

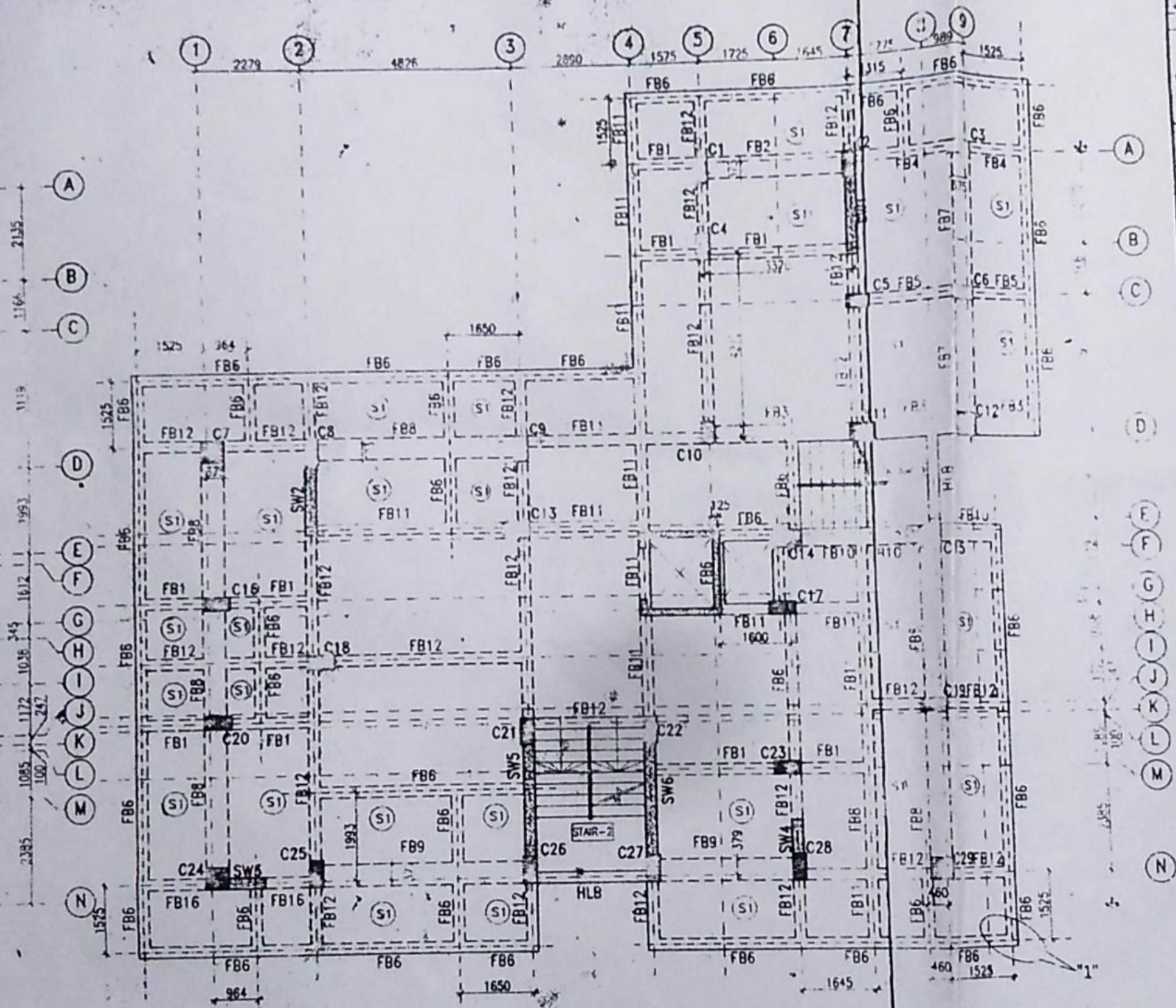
COLUMN LAYOUT PLAN

GRADE OF CONCRETE - UP TO 4TH FLOOR - M30, ABOVE 4TH FLOOR - M25

(FOR COLUMN REINFORCEMENT DETAILS REFER SHEET 3 OF 4)

