOT RELIEVE THE APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF SHOP DRAWINGS AND BAR BENDING SCHEDULES. FOR ENGINEERS APPROVAL AND OBTAIN HIS CONTRACTOR FROM HIS RESPONSIBILITY.
- 17. The allowable bearing capacity of soil should be 1tsf.

2. SHORING AND BRACING

- 1. SHORE & BRACE ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION, TO THE EXTENT NECESSARY TO ENSURE COMPLETE SAFETY, STRENGTH & SERVICEABILITY OF ALL STRUCTURAL ELEMENTS UNDER ALL CONDITIONS OF LOADS WHICH MAY OCCUR DURING CONSTRUCTION. SUCH SHORING & BRACING IS THE CONTRACTOR'S SOLE RESPONSIBILITY AND IS NOT SHOWN ON STRUCTURAL DRAWINGS OR SPECIFIED IN THE PROJECT.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND STABILITY OF THE SLOPES AND SHALL PROVIDE SHORING AND BRACING DURING EXCAVATION AND CONSTRUCTION, WHEREVER AND WHENEVER REQUIRED.
- 3. SEQUENCE OF REMOVAL OF FORMWORK SHALL BE APPROVED BY THE ENGINEER. AT LEAST ONE LOWER FLOOR SHALL REMAIN PROPPED UNTILL THE UPPER FLOOR IS CAST AND CURED.

3. REINFORCED CONCRETE

- 1. STRUCTURAL DESIGN IS BASED ON THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
- 2. ALL STRUCTURAL CONCRETE SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) REQUIREMENTS.
- 3. CONCRETE MIX TO BE DESIGNED ON THE BASIS OF ACI 211 OR EQUIVALENT. TRIAL STRENGTH RESULTS TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BEFORE CONCRETING.
- 4. NO CONCRETING SHALL BE CARRIED OUT UNTIL PERMISSION IS GIVEN IN WRITING OR APPROVED BY STRUCTURE ENGINEER.
- 5. ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM STANDARDS C31, C39, C173 & AS WRITTEN IN SPECIFICATIONS AND THE MINIMUM CYLINDER CRUSHING STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS. TESTING OF CLASS D & E CONCRETE SHALL BE PERFORMED IF SO SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.

CLASS	MIN. CYLINDER CRUSHING STRENGTH AT 28 DAYS (psi)
A	4000
B	3500
C	2400
D	1200
E	800

6. CLASS OF CONCRETE FOR DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE AS FOLLOWS UNLESS NOTED OTHER WISE:

COMPONENT	CONCRETE CLASS
COLUMNS	CLASS 'A'
SLABS, BEAM FOUNDATION	CLASS 'B'
PCC STEPS,	CLASS 'D'
LEAN / BLINDING CONCRETE	CLASS 'E'

- 7. ORDINARY PORTLAND CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.
- 8. AN INTEGRAL WATER PROOFING AGENT SHALL BE USED IN CONCRETE THAT IS CONSTANTLY OR INTERMITTENTLY IN CONTACT WITH WATER AS PER MANUFACTURERS RECOMMENDATIONS (GENCON GENPRUF RMC OR FORTRON ADMIX OR EQUIVALENT).
- 9. ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS, CLASS ACI-315, ACI-318 & ACI-350R.

STRUCTURAL ELEMENT	COVER (INCHES)
FOOTINGS	2"
BEAMS	1 1/2"
COLUMNS	1 1/2"
SLABS	3/4"
WALLS	3/4"

4. REINFORCING STEEL

- 1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM-A615 GRADE 60 HAVING A MINIMUM YIELD STRENGTH OF 60,000 PSI. FOR STIRRUPS, TIES AND #3 BARS USE ASTM A615, GRADE 60 HAVING MINIMUM YIELD STRENGTH OF 60,000 PSI.
 - 2. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED STRENGTH BY MORE THAN 18,000 PSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3000 PSI)
 - 3. THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ADDITIONAL CLEAR SPAN, db-DIAMETER OF BAR-d-EFFECTIVE DEPTH OF CLEAR COVER TO REINFORCEMENT SHALL BE: (inches)
- L-GREATER CLEAR SPAN, db-DIAMETER OF BAR-d-EFFECTIVE DEPTH
- THE FIRST HOOP SHALL BE LOCATED NOT MORE THAN 2" FROM THE FACE OF THE SUPPORTING MEMBER.
- WHERE:

5. CONCRETE CONSTRUCTION

- 1. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND HELD FIRMLY IN PLACE BEFORE & DURING THE PLACEMENT OF CONCRETE BY MEANS OF WIRE AND SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
- 2. LINTELS ARE EXTENDED AT 9 (INCHES) FROM BOTH SIDES OF OPENING.
- 3. PROVIDE 135° HOOK IN ADJACENT STIRRUPS ON ALTERNATE SIDES.
- 4. ALL STRUCTURAL SURFACES, AGAINST WHICH EARTH IS TO BE FILLED, SHALL BE COATED WITH TWO COATS OF HOT BITUMEN OF 10/20 GRADE AT THE RATE OF 0.2 lbs/ft²/coat.
- 5. PROVIDE POLYETHENE SHEET OVER TWO COATS OF HOT BITUMEN AT TOP OF PLINTH BEAM/DFC FOR EXTERIOR WALLS.
- 6. BEFORE CASTING OF ANY STRUCTURAL MEMBER, THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEMS FOR ELECTRICAL, MECHANICAL, HVAC, PLUMBING, STRUCTURAL STEEL AND OTHER WORKS ARE PROPERLY LOCATED AND FIRMLY SECURED IN PLACE.
- 7. DURING CONSTRUCTION, STACKING OF CONSTRUCTION MATERIALS, BLOCKS, etc. SHOULD BE AVOIDED ON SLAB PANELS.

6. BRICK WORK

- 1. ALL BRICK WORK SHALL CONFORM TO SPECIFICATIONS GIVEN IN THE CONTRACT DOCUMENT.
- 2. ALL BRICK SHALL BE SOUND, HARD, WELL BURNT AND OF UNIFORM SIZE, COLOR AND TEXTURE. DIMENSIONAL VARIATION IN SIZES SHALL NOT EXCEED 1/8". BRICKS SHOULD BE IN ACCORDANCE WITH SPECIFICATIONS AND SHOULD CONFIRM TO ASTM C62.
- 3. ALL BRICK WORK SHALL BE ERECTED PLUMB AND TRUE TO LINE AND LEVEL. THE MAXIMUM VARIATION IN ANY STOREY HEIGHT OR ANY LENGTH OF WALL SHALL BE 1/8" IN 10'-0".
- 4. MORTAR USED IN MASONRY CONSTRUCTION SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF NOT LESS THAN 12 MPa (1800psi) AND SHALL CONFORM TO ASTM C270.
- 5. COMPRESSIVE STRENGTH OF BRICK MASONRY AVERAGE OF 5 UNITS AT 28 DAYS SHALL NOT BE LESS THAN AS SPECIFIED IN SPECIFICATION AND SHALL CONFORM TO RELEVANT ASTM STANDARD.
- 6. ALL DESIGN, DETAILING, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT ACI, ASTM, AND UBC CODES AND STANDARDS.
- 7. BRICK SHALL BE LAID "FROG" UPWARD WITH MORTAR JOINT AND IN ENGLISH FLEMISH BOND OR AS SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.
- 8. BRICKS SHOULD BE SOAKED WITH WATER PROPERLY BEFORE USE.
- 9. VERTICAL JOINTS SHOULD BE STAGGERED.
- 10. ALL MASONRY WALLS SHALL BE ANCHORED TO STRUCTURAL FRAME WORK AS INDICATED ON THE DRAWINGS

CLIENT:



UNHCR The UN Refugee Agency

SCHOOL NAME

PSC-294-BASU MAIRA DISTRICT HARIPUR

Date of Revision

Prepared By

Designed By

Checked By

Approved By

FARID KHAN KHAN HAIDER STRUCTURE ENGINEER

Engr. HUMZA AHMAD

PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE: GENERAL NOTES

DATE

SCALE

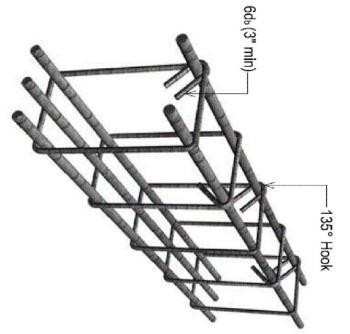
DRG. NO.

Sep 2023

S-01

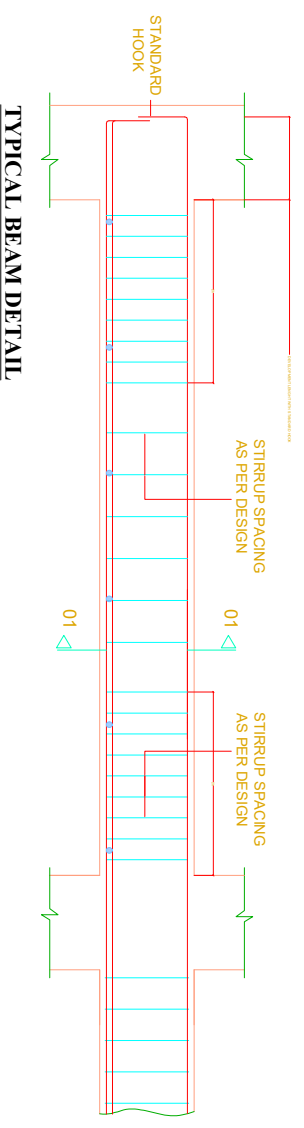
7. CONSTRUCTION JOINTS

JOINTS, NOT SHOWN ON THE DRAWING, SHALL BE SO MADE AND LOCATED AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND SHALL NEED PRIOR APPROVAL OF THE ENGINEER. THEY SHALL BE LOCATED NEAR THE MIDDLE OF THE SPANS OF SLAB & BEAMS. JOINTS IN WALLS & COLUMNS SHALL BE AT THE UNDER-SIDE OF FLOORS, SLABS OR BEAMS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS.

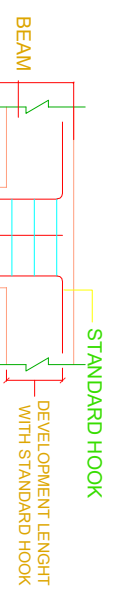


SEISMIC HOOK DETAILS

2. JOINTS SHALL BE PERPENDICULAR TO MAIN REINFORCEMENT. ALL REINFORCING STEEL SHALL BE CONTINUED ACROSS THE JOINTS.
3. JOINTS IN BASE SLAB & WALLS AND ROOF SLAB, IN ADDITION TO THOSE SHOWN ON THE DRAWINGS SHALL BE BORNE BY THE CONTRACTOR. BEAMS & BRACKETS SHALL BE PLACED AT THE SAME TIME AS SLABS.



TYPICAL BEAM DETAIL



TYPICAL COLUMN DETAIL

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 4,000$ psi	$f_y = 60,000$ psi
3/8"	18	7.5
1/2"	24	9.5
3/4"	30	14.5
1"	48	19

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

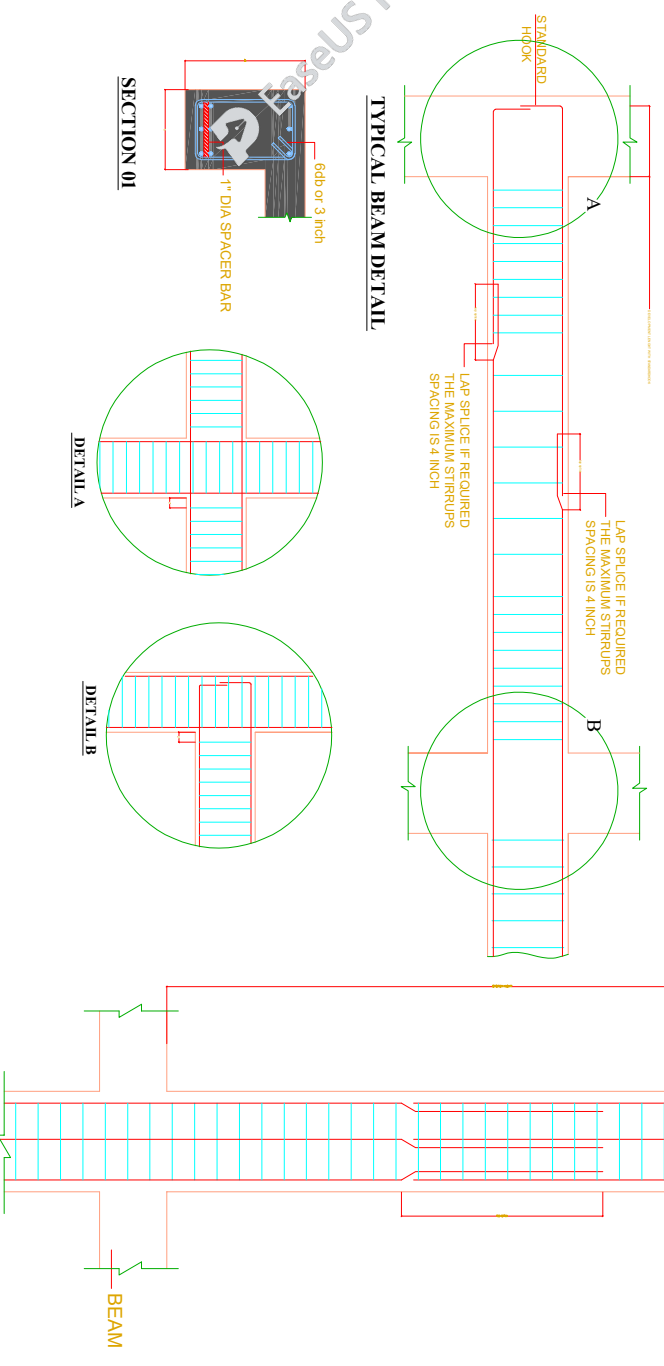
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	TENSION	COMPRESSION
3/8"	15	-
1/2"	20	9
3/4"	30	15
1"	48	18

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 3,000$ psi	$f_y = 60,000$ psi
1/2"	22	11"
5/8"	30	14"
3/4"	34	17"
1"	55	22"

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	SLAB	BEAM / COLUMN
1/2"	25	35
5/8"	-	44
3/4"	-	55
1"	-	70



TYPICAL BEAM DETAIL

SECTION 01

DETAIL A

DETAIL B

TYPICAL COLUMN DETAIL

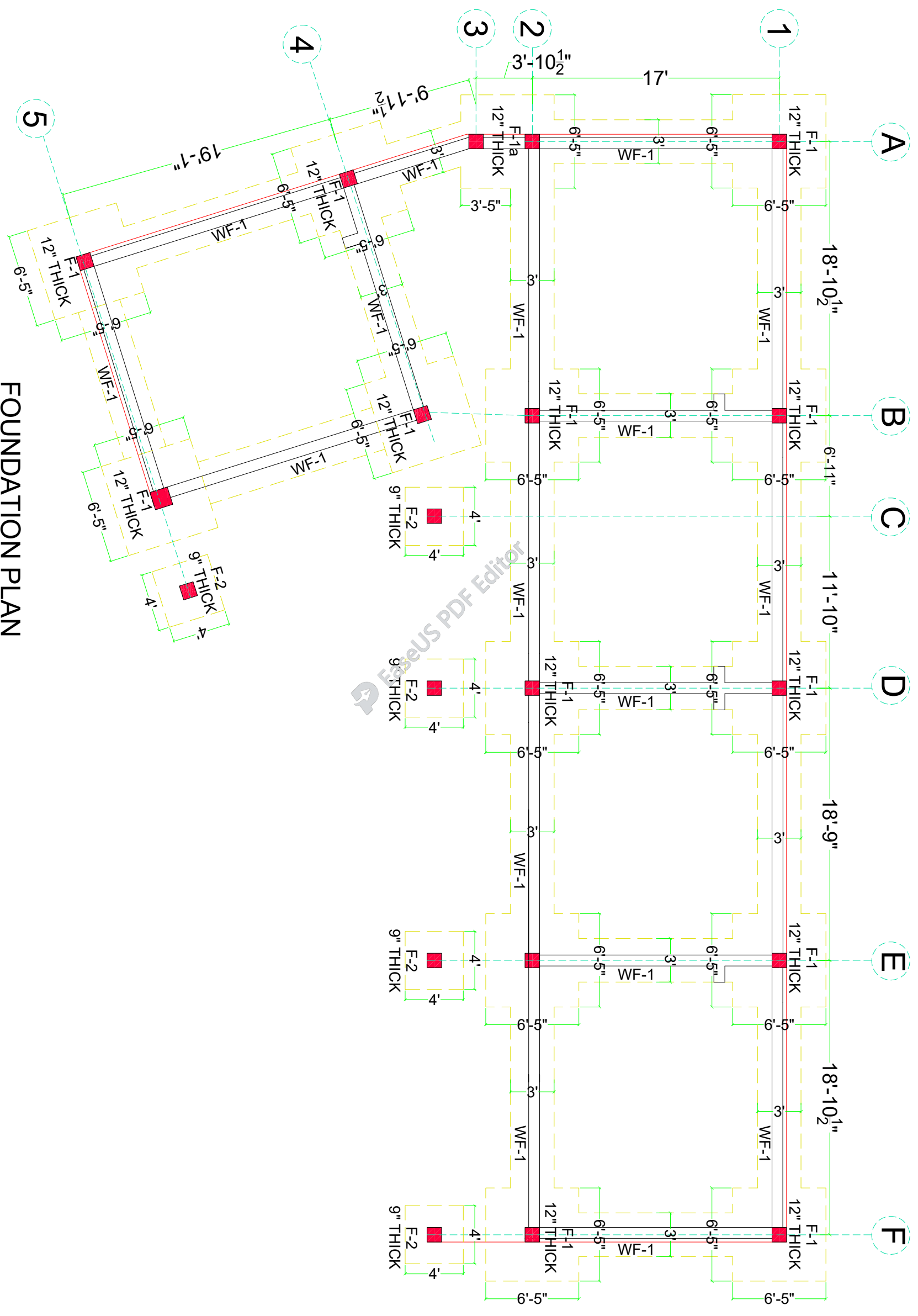
CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	PROJECT:
	ENG. KHAN KHAN KHAN	PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	GERNAL NOTES
	Checked By	
	Approved By	DATE: SEP 2023
		SCALE
		DRG.NO. S-02

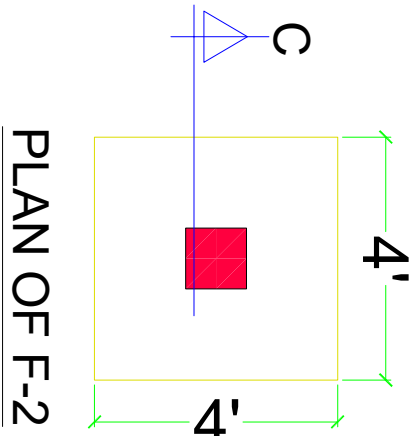
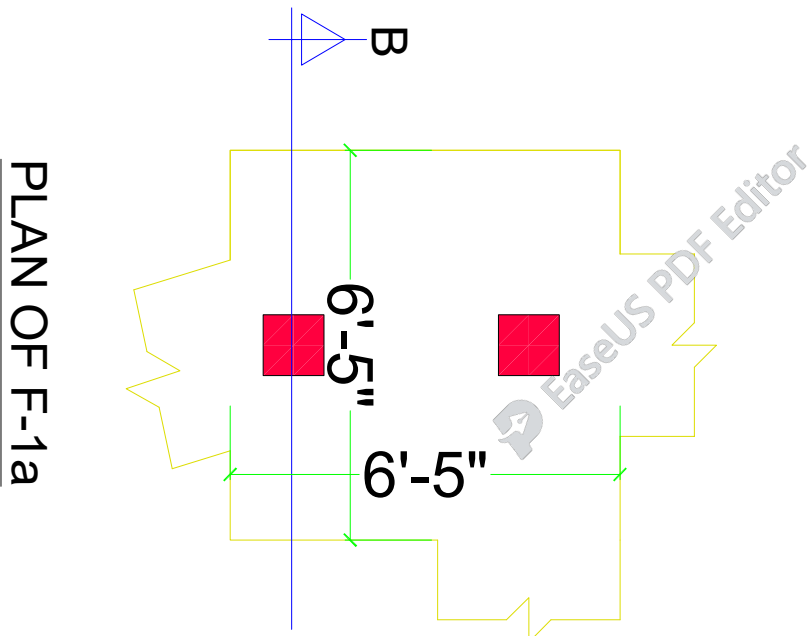
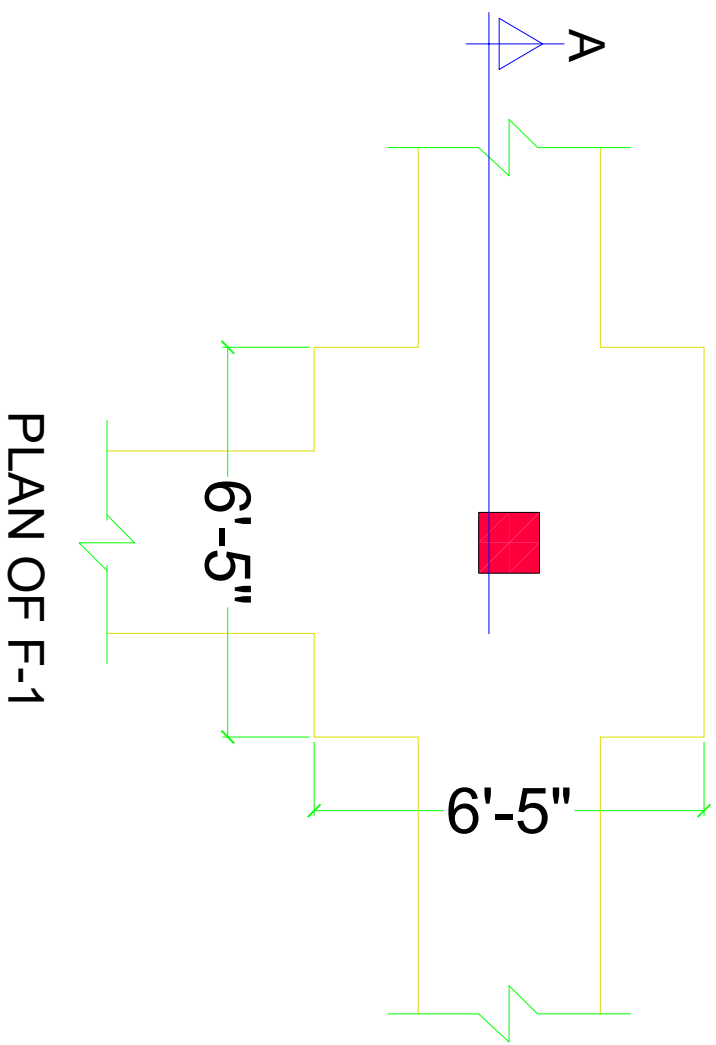
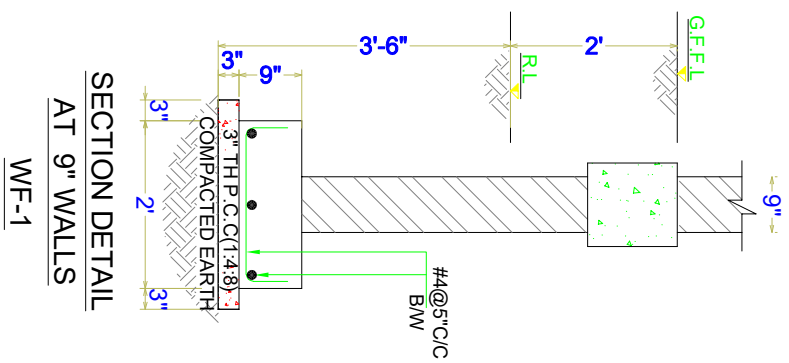
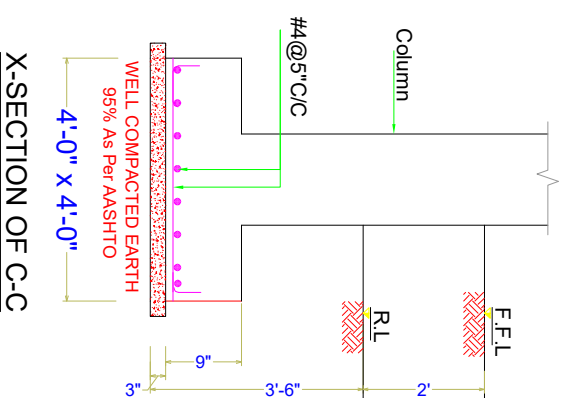
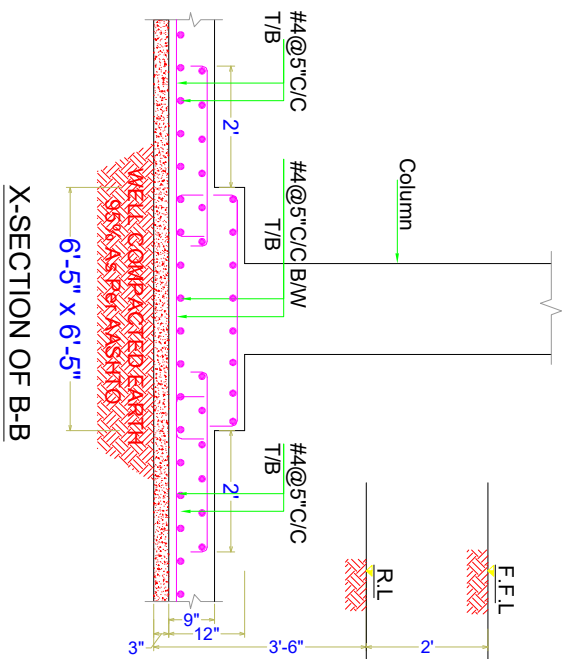
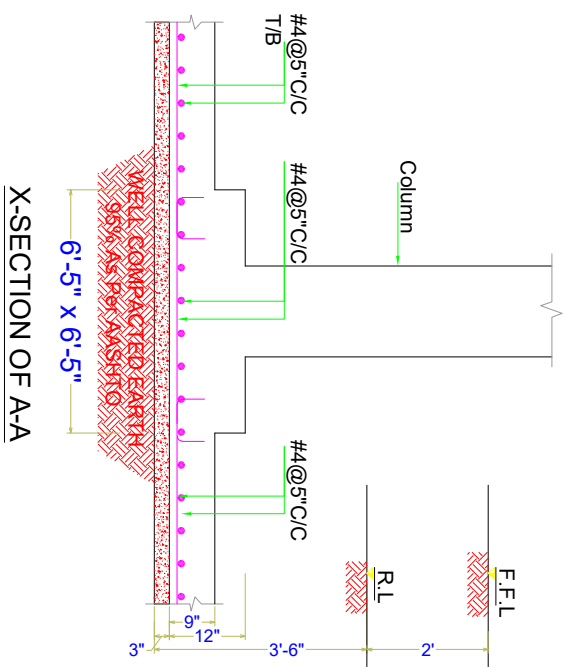


FOUNDATION PLAN

CLIENT:

 The UN Refugee Agency

SCHOOL NAME		PSC-294-BASU MAIRA DISTRICT HARIPUR	
Date of Revision	Prepared By	FARID KHAN KHAN HANIDER STRUCTURE ENGINEER : Engr. HUMZA AHMAD	PROJECT: PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/ REHABILITATION OF SITES TITLE: FOUNDATION PLAN
	Designed By		
	Checked By		
	Approved By	DATE	SEP 2023
		SCALE	
		DRG.NO.	S-03



CLIENT:

