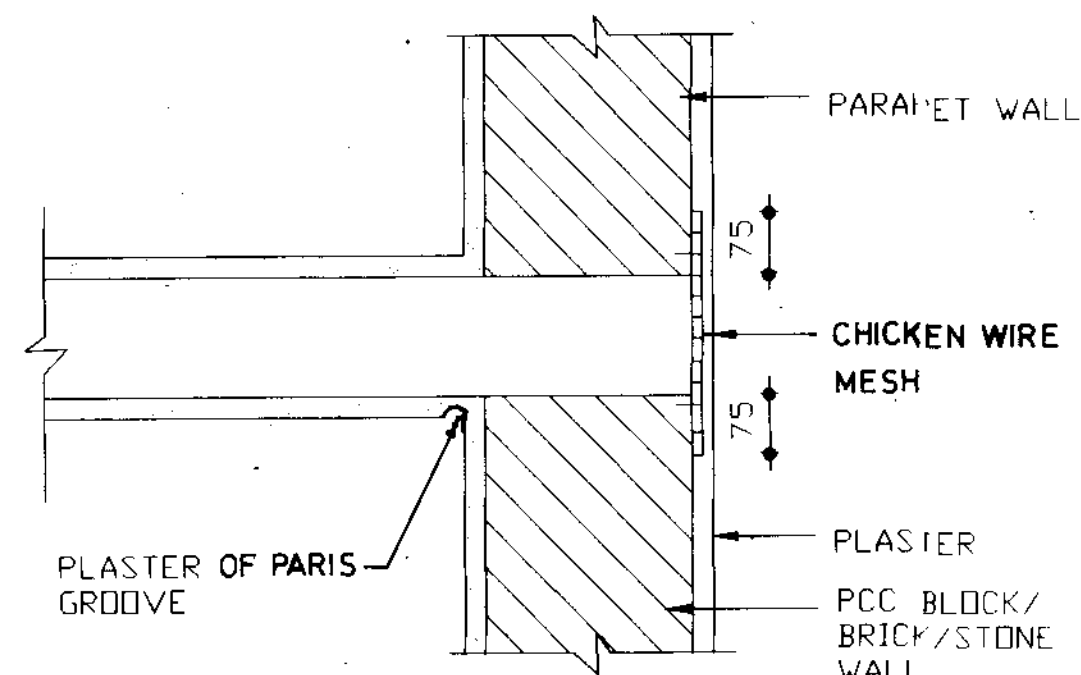
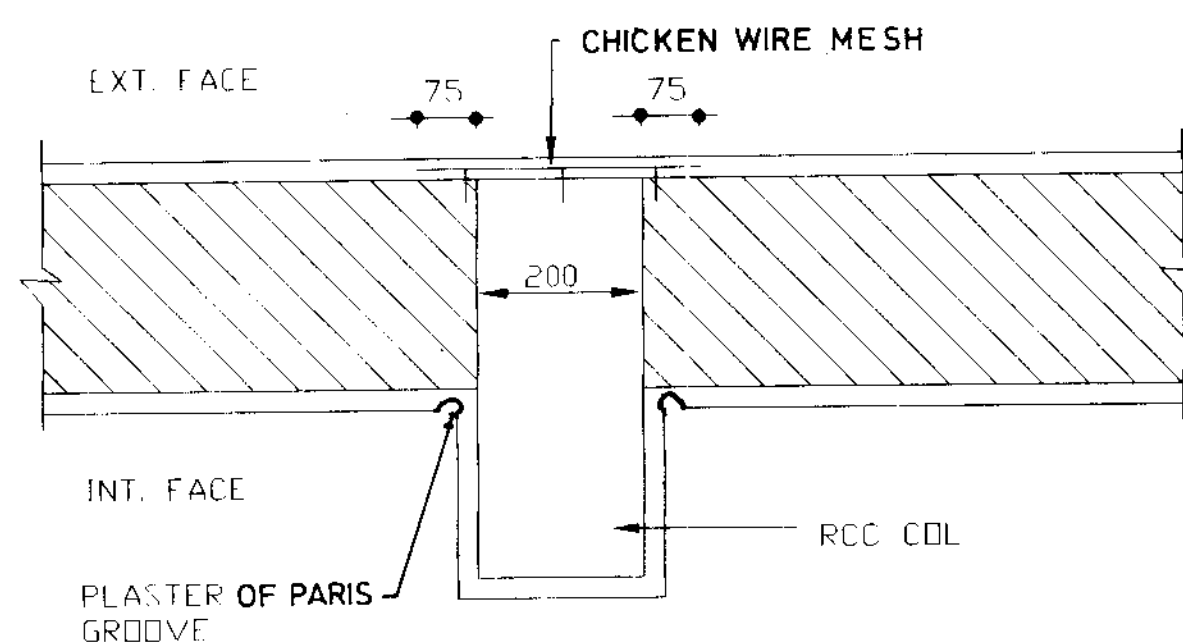


PLAN
WALL AND PROJECTED COLUMNS

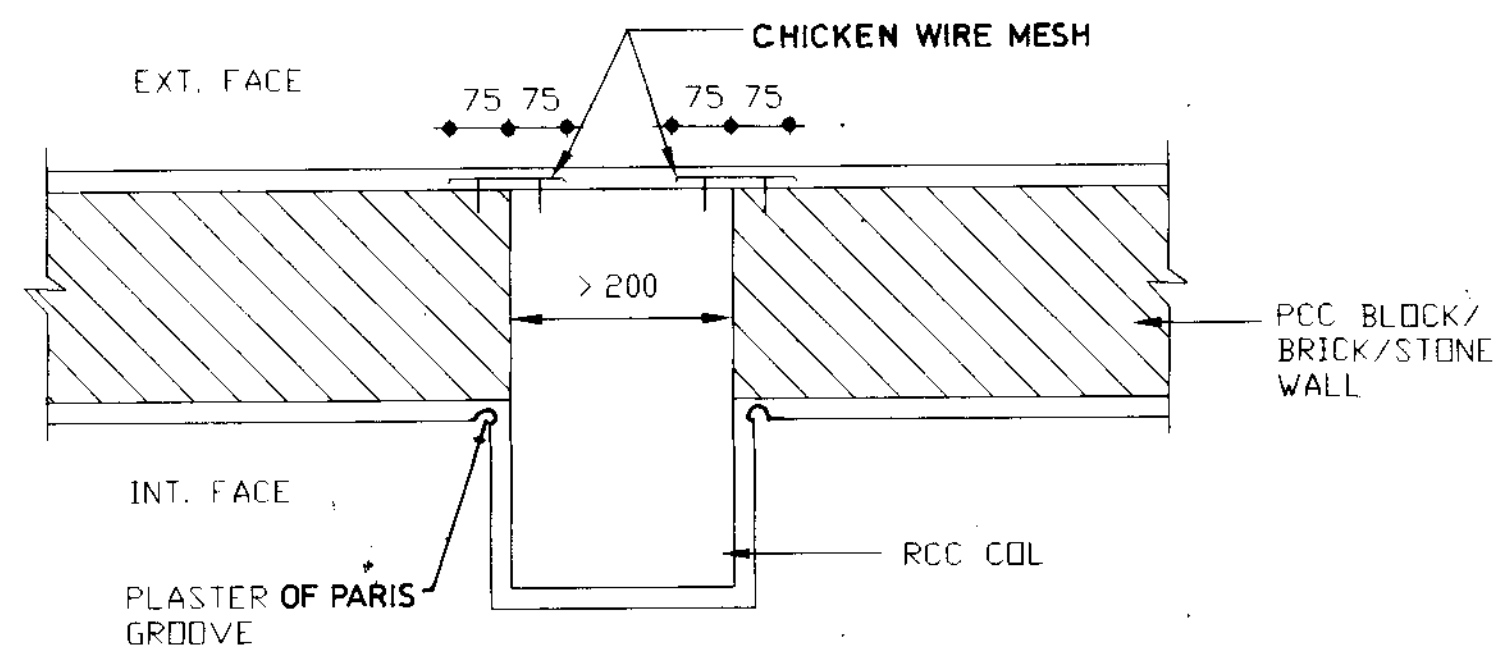


SECTION
SLAB AND WALL/PARAPET WALL

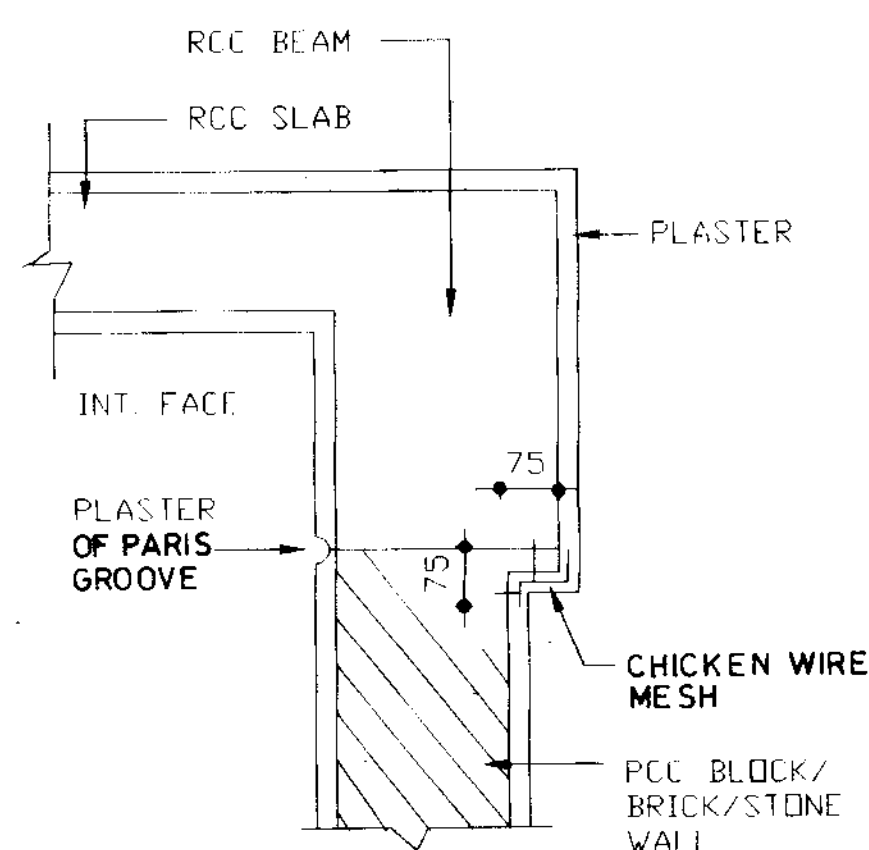


COLUMN WIDTH 200

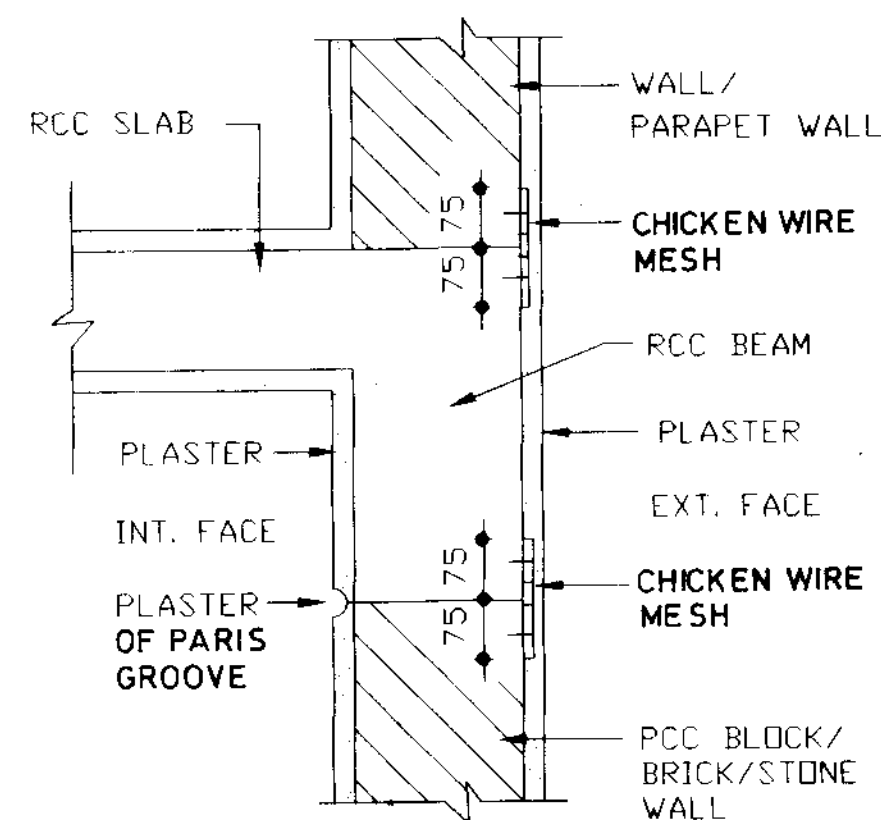
EXTERNAL WALL AND COLUMNS IN ONE PLANE



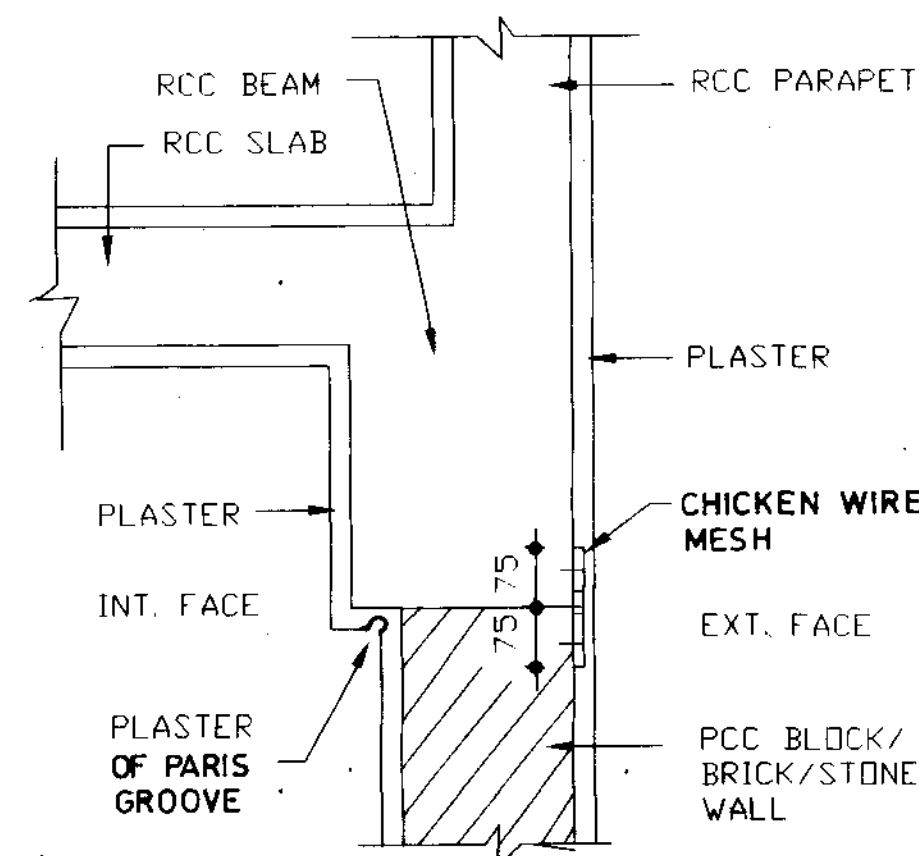
COLUMN WIDTH >200



SECTION
WALL AND RCC BEAM
WITH EXTERNAL PROJECTION



SECTION
WALL AND RCC BEAM
IN ONE PLANE



SECTION
WALL AND RCC BEAM

1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES UNLESS OTHERWISE SHOWN.
3. FIGURED DIMENSIONS SHALL BE FOLLOWED.
4. PLASTER GROOVES INDICATED IN DETAILS SHALL BE 10 MM WIDE AND 10 MM DEEP.
5. G.I. WIRE NET WHEREVER INDICATED SHALL BE OF G.I. WIRE 0.91 MM DIA AND MESH SIZE OF 12 MM. THE G.I. WIRE NET SHALL BE FIXED TO THE WALL WITH NAILS AND TO RCC SURFACE WITH RAWL PLUGS AND NAILS. SURFACE OF NAILS SHALL BE 300 C/C.
6. THE POSSIBLE LOCATION FOR DIFFERENT ELEMENTS REQUIRING PLASTER GROOVE AND CHICKEN WIRE MESH ARE SHOWN IN THIS DRAWING FOR WALL/COL AND ALL SIMILAR JUNCTIONS ARISING ELSEWHERE NEEDING JUNCTION TREATMENT SHALL BE PROVIDED WITH PLASTER GROOVE INTERNALLY AND CHICKEN WIRE MESH EXTERNALLY OR ELSE TO AVOID PROPOGATION OF CRACKS.

SL.NO.	DATE	DESCRIPTION	INT.
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REVISIONS

DETAILS OF INTERNAL PLASTER GROOVES AND EXTERNAL PLASTER
DETAILS AT JUNCTION OF WALL/BEAM/COLUMN

DATE	31-12-2002	CHIEF ENGINEER UDHAMPUR ZONE	SHT. 1/1
DRN	SM S.S.SINGH & C.K.PREMI		
DES			
DF.NO.			
SCALE		DRG.NO.CF TD/1187/2002	

LT COL
SO I (DESIGN)

REFERENCE TO DRGS :-

SER. NO.	DRG. NO.	SHEET NO.	DESCRIPTION
1.	CE/TP-1001/ 2002.	1/2 TO 1/2	TYPICAL RGC DETAILS.
2.	CE/TP-1192/ 2002.	1/2 TO 1/2	GENERAL NOTES ON RGC WORK.
3.	CE/TP-1150/ 2002.	1/5 TO 1/6	TYPICAL DETAILS OF SEISMIC PROVISIONS.
4.	CE/TP-1187/ 2002.	1/1	TYPICAL DETAILS OF INT./EXT. PLASTER GROOVES AT JUNCTION OF COL / BEAM / WALL.
5.	CE/TP-1251/ 2002.	1/1	TYPICAL RGC DETAILS.
6.	CE/TP-1252/ 2002.	1/11 TO 1/11	GENERAL NOTES FOR RGC WORKS.
7.	CE/TP-1253/ 2002.	1/5	TYPICAL DETAIL OF SEISMIC PROVISIONS.

PER. NO.	THICKNESS	MAIN REINF.	DISTRIBUTION BARS	REMARKS.
1.	50	10 # @ 150 c/c.	8 # @ 150 c/c.	
2.	80	10 # @ 150 c/c.	8 # @ 150 c/c.	
3.	80	10 # @ 150 c/c.	8 # @ 150 c/c.	
4.	80	10 # @ 150 c/c.	8 # @ 150 c/c.	
5.	80	10 # @ 150 c/c.	8 # @ 150 c/c.	
6.	100	10 # @ 150 c/c.	8 # @ 150 c/c.	
7.	100	10 # @ 150 c/c.	8 # @ 150 c/c.	
8.	100	10 # @ 150 c/c.	8 # @ 150 c/c.	
9.	100	10 # @ 150 c/c.	8 # @ 150 c/c.	
10.	100	10 # @ 150 c/c.	8 # @ 150 c/c.	

11-5.007 IN REF. TO DRUG SLUGS TO DELETED
AND SLUGS 5 TO 7 ADDED

SL NO	DATE	DESCRIPTION	INITIAL
1	10/10/2018
2	11/10/2018
3	12/10/2018
4	13/10/2018
5	14/10/2018
6	15/10/2018
7	16/10/2018
8	17/10/2018
9	18/10/2018
10	19/10/2018
11	20/10/2018
12	21/10/2018
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94	11/01/2019
95			

