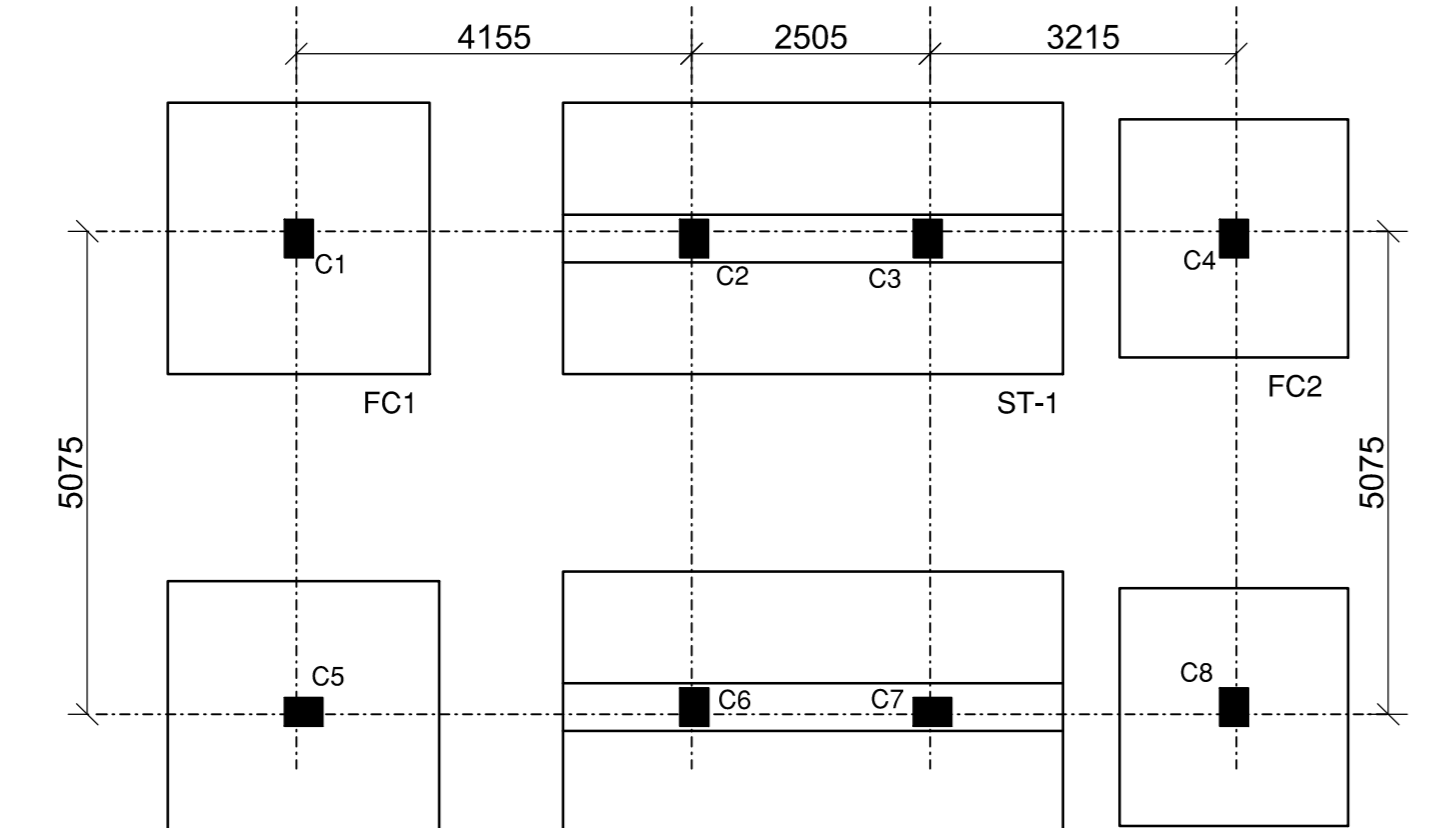
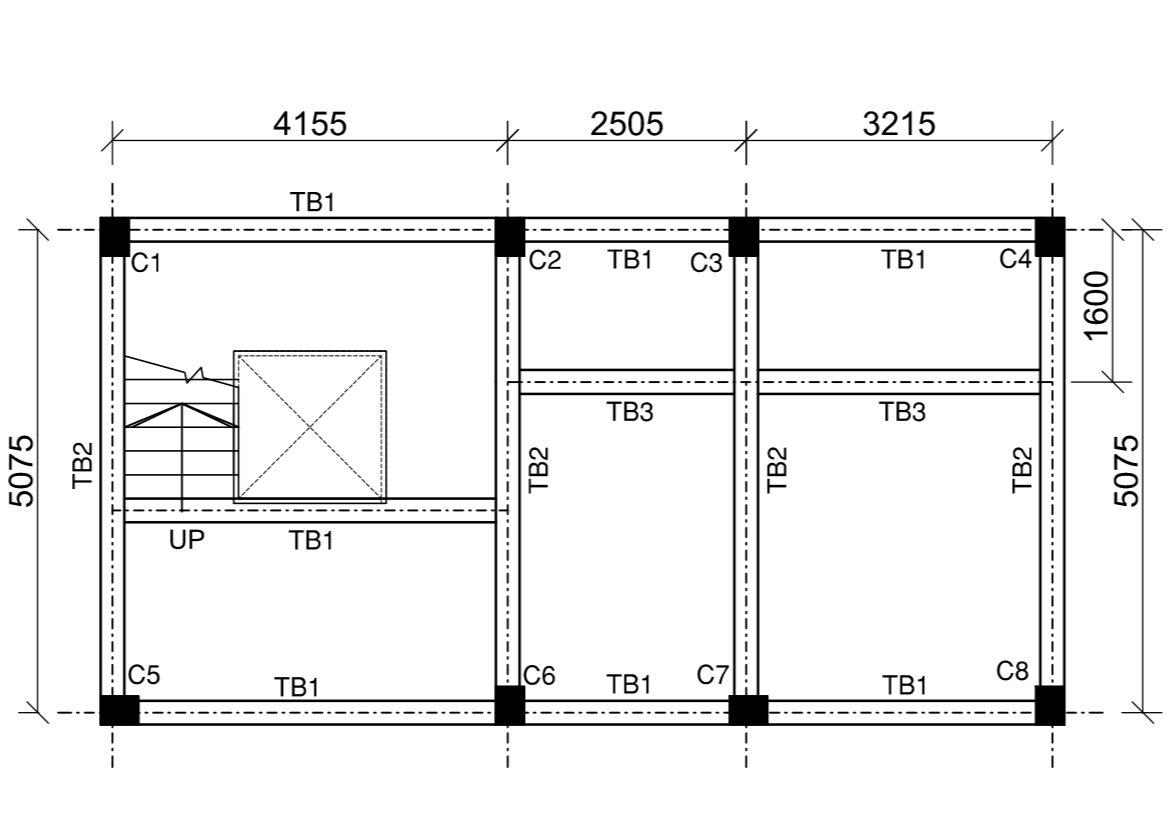


