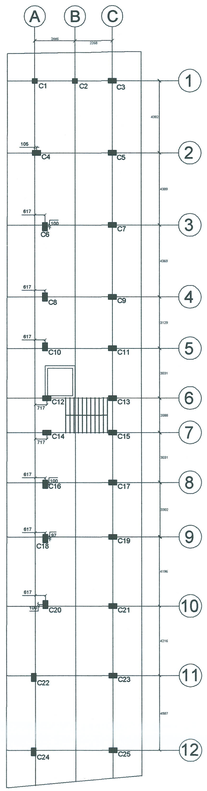
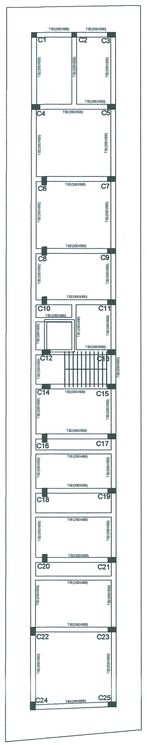
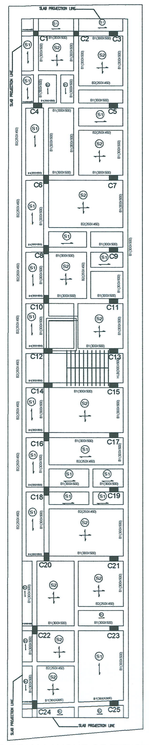


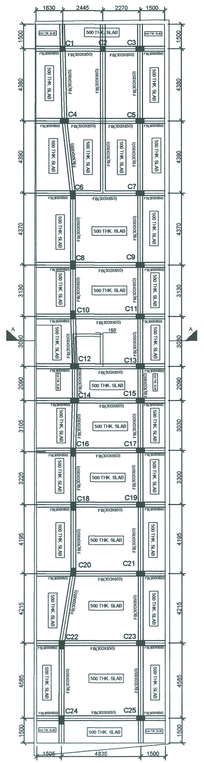
COLUMN LAYOUT DETAILS
SCALE-1:100



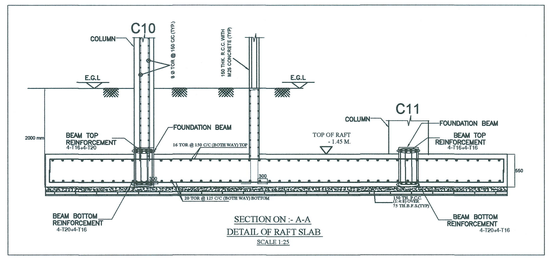
TIE-BEAM LAYOUT OF GROUND FLOOR
SCALE-1:100



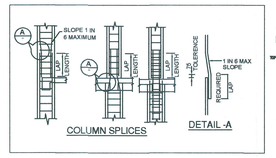
SLAB-BEAM LAYOUT OF TYPICAL FLOOR
SCALE-1:100



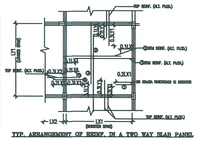
RAFT FOUNDATION LAYOUT DETAILS
SCALE-1:100



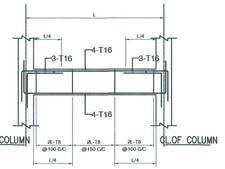
SECTION ON :- A-A
DETAIL OF RAFT SLAB
SCALE 1:25



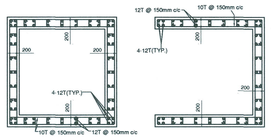
COLUMN SPLICES



TYP. ARRANGEMENT OF REINF. IN A TWO WAY SLAB PANEL

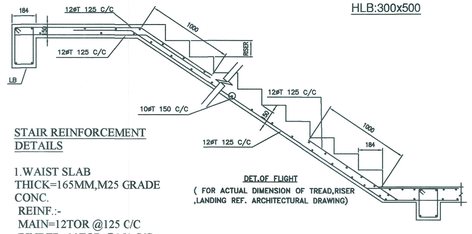


HLB:300x500



LIFT WALL SCHEDULE (M25:Fe500)
FOUNDATION TO PLINTH

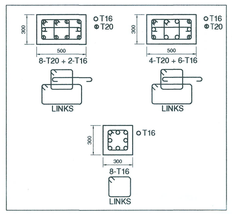
LIFT WALL SCHEDULE (M25:Fe500)
PLINTH TO ROOF

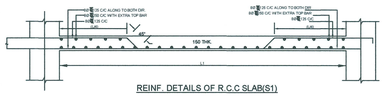


STAIR REINFORCEMENT DETAILS

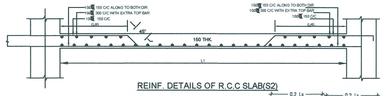
1.WAIST SLAB
THICK=165MM,M25 GRADE CONC.
REINF.:-
MAIN=12TOR @125 C/C
BINDER=10TOR @150 C/C