SCALE - 1:100



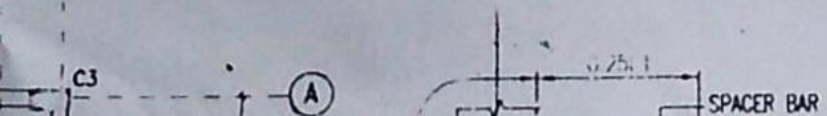


TYPICAL FLOOR (FIRST, SECOND, THIRD, FOURTH, FIFTH, SIXTH) BEAM AND SLAB LAYOUT PLAN AT LEVEL (+)2.90m, (+)5.80m, (+)8.70m, (+)11.6m, (+)14.50m, (+)17.40m

GRADE OF CONCRETE :- 1ST TO 4TH FLOOR BEAM AND SLAB: M30
 5TH AND 6TH FLOOR BEAM AND SLAB: M25

S1 MARKED SLABS ARE 150 MM THICK, ALL OTHER SLABS ARE 115 MM THICK
 SCALE - 1:100

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NOTES

1. UNIFORM
2. OUT
3. ALL
4. OTHER
5. LEVEL
6. ARCH
7. (WITH
8. ANY
9. BE
10. EXE
11. UNIL
12. TMT
13. UNIL
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15. COI
16. G
17. A
18. V
19. C
20. D
21. F
22. 10.
23. 11.
24. SPECIM
25. 1.0) TH
26. AAC BL
27. PER ARC
28. 2.0) AI
29. TITL
30. STR
31. BUI
32. PLO
33. KH
34. NO
35. BA
36. CE
37. T.L
38. SEC
39. SVE
40. S

SCHEDULE OF TIE BEAMS (CONCRETE GRADE: M30)

BEAM MARKED	BEAM SIZE		TOP REINFORCEMENT		BOTTOM REINFORCEMENT		STIRRUPS (AT SUPPORT) (S1)	STIRRUPS (AT SPAN) (S2)
	WIDTH (W) (mm)	DEPTH (D) (mm)	ALTHROUGH (a)	EXTRA AT SUPPORT (b)	ALTHROUGH (c)	EXTRA AT SPAN (e)		
TB1	250	450	2-16 Φ +1-20 Φ	-	2-16 Φ +1-20 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
TB2	250	400	3-16 Φ	2-12 Φ	3-16 Φ	2-12 Φ	2L-8 Φ 100 C/C	2L-8 Φ 100 C/C
TB3	250	400	3-16 Φ	-	3-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 150 C/C
TB4	250	400	3-12 Φ	-	3-12 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
TB5	250	450	3-20 Φ +2-12 Φ	-	3-20 Φ +2-12 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
TB6	250	450	2-16 Φ +1-20 Φ	-	3-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
TB7	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
TB8	250	450	3-12 Φ	-	3-12 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C

SCHEDULE OF TYPICAL FLOOR (1st to 6th) & HALF LANDING BEAM (CONCRETE GRADE: 1ST TO 4TH FLOOR BEAM - M30, 5TH AND 6TH FLOOR BEAM - M25)

BEAM MARKED	BEAM SIZE		TOP REINFORCEMENT		BOTTOM REINFORCEMENT		STIRRUPS (AT SUPPORT) (S1)	STIRRUPS (AT SPAN) (S2)
	WIDTH (W) (mm)	DEPTH (D) (mm)	ALTHROUGH (a)	EXTRA AT SUPPORT (b)	ALTHROUGH (c)	EXTRA AT SPAN (e)		
FB1	250	450	3-20 Φ +2-12 Φ	-	3-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB2	500	350	4-20 Φ	-	4-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB3	400	650	4-20 Φ +2-20 Φ	-	4-20 Φ	-	4L-8 Φ 100 C/C	4L-8 Φ 125 C/C
FB4	250	450	3-20 Φ	2-20 Φ	-	3-20 Φ	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB5	250	450	3-20 Φ +2-12 Φ	-	3-20 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB6	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 150 C/C
FB7	500	350	4-16 Φ	-	4-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB8	500	350	4-20 Φ	-	4-20 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB9	500	350	3-25 Φ +2-20 Φ	-	5-20 Φ	-	4L-8 Φ 100 C/C	4L-8 Φ 125 C/C
FB10	400	650	4-25 Φ +2-20 Φ	-	4-25 Φ	-	4L-10 Φ 100 C/C	4L-10 Φ 125 C/C
FB11	250	450	3-20 Φ	-	3-16 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB12	250	450	3-20 Φ +3-16 Φ	-	3-20 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
FB13	250	450	3-25 Φ	-	3-20 Φ	-	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C

