

GOVERNMENT OF NEPAL
MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY
CENTER FOR EDUCATION AND HUMAN RESOURCE DEVELOPMENT
SANOTHIMI, BHAKTAPUR, NEPAL

ARCHITECTURAL, STRUCTURAL, ELECTRICAL & SANITARY DRAWING
TYPE DESIGN FOR MOUNTAINOUS REGION,
Contract ID: [CEHRD/SESP/SQ/Consultancy/02/2079/080]

FEBRUARY 2023



Government of Nepal
Ministry of Education, Science & Technology
Center for Education and Human Resource Development
Sanothimi, Bhaktapur, Nepal

PREPARE SCHOOL BUILDING TYPE DESIGN FOR MOUNTAINOUS REGION

Contract ID: CEHRD/SESP/SQ/Consultancy/02/2079/080

DETAIL DESIGN AND DRAWING

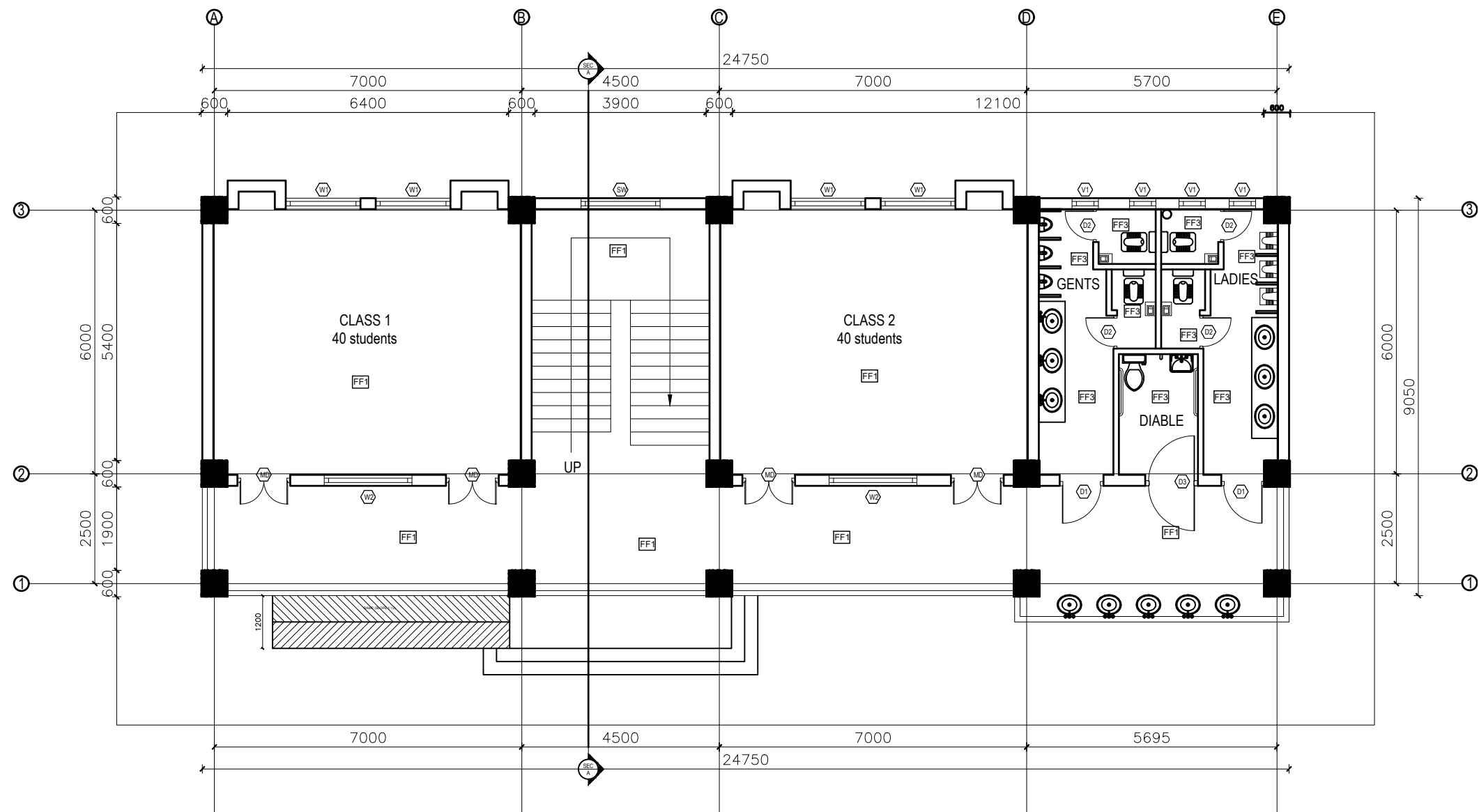
**3 STORY@6 ROOM WITH
(TOILET, WASH ROOM, CHANGING ROOM & BOOK CORNER)**

**SUBMITTED BY:
SAGE ENGINEERING CONSULT**

FEBRUARY, 2023

ARCHITECTURE

DRAWING




GROUND FLOOR PLAN
FLOOR AREA: 225.74 sq.m

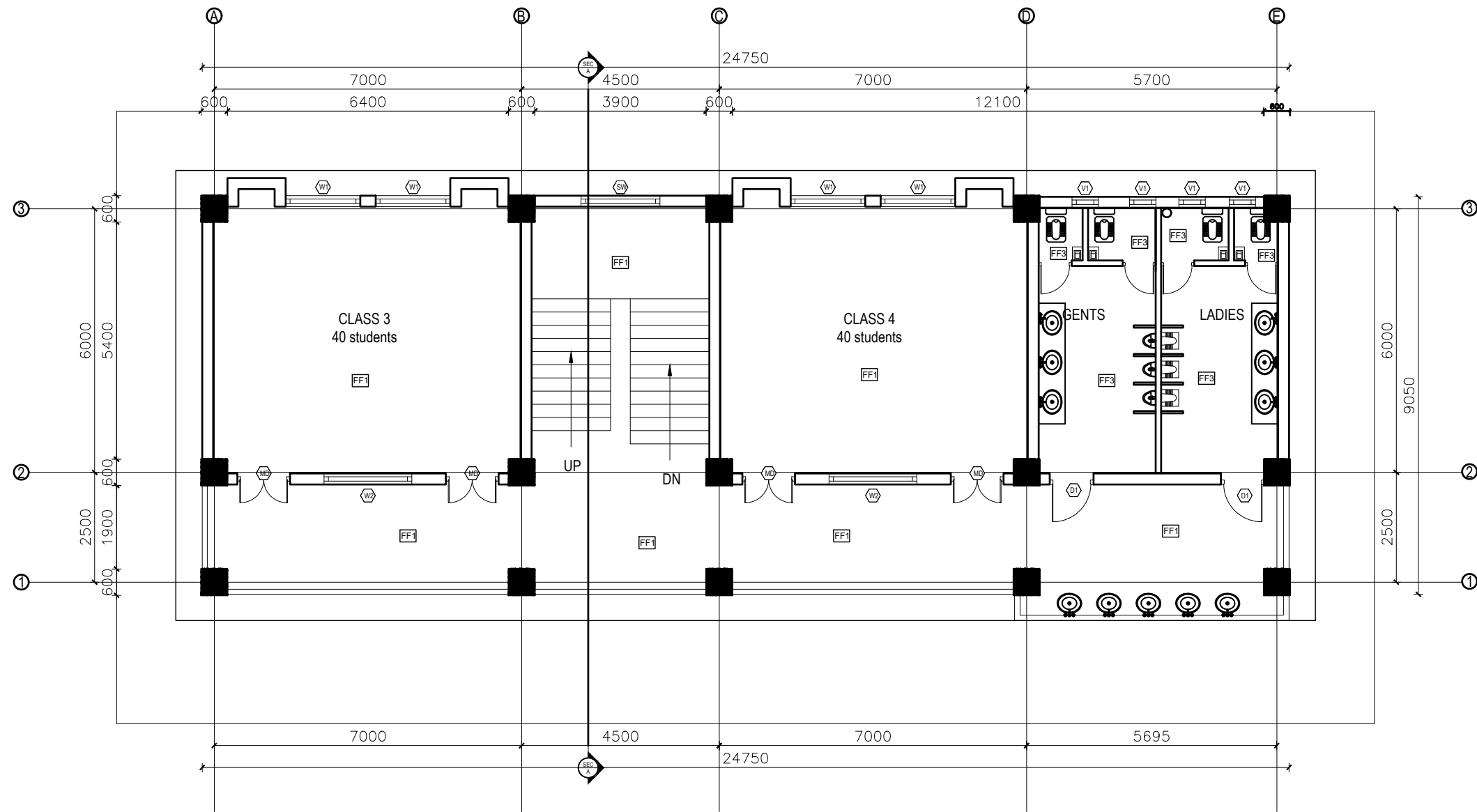
- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.

FINISHING DETAILS:

FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-01	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	GROUND FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE 3S6R-MOUNTAINOUS	

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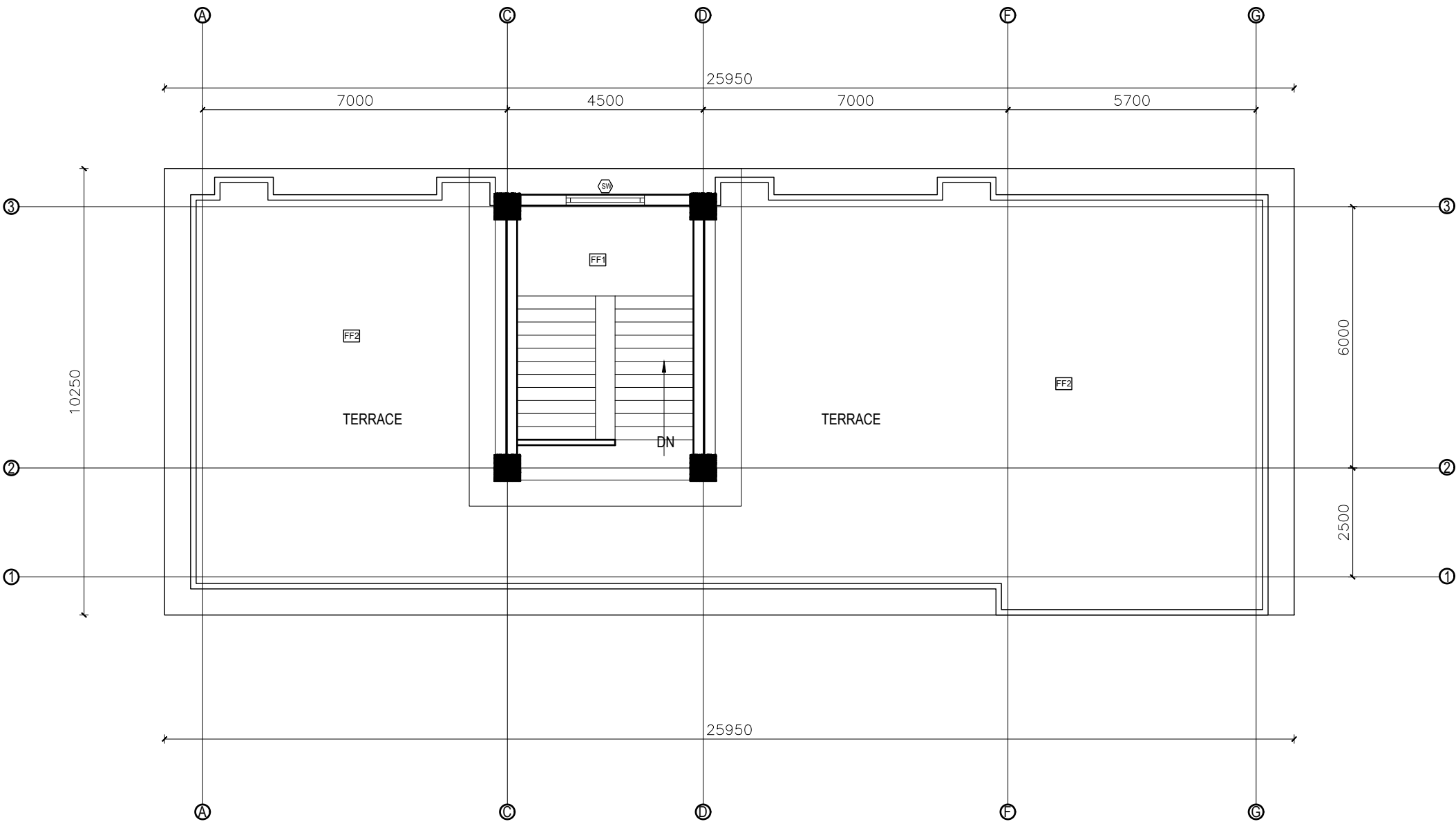


FIRST&SECOND FLOOR PLAN
FLOOR AREA: 225.74 sq.m

FINISHING DETAILS:	
FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)


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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FIRST FLOOR AND SECOND FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN :		APPROVED:	
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	
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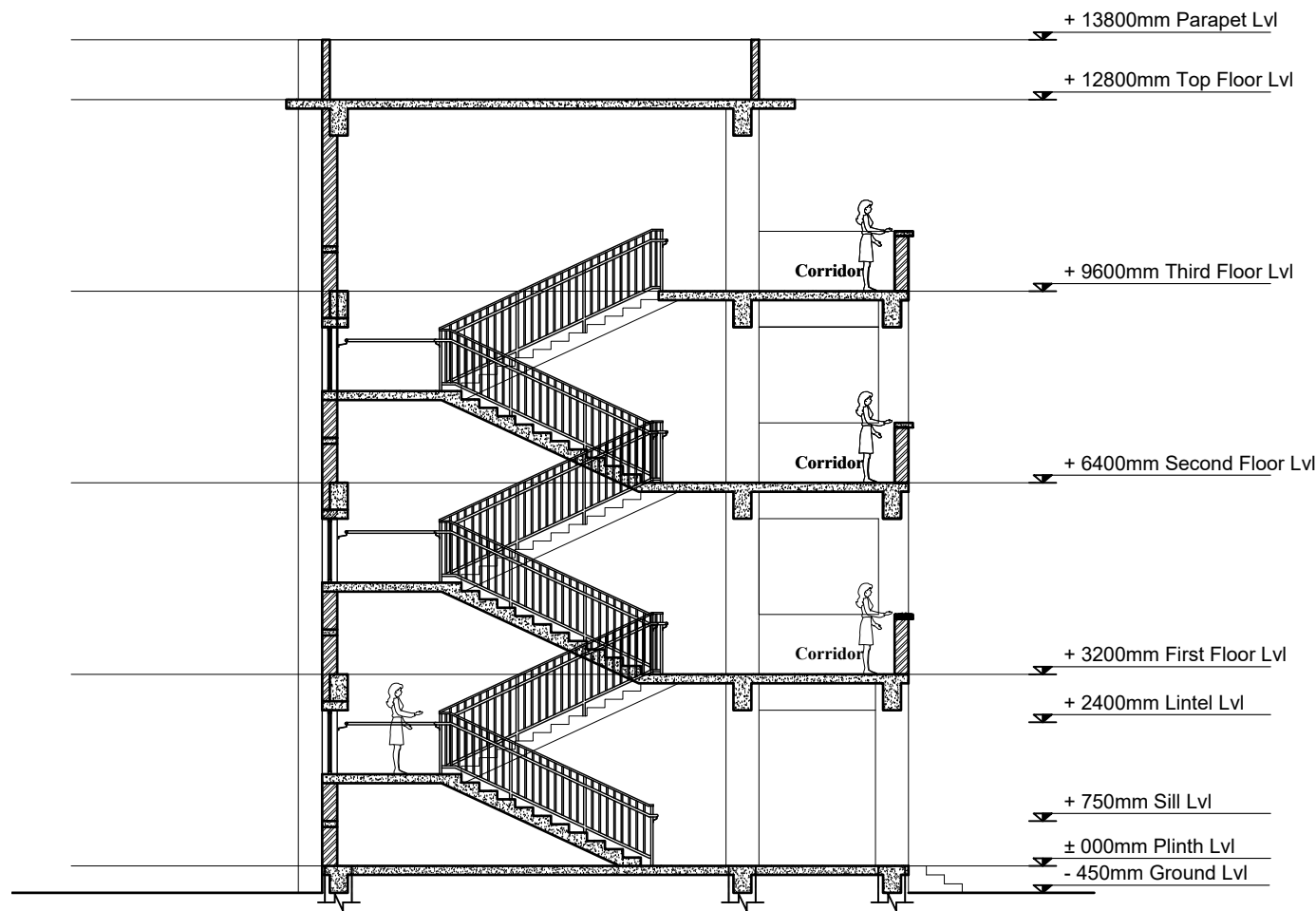


FINISHING DETAILS:	
FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

TOP FLOOR PLAN
FLOOR AREA: 33.07 sq.m

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-03	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ROOF PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S6R-MOUNTAINOUS	
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					DRAWN :	APPROVED:		
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SECTION AT A-A

OPENING SCHEDULE

S.N.	SYMBOL	SIZES	G.F.	F.F.	S.F.	TOTAL	SILL HT.	REMARKS
1.	MD	1200 x 2400	4	4	4	12	-	
2.	D1	1000 x 2400	2	2	2	6	-	
3.	D2	750 x 2100	4	4	4	12	-	
4.	D3	1200 x 2400	1			1	-	
5.	W1	1700 x 1650	4	4	4	12	750 MM	
6.	W2	2000 x 1650	2	2	2	6	750 MM	
7.	SW	1800 x 1070	1	1		2	1530 MM	
8.	V1	600 x 600	4	4	4	12	1800 MM	

FINISHING DETAILS:


FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. AR-04	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SECTION AND OPENING SCHEDULE	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S6R-MOUNTAINOUS	
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

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 - 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 - 5. Dimensions are excluding the plaster/POP thickness.




FRONT ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-05	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region		SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S6R-MOUNTAINOUS	
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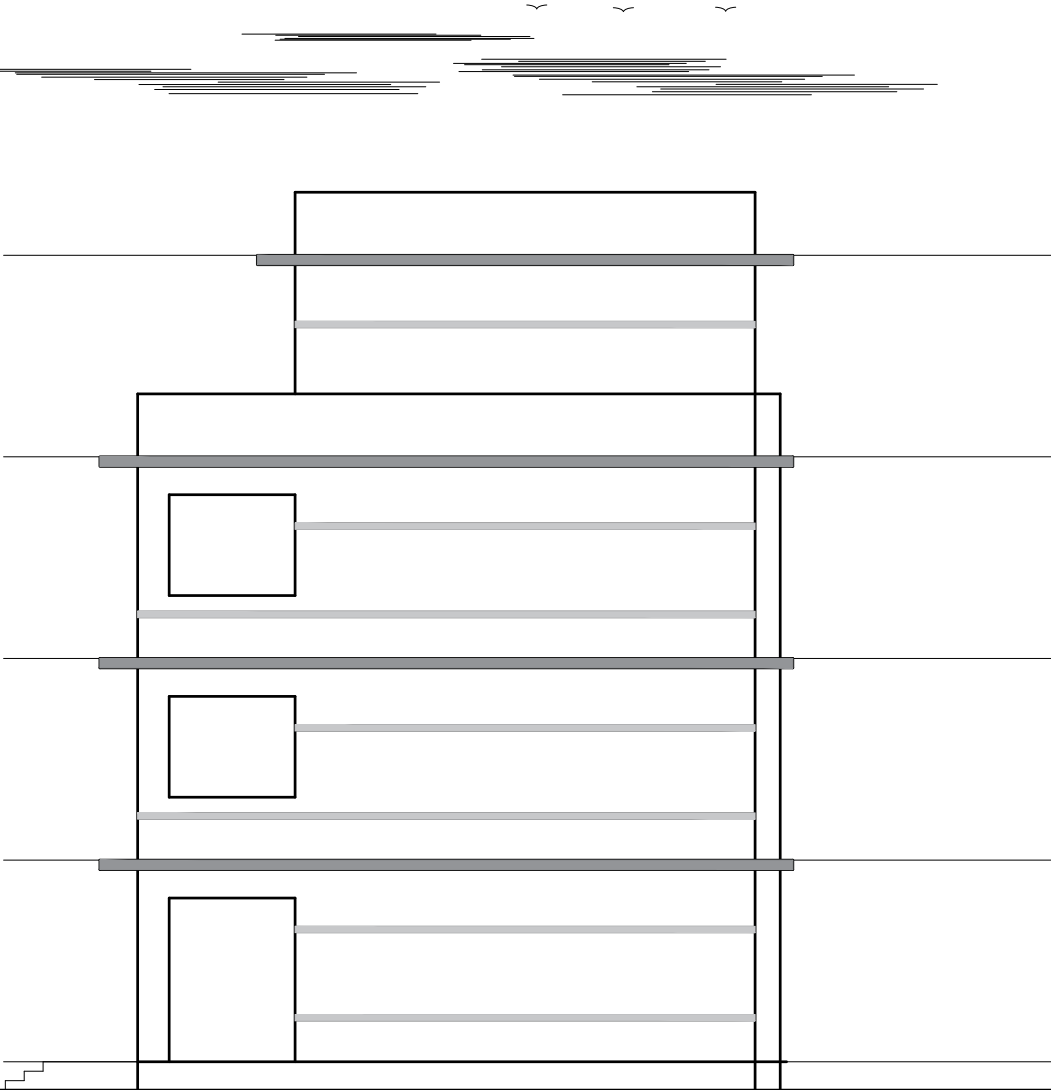
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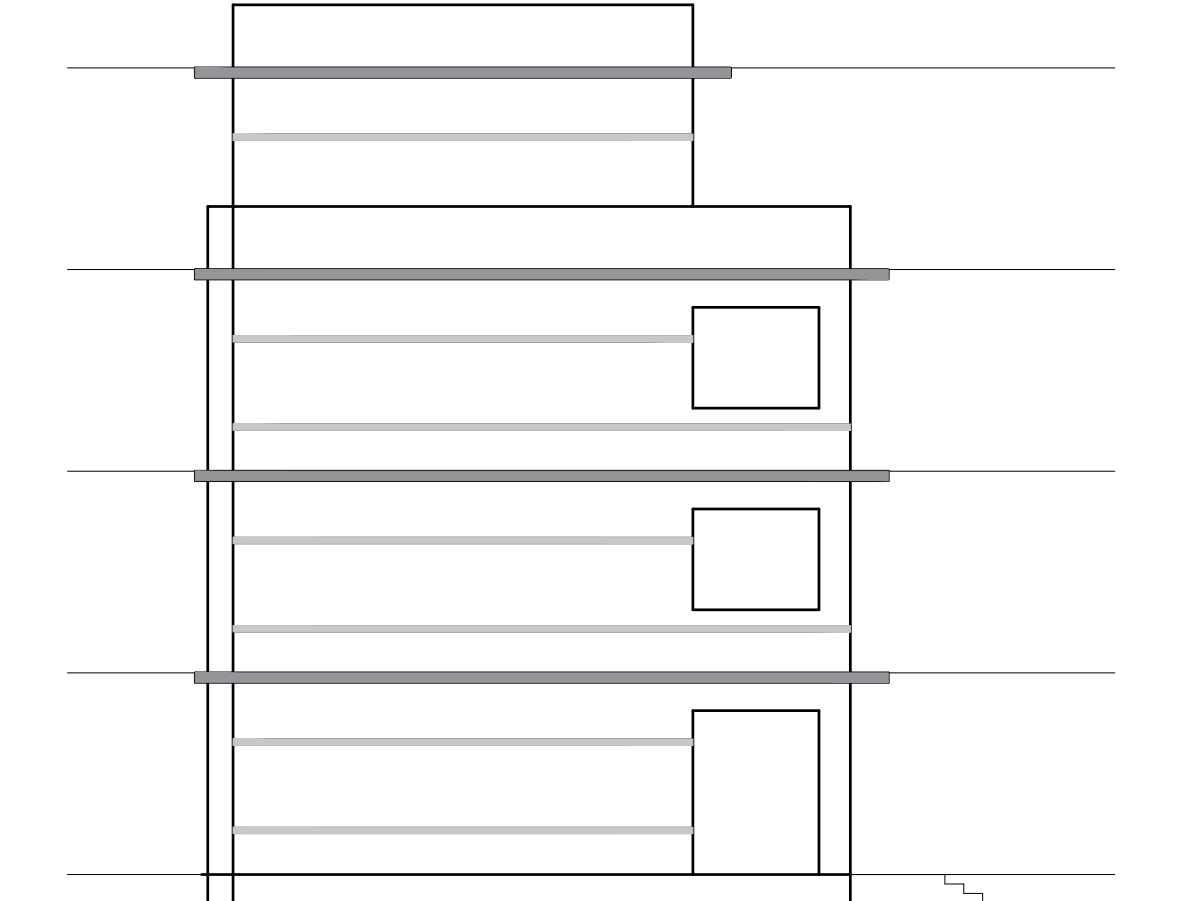
BACK ELEVATION

CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-06	REVISION NO. R-00
 <div>Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal</div>	Prepare School Building Type Design for Mountainous Region	ELEVATION	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S6R-MOUNTAINOUS	
				ARCHITECT:	CHECKED:		
				DRAWN :	APPROVED:		
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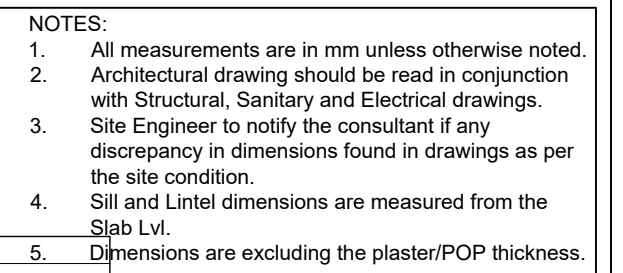


SIDE-1 ELEVATION



SIDE-2 ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-07	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ELEVATIONS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S6R-MOUNTAINOUS	
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					DRAWN :	APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	




SECTION AT B-B

FINISHING DETAIL

FF1	38 mm PCC (M15) hardener (Dreilop)
Terrace	50 mm PCC (M15) cut with floor hardener (equivalent) and water

FINISHING DETAILS:	
FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent)
Terrace	50 mm PCC (M15) with 1:1 cement punning in a 600'600 grid thread cut with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)

CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. AR-08	REVISION NO. R-00
 Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	RAMP DETAILS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		DWG CODE 3S6R-MOUNTAINOUS
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				DRAWN :		APPROVED:		
				SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

STRUCTURE

DRAWING

SN.	DRAWING LIST
1.	GENERAL NOTES
3.	FOOTING DETAIL FOR 100kN/m2
4.	TYPICAL FLOORING DETAIL
5.	SITE SPECIFIC DRAWING
6.	TYPICAL DETAILS OF FOUNDATION WALL
7.	COLUMN DETAIL
8.	BEAM PLAN
9.	BEAM DETAIL
10.	SLAB DETAIL
11.	STAIRCASE DETAIL
12.	BAND DETAIL
13.	RAILING DETAIL

GENERAL NOTES:

1. USE M25 GRADE CONCRETE FOR SLAB, BEAM, COLUMN, FOUNDATION, SILL & LINTEL BANDS (ALL RCC WORKS)
2. USE Fe500 GRADE STEEL ($f_y=500\text{N/mm}^2$)
3. CLEAR COVER TO BARS

a. FOR CONCRETE MEMBERS IN CONTACT WITH SOIL = MIN 50mm

b. FOR COLUMN (FROM FACE TO LATERAL TIES) = 40mm

c. FOR BEAMS (FROM FACE TO LATERAL STIRRUPS) = 25mm

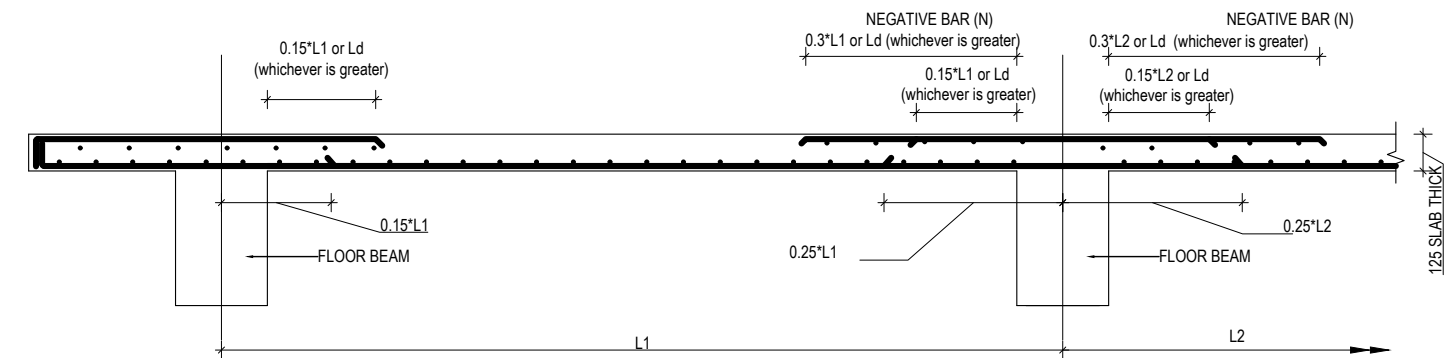
d. FOR OUTER BARS IN SLAB = 15mm

e. FOR STAIRCASE = 20mm
4. BARS IN COLUMNS SHALL BE SPLICED ONLY AT MID HEIGHT OF COLUMN.
5. BARS SPLICING IN BEAM SHALL BE AVOIDED IN THE SPAN WHERE INTERMEDIATE BEAM IS CONNECTED AND SHALL BE ONLY AS SHOWN IN DWG.
6. DEVELOPMENT / LAP LENGTH (L_d) FOR BARS.

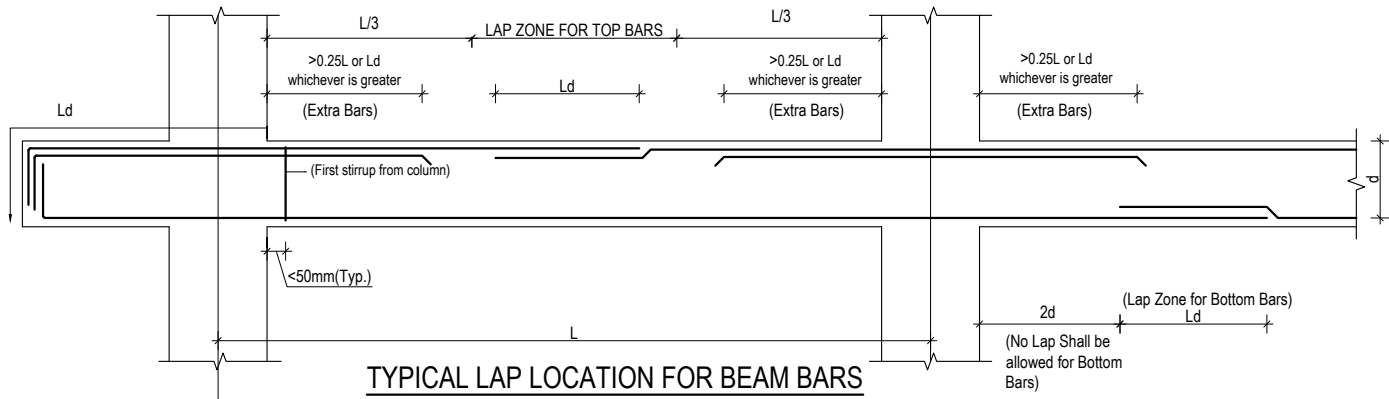
BAR DIA-(mm)	8	10	12	16	20	25
FOR M25 L_d	400	490	590	790	980	1230
7. TEMP./DISTRIBUTION REINFORCEMENT FOR SLAB - TMT \varnothing @ 200 C/C
8. CLEAR VERTICAL DISTANCE BETWEEN TWO ROWS (LAYERS) OF BARS=25mm OR MAXIMUM SIZE OF REBAR
9. PROVIDE STIRRUPS OR TIES AT MIN 150 C/C AT LAP LOCATIONS IN BEAM AND AT MIN 100 C/C AT LAP LOCATION IN COLUMNS.
10. FOUNDATION

10.1 FOUNDATION DESIGN HAVE BEEN PROVIDED FOR SAFE BEARING CAPACITY OF 150KN/m². THIS S.B.C. SHALL BE CONFIRMED FROM GEO TECHNICAL INVESTIGATION AND CONSULTED TO DESIGNER.

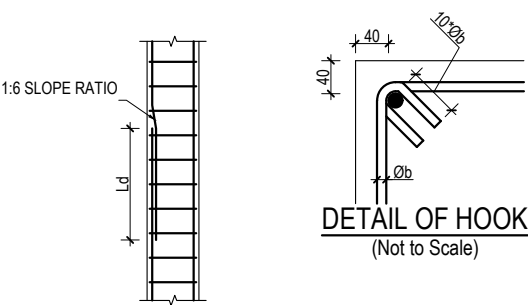
10.2 IF SAFE BEARING CAPACITY OF SOIL IS FOUND LESS THAN 100KN/m², SPECIAL STUDY FOR FOUNDATION DESIGN IS REQUIRED.
11. H = CLEAR SPAN OF FLOOR.
12. D=DEPTH OF BEAM
13. d=EFFECTIVE DEPTH OF BEAM
14. L_d =DEVELOPMENT LENGTH
15. The seismic gap shall be as per codal requirement.



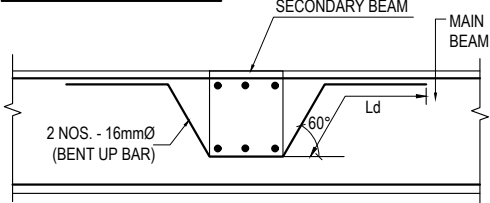
TYPICAL DETAIL FOR SLAB BARS



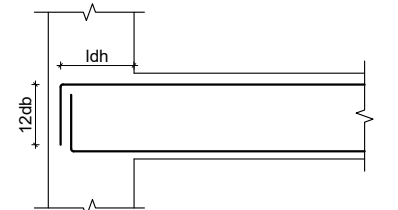
TYPICAL LAP LOCATION FOR BEAM BARS
(STIRRUPS NOT SHOWN FOR CLARITY)



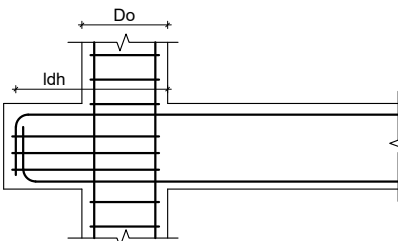
LAPPING METHOD



CONNECTION DETAIL BETWEEN
MAIN & SECONDARY BEAM



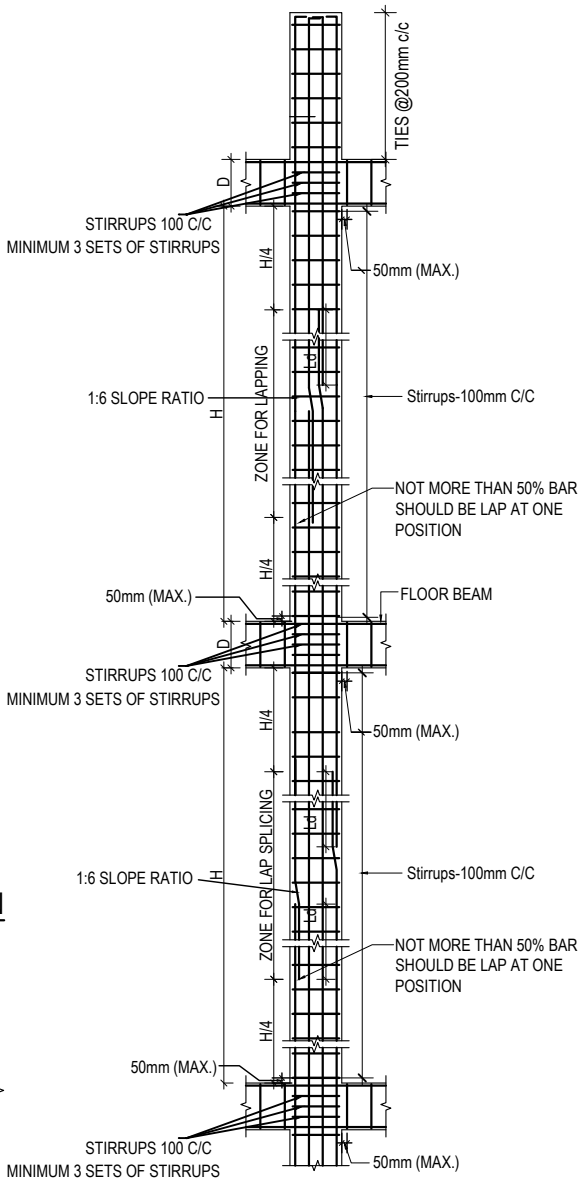
ANCHORAGE OF BEAM
LONGITUDINAL BAR IN COLUMN



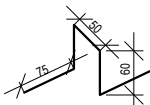
PPROVISION OF BEAM STUB

f_y N/mm ²	f_{ck} N/mm ²	d_b mm	L_{dh} mm	$12d_b$ mm
500	20	12	277	144
500	25	12	248	144
500	20	16	369	192
500	25	16	330	192
500	20	20	462	240
500	25	20	413	240
500	20	25	577	300
500	25	25	516	300


f_y = yield strength of steel
 f_{ck} = Characteristic Compressive strength of concrete
 d_b = diameter of largest longitudinal bar in beam in mm

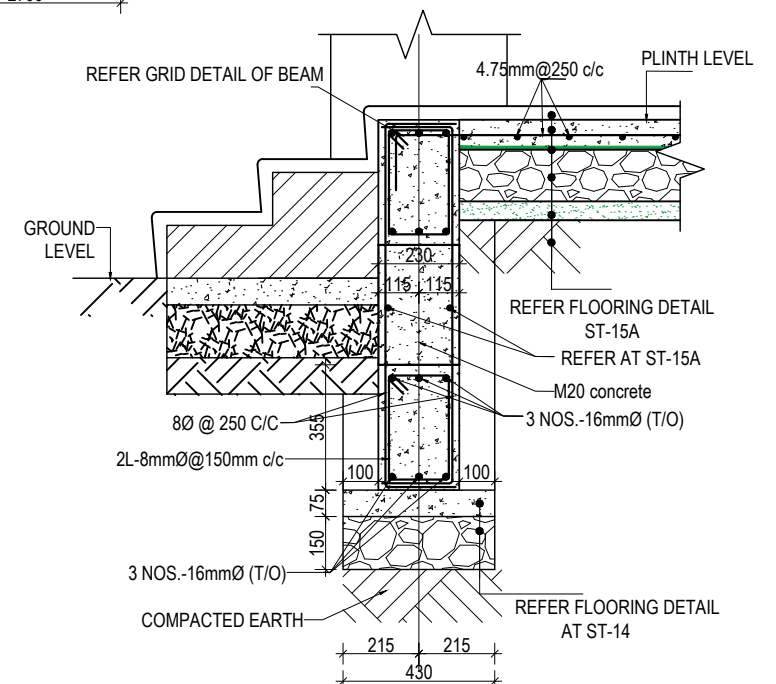
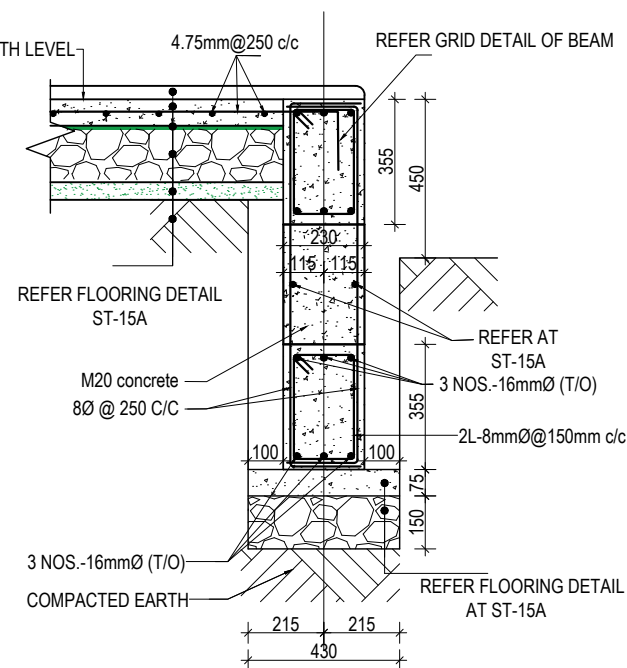
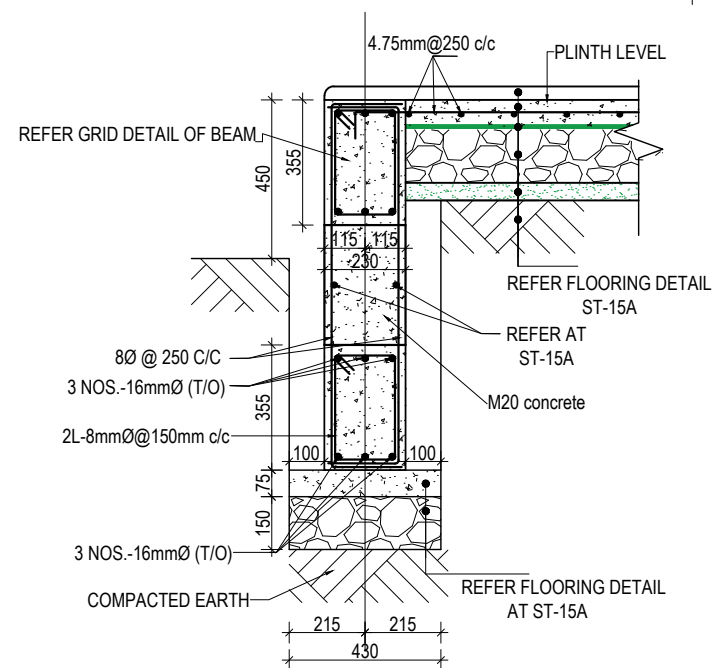
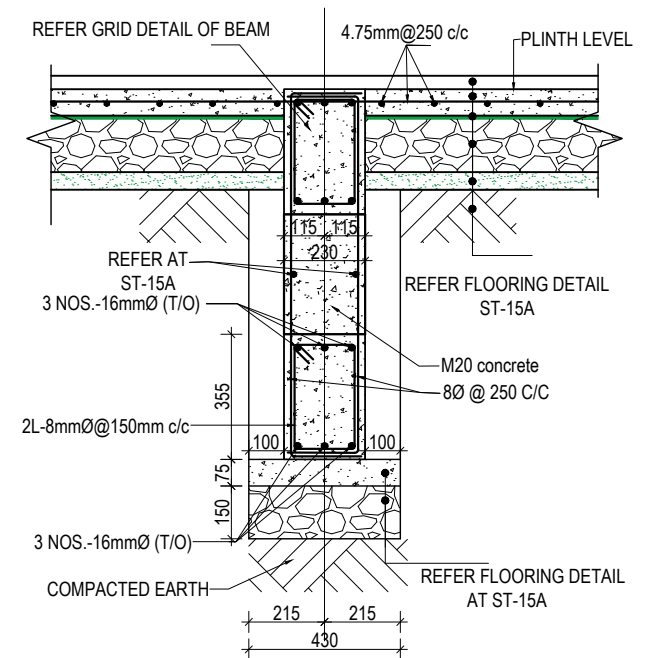
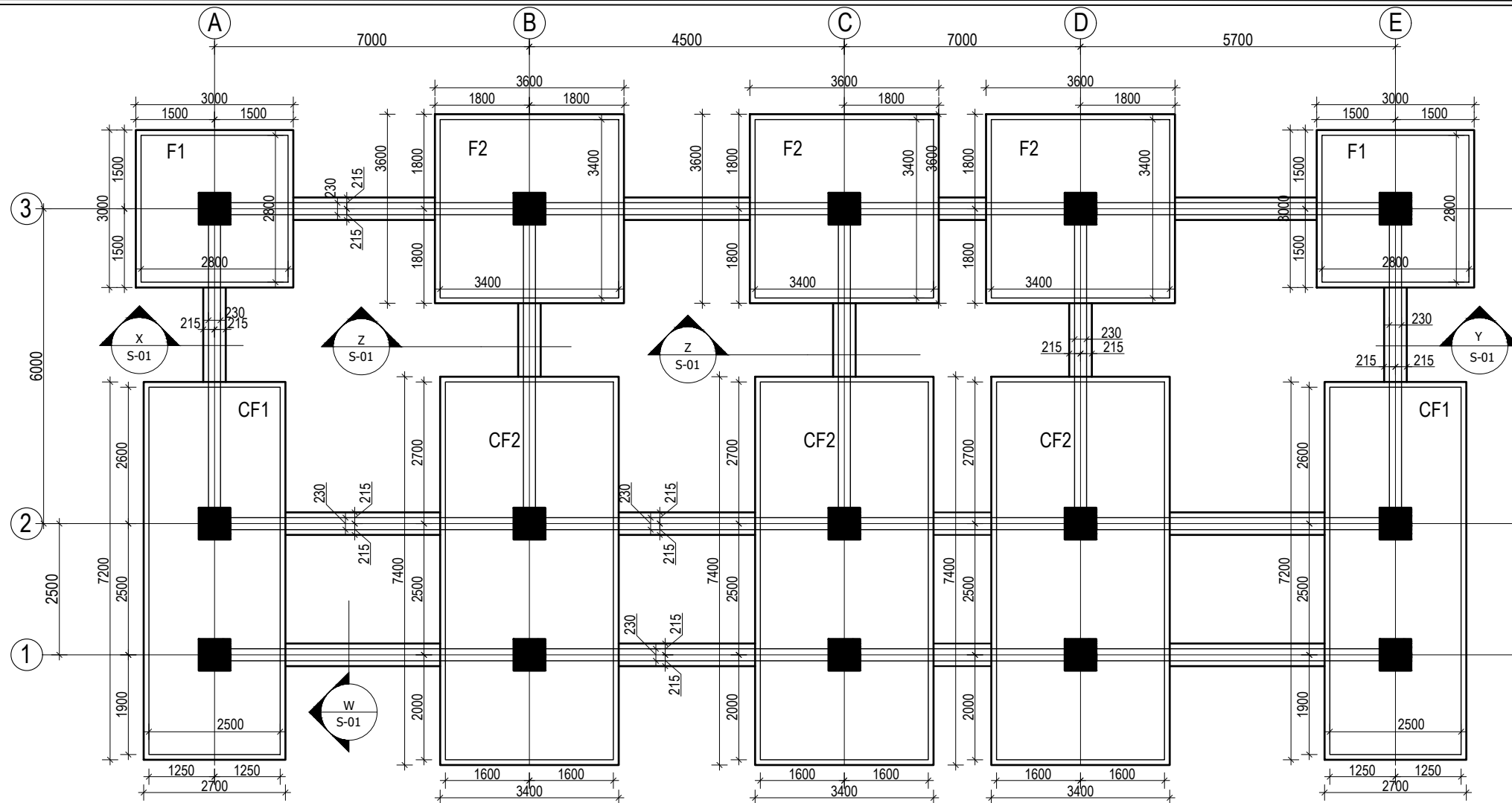



TYP. COLUMN SHEAR
REINFORCEMENT DETAIL

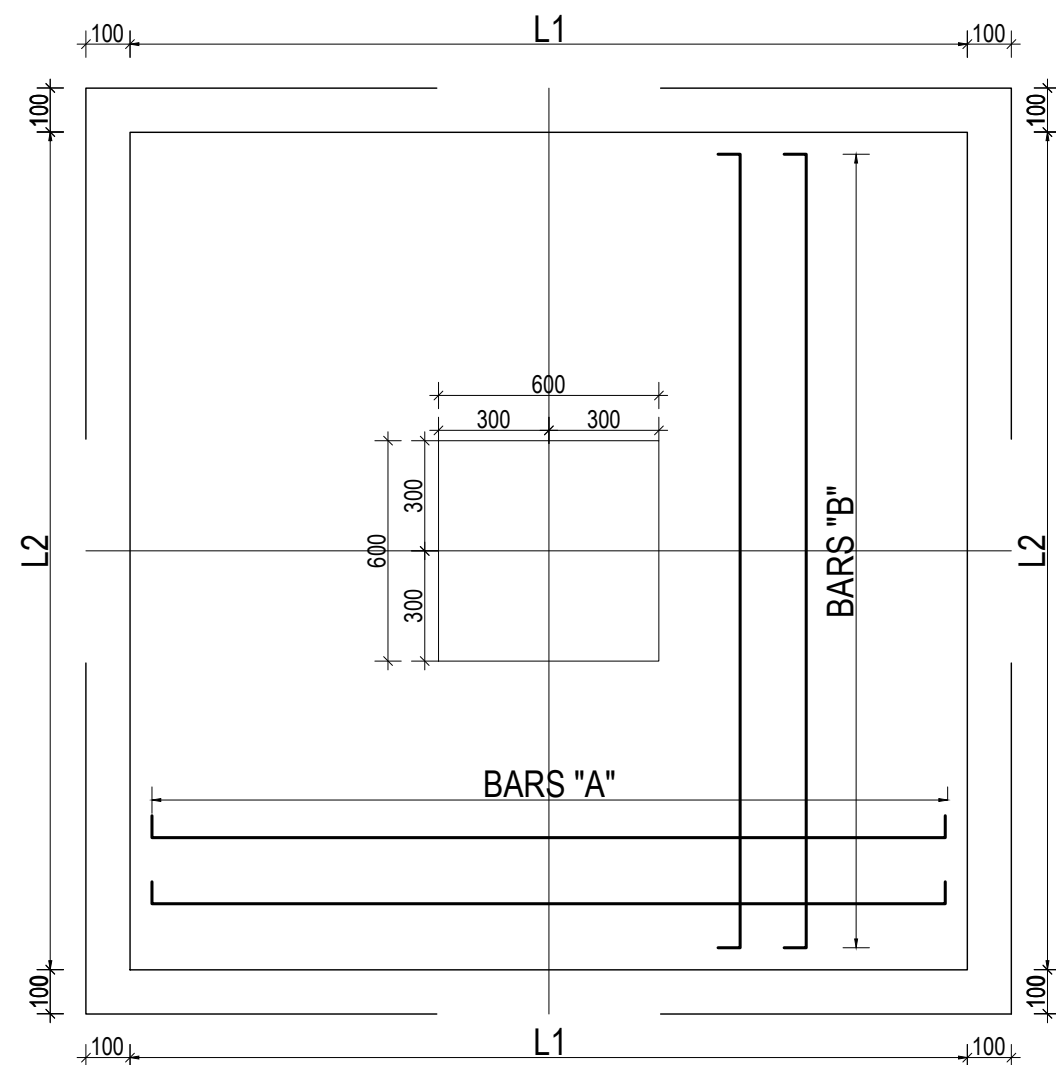


CHAIR RESTING ON BOTTOM BARS
@600 - 900 mm staggered position

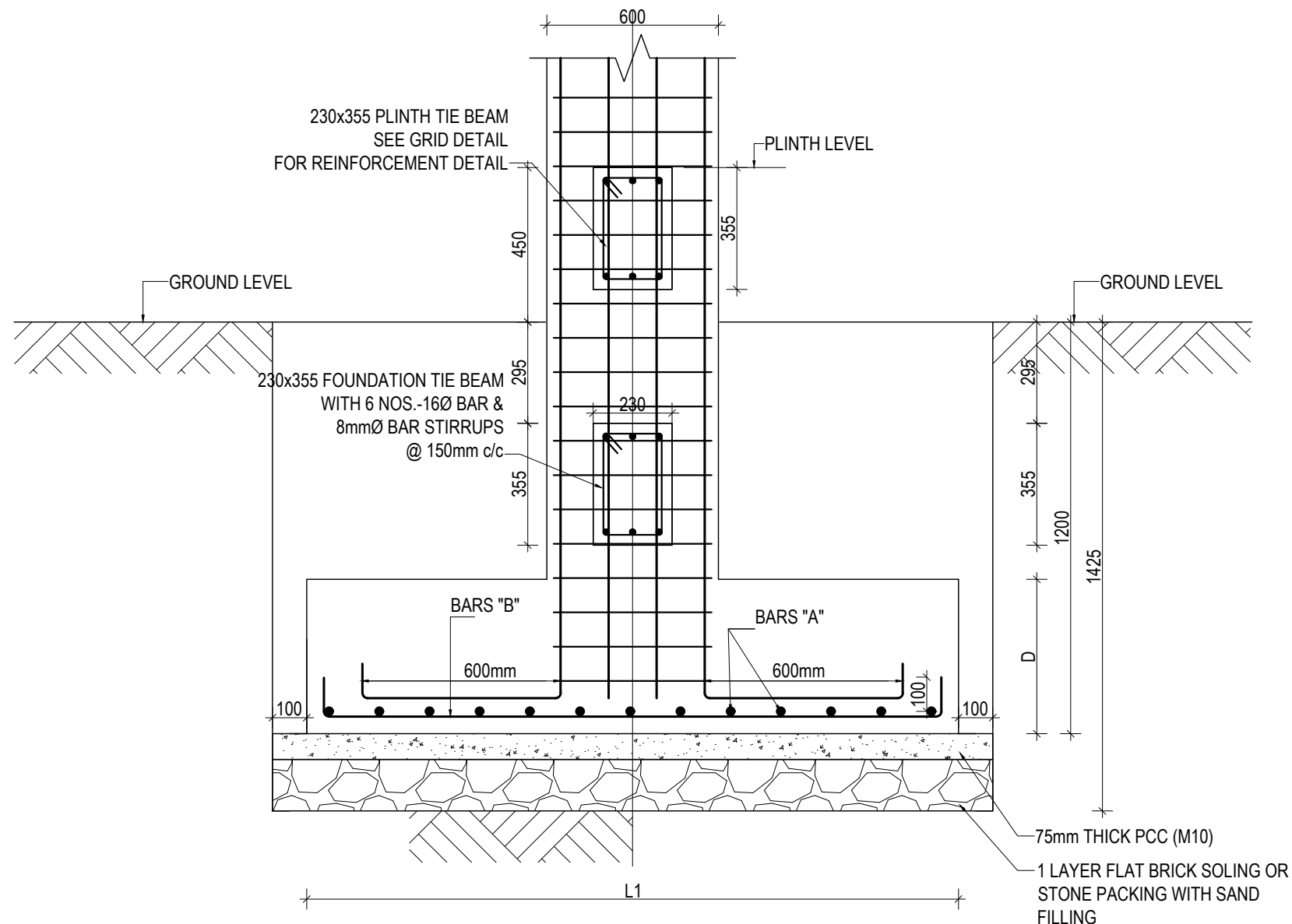
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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	GENERAL NOTES	SAGE Engineering Consult Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE. 3S6R-MOUNTAINOUS	R-00
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 Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TRENCH DETAIL FOR S.B.C 150kN/m ²	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER.:	ST-01	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S6R-MOUNTAINOUS	
				DRAWN:	APPROVED:		
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TYPICAL ISOLATED FOOTING PLAN

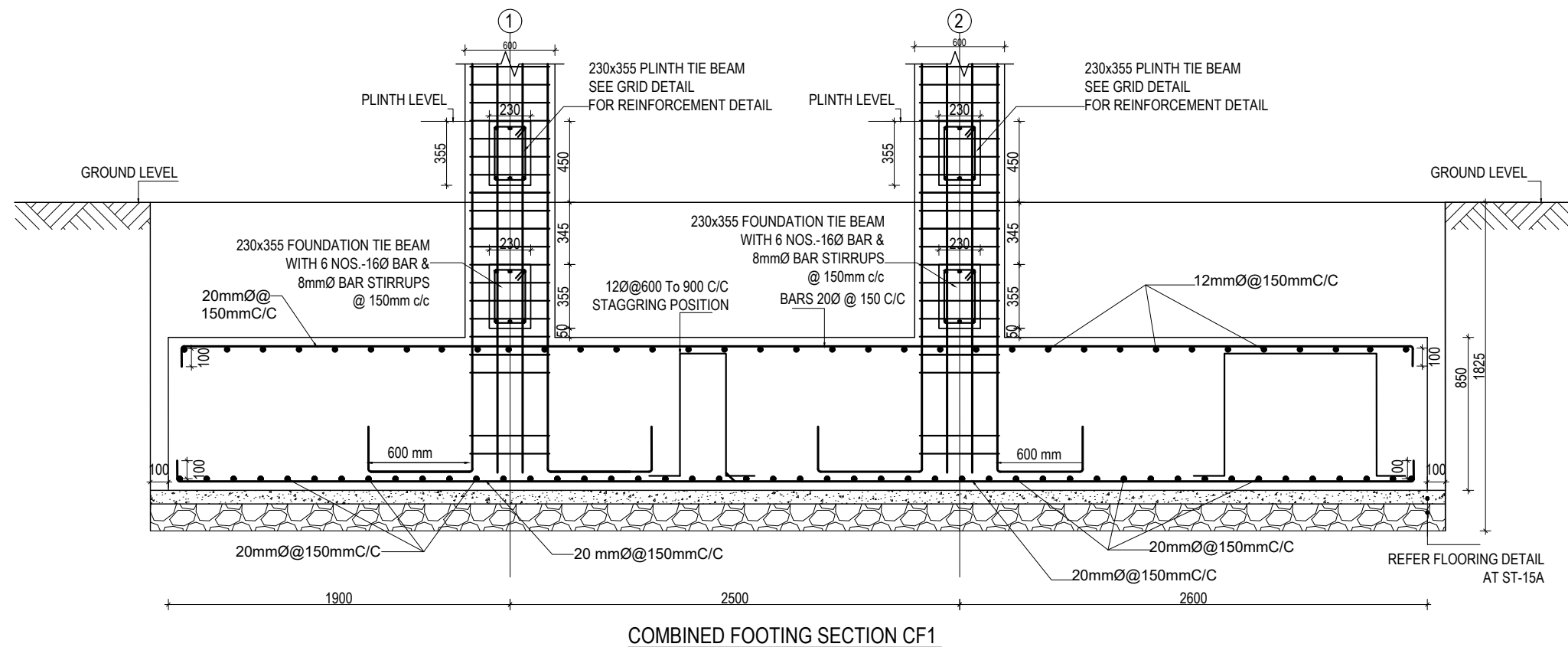
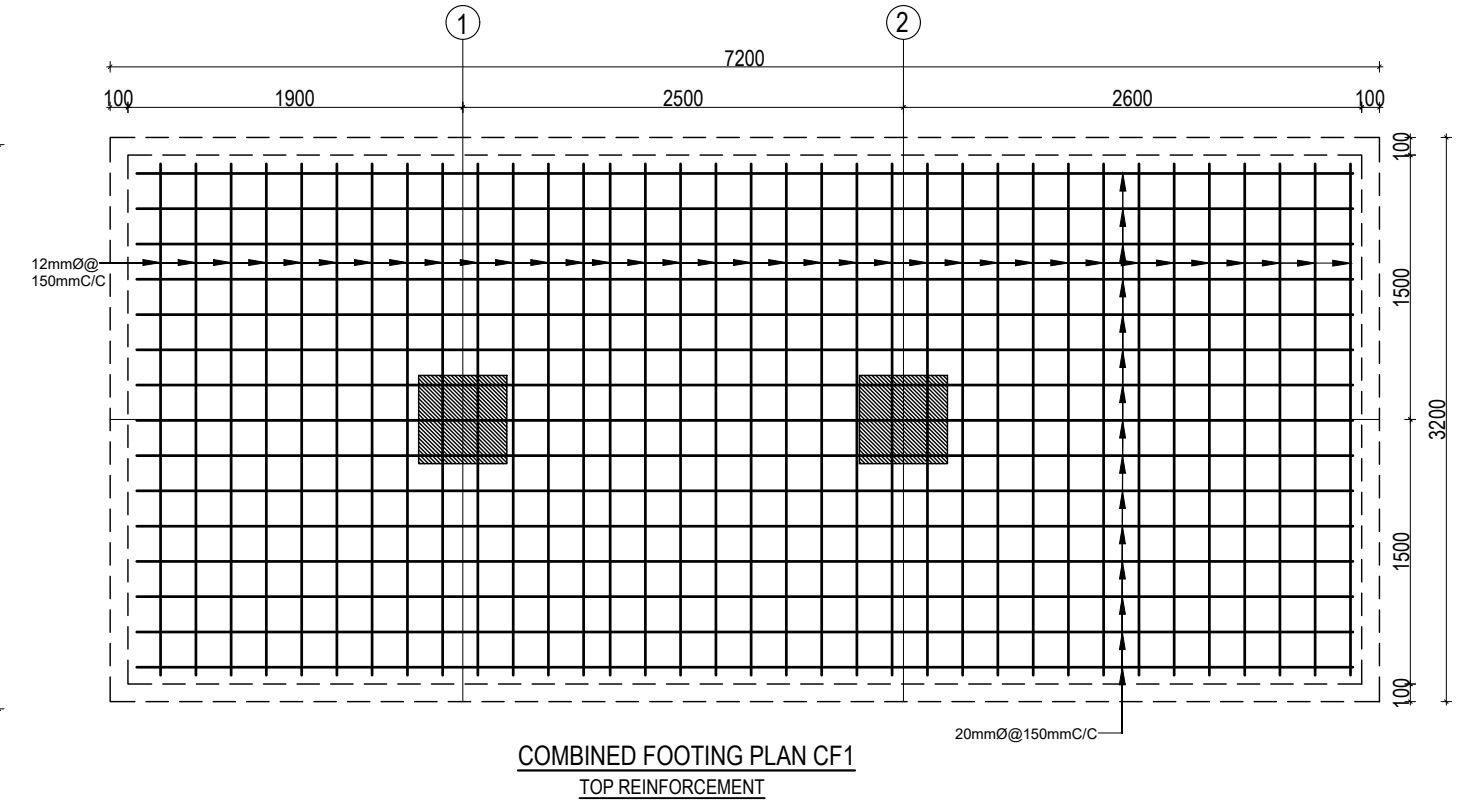
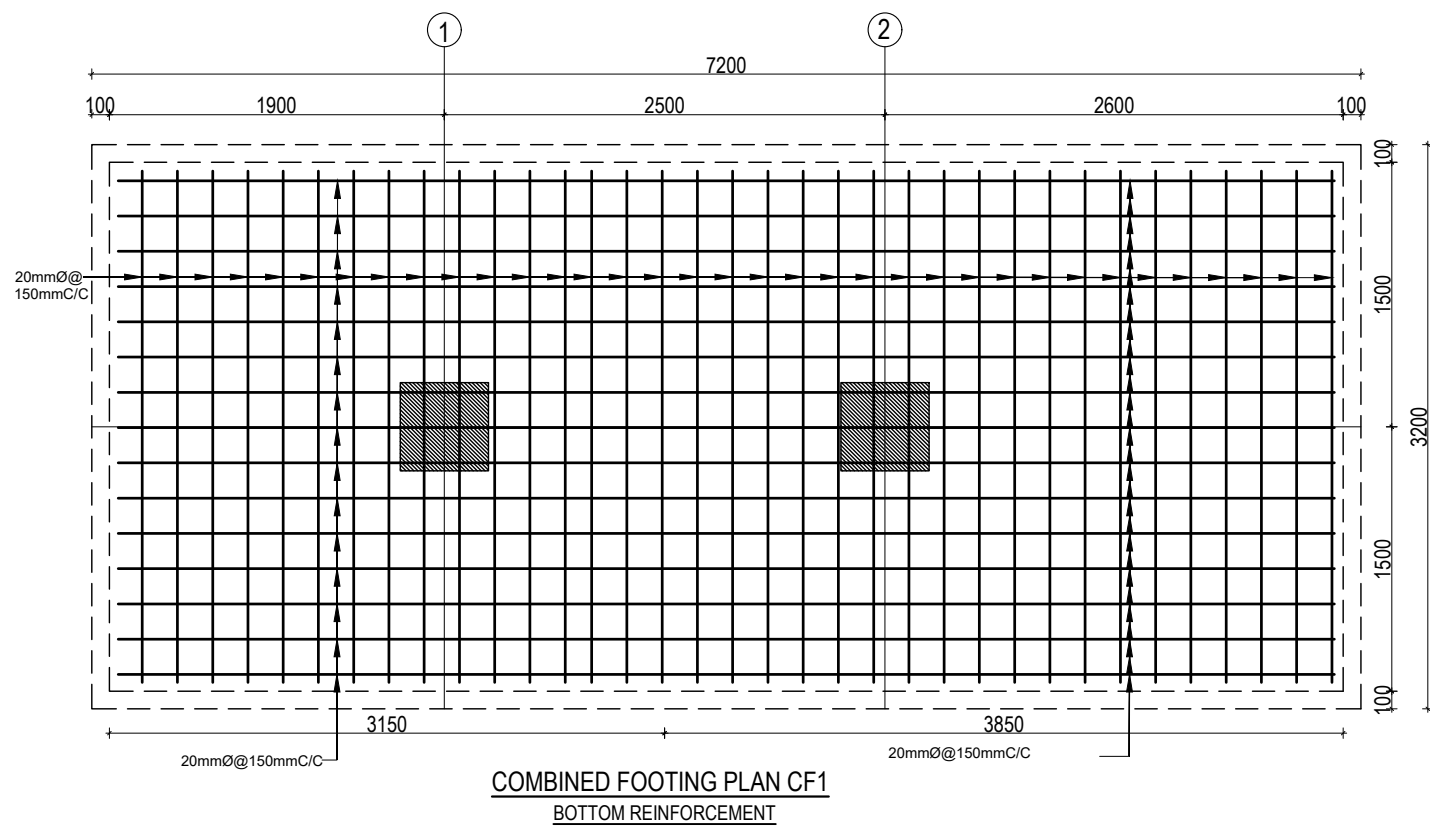



