

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (MASTER PLAN)

TENDER DRAWINGS



LIST OF DRAWINGS

RMP-002- MASTER PLAN OF EXISITING SCHOOL WIITH BLOCK DETAILS



UN-HABITAT
FOR A BETTER URBAN FUTURE

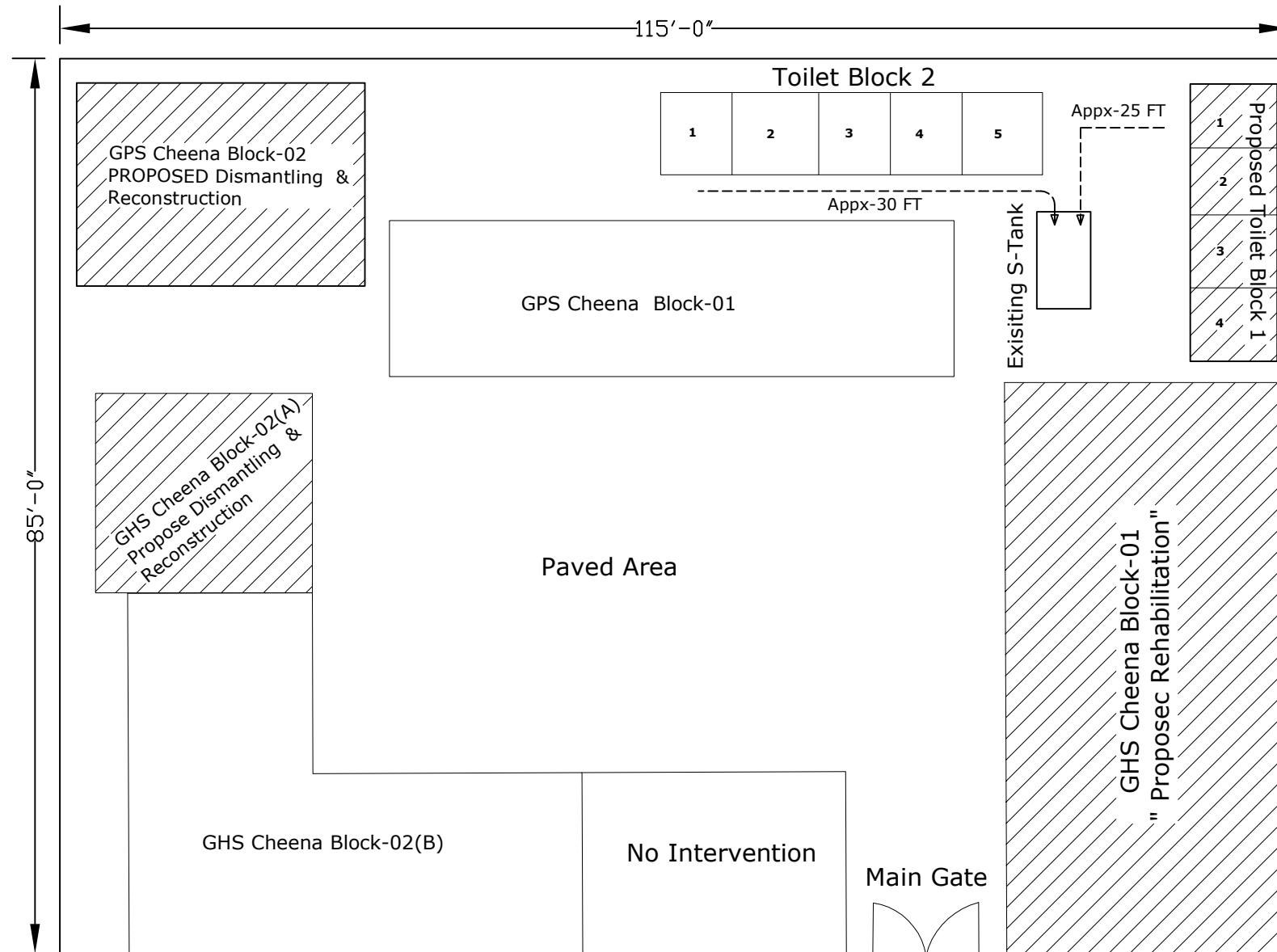
DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL/-071161	THE MASTER PLAN INDICATES THE LOCATION OF ALL EXISTING BLOCKS WITHIN THE SCHOOL PREMISES. THE PROPOSED REHABILITATION, RECONSTRUCTION, AND RETROFITTING WORKS ARE IDENTIFIED IN THE SHADED AREAS. FOR DETAILED REQUIREMENTS, REFER TO THE PLAN DETAILS
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL/-29326	

General Notes – Applicable Unless Otherwise Specified

Page No-

RMP-001

MASTER PLAN OF GPS CHEENA -24064 & GHS CHEENA-35906



General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :

Final Drawing Issuance Date :

TYP/JICA/26

05 May ,2026

REVISION

REVISED DRAWING ISSUE DATE:

0

THE MASTER PLAN INDICATES THE LOCATION OF ALL EXISTING BLOCKS WITHIN THE SCHOOL PREMISES. THE PROPOSED REHABILITATION, RECONSTRUCTION, AND RETROFITTING WORKS ARE IDENTIFIED IN THE SHADED AREAS. FOR DETAILED REQUIREMENTS, REFER TO THE PLAN DETAILS

Page No-

RMP-002

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (PLAN AND SECTIONAL DETAILS OF THE PROPOSED BLOCKS.)

TENDER DRAWINGS



LIST OF DRAWINGS

RPS-002- PLAN VIEW OF I-SHAPED SINGLE CLASSROOM WITH VERANDAH
"GPS CHEENA-24064 BLOCK -2"

RPS-003- PLAN VIEW OF I-SHAPED SINGLE CLASSROOM WITH VERANDAH
"GHS CHEENA-35906 BLOCK -2 (A)"

RPS-004- SECTIONAL VIEW OF I-SHAPED SINGLE CLASSROOM WITH VERANDAH
"GPS CHEENA-24064 BLOCK -2"

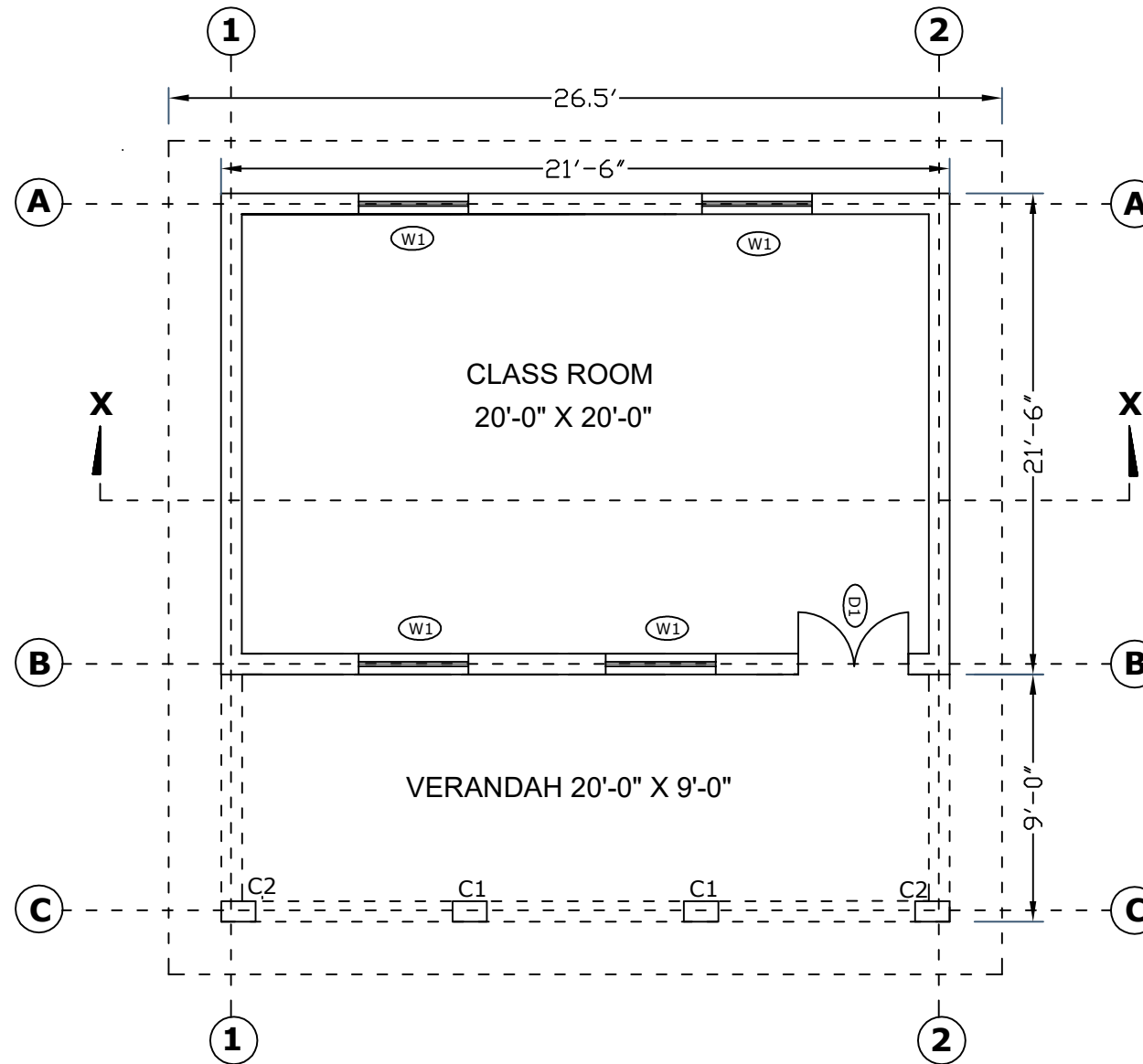
RPS-005- SECTIONAL VIEW OF I-SHAPED SINGLE CLASSROOM WITH VERANDAH
"GHS CHEENA-35906 BLOCK -2 (A)"

RPS-006- REHABILITATION PLAN VIEW OF GHS CHEENA -35906
"GROUND FLOOR BLOCK -1 "

RPS-007- REHABILITATION PLAN VIEW OF GHS CHEENA -35906
"FIRST FLOOR BLOCK -1 "

				General Notes – Applicable Unless Otherwise Specified	
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :			Page No-
	TYP/JICA/26	05 May ,2026			
	REVISION	REVISED DRAWING ISSUE DATE:			
	0				RPS-001
				THE PLAN VIEW OF THE PROPOSED BLOCKS SHOWS THE DETAILED LAYOUT AND ORIENTATION OF THE BUILDING.	

DEMOLITION AND RECONSTRUCTION PLAN VIEW OF GHS CHEENA -35906



SCHEDULE OF OPENINGS

S.No	TYPE	SIZE	SILL	QTY
01	D1	4'-0"X7'-0"	0'-0"	00
02	D1	4'-0"X8'-0"	0'-0"	01
03	D2	2'-6"X7'-0"	0'-0"	00
04	W1	4'-0"X6'-0"	3'-0"	04
05	V1	3'-0"X2'-0"	0'-0"	00
06	C.B	4'-0"X4'-0"	3'-6"	01

GENERAL INFORMATION

PROPOSED BLOCK DETAILS

COVERED AREA : 400 SQ-FT

WALL THICKNESS : 9" THK

CEILING HEIGHT FROM FFL : 11-FT

NSL TO FFL HEIGHT : 2'-0"

COLUMN C1 : 9" X 15"

COLUMN C2 : 9" X 15"

COLUMN C3 : 9" X 15"

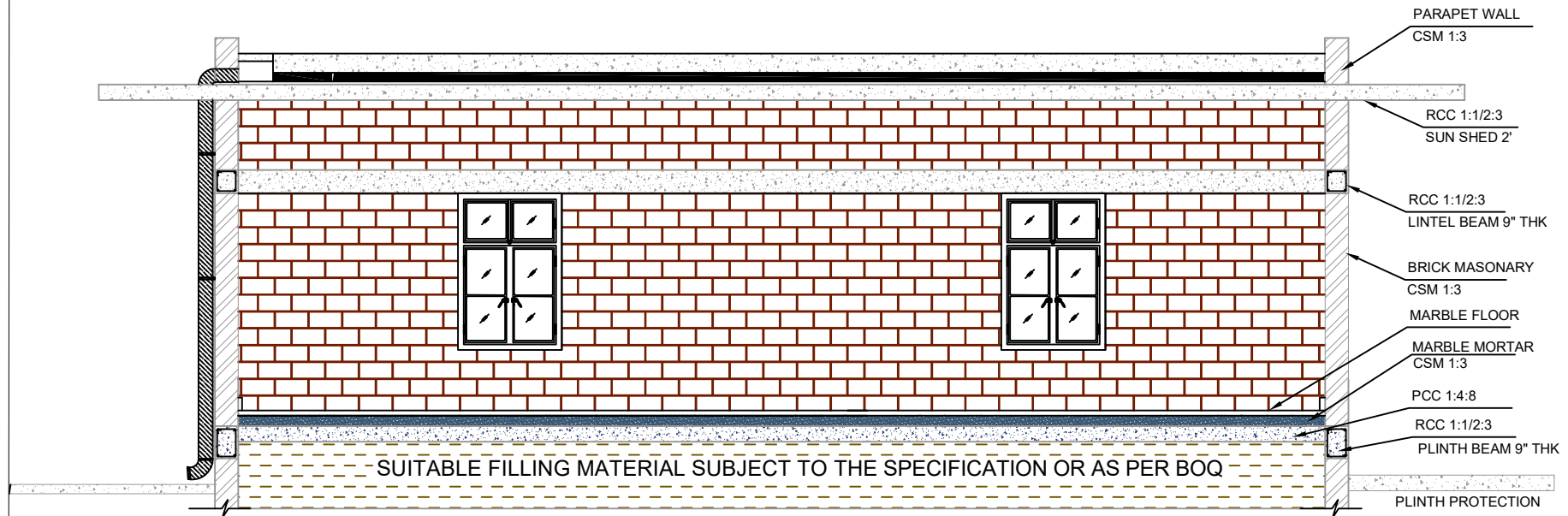
COLUMN C3 : 9" X 15"

SPECIFIC INFORMATION

THE EXISTING BUILDING IS COMPLETELY DAMAGED AND DOES NOT MEET THE RETROFITTING CRITERIA; THEREFORE, DEMOLITION AND RECONSTRUCTION ARE PROPOSED UNDER THE STANDARD 400 SFT COVERED AREA DESIGN.

General Notes – Applicable Unless Otherwise Specified

SECTIONAL VIEW OF THE PROPOSED RECONSTRUCTION FOR GHS CHEENA -35906

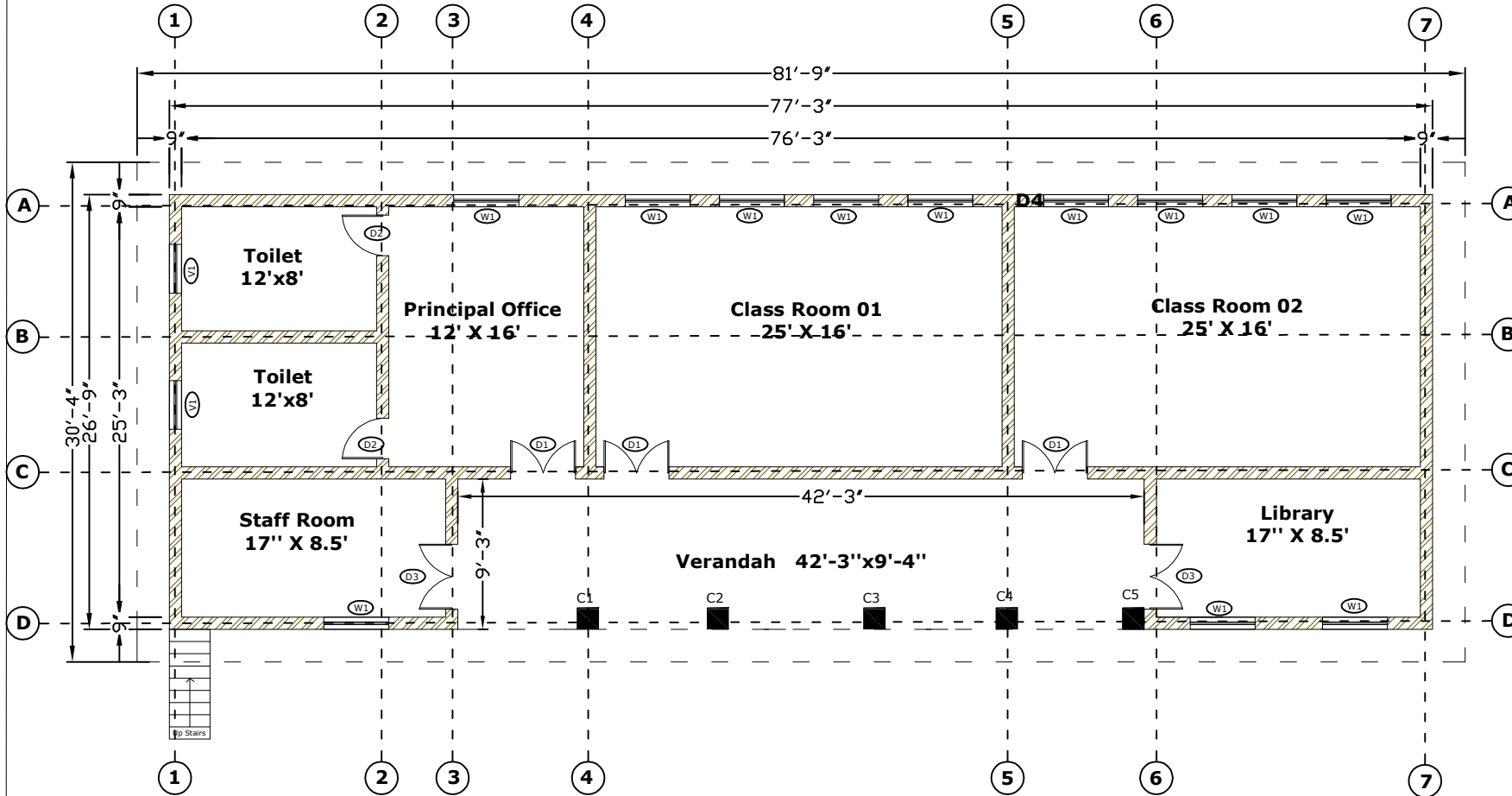


General Notes – Applicable Unless Otherwise Specified

 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE	Page No-
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161		
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:		
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	THE SECTION VIEW OF THE PROPOSED BLOCK SHOWS THE DETAILED STRUCTURAL PROFILE AND VERTICAL ORIENTATION OF THE BUILDING.	RPS-005

REHABILITATION PLAN VIEW OF GHS CHEENA -35906

GROUND FLOOR BLOCK 1



SCHEDULE OF OPENINGS

S.No	TYPE	SIZE	SILL	QTY
01	D1	4'-0"X7'-0"	0'-0"	03
02	D1	4'-0"X8'-0"	0'-0"	02
03	D2	2'-6"X7'-0"	0'-0"	02
04	W1	4'-0"X4'-0"	3'-0"	12
05	V1	3'-0"X2'-0"	0'-0"	02
06	C.B	4'-0"X4'-0"	3'-6"	03

GENERAL INFORMATION

PROPOSED BLOCK DETAILS

COVERED AREA : 2513 SQ-FT

WALL THICKNESS : 16" THK

CEILING HEIGHT FROM FFL : 10-FT

NSL TO FFL HEIGHT : 1'-0"

COLUMN C1 : 16" X 16"

COLUMN C2 : 16" X 16"

COLUMN C3 : 16" X 16"

COLUMN C4 : 16" X 16"

COLUMN C5 : 16" X 16"

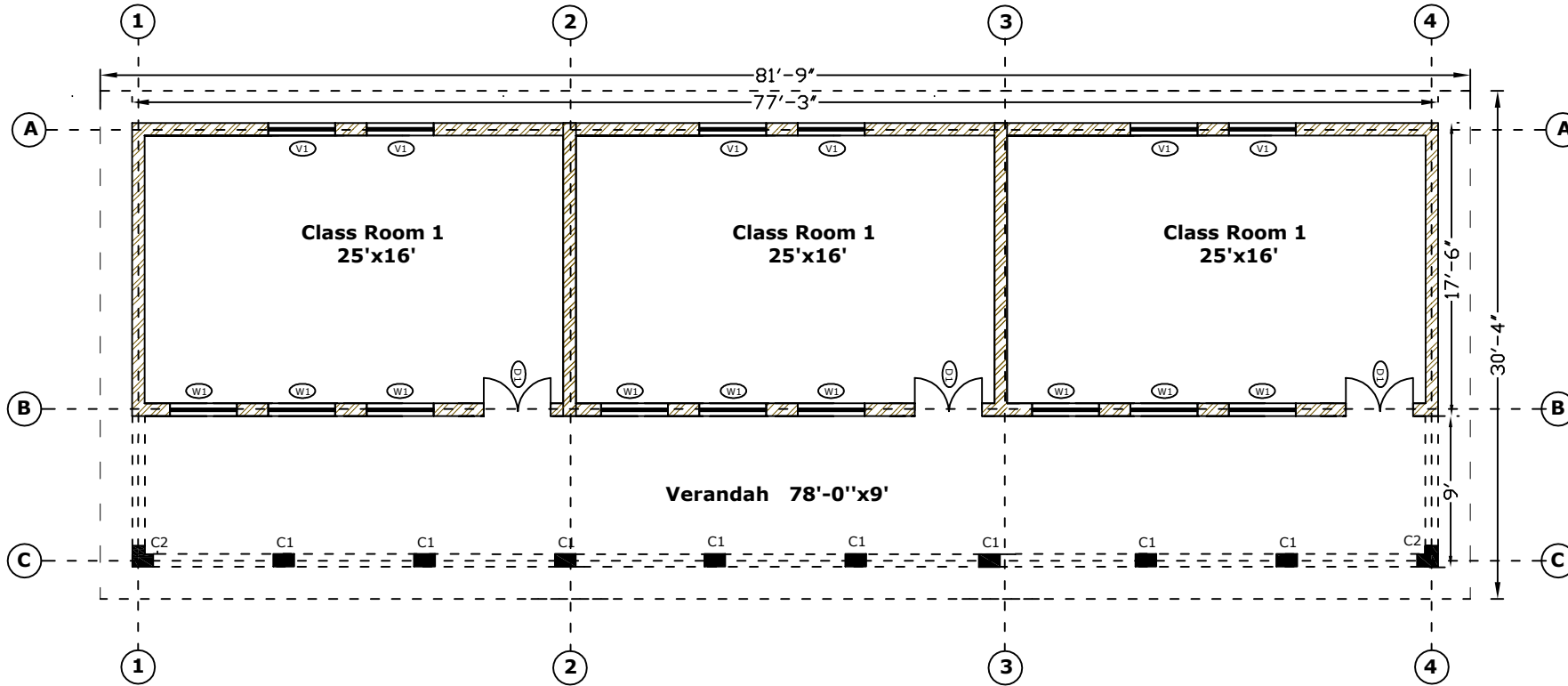
SPECIFIC INFORMATION

THE EXISTING BUILDING REQUIRES MAJOR REHABILITATION WORKS AND DOES NOT REQUIRE RETROFITTING; THEREFORE, REHABILITATION MEASURES ARE PROPOSED.