- (A)
- (B)
- (C)
- (D)
- (E)
- (F)
- (G)
- (H)
- (I)
- (J)
- (K)
- (L)
- (M)
- (N)

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NOTES

1. UNLESS OTHERWISE STATED ALL CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT CONFORMING TO REINFORCEMENT (INDIAN) STANDARD CODES OF PRACTICE.
2. ALL DIMENSIONS ARE IN MILLIMETERS & LEVELS ARE IN METERS. EXCEPT OTHERWISE MENTIONED ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. ALL LEVELS GIVEN IN STRUCTURAL DRAWINGS ARE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS AND INDICATE STRUCTURAL LEVEL ONLY (WITHOUT FINISH).
3. ANY DISCREPANCY IN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS SHALL BE BROUGHT TO THE NOTICE OF STRUCTURAL CONSULTANT BEFORE EXECUTION OF WORK.
4. UNLESS OTHERWISE SPECIFIED ALL REINFORCEMENT TO BE USED SHALL BE TMT BARS OF GRADE $F_e-500/500D$ CONFORMING TO IS-1786-2003.
5. UNLESS OTHERWISE STATED, LAP LENGTH OF BARS SHALL BE EQUAL TO THE DEVELOPMENT LENGTH = $50 \times \text{BAR DIA.}$
6. CONCRETE NOMINAL COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS:
 - i) COLUMNS : 40 mm
 - ii) TIE BEAM : 50 mm
 - iii) BEAM : 30 mm
 - iii) BEAMS SURROUNDING THE STAIR ROOM TO MEET 4 HRS. OF FIRE RESISTANCE : 70 mm
 - iv) WAIST SLAB TO MEET 4 HRS. OF FIRE RESISTANCE : 55 mm
 - v) FLOOR : 20 mm
 - vi) LIFT SHEAR WALL : 20 mm
7. GRADE OF CONCRETE FOR SUPERSTRUCTURE UP TO 4TH FLOOR WILL BE M30 AND FROM 4TH FLOOR ONWARDS WILL BE M25 AS PER IS-456:2000.
8. VIBRATOR SHALL BE USED FOR PROPER COMPACTION OF CONCRETE AND CURING SHALL BE DONE PROPERLY.
9. DEVELOPMENT LENGTH $50 \times D$ FOR LAP & SPLICES SHOULD BE PROVIDED AS PER THE PROVISIONS LAID DOWN IN SP34:1987
10. WHEREVER A SUPPORTED MEMBER TERMINATES AT A SUPPORTING MEMBER THE BARS OF THE SUPPORTED MEMBER SHOULD HAVE AN ANCHORAGE OF $50D$ IN THE SUPPORTING MEMBER.
11. WHEN TWO BEAMS MEET AT A COLUMN LOCATION ALONG THE SAME LINE THE HIGHER REINFORCEMENT AT THE TOP SHOULD BE CONTINUED AT BOTH SIDES.

SPECIAL NOTES:

1.0) THIS STRUCTURAL DRAWING IS VALID IF THE CONSTRUCTION IS DONE USING AAC BLOCKS FOLLOWING PROPER DIMENSION OF EXTERNAL AND INTERNAL WALLS AS PER ARCHITECTURAL DRAWING.

2.0) ALL CANTILEVER BEAMS SHOULD BE CAST WITH A PRECAMBER OF 5 MM.

TITLE

STRUCTURAL DRAWINGS OF PROPOSED G+6 STORED BUILDING "SHUNAV REALTY PVT. LTD." OVER R.S. PLOT NO.- 43(P), L.R. PLOT NO. - 215(P), L.R. KHATIAN NO. - 1802, OF MOU 71- TETIKHOLA -, J.L. NO.- 111, P.S.- NEW TOWN, DIST-PASCHIM BARDHAMAN .