TYPICAL ISOLATED FOOTING SECTION

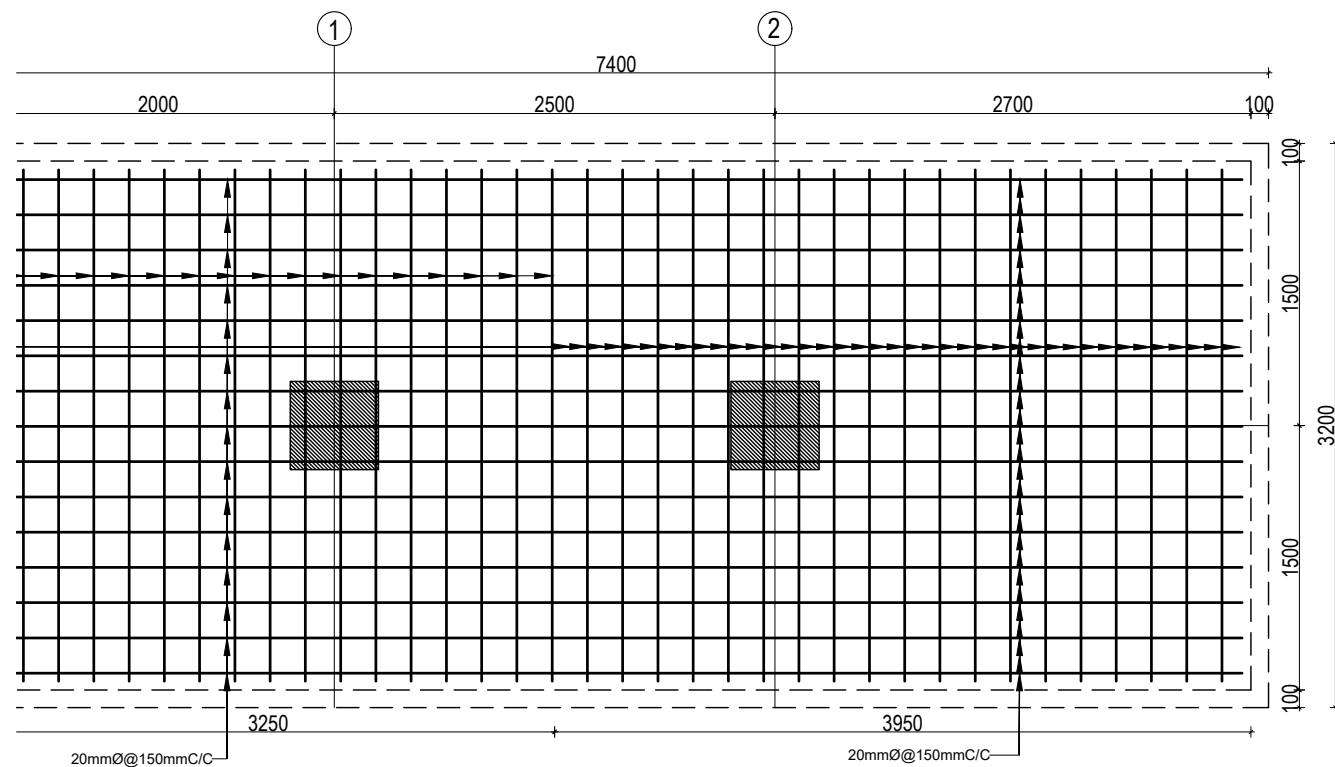
ISOLATED FOOTING SCHEDULE FOR S.B.C 150 kN/m²

FOOTING ID	L1	L2	DEPTH (D)	REINFORCEMENT DETAILS	
				BARS "A"	BARS "B"
F1	2800	2800	650	16Ø @ 150 C/C	16Ø @ 150 C/C
F2	3400	3400	750	16Ø @ 150 C/C	16Ø @ 150 C/C

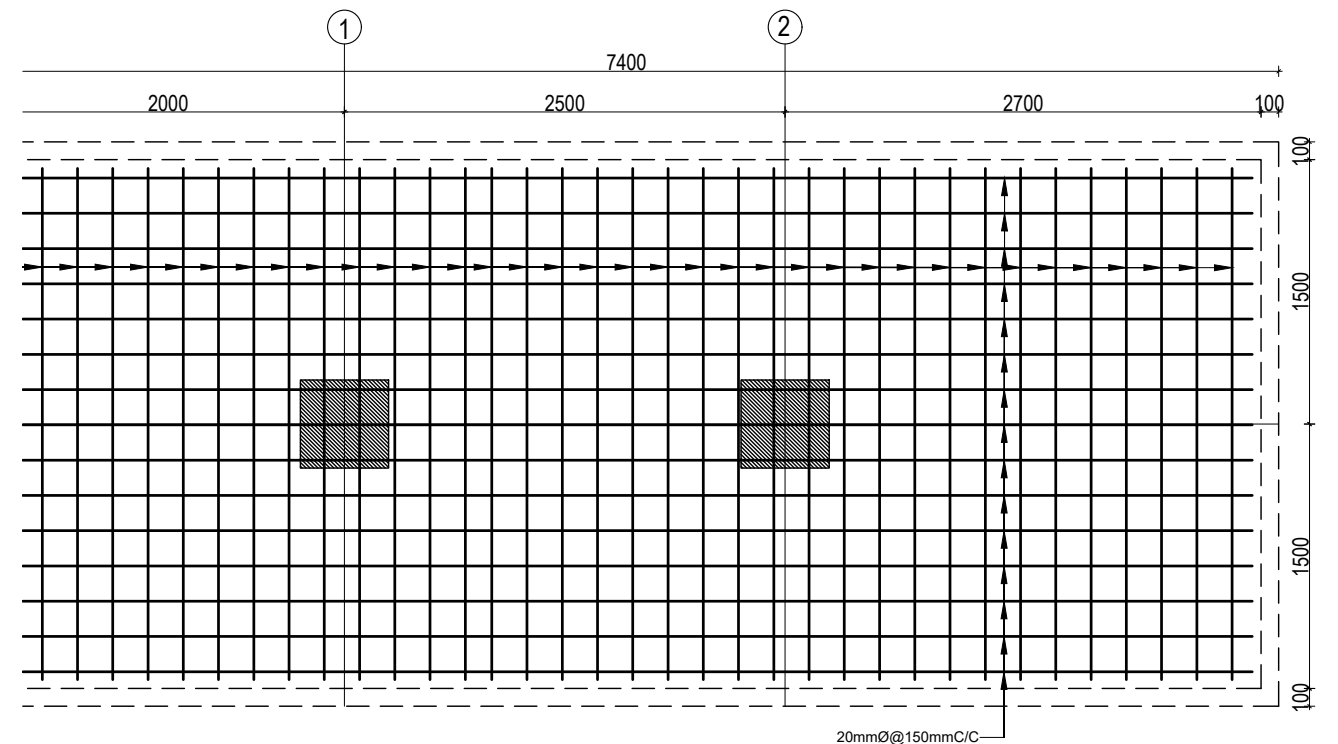
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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE Engineering Consult Nepal	ENGINEER:		STRUCTURE ER. :	
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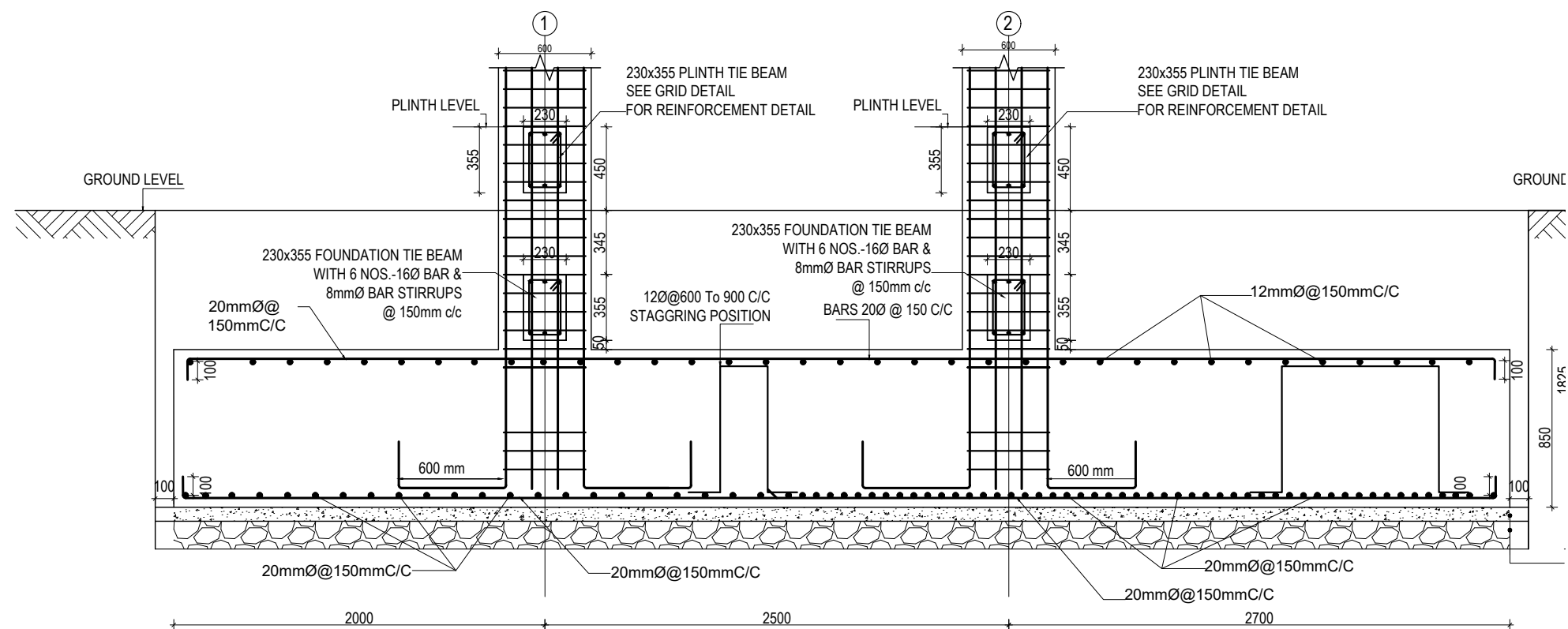
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-03	REVISION NO. R-00
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COMBINED FOOTING PLAN CF2
BOTTOM REINFORCEMENT

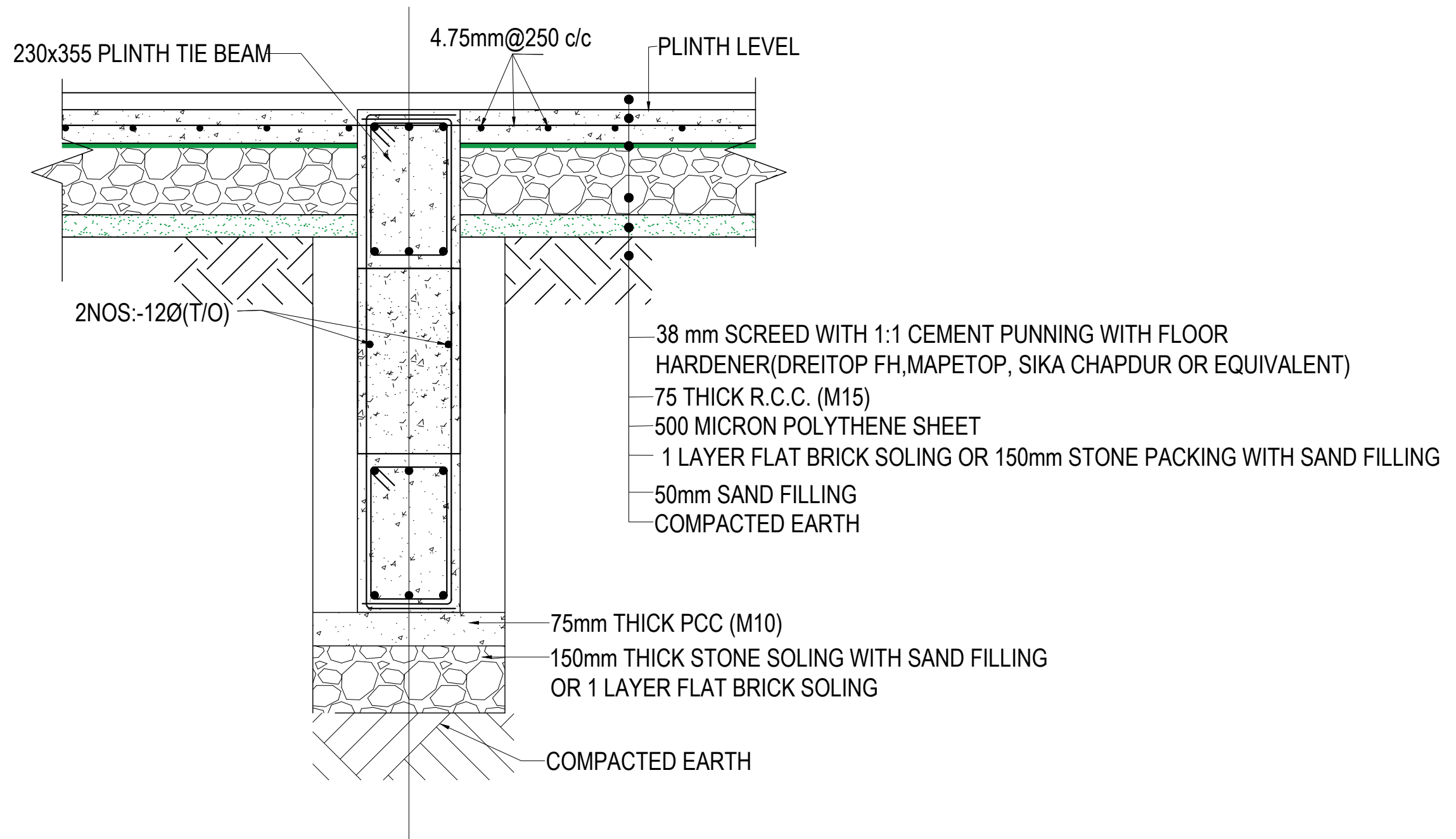


COMBINED FOOTING PLAN CF2
TOP REINFORCEMENT




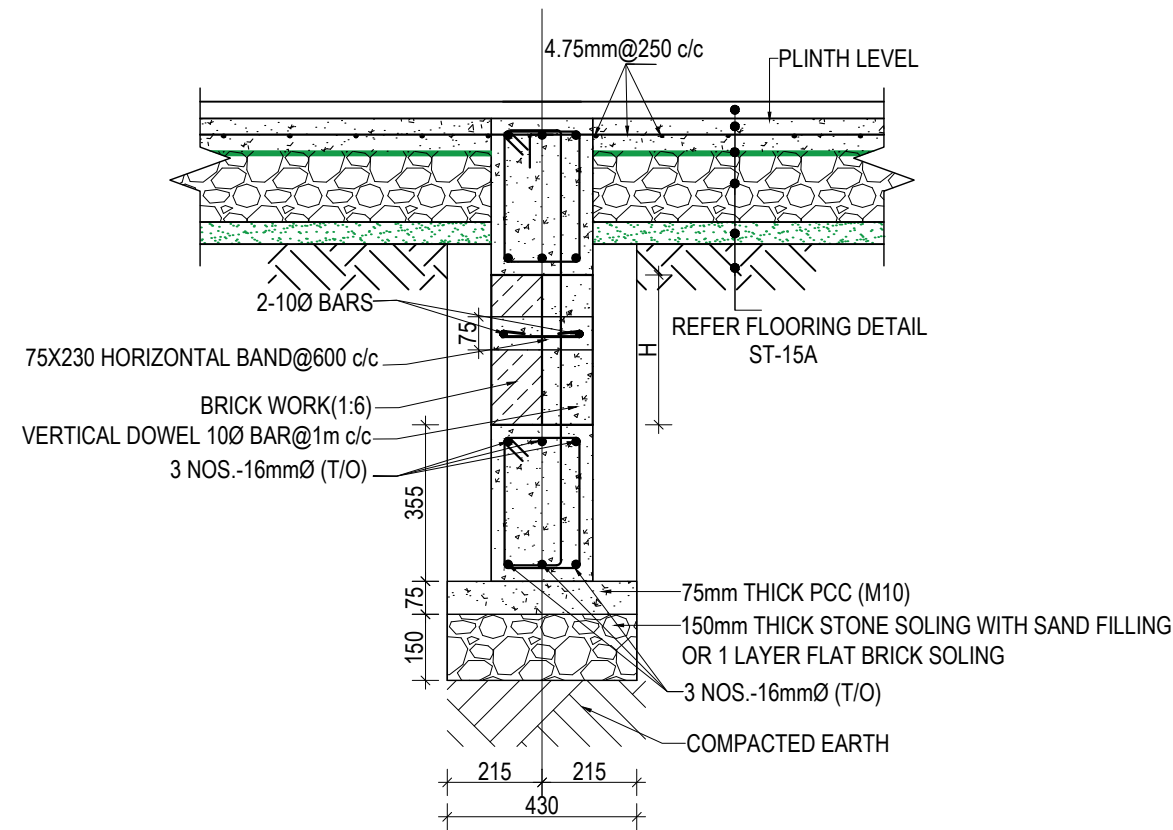
COMBINED FOOTING SECTION CF2

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-04	R-00
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:	DWG CODE. 3S6R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3		



TYPICAL FLOORING DETAIL FF1
(Scale= 1:10)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL FLOORING DETAIL	SAGE Engineering Consult Nepal	ENGINEER:		ST-05	R-00
					ARCHITECT:		DWG CODE. 3S6R-MOUNTAINOUS	
					DRAWN :			
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	



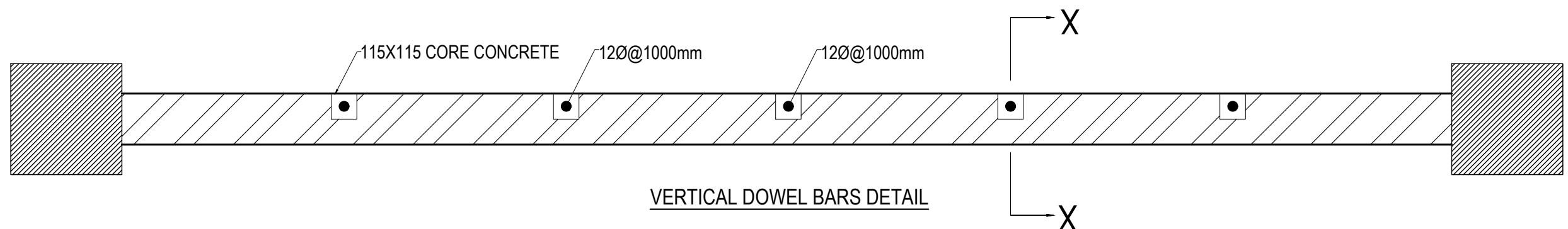
WALL DETAIL FOR DEPTH OF FOOTING MORE THAN 1500 mm

SECTION AT X-X


NOTES:-

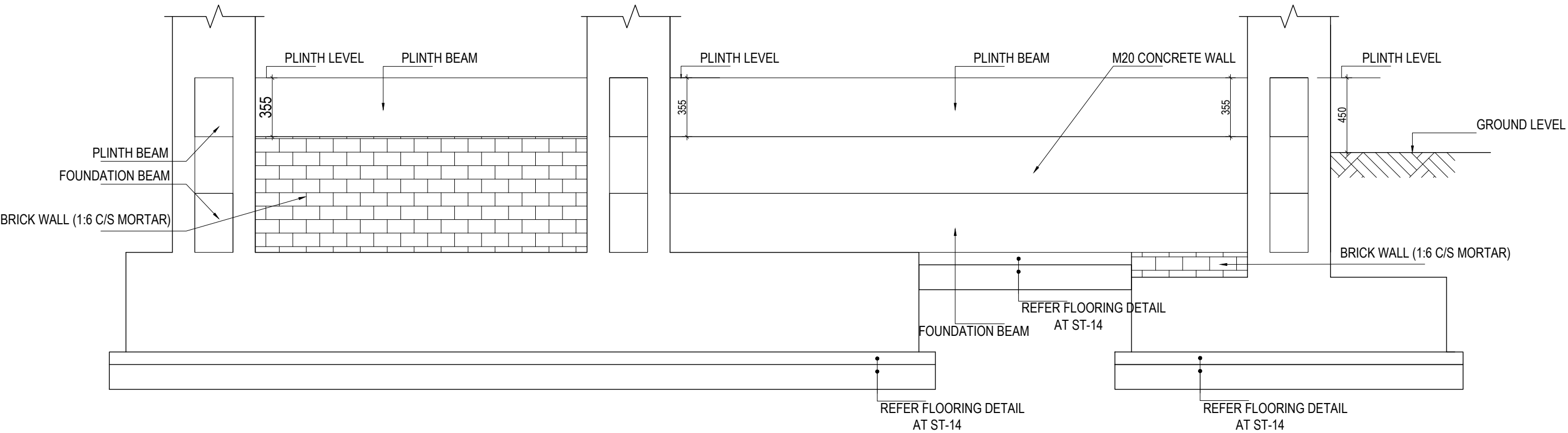
1) BRICK WALL IS USED IF WALL IS CONFINED BY SOIL ON BOTH SIDES

2) IF THE HEIGHT OF THE BRICK WALL EXCEEDS 1800 mm ADDITIONAL BEAM SHALL BE PROVIDED OF SAME SIZE OF FOUNDATION BEAM (SAME REINFORCEMENT TO BE USED)




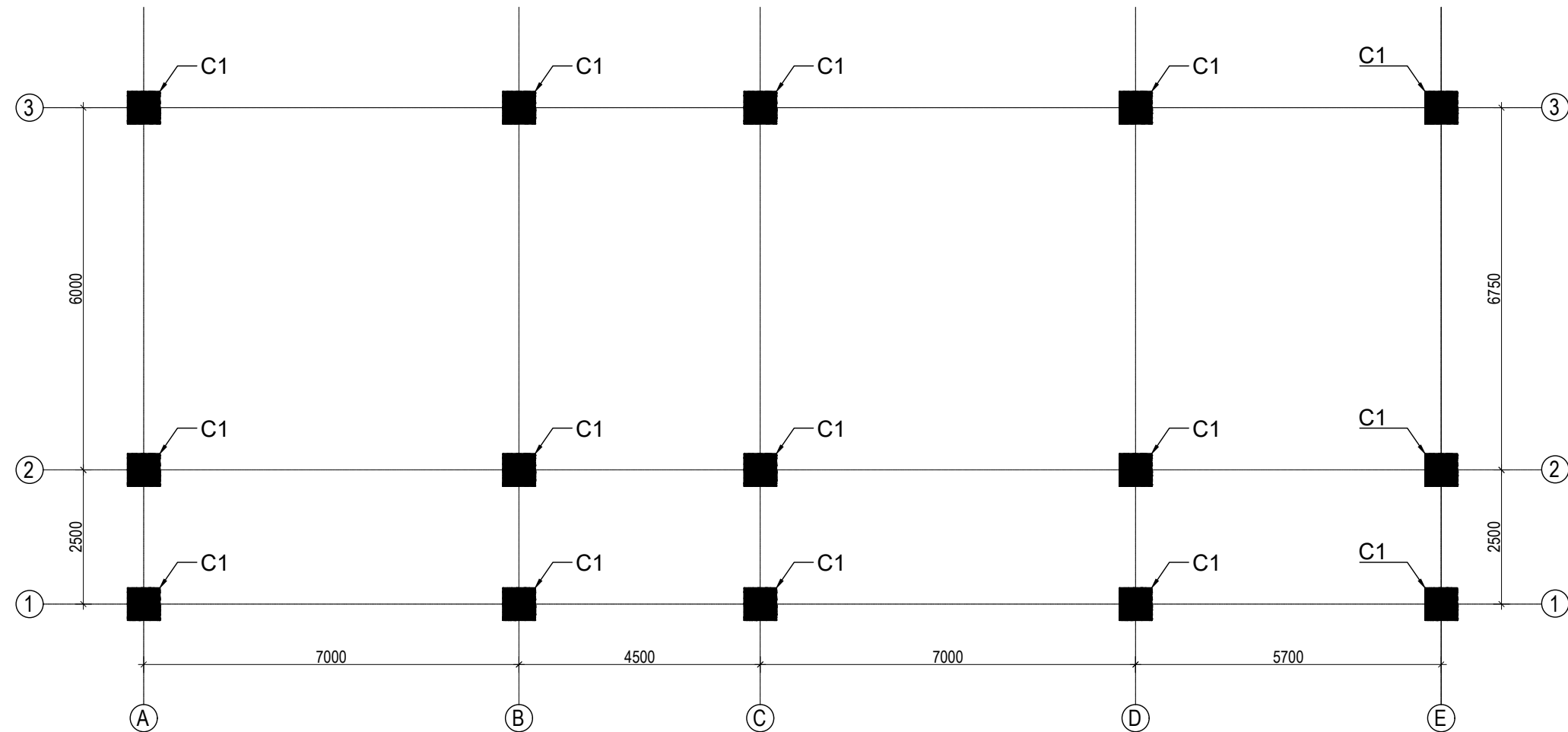
VERTICAL DOWEL BARS DETAIL

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SITE SPECIFIC DRAWING	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-06	R-00
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:	DWG CODE. 3S6R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3		



TYPICAL DETAIL OF FOUNDATION WALL


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL DETAIL OF FOUNDATION WALL	SAGE Engineering Consult Nepal	ENGINEER:		ST-07	
					ARCHITECT:		R-00	
					DRAWN :		DWG CODE.	
					SCALE : 1: 120		3S6R-MOUNTAINOUS	
PAPER SIZE : A3					DATE: FEBRUARY, 2023			

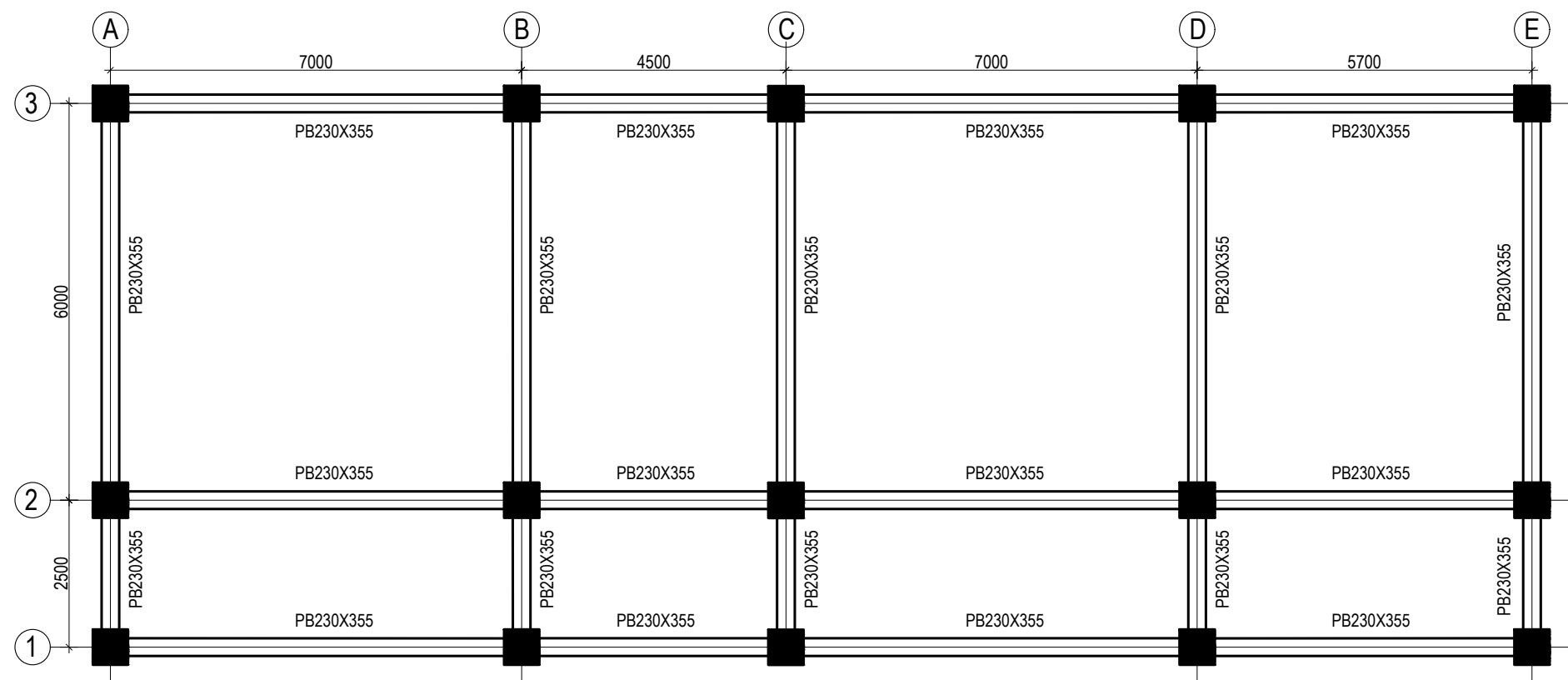


GROUND FLOOR COLUMN LAYOUT PLAN
(SCALE 1:100)


COLUMN REINFORCEMENT DETAILS

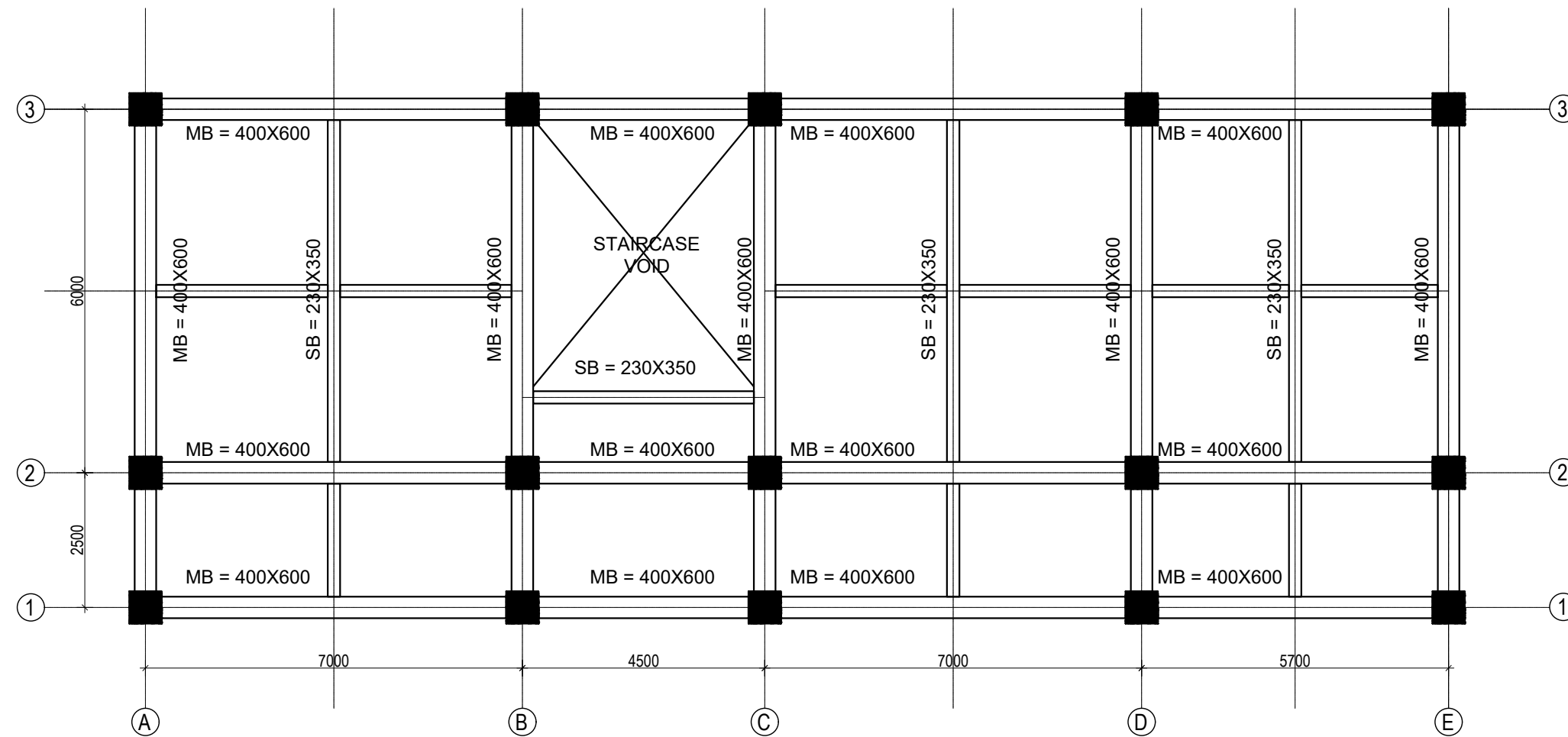
S. NO.	COLUMN	COLUMN SIZE	FLOOR					TIE BAR ORIENTATION
			GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	TOP FLOOR	
1	C1	600X600						

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-08	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	COLUMN DETAIL	SAGE Engineering Consult Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE. 3S6R-MOUNTAINOUS	




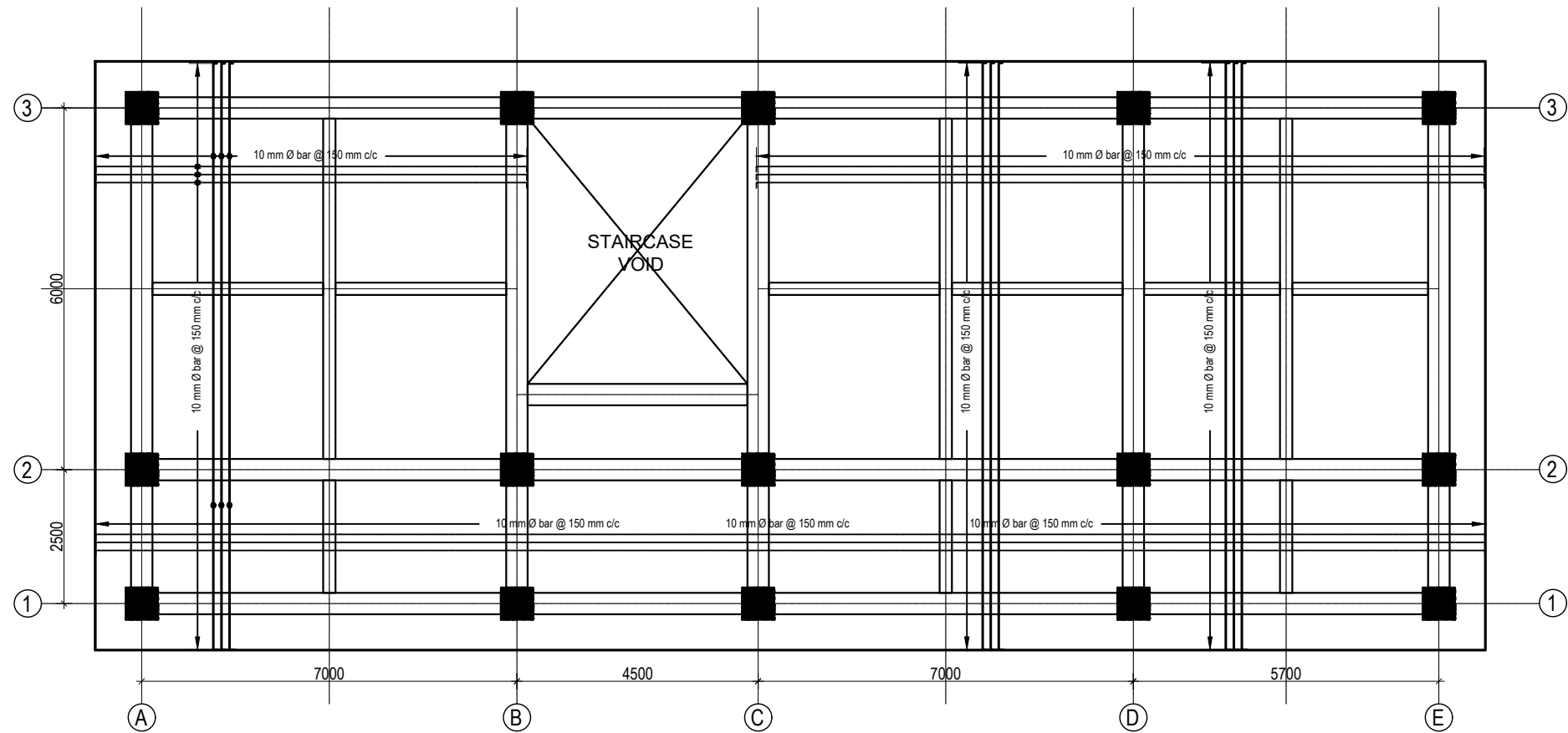
PLINTH BEAM LAYOUT PLAN
(Scale= 1:100)
LVL:- PL+0000


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	BEAM LAYOUT PLAN	SAGE Engineering Consult Nepal	ENGINEER:		ST-09	R-00
					ARCHITECT:			
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						DATE: FEBRUARY, 2023	3S6R-MOUNTAINOUS	



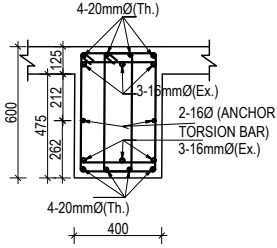
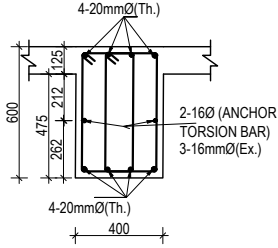
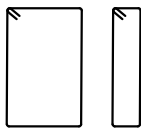
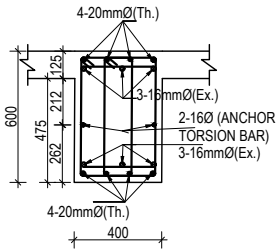
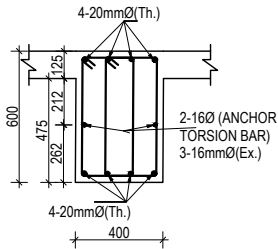
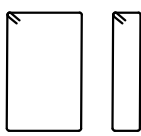
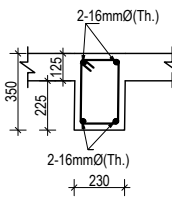
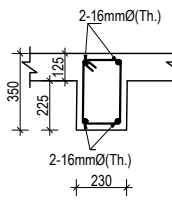

BEAM LAYOUT PLAN (FIRST, SECOND AND THIRD FLOOR)
(Scale= 1:100)


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	BEAM LAYOUT PLAN	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-10	R-00
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					DRAWN :	APPROVED:	DWG CODE. 3S6R-MOUNTAINOUS	
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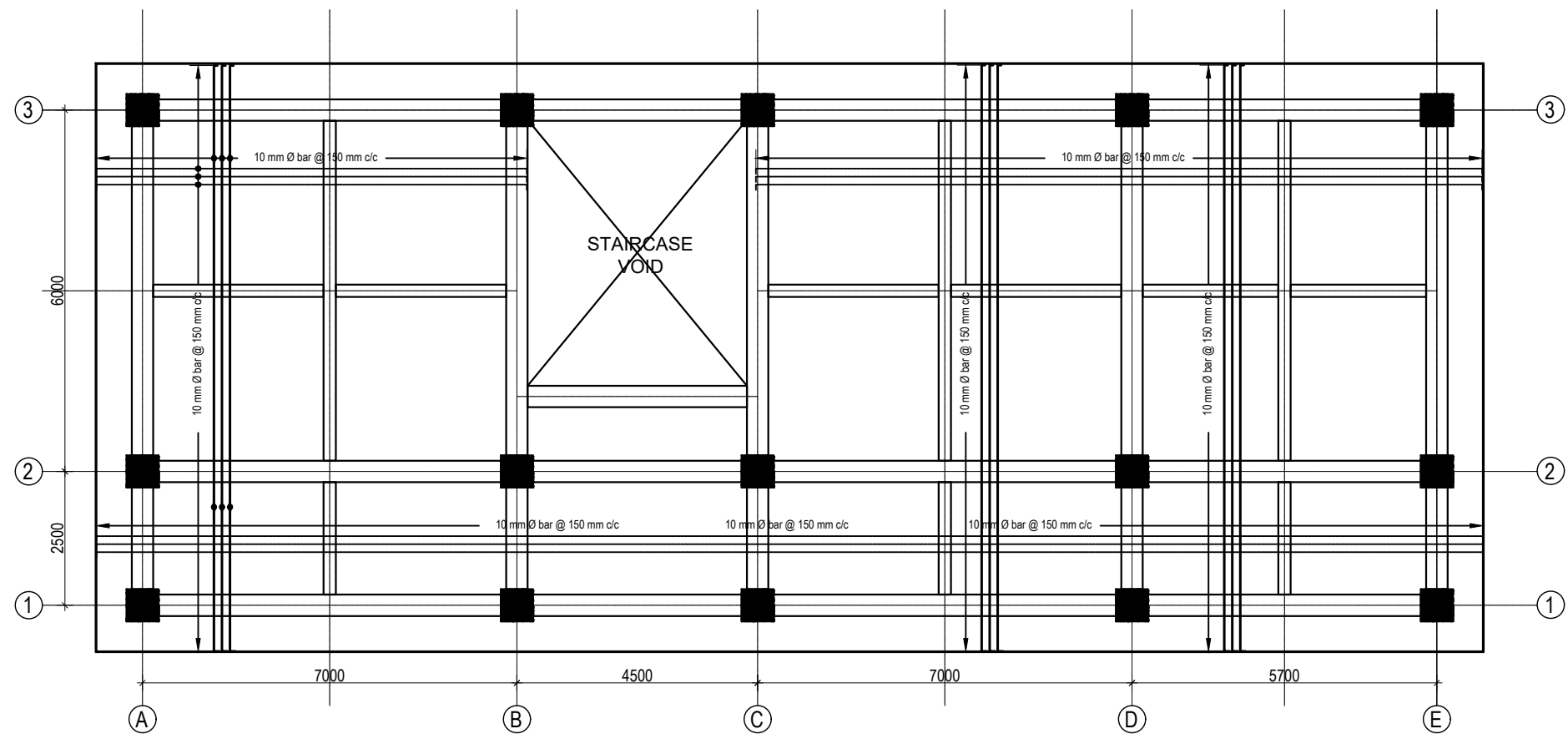


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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SLAB REINFORCEMENT DETAIL	SAGE Engineering Consult Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN :		APPROVED:	
					SCALE : 1: 120		PAPER SIZE : A3	
DATE: FEBRUARY, 2023								
					DWG CODE. 3S6R-MOUNTAINOUS			

COLUMN REINFORCEMENT DETAILS


S. NO.	GRID	BEAM SIZE	AT SUPPORT	AT MID	STIRRUPS BAR ORIENTATION	FLOOR LVL
1	1-1 2-2 3-3	400X600				FIRST FLOOR BEAMS SECOND FLOOR BEAMS
2	A-A B-B C-C D-D E-E	400X600				REMAINING FLOOR BEAMS
3	Sec. beam	230X350				ALL FLOOR BEAMS

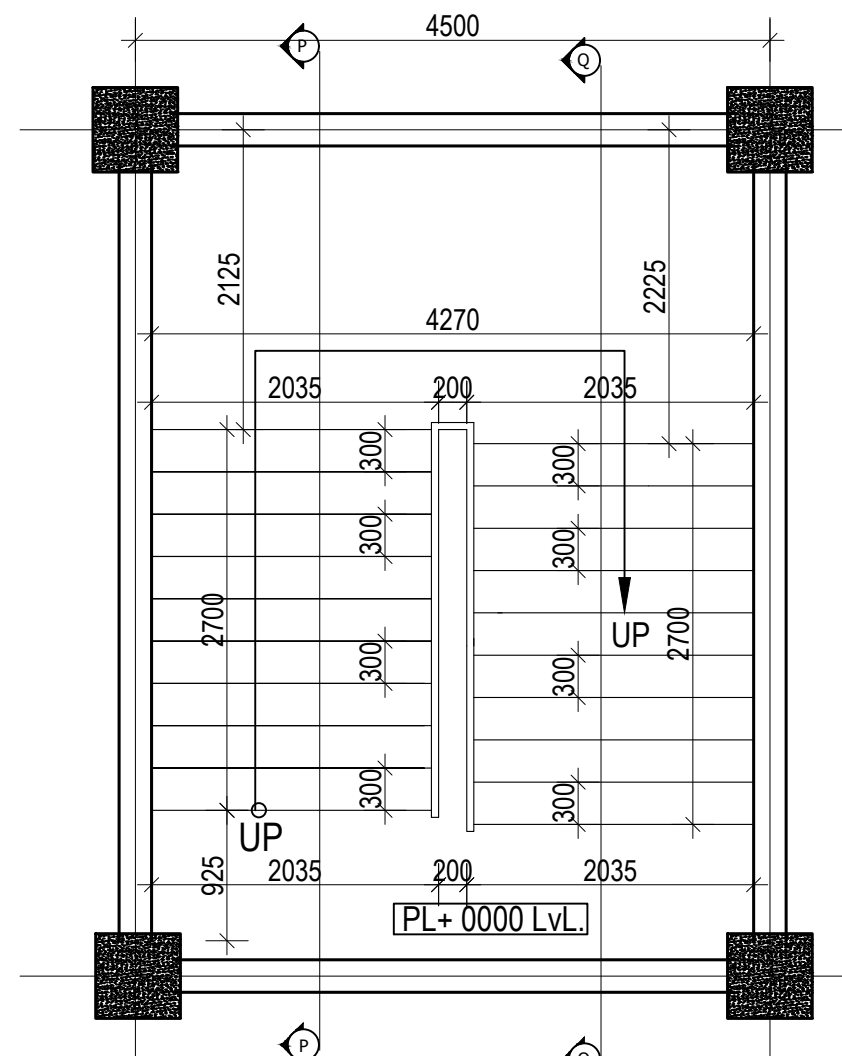
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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	BEAM DETAIL	SAGE Engineering Consult Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
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					DWG CODE. 3S6R-MOUNTAINOUS			



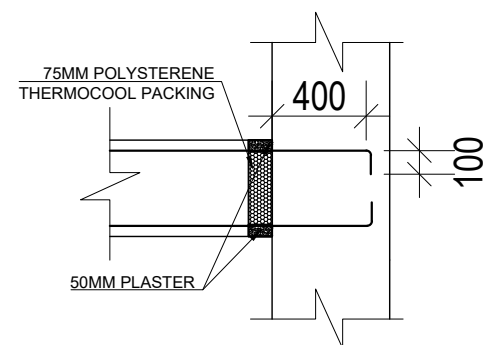
SLAB REINFORCEMENT DETAIL FOR TOP BARS
(GROUND, FIRST, SECOND AND THIRD FLOOR)
TOP REINFORCEMENT: a. FOR MAIN BEAM :10Ø@150 mm c/c
b. FOR SECONDARY BEAM :10Ø@200 mm c/c
(Scale= 1:120)

125 mm SLAB THICKNESS

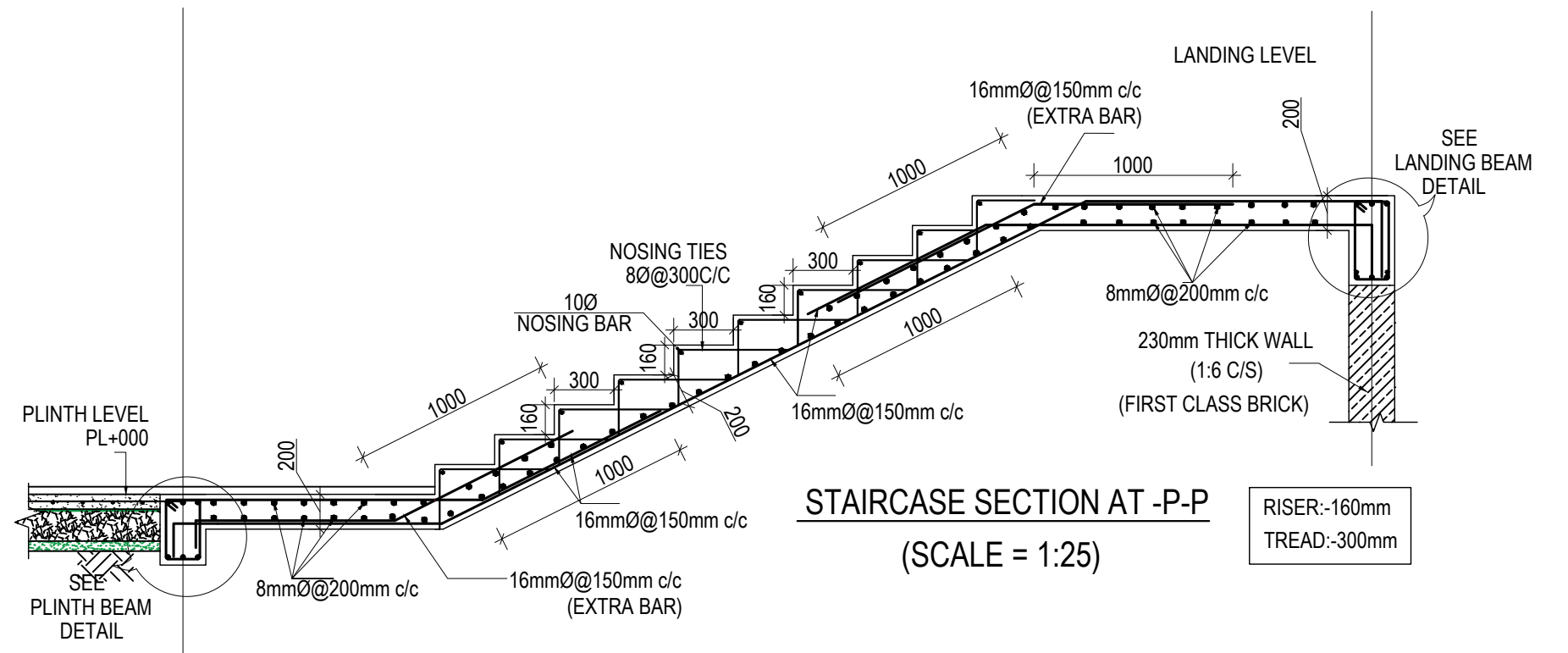
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SLAB REINFORCEMENT DETAIL	SAGE Engineering Consult Nepal	ENGINEER:		ST-13	R-00
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					DRAWN :			
					SCALE : 1: 120	PAPER SIZE : A3		
					APPROVED:		DATE: FEBRUARY, 2023	



GROUND FLOOR STAIRCASE PLAN
(Scale= 1:50)

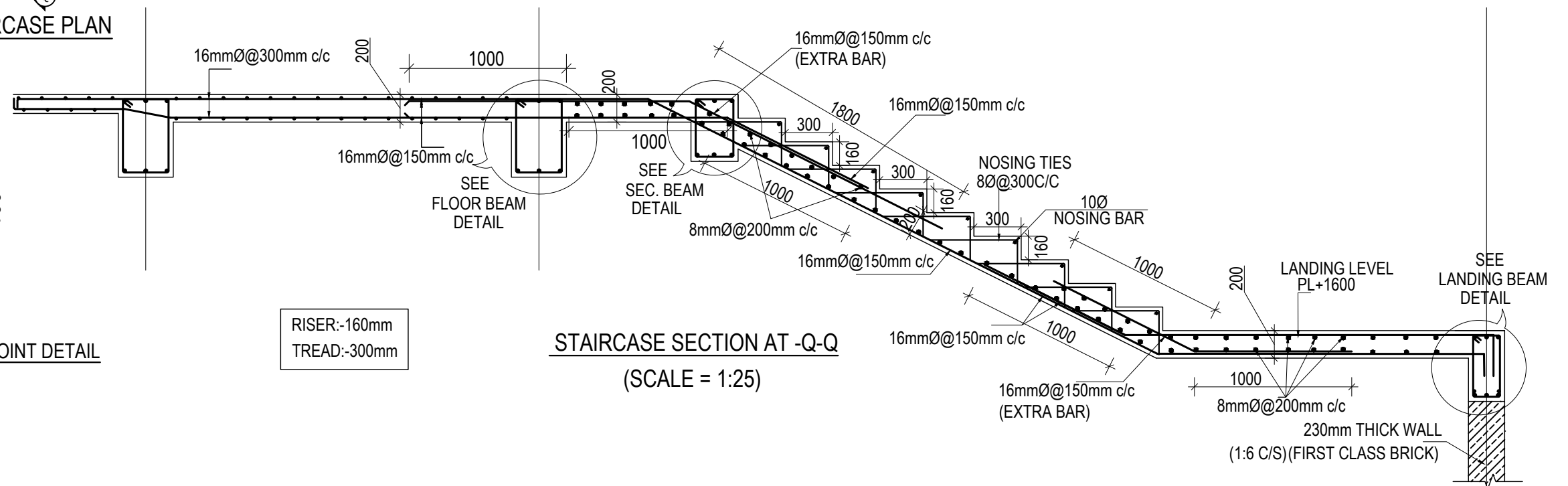


TYPICAL LANDING BEAM AND COLUMN JOINT DETAIL




STAIRCASE SECTION AT -P-P
(SCALE = 1:25)

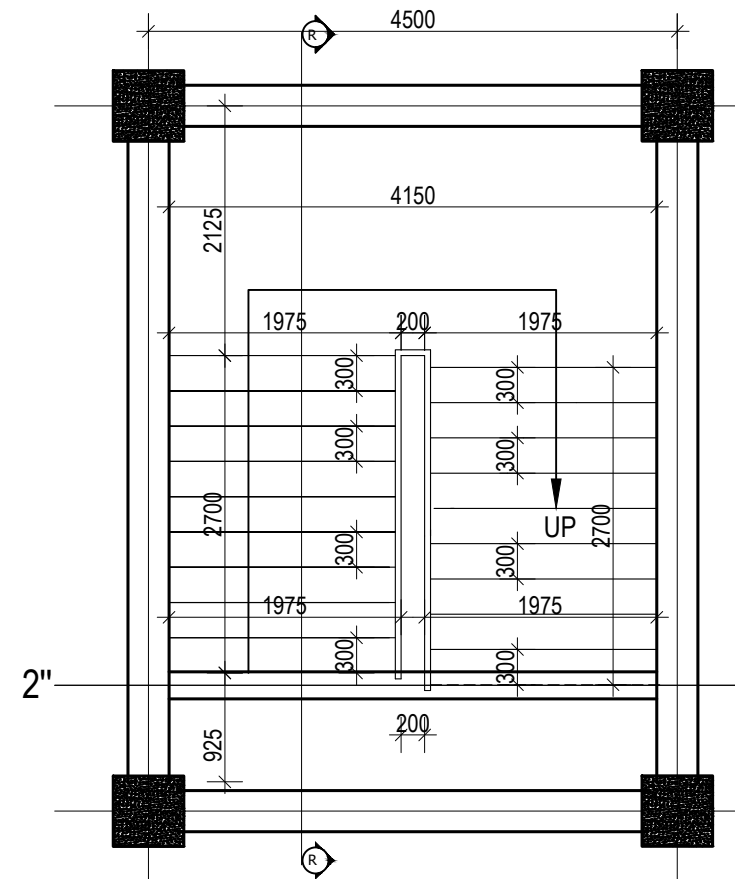
RISER:-160mm
TREAD:-300mm



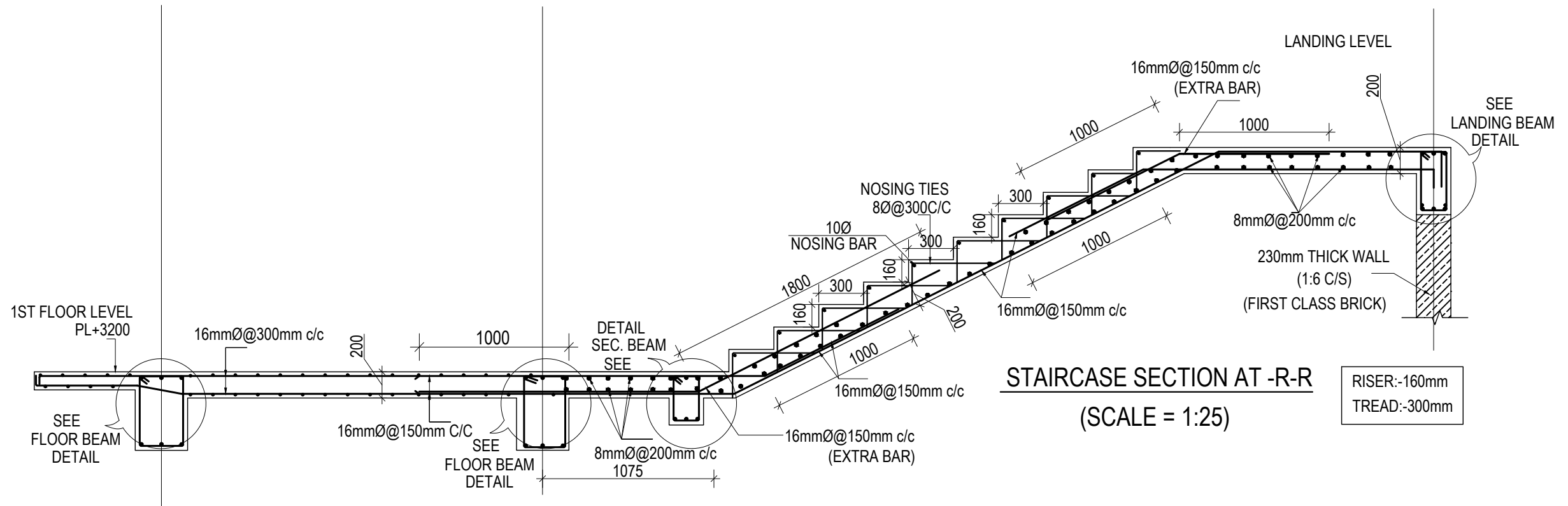
STAIRCASE SECTION AT -Q-Q
(SCALE = 1:25)

RISER:-160mm
TREAD:-300mm

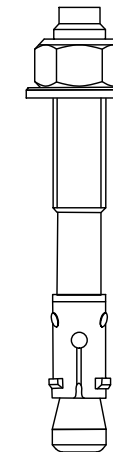
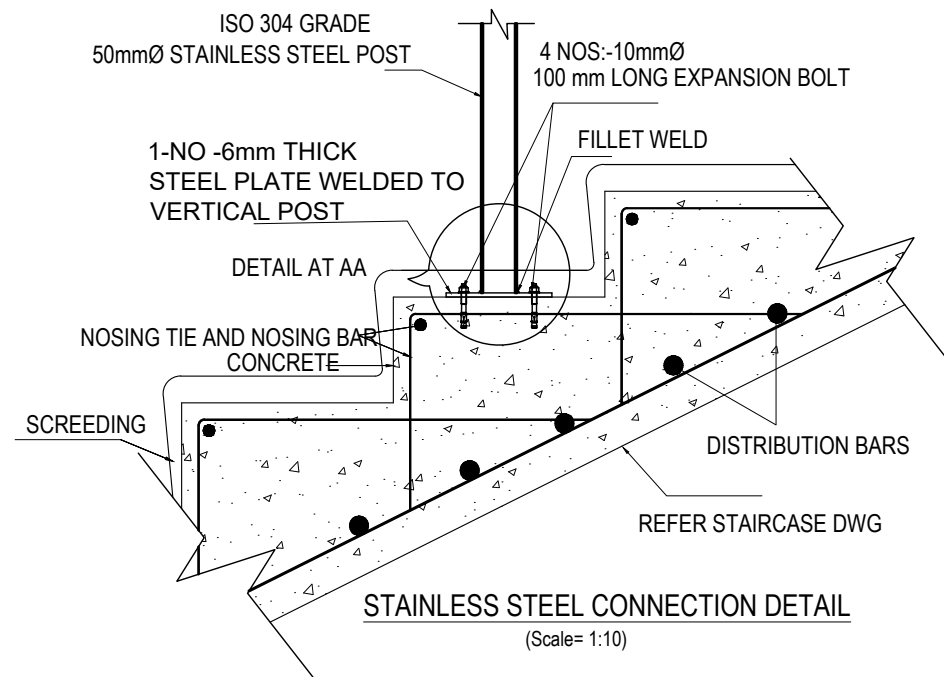
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	STAIRCASE DETAIL	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-14	R-00
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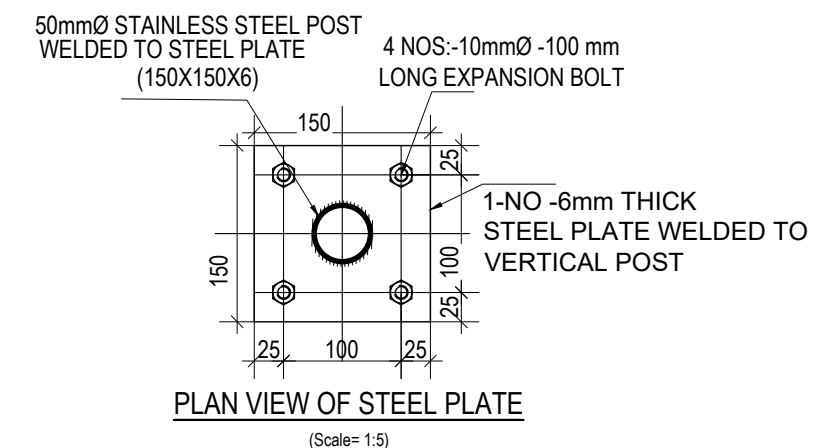
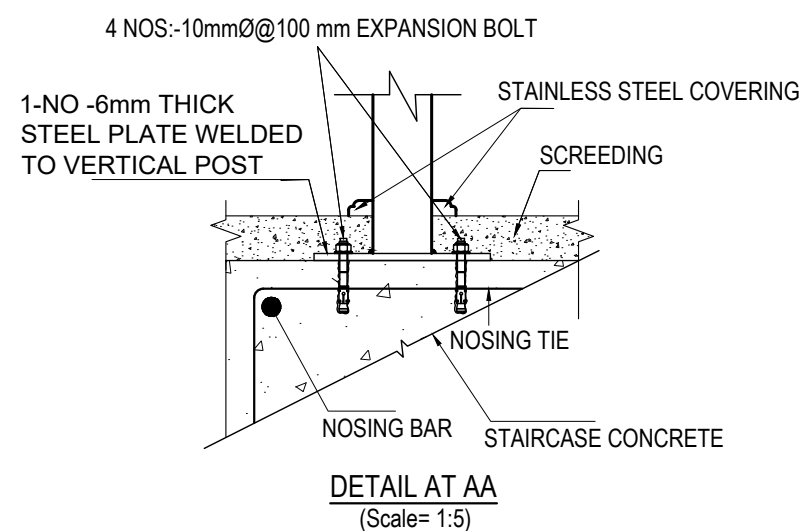
TYPICAL FLOOR STAIRCASE PLAN
(Scale= 1:50)



CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanathimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	STAIRCASE DETAIL	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-15	R-00
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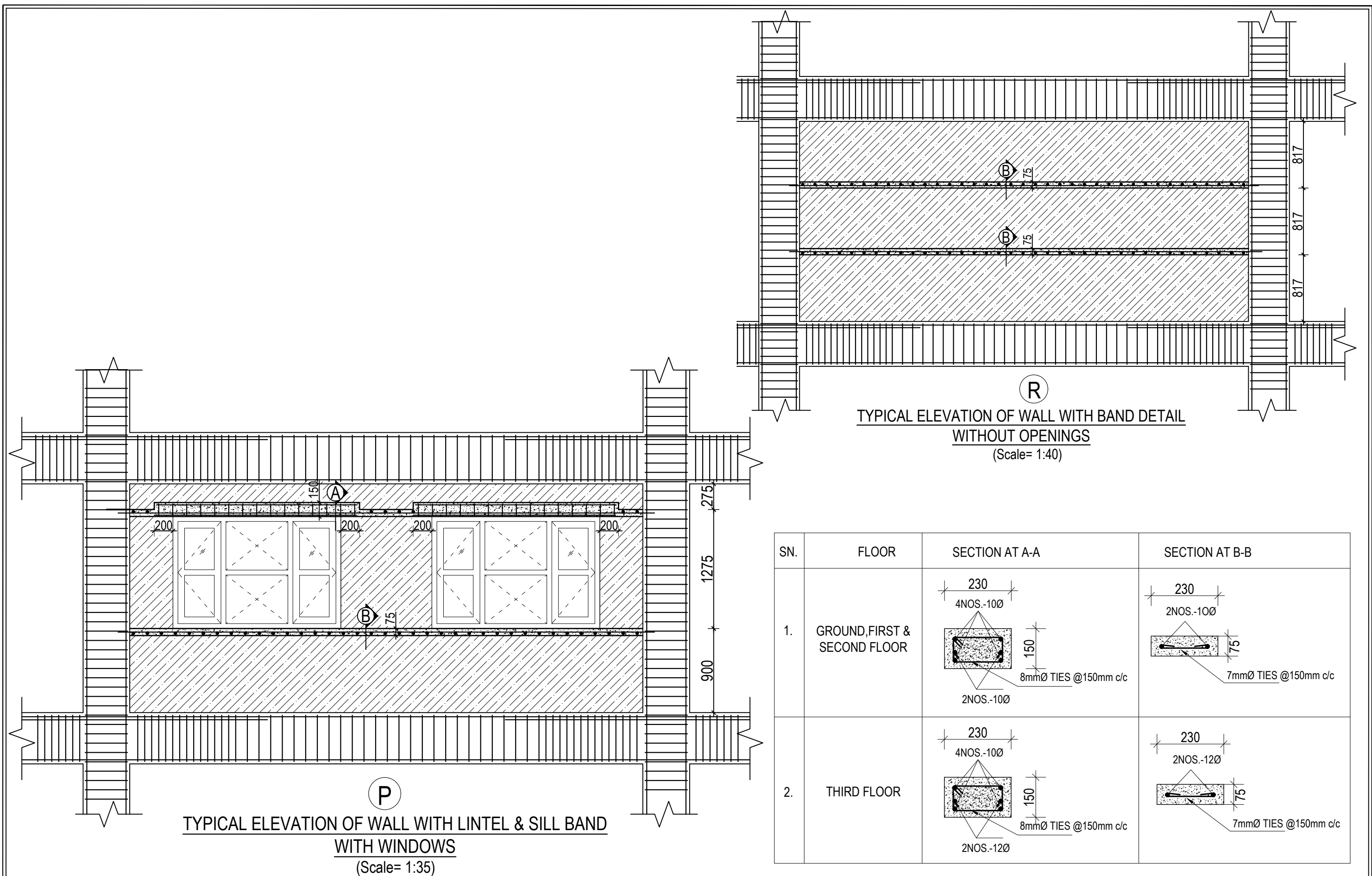
10mmØ-50 mm LONG EXPANSION BOLT
(Scale= 1:1)




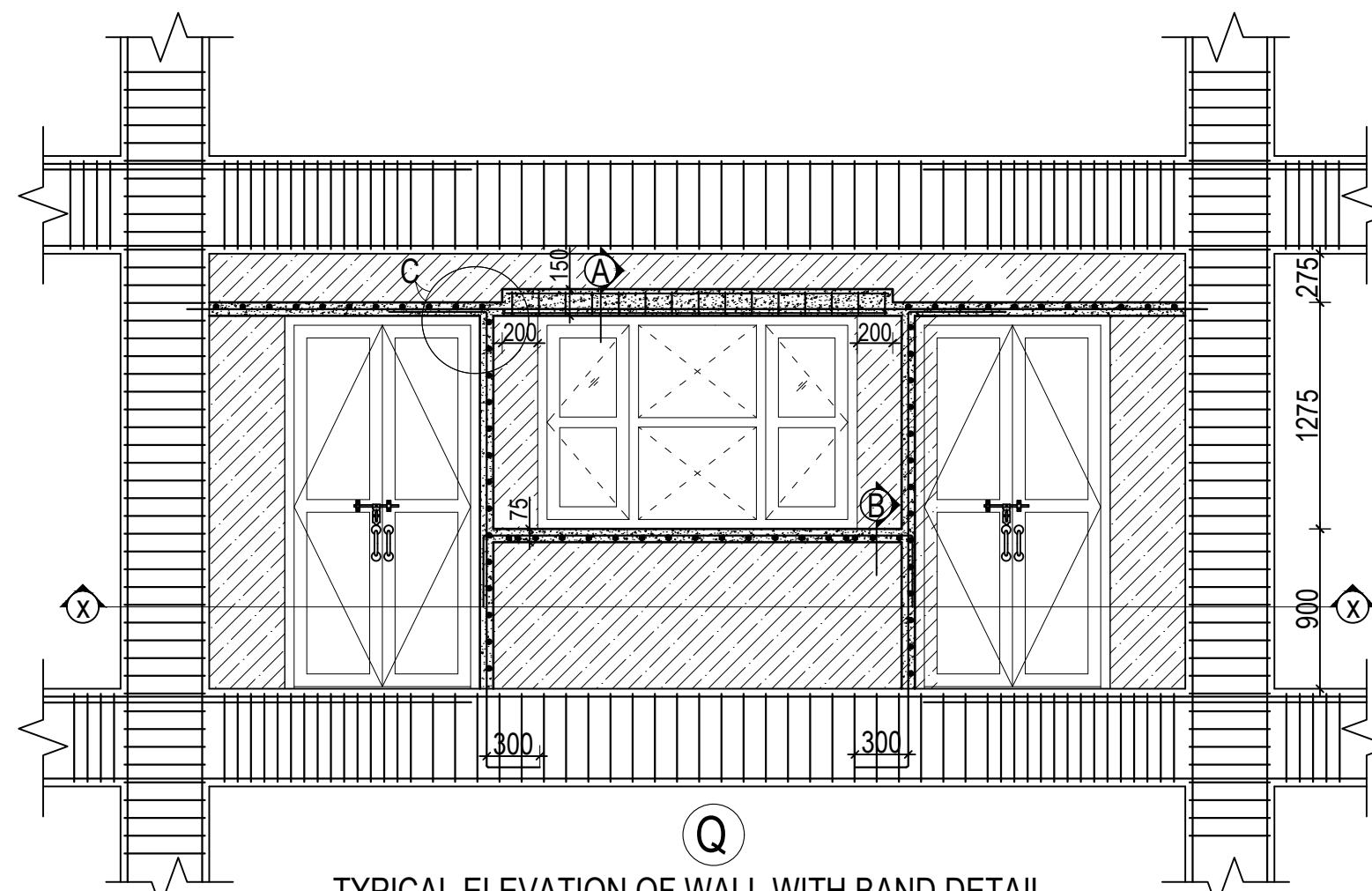
NOTE:

- 1) STAINLESS STEEL SHALL BE IN COMPLIANCE WITH ISO 304 GRADE
- 2) DRILLED HOLE SHALL BE PROPERLY CLEANED BEFORE EMBEDMENT OF BOLT

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	STAIRCASE DETAIL	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-16	R-00
					ARCHITECT:	CHECKED:		
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						DWG CODE. 3S6R-MOUNTAINOUS		

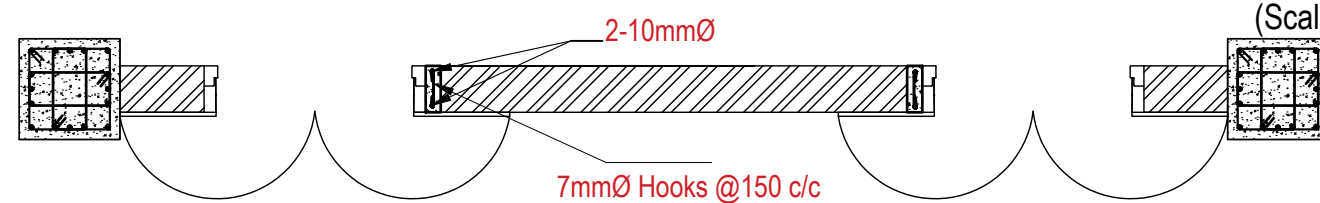


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL WALL DETAIL UPTO SECOND FLOOR	SAGE Engineering Consult Nepal	ENGINEER:		ST-17	R-00
					STRUCTURE ER. :			
					ARCHITECT:		CHECKED:	
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SCALE : 1: 120		PAPER SIZE : A3	DATE: FEBRUARY, 2023		DWG CODE. 3S6R-MOUNTAINOUS			

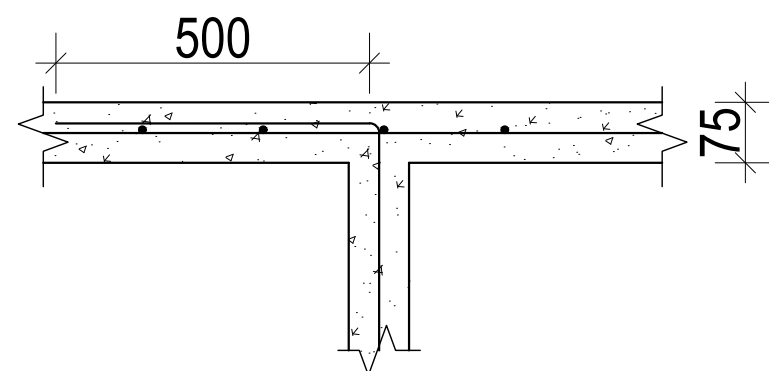


TYPICAL ELEVATION OF WALL WITH BAND DETAIL
WITH DOORS AND WINDOWS

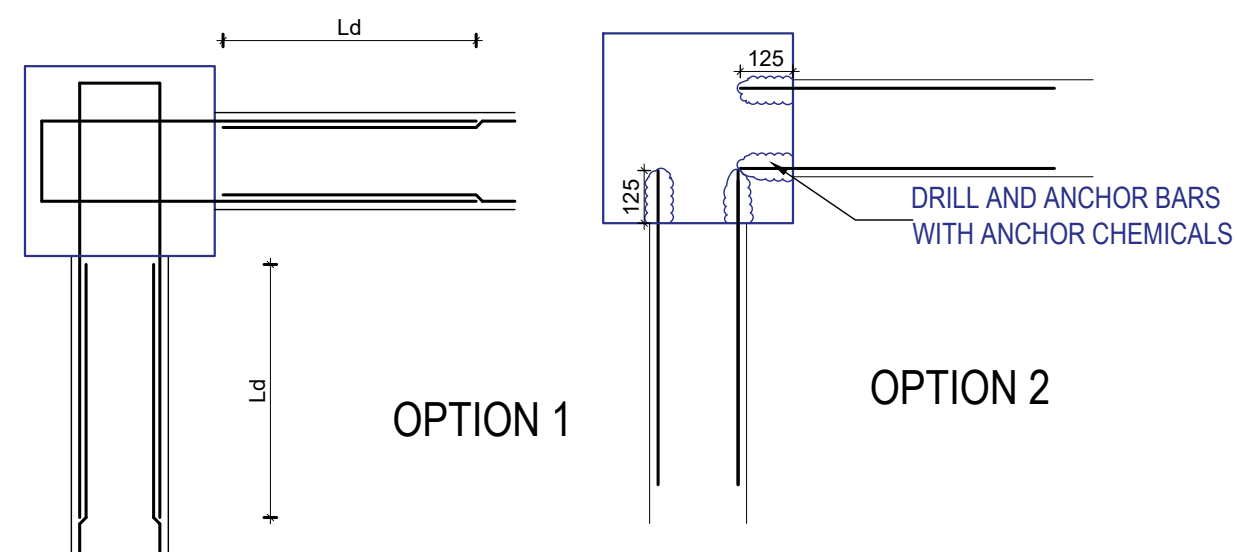
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SECTION AT X-X

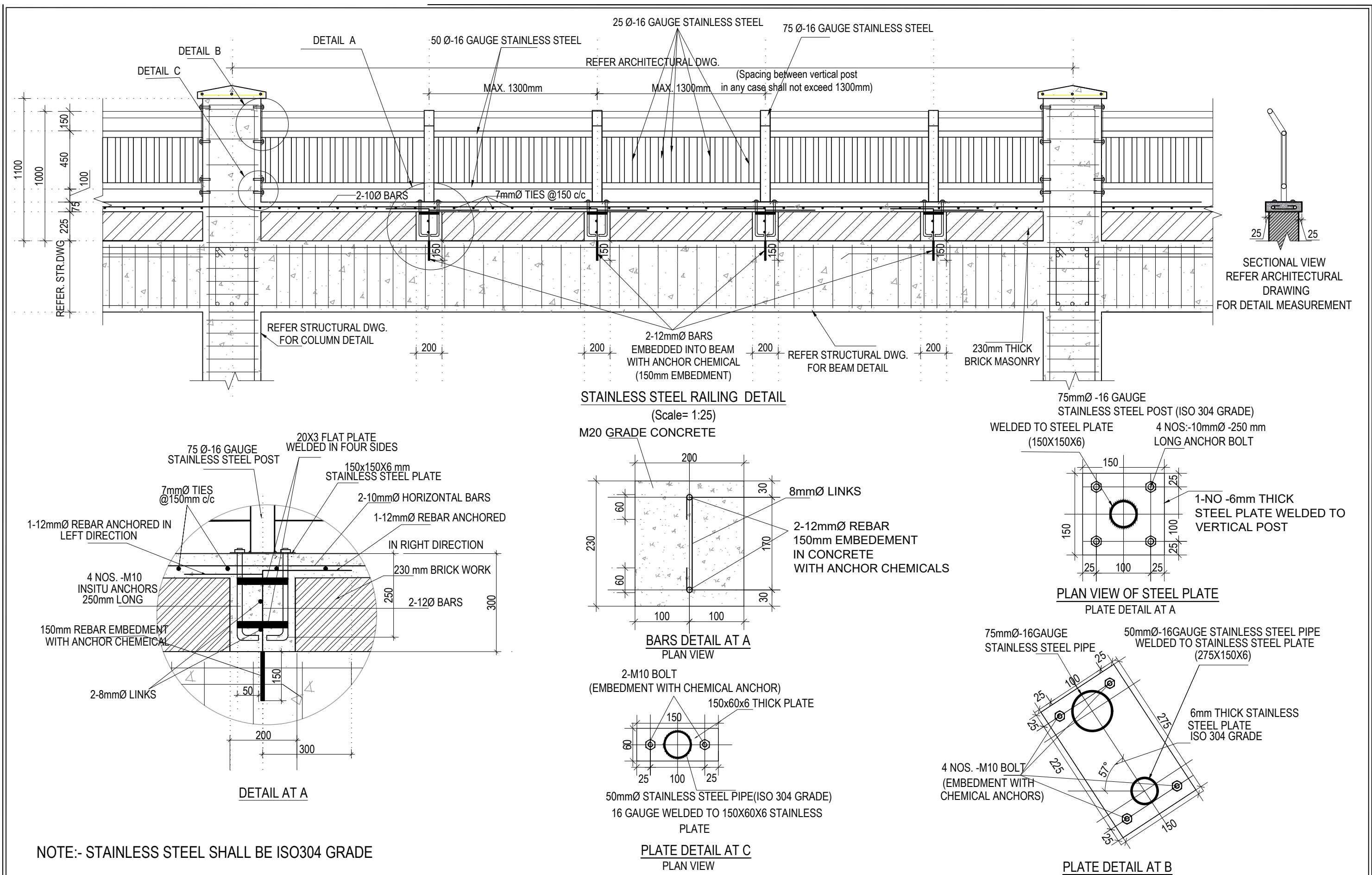


DETAIL AT C



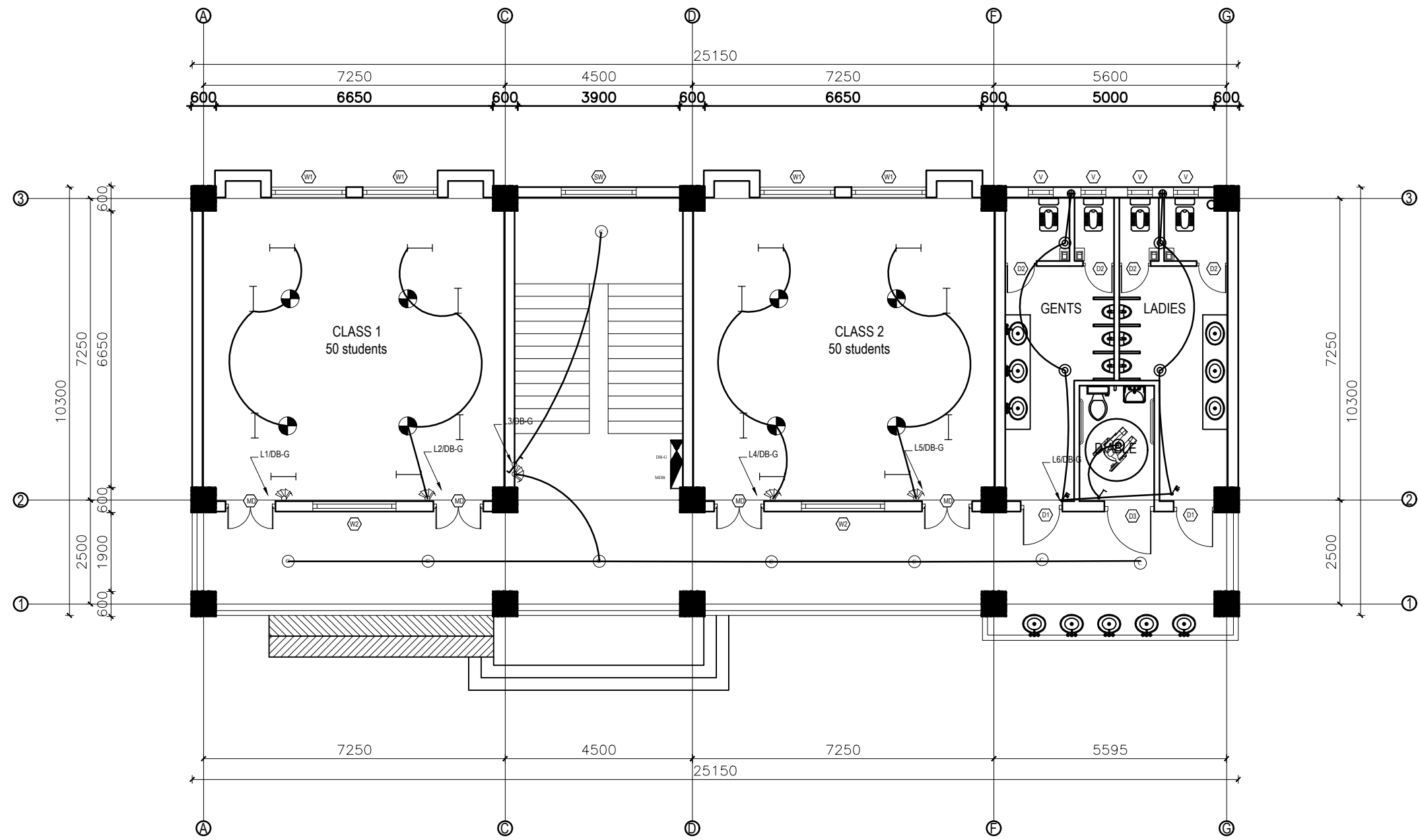
CONNECTION OF BAND REBARS AND COLUMN

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL WALL DETAIL UPTO SECOND FLOOR	SAGE Engineering Consult Nepal	ENGINEER:		ST-18	R-00
					ARCHITECT:		DWG CODE. 3S6R-MOUNTAINOUS	
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					DATE: FEBRUARY, 2023			



CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
 Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL RAILING DETAILS	SAGE Engineering Consult Nepal	ENGINEER:	STRUCTURE ER. :	ST-19	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S6R-MOUNTAINOUS	
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				SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	


ELECTRICAL DRAWING

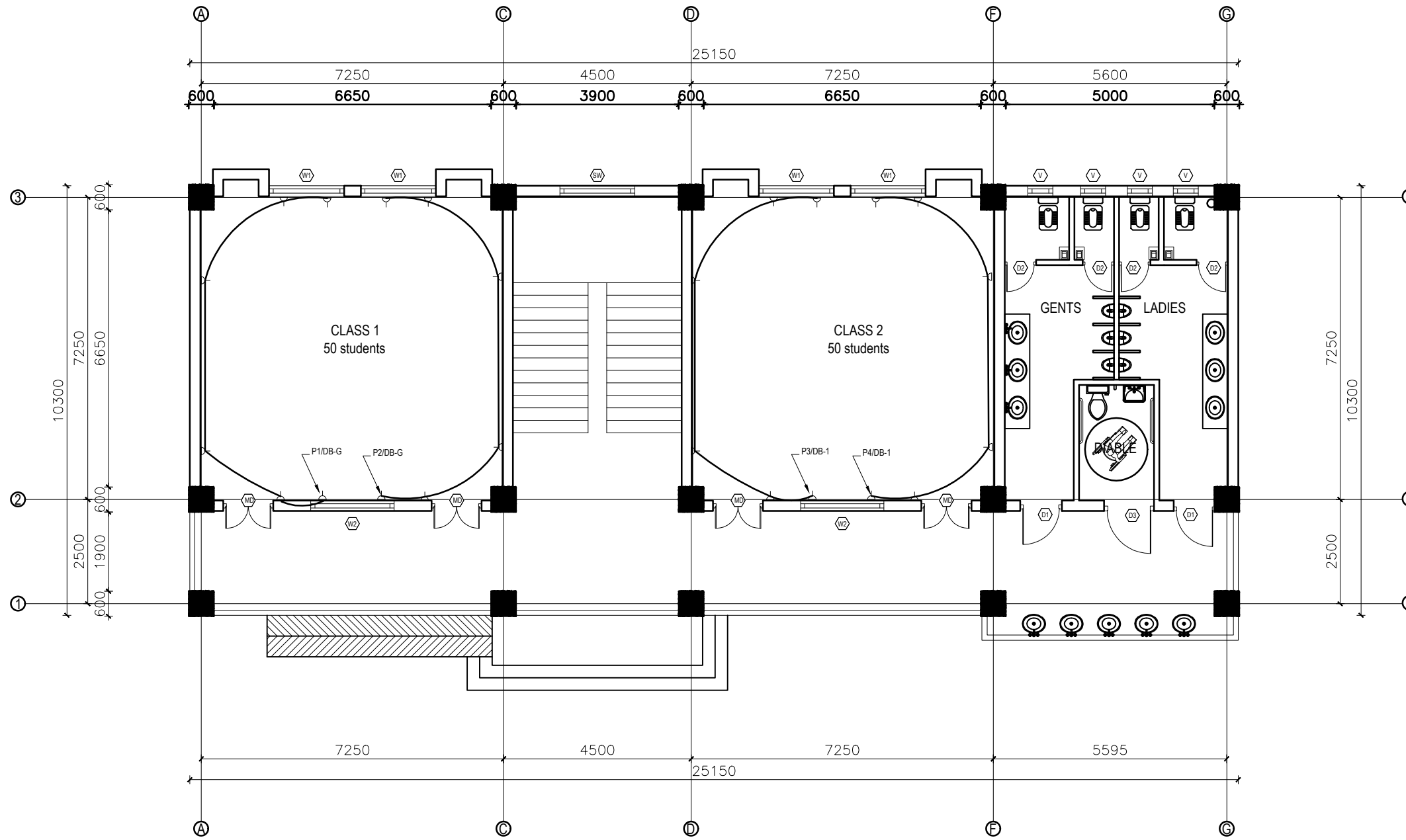


GROUND FLOOR PLAN
FLOOR AREA: 260.805 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42"Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9"Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 01	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
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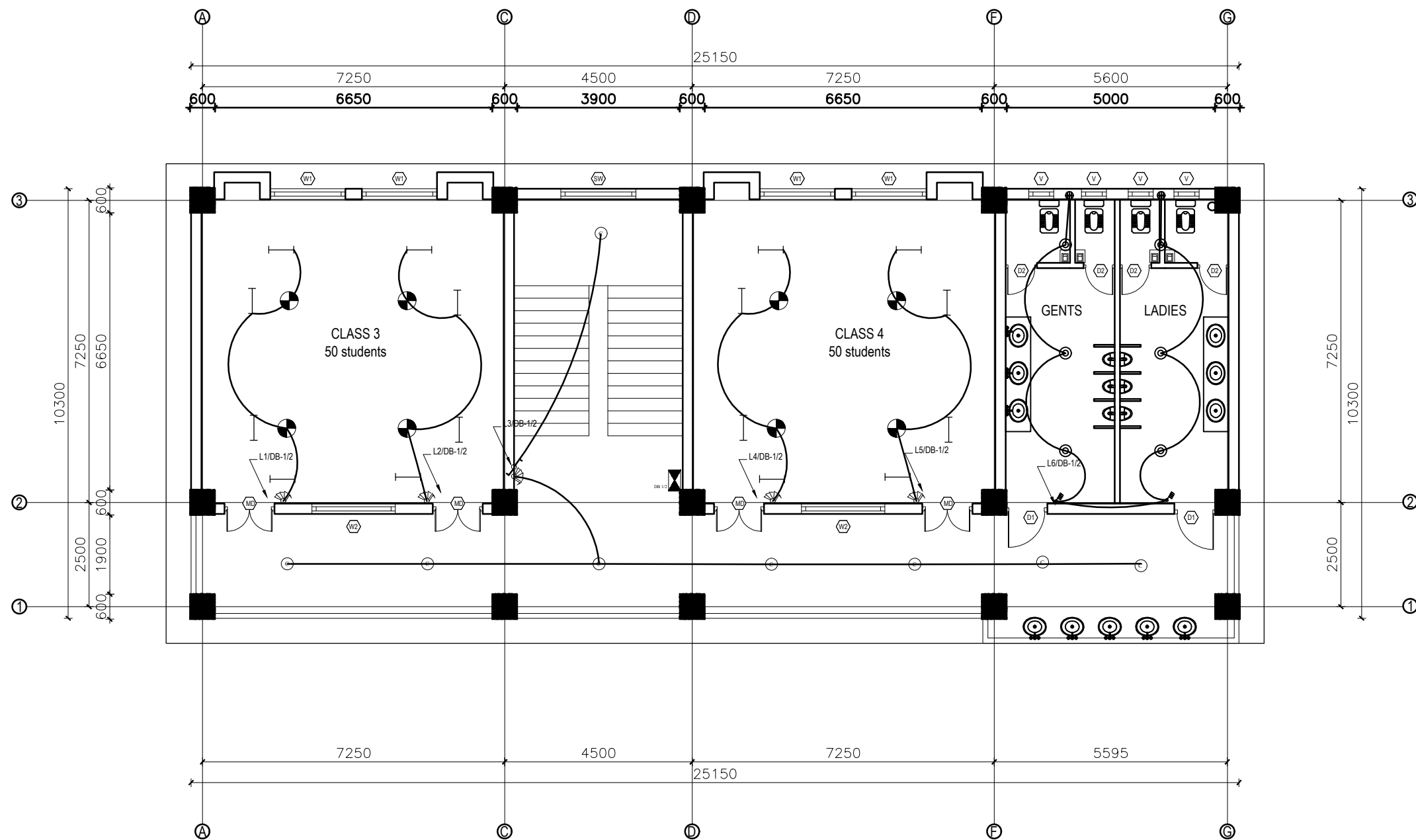


GROUND FLOOR PLAN
FLOOR AREA: 260.805 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
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	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--


CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
				ENGINEER:	STRUCTURE ER. :	02	R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	IDEAL SOLUTION PVT.LTD.	ARCHITECT:	CHECKED:	DWG CODE. 3S12R	
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				DATE: FEBRUARY, 2023			

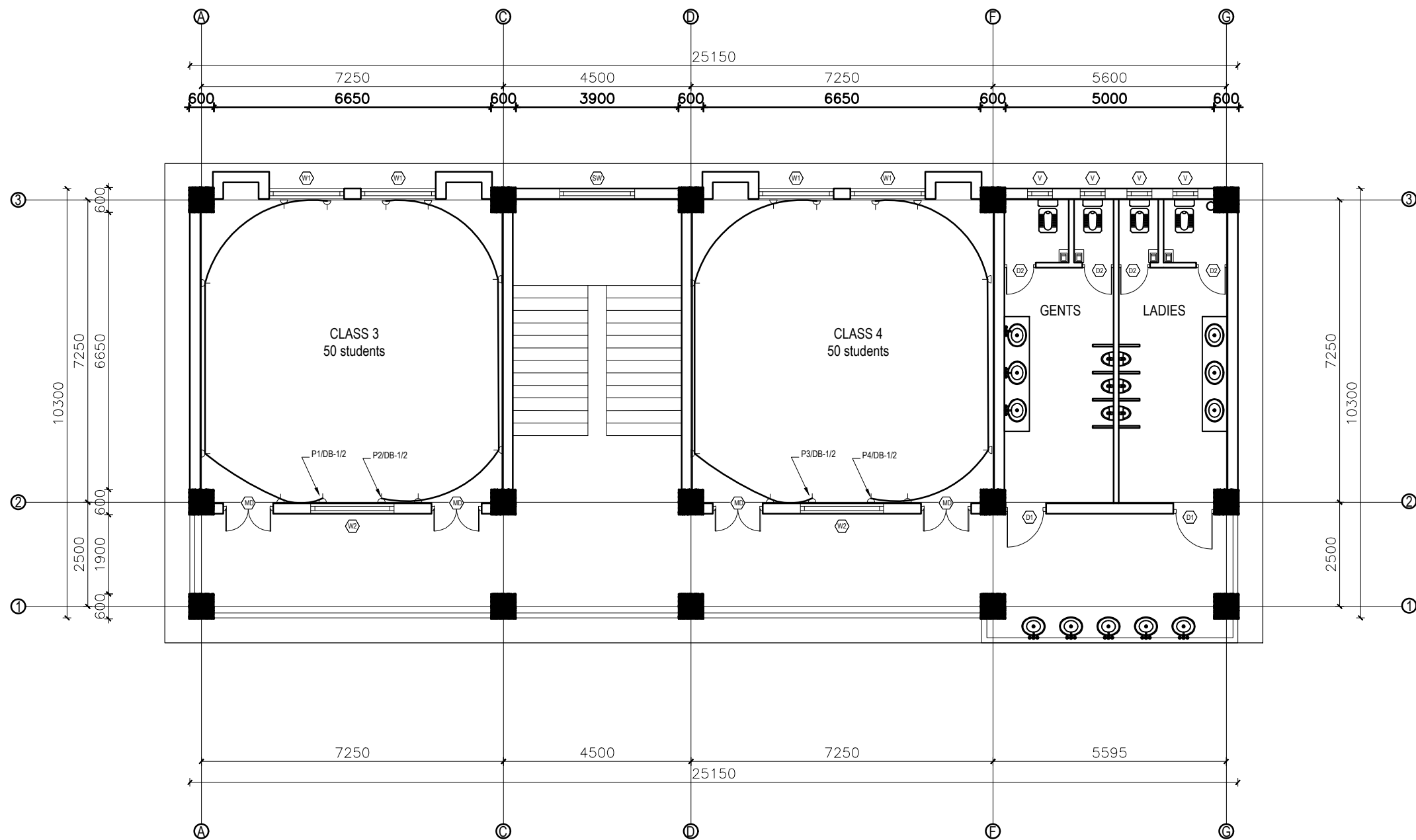


FIRST&SECOND FLOOR PLAN
FLOOR AREA: 260.805 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 03	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN :		APPROVED:	
					SCALE : 1:20	PAPER SIZE : A3	DATE: FEBRUARY, 2023	
						DWG CODE. 3S12R		



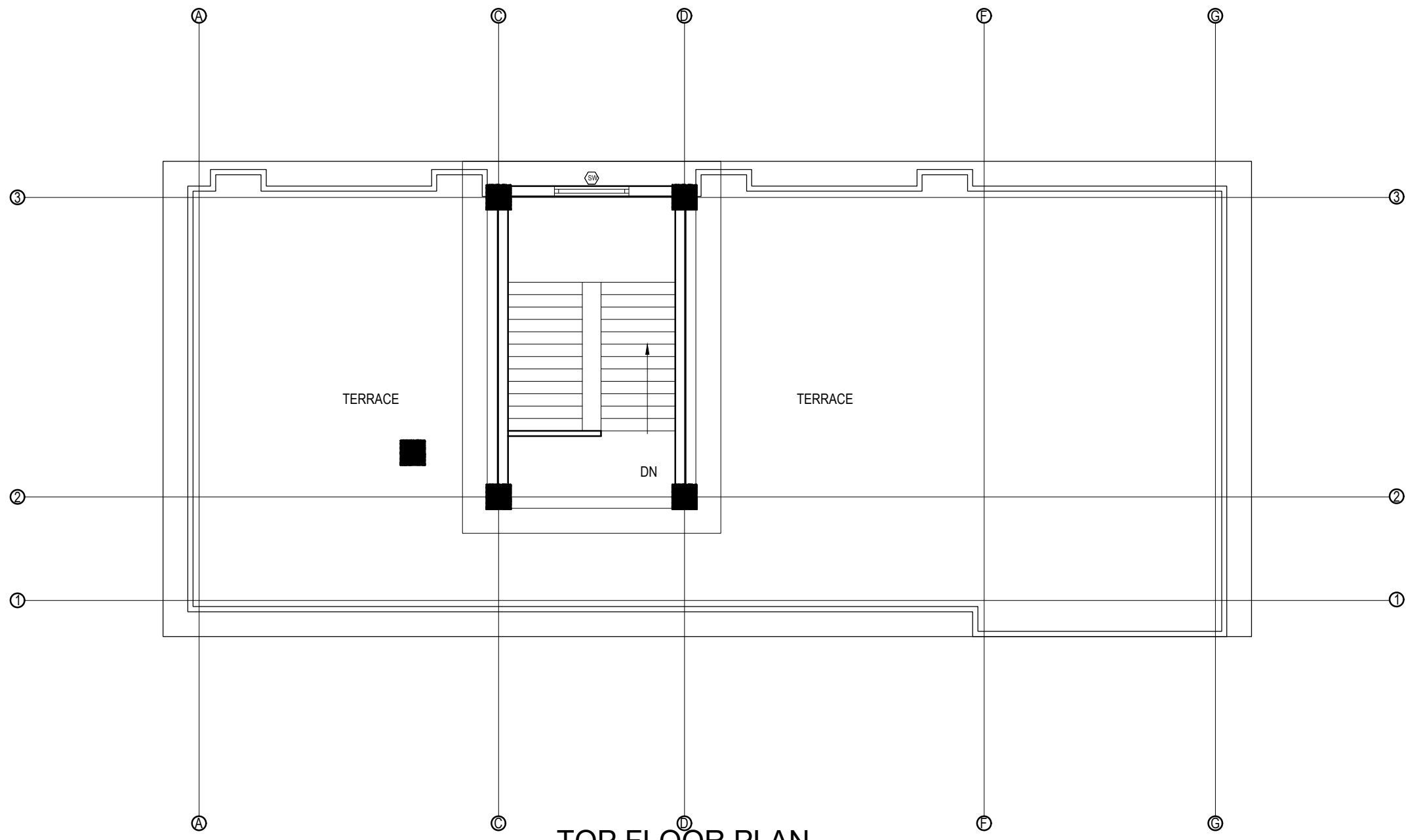
LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42"Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9"Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

FIRST&SECOND FLOOR PLAN

FLOOR AREA: 260.805 sq.m


CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
				ENGINEER:	STRUCTURE ER. :	04	R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	IDEAL SOLUTION PVT.LTD.	ARCHITECT:	CHECKED:	DWG CODE. 3S12R	
				DRAWN :	APPROVED:		
				SCALE : 1:20	PAPER SIZE : A3	DATE: FEBRUARY, 2023	



TOP FLOOR PLAN
FLOOR AREA: 39.39 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42"Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9"Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 05	REVISION NO. R-00
 <div>Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal</div>	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:		STRUCTURE ER. :		DWG CODE. 3S12R
				ARCHITECT:		CHECKED:		
				DRAWN :		APPROVED:		
				SCALE : 1:20		PAPER SIZE : A3		
DATE: FEBRUARY, 2023								

INSTALLATION CONSIDERATION

- * The switch box should be at 200mm from the door and 1250mm above floor.
- * General room socket height should be at 150mm above skirting wall.
- * Kitchen socket height should be at 450mm above kitchen top.
- * Toilet socket/switch should be at 1250mm above floor level and mirror light at 50 mm above mirror as per mirror size.
- * Exhaust fan should be at 600mm below slab.
- * Wall Light should be at 2100mm from floor level.

CONDUIT SCHEDULE

CABLE SIZES \ PVC CON. DIA.	NO OF MAXIMUM CABLE AND PVC FRLS CONDUIT SIZES					
	16 mm Dia.	20 mm Dia.	25 mm Dia.	32 mm Dia.	40 mm Dia.	50 mm Dia.
1.5 SQ. MM/Equivalent	5	7	10	14	--	--
2.5 SQ. MM/Equivalent	3	5	8	12	--	--
4.0 SQ. MM/Equivalent	--	3	6	10	12	--
6.0 SQ. MM/Equivalent	--	2	4	8	9	--
10 SQ. MM/Equivalent	--	--	3	6	8	--
16 SQ. MM/Equivalent	--	--	2	3	4	8

CONVERSION TABLE

INCHES	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
mm	16	20	25	32	40	50	65	80	90	100	130	150

* Unless and otherwise stated, all final circuits shall be wired with multistranded
CU wires in PVC Conduit and shall confirm to the following schedule:

WIRING SYSTEM

Air Conditioner/Heater/Range/Appliances
RJ - 45 Data / TV Point
RJ -11 Telecommunication point
Telephone Point
Outdoor Gate/ Post Top/Street Lights/Flood Lights
6 Amp switched outlet sockets
16 Amp Power Sockets Points
General Light Points (From DB to Switch Board)
Looping of Light Points

CABLE/CONDUCTOR SIZE

2x4.0 + 1x2.5 sq. mm copper wire
CAT 6 4 pairs Data cable
CAT 6 4 pairs Data cable
0.5mm dia PVC Insulated Tinned Cu Cable
3 x 2.5 sq. mm copper M/S wire
2x2.5 + 1x1.5 sq. mm copper M/S wire
2x4.0 + 1x2.5 sq. mm copper M/S wire
2x2.5 + 1x1.5 sq. mm copper M/S wire
2x1.5 + 1x1.0 sq. mm copper M/S wire

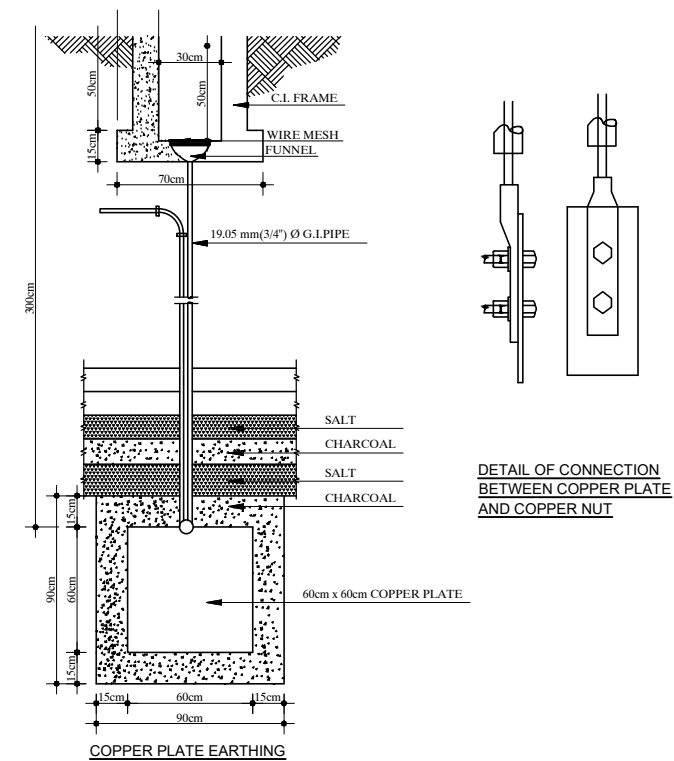
NOTE

- * Conduit Colors for Light/Power Circuit shall be Black, Security Wiring shall be Blue, Fire Alarm Wiring shall be Red, Low Voltage Circuits shall be Brown and UPS Circuits shall be Green.
- * L-N stands for Lighting Circuit, P-N for Power Circuit, AC-N for Air Condition, M/PC-N for Pump/Motor & Lp-N Light Outlet Circuit no.-N (Where N=1,2,3...)
- * For Circuit no., see Distribution Details
- * Unless and otherwise stated, all final circuits shall be wired up by PVC CU M/S Wire in PVC Conduit and shall confirm to the following schedule:

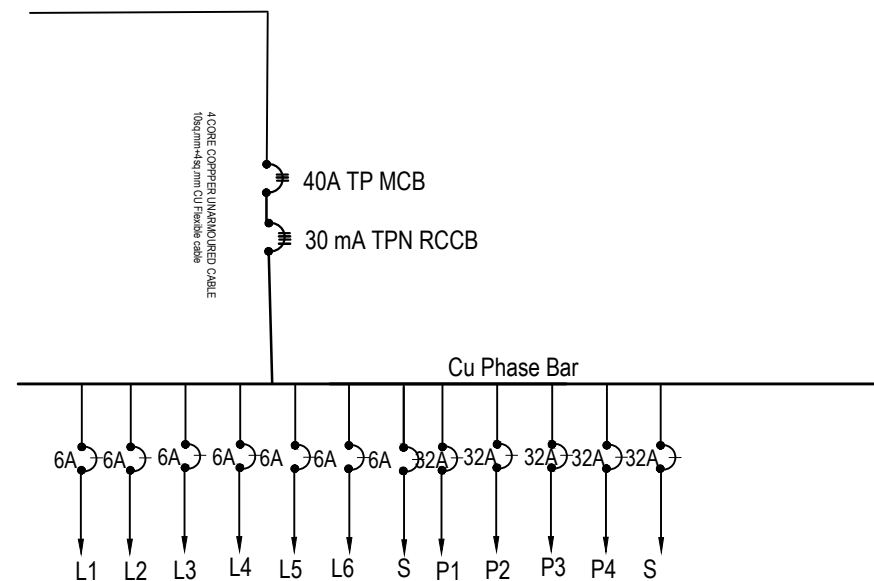
Rating (Amp)	6	10	20	32	40	63
Wire (sq. mm)	1.5	2.5	4.0	6.0	10	16

- * Unless and otherwise stated, maximum of 8 light points shall be wired in a final single lighting circuit where as maximum of 3 power socket outlet shall be wired in single power circuit.
- * Unless and otherwise stated, all 16 A outlets with the same circuit no. shall be wired in ring circuit.
- * Electrical drawings are schematical only, scale: NTS, use as shown purpose, do not measure directly.
- * Contractor should coordinate with interior for exact location of fixtures
- * Run separate conduit for TV, TEL and PS wherever they are in matching places
- * All the Kitchen/Bathroom Power Circuits should be feed by RCCB with 100 mA sensitivity – see schematic details
- * All the cables and conductors shall be PVC insulated CU and shall confirm to the following color codes:

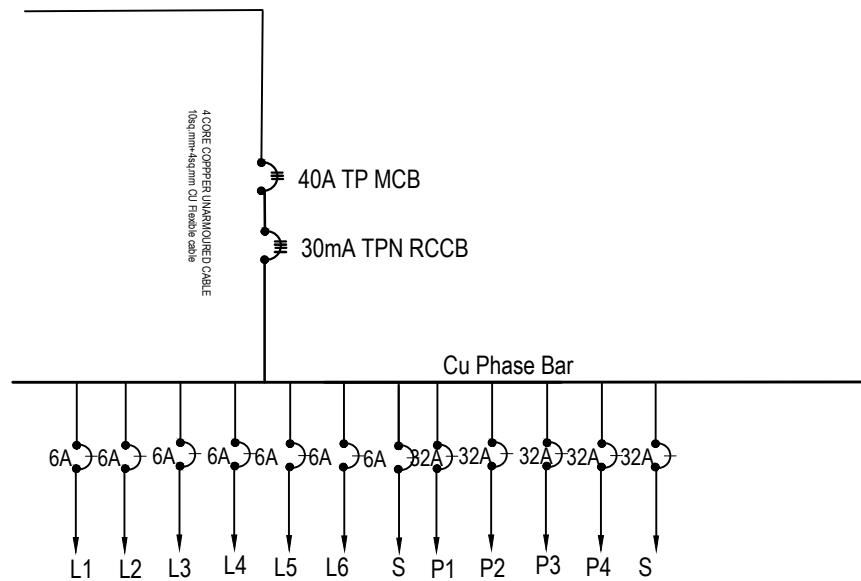
Neutral of AC 1/3 Phase	Black
Grounding/ Bounding/Earthing	Green
loop/common wire for 2 way switch	White
Live Phase A of 3 Phase	Red
Live Phase B of 3 Phase	Yellow
Live Phase C of 3 Phase	Blue



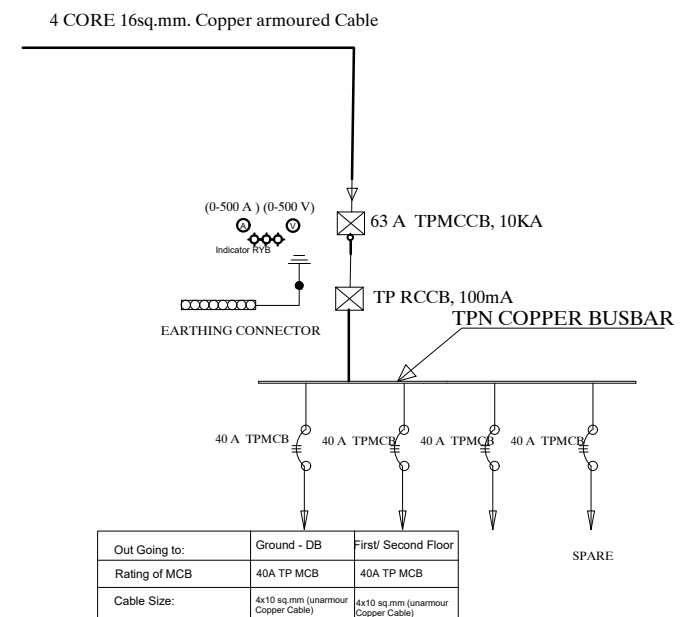
EARTHING DETAILS




GROUND FLOOR L/P DISTRIBUTION SYSTEM (DB-G)



FIRST/SECOND FLOOR L/P DISTRIBUTION SYSTEM (DB-1/2)



DETAILS OF Main -DB

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. 06	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:		STRUCTURE ER. :		DWG CODE. 3S12R
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:20	PAPER SIZE : A3	DATE: FEBRUARY, 2023		



Government of Nepal
Ministry of Education, Science & Technology
Center for Education and Human Resource Development
Sanothimi, Bhaktapur, Nepal

PREPARE SCHOOL BUILDING TYPE DESIGN FOR MOUNTAINOUS REGION

Contract ID: CEHRD/SESP/SQ/Consultancy/02/2079/080

DETAIL DESIGN AND DRAWING

**3 STORY@12 ROOM WITH
(TOILET, WASH ROOM, CHANGING ROOM & BOOK CORNER)**

**SUBMITTED BY:
SAGE ENGINEERING CONSULT**

FEBRUARY, 2023

ARCHITECTURE

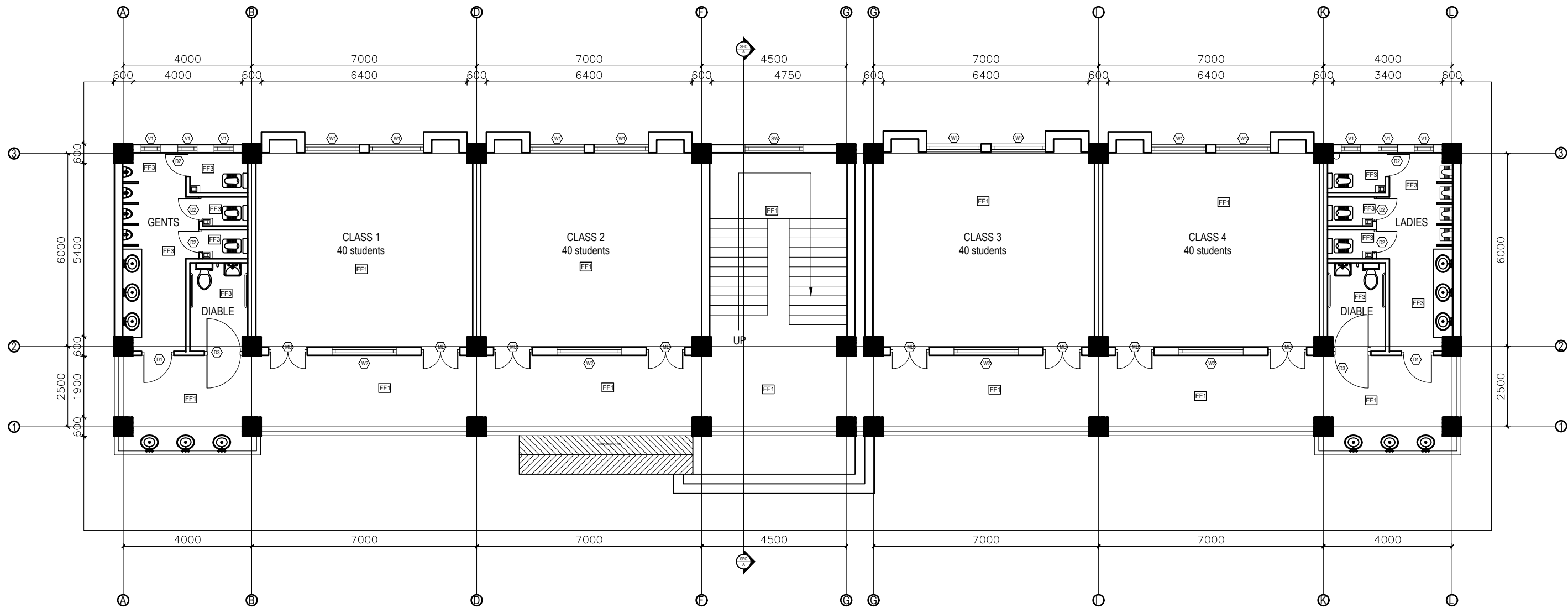
DRAWING

FINISHING DETAILS:

FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)


NOTES:

1. All measurements are in mm unless otherwise noted.
2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
4. Sill and Lintel dimensions are measured from the Slab Lvl.
5. Dimensions are excluding the plaster/POP thickness.



GROUND FLOOR PLAN

FLOOR AREA: 382.71 sq.m

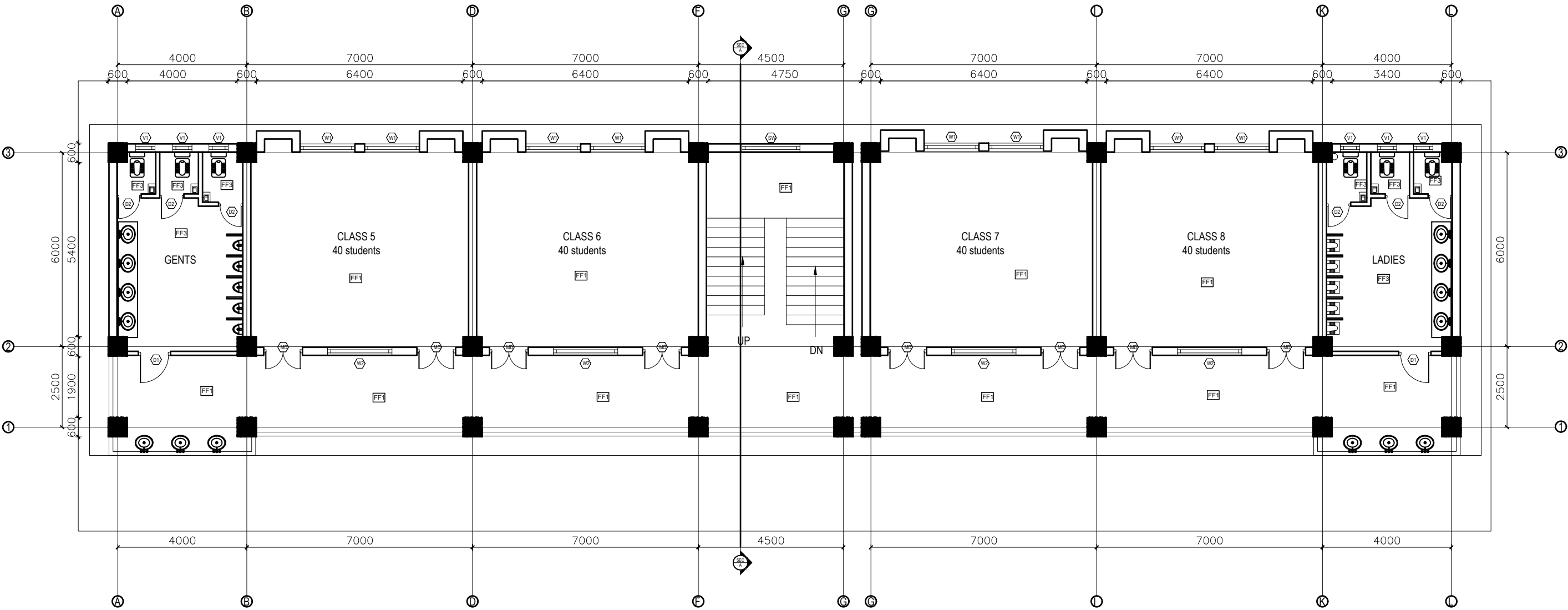
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. AR-01	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	GROUND FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S12R-MOUNTAINOUS	
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

FINISHING DETAILS:


FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

NOTES:

1. All measurements are in mm unless otherwise noted.
2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
4. Sill and Lintel dimensions are measured from the Slab Lvl.
5. Dimensions are excluding the plaster/POP thickness.

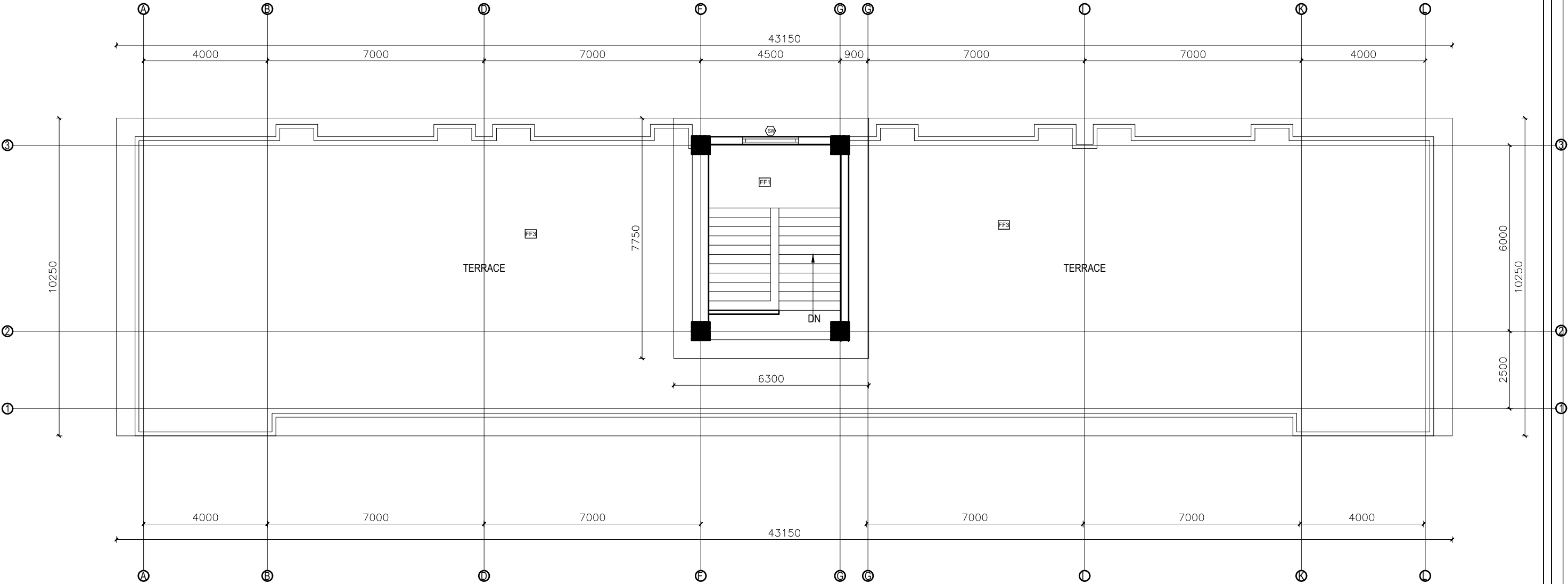


FIRST&SECOND FLOOR PLAN
FLOOR AREA: 382.71 sq.m


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-02	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FIRST & SECOND FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN :		APPROVED:	
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	
DWG CODE 3S12R-MOUNTAINOUS								

FINISHING DETAILS:	
FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

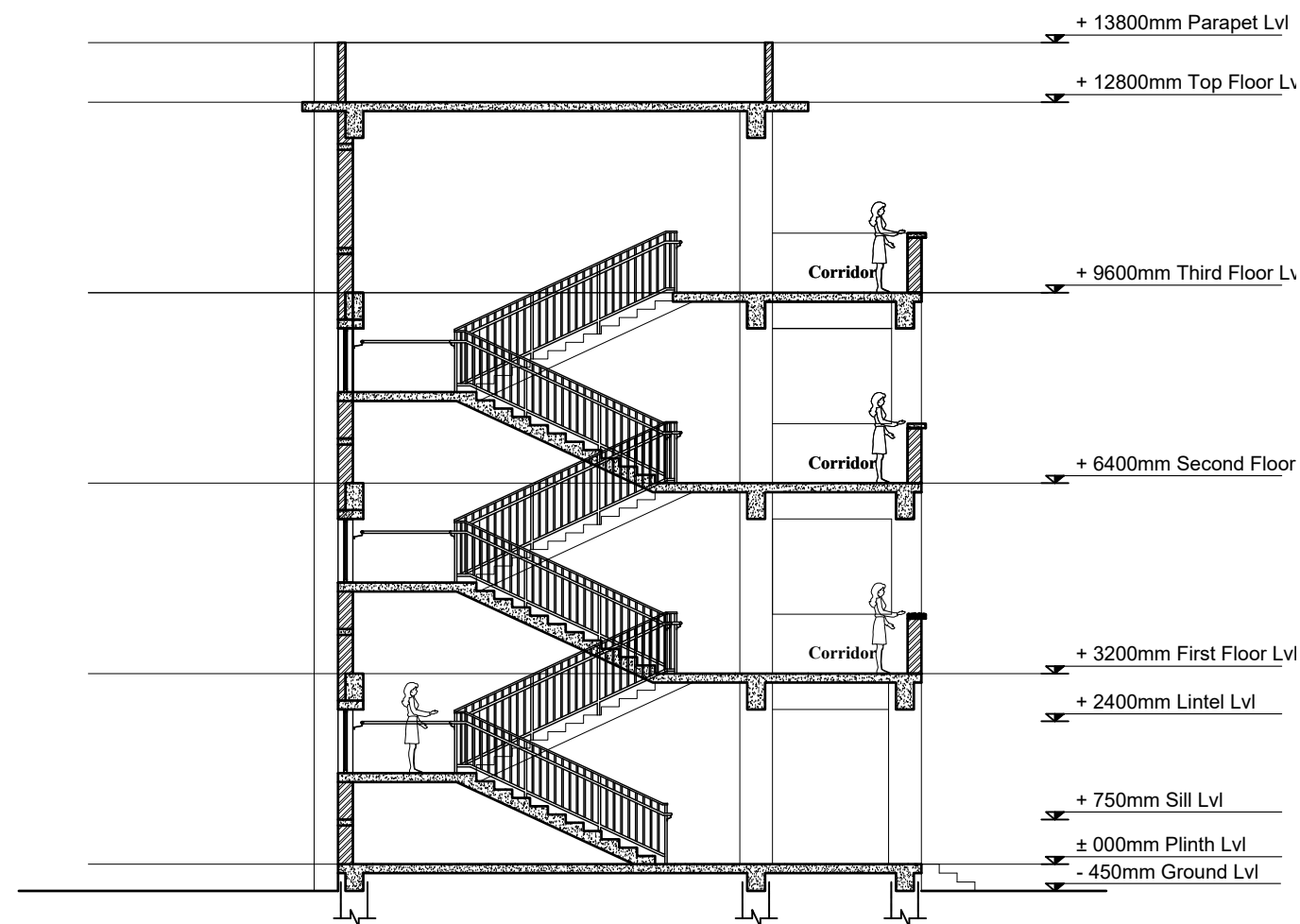
- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.



TOP FLOOR PLAN
FLOOR AREA: 33.07 sq.m

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-03	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TOP FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S12R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	


- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.



SECTION AT A-A

OPENING SCHEDULE


S.N.	SYMBOL	SIZES	G.F.	F.F.	S.F.	TOTAL	SILL HT.	REMARKS
1.	MD	1200 x 2400	8	8	8	24	-	
2.	D1	1000 x 2400	2	2	2	6	-	
3.	D2	750 x 2100	6	6	6	18	-	
4.	D3	1200 x 2400	2			2	-	
5.	W1	1700 x 1650	8	8	8	24	750 MM	
6.	W2	2000 x 1650	4	4	4	12	750 MM	
7.	SW	1800 x 1070	1	1		2	1530 MM	
8.	V1	600 x 600	6	6	6	18	1800 MM	

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-04	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SECTION AND OPENING SCHEDULE	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE 3S12R-MOUNTAINOUS	

- NOTES:
- 1. All measurements are in mm unless otherwise noted.
 - 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 - 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 - 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 - 5. Dimensions are excluding the plaster/POP thickness.




FRONT ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-05	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ELEVATION	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S12R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	

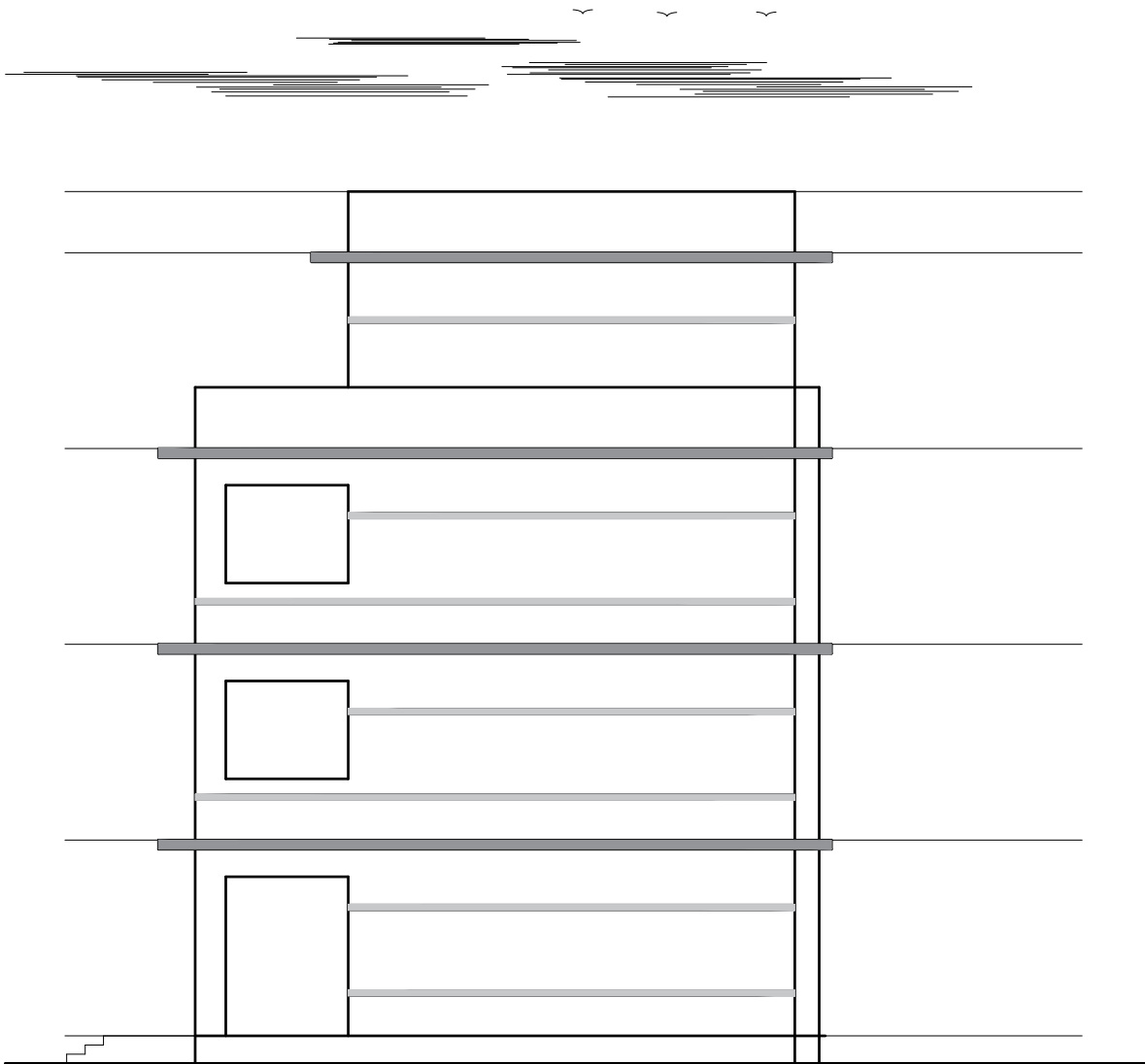
- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.