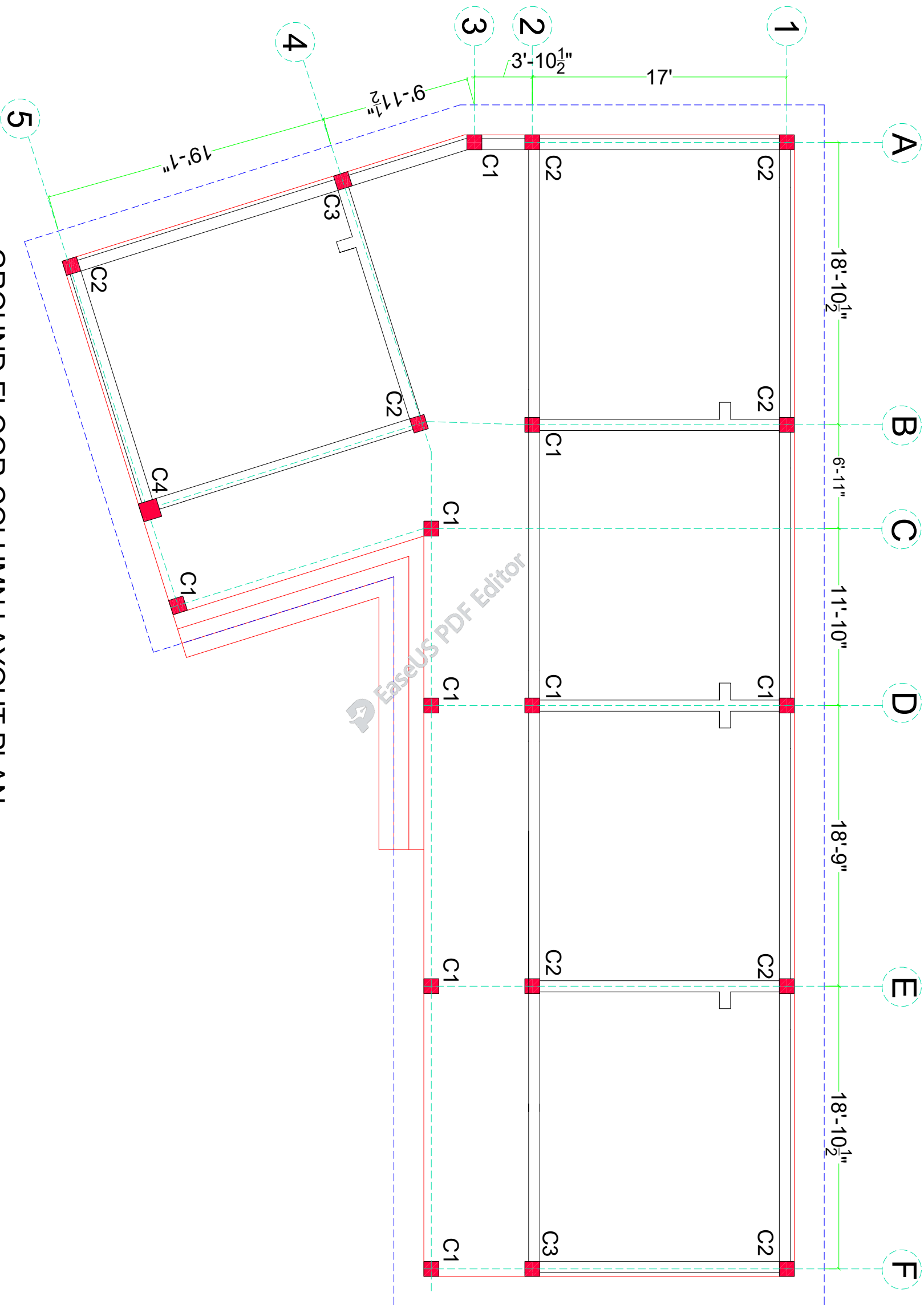


SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	Designed By	Checked By	Approved By
	RAJIB KHAN KIBAN TADIR	Engr. HUMZA AHMAD		

PROJECT:	PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
TITLE:	FOUNDATION SECTION DETAIL
DATE	SEP 2023
SCALE	
DRG. NO.	S-04



GROUND FLOOR COLUMN LAYOUT PLAN

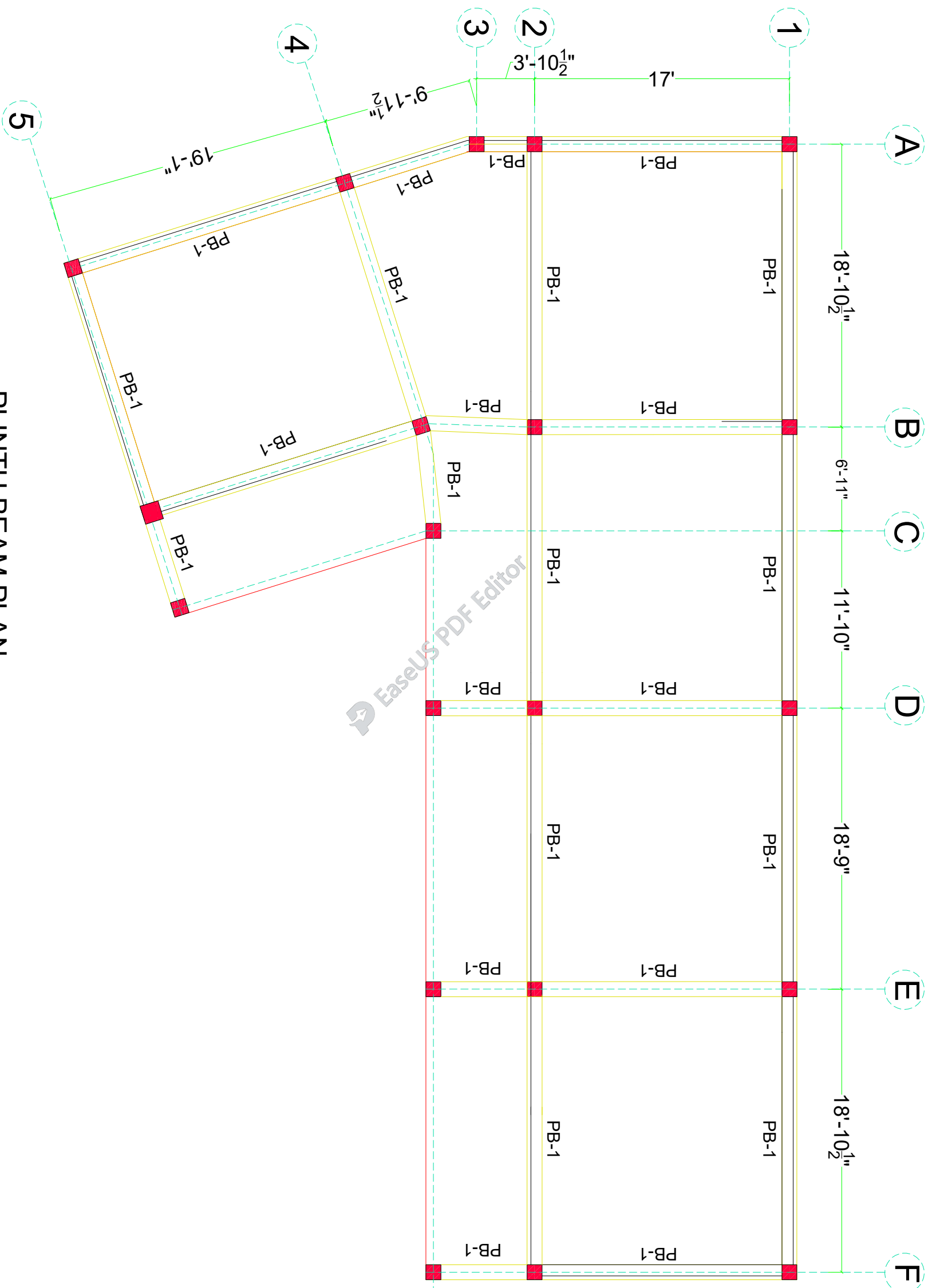
CLIENT:



UNHCR
The UN Refugee Agency

SCHOOL NAME
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	PROJECT:
	Prepared By FARID KHAN KHAN HADIR	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By MARWAT KHAN ORAKZAI (B.Arch) C.E.T (Karachi)	TITLE: GROUND FLOOR COLUMN LAYOUT PLAN
	Checked By ENGR. HUMIZA AHMAD	DATE SEP 2023
	Approved By	SCALE
		DRG. NO. S-05



PLINTH BEAM PLAN

CLIENT:

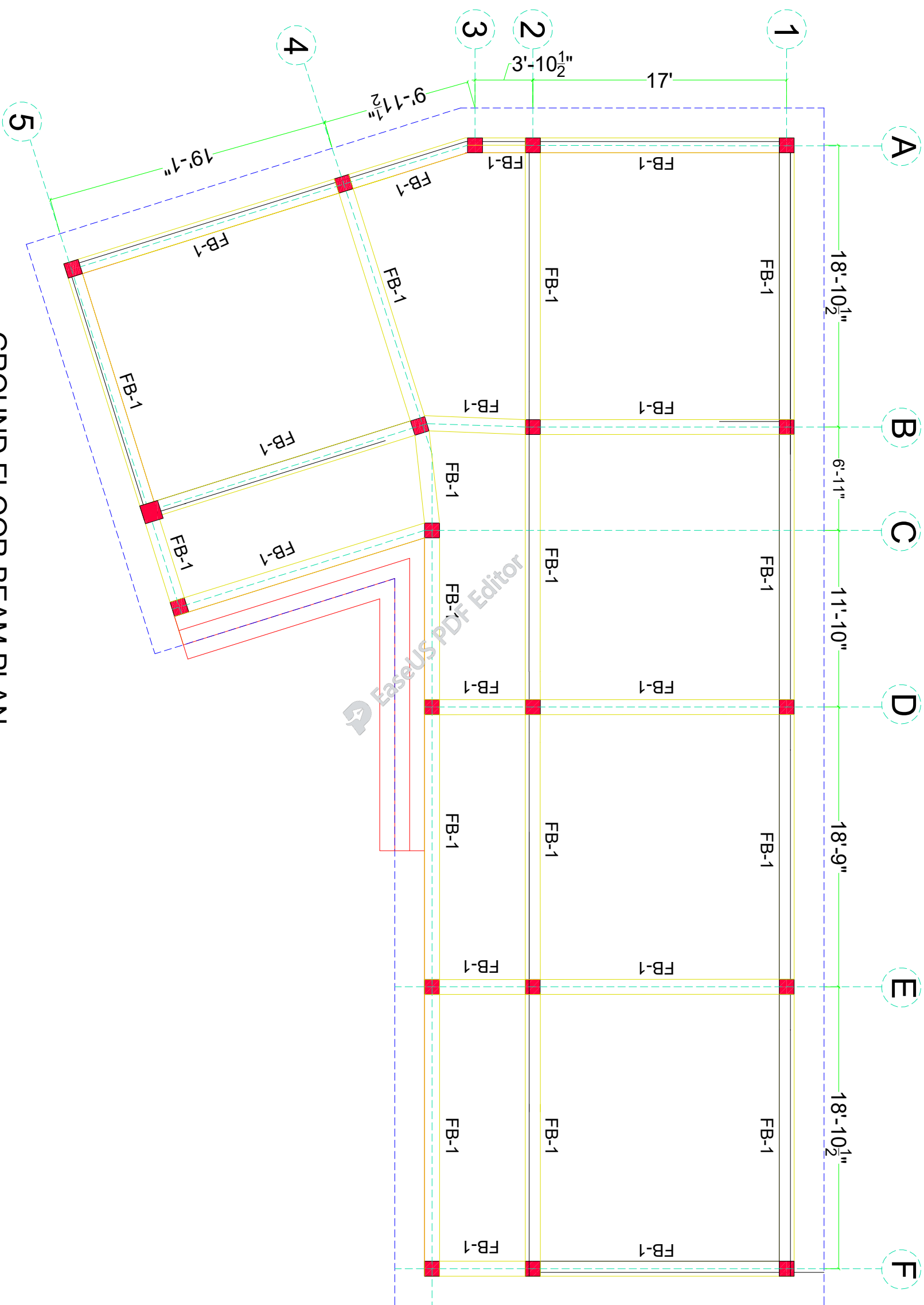


SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	STRUCTURE ENGINEER :
	Designed By	Engr. HUMZA AHMAD
	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE: PLINTH BEAM PLAN		
DATE	SCALE	DRG.NO.
SEP 2023		S-06



GROUND FLOOR BEAM PLAN

CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HADIR
STRUCTURE ENGINEER

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

Designed By

Engr. HUMZA AHMAD

TITLE:

GROUND FLOOR BEAM PLAN

Checked By

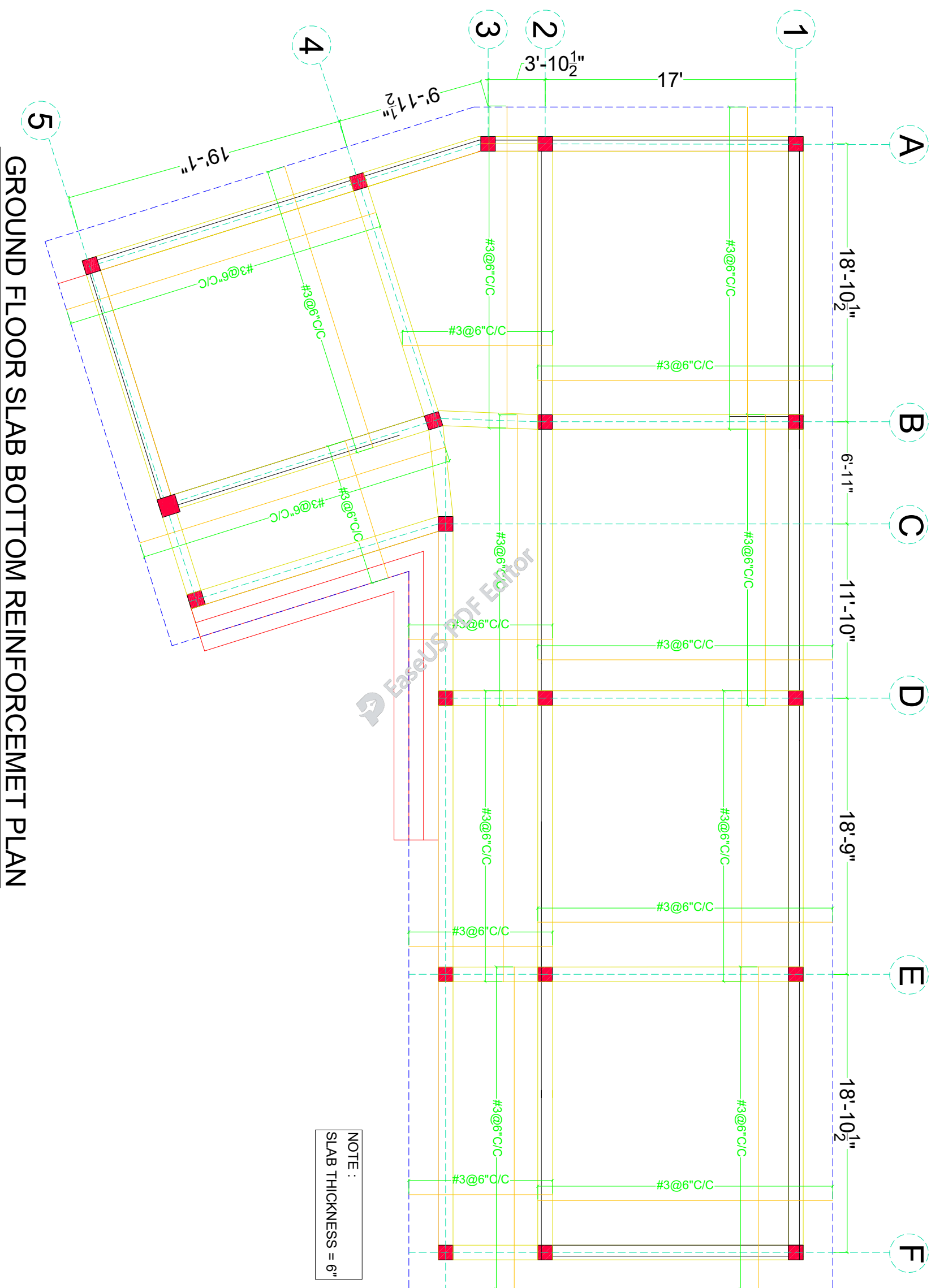
Approved By

DATE
SEP 2023

SCALE

DRG.NO.

S-07



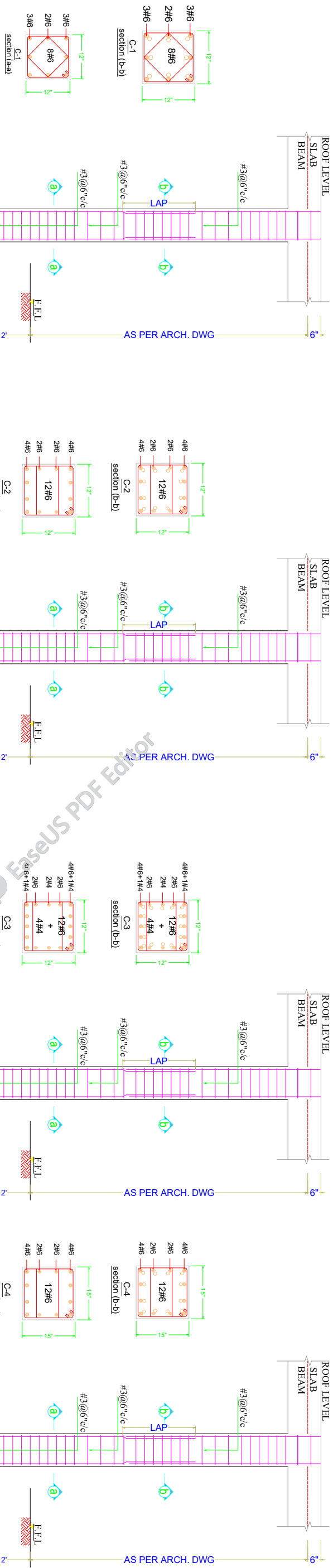
NOTE :
SLAB THICKNESS = 6"

GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN

SCHOOL NAME
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	FARID KHAN KHAN IADDER
	Designed By	Engr. HUMZA AHMAD
	Checked By	
	Approved By	

PROJECT:	PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/ REHABILITATION OF SITES
TITLE:	GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN
DATE	SEP 2023
SCALE	
DRG. NO.	S-08



ELEVATION OF C-1

ELEVATION OF C-2

ELEVATION OF C-3

ELEVATION OF C-4

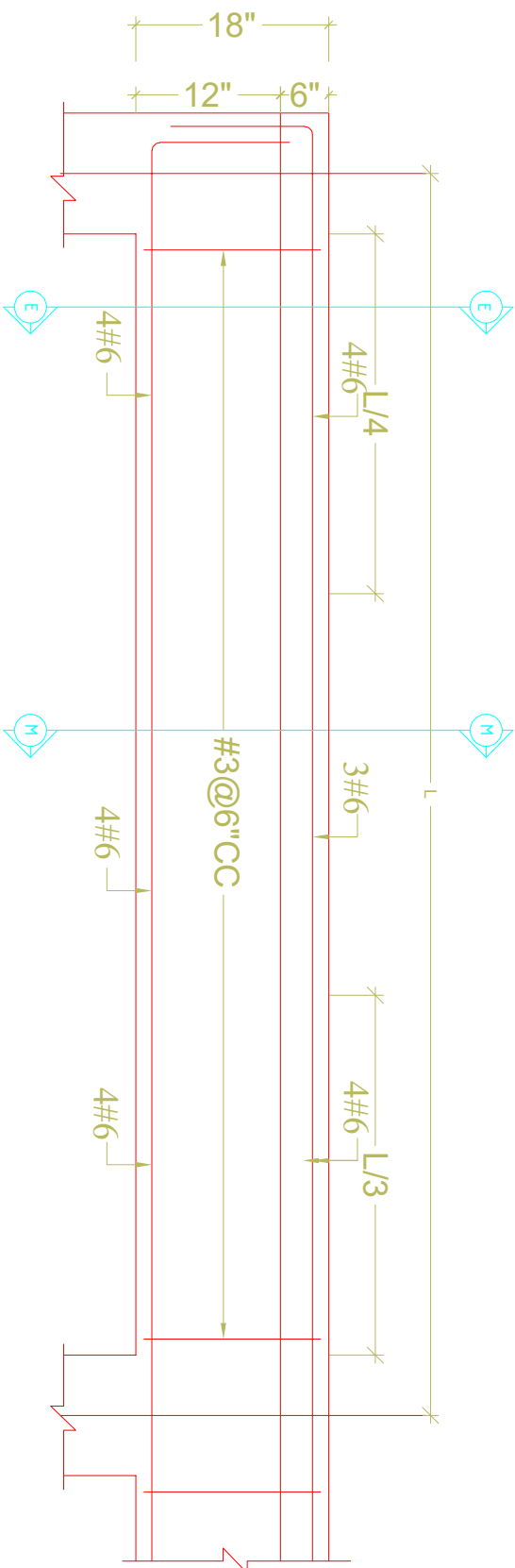
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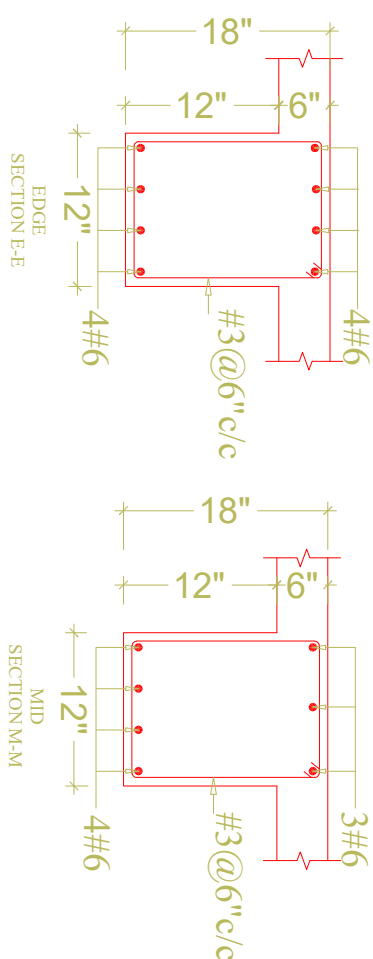
SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

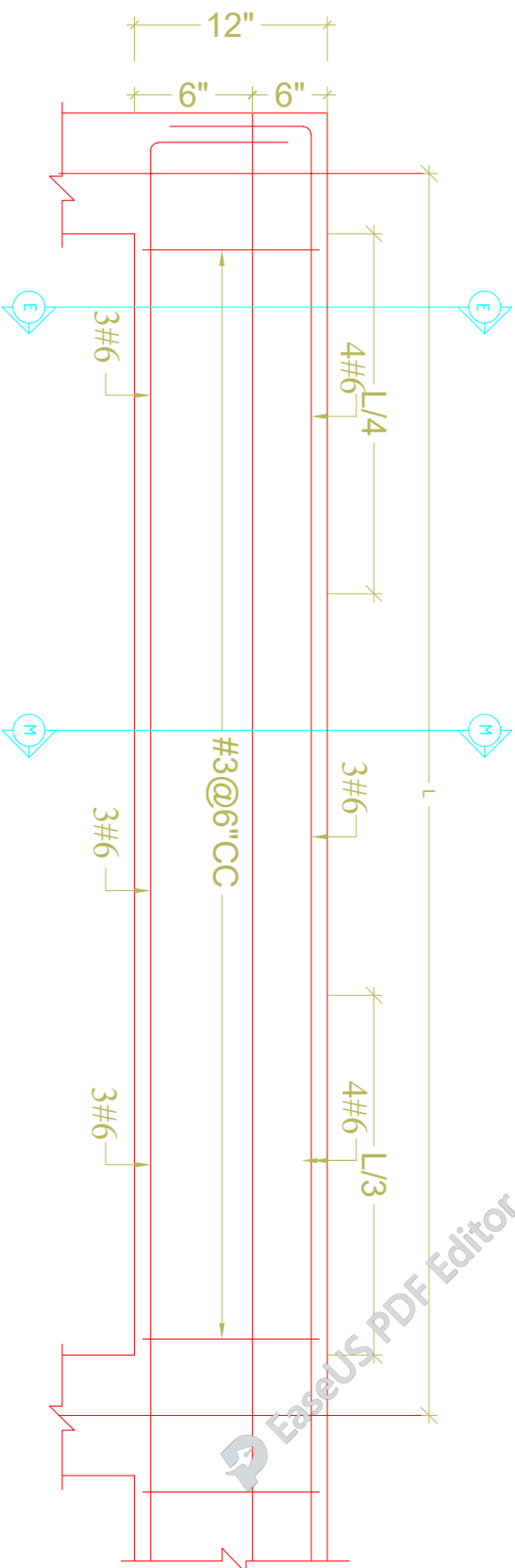
Date of Revision		Prepared By		PROJECT:	
			FARID KHAN KHAN HADDER	PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES	
			Designed By	TITLE:	
			Checked By	COLUMN DETAIL	
			Approved By	DATE	SCALE
				SFP 2023	DRG.NO. S-10



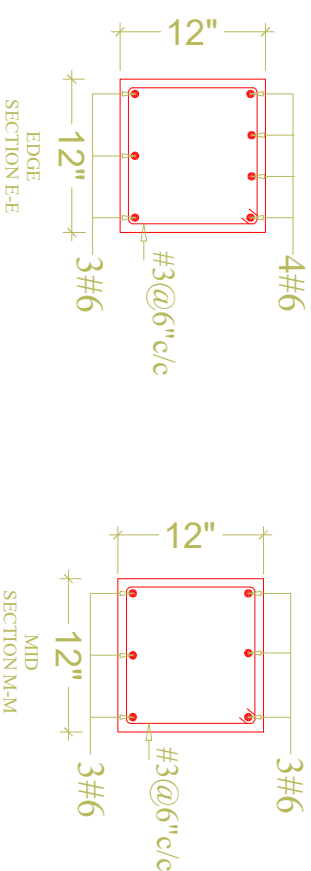
TYPICAL ELEVATION OF FB-1



DETAIL OF FB-1



TYPICAL ELEVATION OF PB-1



DETAIL OF PB-1

CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HANIDER
STRUCTURE ENGINEER

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

DESIGNED BY

Engr. HUMZA AHMAD

CHECKED BY

APPROVED BY

DATE

SEP 2023

SCALE


DRG. NO.

S-11

BEAMS DETAIL

ELECTRIFICATION DRAWINGS
OF
PSC-294-BASU MAIRA DISTRICT
HARIPUR

ELECTRICAL DRAWINGS		
1	GENERAL NOTES	E-01
2	APPROVED MANUFACTURE LIST	E-02
3	LEGEND	E-03
4	GROUND FLOOR PLAN	E-04
5	GROUND FLOOR DIMENSION PLAN	E-05
6	SECTION	E-06
7	EARTHING DETAIL PLAN	E-07
8	MAIN DISTRIBUTION BOARD	E-08
9	LOAD CALCULATION	E-09

 <p>UNHCR The UN Refugee Agency</p>	<p style="text-align: center;">SCHOOL NAME</p>	<p>Date of Revision</p>	<p>Prepared By</p>	<p>PROJECT:</p>
			<p>FAHAD KHAN KHAJANJADIK ELECTRICAL ENGINEER</p>	<p>PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES</p>
			<p>Engr. HAMMAD AHMAD</p>	<p>TITLE:</p> <p>LIST OF DRAWINGS</p>
			<p>Approved By</p>	<p>DATE</p> <p>SEP 2023</p>
				<p>SCALE</p>
				<p>DRG.NO.</p> <p>E-00</p>

ELECTRICAL SYSTEMS

FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL ELECTRICAL DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.

1. THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS THE SITE CONDITIONS NECESSITARY ALTERATION OR DEVIATION OF THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.
2. DIMENSIONS / MEASUREMENTS IS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS ACCORDING TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITION OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.
4. PROPER CO-ORDINATION OF ELECTRICAL WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.
5. ALL NON CURRENT CARRYING PARTS i.e OUTER CASINGS OF EQUIPMENT SUCH AS H.T & IT PANELS. DISTRIBUTION BOARDS. CABLE TRAYS, AUXILIARY CONSTRUCTION FOR EQUIPMENT ETC. SHALL BE CONNECTED TO THE GROUND-EARTHING SYSTEM AT REQUIRED NUMBER OF POINTS WITH SPECIFIED SIZES OF CONDUCTORS WATER PIPES ALONG ELECTRICAL LINE SHALL BE BONDED TO THE EARTHING SYSTEM WITH TO 10MMsq SINGLE CORE COPPER CONDUCTOR PVC CABLE.
6. ELECTRICAL POINTS FOR EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES SUCH AS COMMUNICATION SYSTEMS, HVAC, PLUMBING ETC. THE LOCATION ON ELECTRICAL DRAWINGS IS ONLY INDICATIVE.
7. ARRANGEMENT OF ELECTRICAL EQUIPMENTS ON ELECTRICAL DRAWINGS ARE TENTATIVE EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASY OF MAINTENANCE.
8. LOAD ON ALL PHASES SHALL BE MAXIMUM BALANCED AT THE TIME OF COMMISSIONING STAGE. IT IS RESPONSIBILITY OF CONTRACTOR.
9. CONDUIT RUN UNDER FLOOR SHALL HAVE A MINIMUM COVER OF TWO INCHES FROM TOP TO CONDUIT TO FINISH FLOOR LEVEL.
10. ALL WIRING SHOULD BE CARRYOUT ACCORDING TO THE PHASES RED, YELLOW, BLUE CABLE COLOUR ARE AS PER PHASE DISTRIBUTION IN BUILDING.
11. RUN GREEN OR WHITE SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZE AS PROTECTIVE EARTH CONDUCTOR (LCC) ALL ALONG LIGHT AND POWER WIRING WHEREVER THE SIZE IS NOT SPECIFIED THE FOLLOWING OR ILLERIA SHELL BE OBSERVED TO DETERMINE MINIMUM CROSS SECTIONAL AREA OF EARTH CONTINUITY CONDUCTOR (ECC) IN RELATION TO THE AREA OFFICE PHASE CONDUCTORS RUN SEPARATE ECC FOR EACH CIRCUIT.
 - ECC 2 PHASE CONDUCTOR OF SAVE SIZE FOR UPTO AND INCLUDING 16 MMSQ CABLES
 - FOR CABLES OF 50 MM SQ AND ABOVE SIZES IS HALF SIZE OF PHASE CONDUCTOR
 - MINIMUM SIZE ECC IS 70MM SQ.
12. ALL WIRING FOR CONTROLS SHELL BE CARRIED OUT WITH 1 CORE FLEXIBLE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.
13. THE MAXIMUM CAPACITY OF PVC CONDUITS FOR SIMAL TONCOUS DRAWING OF PVC INSULATED CABLES SHALL BE DETERMINED AS PIN BS 4607. THE FOLLOWING TABLE SHALL BE USED TO DETERMINE THE MAXIMUM NUMBER OF CABLES

NUMBER OF CABLE IN (CONDUIT)	SIZE OF CABLE		
NEW STANDER SIZE MM sq	25 MM (1")	20 MM (3/4")	15 MM (3/8")
1.5 MM sq	13	8	5
2.5 MM sq	10	6	4
4 MM sq	7	4	3
6 MM sq	5	3	2
10 MM sq	3	2	1

14. NORMAL & EMERGENCY CIRCUITS SHALL BE RUN IN SEPARATE CONDUITS.
15. THE WIRING SHELL BE CONTINUOUS LOOPING-IN TYPE AND NO JOINT IN WIRES SHELL BE ALLOWED.
16. THE WIRING SYSTEM SHELL BE CARRIED OUT ONLY AFTER THE CONDUIT SYSTEM IS COMPLETELY INSTALLED AND ALL OUTLET BOXES, ETC. ARE FIXED IN POSITION.
17. MOUNTING HEIGHTS OF ELECTRICAL FITTINGS WHEN MEASURED FROM FINISHED FLOOR LEVEL (ECC) TO THE BOTTOM OF FITTINGS SHELL BE AS UNDER UNLESS OTHER WISE SHOWN OR INSTRUCTED
 - > SWITCH BOARD 48 INCHES
 - > EXHAUST FAN REF TO ARCH DRAWING
 - > DISTRIBUTION BOARD 56 INCHES
 - > CONTROL PANEL 48 INCHES
 - > ON/OFF PUSH BUTTTON STATION 48 INCHES
 - > DIMMER CONTROL UNIT 48 INCHES
 - > LIGHT CONTROL SWITCH (ONE WAY/TWO WAY) 12 INCHES
 - > 5 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
 - > 15 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
 - > 20 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
 - > 16 AMP SOCKET OUTLETS IN KITCHEN (ABOVE COUNTER) 10 INCHES
 - > 16 AMP TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS 12 INCHES
 - > CEILING FAN ON SLAB 90 INCHES
 - > WALL BRACKET FAN 90 INCHES

SCHOOL NAME

Date of Revision	Prepared By	Electrical Engineer
	FARID KHAN KHAN HADIR	Engr. HAMMAD AHMAD
	Designed By	
	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG. NO.
PREPARATION OF DESIGN, DRAWINGS & BOOS FOR CONSTRUCTION/ REHABILITATION OF SITES	SEP 2023		E-01
GENERAL NOTES			



APPROVED MANUFACTURE LIST

S NO.	ITEM OR ACCESSORIES	BRAND
01	WIRING CABLE	PAKISTAN,NEW AGE,FAST, GM, COPPERGAT CABLE
02	POWER CABLE	PAKISTAN,NEW AGE,FAST, GM, COPPERGAT CABLE
03	LIGHT FIXTURES	PHILIPS,PIERLITE,CLIPSAL, OSAKA, FAST LIGHT
04	CEILING FAN	PAK, GFC, ROYAL, LAHORE FAN
05	PVC CONDUIT	POLO,BETA,POPULAR, GM, ADAMJEE
06	SWITCHES	PPL
07	LT SWITCHGEAR	SCHNEIDER, ABB, PEL,ELECTRECH
08	MOULDED CASE CIRCUIT BREAKER	SCHNEIDER, CHINT, LS, ABB
9	MINIATURE CIRCUIT BREAKER	SCHNEIDER, CHINT, LS, ABB

CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FIARID KHAN
KHAN HAIDER
ELECTRICAL ENGINEER

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

APPROVED MANUFACTURE LIST






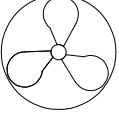
DATE


SEP 2023

SCALE

DRG.NO.

