



Office of Executive Engineer,  
Structural & Quality Control Cell,  
Tamil Nadu Urban Habitat  
Development Board,  
No.5, Kamarajar Salai, Chennai – 5.

**STABILITY CERTIFICATE**

**Date: 22.12.2025**

1. The detailed engineering and structure design of the proposed construction of high rise group development with 5 blocks for residential use in Block A: Partial Stilt + 11 floors residential use building with 414 dwelling units, Block No. B & C: Partial Stilt + 11 floors residential use building with 370 dwelling units, Block D: Partial Stilt + 11 floors residential use building with 184 dwelling units, Block E: Partial Stilt + 11 floors residential use building with 162 dwelling units, totally 1500 dwelling units at East Cemetery Road, West Cemetery Road & South Cemetery Road, comprised in S.No:1651/2pt, Block No. 23, Ward- 51 Of Tondiorpet Village , Fort Tondiorpet Taluk, Chennai District, within the limits of Greater Chennai Corporation, Tamil Nadu has been done by me/us based on the report of geotechnical investigation (soil test) done by Anna University, Chennai Report, Job No. SM&FE 291/Consultancy/2024, Dated 24.05.2024 & SM&FE/291(a)/Consultancy/2024, Dated 30.08.2024 and considering the functional requirement of the building.

2. It is certified that among other factors, the proposed building has been designed to resist earthquake. I/We have checked various parameters and found that the proposed building would be safe.

3. I/We further certify that:

(i) The minimum grade of concrete is M30.

(ii) The design and analysis has been done using the code of practice for plain and reinforced concrete as per IS 456:2000, live load 2 KN/m<sup>2</sup> as per IS 875 Part II and designed for earthquake resistant structure as per IS Code 1893 (Part 1):2016.

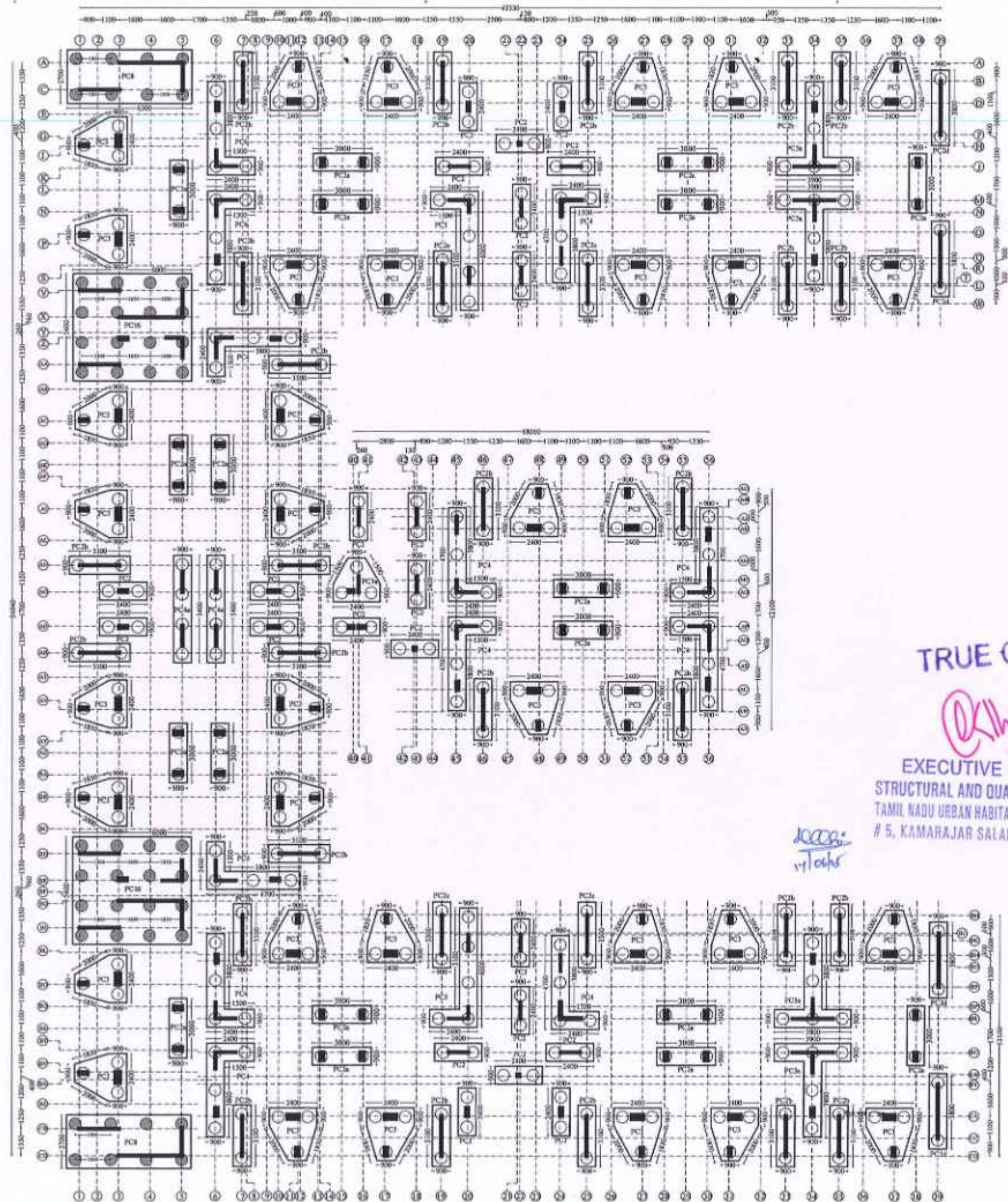
4. The building will be safe and sound when used for the purpose for which it is designed.

*[Signature]*  
22/12/2025

**R. VENKATESAN, M.E.,**  
Assistant Engineer  
Registered Structural Engineer Grade-I (SE)  
Registration No: SE/I/2024/4/0073  
Tamil Nadu Urban Habitat Development Board  
No. 5, Kamarajar Salai, Chennai-600 005.



# PLAN AT PILE CAP LEVEL



## NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS11920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50  $\phi$ .
- Anchorage of column bars into the footings shall not be less than 50  $\phi$ .
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
PLAN AT PILE CAP LEVEL.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-A/02.

REVISION NO.:

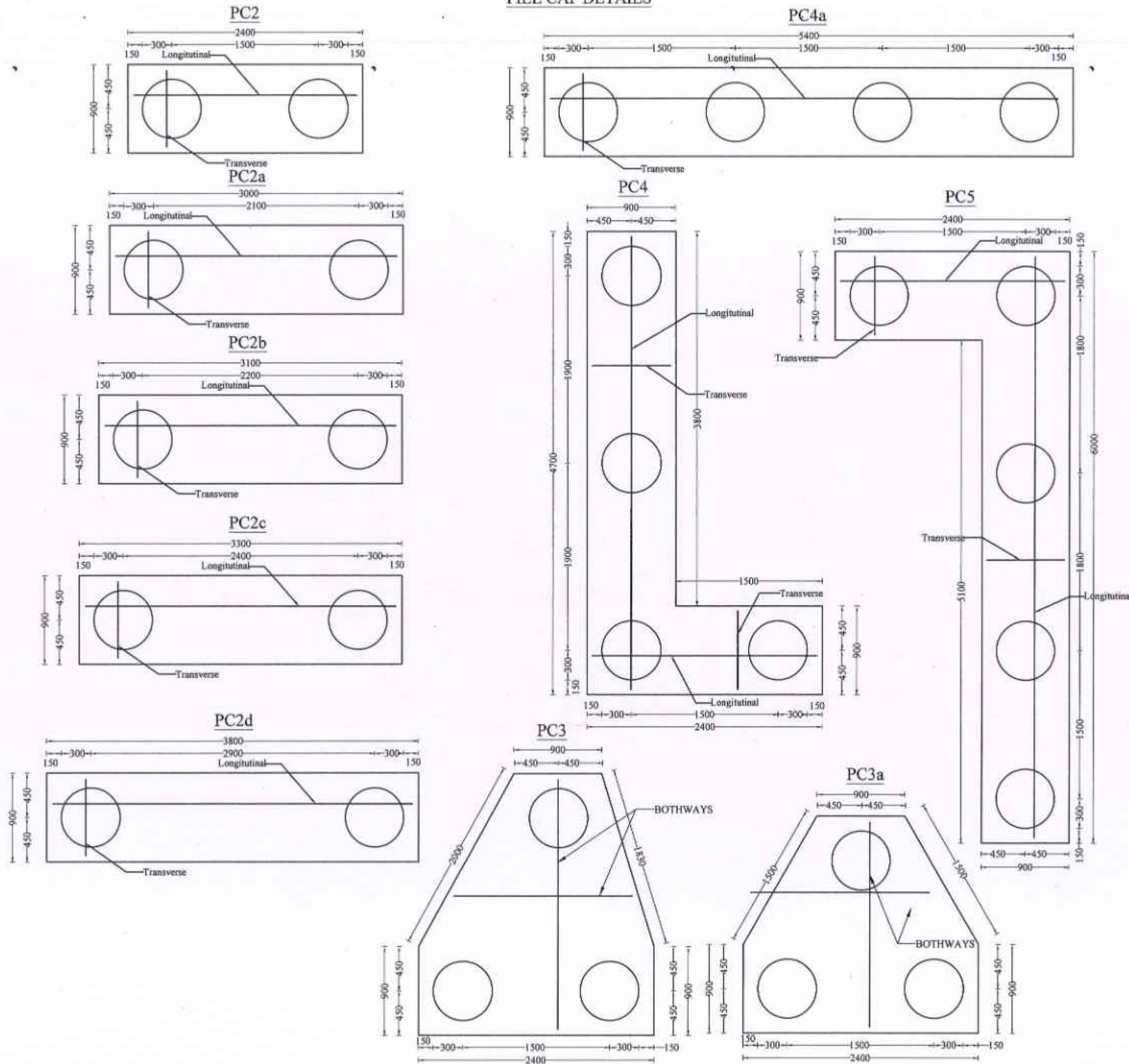
|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 16.06.2025  
Chief Engineer

STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.



## PILE CAP DETAILS



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- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
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- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
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  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lists to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
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**TRUE COPY**

**EXECUTIVE ENGINEER**

**STRUCTURAL AND QUALITY CONTROL CELL**  
**TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD**  
**# 5, KAMARAJAR SALAI, CHENNAI-600 005.**

**STRUCTURAL DETAILS**

**PROJECT:**  
**CONSTRUCTION OF 1500 NOS OF (PS+11)**  
**TENEMENTS AT EAST CEMENTRY ROAD,**  
**CHENNAI CORPORATION, Dn No.51, ZONE V.**

**TITLE:**  
**PILE CAP DETAILS .**

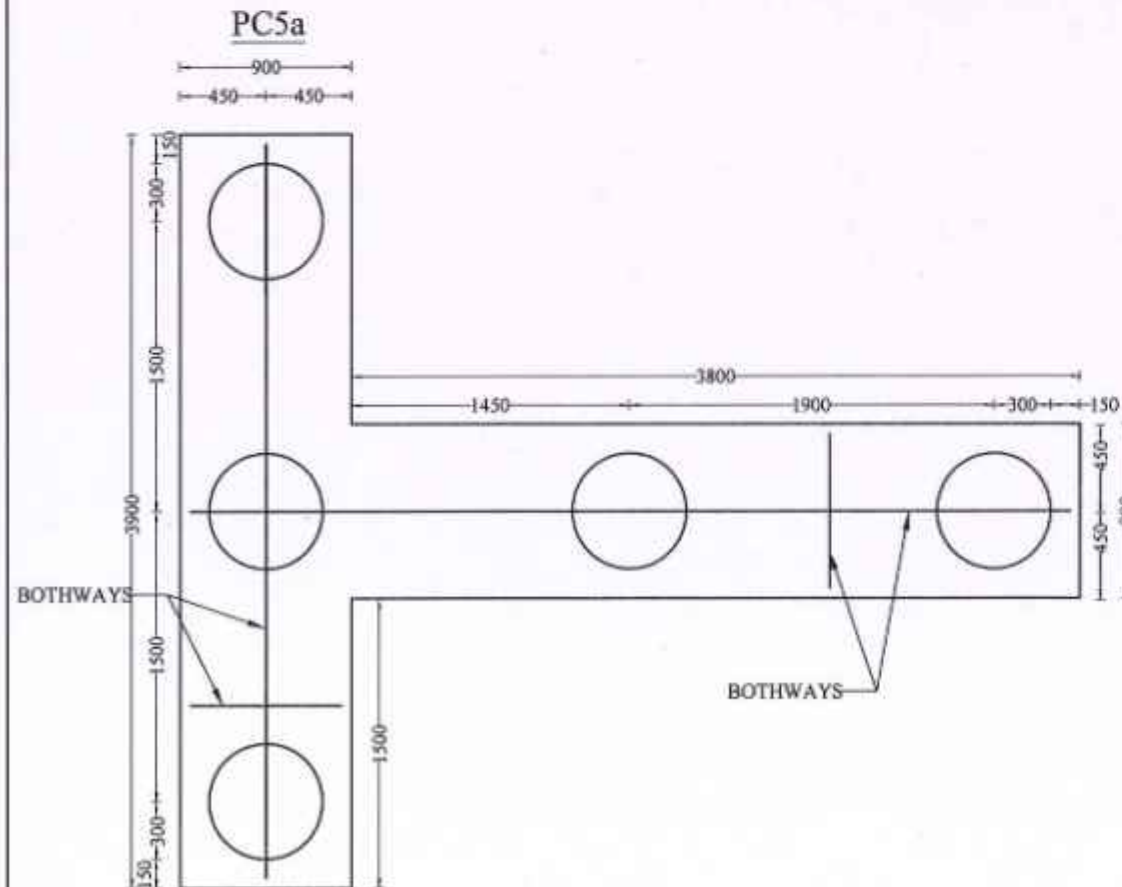
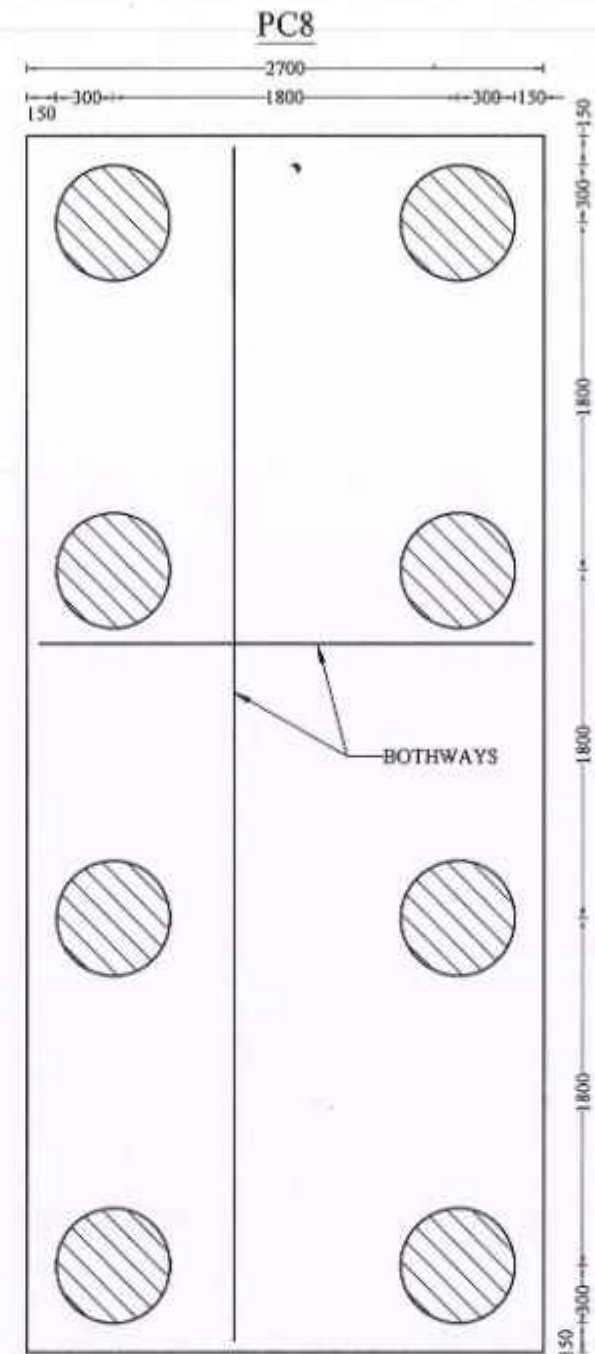
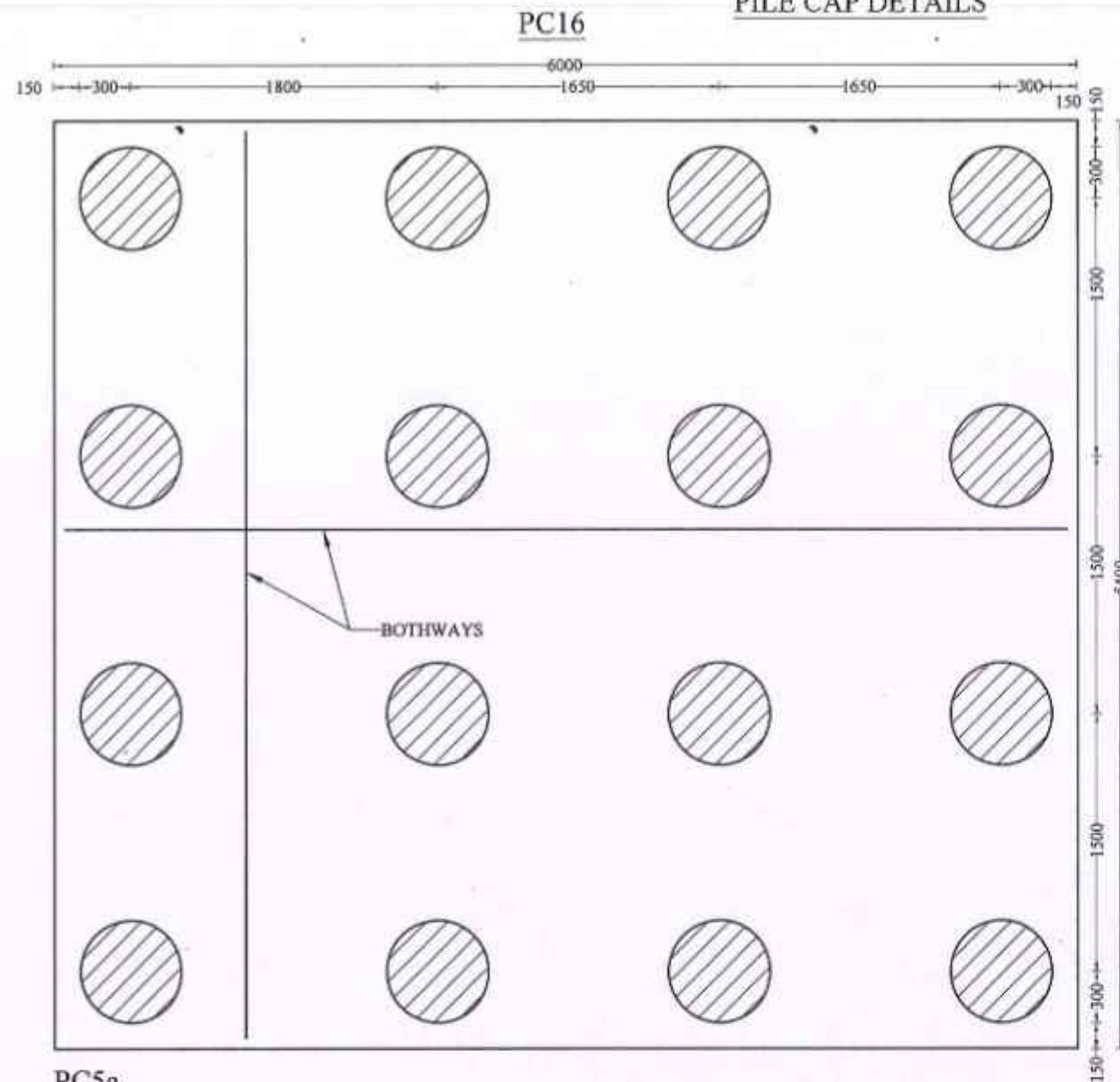
**TYPE DESIGN NO.:**