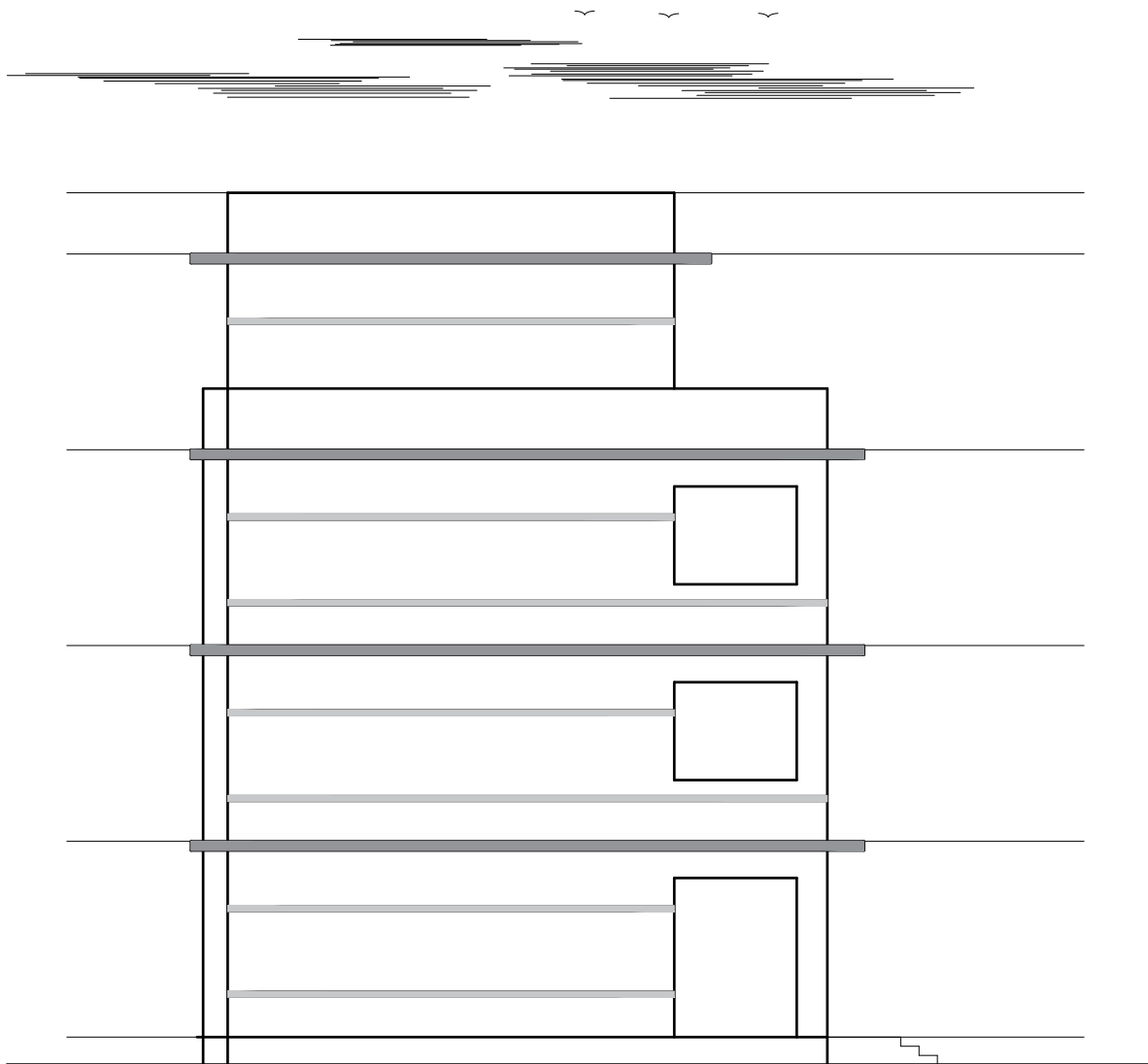
BACK ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-06	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ELEVATION	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S12R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	


- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.

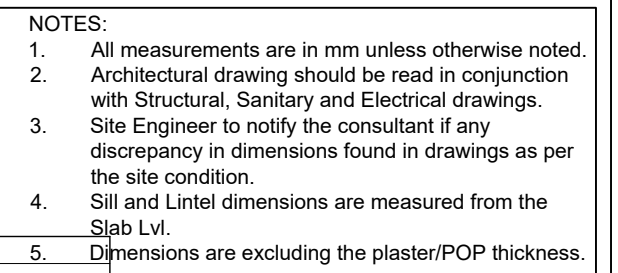


SIDE-1 ELEVATION



SIDE-2 ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-07	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	EEVATIONS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE 3S12R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	



1465 1000 1000 1000 1000 1000

525 230 1375 525 5275

PLINTH LVL ±000

GROUND LVL -450

25 MM SCREED WITH BROOM FINISH

75 MM PCC (M15)

150 MM STONE SOLING OR ONE LAYER FLAT BRICK SOLING

COMPACTED EARTH

75 MM PCC (M15)

150 MM STONE SOLING OR ONE LAYER FLAT BRICK SOLING

COMPACTED EARTH

Ø25MM VERTICAL STAINLESS PIPE at 1000mm c/c


Ø50MM STAINLESS PIPE

Ø25MM STAINLESS PIPE

SECTION AT B-B

FINISHING DETAIL	
FF1	38 mm PCC (M15) hardener (Dreilop)
Terrace	50 mm PCC (M15) cut with floor hardener (equivalent) and wall

FINISHING DETAILS:	
FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent)
Terrace	50 mm PCC (M15) with 1:1 cement punning in a 600'600 grid thread cut with floor hardener (Dreitol FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-08	REVISION NO. R-00
 <div>Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal</div>	Prepare School Building Type Design for Mountainous Region	RAMP DETAILS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S12R-MOUNTAINOUS	
				ARCHITECT:		CHECKED:		
				DRAWN :		APPROVED:		
				SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

STRUCTURE

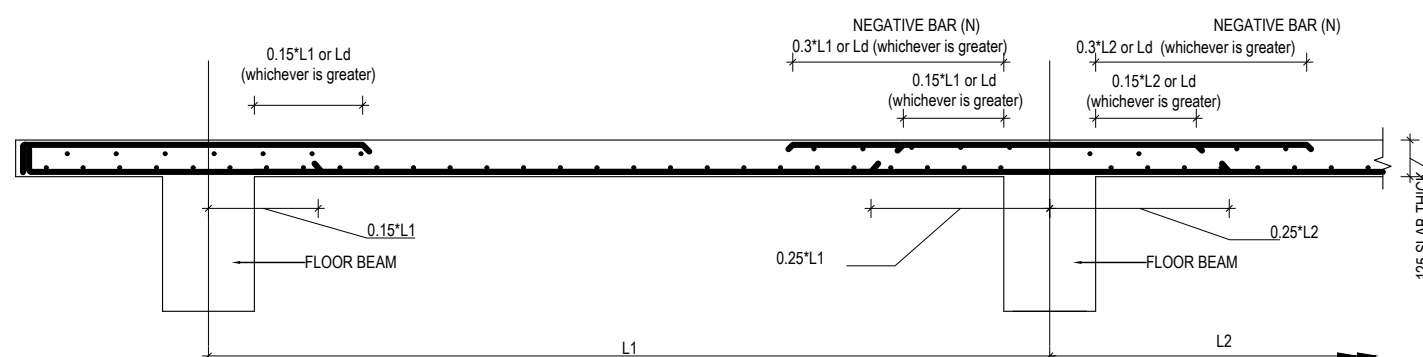
DRAWING

SN.	DRAWING LIST
1.	GENERAL NOTES
3.	FOOTING DETAIL FOR 100kN/m2
4.	TYPICAL FLOORING DETAIL
5.	SITE SPECIFIC DRAWING
6.	TYPICAL DETAILS OF FOUNDATION WALL
7.	COLUMN DETAIL
8.	BEAM PLAN
9.	BEAM DETAIL
10.	SLAB DETAIL
11.	STAIRCASE DETAIL
12.	BAND DETAIL
13.	RAILING DETAIL

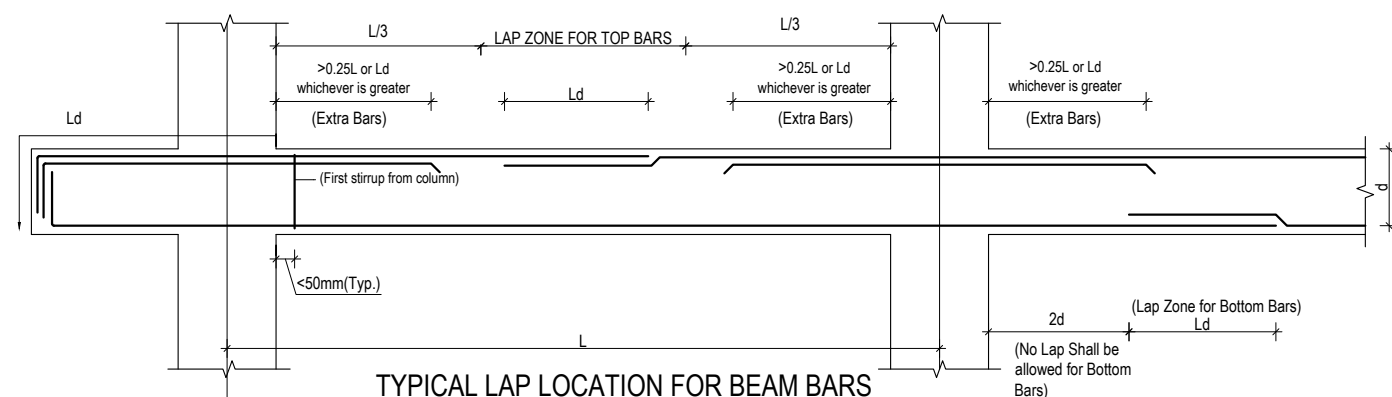
1. USE M25 GRADE CONCRETE FOR SLAB, BEAM, COLUMN, FOUNDATION, SILL & LINTEL BANDS (ALL RCC WORKS)
2. USE Fe500 GRADE STEEL ($f_y=500\text{N/mm}^2$)
3. CLEAR COVER TO BARS
 - a. FOR CONCRETE MEMBERS IN CONTACT WITH SOIL = MIN 50mm
 - b. FOR COLUMN (FROM FACE TO LATERAL TIES) = 40mm
 - c. FOR BEAMS (FROM FACE TO LATERAL STIRRUPS) = 25mm
 - d. FOR OUTER BARS IN SLAB = 15mm
 - e. FOR STAIRCASE = 20mm
4. BARS IN COLUMNS SHALL BE SPLICED ONLY AT MID HEIGHT OF COLUMN.
5. BARS SPLICING IN BEAM SHALL BE AVOIDED IN THE SPAN WHERE INTERMEDIATE BEAM IS CONNECTED AND SHALL BE ONLY AS SHOWN IN DWG.
6. DEVELOPMENT / LAP LENGTH (L_d) FOR BARS.

BAR DIA-(mm)	8	10	12	16	20	25
FOR M25 Ld	400	490	590	790	980	1230

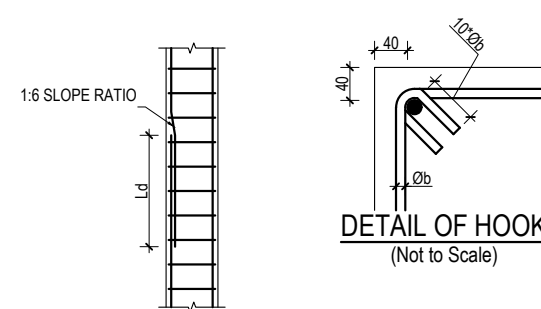
7. TEMP./DISTRIBUTION REINFORCEMENT FOR SLAB - TMT 80 @ 200 C/C
8. CLEAR VERTICAL DISTANCE BETWEEN TWO ROWS (LAYERS) OF BARS=25mm OR MAXIMUM SIZE OF REBAR
9. PROVIDE STIRRUPS OR TIES AT MIN 150 C/C AT LAP LOCATIONS IN BEAM AND AT MIN 100 C/C AT LAP LOCATION IN COLUMNS.
10. FOUNDATION
- 10.1 FOUNDATION DESIGN HAVE BEEN PROVIDED FOR SAFE BEARING CAPACITY OF 150KN/m².
THIS S.B.C. SHALL BE CONFIRMED FROM GEO TECHNICAL INVESTIGATION AND CONSULTED TO DESIGNER.
- 10.2 IF SAFE BEARING CAPACITY OF SOIL IS FOUND LESS THAN 100KN/m², SPECIAL STUDY FOR FOUNDATION DESIGN IS REQUIRED.
11. H = CLEAR SPAN OF FLOOR.
12. D=DEPTH OF BEAM
13. d=EFFECTIVE DEPTH OF BEAM
14. L_d=DEVELOPMENT LENGTH
15. The seismic gap shall be as per codal requirement.



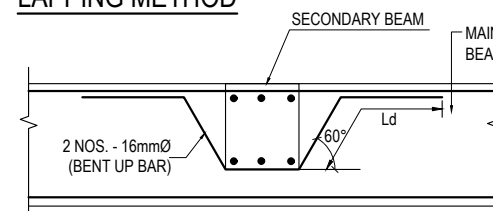
TYPICAL DETAIL FOR SLAB BARS



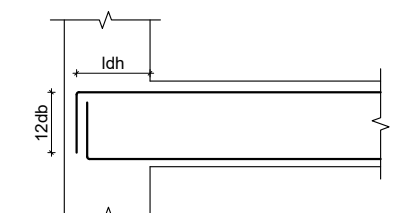
TYPICAL LAP LOCATION FOR BEAM BARS
(STIRRUPS NOT SHOWN FOR CLARITY)



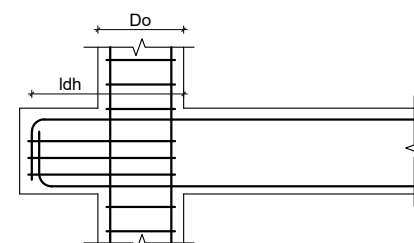
LAPPING METHOD



CONNECTION DETAIL BETWEEN MAIN & SECONDARY BEAM



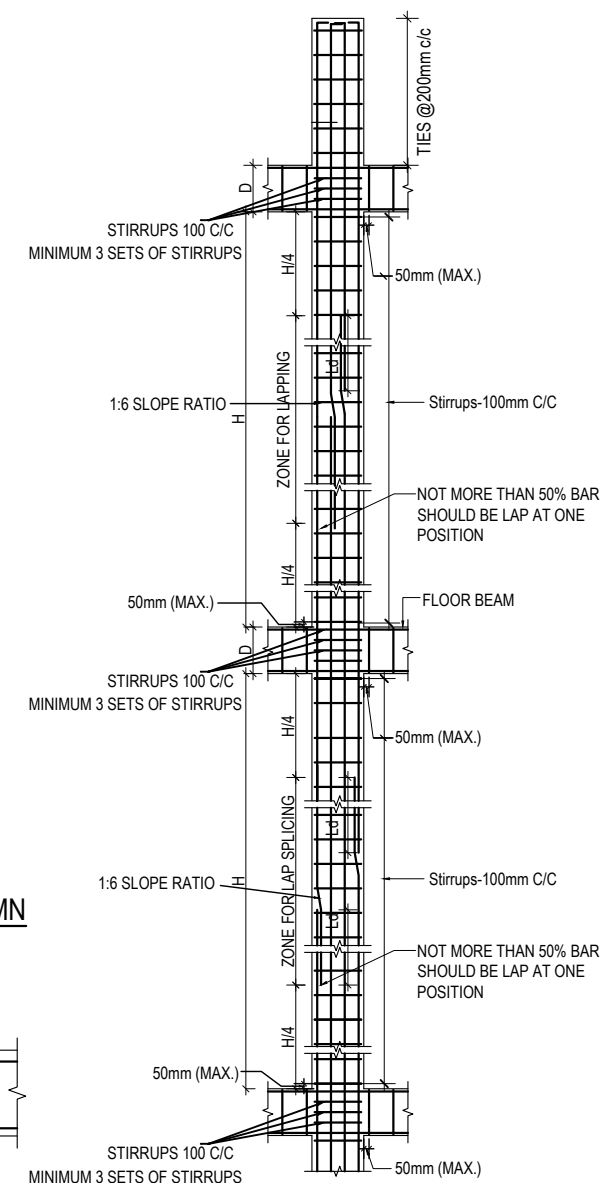
ANCHORAGE OF BEAM LONGITUDINAL BAR IN COLUMN



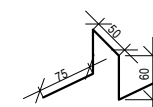
PROVISION OF BEAM STUB

fy	fck	db	Ldh	12db
N/mm2	N/mm2	mm	mm	mm
500	20	12	277	144
500	25	12	248	144
500	20	16	369	192
500	25	16	330	192
500	20	20	462	240
500	25	20	413	240
500	20	25	577	300
500	25	25	516	300


fy= yield strength of steel
fck= Characteristic Compressive strength of concrete
db= diameter of largest longitudinal bar in beam in mm

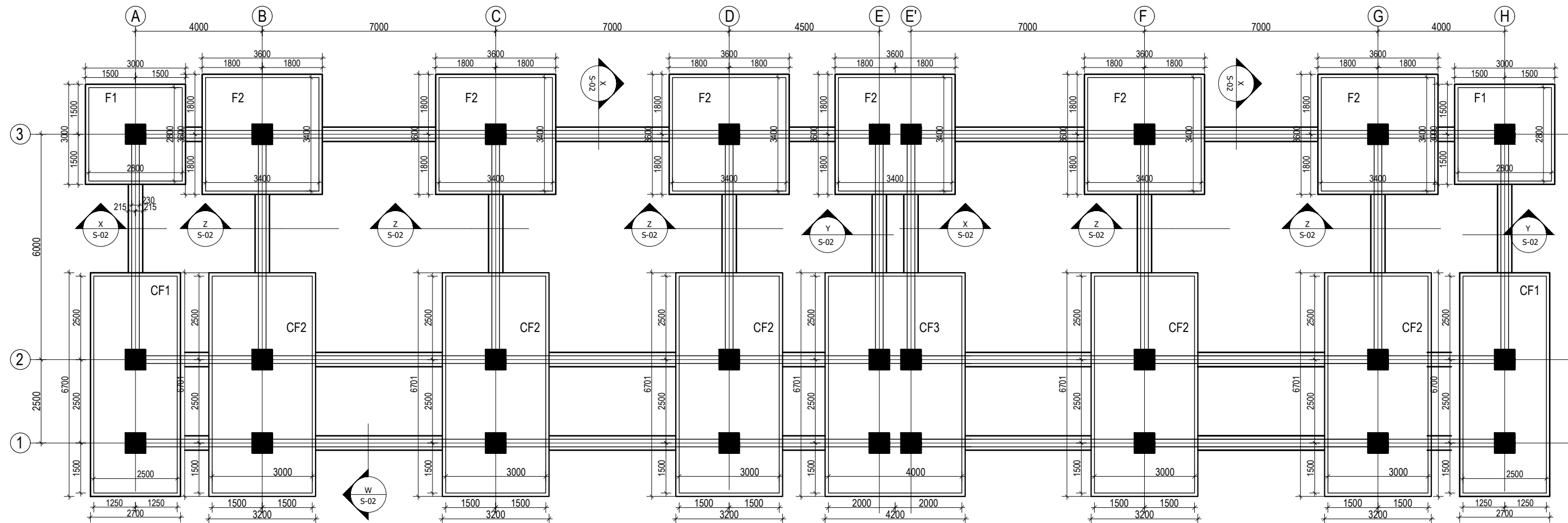


TYP. COLUMN SHEAR
REINFORCEMENT DETAIL



CHAIR RESTING ON BOTTOM BARS
@600 - 900 mm staggered position


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	GENERAL NOTES	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R-MOUNTAINOUS	R-00	
					ARCHITECT:	CHECKED:			
					DRAWN : NEETA BHANDARI				APPROVED:
					SCALE : 1: 120	PAPER SIZE : A3			DATE: FEBRUARY, 2023

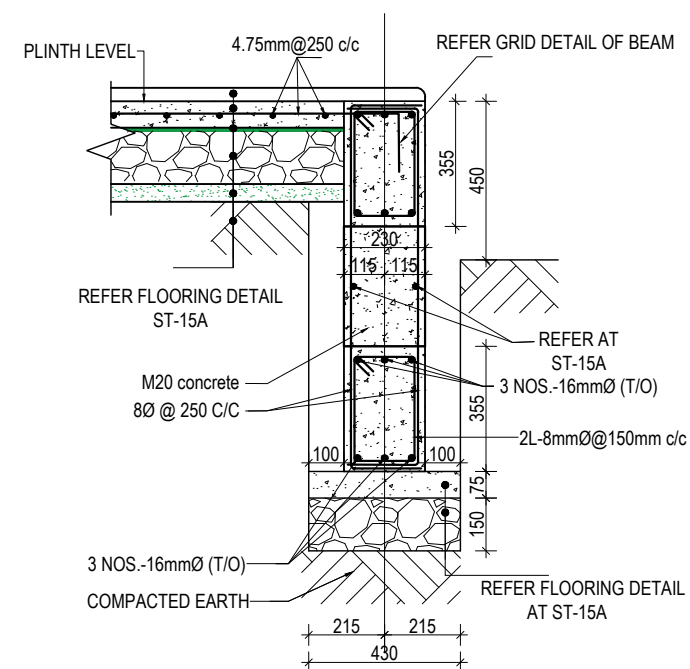
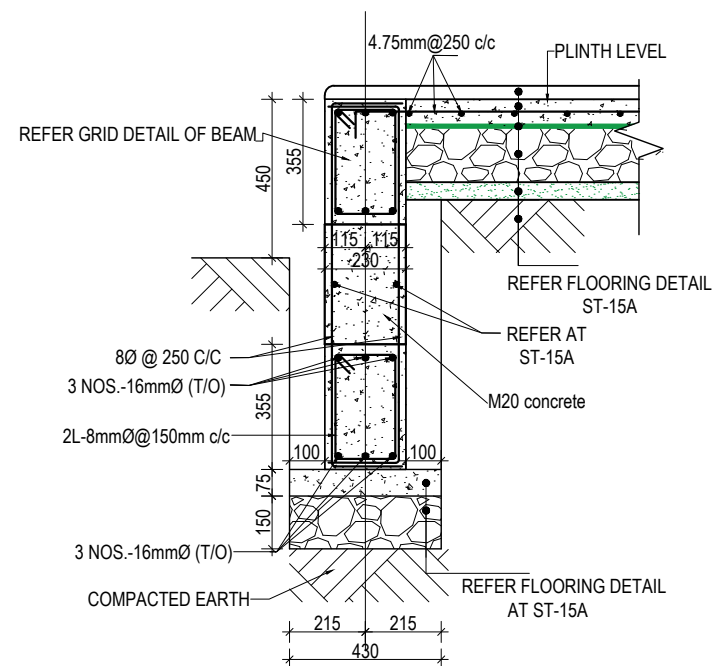
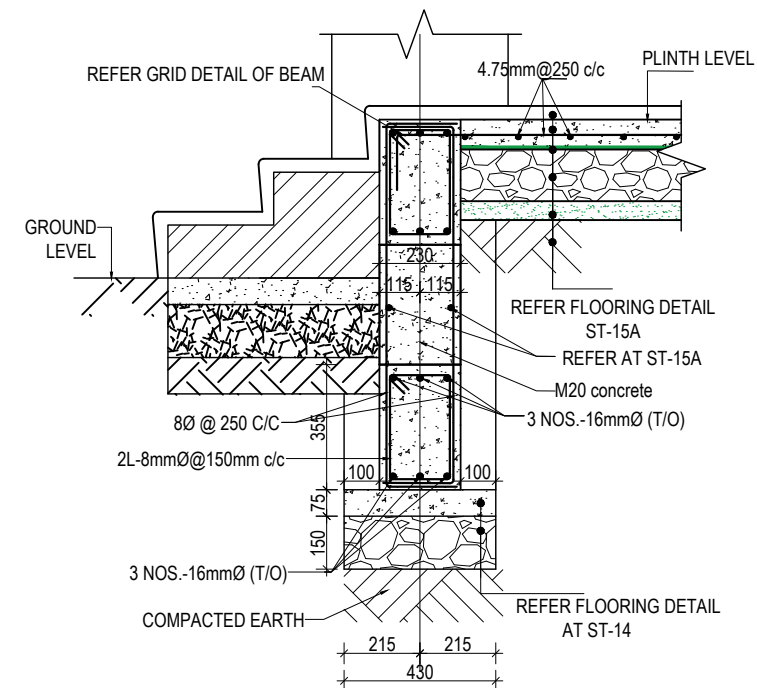
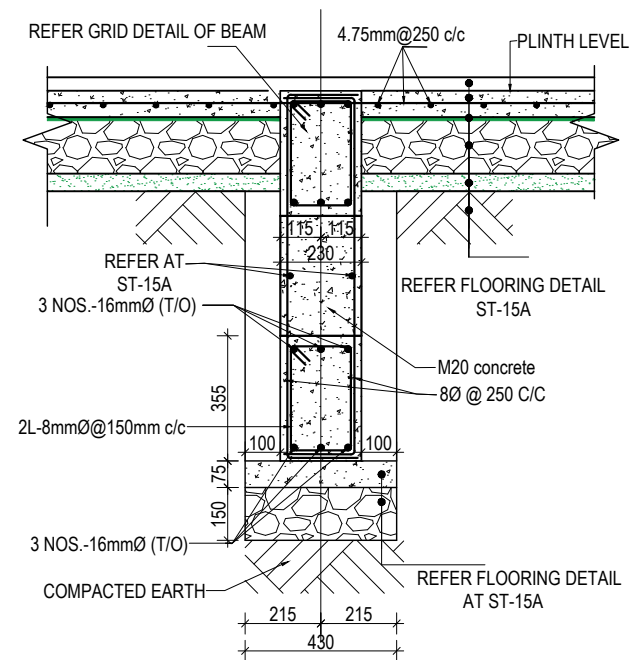



TRENCH PLAN

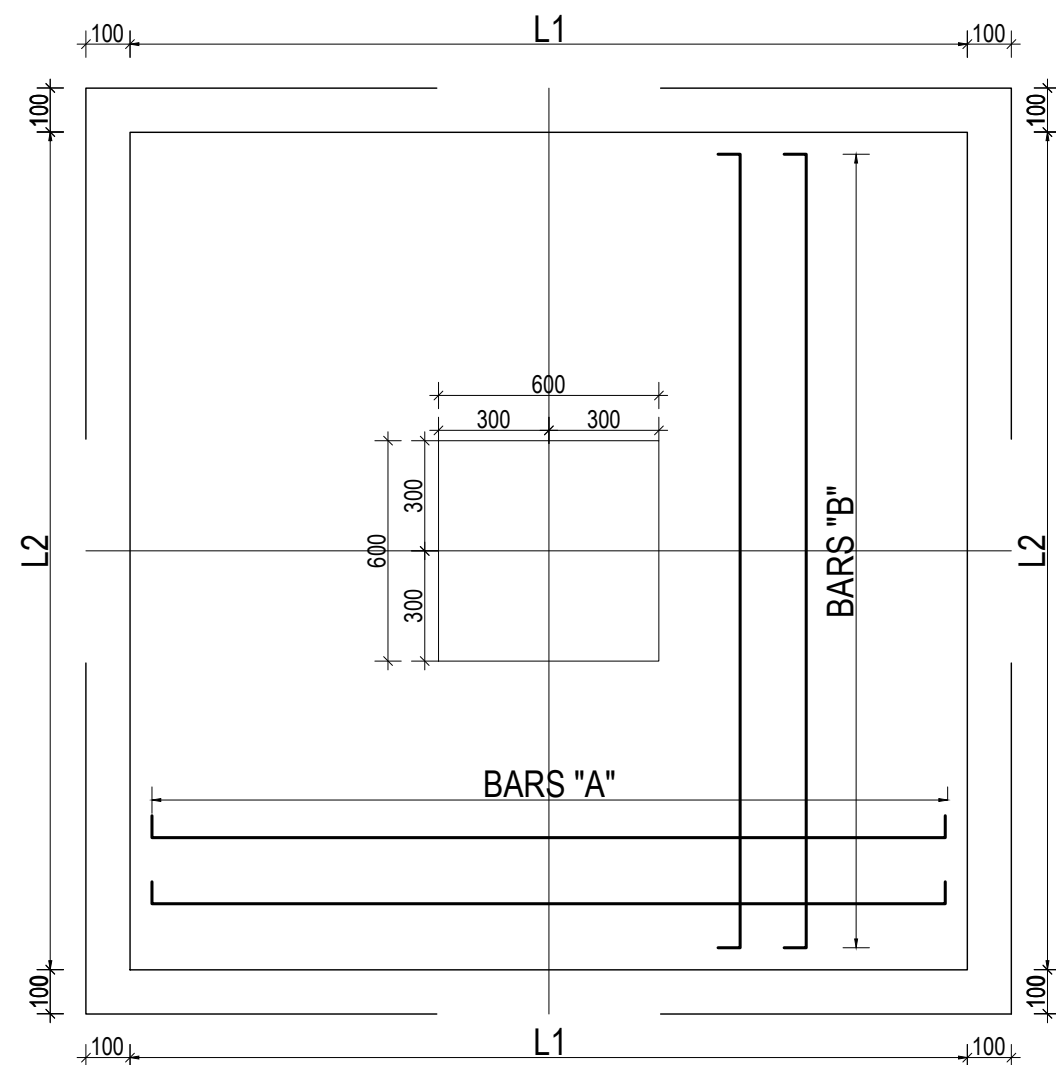
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[Note: Provide wall footing for book corner walls]

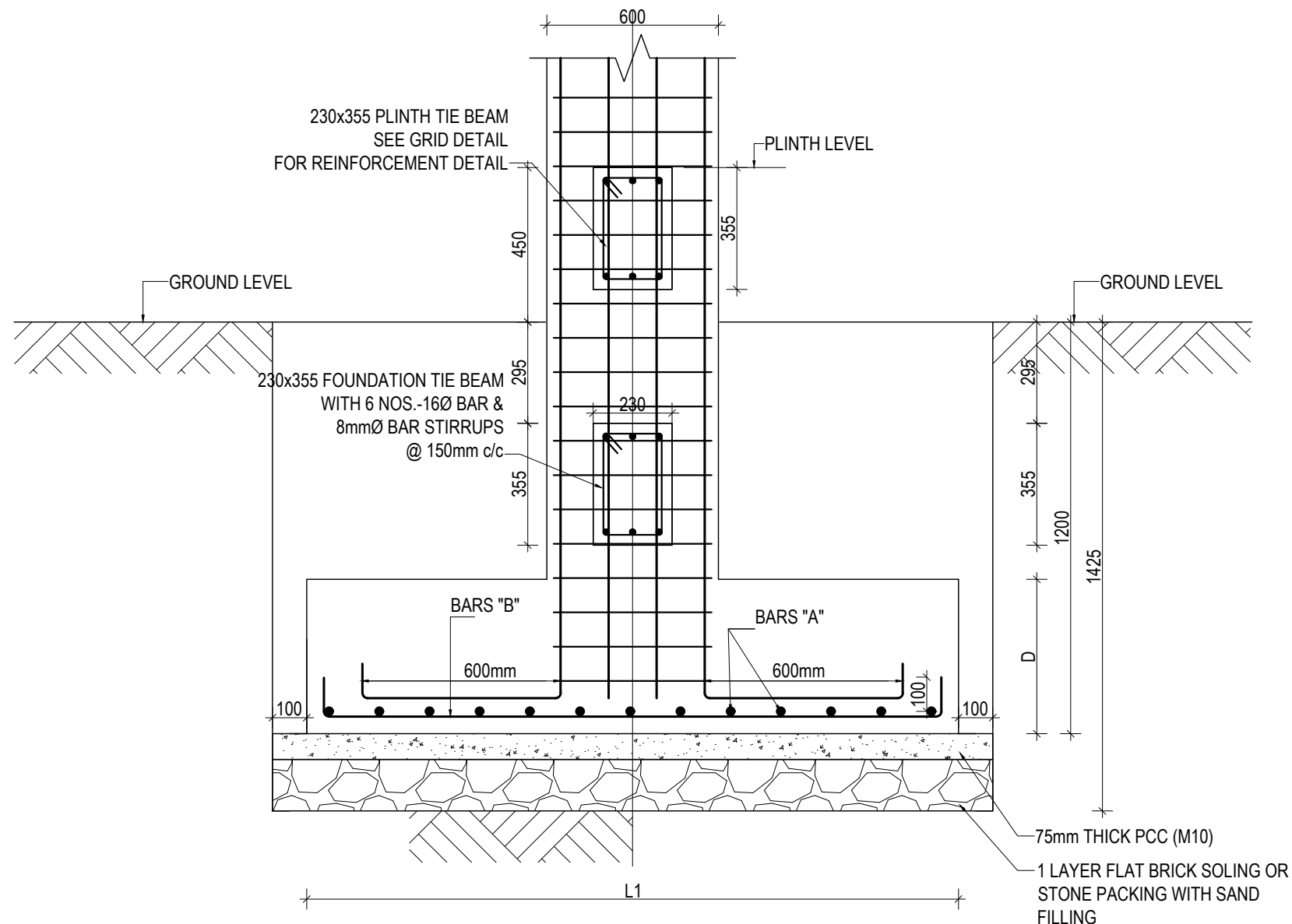
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.		
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TRENCH DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-01	R-00		
					ARCHITECT:	CHECKED:				
					DRAWN : NEETA BHANDARI		APPROVED:		DWG CODE. 3S12R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3 DATE: FEBRUARY, 2023				



CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-02	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TRENCH DETAIL FOR S.B.C 150kn/m2	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		DWG CODE. 3S12R-MOUNTAINOUS	
					STRUCTURE ER. :			
					ARCHITECT:			
					CHECKED:			
DRAWN : NEETA BHANDARI		APPROVED:		SCALE : 1: 120		PAPER SIZE : A3	DATE: FEBRUARY, 2023	




TYPICAL ISOLATED FOOTING PLAN

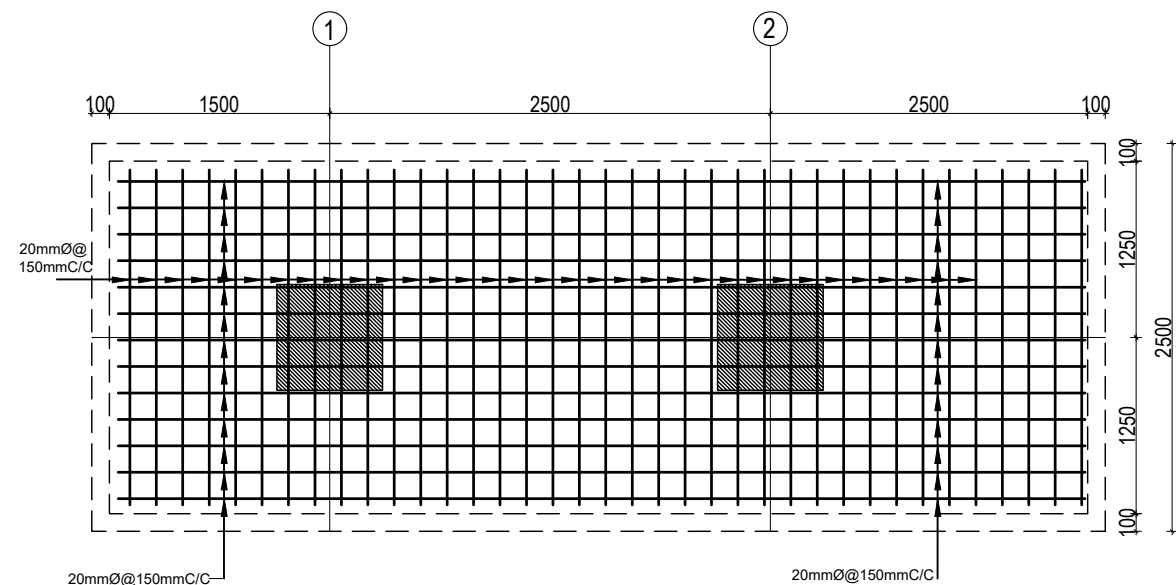


TYPICAL ISOLATED FOOTING SECTION

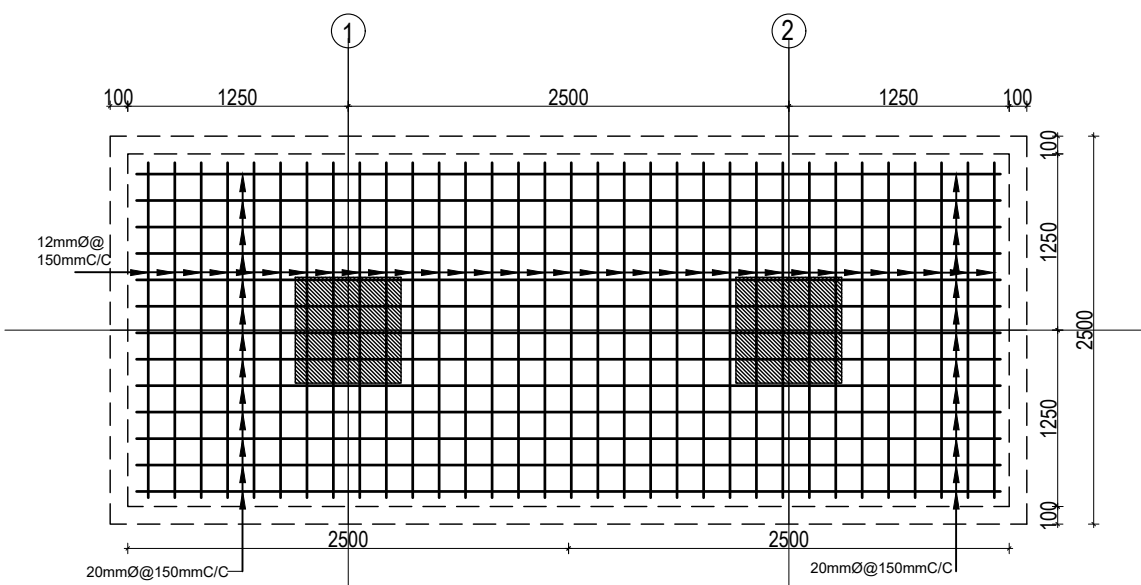
ISOLATED FOOTING SCHEDULE FOR S.B.C 150 kN/m²

FOOTING ID	L1	L2	DEPTH (D)	REINFORCEMENT DETAILS	
				BARS "A"	BARS "B"
F1	2800	2800	650	16Ø @ 150 C/C	16Ø @ 150 C/C
F2	3600	3600	750	16Ø @ 150 C/C	16Ø @ 150 C/C

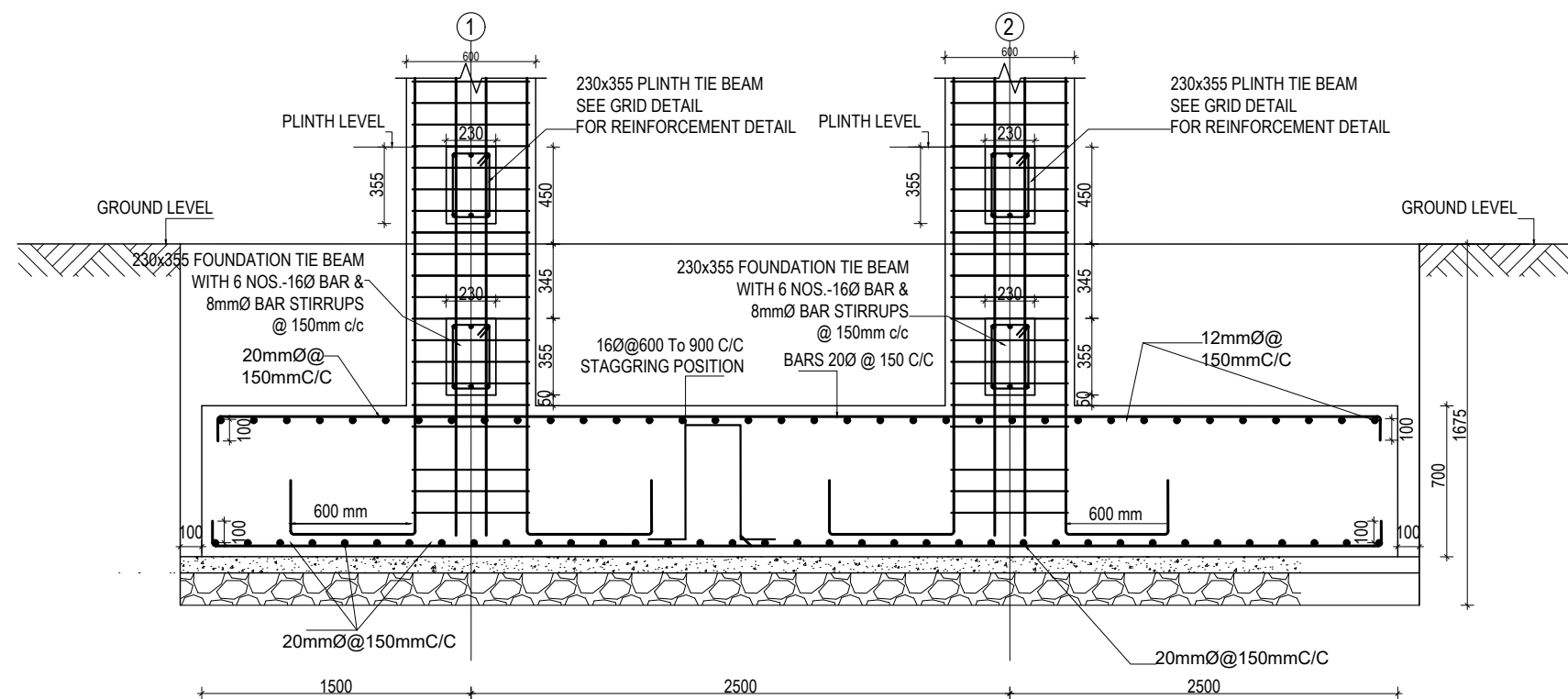
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO		
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	ST-03	R-00		
					ARCHITECT:	CHECKED:				
					DRAWN : NEETA BHANDARI		APPROVED:		DWG CODE. 3S12R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023			




COMBINED FOOTING PLAN CF1
BOTTOM REINFORCEMENT

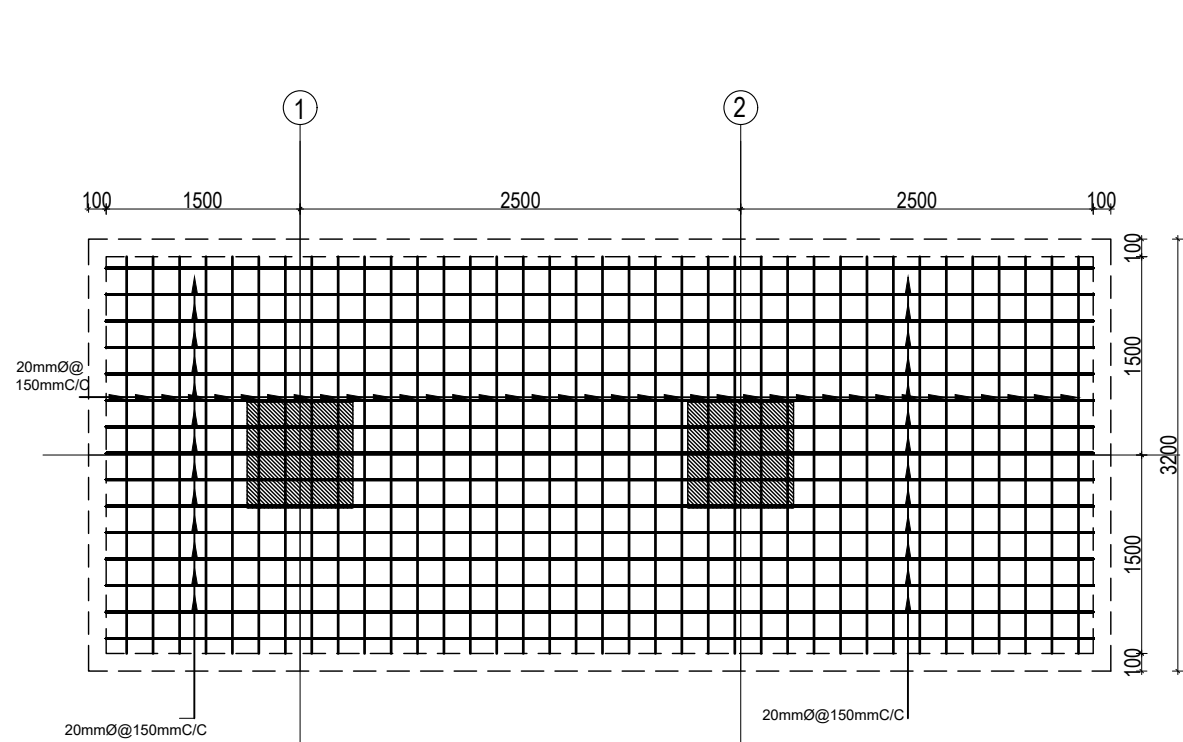


COMBINED FOOTING PLAN CF1
TOP REINFORCEMENT

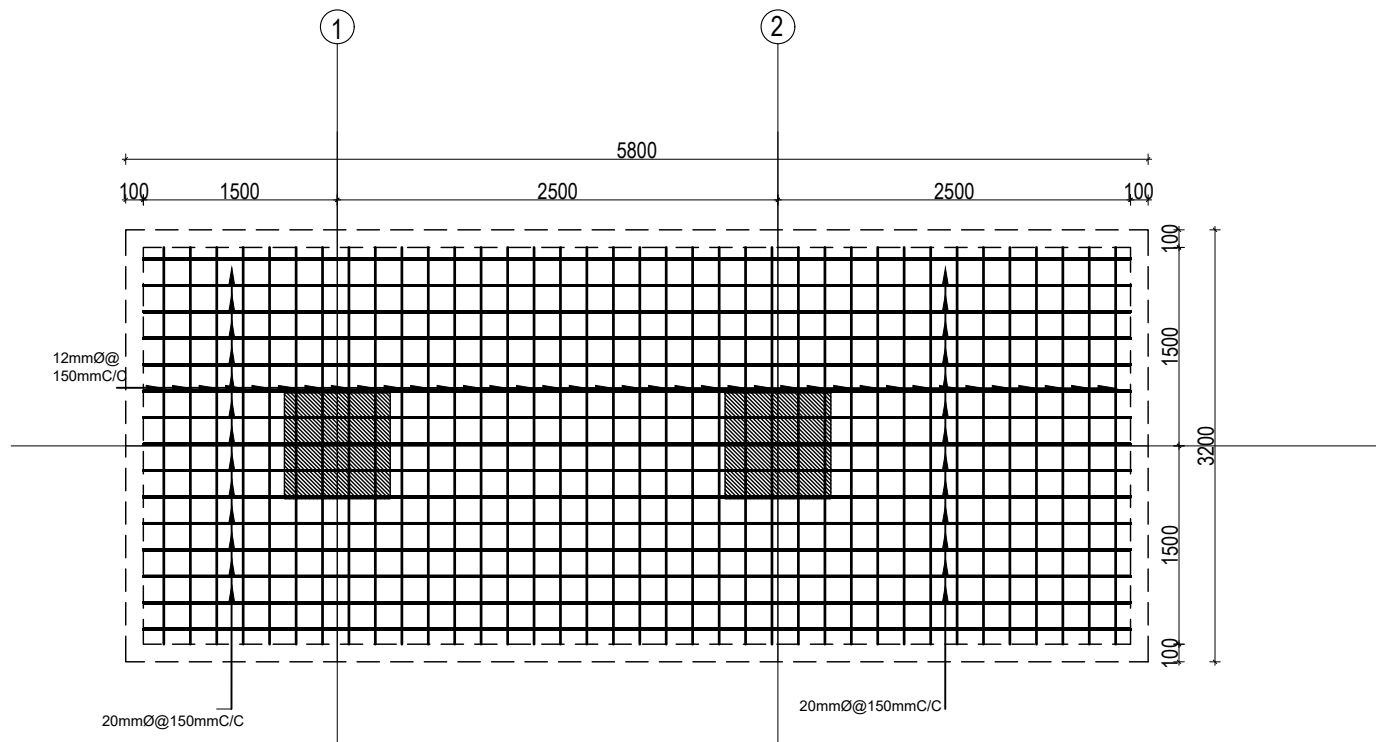


COMBINED FOOTING SECTION CF1

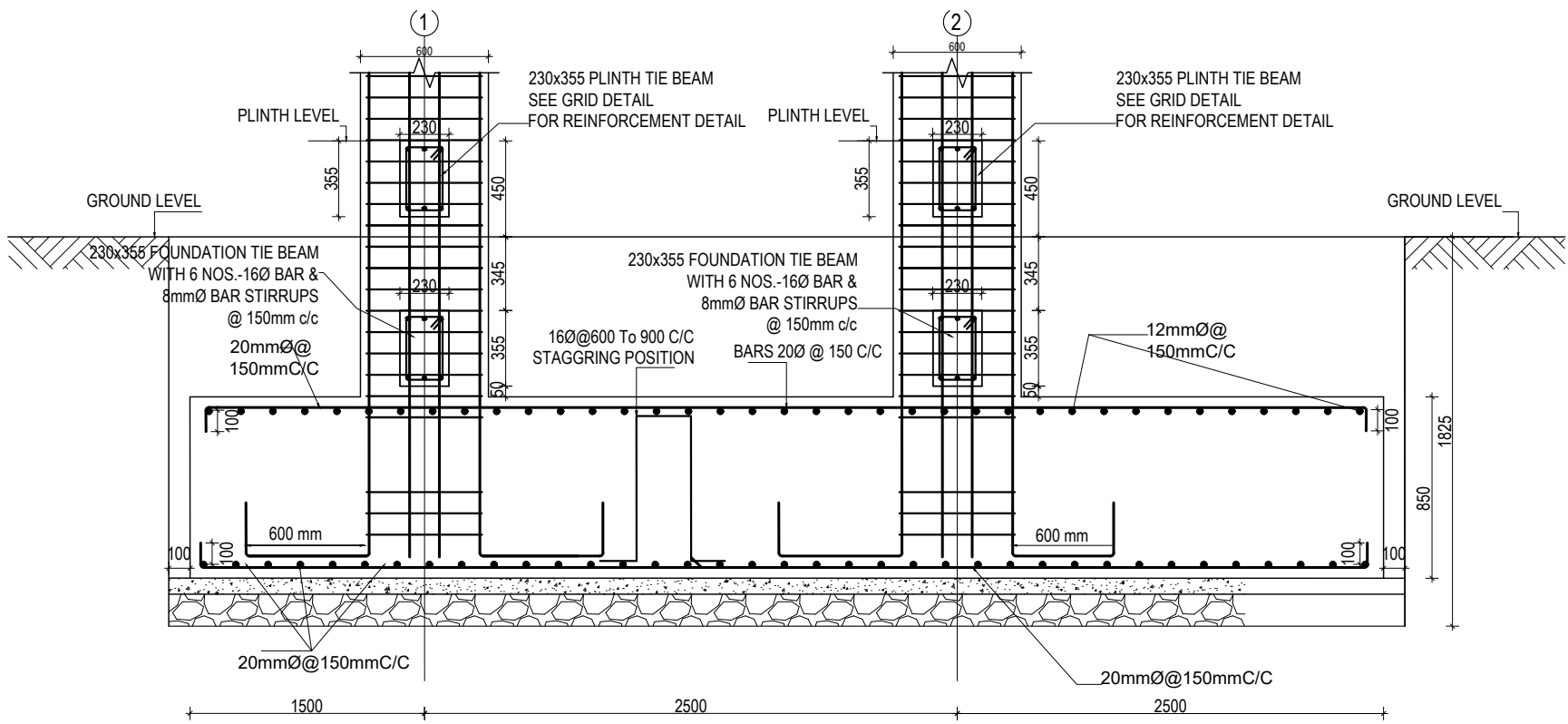
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	ST-04	R-00	
					ARCHITECT:	CHECKED:			
					DRAWN : NEETA BHANDARI		APPROVED:		DWG CODE. 3S12R-MOUNTAINOUS
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		




COMBINED FOOTING PLAN CF2
BOTTOM REINFORCEMENT

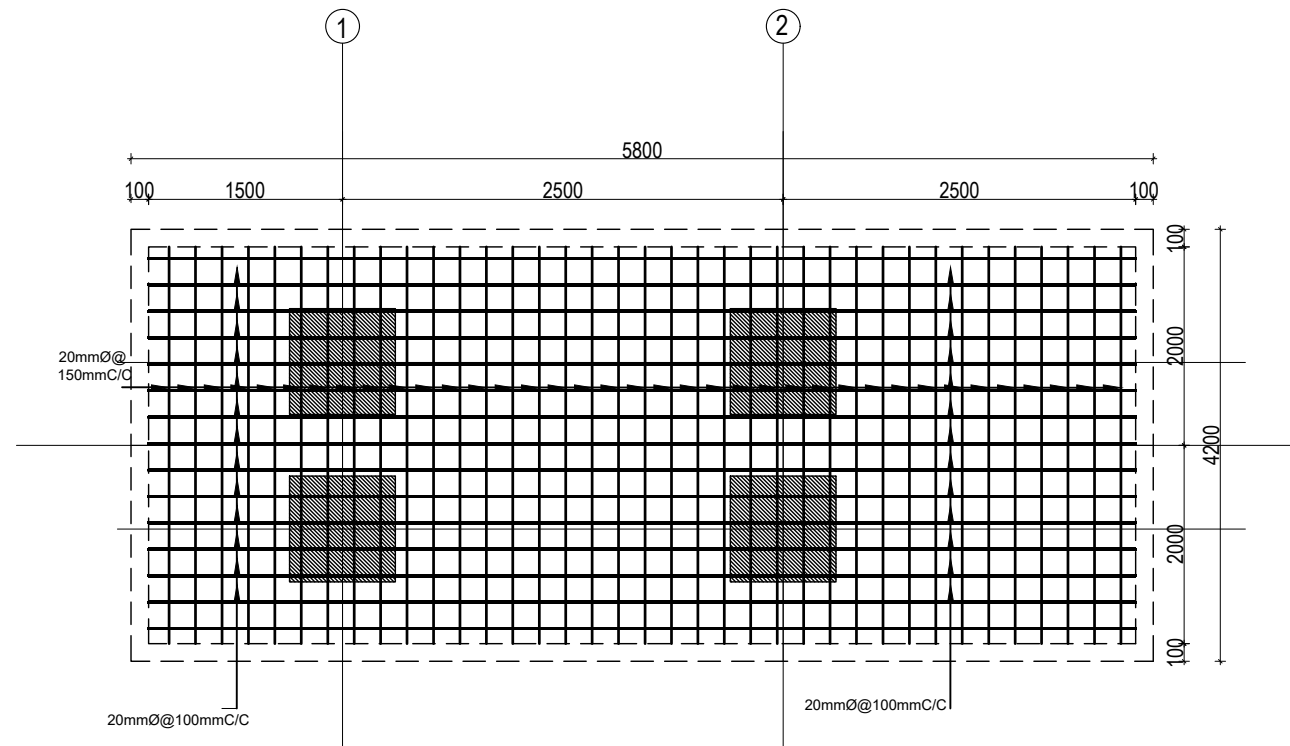


COMBINED FOOTING PLAN CF2
TOP REINFORCEMENT

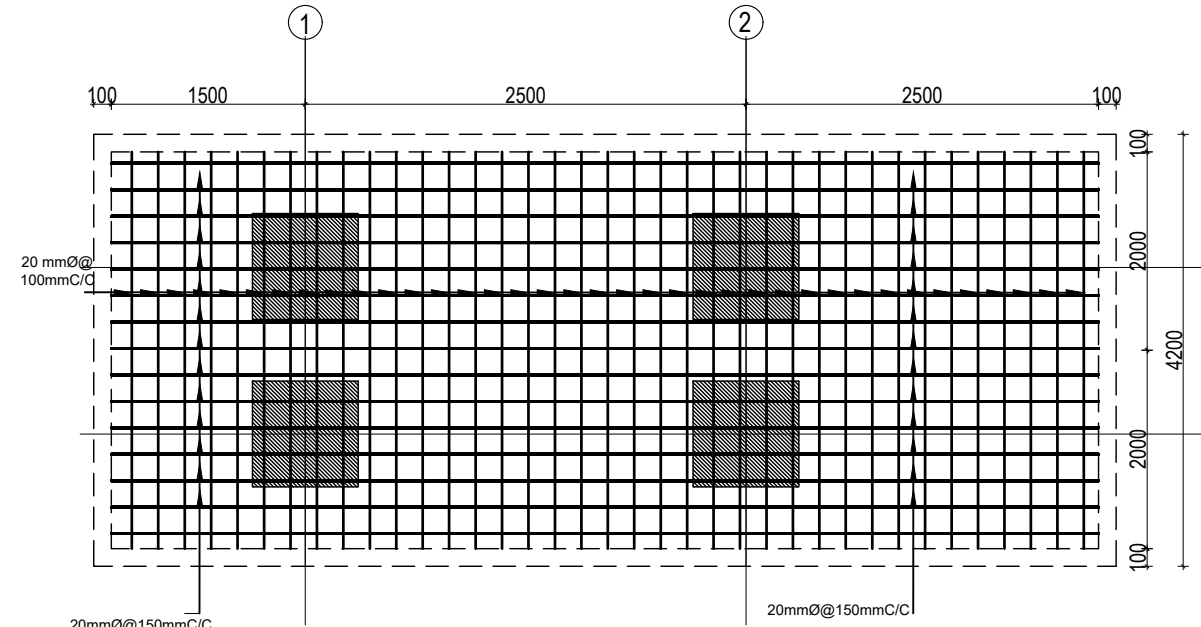


COMBINED FOOTING SECTION CF2

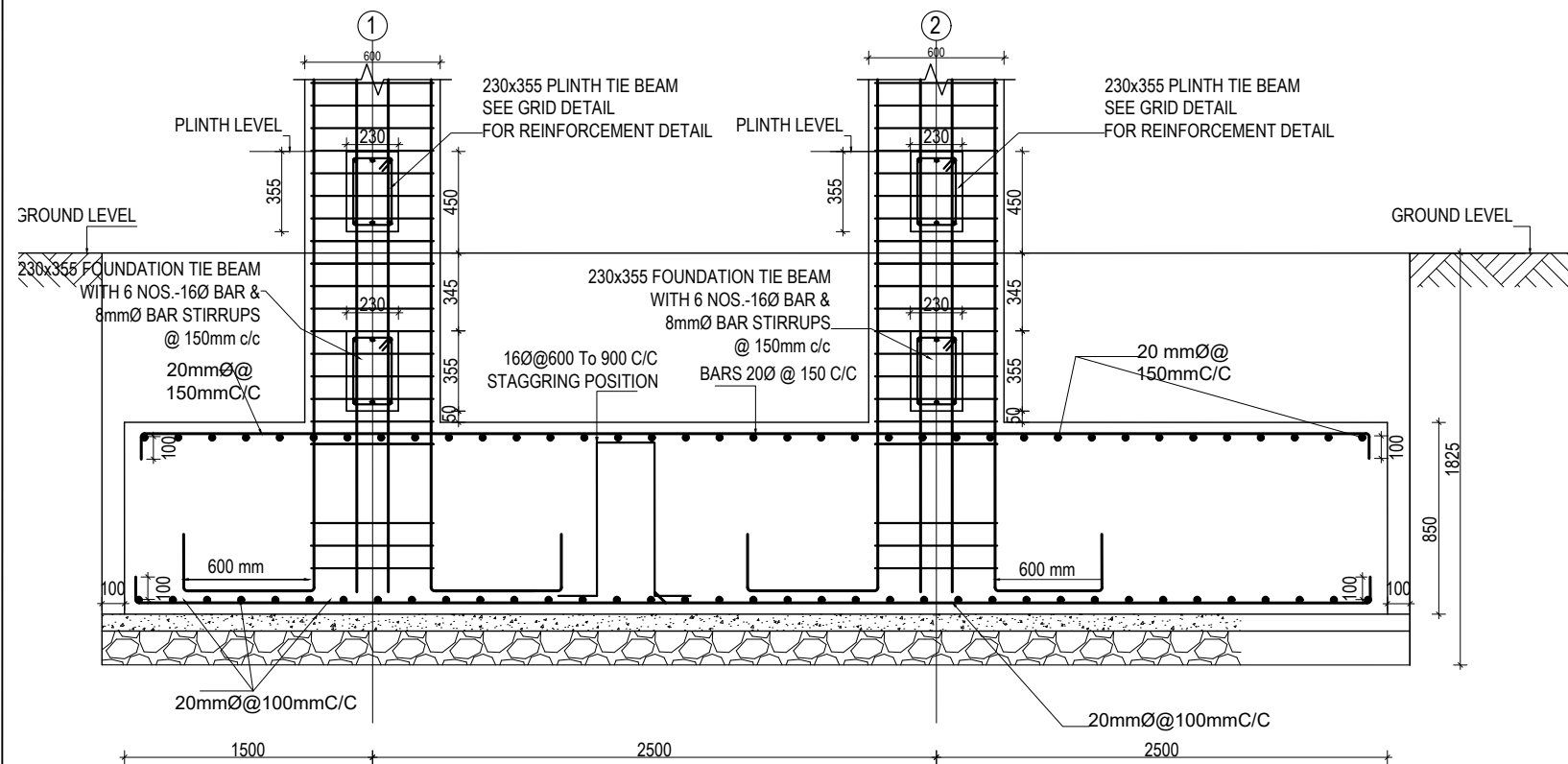
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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		DWG CODE. 3S12R-MOUNTAINOUS
					ARCHITECT:		CHECKED:		
					DRAWN : NEETA BHANDARI		APPROVED:		
					SCALE : 1: 120		PAPER SIZE : A3		
					DATE: FEBRUARY, 2023				



