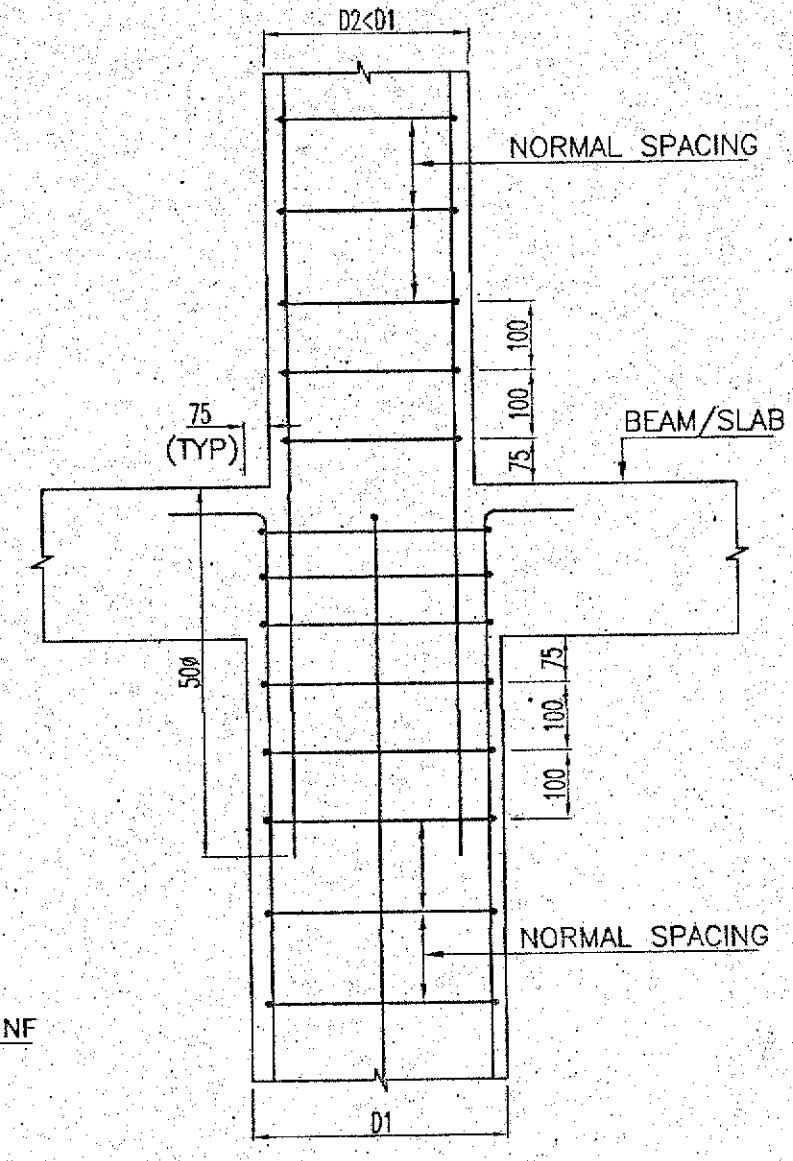
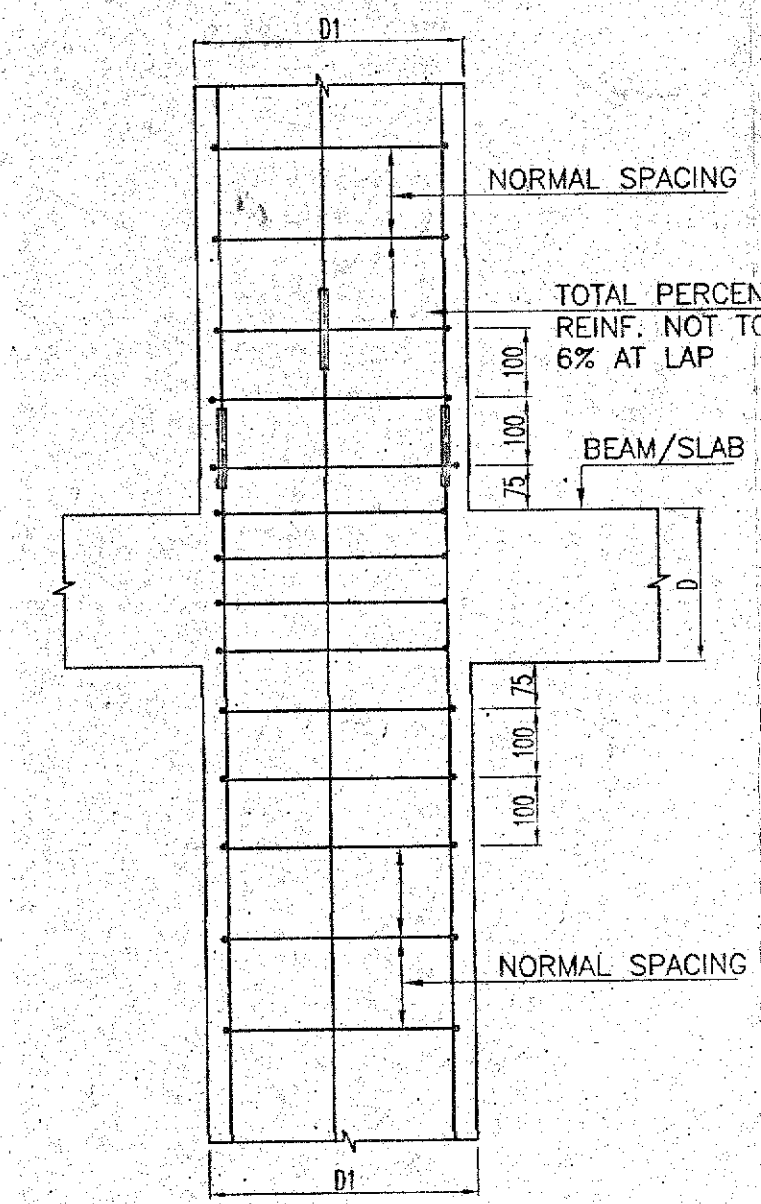