General Notes – Applicable Unless Otherwise Specified

REHABILITATION PLAN VIEW OF GHS CHEENA -35906

FIRST FLOOR BLOCK 1



SCHEDULE OF OPENINGS

S.No	TYPE	SIZE	SILL	QTY
01	D1	4'-0"X7'-0"	0'-0"	03
02	D1	4'-0"X8'-0"	0'-0"	00
03	D2	2'-6"X7'-0"	0'-0"	00
04	W1	4'-0"X4'-0"	3'-0"	09
05	V1	3'-0"X2'-0"	0'-0"	06
06	C.B	4'-0"X4'-0"	3'-6"	03

GENERAL INFORMATION

PROPOSED BLOCK DETAILS

COVERED AREA : 2513 SQ-FT

WALL THICKNESS : 16" THK

CEILING HEIGHT FROM FFL : 10'-FT

NSL TO FFL HEIGHT : 0'-0"

COLUMN C1 : 16" X 16" X 8 NOS

COLUMN C2 : 16" X 19" X 2 NOS

SPECIFIC INFORMATION

THE EXISTING BUILDING REQUIRES MAJOR REHABILITATION WORKS AND DOES NOT REQUIRE RETROFITTING; THEREFORE, REHABILITATION MEASURES ARE PROPOSED.

General Notes – Applicable Unless Otherwise Specified

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (STRUCTURAL DRAWINGS.)

TENDER DRAWINGS



LIST OF DRAWINGS

RS-002- TYPICAL LAYOUT OF SLAB REINFORCEMENT.

RS-003- TYPICAL SECTION DETAILS OF SLAB REINFORCEMENT.

RS-004- SLAB CURTAILMENT PLAN & GENERAL NOTES

RS-005- LINTEL & PLINTH BEAM REINFORCEMENT DETAILS

RS-006- TYPICAL SILL & ROOF BEAM REINFORCEMENT DETAILS

RS-007- TYPIC BEAM 1 & BEAM 2 SECTION & REINFORCEMENT DETAILS

RS-008- L-SHAPE & U-SHAPE RE-BAR DETAILS

RS-009- TYPICAL COLUMN & FOOTING REINFORCEMENT DETAILS

RS-010- TYPICAL FOUNDATION SECTIONAL DETAILS



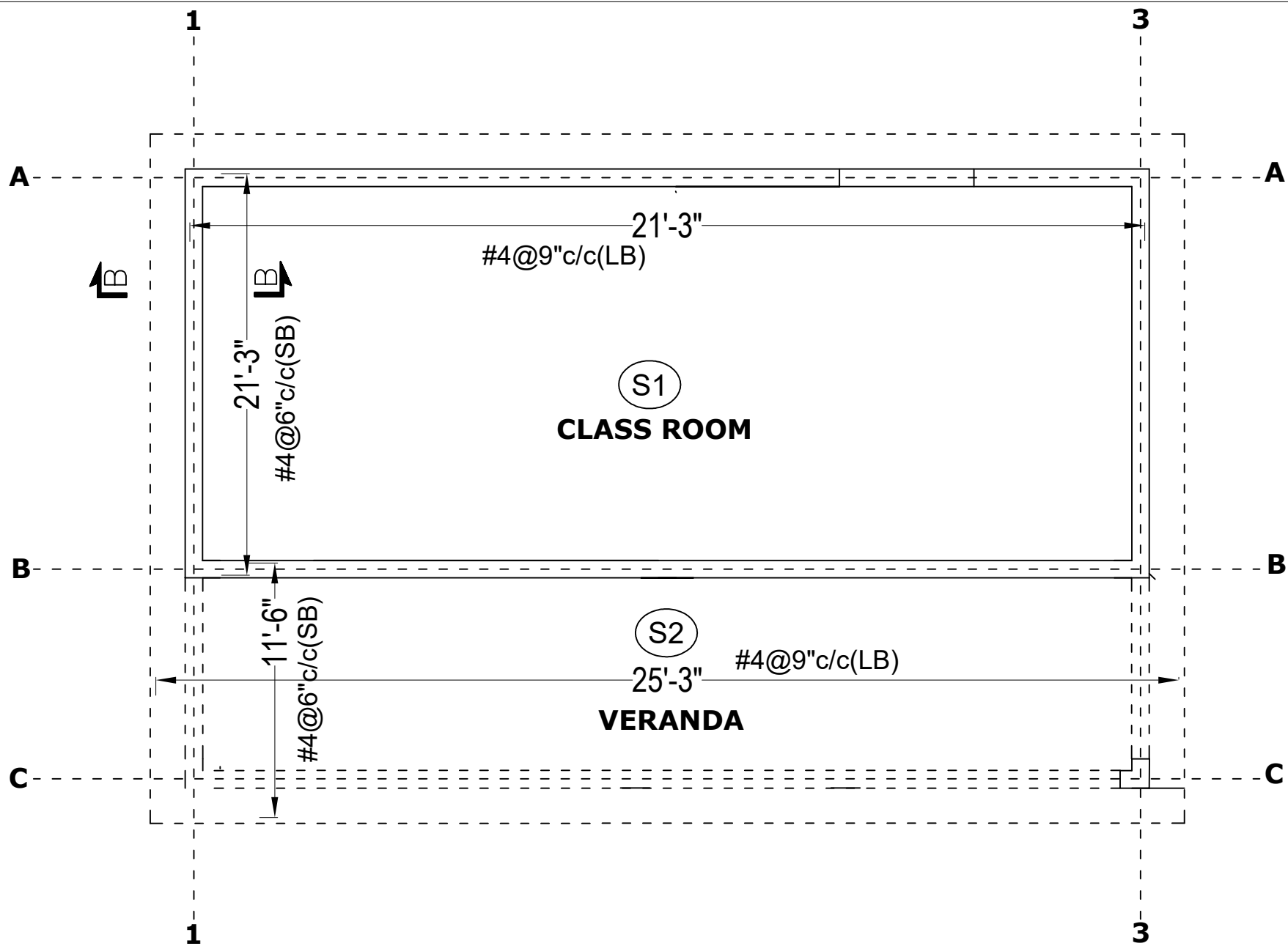
UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS, COLUMNS, AND PLINTH BEAMS.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

General Notes – Applicable Unless Otherwise Specified

Page No-

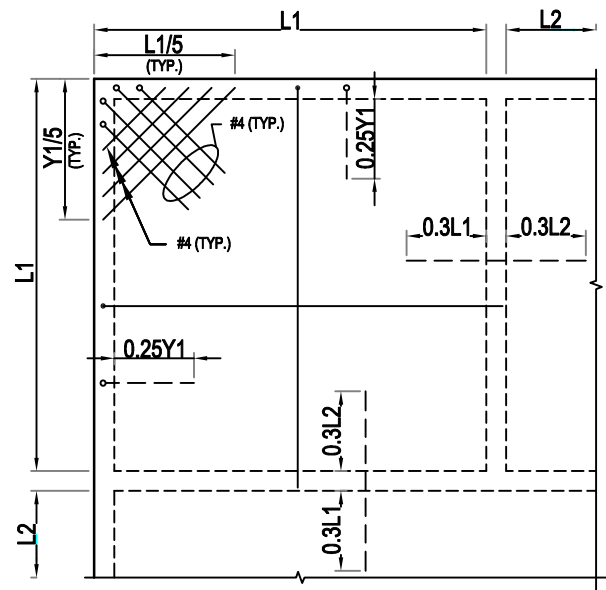
RS-001



SLAB REINFORCEMENT LAYOUT

General Notes – Applicable Unless Otherwise Specified

 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS, COLUMNS, AND PLINTH BEAMS.	Page No-
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161		RS-002
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:		
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326		



TYPICAL SLAB REINFORCEMENT

(CUT OFF POINTS)

GENERAL NOTES - CONCRETE & STEEL COVER

1)-THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL STRUCTURAL DRAWINGS, SPECIFICATIONS, AND RELEVANT CODES. ALL WORKS SHALL COMPLY WITH THE APPLICABLE STANDARDS UNLESS OTHERWISE SPECIFIED.

2)-MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS, UNLESS NOTED OTHERWISE ON DRAWINGS:

ROOF / FLOOR SLABS: 25 MM

BEAMS: 40 MM

COLUMNS: 40 MM

FOOTINGS / FOUNDATIONS IN CONTACT WITH SOIL : 75 MM

PILE CAPS / RAFTS: 50 MM

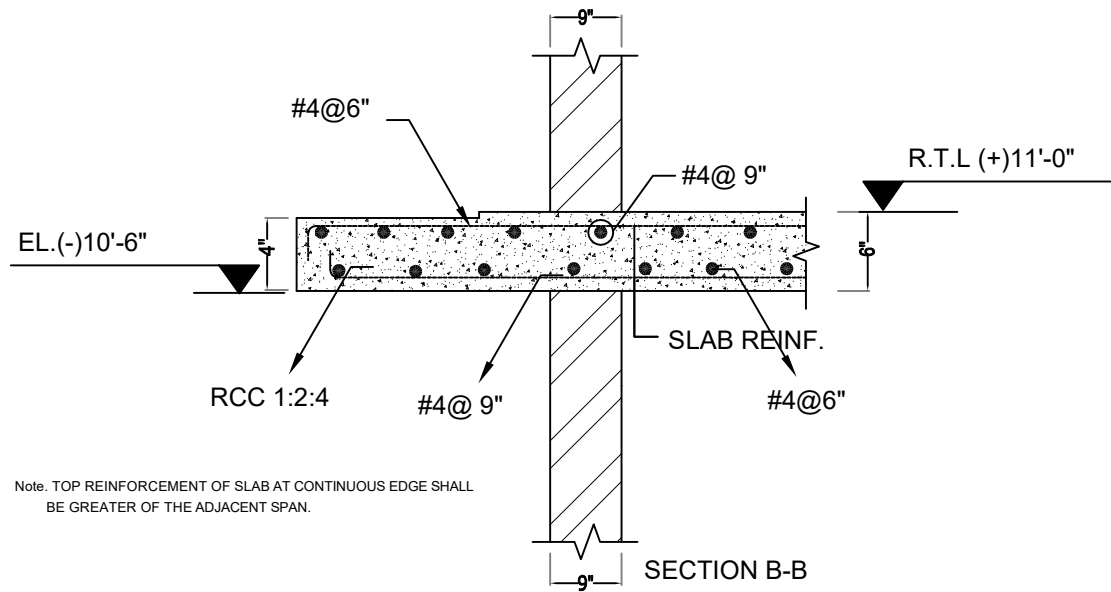
3)-CLEAR COVER SHALL BE MEASURED FROM THE OUTER FACE OF REINFORCEMENT TO THE FINISHED CONCRETE SURFACE, EXCLUDING PLASTER OR FINISHES. APPROVED CONCRETE OR PLASTIC COVER BLOCKS / SPACERS SHALL BE USED TO MAINTAIN THE SPECIFIED COVER DURING CONCRETING. THE USE OF BRICKS, STONES, OR TIMBER PIECES SHALL NOT BE PERMITTED.

4)-REINFORCEMENT SHALL BE PROPERLY FIXED, TIED, AND SUPPORTED TO PREVENT DISPLACEMENT DURING CONCRETING AND VIBRATION.

5)-ALL REINFORCING STEEL SHALL BE CLEAN AND FREE FROM OIL, GREASE, LOOSE RUST, PAINT, OR OTHER DELETERIOUS MATERIALS PRIOR TO PLACEMENT. WELDING OR CUTTING OF REINFORCEMENT SHALL NOT BE CARRIED OUT WITHOUT PRIOR APPROVAL OF THE ENGINEER.

6)-ANY REDUCTION IN THE SPECIFIED CONCRETE COVER SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER, IN ACCORDANCE WITH THE CONDITIONS OF CONTRACT.

7)-THE CONTRACTOR SHALL ENSURE THAT THE CONCRETE COVER IS CHECKED AND APPROVED BY THE ENGINEER BEFORE POURING CONCRETE.



Note. TOP REINFORCEMENT OF SLAB AT CONTINUOUS EDGE SHALL BE GREATER OF THE ADJACENT SPAN.

SECTION B-B



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS, COLUMNS, AND PLINTH BEAMS.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

General Notes – Applicable Unless Otherwise Specified

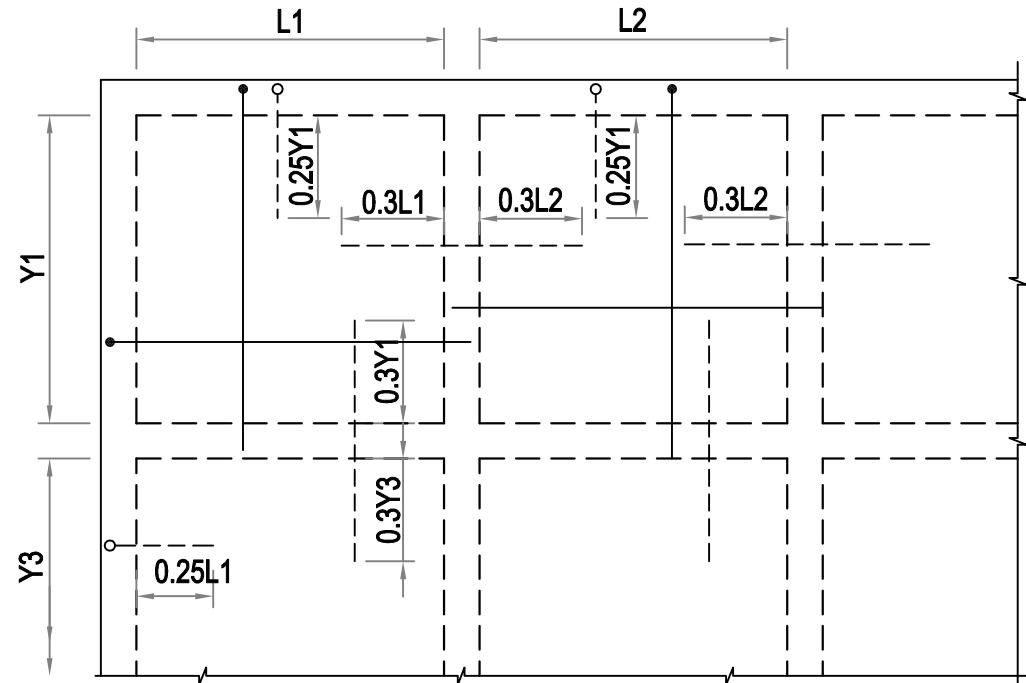
Page No-

RS-003

GENERAL NOTES -REINFORCING STEEL FOR RCC SLAB (ACI 318-19)

- 1)-THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL STRUCTURAL DRAWINGS, BAR BENDING SCHEDULES, AND SPECIFICATIONS. ALL REINFORCING STEEL AND RELATED WORKS SHALL COMPLY WITH ACI 318-19 AND RELEVANT ASTM STANDARDS, UNLESS OTHERWISE SPECIFIED.
- 2)-ALL REINFORCEMENT SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 60 (FY = 60 KSI), UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 3)-REINFORCEMENT SIZE, SPACING, NUMBER OF BARS, AND LAYOUT SHALL BE STRICTLY AS SHOWN ON THE APPROVED DRAWINGS AND DETAILS. SPACING SHALL NOT EXCEED THAT INDICATED ON THE DRAWINGS.
- 4)-MINIMUM CONCRETE COVER TO REINFORCEMENT SHALL BE PROVIDED AS SPECIFIED IN THE STRUCTURAL GENERAL NOTES AND IN ACCORDANCE WITH ACI 318-19 REQUIREMENTS.
- 5)-DEVELOPMENT LENGTHS, LAP SPLICES, AND ANCHORAGE SHALL BE PROVIDED IN ACCORDANCE WITH ACI 318-19 AND AS DETAILED ON THE DRAWINGS. WHERE NOT SPECIFICALLY SHOWN, MINIMUM LAP LENGTHS SHALL BE AS PER ACI 318-19 REQUIREMENTS FOR GRADE 60 REINFORCEMENT.
- 6)-LAP SPLICES SHALL BE STAGGERED AND SHALL NOT BE LOCATED IN ZONES OF MAXIMUM STRESS UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.
- 7)-HOOKS, BENDS, AND ANCHORAGE DETAILS SHALL COMPLY WITH ACI 318-19 REQUIREMENTS. BENDING OF REINFORCEMENT AT SITE SHALL BE CARRIED OUT USING APPROVED METHODS WITHOUT HEATING.
- 8)-REINFORCING STEEL SHALL BE PROPERLY FIXED, TIED, AND SUPPORTED USING APPROVED CHAIRS, SPACERS, AND COVER BLOCKS TO PREVENT DISPLACEMENT DURING CONCRETING.
- 9)-ALL REINFORCEMENT SHALL BE CLEAN AND FREE FROM OIL, GREASE, MUD, PAINT, LOOSE RUST, OR OTHER DELETERIOUS MATERIALS PRIOR TO PLACEMENT.
- 10)-WELDING OR CUTTING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- 11)-REINFORCEMENT PLACEMENTS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE CONCRETE PLACEMENT. NO CONCRETE SHALL BE POURED WITHOUT SUCH APPROVAL.
- 12)-ANY VARIATION, ALTERATION, OR DEVIATION FROM THE APPROVED DRAWINGS, REINFORCEMENT DETAILS, OR ACI 318-19 REQUIREMENTS SHALL BE REPORTED TO THE ENGINEER PRIOR TO EXECUTION, IN ACCORDANCE WITH THE CONDITIONS OF CONTRACT.

SLAB CURTAILMENT PLAN



TYPICAL SLAB REINFORCEMENT
(CUT OFF POINTS)

1. TOP REINFORCEMENT OF SLAB AT CONTINUOUS EDGE SHALL BE GREATER OF THE ADJACENT SPAN.

SCHEDULE OF SLAB REINFORCEMENT

SLAB	SLAB THICK	BOTTOM		TOP		
		SHORTER DIRECTION	LONGER DIRECTION	CONTINUOUS EDGE		DISCONTINUOUS EDGE
				SHORTER DIRECTION	LONGER DIRECTION	
S1	6"	#4@6"	#4@9"	#3@6"	#3@9"	#3@10"
S2	6"	#4@6"	#4@9"	#3@6"	#3@9"	#3@10"
S3	6"	#4@6"	#4@9"	#3@6"	#3@9"	#3@10"

TOP (CONTINUOUS AND DISCONTINUOUS EDGE) REINFORCEMENT.