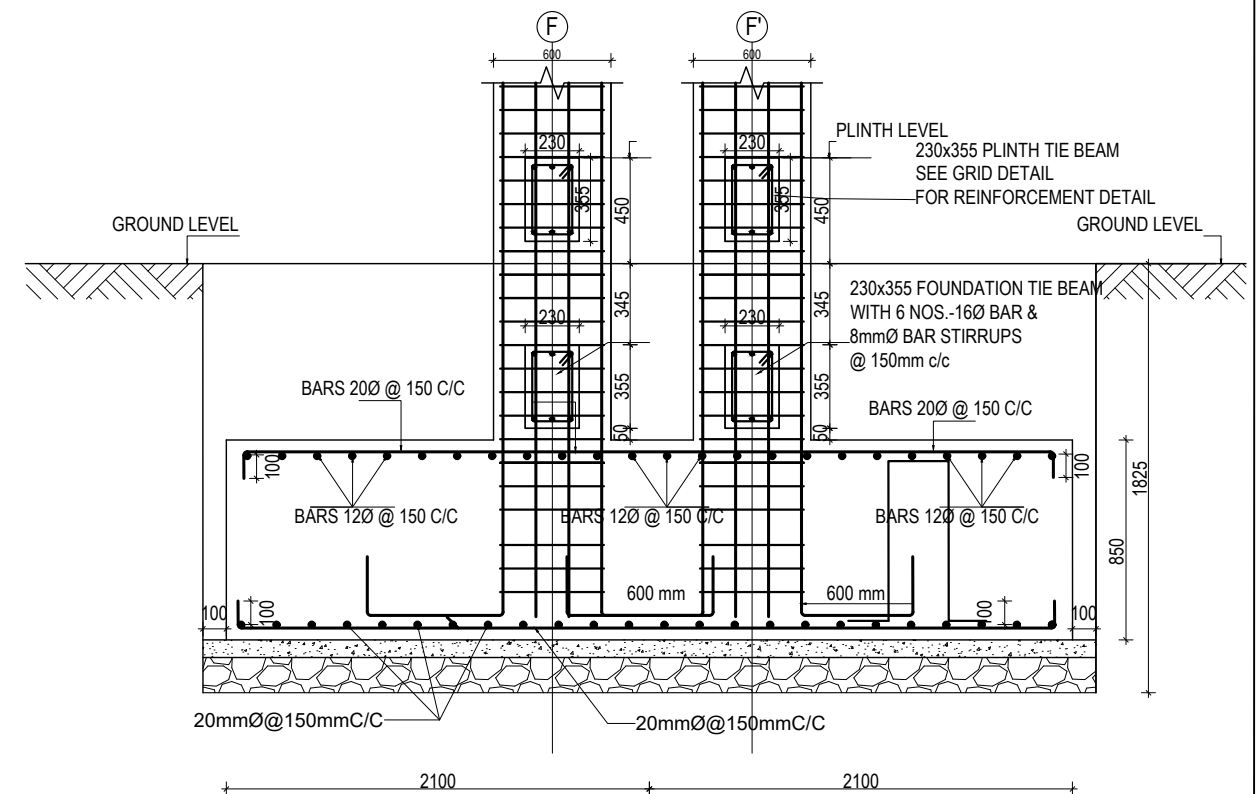
COMBINED FOOTING PLAN CF3
BOTTOM REINFORCEMENT




COMBINED FOOTING PLAN CF3
TOP REINFORCEMENT

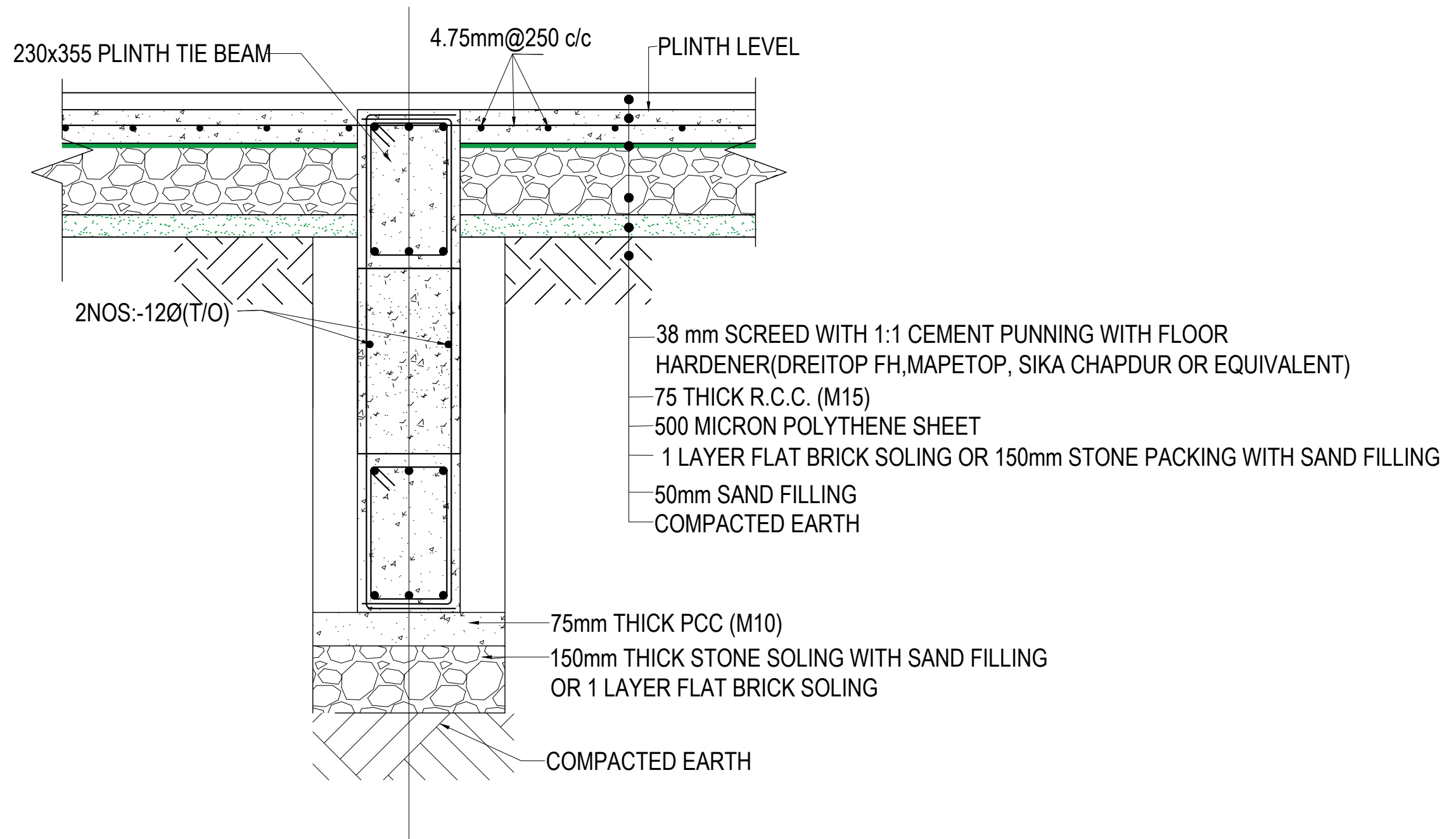


COMBINED FOOTING SECTION CF3 (L-SECTION)




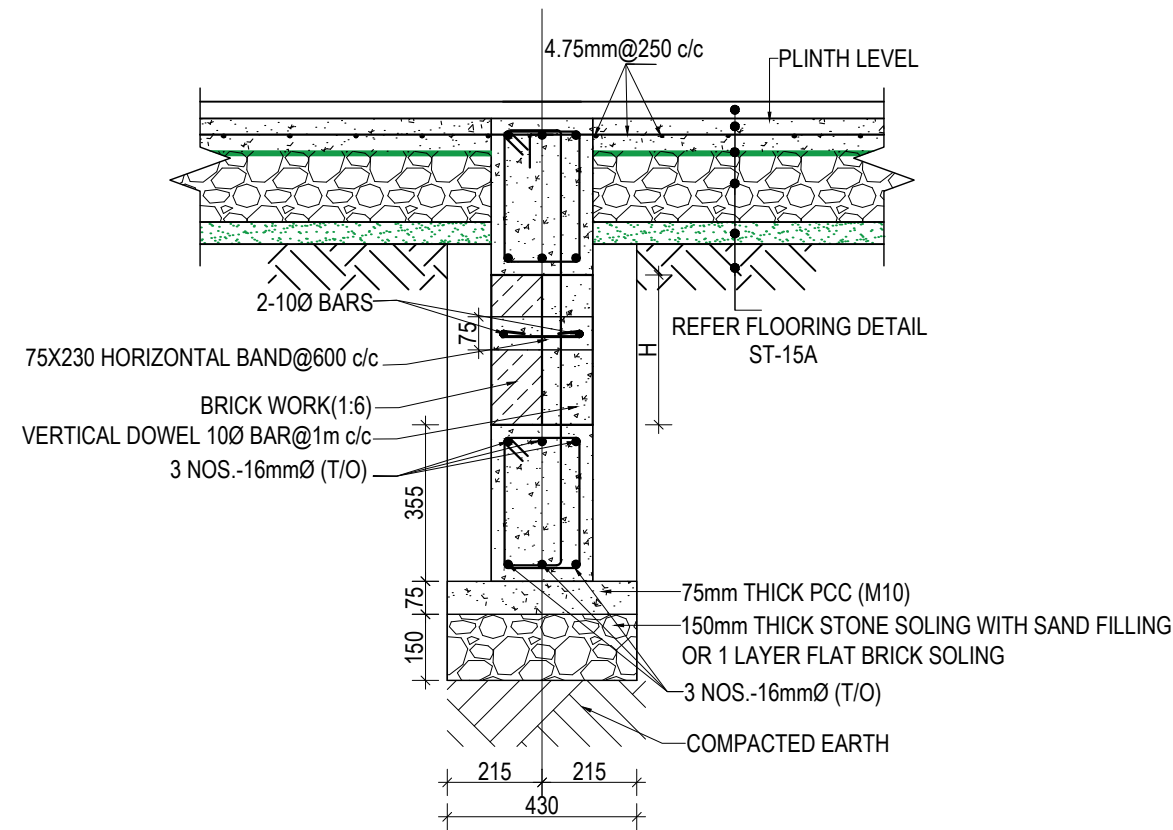
COMBINED FOOTING SECTION CF3 (X-SECTION)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-06	R-00
					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3		
							DWG CODE. 3S12R-MOUNTAINOUS	



TYPICAL FLOORING DETAIL FF1
(Scale= 1:10)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TYPICAL FLOORING DETAIL	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-07	R-00
					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	
						DWG CODE. 3S12R-MOUNTAINOUS		



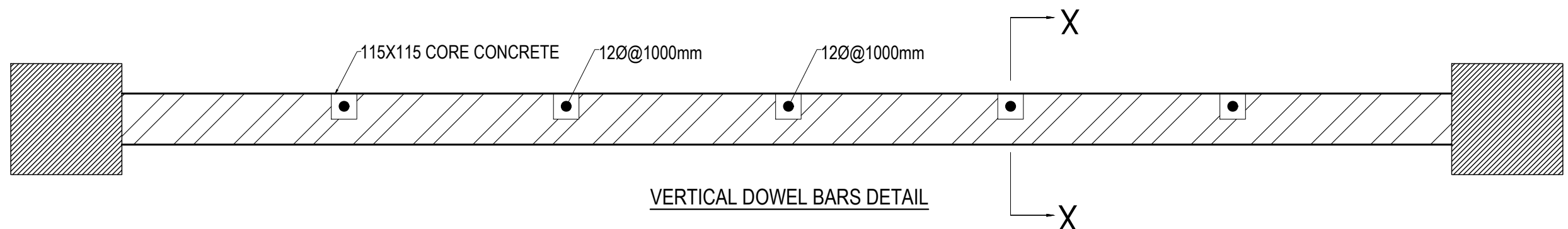
WALL DETAIL FOR DEPTH OF FOOTING MORE THAN 1500 mm

SECTION AT X-X


NOTES:-

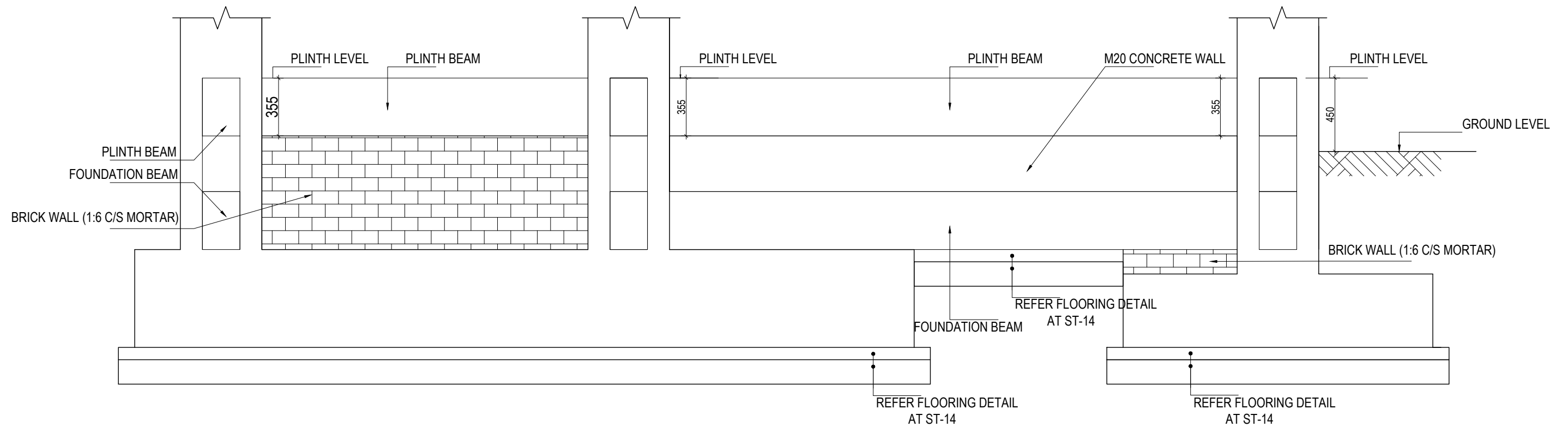
1) BRICK WALL IS USED IF WALL IS CONFINED BY SOIL ON BOTH SIDES

2) IF THE HEIGHT OF THE BRICK WALL EXCEEDS 1800 mm ADDITIONAL BEAM SHALL BE PROVIDED OF SAME SIZE OF FOUNDATION BEAM (SAME REINFORCEMENT TO BE USED)




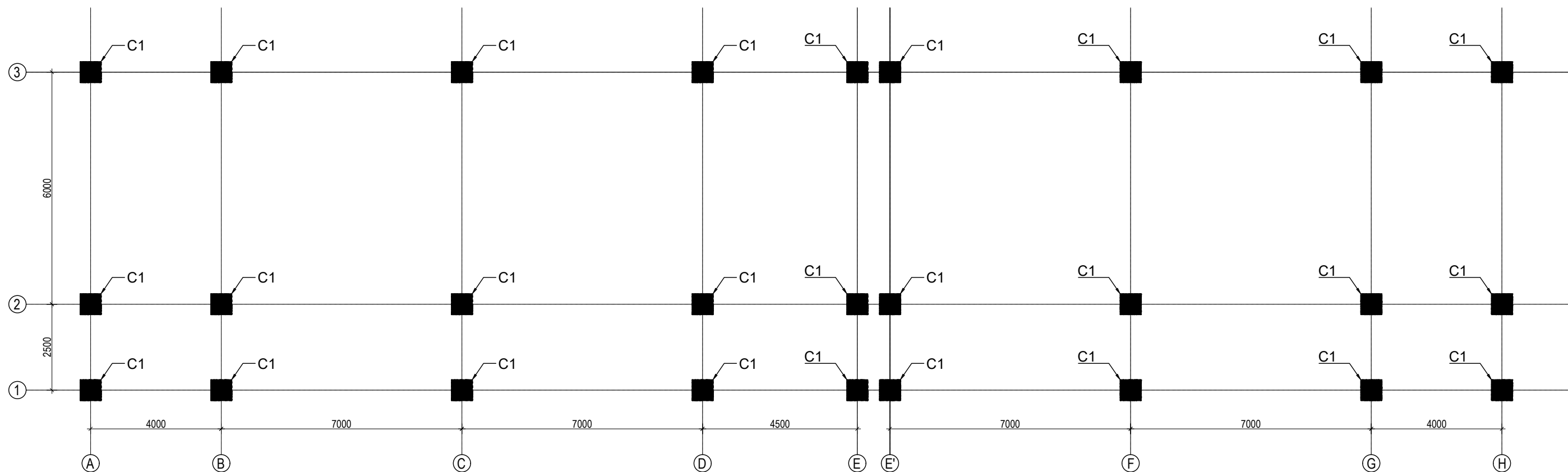
VERTICAL DOWEL BARS DETAIL

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	SITE SPECIFIC DRAWING	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-08	R-00
					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:	DWG CODE. 3S12R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3		



TYPICAL DETAIL OF FOUNDATION WALL


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TYPICAL DETAIL OF FOUNDATION WALL	SAGE ENGINEERING CONSULTANTS Nepal	ENGINEER:		ST-09	R-00
					ARCHITECT:		DWG CODE. 3S12R-MOUNTAINOUS	
					DRAWN : NEETA BHANDARI			
					SCALE : 1: 120 PAPER SIZE : A3			
					DATE: FEBRUARY, 2023			

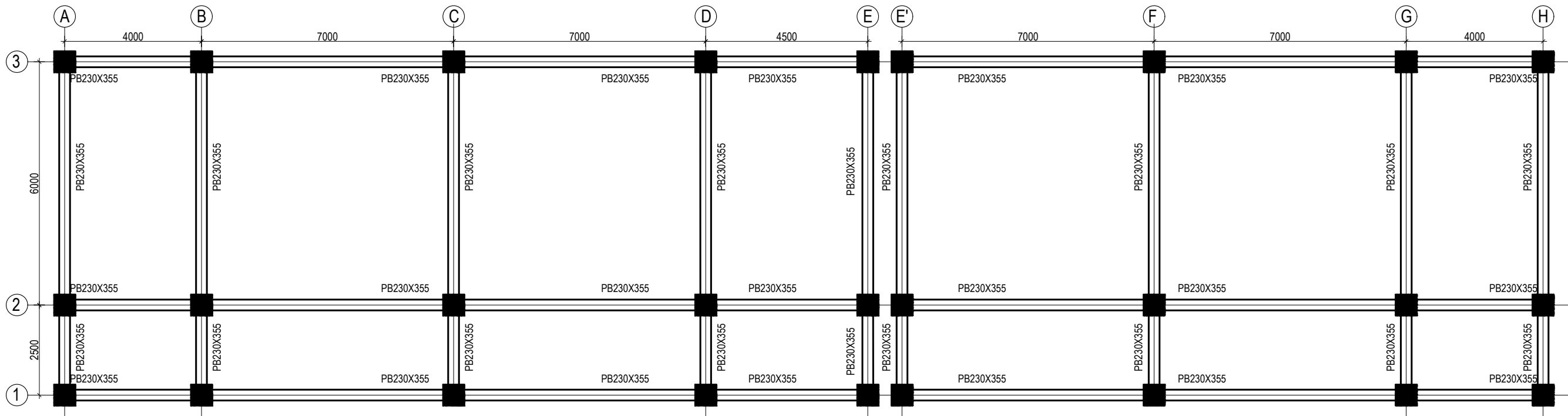


GROUND FLOOR COLUMN LAYOUT PLAN
(SCALE 1:100)


COLUMN REINFORCEMENT DETAILS

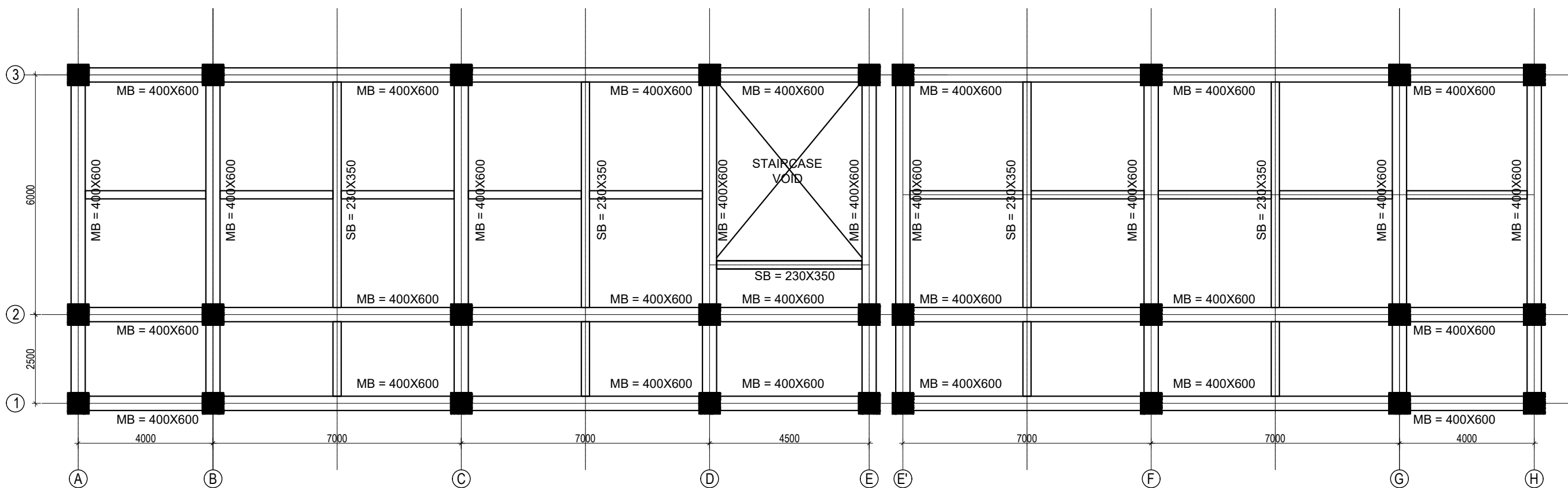
S. NO.	COLUMN	COLUMN SIZE	FLOOR					TIE BAR ORIENTATION
			GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	TOP FLOOR	
1	C1	600X600						

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-10	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	COLUMN DETAIL	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN : NEETA BHANDARI		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE. 3S12R-MOUNTAINOUS	




PLINTH BEAM LAYOUT PLAN
(Scale= 1:100)
LVL:- PL+0000

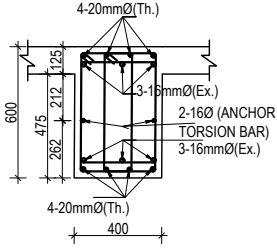
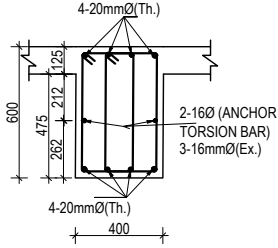
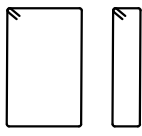
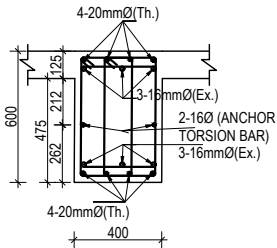
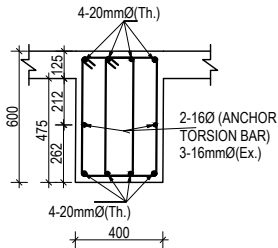
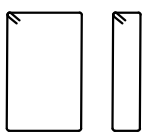
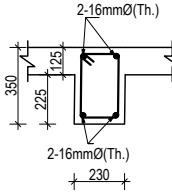
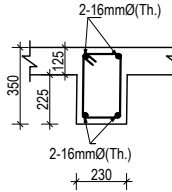

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.		
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	BEAM LAYOUT PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-11	R-00		
					ARCHITECT:	CHECKED:				
					DRAWN : NEETA BHANDARI		APPROVED:		DWG CODE. 3S12R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023			




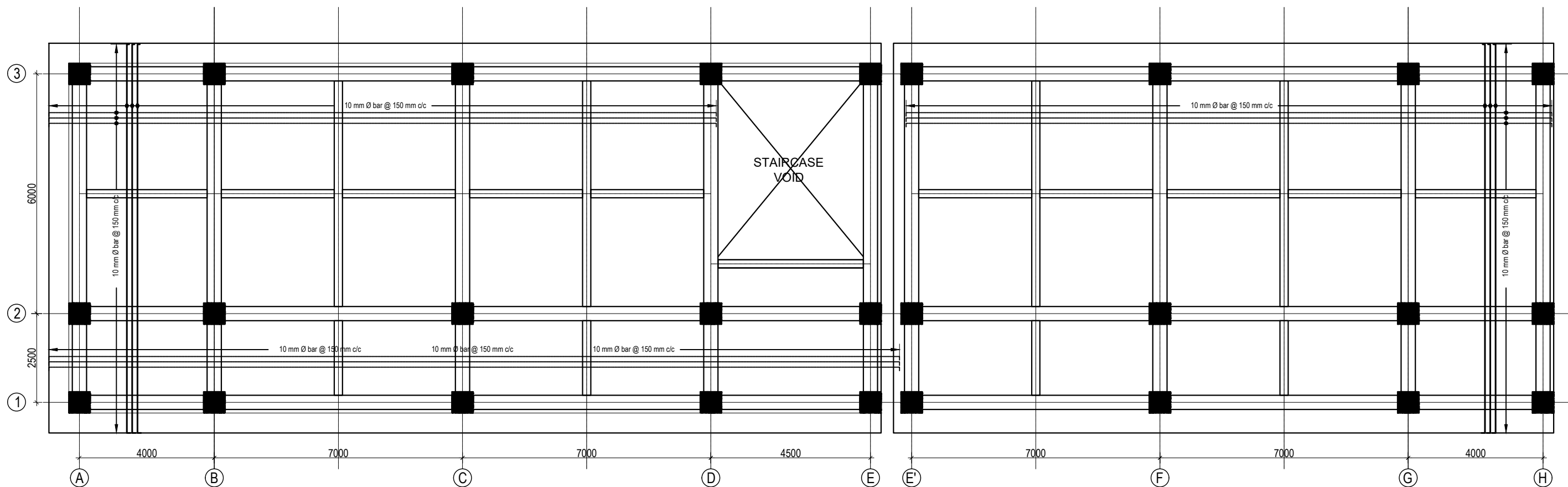
BEAM LAYOUT PLAN (FIRST, SECOND AND THIRD FLOOR)
(Scale= 1:100)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-12	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	BEAM LAYOUT PLAN	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3		

COLUMN REINFORCEMENT DETAILS

S. NO.	GRID	BEAM SIZE	AT SUPPORT	AT MID	STIRRUPS BAR ORIENTATION	FLOOR LVL
1	1-1 2-2 3-3	400X600				FIRST FLOOR BEAMS SECOND FLOOR BEAMS
2	A-A B-B C-C D-D E-E	400X600				REMAINING FLOOR BEAMS
3	Sec. beam	230X350				ALL FLOOR BEAMS

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-13	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	BEAM DETAIL	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN : NEETA BHANDARI		APPROVED:	
					SCALE : 1: 120		PAPER SIZE : A3	
DATE: FEBRUARY, 2023								
						DWG CODE. 3S12R-MOUNTAINOUS		




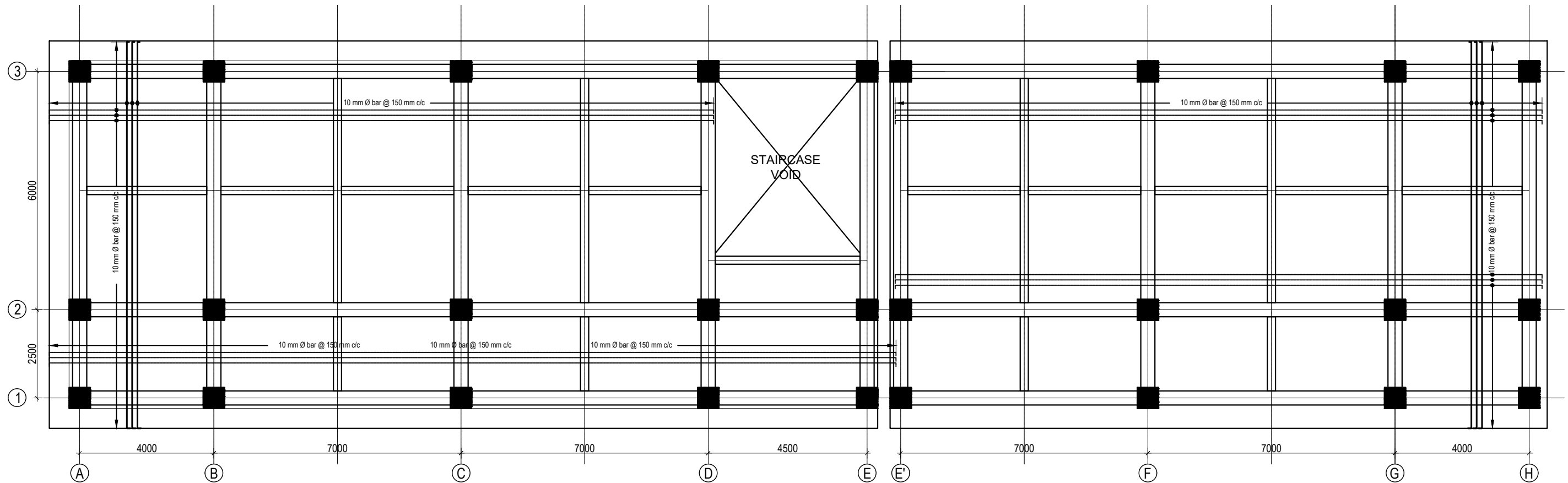
SLAB REINFORCEMENT DETAIL FOR TOP BARS

(GROUND, FIRST, SECOND AND THIRD FLOOR)

TOP REINFORCEMENT: a. FOR MAIN BEAM :10Ø@150 mm c/c
b. FOR SECONDARY BEAM :10Ø@200 mm c/c
(Scale= 1:120)

125 mm SLAB THICKNESS


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-14	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	SLAB REINFORCEMENT DETAIL	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:		
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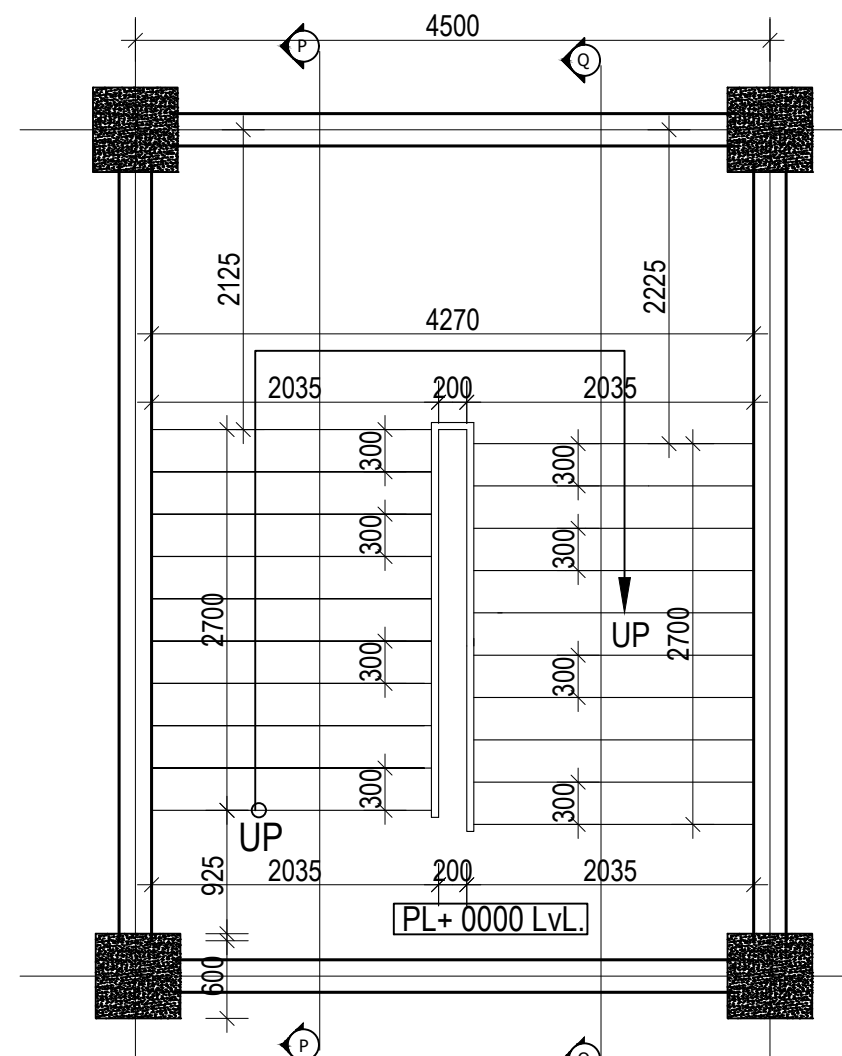


SLAB REINFORCEMENT DETAIL FOR BOTTOM BARS
(GROUND, FIRST, SECOND AND THIRD FLOOR)
BOTTOM REINFORCEMENT: 8Ø@150 mm c/c

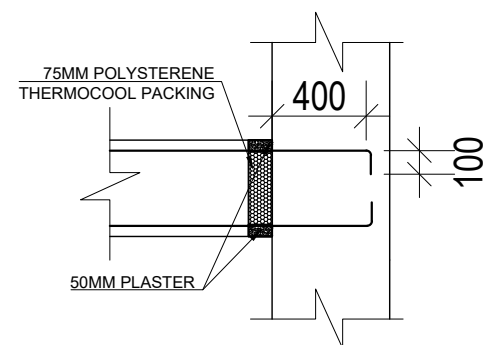
(Scale= 1:120)

125 mm SLAB THICKNESS

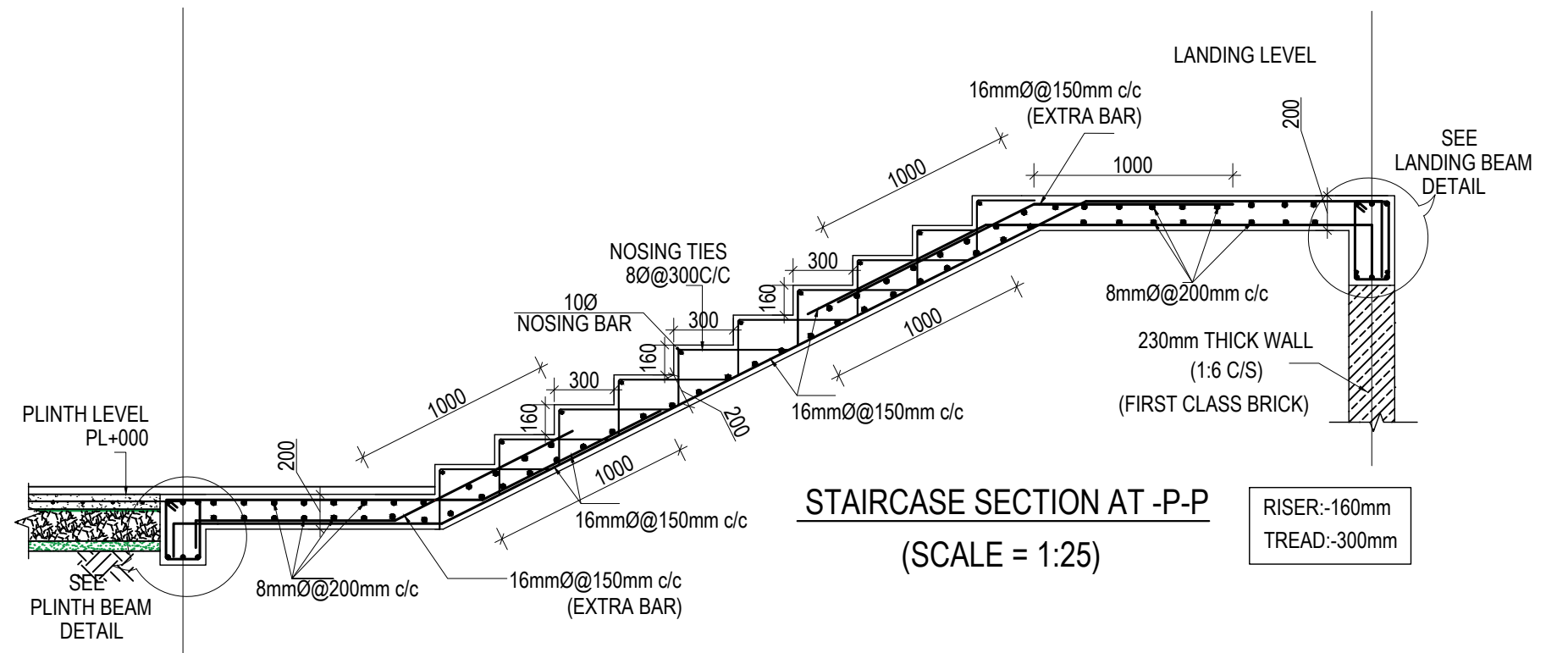
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					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3		



GROUND FLOOR STAIRCASE PLAN
(Scale= 1:50)

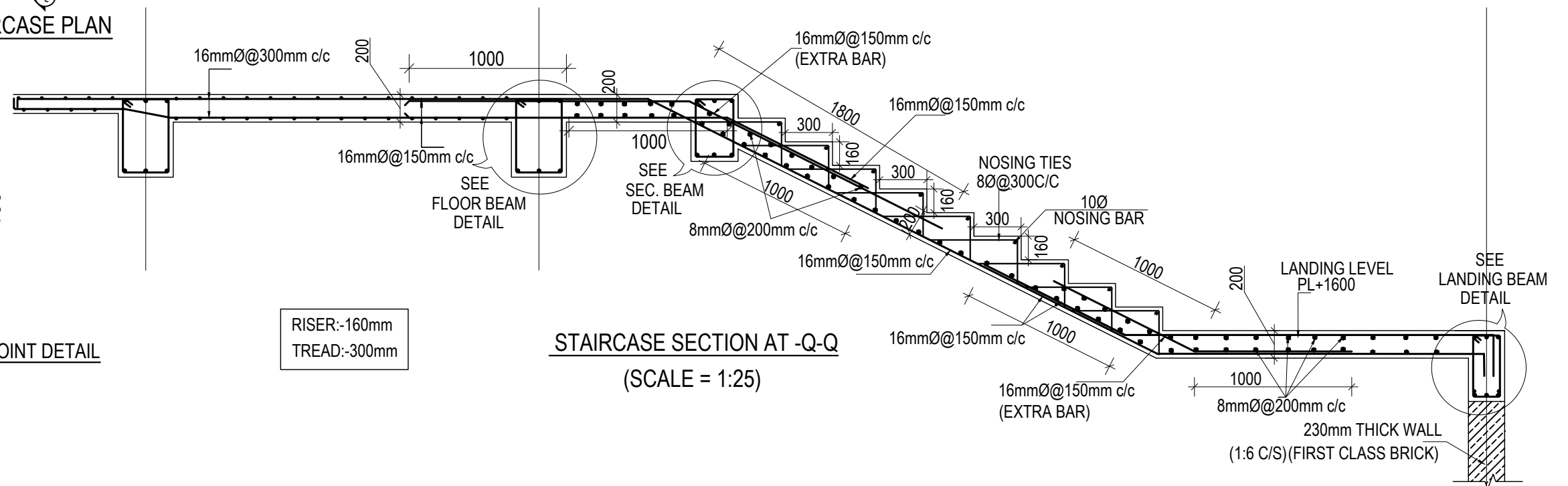


TYPICAL LANDING BEAM AND COLUMN JOINT DETAIL



STAIRCASE SECTION AT -P-P
(SCALE = 1:25)

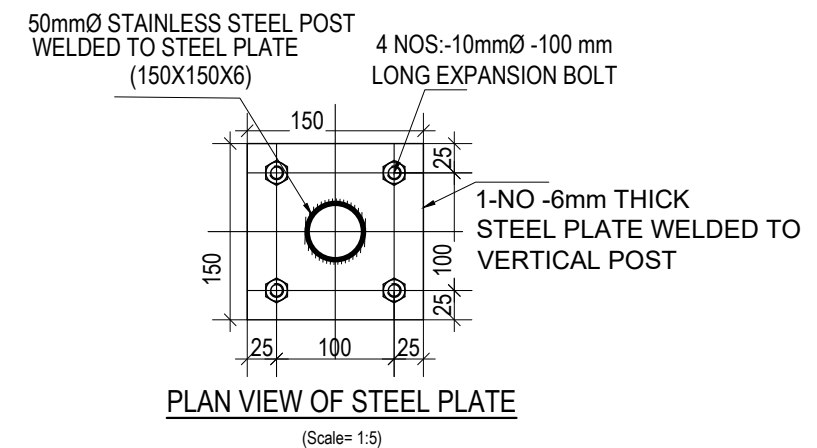
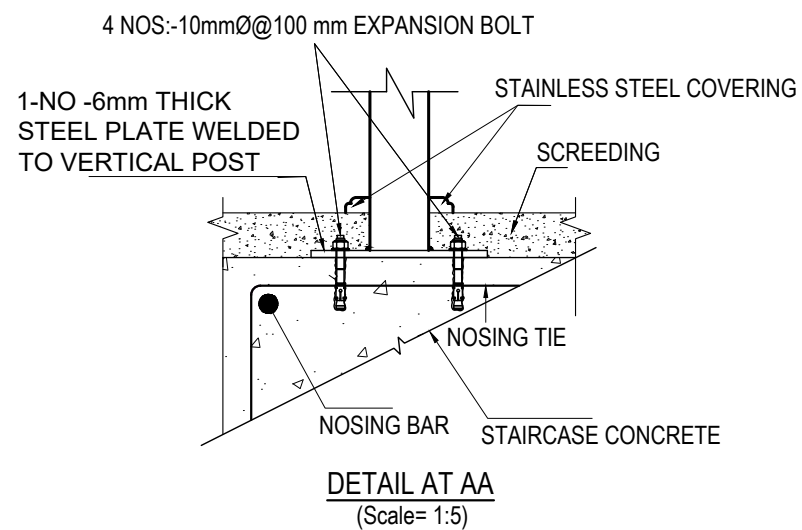
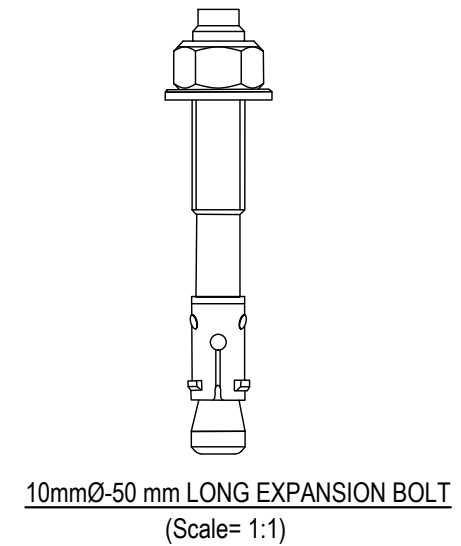
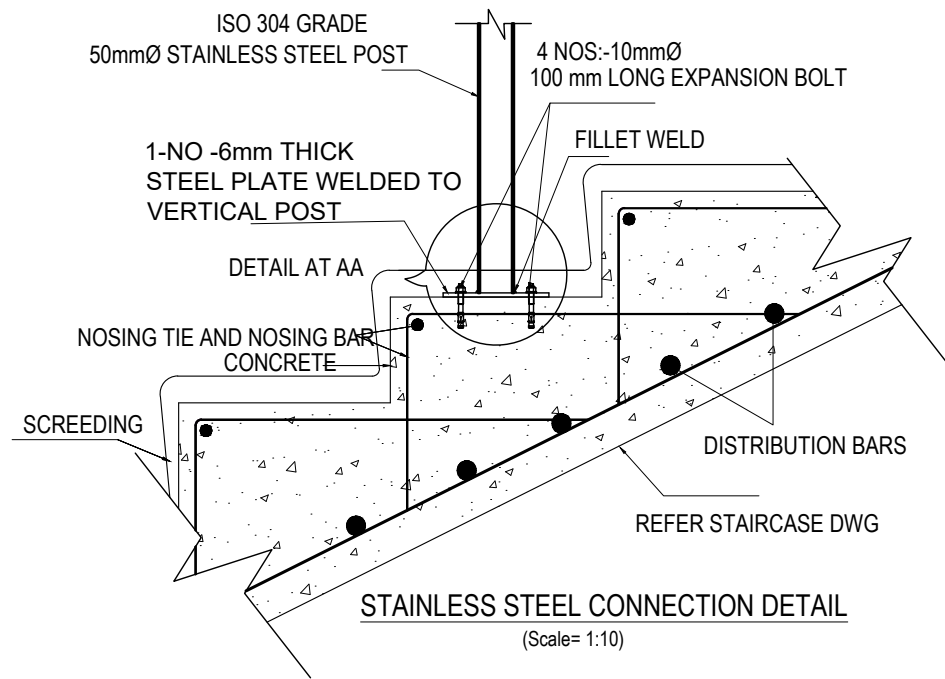
RISER:-160mm
TREAD:-300mm



STAIRCASE SECTION AT -Q-Q
(SCALE = 1:25)


RISER:-160mm
TREAD:-300mm

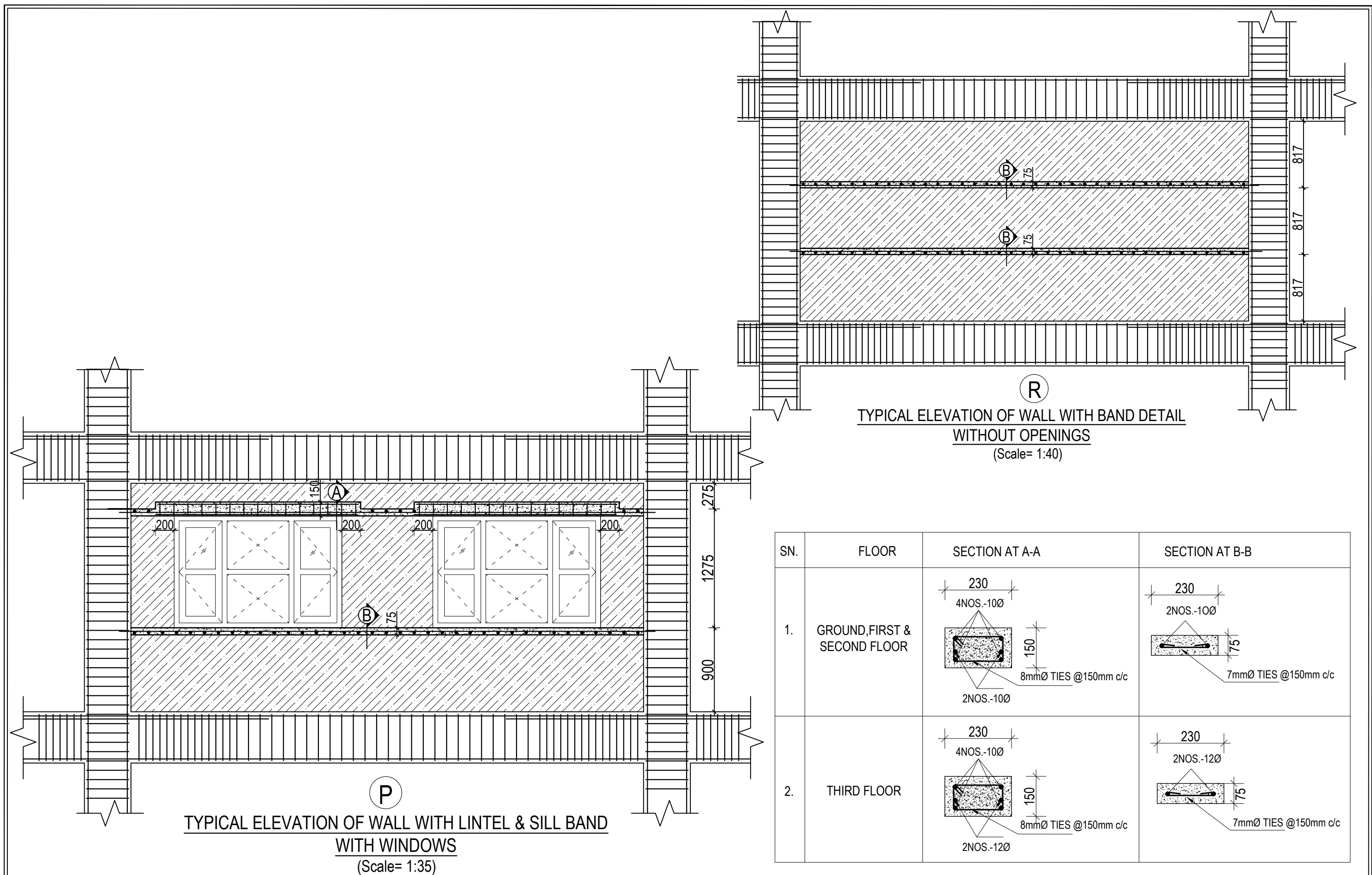
CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	STAIRCASE DETAIL	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-16	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S12R-MOUNTAINOUS	
				DRAWN : NEETA BHANDARI	APPROVED:		
				SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	




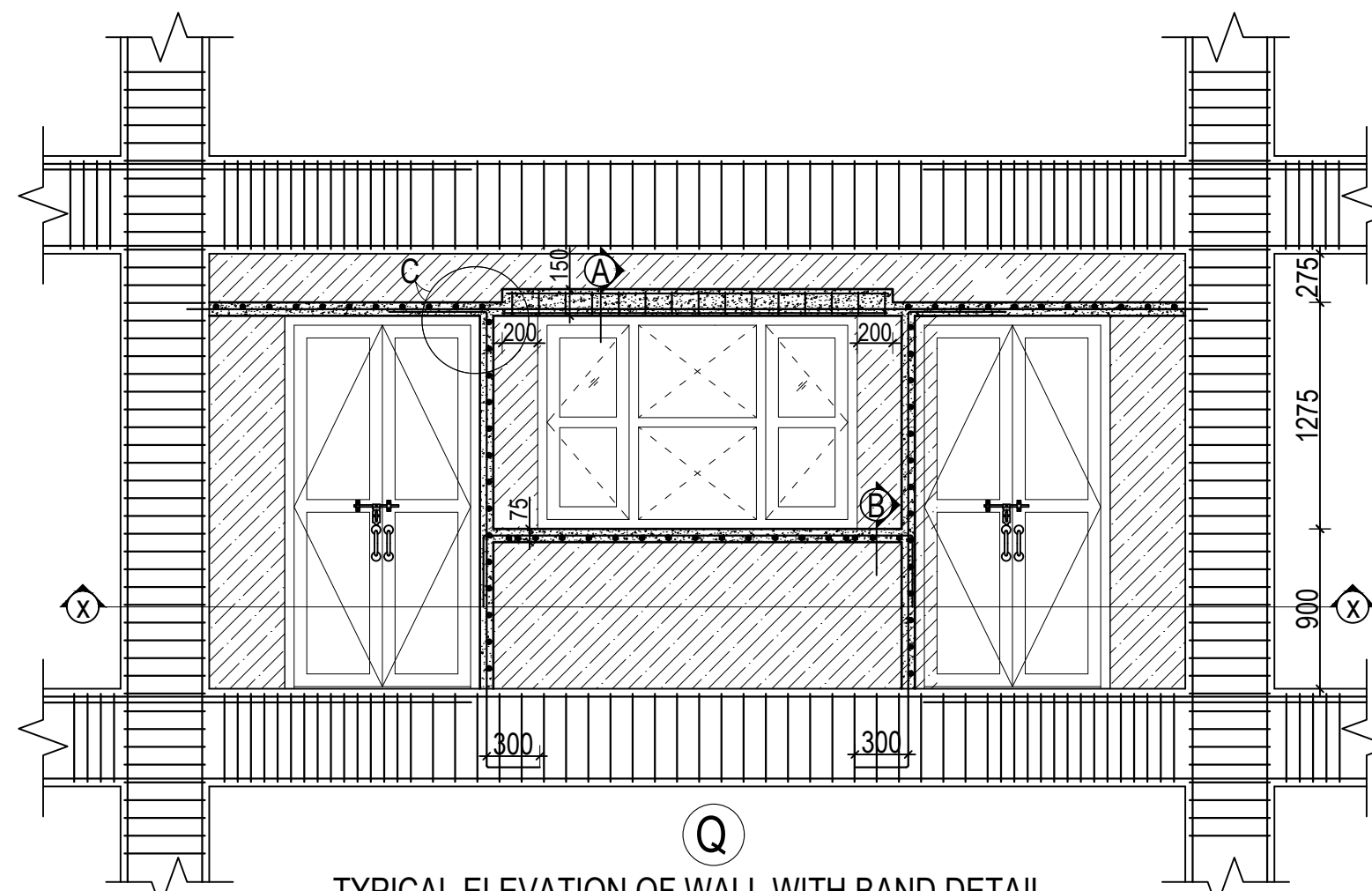
NOTE:

- 1) STAINLESS STEEL SHALL BE IN COMPLIANCE WITH ISO 304 GRADE
- 2) DRILLED HOLE SHALL BE PROPERLY CLEANED BEFORE EMBEDMENT OF BOLT

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	STAIRCASE DETAIL	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	ST-18	R-00
					ARCHITECT:	CHECKED:		
					DRAWN : NEETA BHANDARI	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3		
							DWG CODE. 3S12R-MOUNTAINOUS	

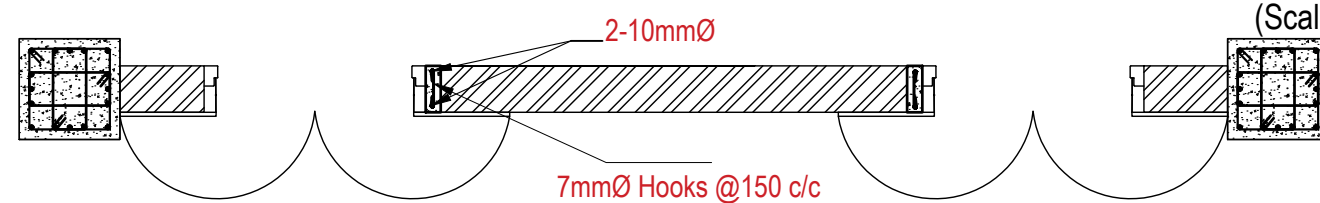


CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
 Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TYPICAL WALL DETAIL UPTO SECOND FLOOR	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER. :	ST-19	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S12R-MOUNTAINOUS	
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				SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	

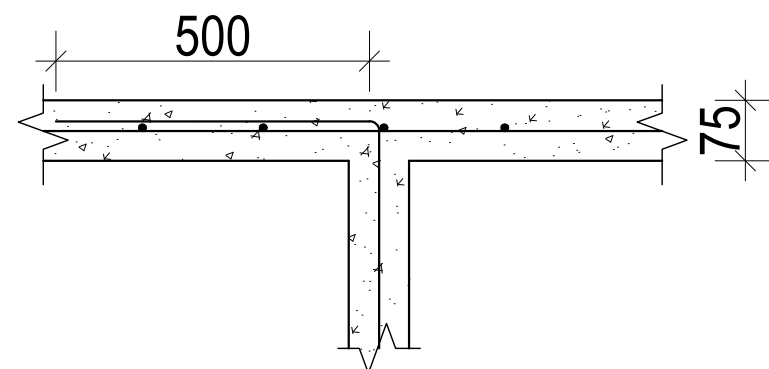


TYPICAL ELEVATION OF WALL WITH BAND DETAIL
WITH DOORS AND WINDOWS

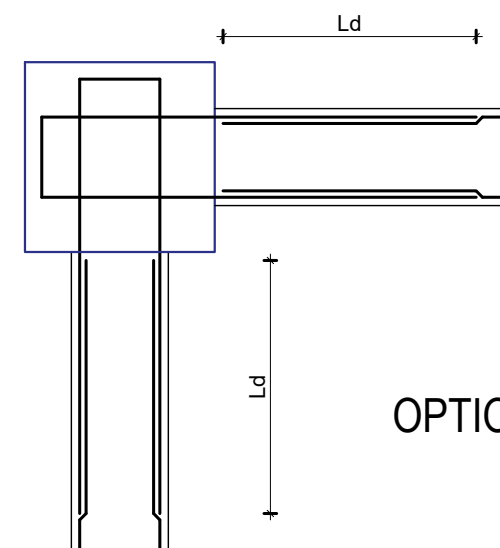
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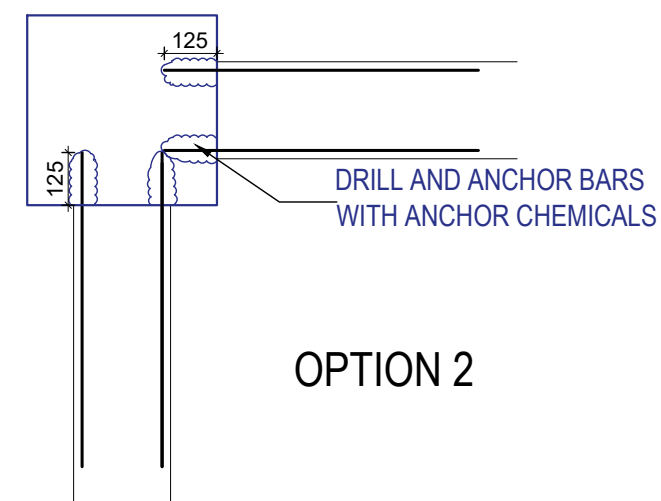
SECTION AT X-X



DETAIL AT C




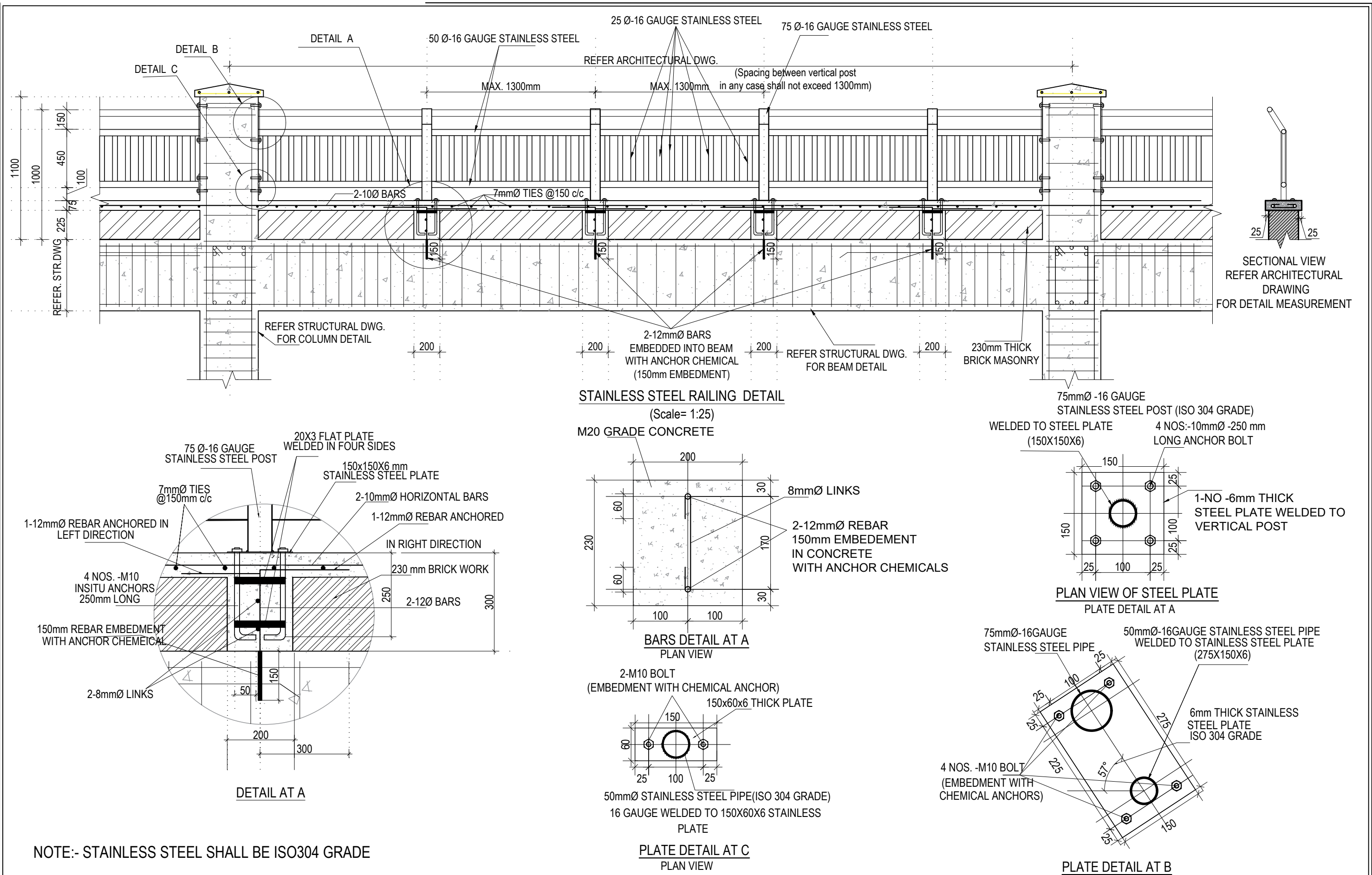
OPTION 1




OPTION 2

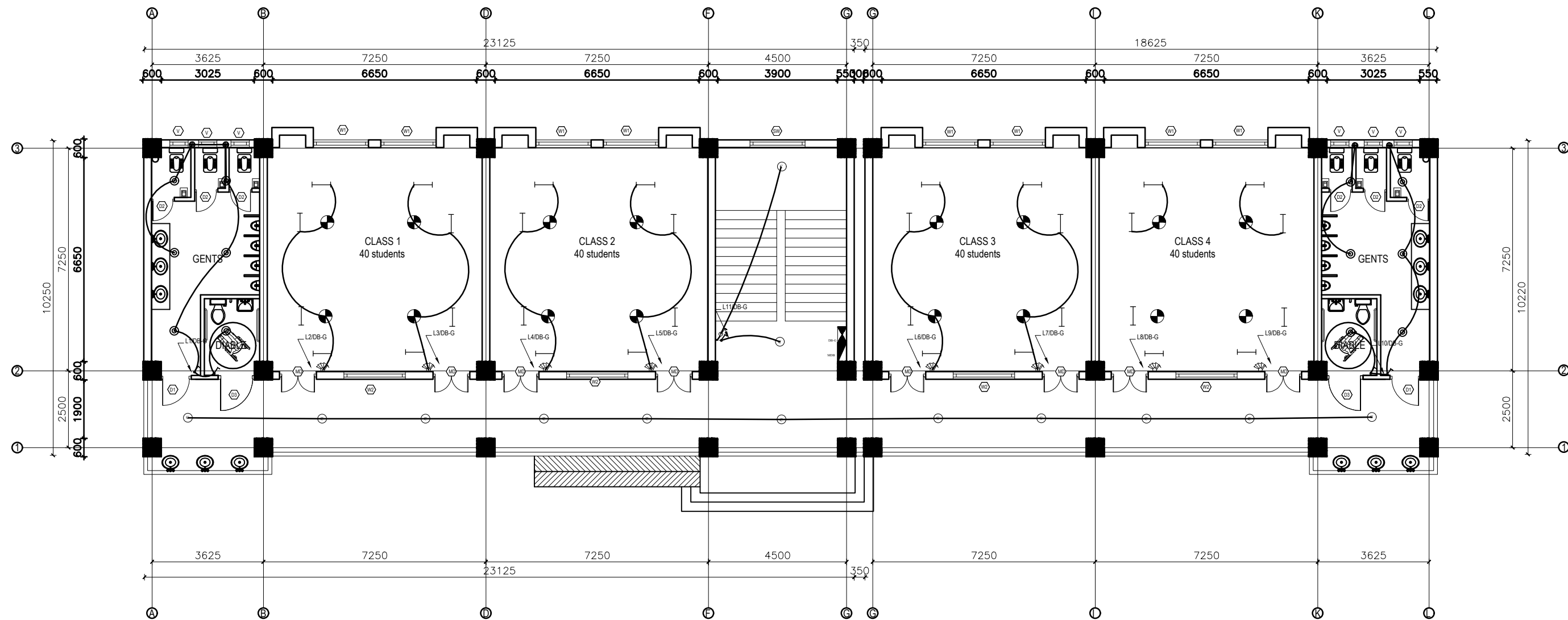
CONNECTION OF BAND REBARS AND COLUMN

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TYPICAL WALL DETAIL UPTO SECOND FLOOR	SAGE ENGINEERING CONSUTL Nepal	ENGINEER:	STRUCTURE ER. :	ST-20	R-00	
					ARCHITECT:	CHECKED:			
					DRAWN : NEETA BHANDARI		APPROVED:		DWG CODE. 3S12R-MOUNTAINOUS
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		



CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
 Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanathimi, Bhaktapur, Nepal	Prepare School Building Type Design Mountainous Region	TYPICAL RAILING DETAILS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:	STRUCTURE ER.:	ST-21	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S12R-MOUNTAINOUS	
				DRAWN : NEETA BHANDARI	APPROVED:		
				SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	


