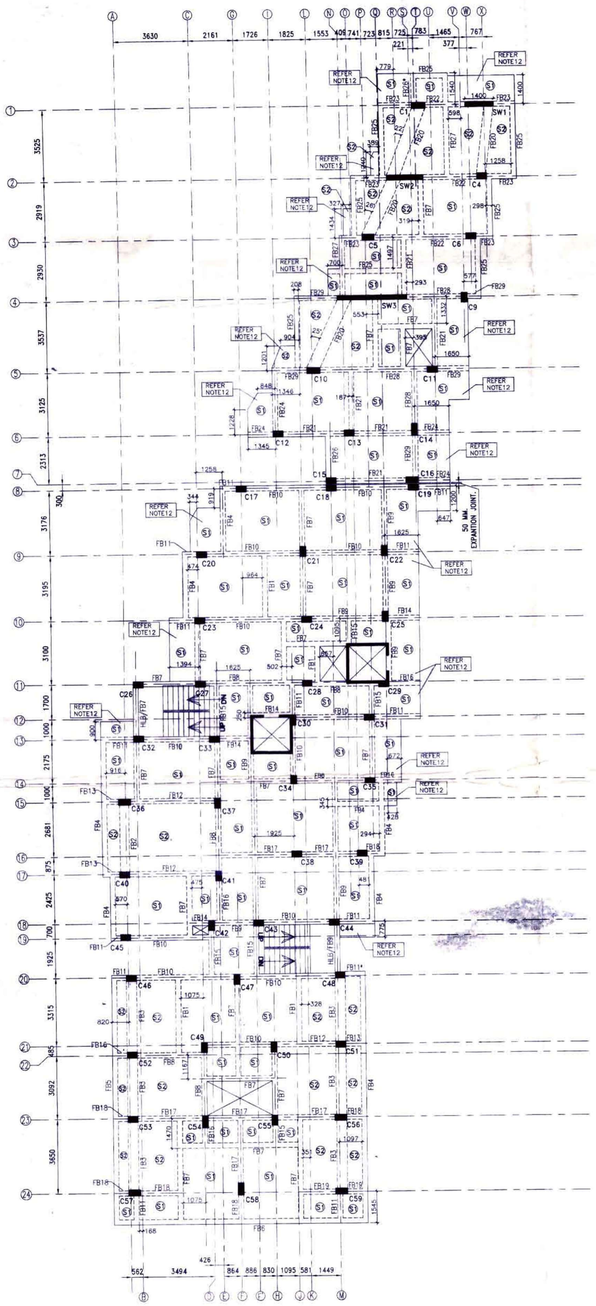
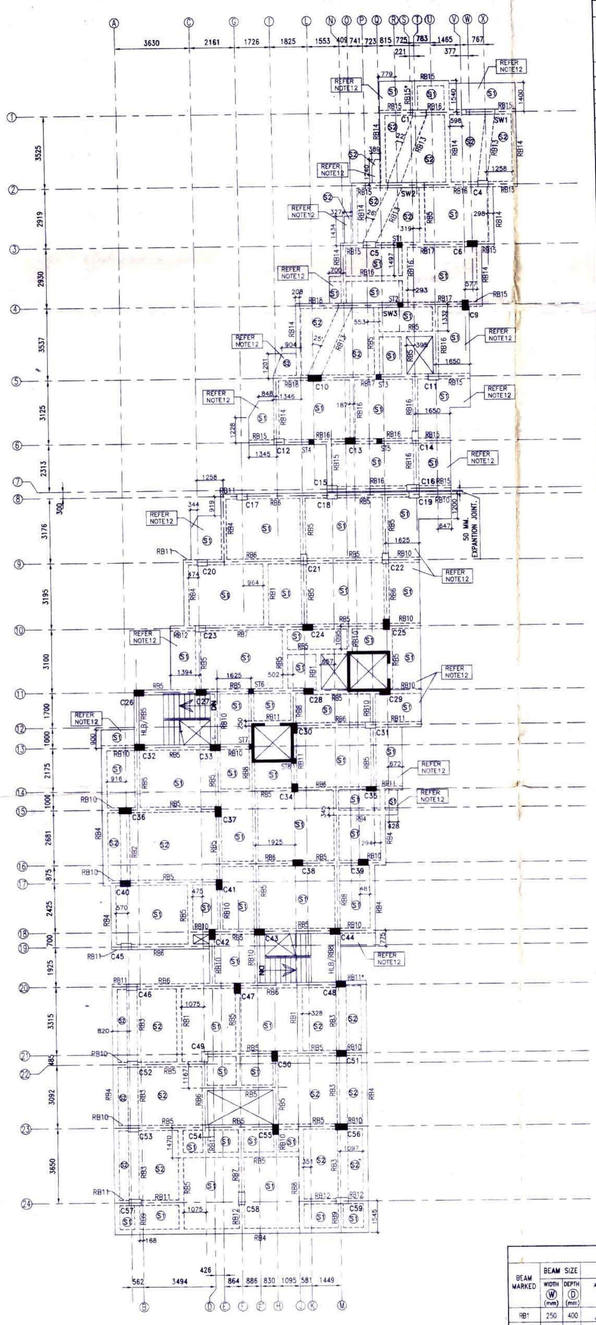
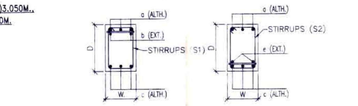