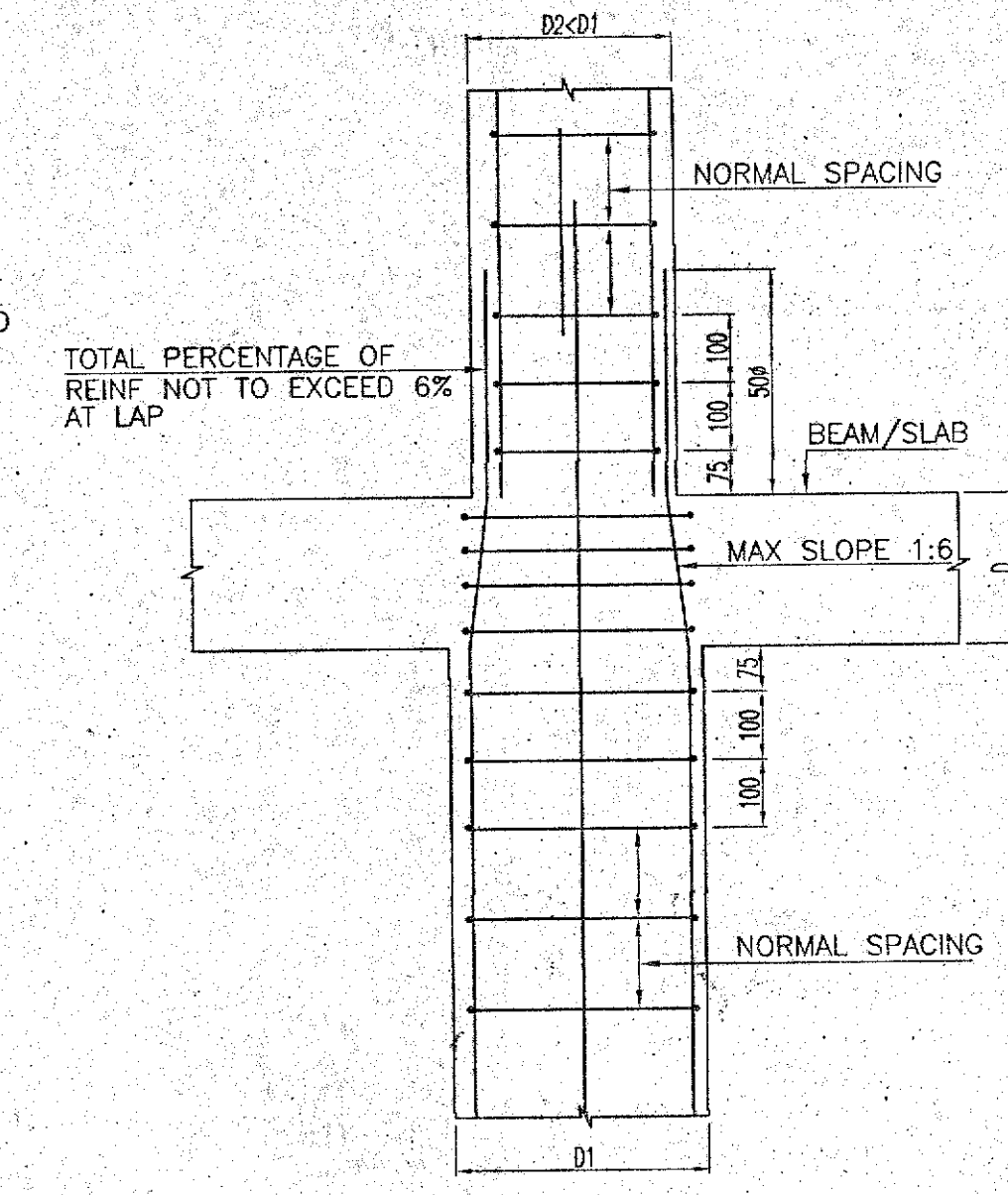
ANCHORAGE OF BEAM BARS IN AN EXTERNAL JOINT