ELECTRICAL DRAWING

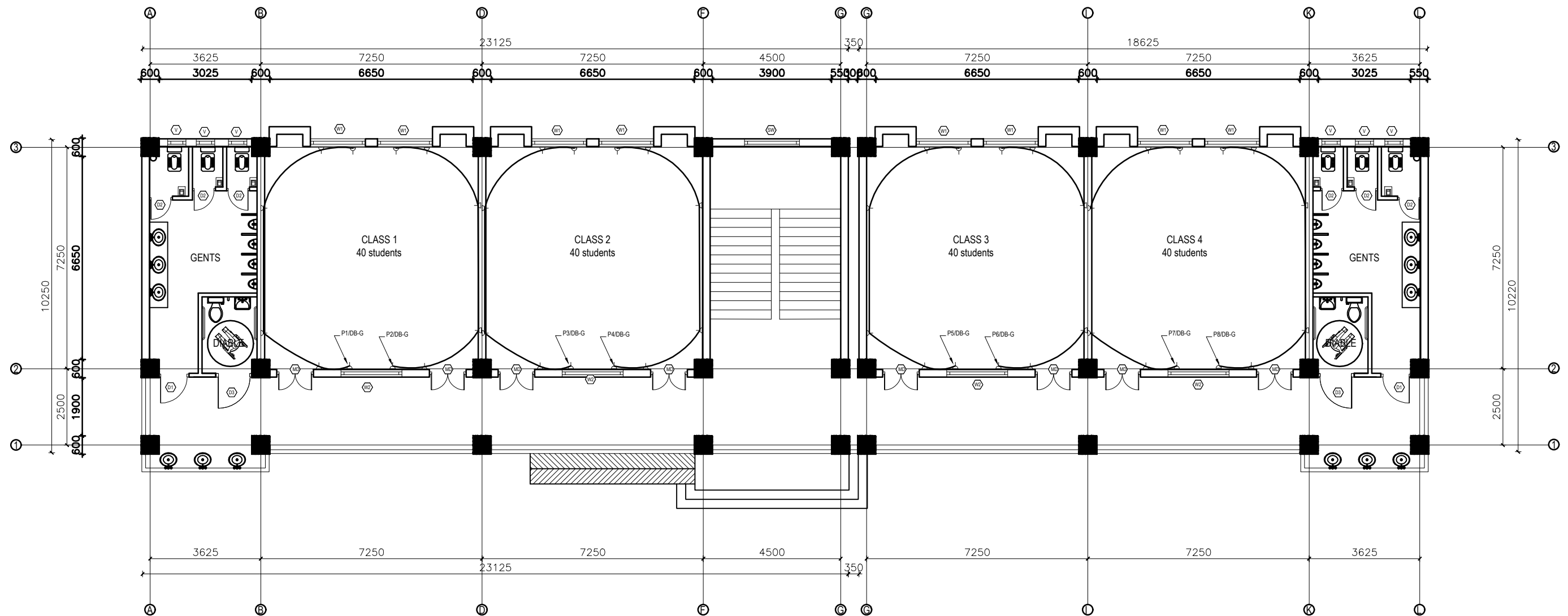


GROUND FLOOR PLAN
FLOOR AREA: 437.662 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB











EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 01	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
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					DRAWN :	APPROVED:		
					SCALE : 1:20	PAPER SIZE : A3		




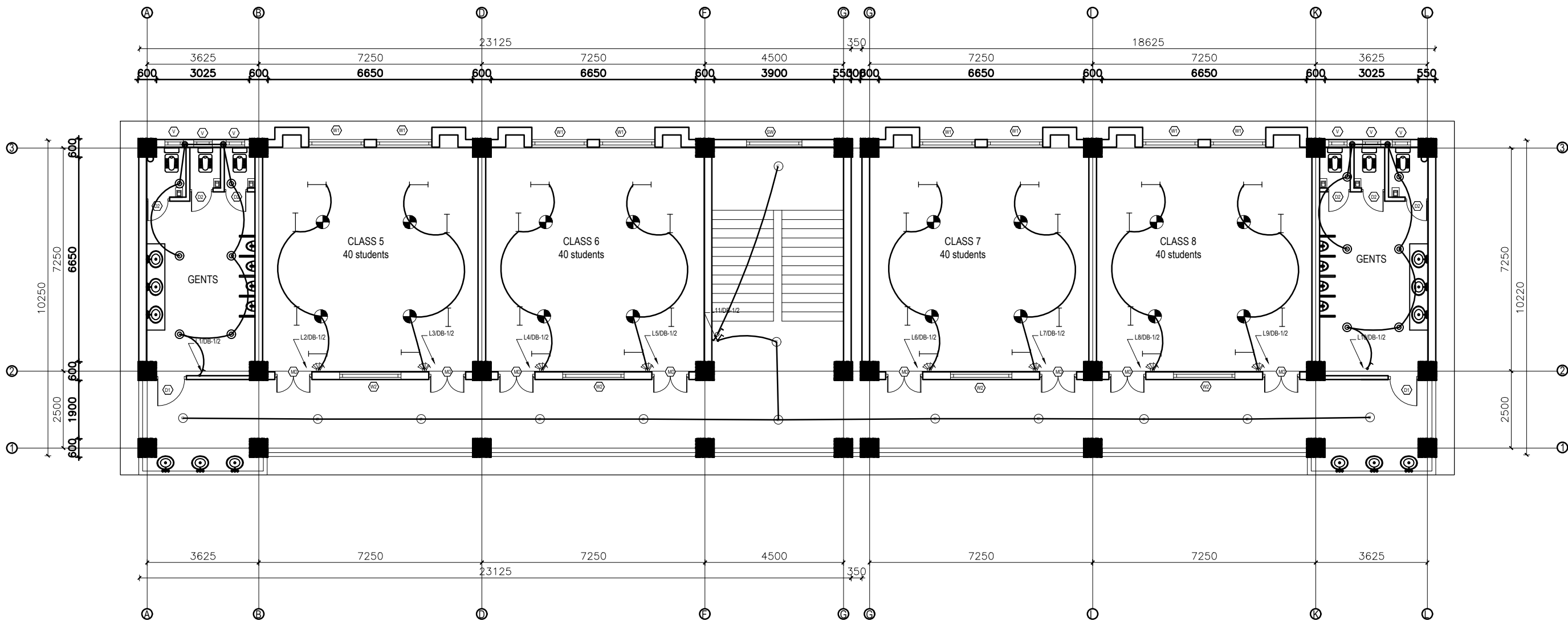
GROUND FLOOR PLAN

FLOOR AREA: 437.662 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12W CFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	-
	CLIP TO HOLD DOWN CONDUCTOR	-
	EARTH TEST LINK	-
	EARTH PIT	-

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 02	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
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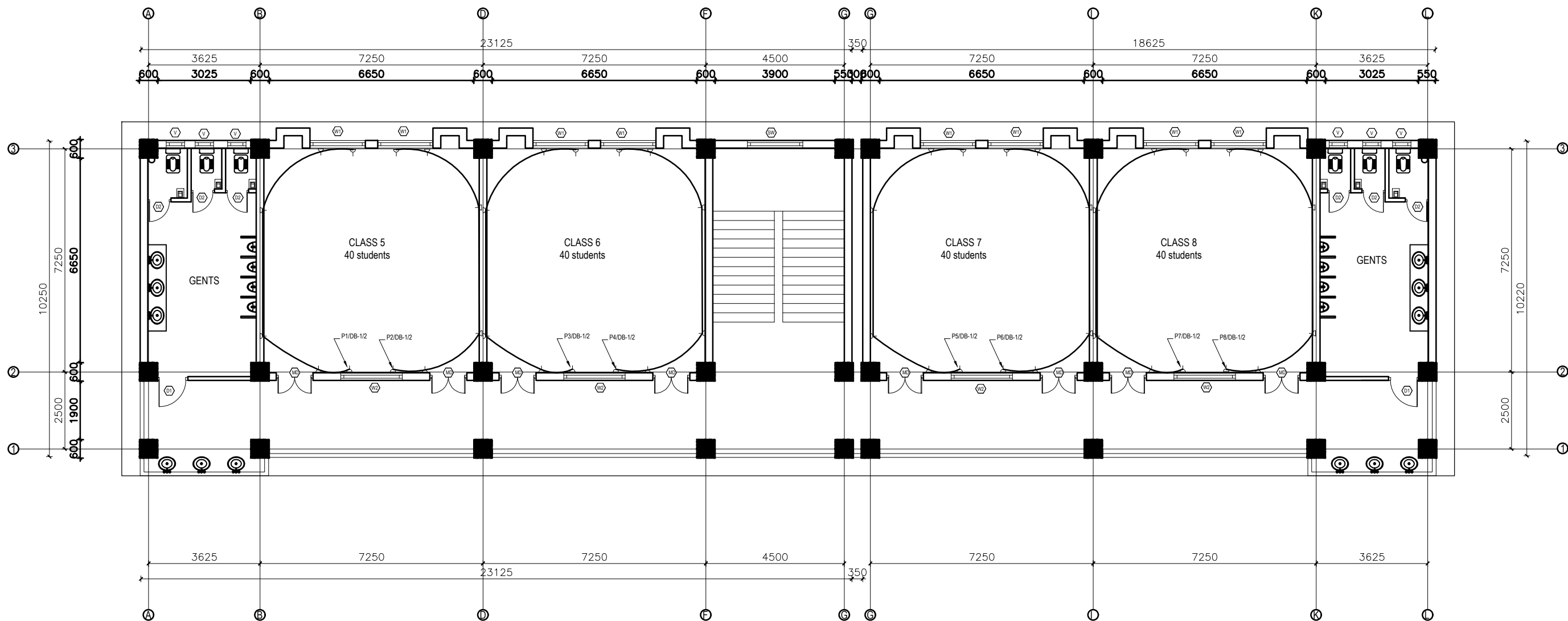
FIRST&SECOND FLOOR PLAN

FLOOR AREA: 437.662 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12W CFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 03	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : PAPER SIZE : A3	DATE: FEBRUARY, 2023		



FIRST&SECOND FLOOR PLAN

FLOOR AREA: 437.662 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12W CFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	-
	CLIP TO HOLD DOWN CONDUCTOR	-
	EARTH TEST LINK	-
	EARTH PIT	-

CLIENT



Government of Nepal
Ministry of Education, Science & Technology
Center for Education and Human Resource Development
Sanothimi, Bhaktapur, Nepal

PROJECT TITLE

Prepare School Building Type Design for
Terai and Valley Region

SHEET TITLE

ELECTRICAL DRAWING

CONSULTANT

IDEAL SOLUTION PVT.LTD.

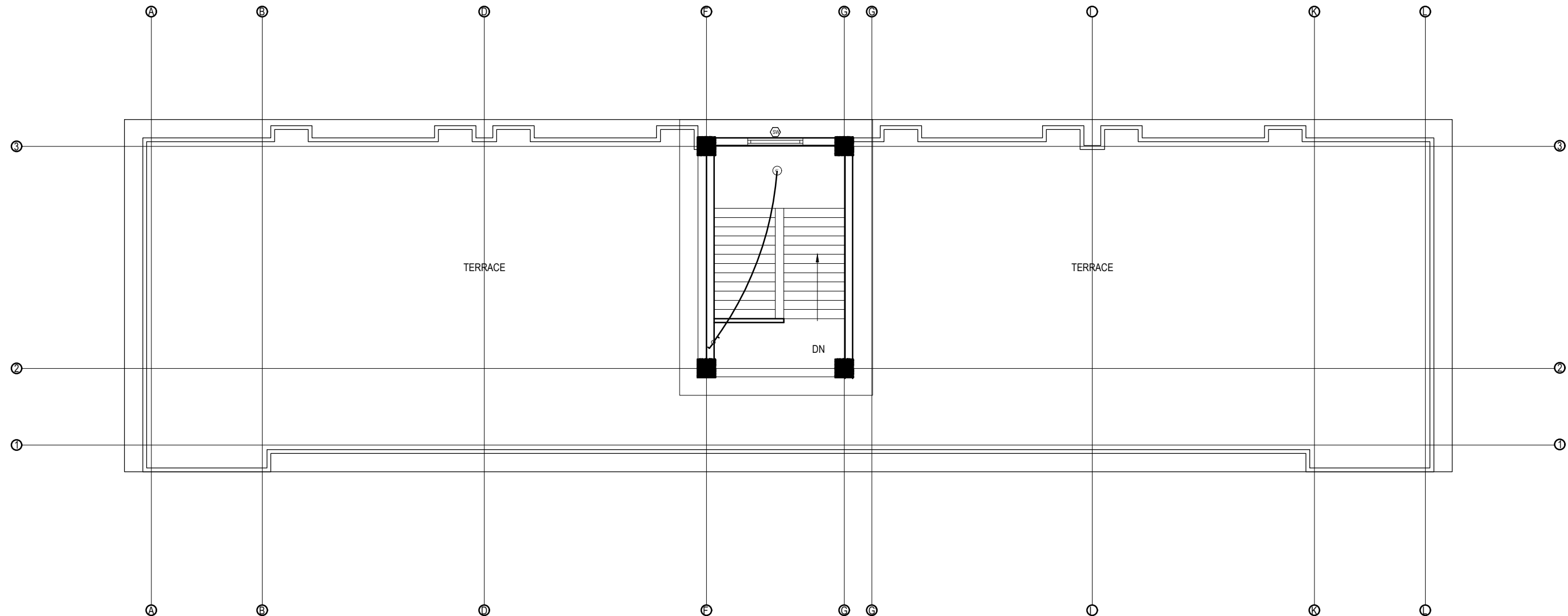
PLANNING DESIGN TEAM

ENGINEER: _____
ARCHITECT: _____
DRAWN : _____
SCALE : _____ PAPER SIZE : A3
STRUCTURE ER. : _____
CHECKED: _____
APPROVED: _____
DATE: FEBRUARY, 2023

SHEET NO.
04

REVISION NO.
R-00


DWG CODE.
3S12R



TOP FLOOR PLAN
FLOOR AREA: 39.39 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12W CFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 05	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1:20	PAPER SIZE : A3		

INSTALLATION CONSIDERATION

- * The switch box should be at 200mm from the door and 1250mm above floor.
- * General room socket height should be at 150mm above skirting wall.
- * Kitchen socket height should be at 450mm above kitchen top.
- * Toilet socket/switch should be at 1250mm above floor level and mirror light at 50 mm above mirror as per mirror size.
- * Exhaust fan should be at 600mm below slab.
- * Wall Light should be at 2100mm from floor level.

CONDUIT SCHEDULE

CABLE SIZES	NO OF MAXIMUM CABLE AND PVC FRLS CONDUIT SIZES					
	16 mm Dia.	20 mm Dia.	25 mm Dia.	32 mm Dia.	40 mm Dia.	50 mm Dia.
1.5 SQ. MM/Equivalent	5	7	10	14	---	---
2.5 SQ. MM/Equivalent	3	5	8	12	---	---
4.0 SQ. MM/Equivalent	---	3	6	10	12	---
6.0 SQ. MM/Equivalent	---	2	4	8	9	---
10 SQ. MM/Equivalent	---	---	3	6	8	---
16 SQ. MM/Equivalent	---	---	2	3	4	8

CONVERSION TABLE

INCHES	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
mm	16	20	25	32	40	50	65	80	90	100	130	150

- * Unless and otherwise stated, all final circuits shall be wired with multistranded CU wires in PVC Conduit and shall confirm to the following schedule:

WIRING SYSTEM

Air Conditioner/Heater/Range/Appliances
RJ -- 45 Data / TV Point
RJ --11 Telecommunication point
Telephone Point
Outdoor Gate/ Post Top/Street Lights/Flood Lights
6 Amp switched outlet sockets
16 Amp Power Sockets Points
General Light Points (From DB to Switch Board)
Looping of Light Points

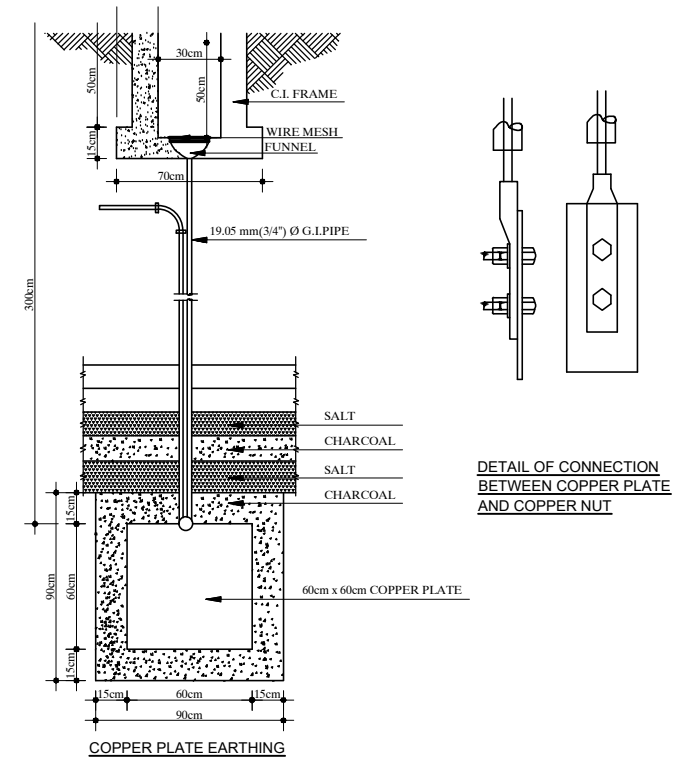
CABLE/CONDUCTOR SIZE

2x4.0 + 1x2.5 sq. mm copper wire
CAT 6 4 pairs Data cable
CAT 6 4 pairs Data cable
0.5mm dia PVC Insulated Tinned Cu Cable
3 x 2.5 sq. mm copper M/S wire
2x2.5 + 1x1.5 sq. mm copper M/S wire
2x4.0 + 1x2.5 sq. mm copper M/S wire
2x2.5 + 1x1.5 sq. mm copper M/S wire
2x1.5 + 1x1.0 sq. mm copper M/S wire

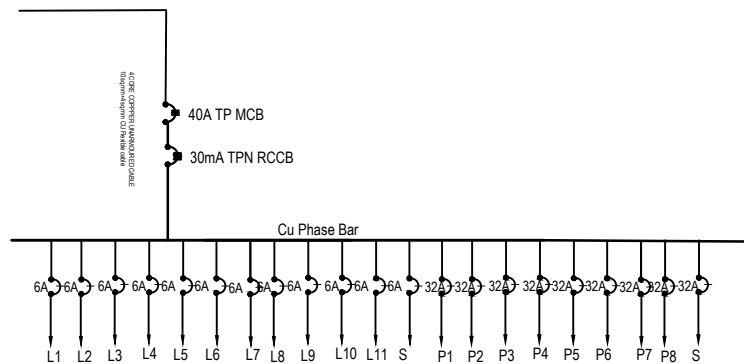
NOTE

- * Conduit Colors for Light/Power Circuit shall be Black, Security Wiring shall be Blue, Fire Alarm Wiring shall be Red, Low Voltage Circuits shall be Brown and UPS Circuits shall be Green.
 - * L-N stands for Lighting Circuit, P-N for Power Circuit, AC-N for Air Condition, M/PC-N for Pump/Motor & Lp-N Light Outlet Circuit no.-N (Where N=1,2,3...)
 - * For Circuit no., see Distribution Details
 - * Unless and otherwise stated, all final circuits shall be wired up by PVC CU M/S Wire in PVC Conduit and shall confirm to the following schedule:
- | Rating (Amp) | 6 | 10 | 20 | 32 | 40 | 63 |
|---------------|-----|-----|-----|-----|----|----|
| Wire (sq. mm) | 1.5 | 2.5 | 4.0 | 6.0 | 10 | 16 |
- * Unless and otherwise stated, maximum of 8 light points shall be wired in a final single lighting circuit where as maximum of 3 power socket outlet shall be wired in single power circuit.
 - * Unless and otherwise stated, all 16 A outlets with the same circuit no. shall be wired in ring circuit.
 - * Electrical drawings are schematical only, scale: NTS, use as shown purpose, do not measure directly.
 - * Contractor should coordinate with interior for exact location of fixtures
 - * Run separate conduit for TV, TEL and PS wherever they are in matching places
 - * All the Kitchen/Bathroom Power Circuits should be feed by RCCB with 100 mA sensitivity -- see schematic details
 - * All the cables and conductors shall be PVC insulated CU and shall confirm to the following color codes:

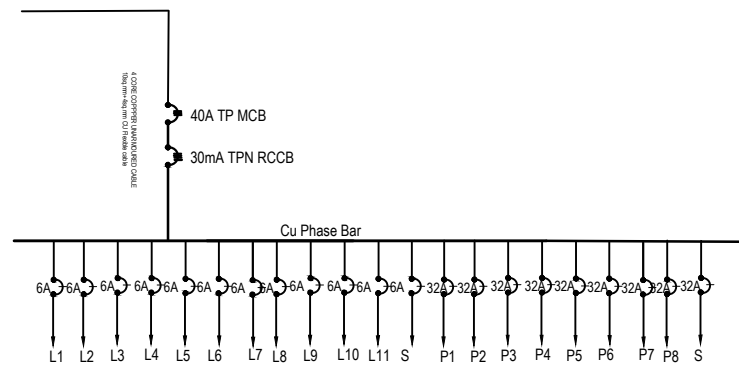
Neutral of AC 1/3 Phase	Black
Grounding/ Bounding/Earthing	Green
loop/common wire for 2 way switch	White
Live Phase A of 3 Phase	Red
Live Phase B of 3 Phase	Yellow
Live Phase C of 3 Phase	Blue



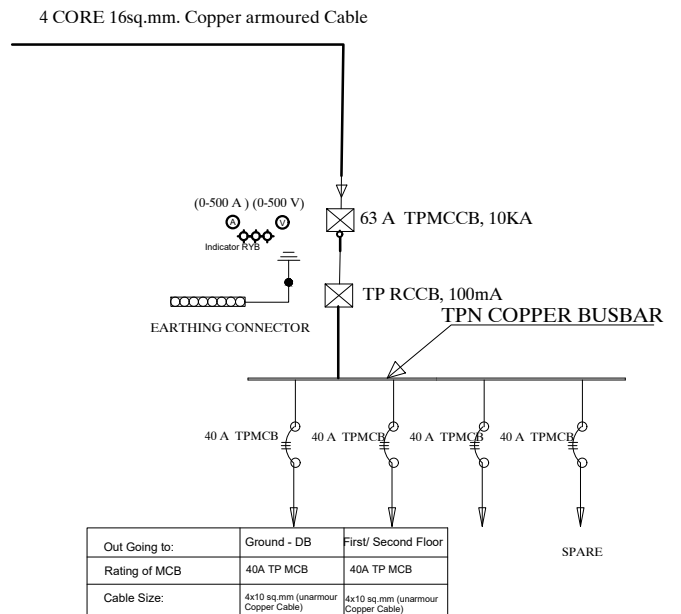
EARTHING DETAILS




GROUND FLOOR L/P DISTRIBUTION SYSTEM (DB-G1)



FIRST/SECOND FLOOR L/P DISTRIBUTION SYSTEM (DB-1/2)



DETAILS OF Main -DB

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. 06	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:		STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:20	PAPER SIZE : A3	DATE: FEBRUARY, 2023		



Government of Nepal
Ministry of Education, Science & Technology
Center for Education and Human Resource Development
Sanothimi, Bhaktapur, Nepal

PREPARE SCHOOL BUILDING TYPE DESIGN FOR MOUNTAINOUS REGION

Contract ID: CEHRD/SESP/SQ/Consultancy/02/2079/080

DETAIL DESIGN AND DRAWING

**3 STORY@18 ROOM WITH
(TOILET, WASH ROOM, CHANGING ROOM & BOOK CORNER)**

**SUBMITTED BY:
SAGE ENGINEERING CONSULT**

FEBRUARY, 2023

ARCHITECTURE

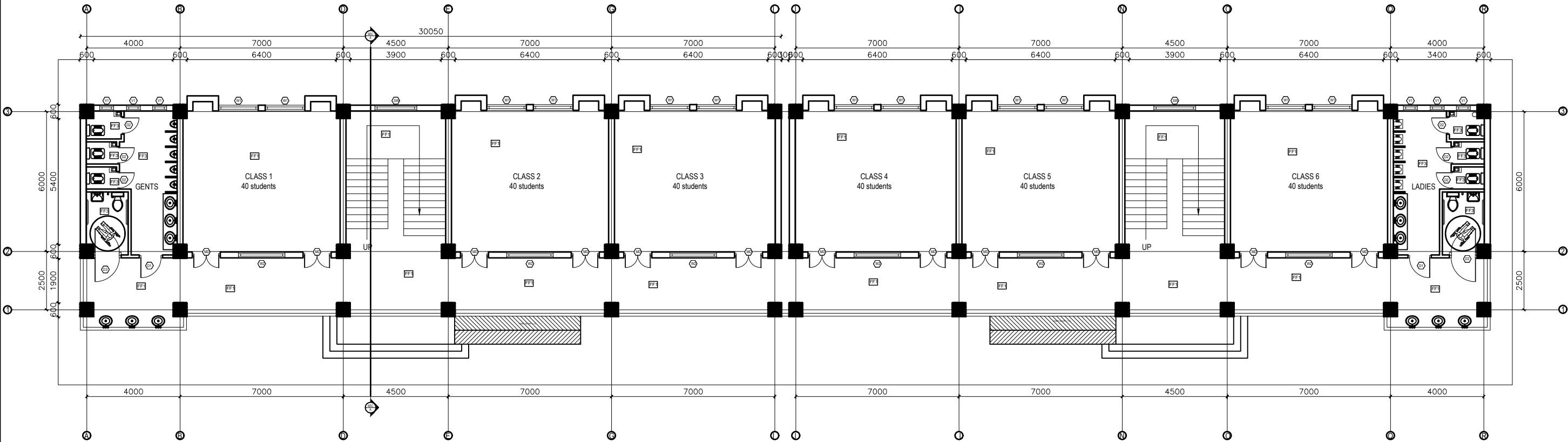
DRAWING

FINISHING DETAILS:


FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

NOTES:

- All measurements are in mm unless otherwise noted.
- Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
- Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
- Sill and Lintel dimensions are measured from the Slab Lvl.
- Dimensions are excluding the plaster/POP thickness.



GROUND FLOOR PLAN
FLOOR AREA: 552.35 sq.m

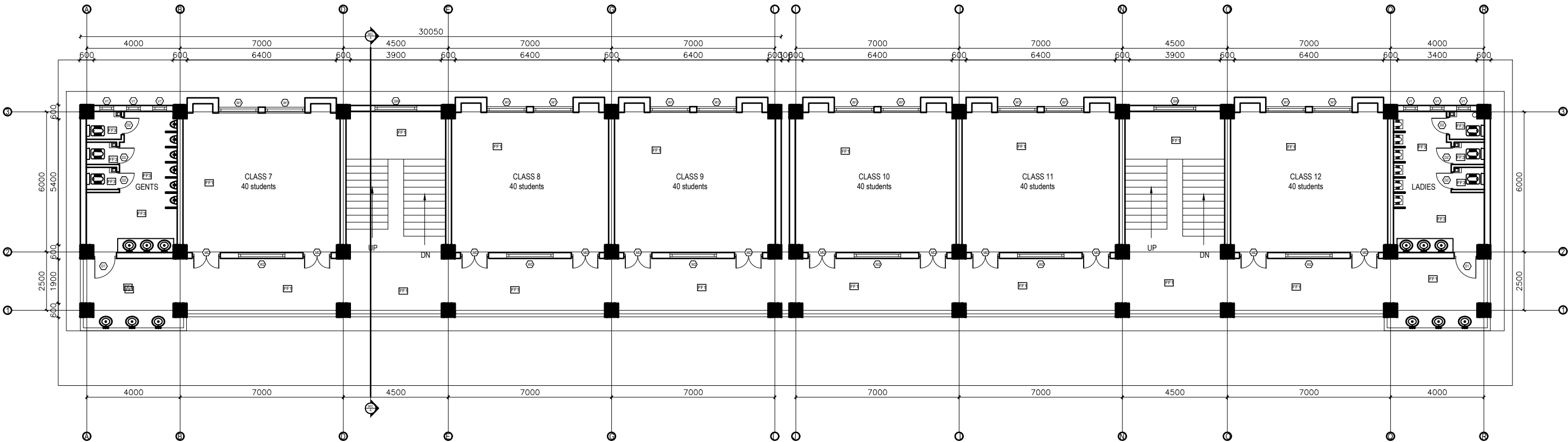
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-01	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	GROUND FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN :		APPROVED:	
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	
DWG CODE 3S18R-MOUNTAINOUS								

FINISHING DETAILS:


FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

NOTES:

1. All measurements are in mm unless otherwise noted.
2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
4. Sill and Lintel dimensions are measured from the Slab Lvl.
5. Dimensions are excluding the plaster/POP thickness.



FIRST&SECOND FLOOR PLAN
FLOOR AREA: 552.35 sq.m

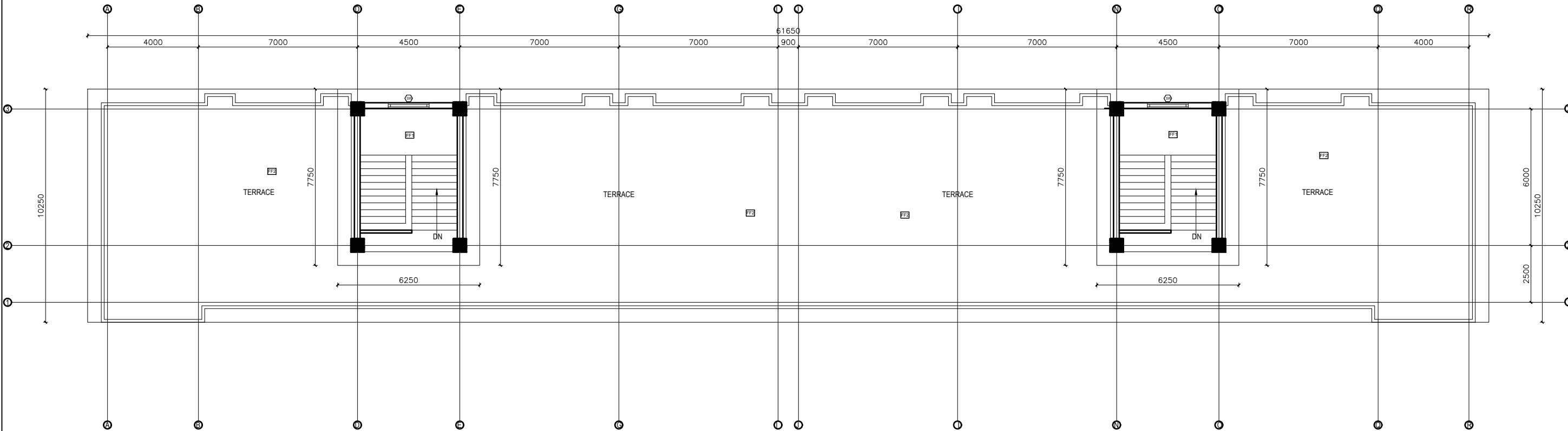
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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FIRST & SECOND FLOOR PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S18R-MOUNTAINOUS	
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

FINISHING DETAILS:


FF1	38 mm PCC (M15) with 1:1 cement punning with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent)
FF2	50 mm PCC (M15) with 1:1 cement punning in a 600X600 thread cut grid with floor hardener (Dreitop FH, mapetop, Sika Chapdur or equivalent) and water proofing (safe-crete or equivalent)
FF3	6 mm thick porcelain non-glaze tile with 20 mm cement sand mortar (1:4)

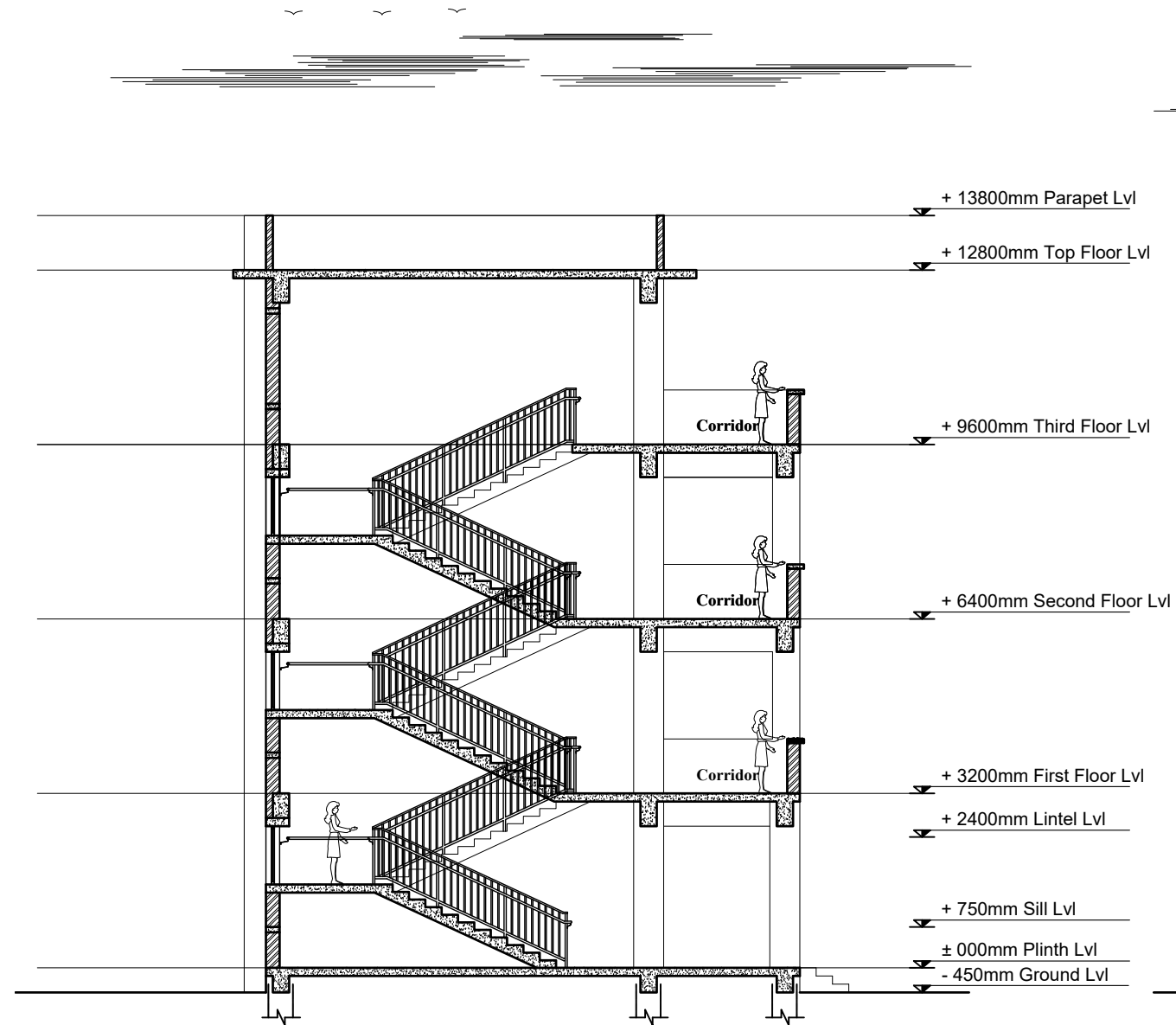
NOTES:

1. All measurements are in mm unless otherwise noted.
2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
4. Sill and Lintel dimensions are measured from the Slab Lvl.
5. Dimensions are excluding the plaster/POP thickness.



TOP FLOOR PLAN
FLOOR AREA: 66.14 sq.m

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. AR-03	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TOP PLAN	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE 3S18R-MOUNTAINOUS	




SECTION AT A-A

- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
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 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.

OPENING SCHEDULE


S.N.	SYMBOL	SIZES	G.F.	F.F.	S.F.	TOTAL	SILL HT.	REMARKS
1.	MD	1200 x 2400	12	12	12	36	-	
2.	D1	1000 x 2400	2	2	2	6	-	
3.	D2	750 x 2100	6	6	6	18	-	
4.	D3	1200 x 2400	2			2	-	
5.	W1	1700 x 1650	12	12	12	36	750 MM	
6.	W2	2000 x 1650	6	6	6	18	750 MM	
7.	SW	1800 x 1070	1	1		2	1530 MM	
8.	V1	600 x 600	6	6	6	18	1800 MM	

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. AR-04	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SECTION AND OPENING SCHEDULE	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S18R-MOUNTAINOUS	
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.




FRONT ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ELEVATIONS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		R-00
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
					DWG CODE 3S18R-MOUNTAINOUS				

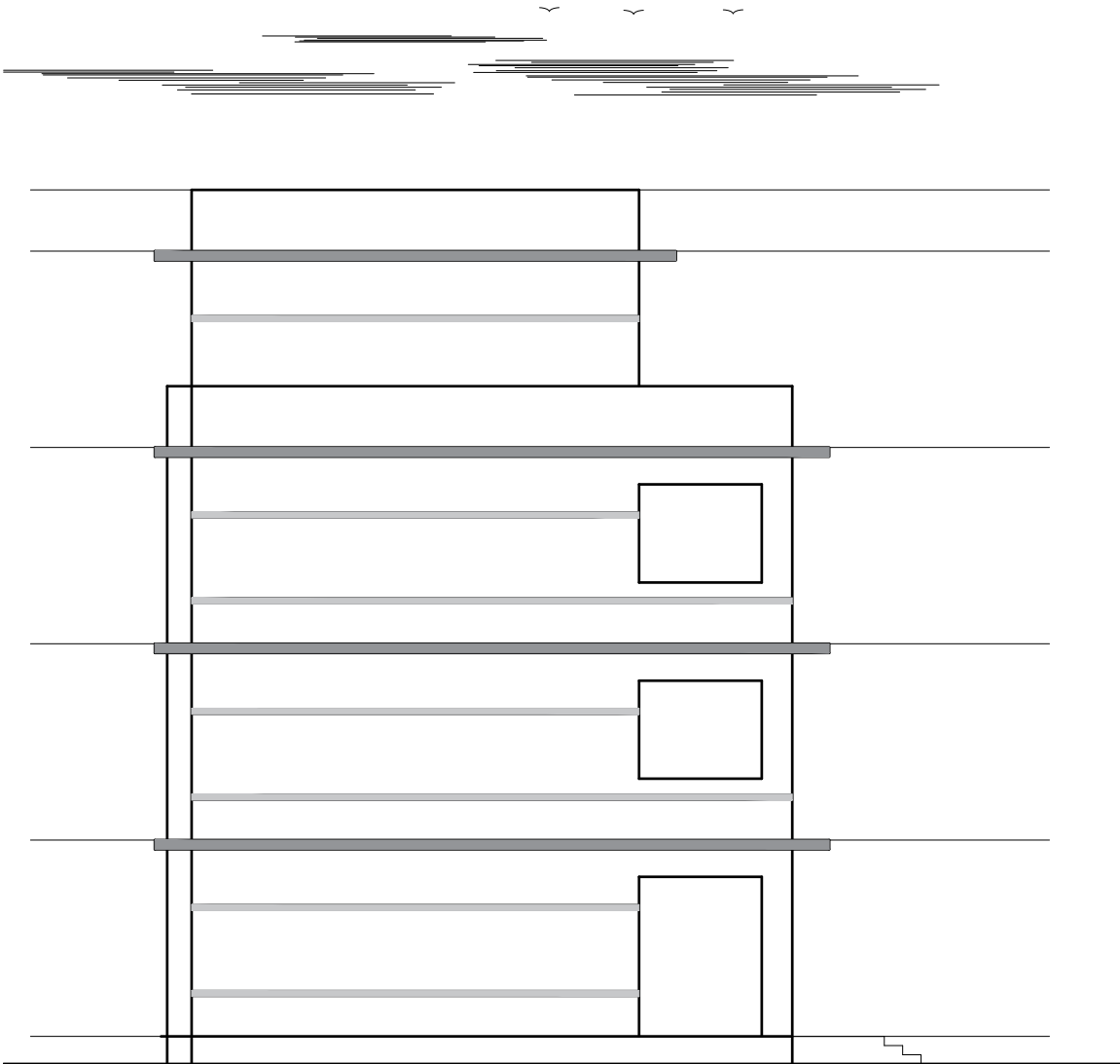
- NOTES:
1. All measurements are in mm unless otherwise noted.
 2. Architectural drawing should be read in conjunction with Structural, Sanitary and Electrical drawings.
 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 5. Dimensions are excluding the plaster/POP thickness.



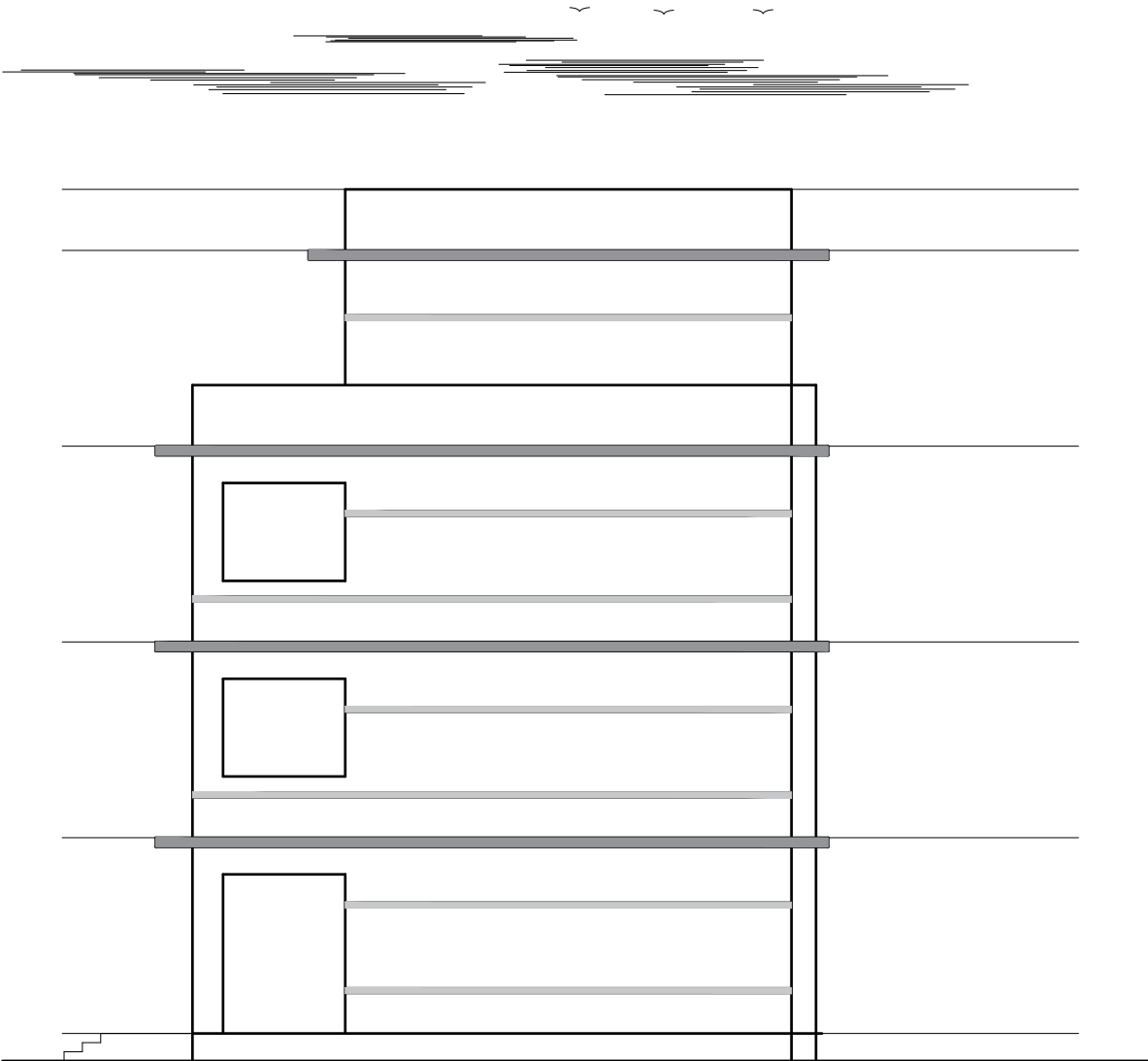
BACK ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ELEVATIONS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S18R-MOUNTAINOUS	R-00
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		


- NOTES:
- 1. All measurements are in mm unless otherwise noted.
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 - 3. Site Engineer to notify the consultant if any discrepancy in dimensions found in drawings as per the site condition.
 - 4. Sill and Lintel dimensions are measured from the Slab Lvl.
 - 5. Dimensions are excluding the plaster/POP thickness.

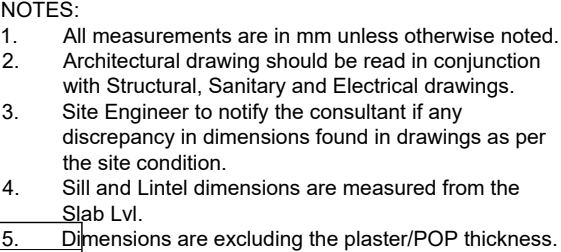


SIDE-2 ELEVATION

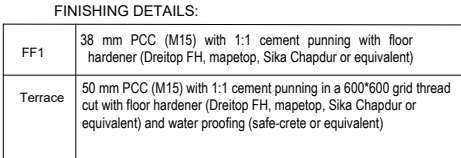


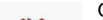
SIDE-1 ELEVATION

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	ELEVATIONS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :		R-00
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
					DWG CODE 3S18R-MOUNTAINOUS				



SECTION AT B-B



CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. AR-08	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	RAMP DETAILS	SAGE ENGINEERING CONSULT Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE 3S18R-MOUNTAINOUS	
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1:120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

STRUCTURE

DRAWING

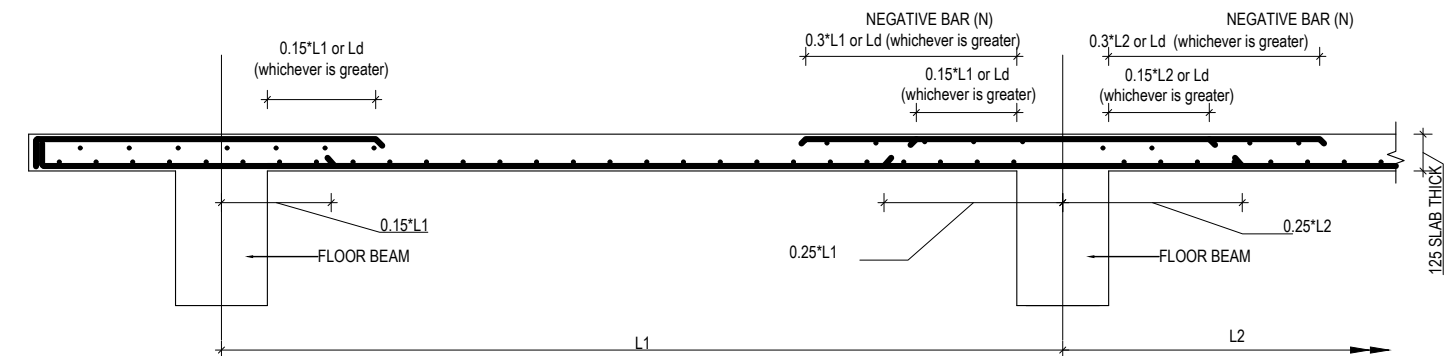
SN.	DRAWING LIST
1.	GENERAL NOTES
3.	FOOTING DETAIL FOR 100kN/m2
4.	TYPICAL FLOORING DETAIL
5.	SITE SPECIFIC DRAWING
6.	TYPICAL DETAILS OF FOUNDATION WALL
7.	COLUMN DETAIL
8.	BEAM PLAN
9.	BEAM DETAIL
10.	SLAB DETAIL
11.	STAIRCASE DETAIL
12.	BAND DETAIL
13.	RAILING DETAIL

GENERAL NOTES:

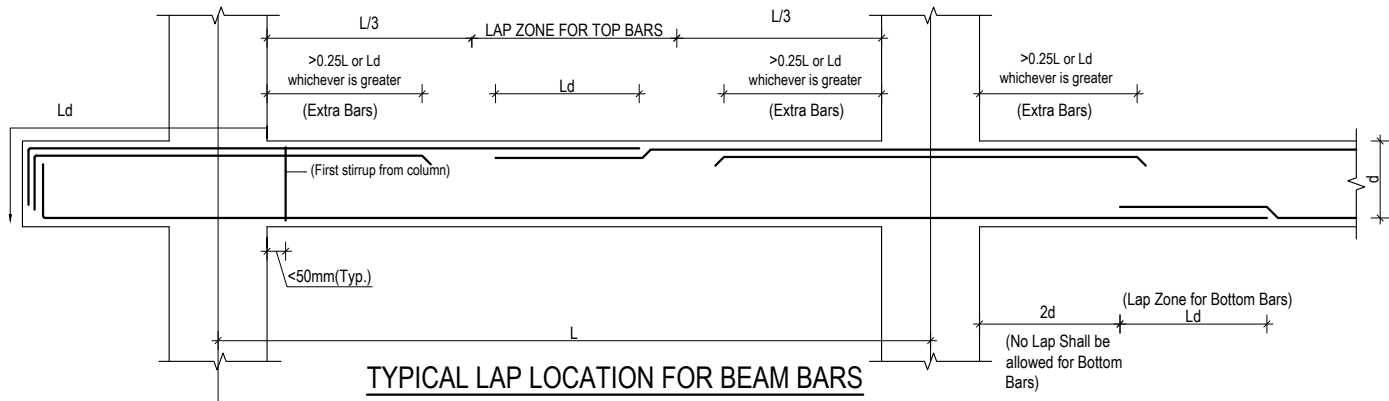
1. USE M25 GRADE CONCRETE FOR SLAB, BEAM, COLUMN, FOUNDATION, SILL & LINTEL BANDS (ALL RCC WORKS)
2. USE Fe500 GRADE STEEL ($f_y=500\text{N/mm}^2$)
3. CLEAR COVER TO BARS
- a. FOR CONCRETE MEMBERS IN CONTACT WITH SOIL = MIN 50mm
- b. FOR COLUMN (FROM FACE TO LATERAL TIES) = 40mm
- c. FOR BEAMS (FROM FACE TO LATERAL STIRRUPS) = 25mm
- d. FOR OUTER BARS IN SLAB = 15mm
- e. FOR STAIRCASE = 20mm
4. BARS IN COLUMNS SHALL BE SPLICED ONLY AT MID HEIGHT OF COLUMN.
5. BARS SPLICING IN BEAM SHALL BE AVOIDED IN THE SPAN WHERE INTERMEDIATE BEAM IS CONNECTED AND SHALL BE ONLY AS SHOWN IN DWG.
6. DEVELOPMENT / LAP LENGTH (L_d) FOR BARS.

BAR DIA-(mm)	8	10	12	16	20	25
FOR M25 L_d	400	490	590	790	980	1230

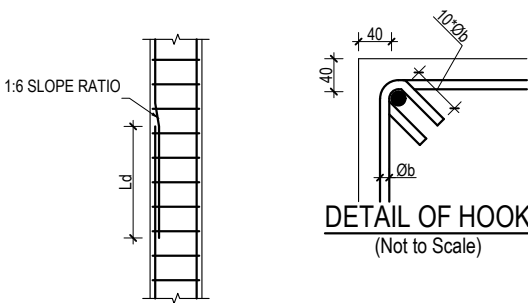
7. TEMP./DISTRIBUTION REINFORCEMENT FOR SLAB - TMT ϕ @ 200 C/C
8. CLEAR VERTICAL DISTANCE BETWEEN TWO ROWS (LAYERS) OF BARS=25mm OR MAXIMUM SIZE OF REBAR
9. PROVIDE STIRRUPS OR TIES AT MIN 150 C/C AT LAP LOCATIONS IN BEAM AND AT MIN 100 C/C AT LAP LOCATION IN COLUMNS.
10. FOUNDATION
- 10.1 FOUNDATION DESIGN HAVE BEEN PROVIDED FOR SAFE BEARING CAPACITY OF 150KN/m^2 . THIS S.B.C. SHALL BE CONFIRMED FROM GEO TECHNICAL INVESTIGATION AND CONSULTED TO DESIGNER.
- 10.2 IF SAFE BEARING CAPACITY OF SOIL IS FOUND LESS THAN 100KN/m^2 , SPECIAL STUDY FOR FOUNDATION DESIGN IS REQUIRED.
11. H = CLEAR SPAN OF FLOOR.
12. D=DEPTH OF BEAM
13. d=EFFECTIVE DEPTH OF BEAM
14. L_d =DEVELOPMENT LENGHT
15. The seismic gap shall be as per codal requirement.



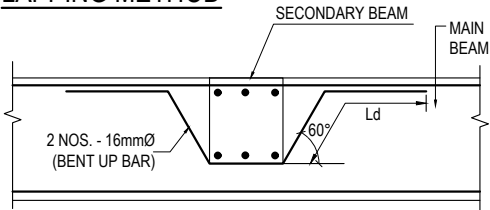
TYPICAL DETAIL FOR SLAB BARS



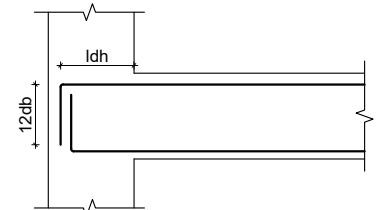
TYPICAL LAP LOCATION FOR BEAM BARS
(STIRRUPS NOT SHOWN FOR CLARITY)



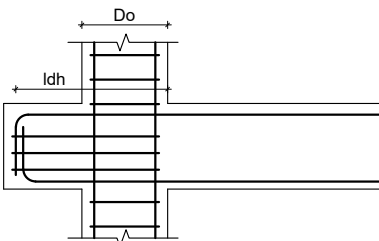
LAPPING METHOD



CONNECTION DETAIL BETWEEN
MAIN & SECONDARY BEAM



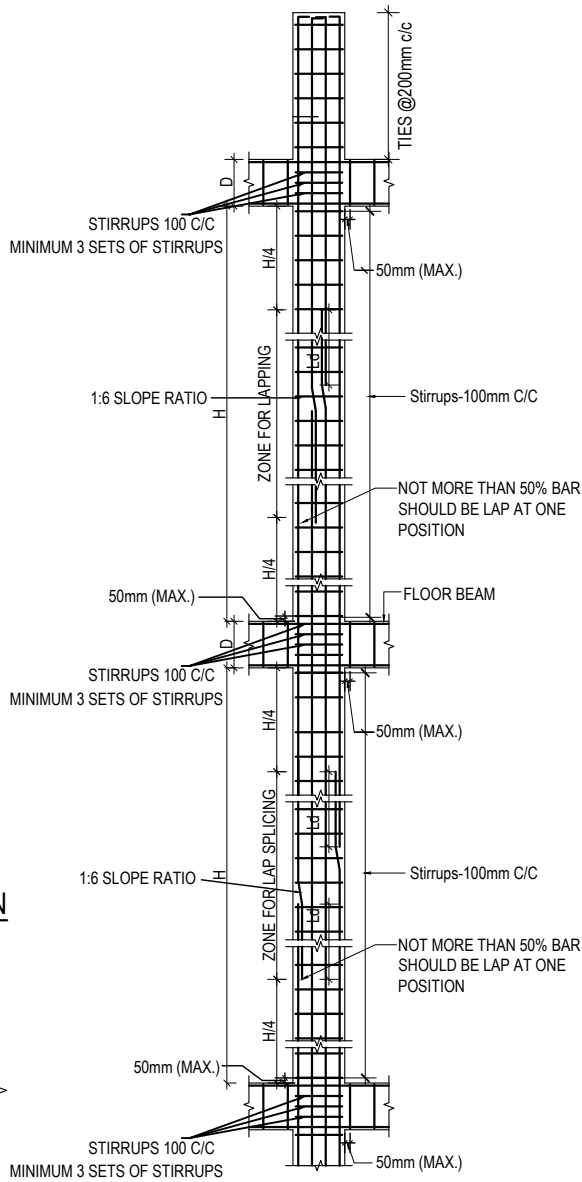
ANCHORAGE OF BEAM
LONGITUDINAL BAR IN COLUMN



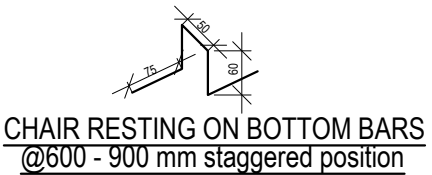
PPROVISION OF BEAM STUB

f_y N/mm ²	f_{ck} N/mm ²	d_b mm	L_{dh} mm	$12d_b$ mm
500	20	12	277	144
500	25	12	248	144
500	20	16	369	192
500	25	16	330	192
500	20	20	462	240
500	25	20	413	240
500	20	25	577	300
500	25	25	516	300


f_y = yield strength of steel
 f_{ck} = Characteristic Compressive strength of concrete
 d_b = diameter of largest longitudinal bar in beam in mm

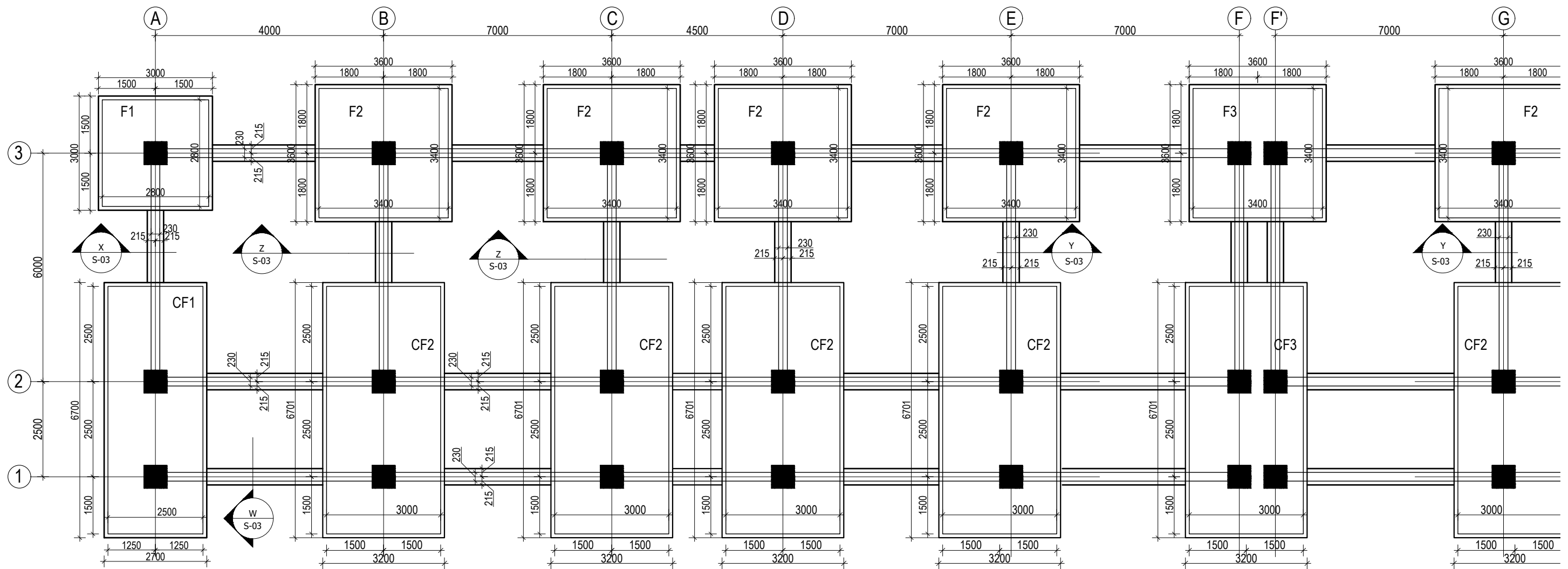


TYP. COLUMN SHEAR
REINFORCEMENT DETAIL



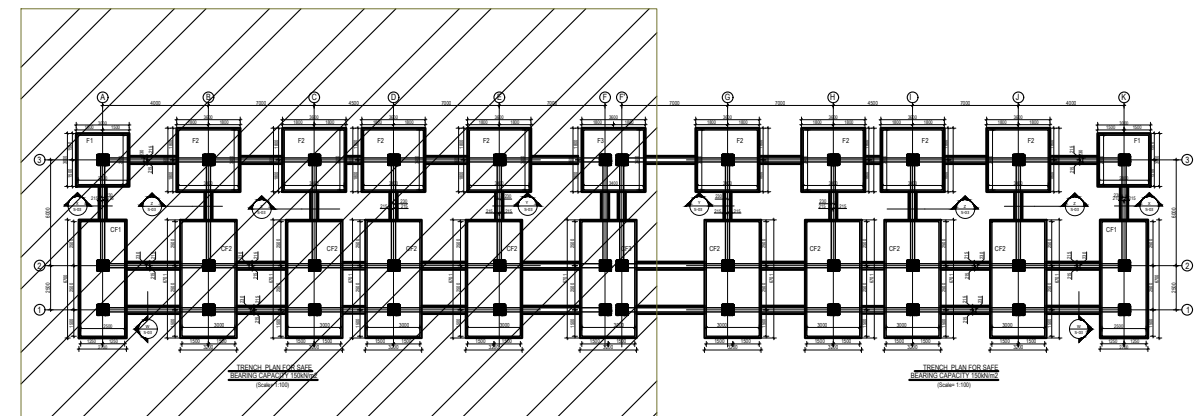
CHAIR RESTING ON BOTTOM BARS
@600 - 900 mm staggered position


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	GENERAL NOTES	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :	DWG CODE. 3S18R-MOUNTAINOUS	R-00
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		

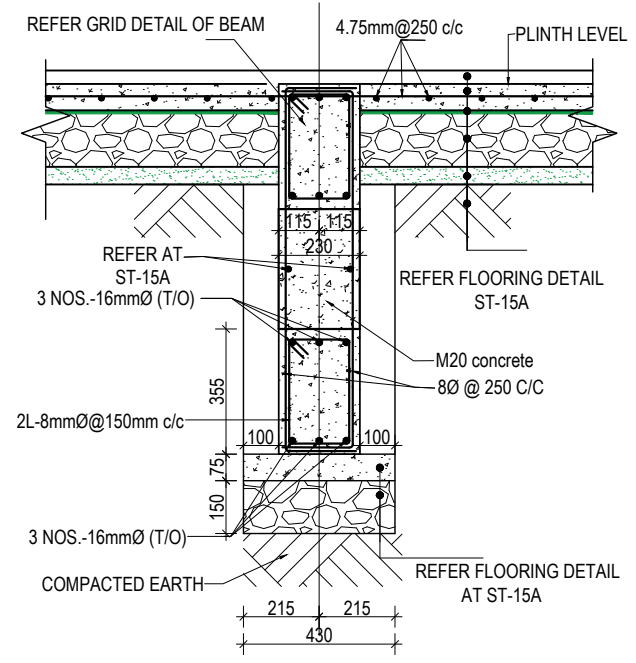


TRENCH PLAN FOR SAFE
BEARING CAPACITY 150kN/m²
(Scale= 1:100)

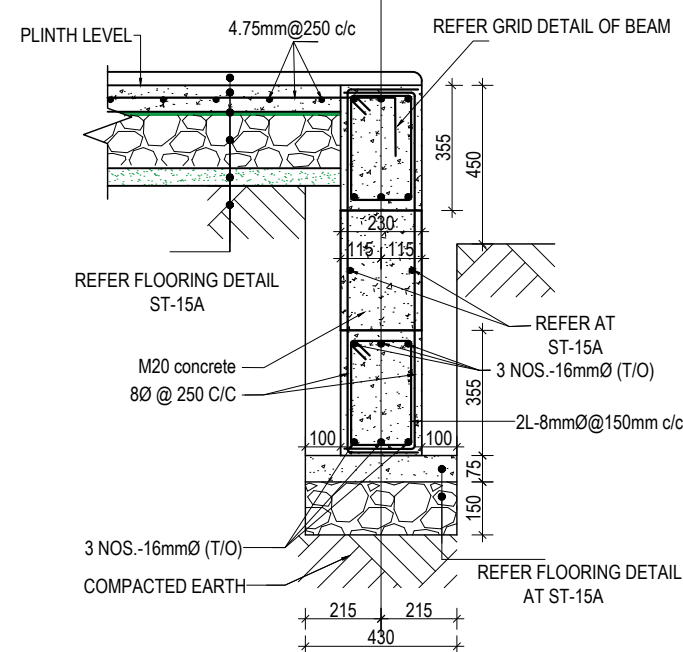
KEY PLAN



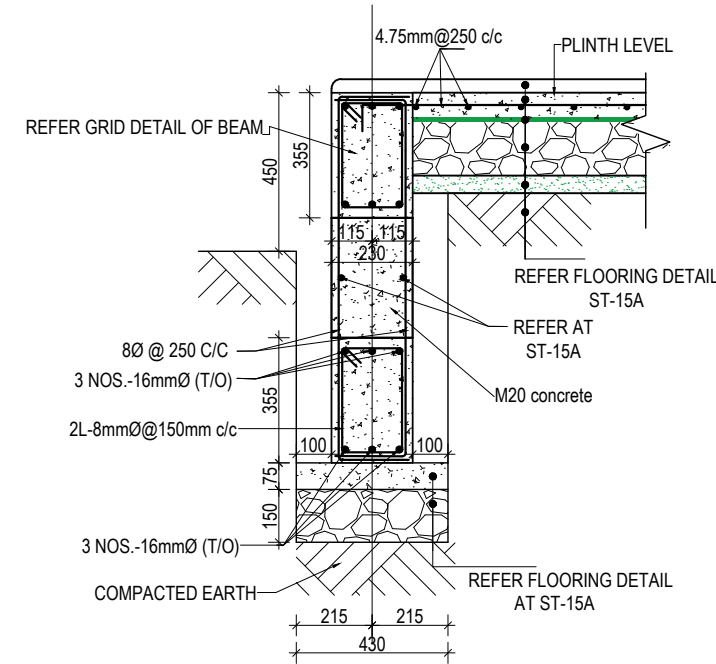
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TRENCH DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		ST-01	R-00
					ARCHITECT:		DWG CODE. 3S18R-MOUNTAINOUS	
					DRAWN :			
					SCALE : 1: 120	PAPER SIZE : A3		
					APPROVED:			
					DATE: FEBRUARY, 2023			