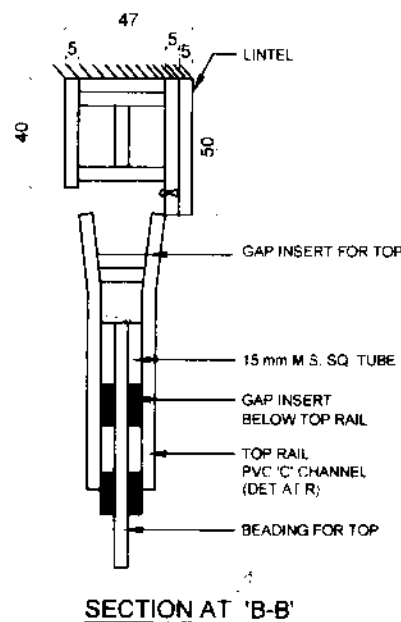
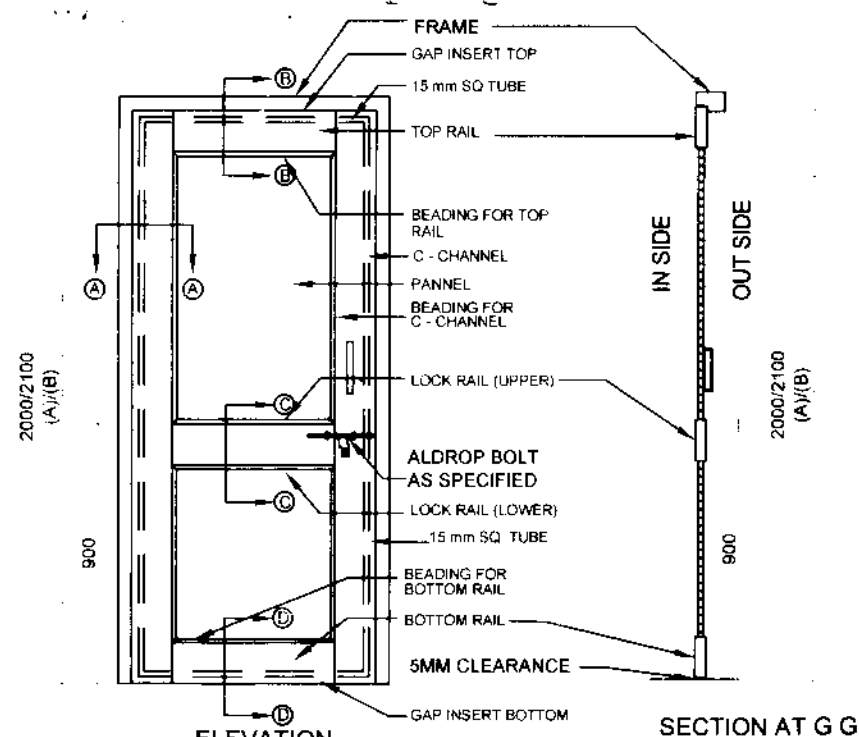
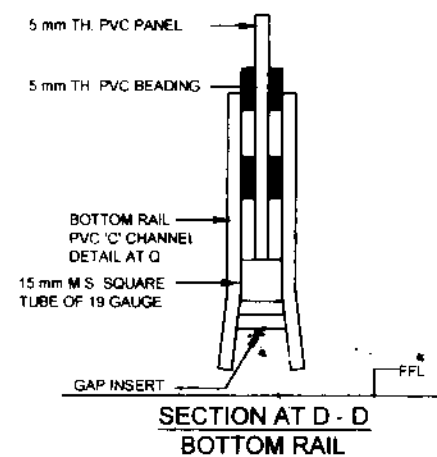
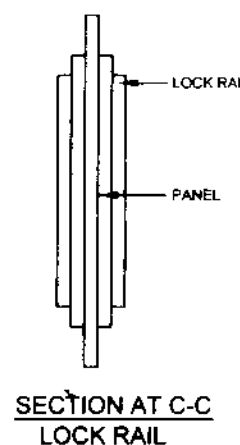
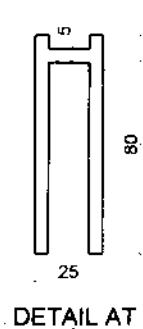
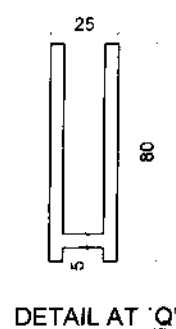
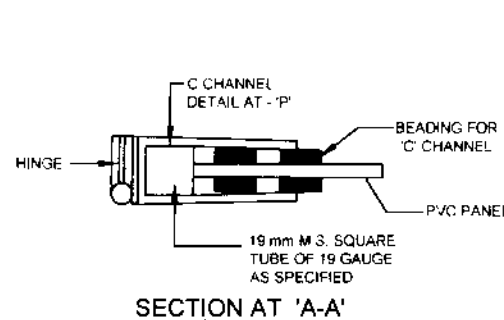
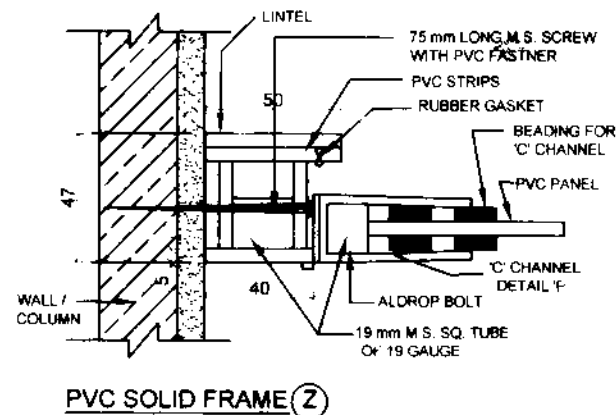
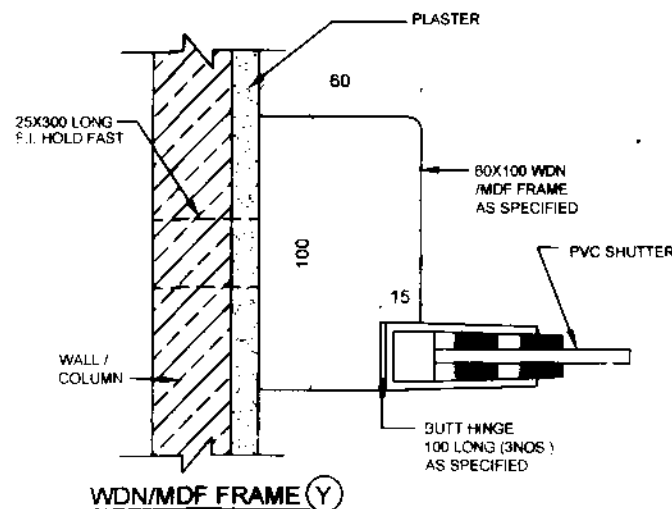
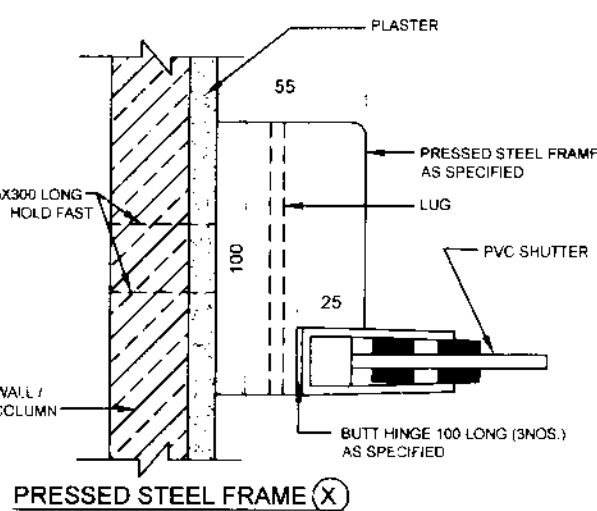
REVISION

TYPICAL DETAILS OF SEPTIC TANK
(UP TO 500 USERS) & SOAKAGE WELL/PIT.

DATE	OCT 03	CHIEF ENGINEER UDHAMPUR ZONE	SHT NO
DRN	Jagbir Nagi.		72
DES			2
OF NO			
SCALE	AS SHOWN	DRG NO- CE/TD- 129/2003	

**MAJOR
SOLD**

12 CAL 30.1 (MAGNUM)
THE GUNSHOTS



SPECIFICATION

T1880, 2000, 2040, 2440, 2640, 2720, 3680, 3800; PROVIDING AND FIXING OF "RAJSHRI" BRAND OR EQUIVALENT 30MM TH. SOLID PANEL PVC DOOR SHUTTER T2160, 2360, 2400, 2480, 2560, 2800; (CONFORMING TO CRITERIA OF TESTING AS PER IS 4020 WITH UP TO DATE AMENDMENTS) CONSISTING OF FRAME MADE OUT OF MS TUBES OF 19 GAUGE THICKNESS AND SIZE OF 19MMX19MM FOR STILES & 15MMX5MM T2; FOR TOP AND BOTTOM RAILS. MS FRAME SHALL HAVE A COAT OF STEEL PRIMERS OF APPROVED MAKE AND MANUFACTURER'S MS FRAME SHALL BE COVERED WITH 5MM THICK HEAT MOULDED PVC 'C' CHANNEL OF SIZE 30X50MM FORMING STILES AND 5MM THICK, 75MM WIDE PVC SHEETS FOR TOP RAIL, LOCK RAIL & BOTTOM RAIL ON EITHER SIDE AND 10MM (5MMX2MM) TH 20 MM WIDE CROSS PVC SHEET AS GAP INSERT FOR TOP AND BOTTOM RAIL PANNELLING OF 5MM THICK PVC SHEET TO BE FITTED IN THE MS FRAME WELDED/SEALED TO THE STILES AND RAILS WITH 30MM WIDE & 5MM TH PVC SHEET BENDING ON EITHER SIDE AND JOINED TOGETHER WITH SOLVENT CEMENT ADHESIVE ETC. AN ADDITIONAL 5MM TH. PVC STRIP OF 20MM WIDTH IS TO BE STUCK ON THE INTERIOR SIDE OF THE 'C' CHANNEL USING PVC SOLVENT ADHESIVE COMPLETE AS PER DIRECTION OF ENGINEER-IN-CHARGE, MANUFACTURER'S SPECIFICATION & DRAWING.

NOTE :- WIDTH OF STILES AND RAILS WILL VARY AS PER DOOR SIZES. THE SIZES OF STILES AND RAILS RECOMMENDED ARE GIVEN IN THE TABLE BELOW

DOOR WIDTH		STILES, TOP RAIL & BOTTOM RAIL SIZE		LOCK RAIL SIZE		REMARKS
INCH	MM	INCH	MM	INCH	MM	
2" TO 2.5"	600 TO 750	2"	50	4"	75	
2.5" TO 3"	750 TO 900	3"	75	5"	100	
3" & ABOVE	900 & ABOVE	4"	100	6"	125	

GAP INSERT OF 15 mm TO BE PROVIDED BETWEEN STILES AND RAIL & PANEL.

NOTES

- CONTRACTOR TO CHECK & VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
- FIGURED DIMENSION SHALL BE FOLLOWED.
- ALL DIMENSIONS ARE GIVEN IN MILLIMETRES, UNLESS OTHERWISE SPECIFIED.
- IRON MONGERY SHALL BE OF ALUMINIUM ANODISED EXCEPT BUTT HINGES WHICH SHALL BE COLD ROLLED M.S. OR AS SPECIFIED IN THE TENDER DOCUMENTS.
- PVC SHEETS TO BE SEALED WITH SOLVENT CEMENT (PVC PIT JOINT ADHESIVE).
- PANEL SHALL BE OF SINGLE 5MM SOLID THICK PVC SHEET (ONE PIECE).
- ALL THE DETAILS OF PVC DOOR SHOWN IN THIS DRG. ARE AS PER THE INFORMATION GIVEN BY RAJSHRI PLASTWOOD INDORE (M.P.).
- PVC DOOR SHOWN HERE IN THIS DRG. CONFIRMS TO IS-45 4020 1994.
- PVC DOOR FRAME SHALL BE FIXED TO WALL USING 75MM LONG MS SCREWS THROUGH THE FRAME FOR USING PVC FASTNERS. COLOUR OF THE PVC SHEET PVC PANNEL RUBBER GASKET ETC SHALL BE DECIDED BY ENGINEER IN CHARGE.
- DOOR STOPPER SHALL BE PROVIDED FOR ALL DOOR.
- ONE NO MORTICE LOCK (GODREJ TYPE) SHALL BE PROVIDED TO MAIN EXTERNAL DOOR.
- PD-1 REPRESENT PVC DOOR WITH PRESSED STEEL DOOR FRAME WIDTH 750 mm AND HEIGHT 2100 mm.

PD-1 SOLID PANNEL PVC DOOR

X- PRESSED STEEL DOOR FRAME

Y- WOODEN/MDF FRAME

Z- PVC SOLID FRAME

A- HEIGHT 2100 mm

B- HEIGHT 2000 mm

09-01-07 IN NOTES SNO. 12 DIM. OF A&B AMENDED

SNO	DATE	DESCRIPTION
		REVISIONS

TYPICAL DETAIL OF PVC DOOR

PLAN, ELEVATION, SECTION & DETAILS OF SOLID PANEL PVC DOOR (PD-1)

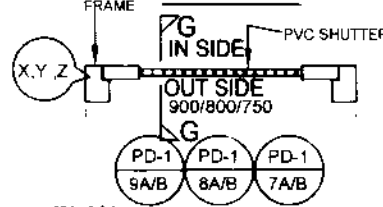
DATE	21 AUG 06	CHIEF ENGINEER	SHT No.
ORN.	SINHA	UDHAMPUR ZONE	
TCD.		UDHAMPUR	1/3
CKD.			
SCALE		REF DRG. No. CEU/TO/1238/06	

TECHNICAL OFFICER

LT COL
SENIOR ARCHITECT
FOR CHIEF ENGINEER

DY DIR. (ARCH)

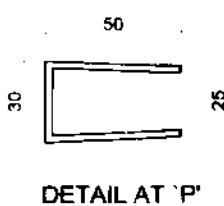
ELEVATION



PLAN

SOLID PANEL PVC DOOR (PD-1)

SECTION AT G G



NOTES

FOR GENERAL NOTES REFER SHT NO. 1/4 OF THIS DRG

RS/TS/BM/SS/SS
 PD-4 REPRESENT PVC DOOR WITH FRAME
 (X/Y/Z) WIDTH 1200 mm & HT 2100 mm

PD-4 SOLID PVC DOOR
 X- PRESSED STEEL
 Y- DOOR FRAME
 Z- WOODEN/MDF FRAME
 BM- BLUE MOON
 BS- BLUE SKY
 SS- SHINING STAR

SPECIFICATIONS:
 PROVIDING AND FIXING DETAIL OF FACTORY MADE 35 mm THICK MOULDED DOOR SHUTTER CONSISTING OF SOLID CORE SINGLE / DOUBLE LEAF FLUSH DOOR 30 mm THICKNESS LIPPED WITH 15 mm (5mmX3) TH X 30mm WIDTH ON OTHER STILES AND BOTTOM RAILS. THE INNER PANEL LAMINATED WITH 2 mm THICK TERMITE PROOF, WATER PROOF AND FIRE RESISTANT PVC SHEET WITH 2.4.6 RAISED PANEL DESIGNED IN DIFFERENT PLAIN AND / OR PRELAM COLOURS ON ONE SIDE AFTER ROUTING THE MOULDED DESIGN ON FLUSH DOOR AND 2 mm PLAIN AND FOR PRELAM PVC SHEET ON OTHER SIDE USING RUBBER ADHESIVE ON FLUSH DOOR AND SOLVENT CEMENT ADHESIVE ON THE PVC LIPPING ETC COMPLETE AS PER DIRECTION OF MANUFACTURERS SPECIFICATION & DRAWING

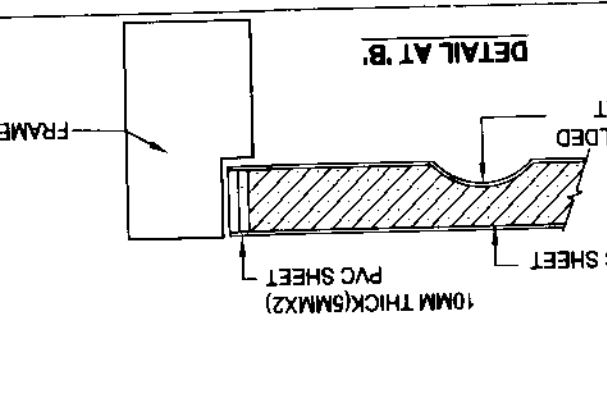
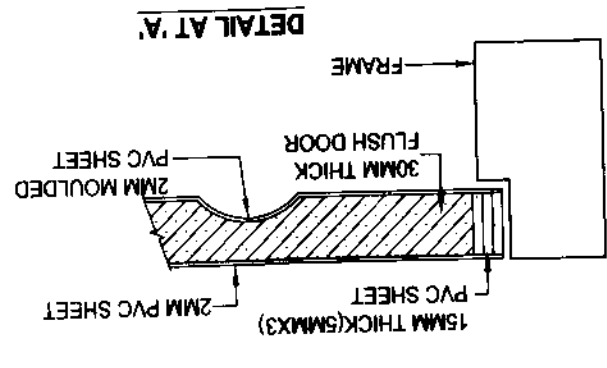
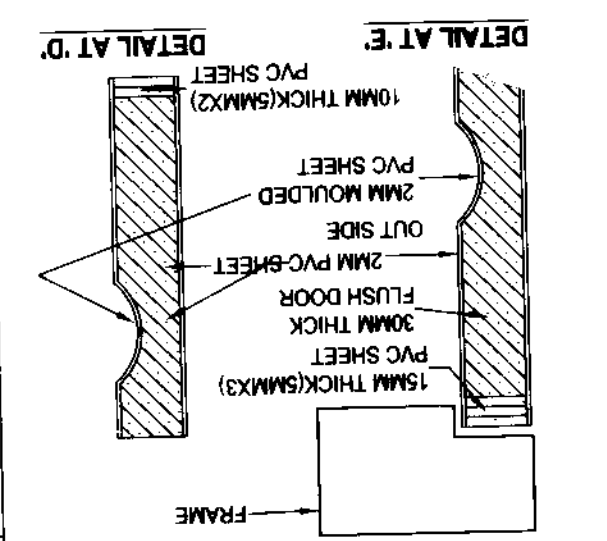
1. 14-11-06 IN NOTES S.No 2 DIM. OF A & B AMENDED
 2. 14-11-06 IN SECTION AT JJ DIMENSIONS AMENDED

REV	DATE	DESCRIPTION
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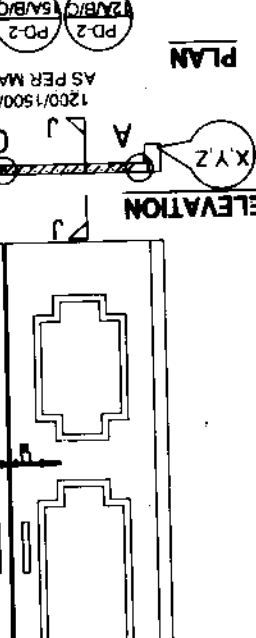
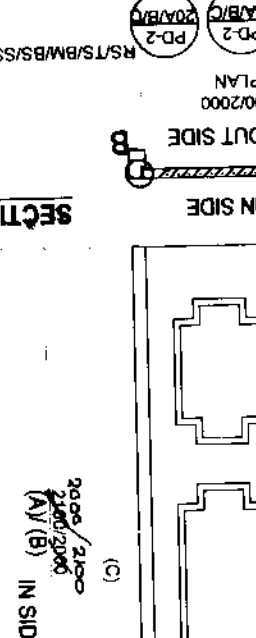
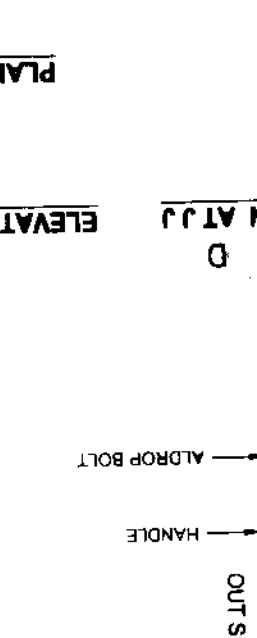
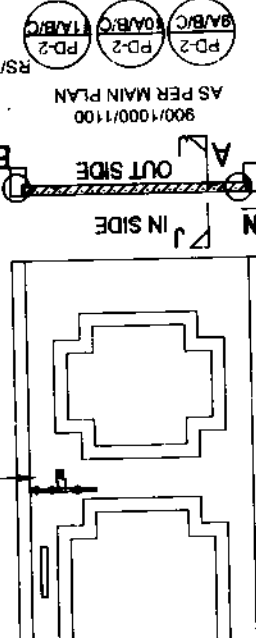
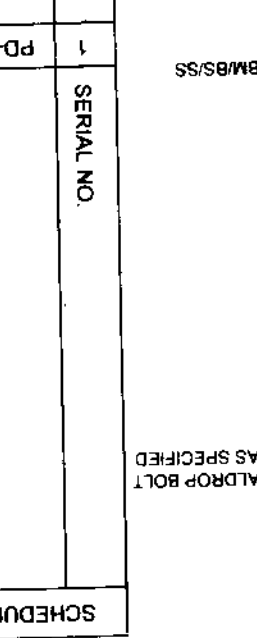
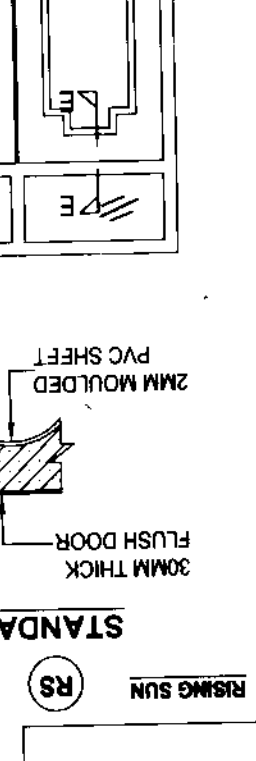
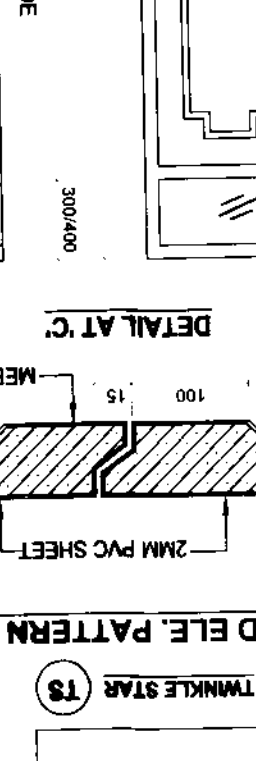
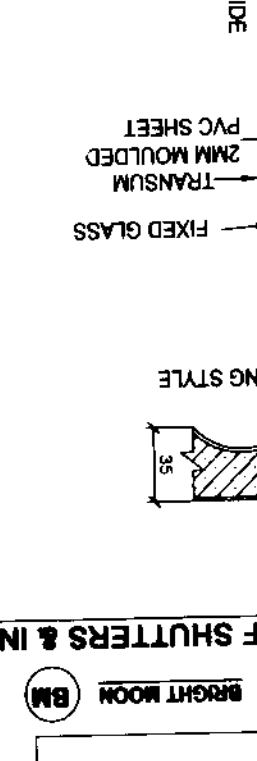
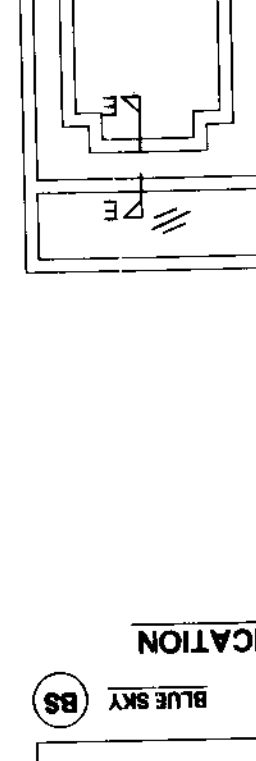
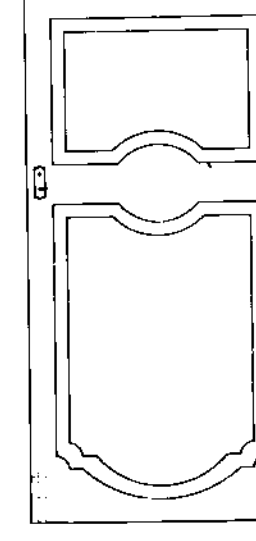
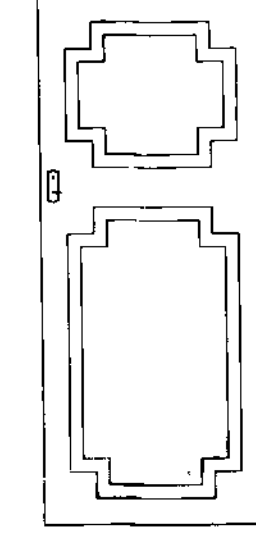
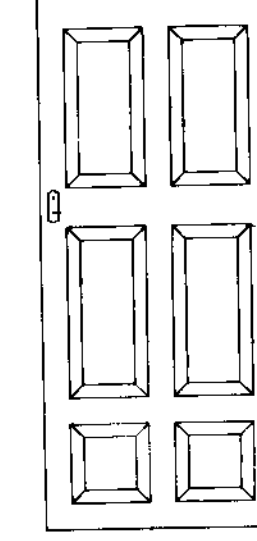
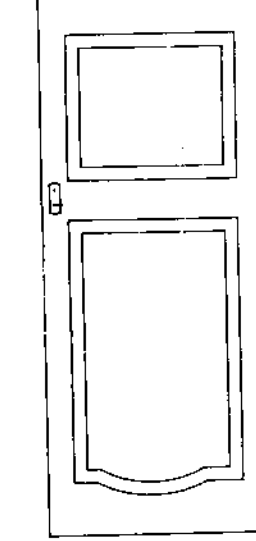
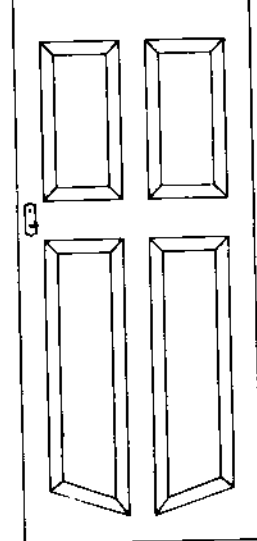
MOULDED PVC DOOR (SOLID CORE)

PLAN, ELEVATION, SECTION & DETAILS OF (PD-2)

DATE: 21 AUG 06
 DRN: Babli
 CKD: TO
 SCALE: ---
 REF DRG. No. CEU/20/1238/06
 CHIEF ENGINEER
 UDHAMPUR ZONE
 UDHAMPUR
 LT COL SENIOR ARCHITECT FOR CHIEF ENGINEER



SERIAL NO.	TYPE OF DOORS
1	BUTT HINGES 100 LONG AS SPECIFIED
2	TOWER BOLT 10 TH. 150 LONG AS SPECIFIED
3	BOW HANDLE 150 LONG 'D' TYPE AS SPECI.
4	19 ALU ANODISED ALDROP BOLT 300 LONG
5	L. SHAPE BRACKET 150 LONG (15X15 SC TUBE OF 19 GAUGE)
6	CHECK STOP OUT OF 35 X 30 X 100
7	25X6X150 LONG FI HOLD FAST AS SPECIFIED



STANDARD ELE. PATTERN OF SHUTTERS & INDICATION

RS- RISING SUN TS- TWINKLE STAR BM- BRIGHT MOON BS- BLUE SKY SS- SHINING STAR

NOTES:-



1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. FIGURED DIMENSIONS SHALL BE FOLLOWED.
3. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE SHOWN.
4. THE DETAILS GIVEN IN THIS DRG ARE TYPICAL AND SHALL BE FOLLOWED ONLY WHEN THE SAME ARE NOT GIVEN IN STRUCTURAL DRAWINGS.
5. FOR ALL RCC WORK M-25 GDE DESIGN MIX. CONC AS PER IS-456 OF 2000 SHALL BE USED UNLESS OTHERWISE MENTIONED IN THE MAIN DRAWINGS.
6. CRUSHING STRENGTH OF BRICK IS TAKEN AS 400 KG/SQ CM.
7. FOUNDATION DETAILS GIVEN IN THIS DRAWING ARE BASED ON SAFE BEARING CAPACITY OF SOIL AS 10 TON/SQM. IN CASE OF VARIANCE IN SBC AT SITE THE FOUNDATION SHALL BE REDESIGNED. IT WILL BE ENSURED THAT NO FOUNDATION SHALL REST ON TREACHEROUS ORGANIC OR FILLED UP SOIL.
8. WIDTH OF CRUMPLE SHALL BE AS PER DETAILS SHOWN IN MAIN STRUCTURAL DRG.

