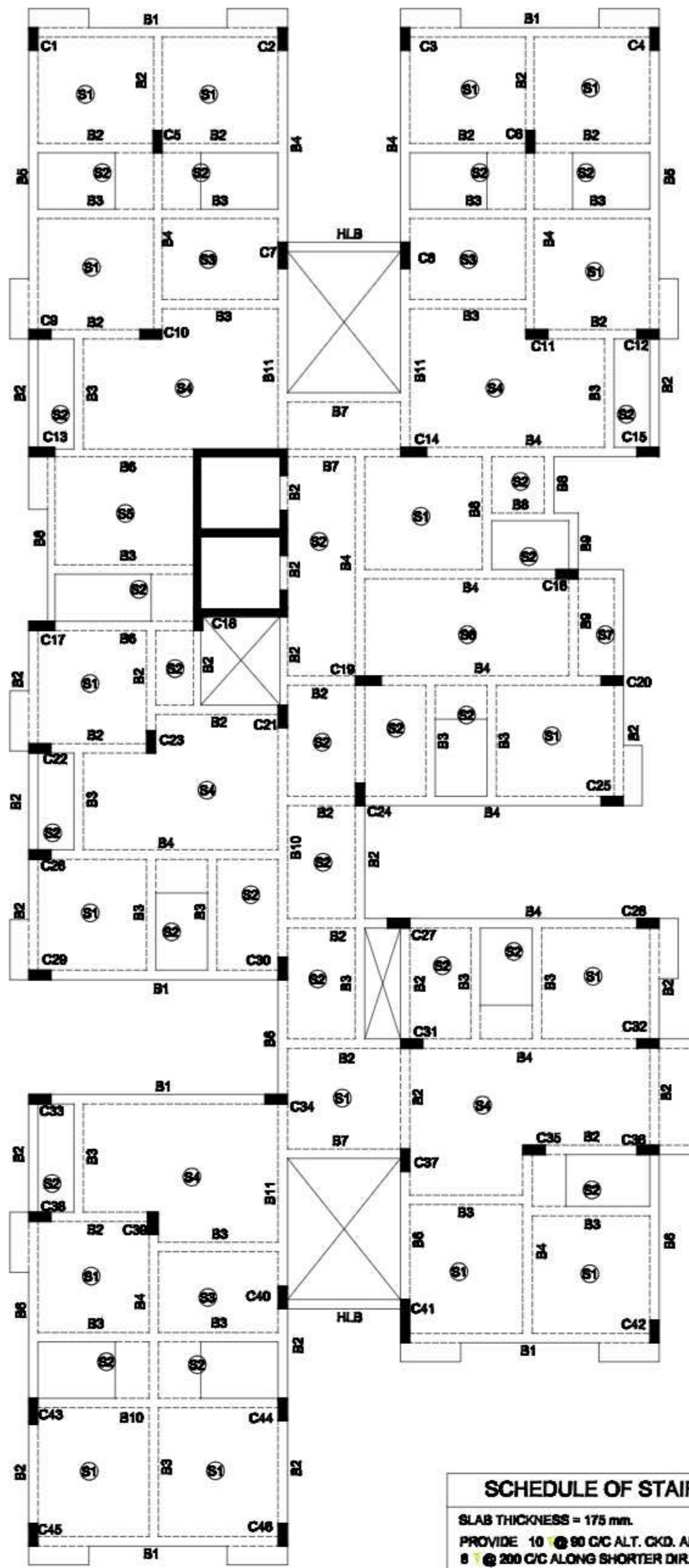


**BLOCK-2**  
TYP. ROOF BEAM LAY-OUT PLAN.

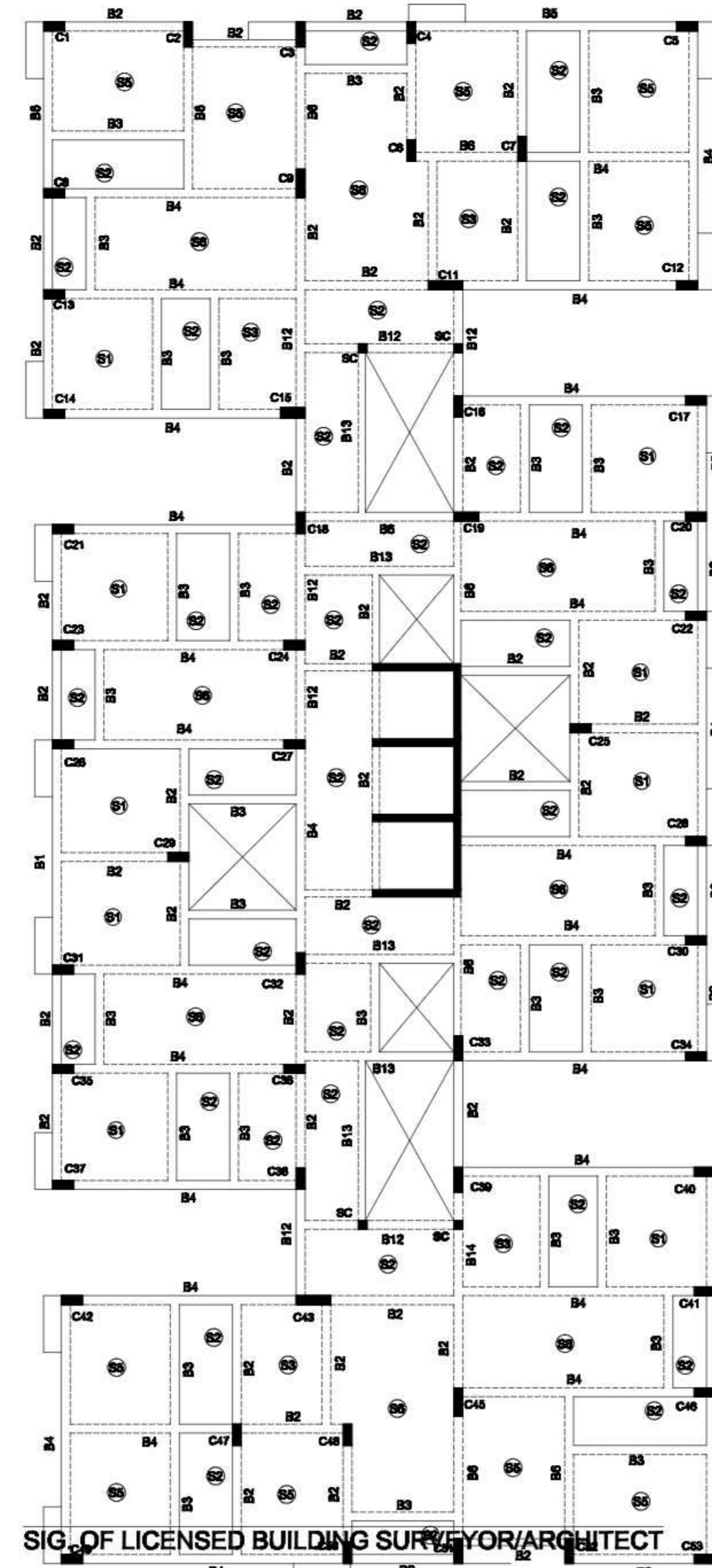


**BLOCK-1**  
TYP. ROOF BEAM LAY-OUT PLAN.

**SCHEDULE OF STAIR.**

SLAB THICKNESS = 175 mm.

PROVIDE 10 @ 90 C/C AL.T. C/D. ALONG LONGER DIR. AND 8 @ 200 C/C ALONG SHORTER DIR. AS DIST.