**DWG.NO.:** TNUHDB/EAST CEMENTRY ROAD-A/04.

**REVISION NO.:**

|                                                                                                                                                                                                                                                      |                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Assistant Engineer</b>                                                                                                                                                                                                                            | <b>Asst. Exe. Engineer</b> |
| <b>Executive Engineer</b>                                                                                                                                                                                                                            | <b>SE - North II</b>       |
| sd.xxxx 16.06.2025<br>Chief Engineer                                                                                                                                                                                                                 |                            |
|  <b>STRUCTURAL &amp; QUALITY CONTROL CELL</b><br><b>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD</b><br><b>NO.5, KAMARAJAR SALAI</b><br><b>CHENNAI - 600 005.</b> |                            |

# PILE CAP DETAILS



| PILE CAP SCHEDULE |                    |        |       |                            |                         |                          |                        |
|-------------------|--------------------|--------|-------|----------------------------|-------------------------|--------------------------|------------------------|
| PILE CAP ID       | PILE CAP SIZE (mm) |        |       | LONGITUDINAL REINFORCEMENT |                         | TRANSVERSE REINFORCEMENT | BURSTING REINFORCEMENT |
|                   | LENGTH             | BREATH | DEPTH | TOP                        | BOTTOM                  |                          |                        |
| PC2               | 2400               | 900    | 1200  | 8-Nos #16                  | 8-Nos #20               | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2a              | 3000               | 900    | 1200  | 8-Nos #16                  | 6-Nos #20               | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2b              | 3100               | 900    | 1200  | 8-Nos #16                  | 6-Nos #20               | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2c              | 3300               | 900    | 1200  | 8-Nos #16                  | 6-Nos #20               | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2d              | 3800               | 900    | 1200  | 8-Nos #20                  | 8-Nos #20               | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC3               | Refer Drawing      |        | 1200  | #16@125mmc/c (Bothways)    | #20@125mmc/c (Bothways) | --                       | 5-Nos #12              |
| PC3a              | Refer Drawing      |        | 1200  | #16@125mmc/c (Bothways)    | #20@125mmc/c (Bothways) | --                       | 5-Nos #12              |
| PC4               | Refer Drawing      |        | 1200  | 7-Nos #20                  | 8-Nos #20               | 4L- #12 @150 c/c         | 5-Nos #12              |
| PC4a              | 5400               | 900    | 1200  | 7-Nos #20                  | 8-Nos #20               | 4L- #12 @150 c/c         | 5-Nos #12              |
| PC5               | Refer Drawing      |        | 1200  | 7-Nos #20                  | 8-Nos #20               | 4L- #12 @150 c/c         | 5-Nos #12              |
| PC5a              | Refer Drawing      |        | 1400  | 8-Nos #20                  | 8-Nos #25               | 4L- #12 @150 c/c         | 6-Nos #12              |
| PC8               | 6300               | 2700   | 1400  | #20@100mmc/c (Bothways)    | #20@100mmc/c (Bothways) | --                       | 6-Nos #12              |
| PC16              | 6000               | 5400   | 1400  | #20@100mmc/c (Bothways)    | #20@100mmc/c (Bothways) | --                       | 6-Nos #12              |

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**TRUE COPY**  
*[Signature]*  
**EXECUTIVE ENGINEER**  
 STRUCTURAL AND QUALITY CONTROL CELL  
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
 # 5, KAMARAJAR SALAI, CHENNAI-600 005.

## STRUCTURAL DETAILS

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 CONSTRUCTION OF 1500 NOS OF (PS+11)  
 TENEMENTS AT EAST CEMENTRY ROAD,  
 CHENNAI CORPORATION, Dn No.51, ZONE V.

**TITLE:**  
 PILE CAP DETAILS.

**TYPE DESIGN NO.:**

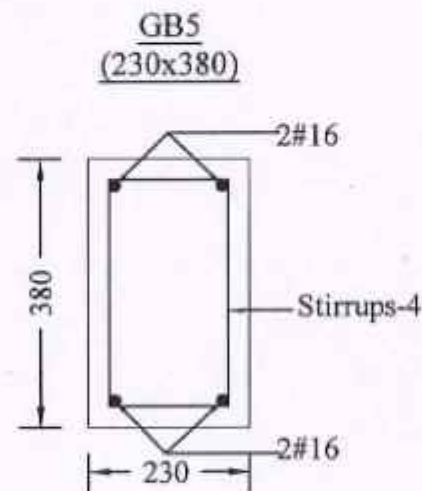
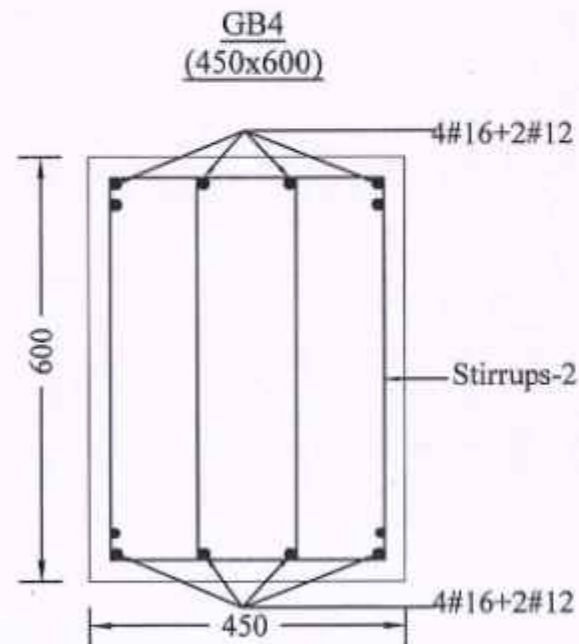
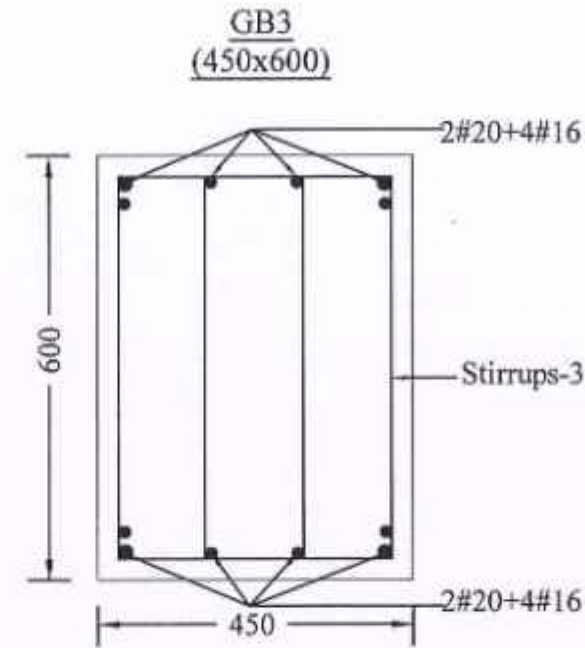
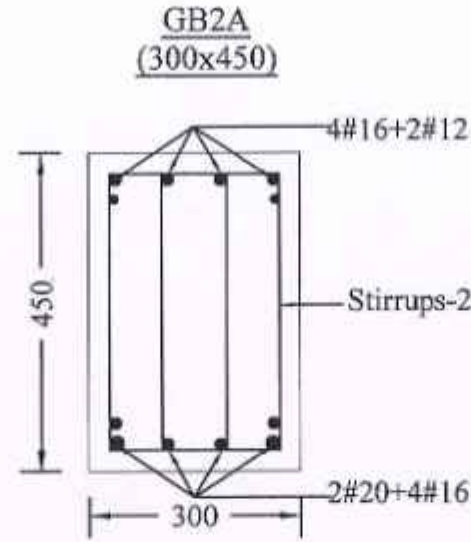
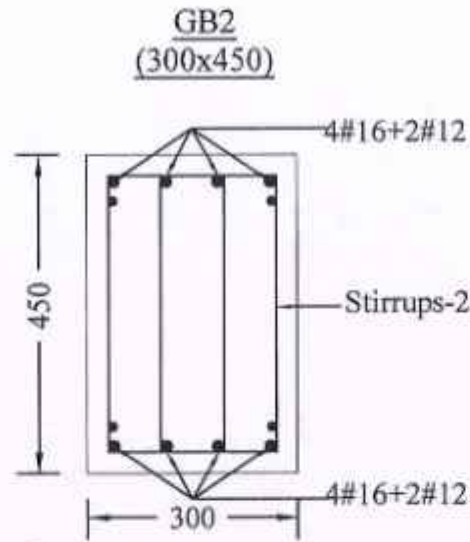
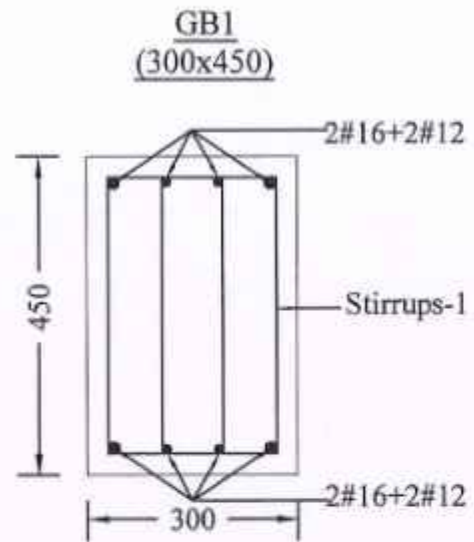
**DWG.NO.:** TNUHDB/EAST CEMENTRY ROAD-A/05.

**REVISION NO.:**

|                                                                                                                                                                                                                                                      |                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Assistant Engineer</b>                                                                                                                                                                                                                            | <b>Asst. Exe. Engineer</b> |
| <b>Executive Engineer</b>                                                                                                                                                                                                                            | <b>SE - North II</b>       |
| sd.xxxx 16.06.2025<br>Chief Engineer                                                                                                                                                                                                                 |                            |
|  <b>STRUCTURAL &amp; QUALITY CONTROL CELL</b><br><b>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD</b><br><b>NO.5, KAMARAJAR SALAI</b><br><b>CHENNAI - 600 005.</b> |                            |



## GRADE BEAM DETAILS



### NOTE :

- 1) Stirrups-1 - 4L#10mm Stirrups @ 150mm c/c throughout the length.
- 2) Stirrups-2 - 4L#10mm Stirrups @ 100mm c/c throughout the length.
- 3) Stirrups-3 - 4L#12mm Stirrups @ 100mm c/c throughout the length.
- 4) Stirrups-4 - 2L#10mm Stirrups @ 100mm c/c for 700 mm length on all side from pilecap face and the rest at 2L#10 @ 150mm c/c.

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## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
GRADE BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-A/07.

REVISION NO.:

|                                                                                                                                                                                                                       |                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Assistant Engineer                                                                                                                                                                                                    | Asst. Exe. Engineer |
| Executive Engineer                                                                                                                                                                                                    | SE - North II       |
| sd.xxxx 16.06.2025<br>Chief Engineer                                                                                                                                                                                  |                     |
|  STRUCTURAL & QUALITY CONTROL CELL<br>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD<br>NO.5, KAMARAJAR SALAI,<br>CHENNAI - 600 005. |                     |

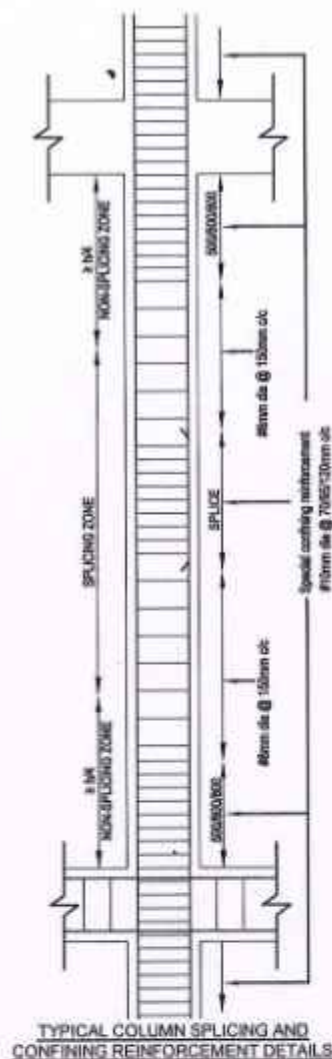
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EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI, CHENNAI-600 005





# SCHEDULE OF COLUMNS

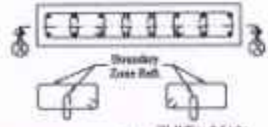


| Sl.No. | Column Marking | No of Columns | Size              |                   | B.G.L. to Stilt Floor Column Reinforcement Details |                                                                                                                                                                                            |               | Tie Profile | Above Stilt Floor Column Reinforcement Details |                                                                                                                     |               | Tie Profile |
|--------|----------------|---------------|-------------------|-------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------|-------------|
|        |                |               | Up to Stilt Floor | Above Stilt Floor | Column Verticals                                   | Lateral Tie                                                                                                                                                                                | Cross Section |             | Column Verticals                               | Lateral Tie                                                                                                         | Cross Section |             |
| 1.     | C1             | 02            | 300 x 450         | 300 x 450         | # 16 - 6 Nos<br>+<br># 12 - 4 Nos                  | 1) Up to Plinth Beam:<br>#10 @ 70 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c   |               |             | # 12 - 6 Nos<br>+<br># 16 - 4 Nos              | #10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 2.     | C2             | 01            | 300 x 350         | 300 x 350         | #16 - 8 Nos<br>+<br>#12 - 4 Nos                    | 1) Up to Plinth Beam:<br>#10 @ 70 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 70 mm c/c for 500 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c   |               |             | #16 - 8 Nos<br>+<br>#12 - 4 Nos                | #10 @ 70 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 3.     | C3             | 55            | 300 x 600         | 300 x 600         | # 16 - 12 Nos                                      | 1) Up to Plinth Beam:<br>#10 @ 95 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c   |               |             | # 16 - 12 Nos                                  | #10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 4.     | C3A            | 08            | 300 x 600         | 300 x 600         | #20 - 6 Nos<br>+<br>#16 - 6 Nos                    | 1) Up to Plinth Beam:<br>#10 @ 95 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c   |               |             | #20 - 6 Nos<br>+<br>#16 - 6 Nos                | #10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 5.     | C4             | 32            | 350 x 600         | 350 x 600         | # 20 - 8Nos<br>+<br>#16 - 4Nos                     | 1) Up to Plinth Beam:<br>#10 @ 95 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c   |               |             | # 20 - 8Nos<br>+<br>#16 - 4Nos                 | #10 @ 95 mm c/c for 600 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 6.     | C5             | 04            | 300 x 750         | 300 x 750         | # 20 - 4Nos<br>+<br>#16 - 8Nos                     | 1) Up to Plinth Beam:<br>#10 @ 95 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 95 mm c/c for 800 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c   |               |             | # 20 - 4Nos<br>+<br>#16 - 8Nos                 | #10 @ 95 mm c/c for 800 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 7.     | C6             | 36            | 400 x 750         | 300 x 750         | # 20 - 12Nos                                       | 1) Up to Plinth Beam:<br>#10 @ 120 mm c/c<br>2) Above Plinth Beam:<br>#10 @ 120 mm c/c for 800 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             | # 20 - 4Nos<br>+<br>#16 - 8Nos                 | #10 @ 95 mm c/c for 800 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c |               |             |
| 8.     | C7             | 03            | 300 x 300         | 300 x 300         | # 16 - 4Nos<br>+<br>#12 - 4Nos                     | 1) Up to Plinth Beam:<br>#8 @ 75 mm c/c<br>2) Above Plinth Beam:<br>#8 @ 75 mm c/c for 450 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c     |               |             | # 16 - 4Nos<br>+<br>#12 - 4Nos                 | #8 @ 75 mm c/c for 450 mm at top and bottom near beam - column junction & lapping zone and the rest #8 @ 150mm c/c  |               |             |

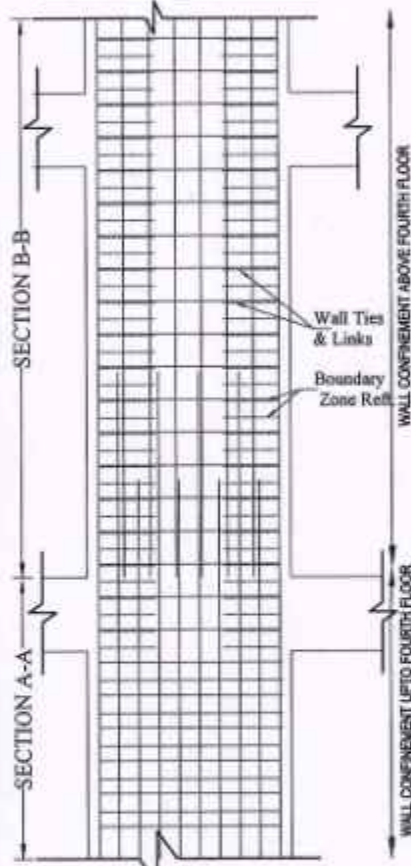
NOTE:  
1.

