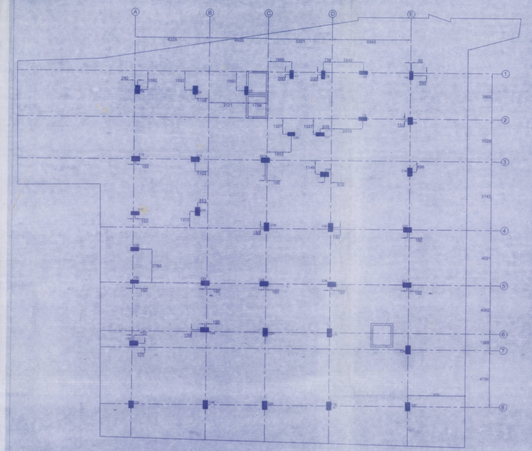
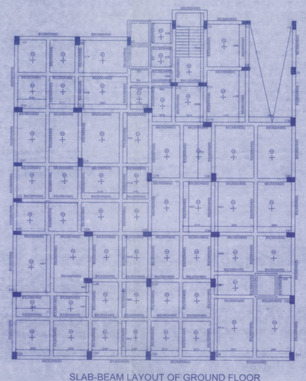
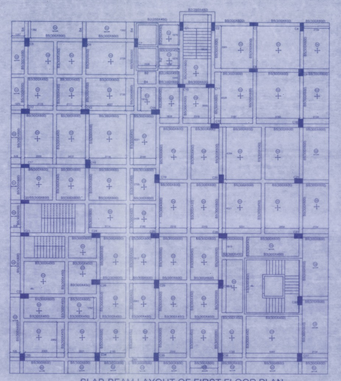


COLUMN LAYOUT DETAILS
SCALE-1:100



SLAB-BEAM LAYOUT OF GROUND FLOOR
SCALE-1:100



SLAB-BEAM LAYOUT OF FIRST FLOOR PLAN
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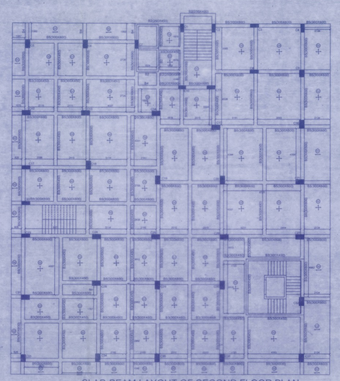


SLAB-BEAM LAYOUT OF SECOND FLOOR PLAN
SCALE-1:100

SCHEDULE OF R.C. COLUMN

FLOOR LEVEL	COLUMN NO.	CLR. SIZE (mm)	REINFORCEMENT	LATERAL TIE
UPTO 1st FLOOR ROOF LEVEL	C27	350X600	8-20 Ø TOR +6-20 Ø TOR	8 Ø TOR @ 100 C/C AT DUCTILE LOW ZONE 8 Ø TOR @ 200 C/C REST PORTION
	C1,C2,C5,C4,C7,C8,C10,C14,C22,C23	350X700	10-20Ø TOR +2-20 Ø TOR	
	C6,C22	450X600	8-20 Ø TOR +2-20 Ø TOR	
	C9,C11,C12,C13,C15,C16,C17,C18,C19,C20,C21,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36	400X700	12-20 Ø TOR +4-20 Ø TOR	
UPTO 3rd FLOOR ROOF LEVEL	C27	350X600	4-20 Ø TOR +2-20 Ø TOR	8 Ø TOR @ 100 C/C AT DUCTILE LOW ZONE 8 Ø TOR @ 200 C/C REST PORTION
	C1,C2,C5,C4,C7,C8,C10,C14,C22,C23	350X700	6-20Ø TOR +4-20 Ø TOR	
	C6,C22	450X600	6-20 Ø TOR +4-20 Ø TOR	
	C9,C11,C12,C13,C15,C16,C17,C18,C19,C20,C21,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36	400X700	8-20 Ø TOR +4-20 Ø TOR	
ABOVE 4TH FLOOR LEVEL	C27	350X600	10-20 Ø TOR	8 Ø TOR @ 100 C/C AT DUCTILE LOW ZONE 8 Ø TOR @ 200 C/C REST PORTION
	C1,C2,C5,C4,C7,C8,C10,C14,C22,C23	350X700	12-20 Ø TOR	
	C6,C22	450X600	14-20 Ø TOR	
	C9,C11,C12,C13,C15,C16,C17,C18,C19,C20,C21,C24,C25,C26,C27,C28,C29,C30,C31,C32,C33,C34,C35,C36	400X700	14-20 Ø TOR	