REDUCING COLUMN SIZE  
SPlicing AT THE FLOOR LEVEL WHEN THE  
RELATIVE DISPLACEMENT OF COLUMN FACES  
IS MORE THAN 75 MM.



MECHANICAL SPlicing DETAIL  
(FOR  $\phi 25$  AND ABOVE)



REDUCING COLUMN SIZE  
TYPICAL COLUMN SPlicing DETAIL  
AT FLOOR LEVEL

1. GENERAL

- 1.1 ALL DIMENSIONS ARE IN S.I UNITS.
- 1.2 WORK TO FIGURED DIMENSIONS AND DO NOT SCALE THE DRAWING.
- 1.3 ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL AND SERVICE DRAWINGS.
- 1.4 ANY DISCREPANCY IN THE DRAWING SHALL BE BROUGHT TO THE NOTICE OF CONSULTANTS BEFORE COMMENCING THE WORK.
- 1.5 THE  $\pm 0.00$  LEVEL OF THE PROJECT REFERS TO ARCHITECTURAL DRAWING.
- 1.6 CLAY BRICK AS BRICKWORK

2. DESIGN CRITERIA

- 2.1 THE CONCRETE DESIGN IS BASED ON IS: 456-2000.
- 2.2 LOADS ARE BASED ON IS: 875
  - i) DEAD LOAD
    - a) SELF WEIGHT: AS PER DRAWING.
    - b) FLOOR FINISH: 125Kg/Sqm
    - c) NO LANDSCAPE LOAD ON THE TERRACE
    - d) EQUIPMENT LOADS: AS PER ARCHITECTURAL/SERVICES DRG.
  - ii) LIVE LOAD - 200Kg/sqm or 300kg/sqm as per DBR
- 2.3 WIND LOADS ARE BASED ON IS:875 PART III AND ARE AS FOLLOWS:  
BASIC WIND SPEED 50 M/SEC
- 2.4 SEISMIC LOAD
  - ZONE : III
  - ZONE FACTOR : 0.16
  - IMPORTANCE FACTOR : 1.20

3. CONCRETE

- 3.1 GRADE OF CONCRETE FOR ALL M25
- 3.2 MAXIMUM SIZE OF AGGREGATE SHALL PREFERABLY BE 20mm AND SHALL BE GRADED
- 3.3 PLAIN CEMENT CONCRETE SHALL HAVE CUBE STRENGTH OF  $10 N/mm^2$  AT 28 DAYS.
- 3.4 ALL CONCRETE SHALL BE OF DESIGN MIX AND ARE TO BE OBTAINED FROM REPUTED TESTING LABORATORIES AND APPROVED BY CONSULTANTS. THE MATERIALS THAT ARE PROPOSED TO BE USED IN THE PROJECT SHALL BE TESTED AND TEST CERTIFICATE FURNISHED BEFORE USE OF MATERIAL AT SITE.
- 3.5 PILE CONCRETE:
  - a) SLUMP VALUE FOR PILE CONCRETE SHOULD BE 150-180MM AS PER IS 2911-(PART I / SEC I)-2010 AS PER CLAUSE 7.3.2 PAGE 7.
  - b) MINIMUM GRADE OF CONCRETE M25 & MINIMUM CEMENT CONTENT 400 KG/CUM. AS PER CLAUSE 7.3.3 OF IS 2911-(PART I / SEC I)-2010 PAGE 7.