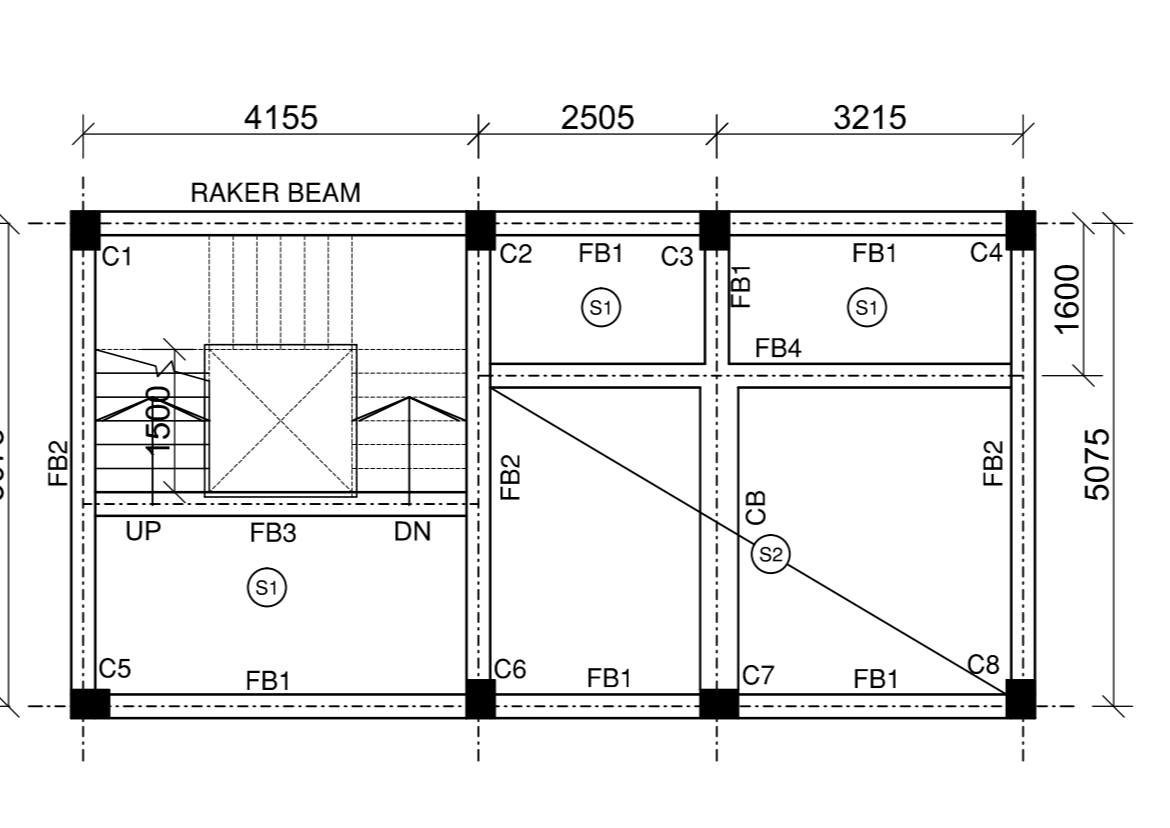
MARKING PLAN OF COLUMN



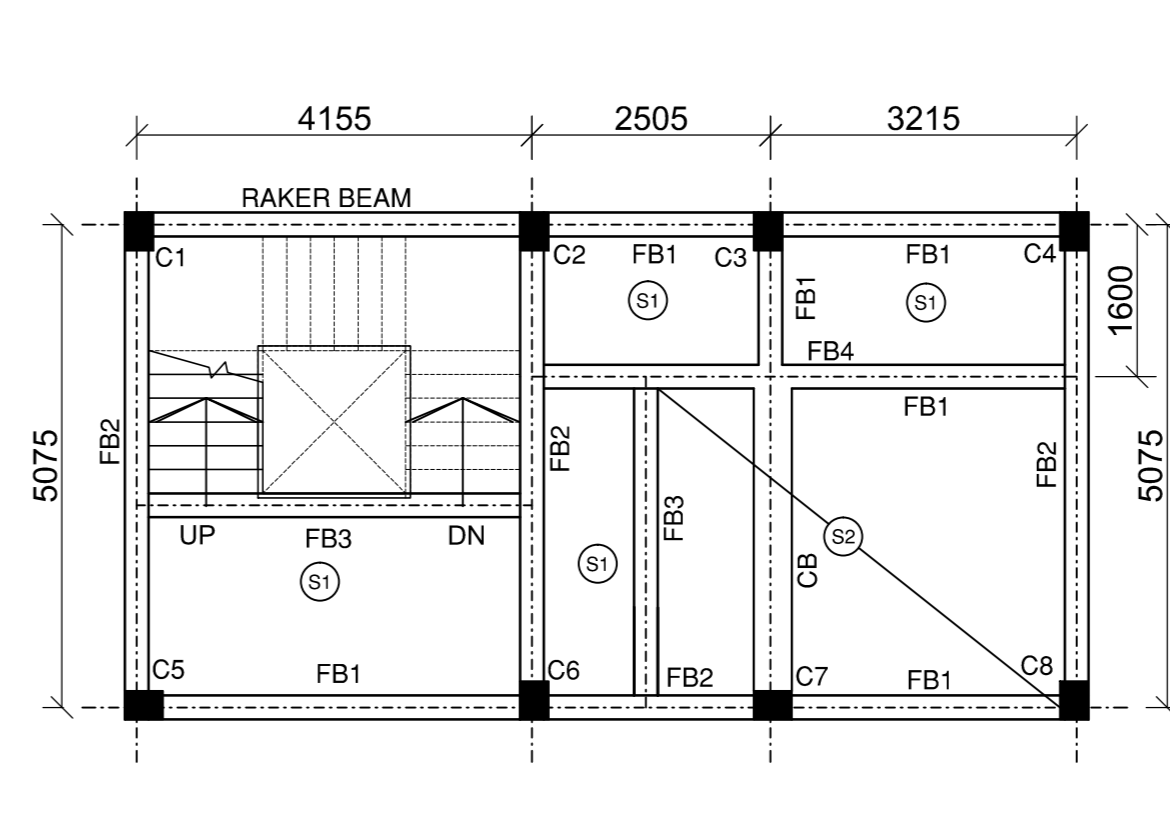
MARKING PLAN OF FOOTING



MARKING PLAN OF TIE BEAM



MARKING PLAN OF 1ST FLOOR BEAM



MARKING PLAN OF 2ND FLOOR & ROOF BEAM

**COLUMN SCHEDULE (M25:Fe500)**

| M25 : Fe500 , COVER = 40mm<br>CONFINING ZONE = 450 MM |              | M25 : Fe500 , COVER = 40mm<br>CONFINING ZONE = 450 MM |          |
|---|--------------|---|----------|
| TO  | Z1 MAIN LINK | Z1 OTHERS   | Z2 LINKS |
| ROOF  |              |   |          |
| FOOTING   | T8 @ 75      | T8 @ 75   | T8 @ 150 |

**COLUMN MARKED**

|             |             |
|-------------|-------------|
| C1,C2,C5,C6 | C3,C4,C7,C8 |
|-------------|-------------|

**FOOTING SCHEDULE (M25:Fe500)**

FOOTING DESIGN DONE WITH THE SBC OF 7.50 T/SQ.M BASED ON PROVIDED SOIL REPORT

| FOOTING NUMBERS | FOOTING TYPE | FOOTING DIMENSION |      |     | FOOTING REINFORCEMENT |             |              |              |
|-----------------|--------------|-------------------|------|-----|-----------------------|-------------|--------------|--------------|
|                 |              | L                 | B    | D   | BOTTOM                |             | TOP          |              |
|                 |              |                   |      |     | ALONG B               | ALONG L     | ALONG B      | ALONG L      |
| FC-1            | PAD          | 2850              | 2750 | 400 | T12@150 C/C           | T12@150 C/C | T8@ 200 C/C  | T8@ 200 C/C  |
| FC-2            | PAD          | 2500              | 2400 | 350 | T12@150 C/C           | T12@150 C/C | T8@ 200 C/C  | T8@ 200 C/C  |
| ST-1            | STRIP        | 5250              | 2850 | 500 | T16@175 C/C           | T16@175 C/C | T12@ 200 C/C | T12@ 200 C/C |

