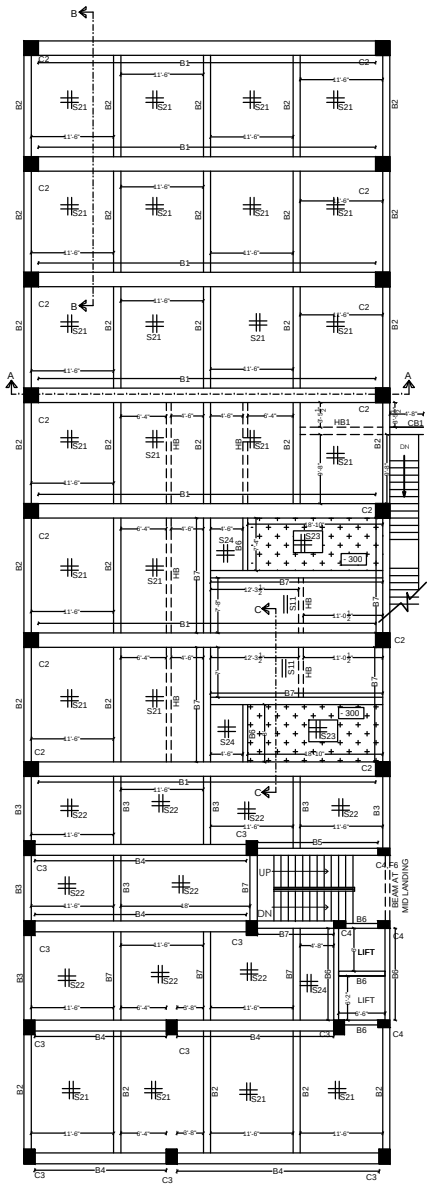
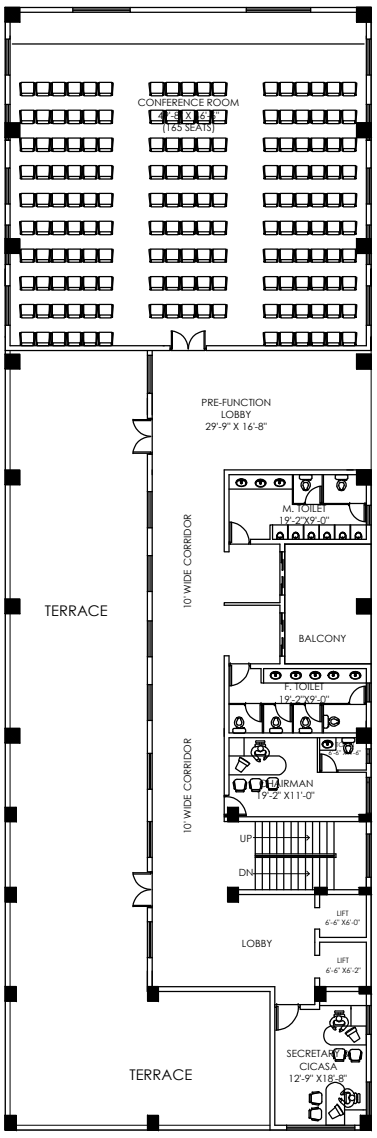