4. REINFORCING STEEL

- 4.1 ALL REINFORCING STEEL SHALL CONFIRM TO IS:1786-2008 HAVING MIN. YIELD STRENGTH OF  $500 N/mm^2$  DENOTED AS  $\text{---} \phi \text{---}$ .

5. SOIL DATA AND WATER TABLE

- 1) CAPACITY OF PILE 80 TON FOR 29M SHAFT LENGTH AT 1.0 M CUTOFF LEVEL FROM E.G.L

6. CONCRETE NOMINAL COVER FROM OUTMOST REINFORCEMENT

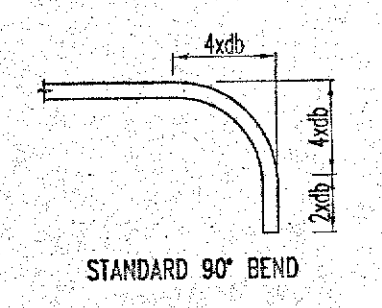
- 6.1 CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 75MM.
  - PILE - 50MM
  - PILE CAP - 75MM
  - TIE BEAM - 50MM
  - BEAM - 30MM
  - COLUMNS - 40MM
  - SLAB - 20MM
  - STAIR SLAB - 20MM
  - LINTEL - 20MM
  - FOOTINGS - 50MM
  - GRADE SLAB - 40MM (BOTTOM) 20MM (TOP)
- 6.3 COVER BLOCKS (CONCRETE) OF APPROVED MAKE SHALL BE USED IN CONCRETE.

7. EXCAVATION

- 7.1 100THK BLINDING SHALL BE PROVIDED UNDER RAFT, INDEPENDENT AND COMBINED FOOTINGS.
- 7.2 EXCAVATION SHALL BE DONE BEYOND THE FOOTING/BASEMENT AS INDICATED IN THE DRAWINGS.
- 7.3 LOOSE POCKETS OF ENCOUNTERED SHALL BE REMOVED AND FILLED WITH PLUMB CONCRETE.
- 7.4 A LEVELING COURSE OF CONCRETE SHALL BE LAID USING P.C.C 1:5:10 PRIOR TO FOUNDATION S REQUIRED.
- 7.5 FOUNDATION SHALL BE LAID BELOW TOP WEAK ZONE IN WEATHERED ROCK STRATA.

8. DEVELOPMENT AND ANCHORAGE LENGTHS

- 8.1 DEVELOPMENT LENGTH ( $L_d$ ) FOR REINFORCEMENT STEEL BARS SHALL BE
  - i) M25, Fe500-46D  
(D IS DIA OF THE BAR)  
(GENERALLY 50D FOLLOWED FOR SITE CONVENIENCE)



- 8.2 LAPS FOR REINFORCEMENT IN COMPRESSION SHALL BE ACCOUNTED ONLY AS STRAIGHT LENGTHS AND NO HOOKS OR BENDS ARE ACCOUNTED FOR COMPRESSION LAPS OR ANCHORAGES.
- 8.3 STANDARD HOOKS OR BENDS SHALL BE PROVIDED WHERE NECESSARY IN TENSION REINFORCEMENTS IN BEAMS, COLUMNS, SLABS, ETC.
- 8.4 MECHANICAL ANCHORAGES OF APPROVED MANUFACTURERS SHALL BE USED FOR COLUMN SPICES FOR 25mm DIA AND ABOVE AND ARE TO BE AS PER DESIGN DRAWINGS AND SHALL HAVE YIELD STRENGTH OF 125% MORE THAN GRADE OF MAIN STEEL.
- 8.5 LAPS SHALL BE STAGGERED AS INDICATED IN DRAWINGS.

9. WATER PROOFING

- 9.1 WATER-PROOFING SHALL BE DONE FOR: SUMP TANKS, OVERHEAD TANK, BASEMENT WALLS, TOILET SLABS, TERRACE, AS PER SPECIFICATIONS.