**TIE BEAM SCHEDULE (M25:Fe500)**

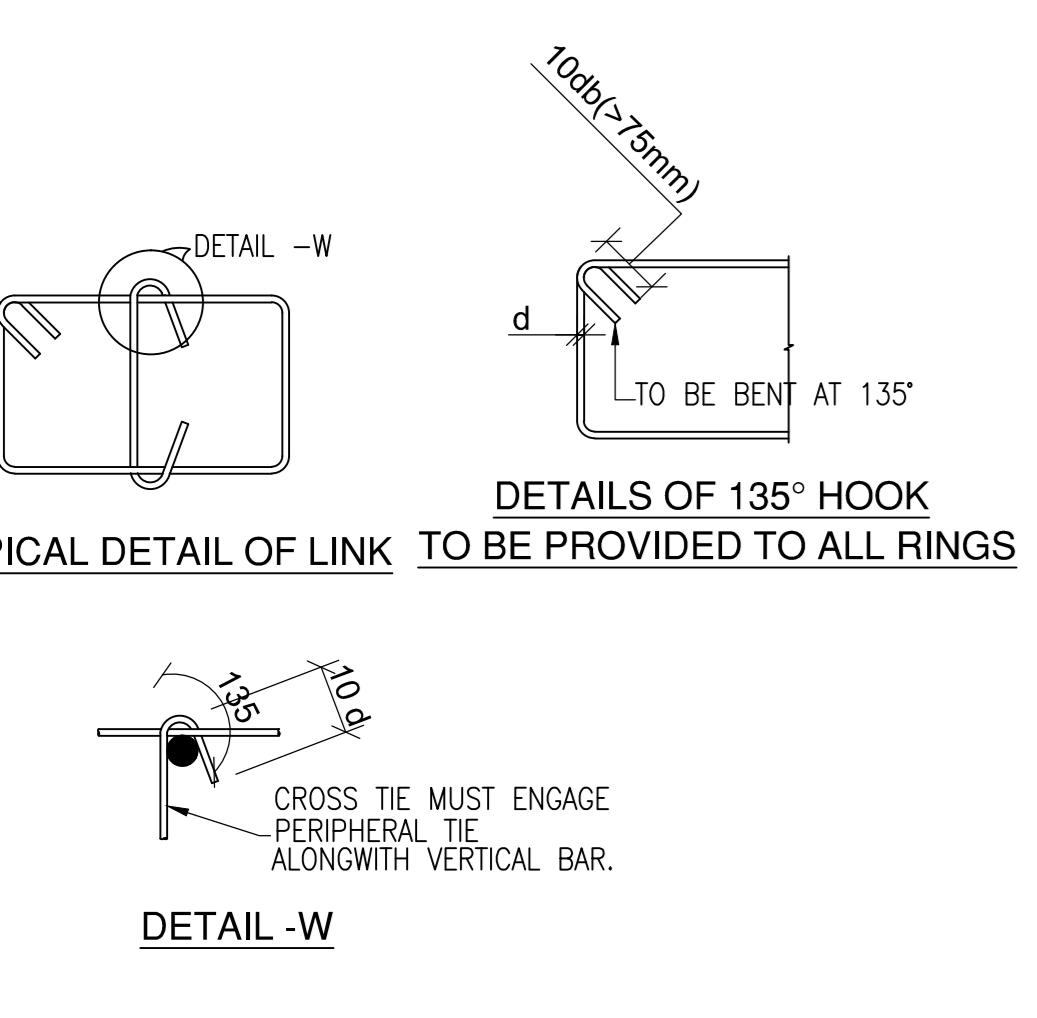
| BEAM NUMBERS | SIZE |     | BOTTOM REINFORCEMENT |               | TOP REINFORCEMENT |          | SHEAR STIRRUPS |               |
|--------------|------|-----|----------------------|---------------|-------------------|----------|----------------|---------------|
|              | B    | D   | SUPPORT              | SPAN          | SUPPORT (S1)      | SPAN(S2) | SUPPORT(S1)    | SPAN(S2)      |
| TB1          | 250  | 400 | 3-T16                | 3-T16         | 3-T16 + 2-T16     | 3-T16    | 2L-T8@100 C/C  | 2L-T8@150 C/C |
| TB2          | 250  | 400 | 3-T16                | 3-T16 + 2-T12 | 3-T16 + 2-T16     | 3-T16    | 2L-T8@100 C/C  | 2L-T8@150 C/C |
| TB3          | 250  | 350 | 3-T16                | 3-T16         | 3-T16             | 3-T16    | 2L-T8@150 C/C  | 2L-T8@150 C/C |

**FLOOR BEAM SCHEDULE (M25:Fe500)**

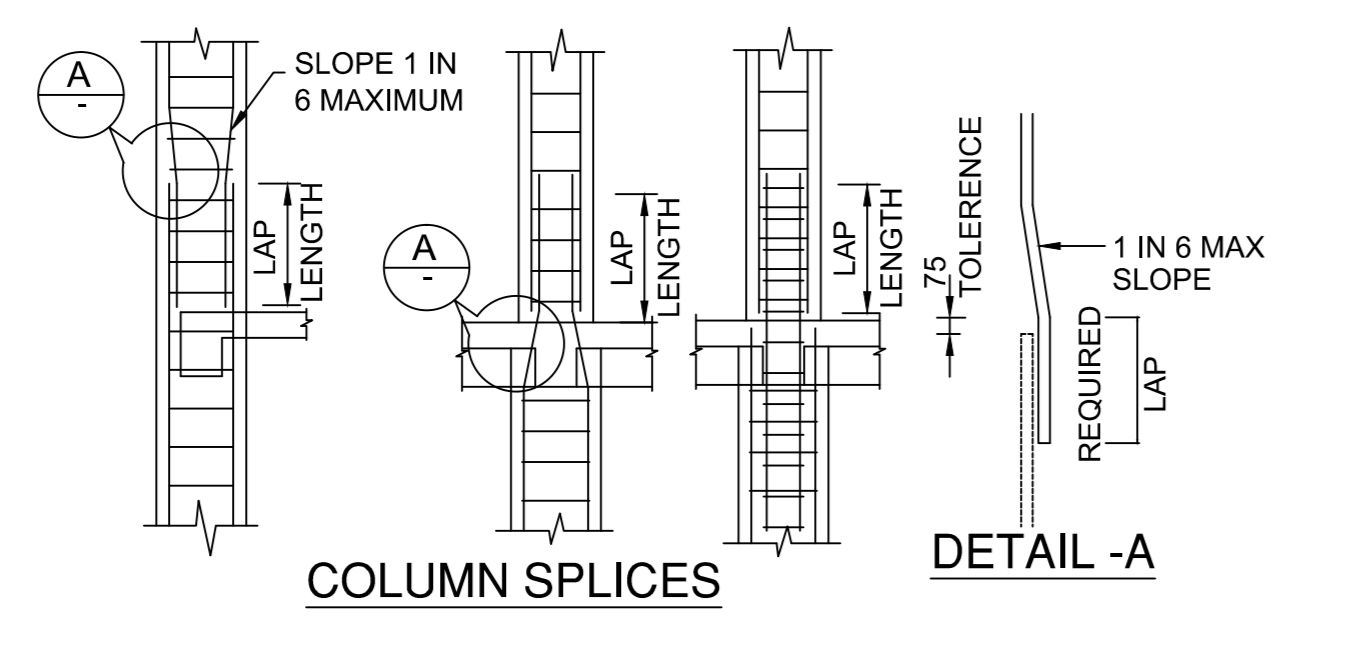
| BEAM NUMBERS | SIZE |     | BOTTOM REINFORCEMENT |               | TOP REINFORCEMENT |       | SHEAR STIRRUPS |               |
|--------------|------|-----|----------------------|---------------|-------------------|-------|----------------|---------------|
|              | B    | D   | SUPPORT              | SPAN          | SUPPORT           | SPAN  | SUPPORT(S1)    | SPAN(S2)      |
| FB1          | 250  | 400 | 3-T16                | 3-T16         | 3-T16 + 2-T16     | 3-T16 | 2L-T8@100 C/C  | 2L-T8@150 C/C |
| FB2          | 250  | 400 | 3-T16                | 3-T16 + 2-T12 | 3-T16 + 2-T20     | 3-T16 | 2L-T8@100 C/C  | 2L-T8@150 C/C |
| FB3          | 250  | 350 | 3-T16                | 3-T16         | 3-T16             | 3-T16 | 2L-T8@150 C/C  | 2L-T8@150 C/C |
| FB4          | 250  | 400 | 3-T16                | 3-T16 + 2-T12 | 3-T16             | 3-T16 | 2L-T8@150 C/C  | 2L-T8@150 C/C |
| CB           | 400  | 150 | 4-T12                | 4-T12         | 4-T12             | 4-T12 | 4L-T8@150 C/C  | 4L-T8@150 C/C |