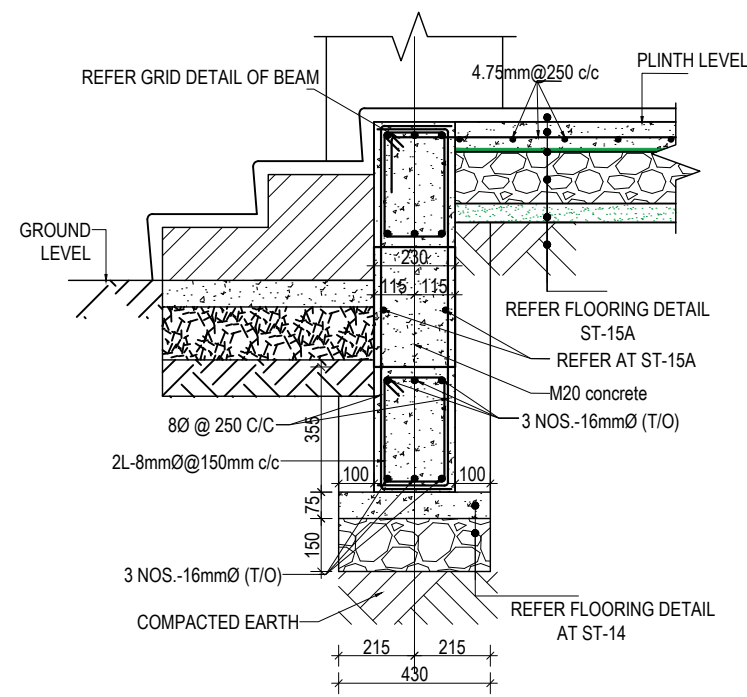
SECTION AT Z-Z
(Scale= 1:20)




SECTION AT Y-Y
(Scale= 1:20)

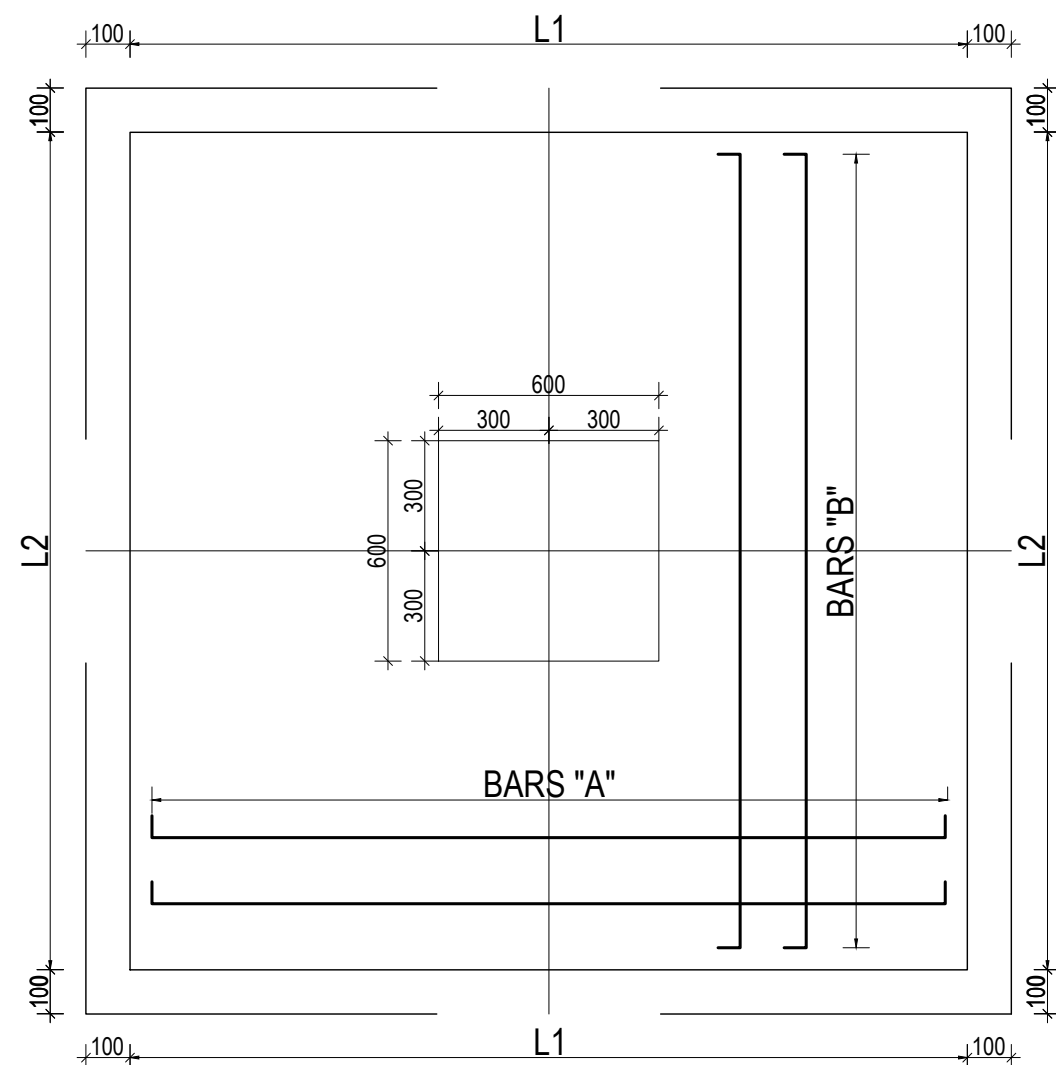


SECTION AT X-X
(Scale= 1:20)

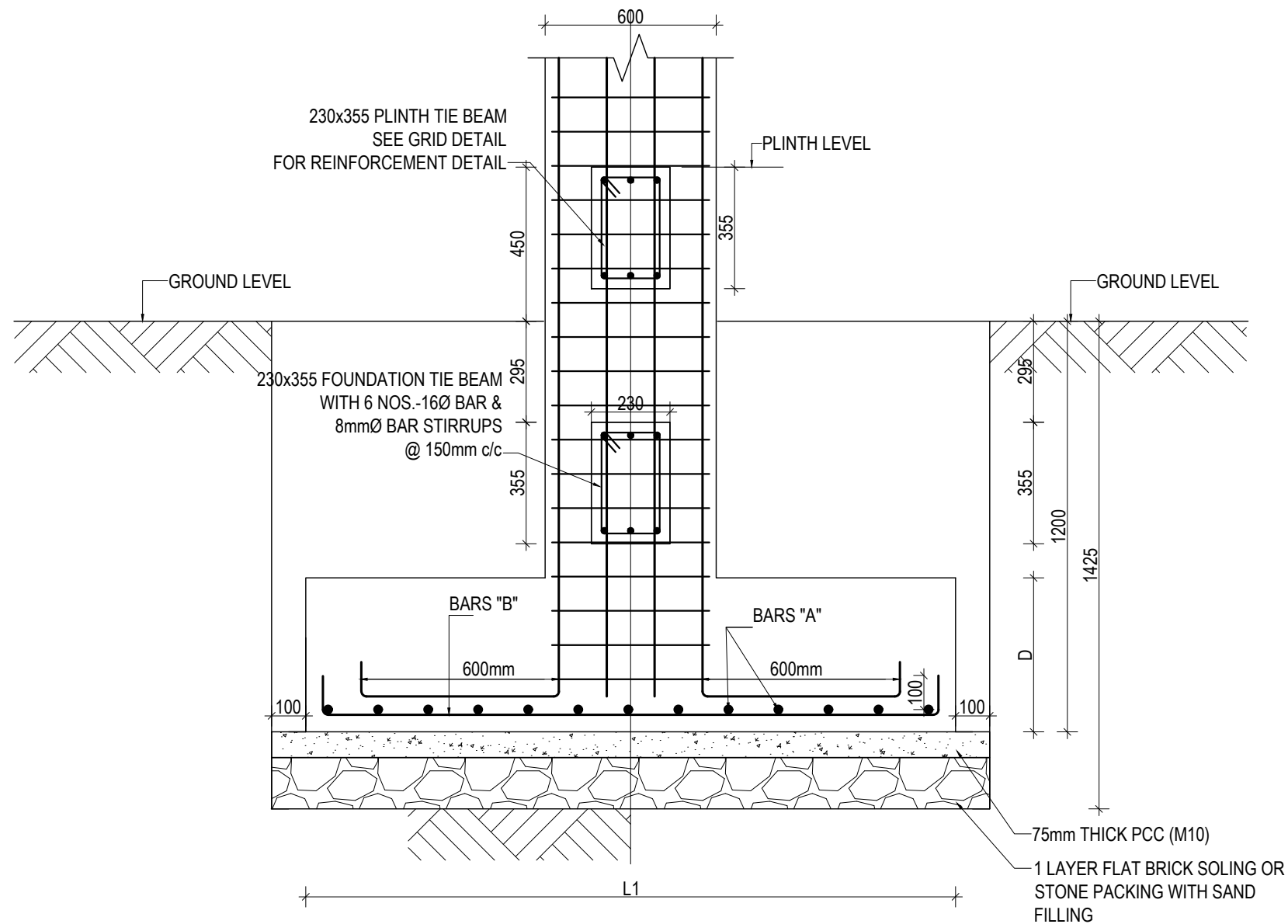


SECTION AT W-W
(Scale= 1:20)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. ST-03	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TRENCH DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		DWG CODE. 3S18R-MOUNTAINOUS
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		




TYPICAL ISOLATED FOOTING PLAN

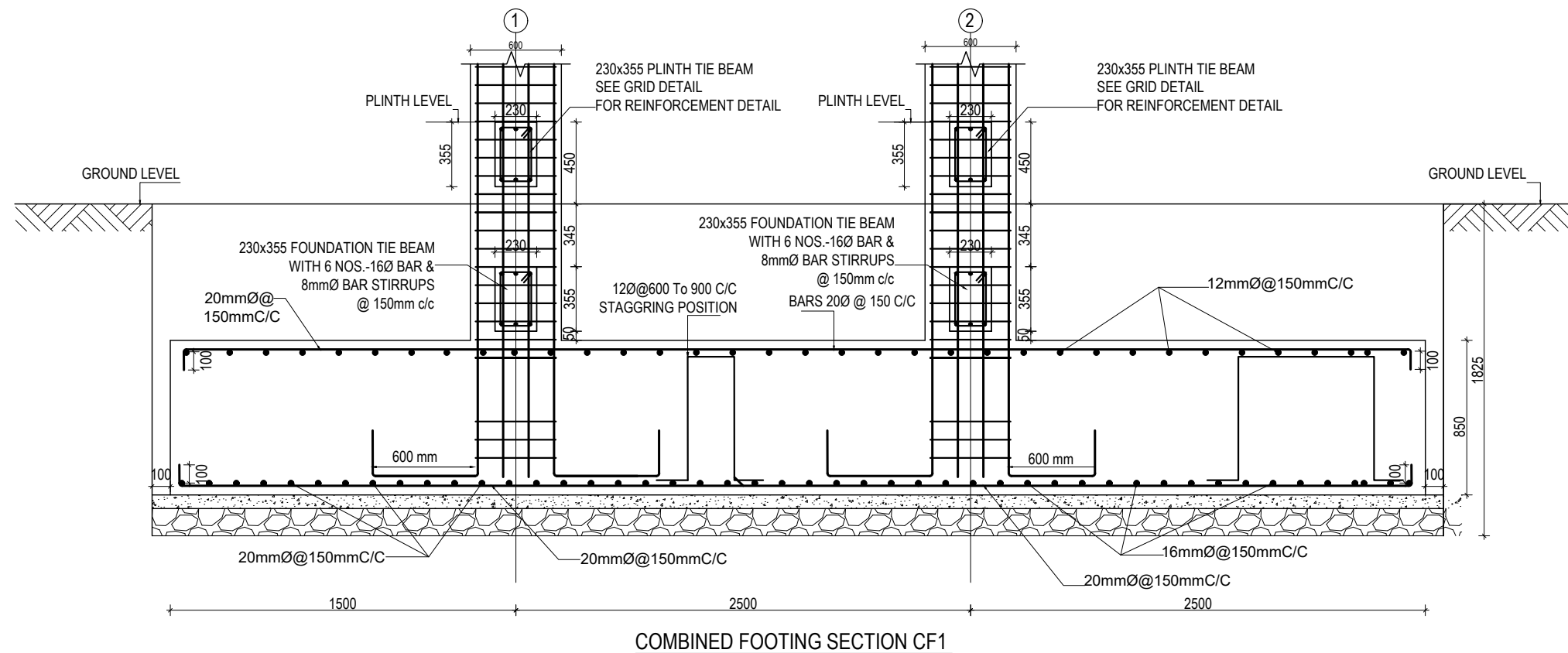
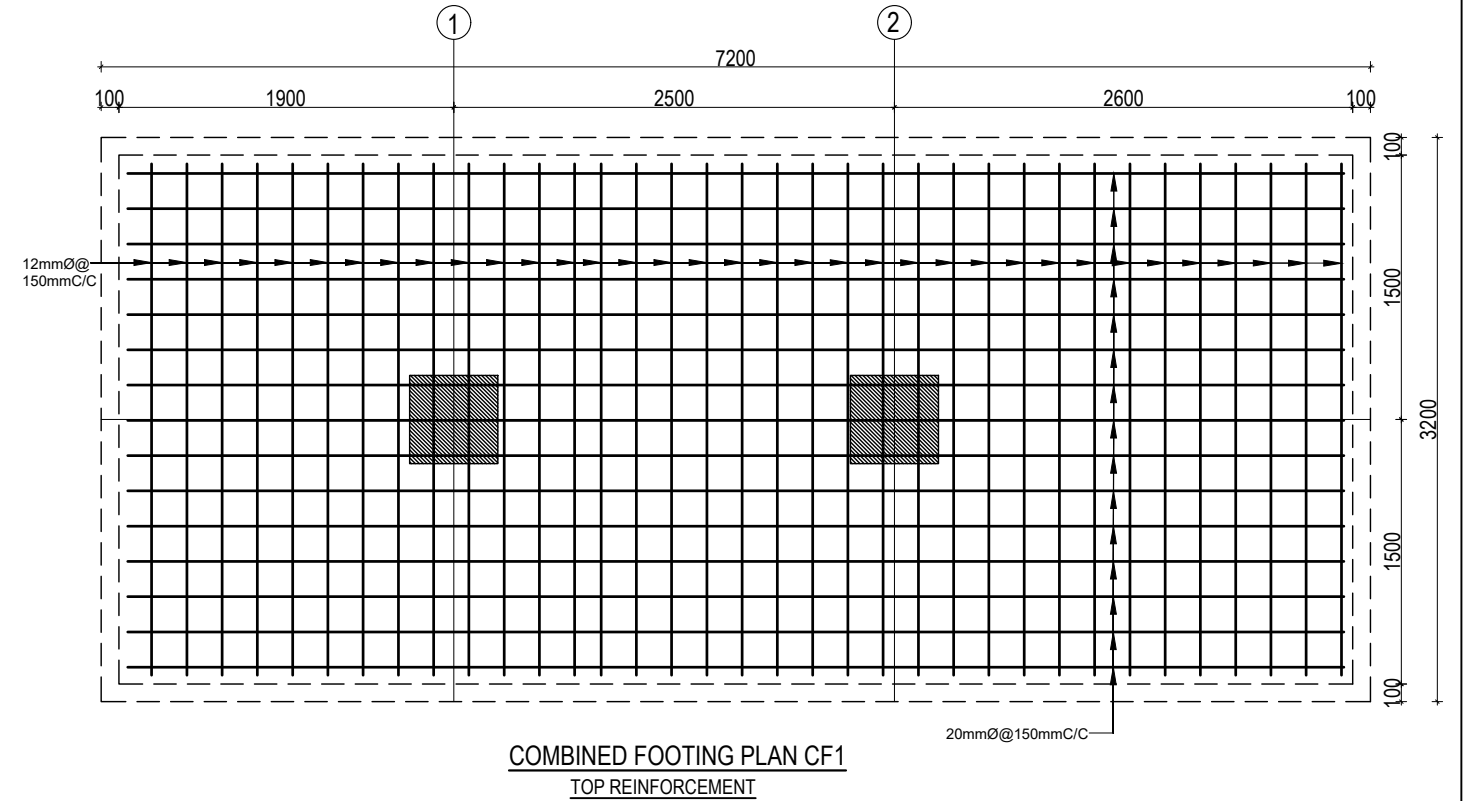
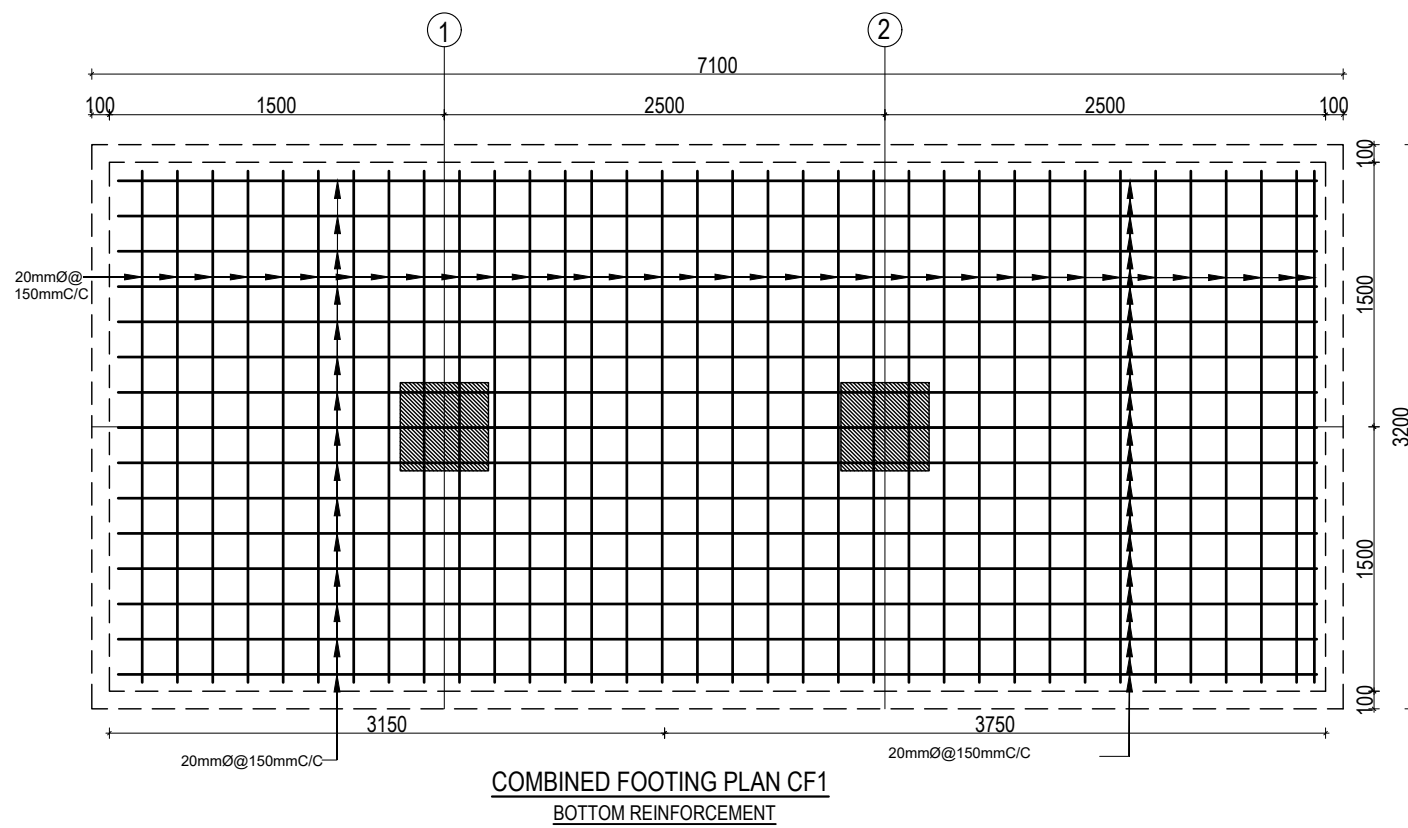



TYPICAL ISOLATED FOOTING SECTION

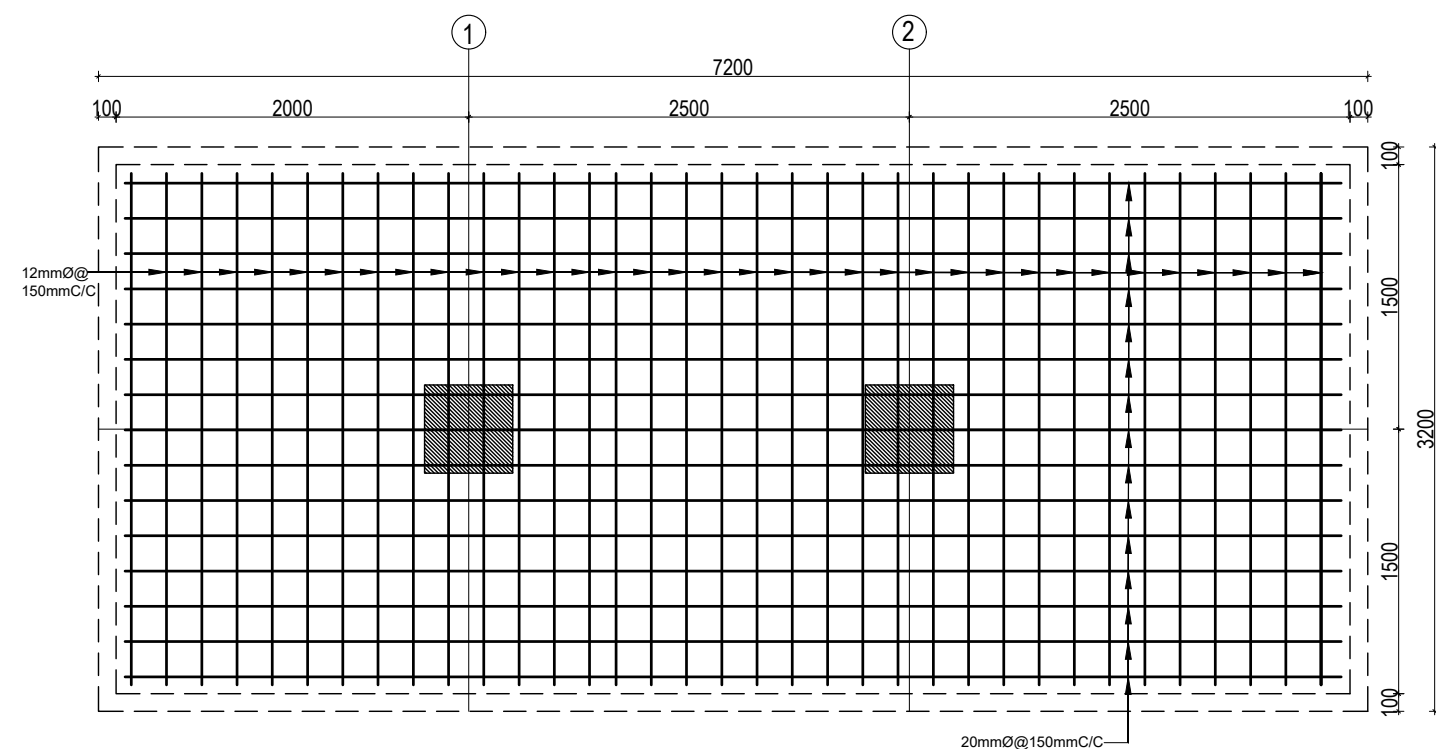
ISOLATED FOOTING SCHEDULE FOR S.B.C 150 kN/m2

FOOTING ID	L1	L2	DEPTH (D)	REINFORCEMENT DETAILS	
				BARS "A"	BARS "B"
F1	2800	2800	650	16Ø @ 150 C/C	16Ø @ 150 C/C
F2	3600	3600	750	16Ø @ 150 C/C	16Ø @ 150 C/C

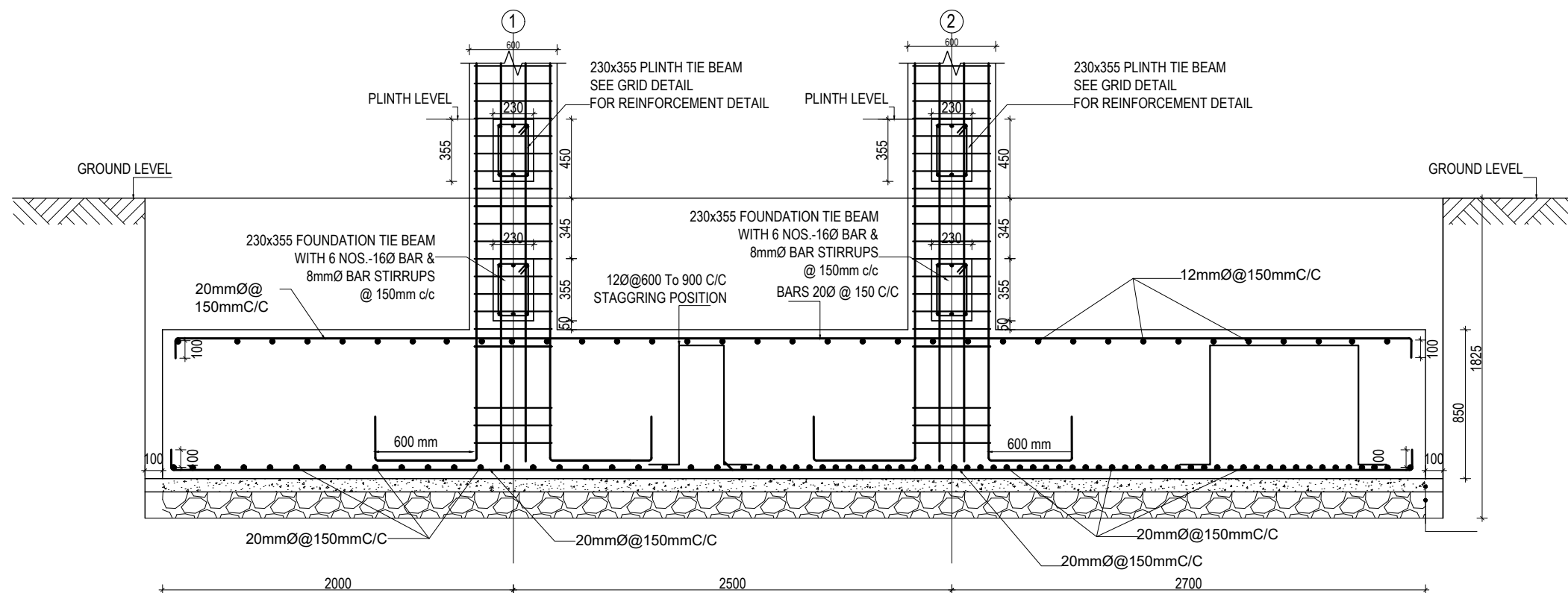
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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		DWG CODE. 3S18R-MOUNTAINOUS
					ARCHITECT:		CHECKED:		
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					DATE: FEBRUARY, 2023				




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	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :	
					ARCHITECT:		CHECKED:	
					DRAWN :		APPROVED:	
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	
					DWG CODE. 3S18R-MOUNTAINOUS			




COMBINED FOOTING PLAN CF2
TOP REINFORCEMENT

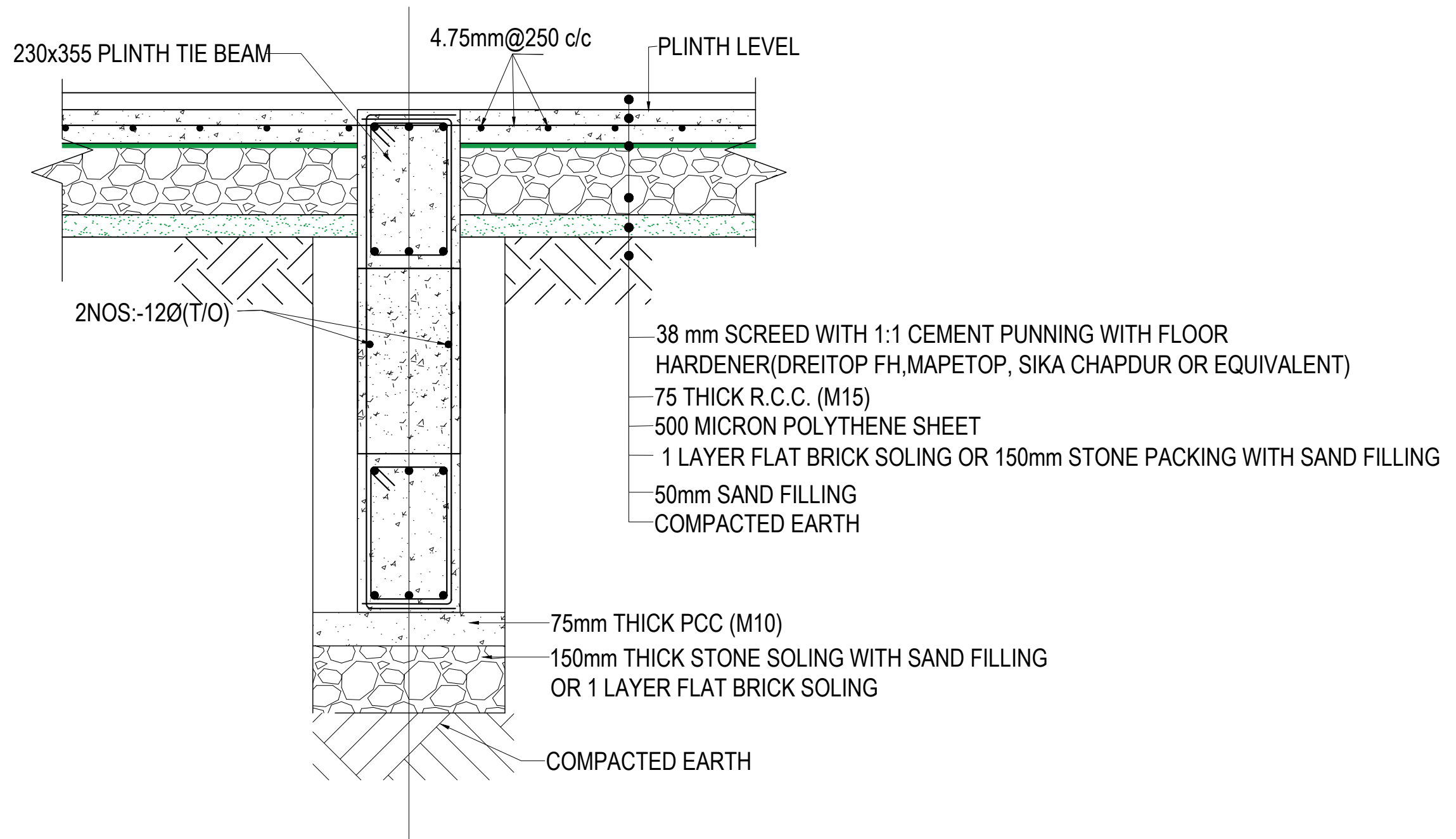


COMBINED FOOTING SECTION CF2


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-06	R-00
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3 DATE: FEBRUARY, 2023		
							DWG CODE. 3S18R-MOUNTAINOUS	

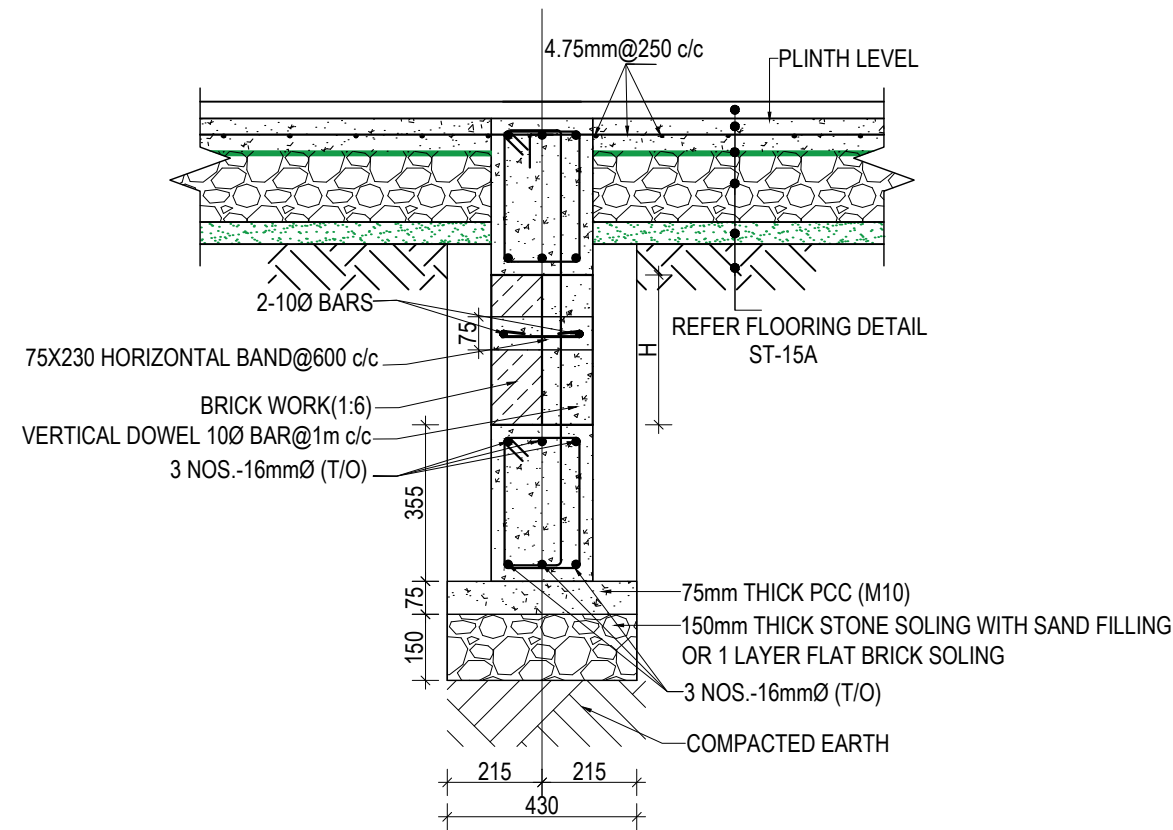


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-07	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	FOOTING DETAIL FOR S.B.C 150kN/m2	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE. 3S18R-MOUNTAINOUS	



TYPICAL FLOORING DETAIL FF1
(Scale= 1:10)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL FLOORING DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :	ST-08	R-00
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		DWG CODE. 3S18R-MOUNTAINOUS



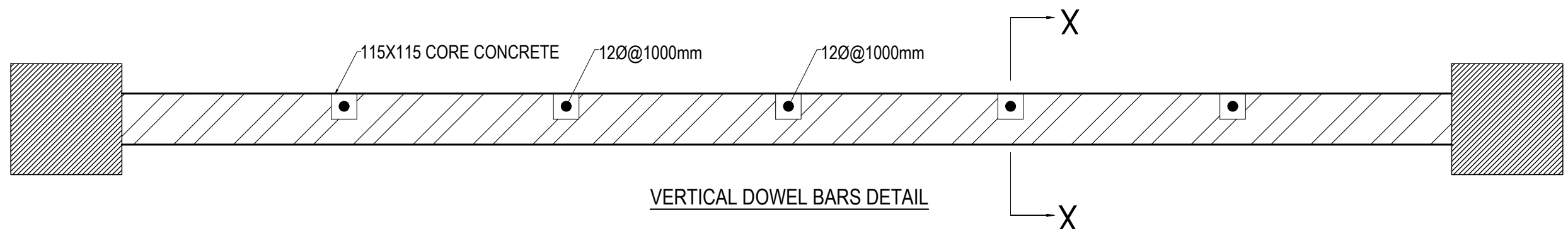
WALL DETAIL FOR DEPTH OF FOOTING MORE THAN 1500 mm

SECTION AT X-X


NOTES:-

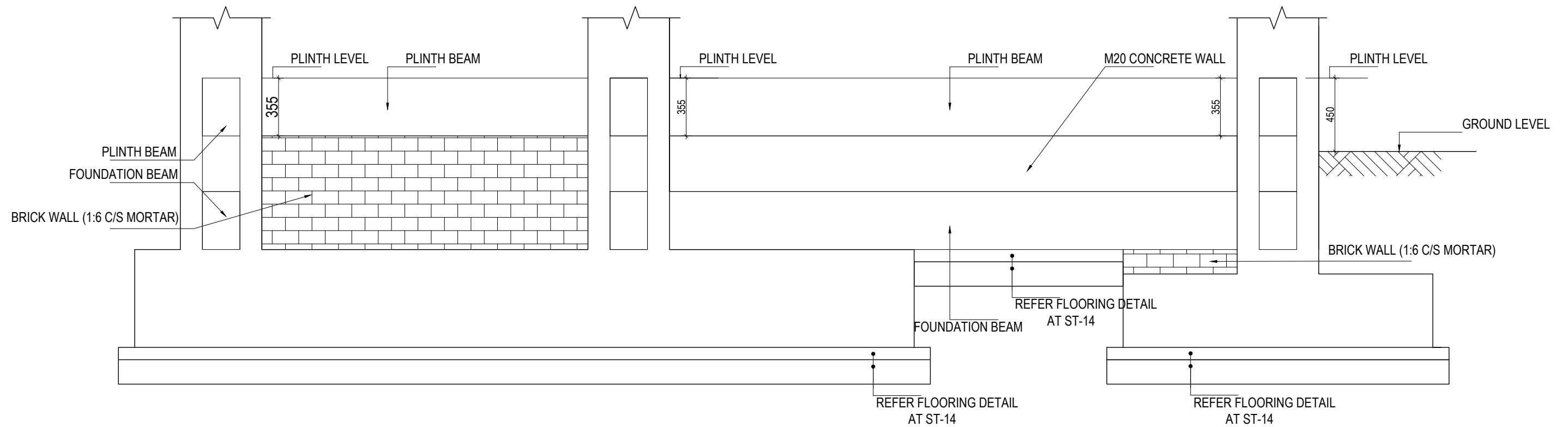
1) BRICK WALL IS USED IF WALL IS CONFINED BY SOIL ON BOTH SIDES

2) IF THE HEIGHT OF THE BRICK WALL EXCEEDS 1800 mm ADDITIONAL BEAM SHALL BE PROVIDED OF SAME SIZE OF FOUNDATION BEAM (SAME REINFORCEMENT TO BE USED)




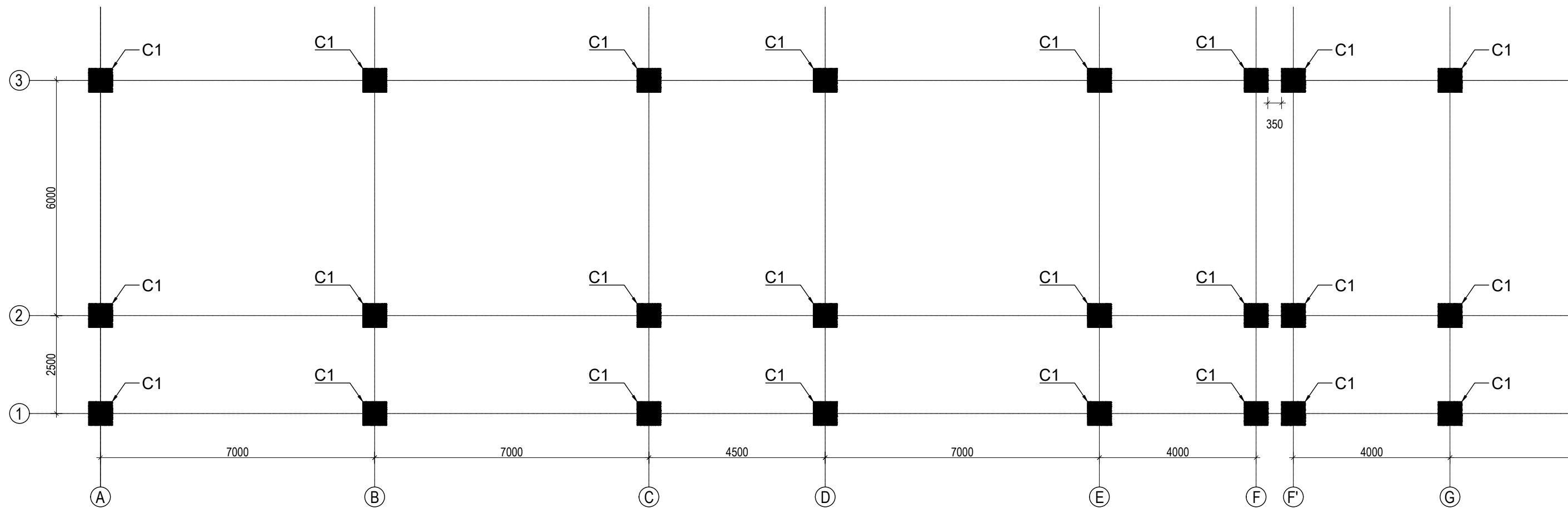
VERTICAL DOWEL BARS DETAIL

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SITE SPECIFIC DRAWING	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-09	R-00
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:	DWG CODE. 3S18R-MOUNTAINOUS	
					SCALE : 1: 120	PAPER SIZE : A3		



TYPICAL DETAIL OF FOUNDATION WALL

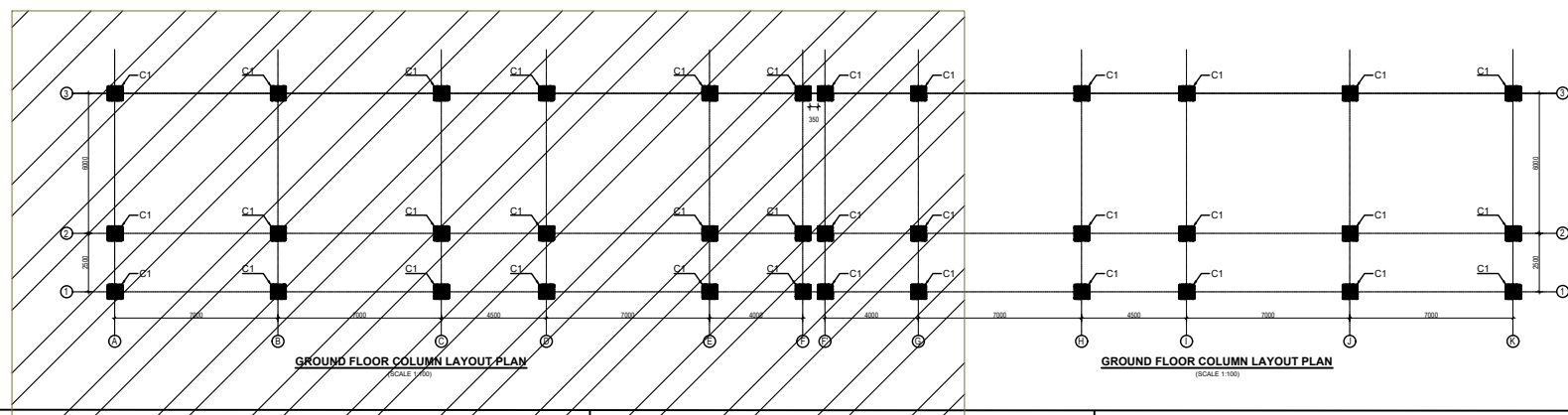
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL DETAIL OF FOUNDATION WALL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-10	R-00	
					ARCHITECT:	CHECKED:			
					DRAWN :	APPROVED:	DWG CODE. 3S18R-MOUNTAINOUS		
					SCALE : 1: 120	PAPER SIZE : A3			DATE: FEBRUARY, 2023



GROUND FLOOR COLUMN LAYOUT PLAN
(SCALE 1:100)

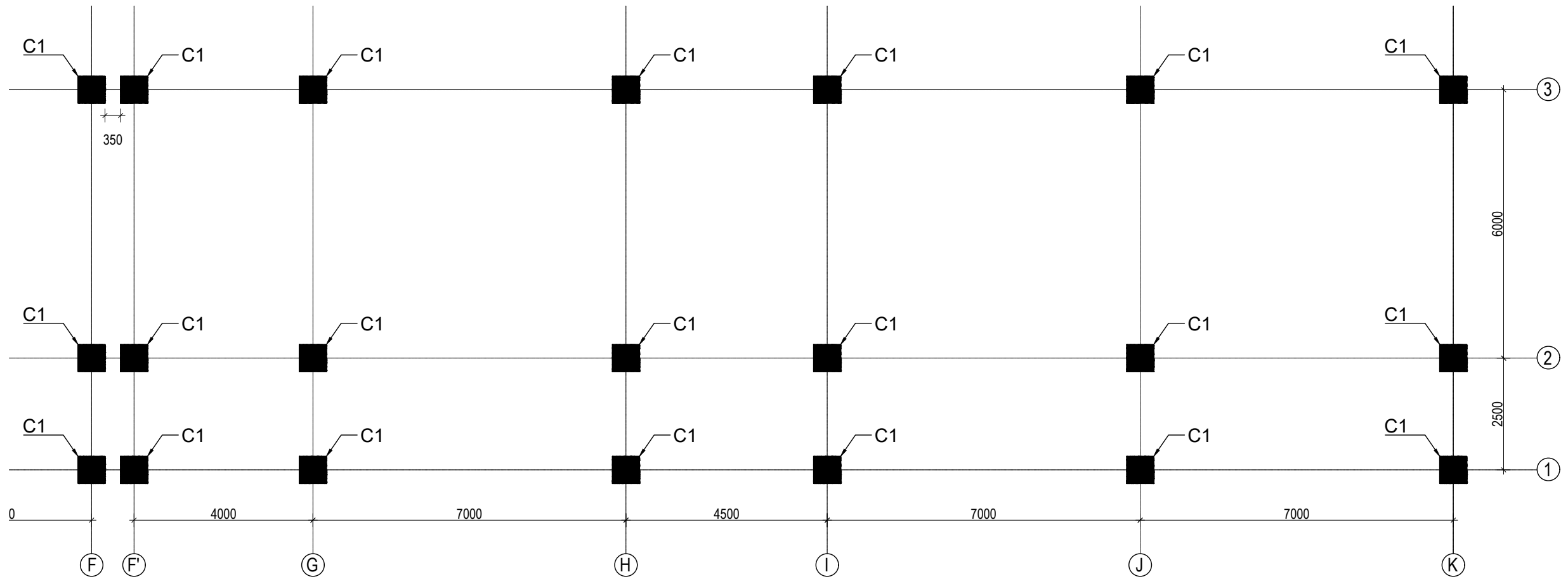
COLUMN REINFORCEMENT DETAILS

S. NO.	COLUMN	COLUMN SIZE	FLOOR					TIE BAR ORIENTATION
			GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	TOP FLOOR	
1	C1	600X600						



KEY PLAN

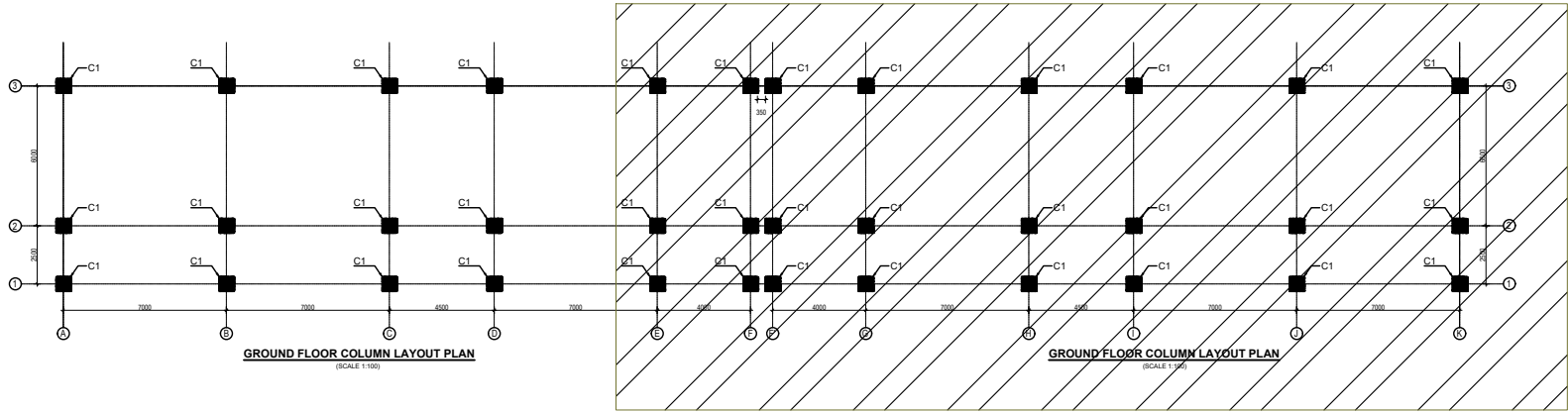
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-11	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	COLUMN DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S18R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3		
					DATE: FEBRUARY, 2023			




GROUND FLOOR COLUMN LAYOUT PLAN
(SCALE 1:100)

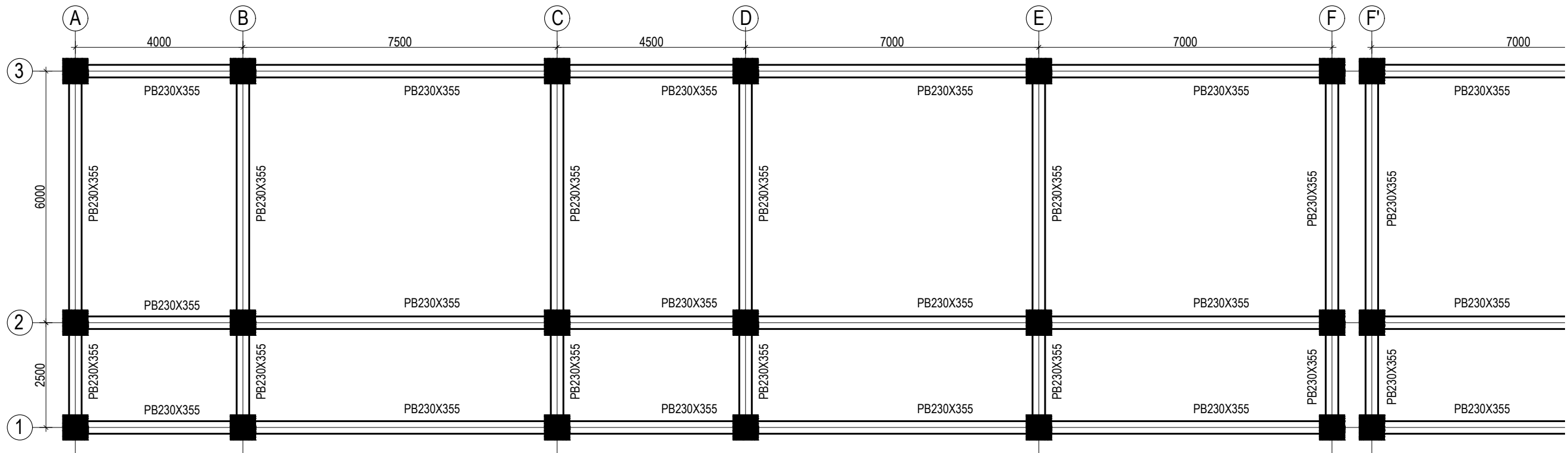
COLUMN REINFORCEMENT DETAILS

S. NO.	COLUMN	COLUMN SIZE	FLOOR					TIE BAR ORIENTATION
			GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	TOP FLOOR	
1	C1	600X600						

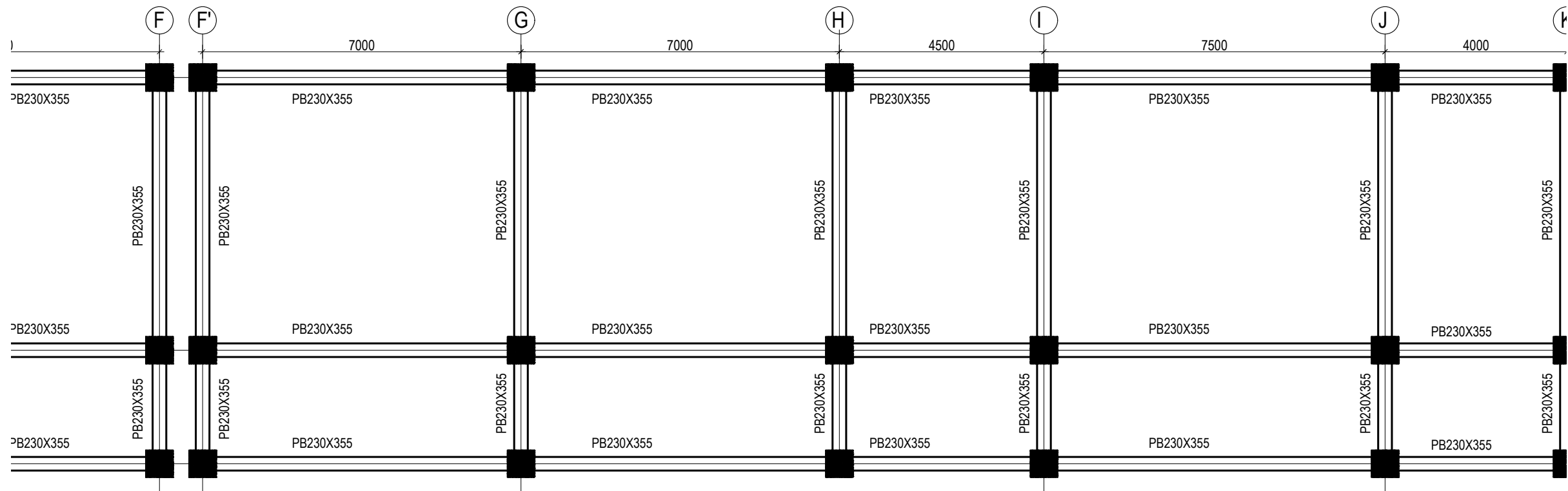


KEY PLAN


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-12	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	COLUMN DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE: 3S18R-MOUNTAINOUS	

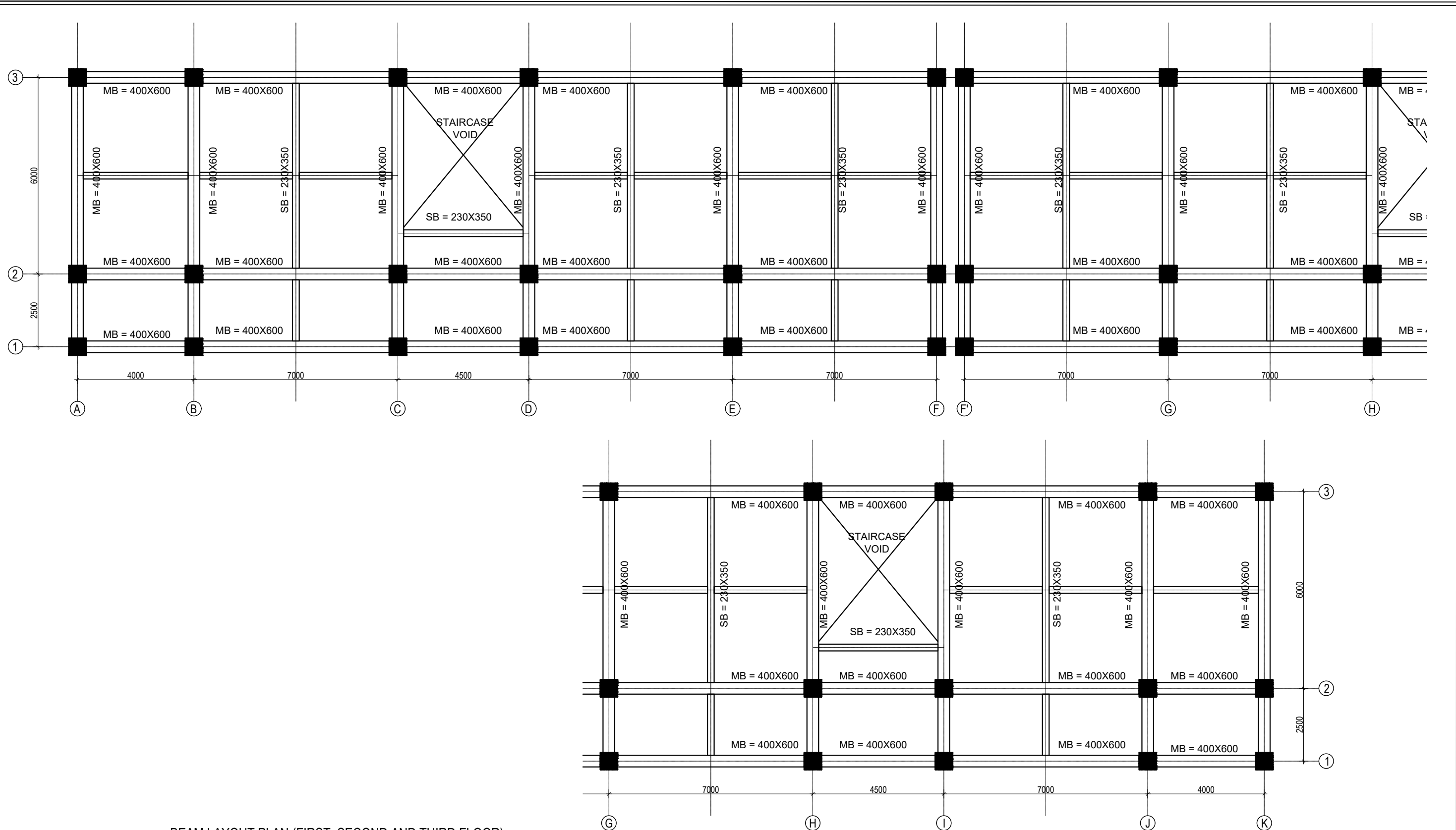


PLINTH BEAM LAYOUT PLAN
(Scale= 1:100)
LVL:- PL+0000




PLINTH BEAM LAYOUT PLAN
(Scale= 1:100)
LVL:- PL+0000

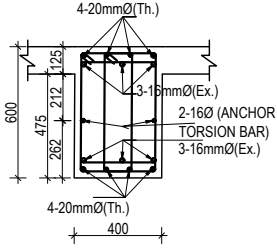
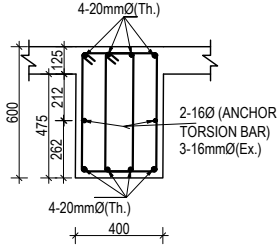
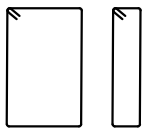
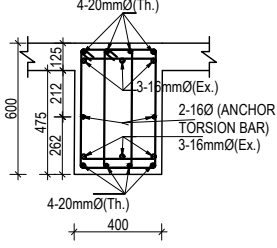
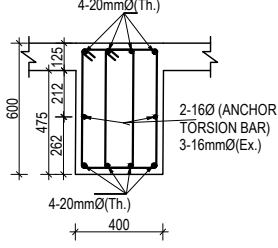
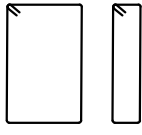
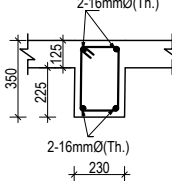
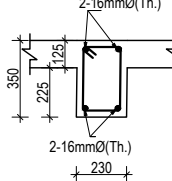

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-13	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	BEAM LAYOUT PLAN	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023		
								DWG CODE: 3S18R-MOUNTAINOUS	




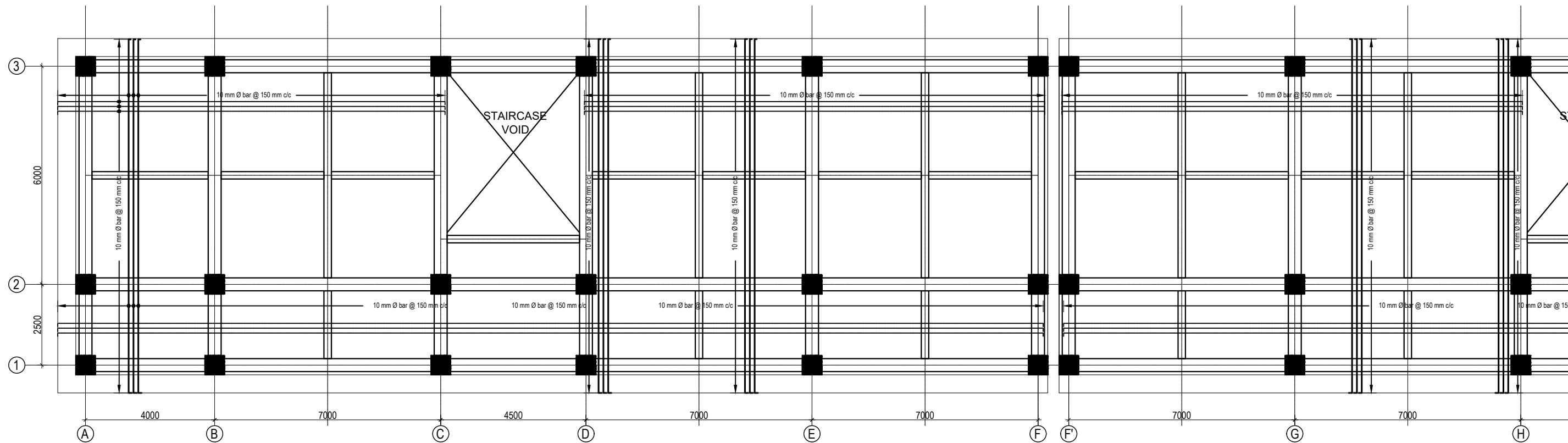
BEAM LAYOUT PLAN (FIRST, SECOND AND THIRD FLOOR)
(Scale= 1:100)

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM			SHEET NO. ST-14	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	BEAM LAYOUT PLAN	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		DWG CODE. 3S18R-MOUNTAINOUS
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
					SCALE : 1: 120		PAPER SIZE : A3		
					DATE: FEBRUARY, 2023				