**TYPICAL SHEAR WALL  
CONFINING REINFORCEMENT  
DETAILS**

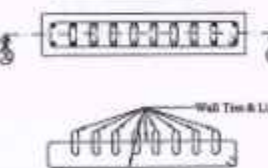
**SECTION B-B**



**DETAILS @ SECTION X-X**

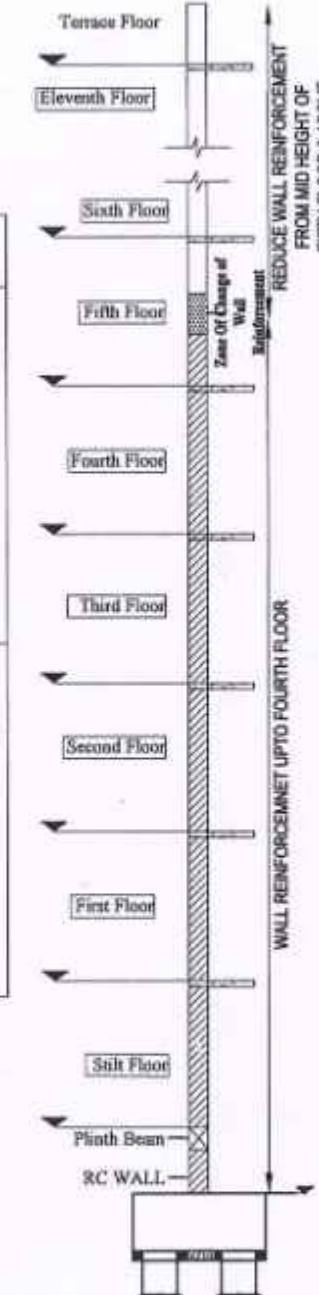


**SECTION A-A**



**SHEAR WALL DETAILS-1**

| Curtailments Levels                                                                           | SW1 (08 Nos)                                   | SW2 (05 Nos)                                   | SW3 (8 Nos)                                    | SW4 (36 Nos)                                   |
|-----------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) | <p>• - 12mm (12 Nos)<br/>• - 10mm (04 Nos)</p> | <p>• - 12mm (08 Nos)<br/>• - 10mm (10 Nos)</p> | <p>• - 12mm (12 Nos)<br/>• - 10mm (10 Nos)</p> | <p>• - 12mm (16 Nos)<br/>• - 10mm (26 Nos)</p> |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  | <p>• - 16mm (08 Nos)<br/>• - 12mm (12 Nos)</p> | <p>• - 16mm (20 Nos)</p>                       | <p>• - 16mm (12 Nos)<br/>• - 12mm (12 Nos)</p> | <p>• - 16mm (32 Nos)<br/>• - 12mm (12 Nos)</p> |



**NOTE :**

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

**STRUCTURAL DETAILS**

**PROJECT:**  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

**TITLE:**  
SHEAR WALL DETAILS-1.

**TYPE DESIGN NO.:**

**DWG.NO.:** TNUHDB/EAST CEMENTRY ROAD-A/11.

**REVISION NO.:**

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

TRUE COPY

*Signature*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
KAMARAJAR SALAI, CHENNAI-600 005

*Signature*  
18/06/25

## SHEAR WALL DETAILS-2

| Curtailments Levels                                                                           | SW5 (04 Nos) | SW6 (08 Nos) | SW7 (02 Nos) |
|-----------------------------------------------------------------------------------------------|--------------|--------------|--------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |              |              |              |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |              |              |              |

### NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 

|                             |         |
|-----------------------------|---------|
| (a) Pile & Pile Cap         | - 60 mm |
| (b) Column/Shear wall       | - 40 mm |
| (c) Floor and roof beam     | - 30 mm |
| (d) Slab                    | - 25 mm |
| (e) Water Tank Walls & Slab | - 30 mm |
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
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### STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11) TENEMENTS AT  
EAST CEMENTRY ROAD, CHENNAI CORPORATION,  
Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-2.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-A/12.

REVISION NO.:

TRUE COPY  
*[Signature]*  
18/06/25  
**EXECUTIVE ENGINEER**  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
15, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

## SHEAR WALL DETAILS-3

| Curtailments Levels                                                                           | SW8 (02 Nos) |
|-----------------------------------------------------------------------------------------------|--------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |              |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |              |

| SW9 (4 No)                                                                                    |  |
|-----------------------------------------------------------------------------------------------|--|
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |  |
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |  |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut limits to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
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- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

### STRUCTURAL DETAILS

**PROJECT:**  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

**TITLE:**  
SHEAR WALL DETAILS-3.

**TYPE DESIGN NO.:**

**DWG.NO.:** TNUHDB/EAST CEMENTRY ROAD-A/13.

**REVISION NO.:**

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI, CHENNAI - 600 005.

TRUE COPY

*Signature*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005

1000  
17/06/25

## SHEAR WALL DETAILS-4

| Curtailments Levels                                                                           | SW10 (04 Nos) | SW11 (04 Nos) |
|-----------------------------------------------------------------------------------------------|---------------|---------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |               |               |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |               |               |

TRUE COPY

*Q. Thirum*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

### NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
 

|                             |         |
|-----------------------------|---------|
| (a) Pile & Pile Cap         | - 60 mm |
| (b) Column/Shear wall       | - 40 mm |
| (c) Floor and roof beam     | - 30 mm |
| (d) Slab                    | - 25 mm |
| (e) Water Tank Walls & Slab | - 30 mm |
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer atonce for review.
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- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

### STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11) TENEMENTS AT  
EAST CEMENTRYROAD,CHENNAI CORPORATION,  
Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-4.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-A/14.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



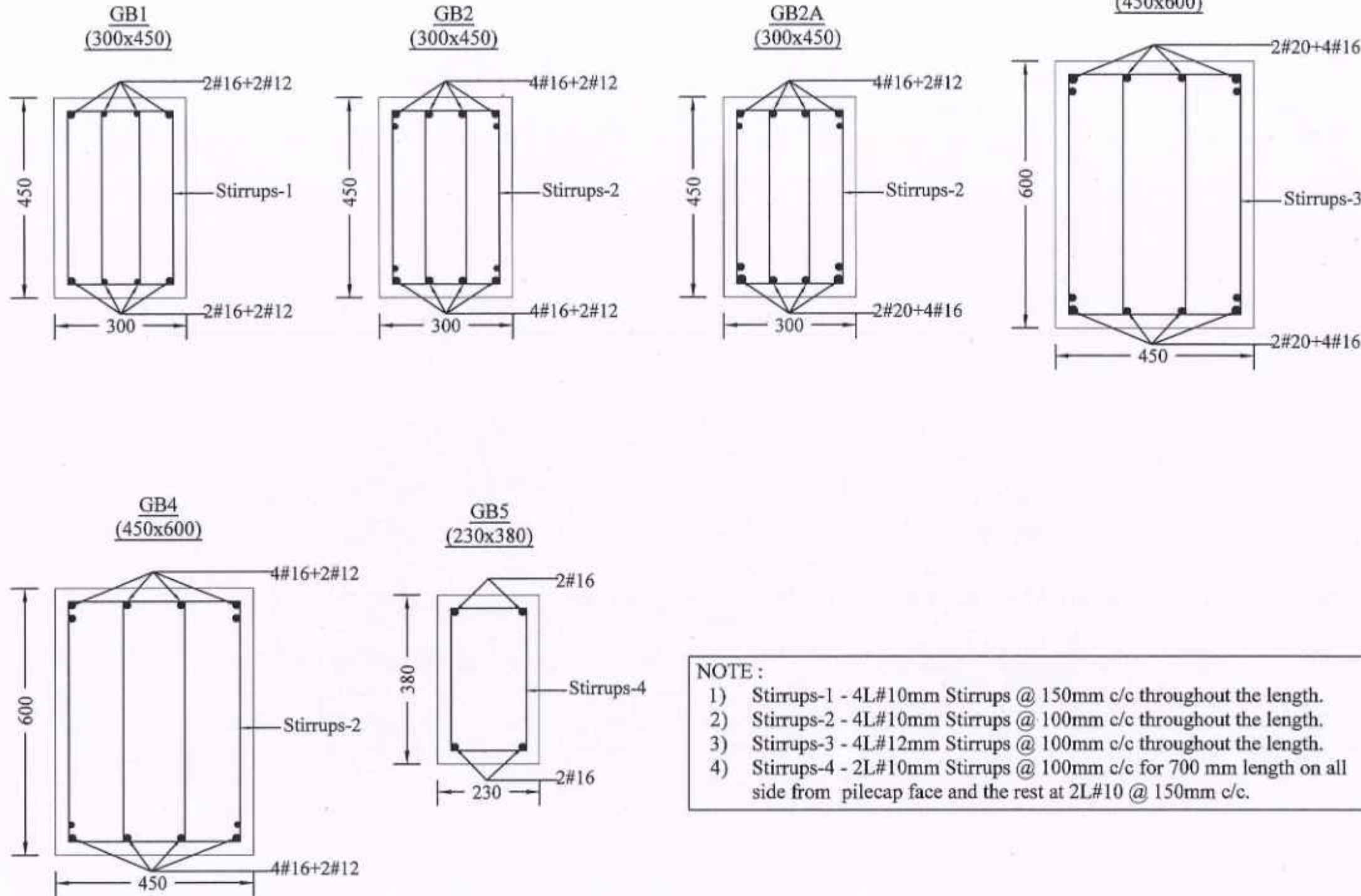
STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.







## GRADE BEAM DETAILS



### NOTE :

- 1) Stirrups-1 - 4L#10mm Stirrups @ 150mm c/c throughout the length.
- 2) Stirrups-2 - 4L#10mm Stirrups @ 100mm c/c throughout the length.
- 3) Stirrups-3 - 4L#12mm Stirrups @ 100mm c/c throughout the length.
- 4) Stirrups-4 - 2L#10mm Stirrups @ 100mm c/c for 700 mm length on all side from pilecap face and the rest at 2L#10 @ 150mm c/c.

### NOTE :

1. All the dimensions are in mm unless noted otherwise.
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3. All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
6. Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (PS+11) floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
  - (a) Pile & Pile Cap - 60 mm
  - (b) Column/Shear wall - 40 mm
  - (c) Floor and roof beam - 30 mm
  - (d) Slab - 25 mm
  - (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
16. Anchorage of column bars into the footings shall not be less than 50 Ø.
17. Field Engineer should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
18. Ground water quality has to be confirmed for suitability to construction work.
19. The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
20. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
21. The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
GRADE BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-B&C/07.

REVISION NO.: R1

|                                                                                                                                                                                                                      |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Assistant Engineer                                                                                                                                                                                                   | Asst. Exe. Engineer |
| Executive Engineer                                                                                                                                                                                                   | SE - North II       |
| sd.xxxx 16.06.2025<br>Chief Engineer                                                                                                                                                                                 |                     |
|  STRUCTURAL & QUALITY CONTROL CELL<br>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD<br>NO.5, KAMARAJAR SALAI<br>CHENNAI - 600 005. |                     |

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*Signature*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
KAMARAJAR SALAI, CHENNAI-600 005.

*Signature*  
18/06/25

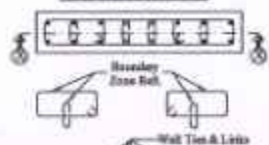




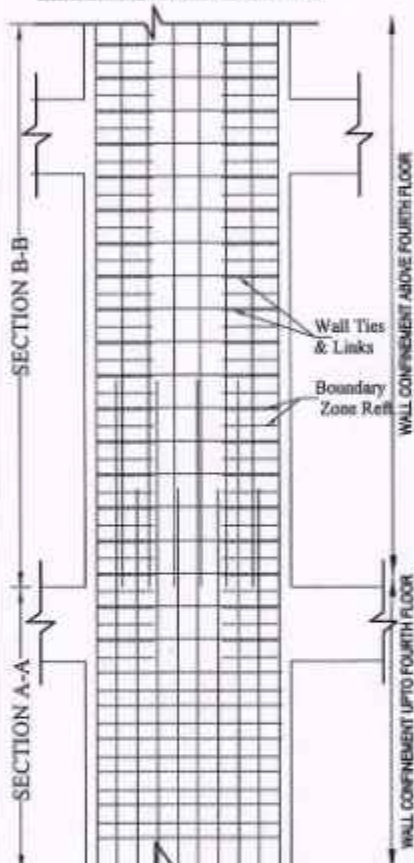


# TYPICAL SHEAR WALL CONFINING REINFORCEMENT DETAILS

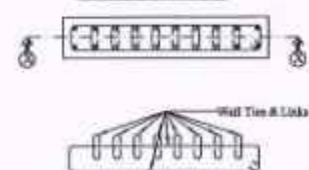
## SECTION B-B



## DETAILS @ SECTION X-X

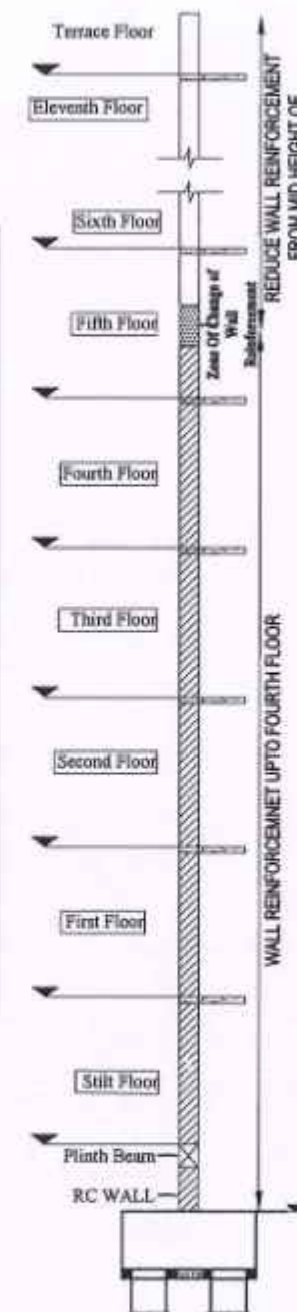


## SECTION A-A



## SHEAR WALL DETAILS-1

| Curtailments Levels                                                                                 | SW1 (08 Nos)                                   | SW2 (05 Nos)                                   | SW3 (8 Nos)                                    | SW4 (32 Nos)                                   |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at<br>mid height of<br>5 <sup>th</sup> floor) | <p>• - 12mm (12 Nos)<br/>• - 10mm (08 Nos)</p> | <p>• - 12mm (08 Nos)<br/>• - 10mm (10 Nos)</p> | <p>• - 12mm (12 Nos)<br/>• - 10mm (10 Nos)</p> | <p>• - 12mm (16 Nos)<br/>• - 10mm (26 Nos)</p> |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at<br>mid height of<br>5 <sup>th</sup> floor)  | <p>• - 16mm (08 Nos)<br/>• - 12mm (12 Nos)</p> | <p>• - 16mm (20 Nos)</p>                       | <p>• - 16mm (12 Nos)<br/>• - 12mm (12 Nos)</p> | <p>• - 16mm (12 Nos)<br/>• - 12mm (12 Nos)</p> |



## NOTE :

- All the dimensions are in mm unless noted otherwise.
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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be confirmed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-1.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-B&C/12.

REVISION NO.:

|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 16.06.2025  
Chief Engineer

STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, K

## SHEAR WALL DETAILS-2

| Curtailments Levels                                                                           | SW5 (04 Nos) | SW6 (08 Nos) | SW7 (06 Nos) |
|-----------------------------------------------------------------------------------------------|--------------|--------------|--------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |              |              |              |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |              |              |              |

### NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50  $\phi$ .
- Anchorage of column bars into the footings shall not be less than 50  $\phi$ .
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
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### STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11) TENEMENTS AT  
EAST CEMENTY ROAD, CHENNAI CORPORATION,  
Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-2.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTY ROAD-B&C/13.