**FLOOR SLAB SCHEDULE (M25 : FE500)**

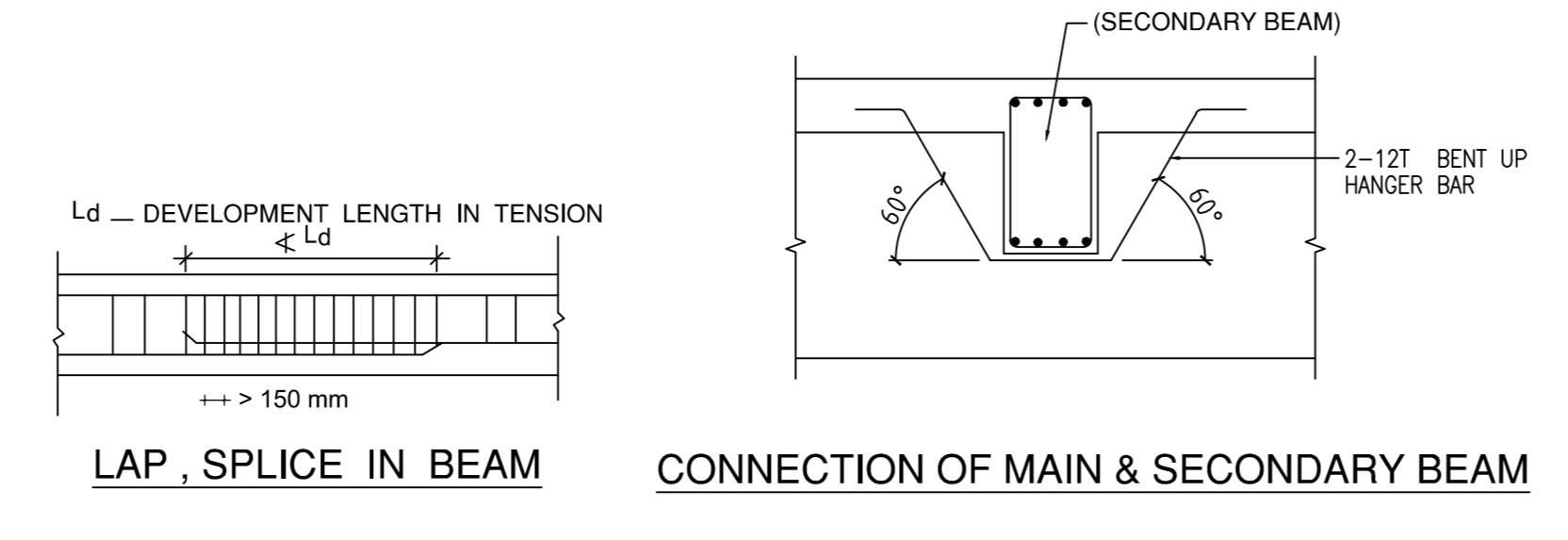
| SLAB MARKED | SLAB THICKNESS | BOTTOM REINFORCEMENT |                 | TOP REINFORCEMENT |                    |
|-------------|----------------|----------------------|-----------------|-------------------|--------------------|
|             |                | ALONG SHORT SPAN     | ALONG LONG SPAN | OVER LONG SUPPORT | OVER SHORT SUPPORT |
| S1          | 110            | T8 @ 150 C/C         | T8 @ 150 C/C    | T8 @ 100 C/C      | T8 @ 100 C/C       |
| S2          | 130            | T8 @ 150 C/C         | T8 @ 150 C/C    | T8 @ 100 C/C      | T8 @ 100 C/C       |