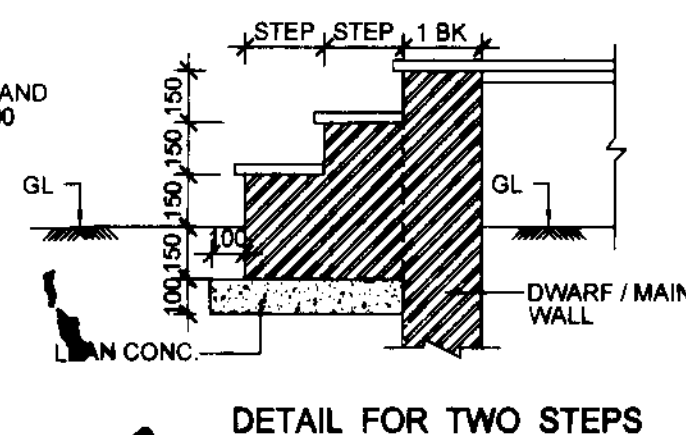
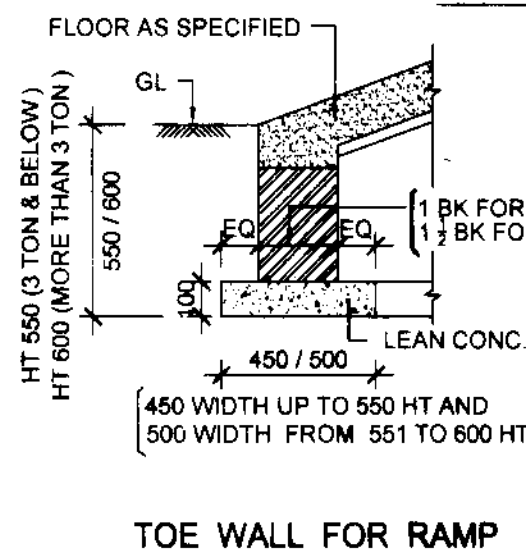
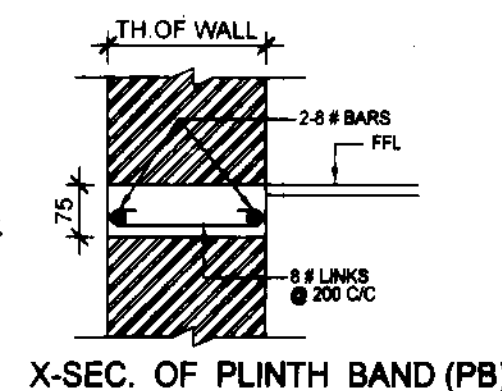
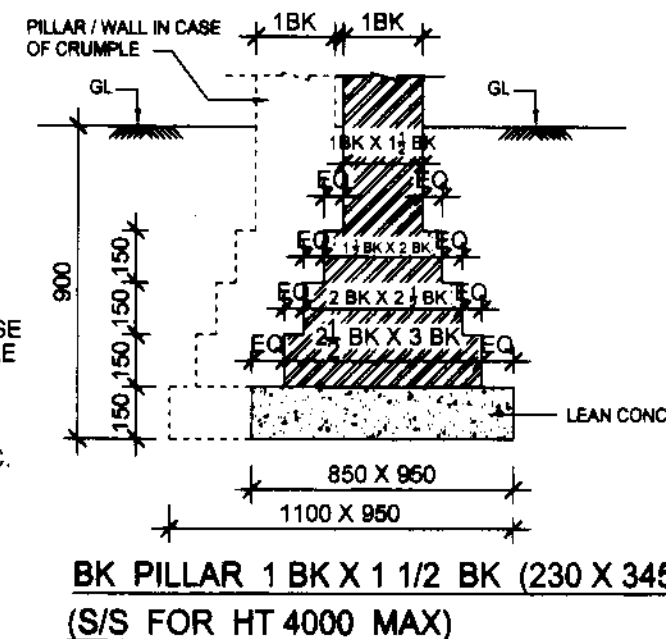
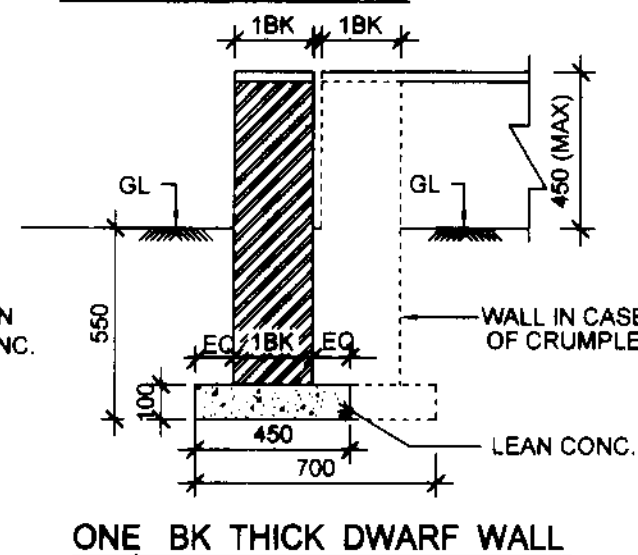
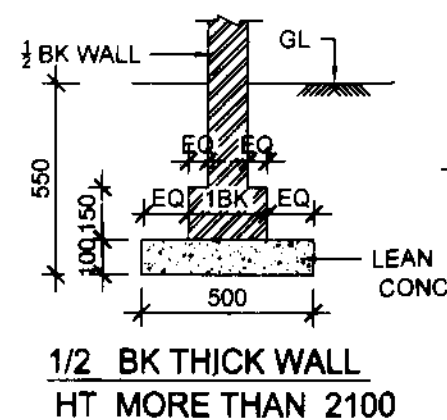
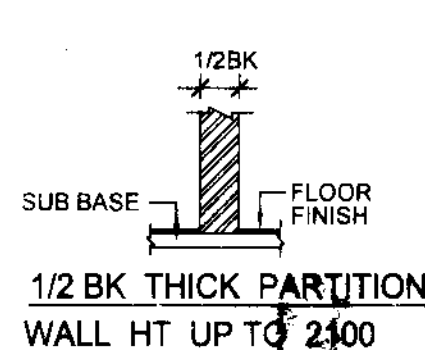
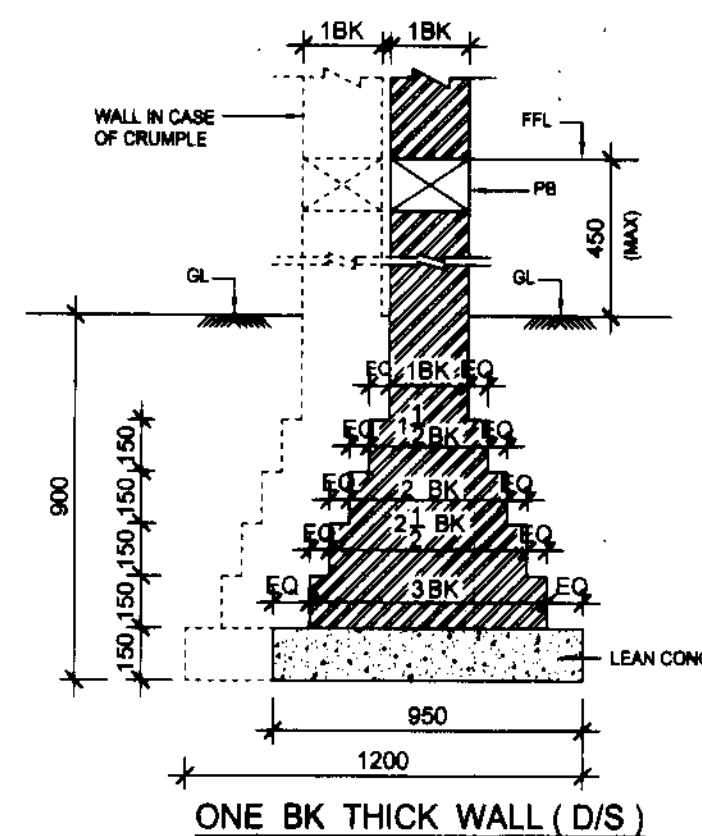
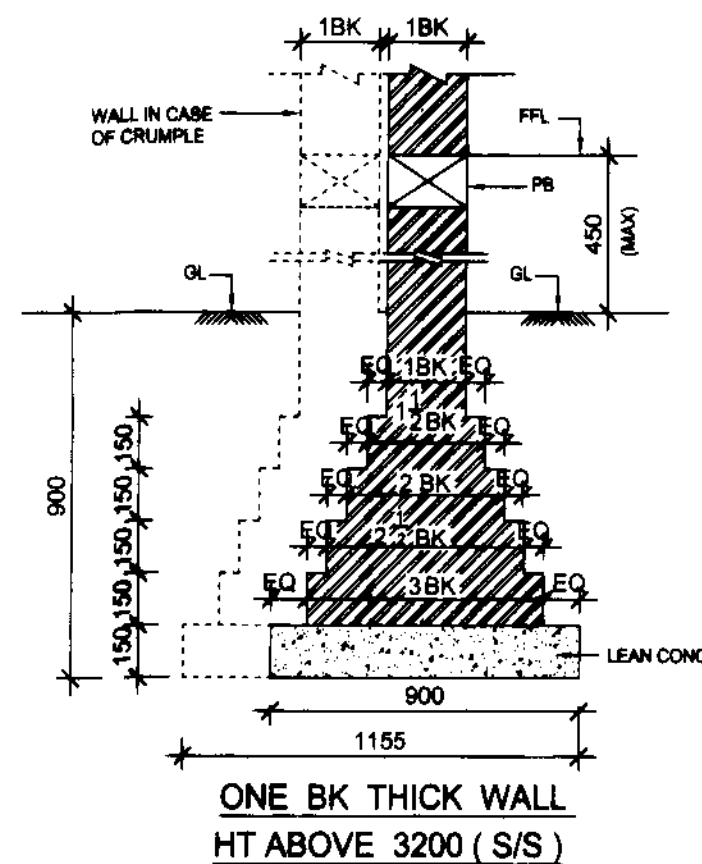
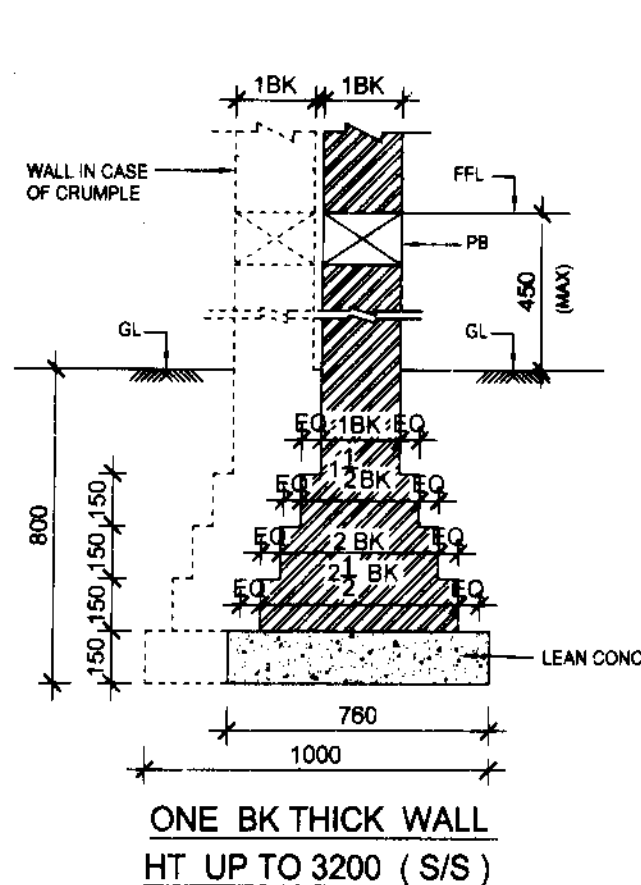
S NO	DATE	DESCRIPTION	INITIAL
1	17-9-13	NOTE NO. 6 CORRECTED	R

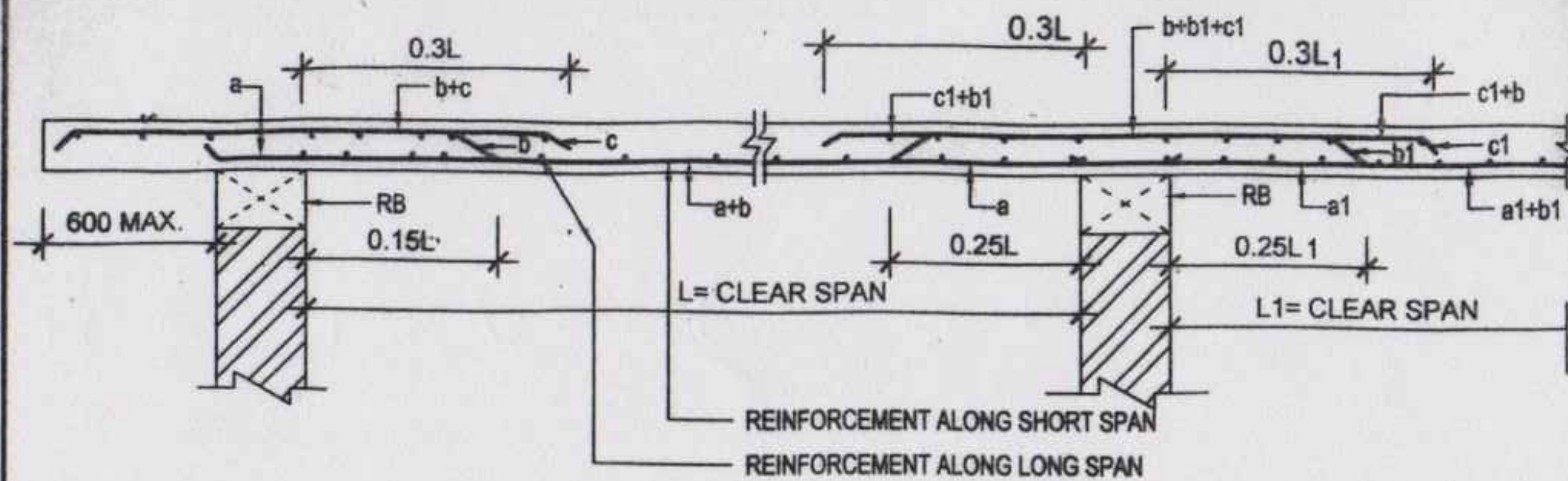
REVISION

TYPICAL FOUNDATION AND BEAM / COLUMN JUNCTION DETAILS

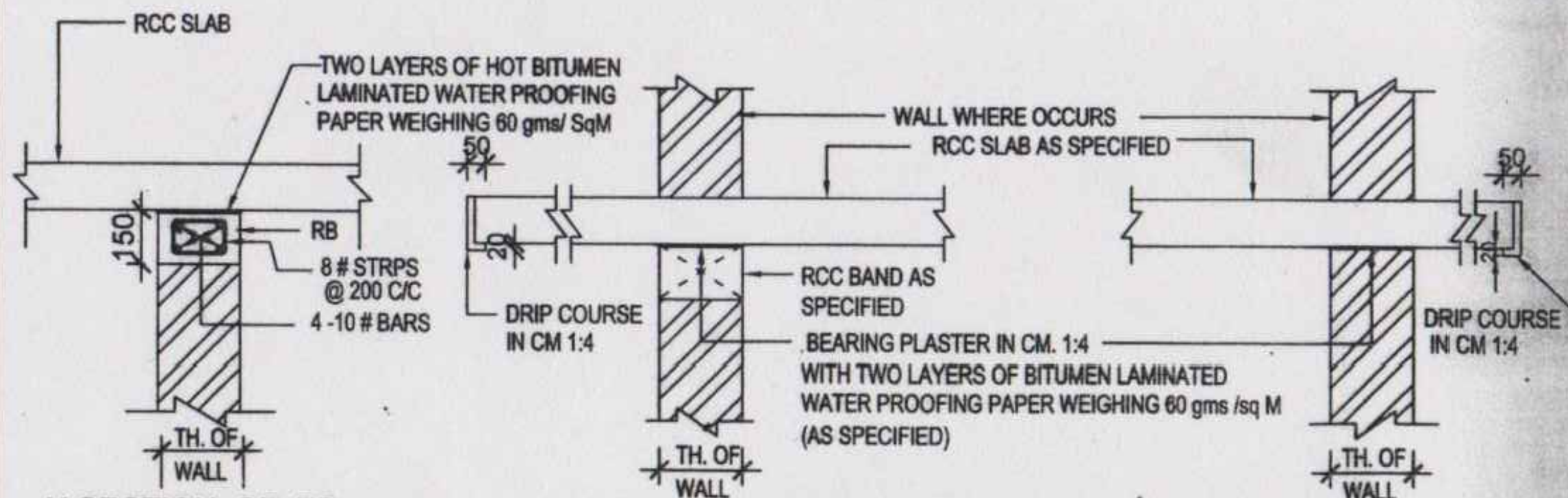
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE DRG. NO. CEUZ / TD -1250 / 2007	SHT. NO 1/1
DRN	Sh. Dhani Ram No. Sub. S. Mungarwar		
DES	SH. B. P. JAIN		
DF NO			
SCALE	AS SHOWN		

 A.A. DIR (ARCH)	 DIRECTOR (DESIGN) FOR CHIEF ENGINEER
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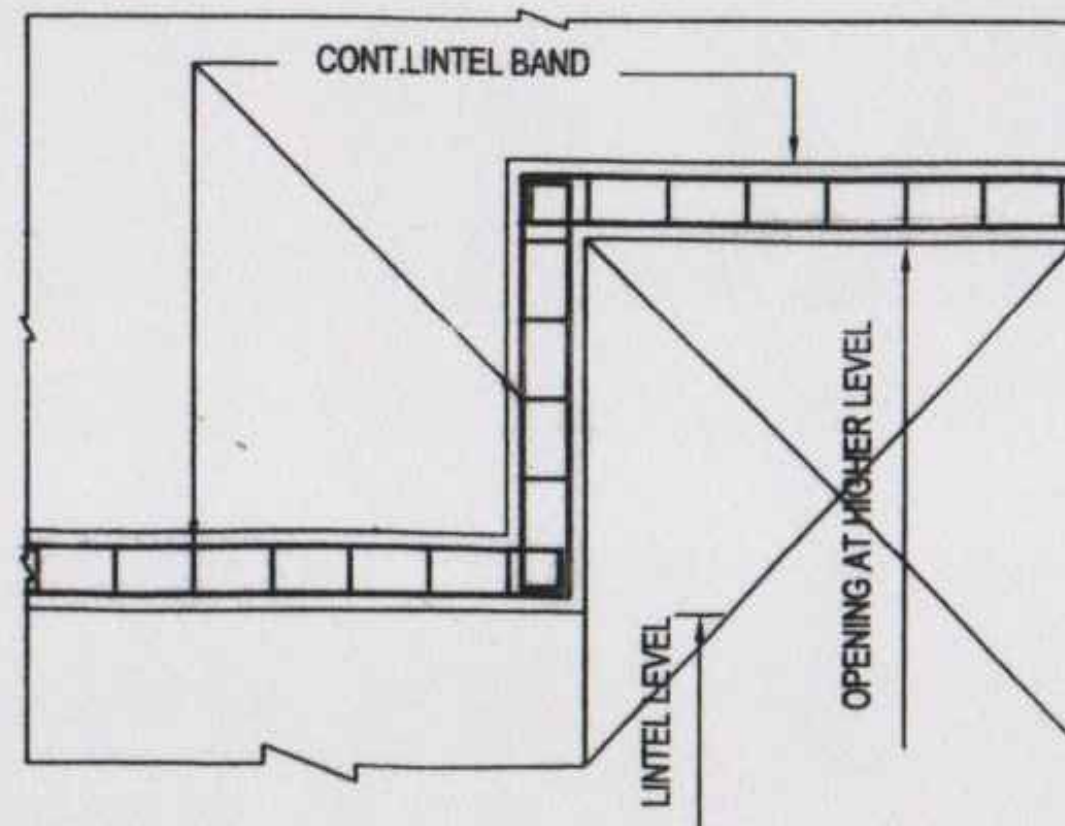