KEY PLAN FOR FIRST FLOOR ROOF SLAB BEAM



SECOND FLOOR PLAN

SCHEDULE FOR FIRST FLOOR ROOF SLAB BEAMS

TYPE	SIZE		TOP R/F STRAIGHT	TOP EXTRA UP TO L/4 FROM SUPPORT	BOTTOM R/F STRAIGHT	BOTTOM EXTRA '0.7 x L' AT CENTER	VERTICAL STIRRUPS		SKIN R/F ON EACH FACE
	WIDTH (INCHES)	DEPTH (INCHES)					UPTO L/4 FROM SUPPORT	AT CENTRE	
B1	24"	30"	5 - 32ϕ	4 - 32ϕ	5 - 32ϕ	4 - 32ϕ	4L-10ϕ @ 4" C/C	4L-10ϕ @ 6" C/C	2 - 16ϕ
B2	12"	24"	3 - 16ϕ	2 - 16ϕ	3 - 16ϕ	2 - 16ϕ	8ϕ @ 4" C/C	8ϕ @ 6" C/C	-----
B3	12"	24"	3 - 16ϕ	----	3 - 16ϕ	----	8ϕ @ 4" C/C	8ϕ @ 4" C/C	-----
B4	18"	30"	4 - 25ϕ	2 - 25ϕ	4 - 25ϕ	2 - 25ϕ	4L-8ϕ @ 4" C/C	4L-8ϕ @ 6" C/C	2 - 16ϕ
B5	12"	24"	3 - 25ϕ	----	3 - 20ϕ	----	8ϕ @ 4" C/C	8ϕ @ 6" C/C	-----
B6	8"	24"	3 - 16ϕ	----	3 - 16ϕ	----	8ϕ @ 4" C/C	8ϕ @ 4" C/C	-----
B7	12"	24"	4 - 16ϕ	----	4 - 16ϕ	----	8ϕ @ 4" C/C	8ϕ @ 4" C/C	-----
B8	18"	24"	4 - 25ϕ	3 - 25ϕ	4 - 25ϕ	3 - 25ϕ	4L-8ϕ @ 4" C/C	4L-8ϕ @ 6" C/C	-----
B9	18"	24"	4 - 25ϕ	----	4 - 25ϕ	----	8ϕ @ 4" C/C	8ϕ @ 6" C/C	-----
B10	12"	24"	3 - 20ϕ	----	3 - 20ϕ	3 - 20ϕ	8ϕ @ 4" C/C	8ϕ @ 6" C/C	-----
B11	18"	24"	3 - 20ϕ	2 - 20ϕ	3 - 20ϕ	2 - 20ϕ	8ϕ @ 4" C/C	8ϕ @ 6" C/C	-----
CB	12"	24"	5 - 16ϕ	----	3 - 16ϕ	----	8ϕ @ 4" C/C	8ϕ @ 4" C/C	-----
CB1	12"	24"	4 - 16ϕ	----	4 - 16ϕ	----	8ϕ @ 4" C/C	8ϕ @ 4" C/C	-----
HB1	12"	SLAB THK	4 - 16ϕ	----	2 - 16ϕ	----	8ϕ @ 6" C/C	8ϕ @ 6" C/C	-----
HB	8"	SLAB THK	2 - 12ϕ	----	2 - 12ϕ	----	8ϕ @ 6" C/C	8ϕ @ 6" C/C	-----

SCHEDULE FOR FIRST FLOOR SLABS

TYPE	THICKNESS (MM)	MAIN R/F ALT. BIJ AT L/5 FROM SUPPORT	EXTRA TOP UP TO L/4 FROM SUPPORT	DIST.	REMARKS
S11	5½"	10ϕ @ 7" C/C	------	8ϕ @ 6" C/C	ONE WAY
S21	5½"	10ϕ @ 6" C/C	10ϕ @ 12" C/C	-----	TWO WAY
S22	5½"	10ϕ @ 7" C/C	10ϕ @ 14" C/C	-----	TWO WAY

SCHEDULE FOR CHIMTA SLAB

TYPE	THICKNESS (INCHES)	MAIN R/F ALT.CHIMTA	DIST BAR ON EACH FACE	REMARKS
CS	5½"	10ϕ @ 6" C/C	8ϕ @ 7" C/C	CHIMTA MESH

SCHEDULE FOR COLUMNS

COLUMN NO.	COLUMN DETAILS			
	WIDTH	DEPTH	MAIN BARS	RINGS
C1	18"	18"	12 - 16ϕ	8ϕ @ 6" C/C
C2	24"	24"	20 - 25ϕ	8ϕ @ 6" C/C
C3	18"	24"	8 - 20ϕ + 8 - 16ϕ	8ϕ @ 6" C/C
C4	12"	20"	10 - 16ϕ	8ϕ @ 6" C/C