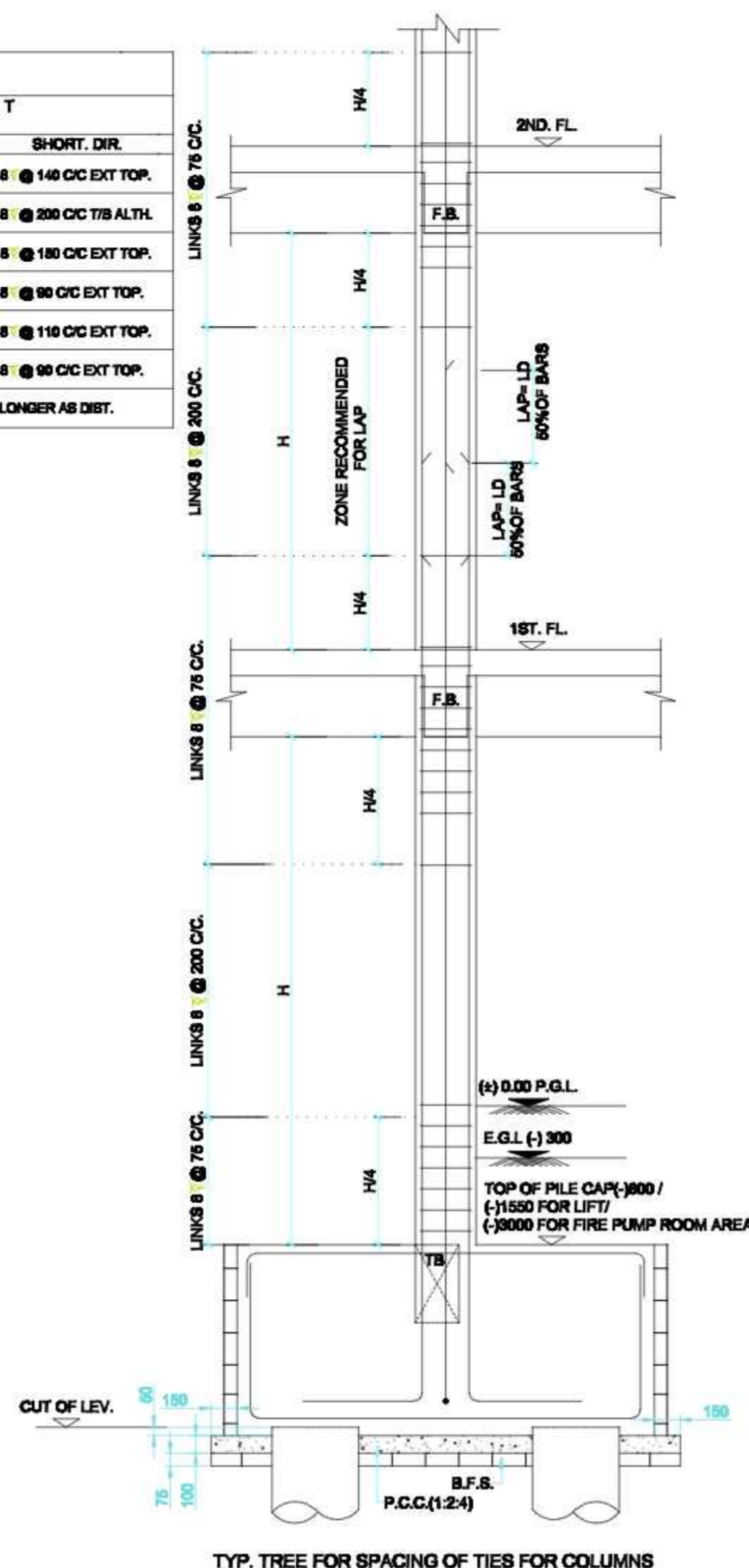
**BLOCK-3**  
TYP. ROOF BEAM LAY-OUT PLAN.