E-02

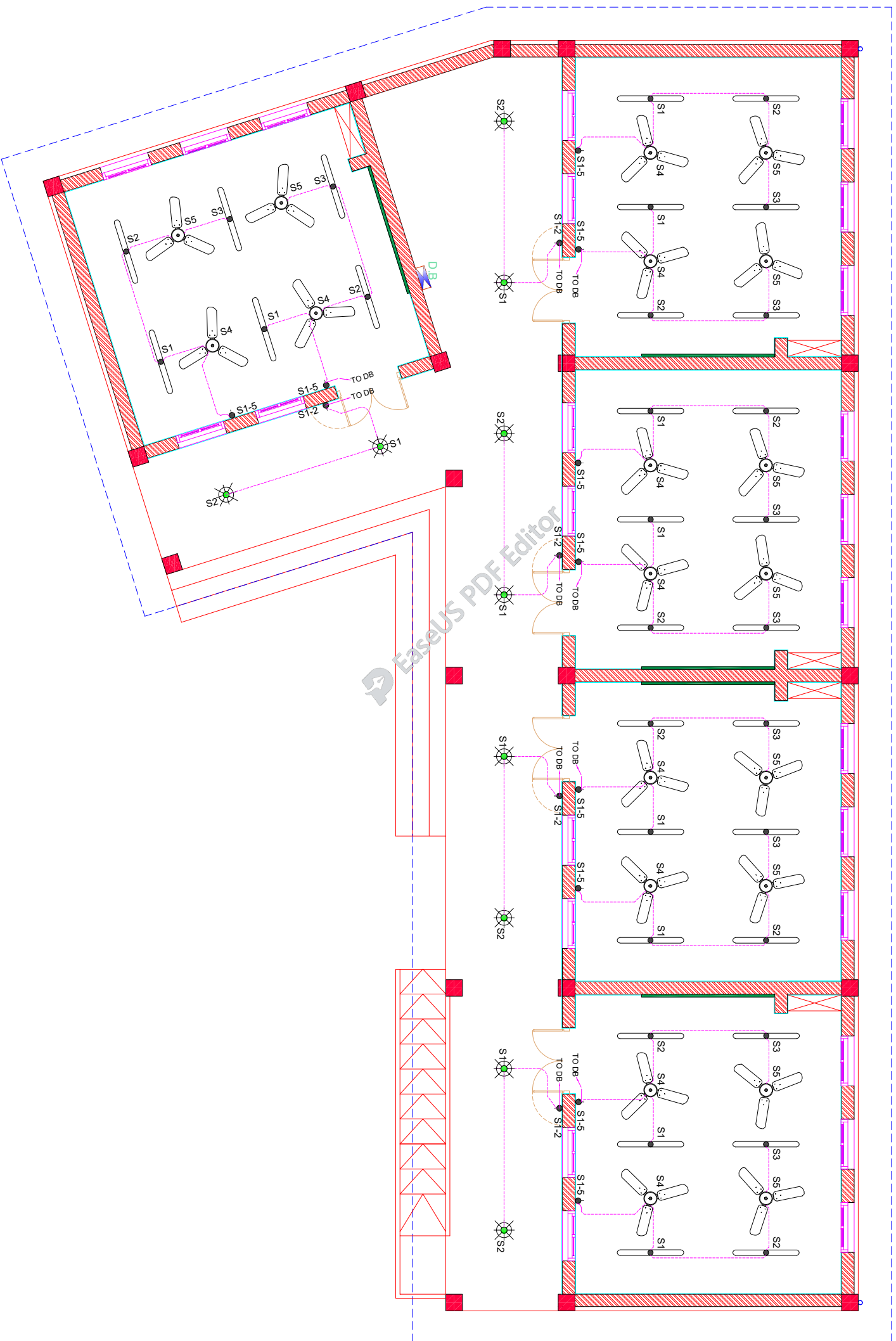
SYMBOL	DESCRIPTION	INSTALLATION HEIGHT
	SURFACE MOUNTED DOWN LIGHT WITH 17 WATT ENERGY SAVER	CEILING MOUNTED
	TMS 136	SLAB MOUNTED
	56" SWEEP CEILING FAN	SLAB MOUNTED
	SWITCH BOARD	56" FROM FFL
	DISTRIBUTION UNIT	60" FROM FFL
	EXHAUST FAN POINT	

 The UN Refugee Agency			
SCHOOL NAME			
Date of Revision	Prepared By	FAHD KHAN KHAN HADIR ELECTRICAL ENGINEER :	PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
	Designed By	Engr. HAMMAD AHMAD	TITLE: LEGEND
	Checked By		DATE SEP 2023
	Approved By		SCALE
			DRG.NO. E-03

CLIENT:



GROUND FLOOR PLAN



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

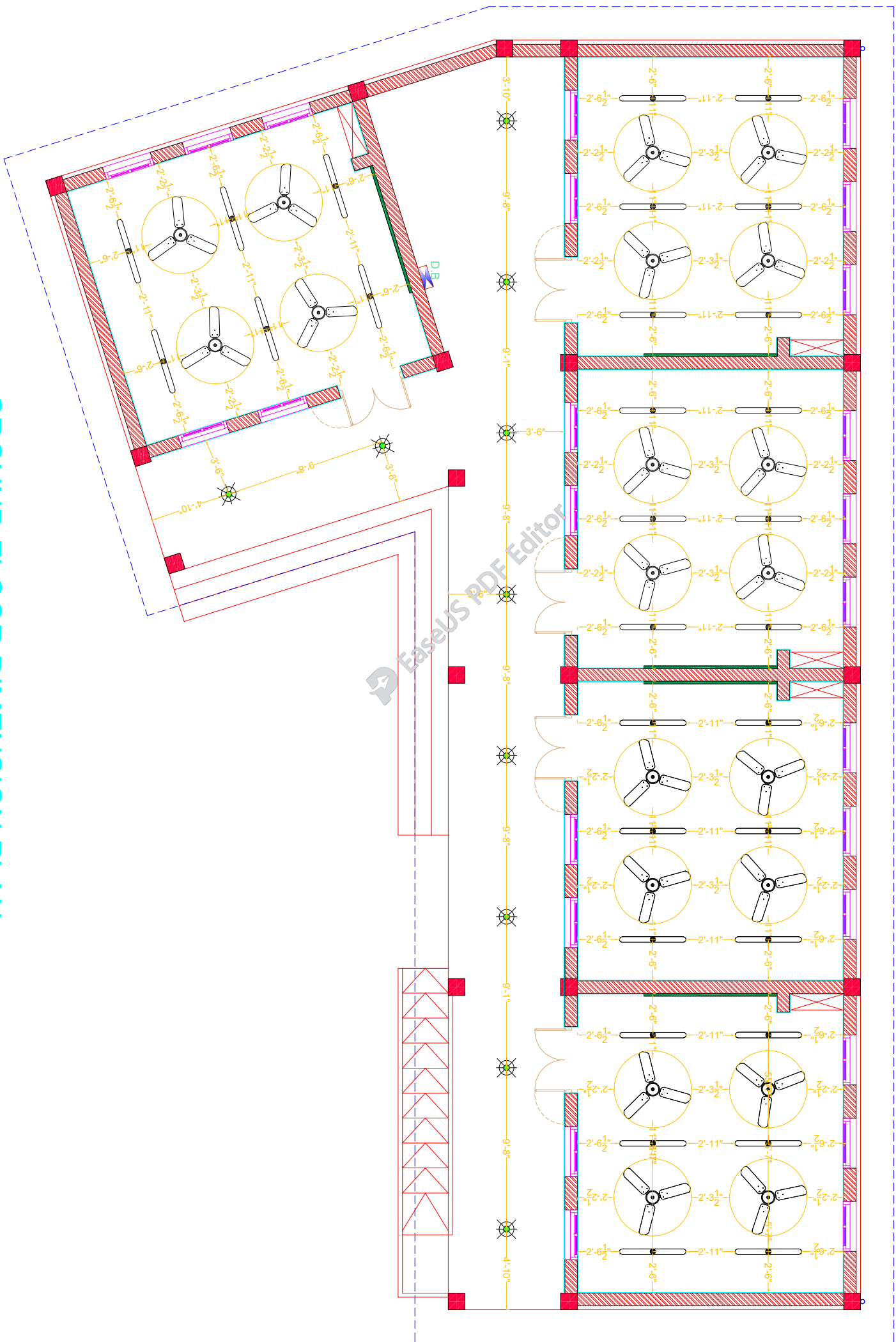
Date of Revision	Prepared By	PROJECT:
	FARID KHAN KHAN HANIDER ELECTRICAL ENGINEER	PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	TITLE: GROUND FLOOR PLAN
	Checked By	
	Approved By	DATE SEP 2023

Scale	DRG.NO.
	E-04

CLIENT:



GROUND FLOOR DIMENSION PLAN



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HADDER
ELECTRICAL ENGINEER

PROJECT:
PREPARATION OF DESIGN DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

Designed By

Engr. HAMMAD AHMAD

TITLE:
GROUND FLOOR DIMENSION PLAN

Checked By

DATE

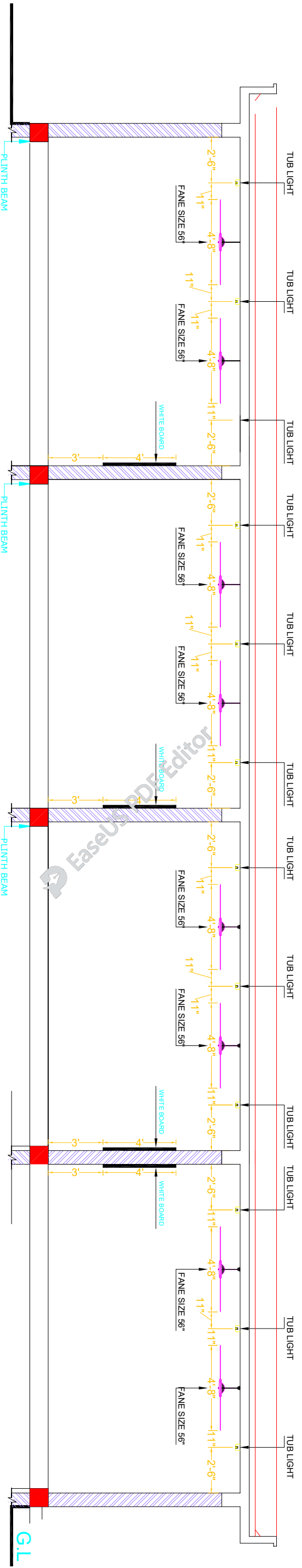
Approved By

SEP 2023

SCALE

DRG.NO.

E-05



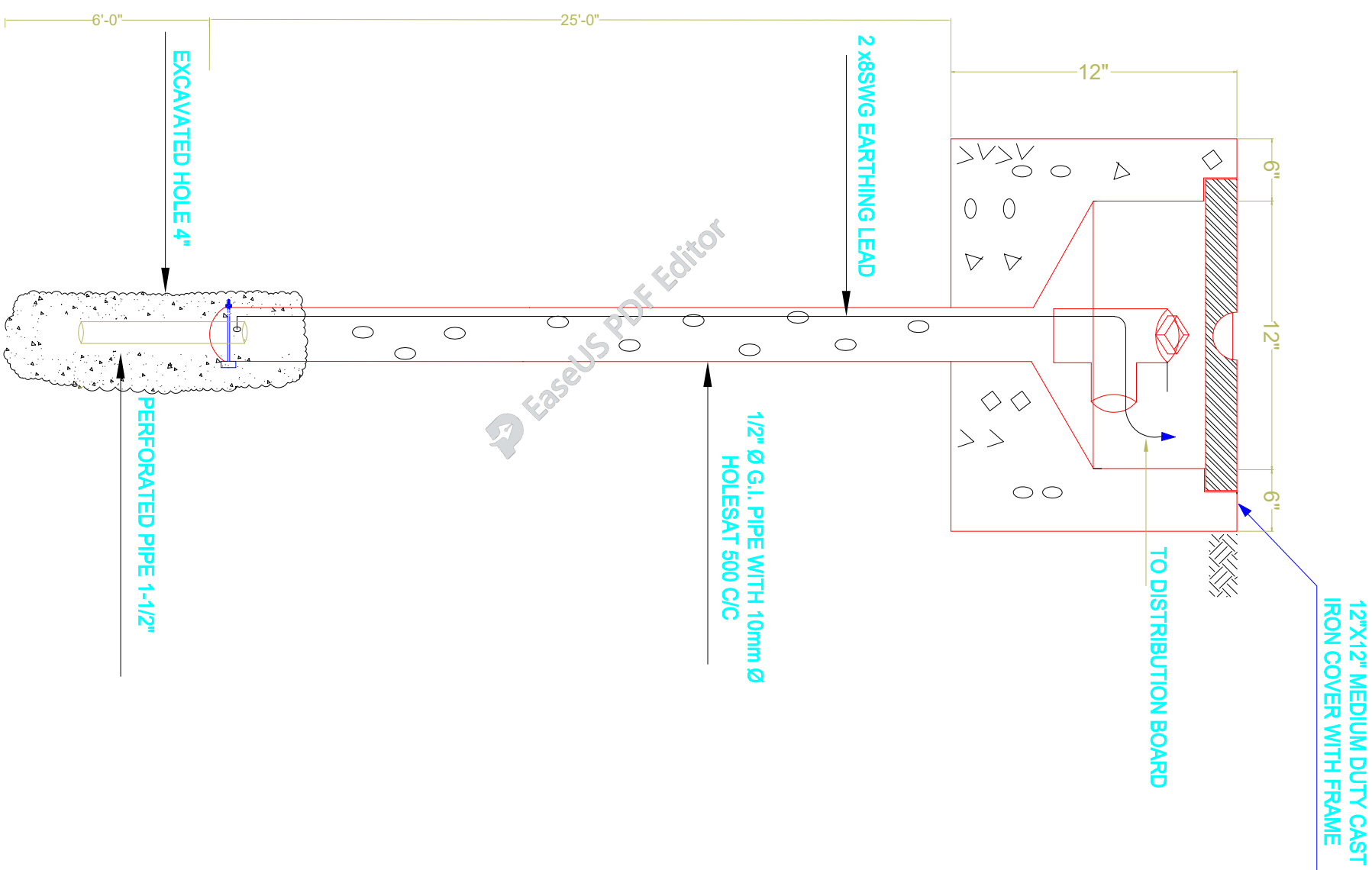
SECTION

SCHOOL NAME



Date of Revision	Prepared By	FAHAD KHAN KHAN HAIDER
	Designed By	Engr. HAMMAD AHMAD
	Checked By	
	Approved By	

PROJECT:	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
TITLE:	SECTION
DATE	SEP 2023
SCALE	
DRG.NO.	E-06



CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHANHAIDER
ELECTRICAL ENGINEER

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOKS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

EARTHING DETAIL PLAN

DATE

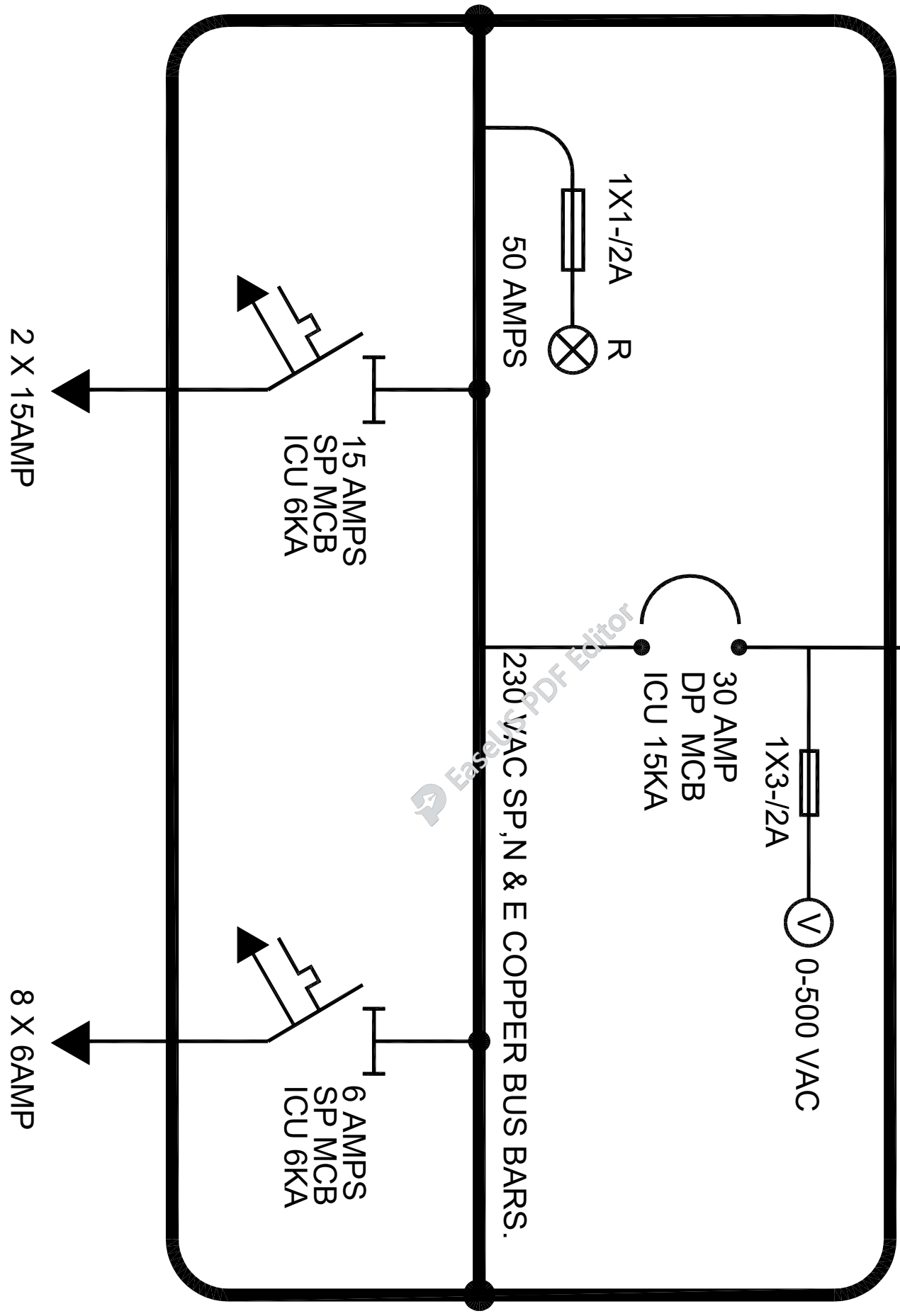
SEP 2023

SCALE

DRG.NO.

E-07

INCOMING FROM MAIN
 DISTRIBUTION BOARD
 2 X 7/0.044" SINGL CORE
 1X7/0.044" SINGL CORE AS EARTH
 16 SWG SHEET STEEL POWDER
 PAINTED RECESSED IN WALL.



DISTRIBUTION BOARD

SCHOOL NAME		Date of Revision		PROJECT:	
				PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	
Prepared By	Designed By	Checked By	Approved By	Engr. HAMMAD AHMAD	TITLE: MAIN DISTRIBUTION BOARD
FARID KHAN KHAN HAIDER ELECTRICAL ENGINEER					DATE SEP 2023
					SCALE
					DRG.NO.
					E-08



LOAD CALCULATION

LOAD (W)	2920
PEAK DEMAND LOAD (W)	2920
25% FUTURE LOAD PROVISION (W)	3650
TOTAL LOAD (W)	4056
CABLE SIZE (MM sq)	6mm

CLIENT:

SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

EYAD KHAN
KHAN HAIDER
ELECTRICAL ENGINEER

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LOAD CALCULATION

DATE

SEP 2023

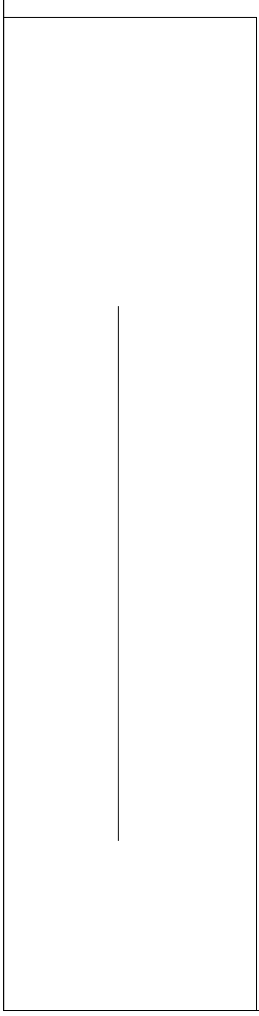
SCALE

DRG.NO.

E-09



PROPOSED DESIGN
OF
REHAB WORKS
AT
PSC-294-BASU MAIRA
DISTRICT HARIPUR



LIST OF DRAWINGS

ARCHITECTURAL DRAWINGS		PLUMBING DRAWINGS			
SR.NO	DESCRIPTION	DRG. NO.	SR.NO	DESCRIPTION	DRG. NO.
1	GROUND FLOOR PLAN	A-01	17	GENERAL NOTES	P-01
2	FRONT ELEVATION	A-02	18	GROUND FLOOR PLUMBING PLAN	P-02
3	SECTION AT B-B	A-03	19	SEPTIC TANK PLAN	P-03
4	SCHEDULE OF OPENING	A-04	WATER SUPPLY DRAWINGS		
5	VENTILATOR, PROJECTION , DRIP COURSE & RAILING DETAILS	A-05	20	LEGEND	WS-01
6	GATE PLAN	A-06	21	GROUND FLOOR WATER SUPPLY PLAN	WS-02
7	GATE ELEVATION	A-07	ELECTRICAL DRAWINGS		
STRUCTURAL DRAWINGS					
8	GENERAL NOTES	S-01	22	GENERAL NOTES	E-01
9	GENERAL NOTES	S-02	23	APPROVED MANUFACTURE LIST	E-02
10	FOUNDATION PLAN	S-03	24	LEGEND	E-03
11	FOUNDATION SECTION DETAIL	S-04	25	GROUND FLOOR PLAN	E-04
12	GROUND FLOOR LINTEL BEAM PLAN	S-05	26	GROUND FLOOR DIMENSION PLAN	E-05
13	GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN	S-06			
14	GROUND FLOOR SLAB TOP REINFORCEMENT PLAN	S-07			
15	LINTEL BEAM DETAIL	S-08			
16	GROUND FLOOR COLUMN LAYOUT PLAN (MAIN GATE)	S-09			

CLIENT:



UNHCR
The UN Refugee Agency

SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	ARCHITECT
	Designed By	MARWAT KHAN ORAZAI (M.Arch, UET Lahore)
	Checked By	
	Approved By	

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

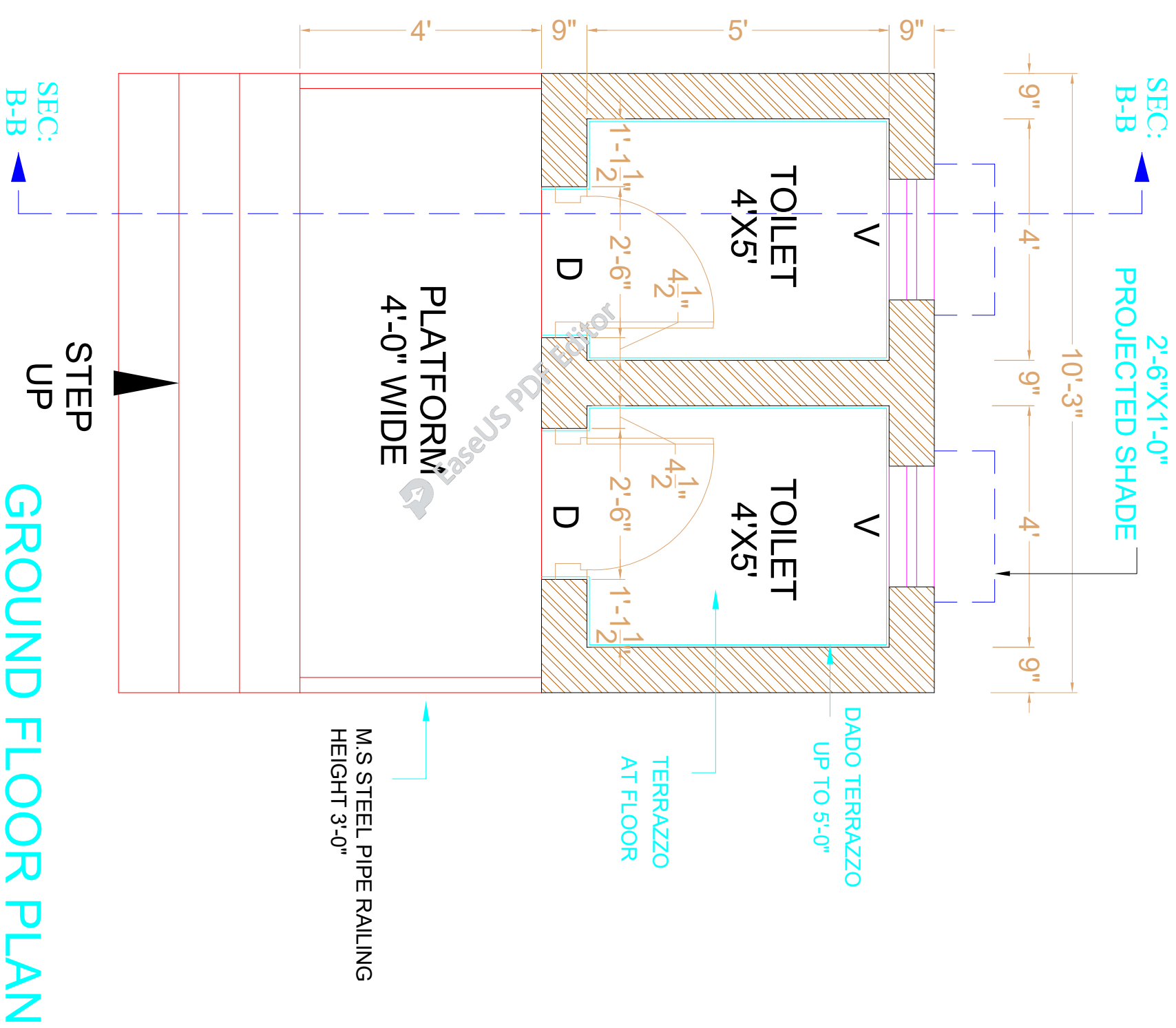
LIST OF DRAWINGS

DATE
SEP 2023

SCALE

DRG.NO.

