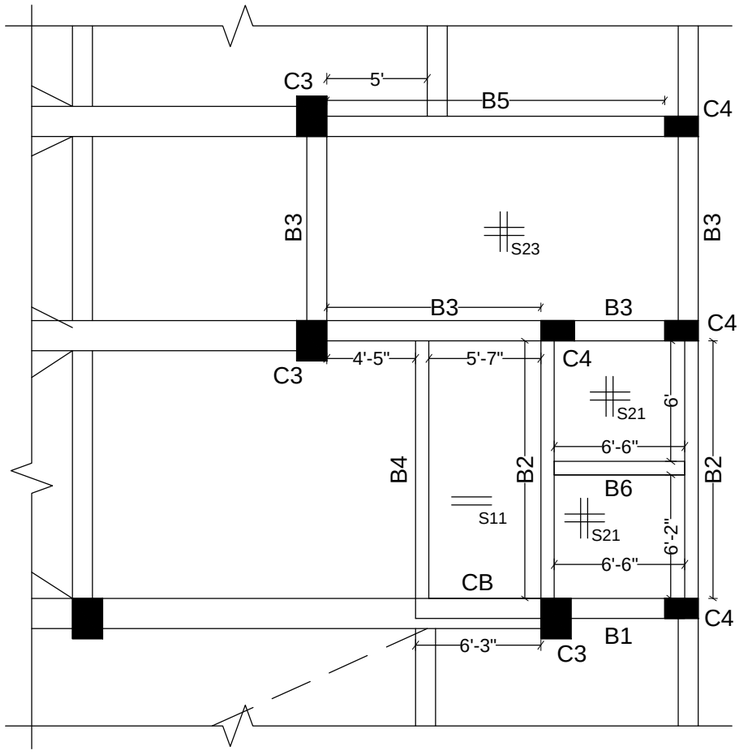
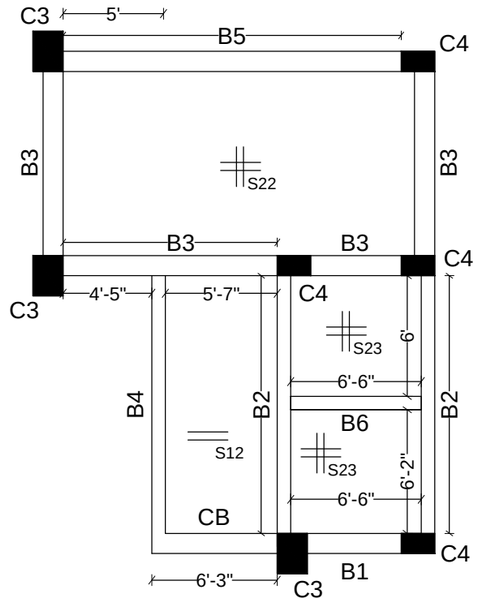
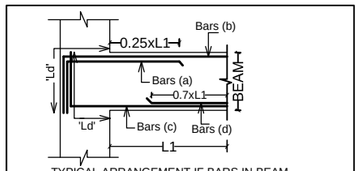


KEY PLAN FOR STAIRCASE TOWER & BOTTOM SLAB OF LMR



KEY PLAN FOR OVER HEAD WATER TANK TOP SLAB & TOP SLAB OF LMR



TYPICAL ARRANGEMENT IF BARS IN BEAM

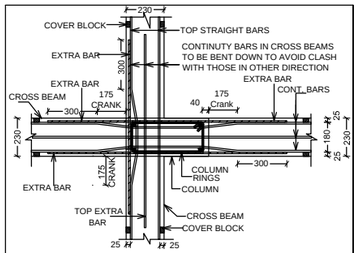
EXPLANATORY NOES:-

Bar marked (b) - At top for full lengths including supports.

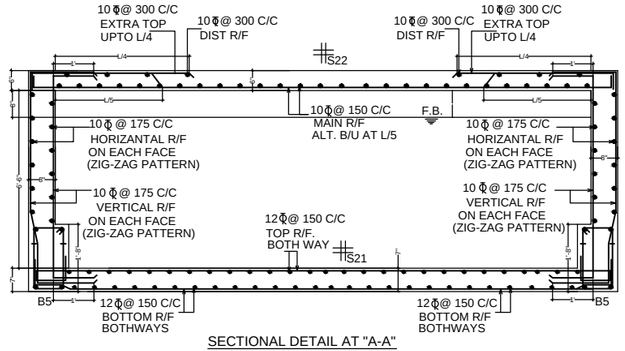
Bar marked (a) - At top extra upto L/4 from face of support.

Bar marked (c) - At bottom for full lengths including supports.

Bar marked (d) - At bottom extra of 0.7xL at center of beam.