10. CURING

- 10.1 CURING COMPOUNDS SHALL BE USED FOR ALL VERTICAL ELEMENTS PROVIDED IT IS PIGMENTED.
- 10.2 CURING BY WATER SHALL BE DONE FOR THE OTHER ELEMENTS FOR A MINIMUM PERIOD OF 7 DAYS

11. DESHUTTERING TIME

- 11.1 TYPE OF FORM WORK FOR:
  - MINIMUM PERIOD BEFORE STRIKING (EXCLUDING THE DAY OF CASTING)
  - a. SLABS UPTO 4.5M : 7 DAYS
  - OVER 4.5M : 14 DAYS
  - b. BEAMS UPTO 6.0M : 14 DAYS
  - OVER 6.0M : 21 DAYS
  - c. WALL, BEAM/COLUMN VERTICAL FACES : 1 DAY

- 11.2 SHUTTERING CAN BE RELEASED EARLIER THAN SPECIFIED ABOVE PROVIDED THE PROPS ARE RETAINED AT REASONABLE SPACINGS AND CONCRETE ATTAINS THE FULL STRENGTH AT THE TIME OF DESHUTTERING AS PER IS 456 - 1978. ESHUTTERING SHALL BE DONE BY PROVIDING DAMPENING MATERIAL BELOW IN ORDER TO REDUCE THE IMPACT AT THE LOWER LEVEL.
- 11.3 SIMPLY SUPPORTED AND CONTINUOUS SPANS SHALL BE DESHUTTERED FROM MID SPAN TOWARDS SUPPORTS. CANTILEVERS SHALL BE DESHUTTERED FROM FREE END TOWARDS SUPPORTS
- 11.4 SLAB/BEAMS SHALL BE REPROPPED UNTIL THE NEXT LEVEL SLAB IS CAST AND DESHUTTERED.

12. CONSTRUCTION JOINTS

- 12.1 SLABS : AT MIDDLE ONE THIRD OF THE SPAN.
- 12.2 BEAMS : AT MIDDLE ONE THIRD OF THE SPAN. IF ANY CROSS BEAMS ARE LOCATED IN THIS REGION THE JOINT SHALL BE LOCATED TWO TIMES THE WIDTH OF THE BEAM AWAY FROM THE BEAM.
- 12.3 RETAINING WALL : AT THE JUNCTION OF THE WALL AND FOOTING WITH A KEY JOINT AND AT MIDDLE OF VERTICAL SPAN. VERTICAL JOINTS TO BE AVOIDED.
- 12.4 RAFT SLAB : AT MIDDLE ONE THIRD OF THE SPAN.
- 12.5 CONSTRUCTION JOINTS SHALL BE STRAIGHT.
- 12.6 CANTILEVERS : CONSTRUCTION JOINT SHALL NOT BE PROVIDED IN CANTILEVERS.

