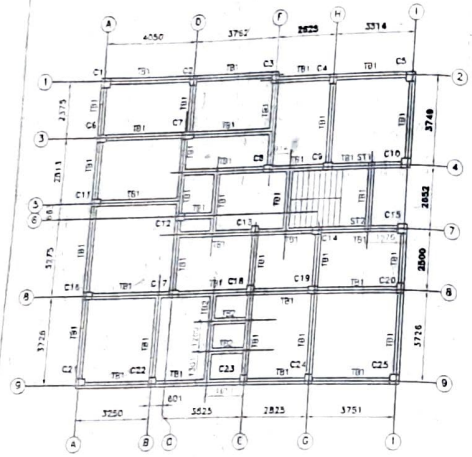
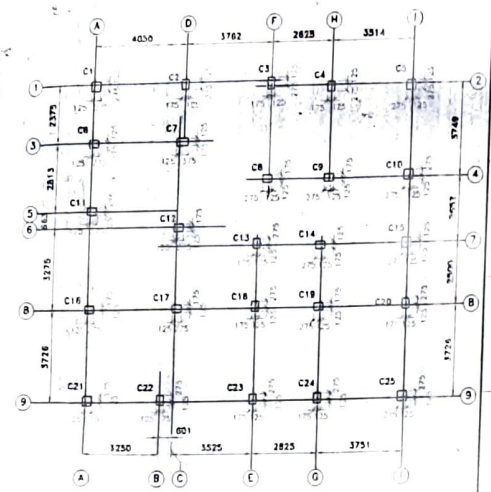
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



TIE BEAM LAYOUT PLAN
AT LVL. (+)0.00

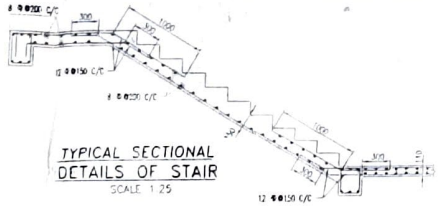


COLUMN LAYOUT PLAN

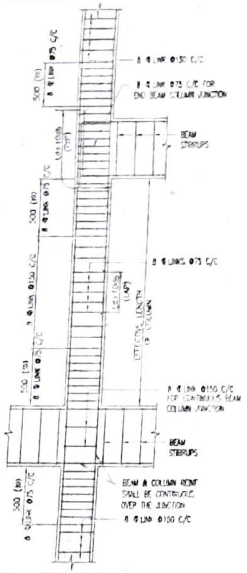
Ld= DEVELOPMENT LENGTH IN TENSION
ϕ= DIAMETER OF LONGITUDINAL BAR

DETAIL : A

DETAILS OF COLUMN
HOOP REINFORCEMENT

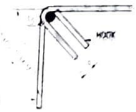


TYPICAL SECTIONAL
DETAILS OF STAIR
SCALE 1:25



TYPICAL DUCTILE DETAIL OF
BEAM COLUMN JUNCTION
SCALE 1:25

Ld= DEVELOPMENT LENGTH IN TENSION
ϕ= DIAMETER OF LONGITUDINAL BAR

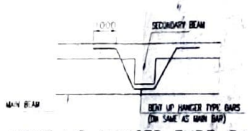


DETAIL : A
(TYPICAL DETAIL OF 135° HOOK)

STIRRUP DETAIL
(d=DIA OF STIRRUP BAR)