DET.OF FLIGHT
(FOR ACTUAL DIMENSION OF TREAD,RISER ,LANDING REF. ARCHITECTURAL DRAWING)

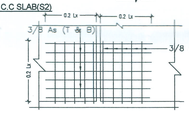


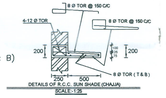


REINF. DETAILS OF R.C.C SLAB(S1)



REINF. DETAILS OF R.C.C SLAB(S2)





DETAILS OF R.C.C. SUN SHADE (CHAJJA)
SCALE-1:25

SPECIFICATION :

1.DEPTH OF FOUNDATION HAS BEEN CONSIDERED 2 METER IN DESIGN.
2.SPECIAL CONFINING REINFORCEMENT SHOULD BE PROVIDED IN HALF LANDING BEAM.
3.SPECIAL CONFINING 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 PCC 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.

7. EXTRA TOP & BOTT.
FLR. BEAM- i) EXT. TOP TO BE PROVIDED AT L/3 FROM SUPPORT OR LD ÷ 10 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 0F L/3 FROM SUPPORT.
8. GRADE OF CONCRETE FOR ALL RCC - M25
9. GRADE OF REINFORCEMENT - Fe500
10. MINIMUM LAP LENGTH FOR TOR STEEL SHALL BE 50 TIMES DIA. OF THE SMALLER BAR

DETAILING OF RAFT SLAB

THICKNESS (mm.)	REINFORCEMENT			
	AT BOTTOM		AT TOP	
	SHORT SPAN	LONG SPAN	SHORT SPAN	LONG SPAN
550	20 TOR @ 125 C/C.	20 TOR @ 125 C/C.	16 TOR @ 150 C/C.	16 TOR @ 150 C/C.
FOOTING DESIGN DONE WITH THE SBC OF 9.0 T/SQ.M BASED ON PROVIDED SOIL REPORT				

FOUNDATION BEAM SCHEDULE

BEAM MKD.	BEAM SIZE (W X D)	REINFORCEMENT AT SUPPORT		REINFORCEMENT AT SPAN		STIRRUPS	
		TOP	BOTTOM	TOP	BOTTOM	S1	S2
						AT SUPPORT	AT SPAN
FB	300X650	4-16ØTOR +4-20 Ø TOR	4-20 Ø TOR +4-16 Ø TOR	4-16 Ø TOR	4-20ØTOR	4L-8Ø @ 100 C/C	4L-8Ø @ 150 C/C

SCHEDULE OF R.C. COLUMN

FLOOR LEVEL	COLUMN MKD.	CLM. SIZE (mm)	REINFORCEMENT	LATERAL TIE
UPTO 1ST FLOOR LEVEL	C1,C2	300X300	8-16 Ø TOR	8 Ø TOR @ 125C/C AT DUCTILE (JOINT)ZONE 8 Ø TOR @ 200C/C REST PORTION
	C4,C8,C18,C22	300X500	8-20 Ø TOR +2-16 Ø TOR	
	C3,C5,C6,C7,C9,C10,C11,C12,C13,C14 C15,C16,C17,C19,C20,C21,C23,C24,C25	300X500	4-20 Ø TOR +6-16 Ø TOR	
FROM 1ST FLOOR LEVEL TO 3RD FLOOR LEVEL	C1,C2	300X300	6-16 Ø TOR	8 Ø TOR @ 125C/C AT DUCTILE (JOINT)ZONE 8 Ø TOR @ 200C/C REST PORTION
	C4,C8,C18,C22	300X500	4-20 Ø TOR +6-16 Ø TOR	
	C3,C5,C6,C7,C9,C10,C11,C12,C13,C14 C15,C16,C17,C19,C20,C21,C23,C24,C25	300X500	4-20 Ø TOR +6-16 Ø TOR	
FROM 3RD FLOOR LEVEL TO ROOF LEVEL	C1,C2	300X300	6-16 Ø TOR	8 Ø TOR @ 125C/C AT DUCTILE (JOINT)ZONE 8 Ø TOR @ 200C/C REST PORTION
	C4,C8,C18,C22	300X500	10-16 Ø TOR	
	C3,C5,C6,C7,C9,C10,C11,C12,C13,C14 C15,C16,C17,C19,C20,C21,C23,C24,C25	300X500	4-20 Ø TOR +6-16 Ø TOR	