General Notes – Applicable Unless Otherwise Specified

Page No-

RS-004



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :

TYP/JICA/26

REVISION

0

Final Drawing Issuance Date :

05 May ,2026

REVISED DRAWING ISSUE DATE:

DESIGN BY

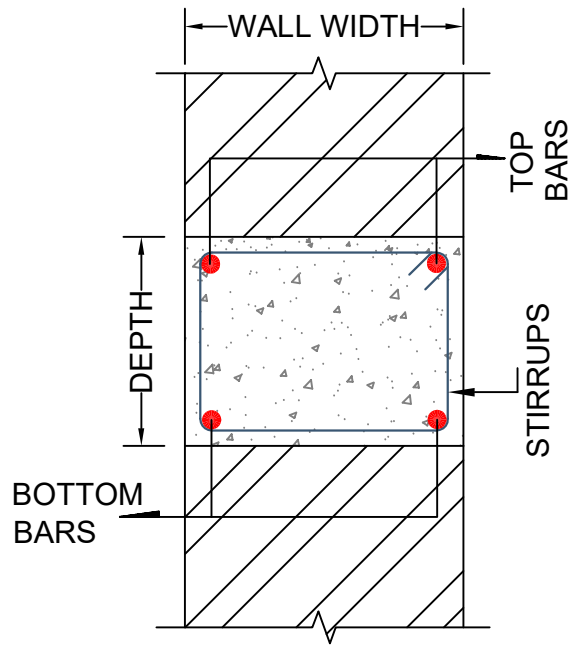
ENGR ARSALAN KHAN
REGISTRATION NO-CIVIL-071161

STRUCTURAL DESIGN ENGINEER

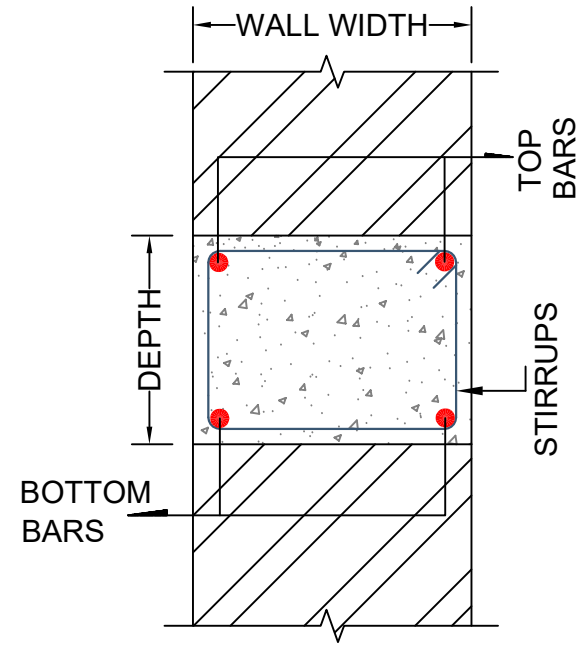
ENGR UMAR AMAAR
REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE

STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS,
COLUMNS, AND PLINTH BEAMS.



LINTEL BEAM SECTION



PLINTH BEAM SECTION

TABLE FOR LINTEL REINFORCEMENT

OPENING WIDTH	DEPTH	BOTTOM	TOP	STIRRUPS
3'-0" TO 4'-0"	6"	2#4	2#3	#3@6"
4'-1" TO 6'-0"	9"	3#4	3#3	#3@6"
7'-0"	9"	4#4	2#4	#3@6"

TABLE FOR PLINTH REINFORCEMENT

WALL WIDTH	DEPTH	BOTTOM	TOP	STIRRUPS
9" THK	6"	2#3	2#3	#3@6"
9" THK	9"	2#4	2#4	#3@6"

General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :

TYP/JICA/26

REVISION

0

Final Drawing Issuance Date :

05 May ,2026

REVISED DRAWING ISSUE DATE:

DESIGN BY

ENGR ARSALAN KHAN
REGISTRATION NO-CIVIL-071161

STRUCTURAL DESIGN ENGINEER:

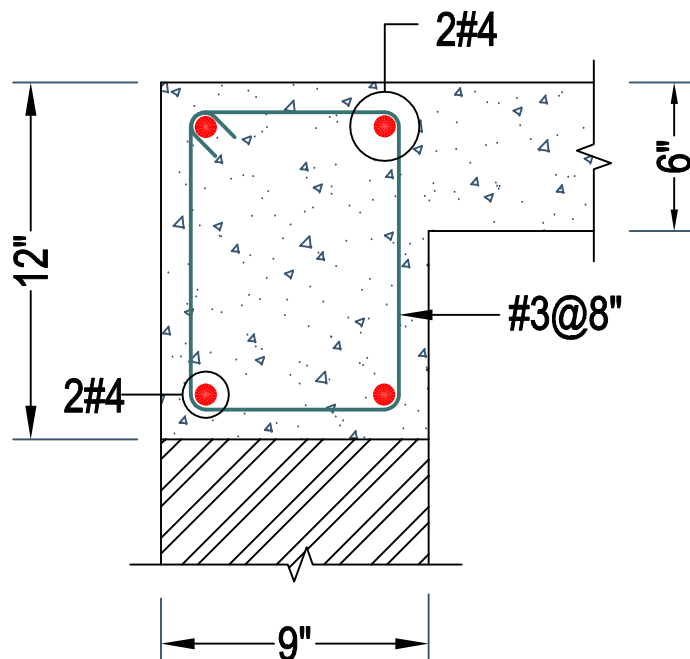
ENGR UMAR AMAAR
REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE

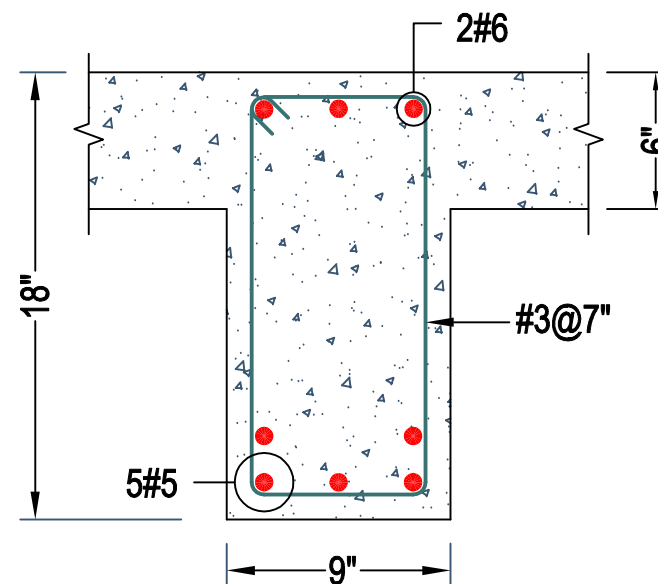
STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS,
COLUMNS, AND PLINTH BEAMS.

Page No-

RS-005



BEAM B1(TYP)



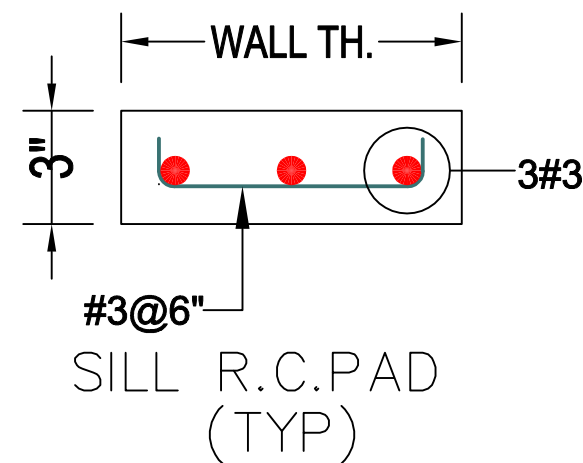
BEAM B2(TYP)

TABLE FOR SILL REINFORCEMENT

WALL WIDTH	DEPTH	BOTTOM	TOP	STIRRUPS
9" THK	3"	2#3	-	#2@6"
9" THK	5"	3#3	-	#2@6"

TABLE FOR ROOF REINFORCEMENT

CLEAR SPAN	CLEAR DEPTH	BOTTOM	TOP	STIRRUPS
< 12 FT	9"	3 #4	2 #4	#3@6"
>12 FT	12"	2 #6	2 #6	#3@6"
>12 FT	18"	(4+2) #5	3 #5	#3@6"



SILL R.C.PAD (TYP)

General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :
TYP/JICA/26
REVISION
0

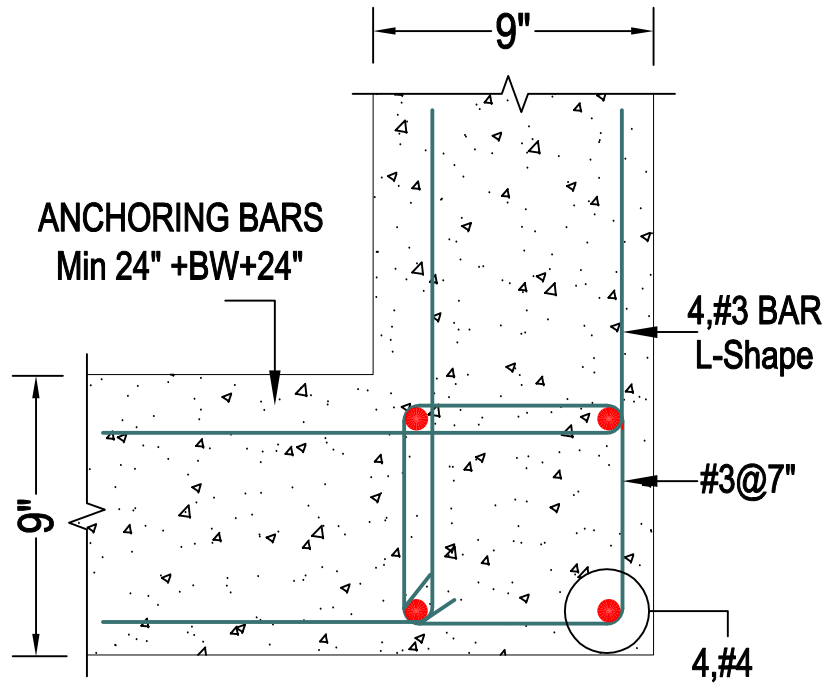
Final Drawing Issuance Date :
05 May ,2026
REVISED DRAWING ISSUE DATE:

DESIGN BY
ENGR ARSALAN KHAN
REGISTRATION NO-CIVIL-071161
STRUCTURAL DESIGN ENGINEER:
ENGR UMAR AMAAR
REGISTRATION NO-CIVIL-29326

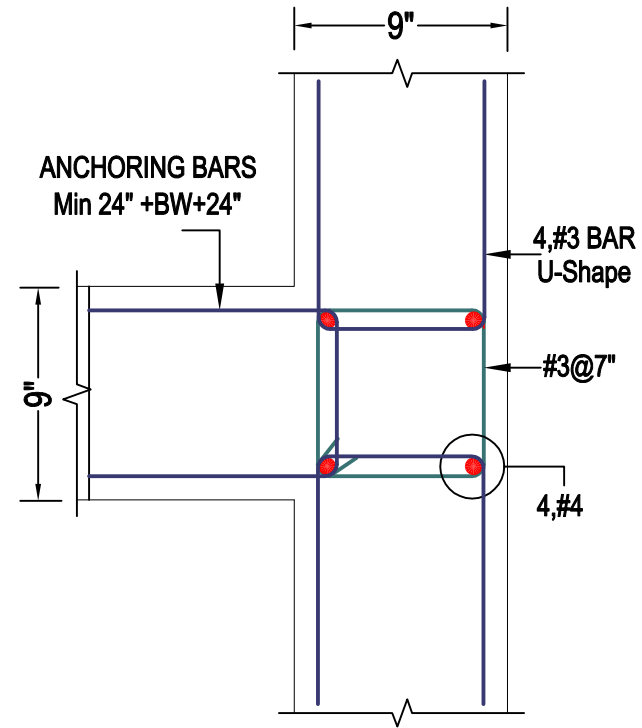
DRAWING DESCRIPTION AND SCOPE
STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS,
COLUMNS, AND PLINTH BEAMS.

Page No-

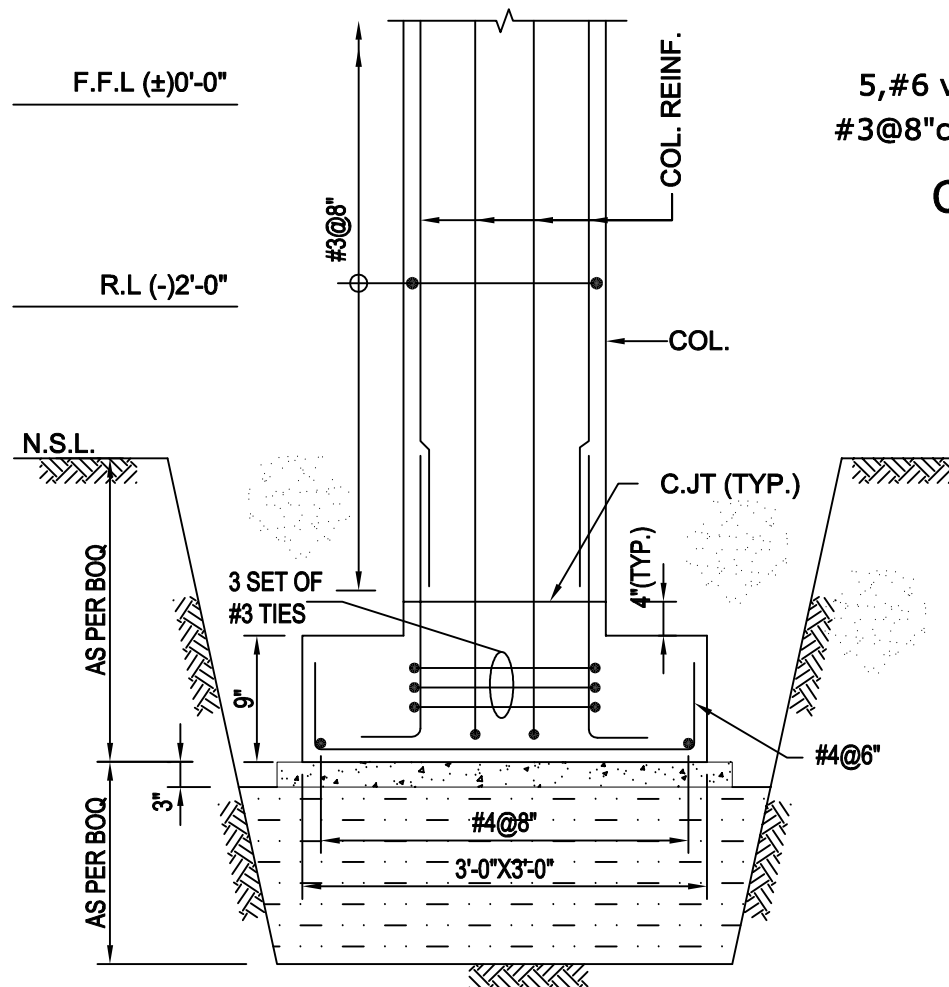
RS-007



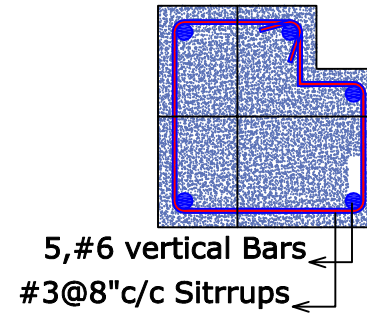
L-SHAPE RE-BARS



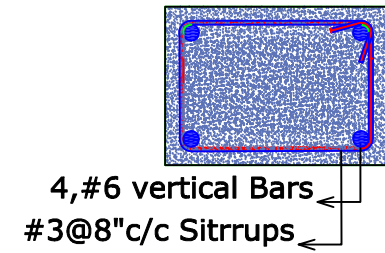
U-SHAPE RE-BARS



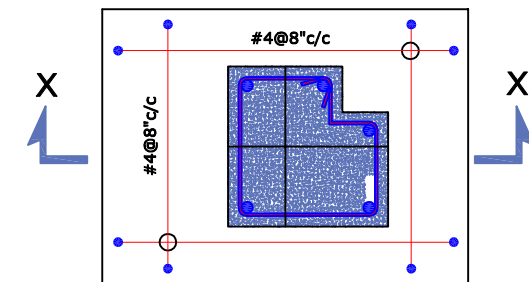
SECTION X-X
SCALE 1/2"=1'-0"



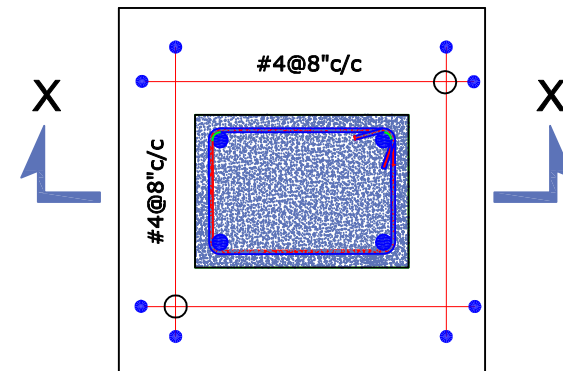
COLUMN 1



COLUMN 2



FOOTING F1



FOOTING F2

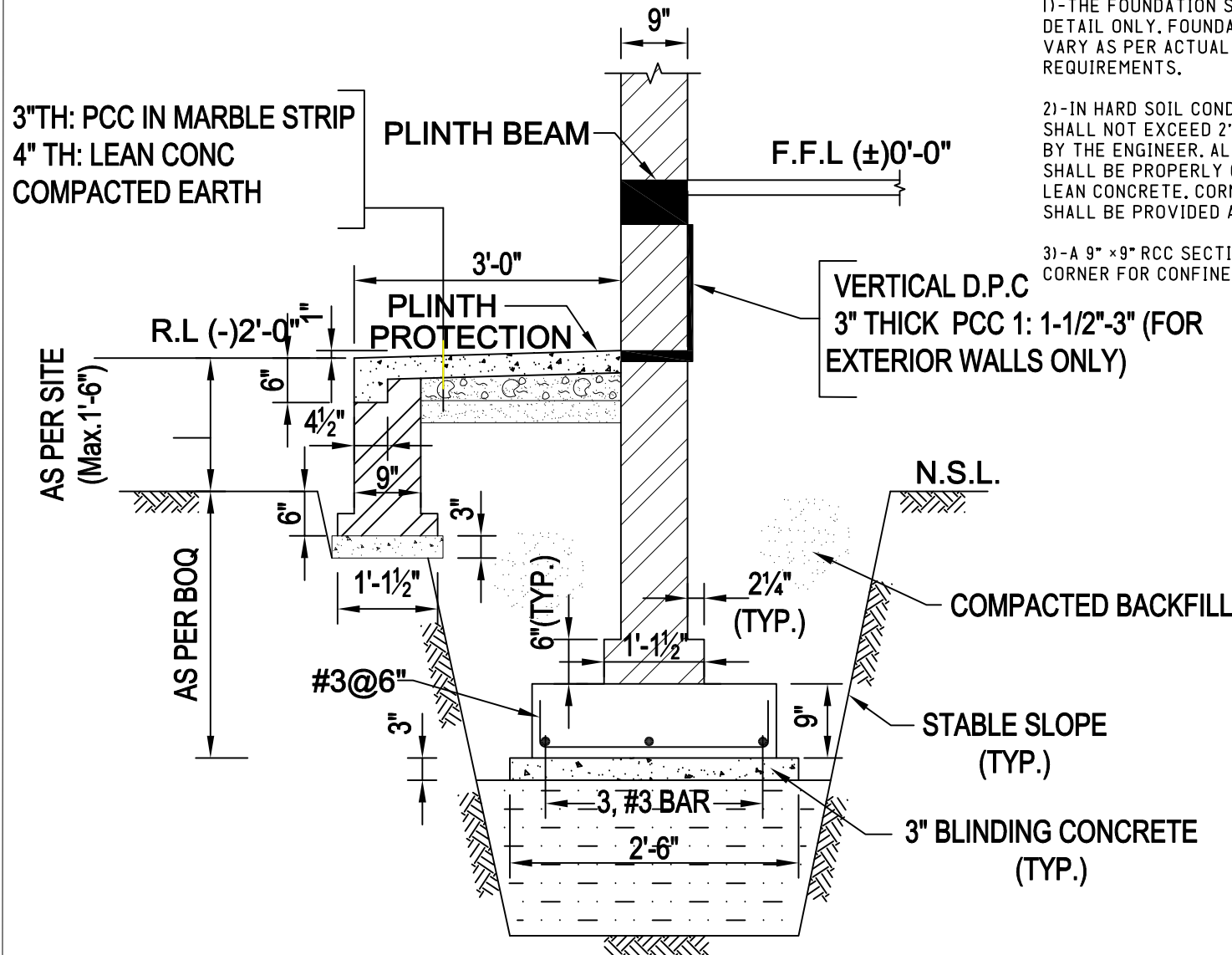
General Notes – Applicable Unless Otherwise Specified

GENERAL NOTES - SINGLE-STORY FOUNDATION

1)- THE FOUNDATION SECTION PROVIDED IS A TYPICAL DETAIL ONLY. FOUNDATION DEPTH AND WIDTH MAY VARY AS PER ACTUAL SITE CONDITIONS AND SOIL REQUIREMENTS.

2)- IN HARD SOIL CONDITIONS, THE FOUNDATION DEPTH SHALL NOT EXCEED 2'-0" UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL DISTURBED SOIL SURFACES SHALL BE PROPERLY COMPACTED BEFORE PLACING LEAN CONCRETE. CORNER RAFTS FOR COLUMN FOOTINGS SHALL BE PROVIDED AT ALL CORNERS.

3)- A 9" x 9" RCC SECTION SHALL BE PROVIDED AT EACH CORNER FOR CONFINED MASONRY CONSTRUCTION.



TYPICAL SECTION B-B

General Notes – Applicable Unless Otherwise Specified

Page No-

RS-010



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO.:

TYP/JICA/26

REVISION

0

Final Drawing Issuance Date :

05 May ,2026

REVISED DRAWING ISSUE DATE:

0

DESIGN BY

ENGR. ARSALAN KHAN

REGISTRATION NO-CIVIL-071161

STRUCTURAL DESIGN ENGINEER:

ENGR. UMAR AMAAR

REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE

STRUCTURAL REINFORCEMENT DETAILS OF SLABS, BEAMS, COLUMNS, AND PLINTH BEAMS.