SCHEDULE OF COLUMNS

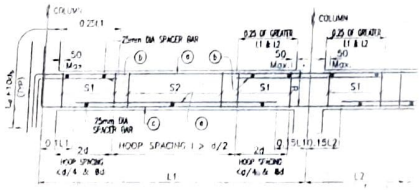
COLUMN MARKED	NOS. OF COLUMNS	COLUMN SIZE (mm x mm)	FOUNDATION TO ROOF	STIRRUP ARRANGEMENT & SPACING: NEAR JUNCTION (N)	STIRRUP ARRANGEMENT & SPACING: REST PORTION
C1, C21, C15, C25	04	400X400	400 / 400 MAIN RNF.-16-12 Nos	8 @75 C/C (2 NOS. CLOSED LINK & 4 NOS. OPEN LINK PER SET)	8 @150 C/C (2 NOS. CLOSED LINK & 4 NOS. OPEN LINK PER SET)
C5, C10	02	400X400	400 / 400 MAIN RNF.-8-16 Nos 8-12 Nos	8 @75 C/C (2 NOS. CLOSED LINK & 3 NOS. OPEN LINK PER SET)	8 @75 C/C (2 NOS. CLOSED LINK & 3 NOS. OPEN LINK PER SET)
C4	01	300X400	400 / 300 MAIN RNF.-8-16 Nos 4-12 Nos	8 @75 C/C (2 NOS. CLOSED LINK & 2 NOS. OPEN LINK PER SET)	8 @150 C/C (2 NOS. CLOSED LINK & 1 NOS. OPEN LINK PER SET)
C2, C6, C8, C9, C11 TO C14, C16 TO C20, C22 TO C24	16	300X400	400 / 300 MAIN RNF.-12-12 Nos	8 @75 C/C (2 NOS. CLOSED LINK & 2 NOS. OPEN LINK PER SET)	8 @150 C/C (2 NOS. CLOSED LINK & 1 NOS. OPEN LINK PER SET)
C3	01	300X475	475 / 300 MAIN RNF.-8-16 Nos 4-12 Nos	8 @75 C/C (2 NOS. CLOSED LINK & 3 NOS. OPEN LINK PER SET)	8 @150 C/C (2 NOS. CLOSED LINK & 2 NOS. OPEN LINK PER SET)
C7	01	300X500	500 / 300 MAIN RNF.-8-16 Nos 4-12 Nos	8 @75 C/C (2 NOS. CLOSED LINK & 3 NOS. OPEN LINK PER SET)	8 @150 C/C (2 NOS. CLOSED LINK & 1 NOS. OPEN LINK PER SET)
STOOL COLUMNS ST1, ST2, ST3, ST4, ST5, ST6, ST7, ST8, ST9, ST10,	10	250X250	250 / 250 MAIN RNF.-8-16 Nos	8 @75 C/C (2 NOS. CLOSED LINK PER SET)	8 @150 C/C (2 NOS. CLOSED LINK PER SET)



BENT UP HANGER TYPE BARS
AT MAIN BEAM & SECONDARY
BEAM JUNCTIONS
SCALE - NTS

SCHEDULE OF TIE BEAMS

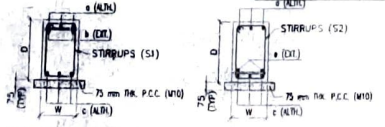
BEAM MARKED	BEAM SIZE: WIDTH (W) (mm)	BEAM SIZE: DEPTH (D) (mm)	TOP REINFORCEMENT: ALLTHROUGH (a)	TOP REINFORCEMENT: EXTRA AT SUPPORT (b)	BOTTOM REINFORCEMENT: ALLTHROUGH (c)	BOTTOM REINFORCEMENT: EXTRA AT SPAN (d)	STIRRUPS (AT SUPPORT) (S1)	STIRRUPS (AT SPAN) (S2)
TB1	250	350	3-16 ϕ	2-12 ϕ	3-16 ϕ	2-12 ϕ	2L-8 ϕ@100 C/C	2L-8 ϕ@200 C/C
TB2	250	300	3-16 ϕ	-	3-16 ϕ	-	2L-8 ϕ@100 C/C	2L-8 ϕ@200 C/C



TYPICAL ARRANGEMENT OF REINFORCEMENT IN TIE BEAM

AS PER SP 34-1987 & 13920-1998

d= EFFECTIVE DEPTH OF BEAM
Ld= DEVELOPMENT LENGTH IN TENSION
ϕ= DIAMETER OF LONGITUDINAL BAR



AT SUPPORT

AT SPAN

TYPICAL CROSS SECTION OF TIE BEAM

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 MILLIMETER. & LEVELS ARE IN METER. EXCEPT OTHERWISE 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). HOWEVER ARCHITECTURAL DRAWING TO BE CORROBORATED FOR ALL LEVELS.
3. ANY DISCREPANCIES 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(FOR) IS CONFORMING TO IS-1786-2008.
5. UNLESS OTHERWISE STATED LAP LENGTH OF BARS SHALL BE 50Øor 600mm WHICHEVER IS GREATER.
6. CONCRETE NOMINAL COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOW
   i) TIE BEAM 30 MM
   ii) COLUMN 40 MM
   iii) RAFT SLAB 75 MM
7. GRADE OF CONCRETE SHALL BE M25 FOR SUPER STRUCTURE.
8. VIBRATOR SHALL BE USED FOR PROPER COMPACTION OF CONCRETE AND CURING SHALL BE DONE PROPERLY.
9. DEVELOPMENT LENGTH 50ØD FOR LAP & SPICES SHOULD BE PROVIDED AS PER THE PROVISIONS LAID DOWN IN SP34:1987
10. MEMBER THE BARS OF THE SUPPORTED MEMBER SHOULD HAVE AN ANCHORAGE OF 50D IN THE SUPPORTING MEMBER DRAWING.
11. WHEN TWO BEAMS MEET AT A COLUMN LOCATION ALONG THE SAME LINE THE HIGHER REINFORCEMENT AT THE TOP SHOULD BE CONTINUED AT THE BOTH SIDE.
12. LIGHT WEIGHT AAC BLOCKS ARE TO BE USED IN PLACE OF EXTERNAL BRICK WORK AT ALL PLACES.