**SCHEDULE OF BEAM.**

BEAM MKD.	BEAM SIZE	REINFORCEMENT				STIRRUPS
		SPAN		SUPPORT		
		TOP	BOTT.	TOP	BOTT.	
B1	280X300	2-20 ALTH.	2-20 ALTH. +2-16 EXT.	2-20 ALTH. +2-25 EXT.	2-20 ALTH.	2L-8 @ 100 TO 250 C/C.
B2	280X300	2-12 ALTH.	2-12 ALTH. +9-12 EXT.	2-12 ALTH. +2-16 EXT.	2-12 ALTH.	2L-8 @ 250 C/C.
B3	280X350	2-12 ALTH.	3-12 ALTH. +2-12 EXT.	2-12 ALTH.	3-12 ALTH.	2L-8 @ 250 C/C.
B4	280X300	2-20 ALTH.	2-20 ALTH. +2-20 EXT.	2-20 ALTH. + (2-25+1-20) EXT.	2-20 ALTH.	2L-8 @ 100 TO 150 C/C.
B5	280X300	2-25 ALTH.	2-25 ALTH. +2-20 EXT.	2-25 ALTH. +2-25 EXT.	2-25 ALTH.	2L-8 @ 100 TO 250 C/C.
B6	280X300	2-16 ALTH.	2-16 ALTH. +2-16 EXT.	2-16 ALTH. +2-16 EXT.	2-16 ALTH.	2L-8 @ 150 TO 200 C/C.
B7	280X450	2-20 ALTH.	2-20 ALTH. +2-20 EXT.	2-20 ALTH. +2-20 EXT.	2-20 ALTH.	2L-8 @ 100 TO 200 C/C.
B8	280X300	2-12 ALTH.	3-12 ALTH.	2-12 ALTH.	3-12 ALTH.	2L-8 @ 250 C/C.
B9	280X300	4-16 ALTH.	3-16 ALTH.	4-16 ALTH.	3-16 ALTH.	2L-8 @ 150 C/C.
B10	280X300	3-20 ALTH.	3-20 ALTH. +2-16 EXT.	3-20 ALTH. +2-20 EXT.	3-20 ALTH.	2L-8 @ 75 TO 250 C/C.
B11	280X300	2-20 ALTH.	2-20 ALTH. +3-20 EXT.	2-20 ALTH. +3-20 EXT.	2-20 ALTH.	2L-8 @ 100 C/C.
B12	280X300	3-20 ALTH.	3-20 ALTH. +2-25 EXT.	3-20 ALTH. +2-25 EXT.	3-20 ALTH.	2L-8 @ 75 C/C.
B13	280X400	2-16 ALTH.	2-16 ALTH. +2-16 EXT.	2-16 ALTH.	2-16 ALTH.	2L-8 @ 250 C/C.
B14	280X300	3-20 ALTH.	3-20 ALTH. +2-25 EXT.	3-20 ALTH. +2-25 EXT.	3-20 ALTH.	2L-8 @ 75 C/C.
HLB	280X300	2-20 ALTH.	2-20 ALTH. +2-20 EXT.	2-20 ALTH. +2-20 EXT.	2-20 ALTH.	2L-8 @ 75 TO 250 C/C.