DETAILS OF 135° HOOK  
TYPICAL DETAIL OF LINK TO BE PROVIDED TO ALL RINGS

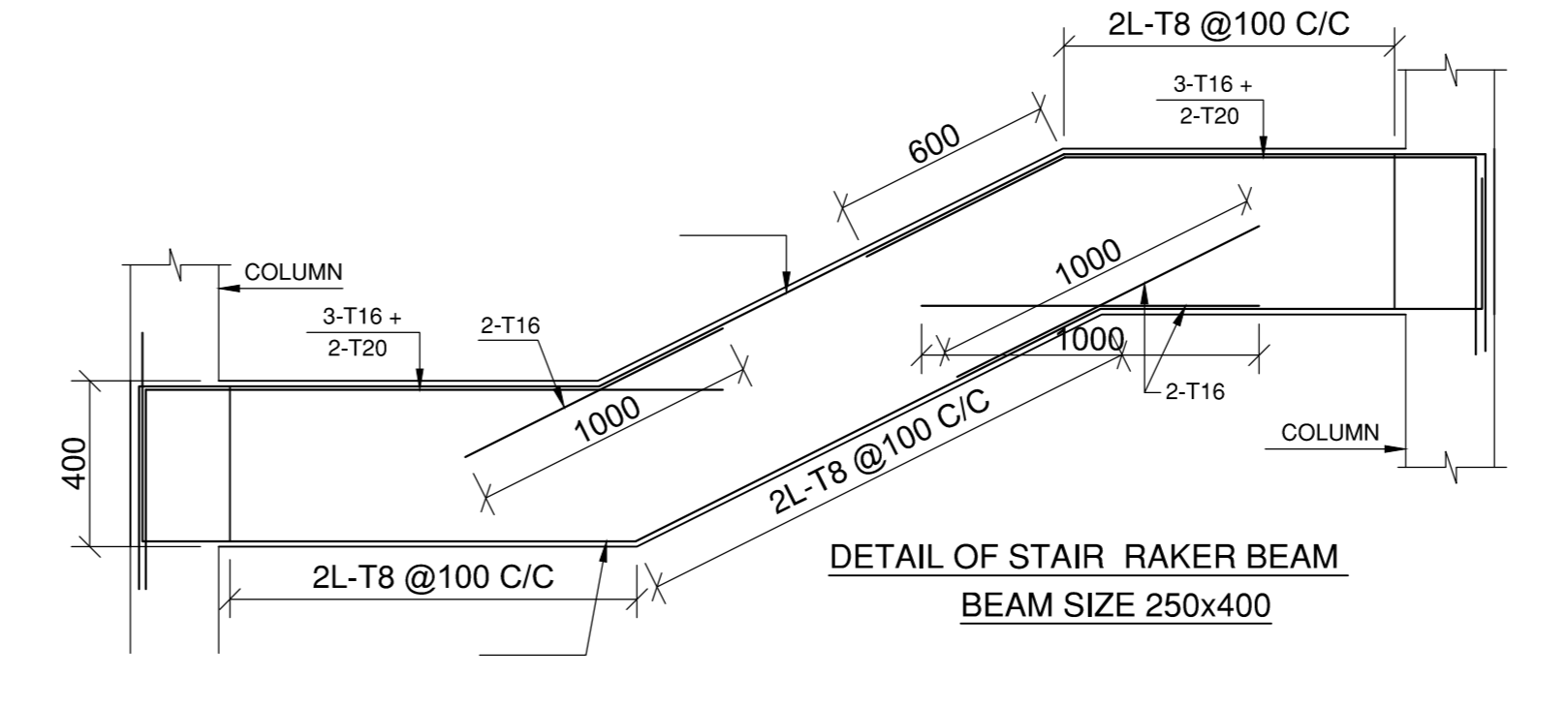


COLUMN SPLICES

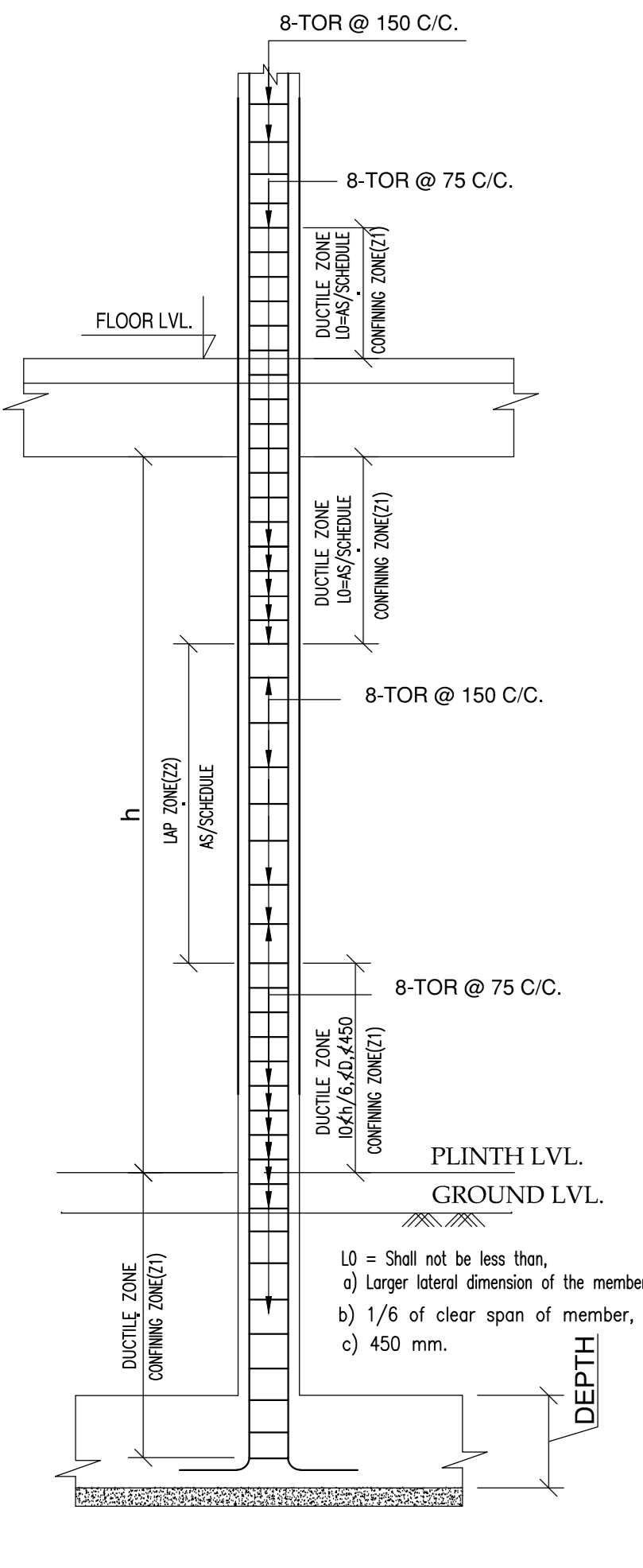


LAP, SPLICE IN BEAM

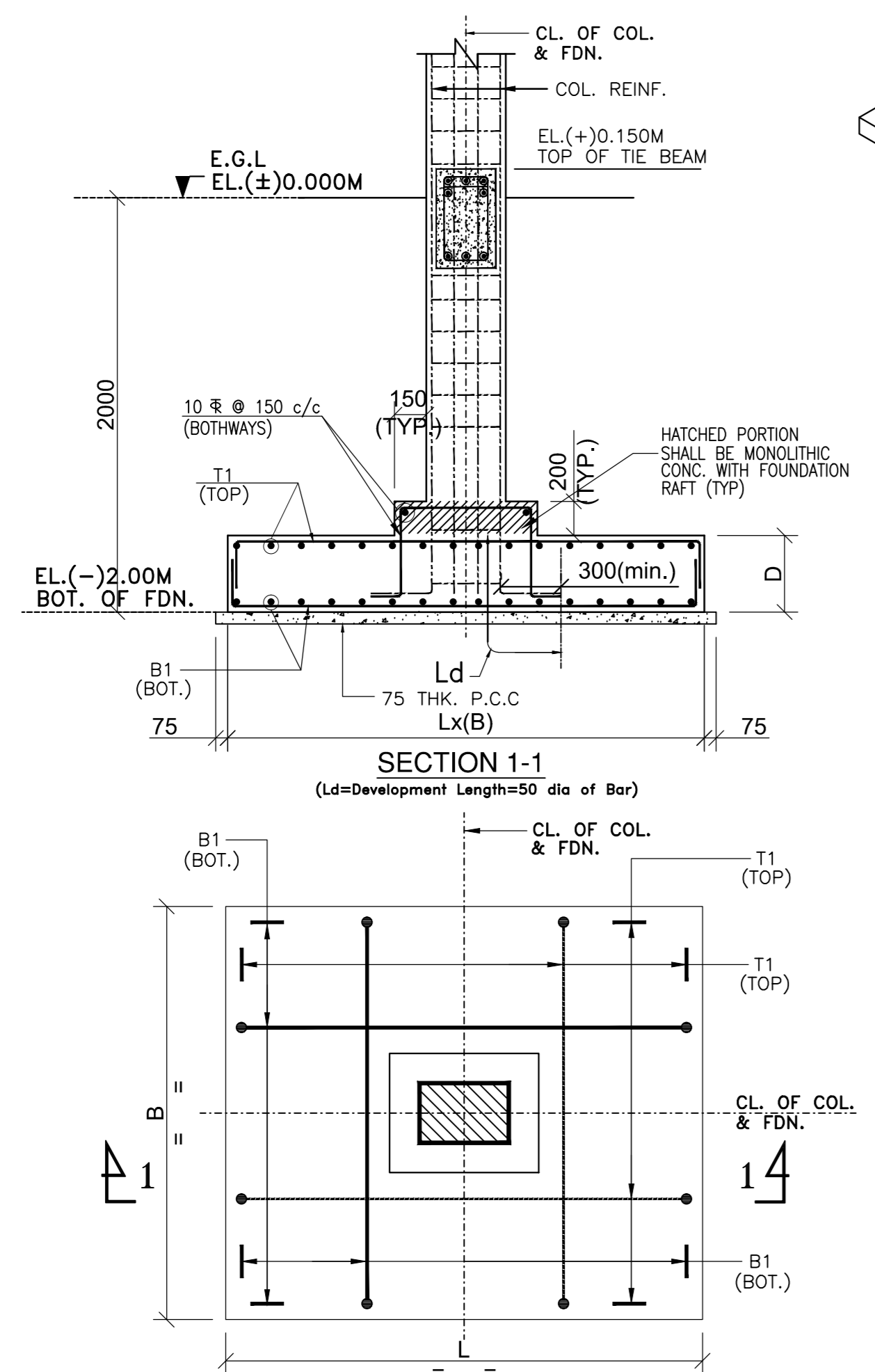
CONNECTION OF MAIN & SECONDARY BEAM



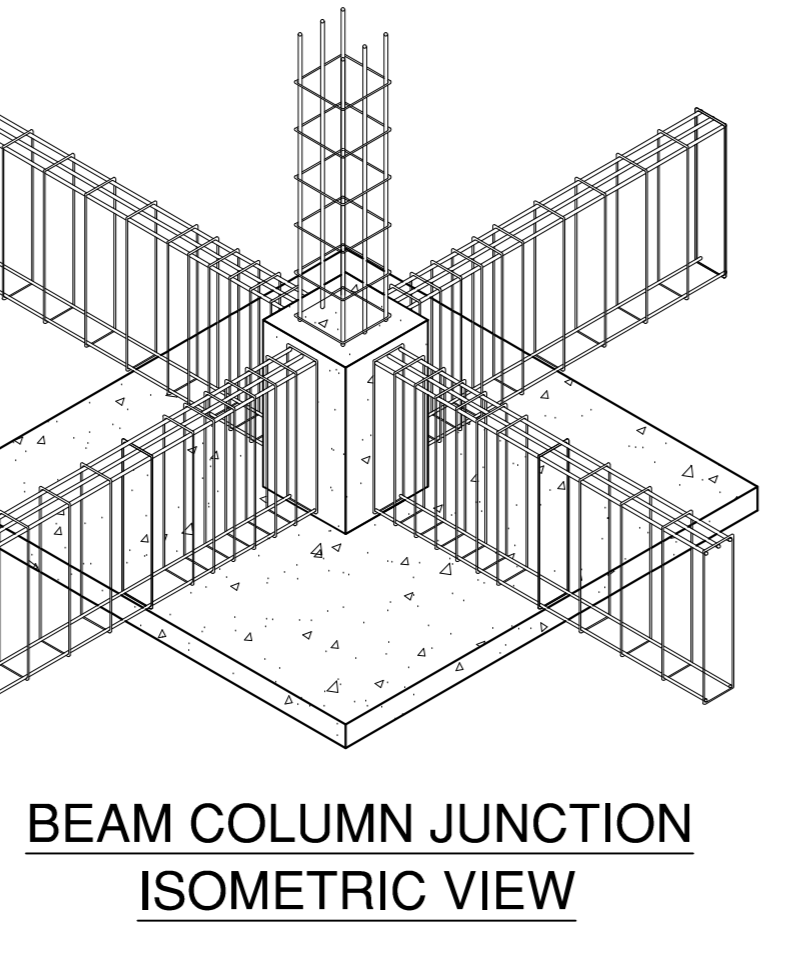
DETAIL OF STAIR RAKER BEAM  
BEAM SIZE 250x400