CERTIFICATE OF STRUCTURAL ENGINEER

I HAVE CAREFULLY DESIGN AND DRAWN THE STRUCTURE AND CHECKED THAT THE DESIGN HAS BEEN MADE BY A COMPETENT ENGINEER AS PER THE NATIONAL CODE OF PRACTICE AND IS SAFE AND STABLE IN ALL RESPECT.

Susmi Choudhury
SUSMITA CHOUDEHARY

STRUCTURE OF BUILDING IS THE PROPERTY OF THE ENGINEER THAT IT IS

Sanjay Debnath

9/11/20

KHATHAN NO. - 111, P.S. - NEW TOWN, DIST-PASCHIM BARDHAMAN.

CERTIFICATE OF STRUCTURAL ENGINEER

THE STRUCTURAL DESIGN AND DRAWING HAS BEEN MADE BY ME AND I HAVE CHECKED THE SAME AND STABLE IN ALL RESPECT.

STRUCTURE OF THE BUILDING IS SAFE AND STABLE IN ALL RESPECT.

Susmi Choudhury
SUSMITA CHOUDHURY
CIVIL ENGINEER
LICENCE NO. - CVER/00175

Sanjay Das
9/11/19

CERTIFICATE OF ARCHITECT

I DO HEREBY CERTIFY THAT THE ARCHITECTURAL DRAWING HAS BEEN PREPARED BY ME KEEPING THE PROJECT SAFE & STABLE IN ALL RESPECT.

THE BUILDING IS SAFE AND STABLE IN ALL RESPECT.

Signature 14/19

VIJAYA MAZUMDER
Consulting Architect
DMC Registered (DMC/BPD/60)
9332802166, 9476426106
VIJAYA SINGH
CONSULTING ARCHITECT
DMC REGISTERED
LIC NO - DMC/BPD/60

SIGNATURE OF GEOTECHNICAL ENGINEER

THIS IS TO CERTIFY THAT THE SOIL TEST HAS BEEN CONDUCTED BY ME FOR THIS PROJECT

Signature

ASIM SARKAR
BCE, ME (SOIL), MIGS
REGISTERED GEOTECHNICAL ENGINEER,
K.M.C. No.: CLASS -1/2

SIGNATURE OF PANGHAYAT PRADHAN

Approved Plan No. on Meeting
No. 04/2018-19 Date 04/02/2019
Valid upto 12/09/2021