TYPICAL INTERNAL COLUMN BEAM JUNCTION



SECTIONAL DETAIL AT "A-A"

SCHEDULE FOR BEAMS

TYPE	SIZE		TOP R/F STRAIGHT	TOP EXTRA UPTO L/4 FROM SUPPORT	BOTTOM R/F STRAIGHT	BOTTOM EXTRA '0.7 x L' AT CENTER	VERTICAL STIRRUPS	
	WIDTH (MM)	DEPTH (MM)					UPTO L/4 FROM SUPPORT	AT CENTRE
B1	300	600	4 - 16 ϕ	2 - 16 ϕ	3 - 16 ϕ	2 - 16 ϕ	8 ϕ@ 100 C/C	8 ϕ@ 100 C/C
B2	200	500	3 - 16 ϕ	-----	3 - 16 ϕ	-----	8 ϕ@ 100 C/C	8 ϕ@ 100 C/C
B3	300	500	3 - 16 ϕ	2 - 16 ϕ	4 - 16 ϕ	2 - 16 ϕ	8 ϕ@ 100 C/C	8 ϕ@ 150 C/C
B4	200	600	3 - 16 ϕ	2 - 16 ϕ	3 - 16 ϕ	2 - 16 ϕ	8 ϕ@ 150 C/C	8 ϕ@ 150 C/C
B5	300	500	4 - 20 ϕ	-----	4 - 20 ϕ	-----	8 ϕ@ 100 C/C	8 ϕ@ 150 C/C
CB	300	600	6 - 16 ϕ	-----	5 - 16 ϕ	-----	8 ϕ@ 100 C/C	8 ϕ@ 100 C/C
HB	200	SLAB THK.	2 - 12 ϕ	-----	2 - 12 ϕ	-----	8 ϕ@ 150 C/C	8 ϕ@ 150 C/C

SCHEDULE FOR SLAB

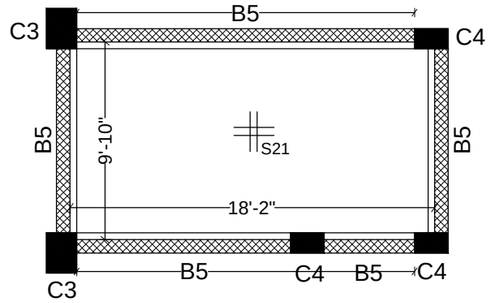
TYPE	THICKNESS (MM)	MAIN R/F ALT. B/U AT L/5 FROM SUPPORT	EXTRA TOP UP TO L/4 FROM SUPPORT	DIST.	REMARKS
S22	150	10 ϕ@ 150 C/C	10 ϕ@ 300 C/C	-----	TWO WAY
S11	150	10 ϕ@ 150 C/C	10 ϕ@ 300 C/C	-----	ONE WAY
S12	125	8 ϕ@ 150 C/C	10 ϕ@ 300 C/C	-----	ONE WAY

SCHEDULE FOR RCC TANK WALL

TYPE	TANK WALL DETAILS			
	THICKNESS (MM)	VERTICAL R/F ON EACH FACE	HORIZANTAL R/F ON EACH FACE	REMARKS
TANK WALL	200	10 ϕ@ 175 C/C	10 ϕ@ 175 C/C	DOUBLE MESH

SCHEDULE FOR MESH SLABS

TYPE	THICKNESS (MM)	BOTTOM R/F BOTHWAYS	TOP R/F BOTHWAYS	REMARKS
S21	175	12 ϕ@ 150 C/C	12 ϕ@ 150 C/C	DOUBLE MESH
S23	150	10 ϕ@ 150 C/C	10 ϕ@ 150 C/C	DOUBLE MESH



KEY PLAN FOR OVER HEAD WATER TANK BOTTOM SLAB

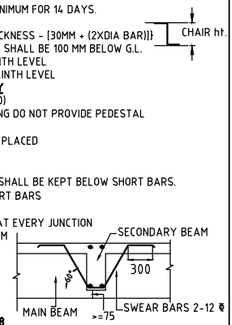
ICAI AT RAIPUR
(LMR & WATER TANK SLAB BEAM DETAILS)

FOR DIMENSIONS, LEVELS, CENTERLINE AND GENERAL ARRANGMENT REFER ARCHITECTURAL DRAWING.

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

NOTE:-

1] ALL DIMENSIONS ARE IN mm.
2] **S.B.C. OF THE SOIL IS ASSUMED AS 80kN/SQ.M. AND SHALL BE VERIFIED AT SITE BY SITE ENGINEER.**
3] **MIN. DEPTH OF FOUNDATION SHOULD BE 3.000 M. BELOW NATURAL GROUND LVL.**
4] **USE M25 GRADE OF CONCRETE.**
5] DENSITY OF BRICK ASSUME TO BE 1900 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+3/4 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. -1:4:8**
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
43] PHYSICAL CENTER OF COLUMN SHALL MATCH WITH CENTER OF FOOTING IN ISOLATED FOOTING.
44] IN CASE OF ANY DISCRIPANCY/HUMAN ERROR KINDLY CONTACT STRUCTURAL ENGINEER.
43] PROVIDE CLEAR COVER OF 25 mm FOR RCC WALL

R.NO.	REVISION	DATE	DEALT		
1.				DESIGN:-	AEC
2.				DEALT :-	KHUSHBU
3.				DATE:-	15/02/2018
4.				SCALE:-	VARIABLE

PROJECT:- PROPOSED ICAI BUILDING AT RAIPUR

TITLE:- STRUCTURAL DETAILS OF LMR & WATER TANK SLAB BEAM

OWNER:-

ARCHITECT :-

ARCHITECT SANDEEP NEENA + ASSOCIATES

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Raipur . (C. G.)
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Web - www.architectsandeepneena.com

STRUCTURAL DESIGNER:-
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DRG. NO. 08

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