SCHEDULE OF R.C. BEAM FOR TYPICAL FLOOR

BEAM MKD.	BEAM SIZE (W X D)	REINFORCEMENT AT SUPPORT TOP	REINFORCEMENT AT SUPPORT BOTTOM	REINFORCEMENT AT SPAN TOP	REINFORCEMENT AT SPAN BOTTOM	STIRRUPS S1 AT SUPPORT	STIRRUPS S2 AT SPAN
B1	250X400	3-16 Ø TOR +3-16 Ø TOR	3-16 Ø TOR	3-16 Ø TOR	3-16 Ø TOR +3-16 Ø TOR	2L-8ØT. @ 125 C/C	2L-8ØT. @ 175 C/C
B2	250X450	3-16 Ø TOR +3-16 Ø TOR	3-16 Ø TOR	3-16 Ø TOR	3-16 Ø TOR +3-16 Ø TOR		
B3	300X450	3-16 Ø TOR +3-20 Ø TOR	3-20 Ø TOR	3-20 Ø TOR	3-16 Ø TOR +3-20 Ø TOR		
B4	300X500	3-20 Ø TOR 2+2=4+3-20 Ø TOR	3-20 Ø TOR	3-20 Ø TOR	3-20 Ø TOR 2-20Ø+1-20 Ø TOR	2L-8ØT. @ 125 C/C	2L-8ØT. @ 150 C/C
B5	300X600	3-25 Ø TOR 3-20 Ø TOR	3-25 Ø TOR	3-25 Ø TOR	3-25 Ø TOR 3-25 Ø TOR		

SCHEDULE OF R.C. STRAP BEAM

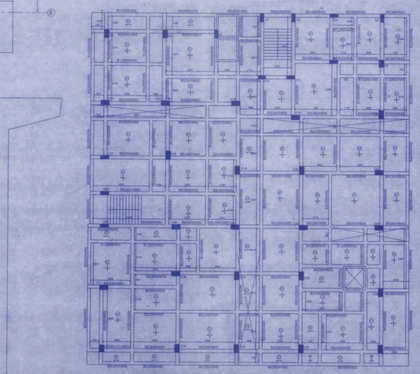
BEAM MKD.	BEAM SIZE (W X D)	REINFORCEMENT AT SUPPORT TOP	REINFORCEMENT AT SUPPORT BOTTOM	REINFORCEMENT AT SPAN TOP	REINFORCEMENT AT SPAN BOTTOM	STIRRUPS
STB	350X550	4-20 Ø TOR +4-16 Ø TOR	2-20 Ø TOR +3-16 Ø TOR	2-20 Ø TOR +2-16 Ø TOR	4-20 Ø TOR +4-16 Ø TOR	SUPP.- 4L-8ØTOR@ 135C/C SPAN.- 4L-8ØTOR@ 175C/C

TYP.REINF. IN A SLAB FOR ALL FLOORS AND ROOF

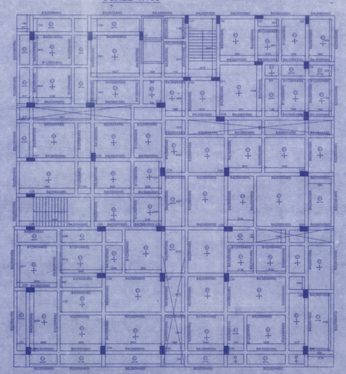
SLAB NO.	THICKNESS (mm)	REINFORCEMENT AT BOTTOM OF SPAN SHORT SPAN	REINFORCEMENT AT BOTTOM OF SPAN LONG SPAN	REINFORCEMENT AT TOP OF SUPPORT SHORT SPAN	REINFORCEMENT AT TOP OF SUPPORT LONG SPAN
S-1	125	8TOR @ 125 C/C	8TOR @ 125 C/C	8TOR @ 125 C/C	8TOR @ 125 C/C
S-2	150	10 TOR @ 125 C/C	10 TOR @ 125 C/C	10 TOR @ 125 C/C	10 TOR @ 125 C/C