Melika Zohar
Pradhan 13/09/19
Jemua Gram Panchayat

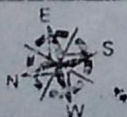
DRAWING TITLE

COLUMN & TIE BEAM LAYOUT PLAN, TYPICAL FLOOR SLAB AND BEAM LAYOUT PLANS AND SCHEDULE, DETAILS OF STAIR AND BEAMS

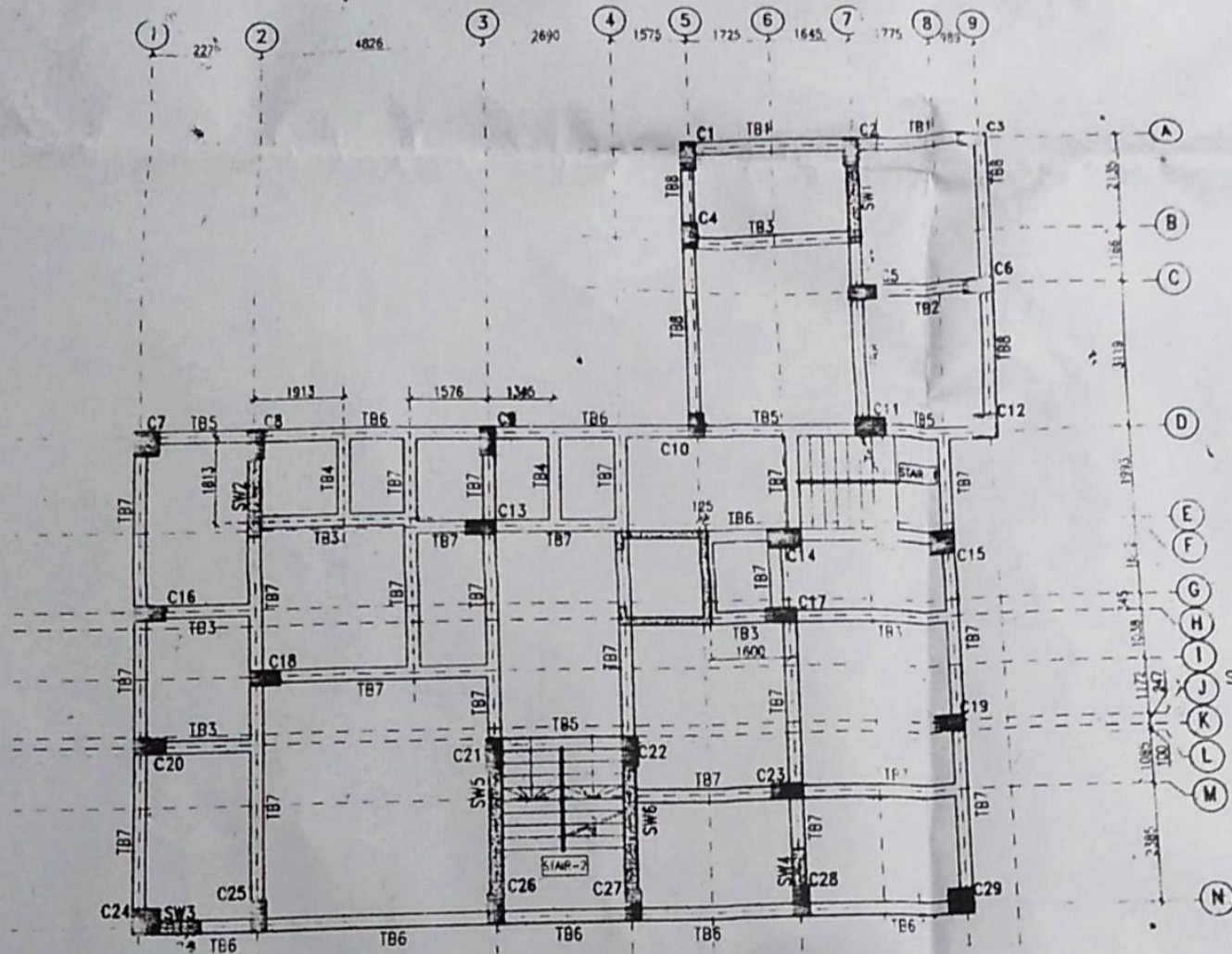
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DATE - 04/04/2019