**TYPICAL SECTION OF RCC SLABS WITH ROOF PROJECTION
(REINFORCEMENT AS PER SCHEDULE/RCC ROOF PLAN)**



**X-SECTION OF RB
SCALE: 1:20**

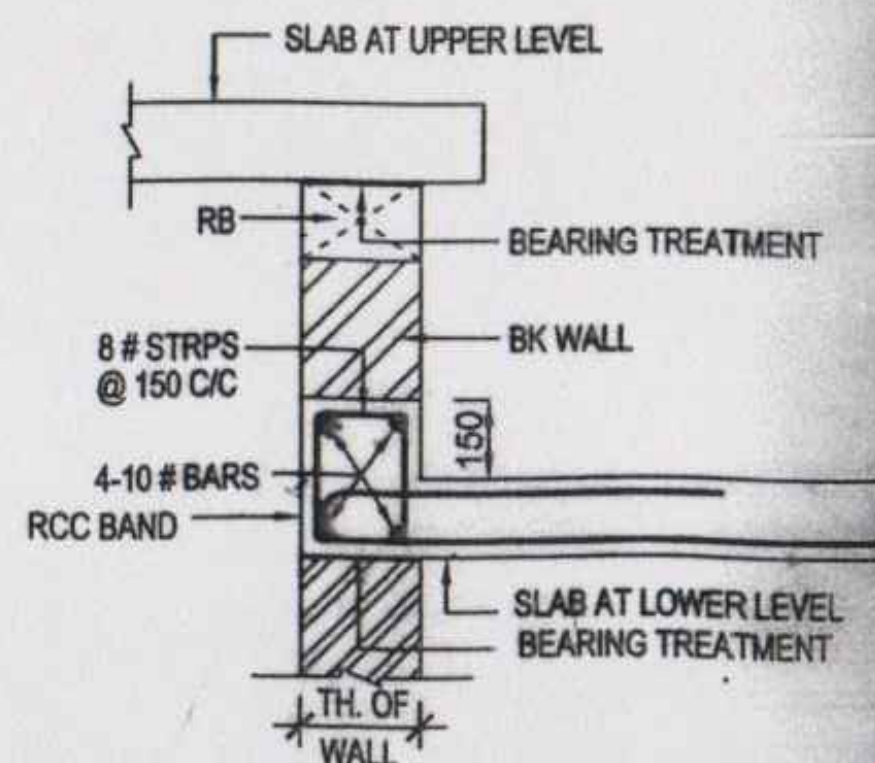
FIG-3



**DETAIL SHOWING CONT.
LINTEL BAND AT DIFFERENT LEVEL
SCALE: 1:20**

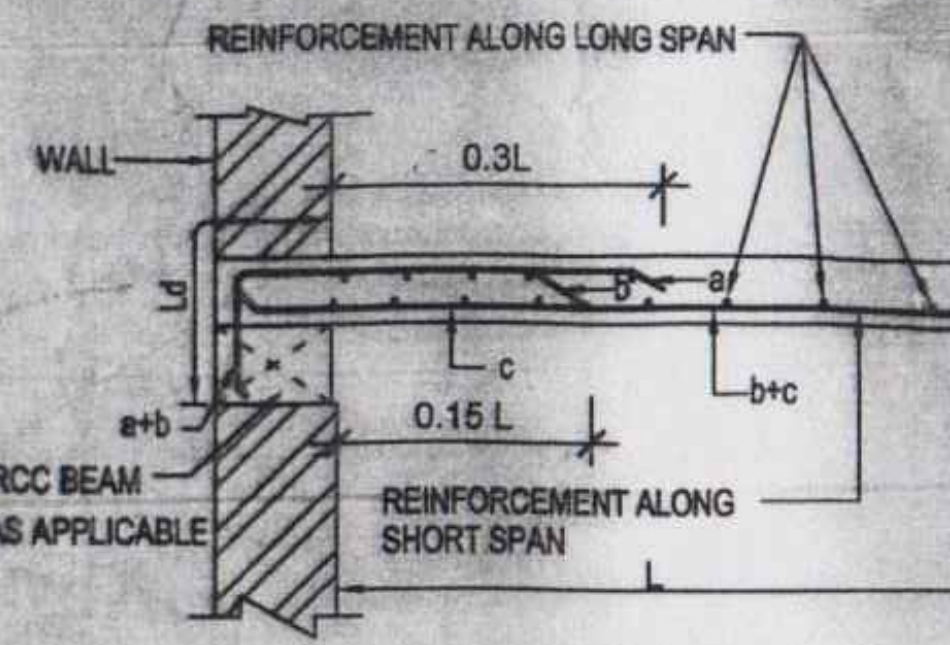
FIG-2

**DETAIL OF DRIP COURSE AND BEARING OF
RCC FLOOR / RCC SLAB
SCALE: 1:20**

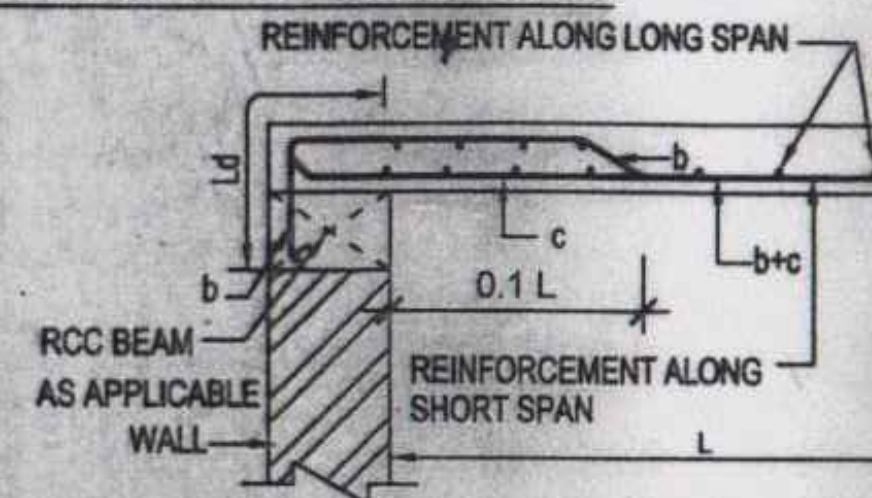


**DETAIL SHOWING ROOF BAND WHERE
ROOF SLAB ARE AT DIFFERENT LEVEL**

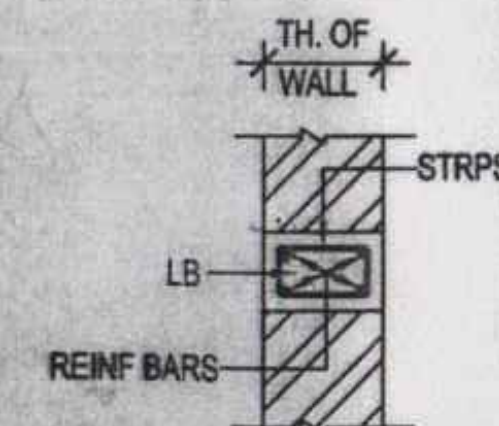
FIG-1



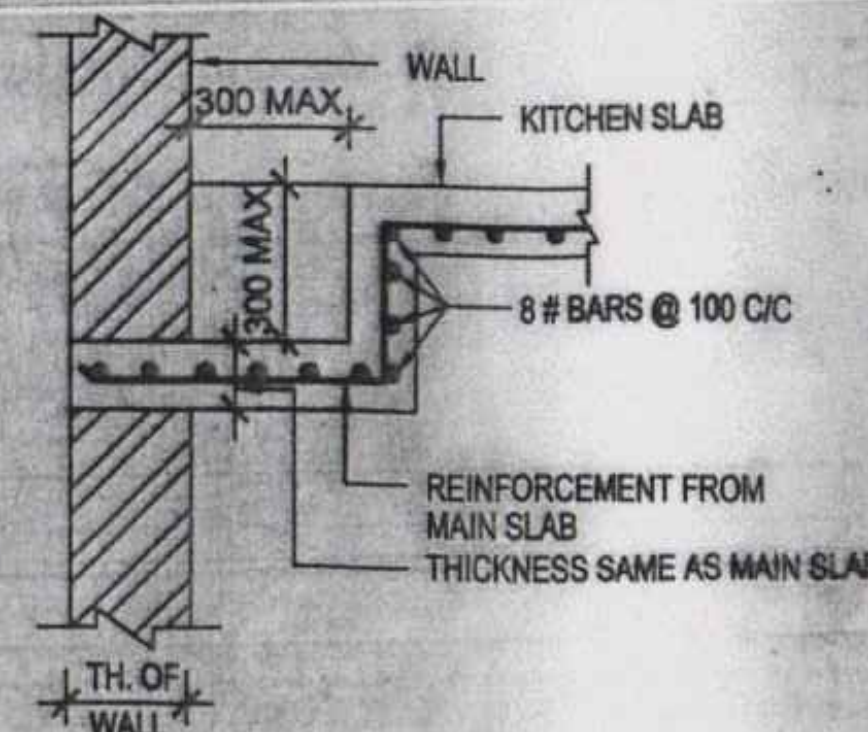
**TYPICAL SECTION OF END SUPPORT
WITHOUT ROOF PROJECTION**



**TYPICAL SECTION OF END SUPPORT
FOR SIMPLY SUPPORTED ROOF SLAB**



**X-SECTION OF CONT. LINTEL BAND
SCALE: 1:20**



**RCC DETAIL OF
LOCAL SUNK IN KITCHEN**

NOTES:-

1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. FIGURED DIMENSIONS SHALL BE FOLLOWED
3. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
4. THE DETAILS GIVEN IN THIS DRG ARE TYPICAL AND SHALL BE FOLLOWED ONLY WHEN THE SAME ARE NOT GIVEN IN STRUCTURAL DRG.
5. FOR REINFORCEMENT OF COL FOOTINGS AND RCC SLAB REF SCHEDULES AND DETAILS GIVEN IN MAIN STRUCTURAL DRG. THE DETAILS AND SECTIONS GIVEN IN THIS DRG. ARE FOR GUIDANCE ONLY.
6. RCC BAND AS SHOWN IN FIG- 1 SHALL BE PROVIDED WHERE TWO RCC ROOF SLABS REST ON MASONRY AND ARE AT DIFFERENT LEVELS UNLESS OTHERWISE SHOWN IN THE MAIN STRUCTURAL DRG.
7. 10 # STEEL CHAIRS @ 1000 C/C IN RCC SLABS AND 16 # @ 1000 C/C (UNLESS OTHERWISE SHOWN IN THE MAIN DRG) IN STRIPS FOOTINGS/ RAFT SLABS (TO SUIT THE COVER REQUIREMENT) SHALL BE PROVIDED AS PER DETAIL GIVEN IN DRG NO. CE / TD - 1252 / 2007. SHT NO. 11/11.
8. BEARING TREATMENT OF 20 MM TH. PLASTER IN CM 1:4 WITH TWO LAYERS OF BITUMEN LAMINATED WATER PROOFING PAPER WEIGHING 60 gms/Sq M SHALL ALSO BE PROVIDED.
9. RB SHALL BE PROVIDED ON ALL LOAD BEARING WALL UNDER RCC ROOF SLAB AS PER DETAIL (FIG - 3) GIVEN IN THIS DRG.
10. THIS DRG SUPERSEDES THE DRG NO CE/1188/2002 SHEET NO.1/2
11. THICKNESS AND REINFORCEMENT DETAILS OF LINTEL BAND SHALL BE PER TD DRG NO.CE / TD-1253 / 2007 SHEET NO. 1/5 TO 5/5.

S NO	DATE	DESCRIPTION	INITIAL
REVISION			
TYPICAL RCC DETAILS			
DATE	30 MAR 2007	CHIEF ENGINEER	SHT. NO.
DRN	Sh. Ghanshyam	UDHAMPUR ZONE	1/1
DES	SH B P JAIN		
DF NO			
SCALE	AS SHOWN	DRG. NO.CE/ TD - 1251 / 2007	
 A.A. DIR (ARCH)		 JOINT DIRECTOR (DESIGN)	
		 DIRECTOR (DESIGN) FOR CHIEF ENGINEER	

1. GENERAL

- 1.1 THE CONTRACTOR AND EXECUTIVES SHALL CAREFULLY STUDY IN ADVANCE ALL THE RELEVANT DRAWINGS AND SPECIFICATIONS BEFORE COMMENCEMENT OF THE WORK. ANY DISCREPANCY OBSERVED SHALL BE BROUGHT TO THE NOTICE OF ACCEPTING OFFICER FOR CLARIFICATION.
- 1.2 ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED. WHEREVER ANY INDIAN STANDARD (IS) IS MENTIONED, IT WILL BE THE LATEST EDITION AS ON THE DATE OF ISSUE OF THE TENDER.
- 1.3 THE CONTENTS GIVEN IN THESE NOTES ARE APPLICABLE TO ALL STRUCTURAL DRAWINGS AND SHALL BE FOLLOWED UNLESS OTHERWISE SPECIFIED.
- 1.4 WHERE DETAILS GIVEN IN THE STRUCTURAL DRAWINGS ARE AT VARIANCE WITH THE NOTES GIVEN BELOW, THE DETAILS AS PER STRUCTURAL DRAWINGS SHALL BE FOLLOWED.
- 1.5 THE WORK SHALL BE EXECUTED ALL AS PER RELEVANT INDIAN STANDARDS AND IN ACCORDANCE WITH GOOD AND SOUND ENGINEERING PRACTICE. THE NOTES DESCRIBED BELOW ONLY HIGHLIGHT CERTAIN IMPORTANT ASPECTS AND THESE SHOULD NOT BE CONSTRUED AS THE ONLY PROVISIONS.
- 1.6 TESTS AS SPECIFIED IN RELEVANT (IS) CODES SHALL BE CONDUCTED.

2. MATERIALS

2.1 CEMENT

- 2.1.1 CEMENT FOR ALL RCC / PCC AND OTHER WORK SHALL BE ORDINARY PORTLAND / PORTLAND POZZOLANA CEMENT UNLESS OTHERWISE SPECIFIED IN TENDER / DRAWINGS.
- 2.1.2 ORDINARY PORTLAND / PORTLAND POZZOLANA CEMENT (O.P.C/P.P.C) SHALL CONFORM TO IS:269, IS:8112, IS:12269 AND IS:1489-PART-I RESPECTIVELY AS SPECIFIED IN TENDER.
- 2.1.3 CEMENT OF DIFFERENT TYPES SHALL NOT BE MIXED FOR CASTING ANY STRUCTURAL MEMBER.

2.2 AGGREGATES

- 2.2.1 COARSE AGGREGATES SHALL BE FROM NATURAL SOURCE AND SHALL CONSIST OF (CRUSHED OR UNCRUSHED) STONE, GRAVEL AND/OR COMBINATION OF THESE CONFORMING TO IS:383.
- 2.2.2 UNLESS OTHERWISE SPECIFIED, COARSE AGGREGATES SHALL BE 20mm GRADED STONE AGGREGATES.
- 2.2.3 FINE AGGREGATES SHALL BE NATURALLY AVAILABLE RIVER SAND CONFORMING TO IS:383. DELETERIOUS ORGANIC MATTER, MICA AND SILT ETC, SHALL NOT EXCEED THE TOLERANCE GIVEN IN THE (IS) CODE.
- 2.2.4 THE UNIFORMITY OF THE QUALITY, SIZE AND GRADING OF THE AGGREGATES SHALL BE ENSURED BY CONDUCTING REGULAR TESTS.

2.3 STEEL FOR REINFORCEMENT

- 2.3.1 UNLESS OTHERWISE SPECIFIED IN STRUCTURAL DRAWINGS, STEEL FOR REINFORCEMENT IN ALL RCC WORKS SHALL BE:-
 - 2.3.1.1 HIGH YIELD STRENGTH DEFORMED BARS / COLD TWISTED DEFORMED BARS/TMT/ BARS CONFORMING TO IS:1786 WITH MINIMUM YIELD STRESS OF 415 N/mm². THESE ARE INDICATED IN THE DRAWINGS AS 'R' OR T.
 - 2.3.1.2 MILD STEEL REINFORCEMENT BARS SHALL CONFORM TO IS:432 Gd-1 AND SHALL HAVE A MINIMUM YIELD STRESS OF 250 N/mm² THESE ARE INDICATED IN DRAWINGS BY 'Ø'.
 - 2.3.1.3 STEEL WIRE FABRIC WELDED MESH REINFORCEMENT SHALL CONFORM TO IS:1566.
 - 2.3.1.4 CLAUSE 2.3.1.1 ABOVE SHALL ALSO BE APPLICABLE TO TMT STEEL OF GRADE Fe-500. HOWEVER, MIN YIELD STRESS IN THAT CASE SHALL BE 500 N/mm².

2.4 WATER

- 2.4.1 WATER USED IN CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF CLAUSE 5.4 OF IS:456-2000. SOURCES OF WATER SHALL BE GOT TESTED FOR ITS SUITABILITY.

NOTES:-

1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
2. FIGURED DIMENSIONS SHALL BE FOLLOWED.
3. THIS DRG. SUPERSEDES DRG. NO. CE/TD-1192/2002 SHT NO 1/12 TO 12/12.
4. THIS DRG. IS MADE BASED ON ADG (D & C) DRG. NO. 2001/TD/001 SHT. 1/13 TO 13/13 AND IS:456 OF 2000.

2	21/12	FOR 'CE' READ 'CEUZ'	
1	29.04.08	IN NOTE NO.2 (MATERIALS) NOTE NO 2.3.1.4 ADDED	
SL NO	DATE	DESCRIPTION	INITIAL

REVISIONS

GENERAL NOTES FOR RCC WORKS

DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT.NO. 1/11
DRN	Sh. Dhani Ram N.B. Sub S. Murugeswaran		
DES	SH. BP JAIN		
DF NO			
SCALE	AS SHOWN		
		DRG. NO. CE / TD -1252 / 2007	

Dhanku
A A DIR (ARCH)

Joint Director
(DESIGN)

3/11/08

DIRECTOR (DESIGN)
FOR CHIEF ENGINEER

3. DURABILITY OF CONCRETE

- 3.1 MINIMUM CEMENT CONTENT AND MAXIMUM FREE W/C RATIO FROM DURABILITY CONSIDERATIONS SHALL BE ENSURED AS PER CLAUSE 8.0 (TABLE 5) OF IS:456-2000.
- 3.2 STRUCTURAL DESIGNS ARE BASED ON EXPOSURE CONDITIONS AS MENTIONED IN STRUCTURAL DRAWINGS. IF THERE IS ANY VARIATION TO IT, THE SAME SHALL BE BROUGHT TO THE NOTICE OF THE DESIGNER.

4. FIRE RESISTANCE OF STRUCTURE

- 4.1 STRUCTURAL DRAWINGS ARE BASED ON FIRE-RESISTANCE RATING AS MENTIONED IN STRUCTURAL DRAWINGS. IF THERE IS ANY VARIATION TO THIS REQUIREMENT, THE SAME SHALL BE BROUGHT TO THE NOTICE OF THE DESIGNER.

5. CONCRETE MIX

- 5.1 THE GRADE OF CONCRETE FOR ALL RCC WORK SHALL BE AS SPECIFIED IN STRUCTURAL DRAWINGS.
- 5.2 ALL CONCRETE USED FOR RCC WORK SHALL BE DESIGN MIX AS PER IS:456-2000. DESIGN OF MIX SHALL BE DONE AS PER SP:23 (S&T) OF BIS, 456-2000 AND IS : 10262.
- 5.3 FREQUENCY OF SAMPLING OF CONCRETE AND ITS ACCEPTANCE CRITERIA SHALL BE AS PER CLAUSE 15 AND 16 OF IS:456-2000 RESPECTIVELY.
- 5.4 WEIGH BATCHING SHALL BE ADOPTED FOR THE DESIGN MIX CONCRETE, LEVER TYPE WEIGH BATCHER SHALL BE PREFERRED TO DIAL TYPE BATCHER. WATER SHALL BE ADDED AFTER ACCOUNTING FOR MOISTURE IN AGGREGATES BY WEIGHT.
- 5.5 CONCRETE FOR ALL RCC WORK SHALL BE MIXED IN A MECHANICAL MIXER. THE MIXER SHALL CONFORM TO IS:1791. THE MIXING SHALL BE CONDUCTED TILL A UNIFORM DISTRIBUTION OF MATERIALS IS ACHIEVED AND THE MASS IS UNIFORM IN COLOUR AND CONSISTENCY.
- 5.6 ALL LEAN CONCRETE IN FOUNDATIONS SHALL BE (1:5:10), UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS/TENDER.

6. FORM WORK

- 6.1 FORM WORK FOR CONCRETE SHALL HAVE ADEQUATE STRENGTH AND RIGIDITY TO SAFELY WITHSTAND FORCES DUE TO POURING AND COMPACTION OF CONCRETE. THE ENTIRE FORM WORK SHALL BE DESIGNED AS PER IS:14887 TO WITHSTAND MOST ADVERSE COMBINATION OF DEAD LOAD, LIVE LOAD, CONSTRUCTION LOADS (INCLUDING IMPACT LOAD, EFFECT OF VIBRATIONS, COMPACTION FLUID PRESSURE OF CONCRETE) AND WIND LOAD. THE JOINTS/JUNCTION OF FORM WORK SHALL BE APPROPRIATELY SEALED TO AVOID LEAKAGE OF SLURRY/PASTE FROM CONCRETE WHEN POURED. ALL FORM WORK INCLUDING SUPPORTS/PROPS, SCHEME OF ERECTION AND REMOVAL OF FORM WORK SHALL BE APPROVED BY GE.
- 6.2 THE PERMISSIBLE TOLERANCE SHALL BE AS PER CLAUSE 11.1 OF IS:456-2000.
- 6.3 FORM WORK SHALL BE OF STEEL OR PLYWOOD BOARD OF ADEQUATE STRENGTH. SPECIAL CARE IS TO BE TAKEN TO ENSURE THAT JOINTS IN PROPS ARE ADEQUATELY STRONG AND STIFF. THE PROPS SUPPORTING THE FORM WORK SHALL BE OF STEEL ONLY AND SHALL BE BRACED TRANSVERSALLY IN BOTH DIRECTIONS AT SUITABLE INTERVALS TO PREVENT FAILURE BY BUCKLING.
- 6.4 SPECIAL CARE IS TO BE TAKEN IN PROVIDING THE FORM WORK FOR LARGE SPANS AND FOR HEIGHTS MORE THAN 4 METRES.



7. CONCRETING WORK

7.1 QUALITY ASSURANCE MEASURES

- 7.1.1 QUALITY ASSURANCE MEASURES IN PRODUCTION OF CONCRETE SHALL BE TAKEN ALL AS SPECIFIED IN CLAUSE 10.1 OF IS: 456-2000 AND AS PER GUIDE LINES LAID DOWN IN APPX 'B' OF THE QUALITY ASSURANCE MANUAL ISSUED BY E-in-C's BRANCH.

7.2 POURING AND COMPACTION

- 7.2.1 THE SCHEME OF POURING CONCRETE SHALL BE APPROVED BY THE GE. IT SHALL BE ENSURED THAT DURING CONCRETING, THERE IS NO SEGREGATION OF ITS CONSTITUENTS.
- 7.2.2 IN CASE OF BEAMS, CONCRETE SHALL BE POURED STARTING FROM SUPPORTS AND CONTINUED TOWARDS MID SPAN.