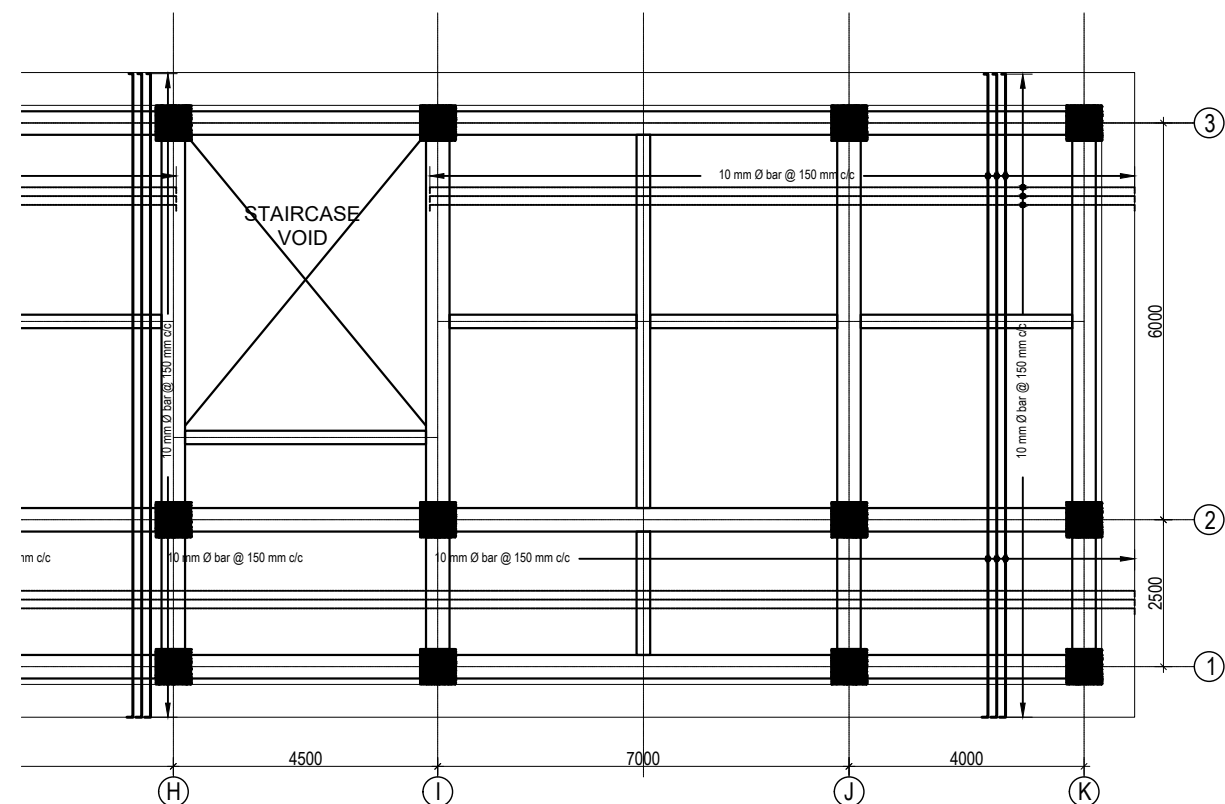
COLUMN REINFORCEMENT DETAILS


S. NO.	GRID	BEAM SIZE	AT SUPPORT	AT MID	STIRRUPS BAR ORIENTATION	FLOOR LVL
1	1-1 2-2 3-3	400X600				FIRST FLOOR BEAMS SECOND FLOOR BEAMS
					4- Legged, 10Ø100c/c & 150 c/c	
2	A-A B-B C-C D-D E-E	400X600				REMAINING FLOOR BEAMS
					4- Legged, 10Ø100c/c & 150 c/c	
3	Sec. beam	230X350				ALL FLOOR BEAMS
					2- Legged, 10Ø100c/c & 150 c/c	

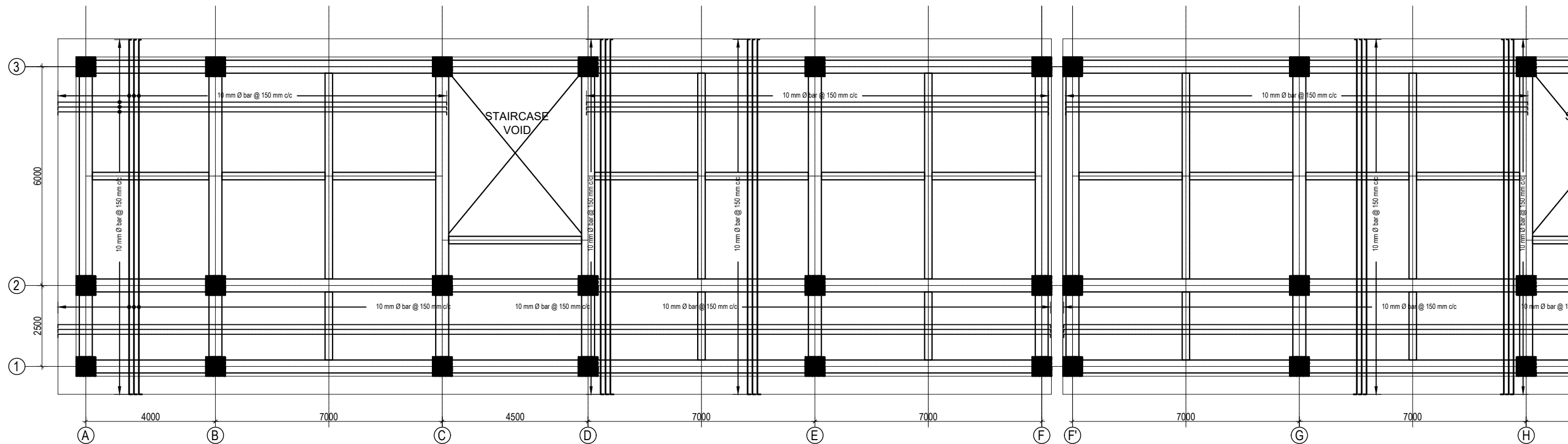
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-15	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	BEAM DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S18R-MOUNTAINOUS	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	



SLAB REINFORCEMENT DETAIL FOR TOP BARS
 (GROUND, FIRST, SECOND AND THIRD FLOOR)
 TOP REINFORCEMENT: a. FOR MAIN BEAM :10@150 mm c/c
 b. FOR SECONDARY BEAM :10@200 mm c/c
 (Scale= 1:120)



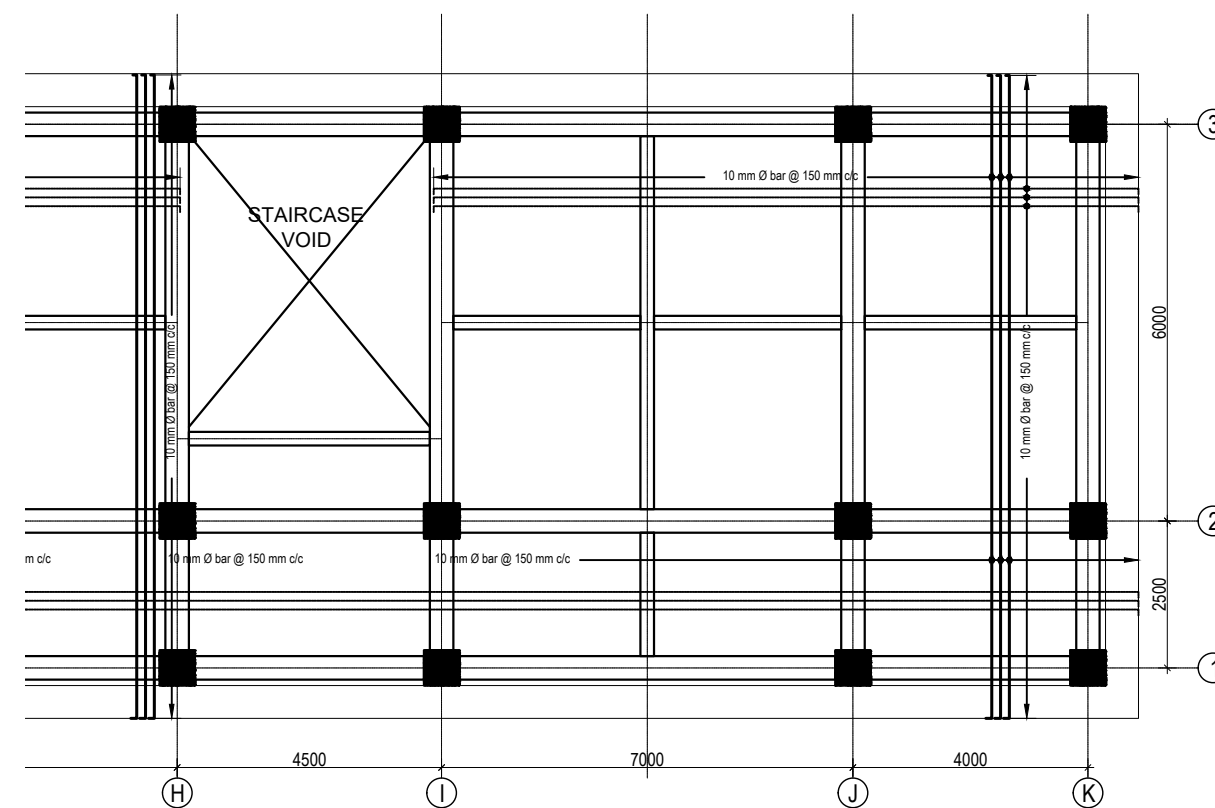
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SLAB REINFORCEMENT DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-16	R-00
					ARCHITECT:	CHECKED:		
					DRAWN :		APPROVED:	DWG CODE. 3S18R-MOUNTAINOUS
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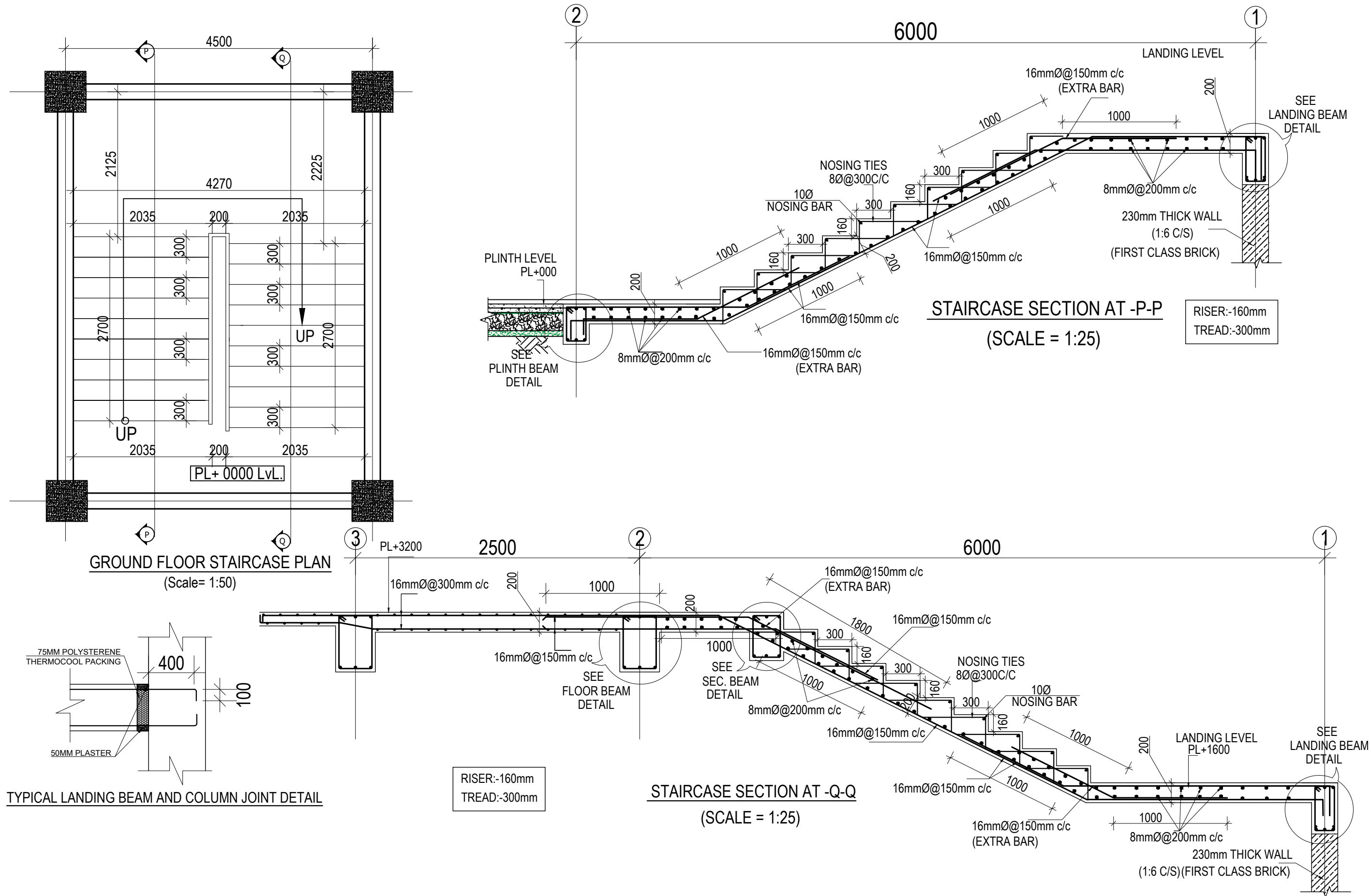
SLAB REINFORCEMENT DETAIL FOR BOTTOM BARS
(GROUND, FIRST, SECOND AND THIRD FLOOR)
BOTTOM REINFORCEMENT: 8Ø@150 mm c/c


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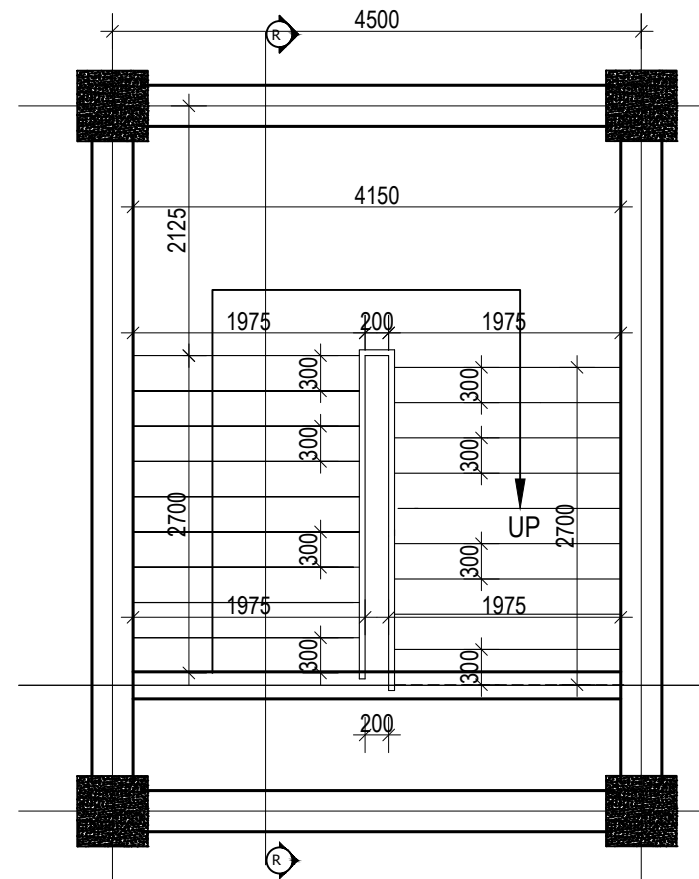
SLAB THICKNESS 125 mm



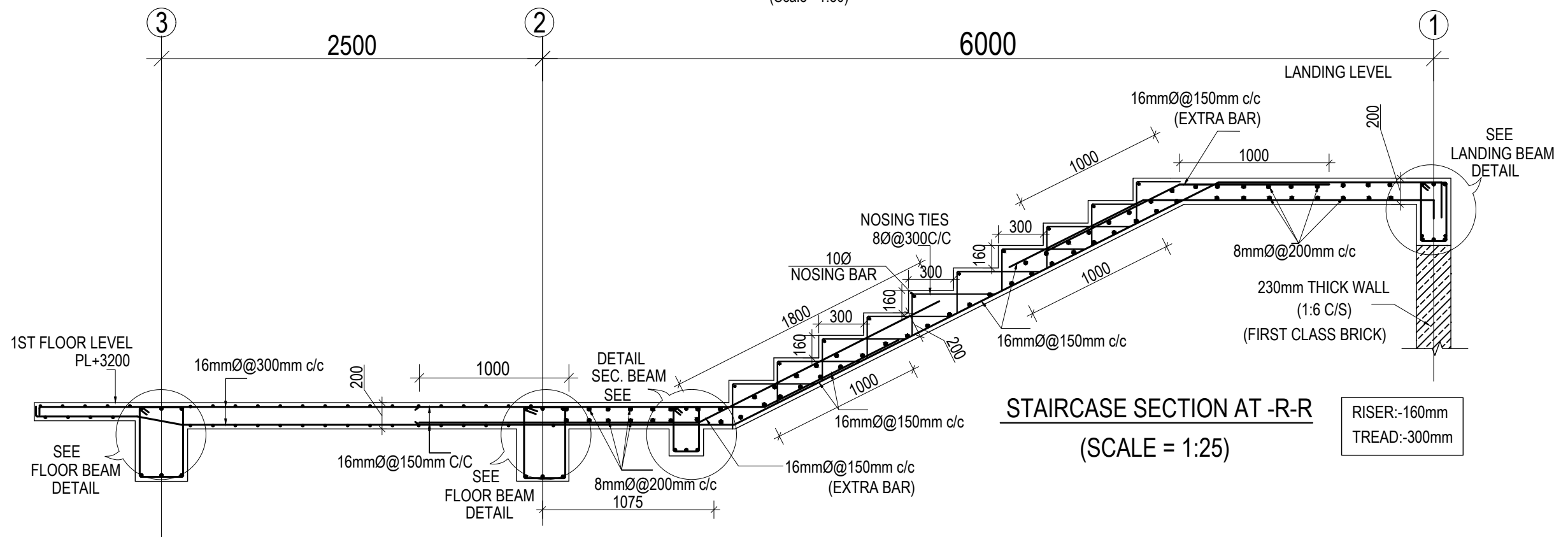
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. ST-17	REVISION NO. R-00	
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	SLAB REINFORCEMENT DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		STRUCTURE ER. :		
					ARCHITECT:		CHECKED:		
					DRAWN :		APPROVED:		
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								DWG CODE. 3S18R-MOUNTAINOUS	



CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	STAIRCASE DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		ST-18	R-00
					ARCHITECT:		DWG CODE. 3S18R-MOUNTAINOUS	
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					APPROVED:			
					DATE: FEBRUARY, 2023			

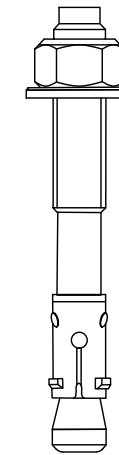
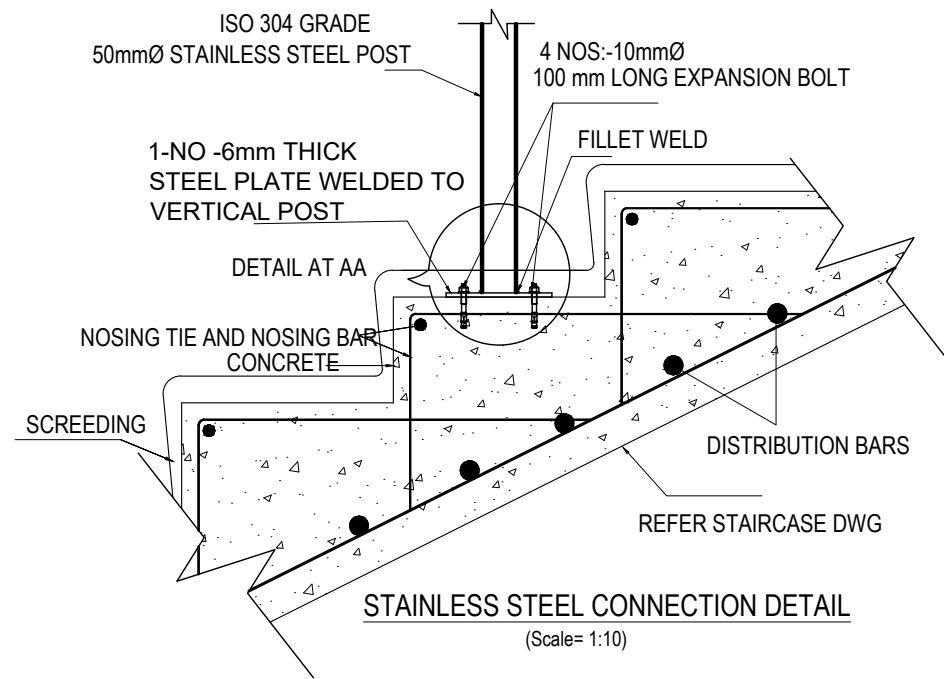


TYPICAL FLOOR STAIRCASE PLAN
(Scale= 1:50)

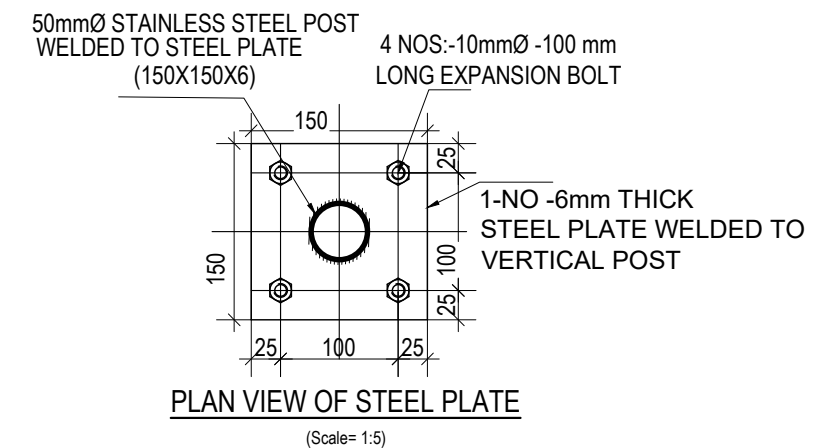
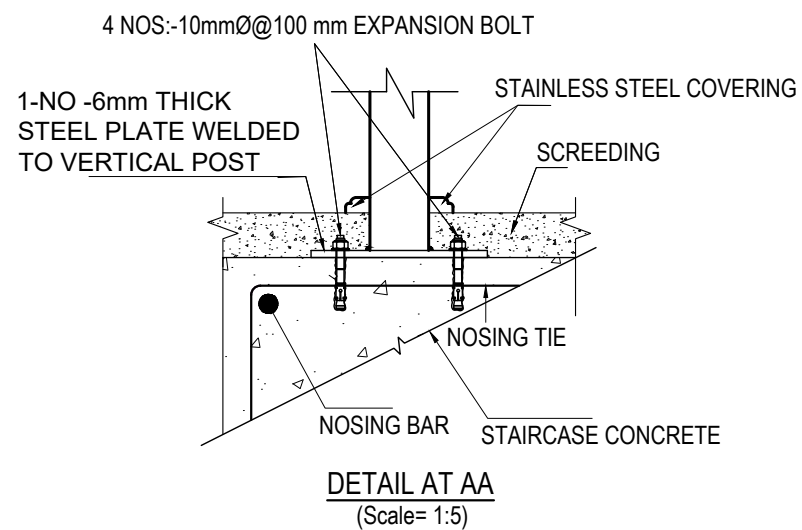


STAIRCASE SECTION AT -R-R
(SCALE = 1:25)

CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanathimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	STAIRCASE DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-19	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S18R-MOUNTAINOUS	
				DRAWN :	APPROVED:		
				SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	




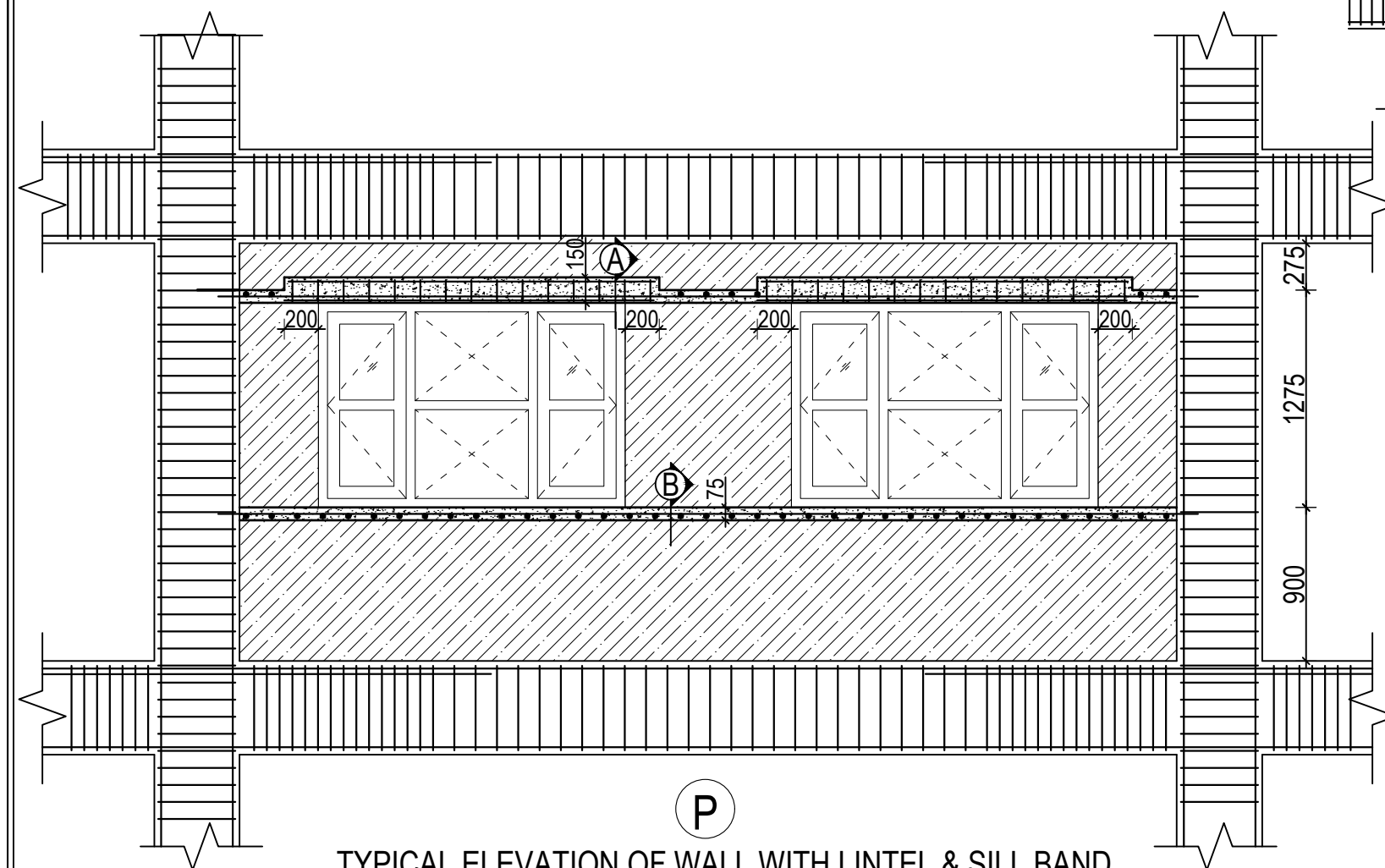
10mmØ-50 mm LONG EXPANSION BOLT
(Scale= 1:1)



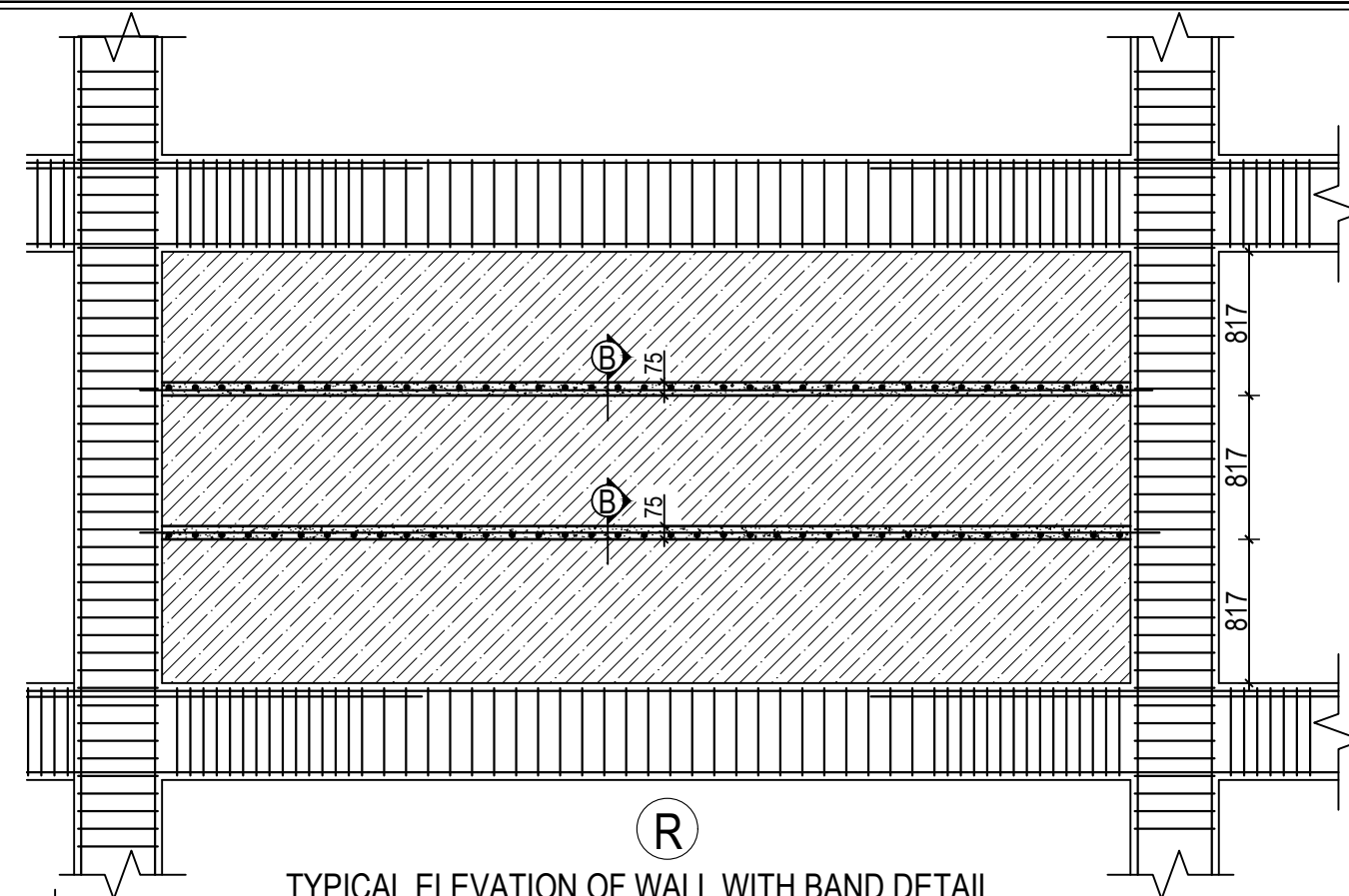
NOTE:

- 1) STAINLESS STEEL SHALL BE IN COMPLIANCE WITH ISO 304 GRADE
- 2) DRILLED HOLE SHALL BE PROPERLY CLEANED BEFORE EMBEDMENT OF BOLT

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	STAIRCASE DETAIL	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-20	R-00
					ARCHITECT:	CHECKED:		
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					SCALE : 1: 120	PAPER SIZE : A3		




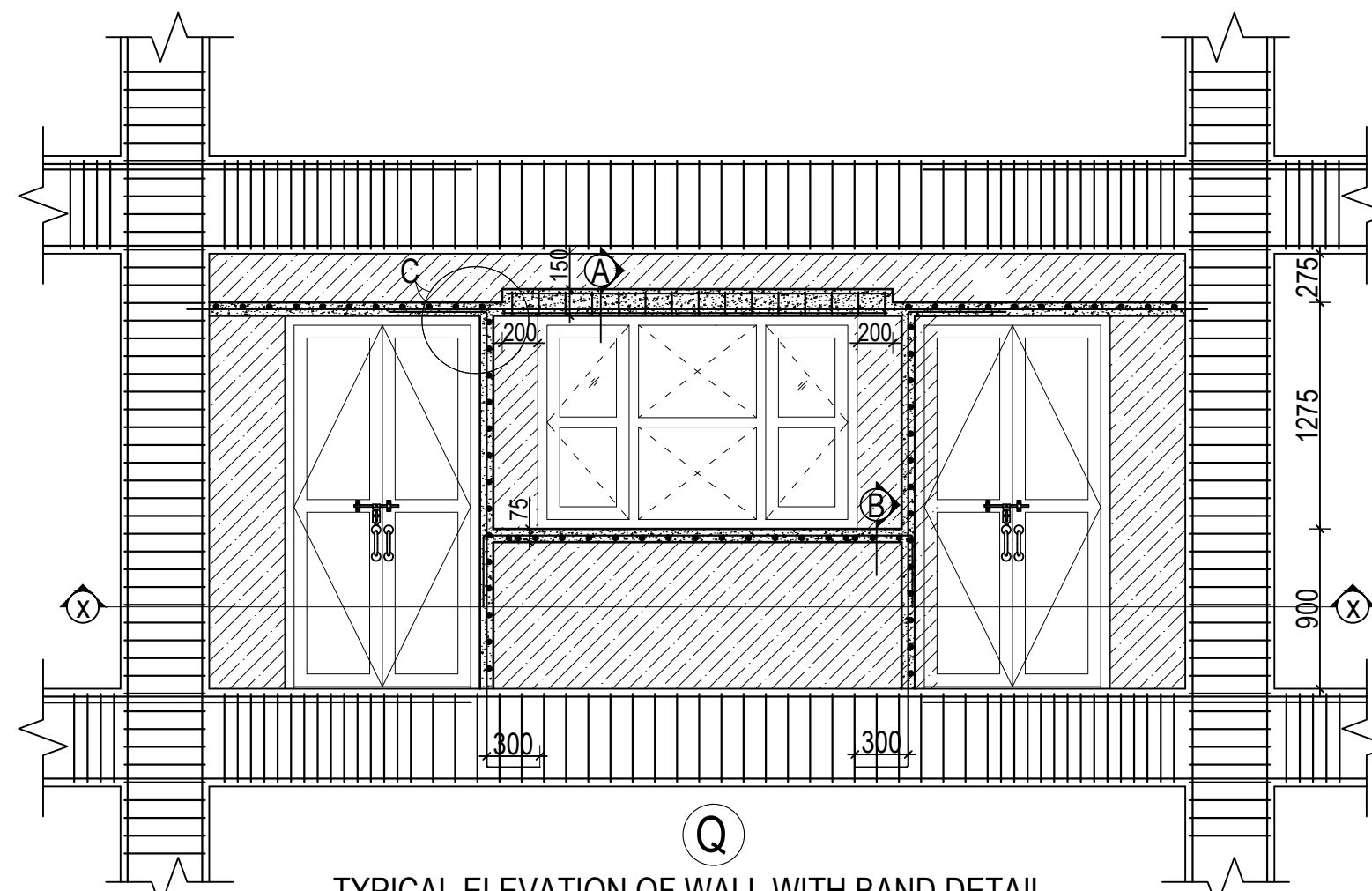
**TYPICAL ELEVATION OF WALL WITH LINTEL & SILL BAND
WITH WINDOWS**
(Scale= 1:35)



**TYPICAL ELEVATION OF WALL WITH BAND DETAIL
WITHOUT OPENINGS**
(Scale= 1:40)

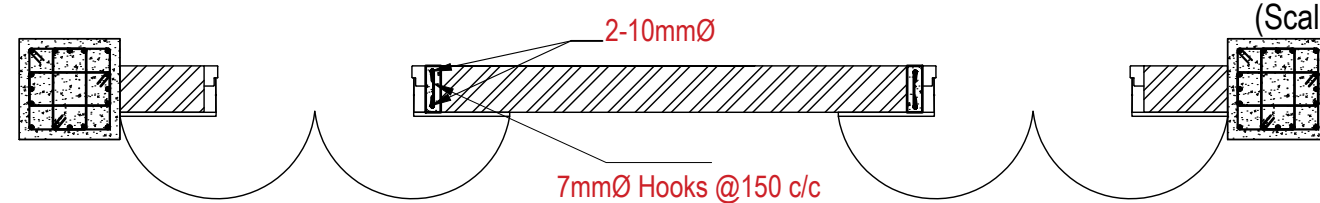
SN.	FLOOR	SECTION AT A-A	SECTION AT B-B
1.	GROUND, FIRST & SECOND FLOOR	<p>230</p> <p>4NOS.-10Ø</p> <p>150</p> <p>8mmØ TIES @150mm c/c</p> <p>2NOS.-10Ø</p>	<p>230</p> <p>2NOS.-10Ø</p> <p>75</p> <p>7mmØ TIES @150mm c/c</p>
2.	THIRD FLOOR	<p>230</p> <p>4NOS.-10Ø</p> <p>150</p> <p>8mmØ TIES @150mm c/c</p> <p>2NOS.-12Ø</p>	<p>230</p> <p>2NOS.-12Ø</p> <p>75</p> <p>7mmØ TIES @150mm c/c</p>

CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
 <p>Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal</p>	Prepare School Building Type Design for Mountainous Region	TYPICAL WALL DETAIL UPTO SECOND FLOOR	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:	STRUCTURE ER. :	ST-21	R-00
				ARCHITECT:	CHECKED:	DWG CODE. 3S18R-MOUNTAINOUS	
				DRAWN :	APPROVED:		
				SCALE : 1: 120	PAPER SIZE : A3	DATE: FEBRUARY, 2023	

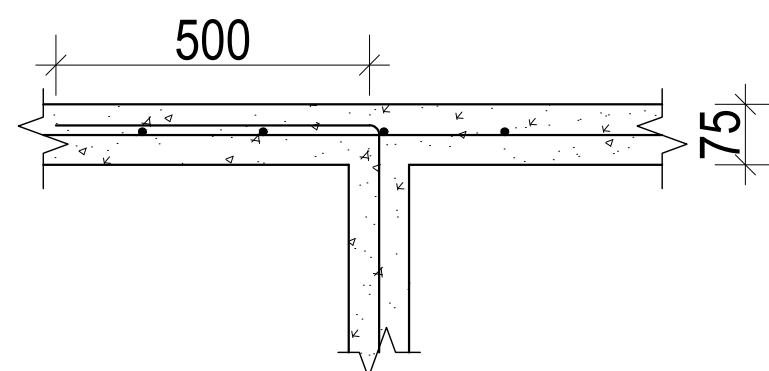


TYPICAL ELEVATION OF WALL WITH BAND DETAIL
WITH DOORS AND WINDOWS

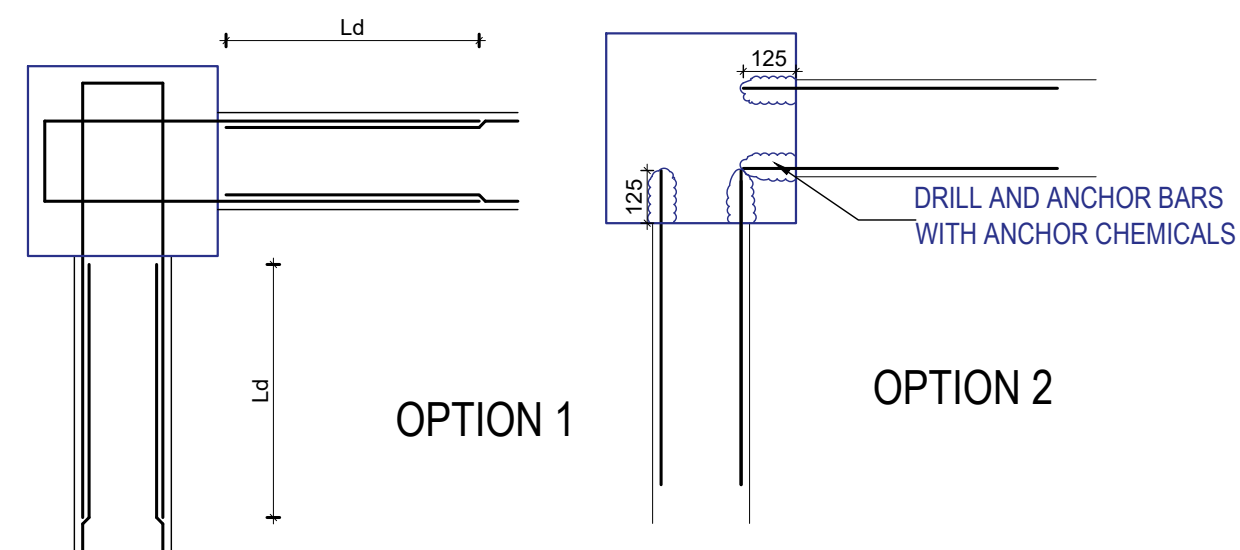
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SECTION AT X-X



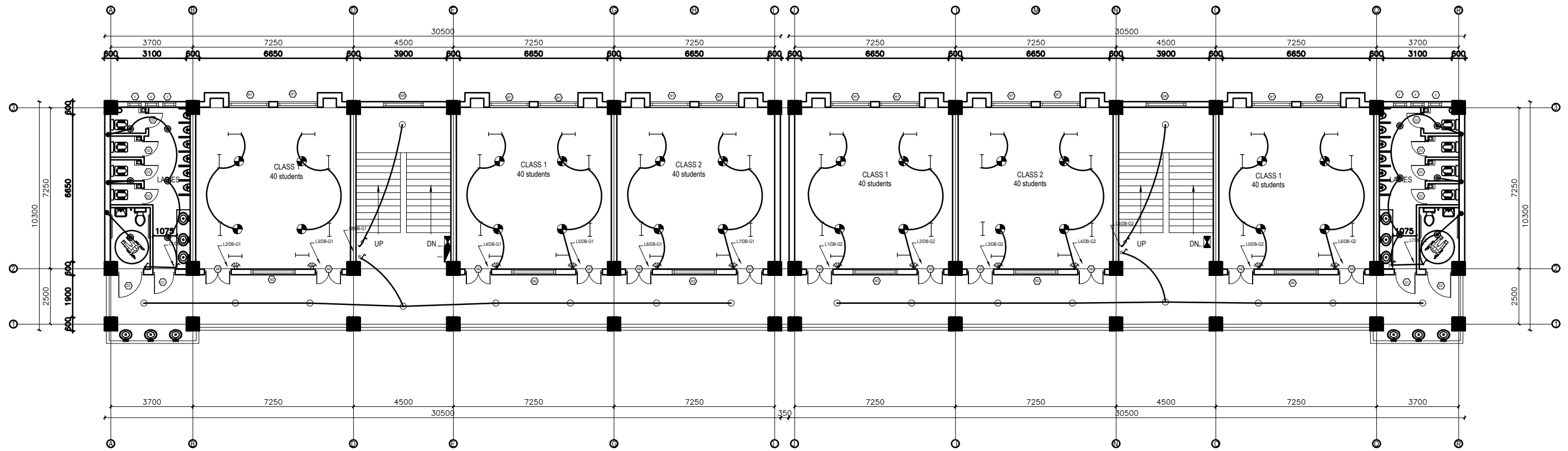
DETAIL AT C



CONNECTION OF BAND REBARS AND COLUMN

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO.	REVISION NO.
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Mountainous Region	TYPICAL WALL DETAIL UPTO SECOND FLOOR	SAGE ENGINEERING CONSULT Bhaktapur, Nepal	ENGINEER:		ST-22	R-00
					ARCHITECT:		DWG CODE. 3S18R-MOUNTAINOUS	
					DRAWN :			
					SCALE : 1: 120	PAPER SIZE : A3		
					DATE: FEBRUARY, 2023			

ELECTRICAL DRAWING

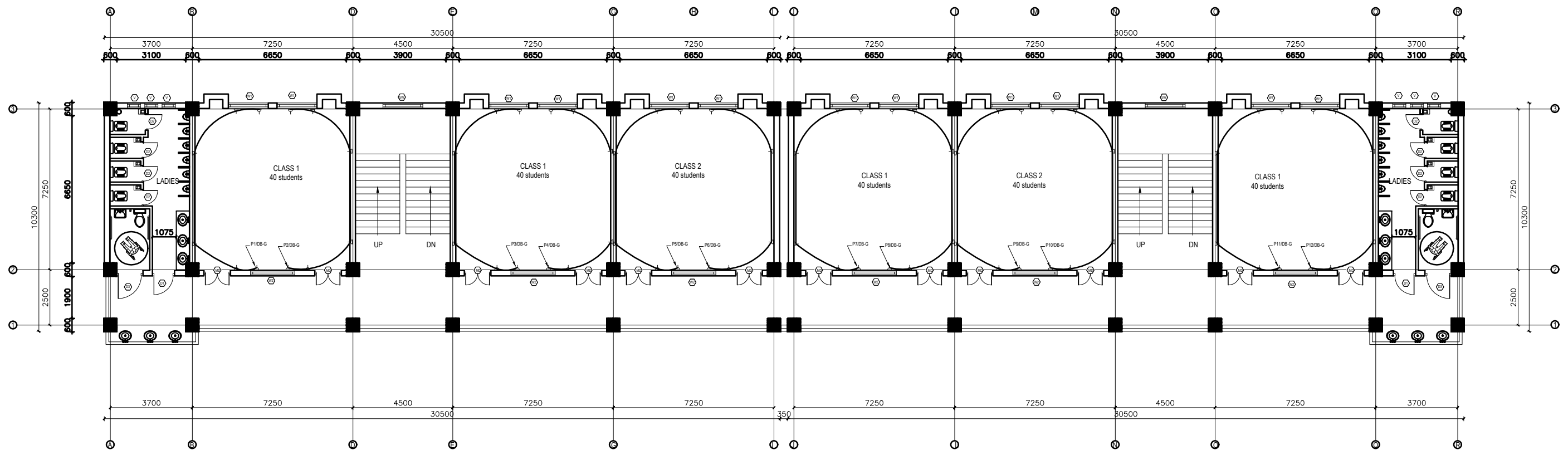


GROUND FLOOR PLAN
FLOOR AREA: 637.185 sq.m

LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42\"/>	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9\"/>	24\"/>

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--


CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 01	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE :	PAPER SIZE : A3 DATE: FEBRUARY, 2023		

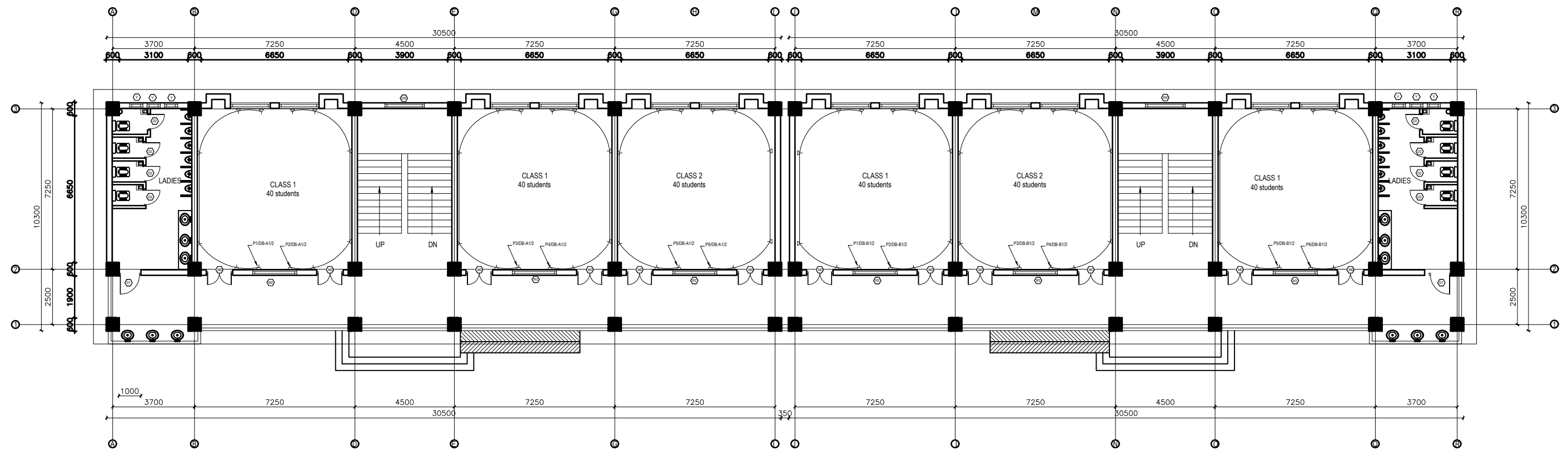


GROUND FLOOR PLAN
FLOOR AREA: 637.185 sq.m











LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12W CFL Light Bulb	Attached to ceiling
	42\"/>	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9\"/>	24\"/>

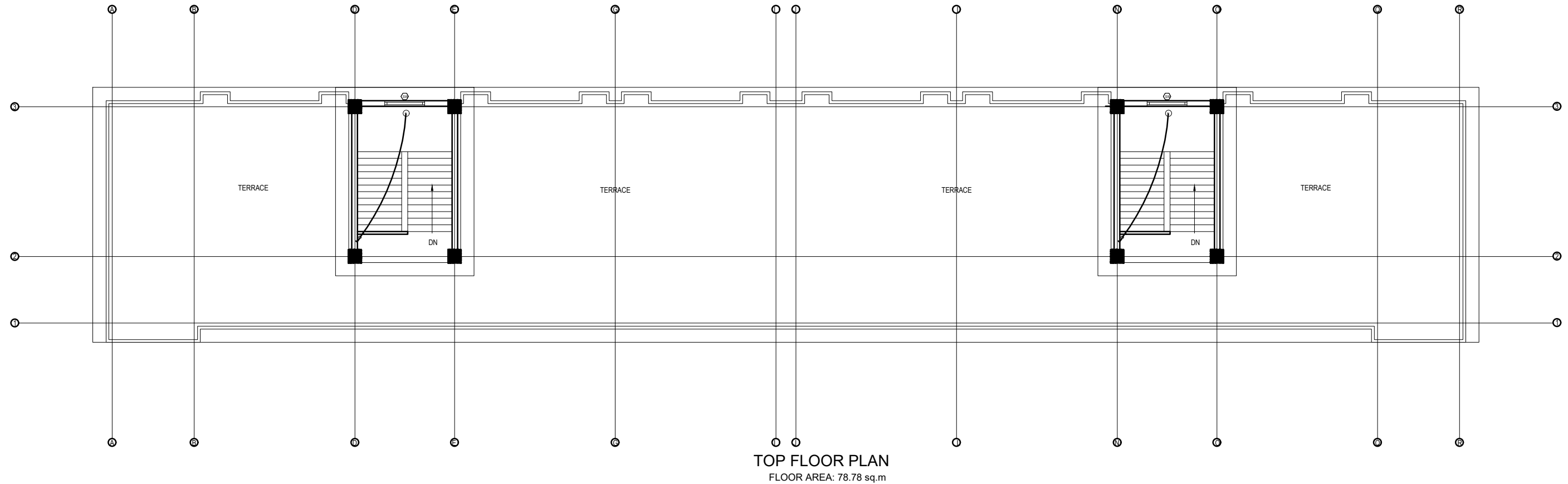
EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 02	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : PAPER SIZE : A3	DATE: FEBRUARY, 2023		



FIRST&SECOND FLOOR PLAN
FLOOR AREA: 637.185 sq.m

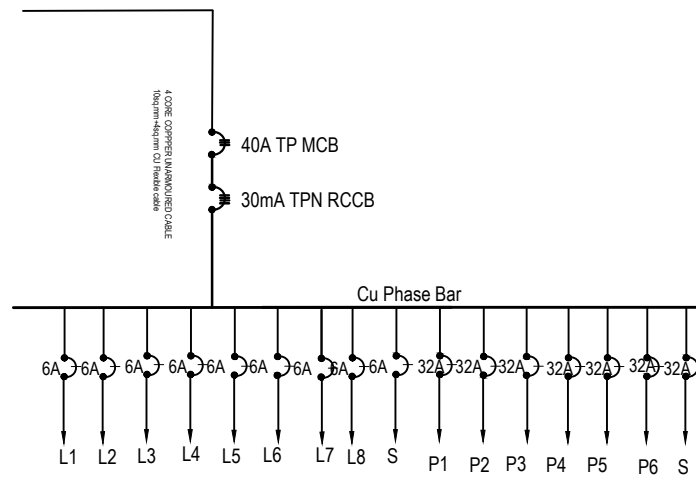
LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12W CFL Light Bulb	Attached to ceiling
	42" Ceiling Fan	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	125mm above finished floor level
	4,5,6 gang Switch	125mm above finished floor level
	Two way Switch	125mm above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9" Exhaust Fan	24" BELOW SLAB



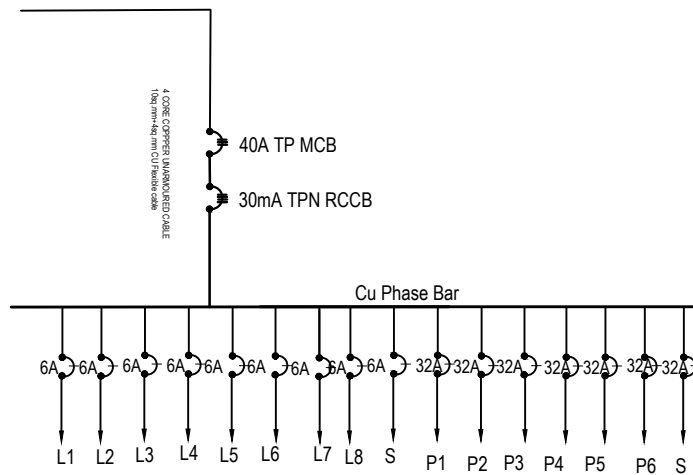
LEGEND		
SYMBOL	DESCRIPTION	MOUNT HEIGHT
	40 W Tubelight	Attached to wall
	12WCFL Light Bulb	Attached to ceiling
	42\"/>	Attached to ceiling
	Power Socket	300mm from finished floor level
	1,2,3 gang Switch	1.25m above finished floor level
	4,5,6 gang Switch	1.25m above finished floor level
	Two way Switch	1.25m above finished floor level
	Distribution Box	2.5m above finished floor level
	MDB	1m above finished floor level
	9\"/>	24\"/>

EARTHING & LIGHTNING PROTECTION SYSTEM		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	VERTICAL AIR TERMINAL	--
	CLIP TO HOLD DOWN CONDUCTOR	--
	EARTH TEST LINK	--
	EARTH PIT	--

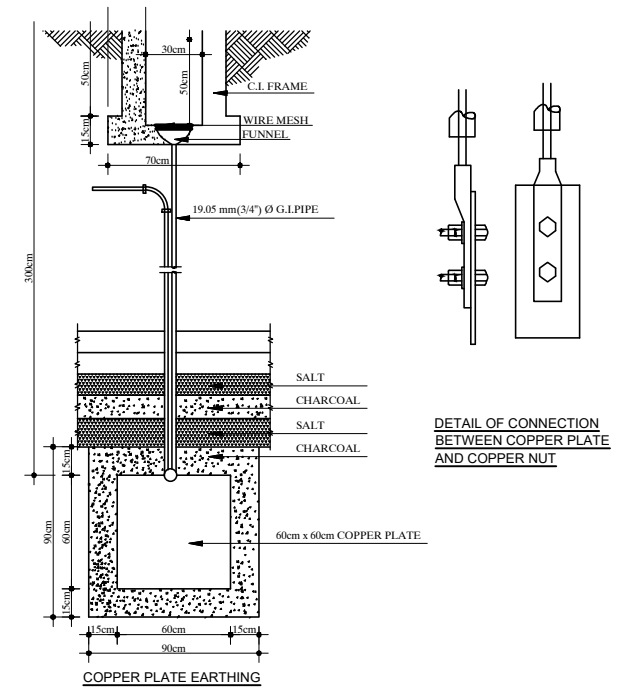
CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 05	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE : PAPER SIZE : A3	DATE: FEBRUARY, 2023		



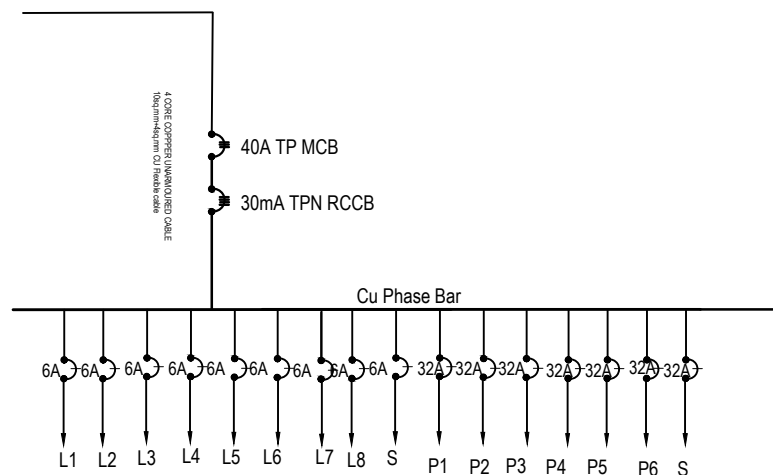
GROUND FLOOR L/P DISTRIBUTION SYSTEM (DB-G1)



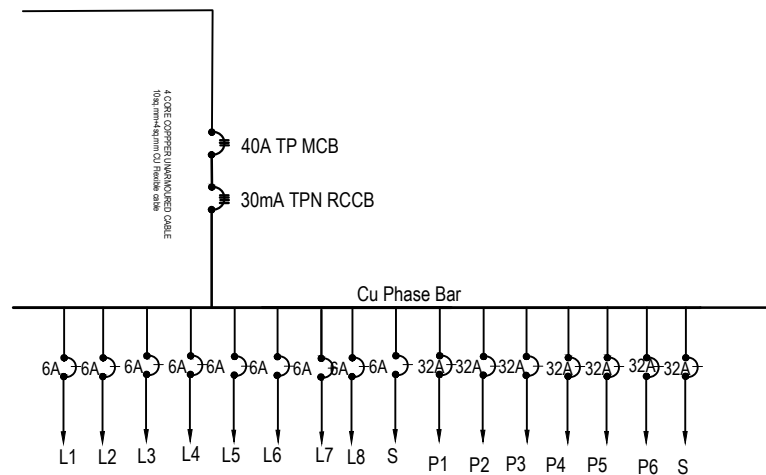
FIRST/SECOND FLOOR L/P DISTRIBUTION SYSTEM (DB-A1/2)



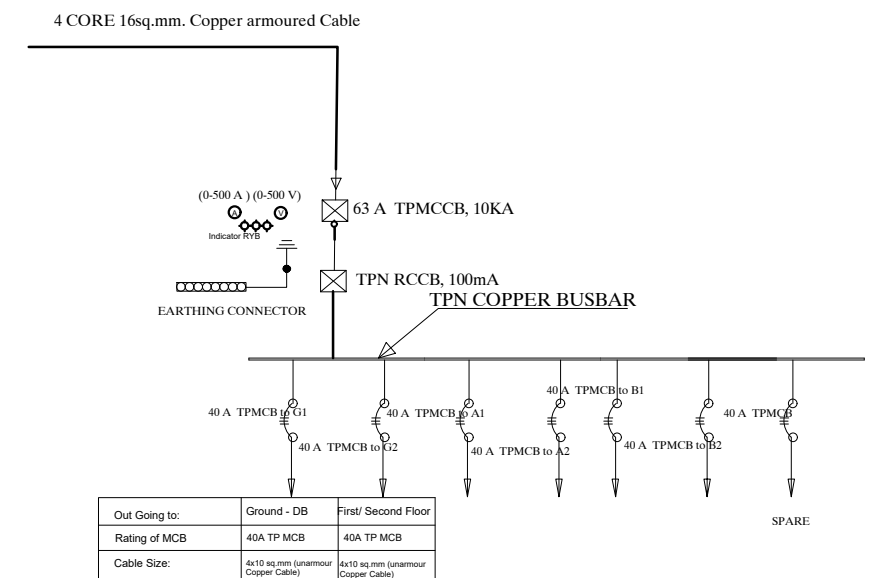
EARTHING DETAILS




GROUND FLOOR L/P DISTRIBUTION SYSTEM (DB-G2)



FIRST/SECOND FLOOR L/P DISTRIBUTION SYSTEM (DB-B1/2)



DETAILS OF Main -DB

CLIENT	PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 06	REVISION NO. R-00
 <div>Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal</div>	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
				ARCHITECT:	CHECKED:		
				DRAWN :	APPROVED:		
				SCALE :	PAPER SIZE : A3	DATE: FEBRUARY, 2023	

INSTALLATION CONSIDERATION

* The switch box should be at 200mm from the door and 1250mm above floor.
* General room socket height should be at 150mm above skirting wall.
* Kitchen socket height should be at 450mm above kitchen top.
* Toilet socket/switch should be at 1250mm above floor level and mirror light at 50 mm above mirror as per mirror size.
* Exhaust fan should be at 600mm below slab.
* Wall Light should be at 2100mm from floor level.

CONDUIT SCHEDULE

CABLE SIZES \ PVC CON. DIA.	NO OF MAXIMUM CABLE AND PVC FRLS CONDUIT SIZES					
	16 mm Dia.	20 mm Dia.	25 mm Dia.	32 mm Dia.	40 mm Dia.	50 mm Dia.
1.5 SQ. MM/Equivalent	5	7	10	14	--	--
2.5 SQ. MM/Equivalent	3	5	8	12	--	--
4.0 SQ. MM/Equivalent	--	3	6	10	12	--
6.0 SQ. MM/Equivalent	--	2	4	8	9	--
10 SQ. MM/Equivalent	--	--	3	6	8	--
16 SQ. MM/Equivalent	--	--	2	3	4	8

CONVERSION TABLE

INCHES	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	3-1/2	4	5	6
mm	16	20	25	32	40	50	65	80	90	100	130	150

* Unless and otherwise stated, all final circuits shall be wired with multistranded
CU wires in PVC Conduit and shall confirm to the following schedule:


WIRING SYSTEM

Air Conditioner/Heater/Range/Appliances
RJ – 45 Data / TV Point
RJ –11 Telecommunication point
Telephone Point
Outdoor Gate/ Post Top/Street Lights/Flood Lights
6 Amp switched outlet sockets
16 Amp Power Sockets Points
General Light Points (From DB to Switch Board)
Looping of Light Points

CABLE/CONDUCTOR SIZE

2x4.0 + 1x2.5 sq. mm copper wire
CAT 6 4 pairs Data cable
CAT 6 4 pairs Data cable
0.5mm dia PVC Insulated Tinned Cu Cable
3 x 2.5 sq. mm copper M/S wire
2x2.5 + 1x1.5 sq. mm copper M/S wire
2x4.0 + 1x2.5 sq. mm copper M/S wire
2x2.5 + 1x1.5 sq. mm copper M/S wire
2x1.5 + 1x1.0 sq. mm copper M/S wire

NOTE	
* Conduit Colors for Light/Power Circuit shall be Black, Security Wiring shall be Blue, Fire Alarm Wiring shall be Red, Low Voltage Circuits shall be Brown and UPS Circuits shall be Green.	
* L–N stands for Lighting Circuit, P–N for Power Circuit, AC–N for Air Condition, M/PC–N for Pump/Motor & Lp–N Light Outlet Circuit no.–N (Where N=1,2,3...)	
* For Circuit no., see Distribution Details	
* Unless and otherwise stated, all final circuits shall be wired up by PVC CU M/S Wire in PVC Conduit and shall confirm to the following schedule:	
Rating (Amp)	6 10 20 32 40 63
Wire (sq. mm)	1.5 2.5 4.0 6.0 10 16
* Unless and otherwise stated, maximum of 8 light points shall be wired in a final single lighting circuit where as maximum of 3 power socket outlet shall be wired in single power circuit.	
* Unless and otherwise stated, all 16 A outlets with the same circuit no. shall be wired in ring circuit.	
* Electrical drawings are schematical only, scale: NTS, use as shown purpose, do not measure directly.	
* Contractor should coordinate with interior for exact location of fixtures	
* Run separate conduit for TV, TEL and PS wherever they are in matching places	
* All the Kitchen/Bathroom Power Circuits should be feed by RCCB with 100 mA sensitivity – see schematic details	
* All the cables and conductors shall be PVC insulated CU and shall confirm to the following color codes:	
Neutral of AC 1/3 Phase	Black
Grounding/ Bounding/Earthing	Green
loop/common wire for 2 way switch	White
Live Phase A of 3 Phase	Red
Live Phase B of 3 Phase	Yellow
Live Phase C of 3 Phase	Blue

CLIENT		PROJECT TITLE	SHEET TITLE	CONSULTANT	PLANNING DESIGN TEAM		SHEET NO. 07	REVISION NO. R-00
	Government of Nepal Ministry of Education, Science & Technology Center for Education and Human Resource Development Sanothimi, Bhaktapur, Nepal	Prepare School Building Type Design for Terai and Valley Region	ELECTRICAL DRAWING	IDEAL SOLUTION PVT.LTD.	ENGINEER:	STRUCTURE ER. :	DWG CODE. 3S12R	
					ARCHITECT:	CHECKED:		
					DRAWN :	APPROVED:		
					SCALE :	PAPER SIZE : A3	DATE: FEBRUARY, 2023	