REVISION NO.:R1

**TRUE COPY**

**EXECUTIVE ENGINEER**  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

## SHEAR WALL DETAILS-3

| Curtailments Levels                                                                           | SW8 (02 Nos) |
|-----------------------------------------------------------------------------------------------|--------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |              |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |              |

| SW9 (4 No)                                                                                    |  |
|-----------------------------------------------------------------------------------------------|--|
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |  |
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |  |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
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- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
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### STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-3.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-B&C/14.

REVISION NO.: R1

|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

TRUE COPY

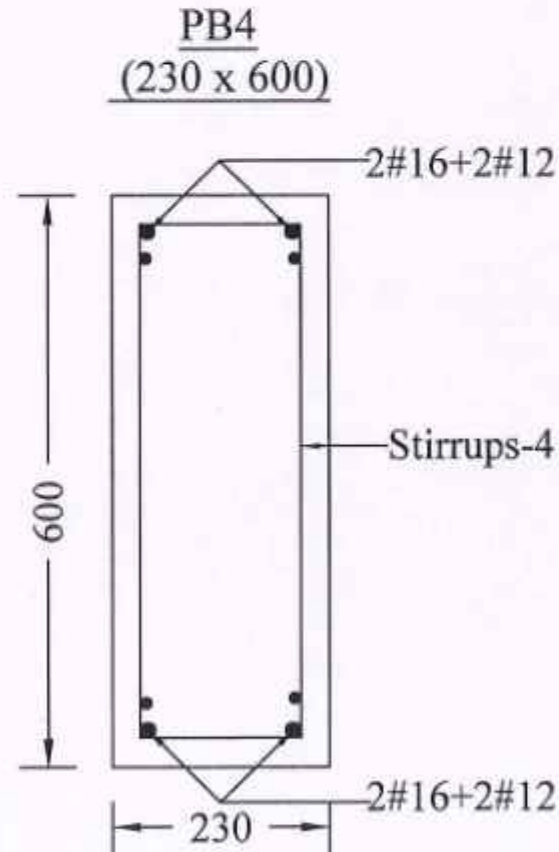
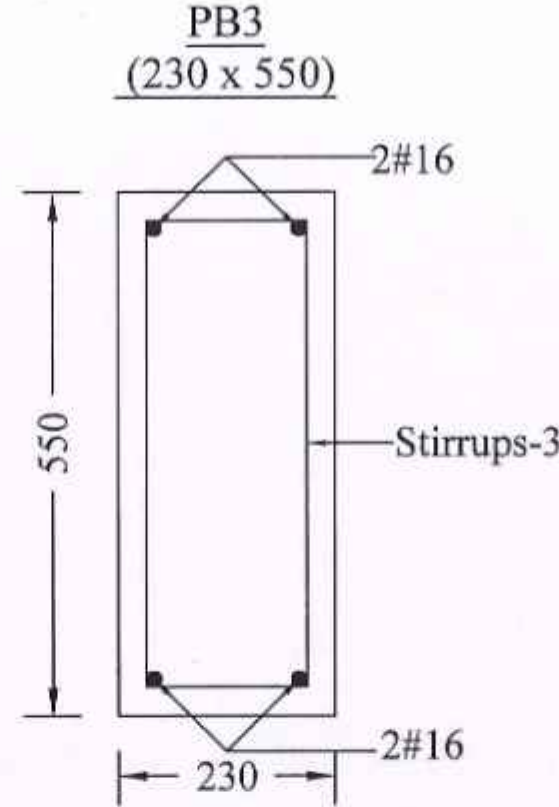
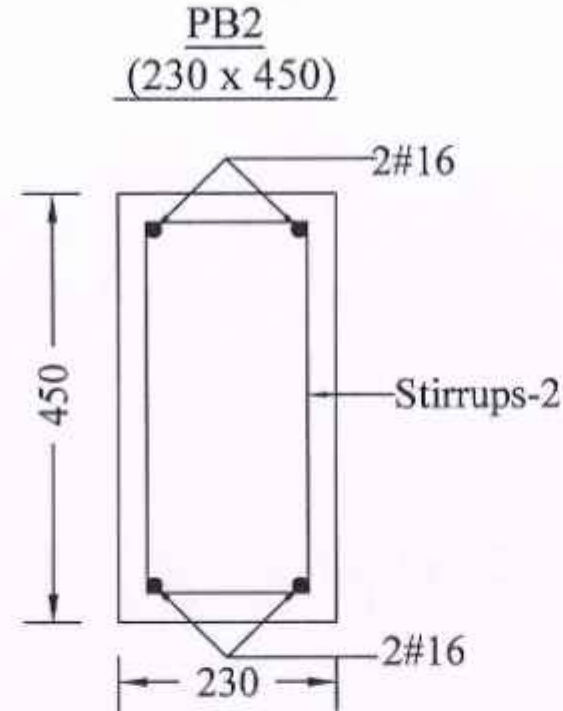
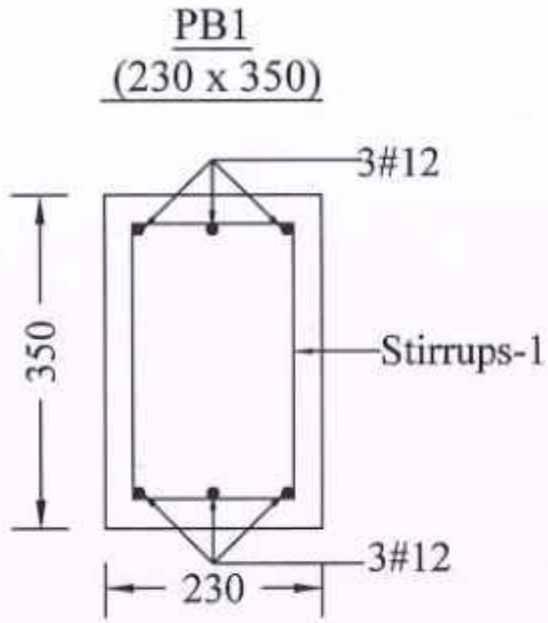
*Signature*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

*Signature*



# PLINTH BEAM DETAILS



## NOTE:

- Stirrups-1** : 2 Legged # 8 mm stirrups at 75 mm c/c for 700 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.
- Stirrups-2** : 2 Legged # 8 mm stirrups at 100 mm c/c for 900 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.
- Stirrups-3** : 2 Legged # 8 mm stirrups at 100 mm c/c for 1100 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.
- Stirrups-4** : 2 Legged # 8 mm stirrups at 100 mm c/c for 1200 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.

TRUE COPY

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

## NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:  
(a) Pile & Pile Cap - 60 mm  
(b) Column/Shear wall - 40 mm  
(c) Floor and roof beam - 30 mm  
(d) Slab - 25 mm  
(e) Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut listels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 30 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
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- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
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## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
PLINTH BEAM DETAILS.

TYPE DESIGN NO.:

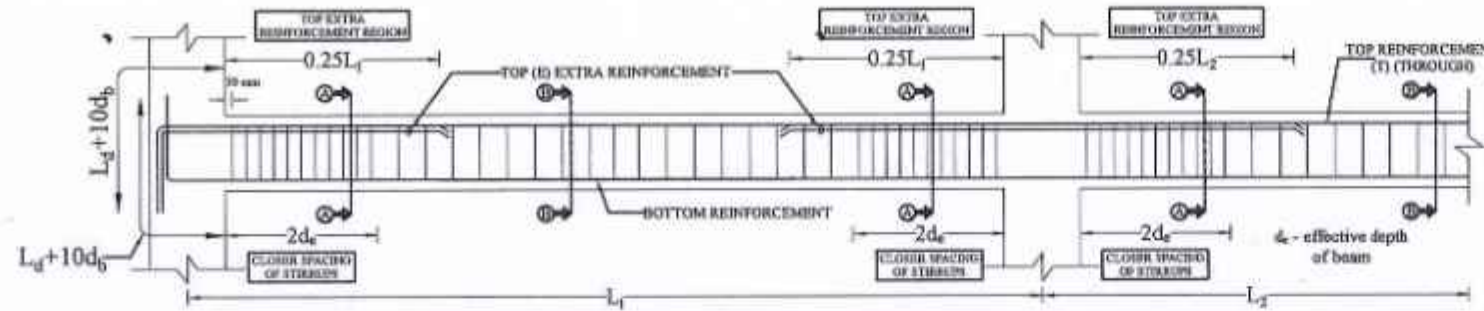
DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-B&C/16.

REVISION NO.:

|                                                                                                                                |                     |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Assistant Engineer                                                                                                             | Asst. Exe. Engineer |
| Executive Engineer                                                                                                             | SE - North II       |
| sd.xxxx 16.06.2025<br>Chief Engineer                                                                                           |                     |
| STRUCTURAL & QUALITY CONTROL CELL<br>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD<br>NO.5, KAMARAJAR SALAI<br>CHENNAI - 600 005. |                     |



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



## STILT & FIRST FLOOR BEAM DETAILS

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | FB1<br>200 x 350               |                             |                          |
| 2.     | FB2<br>200 x 550               |                             |                          |
| 3.     | FB3<br>200 x 550               |                             |                          |
| 4.     | FB4<br>200 x 550               |                             |                          |
| 5.     | FB5<br>200 x 550               |                             |                          |

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 6.     | FB6<br>200 x 550               |                             |                          |
| 7.     | FB7<br>200 x 600               |                             |                          |
| 8.     | FB8<br>200 x 600               |                             |                          |
| 9.     | FB9<br>300 x 500               |                             |                          |

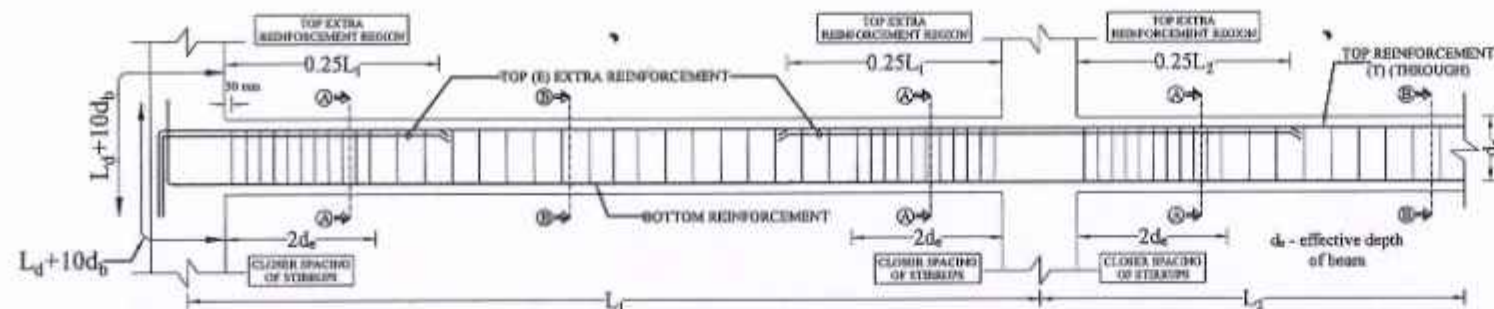
### NOTE:

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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
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- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
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TRUE COPY  
  
 EXECUTIVE ENGINEER  
 STRUCTURAL AND QUALITY CONTROL CELL  
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
 # 5, KAMARAJAR SALAI, CHENNAI-600 005.



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



### 2nd TO 6th FLOOR BEAM DETAILS

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | FB1<br>200 x 350               |                             |                          |
| 2.     | FB2<br>200 x 550               |                             |                          |
| 3.     | FB3<br>200 x 550               |                             |                          |
| 4.     | FB4<br>200 x 550               |                             |                          |
| 5.     | FB5<br>200 x 550               |                             |                          |

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 6.     | FB6<br>200 x 550               |                             |                          |
| 7.     | FB7<br>200 x 600               |                             |                          |
| 8.     | FB8<br>200 x 600               |                             |                          |
| 9.     | FB9<br>300 x 500               |                             |                          |

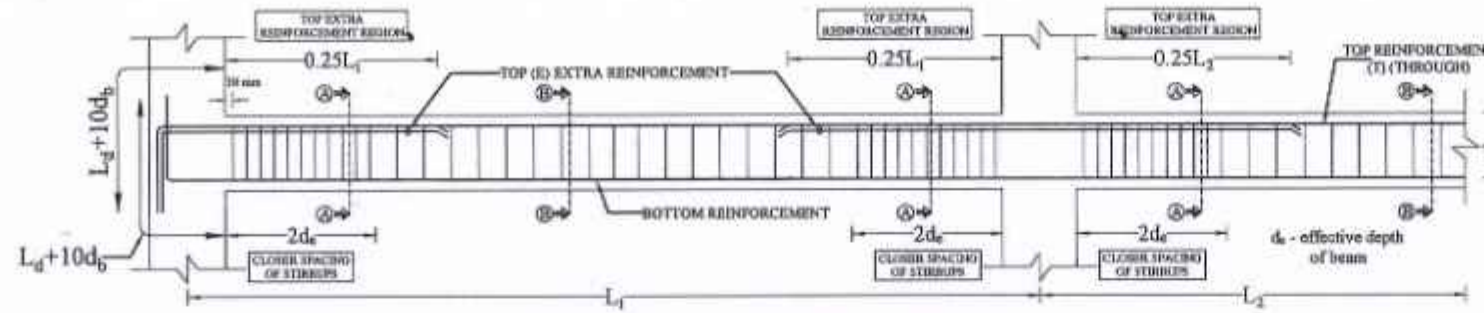
#### NOTE:

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- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
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- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
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  - Floor and roof beam - 30 mm
  - Slab - 25 mm
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- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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## TYPICAL CURTAILMENT & STIRRUPS DETAILS



**7th TO 10th FLOOR BEAM LAYOUT**

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | FB1<br>200 x 350               |                             |                          |
| 2.     | FB2<br>200 x 450               |                             |                          |
| 3.     | FB3<br>200 x 550               |                             |                          |
| 4.     | FB4<br>200 x 450               |                             |                          |
| 5.     | FB5<br>200 x 450               |                             |                          |

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 6.     | FB6<br>200 x 600               |                             |                          |
| 7.     | FB7<br>200 x 600               |                             |                          |

### NOTE:

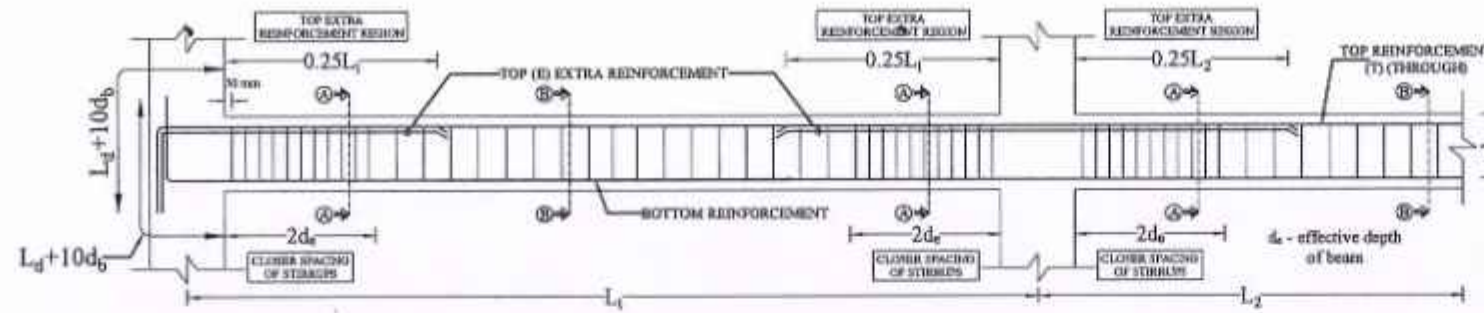
- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS:13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
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### STRUCTURAL DETAILS

**PROJECT:**  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,<



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



## TERRACE FLOOR BEAM DETAILS

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | TB1<br>200 x 350               |                             |                          |
| 2.     | TB2<br>200 x 450               |                             |                          |
| 3.     | TB2A<br>200 x 450              |                             |                          |
| 4.     | TB3<br>200 x 600               |                             |                          |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
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- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
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- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
TERRACE FLOOR BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-B&C/24.