PROPOSED G+4 STORIED RESIDENTIAL BUILDING PLAN OF GADIA ASSOCIATES PVT LTD. AT MOUZA - GHUNI, R.S. & L.R. DAG No - 2816,R.S. KHATIAN NO.-926,L.R. KHATIAN NO.-749/2,46/1,1268/2,1127/1,2387,3397, TOUZI NO.:- R.S. NO.:- J.L.No. - 23,DIST.-24 PGS.(N) UNDER JYANGRA HATIARA-2 GRAM PANCHAYET, PRESENT L.R KH. NO

NAME OF OWNER'S

GADIA ASSOCIATES PVT LTD

Director

SIG. OF OWNERS

DECLARATION OF STRUCTURAL ENGINEER

THE STRUCTURAL DESIGNS AND DRAWINGS OF BOTH FOUNDATION AND SUPERSTRUCTURE OF THE BUILDING AT MOUZA - GHUNI, R.S. & L.R DAG No - 2816,R.S. KHATIAN NO.-926/1, R. KHATIAN NO.-749/2,46/1,1268/2,1127/1,2387,3397, TOUZI NO.:- R.S. NO.:- J.L.No. - 23,DIST.-24 PGS.(N) UNDER JYANGRA HATIARA-2 GRAM PANCHAYET, PRESENT L.R KH. NO. HAS BEEN MADE BY ME CONSIDERING ALL POSSIBLE LOADS INCLUDING SEISMIC LOAD AS PER NATIONAL BUILDING CODE OF INDIA 2000 AS AMENDED FROM TIME TO TIME AND CERTIFY THAT IT IS SAFE AND STABLE IN ALL RESPECTS.

SUSMITA GHOSH
CIVIL ENGINEER (B.Tech)
WBUT

SIG. OF STRUCTURAL ENGINEER

DECLARATION OF ARCHITECT

I CERTIFY THAT ALL ARCHITECTURAL DRAWING OF THE MOUZA - GHUNI, R.S. & L.R DAG No. 2816,R.S. KHATIAN NO.-926/1, R. KHATIAN NO.-749/2,46/1,1268/2,1127/1,2387,3397, TOUZI NO.:- R.S. NO.:- J.L.No. - 23,DIST.-24 PGS.(N) UNDER JYANGRA HATIARA-2 GRAM PANCHAYET, PRESENT L.R KH. NO.

PREPARED BY ME COMPLYING WITH THE NEWTOWN PLANNING AREA (BUILDING) RULES, 2014

NO SUCH WRONG AND INCORRECT INFORMATION HAS BEEN FURNISHED BY ME INCLUDING AREA CALCULATION CHARTS IN THE DRAWING AND NO VIOLATION OF THE PROVISION OF THESE RULES WILL BE FOUND IN ANY OF THE DRAWINGS AND DOCUMENTS. SUBMITTED TO THE SANCTIONING AUTHORITY FOR OBTAINING SANCTION.

The structural analysis reports & soil repoins are kept for reference in this office. The clearance is accordingly subject to certificate of architect Str. Engineer, Geo-Tech Engineer

Approval Date: 15/5/19
Date: 29-12-17
Validity: 28-11-22

District Engineer
(N) 24 Parganas Zilla Parishad

SIG. OF ARCHITECT/ENGINEER

DRAWING TITLE:
TIE BEAM ,COLUMN LAYOUT PLAN, REINFORCEMENT SCHEDULE & DETAILS OF STAIR

SHT. SIZE	SHEET NO	REV DATE	R-0 01.12.17	R-1	DWG. NO. RDA/G+4/STR/17-18
A1	2 OF 3				

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