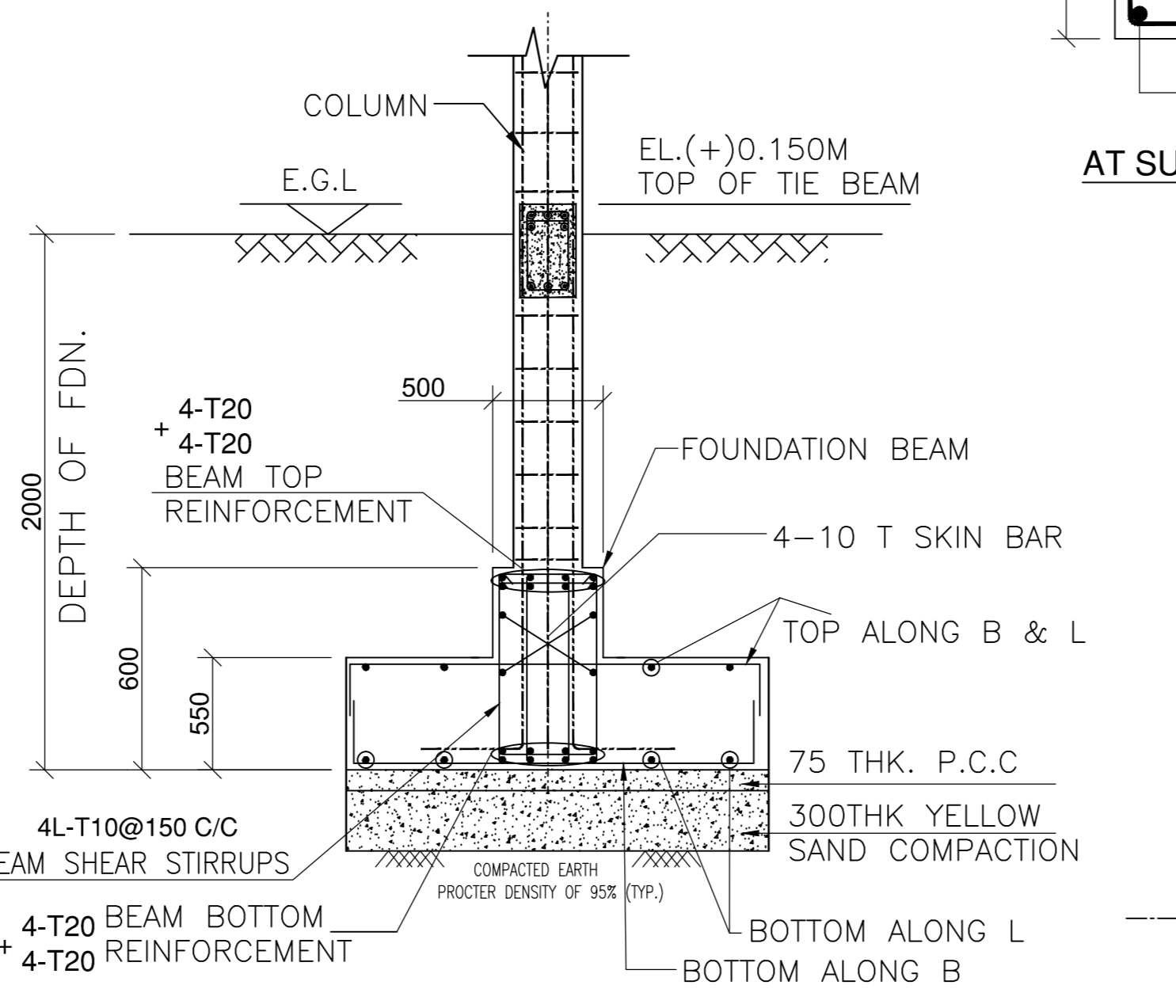
TYPICAL DETAIL OF COLUMN REINFORCEMENT



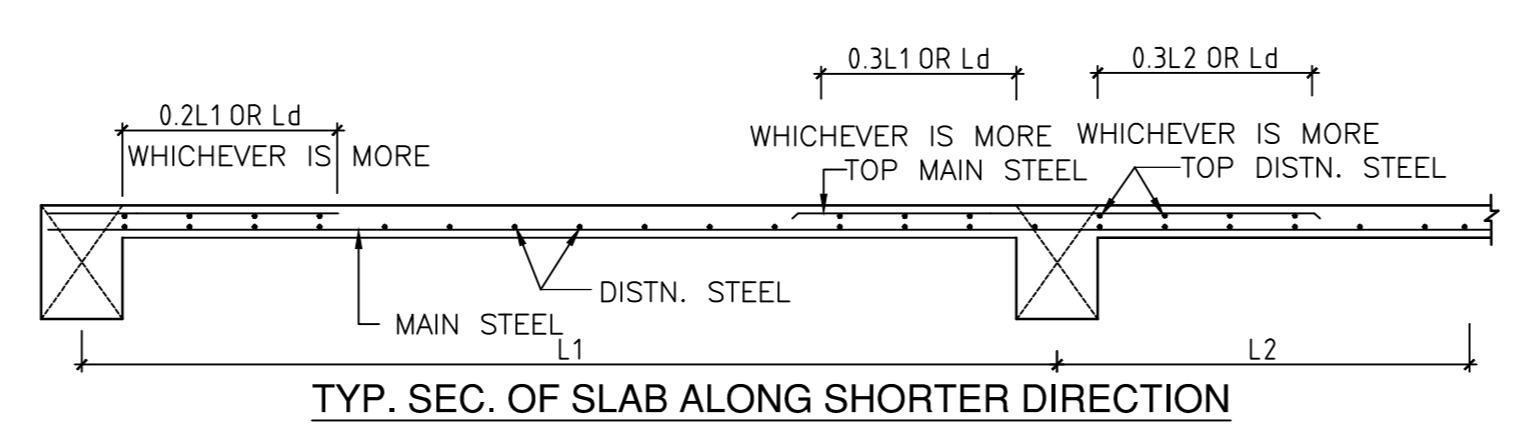
TYPICAL ISOLATE FOOTING PLAN



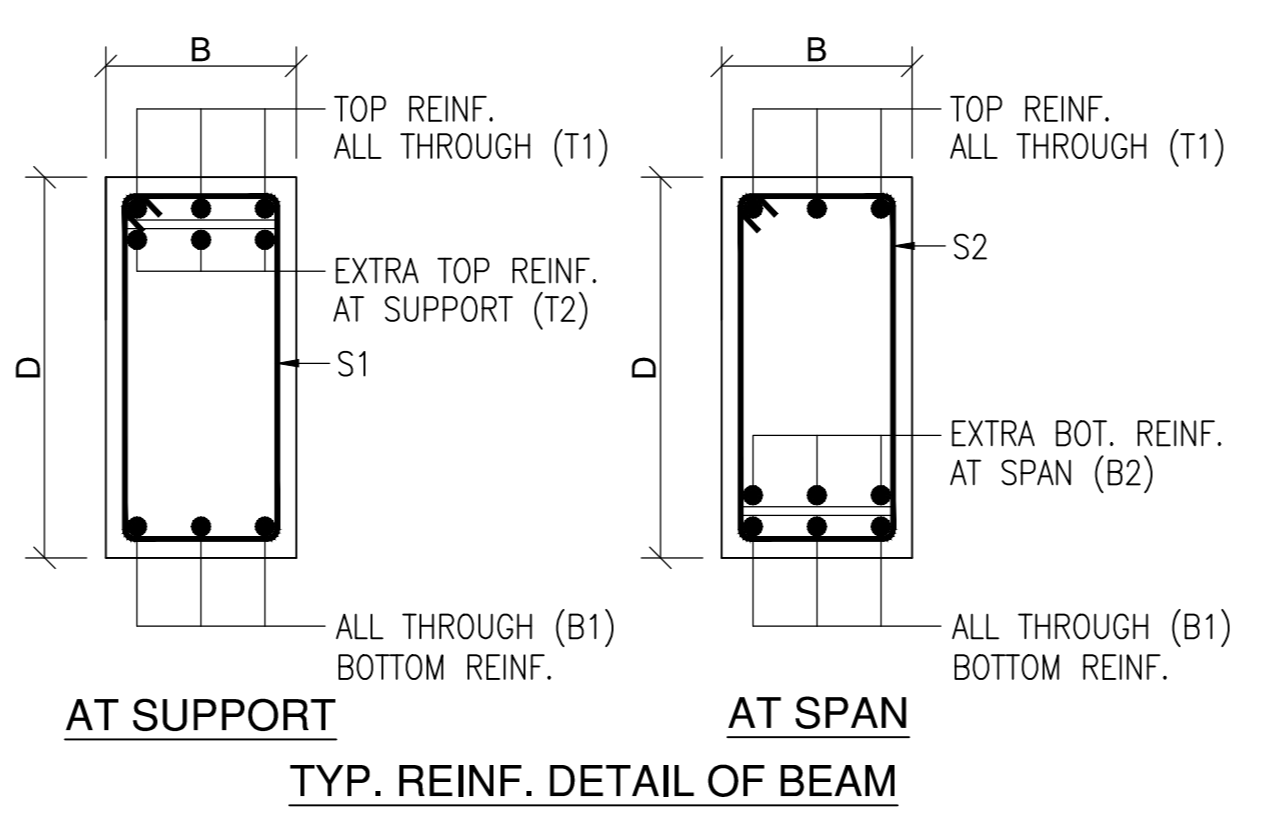