13. ADMXTURE

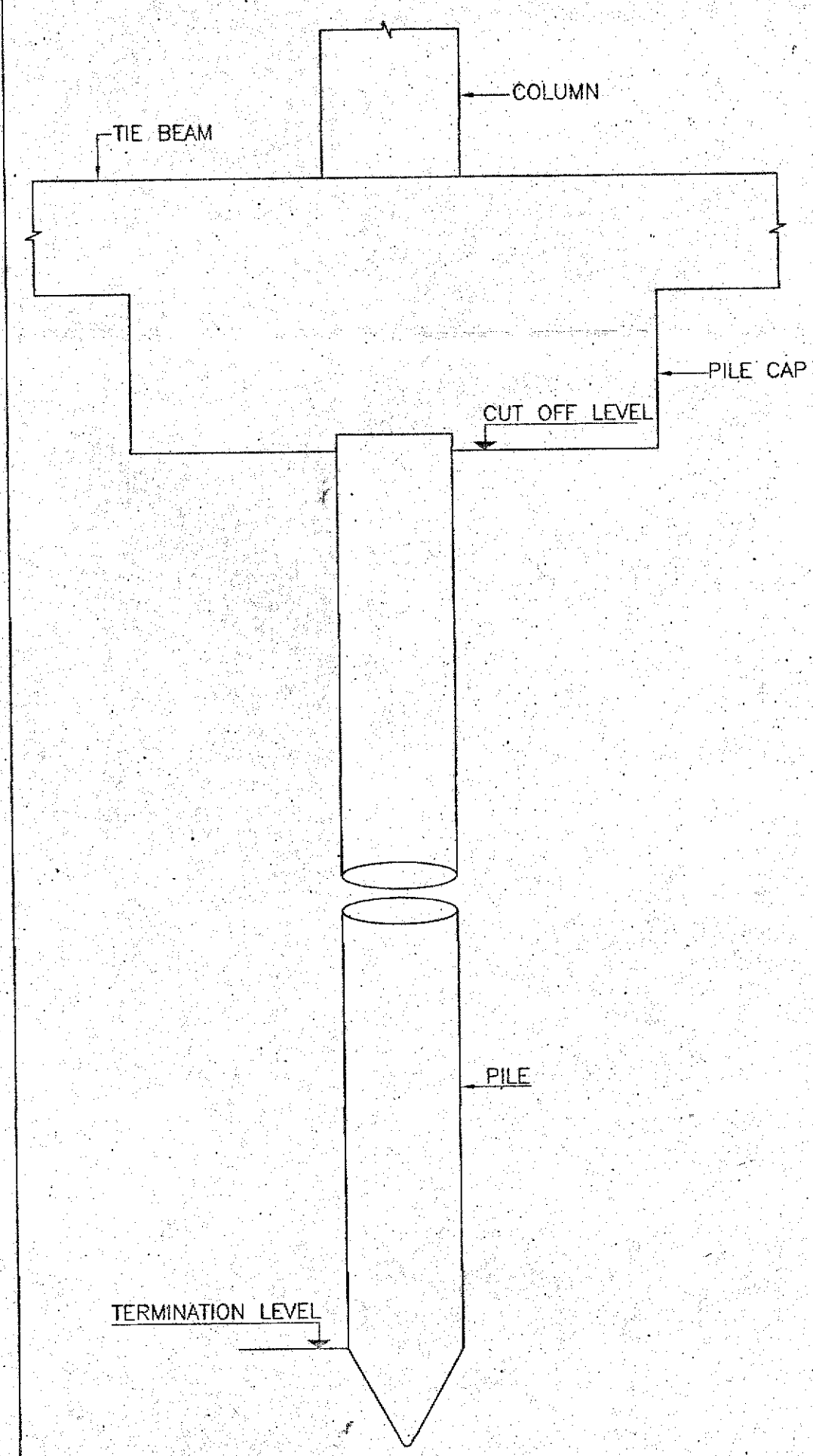
- 13.1 CONCRETE ADMXTURES OF APPROVED MAKE SHALL BE USED TO IMPROVE WORKABILITY AND STRENGTH AS PER TENDER SPECIFICATIONS.
- 13.2 CONCRETE ADMXTURES OF APPROVED MAKE SHALL BE USED FOR WATER PROOFING AS PER TENDER SPECIFICATIONS.

14. CONSULTANTS APPROVAL

- 14.1 CONSULTANTS SHALL APPROVE THE CONCRETING SURFACE AFTER INSPECTION AND REMEDIAL MEASURES IF ANY TO BE DONE BEFORE ANY PLASTERING WORK IS TAKEN UP ON CONCRETE SURFACE. HOWEVER THIS DOES NOT DEVOLVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR GETTING THE REQUIRED STRENGTH OF CONCRETE.

15. CAMBER FOR CANTILEVERS

- FOR UP TO 1.5M CANTILEVERS --- 10MM
- FROM 1.5M TO 2.5M CANTILEVERS -- 15MM



TYPICAL SECTION OF PILE

Sanctioned  
As per sec 72 of  
West Bengal Panchayat Samity  
Administrative Rule 2008  
Order No. 671 dt. 03/11/2021  
of Barrackpore-II Panchayat Samity  
03.12.21  
Executive officer  
Barrackpore-II Panchayat Samity

THIS STRUCTURAL DRAWING IS VETTED BY  
PROFESSOR DR. PARTHA GHOSH OF  
JADAVPUR UNIVERSITY(J.U.),  
KOLKATA

Checked & Vetted  
Dr. Partha Ghosh  
B.E. (Civil), M.E. (Structural Engg.), Ph.D (Engg.)  
Professor  
Construction Engg. Department  
Jadavpur University, Kolkata-700 106

SIGNATURE OF OWNER

I/WE CONFIRM THAT THE ERECTION OF BUILDING TO BE UNDERTAKAE SHALL BE STRICTLY IN ACCORDANCE WITH THE WEST BENGAL MUNICIPALITY BUILDING RULES 2007 & AMENDMENT 2016.