**SCHEDULE OF SLAB.**

SLAB MKD.	SLAB THICKNESS	SPAN BOTTOM		SUPPORT TOP	
		LONG. DIR.	SHORT. DIR.	LONG. DIR.	SHORT. DIR.
B1	110	8 @ 170 C/C AL.T. CUT.	8 @ 170 C/C AL.T. CUT.	8 @ 140 C/C EXT. TOP.	8 @ 140 C/C EXT. TOP.
B2	100	8 @ 230 C/C 7/8 ALTH.	8 @ 200 C/C 7/8 ALTH.	8 @ 220 C/C 7/8 ALTH.	8 @ 200 C/C 7/8 ALTH.
B3	100	8 @ 200 C/C AL.T. CUT.	8 @ 170 C/C AL.T. CUT.	8 @ 200 C/C EXT. TOP.	8 @ 180 C/C EXT. TOP.
B4	105	8 @ 180 C/C AL.T. CUT.	8 @ 120 C/C AL.T. CUT.	8 @ 120 C/C EXT. TOP.	8 @ 90 C/C EXT. TOP.
B5	120	8 @ 190 C/C AL.T. CUT.	8 @ 150 C/C AL.T. CUT.	8 @ 110 C/C EXT. TOP.	8 @ 110 C/C EXT. TOP.
B6	120	8 @ 280 C/C AS DIST.	8 @ 130 C/C AL.T. CUT.	8 @ 250 C/C AS DIST.	8 @ 90 C/C EXT. TOP.
B7	140	8 @ 125 C/C TOP. & 8 @ 280 C/C AT BOT. ONLY SHORER 8 @ 280 C/C TOP. & BOT. ONLY LONGER AS DIST.			



TYP. TREE FOR SPACING OF TIES FOR COLUMNS

- NOTES :-**
- 1) ALL DIAMETERS ARE IN MILLIMETERS.
  - 2) GRADE OF CONG. : ALL DESIGN MIX I. PILE > M-20, WITH MINIMUM CEMENT CONTENT @ 400 Kg/CUM OF CONG. II. COLUMN & LIFT : AS PER SCHEDULE. III. REST ALL > M-25 GR. ROOF TO 6TH. ROOF.
  - 3) P.C.C SHALL BE NOMINAL 1:2:4 (M15) AS PER IS: 456 - 2000.
  - 4) TOP STEEL REINFORCEMENT SHALL CONFORM TO LATEST IS: 1786 - 1986 CODES WITH YIELD STRESS 800 MPa.
  - 5) CLEAR COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS:- a) PILE : 40 MM ALL SIDES FROM OUTERMOST MAIN BAR. b) PILE CAP : 50 MM ALL SIDES FROM OUTERMOST MAIN BAR. c) COLUMN : 40 MM ALL SIDES FROM OUTERMOST MAIN BAR. d) THE BEAM : 30 MM ALL SIDES FROM OUTERMOST MAIN BAR. e) FLOOR BEAM : 30 MM ALL SIDES FROM OUTERMOST MAIN BAR. f) SLAB : 20 MM ALL SIDES FROM OUTERMOST MAIN BAR. g) WAIST SLAB : 20 MM ALL SIDES FROM OUTERMOST MAIN BAR.
  - 6) MINIMUM LAP LENGTH - FOR PILE : 40 Ø WITH 3 SETS LAP WELDING IN BOTH SIDES FOR A LENGTH OF 200MM. FOR REST - 50 Ø OF THE BAR.