A-00



GROUND FLOOR PLAN

CLIENT: _____



SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

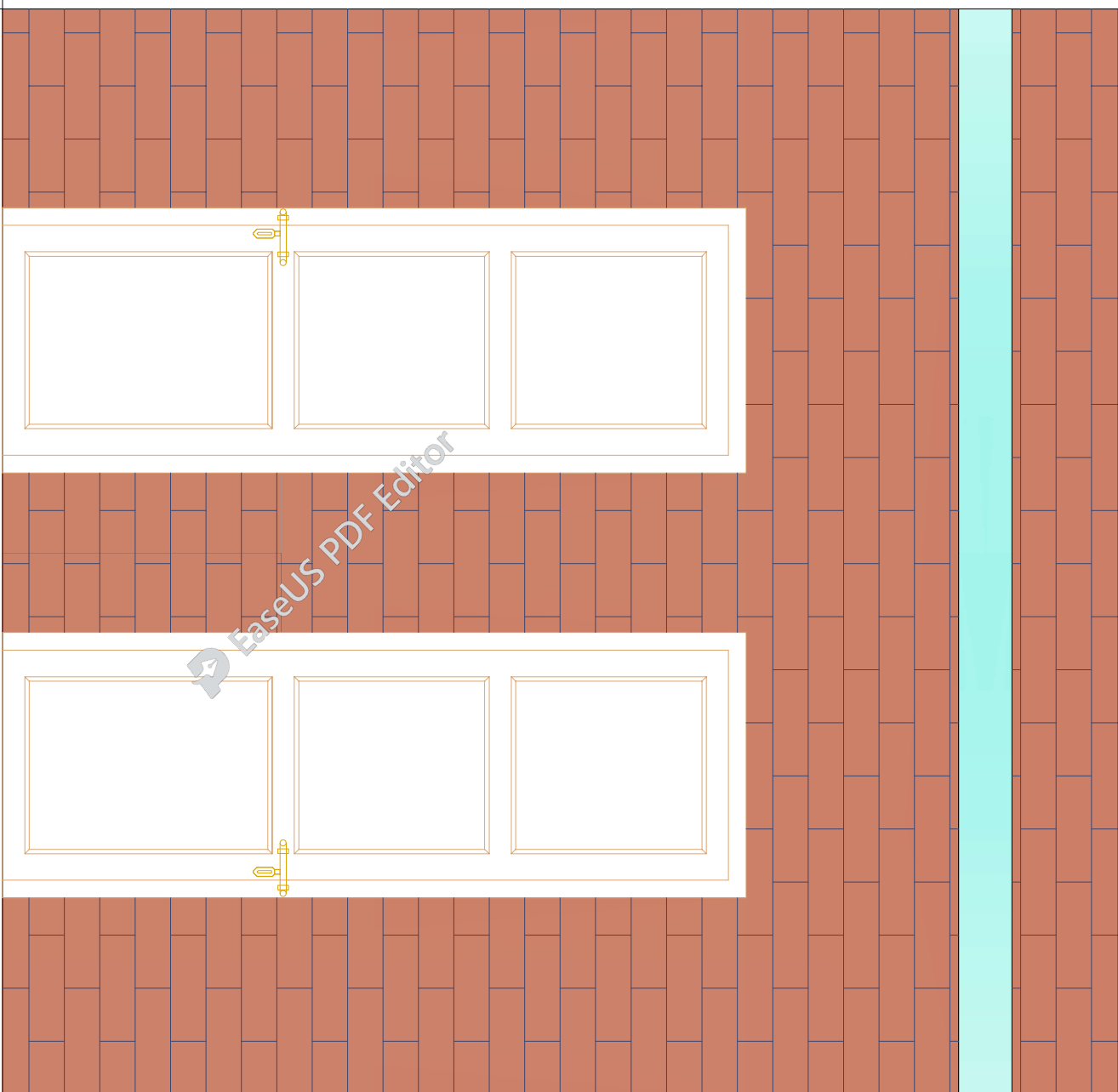
Date of Revision	Prepared By	ARCHITECT
	Designed By	MARWAT KHAN ORAKZAI (B.Arch, D.C.E.T Karachi) (M.Arch, UET Lahore)
	Checked By	
	Approved By	

PROJECT:			
PREPARATION OF DESIGN DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES			
TITLE: GROUND FLOOR PLAN			
DATE	SCALE	DRG.NO.	
SEP 2023		A-01	

CLIENT:



F.L
G.F



F.L
G.F

FRONT ELEVATION

SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HANIDER
ARCHITECT

Designed By

MARWAT KHAN ORAKZAI
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Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FRONT ELEVATION

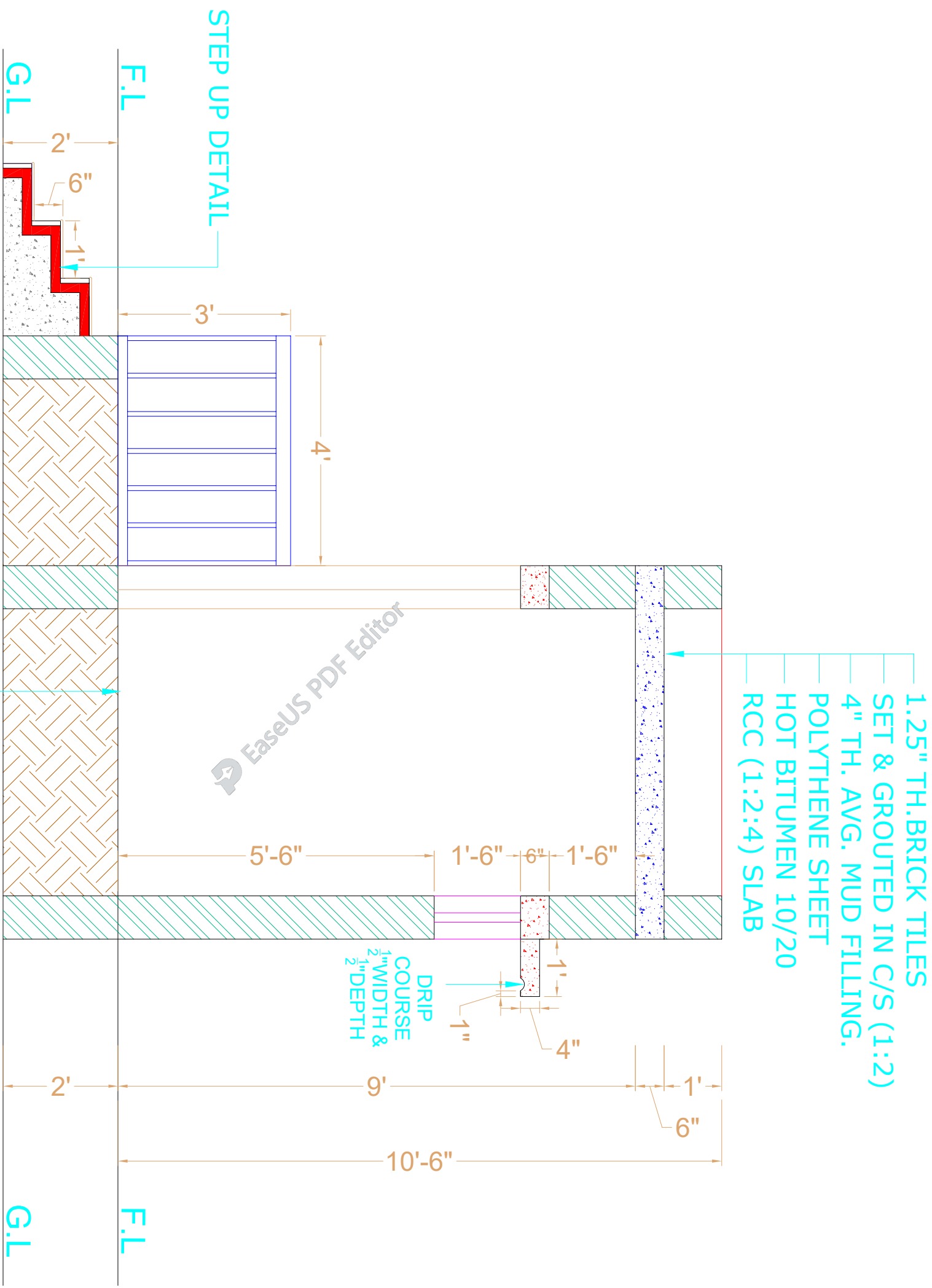
DATE

SEP 2023

SCALE


DRG.NO.

A-02



SECTION AT B.B

MARBLE TOPPING
3" PCC 1:3:6
4" SAND FILLING
COMPACTED EARTH

CLIENT:  The UN Refugee Agency		SCHOOL NAME: REHAB WORKS OF PSC-294-BASU MAIRA DISTRICT HARIPUR	
Date of Revision	Prepared By FARID KHAN KHAN HAIDER	Designed By MARWAT KHAN ORAKZAI (B.Architect Karachi) (B.Architect Lahore)	PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
Checked By	Approved By	DATE SEP 2023	TITLE: SECTION AT B.B
Scale	DRG.NO.	A-03	A-03

SCHEDULE OF OPENING

TYPE	SIZE	S-LEVEL	DESCRIPTION
D	2'-6" X 7'-0"	0"-0"	STEEL
V	2'-0" X 1'-6"	5'-6"	STEEL

CLIENT:



UNHCR
The UN Refugee Agency

SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

EYAD KHAN
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Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

SCHEDULE OF OPENING

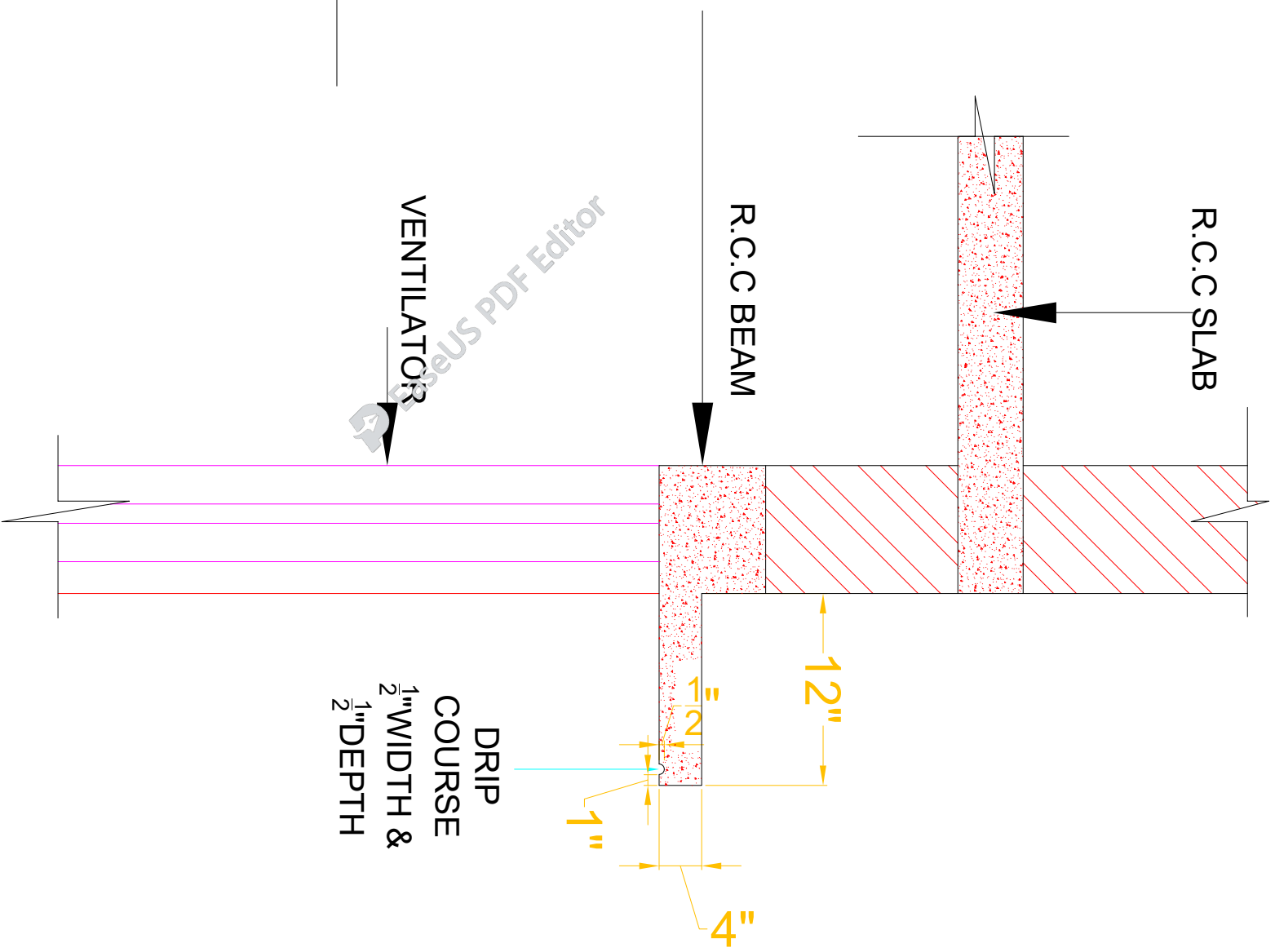
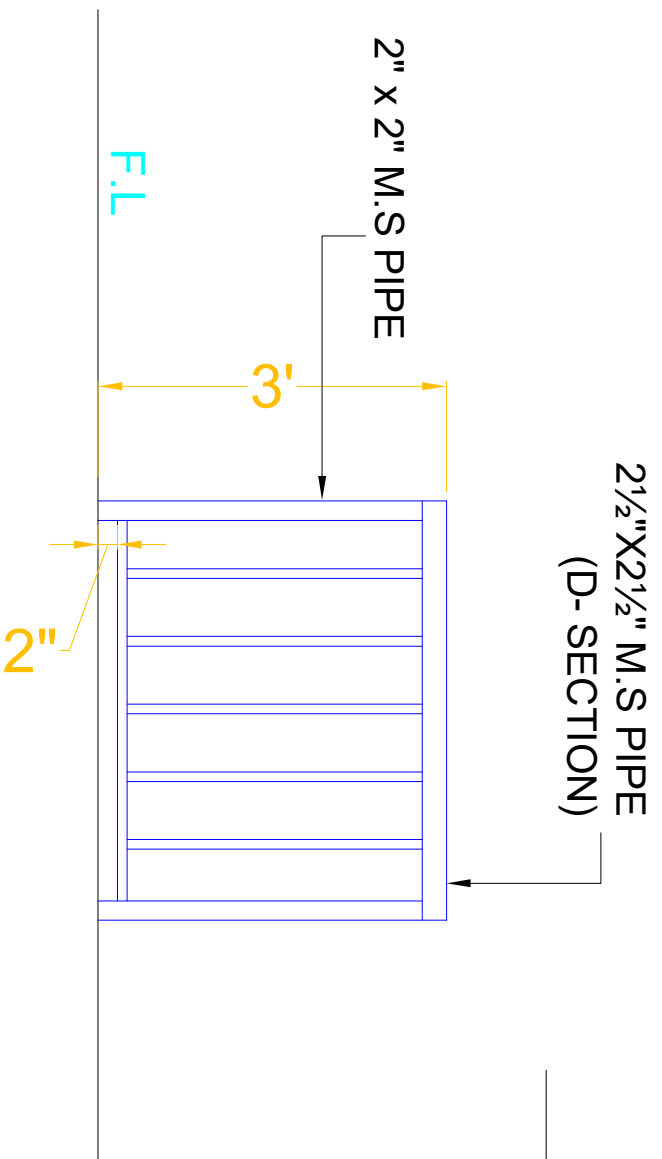
DATE

SEP 2023

SCALE

DRG.NO.

A-04



CLIENT:



SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	ARCHITECT
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	Checked By	
	Approved By	

PROJECT:		
PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES		
TITLE: VENTILATOR, PROJECTION, DRIP COURSE AND RAILING DETAILS		
DATE	SCALE	DRG.NO.
SEP 2023		A-05



MAIN GATE

GATE PLAN

CLIENT:



SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HADDER
ARCHITECT

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

GATE PLAN

Designed By
Checked By
Approved By

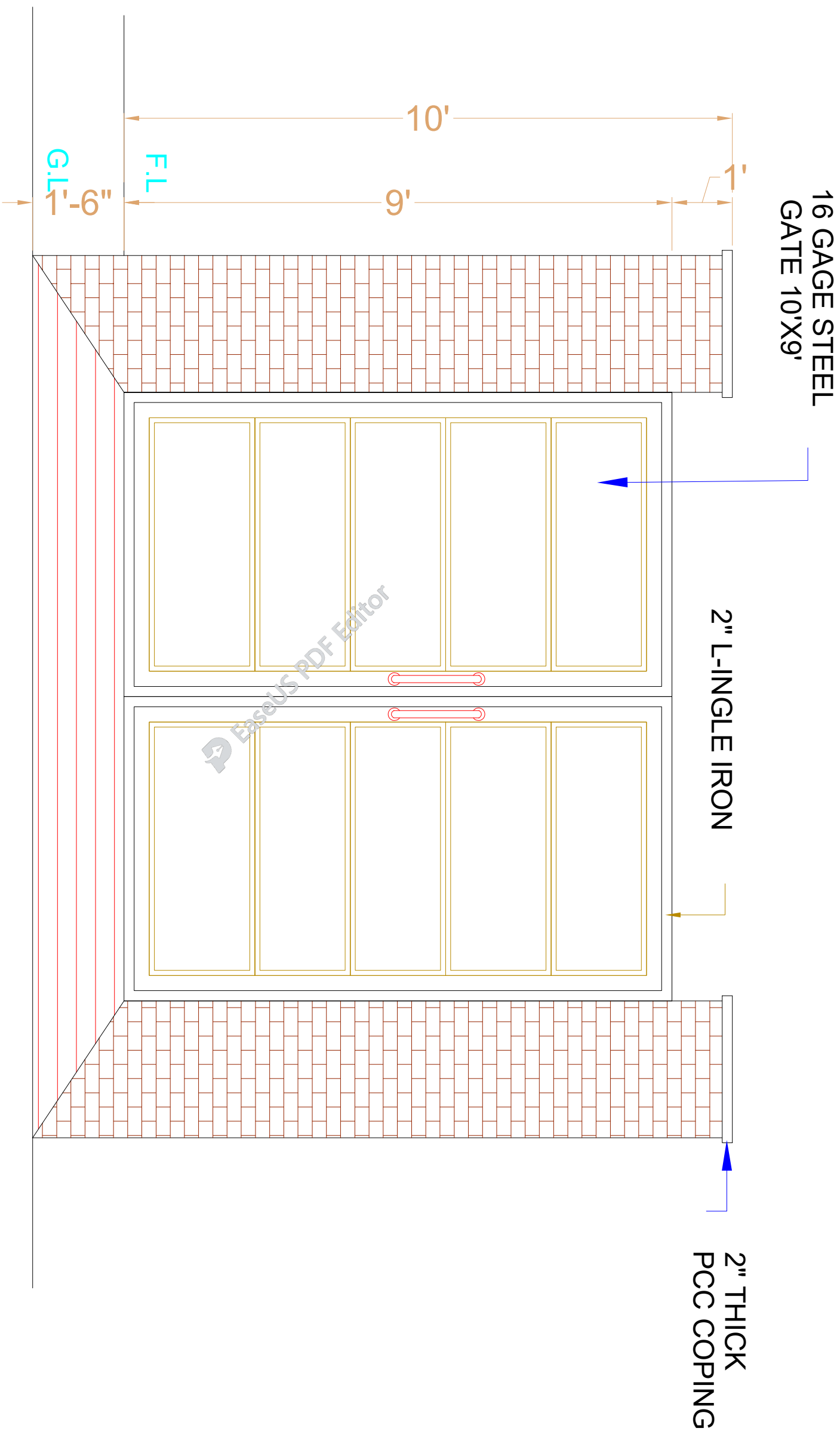
MARWAT KHAN ORAKZAI
(B.Arch, D.C.E.T, Karachi)
(M.Arch, UET, Lahore)

DATE
SEP 2023

SCALE

DRG.NO.

A-06



GATE ELEVATION

CLIENT:



The UN Refugee Agency

SCHOOL NAME

REHAB WORKS OF
GPSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

HARIB KHAN
KHAN, HADIR

Designed By

ARCHITECT
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(M.Arch/ITET, Lahore)

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

GATE ELEVATION

DATE

SEP 2023

SCALE

DRG. NO.

A-07

**STRUCTURE DRAWING
OF
REHAB WORKS AT
PSC-294-BASU MAIRA
DISTRICT HARIPUR**

1. GENERAL

- READ ALL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, GEOTECHNICAL, PLUMBING, MECHANICAL, ELECTRICAL & ANY OTHER RELEVANT DRAWINGS. NOTES GIVEN IN THIS DRAWING ARE APPLICABLE TO ALL DRAWINGS UNLESS MENTIONED OTHERWISE. NOTES WRITTEN ON A DRAWING, SHALL BE APPLICABLE TO THAT PARTICULAR DRAWING ONLY UNLESS OTHERWISE CROSS-REFERRED.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SPECIFICATIONS OF THE CONTRACT DOCUMENTS, IN ABSENCE OF ANY SPECIFICATIONS. ALL MATERIALS & WORKMANSHIP SHALL CONFORM TO RELEVANT ACI/BRITISH CODES AND SHALL BE SUBJECTED TO APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURES DURING CONSTRUCTION. HE SHALL ALSO VERIFY ALL DIMENSIONS AND LEVELS BEFORE EXECUTION OF WORK. ANY DISCREPANCY, ERROR OR OMISSION, IF FOUND, SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR CORRECTION AND APPROVAL.
- THE CONTRACTOR SHALL CO-ORDINATE WITH VARIOUS SERVICES DRAWINGS FOR SIZES & LOCATION OF ALL STRUCTURAL MEMBERS, FLOORS, WALLS, OPENINGS, FLOOR FINISHES, PIPES ETC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXECUTION OF DEWATERING SYSTEM WHERE SO REQUIRED DURING CONSTRUCTION.
- ALL DIMENSIONS & LEVELS ARE IN FEET & INCHES.
- DO NOT SCALE THE DRAWINGS. DIMENSIONS GIVEN ON THE DRAWING, SHALL GOVERN.
- ALL FABRICATION, PAINTING, ERECTION AND QUALITY CONTROL IS TO BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE ACI/BRITISH SPECIFICATIONS.
- BACKFILLING AROUND FOUNDATIONS AND WALLS SHALL BE WELL COMPACTED LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS.
- IT IS STRONGLY RECOMMENDED TO RECONFIRM THE SITE PLAN BEFORE START OF EXECUTION AT SITE. THE SITE SHOULD BE EXAMINED FOR CLEARANCE WITH RESPECT TO LOCAL/SEISMIC HAZARDS.
- THE CONTRACTOR SHALL INFORM THE ENGINEER ABOUT ANTICIPATED CONSTRUCTION LOADS IN THE STRUCTURE AND OBTAIN ENGINEER'S APPROVAL THEREOF BEFORE COMMENCING THE WORK.
- THE CONTRACTOR SHALL VERIFY LAYOUT, CONFIGURATION, ALL DIMENSIONS AND LEVELS PERTAINING TO EXISTING WORKS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ADOPT ADEQUATE AND APPROPRIATE MEASURES SO AS NOT TO DAMAGE THE EXISTING WORKS.
- THE CONTRACTOR SHALL EXERCISE UTMOST CARE AND PRECAUTION DURING THE WORKS, AGAINST ANY MISHAPS OR ACCIDENTS, FOR WHICH THE CONTRACTOR SHALL BE WHOLLY AND SOLELY RESPONSIBLE. THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ANY ACCIDENTS AND ANY LOSSES THEREFROM AND SHALL REPAIR AND RECTIFY THEM AT HIS OWN COST AND TIME.
- ANY DEPARTURES/DEVIATIONS DESIRED FROM THE DESIGN OR SPECIFICATIONS, OR SOLUTIONS TO ANY PROBLEMS ENCOUNTERED, SHALL BE GOT APPROVED FROM THE ENGINEER PRIOR TO IMPLEMENTATION. UNAPPROVED DEPARTURES/DEVIATIONS MAY LEAD TO REJECTION/REPLACEMENT OF THE ENTIRE WORK AT THE CONTRACTOR'S COST.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND BAR BENDING SCHEDULES. THE ENGINEER'S APPROVAL SHALL NOT RELIEVE THE APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF SHOP DRAWINGS AND BAR BENDING SCHEDULES FOR ENGINEERS APPROVAL AND OBTAIN HIS CONTRACTOR FROM HIS RESPONSIBILITY.
- The allowable bearing capacity of soil should be 11sf.

2. SHORING AND BRACING

- SHORE & BRACE ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION, TO THE EXTENT NECESSARY TO ENSURE COMPLETE SAFETY, STRENGTH & SERVICEABILITY OF ALL STRUCTURAL ELEMENTS UNDER ALL CONDITIONS OF LOADS WHICH MAY OCCUR DURING CONSTRUCTION. SUCH SHORING & BRACING IS THE CONTRACTOR'S SOLE RESPONSIBILITY AND IS NOT SHOWN ON STRUCTURAL DRAWINGS OR SPECIFIED IN THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND STABILITY OF THE SLOPES AND SHALL PROVIDE SHORING AND BRACING DURING EXCAVATION AND CONSTRUCTION, WHEREVER AND WHENEVER REQUIRED.
- SEQUENCE OF REMOVAL OF FORMWORK SHALL BE APPROVED BY THE ENGINEER. AT LEAST ONE LOWER FLOOR SHALL REMAIN PROPPED UNTILL THE UPPER FLOOR IS CAST AND CURED.

3. REINFORCED CONCRETE

- STRUCTURAL DESIGN IS BASED ON THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
- ALL STRUCTURAL CONCRETE SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) REQUIREMENTS.
- CONCRETE MIX TO BE DESIGNED ON THE BASIS OF ACI 211 OR EQUIVALENT. TRIAL STRENGTH RESULTS TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BEFORE CONCRETING.
- NO CONCRETING SHALL BE CARRIED OUT UNTIL PERMISSION IS GIVEN IN WRITING OR APPROVED BY STRUCTURE ENGINEER.
- ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM STANDARDS C31, C39, C172 & AS WRITTEN IN SPECIFICATIONS AND THE MINIMUM CYLINDER CRUSHING STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS. TESTING OF CLASS D & E CONCRETE SHALL BE PERFORMED IF SO SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.

CLASS	MIN. CYLINDER CRUSHING STRENGTH AT 28 DAYS (psi).
A	4000
B	3000
C	2400
D	1200
E	800

- CLASS OF CONCRETE FOR DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE AS FOLLOWS UNLESS NOTED OTHER WISE:

COMPONENT	CONCRETE CLASS
COLUMNS	CLASS 'A'
SLABS, BEAMS, FOUNDATION	CLASS 'B'
RCC WALLS	CLASS 'D'
PCC STEPS	CLASS 'E'
LEAN / BLINDING CONCRETE	CLASS 'E'

- ORDINARY PORTLAND CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.
- AN INTEGRAL WATER PROOFING AGENT SHALL BE USED IN CONCRETE THAT IS CONSTANTLY OR INTERMITTENTLY IN CONTACT WITH WATER AS PER MANUFACTURERS RECOMMENDATIONS (GENCON GENPRUF RMC OR PENETRON ADMIX OR EQUIVALENT).
- ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS ACI-315, ACI-318 & ACI-350R.

STRUCTURAL ELEMENT	COVER (INCHES)
FOOTINGS	2"
BEAMS	1 1/2"
COLUMNS	1 1/2"
SLABS	3/4"
WALLS	3/4"

4. REINFORCING STEEL

- ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM-A615 GRADE 60 HAVING A MINIMUM YIELD STRENGTH OF 60,000 PSI. FOR STIRRUPS, TIES AND #3 BARS USE ASTM A615 GRADE 60 HAVING MINIMUM YIELD STRENGTH OF 60,000 PSI.
- THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED STRENGTH BY MORE THAN 18,000 PSI. (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3000 PSI)
- THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25
- CLEAR COVER TO REINFORCEMENT SHALL BE: (inches)
 - L-GREATER CLEAR SPAN, db-DIAMETER OF BAR,d-EFFECTIVE DEPTH
 THE FIRST HOOP SHALL BE LOCATED NOT MORE THAN 2" FROM THE FACE OF THE SUPPORTING MEMBER.

WHERE:

5. CONCRETE CONSTRUCTION

- ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED IN THE FORMS AND HELD FIRMLY IN PLACE BEFORE & DURING THE PLACEMENT OF CONCRETE, BY MEANS OF WIRE AND SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
- INTELS ARE EXTENDED AT 9 (INCHES) FROM BOTH SIDES OF OPENING. PROVIDE 135° HOOK IN ADJACENT STIRRUPS ON ALTERNATE SIDES.
- ALL STRUCTURAL SURFACES, AGAINST WHICH EARTH IS TO BE FILLED, SHALL BE COATED WITH TWO COATS OF HOT BITUMEN OF 10/20 GRADE AT THE RATE OF 0.2 lbs/ft²/coat.
- PROVIDE POLYTHENE SHEET OVER TWO COATS OF HOT BITUMEN AT TOP OF PLINTH BEAM/DPC FOR EXTERIOR WALLS.
- BEFORE CASTING OF ANY STRUCTURAL MEMBER, THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEMS FOR ELECTRICAL, MECHANICAL, HVAC, PLUMBING, STRUCTURAL STEEL AND OTHER WORKS ARE PROPERLY LOCATED AND FIRMLY SECURED IN PLACE.
- DURING CONSTRUCTION, STACKING OF CONSTRUCTION MATERIALS, BLOCKS, etc. SHOULD BE AVOIDED ON SLAB PANELS.