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (ROOFING & FLOORING)

TENDER DRAWINGS



LIST OF DRAWINGS

RRF-002- GENERAL NOTES

RRF-003- TYPICAL ELEVATION OF ROOFING AND FLOORING DETAILS

RRF-004- TYPICAL ROOF PLAN

RRF-005- TYPICAL DETAILS OF WATER TROUGH WITH RAIN WATER PIPE & Drain

				General Notes – Applicable Unless Otherwise Specified	
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	TYPICAL DRAWING OF ROOFING AND FLOORING. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.	Page No-
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161		
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:		
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326		RRF-001

GENERAL NOTES FOR ROOFING WORKS:

1)-EXISTING ROOF INSULATION LAYERS SUCH AS CONCRETE TOPPING, BRICK TILES, CLAY LAYER, WATERPROOFING LAYERS, OR OTHER UNSERVICEABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF AS PER THE APPROVED SCOPE OF WORK, DRAWINGS, AND BOQS.

2)-THE TOP SURFACE OF RCC ROOF SLAB SHALL BE THOROUGHLY CLEANED AND MADE FREE FROM DUST, LOOSE MATERIAL, OIL, DEBRIS, AND OTHER FOREIGN MATTER PRIOR TO COMMENCEMENT OF WATERPROOFING OR INSULATION WORKS.

3)-IN CASE OF SURFACE CRACKS OR DAMAGED AREAS, CRACK TREATMENT/REPAIR WORKS SHALL BE CARRIED OUT AS PER THE APPROVED SCOPE OF WORK, TECHNICAL SPECIFICATIONS, OR INSTRUCTIONS OF THE ENGINEER.

4)-AFTER COMPLETION OF CRACK REPAIR WORKS, A PRIMER COAT OF COLD BITUMEN SHALL BE APPLIED PRIOR TO APPLICATION OF HOT BITUMEN TO ENSURE PROPER ADHESION, SEAL SURFACE PORES, AND REMOVE THE EFFECT OF FINE DUST PARTICLES.

5)-DURING APPLICATION OF HOT BITUMEN, POLYTHENE SHEET SHALL BE LAID SIMULTANEOUSLY AND PARALLEL TO THE BITUMEN APPLICATION TO ENSURE PROPER BONDING AND ADHESION WITH THE BITUMEN LAYER.

6)-POLYTHENE SHEETS SHALL HAVE A MINIMUM OVERLAP OF 3 FEET OR AS SPECIFIED IN THE DRAWINGS, TECHNICAL SPECIFICATIONS, OR BOQS.

7)-WHERE SPECIFIED IN THE BOQ OR DRAWINGS, PROVIDE EXTRUDED POLYSTYRENE (EPS/XPS) INSULATION SHEETS OF MAXIMUM SIZE 6' x 3' AND THICKNESS AS SPECIFIED FOR THE PARTICULAR SCHOOL.

8)-IN CASE EPS INSULATION SHEETS ARE NOT PROVIDED OR SPECIFIED, AN AVERAGE 3" THICK PCC LAYER SHALL BE PROVIDED IN PANELS/CLOSE MARBLE PATTI TO MINIMIZE SURFACE CRACKS.

9)-WHERE EPS SHEETS ARE USED, CHICKEN MESH SHALL BE PROVIDED IN PCC TOPPING TO CONTROL SHRINKAGE AND SURFACE CRACKS. PAYMENT OF CHICKEN MESH SHALL BE MADE UNDER RELEVANT PSI ITEMS WHERE APPLICABLE. PCC OR CONCRETE WORKS SHALL BE CURED USING WATER PONDING METHOD FOR A MINIMUM PERIOD OF 3 DAYS. ALTERNATIVELY, APPROVED CURING COMPOUND MAY BE USED FOR CONCRETE WORKS SUBJECT TO APPROVAL OF THE ENGINEER.

10)-WATER KURRAS/GOLA SHALL BE PROVIDED AT ROOF EDGES, WALL JUNCTIONS, AND PLINTH LEVELS AS SHOWN ON DRAWINGS OR SPECIFIED IN THE BOQ.

11)-ALL ROOFING WORKS SHALL BE EXECUTED AS PER APPROVED DRAWINGS, TECHNICAL SPECIFICATIONS, RELEVANT BOQS, AND INSTRUCTIONS OF THE ENGINEER.

GENERAL NOTES FOR FLOORING WORKS:

1)-EXISTING SITE CONDITIONS OF EACH SCHOOL MAY VARY. IN CASE THE EXISTING PCC FLOOR OF THE RETROFITTING BLOCK IS FOUND SOUND, LEVEL, AND SUITABLE, MARBLE FLOORING MAY BE APPLIED DIRECTLY OVER THE EXISTING PCC SURFACE AFTER REQUIRED SURFACE PREPARATION.

2)-IN CASE THE EXISTING PCC FLOOR IS DAMAGED, LOOSE, UNEVEN, OR LIKELY TO CAUSE FUTURE BONDING OR SETTLEMENT ISSUES, THE EXISTING FLOOR SHALL BE EXCAVATED/REMOVED TO THE REQUIRED LEVEL AND NEW PCC SHALL BE PROVIDED AS PER APPROVED DRAWINGS, BOQS, AND TECHNICAL SPECIFICATIONS PRIOR TO LAYING OF MARBLE FLOORING.

3)-MARBLE FLOORING, SKIRTING, MARBLE PATTI, JOINTS, AND FINISHES SHALL BE PROVIDED AS SPECIFIED IN THE DRAWINGS, TECHNICAL SPECIFICATIONS, AND RELEVANT BOQS OF THE SPECIFIC SCHOOL.

4)-FLOOR SURFACE SHALL BE PROPERLY LEVELED, COMPACTED, AND PREPARED BEFORE LAYING PCC OR FLOOR FINISHES TO ENSURE UNIFORMITY AND LONG-TERM PERFORMANCE.

5)-ALL FLOORING JOINTS SHALL BE PROPERLY FILLED, ALIGNED, AND FINISHED TO ACHIEVE A LEVEL AND UNIFORM SURFACE.

6)-POLISHING OF MARBLE FLOORING MAY BE CARRIED OUT EITHER BY PRE -POLISHED MARBLE OR POST -POLISHING METHOD AT THE CONTRACTOR'S CONVENIENCE, SUBJECT TO APPROVAL OF THE ENGINEER AND REQUIRED FINISH QUALITY.

7)-ALL FLOORING WORKS SHALL BE EXECUTED AS PER APPROVED DRAWINGS, TECHNICAL SPECIFICATIONS, RELEVANT BOQS, AND INSTRUCTIONS OF THE ENGINEER.

General Notes – Applicable Unless Otherwise Specified

Page No-

RRF-002



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :

Final Drawing Issuance Date :

DESIGN BY

DRAWING DESCRIPTION AND SCOPE

TYP/JICA/26

05 May ,2026

ENGR ARSALAN KHAN
REGISTRATION NO-CIVIL-071161

TYPICAL DRAWING OF ROOFING AND FLOORING.
FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL
SPECIFICATIONS AND MEASUREMENT SHEET OF THE SPECIFIC
SCHOOL.

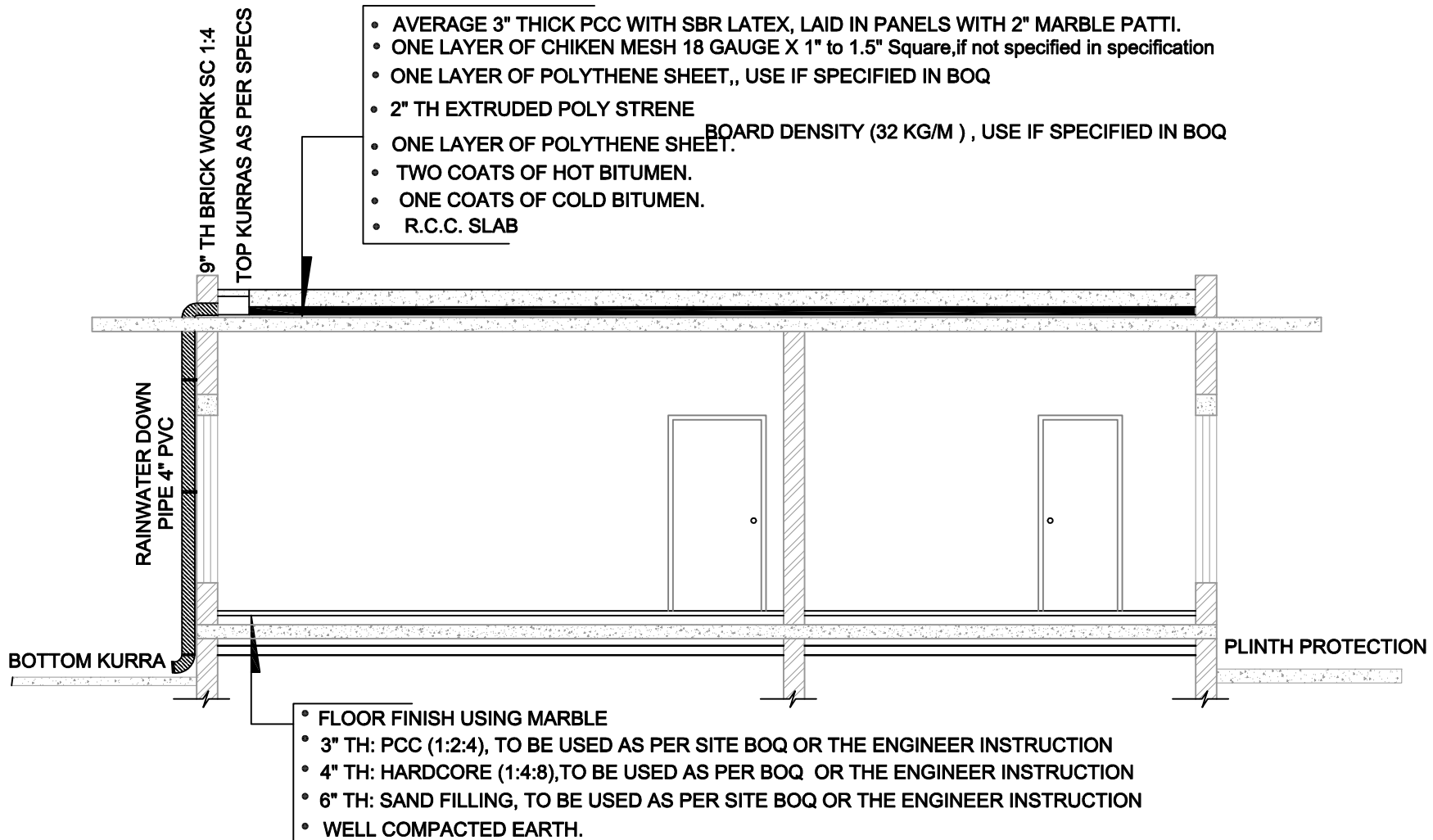
REVISION

REVISED DRAWING ISSUE DATE:

STRUCTURAL DESIGN ENGINEER

0

ENGR UMAR AMAAR
REGISTRATION NO-CIVIL-29326



TYPICAL ELEVATION OF BUILDING SHOWING ROOFING & FLOORING SYSTEM, RAIN WATER DOWN PIPE, KURRAS, PLINTH PROTECTION, & PARAPET WALL



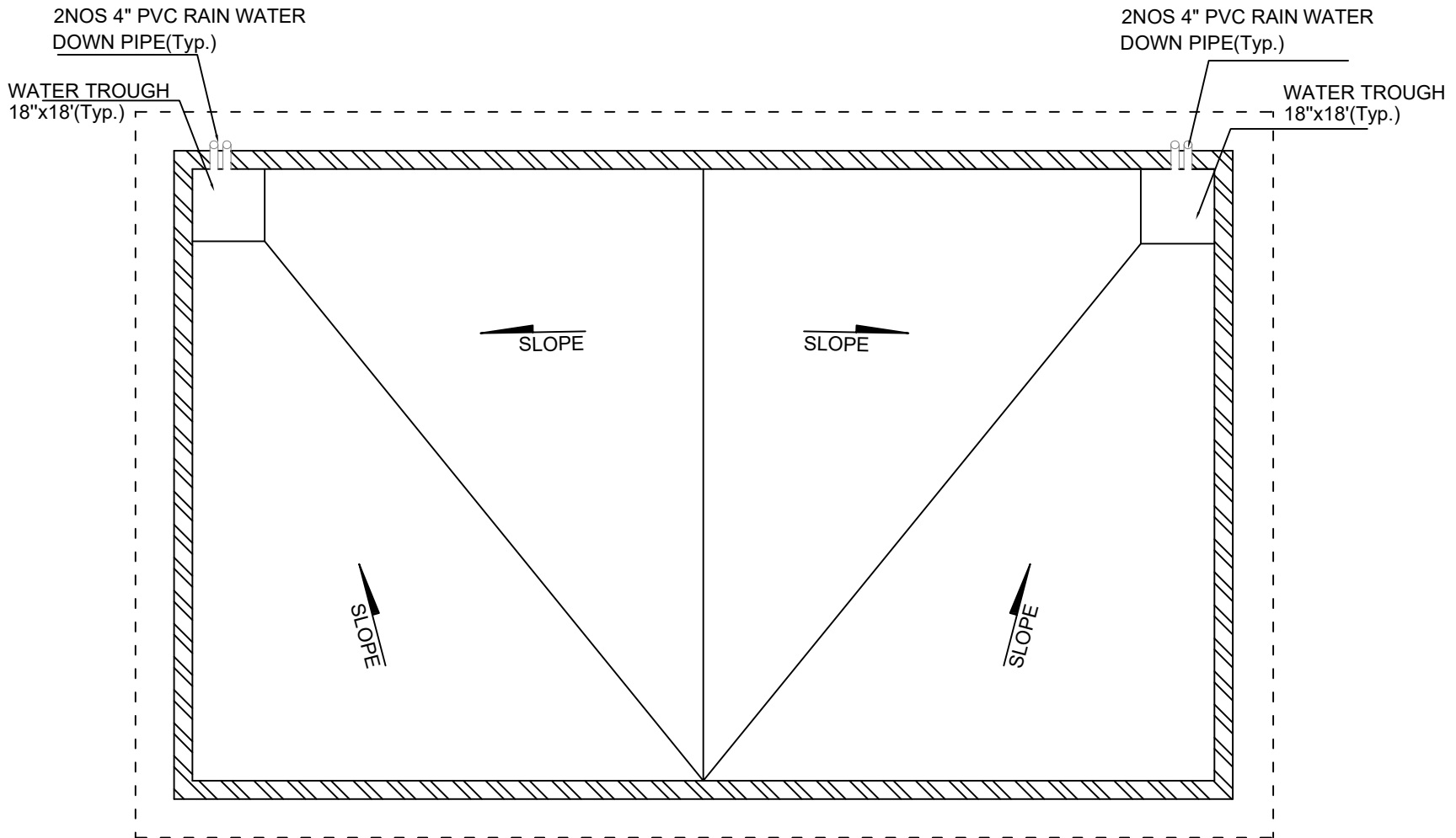
UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF ROOFING AND FLOORING. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

General Notes – Applicable Unless Otherwise Specified

Page No-

RRF-003



TYPICAL ROOF PLAN

General Notes – Applicable Unless Otherwise Specified



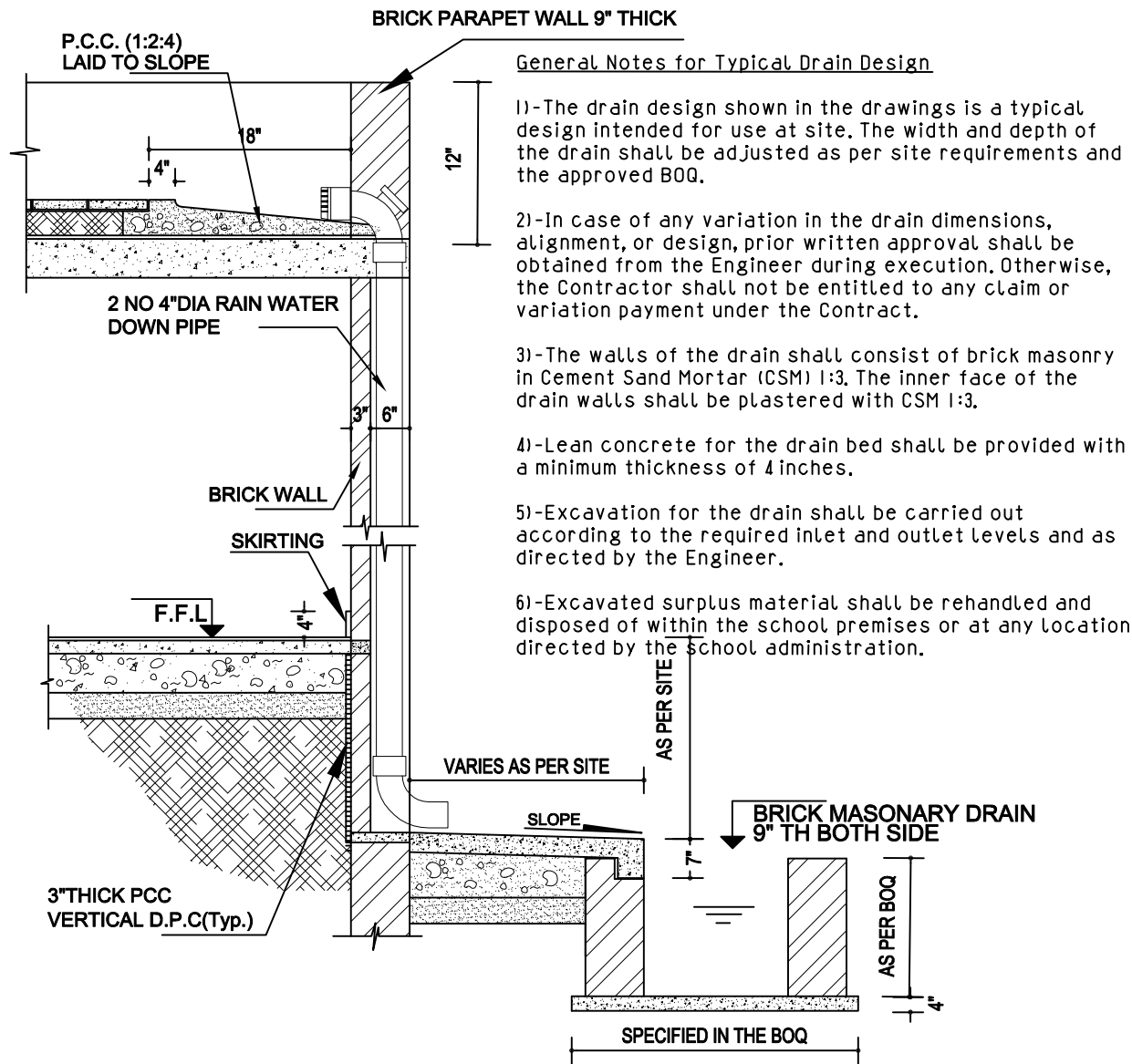
UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL/-071161	
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL/-29326	

TYPICAL DRAWING OF ROOFING AND FLOORING.
FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL
SPECIFICATIONS AND MEASUREMENT SHEET OF THE SPECIFIC
SCHOOL.

Page No-

RRF-004



WALL SECTION
DETAIL OF WATER TROUGH WITH RAIN WATER PIPE (TYP)
PLINTH PROTECTION & DRAIN SECTION (TYP)

General Notes for Typical Drain Design

- 1)-The drain design shown in the drawings is a typical design intended for use at site. The width and depth of the drain shall be adjusted as per site requirements and the approved BOQ.
- 2)-In case of any variation in the drain dimensions, alignment, or design, prior written approval shall be obtained from the Engineer during execution. Otherwise, the Contractor shall not be entitled to any claim or variation payment under the Contract.
- 3)-The walls of the drain shall consist of brick masonry in Cement Sand Mortar (CSM) 1:3. The inner face of the drain walls shall be plastered with CSM 1:3.
- 4)-Lean concrete for the drain bed shall be provided with a minimum thickness of 4 inches.
- 5)-Excavation for the drain shall be carried out according to the required inlet and outlet levels and as directed by the Engineer.
- 6)-Excavated surplus material shall be rehandled and disposed of within the school premises or at any location directed by the school administration.

General Notes for Rain Water Down Pipe

- 1)-Top and bottom kurras shall be provided for proper support and alignment of the rain water down pipe system.
- 2)-PVC pipe of 4-inch diameter shall be provided as per the approved specifications, including 2 Nos. PVC elbows/bends (L-bows) for proper connection and discharge arrangement.
- 3)-A suitable grating/strainer shall be installed at the top inlet of the PVC pipe to prevent the entry of leaves, debris, and other blocking materials, in order to avoid choking of the rain water pipe.
- 4)-The PVC down pipe shall be firmly fixed to the wall using approved U-clamps. Minimum 2 Nos. U-clamps shall be provided for each pipe :
- 4.1)-One clamp at approximately 3'-0" above Plinth Finished Floor Level (FFL).
- 4.2)-One clamp at approximately 7'-0" above Plinth Natural Surface Level (NSL).
- 5)-All PVC pipe joints and fittings shall be properly solvent welded and made watertight to avoid leakage during operation.
- 6)-The alignment and verticality of the down pipe shall be maintained true and plumb throughout the installation.
- 7)-The outlet of the rain water pipe shall be properly connected to the surface drain/open channel as shown in the drawings or as directed by the Engineer at site.
- 8)-Any damage to walls, plaster, paint, or existing finishes during installation of rain water pipes shall be repaired and restored by the Contractor at no additional cost.
- 9)-The Contractor shall ensure proper testing and free flow of rain water pipes prior to handing over the works.