SIGN. OF OWNER

CERTIFICATE OF ARCHITECT

I CERTIFY THAT ALL THE ARCHITECTURAL DRAWINGS OF THE PROJECT AT R.S. DAG NOS. - 1507, 1508, 1510, 1550, 1551, 1560, 1565, 1566, 1581, 1582, 1583, 1545, 1546, 1584, 1585, 1561, 1563, 1564, 1511, 1512, L.R. KHATIAN NOS. - 4612, 4613, MOUZA - JAFARPUR, J.L.NO - 9, UNDER P.S - TITAGARH, DIST - NORTH 24 PARGANAS, HAVE BEEN PREPARED BY ME & CERTIFY THAT THE PLANS AND DRAWINGS COMPLYING WITH ALL THE PROVISIONS REGARDING THE FIRE PROTECTION AS PER THE WEST BENGAL MUNICIPALITY BUILDING RULES 2007 & AMENDMENT 2016. I SHALL BE HELD RESPONSIBLE IF ANY INCORRECT INFORMATION IS FURNISHED BY ME OR ANY VIOLATION OF PROVISIONS OF THESE RULES OR THE PREVALING NATIONAL BUILDING CODE IS FOUND IN ANY OF THE DRAWINGS AND DOCUMENTS, SIGNED BY ME AND SUBMITTED TO THE SANCTIONING AUTHORITY FOR OBTAINING SANCTION.

Rajkumar Agarwal  
Architect  
Member of Council of  
Architecture CA / 94 / 17940

SIGN. OF ARCHITECT  
RAJKUMAR AGARWAL  
COUNCIL REGISTRATION NO. CA/94/17940

ADDRESS:  
RAJ AGRAWAL & ASSOCIATES  
8B, ROYD STREET (2ND FLOOR), KOLKATA-16.

IT IS HEREBY CERTIFIED THAT THE STRUCTURAL DRAWINGS ARE PREPARED FOR EARTHQUAKE RESISTANCE IN ACCORDANCE WITH THE WEST BENGAL MUNICIPALITY BUILDING RULES 2007 & AMENDMENT 2016 .

SIGN. OF GEO-TECHNICAL ENGINEER

CERTIFICATE OF STRUCTURAL ENGINEER

CERTIFIED THAT, "THE STRUCTURAL DRAWING & DESIGN OF BOTH FOUNDATION & SUPER STRUCTURE OF THE BUILDING / BUILDINGS HAS BEEN MADE CONSIDERING THE SOIL TEST REPORT, AS PER THE RULES AND REGULATIONS MADE UNDER THE ACT AND ALSO CONSIDERING ALL POSSIBLE LOADS, SEISMIC LOAD AND THE MOMENTS GENERATED BY THE PROPOSED STRUCTURE AS PER THE BUREAU OF INDIAN STANDARD AND NATIONAL BUILDING CODE OF INDIA AND CERTIFIED THAT IT IS SAFE & STABLE IN ALL RESPECT AND THESE PROVISIONS SHALL BE ADHERED TO DURING THE CONSTRUCTION.

Mainak Majumdar  
B.C.E., M.C.E. (Struct)  
ESE-152/1 of KMC  
STRV/NKDA/10/00020  
STRV/NKDA/14/00001

SIGN. OF STRUCTURAL ENGINEER

PROJECT

PROPOSED ADDITION OF THREE BUILDING (BLOCK 13,14 & 15) (BLOCK-1, 2, 3, 4, 5, 6, 7 & 8 ALREADY SANCTIONED) FOR G+VII STORED (25.0 MT. HT.) RESIDENTIAL BUILDING OF MAGNOLIA SPORTS CITY, L.R. DAG NOS. - 1507, 1508, 1510, 1550, 1551, 1560, 1565, 1566, 1581, 1582, 1583, 1545, 1546, 1584, 1585, 1561, 1563, 1564, 1511, 1512, L.R. KHATIAN NOS. - 4612, 4613, MOUZA - JAFARPUR, J.L.NO - 9, UNDER P.S - TITAGARH, DIST - NORTH 24 PARGANAS.

STRUCTURAL CONSULTANT

ADROIT CONSULTANT  
10/3 PANCHANANTALA MAIN ROAD  
KOLKATA-700029

ARCHITECT

RAJ AGARWAL & ASSOCIATES  
8B, ROYD STREET, KOLKATA-16

SANCTION DRAWING

SCALE-	TITLE-	GENERAL NOTE
DESIGNED MM		
DRAWN R.H	DRAWING NO. - HS/ST-01	REV-
CHECKED MM	DATE : 06.08.21	