SCHEDULE FOR MESH SLAB

TYPE	THICKNESS (INCHES)	BOTTOM R/F BOTHWAYS	TOP R/F BOTHWAYS	REMARKS
S23	6"	10ϕ @ 6" C/C	10ϕ @ 6" C/C	DOUBLE MESH
S24	5½"	10ϕ @ 7" C/C	10ϕ @ 7" C/C	DOUBLE MESH

BUILDING IS DESIGN FOR G+2 ONLY

GRADE OF CONCRETE - M25

GRADE OF STEEL - FE 500

ICAI
(FIRST FLOOR ROOF SLAB BEAM DETAILS)

CUBE TEST REQUIRED

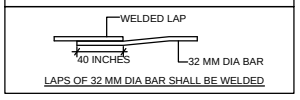
QUANTITY OF CONCRETE IN CUM.	SET OF SAMPLES FOR 7 DAYS CUBE TEST	SET OF SAMPLES FOR 28 DAYS CUBE TEST
1-5	1	1
6-15	2	2
16-30	3	3
31-50	4	4
51-100	6	6

* **7 DAYS & 28 DAYS** TEST REPORT SHALL BE SUBMITTED AFTER CASTING OTHER WISE WE WILL NOT BE **RESPONSIBLE FOR CONCRETE STRENGTH** .

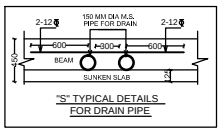
DEV. LENGTH TABLE OF BARS

DIA OF BAR	DEV. LENGTH	DIA OF BAR	DEV. LENGTH
6 MM	12 INCHES	12 MM	24 INCHES
8 MM	16 INCHES	16 MM	30 INCHES
10 MM	20 INCHES	20 MM	38 INCHES
25 MM	50 INCHES	32 MM	WELDED

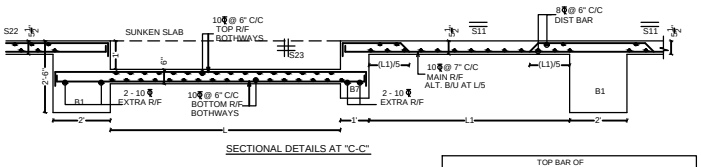
NOTE:- FOR 32 MM DIA BAR IT IS MANDATORY TO WELD THE LAPS



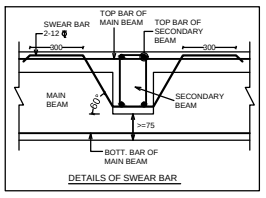
LAPS OF 32 MM DIA BAR SHALL BE WELDED



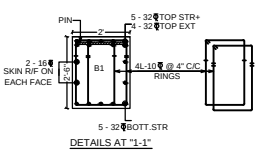
"S" TYPICAL DETAILS FOR DRAIN PIPE



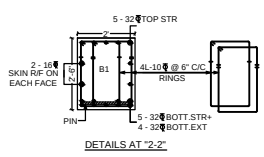
SECTIONAL DETAILS AT "C-C"