General Notes – Applicable Unless Otherwise Specified

Page No-

RRF-005



UN-HABITAT
 FOR A BETTER URBAN FUTURE

DRAWING NO :

TYP/JICA/26

REVISION

0

Final Drawing Issuance Date :

05 May ,2026

REVISED DRAWING ISSUE DATE:

DESIGN BY

ENGR ARSALAN KHAN
 REGISTRATION NO-CIVIL-071161

STRUCTURAL DESIGN ENGINEER:

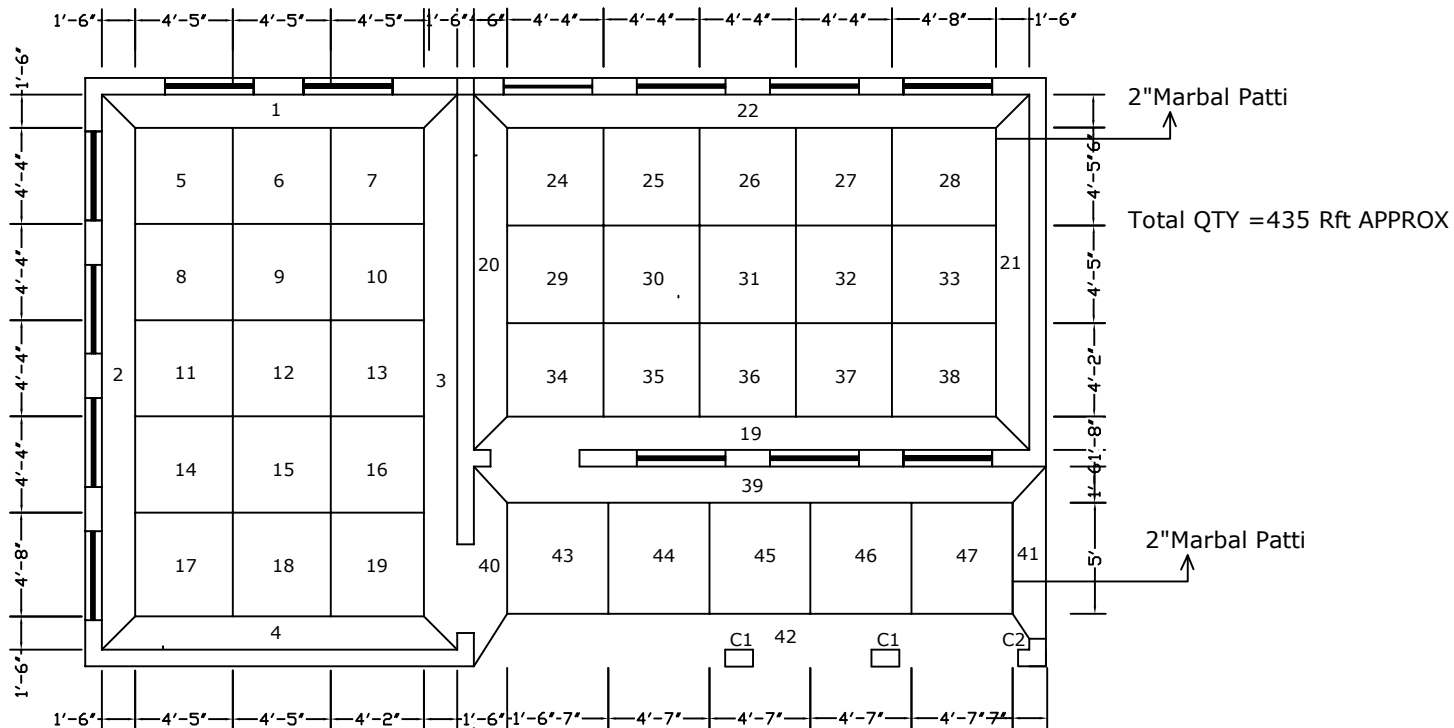
ENGR UMAR AMAAR
 REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE

TYPICAL DRAWING OF ROOFING AND FLOORING.
 FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL
 SPECIFICATIONS AND MEASUREMENT SHEET OF THE SPECIFIC
 SCHOOL.

GENERAL NOTES FOR CONCRETE FLOORING WORKS

- 1)-PREPARE THE EXISTING SURFACE BY REMOVING ALL LOOSE MATERIAL, DEBRIS, DUST, AND UNSOUND PORTIONS, AND PROPERLY COMPACT THE SURFACE BEFORE COMMENCEMENT OF CONCRETE WORK.
- 2)-IN CASE THE EXISTING FLOOR HAS PIT HOLES OR DEPRESSIONS, THE SAME SHALL BE FILLED WITH LEAN CONCRETE IN RATIO 1:4:8 UP TO THE REQUIRED LEVEL BEFORE LAYING PCC 1:1½:3 FLOORING.
- 3)-IF THE EXISTING FLOOR IS PARTIALLY DAMAGED OR HAS A SMOOTH SURFACE, THE TOP SURFACE SHALL BE PROPERLY HACKED, CHIPPED, AND ROUGHENED TO ENSURE ADEQUATE BONDING WITH NEW CONCRETE.
- 4)-THE CONTRACTOR SHALL MARK THE EXISTING FLOOR LEVELS AT THE CORNERS OF EACH ROOM AND VERANDAH SO THAT THE EXISTING LEVELS CAN BE CLEARLY IDENTIFIED AND MAINTAINED DURING EXECUTION.
- 5)-THE MARBLE PATTI OF ¾" THICKNESS AND 1.5" TO 2" WIDTH (AS BEST FIT ACCORDING TO SITE REQUIREMENTS AND FOR EASE OF WORKING) SHALL BE FIXED IN CEMENT SAND MORTAR (1:3) AT LEAST 24 HOURS PRIOR TO CONCRETE FLOORING WORK TO ENSURE PROPER LEVEL CONTROL AND ALIGNMENT.
- 6)-A MINIMUM SLOPE OF 1% SHALL BE PROVIDED TOWARDS THE DOOR WHERE FEASIBLE; OTHERWISE, THE ROOM AND VERANDAH FLOOR SHALL BE MAINTAINED AT ZERO LEVEL.
- 7)-THE CONCRETE FLOOR SHALL BE PROPERLY CURED BY WATER PONDING METHOD FOR A MINIMUM PERIOD OF 3 DAYS OR AS DIRECTED BY THE ENGINEER/CONSULTANT.



TYPICAL LAYOUT PLAN OF CONCRETE FLOORING SHOWING MARBLE PATTI ALIGNMENT, PANEL DIVISION, AND ORIENTATION DETAILS.

General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :
TYP/JICA/26
REVISION
0

Final Drawing Issuance Date :
05 May ,2026
REVISED DRAWING ISSUE DATE:

DESIGN BY
ENGR ARSALAN KHAN
REGISTRATION NO-CIVIL-071161
STRUCTURAL DESIGN ENGINEER
ENGR UMAR AMAR
REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE
TYPICAL DRAWING OF ROOFING AND FLOORING.
FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL
SPECIFICATIONS AND MEASUREMENT SHEET OF THE SPECIFIC
SCHOOL.

Page No-

RRF-006

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (DOOR, WINDOW ,SAFETY GRILL ,RAMP & RAILING)

TENDER DRAWINGS



LIST OF DRAWINGS

RDW-002- GENERAL NOTES

RDW-003- TYPICAL ELEVATION, PLAN & SECTIONS OF CLASS ROOM DOOR

RDW-004- TYPICAL ELEVATION, PLAN & SECTIONS OF TOILET DOOR

RDW-005- TYPICAL ELEVATION, PLAN & SECTIONS OF CLASS ROOM WINDOW

RDW-006- ACTUAL VIEW OF DOOR, WINDOW & SAFETY GRILL WITH MOSQUITO MESH

RDW-007- TYPICAL ELEVATION, PLAN & SECTIONS OF DISABLE RAMP WITH RAILING DETAILS

 UN-HABITAT FOR A BETTER URBAN FUTURE				General Notes – Applicable Unless Otherwise Specified		
				TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.		Page No-
						RDW-001
DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE			
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161				
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:				
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326				

GENERAL NOTES FOR DOORS, WINDOWS, SAFETY GRILLS, RAMPS & RAILINGS

- 1)-All dimensions shall be verified at site before fabrication and installation.
- 2)-The contractor shall coordinate all works with approved architectural drawings, structural drawings, technical specifications, approved shop drawings, and BOQ quantities.
- 3)-Any discrepancy between drawings and site conditions shall be reported to the Engineer/Consultant before execution.
- 4)-All steel members shall be straight, properly aligned, welded, grinded smooth, and free from visible defects.
- 5)-All exposed sharp edges shall be properly finished and smoothened for safety purposes.
- 6)-Fabrication and installation of doors, windows, safety grills, ramps, and railings shall be completed in true line, level, plumb, and position.
- 7)-All MS steel sections shall be cleaned properly before application of paint.
- 8)-One coat of approved quality red oxide primer shall be applied over all MS steel surfaces to protect against rust and corrosion.
- 9)-After primer application, one or two coats of approved enamel paint shall be applied as specified in the technical specifications and BOQ quantities.
- 10)-Color and paint finish shall be finalized/approved by the Engineer/Consultant prior to application.
- 11)-All hardware including hinges, handles, locks, latches, stoppers, screws, rivets, and accessories shall be of approved quality and heavy-duty type.
- 12)-Glass for windows shall be 5mm thick plain glass fixed with aluminum angle bedding and proper sealant where required.
- 13)-Safety grills shall be securely anchored/fixed to the wall/frame using approved fasteners and welding details.
- 14)-Mosquito mesh, where specified, shall be fixed properly without sagging and shall be easily removable for maintenance.
- 15)-All dimensions of doors, windows, safety grills, ramps, and railings may vary as per site conditions and BOQ requirements.
- 16)-The disabled access ramp shall be constructed with a comfortable slope ranging from 1:15 to 1:20 unless otherwise specified.
- 17)-Ramp surface shall be non-slip finish suitable for wheelchair users and accessible movement.
- 18)-Level landing shall be provided at top and bottom of ramp as shown in drawings or as directed by the Engineer.
- 19)-Ramp width and landing dimensions shall be maintained as per approved drawings and accessibility requirements.
- 20)-Handrails/railings shall be provided on both sides of ramps wherever required.
- 21)-The railing shall be fabricated using MS circular pipe of 1.5-inch diameter and 3/4-inch square pipe of 16 gauge unless otherwise specified.
- 22)-All railing posts, members, and joints shall be properly welded and ground smooth before painting.
- 23)-Welding work shall conform to standard engineering practice and all joints shall be neat and structurally sound.
- 24)-Contractor shall ensure safe handling, transportation, fabrication, and installation of all items during execution.
- 25)-For detailed requirements and construction details, refer to the relevant tender drawings, approved shop drawings, technical specifications, and BOQ.

General Notes – Applicable Unless Otherwise Specified

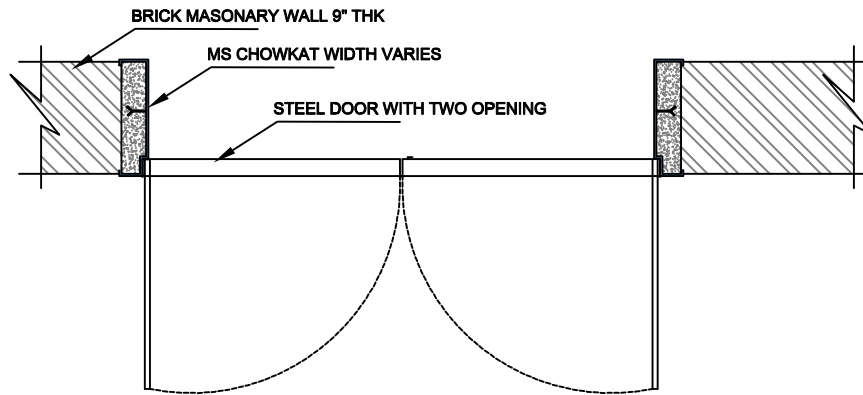


UN-HABITAT
FOR A BETTER URBAN FUTURE

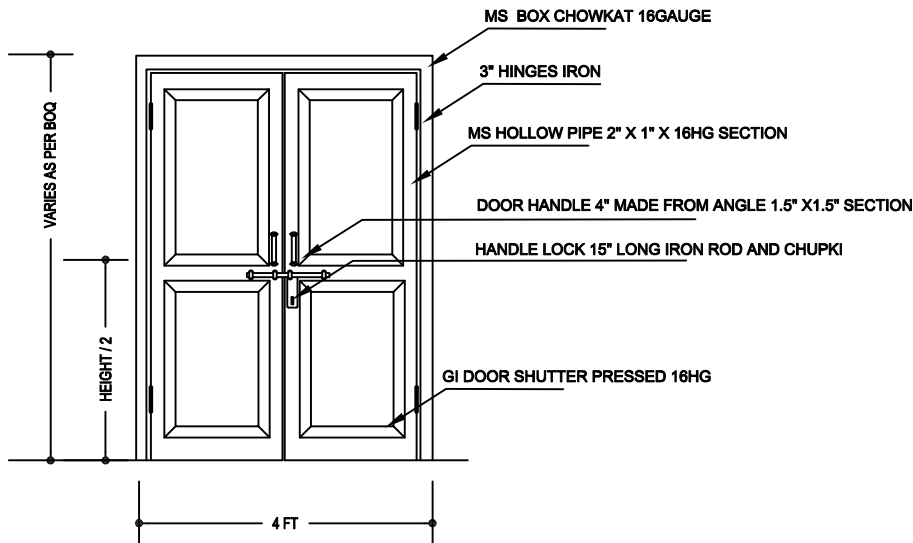
DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAR REGISTRATION NO-CIVIL-29326	

Page No-

RDW-002

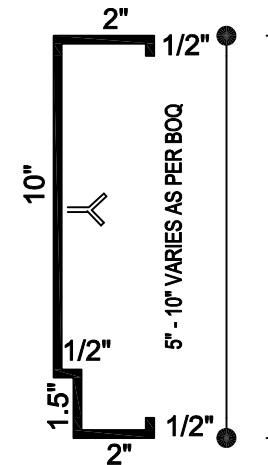
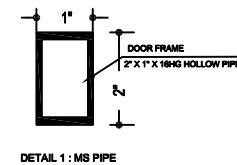


DETAIL 3 : PLAN OF DOOR , CHOWKAT & BRICK WALL



CLASS ROOM DOOR ELEVATION

TYPICAL DETAILS OF CLASS ROOM DOOR



DETAIL 2 : MS CHOWKAT

DOOR SCHEDULE	
DESCRIPTION	DOUBLE LEAF MS DOOR
SIZE	4.00 FT (TYP) WIDE 7'-0" TO 8'-0" HIGH WITH OR WITHOUT VENTILATOR (TYP)
SHUTTER	GI DOOR SHUTTER 16HG
DOOR FRAME	2" X 1" X 16HG HOLLOW STEEL PIPE
MS CHOWKAT	STEEL CHOWKAT WIDTH VARIES AS PER BOQ
HARDWARE	HANDLE, TOWER BOLT HANDLE LOCK, HINGES

General Notes – Applicable Unless Otherwise Specified

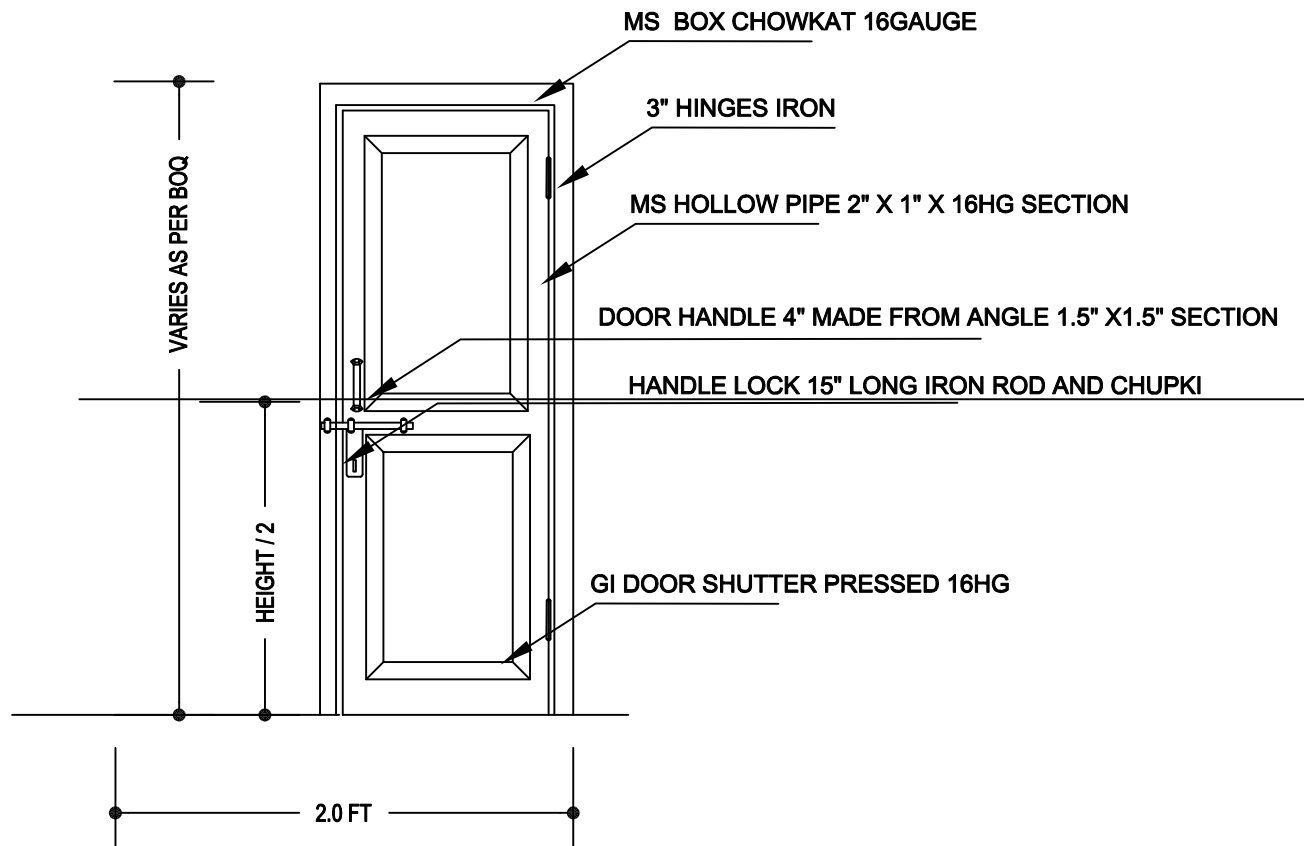


FOR A BETTER URBAN FUTURE

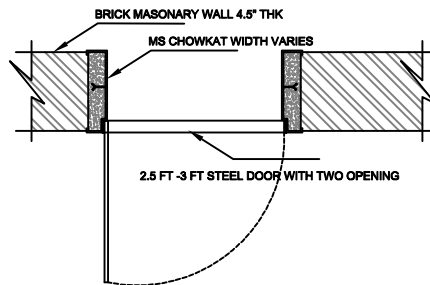
DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