  - 7) MAXIMUM LOAD ON EACH PILE : VERTICAL LOAD - 45 MT. AS PER THE SOIL INVESTIGATION REPORT PREPARED BY M/S GEOTECH ENGINEERS ENGINEERS PVT.LTD
  - 8) POSITIONAL ECCENTRICITY OF ANY PILE MORE THAN, 60mm, FOR SINGLE PILE, AND 75 mm. FOR GROUP OF PILES SHALL NOT BE PERMITTED.
  - 9) THE PILE HEADS SHALL PROJECT IN TO PILE CAP FOR 50 mm. THE HEADS TO BE NEATLY FORMED TO THE REQUIRED DIA.
  - 10) ALL TIES TO BE SPOT WELDED WITH ALGAR REINFORCEMENT.
  - 11) BORING OF PILE :- I. BORING MAY BE DONE WITH ALGAR METHOD CONSIDERING SUB - SOIL STRATA & DEPTH OF PILE. II. FOR PLACING OF CONCRETE IN PILE BORES, A FUNNEL SHOULD BE USED AND METHOD OF CONCRETING SHOULD BE SUCH THAT THE ENTIRE VOLUME OF THE PILE SHAFT IS FILLED UP WITHOUT THE FORMATION OF VOIDS OR MIXING OF SOIL AND DRILLING FLUID WITHIN CONCRETE.
  - 12) VERTICAL LOAD TESTING OF PILE SHOULD CONFIRM IS-2911 (PART-4).
  - 13) ROCK BORED CAST IN SITU PILE SHOULD CONFIRM IS-2911 (PART-1, SEC-II)
  - 14) EXT. TOP & BOTT. FLOOR, BEAM - I) EXT. TOP TO BE PROVIDED AT L/A FROM SUPPORT. II) EXT. BOTT. TO BE EXTENDED L/S FROM SUPPORT. SLAB - I) EXT. TOP TO BE PROVIDED IN ALL SUPPORTS FOR A LENGTH OF L/A FROM SUPPORT. II) BOTTOM ROD TO BE ALT. CUT. AT L/S FROM SUPPORT.
  - 15) ALL DRAWINGS SHALL BE CORRELATED WITH ARCHITECTURAL DRAWINGS & ANY DISCREPANCY SHALL BE BROUGHT TO NOTICE OF THE ENGINEER BEFORE EXECUTION.
  - 16) THIS DRAWING TO BE READ ALONGWITH SPECIFICATIONS & ALL REFERENCE DRAWING.
  - 17) ALL THE WORKS SHALL BE DONE AS PER RELEVANT IS CODE PERTAINING TO WORK.
  - 18) CONTRACTOR MUST VERIFY ALL DIMENSION AT SITE BEFORE EXECUTION OF WORK NO CLAIM WILL BE ENTERTAINED. CONTRACTOR SHALL BE RESPONSIBLE TO PROPER LINE AND LEVEL OF STRUCTURE.
  - 19) DESIGN IS BASED ON AS PER IS-456, IS-475, SP16, IS-1893 & IS-2911.
  - 20) STRUCTURAL DESIGN IS DONE FOR ALL BLOCKS (6+VII) STORED BUILDING ONLY.
  - 21) SEISMIC ZONE CONSIDERED FOR DESIGN AS ZONE-III & OMRF.