SCHEDULE OF R.C. BEAM

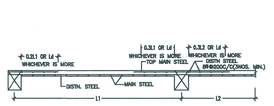
BEAM MKD.	BEAM SIZE (W X D)	REINFORCEMENT AT SUPPORT		REINFORCEMENT AT SPAN		STIRRUPS	
		TOP	BOTTOM	TOP	BOTTOM	S1	S2
						AT SUPPORT	AT SPAN
B1	300X500	4-16ØTOR +3-20 Ø TOR	4-16 Ø TOR	4-16 Ø TOR	4-16ØTOR +2-16 Ø TOR	2L-8Ø @ 100 C/C	2L-8Ø @ 150 C/C
B2	250X450	3-16ØTOR	3-16ØTOR	3-16ØTOR	3-16ØTOR		

SCHEDULE OF TIE-BEAM FOR GROUND FLOOR

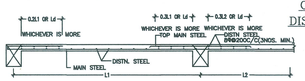
BEAM MKD.	BEAM SIZE (W X D)	REINFORCEMENT AT SUPPORT		REINFORCEMENT AT SPAN		STIRRUPS	
		TOP	BOTTOM	TOP	BOTTOM	S1	S2
						AT SUPPORT	AT SPAN
TB1	250X400	3-16Ø TOR	3-16Ø TOR	3-16Ø TOR	3-16Ø TOR	2L-8ØT @ 125 C/C	2L-8ØT @ 150 C/C
TB2	300X500	4-16 Ø TOR 2-20 Ø TOR	4-16 Ø TOR	4-16 Ø TOR	4-16 Ø TOR 2-20 Ø TOR	2L-8ØT @ 100 C/C	2L-8ØT @ 150 C/C

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

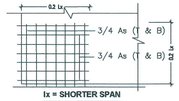
SLAB NO.	THICKNESS (mm.)	REINFORCEMENT			
		AT BOTTOM OF SPAN		AT TOP OF SUPPORT	
		SHORT SPAN	LONG SPAN	SHORT SPAN	LONG SPAN
S-1 one-way /cantilever	150	8TOR @ 125 C/C.	8TOR @ 125 C/C.	8TOR @ 125 C/C.	8TOR @ 125 C/C.
S-2 two-way	150	10 TOR @ 125 C/C.	10 TOR @ 125 C/C.	10 TOR @ 125 C/C.	10 TOR @ 125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



TYP. SEC. OF SLAB ALONG LONGER DIRECTION



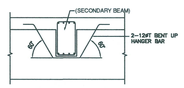
TYP. SEC. OF SLAB ALONG SHORTER DIRECTION



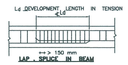
lx = SHORTER SPAN

CORNER WITH TWO DISCONTINUOUS ENDS

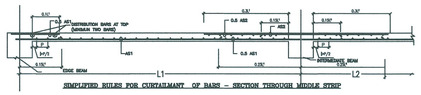
CORNER WITH ONE DISCONTINUOUS ENDS TORSIONAL REINFORCEMENT IN SLAB



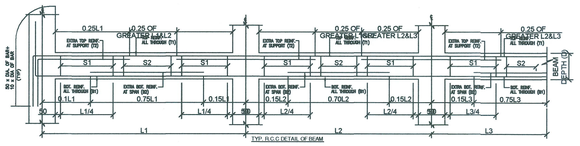
CONNECTION OF MAIN & SECONDARY BEAM



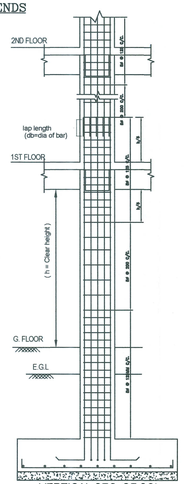
LAP - SPLICE IN BEAM



SIMPLIFIED RULES FOR CURTAILMANT OF BARS - SECTION THROUGH MIDDLE STRIP



TYP. R.C.C DETAIL OF BEAM



VERTICAL SEC. OF COL.
SHOWING LATERAL TIE

DETAILS OF PROJECT :
PROPOSED (G+4) STORIED BUILDING OF SMT. MITALI DAS, W/O- SRI CHANDAN KUMAR DAS, AT- MOUZA- SAHAPUR, J.L. NO.- 110, DAG NO.- 375, KH. NO.-4735, UNDER SAHAPUR GRAM PANCHAYAT, DIST.-MALDA.

Mitali Das

SIGNATURE OF OWNER

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 LATEST NATIONAL BUILDING CODE OF INDIA AND CERTIFIED THAT IT IS SAFE AND STABLE IN ALL RESPECT.

Santanu Mandal
Santanu Mandal
Structural Engineer-I & Lic-I
Reg. No.- EBM/PW/PM/139
Krishna Kalilala, Malda
Mob. No.- 8637527665

SIGNATURE OF STRUCTURAL ENGINEER

8.9.15
DR. AMIT SHIULY
Associate Professor
Civil Engineering Department
Jadavpur University
Jadavpur, Kol-32

VETTED BY

DRAWING NO	SCALE	SHT. NO
15.STR-01	1:100,50,25,20	1