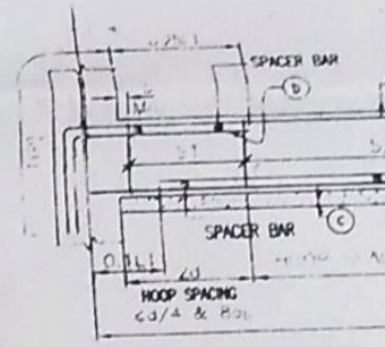
SHEET NO - 2 OF 4



S1 MARKED SLABS ARE 150 mm

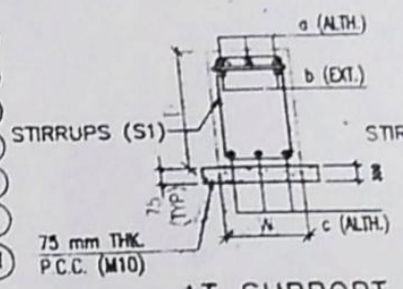


TIE BEAM LAYOUT PLAN AT LEVEL (±) 0.00 m.
 GRADE OF CONCRETE - M30
 SCALE - 1:100

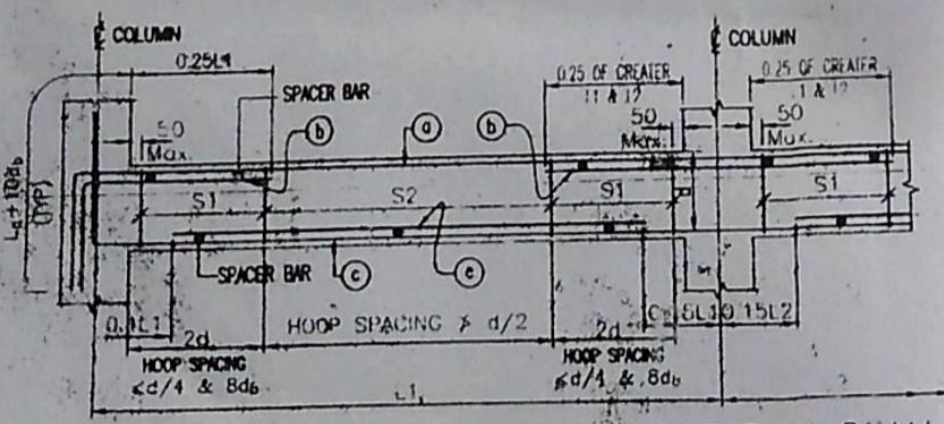


TYPICAL ARRANGEMENT

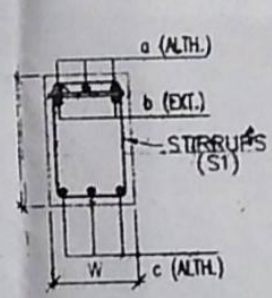
AS PER
 $d = \text{EFF}$
 $L_d = \text{DE}$
 $d_b = \text{DA}$



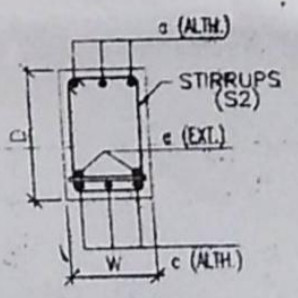
AT SUPPORT
 TYPICAL CROSS



TYPICAL ARRANGEMENT OF REINFORCEMENT IN BEAM



AT SUPPORT

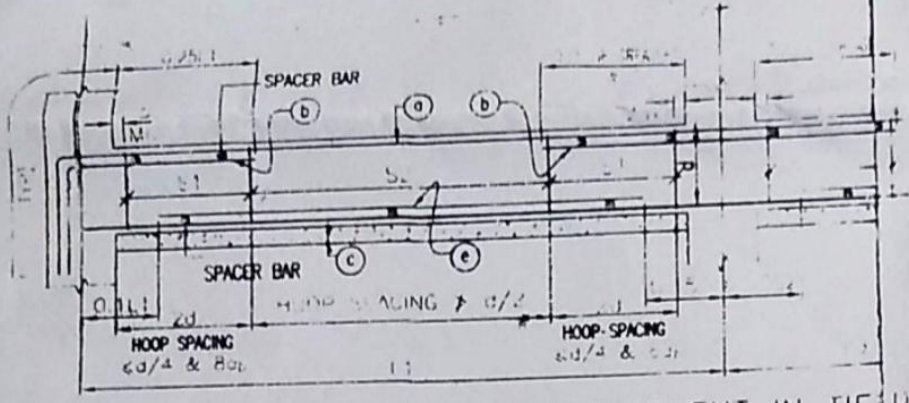


AT SPAN

TYPICAL CROSS SECTION OF BEAM

5TH AND 6TH FLOOR BEAM
 S1 MARKED SLABS ARE 150 MM THICK, ALL OTHER SLABS ARE 115 MM THICK
 SCALE - 1:100

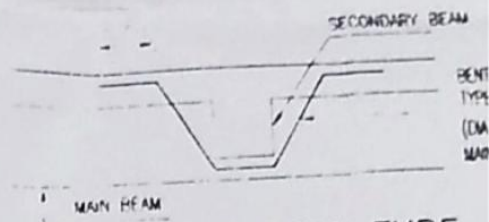
FRT	250	450	3-20
LRT	250	450	3-20 +3-16
FLU	250	450	3-25