Page No-

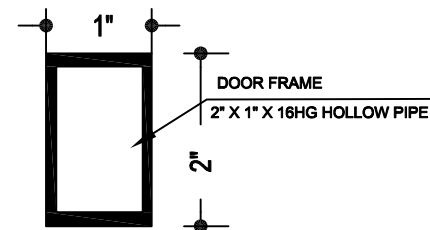
RDW-003



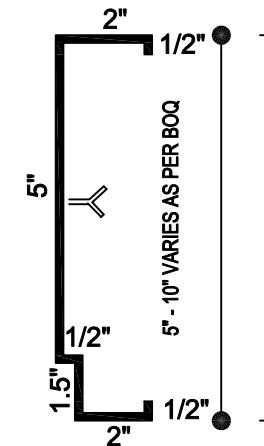
TOILET DOOR ELEVATION



DETAIL 3 : PLAN OF DOOR , CHOWKAT & WALL



DETAIL 1 : MS PIPE

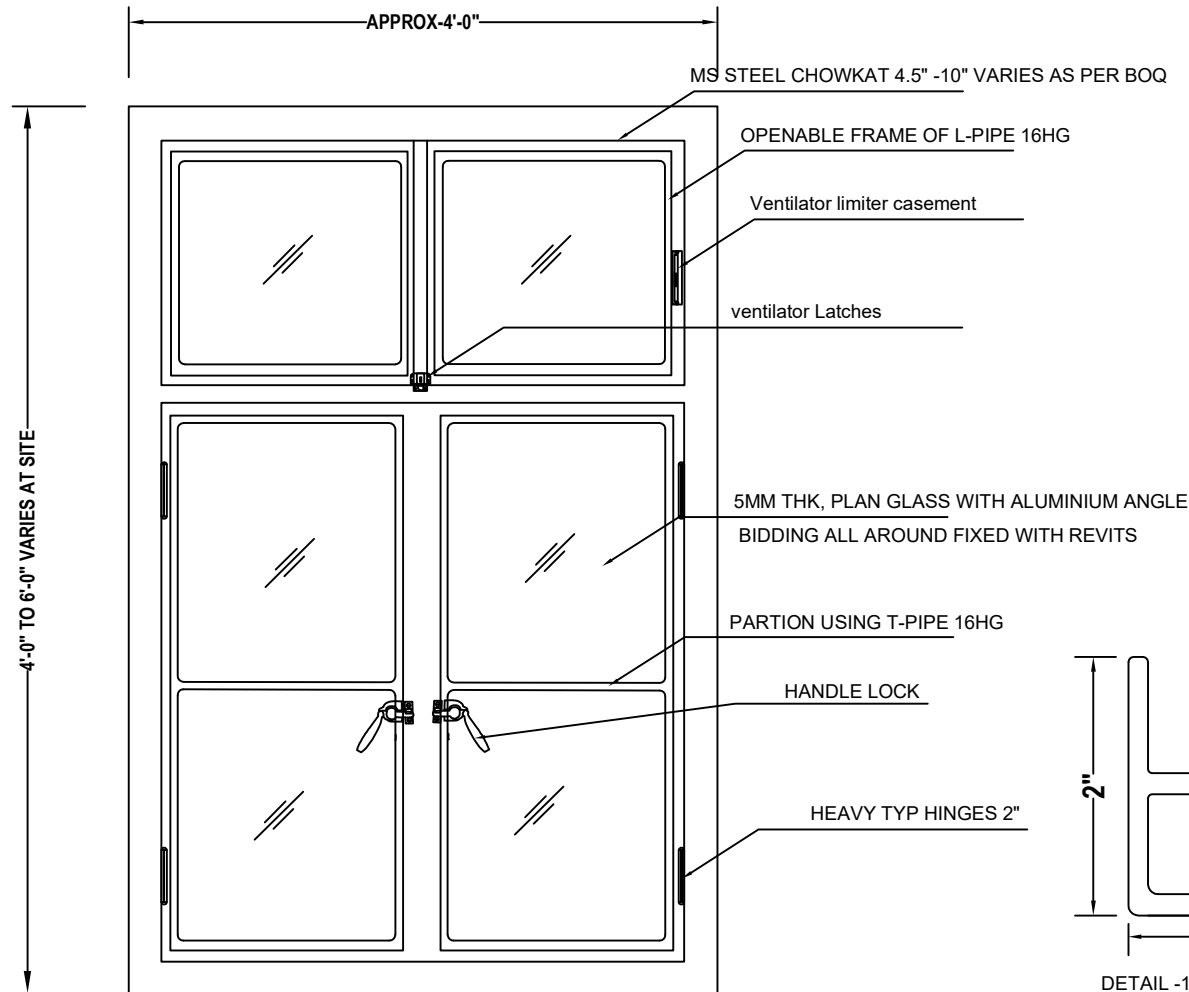


DETAIL 2 : MS CHOWKAT

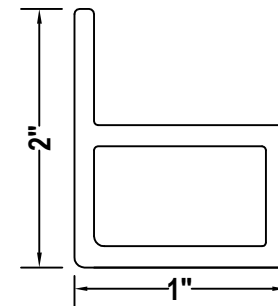
TYPICAL DETAILS OF TOILET BLOCK DOOR

General Notes – Applicable Unless Otherwise Specified

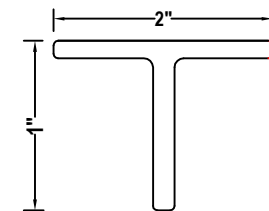
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.	Page No-
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL/-071161		
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:		
	0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL/-29326		RDW-004



WINDOW SCHEDULE	
DESCRIPTION	SPECIFICATION
SIZE	4'-0" FT (TYP) WIDE 4'-0" TO 6'-0" HIGHT VARIABLE HEIGHT (TYP)
OPENING FRAME	L-PIPE & TEE PIPE 1" SEC 16 HG SECTION
MS CHOWKAT	STEEL CHOWKAT WD 5" -10" VARIES AS PER BOQ
GLASS	5MM THK PLAIN GLASS WITH ALUMINIUM ANGLE BEDDING (ALL AROUND)
HARDWARE	HANDLE LOCK, VENTILATOR LATCHES, VENTILATOR LIMITER CASEMENT



DETAIL -1
(OPENING FRAME - L-PIPE 16HG)



DETAIL -2
(OPENING FRAME - T-PIPE 16HG)

TYPICAL ELEVATION OF CLASS ROOM WINDOW

General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

Page No-

RDW-005



ACTUAL DESIGN OF DOOR, WINDOW & SAFTEY GRILL



UN-HABITAT
FOR A BETTER URBAN FUTURE

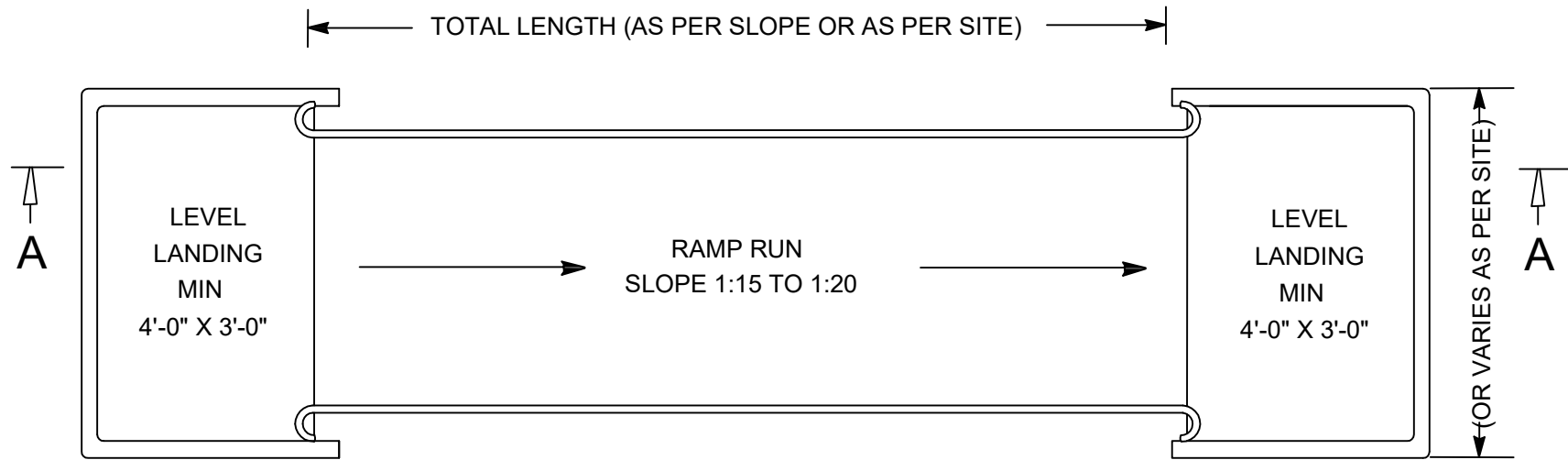
DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL/-071161	
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL/-29326	

TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.

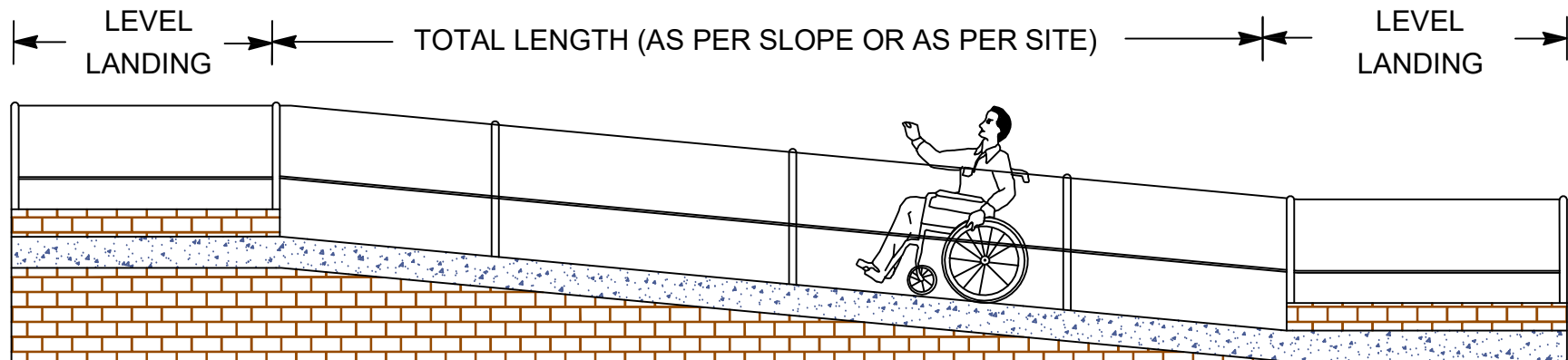
General Notes – Applicable Unless Otherwise Specified

Page No-

RDW-006



TYPICAL PLAN OF RAMP AND RAILING DETAILS



TYPICAL SECTION OF RAMP AND RAILING DETAILS

General Notes – Applicable Unless Otherwise Specified

Page No-

RDW-007



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :

TYP/JICA/26

REVISION

0

Final Drawing Issuance Date :

05 May ,2026

REVISED DRAWING ISSUE DATE:

DESIGN BY

ENGR. ARSALAN KHAN
REGISTRATION NO-CIVIL-071161

STRUCTURAL DESIGN ENGINEER:

ENGR. UMAR AMAAR
REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE

TYPICAL DRAWING OF DOORS, WINDOWS, SAFETY GRILLS & RAILINGS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (ELECTRICAL WORKS)

TENDER DRAWINGS



LIST OF DRAWINGS

RE-002- GENERAL NOTES PART I

RE-003- GENERAL NOTES PART II

RE-004- TYPICAL LAYOUT PLANS OF CLASS ROOM ELECTRICAL CONDUITING

RE-005- TYPICAL LAYOUT OF ELECTRICAL WIRING AND A.C. CIRCUIT BREAKERS.

RE-006- TYPICAL ELEVATION SHOWING ELECTRICAL CONDUIT ORIENTATION PART-I

RE-007- TYPICAL ELEVATION SHOWING ELECTRICAL CONDUIT ORIENTATION PART-II

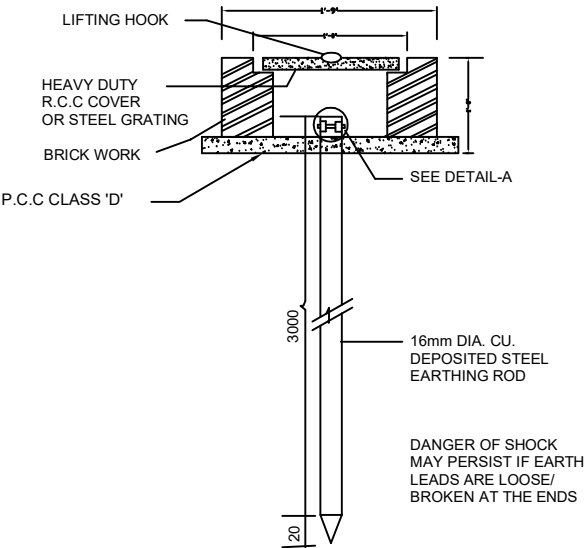
					General Notes – Applicable Unless Otherwise Specified	
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE		Page No-
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF ELECTRICAL WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, ELECTRICAL LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.		
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:			
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326			RE-001

GENERAL NOTES –ELECTRICAL WORKS

- 1)-THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE BILL OF QUANTITIES (BOQ) AND TECHNICAL SPECIFICATIONS.
- 2)-THIS DRAWING SHALL BE COORDINATED WITH OTHER DISCIPLINE WORKS FOR ROUTING, SPACING, AND INSTALLATION REQUIREMENTS.
- 3)-THE MINIMUM SIZE OF PVC CONDUIT SHALL BE 25MM (1") DIAMETER.
- 4)-LIGHT CIRCUIT WIRING SHALL BE CARRIED OUT WITH 2.5MM² (7/0.029) AND LIGHT POINT WIRING SHALL BE WITH 1.5MM² (3/0.029) SINGLE CORE STRANDED COPPER PVC INSULATED CABLES.
- 5)-ALL POWER SOCKETS (20 AMP) SHALL BE WIRED WITH 3×6.0MM² (7/0.044) CABLES. LIGHT PLUG (10 AMP) SOCKET FIRST POINT SHALL BE WIRED WITH 3×4MM² (7/0.036), AND 10 AMP SOCKETS SHALL BE POINT-TO-POINT WIRED WITH 3×2.5MM² (7/0.029) STRANDED COPPER PVC CABLES.
- 6)-ALL SINGLE CORE WIRES SHALL HAVE THE FOLLOWING COLOURS:
PHASE WIRES RED
NEUTRAL WIRES BLACK
C.P.C GREEN/YELLOW (AS PER B.O.Q)
- 7)-WIRING WORK SHALL COMMENCE ONLY AFTER COMPLETE INSTALLATION OF THE CONDUIT SYSTEM AND FIXING OF ALL OUTLET BOXES IN THEIR FINAL POSITIONS.
- 8)-ALL POWER AND LIGHT PLUG SOCKET WIRING SHALL BE SEGREGATED AND PROVIDED WITH INDEPENDENT WIRING DIRECTLY FROM THE MINIATURE CIRCUIT BREAKERS (MCBs) IN THE DISTRIBUTION BOARD.
- 9)-THE ACTUAL LOCATION OF ALL OUTLETS SHALL BE VERIFIED BY THE CONTRACTOR'S SITE ENGINEER PRIOR TO COMMENCEMENT OF INSTALLATION.
- 10)-NO LUBRICATION OTHER THAN THAT RECOMMENDED BY THE MANUFACTURER SHALL BE USED FOR REDUCING FRICTION DURING WIRE PULLING. USE OF OIL, SOAP, OR SIMILAR MATERIALS SHALL NOT BE PERMITTED.
- 11)-THE CONTRACTOR SHALL SUBMIT CONDUIT LAYOUT PLANS BASED ON THE ELECTRIFICATION DRAWINGS FOR APPROVAL OF THE ELECTRICAL ENGINEER BEFORE CASTING OF ROOF SLABS, WALLS, AND COLUMNS.

LEGEND

SYMBOL	DESCRIPTION
	DISTRIBUTION BOARD (DB)
	MOULDED CASE CIRCUIT BREAKER
	VOLTMETER
	AMMETER
	SELECTOR SWITCH
	EXHAUST FAN
	SINGLE POLE 1-WAY SWITCH
	10/13 AMPS 3PIN SINGLE PHASE SWITCH SOCKET UNIT (AWAY FROM SWITCH BOARD)
	15/20 AMP 3PIN SINGLE PHASE NEU. & EARTH SWITCH SOCKET UNIT (AWAY FROM SWITCH BOARD)
	CEILING FAN
	CEILING FAN HOOK



ROD TYPE EARTH
POINT DETAIL FOR DB.S

General Notes – Applicable Unless Otherwise Specified					Page No-
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE	RE-002
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161		
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:		
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326		

GENERAL NOTES –ELECTRICAL WORKS

12)-ALL ELECTRICAL WORKS SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

13)-ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE SUPPLIED FROM APPROVED MANUFACTURERS AND SHALL CONFORM TO APPLICABLE STANDARDS AND CODES.

14)-PROVIDE WIRING FOR CEILING FANS, TUBE LIGHTS, AND CEILING LIGHTS AS SHOWN ON THE DRAWINGS, ENSURING PROPER CONNECTION TO SWITCHES AND DISTRIBUTION BOARDS.

15)-PROVIDE WIRING FOR LIGHT PLUGS, POWER PLUGS, AND SOCKET OUTLETS AS INDICATED. ALL SOCKETS SHALL BE PROPERLY EARTHED AND INSTALLED AT THE SPECIFIED HEIGHTS.

16)-ALL JUNCTION BOXES, SWITCH BOXES, AND ACCESSORIES SHALL BE OF APPROVED QUALITY AND INSTALLED FLUSH WITH WALLS OR CEILINGS AS INDICATED. COVER PLATES SHALL BE FIXED AFTER INSPECTION AND TESTING.

17)-ALL ELECTRICAL CIRCUITS SHALL BE TESTED FOR CONTINUITY, INSULATION RESISTANCE, AND PROPER OPERATION BEFORE HANDOVER. DEFECTIVE WIRING, SWITCHES, SOCKETS, OR CONDUITS SHALL BE REPLACED IMMEDIATELY.

18)-VERIFY ROUTING OF CONDUITS WITH ARCHITECTURAL, STRUCTURAL, AND PLUMBING SERVICES TO AVOID CLASHES.

19)-PROPER ELECTRICAL SAFETY PRACTICES SHALL BE FOLLOWED DURING INSTALLATION. THE MAIN POWER SUPPLY SHALL BE SWITCHED OFF BEFORE WORKING ON LIVE CIRCUITS. ANY DEVIATION FROM DRAWINGS OR SPECIFICATIONS SHALL BE REPORTED TO THE CONCERNED ENGINEER PRIOR TO EXECUTION.

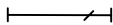
20)-THE CONTRACTOR SHALL TEST ALL CIRCUITS, SWITCHES, MCBS, LIGHTS, FANS, SOCKETS, AND EQUIPMENT BEFORE HANDING OVER THE WORK.

21)-THE CONTRACTOR SHALL ENSURE SAFE HANDLING, STORAGE, TRANSPORTATION, AND INSTALLATION OF ALL ELECTRICAL MATERIALS AND EQUIPMENT.

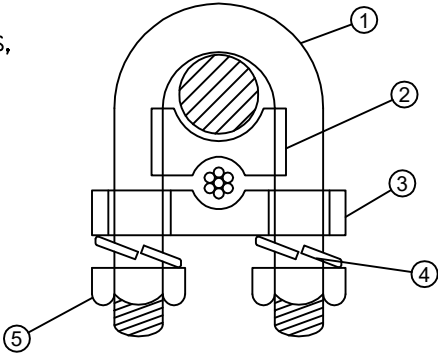
22)-ALL WORKS SHALL BE EXECUTED AS PER APPROVED SHOP DRAWINGS, SITE CONDITIONS, AND INSTRUCTIONS OF THE ENGINEER/CONSULTANT.

23)-THE CONTRACTOR WILL FOLLOW THE WIRING LAYOUT AS ATTACHED IN THE DRAWING WHILE LAYING OF WIRING.

LIGHT FITTING SCHEDULE

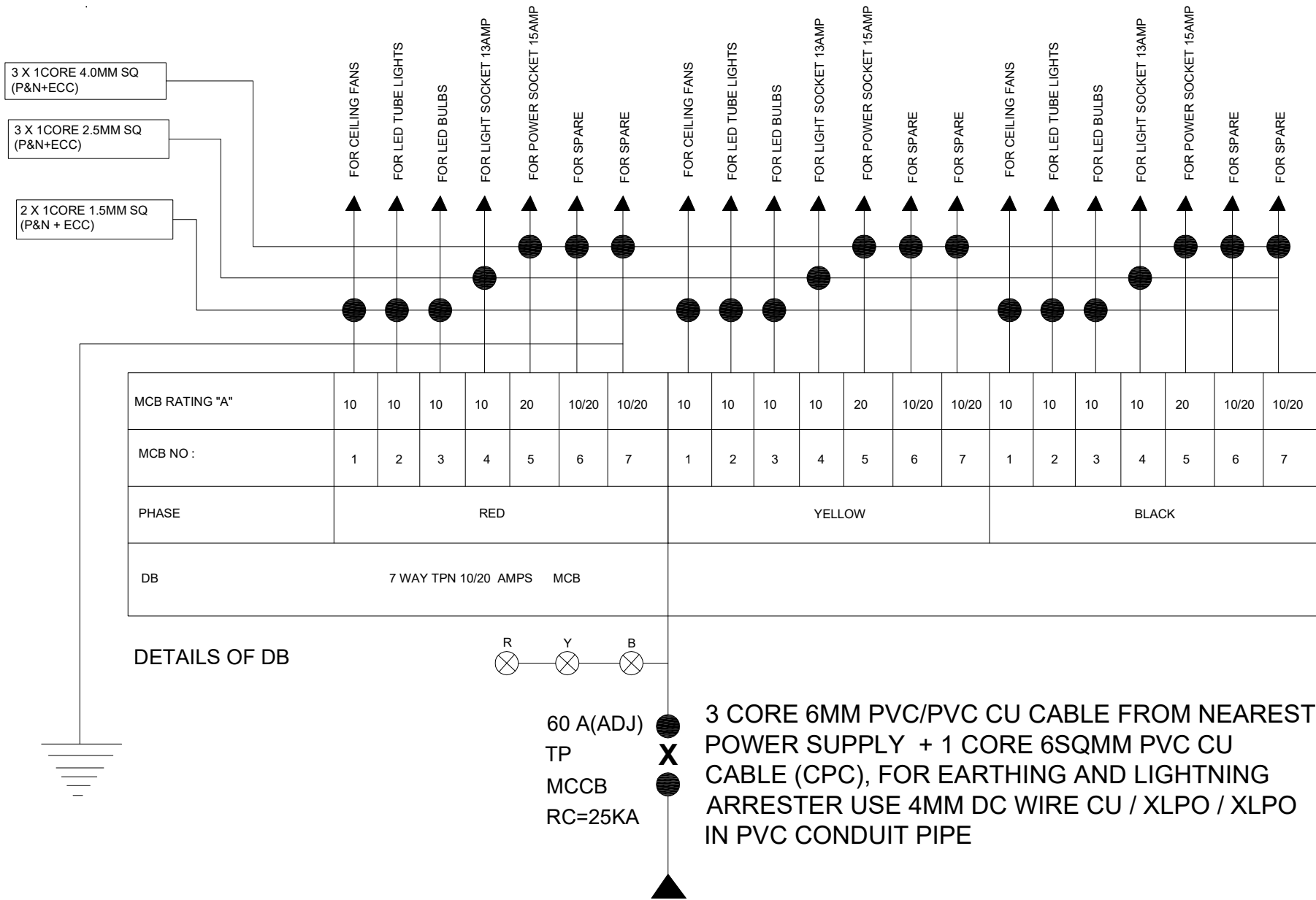
SYMBOL	DESCRIPTION
	LED TUBE LIGHT 36 OR 40 WATT WHITE AS PER APPROVED LIST OR EQUIVALENT
	SMD LED WATER TIGHT FIXTURE 50W IP 65 AS PER APPROVED LIST OR EQUIVALENT
	CEILING MOUNTED DOWN LIGHT 7 WATT WHITE (FBS 120) AS PER APPROVED OR EQUIVALENT
	LED BULB 12 TO 18 WATT WHITE COLOUR AS PER APPROVED LIST OR EQUIVALENT

ITEM NO.	ITEM NAME	MATERIAL
1	U-BOLT	MILD STEEL
2	SPACER	CAST IRON
3	BASE	MILD STEEL
4	SPRING WASHER	CARBON STEEL
5	NUT	MILD STEEL



DETAIL –'A'

General Notes – Applicable Unless Otherwise Specified



TYPICAL LAYOUT OF ELECTRICAL WIRING AND A.C. CIRCUIT BREAKERS.