1	21	12	12	FOR BE' READ 'CEUZ'	1
SL NO	DATE	DESCRIPTION			INITIAL
REVISIONS					
GENERAL NOTES FOR RCC WORKS					
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE			SHT.NO. 2/11
DRN	Sh. Dhani Ram Md Sub S. Munugeswaran				
DES	SH BP JAIN				
DF NO					
SCALE	AS SHOWN	DRG. NO. 02 / TD - 1252 / 2007			
 A A DIR (ARCH)			 JOINT DIRECTOR (DESIGN)		
			DIRECTOR (DESIGN) FOR CHIEF ENGINEER		

- 7.2.3 IN CASE OF CANTILEVERS, CONCRETE SHALL BE POURED STARTING AT THE FIXED END AND MOVING TOWARDS FREE END.
- 7.2.4 AS FAR AS POSSIBLE ALL CONCRETING SHALL BE DONE IN ONE OPERATION UPTO THE PREDECIDED STAGE AS PER CLAUSE 13.4 OF IS: 456-2000.
- 7.2.5 IF A CONSTRUCTION JOINT IS NECESSARY, IT SHALL ALWAYS BE PROVIDED IN THE ZONE OF MINIMUM STRESS. ALL CONSTRUCTION JOINTS SHOULD COMPLY WITH IS:11817.
- 7.2.6 ALL CONCRETE FOR RCC WORK SHALL BE COMPACTED USING APPROPRIATE TYPE OF VIBRATORS, SO AS TO ACHIEVE DENSE AND COMPACT CONCRETE AROUND REINFORCEMENT, ANY EMBEDDED FIXTURE AND TO THE SIDE OF FORM WORK. VIBRATORS FOR COMPACTION OF CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF IS:2505, IS:2514 AND IS:4656.
- 7.2.7 OVER VIBRATION MAY LEAD TO SEGREGATION OF CONCRETE AND SHOULD BE AVOIDED. UNDER VIBRATION WILL NOT GIVE THE NECESSARY COMPACTION. PROPER VIBRATION TO ACHIEVE A DENSE AND VOID FREE CONCRETE SHALL BE ENSURED.
- 7.2.8 CONCRETE ONCE LAID AND COMPACTED SHALL NOT BE DISTURBED OR REMOULDED.
- 7.2.9 ANY PIPE, DUCT OR ANY OTHER FIXTURE TO BE FIXED OR TAKEN THROUGH A RCC/PCC MEMBER SHALL BE INITIALLY PLACED IN POSITION BEFORE CONCRETING. CONCRETE ONCE CAST AND HARDENED SHALL NOT BE BROKEN/DAMAGED TO PROVIDE OPENING FOR PIPES ETC.
- 7.2.10 IN CASE THE ADJOINING MEMBER IS HAVING DIFFERENT GRADE OF CONCRETE, THE RICHER CONCRETE SHALL BE POURED AND COMPACTED FIRST BY CONTAINING THE CONCRETE WITH THE HELP OF STOP BOARDS AS SHOWN IN FIG-6 SHT. NO- 9/11.

7.3 CURING OF CONCRETE

- 7.3.1 ALL CONCRETE MEMBER SHOULD BE ADEQUATELY CURED ALL AS SPECIFIED IN CLAUSE 13.5 OF IS:456-2000. THE CURING SHALL BE DONE IN THE MANNER DESCRIBED AS BELOW:-

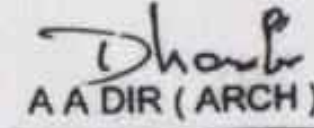


7.3.1.1 MOIST CURING:-

EXPOSED SURFACES OF CONCRETE SHALL BE KEPT CONTINUOUSLY IN A DAMP OR WET CONDITION BY PONDING OR BY COVERING WITH A LAYER OF SACKING, CANVAS, HESSIAN OR SIMILAR MATERIALS AND KEPT CONSTANTLY WET FOR AT LEAST SEVEN DAYS FROM THE DATE OF PLACING CONCRETE IN CASE OF ORDINARY PORTLAND CEMENT AND AT LEAST TEN DAYS WHERE MINERAL ADMIXTURES OR BLENDED CEMENTS ARE USED. THE PERIOD OF CURING SHALL NOT BE LESS THAN TEN DAYS FOR CONCRETE EXPOSED TO DRY AND HOT WEATHER CONDITIONS. IN THE CASE OF CONCRETE WHERE MINERAL ADMIXTURES OR BLENDED CEMENTS ARE USED, IT IS RECOMMENDED THAT ABOVE MINIMUM PERIODS MAY BE EXTENDED TO 14 DAYS.

8. FABRICATION AND DETAILING OF STEEL REINFORCEMENT

8.1 GENERAL

- 8.1.1 ALL REINFORCEMENT IN RCC WORK SHALL BE CORRECTLY INCORPORATED AS PER DETAILS GIVEN IN THE STRUCTURAL DRAWINGS. IT SHALL BE FABRICATED IN CONFORMITY WITH IS:2502 AND IS:5525.
- 8.1.2 A BAR ONCE HOOKED OR CRANKED SHALL NOT BE STRAIGHTENED AND USED AGAIN.
- 8.1.3 BAR BENDING SCHEDULE SHALL BE PREPARED FOR ALL REINFORCEMENT WORK.

SL NO	DATE	DESCRIPTION	INITIAL
1	21/12	FOR 'CE' READ 'CEU'	
REVISIONS			
GENERAL NOTES FOR RCC WORKS			
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT.NO. 3/11
DRN	Sh Dhani Ram Nb Sub S Mungeewaran		
DES	SH BP JAIN		
DF NO			
SCALE	AS SHOWN	DRG. NO. <u>CE/ TD - 1252 / 2007</u>	
 A A DIR (ARCH)		 JOINT DIRECTOR (DESIGN)	
		 DIRECTOR (DESIGN) FOR CHIEF ENGINEER	

8.1.4 IT SHALL BE ENSURED THAT WHILE CONCRETING THE BARS ARE NOT DISPLACED OR DISTURBED FROM POSITION DUE TO MOVEMENT OF WORKERS/EQUIPMENT ETC. ADEQUATE TEMPORARY WORKING PLATFORM SHALL BE PROVIDED FOR WORKERS/EQUIPMENT. SPECIAL CARE IS TO BE TAKEN IN CASE OF CANTILEVER SLABS AND BEAMS.

8.1.5 BARS PROJECTING FROM MEMBERS SHALL NOT BE BENT OUT OF SHAPE/POSITION AND SHALL BE ADEQUATELY HELD IN PLACE.

8.2 HOOKS, BENDS AND STIRRUPS / LINKS

8.2.1 THE SHAPE AND CONFIGURATION OF A STANDARD HOOK AND BEND SHALL BE AS GIVEN IN FIG-1 SHT. NO- 8/11.

8.2.2 END OF ALL MS BARS SHALL BE PROVIDED WITH A STANDARD HOOK.

8.2.3 UNLESS OTHERWISE SHOWN IN DRAWINGS, CTD/TMT BARS IN SLABS SHALL TERMINATE IN A STANDARD 90° BEND.

8.2.4 STIRRUPS IN BEAMS AND LATERAL TIES IN COLUMNS SHALL BE BENT TO AN ANGLE OF 135° AS SHOWN IN FIG-2 SHT. NO- 8/11. LINKS SHALL HAVE STANDARD HOOKS AT BOTH ENDS AND PLACED SUCH THAT HOOK PASSES OVER THE STIRRUPS / LATERAL TIES TO ENGAGE IT WITH LONG BAR AS SHOWN IN FIG-2 SHT. NO- 8/11. THIS IS APPLICABLE FOR MS/CTD/TMT BARS. STIRRUPS/LATERAL TIES SHALL BE PROVIDED TO ALL BEAMS AND COLUMNS AS INDICATED IN STRUCTURAL DRAWINGS.

8.2.5 IN A BEAM, STIRRUP/LINK NEAREST TO THE SUPPORT SHALL NOT BE MORE THAN 50 mm AWAY FROM SUPPORT. IN CASE OF COLUMNS, LATERAL TIE/LINK NEAREST TO FLOOR OR SOFFIT OF BEAM SHALL NOT BE MORE THAN 50 mm AWAY FROM THE FLOOR OR SOFFIT OF THE BEAM. LATERAL TIES/LINKS AT JUNCTION OF COLUMN AND BEAM WILL BE PROVIDED AS SHOWN IN FIG-3 SHT. NO- 8/11. DOUBLE "U" LINKS MAY BE USED IN LIEU OF SINGLE LATERAL TIES IF NECESSARY.

8.3 COVER TO REINFORCEMENT

8.3.1 THE NOMINAL COVER TO REINFORCEMENT INCLUDING LINKS SHALL BE ALL AS SPECIFIED IN STRUCTURAL DRAWINGS. IT SHALL BE ENSURED THAT THE REQUIRED COVER TO REINFORCEMENT IS PROVIDED.

8.3.2 UNLESS SPECIFIED OTHERWISE, ACTUAL CONCRETE COVER SHOULD NOT DEVIATE FROM THE REQUIRED NOMINAL COVER BY MORE THAN PLUS 10 mm SUBJECT TO SATISFACTION OF CLAUSE 21.3.1 OF IS-456-2000.

8.4 DEVELOPMENT LENGTH

8.4.1 UNLESS OTHERWISE INDICATED IN STRUCTURAL DRAWINGS, ALL LONGITUDINAL BARS IN TENSION SHALL BE ANCHORED INTO SUPPORT/ADJACENT SPAN TO ITS FULL DEVELOPMENT LENGTH "Ld" AS GIVEN IN THE TABLE BELOW:-

GRADE OF CONCRETE	TMT/HYSD/CTD BARS YIELD STRESS 415(N/mm ²)	MS BARS YIELD STRESS 250 N/mm ² FOR BARS UPTO 20 mm	NOTE:- "d" IS DIAMETER OF BAR. IN CASE OF Fe 500 (REFER TABLE NOTE 1)
M : 20	47.0 X d	45.3 X d	
M : 25	40.8 X d	38.8 X d	
M : 30	37.6 X d	36.3 X d	
M : 35	33.2 X d	32.0 X d	
M : 40	29.7 X d	28.6 X d	

8.4.2 FOR BARS IN COMPRESSION, ABOVE VALUES OF Ld MAY BE REDUCED TO 0.8 TIMES.

8.4.3 ANCHORAGE VALUE OF HOOK / BENDS:- WHERE THE REINFORCEMENT BARS HAVE BEEN PROVIDED WITH HOOK/BENDS, THE DEVELOPMENT LENGTH GIVEN IN TABLE UNDER PARA 8.4.1, SHALL BE ADJUSTED FOR THEIR ANCHORAGE VALUE AS GIVEN BELOW:-

- (a) BENDS:- 4 X DIA OF BAR FOR EACH 45 DEGREE BEND SUBJECT TO A MAX. OF 16 X DIA. OF BAR.
(b) STANDARD U-TYPE HOOK:- 16 X DIA OF BAR.

NOTE:- DEVELOPMENT LENGTH IN TENSION IN CASE OF
1 Fe 500 SHALL BE AS UNDER:-

GRADE OF CONCRETE	TMT/HYSD/CTD BARS Fe 500 GRADE YIELD STRESS 500 N/mm ²	NOTE:-
M : 20	56.7 X d	"d" IS DIAMETER OF BAR. FOR BARS IN COMPRESSION REF. NOTE 8.4.2 OF NOTE NO 8.4
M : 25	48.6 X d	
M : 30	45.4 X d	
M : 35	40.0 X d	
M : 40	35.8 X d	

2	21 $\frac{12}{12}$	FOR 'CE' READ 'CEUZ'	
1	29.04.08	NOTE NO1 (TABLE IN CASE OF Fe 500) ADDED	
SL NO	DATE	DESCRIPTION	INITIAL

REVISIONS

GENERAL NOTES FOR RCC WORKS

DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT. NO. 4 / 11
DRN	Sh Dhani Ram Md Sub S Murugeswaran		
DES	SH BP JAIN		
DF NO			
SCALE	AS SHOWN		
		DRG. NO. CE / TD - 1252 / 2007	

Shash
A A DIR (ARCH)

Akash
JOINT DIRECTOR
(DESIGN)

3/2/11

DIRECTOR (DESIGN)
FOR CHIEF ENGINEER

8.5 JOINTS / LAPS IN REINFORCEMENT

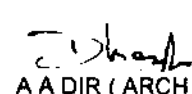
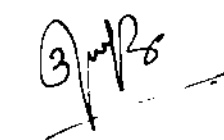
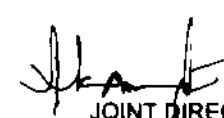
- 8.5.1 JOINTS IN REINFORCEMENT SHALL BE AVOIDED AS FAR AS POSSIBLE.
- 8.5.2 IF JOINTS ARE UNAVOIDABLE, THEY SHALL BE STAGGERED. AT ANY CROSS SECTION, THE NUMBER OF LAPS SHALL NOT BE MORE THAN HALF THE NUMBER OF BARS PROVIDED. LAP SPLICE SHALL BE CONSIDERED STAGGERED IF C/C DISTANCE OF THE SPLICE IS 1.3 X LAP LENGTH OR MORE.
- 8.5.3 LAP SPLICES SHALL NOT BE USED FOR BARS LARGER THAN 36 mm. FOR LARGER DIAMETERS, BARS MAY BE WELDED. IN CASE WHERE WELDING IS NOT PRACTICABLE, LAPPING BARS LARGER THAN 36mm MAY BE PERMITTED IN WHICH CASE ADDITIONAL SPIRALS SHOWN IN FIG-4 SHT.NO - 8/11 SHOULD BE PROVIDED AROUND THE LAPPED BARS.
- 8.5.4 FOR SPLICING BARS OF TWO DIFFERENT DIAMETERS, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF THE SMALLER BAR.
- 8.5.5 IT IS UNDESIRABLE TO HAVE JOINTS IN THE REINFORCEMENT IN THE REGION OF MAXIMUM STRESSES.
- 8.5.6 LONGITUDINAL BARS IN CASE OF RCC COLUMNS IN FRAMED STRUCTURES SHALL BE SPLICED IN THE CENTRAL HALF OF THE MEMBER LENGTH, IT SHOULD BE PROPORTIONED AS A TENSION SPLICE. LATERAL TIES SHALL BE PROVIDED OVER THE ENTIRE SPLICE LENGTH AT SPACING NOT EXCEEDING 150 mm CENTRE TO CENTRE. NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION.
- 8.5.7 IN CASE OF A RCC LINTEL ABUTTING RCC MEMBER LIKE BEAM/COLUMN, THE LONGITUDINAL BARS OF LINTEL SHALL BE ANCHORED IN THE RCC MEMBER. HOWEVER IN CASE OF LINTELS UPTO 1.5 M CLEAR SPAN, DOWEL BARS WITH ANCHORAGE AND LAP OF FULL DEVELOPMENT LENGTH "Ld" CAN BE USED.
- 8.5.8 LAP LENGTH INCLUDING ANCHORAGE VALUE OF HOOKS FOR BARS IN FLEXURAL TENSION SHALL BE Ld OR 30 DIA WHICHEVER IS GREATER AND FOR DIRECT TENSION SHALL BE 2 Ld OR 30 DIA WHICHEVER IS GREATER. THE STRAIGHT LENGTH OF THE LAP SHALL NOT BE LESS THAN 15 DIA OR 200 mm.
- 8.5.9 THE LAP LENGTH IN COMPRESSION SHALL BE EQUAL TO THE DEVELOPMENT LENGTH IN COMPRESSION BUT NOT LESS THAN 24 DIA.

8.6 PLACING OF REINFORCEMENT

- 8.6.1 ROUGH HANDLING, SHOCK LOADING (PRIOR TO EMBEDMENT) AND THE DROPPING OF REINFORCEMENT FROM A HEIGHT SHOULD BE AVOIDED. REINFORCEMENT SHOULD BE SECURED AGAINST DISPLACEMENT OUT SIDE THE SPECIFIED LIMITS.
- 8.6.2 TO MAINTAIN THE SPECIFIED NOMINAL COVER TO STEEL REINFORCEMENT, SPACER/COVER BLOCK OF CONCRETE OF SAME STRENGTH SHALL BE USED. SPACERS/COVER BLOCKS SHALL BE PLACED AT A MAXIMUM SPACING OF 1 MTR.

8.7 SPACING OF REINFORCEMENT

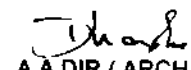

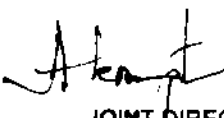
- 8.7.1 HORIZONTAL DISTANCE BETWEEN TWO PARALLEL BARS SHALL NOT BE LESS THAN THE MAXIMUM OF THE FOLLOWING:-
- (a) THE DIAMETER OF BAR IF THE DIAMETERS ARE EQUAL.
 - (b) DIA OF THE LARGER BAR IF THE DIAMETERS ARE UNEQUAL.
 - (c) 5 mm MORE THAN THE MAXIMUM SIZE OF AGGREGATE.

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SL NO	DATE	DESCRIPTION	INITIAL
REVISIONS			
GENERAL NOTES FOR RCC WORKS			
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT.NO. 5/11
DRN	Sh Dhani Ram Nb Sub S Murugeswaran		
DES	SH BP JAIN	DRG. NO. CE/TD - 1252 / 2007	
DF NO			
SCALE	AS SHOWN		
		 A A DIR (ARCH)	 DIRECTOR (DESIGN) FOR CHIEF ENGINEER
		 JOINT DIRECTOR (DESIGN)	

- 8.7.2 WHERE THERE ARE TWO OR MORE ROWS OF BARS, THE BARS SHALL BE VERTICAL IN LINE AND THE MINIMUM VERTICAL DISTANCE BETWEEN THE BARS SHALL BE 15 mm OR THE MAXIMUM SIZE OF THE BAR WHICHEVER IS MORE. IN SUCH A SITUATION SPACERS (NOT LESS THAN 2 NUMBERS) SHALL BE PROVIDED NOT EXCEEDING 900 mm C/C.
- 8.7.3 IN CASE OF SLAB, THE BARS ACROSS THE SHORTER SPAN SHOULD BE PLACED UNDER AND AT SUPPORT OVER THE BARS ACROSS THE LARGER SPAN AS SHOWN IN FIG.7 SHT.NO - 9/11.
- 8.7.4 IN RCC SLABS DISTRIBUTION BARS 8 # @ 200 C/C FOR THE CRANKED UP PORTION AS SHOWN IN FIG. 8 SHT.NO - 9/11. SHALL BE PROVIDED, UNLESS OTHERWISE INDICATED IN THE STRUCTURAL DRAWINGS.
- 8.7.5 TOP BARS OF THE SLAB OVER SUPPORT/BEAM SHALL BE EXTENDED TO 0.3L IN THE ADJACENT SPAN WHERE 'L' IS GREATER OF THE TWO ADJACENT CLEAR SPANS.THIS SHALL BE SUBJECT TO FULFILLMENT OF DEVELOPMENT LENGTH REQUIREMENT.
- 8.7.6 UNLESS SHOWN OTHERWISE,CRANKING OF ALTERNATE BARS IN SIMPLY SUPPORTED SLABS BE AT 0.15 OF THE CLEAR SPAN FROM END SUPPORT, AT 0.25 OF THE CLEAR SPAN AT INTERMEDIATE SUPPORT . NOT MORE THAN HALF THE MAIN REINFORCEMENT SHALL BE CRANKED.
- 8.7.7 BARS SHALL BE LAID SUCH THAT THE BAR NEAREST TO SUPPORT IS NOT AWAY MORE THAN 50 mm FROM IT. REFER FIG.7. SHT. NO - 9/11.
- 8.7.8 TORSIONAL REINFORCEMENT SHALL BE PROVIDED AT THE NON CONTINOUS CORNERS OF THE RESTRAINED SLABS.IT SHALL CONSIST OF TOP AND BOTTOM REINFORCEMENT EACH WITH LAYERS OF BARS PLACED PARALLEL TO THE SIDES OF THE SLABS AND EXTENDING FROM THE EDGES A MINIMUM DISTANCE OF 1/5th OF THE SHORTER SPAN. THE AREA OF REINFORCEMENT IN EACH OF THESE FOUR LAYERS SHALL BE 3/4th OF THE AREA REQUIRED FOR THE MAXIMUM MID SPAN MOMENT IN THE SLAB. REF. FIG. 9 SHT. NO - 10/11.
- 8.7.9 TORSION REINFORCEMENT EQUAL TO HALF THAT DESCRIBED ABOVE SHALL BE PROVIDED AT A CORNER CONTAINED BY EDGES OVER ONLY ONE OF WHICH THE SLAB IS CONTINUOUS. REFER FIG.9 SHT.NO - 10/11.
- 8.7.10 WHEREVER PIPE OF SEWAGE/DRAINAGE, WATER SUPPLY ETC. INTERCEPT RCC MEMBER LIKE BEAM/COLUMN, THE PIPE SLEEVE SHALL BE EMBEDDED IN CONCRETE AS SHOWN IN FIG.10 SHT.NO-10/11 OR DUMMY PIPE EMBEDDED IN CONCRETE SHALL TAKEN OUT AFTER CONCRETE HAS HARDENED . IN NO CASE CONCRETE SHALL BE BROKEN OR THE REINFORCEMENT CUT BY (TO CROSS THE PIPE ETC.) FROM ANY RCC MEMBER.
- 8.7.11 FOR OPENING UP TO 200 mm DIA OR SQUARE IN RCC SLAB, EXTRA REINFORCEMENT AS SHOWN IN FIG. 11 SHT.NO - 10/11 SHALL BE PROVIDED.
- 8.7.12 WHERE ADJACENT SLABS IN A CONTINUOUS SLAB ARE OF DIFFERENT THICKNESS, THE ARRANGEMENT AS SHOWN IN FIG. 12 SHT.NO- 10/11 SHALL BE FOLLOWED.
- 8.7.13 CHAIRS AS SHOWN IN FIG. 13 SHT.NO - 11/11 SHALL BE USED TO SUPPORT TOP REINFORCEMENT IN SLAB/FOOTINGS AS PER DIRECTIONS OF GE/ENGR-IN-CHARGE.

9. STRIPPING OF SHUTTERING

- 9.1 STRIPPING TIME SHALL BE IN ACCORDANCE WITH CLAUSE 11.3 OF IS:456-2000 AND MAY BE INCREASED BY GE, DEPENDING UPON THE SITE CONDITIONS, WEATHER AND TYPE OF CEMENT, ETC. IN GENERAL MINIMUM PERIOD BEFORE STRIPPING FORM WORK SHALL BE AS GIVEN IN THE NEXT SHEET.