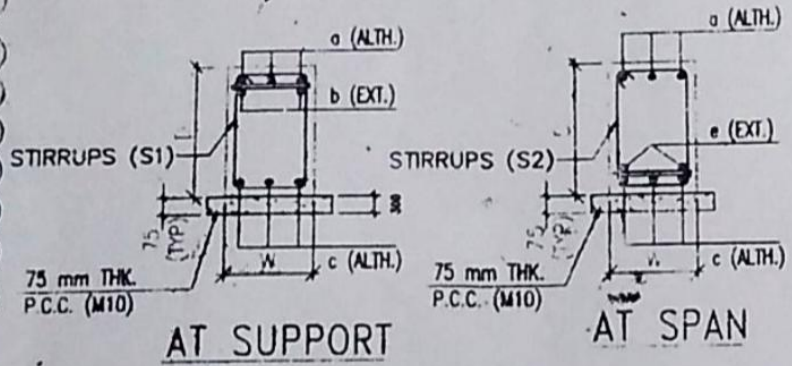
TYPICAL ARRANGEMENT OF REINFORCEMENT IN TIE BEAM

AS PER SP 34-1987 & 13920-1998

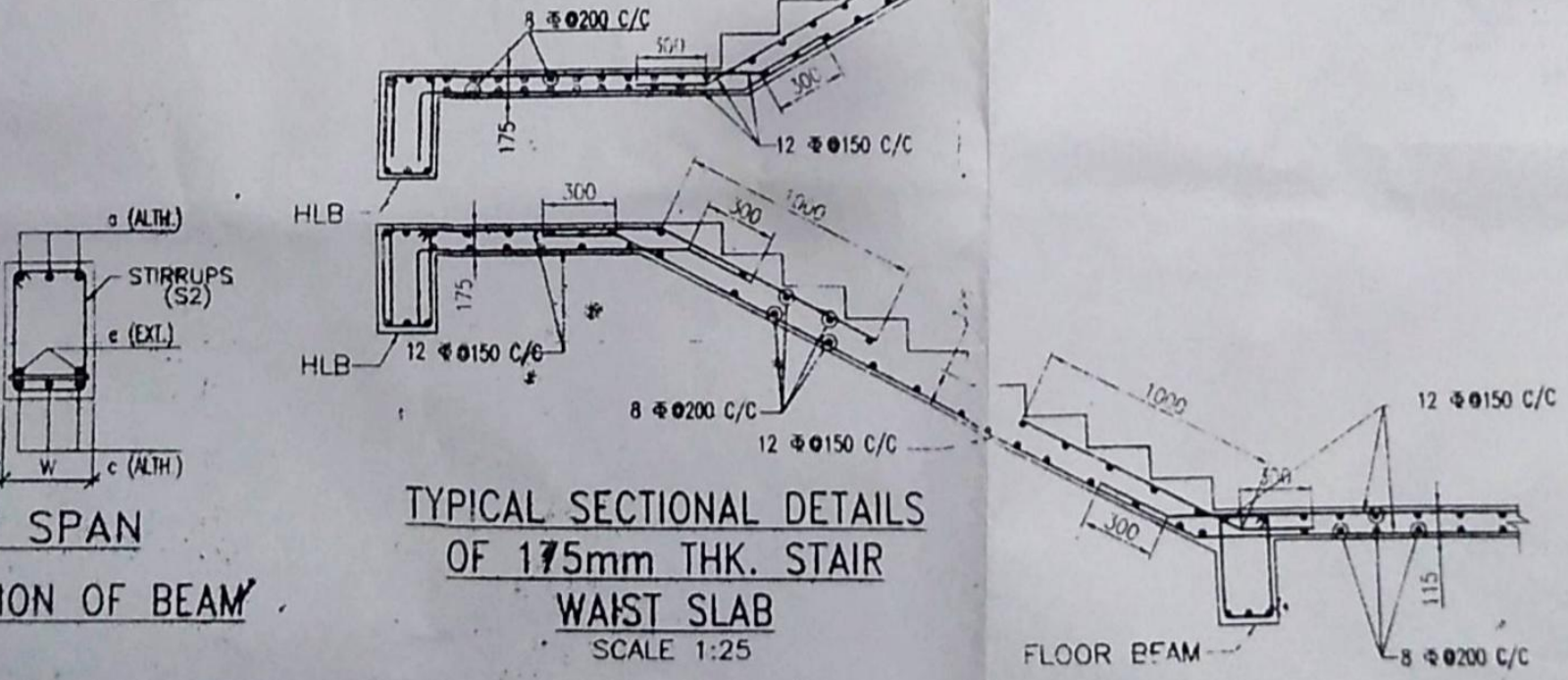
- d = EFFECTIVE DEPTH OF BEAM
- L_d = DEVELOPMENT LENGTH IN TENSION
- db = DIAMETER OF LONGITUDINAL BAR



BENT UP HANGER TYPE BARS AT MAIN BEAM & SECONDARY BEAM JUNCTIONS
 SCALE - N.T.S.