REVISION NO.:

|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

TRUE COPY

*Chinmay*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

sd.xxxx  
17/06/25

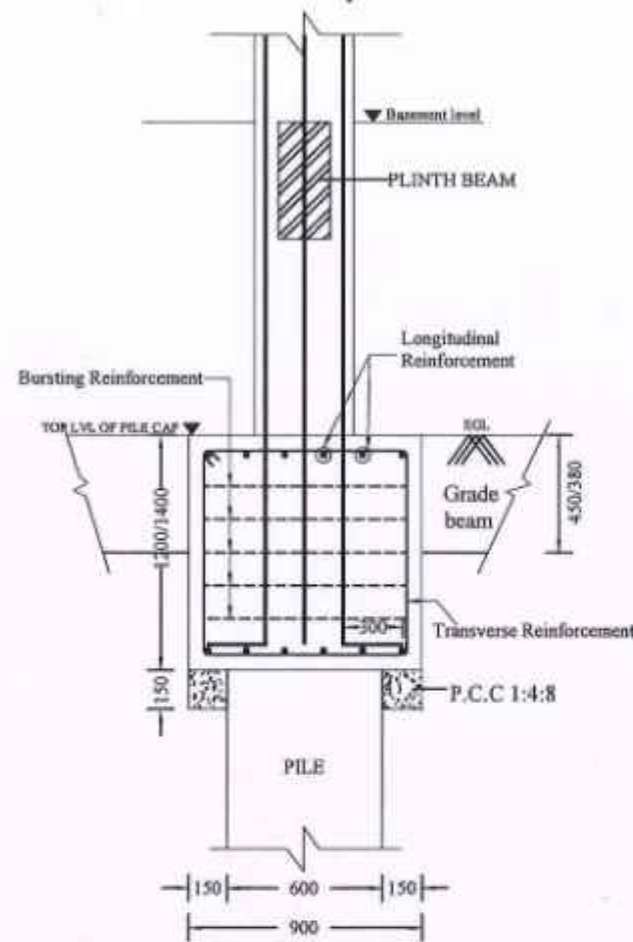




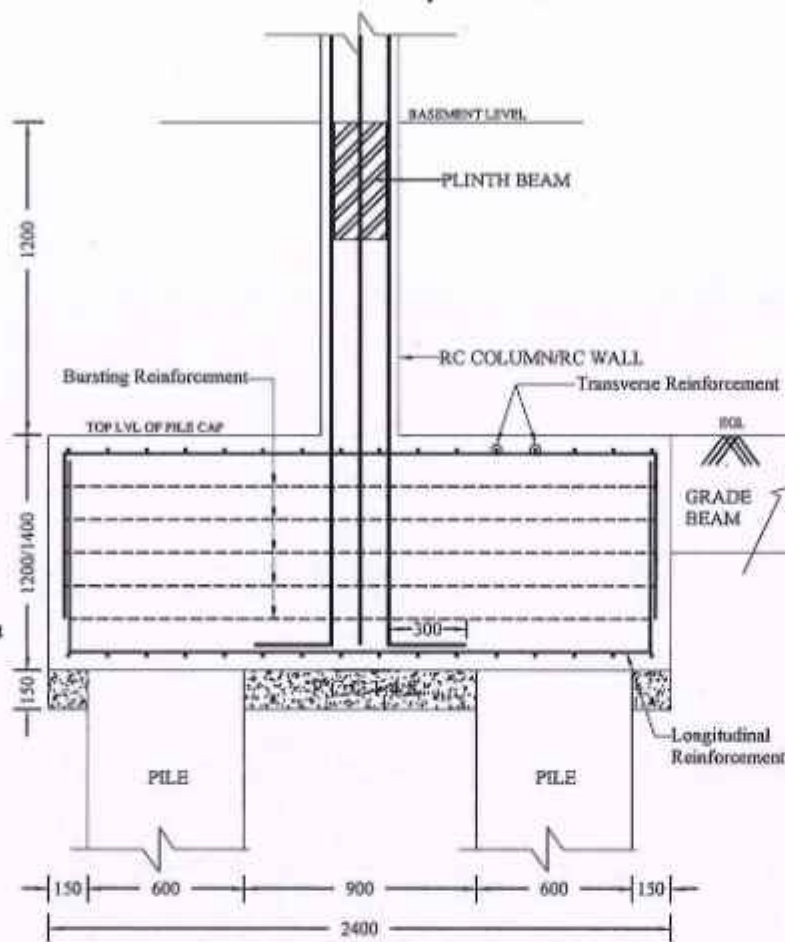




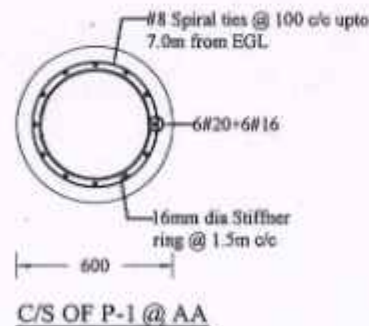
# PILE CAP CROSS SECTIONAL DETAILS (TYPICAL) & DETAILS OF PILE.



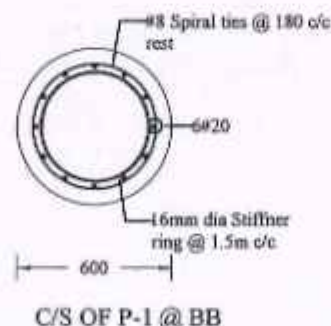
TYPICAL CROSS SECTION



TYPICAL LONGITUDINAL SECTION



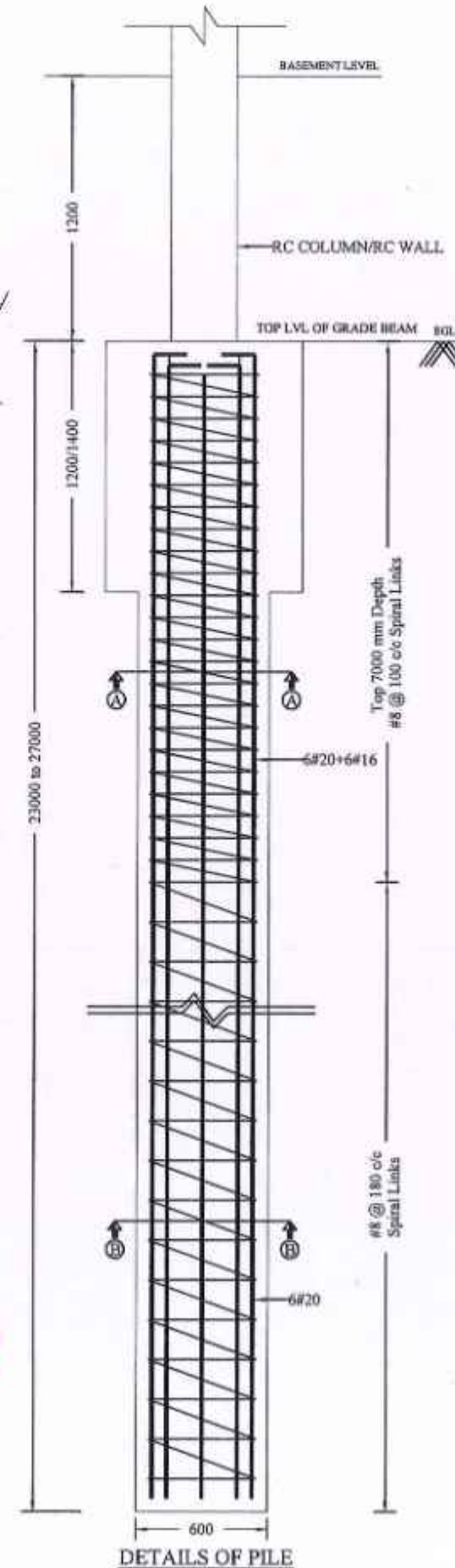
C/S OF P-1 @ AA



C/S OF P-1 @ BB

TRUE COPY

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
CHENNAI - 600 005



DETAILS OF PILE

## NOTE:

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  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
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- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
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## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
PILE CAP CROSS SECTIONAL DETAILS (TYPICAL) &  
DETAILS OF PILE.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-D/03.

REVISION NO.:

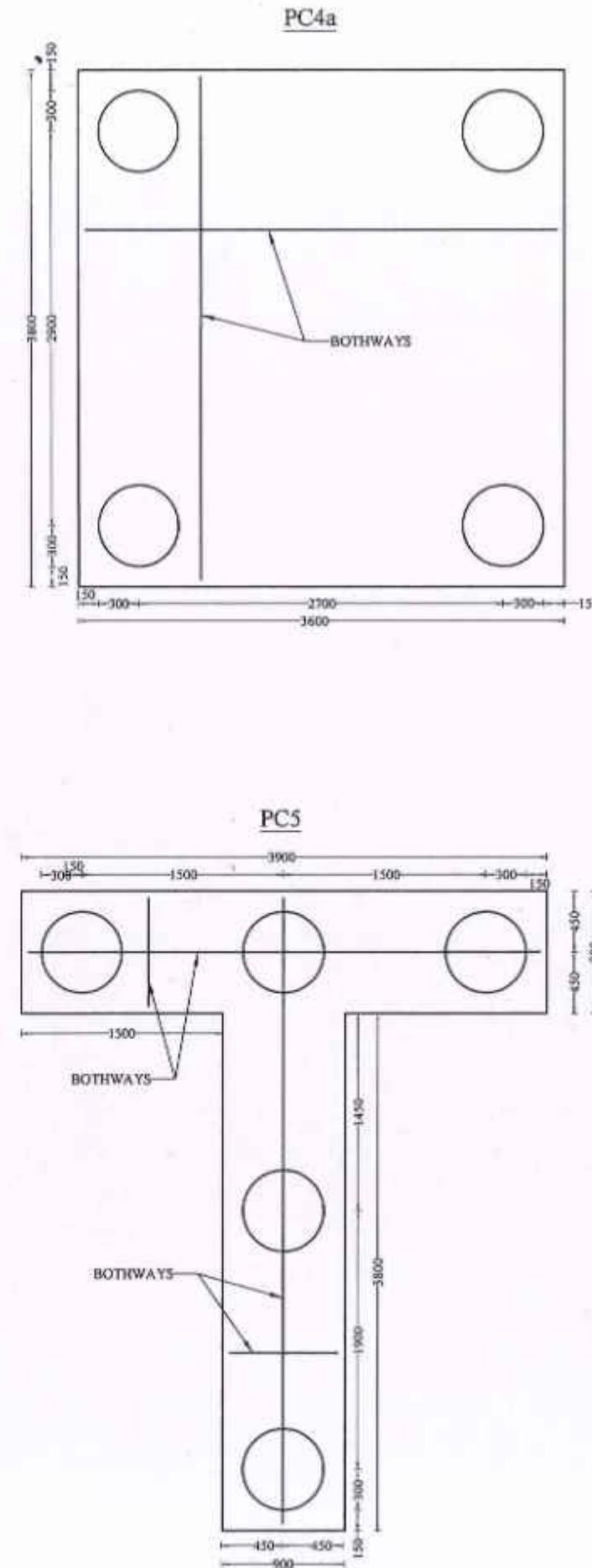
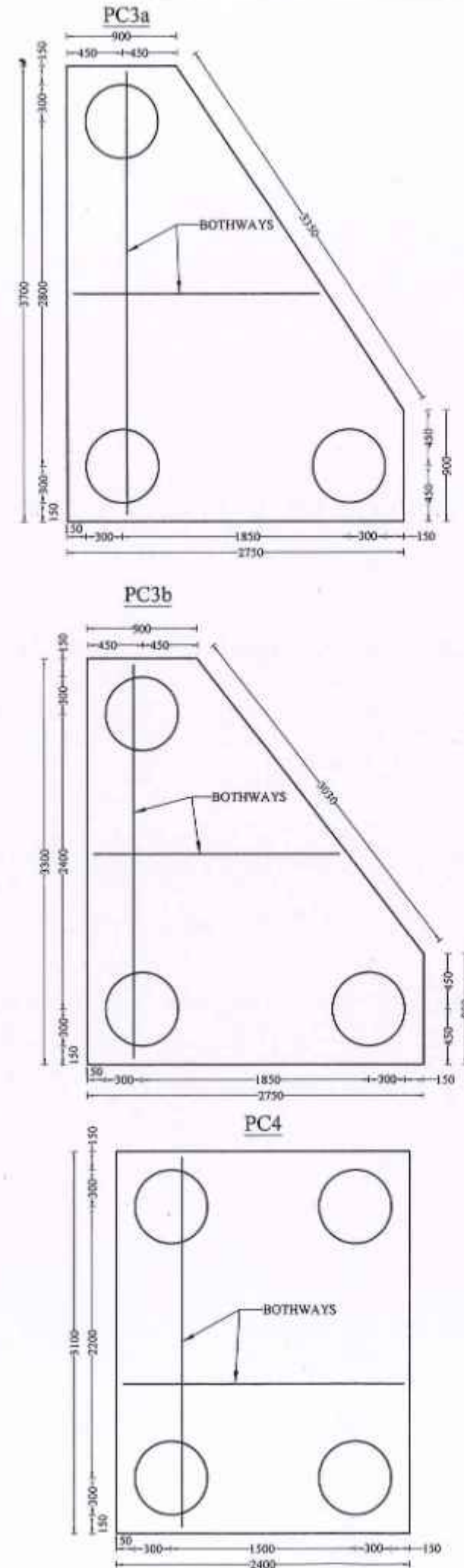
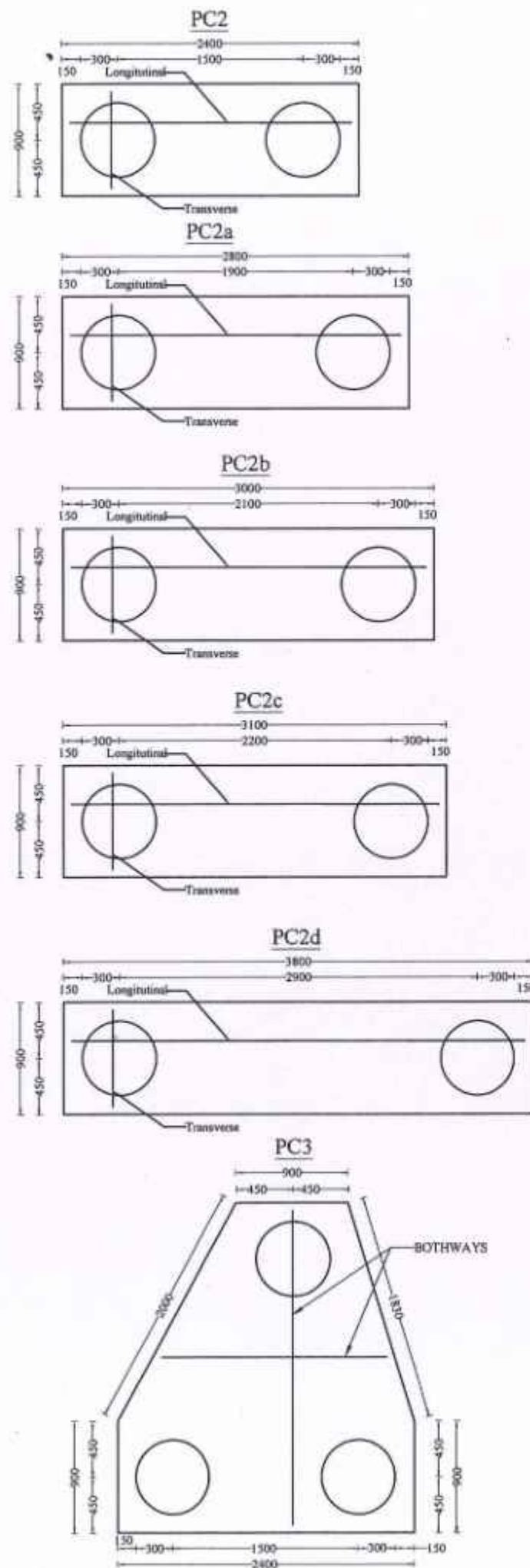
|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

# PILE CAP DETAILS



## NOTE:

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**TRUE COPY**  
*Q. Thiagar*  
**EXECUTIVE ENGINEER**  
**STRUCTURAL AND QUALITY CONTROL CELL**  
**TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD**  
**# 5, KAMARAJAR SALAI, CHENNAI-600 005**

## STRUCTURAL DETAILS

**PROJECT:**  
 CONSTRUCTION OF 1500 NOS OF (PS+11)  
 TENEMENTS AT EAST CEMENTRY ROAD,  
 CHENNAI CORPORATION, Dn No.51, ZONE V.

**TITLE:**  
 PILE CAP DETAILS .

**TYPE DESIGN NO.:**

**DWG.NO.:** TNUHDB/EAST CEMENTRY ROAD-D/04.

**REVISION NO.:**

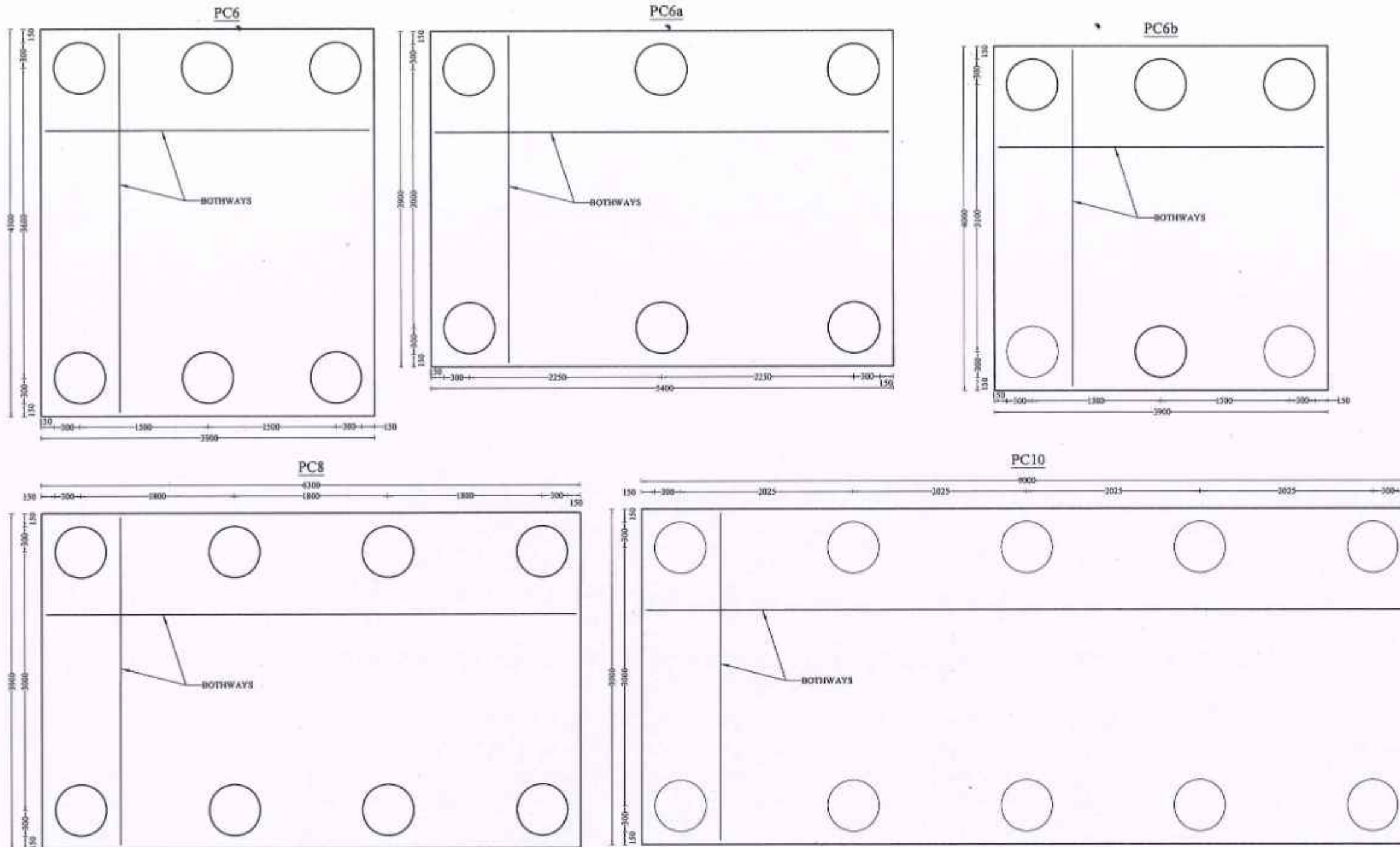
|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd,xxxx 16.06.2025  
 Chief Engineer



**STRUCTURAL & QUALITY CONTROL CELL**  
**TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD**  
**NO.5, KAMARAJAR SALAI**  
**CHENNAI - 600 005.**

## PILE CAP DETAILS



### NOTE :

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  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
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**TRUE COPY**  
  
**EXECUTIVE ENGINEER**  
 STRUCTURAL AND QUALITY CONTROL CELL  
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
 # 5, KAMARAJAR SALAI, CHENNAI-600 005.