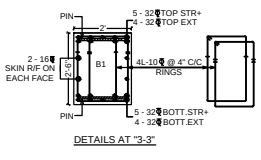
DETAILS OF SWEAR BAR



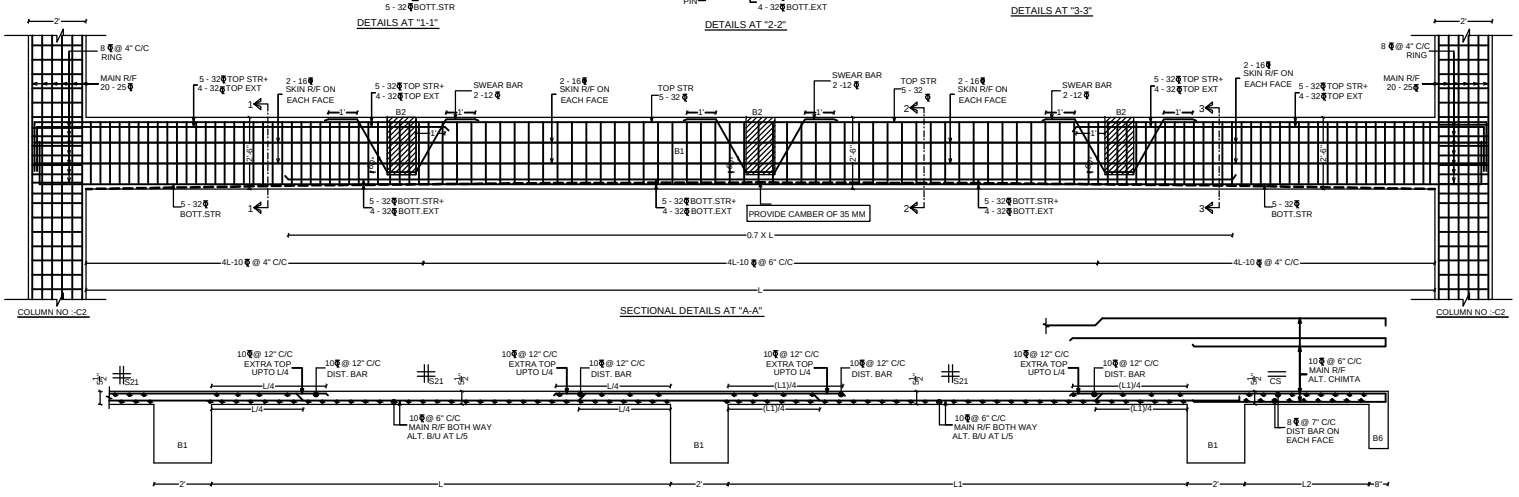
DETAILS AT "1-1"



DETAILS AT "2-2"



DETAILS AT "3-3"



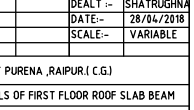
SECTIONAL DETAILS AT "A-A"

SECTIONAL DETAILS AT "B-B"

FOR DIMENSIONS, LEVELS, CENTERLINE AND GENERAL ARRANGMENT REFERARCHITECTURAL DRAWING.