6. BRICK WORK

- ALL BRICK WORK SHALL CONFORM TO SPECIFICATIONS GIVEN IN THE CONTRACT DOCUMENT.
- ALL BRICK SHALL BE SOUND, HARD, WELL BURNT AND OF UNIFORM SIZE, COLOUR AND TEXTURE. DIMENSIONAL VARIATION IN SIZES SHALL NOT EXCEED 1/8". BRICKS SHOULD BE IN ACCORDANCE WITH SPECIFICATIONS AND SHOULD CONFORM TO ASTM C62.
- ALL BRICK WORK SHALL BE ERECTED PLUMB AND TRUE TO LINE AND LEVEL. THE MAXIMUM VARIATION IN ANY STOREY HEIGHT OR ANY LENGTH OF WALL SHALL BE 1/8" IN 10'-0".
- MORTAR USED IN MASONRY CONSTRUCTION SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF NOT LESS THAN 12 MPa (1800psi) AND SHALL CONFORM TO ASTM C270.
- COMPRESSIVE STRENGTH OF BRICK MASONRY AVERAGE OF 5 UNITS AT 28 DAYS SHALL NOT BE LESS THAN AS SPECIFIED IN SPECIFICATION AND SHALL CONFORM TO RELEVANT ASTM STANDARD.
- ALL DESIGN, DETAILING, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT ACI, ASTM, AND UBC CODES AND STANDARDS.
- BRICK SHALL BE LAID "FROG" UPWARD WITH MORTAR JOINT AND IN ENGLISH FLEMISH BOND OR AS SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.
- BRICKS SHOULD BE SOAKED WITH WATER PROPERLY BEFORE USE.
- VERTICAL JOINTS SHOULD BE STAGGERED.
- ALL MASONRY WALLS SHALL BE ANCHORED TO STRUCTURAL FRAME WORK AS INDICATED ON THE DRAWINGS

SCHOOL NAME

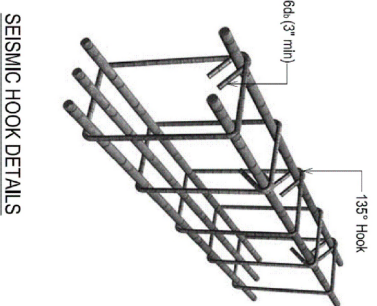
Date of Revision	Prepared By	STRUCTURE ENGINEER	PROJECT:
	Designed By	Engr. HUMZA AHMAD	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Checked By		GENERAL NOTES
	Approved By		DATE: SEP 2023
			SCALE
			DRG. NO.



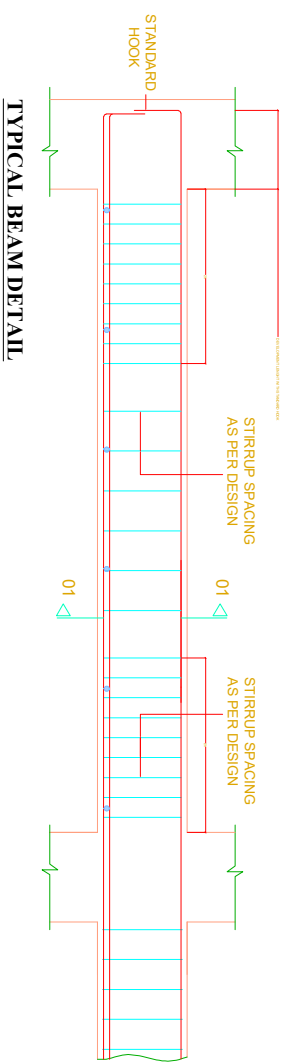
UNHCR
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7. CONSTRUCTION JOINTS

1. JOINTS, NOT SHOWN ON THE DRAWING, SHALL BE SO MADE AND LOCATED AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND SHALL NEED PRIOR APPROVAL OF THE ENGINEER. THEY SHALL BE LOCATED NEAR THE MIDDLE OF THE SPANS OF SLAB & BEAMS. JOINTS IN WALLS & COLUMNS SHALL BE AT THE UNDER-SIDE OF FLOORS, SLABS OR BEAMS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS.
2. JOINTS SHALL BE PERPENDICULAR TO MAIN REINFORCEMENT. ALL REINFORCING STEEL SHALL BE CONTINUED ACROSS THE JOINTS.
3. JOINTS IN BASE SLAB & WALLS AND ROOF SLAB, IN ADDITION TO THOSE SHOWN ON THE DRAWINGS SHALL BE BORNE BY THE CONTRACTOR. BEAMS & BRACKETS SHALL BE PLACED AT THE SAME TIME AS SLABS.



SEISMIC HOOK DETAILS



TYPICAL BEAM DETAIL

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 4,000$ psi	$f_y = 60,000$ psi
3/8"	18	7.5
1/2"	24	9.5
3/4"	30	14.5
1"	48	19

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

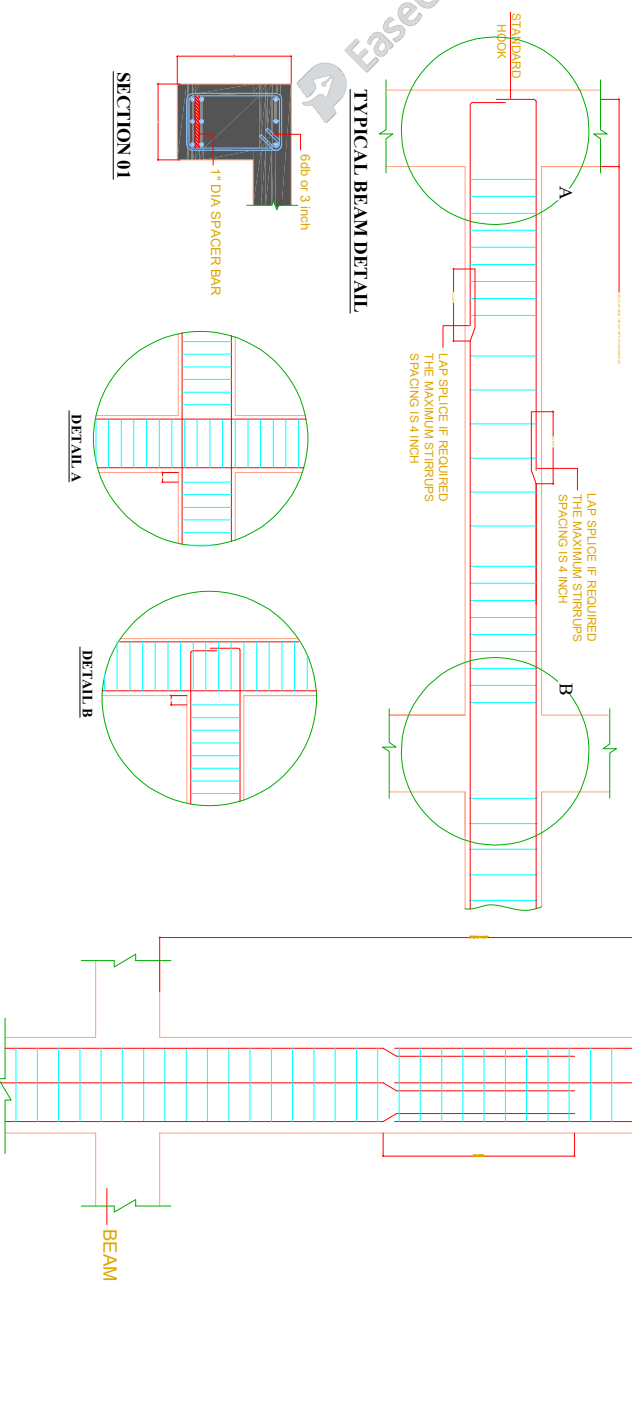
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	TENSION	COMPRESSION
3/8"	15	-
1/2"	20	9
3/4"	30	15
1"	48	18

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

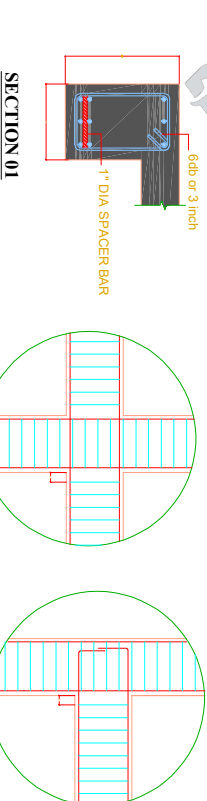
BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 3,000$ psi	$f_y = 60,000$ psi
1/2"	22	11"
5/8"	30	14"
3/4"	34	17"
1"	55	22"

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	SLAB	BEAM / COLUMN
1/2"	25	35
5/8"	-	44
3/4"	-	55
1"	-	70



TYPICAL COLUMN DETAIL

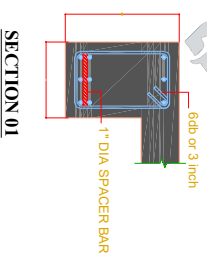


TYPICAL BEAM DETAIL

SECTION 01

DETAIL A

DETAIL B



DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 3,000$ psi	$f_y = 60,000$ psi
1/2"	22	11"
5/8"	30	14"
3/4"	34	17"
1"	55	22"

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	SLAB	BEAM / COLUMN
1/2"	25	35
5/8"	-	44
3/4"	-	55
1"	-	70

CLIENT:



SCHOOL NAME

REHAB WORKS AT
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

Farid Khan
Khan Haider
STRUCTURE ENGINEER

Designed By

Egr. HUMZA AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOQS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

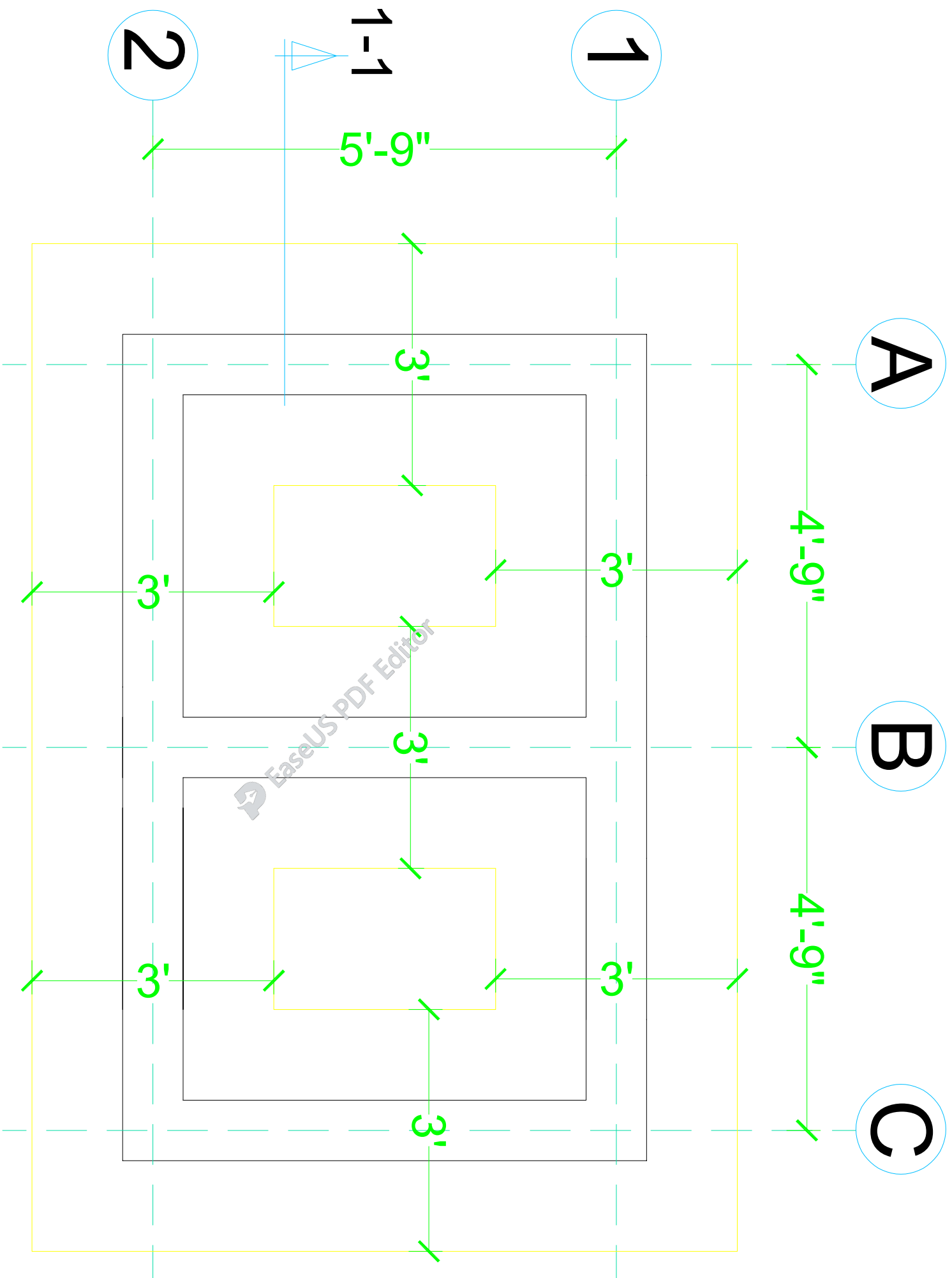
GENERAL NOTES

DATE
SEP 2023

SCALE

DRG. NO.

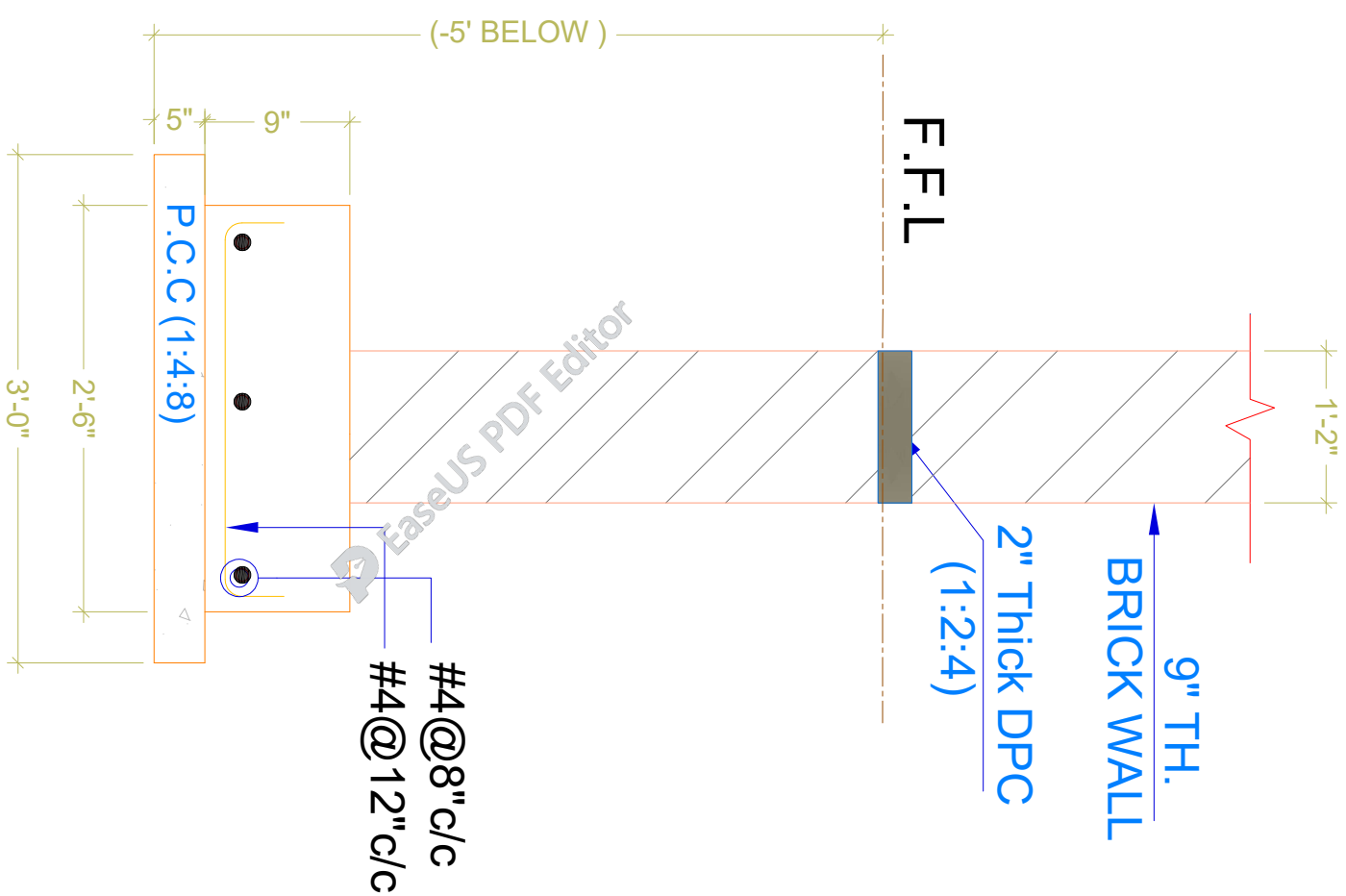
S-02



FOUNDATION PLAN



SCHOOL NAME		Date of Revision		PROJECT:	
				PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	
Prepared By		Designed By		TITLE:	
FARID KHAN KIYAN HADDER STRUCTURE ENGINEER		Egr. HUMZA AHMAD		FOUNDATION PLAN	
Checked By		Approved By		DATE	
				SEP 2023	
				SCALE	
				DRG.NO.	
				S-03	



SECTION 1-1

CLIENT:



The UN Refugee Agency

SCHOOL NAME

REHAB WORKS AT
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

Designed By

Checked By

Approved By

FARID KIYAN
KIYAN HABIBER
STRUCTURE ENGINEER

Engr. HUMZA AHMAD

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOOKS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

FOUNDATION SECTION DETAIL

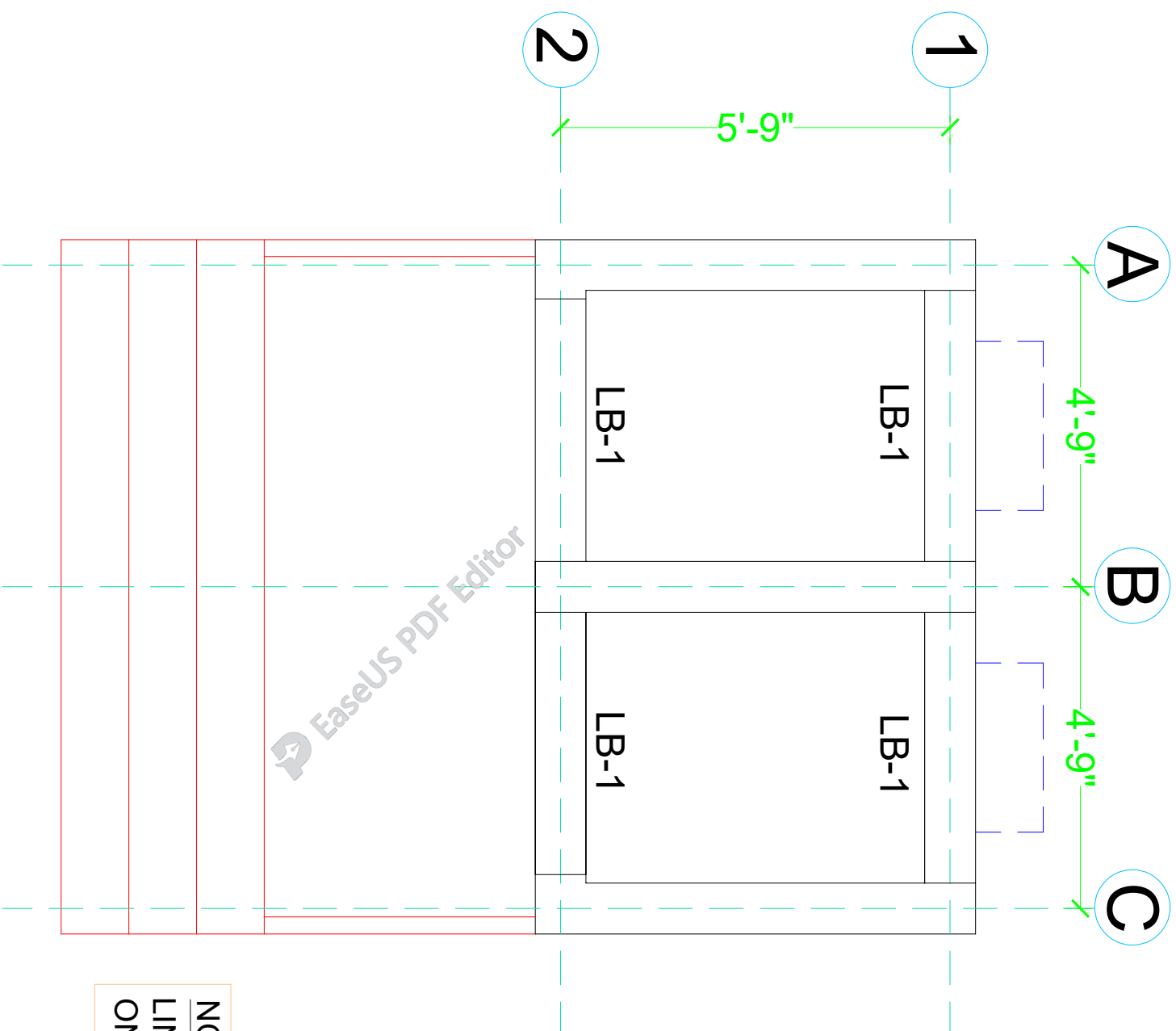
DATE

SEP 2023

SCALE


DRG.NO.

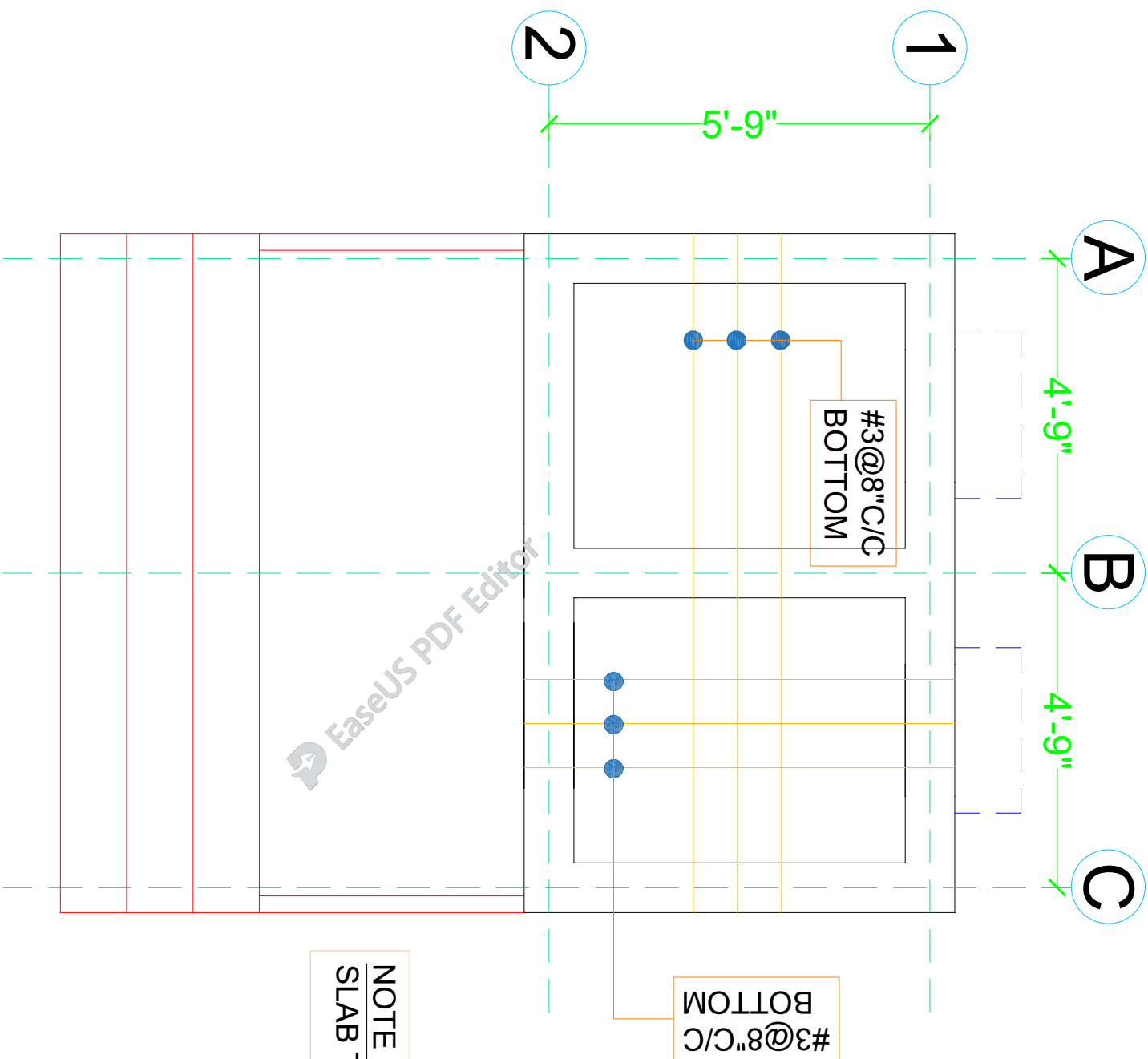
S-04



NOTE
 LINTEL BEAM WILL BE EXTEND
 ON BOTH SIDE UP TO 1'


GROUND FLOOR LINTEL BEAM PLAN

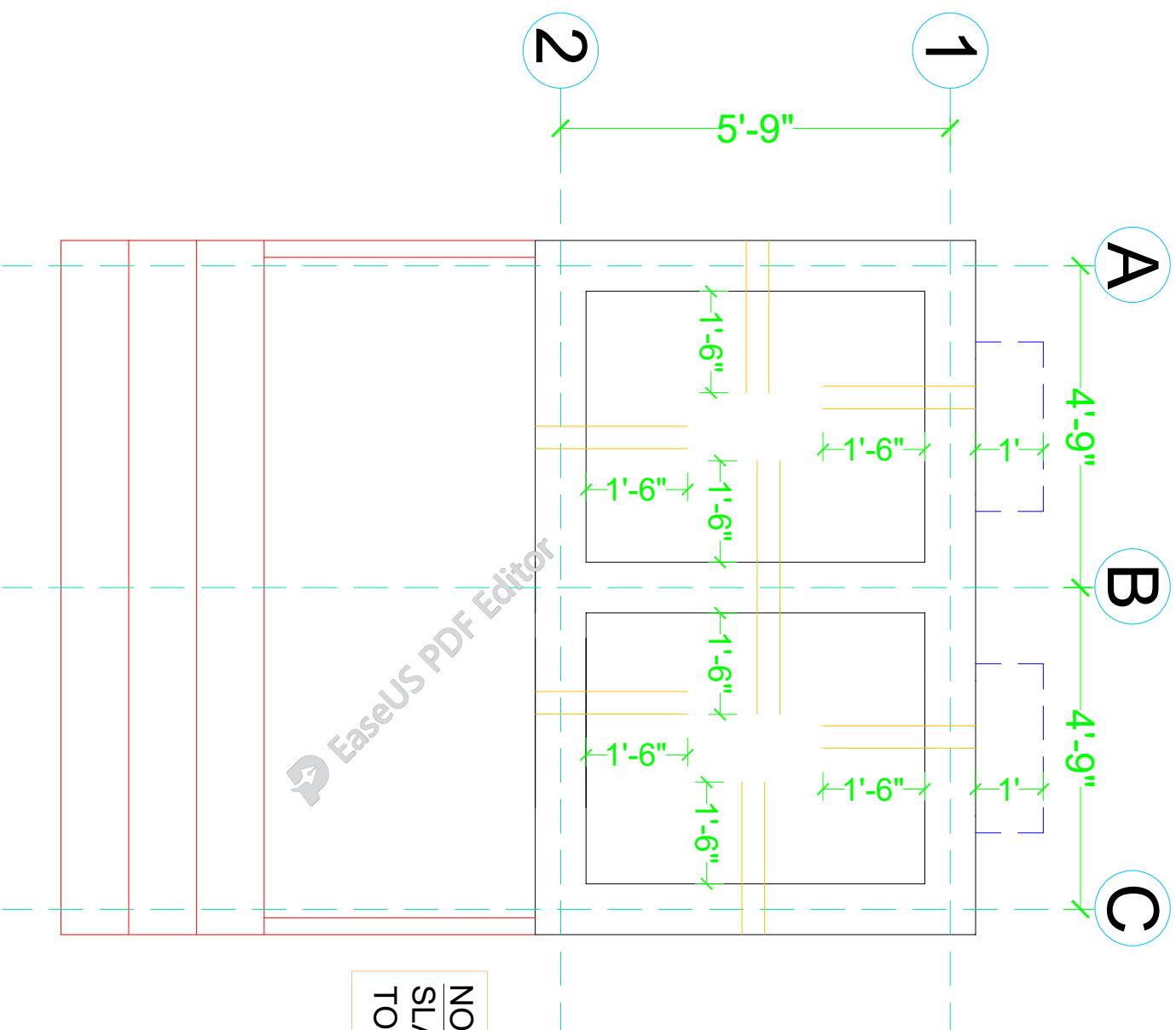
CLIENT: _____ 		SCHOOL NAME REHAB WORKS AT PSC-294-BASU MAIRA DISTRICT HARIPUR	
Date of Revision	Prepared By	FARID KHAN KHAN HADDER STRUCTURE ENGINEER	PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	Engr. HUMZA AHMAD	TITLE: GROUND FLOOR LINTEL BEAM PLAN
	Checked By		DATE SEP 2023
	Approved By		SCALE
			DRG. NO. S-05