### STRUCTURAL DETAILS

**PROJECT:**  
 CONSTRUCTION OF 1500 NOS OF (PS+11)  
 TENEMENTS AT EAST CEMENTRY ROAD,  
 CHENNAI CORPORATION, Dn No.51, ZONE V.

**TITLE:**  
 PILE CAP DETAILS .

**TYPE DESIGN NO.:**

**DWG.NO.:** TNUHDB/EAST CEMENTRY ROAD-D/05.

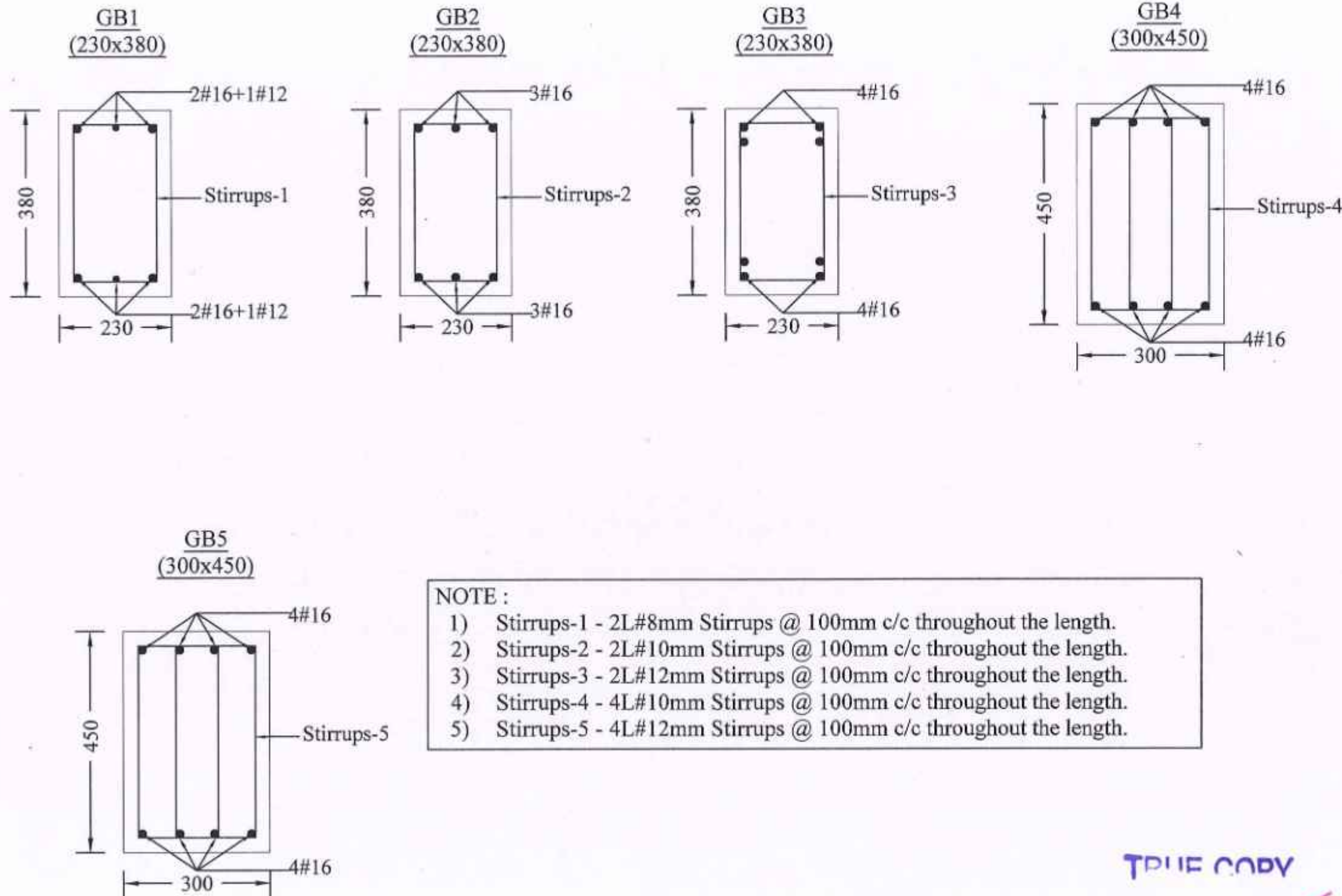
**REVISION NO.:**

|                                                                                                                                    |                            |
|------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>Assistant Engineer</b>                                                                                                          | <b>Asst. Exe. Engineer</b> |
| <b>Executive Engineer</b>                                                                                                          | <b>SE - North II</b>       |
| sd,xxxx 16.06.2025<br>Chief Engineer                                                                                               |                            |
| <br>STRUCTURAL & QUALITY CONTROL CELL<br>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD<br>NO.5, KAMARAJAR SALAI<br>CHENNAI - 600 005. |                            |

| PILE CAP SCHEDULE |                    |        |       |                            |                        |                          |                        |
|-------------------|--------------------|--------|-------|----------------------------|------------------------|--------------------------|------------------------|
| PILE CAP ID       | PILE CAP SIZE (mm) |        |       | LONGITUDINAL REINFORCEMENT |                        | TRANSVERSE REINFORCEMENT | BURSTING REINFORCEMENT |
|                   | LENGTH             | BREATH | DEPTH | TOP                        | BOTTOM                 |                          |                        |
| PC1               | 2400               | 900    | 1200  | 8-Nos #20                  | 8-Nos #20              | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2a              | 2800               | 900    | 1200  | 8-Nos #20                  | 8-Nos #20              | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2b              | 3000               | 900    | 1200  | 8-Nos #16                  | 8-Nos #20              | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2c              | 3100               | 900    | 1200  | 8-Nos #20                  | 8-Nos #20              | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC2d              | 3800               | 900    | 1200  | 8-Nos #20                  | 8-Nos #20              | 2L- #12 @125 c/c         | 5-Nos #12              |
| PC3               | Refer Drawing      |        | 1200  | #20@125mm/c (Bothways)     | #20@125mm/c (Bothways) | --                       | 5-Nos #12              |
| PC3a              | Refer Drawing      |        | 1200  |                            |                        |                          |                        |



## GRADE BEAM DETAILS



### NOTE :

- 1) Stirrups-1 - 2L#8mm Stirrups @ 100mm c/c throughout the length.
- 2) Stirrups-2 - 2L#10mm Stirrups @ 100mm c/c throughout the length.
- 3) Stirrups-3 - 2L#12mm Stirrups @ 100mm c/c throughout the length.
- 4) Stirrups-4 - 4L#10mm Stirrups @ 100mm c/c throughout the length.
- 5) Stirrups-5 - 4L#12mm Stirrups @ 100mm c/c throughout the length.

### NOTE :

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3. All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
6. Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (PS+11) floors only.
8. Design of the structure carried out with Limit State Method.
9. Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
10. Analysis of the structure done with ETABS.
11. Clear cover for reinforcement are as follows:
  - (a) Pile & Pile Cap - 60 mm
  - (b) Column/Shear wall - 40 mm
  - (c) Floor and roof beam - 30 mm
  - (d) Slab - 25 mm
  - (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lists to be provided in all floors.
15. Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
16. Anchorage of column bars into the footings shall not be less than 50 Ø.
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## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
GRADE BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-D/07.

REVISION NO.:

|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

TRUE COPY

*Signature*  
18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

*Signature*  
17/06/25

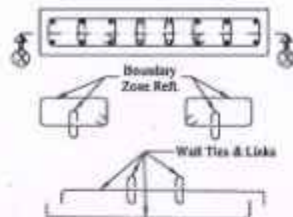




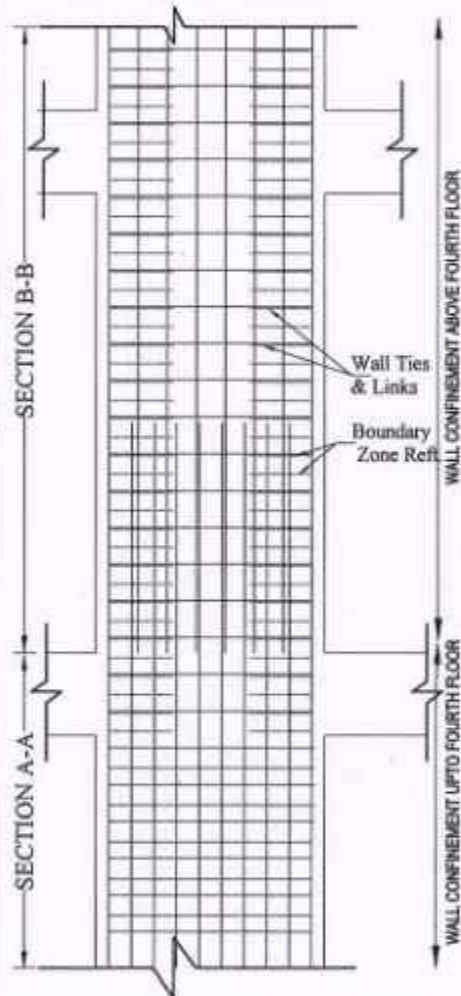


**TYPICAL SHEAR WALL  
CONFINING REINFORCEMENT  
DETAILS**

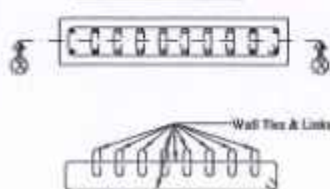
**SECTION B-B**



**DETAILS @ SECTION X-X**

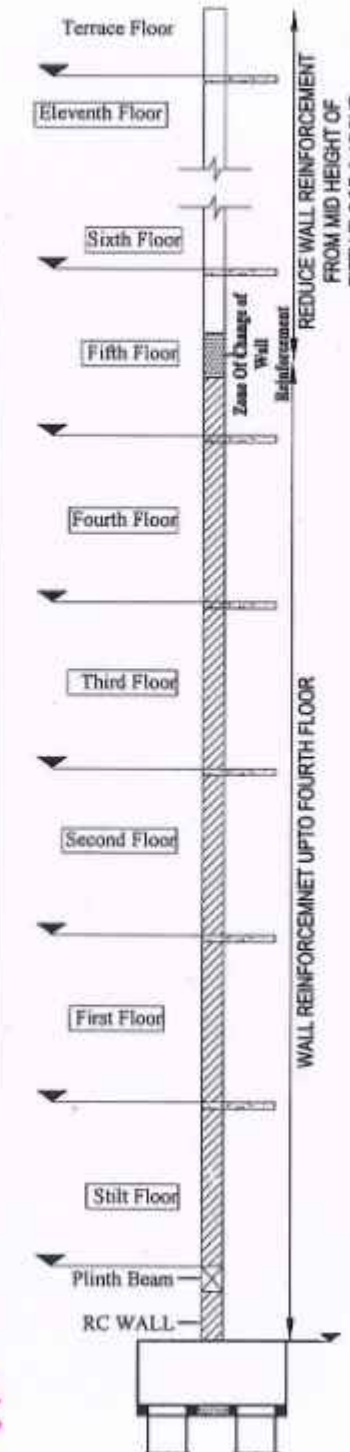


**SECTION A-A**



**SHEAR WALL DETAILS-1**

| Curtailments Levels                                                                           | SW1 (08 Nos) | SW2 (06 Nos) | SW3 (12 Nos) |
|-----------------------------------------------------------------------------------------------|--------------|--------------|--------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |              |              |              |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |              |              |              |



**NOTE :**

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**STRUCTURAL DETAILS**

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-1.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-D/11.

REVISION NO.:

|                                                                                                                                |                     |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Assistant Engineer                                                                                                             | Asst. Exe. Engineer |
| Executive Engineer                                                                                                             | SE - North II       |
| sd. XXXX 16.06.2025<br>Chief Engineer                                                                                          |                     |
| STRUCTURAL & QUALITY CONTROL CELL<br>TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD<br>NO.5, KAMARAJAR SALAI<br>CHENNAI - 600 005. |                     |

**TRUE COPY**

## SHEAR WALL DETAILS-2

| Curtailments Levels                                                                           | SW4 (02 Nos) | SW6 (02 Nos) |
|-----------------------------------------------------------------------------------------------|--------------|--------------|
| Above 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor) |              |              |
| Upto 4 <sup>th</sup> Floor level<br>(Bar Curtailment at mid height of 5 <sup>th</sup> floor)  |              |              |

**EXECUTIVE ENGINEER**  
 STRUCTURAL AND QUALITY CONTROL CELL  
 TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
 5, KAMARAJAR SALAI, CHENNAI-600 005

### NOTE :

- 1.All the dimensions are in mm unless noted otherwise.
- 2.All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- 3.All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- 4.All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- 5.The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- 6.Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- 7.Structure is designed for (PS+11) floors only.
- 8.Design of the structure carried out with Limit State Method.
- 9.Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- 10.Analysis of the structure done with ETABS.
- 11.Clear cover for reinforcement are as follows:
 

|                             |         |
|-----------------------------|---------|
| (a) Pile & Pile Cap         | - 60 mm |
| (b) Column/Shear wall       | - 40 mm |
| (c) Floor and roof beam     | - 30 mm |
| (d) Slab                    | - 25 mm |
| (e) Water Tank Walls & Slab | - 30 mm |
- 12.Design mix report should be got approved by the Anna University/IIT Madras/PWD.

- 13.All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- 14.Cut lintels to be provided in all floors.
- 15.Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- 16.Anchorage of column bars into the footings shall not be less than 50 Ø.
- 17.Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer atonce for review.
- 18.Ground water quality has to be conformed for suitability to construction work.
- 19.The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- 20.Dimensions and levels are to unfinished surface excluding finishes,coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- 21.The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024 , Dt: 30.08.2024 should be followed scrupulously.

### STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11) TENEMENTS AT  
EAST CEMENTRYROAD,CHENNAI CORPORATION ,  
Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-2.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-D/12.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

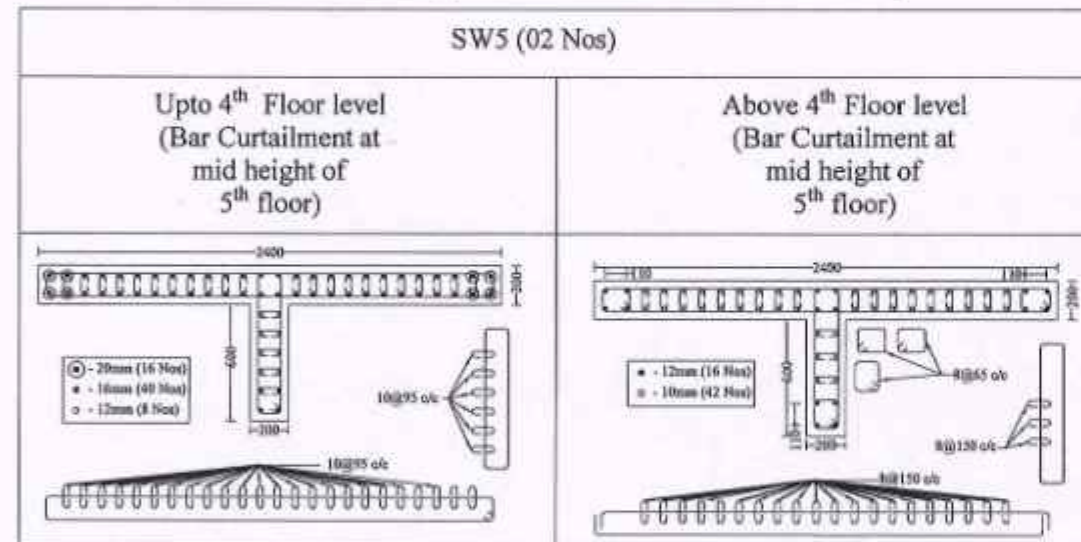
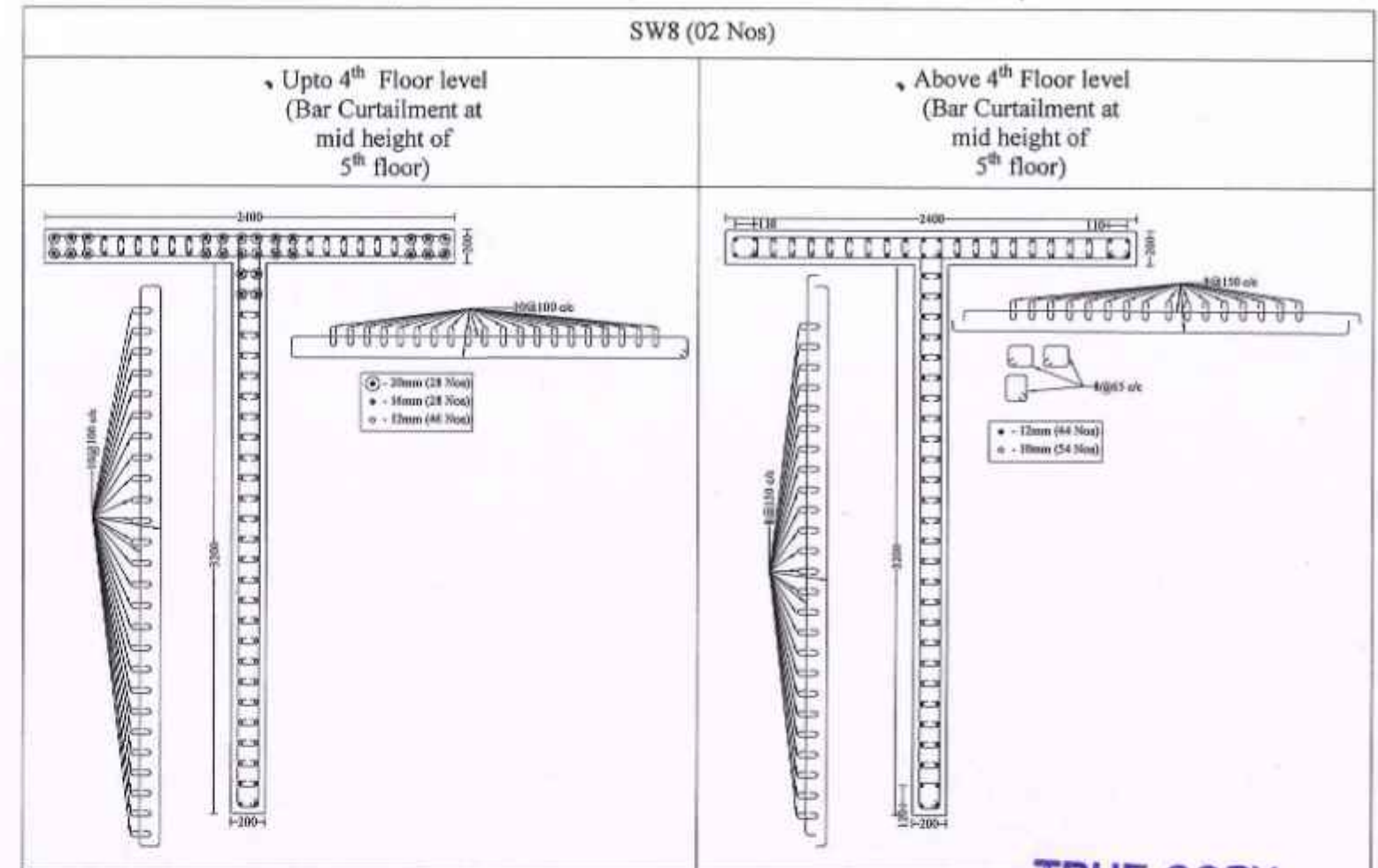
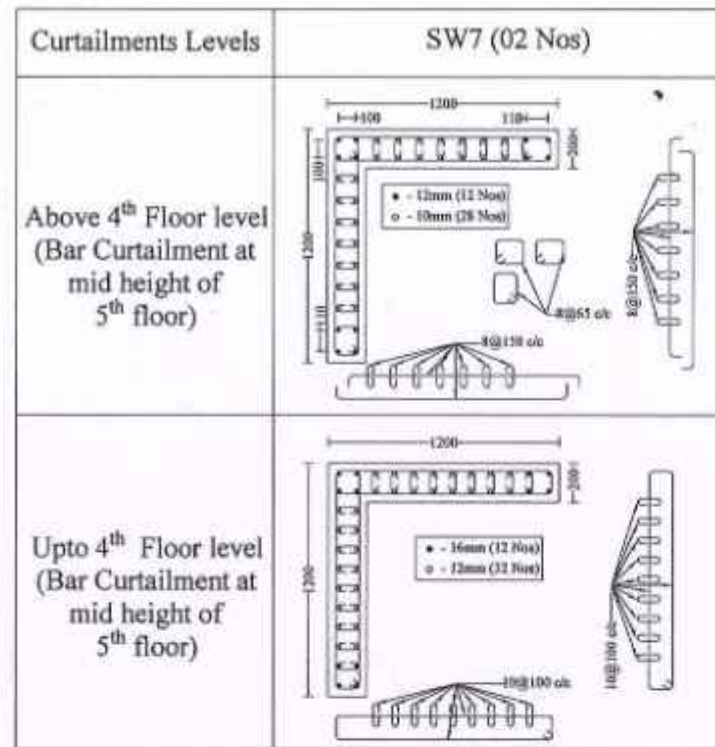
SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

# SHEAR WALL DETAILS-3



TRUE COPY

*Q. Thiagar*  
18/06/25  
EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

## NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.

- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11) TENEMENTS AT  
EAST CEMENTRY ROAD, CHENNAI CORPORATION,  
Dn No.51, ZONE V.

TITLE:  
SHEAR WALL DETAILS-3.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-D/13.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025

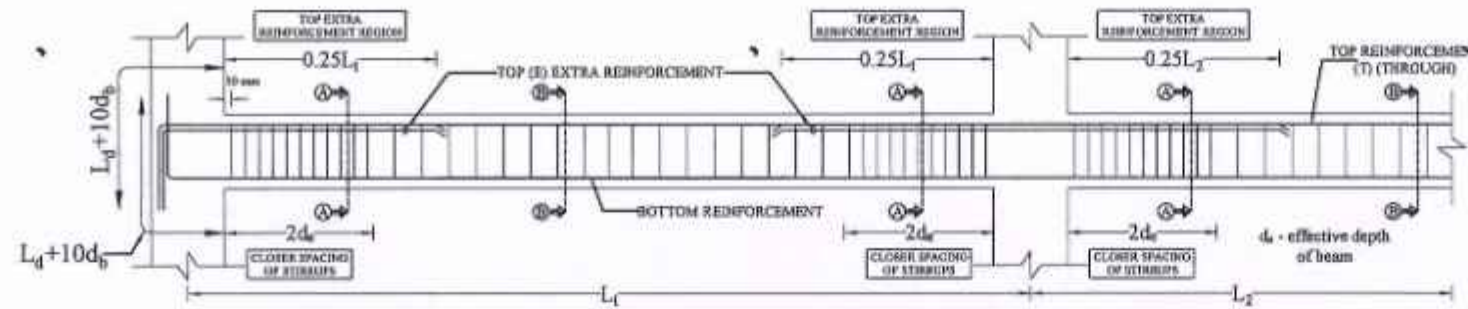
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URB



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



## PLINTH BEAM DETAILS

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | PB1<br>230 x 350               |                             |                          |
| 2.     | PB2<br>230 x 450               |                             |                          |
| 3.     | PB3<br>230 x 550               |                             |                          |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Sish - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut limits to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
PLINTH BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-E/15.

REVISION NO.:

|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd,xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI,  
CHENNAI - 600 005.

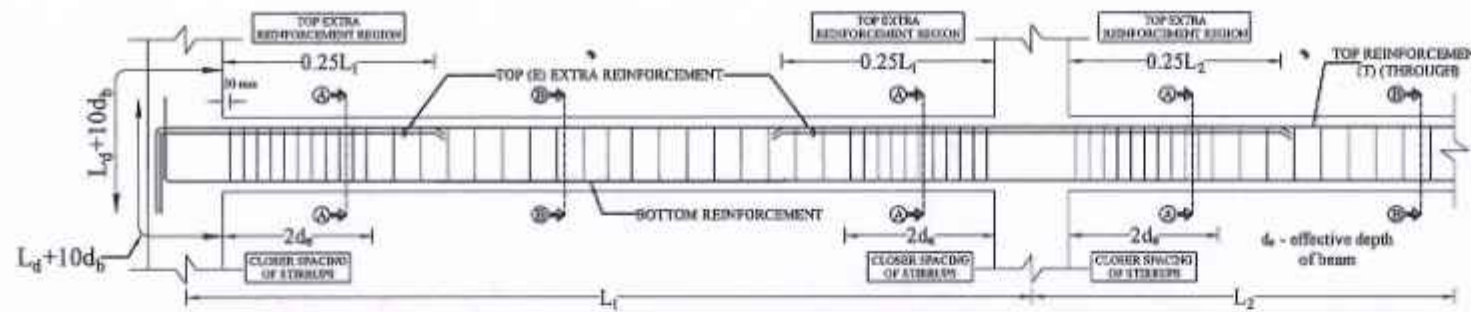
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EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

18/06/25



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



**P.S & 1st FLOOR BEAM DETAILS.**

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | FB1<br>200 x 350               |                             |                          |
| 2.     | FB2<br>200 x 550               |                             |                          |
| 3.     | FB3<br>200 x 550               |                             |                          |
| 4.     | FB4<br>200 x 550               |                             |                          |
| 5.     | FB5<br>200 x 550               |                             |                          |

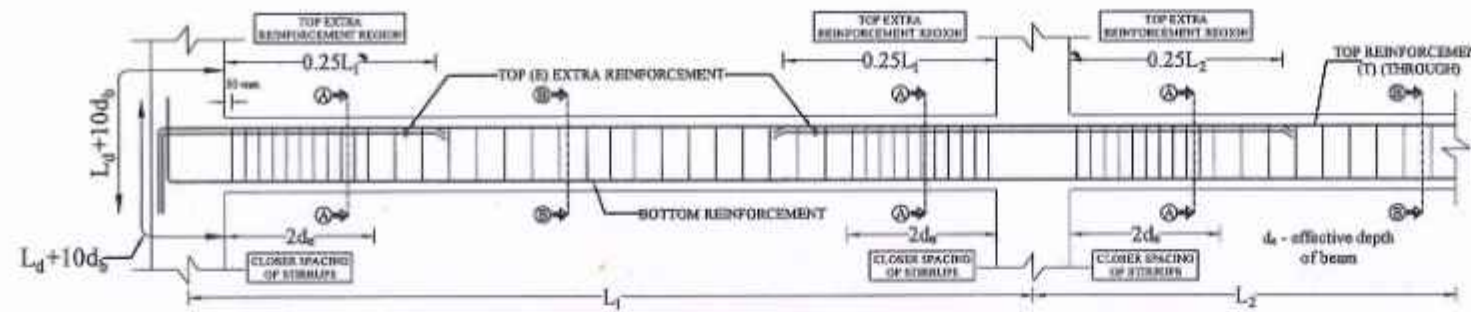
| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 6.     | FB6<br>200 x 550               |                             |                          |
| 7.     | FB7<br>200 x 600               |                             |                          |
| 8.     | FB8<br>200 x 600               |                             |                          |

### NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut listels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer stance for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes,coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/20



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



**2nd TO 6th FLOOR BEAM DETAILS.**

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | FB1<br>200 x 350               |                             |                          |
| 2.     | FB2<br>200 x 550               |                             |                          |
| 3.     | FB3<br>200 x 550               |                             |                          |
| 4.     | FB4<br>200 x 550               |                             |                          |
| 5.     | FB5<br>200 x 550               |                             |                          |

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 6.     | FB6<br>200 x 550               |                             |                          |
| 7.     | FB7<br>200 x 600               |                             |                          |
| 8.     | FB8<br>200 x 600               |                             |                          |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008, unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS 13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50  $\phi$ .
- Anchorage of column bars into the footings shall not be less than 50  $\phi$ .
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.03.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

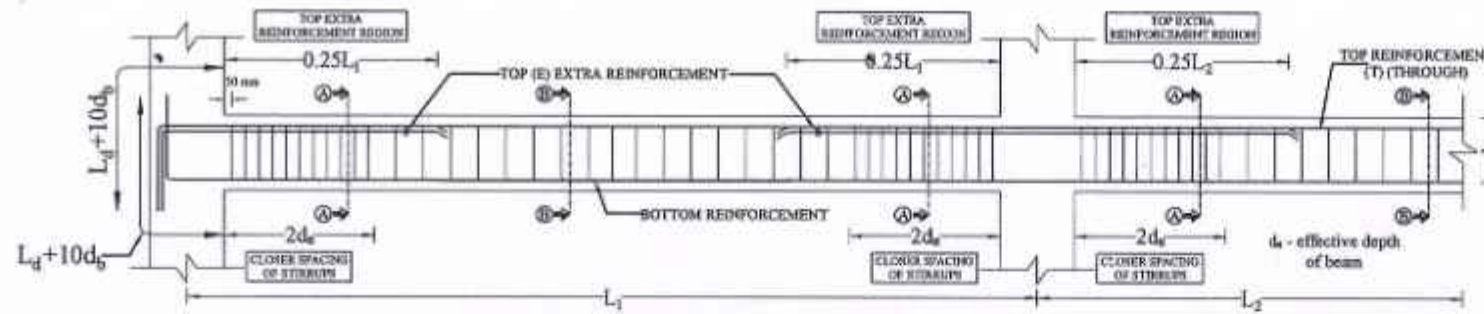
### STRUCTURAL DETAILS

**PROJECT:**  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.  
**TITLE:**  
2nd TO 6th FLOOR BEAM DETAILS.

**TYPE DESIGN NO.:**



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



**7th TO 10th FLOOR BEAM DETAILS.**

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | FB1<br>200 x 350               |                             |                          |
| 2.     | FB2<br>200 x 450               |                             |                          |
| 3.     | FB3<br>200 x 350               |                             |                          |
| 4.     | FB4<br>200 x 450               |                             |                          |
| 5.     | FB5<br>200 x 450               |                             |                          |

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 6.     | FB6<br>200 x 450               |                             |                          |
| 7.     | FB7<br>200 x 600               |                             |                          |
| 8.     | FB8<br>200 x 600               |                             |                          |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
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- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
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  - Pile & Pile Cap - 60 mm
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  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
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- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
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- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
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- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
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### STRUCTURAL DETAILS

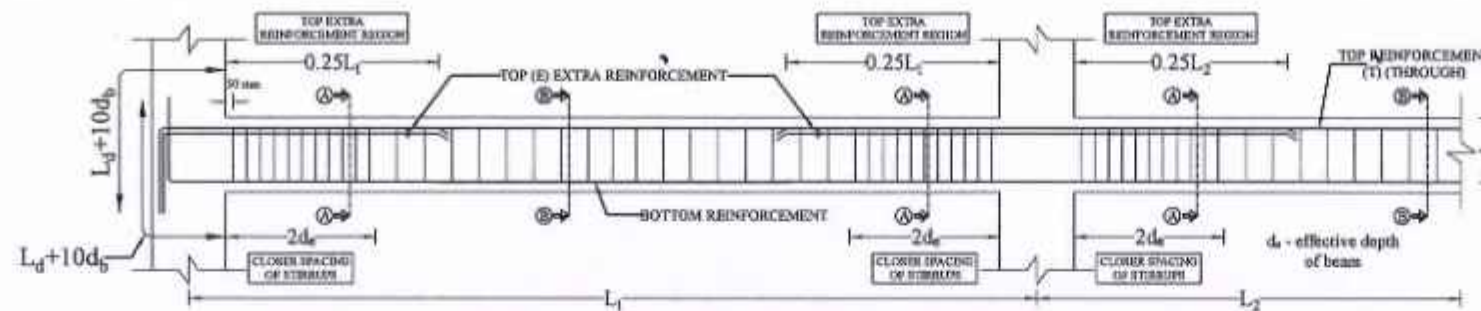
**PROJECT:**  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.  
**TITLE:**  
7th TO 10th FLOOR BEAM DETAILS.