SCHEDULE OF R.C. PILE FOUNDATION

FOUNDATION MARKED	UNDER COL. MARKED	NO.S DIA. OF PILE	LENGTH OF PILE mm	REINFORCEMENT OF PILE	DIMENSION OF PILE CAP (L X W X D) mm	REINFORCEMENT OF PILE CAP
F1	C1,C2,C3,C4	4 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	2100 X 2100 X 1000	BOTTOM -20 Ø TOR @ 150 C/C, TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F2	C7	5 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	2654 X 2654 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F3	C8,C17	6 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	3450 X 2100 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F4	C5	7 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	3450 X 3100 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F5	C6,C9,C12,C25,C33,C35	8 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	3450 X 3100 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F6	C19,C23,C27,C29,C31,C37	9 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	3450 X 3450 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F7	C13,C16,C24,C27,C28,C34,C36	10 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	4800 X 3100 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F8	C18	11 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	4800 X 3100 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F9	C22 & C23	12 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	4800X 5450 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F10	C32 & LIFT	13 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	AS PER DRAWING (THK. = 1000)	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F11	C26 & C30	18 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	5450 X 4800 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR
F12	C10,C11,C14 &C15	30 NOS.-450 Ø	(21.3-2.8)=18.5	VERTICAL 8 NOS.-12 Ø TOR LATERAL TIE 8 Ø TOR @ 75 C/C FOR 1000mm FROM TOP & BOTTOM REST PORTION 8 Ø TOR @ 150 C/C	7500 X 6150 X 1000	BOTTOM - 20 Ø TOR @ 150 C/C TOP - 16 Ø TOR @ 150 C/C VERTICAL STIRRUPS 4-L 8 Ø TOR @ 150 C/C HORIZONTAL STIRRUPS 4 NOS. - 10 Ø TOR



SLAB-BEAM LAYOUT OF THIRD FLOOR PLAN
SCALE-1:100



SLAB-BEAM LAYOUT OF TYPICAL FLOOR PLAN
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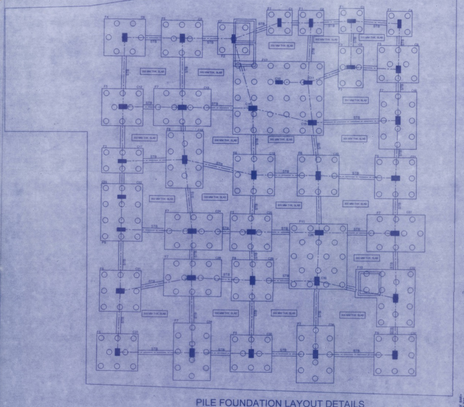

PILE FOUNDATION LAYOUT DETAILS
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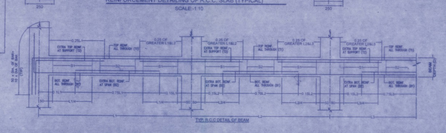

REINFORCEMENT DETAILING OF R.C.C. SLAB (TYPICAL)
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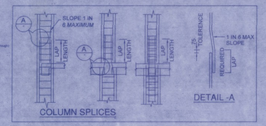
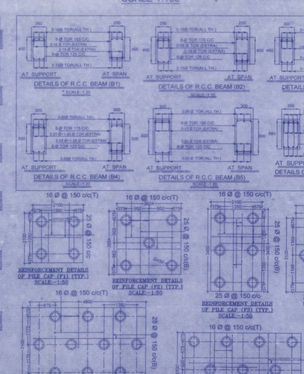
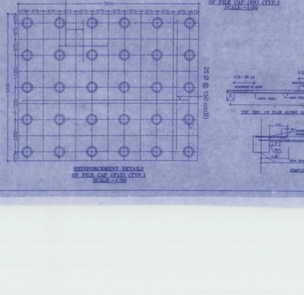
TYP.R.C.C DETAIL OF BEAM

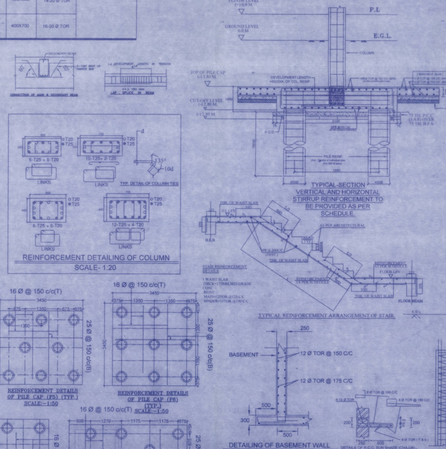


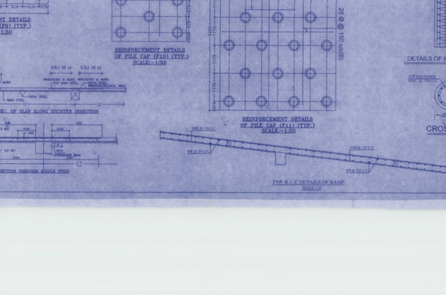
COLUMN SPLICES

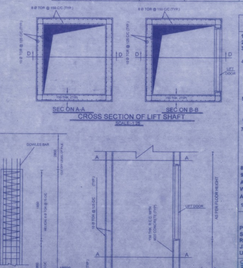
DETAIL -A

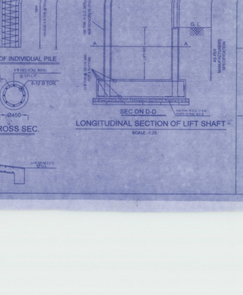












SPECIFICATION :