NOTE :
SLAB THICKNESS = 5"


GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN

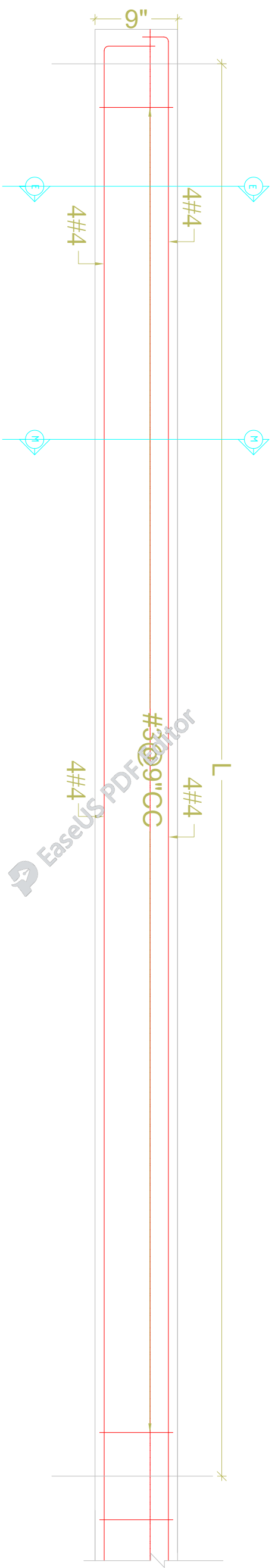
<p>CLIENT:</p>  <p>UNHCR The UN Refugee Agency</p>			
<p>SCHOOL NAME</p> <p>REHAB WORKS AT PSC-294-BASU MAIRA DISTRICT HARIPUR</p>		<p>Date of Revision</p>	
<p>Prepared By</p> <p>Eng. KIAN HABER</p>		<p>Prepared By</p> <p>Eng. KIAN HABER</p>	
<p>Checked By</p> <p>Eng. HUMZA AHMAD</p>		<p>Checked By</p> <p>Eng. HUMZA AHMAD</p>	
<p>Approved By</p>		<p>Approved By</p>	
<p>PROJECT:</p> <p>PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES</p>		<p>PROJECT:</p> <p>PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES</p>	
<p>TITLE:</p> <p>GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN</p>		<p>TITLE:</p> <p>GROUND FLOOR SLAB BOTTOM REINFORCEMENT PLAN</p>	
<p>DATE</p> <p>SEP 2023</p>		<p>DATE</p> <p>SEP 2023</p>	
<p>SCALE</p>		<p>SCALE</p>	
<p>DRG.NO.</p> <p>S-06</p>		<p>DRG.NO.</p> <p>S-06</p>	



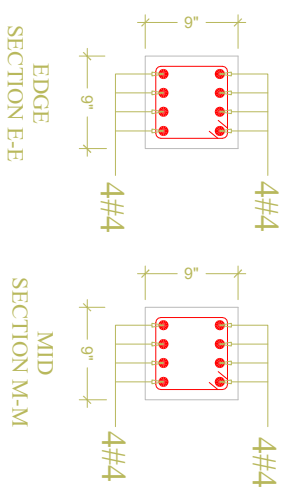
NOTE :
 SLAB THICKNESS = 5"
 TOP REINFORCEMENT = #4@8" C/C

GROUND FLOOR SLAB TOP REINFORCEMENT PLAN

<p>CLIENT:</p>			
 <p>UNHCR The UN Refugee Agency</p>			
<p>SCHOOL NAME</p>	<p>REHAB WORKS AT PSC-294-BASU MAIRA DISTRICT HARIPUR</p>	<p>Date of Revision</p>	<p>Prepared By</p>
			<p>Designed By</p>
			<p>Checked By</p>
			<p>Approved By</p>
		<p>PROJECT:</p>	<p>DATE</p>
		<p>PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES</p>	<p>SEP 2023</p>
		<p>TITLE:</p>	<p>SCALE</p>
		<p>GROUND FLOOR SLAB TOP REINFORCEMENT PLAN</p>	<p>DRG. NO.</p>
			<p>S-07</p>



TYPICAL ELEVATION OF LB-1



SCHOOL NAME

Date of Revision

Prepared By

FARID KHAN
KHAN HAIDER
STRUCTURE ENGINEER

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:

LINTEL BEAM DETAIL

Designed By

Engr. HUMZA AHMAD

DATE

SEP 2023

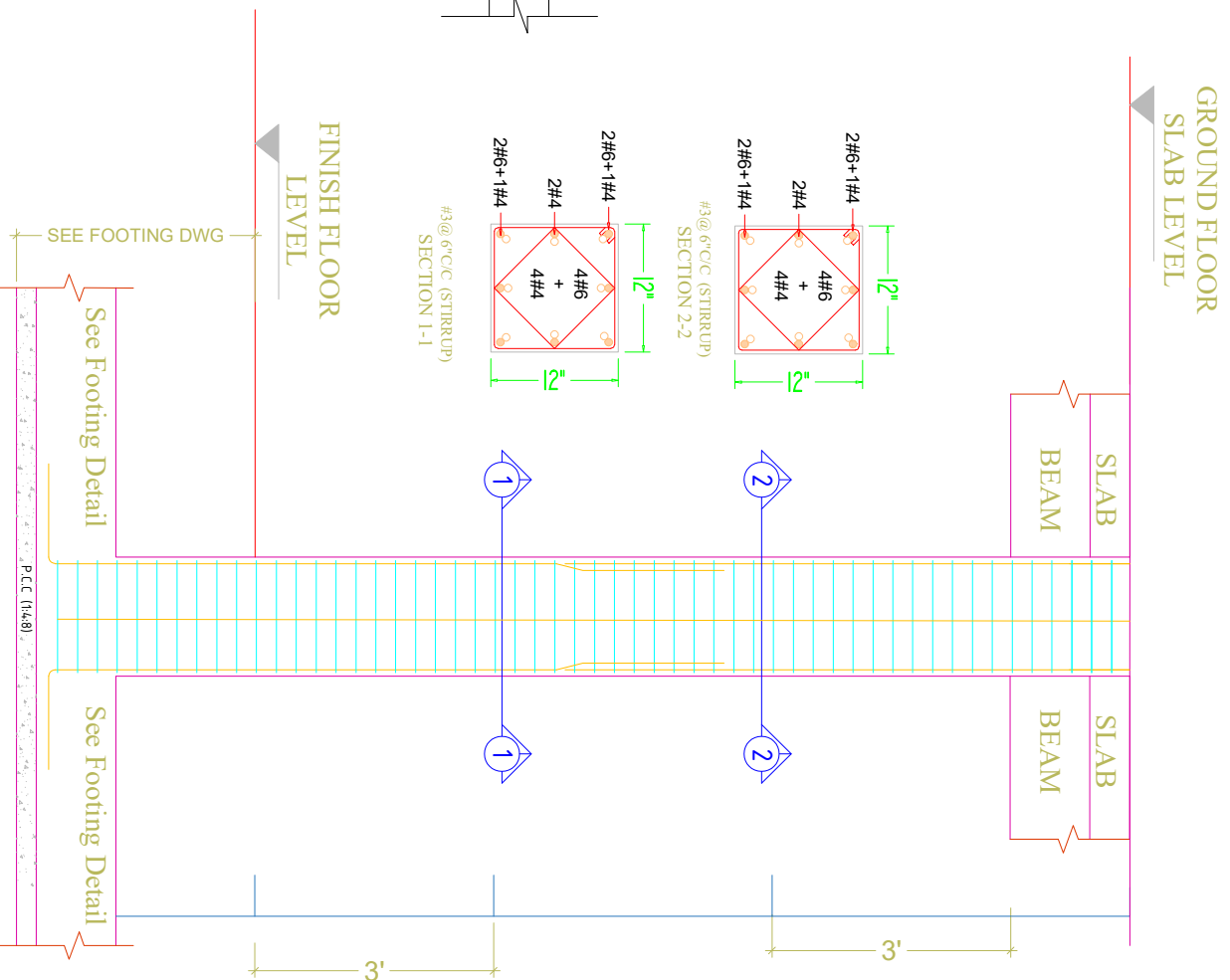
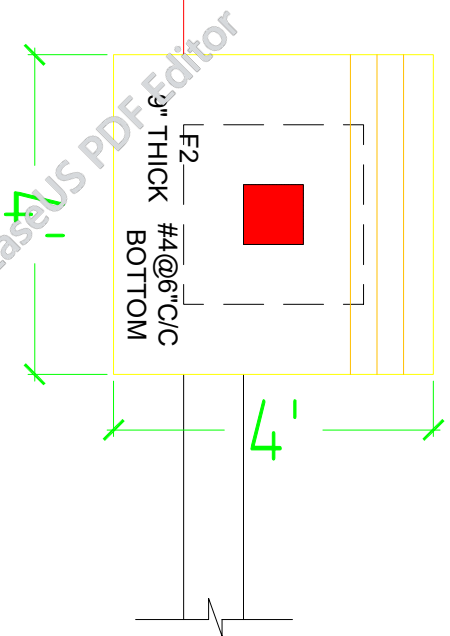
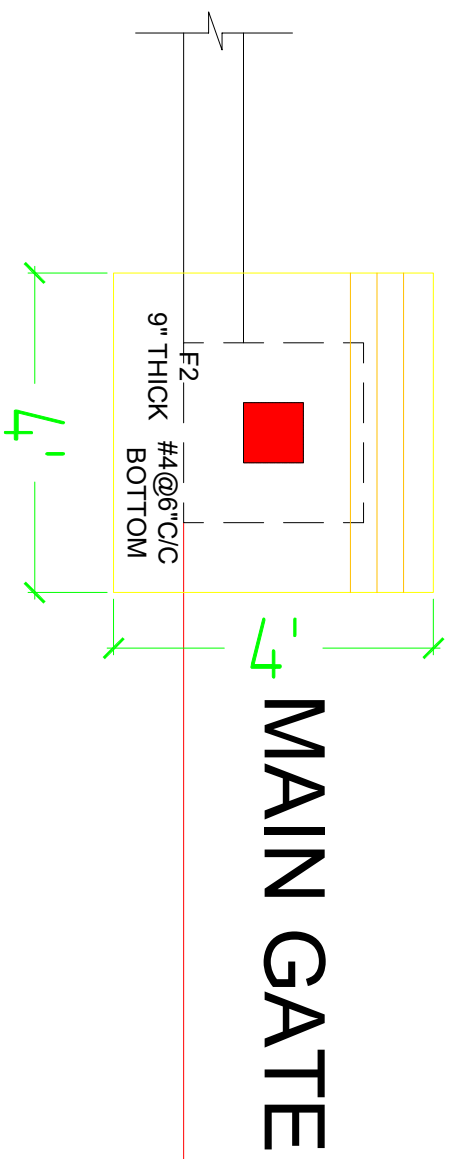
Checked By

SCALE

DRG.NO.

S-08

Approved By



GATE PLAN

CLIENT:



SCHOOL NAME

REHAB WORKS AT
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	FAHAD KHAN KIYAN HAIDER STRUCTURE ENGINEER
	Designed By	Egr. HUMZA AHMAD
	Checked By	
	Approved By	

PROJECT:	TITLE:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	GROUND FLOOR COLUMN LAYOUT PLAN (MAIN GATE)	SEP 2023		S-09

PLUMBING DRAWING

EaseUS PDF Editor

GENERAL NOTES

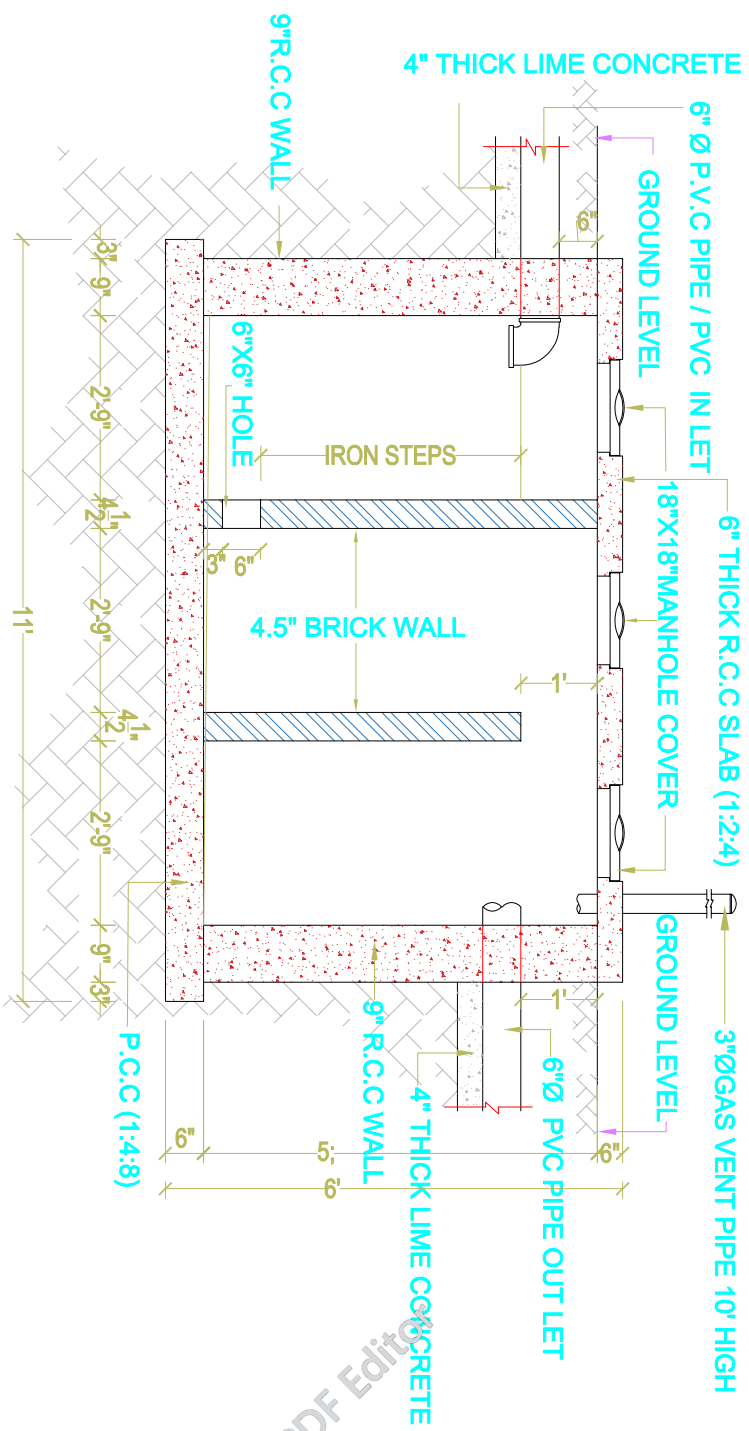
ALL UNDER GROUND SEWAGE PIPES SHALL HAVE A MINIMUM SLOPE OF 1%.
 ISOLATING VALVES SHALL BE PROVIDED TO SEPARATE THE INDIVIDUAL TOILETS, GATE VALVES SHALL BE PROVIDED TO/ FROM WATER HEATERS
 EXACT LOCATION OF WATER PIPE WORK SHALL BE DETERMINED ON SITE.
 PROVIDE ISOLATING VALVE ON ALL MAIN AND BRANCH LINES FOR MAINTENANCE.
 IN PLUMBING WATER SUPPLY SYSTEM THE PIPE DIAMETER INDICATED ARE NET FLOW AREAS (i.e. INTERNAL DIAMETERS) AND THE CONTRACTOR
 SHALL USE ADEQUATE PIPES SIZE, SPECIALLY WHEN USING PLASTIC PIPES TO ACCOUNT FOR PIPE WALL THICKNESS.
 CONTRACTOR TO PROVIDE OVERFLOW, TEST PIPE, WARNING LEVEL AND DRAIN CONNECTION.

FOR COLD WATER SUPPLY PPR PN-20 PIPES SHALL BE USED.
 ALL EXPOSED COLD AND HOT WATER PIPING SHALL BE PPR.
 ALL HOT WATER PIPES SHALL BE PPR PN-20.
 ALL HOT WATER PIPES SHALL BE INSULATED.
 PPR PIPE INTERNAL CLEAR DIA.
 ALL SUI GAS PIPE SHALL BE G.I PIPE BEST QUALITY

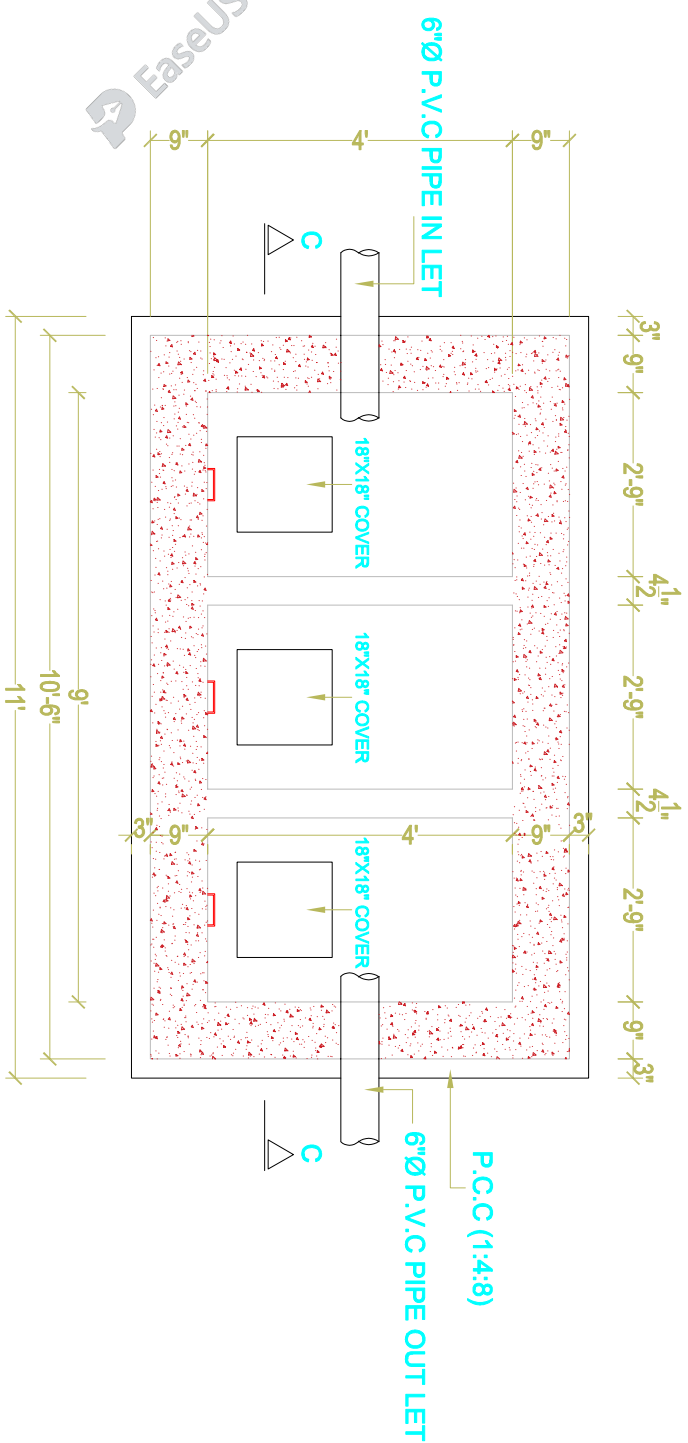
LEGEND FOR PLUMBING	
1	MAIN HOLE
2	2" Ø u.p.v.c VENT PIPE ABOVE

LEGEND	
	CW COLD WATER SUPPLY & MAKEUP WATER
	HW HOT WATER SUPPLY
	WMH WASTE WATER MANHOLE
	SMH SOIL WATER MANHOLE
	HWG HOT WATER GEYSER
	W.C WATER CLOSET (ENGLISH)
	W.C WATER CLOSET (INDIAN)
	W.B WASH BASIN
	F.T FLOW TRAP
	T.R TOWEL RAIL (ROD)
	SH SHOWER
	TAP TAP
	OHWT OVER HEAD WATER TANK
	UGWT UNDER GROUND WATER TANK

CLIENT:		SCHOOL NAME		PROJECT:	
		REHAB WORKS OF PSC-294-BASU MAIRA DISTRICT HARIPUR		PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/ REHABILITATION OF SITES	
_____ _____		Prepared By FARD KHAN KHAN HADDER		ARCHITECT MARWAT KHAN ORAKZAI (B.Arch, D.C.E.T Karachi) (M.Arch, UJET Lahore)	
_____ _____		Designed By _____		TITLE: GENERAL NOTES	
_____ _____		Checked By _____		DATE SEP 2023	
_____ _____		Approved By _____		SCALE _____	
_____ _____		_____ _____		DRG. NO. P-01	



SEPTIC TANK SECTION



SEPTIC TANK PLAN

CLIENT:



SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR





Date of Revision	Prepared By	ARCHITECT
	FARID KHAN KHAN HAIDER	ARCHITECT
	Designed By	MAR WAT KHAN ORAKZAI (B.Arch.D.C.E.T Karachi) (M.Arch.D.E.T. Lahore)
	Checked By	
	Approved By	

PROJECT:	DATE	SCALE	DRG.NO.
PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	SEP 2023		P-43
TITLE:		SEPTIC TANK PLAN	

WATER SUPPLY DRAWING

EaseUS PDF Editor

LEGEND

	CW	COLD WATER SUPPLY & MAKEUP WATER
	HW	HOT WATER SUPPLY
	WMH	WASTE WATER MANHOLE
	SMH	SOIL WATER MANHOLE
	HWG	HOT WATER GEYSER
	W.C	WATER CLOSET (ENGLISH)
	W.C	WATER CLOSET (INDIAN)
	W.B	WASH BASIN
	F.T	FLOW TRAIL
	T.R	TOWEL RAIL (ROD)
	SH	SHOWER
	TAP	TAP
	OHWT	OVER HEAD WATER TANK
	UGWT	UNDER GROUND WATER TANK

CLIENT: _____



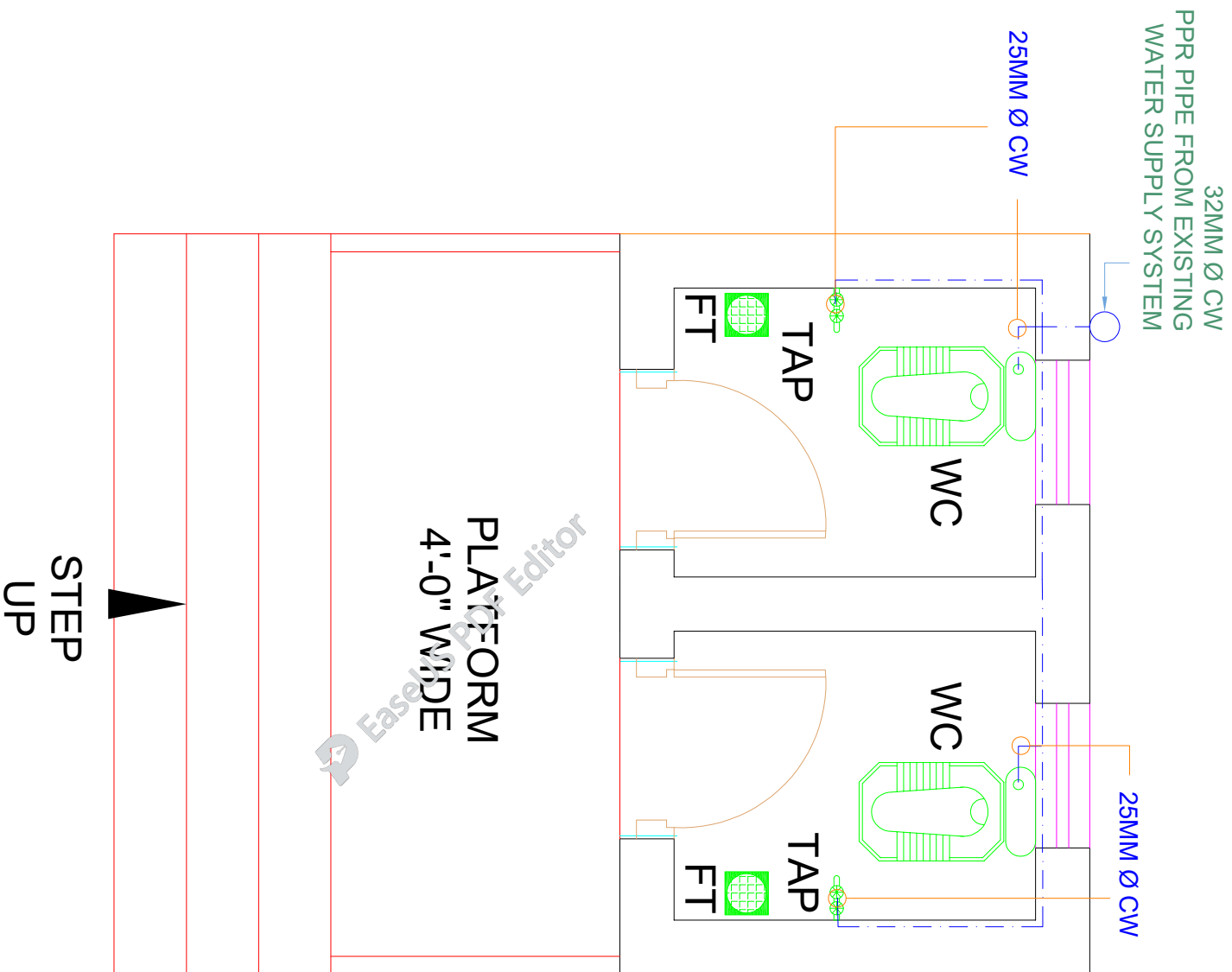
SCHOOL NAME
 REHAB WORKS OF
 PSC-294-BASU MAIRA
 DISTRICT HARIPUR

Date of Revision	Prepared By	FARID KHAN KHAN HANIDER
	Designed By	ARCHITECT MARWAT KHAN OKARZAI (B.Arch, D.C.E.T Kancho) (M.Arch, UET, Lahore)
	Checked By	
	Approved By	


PROJECT:
 PREPARATION OF DESIGN DRAWINGS & BOOK
 FOR CONSTRUCTION/REHABILITATION OF SITES

TITLE:
 LEGEND

DATE: SEP 2023 SCALE: DRG.NO: WS-01




GROUND FLOOR WATER SUPPLY PLAN

CLIENT:  The UN Refugee Agency			
SCHOOL NAME REHAB WORKS OF PSC-294-BASU MAIRA DISTRICT HARIPUR			
Date of Revision	Prepared By	FARID KHAN KHAN HADIR ARCHITECT	PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOOKS FOR CONSTRUCTION/ REHABILITATION OF SITES TITLE: GROUND FLOOR WATER SUPPLY PLAN
	Designed By	MARWAT KHAN ORAKZAI (B.Arch, D.El.E.T (Karnal)) (M.Arch, V.H.I. Ladnos)	
	Checked By		
	Approved By		DATE SEP 2023 SCALE DRG. NO. WS-02

ELECTRIFICATION DRAWINGS
OF
REHAB WORKS
AT
PSC-294-BASU MAIRA DISTRICT
HARIPUR

ELECTRICAL DRAWINGS		
1	GENERAL NOTES	E-01
2	APPROVED MANUFACTURE LIST	E-02
3	LEGEND	E-03
4	GROUND FLOOR PLAN	E-04
5	GROUND FLOOR DIMENSION PLAN	E-05

 <p>UNHCR The UN Refugee Agency</p>		<p>SCHOOL NAME</p> <p>_____</p>		<p><small>Date of Revision</small></p>		<p><small>Prepared By</small></p> <p><small>Designed By</small></p> <p><small>Checked By</small></p> <p><small>Approved By</small></p>	<p><small>Engr. KHAAN KHAN</small></p> <p><small>ELECTRICAL ENGINEER</small></p> <p><small>Engr. HAMMAD AHMAD</small></p>	<p><small>PROJECT:</small></p> <p>PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES</p>	<p><small>TITLE:</small></p> <p>LIST OF DRAWINGS</p>	<p><small>DATE</small></p> <p>SEP 2023</p>	<p><small>SCALE</small></p>	<p><small>DRG.NO.</small></p> <p>E-00</p>
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ELECTRICAL SYSTEMS

FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL ELECTRICAL DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.

1. THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS THE SITE CONDITIONS NECESSITARY ALTERATION OR DEVIATION OF THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.
2. DIMENSIONS / MEASUREMENTS IS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS ACCORDING TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITION OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.
4. PROPER CO-ORDINATION OF ELECTRICAL WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.
5. ALL NON CURRENT CARRYING PARTS, i.e. OUTER CASINGS OF EQUIPMENT SUCH AS H.T & IT PANELS, DISTRIBUTION BOARDS, CABLE TRAYS, AUXILIARY CONSTRUCTION FOR EQUIPMENT ETC. SHALL BE CONNECTED TO THE GROUND-EARTHING SYSTEM AT REQUIRED NUMBER OF POINTS WITH SPECIFIED SIZES OF CONDUCTORS. WATER PIPES ALONG ELECTRICAL LINE SHALL BE BONDED TO THE EARTHING SYSTEM WITH TO 10MMsq SINGLE CORE COPPER CONDUCTOR PVC CABLE.
6. ELECTRICAL POINTS FOR EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES SUCH AS COMMUNICATION SYSTEMS, HVAC, PLUMBING ETC. THE LOCATION ON ELECTRICAL DRAWINGS IS ONLY INDICATIVE.
7. ARRANGEMENT OF ELECTRICAL EQUIPMENTS ON ELECTRICAL DRAWINGS ARE TENTATIVE EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASY OF MAINTENANCE.
8. LOAD ON ALL PHASES SHALL BE MAXIMUM BALANCED AT THE TIME OF COMMISSIONING STAGE. IT IS RESPONSIBILITY OF CONTRACTOR.
9. CONDUIT RUN UNDER FLOOR SHALL HAVE A MINIMUM COVER OF TWO INCHES FROM TOP TO CONDUIT TO FINISH FLOOR LEVEL.
10. ALL WIRING SHOULD BE CARRYOUT ACCORDING TO THE PHASES RED, YELLOW, BLUE CABLE COLOUR ARE AS PER PHASE DISTRIBUTION IN BUILDING.
11. RUN GREEN OR WHITE SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZE AS PROTECTIVE EARTH CONDUCTOR (LCC) ALL ALONG LIGHT AND POWER WIRING WHEREVER THE SIZE IS NOT SPECIFIED THE FOLLOWING CRITERIA SHALL BE OBSERVED TO DETERMINE MINIMUM CROSS SECTIONAL AREA OF EARTH CONTINUITY CONDUCTOR (ECC) IN RELATION TO THE AREA OFFICE PHASE CONDUCTORS RUN SEPARATE ECC FOR EACH CIRCUIT.
 - ECC 2 PHASE CONDUCTOR OF SAME SIZE FOR LPTO AND INCLUDING 16 MMSQ CABLES
 - FOR CABLES OF 50 MM SQ AND ABOVE SIZES IS HALF SIZE OF PHASE CONDUCTOR
 - MINIMUM SIZE ECC IS 70MM SQ.
12. ALL WIRING FOR CONTROLS SHALL BE CARRIED OUT WITH 1 CORE FLEXIBLE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.
13. THE MAXIMUM CAPACITY OF PVC CONDUITS FOR SIMILAR TONCOUS DRAWING OF PVC INSULATED CABLES SHALL BE DETERMINED AS PER BS 4607. THE FOLLOWING TABLE SHALL BE USED TO DETERMINE THE MAXIMUM NUMBER OF CABLES

NUMBER OF CABLE IN (CONDUIT)	SIZE OF CABLE		
NEW STANDER SIZE MM sq	25 MM (1")	20 MM (3/4")	15 MM (3/8")
1.5 MM sq	13	8	5
2.5 MM sq	10	6	4
4 MM sq	7	4	3
6 MM sq	5	3	2
10 MM sq	3	2	1

14. NORMAL & EMERGENCY CIRCUITS SHALL BE RUN IN SEPARATE CONDUITS.
15. THE WIRING SHELL BE CONTINUOUS LOOPING-IN TYPE AND NO JOINT IN WIRES SHELL BE ALLOWED.
16. THE WIRING SYSTEM SHELL BE CARRIED OUT ONLY AFTER THE CONDUIT SYSTEM IS COMPLETELY INSTALLED AND ALL OUTLET BOXES, ETC. ARE FIXED IN POSITION.
17. MOUNTING HEIGHTS OF ELECTRICAL FITTINGS WHEN MEASURED FROM FINISHED FLOOR LEVEL (ECC) TO THE BOTTOM OF FITTINGS SHELL BE AS UNDER UNLESS OTHERWISE SHOWN OR INSTRUCTED
 - > SWITCH BOARD 48 INCHES
 - > EXHAUST FAN REF TO ARCH DRAWING
 - > DISTRIBUTION BOARD 56 INCHES
 - > CONTROL PANEL 48 INCHES
 - > ON/OFF PUSH BUTTON STATION 48 INCHES
 - > DIMMER CONTROL UNIT 48 INCHES
 - > LIGHT CONTROL SWITCH (ONE WAY/TWO WAY) 48 INCHES
 - > 5 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
 - > 15 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
 - > 20 AMP SOCKET OUTLETS IN GENERAL AREAS 12 INCHES
 - > 16 AMP SOCKET OUTLETS IN KITCHEN (ABOVE COUNTER) 10 INCHES
 - > 16 AMP TP SPIN INDUSTRIAL SOCKET OUTLETS IN LABS 12 INCHES
 - > CEILING FAN ON SLAB
 - > WALL BRACKET FAN 90 INCHES

SCHOOL NAME

Date of Revision		Prepared By	FARID KHAN KIYANHAIDER ELECTRICAL ENGINEER	PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
		Designed By	Engr. HAMMAD AHMAD	
		Checked By		
		Approved By		
DATE	SCALE	DRG. NO.	GENERAL NOTES	
SEP 2023			E-01	



APPROVED MANUFACTURE LIST

S NO.	ITEM OR ACCESSORIES	BRAND
01	WIRING CABLE	PAKISTAN,NEW AGE,FAST, GM, COPPERGAT CABLE
02	POWER CABLE	PAKISTAN,NEW AGE,FAST, GM, COPPERGAT CABLE
03	LIGHT FIXTURES	PHILIPS,PIERLITE,CLIPSAL, OSAKA, FAST LIGHT
04	CEILING FAN	PAK, GFC, ROYAL, LAHORE FAN
05	PVC CONDUIT	POLO,BETA,POPULAR, GM, ADAMJEE
06	SWITCHES	PPL
07	LT SWITCHGEAR	SCHNEIDER, ABB, PEL,ELECTRECH
08	MOULDED CASE CIRCUIT BREAKER	SCHNEIDER, CHINT, LS, ABB
9	MINIATURE CIRCUIT BREAKER	SCHNEIDER, CHINT, LS, ABB

CLIENT:



UNHCR
The UN Refugee Agency

SCHOOL NAME

REHAB WORKS OF
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HAIDER
ELECTRICAL ENGINEER

Designed By

Engr. HAMMAD AHMAD

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN DRAWINGS & BOOKS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

APPROVED MANUFACTURE LIST

DATE


SEP 2023

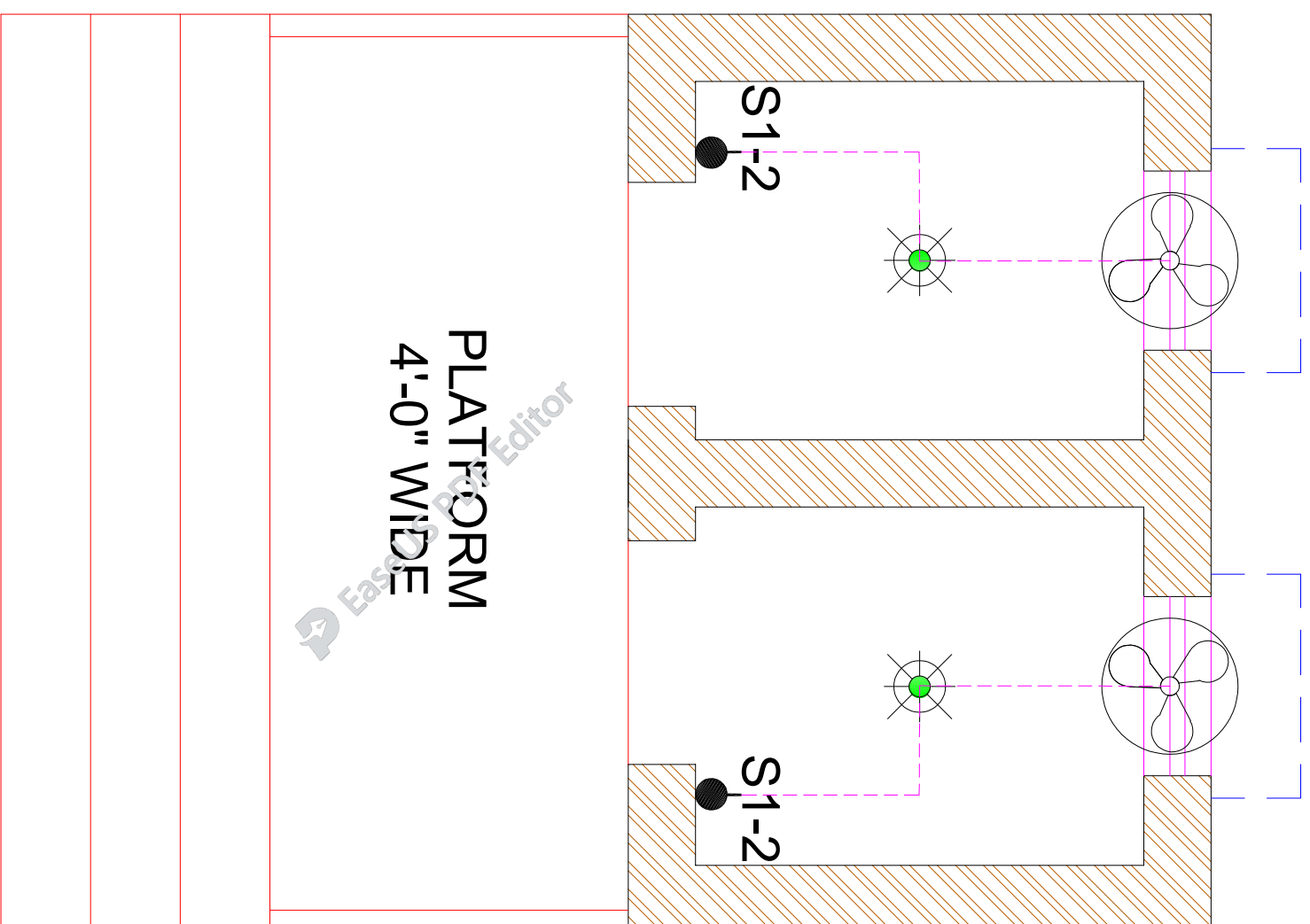
SCALE

DRG.NO.


E-02

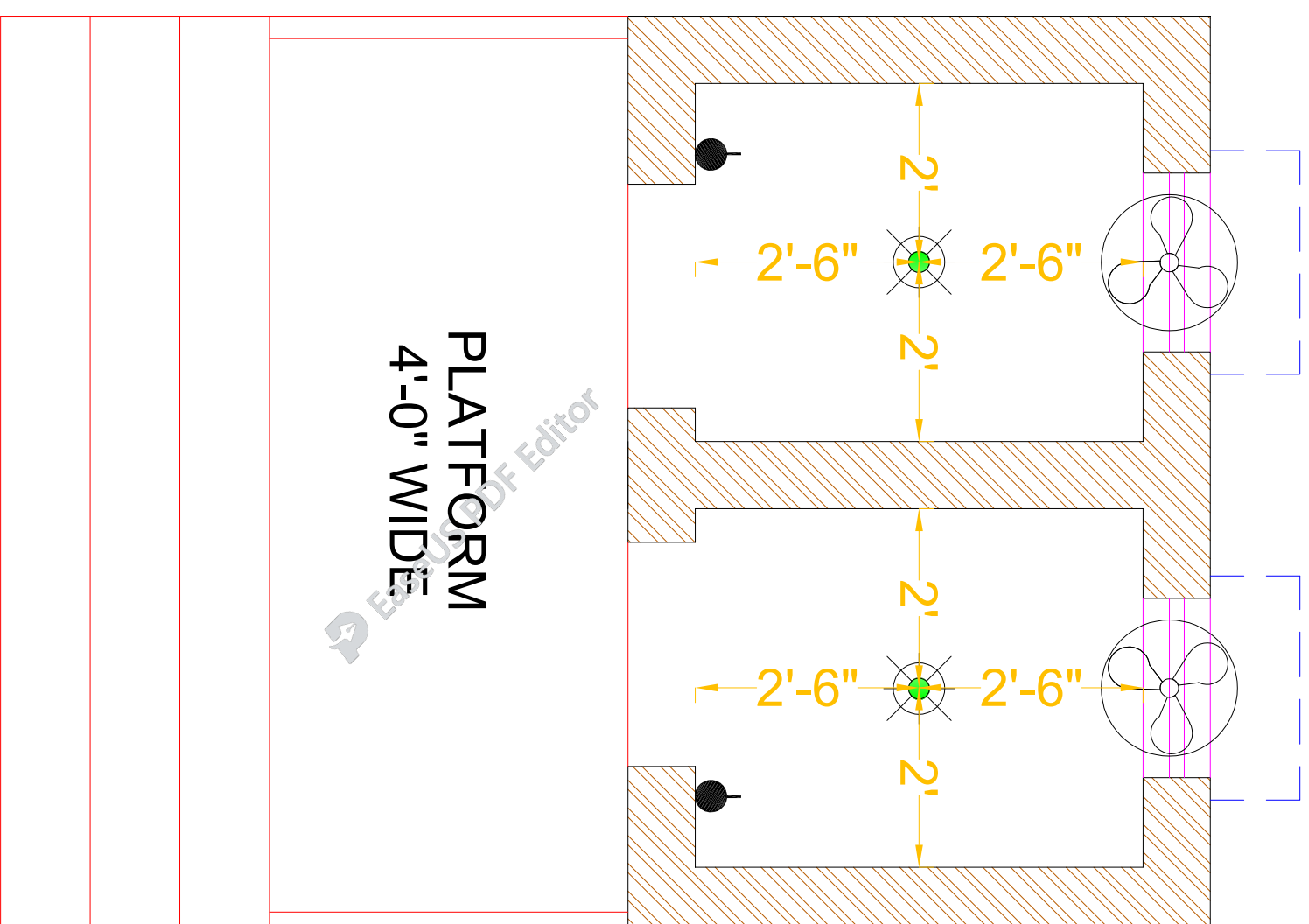
SYMBOL	DESCRIPTION	INSTALLATION HEIGHT
	SURFACE MOUNTED DOWN LIGHT WITH 17 WATT ENERGY SAVER	CEILING MOUNTED
	TMS 136	SLAB MOUNTED
	56" SWEEP CEILING FAN	SLAB MOUNTED
	SWITCH BOARD	56" FROM FFL
	DISTRIBUTION UNIT	60" FROM FFL
	EXHAUST FAN POINT	

 UNHCR The UN Refugee Agency		SCHOOL NAME _____	
		Date of Revision _____	Prepared By _____
Designed By _____		ELECTRICAL ENGINEER: Engr. HAMMAD AHMAD	TITLE: _____
Checked By _____		DATE SEP 2023	SCALE _____
Approved By _____		DRG. NO. _____	LEGEND _____
		E-03	




GROUND FLOOR PLAN

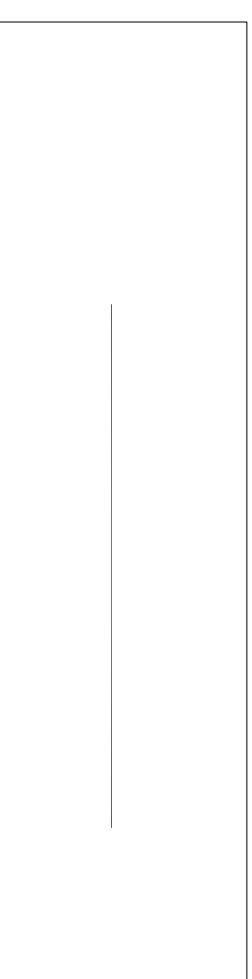
CLIENT: 		SCHOOL NAME REHAB WORKS OF PSC-294-BASU MAIRA DISTRICT HARIPUR	
_____ _____		Date of Revision _____	Prepared By FARID KHAN KIANS HANJIR ELECTRICAL ENGINEER
_____ _____		Designed By Engr. HAMMAD AHMAD	Checked By _____
_____ _____		Approved By _____	DATE SEP 2023
PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES		TITLE: GROUND FLOOR PLAN	
_____ _____		SCALE _____	DRG. NO. E-04



GROUND FLOOR DIMENSION PLAN


<p>CLIENT:</p>		<p>SCHOOL NAME</p> <p>REHAB WORKS OF PSC-294-BASU MAIRA DISTRICT HARIPUR</p>				
 <p>UNHCR The UN Refugee Agency</p>						
			Date of Revision	Prepared By	ELECTRICAL ENGINEER:	PROJECT:
				Designed By	Engr. HAMMAD AHMAD	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES
				Checked By		TITLE: GROUND FLOOR DIMENSION PLAN
				Approved By		DATE SEP 2023
						SCALE
						DRG.NO. E-05

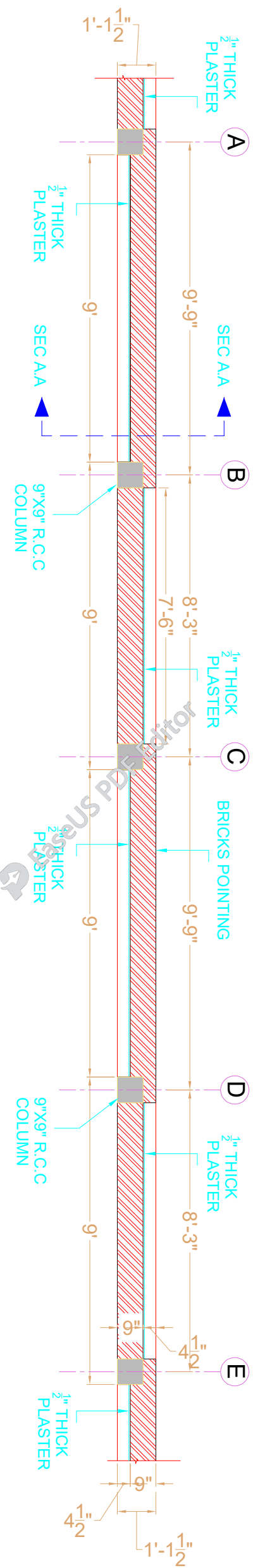
**PROPOSED DESIGN OF
(BOUNDARY WALL)
PSC-294-BASU MAIRA
DISTRICT HARIPUR**




LIST OF DRAWINGS

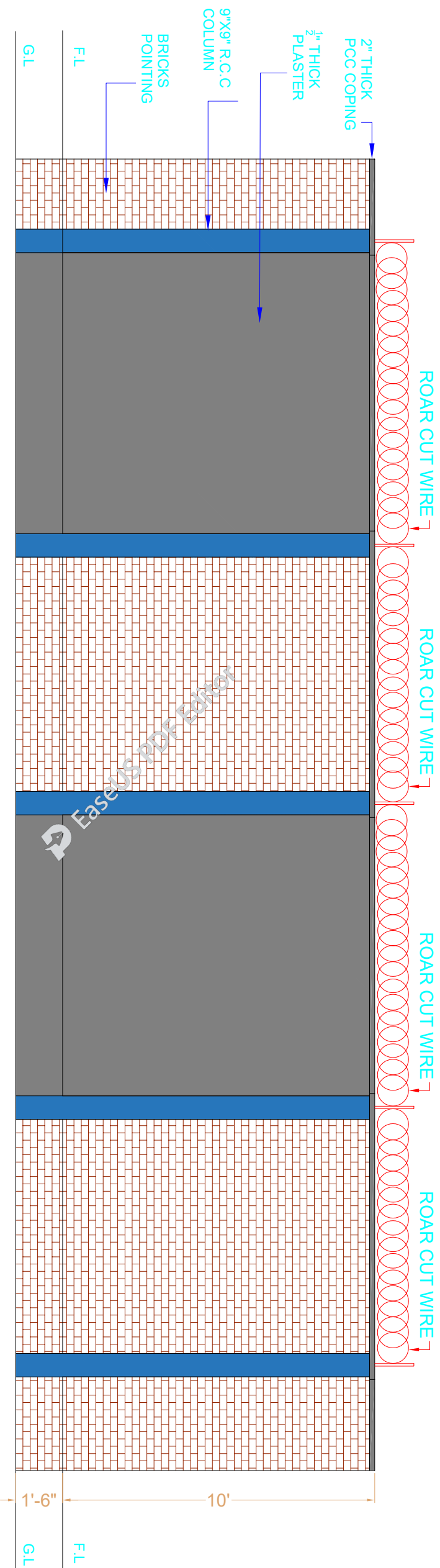
ARCHITECTURAL DRAWINGS				STRUCTURAL DRAWINGS				
SR.NO	DESCRIPTION	DRG. NO.	SR.NO	DESCRIPTION	DRG. NO.	SR.NO	DESCRIPTION	DRG. NO.
1	PLAN OF BOUNDARY WALL	A-01	5	GENERAL NOTES	S-01			
2	FRONT ELEVATION OF BOUNDARY WALL	A-02	6	GENERAL NOTES	S-02			
3	SECTION AT A.A	A-03	7	FOUNDATION PLAN	S-03			
4	DETAIL B.B	A-04	8	COLUMN LAYOUT PLAN	S-04			
			9	COLUMN SECTION DETAIL	S-05			

CLIENT:  UNHCR The UN Refugee Agency	SCHOOL NAME PSC-294-BASU MAIRA DISTRICT HARIPIUR
PROJECT: PREPARATION OF DESIGN, DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES LIST OF DRAWINGS	DATE SEP 2023 SCALE DRG.NO. A-00
Prepared By FARID KHAN KHAN HANIDER ARCHITECT	Designed By MARWAT KHAN ORAKZAI (B.Arch D.C.E.T Karachi) (M.Arch UET Lahore)
Checked By Approved By	Date of Revision




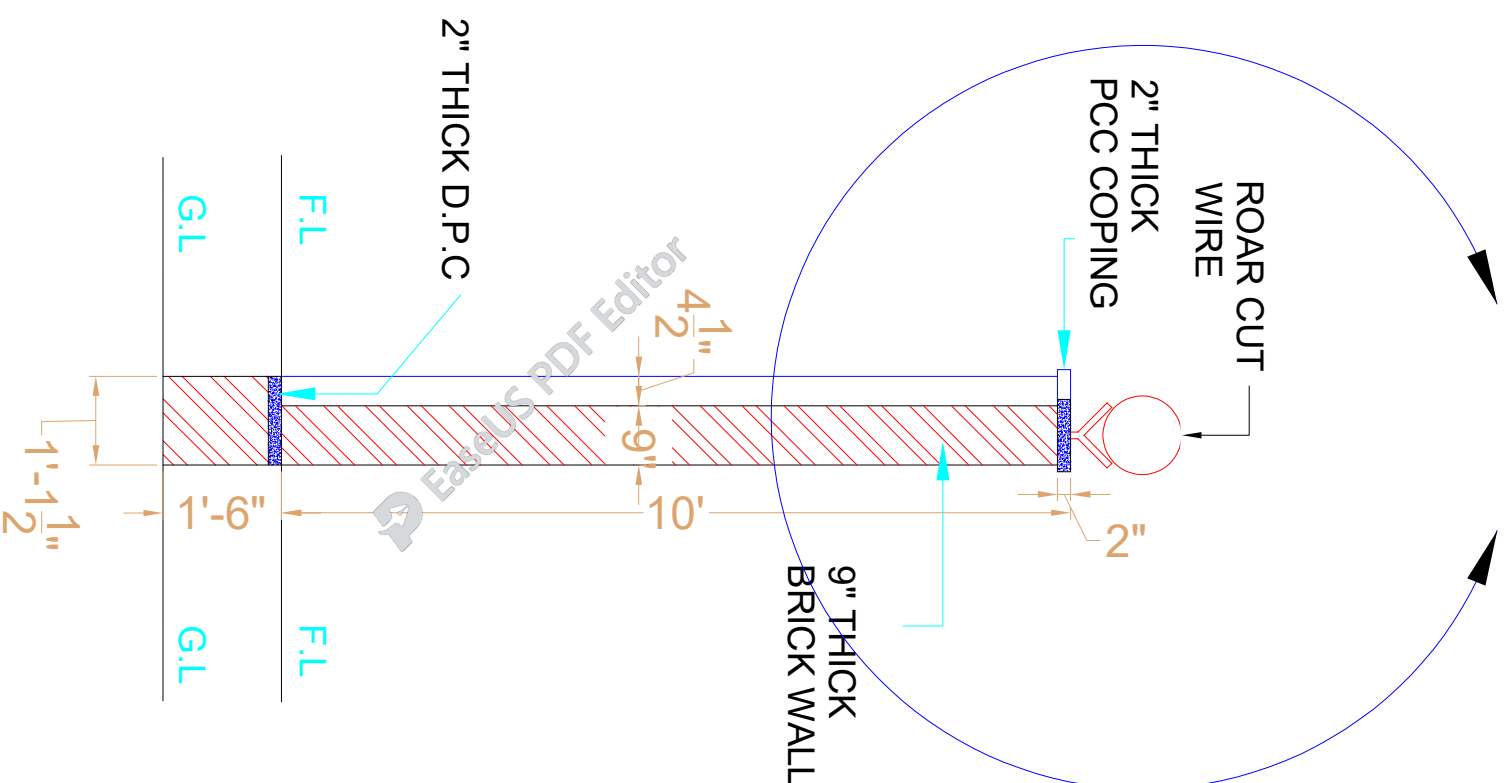
**PLAN OF BOUNDARY WALL
(100 R FT)**

CLIENT:  The UN Refugee Agency		SCHOOL NAME PSC-294-BASU MAIRA DISTRICT HARIPUR	
Date of Revision		Prepared By FARIH KHAN KHAN HADDER ARCHITECT	
Designed By MARWATI KHAN ORAKZAI (B.Arch.D.C.E.T Karachi) (D.Arch.D.H.T. Lahore)		Checked By Approved By	
PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES		TITLE: PLAN OF BOUNDARY WALL	
DATE SEP 2023	SCALE	DRG.NO.	A-01




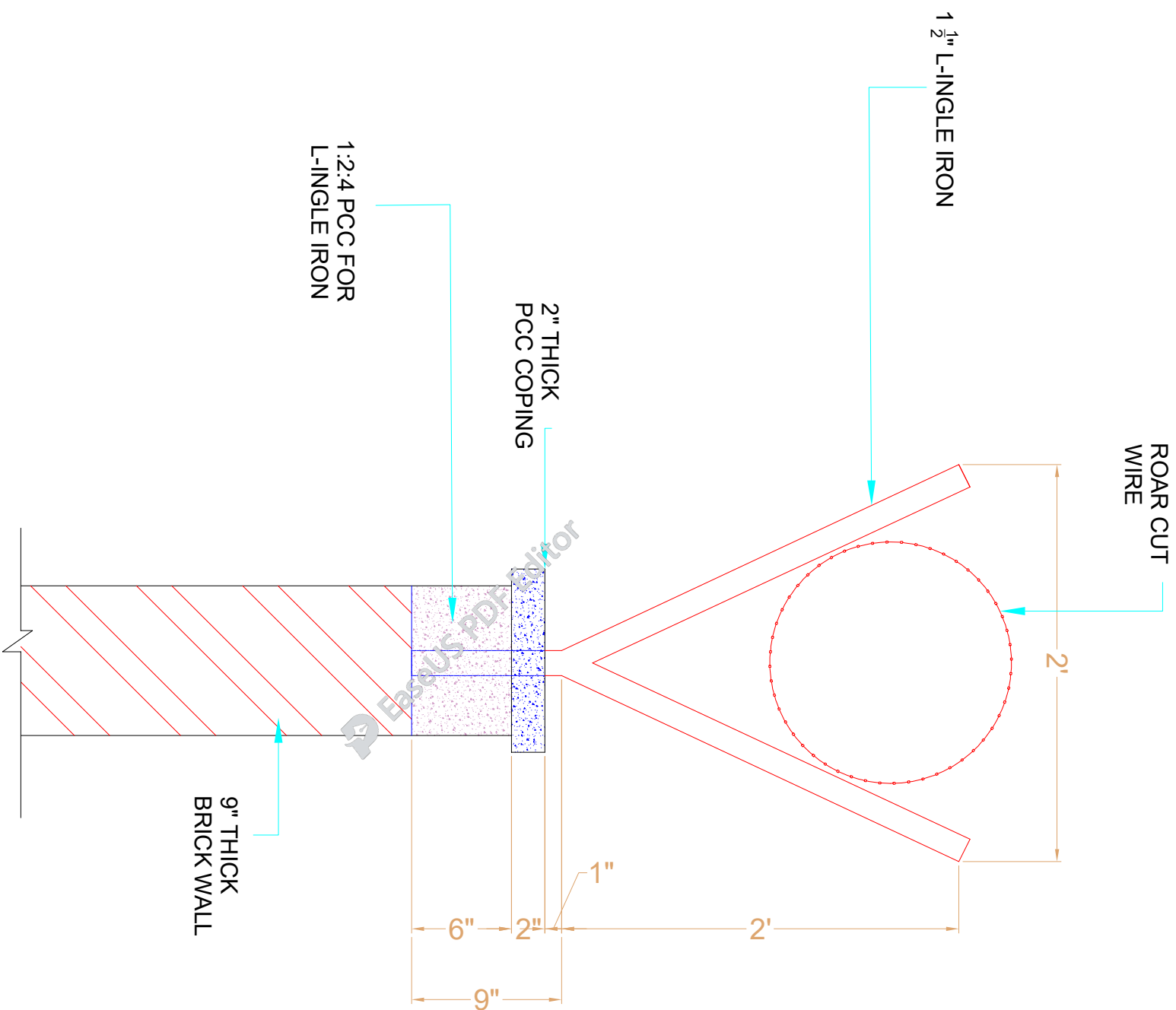
FRONT ELEVATION OF BOUNDARY WALL

 <p>UNHCR The UN Refugee Agency</p>			
<p>SCHOOL NAME</p> <p>PSC-294-BASU MAIRA DISTRICT HARIPUR</p>		<p>Date of Revision</p>	
<p>Prepared By</p> <p>FARID KHAN KHAN HADDER ARCHITECT</p>		<p>Designed By</p> <p>MARWAT KHAN ORAKZAI (B.Arch D.C.E.T. Karachi) (M.Arch. UET. Lahore)</p>	
<p>Checked By</p>		<p>Approved By</p>	
<p>PROJECT:</p> <p>PREPARATION OF DESIGN, DRAWINGS & BOOK FOR CONSTRUCTION/REHABILITATION OF SITES</p>		<p>TITLE:</p> <p>FRONT ELEVATION OF BOUNDARY WALL</p>	
<p>DATE</p> <p>SEP 2023</p>		<p>SCALE</p>	
<p>DRG. NO.</p> <p>A-02</p>			



SECTION AT A.A

CLIENT:  The UN Refugee Agency			
SCHOOL NAME PSC-294-BASU MAIRA DISTRICT HARIPUR			
Date of Revision	Prepared By	FARUKH KHAN KHANHAIDR ARCHITECT MARWAT KHAN ORAKZAI (B.Archd C.E.T Karachi) (M.Archd. UET Lahore)	PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES TITLE: SECTION AT AA
	Designed By		
	Checked By		
	Approved By		DATE: <i>SEP 2023</i> SCALE: DRG.NO. A-03



DETAIL B.B

CLIENT:



SCHOOL NAME

PSC-294-BASU MAIRA
DISTRICT HARIPIPUR

Date of Revision

Prepared By

FARID KHAN
KHAN HANIDER
ARCHITECT

Designed By

MARWAT KHAN ORAKZAI
(B.Arch, D.C.E.T Kanesh)
(M.Arch, UET, Lahore)

Checked By

Approved By

PROJECT:

PREPARATION OF DESIGN, DRAWINGS & BOQS
FOR CONSTRUCTION/ REHABILITATION OF SITES

TITLE:

DETAIL B.B

DATE

SEP 2023

SCALE

DRG.NO.