1	21	12/12	FOR 'CE' READ 'CEUZ'	
SL NO	DATE	DESCRIPTION	INITIAL	
REVISIONS				
GENERAL NOTES FOR RCC WORKS				
DATE	30 MAR '2007	CHIEF ENGINEER		SHT.NO.
DRN	Sh Dhani Ram Nb Sub S Murugeswaran	UDHAMPUR ZONE		6/11
DES	SH BP JAIN			
DF NO				
SCALE	AS SHOWN	DRG. NO. CE / TD - 1252 / 2007		
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TYPE OF FORM WORK		MINIMUM PERIOD BEFORE STRIPPING FORM WORK
VERTICAL FORM WORK TO COLUMNS, WALLS, BEAMS		16-24 HOURS
SOFFIT FORMWORK TO SLAB (PROPS TO BE REFIXED IMMEDIATELY AFTER REMOVAL OF FORMWORK)		3 DAYS
SOFFIT FORMWORK TO BEAMS (PROPS TO BE REFIXED IMMEDIATELY AFTER REMOVAL OF FORMWORK)		7 DAYS
PROPS TO SLABS :- SPANNING UP TO 4.5 M		7 DAYS
SPANNING OVER 4.5 M		14 DAYS
PROPS TO BEAMS AND ARCHES :- SPANNING UP TO 6 M		14 DAYS
SPANNING OVER 6 M		21 DAYS

9.2 PROPS OF CANTILEVER SLAB/BAM SHALL BE REMOVED ONLY AFTER THE WALL OVER THE BEAM/COUNTER WEIGHT HAS BEEN CONSTRUCTED.

9.3 IN CASE OF CANTILEVER BEAM/SLAB, THE FORM WORK SHALL BE REMOVED STARTING FROM FREE END SIDE ONLY.

10. **PANEL WALLS (IN RCC FRAMED STRUCTURES)**

10.1 MASONRY PANEL WALLS SHALL BE CONSTRUCTED AS SPECIFIED IN DRAWINGS/TENDER AND ALL AS PER SSR. UNLESS OTHERWISE MENTIONED IN TENDER/DRAWINGS, THE MIX OF CEMENT MORTAR SHALL BE (1:6) FOR WALLS ONE BRICK THICK (OR EQUIVALENT) OR MORE AND (1:4) FOR WALLS HALF BRICK THICK (OR EQUIVALENT)

10.2 AT THE JUNCTION OF COLUMN AND MASONRY PANEL WALL, 40 mm X 3 mm FI DOWELS WITH SPLIT ENDS AT EVERY FOURTH COURSE SHALL BE PROVIDED ALL AS SHOWN IN FIG-14 SHT.NO - 11/11. DETAILS OF JUNCTION BETWEEN MASONRY WALL AND RCC WALL IS AS SHOWN IN FIG-15 SHT. NO - 11/11.

10.3 HALF BRICK THICK WALLS SHALL BE RAISED OFF THE SUB FLOOR IN GROUND FLOOR AND OFF THE SLAB IN OTHER CASES. HALF BRICK WALLS SHALL HAVE TWO 8 mm DIA MS BARS AT EVERY 4th COURSE (i.e. NOT EXCEEDING 350 mm). AT LINTEL LEVEL, RCC BAND AS PER FIG-16 SHT.NO - 11/11 SHALL BE PROVIDED WHERE RCC LINTEL BEAM IS NOT SHOWN IN STRUCTURAL DRGS, IF HALF BRICK WALL IS PLACED DIRECTLY OVER RCC SLAB, A HIDDEN BEAM SHALL BE PROVIDED IN THE SLAB AS SHOWN IN FIG-17 SHT.NO - 11/11.

10.4 THE VERTICAL FACE OF CONCRETE AT THE JUNCTION OF WALL AND RCC MEMBER SHALL BE RAKED TO GIVE A ROUGH SURFACE. CEMENT MORTAR AT THIS JUNCTION SHOULD BE APPLIED AS THE WORK PROCEEDS SO AS TO DEVELOP PROPER BOND BETWEEN WALL AND RCC MEMBER.

10.5 CONSTRUCTION OF PANEL WALLS SHALL BE CARRIED OUT STARTING FROM UPPER MOST FLOOR TOWARDS GROUND FLOOR i.e VERTICALLY IN DOWN WARD DIRECTION.

10.6 A GAP OF 10 mm SHALL BE LEFT BETWEEN THE SOFFIT OF RCC BEAM/SLAB AND TOP OF THE WALL WHICH WILL BE FILLED UP WITH WEAK MORTAR.

10.7 ALL OPENINGS FOR DOOR/WINDOWS OR OTHERWISE IN PANEL WALLS SHALL HAVE LINTELS UNLESS THE STRUCTURAL DRAWINGS PROVIDE FOR RCC LINTEL BEAM.

11. **SIDE FACE REINFORCEMENT IN BEAMS**

11.1 WHERE THE DEPTH OF THE WEB IN A BEAM EXCEEDS 750 mm, REINFORCEMENT SHALL BE PROVIDED ALONG THE TWO FACES AS SHOWN IN THE STR DRGS. TOTAL AREA OF SUCH REINFORCEMENT SHALL NOT BE LESS THAN 0.1% OF WEB AREA AND SHALL BE DISTRIBUTED EQUALLY ON TWO FACES AT A SPACING NOT EXCEEDING 300 mm OR WEB THICKNESS WHICHEVER IS LESS. REF.FIG. 18 SHT.NO - 11/11.

12. **SEISMIC PROVISION AND DUCTILITY REQUIREMENT**

12.1 THE ABOVE NOTES SHALL BE SUITABLY MODIFIED TO CATER FOR SEISMIC PROVISIONS IN LOAD BEARING WALLS OR DUCTILITY REQUIREMENTS IN RCC MEMBERS AS SHOWN IN STR TD DRGS. FOR THIS PURPOSE, REFERENCE MAY BE MADE TO IS: 1893, IS:4326 AND IS:13920.

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GENERAL NOTES FOR RCC WORKS

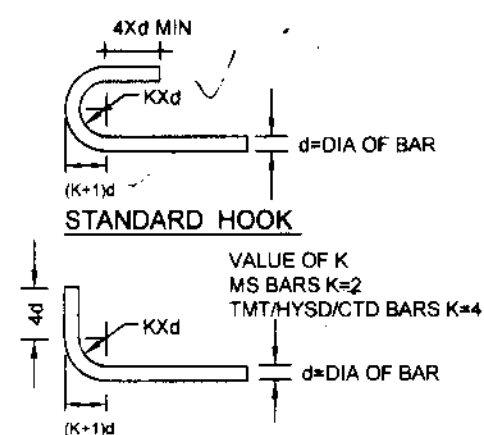
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT.NO 7/11
DRN	Sh. Dhani Ram Nb Sub. S. Murugeswaran		
DES	SH BP JAIN		
DF NO			
SCALE	AS SHOWN	DRG. NO. CE/JD - 1252 / 2007	

Sh. Dhani Ram
A A DIR (ARCH)

Sh. BP Jain
JOINT DIRECTOR
(DESIGN)

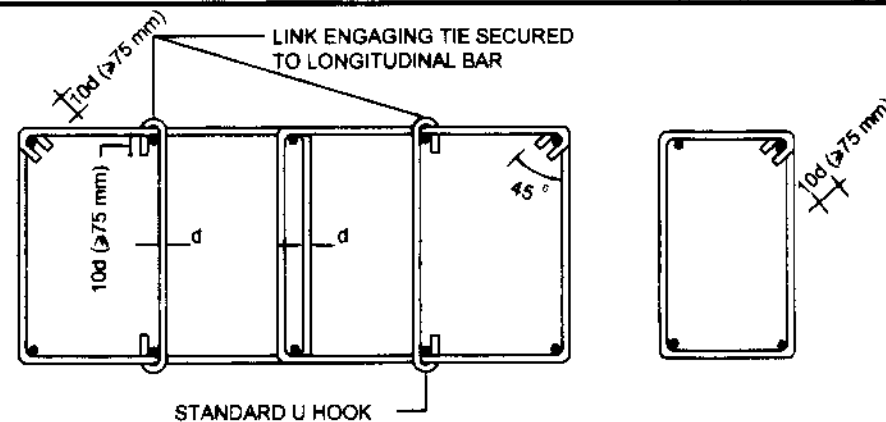
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FOR CHIEF ENGINEER



STANDARD BEND

FIG-1 :- STANDARD HOOKS & BEND
(CLAUSE 8.2.1)



FOR COLUMN
FIG-2 (a)

FOR BEAM
FIG-2 (b)

FIG 2 :- STIRRUPS / TIES IN BEAM / COLUMN
(CLAUSE 8.2.4)

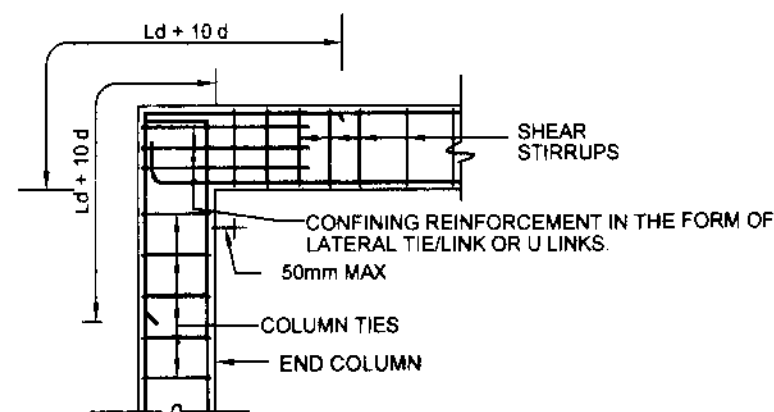


FIG 3 (a) :- FIXED END JOINT IN A COLUMN

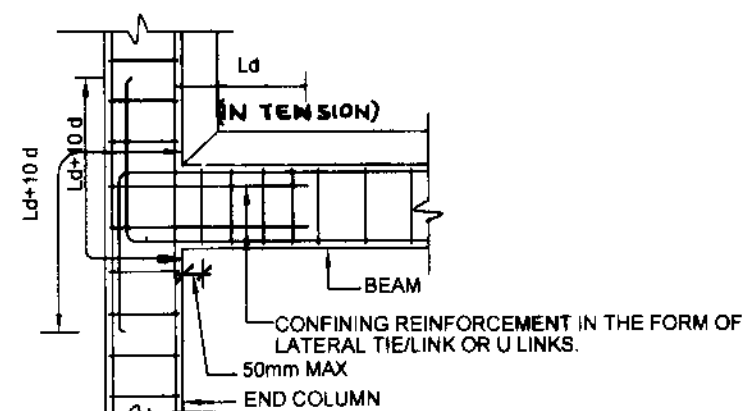


FIG 3 (b) :- TYPICAL DETAILS OF A BEAM-COLUMN
JUNCTION AT EXTERIOR COLUMN

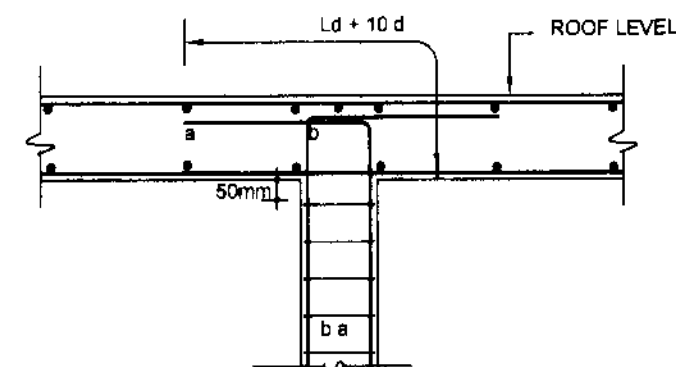


FIG 3 (c) TYP. DETAILS OF A BEAM-COLUMN JN
AT INTERIOR COLUMN

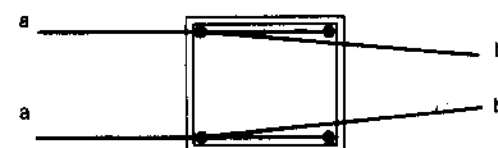


FIG-3 (d) TERMINATION OF
COLUMN BARS INSIDE A SLAB

FIG-3 :- BEAM / COLUMN / SLAB JOINTS
(CLAUSE 8.2.5)

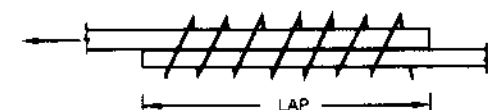


FIG-4 :- SPIRALS AROUND
LAPPED BARS (> 36 mm)
(CLAUSE 8.5.3)

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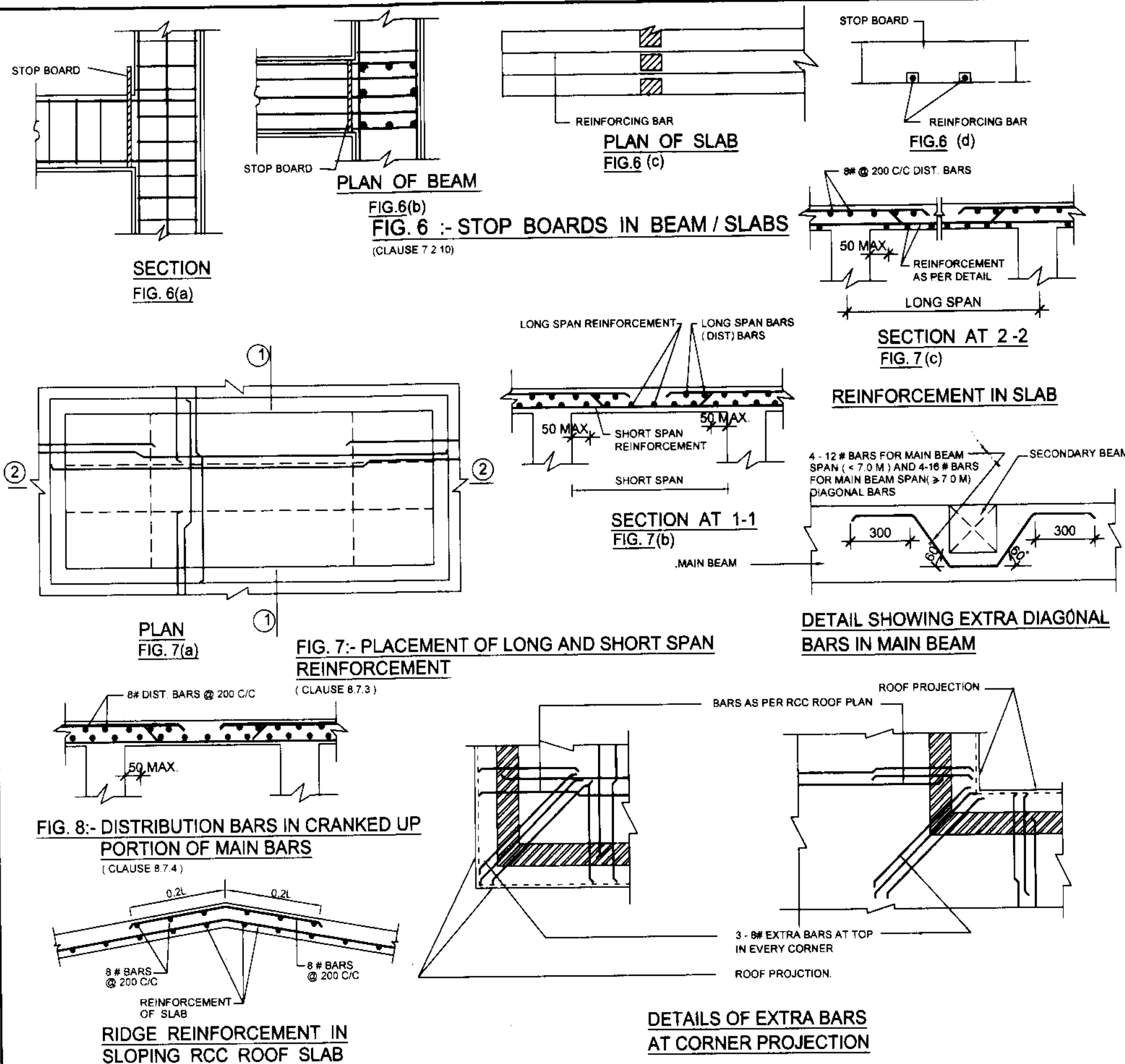
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT.NO. 8/11
DRN	Sh. Dhanj Ram No. Sub. 8 Murugeswaran		
DES	SH BP JAIN		
DF NO			
SCALE	AS SHOWN	DRG. NO. CE/ TD - 1252 / 2007	

Sh. Dhanj Ram
A A DIR (ARCH)

Sh. BP Jain
JOINT DIRECTOR
(DESIGN)

3/12/12

DIRECTOR (DESIGN)
FOR CHIEF ENGINEER



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SNO	DATE	DESCRIPTION	INITIAL
REVISION			
GENERAL NOTES FOR RCC WORKS			
FIG - 6,7 & 8			
DATE	30 MAR 2007	CHIEF ENGINEER	SHT. NO.
DRN	Sh. Dhani Ram	UDHAMPUR ZONE	9/11
DES	SH. B. P. JAIN		
DF NO			
SCALE	AS SHOWN	DRG. NO. CE / TD - 1252 / 2007	
AA DIR (ARCH)		DIRECTOR (DESIGN) FOR CHIEF ENGINEER	
JOINT DIRECTOR (DESIGN)			



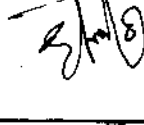
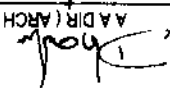
DIRECTOR (DESIGN) FOR CHIEF ENGINEER 		JOINT DIRECTOR (DESIGN) 	
CHIEF ENGINEER 		A.A.D.R. (ARCH) 	
DRG. NO. DE / TD - 1252 / 2007 CEU2		SCALE	
CHIEF ENGINEER UDHAMPUR ZONE 10/11		DES	SH BP JAIN
SHT. NO.		DRN	SH Dhani Ram ND Sub S Murgesswarar
		DATE	30 MAR 2007
FIG. 9,10,11 & 12			
GENERAL NOTES FOR RCC WORKS			
R E V I S I O N S			
SL. NO.	DATE	DESCRIPTION	INT.
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FIG. 9 :- TORSION REINFORCEMENT IN SLABS
(CLAUSE 8.7.8 & 8.7.9)

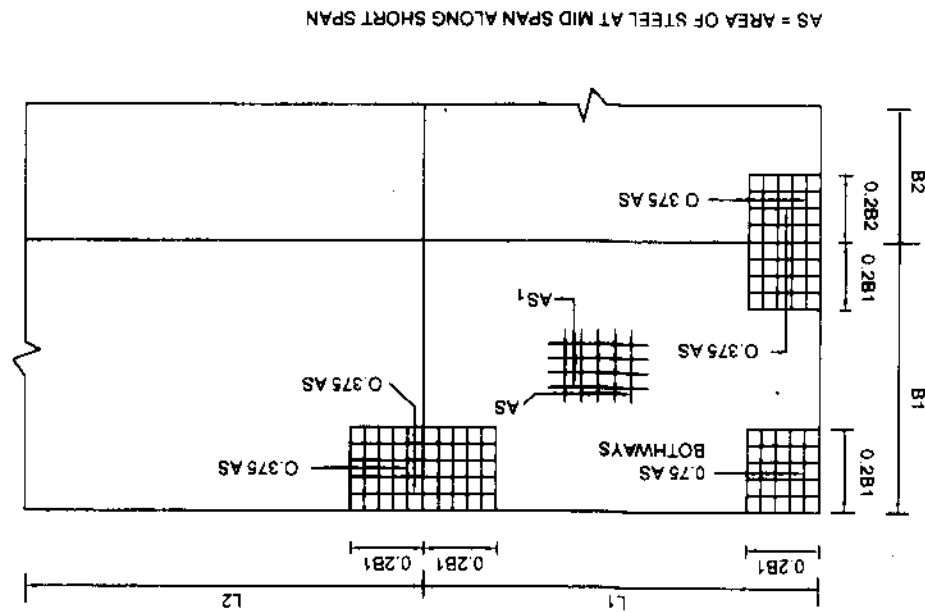


FIG.11. :- DETAILS OF REINFORCEMENT
AROUND OPENING IN RCC SLAB
(CLAUSE 8.7.11)

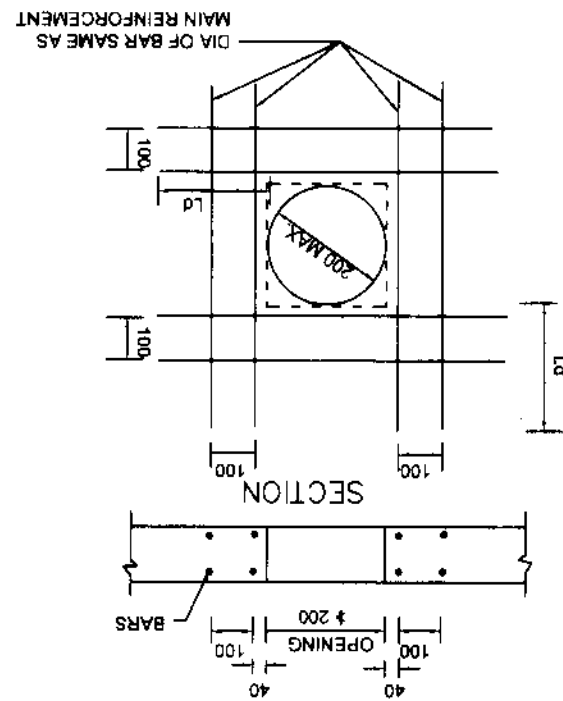


FIG. 10 :- FIXING DETAILS OF PIPE EMBEDDED
IN CONCRETE MEMBER
(CLAUSE 8.7.10)

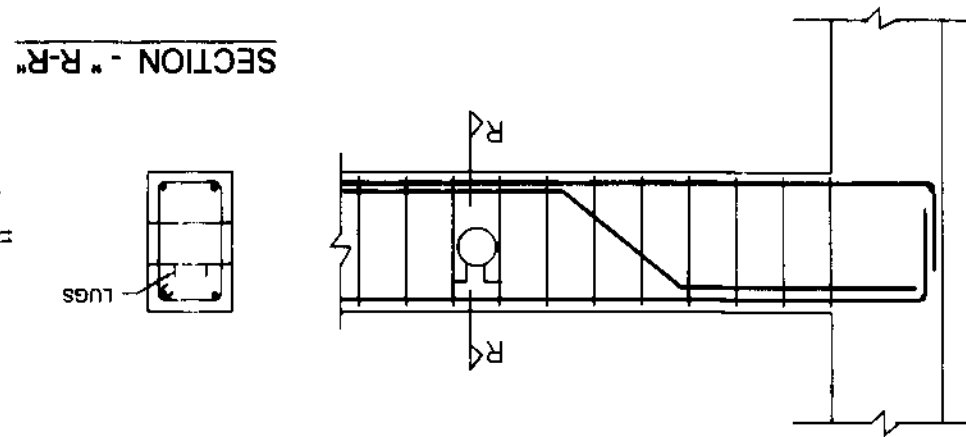


FIG. 12 :- DETAILS OF REINFORCEMENT AT JUNCTION OF SLABS OF TWO DIFFERENT THICKNESS (CLAUSE 8.7.12)