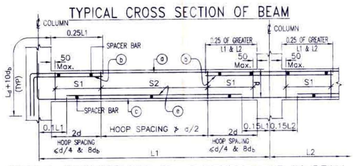
TYPICAL FLOOR BEAM AND SLAB LAYOUT PLAN AT LEVELS (+)3.050M., 5.950M.,8.850M.,11.750M.,14.650M.,17.550M.,20.450M. & 23.350M.
S1 MARKED SLABS ARE 115 mm THICK.
S2 MARKED SLABS ARE 150 mm THICK.
"*" MARKED BEAM REFERS TO DETAIL 1
SCALE- 1:100



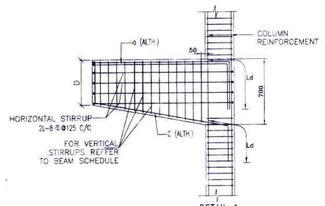
ROOF BEAM AND SLAB LAYOUT PLAN AT LEVELS (+)26.250M.
S1 MARKED SLABS ARE 115 mm THICK.
S2 MARKED SLABS ARE 150 mm THICK.
"*" MARKED BEAM REFERS TO DETAIL 1
SCALE- 1:100



AT SUPPORT AT SPAN
TYPICAL CROSS SECTION OF BEAM



TYPICAL ARRANGEMENT OF REINFORCEMENT IN BEAM



DETAIL 1
TYPICAL DETAILS OF CORBEL BEAM

SCHEDULE OF TYPICAL FLOOR BEAMS

BEAM MARKED	BEAM SIZE WIDTH (W) mm	BEAM SIZE DEPTH (D) mm	TOP REINFORCEMENT ALTHROUGH (a)	TOP REINFORCEMENT EXTRA AT SUPPORT (b)	BOTTOM REINFORCEMENT ALTHROUGH (c)	BOTTOM REINFORCEMENT EXTRA AT SPAN (e)	STIRRUPS (AT SUPPORT) (S1)	STIRRUPS (AT SPAN) (S2)
FB1	250	400	2-12 Φ +1-16 Φ	-	2-12 Φ +1-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB2	450	150	4-16 Φ	-	4-16 Φ	-	4L-8 Φ@100 C/C	4L-8 Φ@150 C/C
FB3	500	250	5-16 Φ	-	5-16 Φ	-	4L-8 Φ@100 C/C	4L-8 Φ@200 C/C
FB4	250	450	2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@125 C/C
FB5	250	450	2-16 Φ +1-12 Φ	2-12 Φ	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@125 C/C
FB6	250	450	3-16 Φ	2-12 Φ	3-16 Φ	2-12 Φ	2L-8 Φ@100 C/C	2L-8 Φ@125 C/C
FB7	250	450	2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB8	250	450	2-16 Φ +1-12 Φ	3-12 Φ	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB9	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C
FB10	250	450	3-16 Φ	2-16 Φ	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB11	250	450	3-16 Φ +2-16 Φ	-	3-16 Φ	-	2L-12 Φ@100 C/C	2L-12 Φ@100 C/C
FB12	250	450	3-16 Φ	3-16 Φ	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB13	250	450	3-16 Φ +2-16 Φ	-	3-16 Φ	-	2L-12 Φ@100 C/C	2L-12 Φ@100 C/C
FB14	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
FB15	250	450	2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
FB16	250	450	LAYER-1 2-16 Φ +1-12 Φ; LAYER-2 2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
FB17	250	450	3-20 Φ	3-16 Φ	3-20 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB18	250	450	3-20 Φ +3-16 Φ	-	3-20 Φ	-	2L-12 Φ@100 C/C	2L-12 Φ@100 C/C
FB19	250	450	3-20 Φ +3-20 Φ	-	3-20 Φ	-	2L-10 Φ@100 C/C	2L-10 Φ@100 C/C
FB20	600	250	6-16 Φ	-	6-16 Φ	-	4L-8 Φ@100 C/C	4L-8 Φ@200 C/C
FB21	250	550	3-16 Φ	2-12 Φ	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB22	250	550	3-16 Φ	3-16 Φ	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB23	250	550	3-16 Φ +2-12 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
FB24	250	550	3-16 Φ +2-12 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
FB25	250	550	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C
FB26	250	550	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
FB27	250	550	3-20 Φ	-	3-20 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C
FB28	250	550	3-20 Φ	3-16 Φ	3-20 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
FB29	250	550	3-20 Φ +3-16 Φ	-	3-20 Φ	-	2L-10 Φ@100 C/C	2L-10 Φ@100 C/C
HLB	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C