A-04

**STRUCTURE DRAWINGS OF
(BOUNDARY WALL)
PSC-294-BASU MAIRA
DISTRICT HARIPUR**

1. GENERAL

1. READ ALL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, GEOTECHNICAL, PLUMBING, MECHANICAL, ELECTRICAL & ANY OTHER RELEVANT DRAWINGS.
2. NOTES GIVEN IN THIS DRAWING ARE APPLICABLE TO ALL DRAWINGS UNLESS MENTIONED OTHERWISE. NOTES WRITTEN ON A DRAWING, SHALL BE APPLICABLE TO THAT PARTICULAR DRAWING ONLY UNLESS OTHERWISE CROSS-REFERRED.
3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE SPECIFICATIONS OF THE CONTRACT DOCUMENTS. IN ABSENCE OF ANY SPECIFICATIONS, ALL MATERIALS & WORKMANSHIP SHALL CONFORM TO RELEVANT ACI/BRITISH CODES AND SHALL BE SUBJECTED TO APPROVAL OF THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURES DURING CONSTRUCTION. HE SHALL ALSO VERIFY ALL DIMENSIONS AND LEVELS BEFORE EXECUTION OF WORK. ANY DISCREPANCY, ERROR OR OMISSION, IF FOUND, SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR CORRECTION AND APPROVAL.
5. THE CONTRACTOR SHALL CO-ORDINATE WITH VARIOUS SERVICES DRAWINGS FOR SIZES & LOCATION OF ALL STRUCTURAL MEMBERS, FLOORS, WALLS, OPENINGS, FLOOR FINISHES, PIPES ETC.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXECUTION OF DEWATERING SYSTEM WHERE SO REQUIRED DURING CONSTRUCTION.
7. ALL DIMENSIONS & LEVELS ARE IN FEET & INCHES.
8. DO NOT SCALE THE DRAWINGS. DIMENSIONS, GIVEN ON THE DRAWING, SHALL GOVERN.
9. ALL FABRICATION, PAINTING, ERECTION AND QUALITY CONTROL IS TO BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE ACI/BRITISH SPECIFICATIONS.
10. BACKFILLING AROUND FOUNDATIONS AND WALLS SHALL BE WELL COMPACTED LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS.
11. IT IS STRONGLY RECOMMENDED TO RECONFIRM THE SITE PLAN BEFORE START OF EXECUTION AT SITE. THE SITE SHOULD BE EXAMINED FOR CLEARANCE WITH RESPECT TO LOCAL/SEISMIC HAZARDS.
12. THE CONTRACTOR SHALL INFORM THE ENGINEER ABOUT ANTICIPATED CONSTRUCTION LOADS IN THE STRUCTURE AND OBTAIN ENGINEER'S APPROVAL THEREOF BEFORE COMMENCING THE WORK.
13. THE CONTRACTOR SHALL VERIFY LAYOUT, CONFIGURATION, ALL DIMENSIONS AND LEVELS PERTAINING TO EXISTING WORKS BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ADOPT ADEQUATE AND APPROPRIATE MEASURES SO AS NOT TO DAMAGE THE EXISTING WORKS.
14. THE CONTRACTOR SHALL EXERCISE UTMOST CARE AND PRECAUTION DURING THE WORKS, AGAINST ANY MISHAPS OR ACCIDENTS. FOR WHICH THE CONTRACTOR SHALL BE WHOLLY AND SOLELY RESPONSIBLE. THE CONTRACTOR SHALL INDEMNIFY THE OWNER AGAINST ANY ACCIDENTS AND ANY LOSSES THEREFROM AND SHALL REPAIR AND RECTIFY THEM AT HIS OWN COST AND TIME.
15. ANY DEPARTURES/DEVIATIONS DESIRED FROM THE DESIGN OR SPECIFICATIONS, OR SOLUTIONS TO ANY PROBLEMS ENCOUNTERED, SHALL BE GOT APPROVED FROM THE ENGINEER PRIOR TO IMPLEMENTATION. UNAPPROVED DEPARTURES/DEVIATIONS MAY LEAD TO REJECTION/REPLACEMENT OF THE ENTIRE WORK AT THE CONTRACTOR'S COST.
16. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND BAR BENDING SCHEDULES. THE ENGINEER'S APPROVAL SHALL NOT RELIEVE THE APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ACCURACY OF SHOP DRAWINGS AND BAR BENDING SCHEDULES. FOR ENGINEERS APPROVAL AND OBTAIN HIS CONTRACTOR FROM HIS RESPONSIBILITY.
17. The allowable bearing capacity of soil should be 11sf.

2. SHORING AND BRACING

1. SHORE & BRACE ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION, TO THE EXTENT NECESSARY TO ENSURE COMPLETE SAFETY, STRENGTH & SERVICEABILITY OF ALL STRUCTURAL ELEMENTS UNDER ALL CONDITIONS OF LOADS WHICH MAY OCCUR DURING CONSTRUCTION. SUCH SHORING & BRACING IS THE CONTRACTOR'S SOLE RESPONSIBILITY AND IS NOT SHOWN ON STRUCTURAL DRAWINGS OR SPECIFIED IN THE PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND STABILITY OF THE SLOPES AND SHALL PROVIDE SHORING AND BRACING DURING EXCAVATION AND CONSTRUCTION WHEREVER AND WHENEVER REQUIRED.
3. SEQUENCE OF REMOVAL OF FORMWORK SHALL BE APPROVED BY THE ENGINEER.
4. AT LEAST ONE LOWER FLOOR SHALL REMAIN PROPPED UNTILL THE UPPER FLOOR IS CAST AND CURED.

3. REINFORCED CONCRETE

1. STRUCTURAL DESIGN IS BASED ON THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE OF AMERICAN CONCRETE INSTITUTE (ACI 318).
2. ALL STRUCTURAL CONCRETE SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) REQUIREMENTS.
3. CONCRETE MIX TO BE DESIGNED ON THE BASIS OF ACI 211 OR EQUIVALENT. TRIAL STRENGTH RESULTS TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BEFORE CONCRETING.
4. NO CONCRETING SHALL BE CARRIED OUT UNTIL PERMISSION IS GIVEN IN WRITING OR APPROVED BY STRUCTURE ENGINEER.
5. ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM STANDARDS C31, C39, C172 & AS WRITTEN IN SPECIFICATIONS AND THE MINIMUM CYLINDER CRUSHING STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS. TESTING OF CLASS D & E CONCRETE SHALL BE PERFORMED IF SO SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.

CLASS	MIN. CYLINDER CRUSHING STRENGTH AT 28 DAYS (psi).
A	4000
B	3000
C	2400
D	1200
E	800

6. CLASS OF CONCRETE FOR DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE AS FOLLOWS UNLESS NOTED OTHER WISE:

COMPONENT	CONCRETE CLASS
COLUMNS	CLASS 'B'
FOUNDATION	CLASS 'B'
LEAN / BLINDING CONCRETE	CLASS 'E'

7. ORDINARY PORTLAND CEMENT SHALL BE USED FOR ALL CONCRETE WORKS.
8. AN INTEGRAL WATER PROOFING AGENT SHALL BE USED IN CONCRETE THAT IS CONSTANTLY OR INTERMITTENTLY IN CONTACT WITH WATER AS PER MANUFACTURER'S RECOMMENDATIONS (GENCON GENRUF RMC OR PENETRON ADMIX OR EQUIVALENT).
9. ALL DETAILING SHALL BE DONE AS PER ACI STANDARDS ACI-315, ACI-318 & ACI-350R.

STRUCTURAL ELEMENT	COVER (INCHES)
FOOTINGS	2"
BEAMS	1 1/2"
COLUMNS	1 1/2"
SLABS	3/4"
WALLS	3/4"

4. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 HAVING A MINIMUM YIELD STRENGTH OF 60,000 PSI. FOR STIRRUPS, TIES AND #3 BARS USE ASTM A615, GRADE 60 HAVING MINIMUM YIELD STRENGTH OF 60,000 PSI.
 2. THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED STRENGTH BY MORE THAN 18,000 PSI (RETENTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN 3. THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ADDITIONAL 3000 PSI)
 4. ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25 CLEAR COVER TO REINFORCEMENT SHALL BE: (inches)
 4. CLEAR COVER TO REINFORCEMENT SHALL BE: (inches)
 - L-GREATER CLEAR SPAN, db-DIAMETER OF BAR, d-EFFECTIVE DEPTH
- THE FIRST HOOP SHALL BE LOCATED NOT MORE THAN 2" FROM THE FACE OF THE SUPPORTING MEMBER.
- WHERE:

5. CONCRETE CONSTRUCTION

1. ALL STRUCTURAL SURFACES, AGAINST WHICH EARTH IS TO BE FILLED, SHALL BE COATED WITH TWO COATS OF HOT BITUMEN OF 10/20 GRADE AT THE RATE OF 0.2 lbs/ft²/coat.
2. PROVIDE POLYTHENE SHEET OVER TWO COATS OF HOT BITUMEN AT TOP OF PLINTH BEAM/DPC FOR EXTERIOR WALLS.
3. BEFORE CASTING OF ANY STRUCTURAL MEMBER, THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEMS FOR ELECTRICAL, MECHANICAL, HVAC, PLUMBING, STRUCTURAL STEEL AND OTHER WORKS ARE PROPERLY LOCATED AND FIRMLY SECURED IN PLACE.
4. DURING CONSTRUCTION, STACKING OF CONSTRUCTION MATERIALS, BLOCKS, etc. SHOULD BE AVOIDED ON SLAB PANELS.

6. BRICK WORK

1. ALL BRICK WORK SHALL CONFORM TO SPECIFICATIONS GIVEN IN THE CONTRACT DOCUMENT.
2. ALL BRICK SHALL BE SOUND, HARD, WELL BURNED AND OF UNIFORM SIZE COLOUR AND TEXTURE. DIMENSIONAL VARIATION IN SIZES SHALL NOT EXCEED 1/8". BRICKS SHOULD BE IN ACCORDANCE WITH SPECIFICATIONS AND SHOULD CONFIRM TO ASTM C2.
3. ALL BRICK WORK SHALL BE ERECTED PLUMB AND TRUE TO LINE AND LEVEL. THE MAXIMUM VARIATION IN ANY STOREY HEIGHT OR ANY LENGTH OF WALL SHALL BE 1/8" IN 10'-0".
4. MORTAR USED IN MASONRY CONSTRUCTION SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH OF NOT LESS THAN 12 MPa (1800psi) AND SHALL CONFORM TO ASTM C270.
5. COMPRESSIVE STRENGTH OF BRICK MASONRY AVERAGE OF 5 UNITS AT 28 DAYS SHALL NOT BE LESS THAN AS SPECIFIED IN SPECIFICATION AND SHALL CONFORM TO RELEVANT ASTM STANDARD.
6. ALL DESIGN, DETAILING, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT ACI, ASTM, AND UBC CODES AND STANDARDS.
7. BRICK SHALL BE LAID "FROG" UPWARD WITH MORTAR JOINT AND IN ENGLISH FLEMISH BOND OR AS SHAHEED CHAWK EXACT, NEAR ALFALAH FURNITURE LOWER DIRECTED BY THE ENGINEER.
8. BRICKS SHOULD BE SOAKED WITH WATER PROPERLY BEFORE USE.
9. VERTICAL JOINTS SHOULD BE STAGGERED.
10. ALL MASONRY WALLS SHALL BE ANCHORED TO STRUCTURAL FRAME WORK AS INDICATED ON THE DRAWINGS

CLIENT:



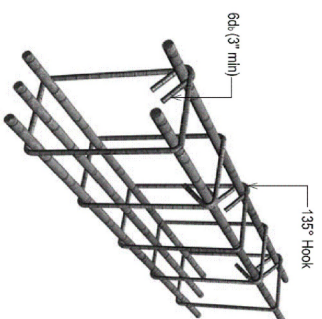
SCHOOL NAME

(BOUNDARY WALL)
PSC-294-BASU MAIRA
DISTRICT HARIPUR

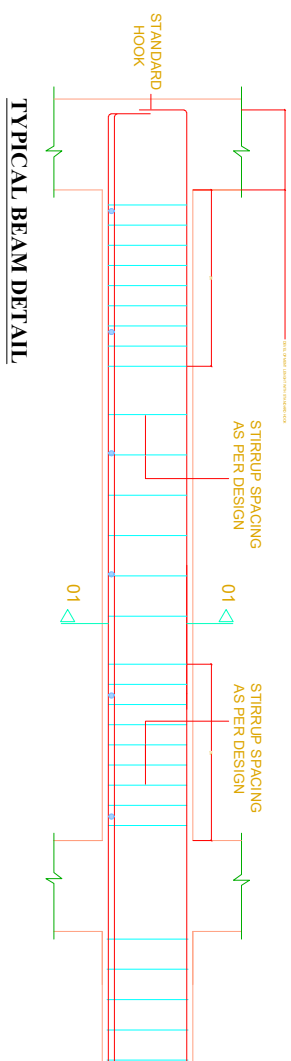
Date of Revision	Prepared By	STRUCTURE ENGINEER:	PROJECT:
	Engr. KHAN KHAN KHAN		PREPARATION OF DESIGN DRAWINGS & BOOKS FOR CONSTRUCTION/REHABILITATION OF SITES
	Designed By	Engr. HUMZA AHMAD	TITLE:
	Checked By		GENERAL NOTES
	Approved By		DATE: SEP 2023
			SCALE
			DRG. NO. S-01

7. CONSTRUCTION JOINTS

- JOINTS, NOT SHOWN ON THE DRAWING, SHALL BE SO MADE AND LOCATED AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND SHALL NEED PRIOR APPROVAL OF THE ENGINEER. THEY SHALL BE LOCATED NEAR THE MIDDLE OF THE SPANS OF SLAB & BEAMS. JOINTS IN WALLS & COLUMNS SHALL BE AT THE UNDER-SIDE OF FLOORS, SLABS OR BEAMS AND AT THE TOP OF FOOTINGS OR FLOOR SLABS.
- JOINTS SHALL BE PERPENDICULAR TO MAIN REINFORCEMENT. ALL REINFORCING STEEL SHALL BE CONTINUED ACROSS THE JOINTS.
- JOINTS IN BASE SLAB & WALLS AND ROOF SLAB, IN ADDITION TO THOSE SHOWN ON THE DRAWINGS SHALL BE BORNE BY THE CONTRACTOR. BEAMS & BRACKETS SHALL BE PLACED AT THE SAME TIME AS SLABS.



SEISMIC HOOK DETAILS



TYPICAL BEAM DETAIL

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 4,000$ psi	$f_y = 60,000$ psi
3/8"	18	7.5
1/2"	24	9.5
3/4"	30	14.5
1"	48	19

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

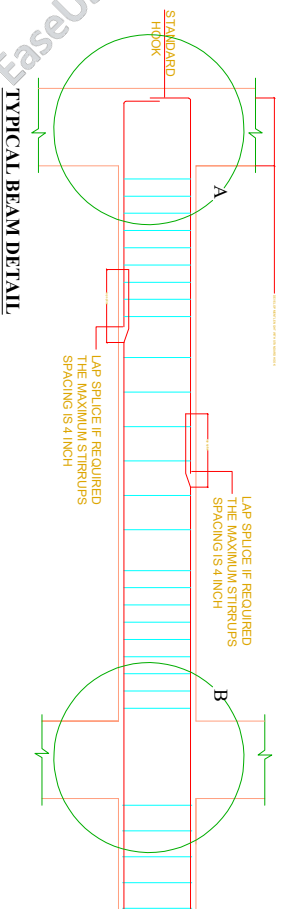
BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	TENSION	COMPRESSION
3/8"	15	-
1/2"	20	9
3/4"	30	15
1"	48	18

DEVELOPMENT LENGTH IN TENSION (ACI 21.5.4.1)

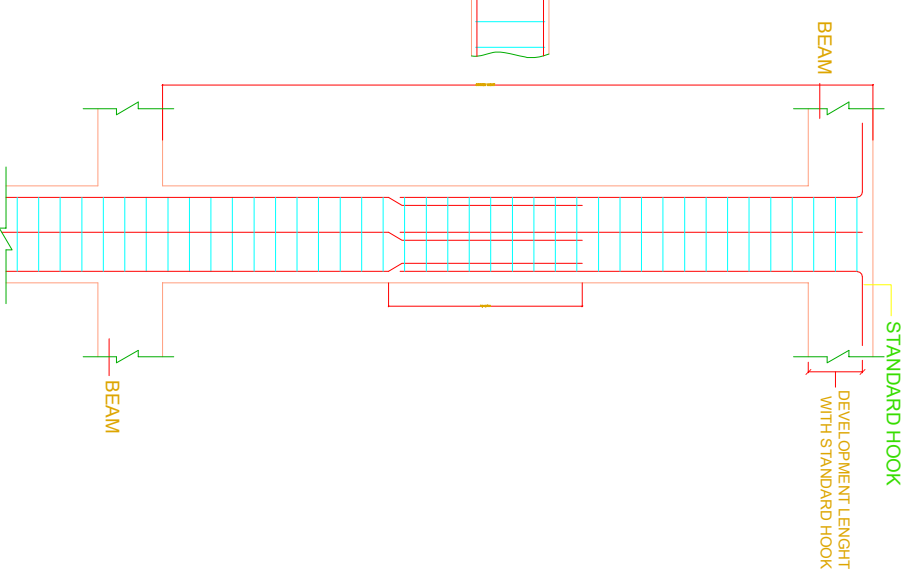
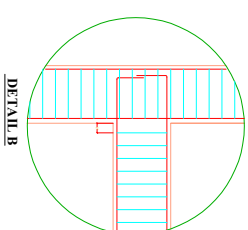
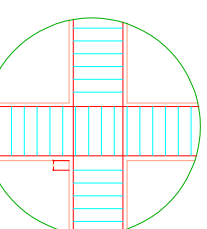
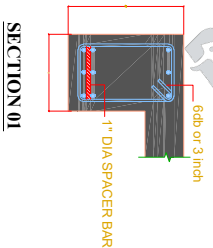
BAR DIA	DEVELOPMENT LENGTH (INCHES)	
	$f_c' = 3,000$ psi	$f_y = 60,000$ psi
1/2"	22	11"
5/8"	30	14"
3/4"	34	17"
1"	55	22"

SPLICE LENGTH (ACI 21.3.2.4, Class B Splice)

BAR DIA	MINIMUM SPLICE LAP LENGTH (INCHES)	
	SLAB	BEAM / COLUMN
1/2"	25	35
5/8"	-	44
3/4"	-	55
1"	-	70



TYPICAL BEAM DETAIL



TYPICAL COLUMN DETAIL

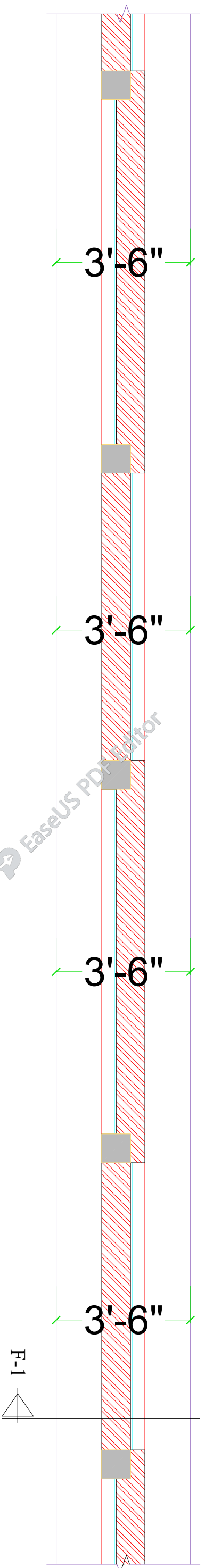
CLIENT:




SCHOOL NAME

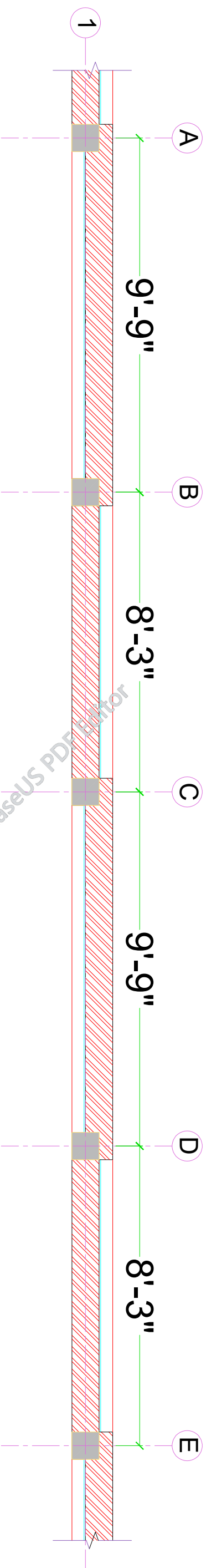
(BOUNDARY WALL)
PSC-294-BASU MAIRA
DISTRICT HARIPUR

Date of Revision	Prepared By	PROJECT:
	FARID KHAN KIYAN HADDER STRUCTURE ENGINEER :	PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
	Designed By	GENERAL NOTES
	Checked By	
	Approved By	DATE: SEP 2023
		SCALE: DRG. NO. S-02



FOUNDATION PLAN

CLIENT:  The UN Refugee Agency			
SCHOOL NAME (BOUNDARY WALL) PSC-294-BASU MAIRA DISTRICT HARIPUR			
Date of Revision	Prepared By	FAHIM KHAN KHAN IANBER STRUCTURE ENGINEER Engr. HUMZA AHMAD	PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES TITLE: FOUNDATION PLAN
	Designed By		
	Checked By		
	Approved By		DATE: SEP 2023 SCALE: DRG. NO.: S-03

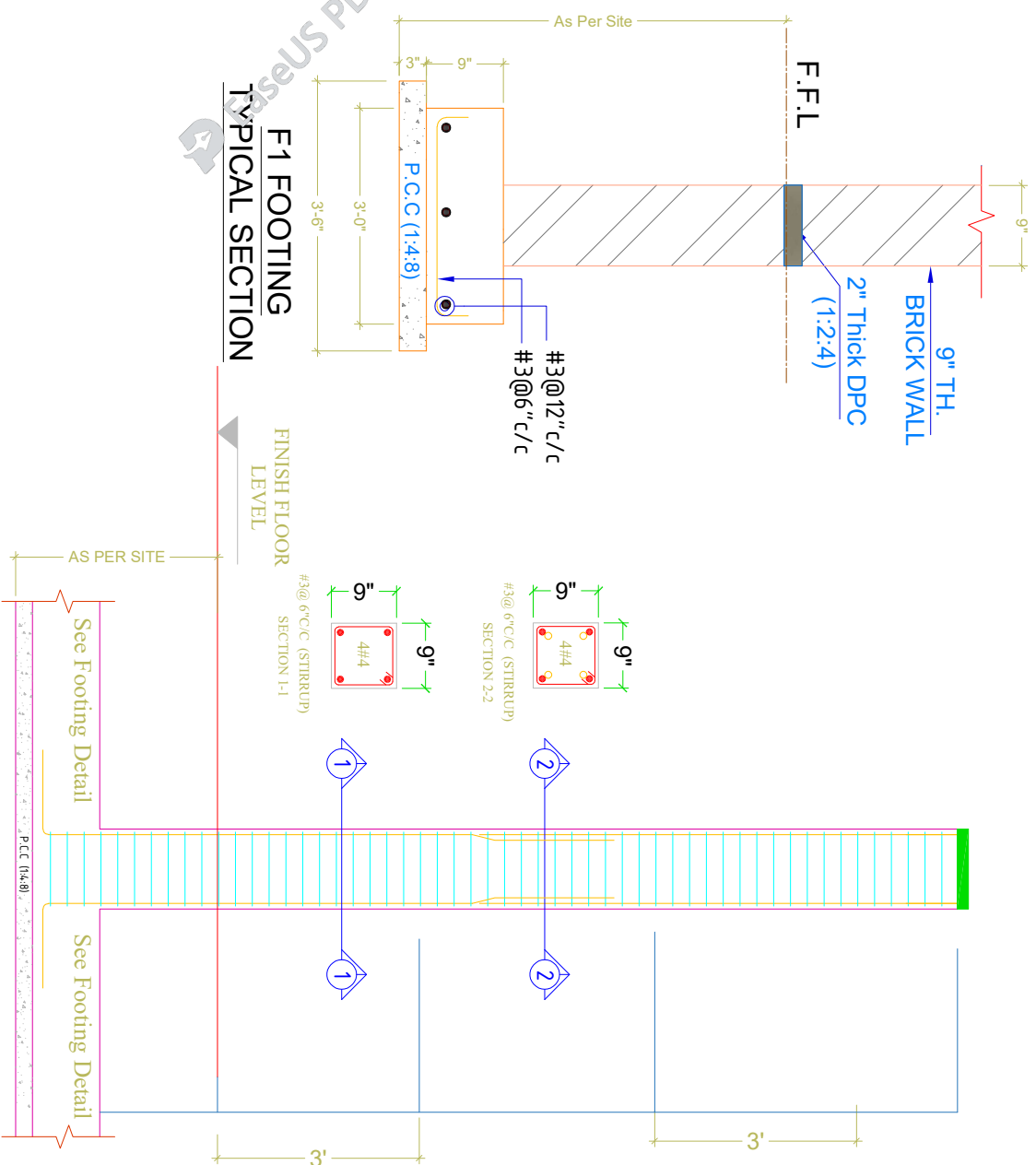


COLUMN LAYOUT PLAN

CLIENT: _____		SCHOOL NAME (BOUNDARY WALL) PSC-294-BASU MAIRA DISTRICT HARIPUR	
Date of Revision	Prepared By	FAHID KHAN KHAN KHANDEER STRUCTURE ENGINEER	PROJECT: PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/ REHABILITATION OF SITES
_____	Designed By	Engr. HUMZA AHMAD	TITLE: COLUMN LAYOUT PLAN
_____	Checked By	_____	DATE SEP 2023
_____	Approved By	_____	SCALE
_____	_____	_____	DRG.NO. S-04



SCHEDULE OF COLUMNS	
COLUMN TYPES	COL. C-1
GROUND FLOOR LEVEL	



COLUMN LONG SECTION C-1

CLIENT:		SCHOOL NAME		PROJECT:	
		(BOUNDARY WALL) PSC-294-BASU MAIRA DISTRICT HARIPUR		PREPARATION OF DESIGN DRAWINGS & BOQS FOR CONSTRUCTION/REHABILITATION OF SITES	
_____ _____		Date of Revision		Prepared By FAHIM KHAN KHANNAHADR STRUCTURE ENGINEER	
_____ _____		Designed By Engr. HUMZA AHMAD		TITLE: COLUMN SECTIONS DETAIL	
_____ _____		Checked By Approved By		DATE SEP 2023	
_____ _____		Approved By		SCALE DRG.NO. S-05	