**CERTIFICATE OF OWNER**

CERTIFIED THAT I SHALL NOT ON A LATER DATE MAKE ANY ADDITION OR ALTERATION TO THIS PLAN SO AS TO CONVERT IT FOR MY USE OR ALLOW IT TO BE USED FOR SEPARATE FLATS/FLOORSTOREY. CERTIFIED THAT I HAVE GONE THROUGH THE BUILDING RULES FOR N.D.D.M. & ALSO UNDERTAKE TO ABIDE BY THOSE RULES DURING & AFTER CONSTRUCTION OF BUILDING. CERTIFIED THAT I ALSO UNDERTAKE TO REPORT OF COMMENCEMENT BEFORE SEVEN DAYS AND COMPLETION WOULD BE REPORTED WITHIN 90 DAYS. I ALSO UNDERTAKE TO REPORT THAT THERE IS NO COURT CASE OR ANY COMPLAINTS FROM ANY CORNER IN RESPECT OF MY PROPERTY AS PER PLAN, S.D.D.M. WILL NOT BE LIABLE FOR ANY TYPE OF DISPUTE IF ARISING IN FUTURE FURTHER THERE IS NO TENANT IN THE ABOVE SAID PREMISES.

**SIGNATURE OF OWNER.**

**CERTIFICATE OF BUILDING PLAN**

I/WE DO HEREBY CERTIFY THAT PLANS/ELEVATIONS AND SECTIONS AND OTHER STRUCTURAL DETAILS OF THE PROPOSED BUILDING ON HOLDING NO 287 (228), NORTH NILACHAL ROAD ; MOUZA - BISARPARA ; J.L. NO : 05 ; R.S. PLOT NO - 288, 289, 276, 271, 272, 273, 307 ; L.R. KHATAN NO : 1327, 1328, 1329, 1330 ; P.S. - AIRPORT UNDER NORTH DUM DUM MUNICIPALITY ; WARD NO - 33 ; DIST - 24 PGS (A). HAVE BEEN PREPARED IN CONFORMITY WITH ALL RELEVANT PROVISION UNDER THE WEST BENGAL MUNICIPALITY BUILDING RULES, 2007. THIS ALSO TO CERTIFY THAT ALL RELEVANT NO OBJECTION CERTIFICATES FROM THE RESPECTIVE AUTHORITIES SUCH AS FIRE AND EMERGENCY SERVICES DEPARTMENT, AIRPORT AUTHORITY, TELECOMMUNICATION DEPARTMENT ETC. AS APPLICABLE IN THIS REGARD, ARE ALSO ENCLOSED WITH THE APPLICATION FOR SEEKING APPROVAL OF THE PLAN TO CONSTRUCTION/ADDITION/ALTERATION OF THE BUILDING ON THE SAID PLOT.

**SIG. OF LICENSED BUILDING SURVEYOR/ARCHITECT**

**CERTIFICATE OF STRUCTURAL STABILITY**

I/WE HEREBY CERTIFY THAT THE FOUNDATION AND SUPERSTRUCTURE OF THE BUILDING PROPOSED FOR CONSTRUCTION ON HOLDING NO : 287 (228), NORTH NILACHAL ROAD ; MOUZA - BISARPARA ; J.L. NO : 05 ; R.S. PLOT NO - 288, 289, 276, 271, 272, 273, 307 ; L.R. KHATAN NO : 1327, 1328, 1329, 1330 ; P.S. - AIRPORT UNDER NORTH DUM DUM MUNICIPALITY ; WARD NO - 33 ; DIST - 24 PGS (A). HAVE BEEN PERSONALLY INSPECTED AND SO DESIGNED BY ME/US WILL MAKE SUCH FOUNDATION AND SUPER STRUCTURE SAFE IN ALL RESPECT INCLUDING THE CONSIDERATION OF BEARING CAPACITY AND SETTLEMENT OF SOIL AND OTHER CONDITIONS IF ANY CONFORMING TO ALL STIPULATIONS OF ALL RELEVANT IS CODE OF PRACTICE AND NATIONAL BUILDING CODE.

**SIG. OF STRUCTURAL ENGINEER**      **SIG. OF GEOTECHNICAL ENGINEER**

**STRUCTURAL CONSULTANT**  
**ENGINEERS FORUM**  
60/401, H. P. DUTTA LANE (GOLF GARDEN)  
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**ARCHITECT:** RAJ AGRAWAL & ASSOCIATES  
ARCHITECTS, PLANNERS AND INTERIOR DESIGNERS.  
8B, BOYD STREET (2ND FLOOR), KOLKATA-16.

**PROJECT:-**  
ADDITION OF 2 NOS. FLOOR FOR G+VI STORED (24.7 M HT.) ABOVE G+V STORED (18.8 M HT.) IN SANCTIONED RESIDENTIAL BUILDING AT HOLDING NO: 287 (228), NORTH NILACHAL ROAD; MOUZA - BISARPARA; J.L. NO: 05; R.S. PLOT NO: - 288, 289, 276, 271, 272, 273, 307; L.R. KHATAN NO: 1327, 1328, 1329, 1330; P.S. AIRPORT UNDER NORTH DUM DUM MUNICIPALITY; WARD NO. 33; DIST. 24 PGS (A). SANCTIONED VIDE B.P. NO. - 154 OF 2020-2021, DATED - 29.06.2019.

**TITLE: SANCTION DRAWING (STRUCTURE)**  
JOB NO. : 02/2016-2019  
DRG. NO. : EF/8/05  
DRAWN BY : **IBEMANTA**  
SCALE : 1:100, 1:25.  
DATE : 12.09.2022