SCHEDULE OF SHEAR WALLS

SHEAR WALL MARKED	NOS. OF SHEAR WALL	SHEAR WALL SIZE (mm x mm)	FOUNDATION TO ROOF	STIRRUP ARRANGEMENT & SPACING: NEAR JUNCTION (lh)	STIRRUP ARRANGEMENT & SPACING: REST PORTION
SW1	01	250X1400	MAIN RNF.:-14-16 Φ +14-12 Φ	8 Φ@75 C/C (6 NOS. CLOSED LINKS) (3 NOS. OPEN LINKS)	8 Φ@150 C/C (6 NOS. CLOSED LINKS) (3 NOS. OPEN LINKS)
SW2	01	250X1750	MAIN RNF.:-16-16 Φ +14-12 Φ	8 Φ@75 C/C (7 NOS. CLOSED LINKS) (2 NOS. OPEN LINKS)	8 Φ@150 C/C (7 NOS. CLOSED LINKS) (2 NOS. OPEN LINKS)

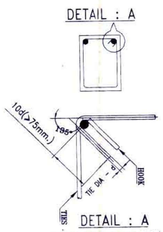
SCHEDULE OF ROOF BEAMS

BEAM MARKED	BEAM SIZE WIDTH (W) mm	BEAM SIZE DEPTH (D) mm	TOP REINFORCEMENT ALTHROUGH (a)	TOP REINFORCEMENT EXTRA AT SUPPORT (b)	BOTTOM REINFORCEMENT ALTHROUGH (c)	BOTTOM REINFORCEMENT EXTRA AT SPAN (e)	STIRRUPS (AT SUPPORT) (S1)	STIRRUPS (AT SPAN) (S2)
RB1	250	400	2-12 Φ +1-16 Φ	-	2-12 Φ +1-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB2	450	150	4-16 Φ	-	4-16 Φ	-	4L-8 Φ@100 C/C	4L-8 Φ@150 C/C
RB3	500	250	5-16 Φ	-	5-16 Φ	-	4L-8 Φ@100 C/C	4L-8 Φ@200 C/C
RB4	250	450	2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@125 C/C
RB5	250	450	2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@125 C/C
RB6	250	450	2-16 Φ +1-12 Φ	2-12 Φ	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB7	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB8	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB9	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C
RB10	250	450	2-16 Φ +1-12 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
RB11	250	450	LAYER-1 2-16 Φ +1-12 Φ; LAYER-2 2-16 Φ	-	2-16 Φ +1-12 Φ	-	2L-12 Φ@100 C/C	2L-12 Φ@100 C/C
RB12	250	450	LAYER-1 2-16 Φ +1-12 Φ; LAYER-2 2-16 Φ	-	2-16 Φ +1-12 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB13	600	250	5-16 Φ	-	5-16 Φ	-	4L-8 Φ@100 C/C	4L-8 Φ@200 C/C
RB14	250	550	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C
RB15	250	550	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
RB16	250	550	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB17	250	550	3-16 Φ	3-16 Φ	3-16 Φ	2-16 Φ	2L-8 Φ@100 C/C	2L-8 Φ@200 C/C
RB18	250	550	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@100 C/C
HLB	250	450	3-16 Φ	-	3-16 Φ	-	2L-8 Φ@100 C/C	2L-8 Φ@150 C/C

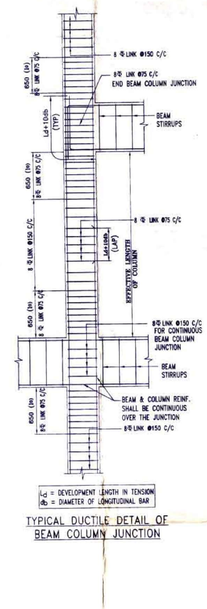
SCHEDULE OF SHEAR WALLS

SHEAR WALL MARKED	NOS. OF SHEAR WALL	SHEAR WALL SIZE (mm x mm)	FOUNDATION TO ROOF	STIRRUP ARRANGEMENT & SPACING: NEAR JUNCTION (lh)	STIRRUP ARRANGEMENT & SPACING: REST PORTION
SW3	01	250X3390	MAIN RNF.:-24-16 Φ +30-12 Φ	8 Φ@75 C/C (14 NOS. CLOSED LINKS)	8 Φ@150 C/C (14 NOS. CLOSED LINKS)