1. CONSULTANT COPY 2. CLIENT'S COPY 3. SITE COPY 4. OFFICE COPY

NOTE:-
1) ALL DIMENSIONS ARE IN FEET INCHES.
2) **S.B.C. OF THE SOIL IS ASSUMED AS 9MT/SQ.M. AND SHALL BE VERIFIED AT SITE BY SITE ENGINEER.**
3) **MIN DEPTH OF FOUNDATION SHOULD BE 10 FEET BELOW M. G. LEVEL**
4) **USE M25 GRADE OF CONCRETE.**
5) DENSITY OF BRICK ASSUME TO BE 850 KG/M³.
6) ALL STRUCTURAL STEEL REINFORCEMENT SHALL BE HIGH STRENGTH DEFORM BARS OF GRADE FE.500 CONFORMING TO IS 1786-1985 & MILD STEEL GRADE I CONFORMING TO IS:432-1982(PART 1)
7) PROVIDE CLEAR COVER OF 50 mm FOR FOOTING R/F.
8) PROVIDE CLEAR COVER OF 40 mm FOR COLUMN R/F.
9) PROVIDE CLEAR COVER OF 25 mm FOR BEAM R/F AND 20 MM FOR SLAB R/F
10) NOT MORE THAN 50 % BARS SHOULD BE LAPPED AT ONE SECTION.
11) EXECUTION SHALL BE AS PER IS 456-2000.
12) **FOR DIMENSIONS, LEVELS, CENTERLINE AND GENERAL ARRANGMENT REFER ARCHITECTURAL DRAWING.**
13) ALL BARS SHOULD BE EXTENDED UPTO DEVELOPMENT LENGTH + 10 DIA OF BAR
14) LAP SHOULD BE EQUAL TO DEVELOPEMENT LENGTH + 10 DIA OF BAR
15) USE OPC/PPC WITH MINIMUM GRADE 43/53 AND USE MAXIMUM WATER CEMENT RATIO 0.5
16) NO OVERLAPS ARE ALLOWED IN FOOTING
17) ALL AGGREGATE FOR FOOTING 30mm DOWN AND FOR COLUMN 20mm DOWN
18) USE CURED MORTOR COVER BLOCKS OF SAME STRENGTH OF CONCRETE
19) STRIPPING OF TIME FOR SHUTTERING AS PER IS 456-2000
20) TOLERANCES FOR FORMWORK, REINFORCEMENT, COVER AS PER IS 456-2000
21) BACKFILLING IN COLUMN PITS SHALL BE WITH APPROVED SOIL AND COMPACTED PROPERLY TO AVOID SETTLEMENT
22) USE DENSIFIED COATED PLYWOOD FOR SHUTTERING & FORMWORK
23) USE STEEL PROPS & STEEL SUPPORT FOR FORMWORK
24) BURNT OIL NOT PERMITTED FOR SHUTTERING, USE MOULD OIL.
25) USE SUPER-PLASTICISER TO MAINTAIN WATER/CEMENT RATIO
26) CURING-EXPOSED SURFACE OF CONCRETE SHALL BE KEPT CONTINUOUSLY IN WET CONDITION MINIMUM FOR 14 DAYS.
27) GHODI OR CHAIR SPACING @ 600 C/C
28) GHODI OR CHAIR HEIGHT = (SLAB THICKNESS - [30MM + (2XDIA BAR)])
29) ALL OUTER PLINTH BEAMS BOTTOMS SHALL BE 100 MM BELOW G.L.
30) ALL INNER BEAMS SHALL BE AT PLINTH LEVEL
31) STUB COLUMN SC ARE ONLY UPTO PLINTH LEVEL
32) **BUILDING IS DESIGN FOR G+2 ONLY**
33) IN BOX FOOTING "L" SHALL BE (D-150)
34) IN RAFT, BOX AND ECCENTRIC FOOTING DO NOT PROVIDE PEDESTAL UNTILL & UNLESS SPECIFIED
35) HIGHER DIAMETER OF BAR SHALL BE PLACED AT SHORTER FACE OF COLUMN.
36) SUPERVISION AT OWNER'S RISK.
37) FOR ISOLATED FOOTING LONG BARS SHALL BE KEPT BELOW SHORT BARS.
38) FOR COMBINED & RAFT FOOTING SHORT BARS SHALL BE KEPT BELOW LONG BARS.
39) TYPICAL DETAILS OF SWEAR BARS AT EVERY JUNCTION OF MAIN BEAM AND SECONDARY BEAM.



40) **GRADE OF CONCRETE FOR P.C.C. -M15**
41) CONCRETE AND STEEL MATERIAL TESTING AT OWNER'S RISK.
42) POSITION OF DRAIN PIPES IN TOILETS MAY VARY AS PER ARCHITECTURAL REQUIREMENT & SHALL BE 250MM AWAY FROM SUPPORT

STUDY PURPOSE

R.NO.	REVISION	DATE		
1.			DESIGN:-	AEC
2.			DEALT :-	SHATRUGHNA
3.			DATE:-	28/04/2018
4.			SCALE:-	VARIABLE

PROJECT:- PROPOSED ICAI AT PURENA ,RAIPUR.(C.G.)

TITLE:- STRUCTURAL DETAILS OF FIRST FLOOR ROOF SLAB BEAM

OWNER:- -----

ARCHITECT :- ARCHITECT SANDEEP NEENA + ASSOCIATES
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STRUCTURAL DESIGNER:-
AAJ ENGINEERS AND CONSULTANTS PVT. LTD.
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DRG. NO. 04

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