1.DEPT. OF FOUNDATION HAS BEEN CONSIDERED 21.3 METER IN DESIGN.
2.SPECIAL CONFINING REINFORCEMENT SHOULD BE PROVIDED IN HALF LANDING BEAM.
3.SPECIAL CONFINING REINFORCEMENT SHOULD BE PROVIDED ALL OVER THE SPAN IN SECONDARY AND PRIMARY CONNECTION.
4.CLEAR COVER TO MAIN REINFORCEMENT SHALL BE
AS FOLLOWS :-
(a) COLUMN - 40 MM SIDES, (b) FLOOR BEAMS - 25 MM TOP,BOTTOM & SIDES.
(c) FLOOR SLAB - 20 MM TOP & BOTTOM. (d) ROOF SLAB - 25 MM TOP & BOTTOM.
(e) FOUNDATION - 50 MM
5. ALL POC WORK SHOULD BE OF M15 GRADE CEMENT CONCRETE.
FOR INSIDE WALL WITH 1:6 CEMENT MORTAR. 20mm THK. FOR OUTSIDE WALL PLASTER WITH 1:4 CEMENT MORTAR.
6. ALL REINFORCEMENT WORK SHOULD BE OF FE500 GRADE TMT BARS.
7. EXTRA TOP & BOTT.
FLN. BEAM- i) EXT. TOP TO BE PROVIDED AT L/3 FROM SUPPORT OR LD + 19 WHICHEVER IS GREATER AS PER IS CODE.
ii) EXT. BOTT. TO BE EXTENDED L/5 FROM SUPPORT.
SLAB - i) EXT. TOP TO BE PROVIDED IN ALL SUPPORTS FOR A LENGTH OF L/3 FROM SUPPORT.
8. MINIMUM LAP LENGTH - 47D GRADE OF CONCRETE FOR ALL RCC - M25
9.MINIMUM LAP LENGTH FOR TOR STEEL SHALL BE 67 DIA OF THE BAR
AND ANY DISCREPANCY SHALL BE BROUGHT TO NOTICE OF THE ENGINEER BEFORE EXECUTION. WILL BE ENTERTAINED THEREAFTER. CONTRACTOR SHALL BE RESPONSIBLE TO PROPER LINE AND LEVEL OF STRUCTURE.
10. ALL THE DIMENSIONS ARE IN MM UNLESS SPECIFIED.

DETAILS OF PROJECT :

PROPOSED (GB+GHI) BLOCK-A1 & (GI+H) BLOCK-B1 STORIED BUILDING OF i) SRI UTTAM KUMAR SAHA, S/O-LATE AMULYA KUMAR SAHA, ii) SRI SAGAR SAHA, S/O-SRI UTTAM KUMAR SAHA, 3. SRI RABINDI GHOSH, S/O-KRISHNA GHOSH, AT BULBULCHANDI ROAD, MOUZA-MANSALBARI SAMANDAL (L.L. NO.-195, RN. NO.-L.R.-2585, 11999, 12000, DAG NO.-L.R.-1744, 1733, 1732, M. NO.-16, R. NO.-39/184, UNDER OLD MALDA MUNICIPALITY, P.S-CIST.-MALDA.

CERTIFICATE OF STRUCTURAL ENGINEER :

THE STRUCTURAL DESIGN AND DRAWING OF BOTH FOUNDATION AND SUPER-STRUCTURE OF THE BUILDING HAS BEEN MADE BY ME CONSIDERING OF ALL POSSIBLE LOADS (INCLUDING THE SEISMIC LOAD AS PER THE NATIONAL BUILDING CODE OF INDIA AND CERTIFIED THAT IT IS SAFE AND STABLE IN ALL RESPECT.

Santanu Mandal
Structural Engineer Grade-I
License No.: M1-C0458
Date of Validity: 31-12-2024
PH.NO:9733765, 9614600444

SIGNATURE OF STRUCTURAL ENGINEER

Checked & Verified.
H.O.D. Dept. of Civil Engg. Institute of Technology Malda (F.of W.B.)
H.O.D. Dept. of Civil Engg. Malda Polytechnic (Govt. of W.B.)

CHECKED AND VERIFIED BY

Checked & Approved
Chairman
Old Malda Municipality

Approved & Recommended
Partner
Partner

SIGNATURE OF OWNER