IMPORTANT NOTE:-
THIS STRUCTURE MUST BE CONSTRUCTED IN PRESENCE OF A COMPETENT STRUCTURAL ENGINEER FOR STRICT SUPERVISION



DETAIL : A
DETAIL : A
(TYPICAL DETAIL OF 135° HOOK)



L_d = DEVELOPMENT LENGTH IN TENSION
d_b = DIAMETER OF LONGITUDINAL BAR
TYPICAL DUCTILE DETAIL OF BEAM COLUMN JUNCTION

NOTES :

1. UNLESS OTHERWISE STATED ALL CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT CONFORMING TO RELEVANT (INDIAN) STANDARD CODES OF PRACTICE.
2. ALL DIMENSIONS ARE IN MILLIMETERS & LEVELS ARE IN METER. 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 Fe-500/500D CONFORMING TO IS-1786-2008.
5. UNLESS OTHERWISE STATED LAP LENGTH OF BARS SHALL BE EQUAL TO THE DEVELOPMENT LENGTH = 50xBAR DIA.
6. CONCRETE NOMINAL COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS:
   - i) COLUMNS : 40 mm
   - ii) BEAMS : 30 mm
   - iii) SLABS : 20 mm
   - iv) WAIST SLAB : 20 mm
7. GRADE OF CONCRETE FOR SUPERSTRUCTURE UPTO AND INCLUDING 4TH FLOOR WILL BE M30 AND ABOVE THAT 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 50XD 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 60D 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 SIDE.
12. IN ALL CANTILEVER SLAB WITHOUT PERIPHERAL BEAMS THE TOP REINFORCEMENT PARALLEL TO THE CANTILEVER SPAN SHOULD BE CONTINUED UPTO ATLEAST 1.5 TIMES THE CANTILEVER SPAN WITHIN THE ADJACENT SLAB.

SPECIAL NOTES:-
1. 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. ALL BEAMS SPANNING GREATER THAN 5.0 M FROM GROUND FLOOR TO ROOF SHOULD BE CAST WITH A PRECAMBER OF 15 MM IN EACH BAY BOTH AT TOP AND BOTTOM.

TITLE

STRUCTURAL DRAWING OF PROPOSED G+8 STORIED RESIDENTIAL APARTMENT OF SRI. ABHIJIT GHOSH & SRI. SUVENDU SARKAR AT PLOT DETAILS /ADDRESS :R.S. PLOT NO- 1584(P), L.R. PLOT NO-1830(P) KHATIAN NO- 5046&3139,J.L. NO-91, MOUZA:- ARRAH, P.S.-KANKSA,DIST. -PASCHIM BURDWAN.

SIGNATURE OF OWNER

Abhijit Ghosh.
Suvendu Sarkar

SIGNATURE OF PANCHAYET PRADHAN

APPROVED Vide Memo no-85/PS828 dt 11/01/23
Pradhan 07/01/23
Arrah Gram Panchayat

SIGNATURE OF CONSULTANT/ARCHITECT

Jui Chatterjee
AR. JUI CHATTERJEE, B.ARCH
Registration No : CA/2021/134352
Ph : 9434649399, 7586803411
4/13, Suhalta Commercial Complex,
City Centre, Durgapur - 713216

SIGNATURE OF GEOTECHNICAL ENGINEER

ASIM SARKAR
B.E.(CIVIL), M.I.E., M.I.G., M.I.R.S.
EMPANELLED GRADE-I ENGINEER
REG. NO.- S/01/GAU/A-1

SIGNATURE OF STRUCTURAL ENGINEER

S Choudhury 14/1/22
SUSMITA CHOUDHURY
B.TECH (CIVIL)-WBUT,
ME (CONSTRUCTION)-JU
ESE-I/RLY/SON/130
ESE-II/KMC/464
STER/SIDA/A/21/00010
CVER/NKDA/10/00175
(M)- 8597517321/7003201735

SIGNATURE OF THE VETTING AUTHORITY

CHECKED & VETTED
DR. DIPANKAR CHAKRABORTY
STRUCTURAL ENGINEER & CONSULTANT
GOVT. REGISTERED CIVIL CONTRACTOR
GOVT. ENGINEER & TECHNICAL CONSULTANT
EMPANELLED GRADE-I
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DRAWING TITLE

1. TYPICAL FLOOR & ROOF BEAM AND SLAB LAYOUT PLAN AND REINFORCEMENT DETAILS.
2. TYPICAL DUCTILE DETAILS.
3. SHEAR WALL SCHEDULE.

SCALE -1:100 OR AS SHOWN
DATE -14.01.2022
SHEET NO. - 3 OF 4