General Notes – Applicable Unless Otherwise Specified

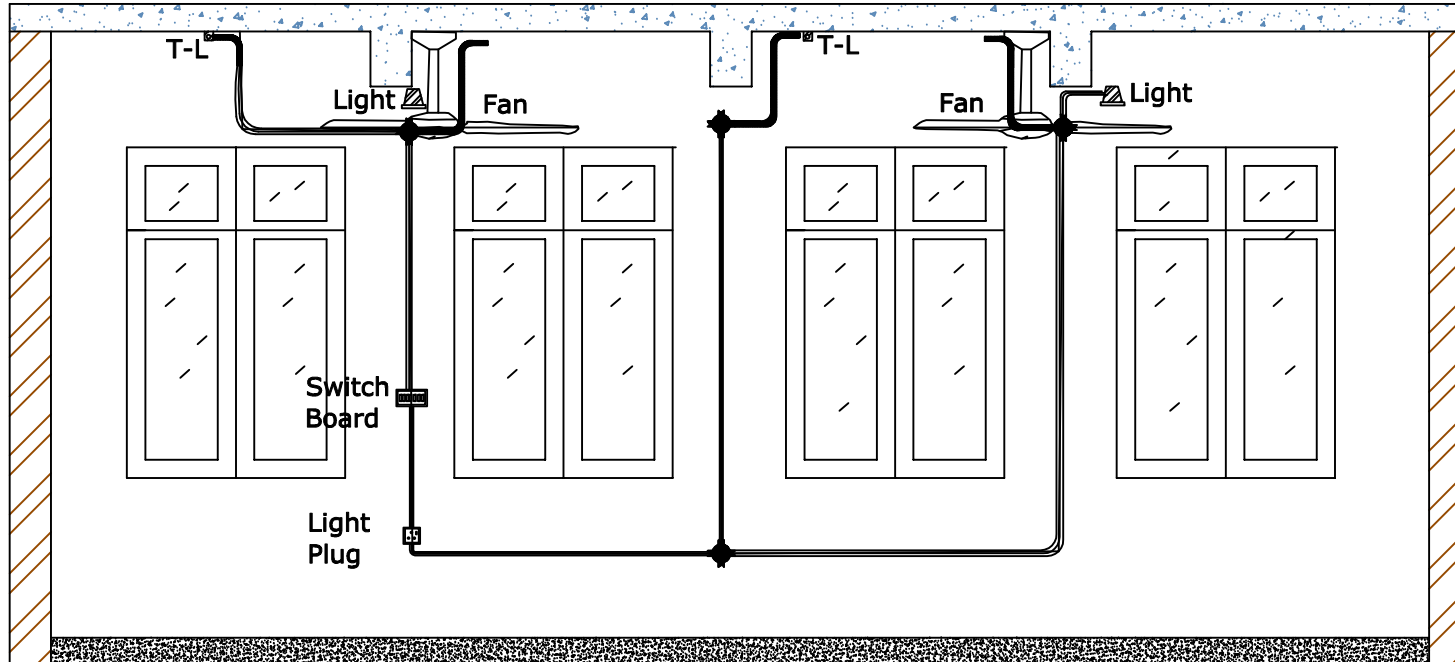


UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF ELECTRICAL WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, ELECTRICAL LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

Page No-

RE-005



TYPICAL ELEVATION SHOWING ELECTRICAL CONDUIT ORIENTATION.

General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :

TYP/JICA/26

REVISION

0

Final Drawing Issuance Date :

05 May ,2026

REVISED DRAWING ISSUE DATE:

DESIGN BY

ENGR ARSALAN KHAN
REGISTRATION NO-CIVIL-071161

STRUCTURAL DESIGN ENGINEER:

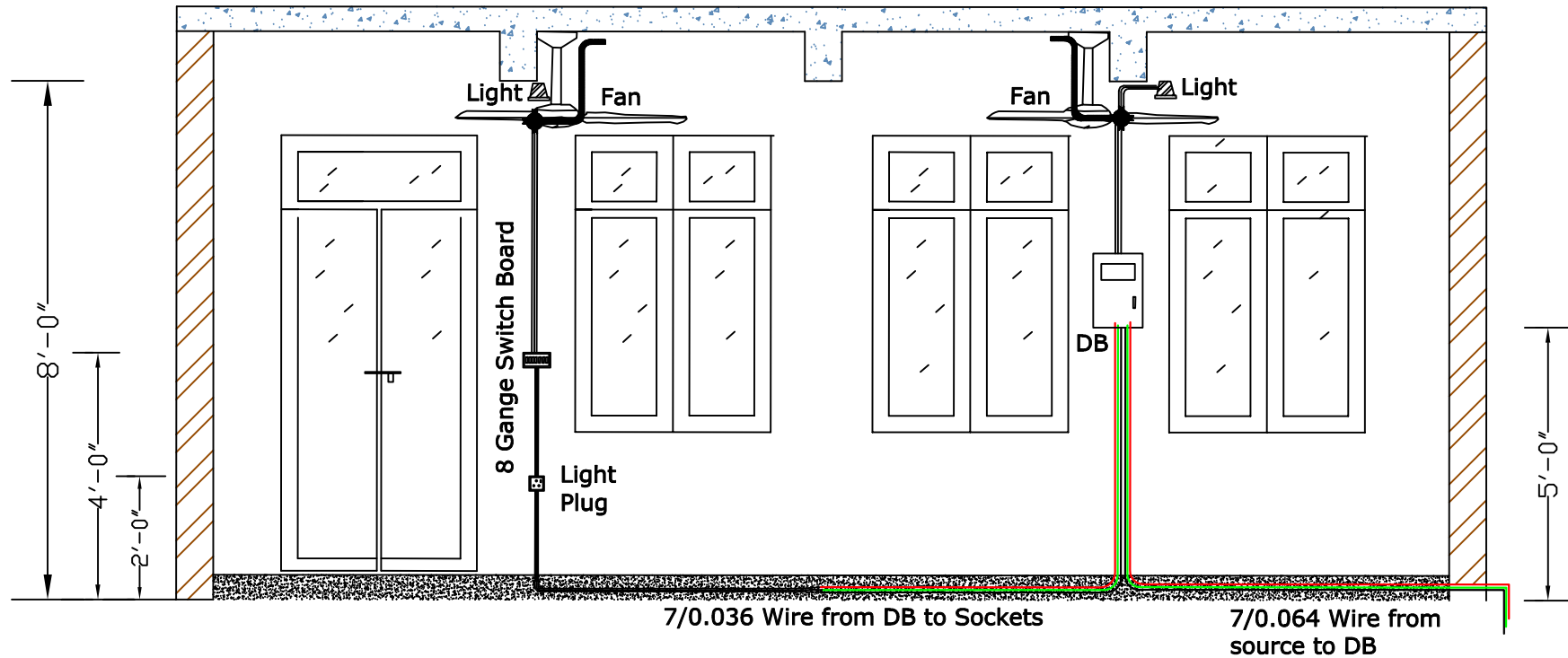
ENGR UMAR AMAAR
REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE

TYPICAL DRAWING OF ELECTRICAL WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, ELECTRICAL LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.

Page No-

RE-006



TYPICAL ELEVATION SHOWING ELECTRICAL CONDUIT ORIENTATION.



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF ELECTRICAL WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, ELECTRICAL LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

General Notes – Applicable Unless Otherwise Specified

Page No-

RE-007

STRENGTHEN DISASTER RESILIENCE OF SCHOOLS IN KHYBER PAKHTUNKHUWA

SCHOOL RETROFITTING (PHE WORKS)

TENDER DRAWINGS



LIST OF DRAWINGS

RPHE-002- GENERAL NOTES

RPHE-003- TYPICAL LAYOUT PLANS OF 1 NO TOILET BLOCK (ONE STANDARD TOILET
& ONE DISABLED FRIENDLY TOILET)

RPHE-004- TYPICAL ELEVATION OF 1 NO TOILET BLOCK (ONE STANDARD TOILET
& ONE DISABLED FRIENDLY TOILET)

RPHE-005- TYPICAL WATER SUPPLY LAYOUT FOR TOILET BLOCK
(ONE STANDARD TOILET & ONE DISABLED FRIENDLY TOILET)

RPHE-006- TYPICAL SEWERAGE LAYOUT FOR TOILET BLOCK
(ONE STANDARD TOILET & ONE DISABLED FRIENDLY TOILET)

RPHE-007- TYPICAL DRAINAGE LAYOUT FOR TOILET BLOCK
(ONE STANDARD TOILET & ONE DISABLED FRIENDLY TOILET)

RPHE-008- TYPICAL SEPTIC TANK LAYOUT DETAILS FOR TOILET BLOCK

RPHE-009- TYPICAL SEPTIC TANK X-SECTION DETAILS FOR TOILET BLOCK

					General Notes – Applicable Unless Otherwise Specified	
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE	Page No- RPHE-001	
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL/071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.		
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:			
	0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL/29326			

GENERAL NOTES -PHE / SANITARY & WATER SUPPLY WORKS

1)- THE CONTRACTOR SHALL CAREFULLY DISMANTLE EXISTING GI PIPES, FITTINGS, WATER CLOSETS (WCs), SEWERAGE PIPES, AND ALL RELATED PLUMBING ACCESSORIES AS DIRECTED BY THE ENGINEER. ALL DISMANTLED MATERIAL SHALL BE HANDED OVER TO THE SCHOOL ADMINISTRATION FOR RECORD AND CUSTODY.

2)- THESE ARE TYPICAL DRAWINGS FOR ONE TOILET BLOCK CONTAINING TWO TOILETS, INCLUDING ONE STANDARD TOILET AND ONE DISABLED-FRIENDLY TOILET. THE EXISTING SEWERAGE LINE SHALL BE THOROUGHLY CHECKED BEFORE EXECUTION OF WORKS. IN CASE THE SEWERAGE LINE IS FOUND BLOCKED, DAMAGED, OR NON-FUNCTIONAL, A NEW SEWERAGE LINE SHALL BE PROVIDED COMPLETE IN ALL RESPECTS AS PER SPECIFICATIONS AND BOQ REQUIREMENTS.

3)- IN CASE THE EXISTING SEPTIC TANK IS FOUND DAMAGED, LEAKING, STRUCTURALLY UNSAFE, OR INSUFFICIENT TO ACCOMMODATE THE PROPOSED TOILET WASTE LOAD, A NEW SEPTIC TANK SHALL BE CONSTRUCTED. THE SIZE, SPECIFICATIONS, AND CAPACITY OF THE SEPTIC TANK SHALL BE AS PER APPROVED DRAWINGS, TECHNICAL SPECIFICATIONS, AND BOQ.

4)- ALL DIMENSIONS SHOWN ON DRAWINGS ARE TENTATIVE AND TYPICAL. THE CONTRACTOR SHALL VERIFY ALL ACTUAL SITE DIMENSIONS BEFORE EXECUTION. THE ACTUAL SCOPE OF WORK, QUANTITIES, AND MEASUREMENTS SHALL BE GOVERNED BY THE APPROVED BOQ AND SITE CONDITIONS.

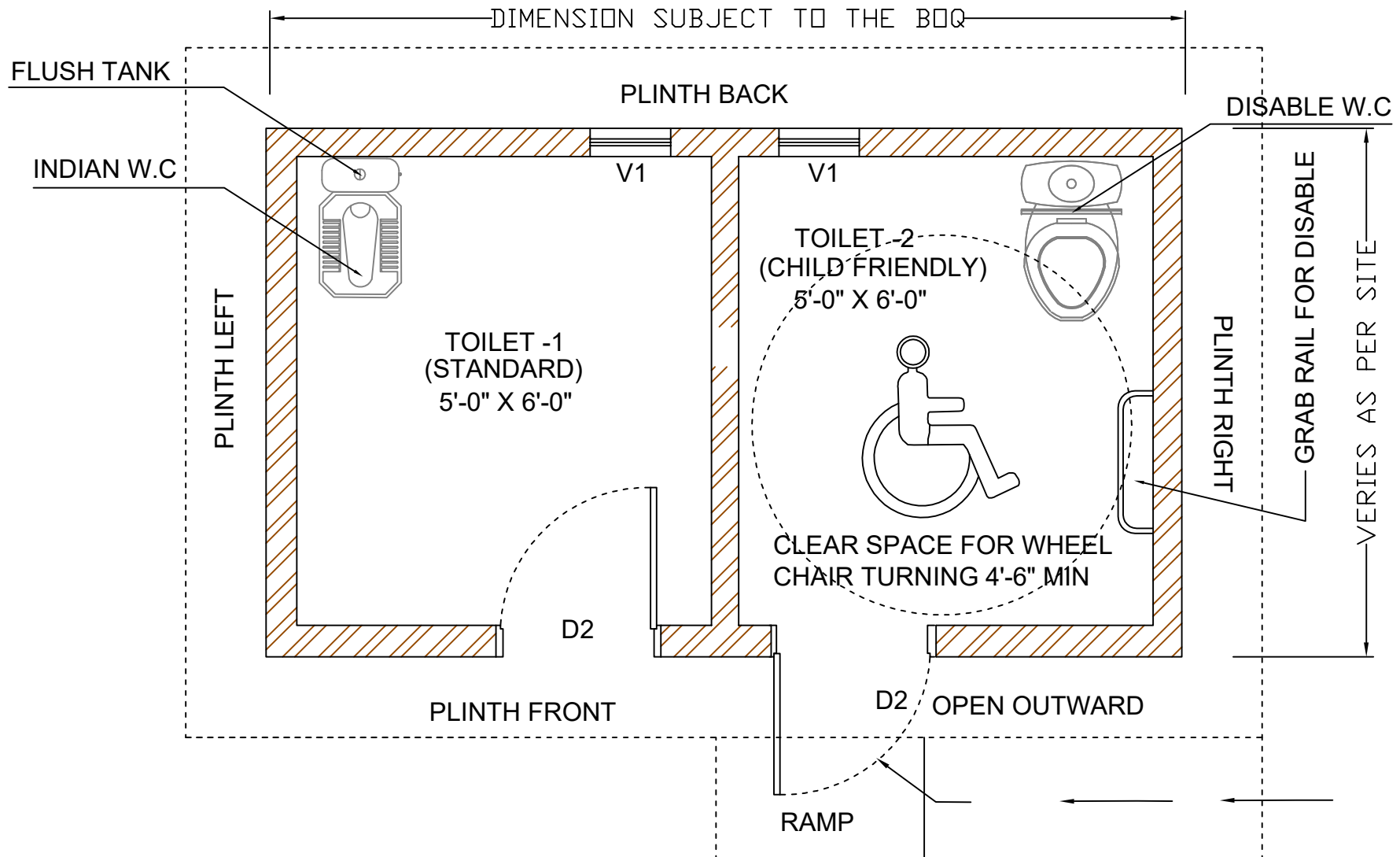
5)- ALL SANITARY FIXTURES, PLUMBING ACCESSORIES, VALVES, FITTINGS, PIPES, TANKS, AND RELATED MATERIALS SHALL BE OF APPROVED MAKE AND QUALITY. THE BRAND/MANUFACTURER SHALL BE SELECTED FROM THE APPROVED LIST OF MANUFACTURERS PROVIDED IN THE SPECIAL PROVISIONS UNDER PARTICULAR CONDITIONS OF CONTRACT (PART-II).

6)- FOR WATER SUPPLY WORKS, PPR PIPES OF SPECIFIED DIAMETER AND REQUIRED LENGTHS SHALL BE PROVIDED AS PER TECHNICAL SPECIFICATIONS AND BOQ QUANTITIES, INCLUDING ALL SPECIALS, FITTINGS, VALVES, CLAMPS, SUPPORTS, CUTTING, THREADING, JOINTING, TESTING, AND COMMISSIONING COMPLETE IN ALL RESPECTS.

7)- ALL UPVC SEWERAGE, WASTE, VENT, AND DRAINAGE PIPES SHALL BE PROPERLY LAID TO THE REQUIRED SLOPE AND TESTED AGAINST LEAKAGE BEFORE CONCEALMENT OR BACKFILLING, COMPLETE IN ACCORDANCE WITH APPROVED SPECIFICATIONS AND STANDARD PLUMBING PRACTICES.

8)- THE CONTRACTOR SHALL ENSURE THAT ALL PLUMBING AND SANITARY WORKS ARE EXECUTED USING STANDARD CONSTRUCTION PRACTICES AND IN ACCORDANCE WITH APPROVED DRAWINGS, TECHNICAL SPECIFICATIONS, AND INSTRUCTIONS OF THE ENGINEER.

					General Notes – Applicable Unless Otherwise Specified	
 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE		Page No-
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.		RPHE-002
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:			
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326			