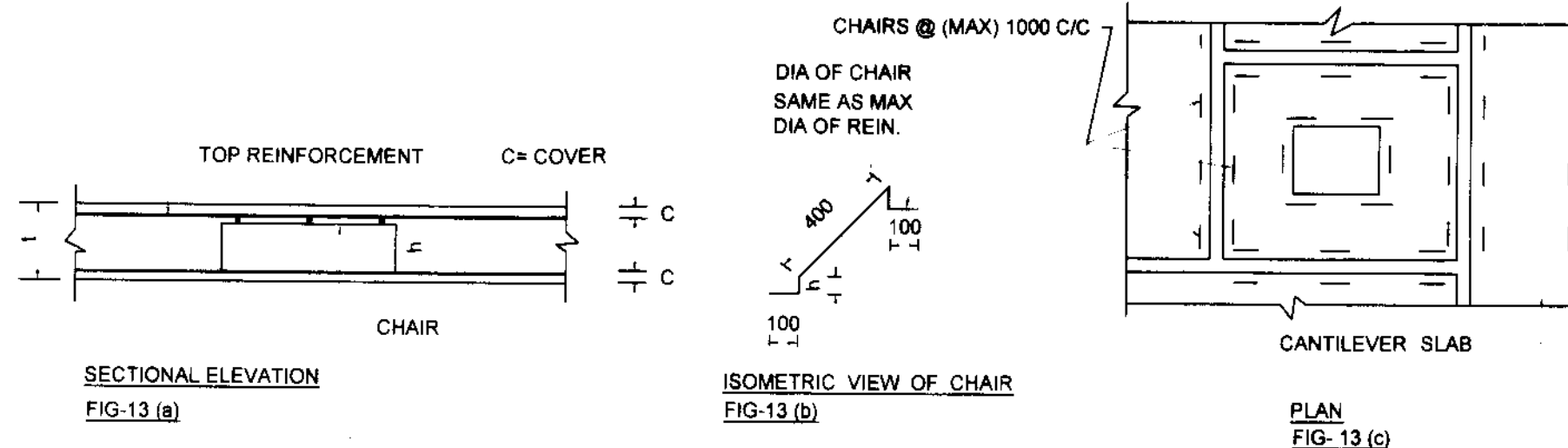
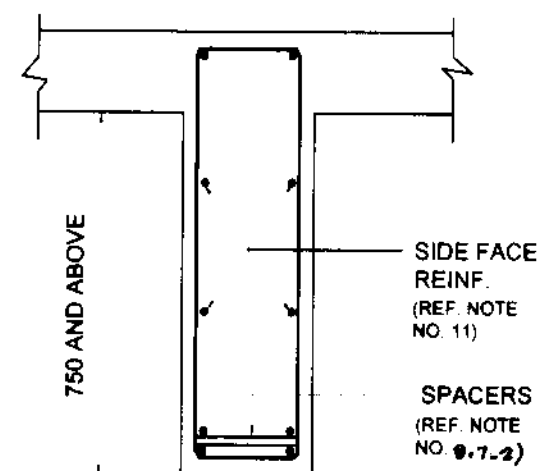
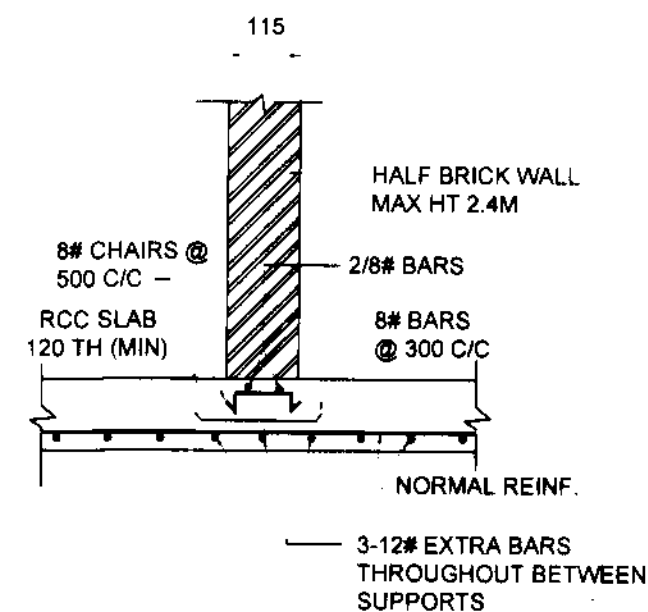
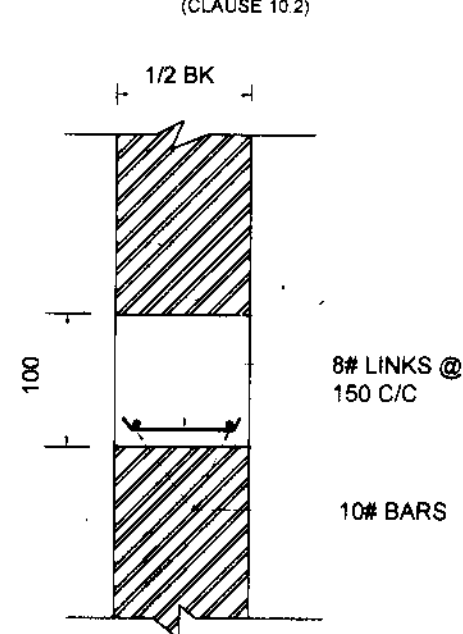
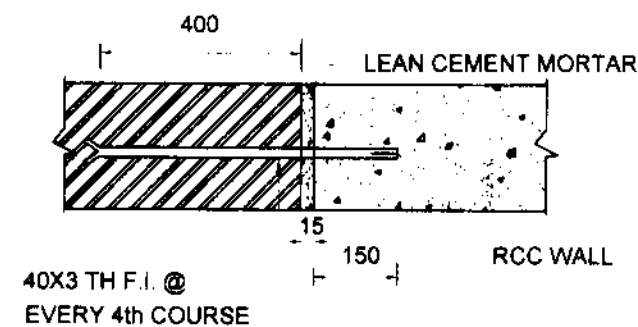
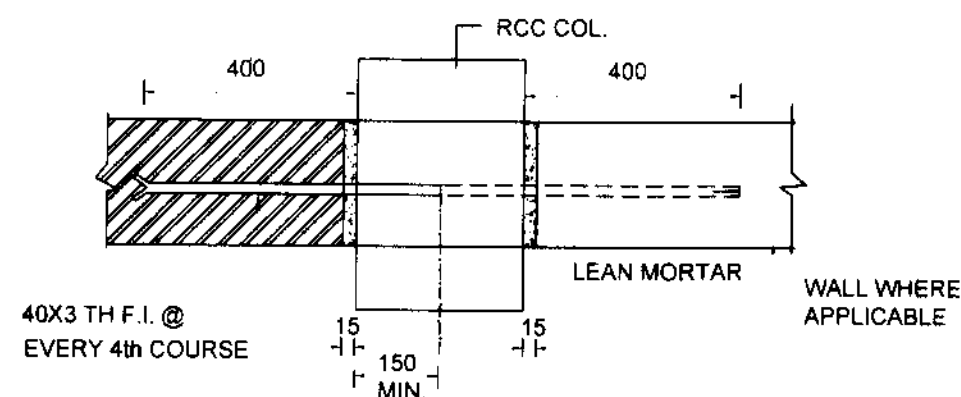


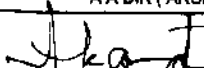


FIG-13 :- DETAILS OF CHAIRS IN RCC SLABS
(CLAUSE 8.7.13)



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GENERAL NOTES FOR RCC WORKS			
FIG- 13, 14, 15, 16, 17 & 18			
DATE	30 MAR 2007	CHIEF ENGINEER UDHAMPUR ZONE	SHT.NO. 11/ 11
DRN	Sh. Dhani Ram No Sub S. Murugeswaran		
DES	SH. B. P. JAIN		
DF.NO.			
SCALE	AS SHOWN	DRG. NO. DE / TD- 1252 / 2007 CEUZ	
 A.A. DIR (ARCH)			
 JOINT DIRECTOR (DESIGN)		DIRECTOR (DESIGN) FOR CHIEF ENGINEER	

DATE: 01-OCT-2008		DRG. NO. CEUZ / TD-1257 / 2008	SCALE: AS SHOWN
DRAWN: RAJAT SINGH		DESIGNED: COL. R. K. SHARMA	CHECKED: A. A. DIR (ARCH)
PROJECT: UDHAMPUR ZONE		SHEET NO. 1/1	
FOR CHIEF ENGINEER			

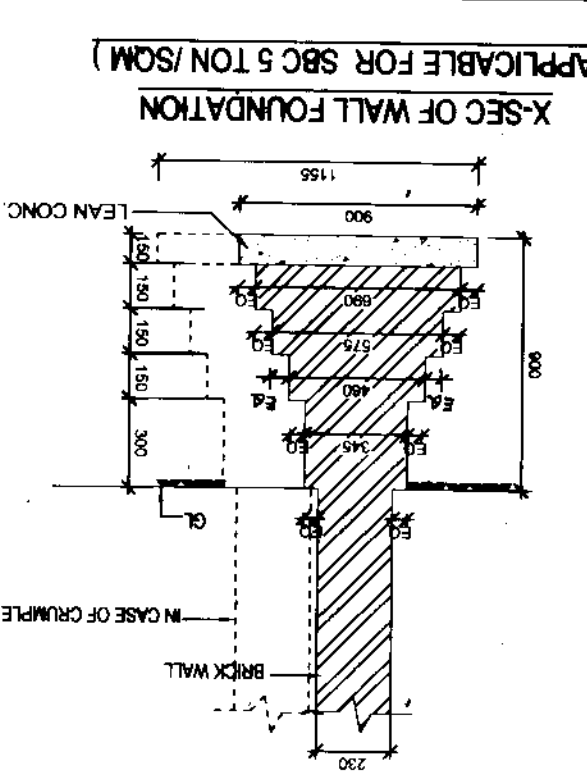
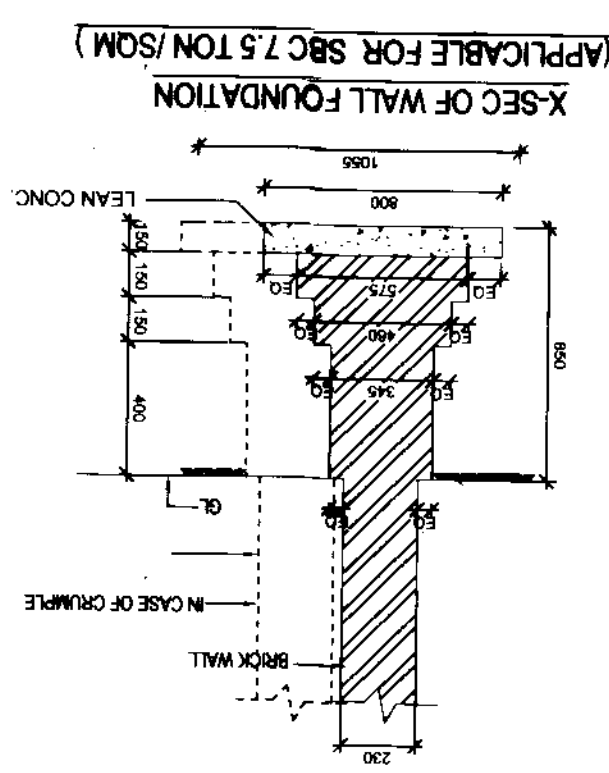
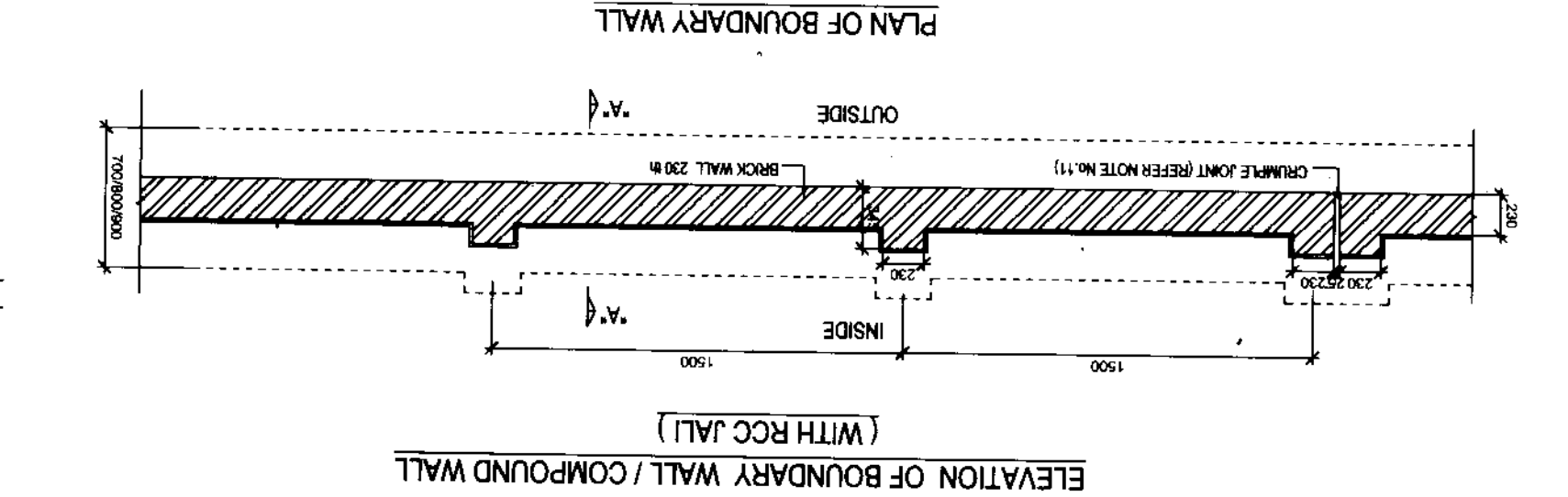
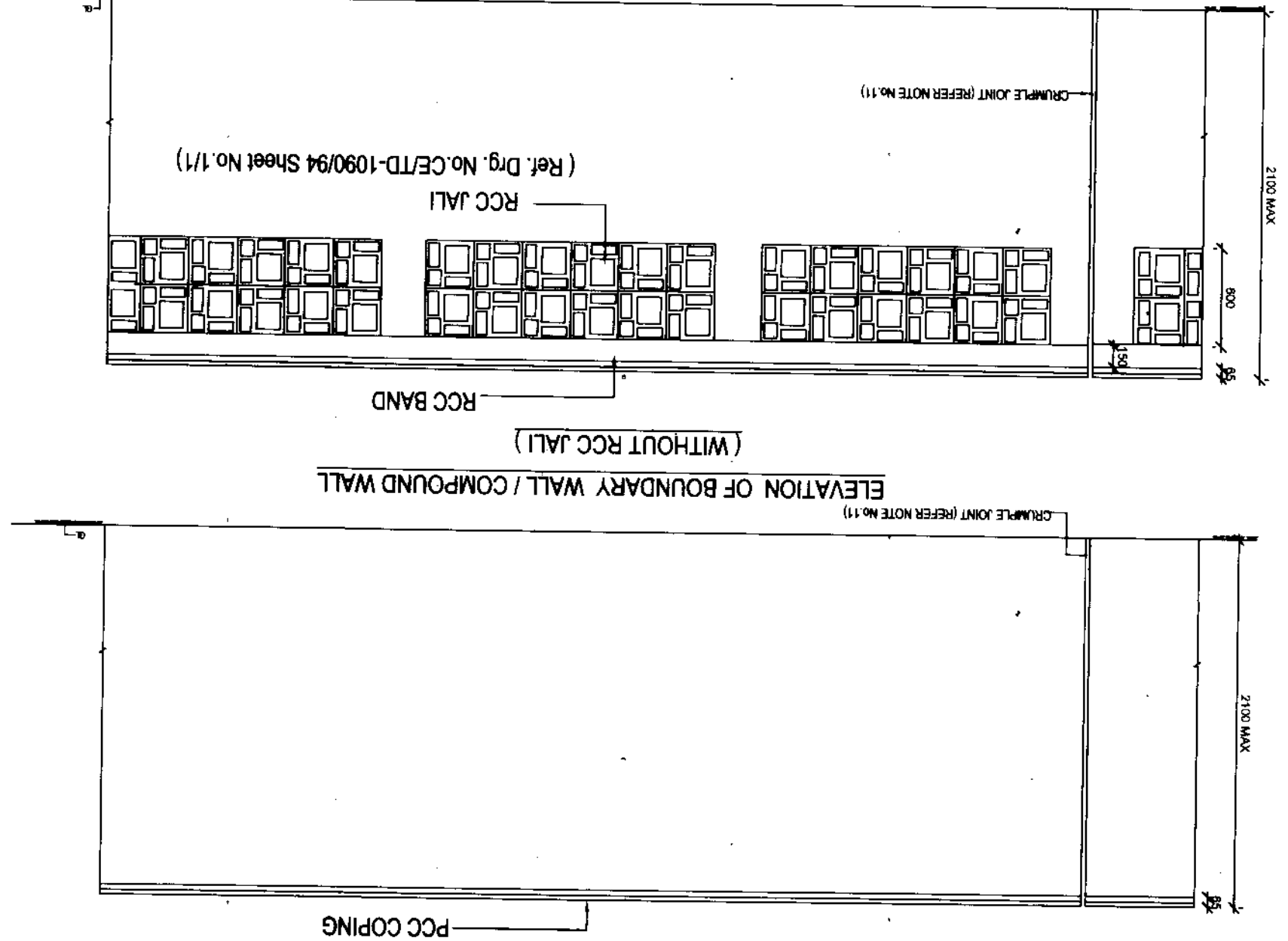
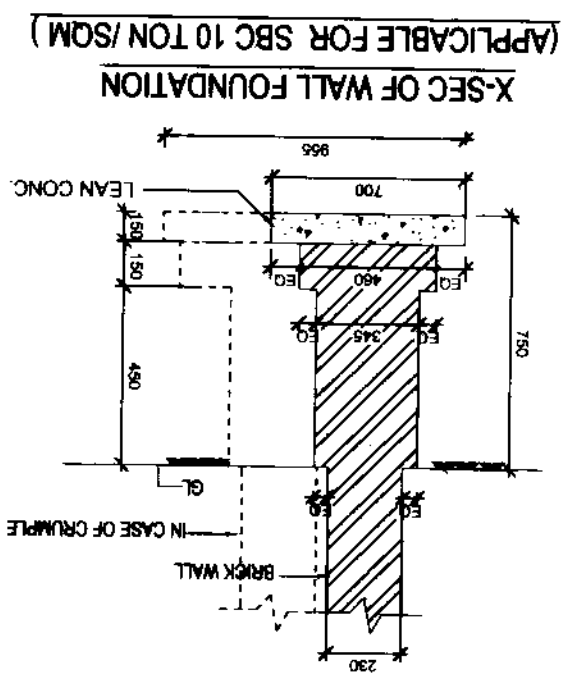
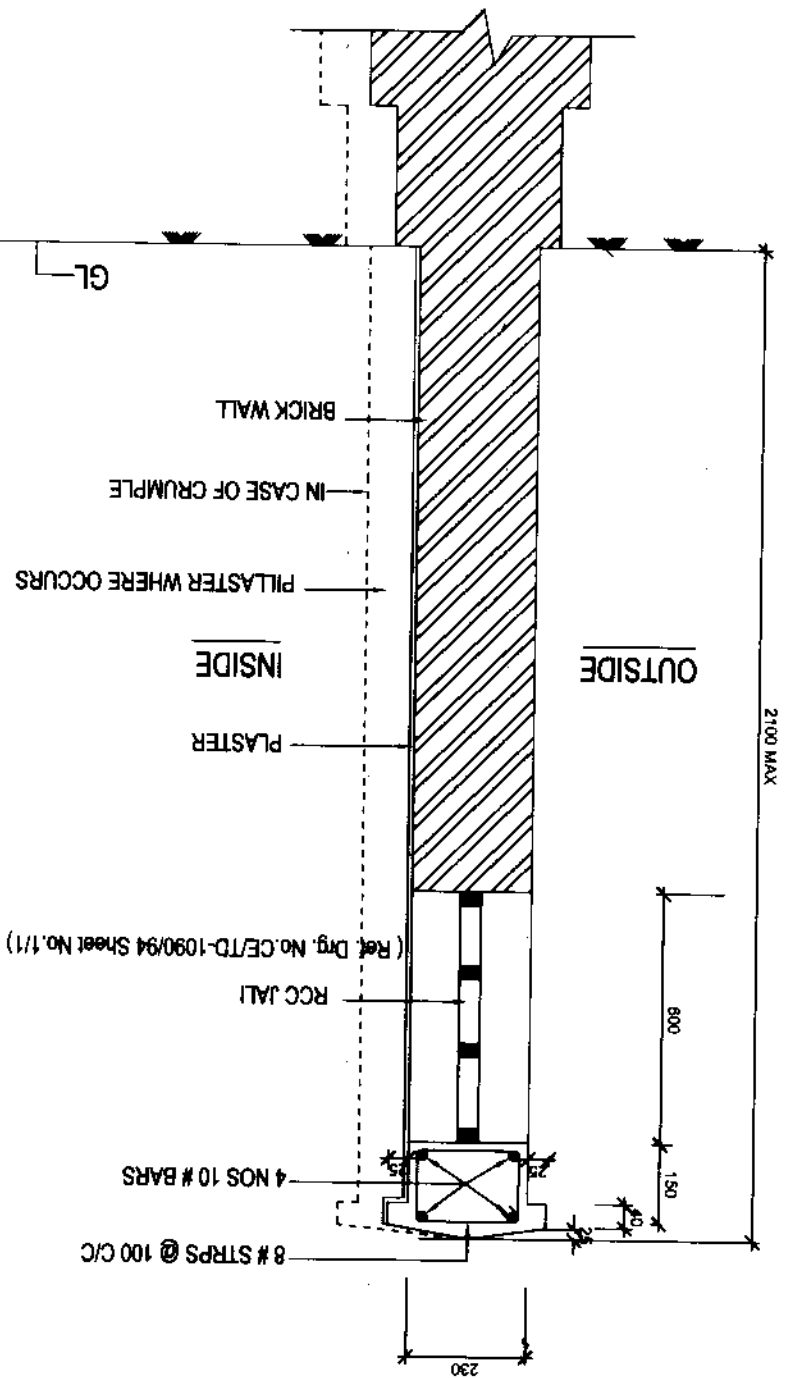
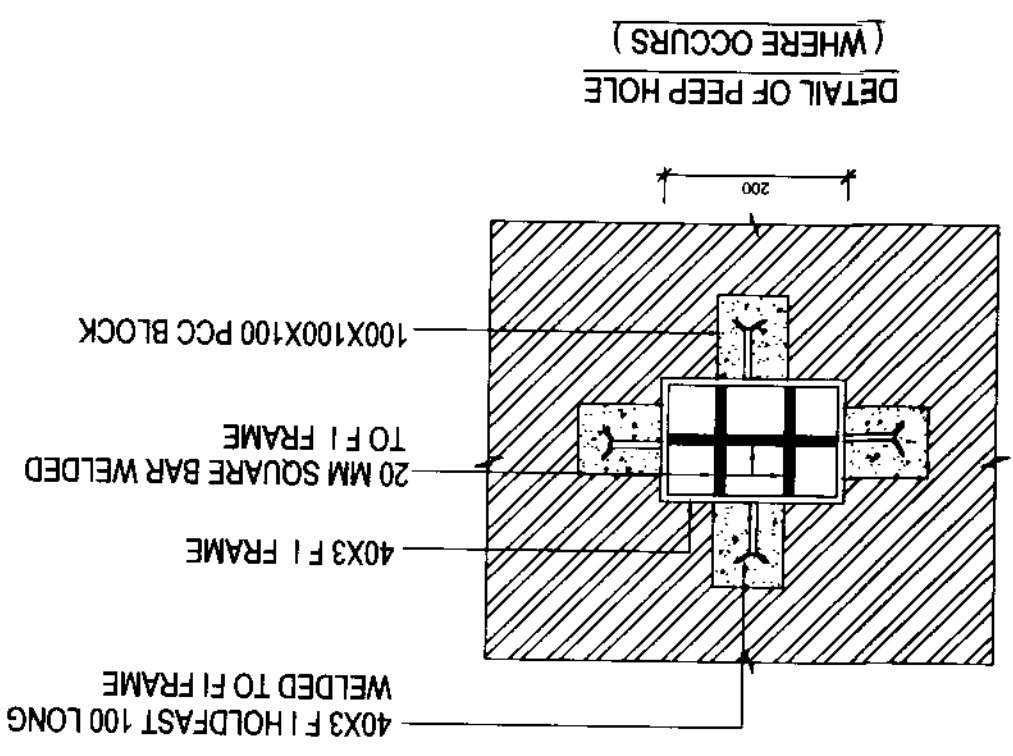
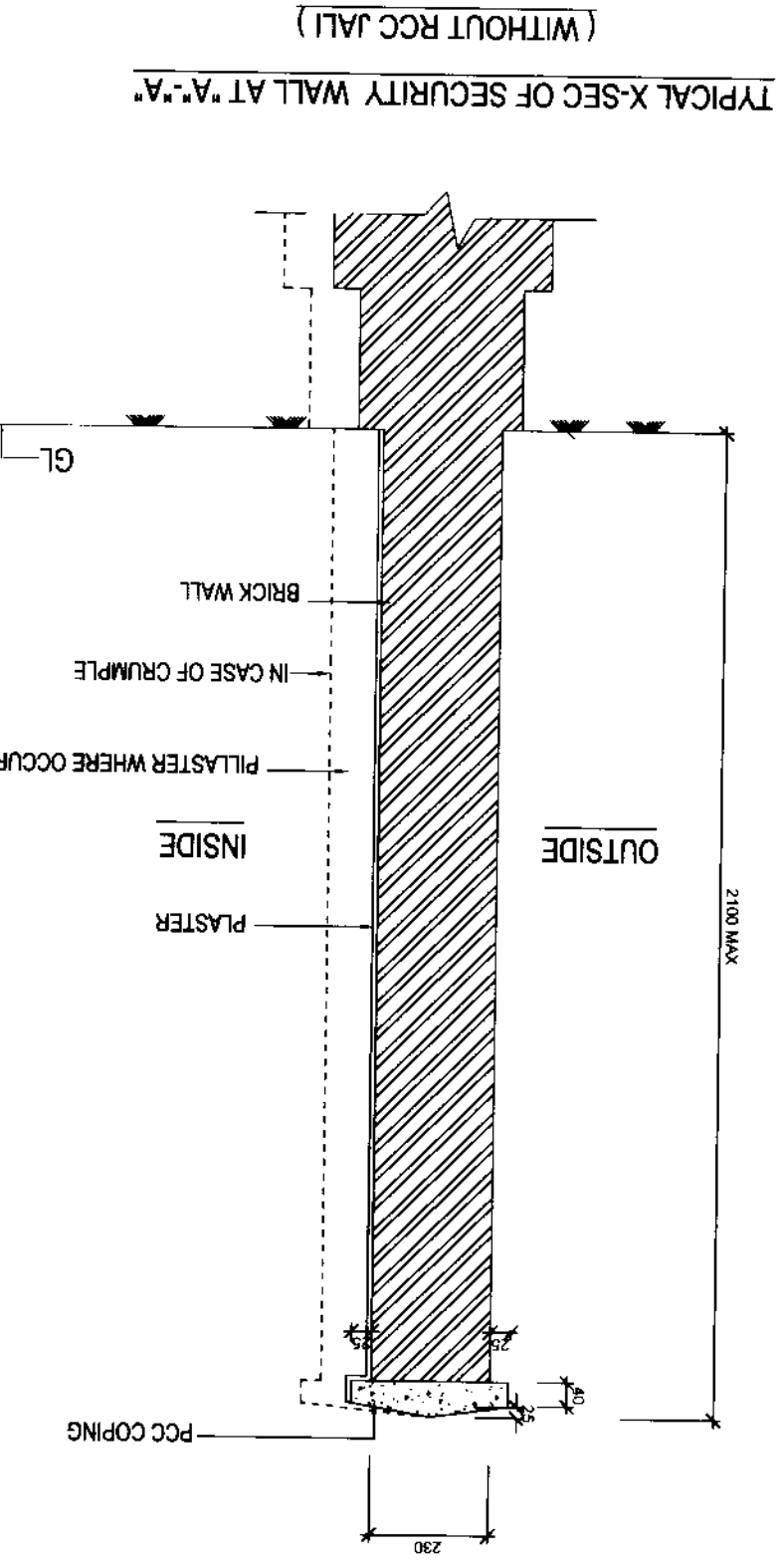
TYPICAL DETAILS OF BOUNDARY WALL /
COMPOUND WALL (TOTAL 2100 HT)