BEAM COLUMN JUNCTION ISOMETRIC VIEW



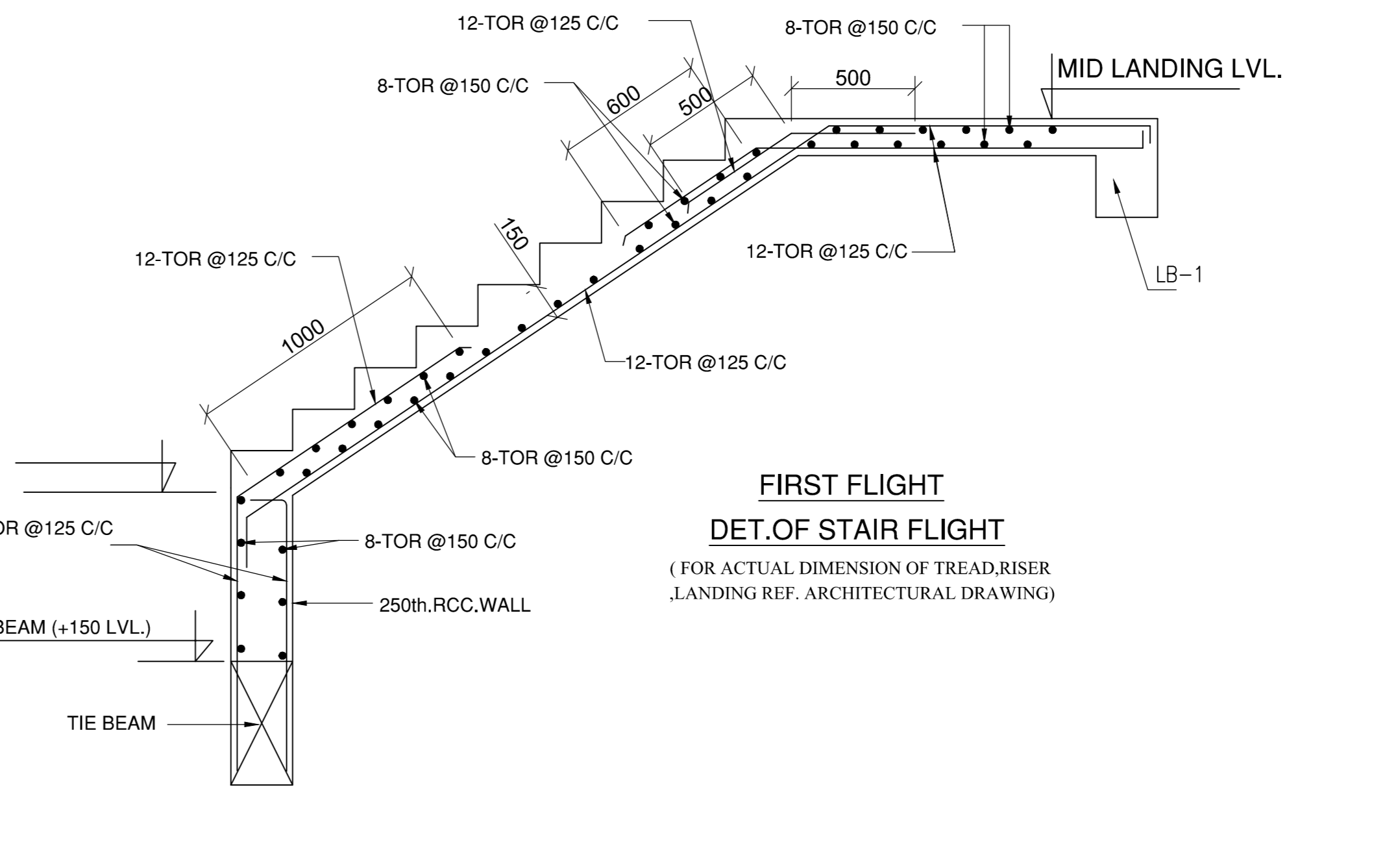
CROSS SECTION OF STRIP FOOTING



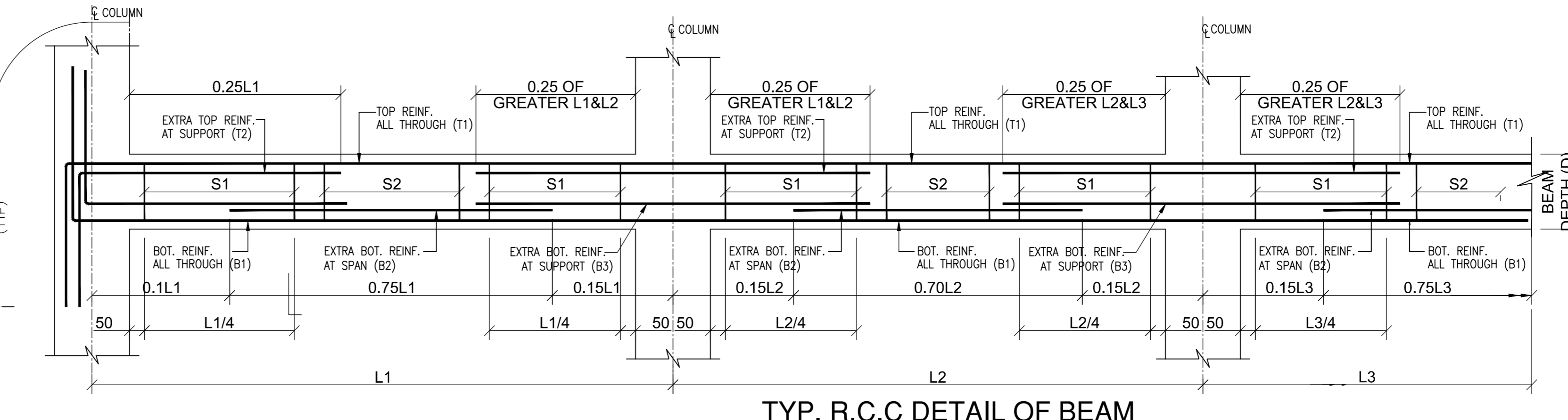
TYP. SEC. OF SLAB ALONG SHORTER DIRECTION