TYPICAL LAYOUT PLAN OF TOILET BLOCK

General Notes – Applicable Unless Otherwise Specified

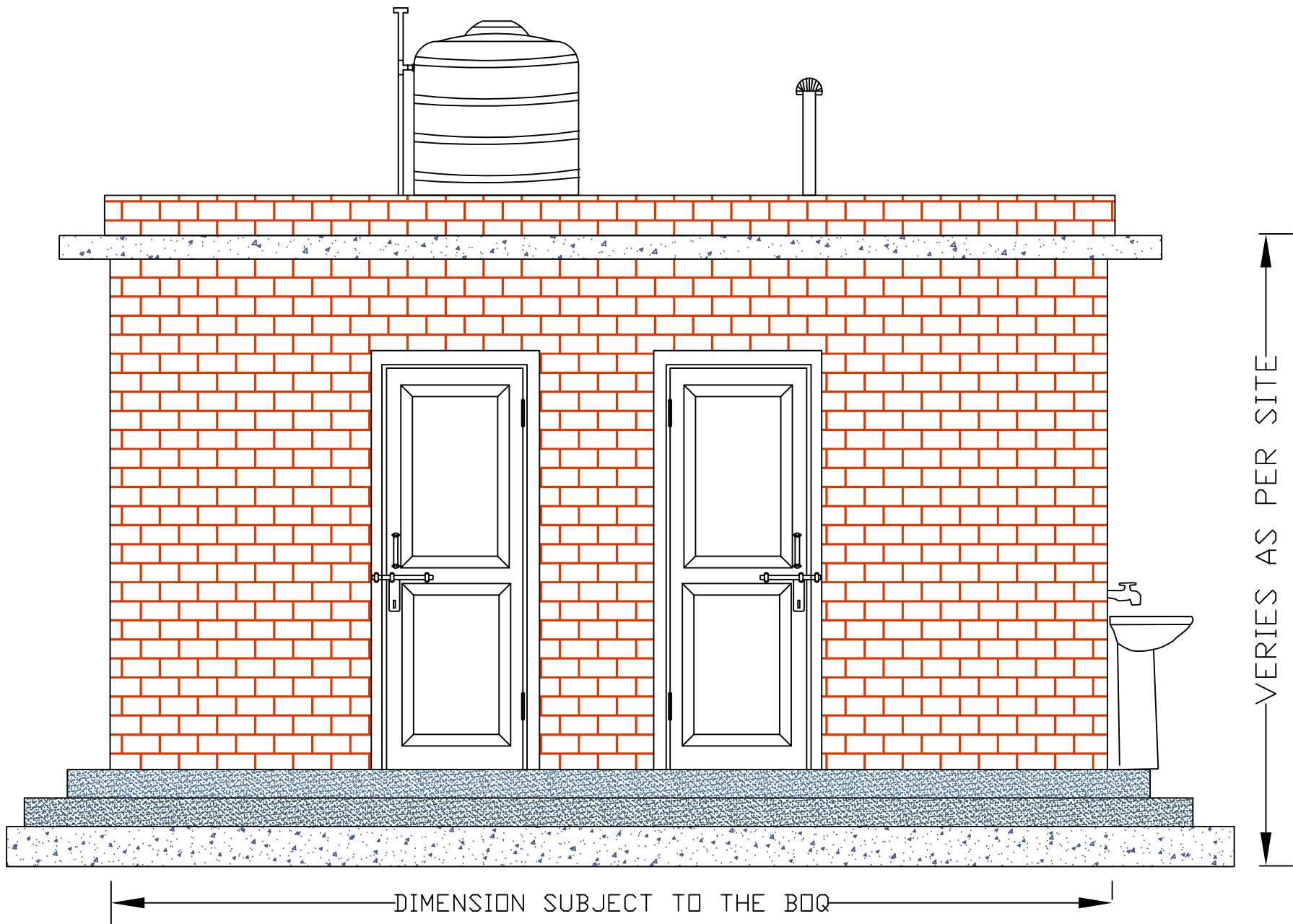


UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

Page No-

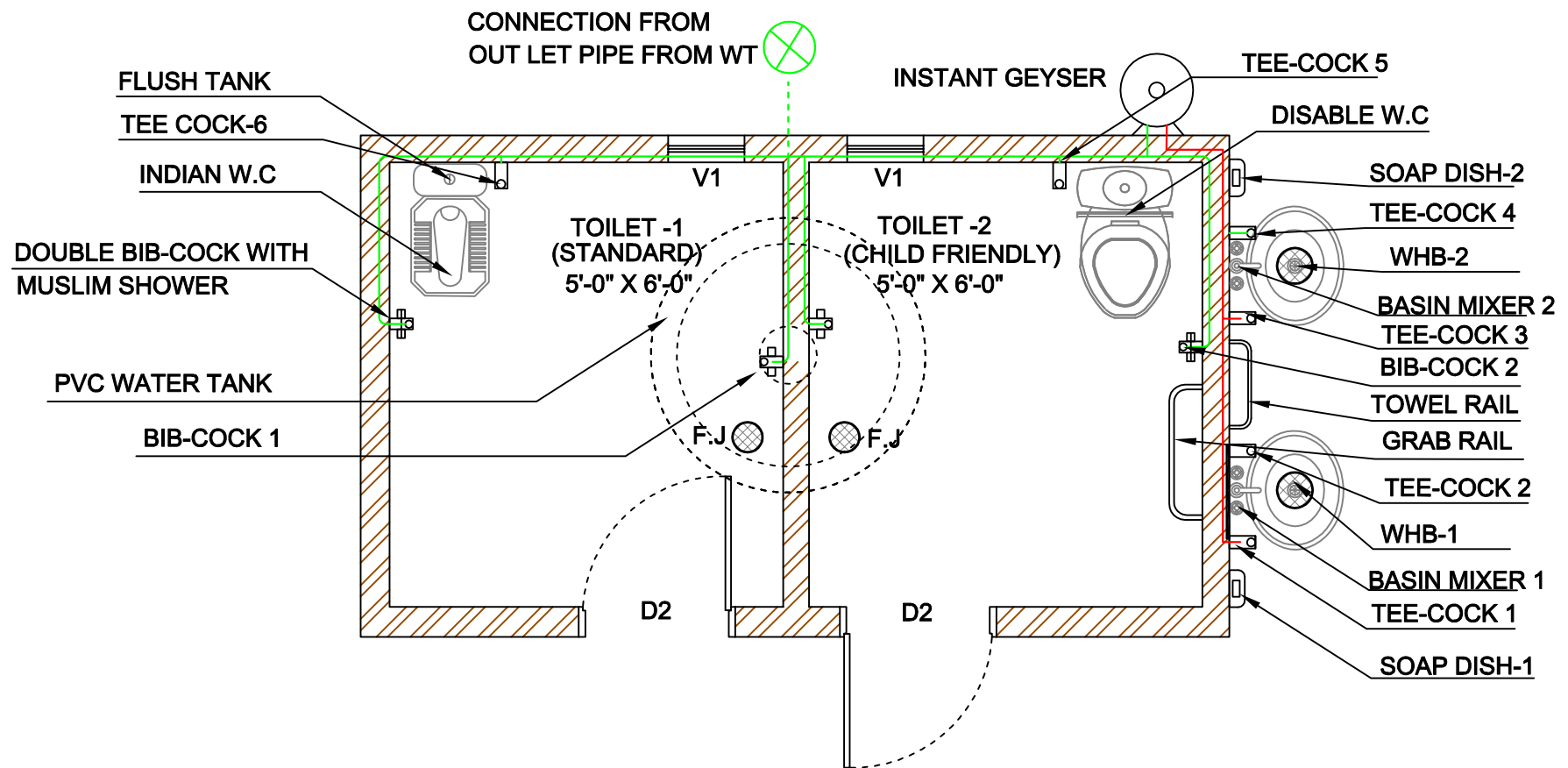
RPHE-003



TYPICAL FRONT ELEVATION OF TOILET BLOCK

General Notes – Applicable Unless Otherwise Specified

 UN-HABITAT FOR A BETTER URBAN FUTURE	DRAWING NO :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE	Page No- RPHE-004
	TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL/-071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.	
	REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:		
			ENGR UMAR AMAAR REGISTRATION NO-CIVIL/-29326		



TYPICAL WATER SUPPLY LAYOUT FOR TOILET BLOCK



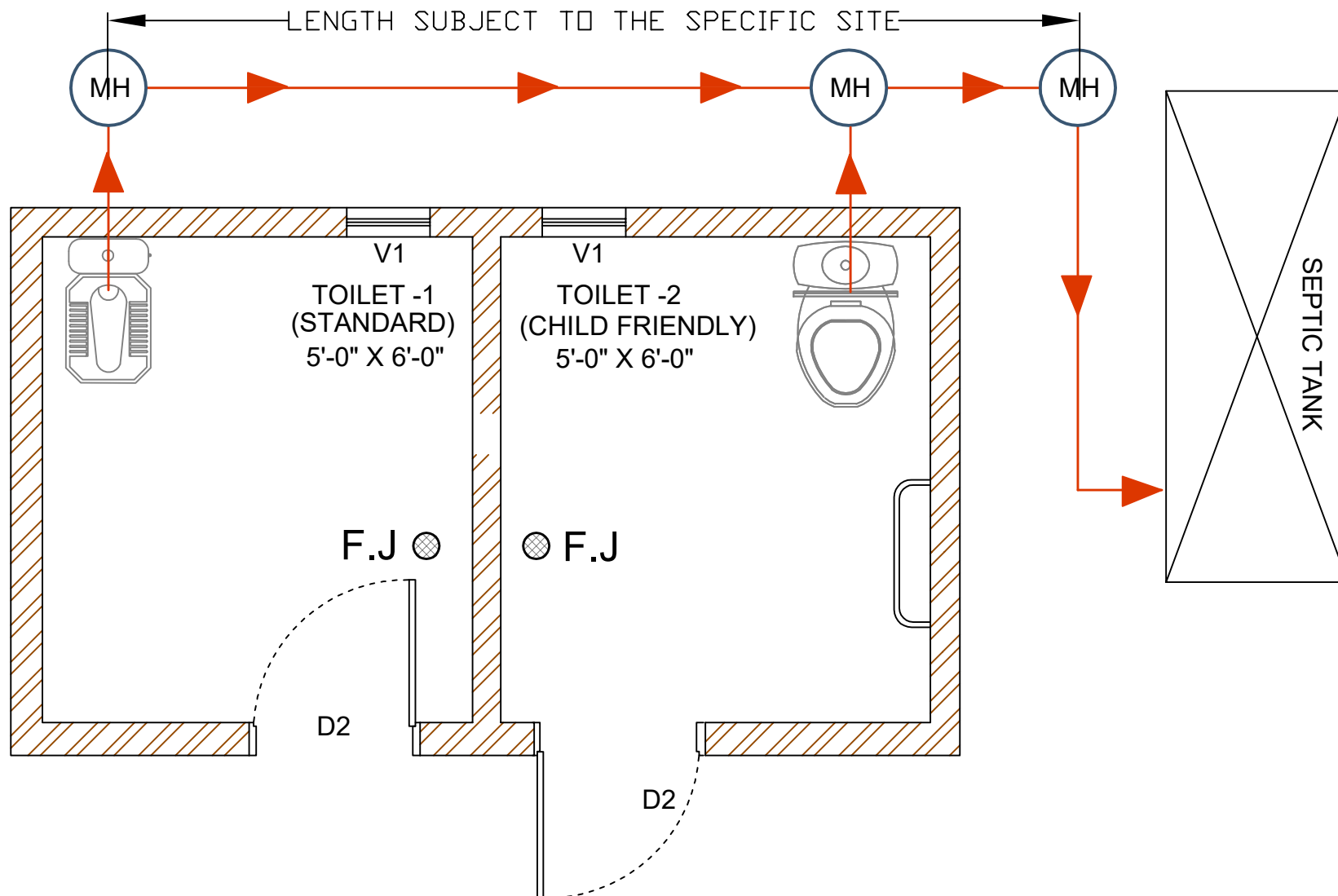
UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR. ARSALAN KHAN REGISTRATION NO-CIVIL/-071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR. UMAR AMAAR REGISTRATION NO-CIVIL/-29326	

General Notes – Applicable Unless Otherwise Specified

Page No-

RPHE-005



TYPICAL SEWERAGE LAYOUT FOR TOILET BLOCK

General Notes – Applicable Unless Otherwise Specified

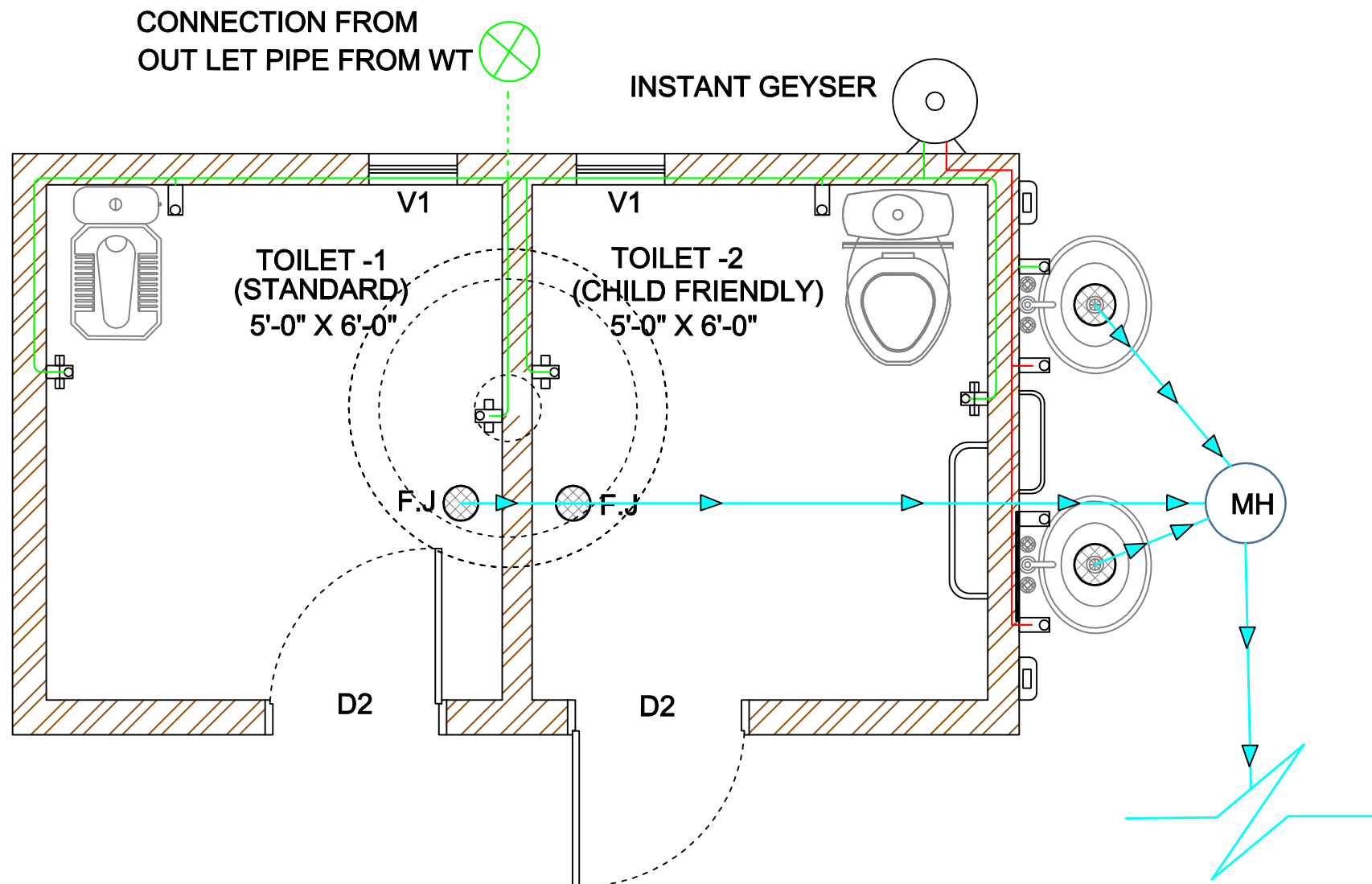


UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

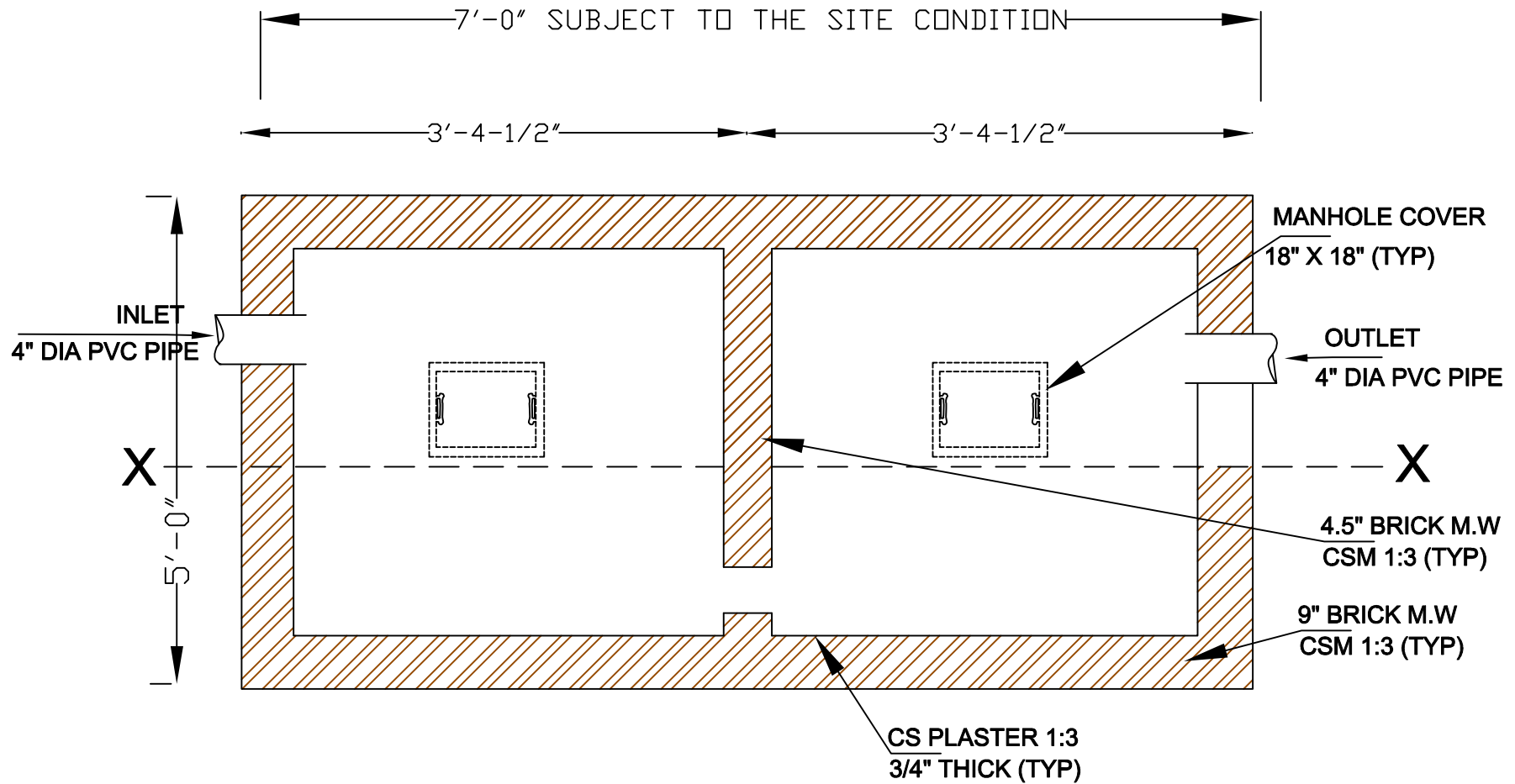
Page No-

RPHE-006



TYPICAL DRAINAGE LAYOUT FOR TOILET BLOCK

General Notes – Applicable Unless Otherwise Specified



TYPICAL SEPTIC TANK LAYOUT DETAILS FOR TOILET BLOCK



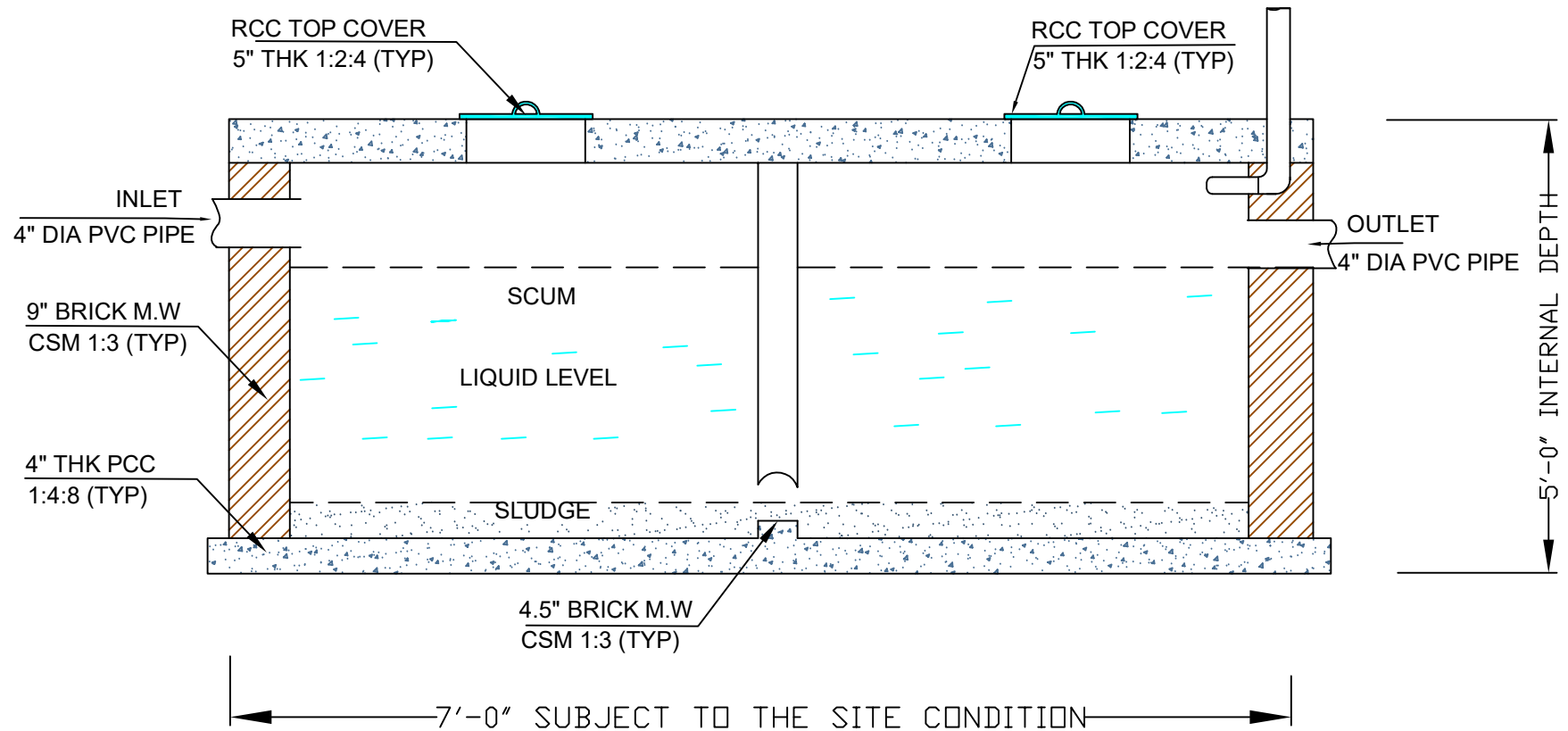
UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO. :	Final Drawing Issuance Date :	DESIGN BY	DRAWING DESCRIPTION AND SCOPE
TYP/JICA/26	05 May ,2026	ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161	TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.
REVISION	REVISED DRAWING ISSUE DATE:	STRUCTURAL DESIGN ENGINEER:	
0		ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326	

General Notes – Applicable Unless Otherwise Specified

Page No-

RPHE-008



TYPICAL SEPTIC TANK X-SECTION DETAILS FOR TOILET BLOCK

General Notes – Applicable Unless Otherwise Specified



UN-HABITAT
FOR A BETTER URBAN FUTURE

DRAWING NO :	Final Drawing Issuance Date :
TYP/JICA/26	05 May ,2026
REVISION	REVISED DRAWING ISSUE DATE:
0	

DESIGN BY
ENGR ARSALAN KHAN REGISTRATION NO-CIVIL-071161
STRUCTURAL DESIGN ENGINEER:
ENGR UMAR AMAAR REGISTRATION NO-CIVIL-29326

DRAWING DESCRIPTION AND SCOPE
TYPICAL DRAWING OF PHE WORKS. FOR DETAILED REQUIREMENTS, REFER TO THE TECHNICAL SPECIFICATIONS, APPROVED SHOP DRAWINGS, PHE LAYOUTS, AND MEASUREMENT SHEET OF THE SPECIFIC SCHOOL.

General Notes – Applicable Unless Otherwise Specified

Page No-

RPHE-009