TYPICAL CROSS SECTION OF TIE BEAM

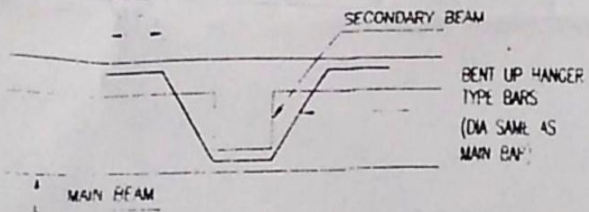


TYPICAL SECTIONAL DETAILS OF 175mm THK. STAIR WAIST SLAB
 SCALE 1:25

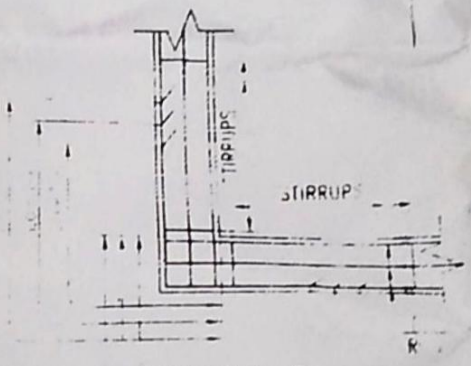
AT SPAN
 SECTION OF BEAM

FLOOR BEAM

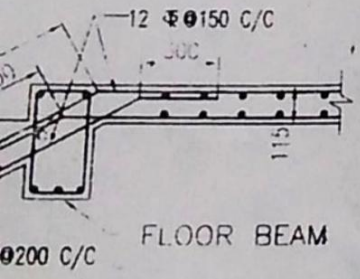
11LW	15C	15C	3-25 Φ	3-20 Φ	2L-8 Φ 100 C/C	2L-8 Φ 125 C/C
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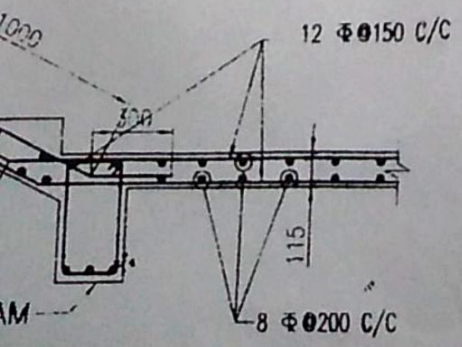
BENT UP HANGER TYPE BARS AT MAIN BEAM & SECONDARY BEAM JUNCTIONS
SCALE - N.T.S.



DETAIL-- "1"
DETAIL OF BOW GIRDER IN CANTILEVER PORTION
SCALE- 1:25



0200 C/C



CERTIFICATE OF OWNER

THIS IS TO CERTIFY THAT I SHALL NOT ON A LATER DATE, MAKE ANY ADDITION OR ALTERATION TO THIS PLAN. THIS IS CERTIFIED THAT I HAVE GONE THROUGH THE NBC OF INDIA AND ALSO ABIDE BY THOSE RULES DURING AND LATER CONSTRUCTION OF BUILDING.

SIGNATURE OF THE VETTING AUTHORITY

CHECKED & VETTED
[Signature]
DR. DIPANKAR CHARRAVORTY
 STRUCTURAL ENGINEERING DIVISION
 PROFESSOR & HEAD OF CIVIL ENGINEERING DEPARTMENT
 JADAVPUR UNIVERSITY
 PIE, ESE-1 (KMC), STRICK... REVIEWER (KMC)
 B.E. (J.U.) GOLD MEDALIST
 M. TECH (IITK)... MEDALIST
 PH.D. (IIT KGP)
 (OFF) 033-2457...
 (M) 9830188502 & 9820931143
 EMAIL: prof.dipankar@gmail.com

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