PLAN, ELEVATION, SECTION AND DETAILS

SL. NO.	DATE	DESCRIPTION	INITIAL

NOTES:-

- CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF THE WORK.
- ALL DIMENSIONS ARE GIVEN IN MILLIMETRES, UNLESS OTHERWISE SHOWN.
- FIGURED DIMENSIONS SHALL BE FOLLOWED.
- THE FOUNDATION DETAILS GIVEN IN THIS DRG. ARE BASED ON SBC OF SOIL AS 5.7.5 & 10 T/M² AT A MIN. DEPTH OF 750 mm BELOW GL. IN CASE OF ANY VARIANCE IN SBC AT SITE, THE FOUNDATION SHALL BE REDESIGNED. THE FOUNDATION SHALL NOT REST ON TREACHEROUS OR GRAZY OR FILLED UP SOIL.
- FOR ALL RCC WORK M-25 GRADE DESIGN MIX CONC. AS PER IS - 456 OF 2000 SHALL BE USED.
- ALL REINFORCEMENT STEEL USED SHALL BE TMT STEEL OF GRADE Fe-415 MEETING ALL OTHER REQUIREMENTS OF IS - 1786.
- BRICKS SHALL HAVE A MINIMUM CRUSHING STRENGTH OF 100 Kg/cm².
- WIDTH OF CRUMPLE JOINT WHEREVER INDICATED SHALL BE TAKEN AS 25 MM.
- CRUMPLE JOINT SHALL BE PROVIDED AT DISTANCE NOT EXCEEDING 15.0 M OR WHERE GROUND REQUIREMENTS INDICATE SUCH AS TURNING OR STEPPING.
- FOR ALL BRICK WORK CM NOT LEANER THAN 1:6 SHALL BE USED.
- THE WALL HAS BEEN DESIGNED FOR MAX WIND PRESSURE OF 75 Kg/m².
- 100X100 WEEP HOLES TO BE PROVIDED IN THE PANELS, WHERE THERE IS LIKELY HOOD OF WATER.
- PEEP HOLES SHALL BE PROVIDED ONLY IN CASE OF USERS REQUIREMENT.



DATE 31 OCT 08		DRG NO: CEUZ/TD/1264/2008	SR ARCHITECT FOR CHIEF ENGINEER	
SHT NO 3/4		CHIEF ENGINEER UDHAMPUR ZONE	AD (ARCH) JT DIR (ARCH)	
SCALE				
C/D				
T/C/D				
D/R				

DETAILS			
PANELLED DOORS WITH PRESSED STEEL FRAMES			
REVISION			
Sr. No.	DATE	DESCRIPTION	INITIAL
1	11/10/08	DETAILS CORRECTED	(Signature)

NOTES:

8. FOR NOTES 1 TO 7 REF DRG. NO CEUZ/TD/1264/08 SHT NO 1/4.

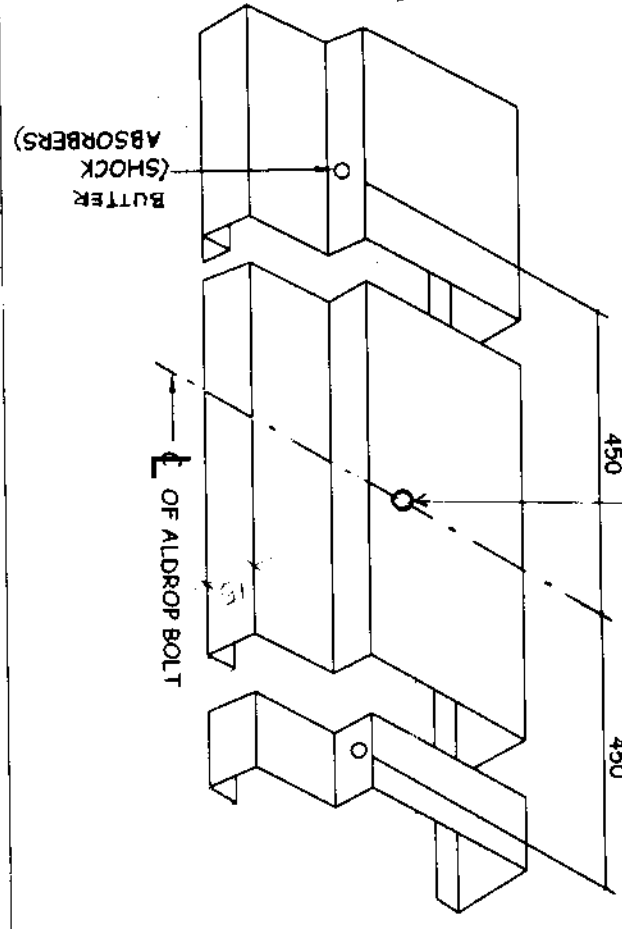
9. PRESSED STEEL FRAME SHALL CONFIRM TO IS-4351: 1992.

10. PROFILE OF FRAME FOR PLASTERED JAMB & POINTED JAMB BE CLARIFIED WITH PROPER NOTE OR DETAIL.

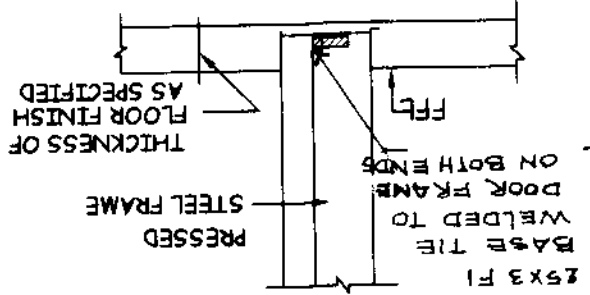
11. IN CASE OF RCC COL/ RCC WALL THE DOORS FRAME SHALL BE FIXED WITH BOLT OF STANDARD QUALITY AND SIZE AT 300 MM C/C.

12. FOR SCHEDULE OF IRON WORKERY/ FITTINGS REF SHT NO. 4/4.

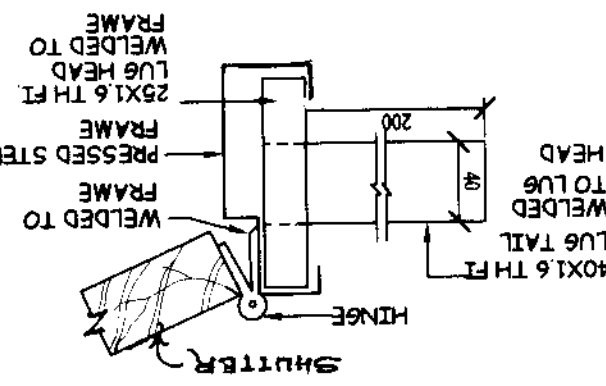
ISOMETRIC VIEW SHOWING LOCATION OF SHOCK ABSORBERS



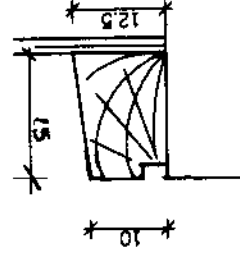
DETAIL OF FIXING BASE TIE TO PRESSED STEEL FRAME



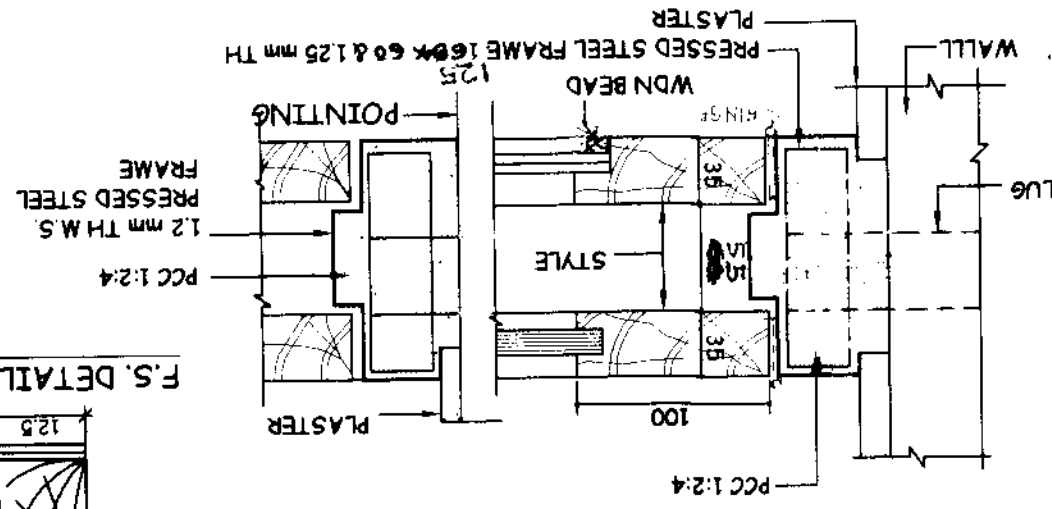
DETAIL OF FIXING LUG/HINGE TO PRESSED STEEL FRAME



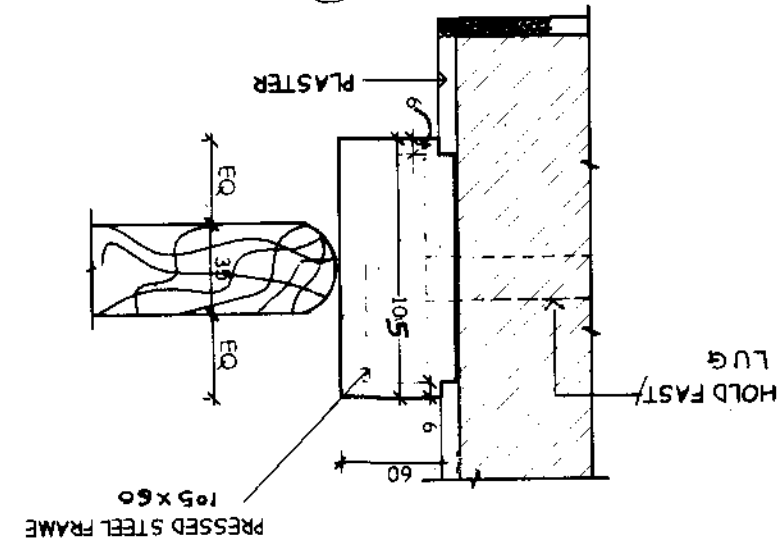
F.S. DETAIL OF BEAD



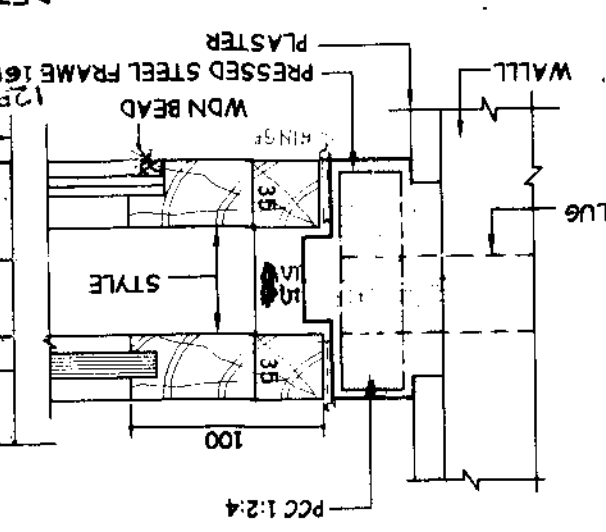
DETAIL IN CASE OF POINTING FACE



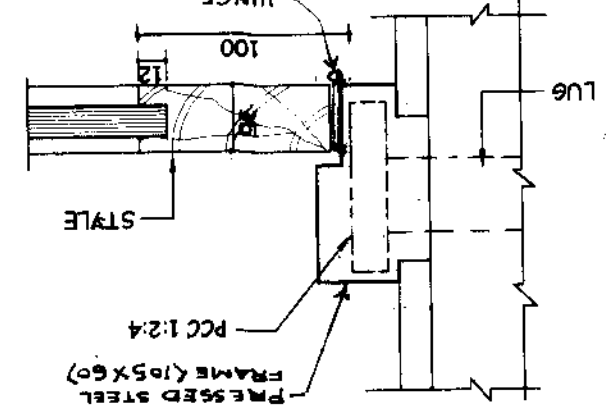
DETAIL AT C



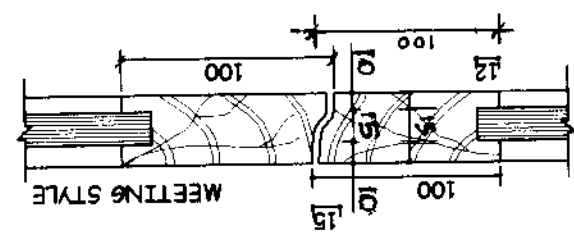
DETAIL AT A



DETAIL AT B



DETAIL AT D



SCHEDULE OF FITTINGS/BUILDERS HARDWARE (PER DOOR)

TYPE OF DOOR	LOCATION		STEEL		ALUMINIUM ANODIZED OR STEEL STOVE ENAMELED BLACK								WOODEN	BRASS	MATERIAL	
			BUTT HINGES COLD ROLLED MS	HELICAL DOOR SPRING MS	DOUBLE ACTION SPRING HINGE MS	TOWER BOLT BOLT 12 MM Ø	'D' TYPE HANDLE <WITH 32X3MM PLATE>	SLIDING BOLT <ALDROP> OF 16MM Ø BOLT	SLIDING BOLT <ALDROP> OF 16MM Ø BOLT	DOOR STOPPER	MORTICE LOCK WITH HANDLE LEVER TYPE ON BOTH SIDE (4 LEVERS)	PEG SET OF TWO	CLEAT WITH STEEL BUTT HINGE & SHOCK OBSERVER IN CASE OF PRESSED STEEL FRAME ROLLED STEEL SECTION	CHOCK STOP OUT OF 35X50X100MM ONLY FOR WOOD FRAME	HYDRAULIC DOOR CLOSER	
	100	150	150	150	125	250	300	40	65		50				SIZE IN MM	
(D-11 / D-12)	ALL ROOMS DRG, DINING, STUDY, LIVING BEDS ETC.	OFFICER ROOM BARRACKS & DINING ETC.	6	-	-	3	3	-	1	-	-	-	2	2	1 ⊕	⊕ IT USED FOR CONFERENCE ROOM
(D-11 F / D-12 F)	DO	DO	12	2	-	5	6	-	2	-	-	-	4	2	-	⊗ TO WIRE GAUGE SHUTTER ONLY
(D-8 D-9 D-10)	DO	DO	3	-	-	2	2	1	-	-	-	-	1	1	-	
- DO -	DO	OFFICER, S ROOM & CONFERENCE ROOM	3	-	-	2	-	-	-	1	1	-	-	-	1	
(D-8 F / D-9 F / D-10 F)	DO	KITCHEN COOK HOUSE, LAV	6	-	-	3	4	2	-	⊗	-	-	1	1	-	⊗ ONLY FOR SINGLE & MD ACCN FOR OFFICER'S
(D-7 F / D-8 F)	STORE/KITCHEN	STORE/ LAV	3	-	-	2	2	10	-	-	-	-	1	1	-	⊕ IN CASE OF STORE ONLY
DO	TOILET/ BATH & W.C.	TOILET/ BATH & W.C.	3	-	-	3	2	-	-	-	-	⊗	1	1	-	⊗ IN CASE OF WC
(D-8S)	KITCHEN	PANTRY/ SERVERY	-	-	3	2	2	1	-	-	-	-	-	-	-	
(D-10 X / D-9 X / D-8 X)	PASSAGE	PASSAGE/ KIT.	3	1	-	2	2	1	-	-	-	-	1	1	-	
(D-7 X / D-7.5 X)																

NOTES :

1. A MAGIC EYE SHALL BE PROVIDED TO ENTRANCE DOOR OF MD AND SINGLE LIVING ACCN TO ALL RANKS.
2. 6 NO HOLDFAST / LUGS SHALL BE PROVIDED TO ALL DOORS.
3. D TYPE HANDLE SHALL BE WITHOUT PAINT IN CASE OF STOVE ENAMELED MONGERY.
4. THOUGH DOOR NO. WITH FIGURES ARE WRITTEN WITHOUT THE LETTER A&B THE FITTING ARE FOR BOTH TYPE e.g. D9 MEANS BOTH FOR D9A & D9B
5. 50 MM / 60 MM LONG STANDARD RUBBER STOPPER TO BE FIXED TO WALL WITH DASH THROUGH BOLT AT THE JOINT OF LOCK RAIL & MEETING STYLE OF DOOR.
6. ALUMINIUM SHEET EDGING SHALL BE PROVIDED AROUND THE BOTTOM RAIL OF DOORS IN TOILET, BATH, WC.
7. FITTINGS/ BUILDER HARDWARE SHALL BE OF ALUMINIUM ANODISED IN OFFERS MD/ SINGLE ACCN, IMPORTANT BLDGS.

S NO.	DATE	DESCRIPTION	INITIAL
REVISION			
SCHEDULE OF FITTINGS			
DATE	31 OCT 08	CHIEF ENGINEER UDHAMPUR ZONE	SHT NO. 4/4
DRN	VIKAS		
TCD	-		
CKD	E6		
SCALE	NA	DRG NO. :- CEUZ/TD/1264/2008	
Aakash AAD (ARCH)		SR. ARCHITECT FOR CHIEF ENGINEER	
JL JT DIR (ARCH)			