TYP. REINF. DETAIL OF BEAM



DET. OF STAIR FLIGHT  
(FOR ACTUAL DIMENSION OF TREAD, RISER  
LANDING REF. ARCHITECTURAL DRAWING)



TYP. R.C.C DETAIL OF BEAM

**NOTES :-**

**A. GENERAL:**

- ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRE.
- DRAWINGS SHALL NOT BE SCALED. ONLY WRITTEN DIMENSIONS ARE TO BE USED.
- ALL FOUNDATIONS SHALL BE REST ON VIRGIN SOIL OR ON THOROUGHLY SOIL AS PER SPECIFICATION. WHENEVER THE SOIL CONTAIN THE LOOSE SOIL POCKETS, THE SAME SHALL BE REMOVED AND REFILLED WITH THE P.C.C.

**B. CONCRETE WORK:**

- ALL CONCRETE WORK SHALL BE AS PER IS:456 (LATEST REVISION)
- ALL STRUCTURAL REINFORCED CONCRETE WORK SHALL BE WITH DESIGN MIX CONCRETE OF GRADE AS FOLLOWS UNLESS NOTED OTHERWISE.
  - THE GRADE CONC. FOR SUB & SUPER STRUCTURES ARE **M-25**
- PLAIN CONCRETE WORK SHALL BE OF THE FOLLOWING GRADES OF NOMINAL MIX CONCRETE:
  - 1:5:10 PLUM CONCRETE FOR FILLING CONCRETE UNDER FOUNDATION (WITH MAXIMUM AGGREGATE SIZE OF 40 MM.) AND AS , PIT, TRENCHES ETC.
  - M-15 FOR LEAN CONCRETE BELOW FOUNDATIONS & PLINTH PROTECTION
- THE MINIMUM CLEAR COVER FOR PROTECTION OF MAIN REINFORCEMENT SHALL BE AS FOLLOWS

| STRUCTURAL ELEMENT | COVER |        |       |
|--------------------|-------|--------|-------|
|                    | TOP   | BOTTOM | SIDES |
| a). PLINTH BEAM    | 25    | 40     | 40    |
| b). COLUMNS        | 50    | -      | 40    |
| c). SLAB ON GRADE  | 20    | 25     | 25    |
| d). FLOOR BEAM     | 25    | 25     | 25    |
| e). SLAB           | 20    | 20     | 20    |
| f). FOUNDATION     | 50    | 50     | 50    |

**C. REINFORCEMENTS:**

- ALL REINFORCING STEEL SHALL BE OF TESTED QUALITY.
- (a). HIGH YIELD STRENGTH DEFORMED BAR REINFORCEMENT (YIELD STRESS  $F_y = 500 \text{ N/MM}^2$ ) SHALL CONFORM TO IS:1786. (LATEST REVISION)
- LAPS AND SPLICES OF REINFORCEMENT TO SUIT AVAILABLE LENGTH OF BARS SHALL BE MADE AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER AT SITE.
- ALL HOOKS, BENDS, LAPS AND SPLICES SHALL BE AS PER IS:2502.
- THE LAP/ANCHORAGE LENGTH OF BARS OF DIAMETER 'D' SHALL BE AS FOLLOWS:-

| CONCRETE GRADE | DEFORMED BARS |             |
|----------------|---------------|-------------|
|                | TENSION       | COMPRESSION |
| M-25           | 50XD          | 40XD        |

- LAPPING OF BARS SHALL BE SUITABLY STAGGERED AND IN NO CASE MORE THAN 50% BARS SHALL BE LAPPED AT ANY SECTION.
- LAPPING OF BARS FOR BEAM AND SLAB SHALL BE AVOIDED IN THE MAXIMUM TENSION ZONES.
- DEVELOPMENT LENGTH ( $L_d$ ) =  $50 \times \text{DIA}$  OF THE BAR +  $10 \times \text{DIA}$  OF THE BAR.
- ALL SPACER BARS ARE 25DIA @ 450 C/C AND TO BE PROVIDED WHEREVER REQUIRED.

**NOTE:**

THIS BUILDING HAS BEEN DESIGNED FOR G+2.  
ALL EXTERNAL BRICK WALLS ARE 200MM THICK USED DENSITY  $20 \text{ kN/m}^3$   
ALL INTERNAL BRICK WALLS ARE 125MM THICK USED DENSITY  $20 \text{ kN/m}^3$

**LOAD CONSIDERED NOTE:**

FLOOR LIVE LOAD =  $2.0 \text{ kN/m}^2$  (RESIDENTIAL)  
ACCESS ROOF LIVE LOAD =  $1.5 \text{ kN/m}^2$   
NON ACCESS ROOF LIVE LOAD =  $0.75 \text{ kN/m}^2$   
WATER TANK WITH WATER DEAD LOAD =  $2.5 \text{ kN/m}^2$

**PROJECT TITLE :**

PROPOSED G+2 STORIED (RESIDENTIAL VILLA) IN THE NAME & STYLE " ITHEMBA DEVELOPMENTS LTD. " DIST - HOOGHLY, MOUZA & P.S. - CHANDERNAGORE, J.L. NO.- 1, C.S. & R.S.DAG NO.- 462, R.S.KHATIAN NO.- 289, L.R. DAG NO.- 786, L.R. KHATIAN NO-3235,3236,3231,3232,3233,3234 SHEET NO.- 11 AT CHANDERNAGORE STATION ROAD, WARD NO.- 10, UNDER CHANDERNAGORE MUNICIPAL CORPORATION.

DEMOLISHING ORDER NO.-  
BD-6 / 2023 / 2024 / 50

DATE :- 04.01.2024

**DECLARATION OF STRUCTURAL ENGINEER**

Certified that the Structural Analysis & Design of PROPOSED G+2 STORIED (RESIDENTIAL VILLA) IN THE NAME & STYLE " ITHEMBA DEVELOPMENTS LTD. " has been prepared by me in the following land schedule: DIST - HOOGHLY, MOUZA & P.S. - CHANDERNAGORE, J.L. NO.- 1, C.S. & R.S.DAG NO.- 462, R.S.KHATIAN NO.- 289, L.R. DAG NO.- 786, L.R. KHATIAN NO-3235,3236,3231,3232,3233,3234 SHEET NO.- 11 AT CHANDERNAGORE STATION ROAD, WARD NO.- 10, UNDER CHANDERNAGORE MUNICIPAL CORPORATION.

It is also certified that the said Structural Analysis has been prepared considering all possible loads including seismic loads and as per latest relevant IS Codes and the proposed structure is safe in all respect.

SIGNATURE OF STRUCTURAL ENGINEER

DRAWING TITLE:-  
MARKING AND DETAILS OF COLUMN, FOOTING,STAIR,BEAM & SLAB

PROJECT NO:-23\_90/NM DRAWING NO: STR-01 REV:R0