**TYPE DESIGN NO.:**

**DWG.NO.:** T



## TYPICAL CURTAILMENT & STIRRUPS DETAILS



## TERRACE FLOOR BEAM DETAILS.

| Sl. No | Beam Notation & Size (mm x mm) | SECTION ALONG A-A (SUPPORT) | SECTION ALONG B-B (SPAN) |
|--------|--------------------------------|-----------------------------|--------------------------|
| 1.     | TB1<br>200 x 350               |                             |                          |
| 2.     | TB2<br>200 x 450               |                             |                          |
| 3.     | TB2A<br>200 x 450              |                             |                          |
| 4.     | TB3<br>200 x 600               |                             |                          |

### NOTE:

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IIT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut listels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
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## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
TERRACE FLOOR BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-E/23.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

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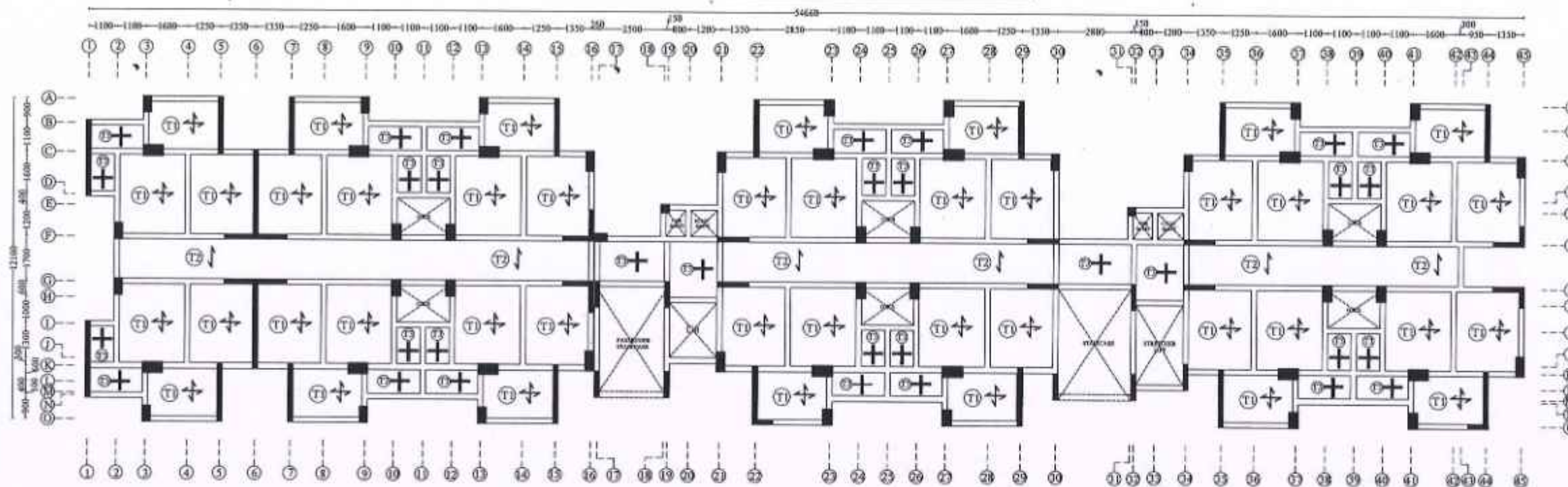
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18/06/25

EXECUTIVE ENGINEER  
STRUCTURAL AND QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

sd.xxxx  
17/06/25

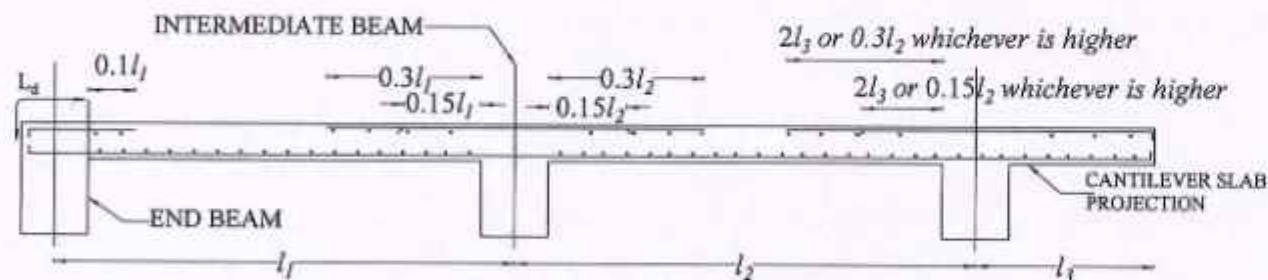


# TERRACE FLOOR SLAB LAYOUT & DETAILS

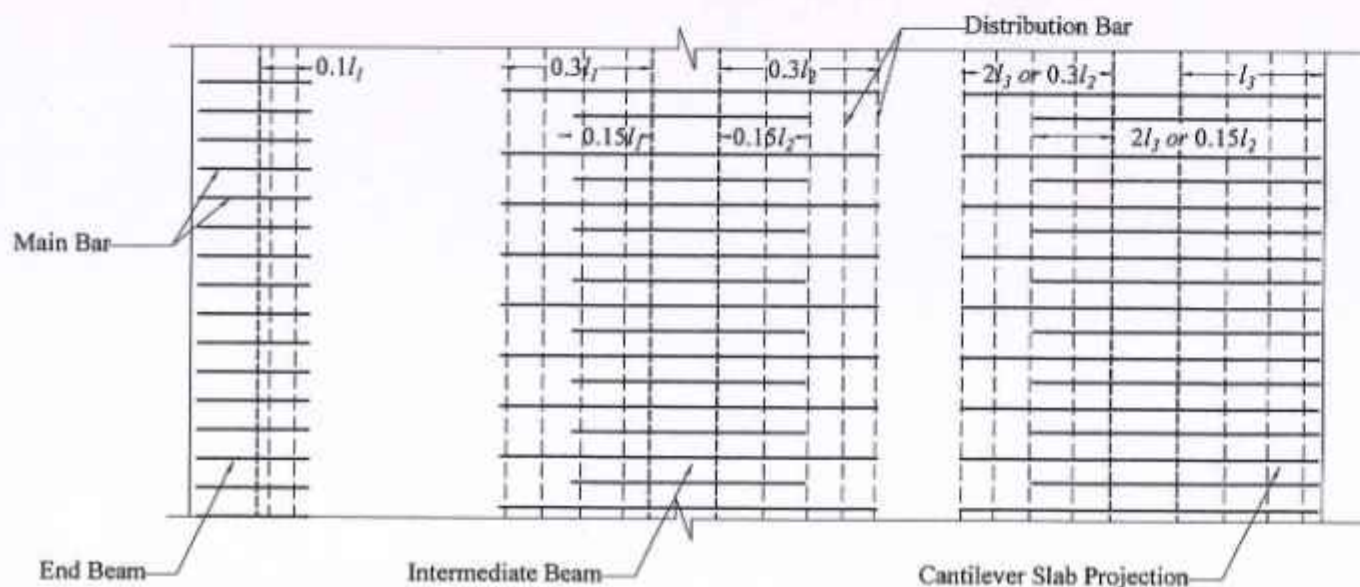


SLAB REINFORCEMENT DETAILS

| Sl. No. | SLAB ID | LEGEND | TYPE OF SLAB | THICKNESS (mm) | Bottom Reinforcement |              | Top Reinforcement |               |                                    |
|---------|---------|--------|--------------|----------------|----------------------|--------------|-------------------|---------------|------------------------------------|
|         |         |        |              |                | Shorter Span         | Longer Span  | Shorter Span      | Longer Span   | Distribution bar wherever required |
| 1.      | T1      |        | Two Way      | 125            | #8 @ 150 c/c         | #8 @ 150 c/c | #8 @ 150 c/c      | #8 @ 150 c/c  | #8 @ 230 c/c                       |
| 2.      | T2      |        | One Way      | 125            | #8 @ 150 c/c         | #8 @ 230 c/c | #8 @ 150 c/c      | #8 @ 230 c/c  | #8 @ 230 c/c                       |
| 3.      | T3      |        | Mat          | 125            | #8 @ 150 c/c         | #8 @ 150 c/c | #8 @ 150 c/c      | #10 @ 150 c/c | ---                                |



TYPICAL SLAB REINFORCEMENT DETAILS



## NOTE:

1. All the Dimensions are in mm.
2. M30 Concrete and Fe500D grade steel shall be adopted.
3. Clear cover to slab is 25mm.
4. Crank point distances are as shown.
5. "-----" denotes extra rods to be provided at top.
6. The bottom shorter direction bar / main bars should be placed at bottom most of layer & Top main bar should be placed at top most of layer.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11) TENEMENTS AT  
EAST CEMENTRY ROAD, CHENNAI CORPORATION,  
Dn No.51, ZONE V.

TITLE:  
TERRACE FLOOR SLAB LAYOUT &  
DETAILS..

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-E/25.

REVISION NO.:

Assistant Engineer

Asst. Exe. Engineer

Executive Engineer

SE - North II

sd.xxxx 16.06.2025  
Chief Engineer

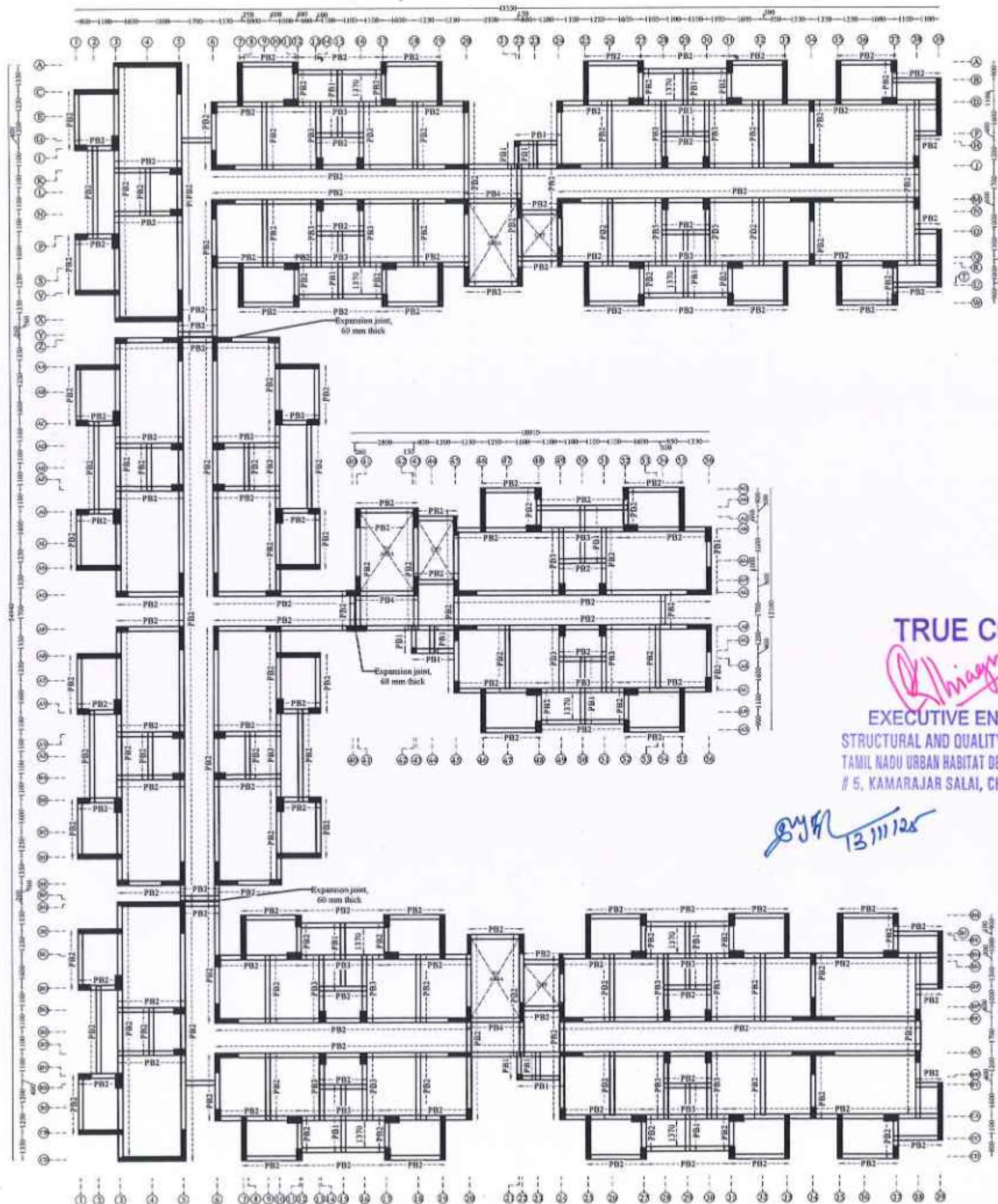


STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

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TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005

# PLINTH BEAM LAYOUT



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TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
# 5, KAMARAJAR SALAI, CHENNAI-600 005.

## NOTE :

- All the dimensions are in mm unless noted otherwise.
- All structural drawings shall be read in conjunction with the relevant Architectural drawings.
- All the RCC works shall be as per design mix of M30 grade, conforming to IS: 456 - 2000.
- All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
- The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
- Flyash bricks has been considered for masonry work in sub structure and AAC blocks has been considered for masonry work in super structure.
- Structure is designed for (PS+11) floors only.
- Design of the structure carried out with Limit State Method.
- Bored Cast-in-situ piles of 600 mm diameter shall be adopted with the minimum length of pile of 23 m to 27 m from the Existing Ground Level (EGL) & The axial capacity of pile is 1600 KN and the lateral capacity is 138.1 KN for 600mm diameter Piles (Fixed) as recommended in Soil Report.
- Analysis of the structure done with ETABS.
- Clear cover for reinforcement are as follows:
  - Pile & Pile Cap - 60 mm
  - Column/Shear wall - 40 mm
  - Floor and roof beam - 30 mm
  - Slab - 25 mm
  - Water Tank Walls & Slab - 30 mm
- Design mix report should be got approved by the Anna University/IT Madras/PWD.
- All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
- Cut lintels to be provided in all floors.
- Lapping of column bars shall be midway between slabs and staggered with lap length not less than 50 Ø.
- Anchorage of column bars into the footings shall not be less than 50 Ø.
- Field Engineers should ensure that the soil at the recommended founding depth is in conformity to the soil characteristic detailed in the soil test report. If any variation in soil strata is encountered at the recommended foundation depth, then the same should be informed to the Chief Engineer at once for review.
- Ground water quality has to be conformed for suitability to construction work.
- The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
- Dimensions and levels are to unfinished surface including finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
- The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
PLINTH BEAM LAYOUT.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-A/15.

REVISION NO.:

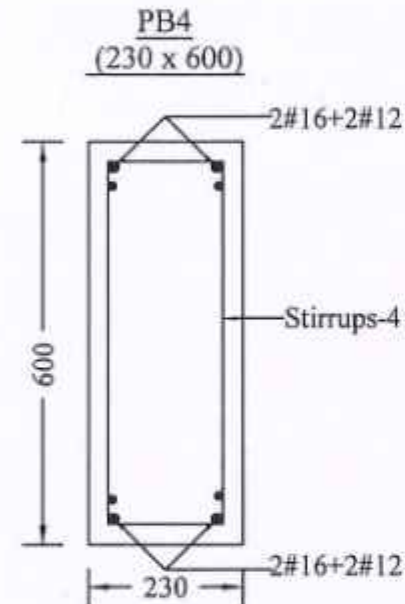
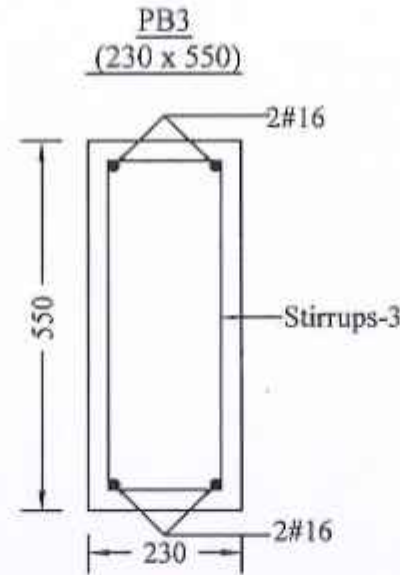
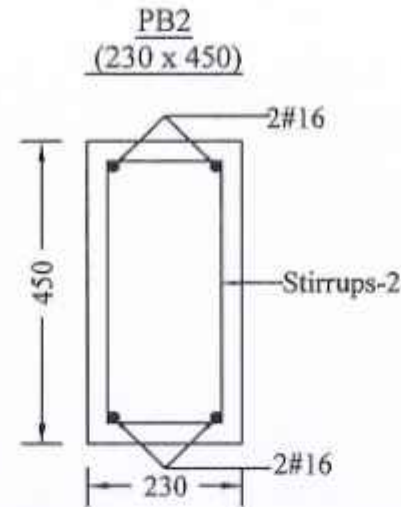
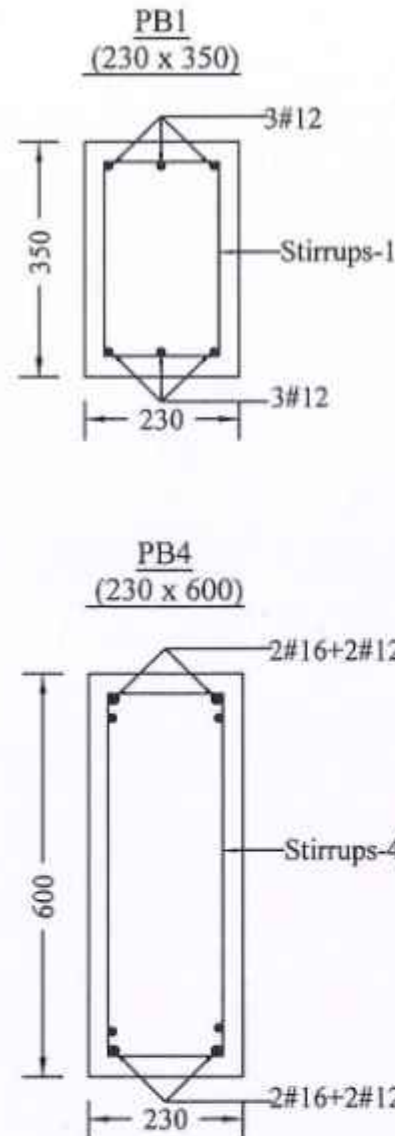
|                    |                     |
|--------------------|---------------------|
| Assistant Engineer | Asst. Exe. Engineer |
| Executive Engineer | SE - North II       |

sd.xxxx 13.11.2025  
Chief Engineer



STRUCTURAL & QUALITY CONTROL CELL  
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD  
NO.5, KAMARAJAR SALAI  
CHENNAI - 600 005.

# PLINTH BEAM DETAILS



## NOTE:

1. **Stirrups-1** : 2 Legged # 8 mm stirrups at 75 mm c/c for 700 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.
2. **Stirrups-2** : 2 Legged # 8 mm stirrups at 100 mm c/c for 900 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.
3. **Stirrups-3** : 2 Legged # 8 mm stirrups at 100 mm c/c for 1100 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.
4. **Stirrups-4** : 2 Legged # 8 mm stirrups at 100 mm c/c for 1200 mm length on all sides near Beam - Column junctions and the rest at 125 mm c/c.

## NOTE :

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4. All the reinforcement shall be of Fe500D grade conforming to IS 1786 - 2008 unless noted otherwise.
5. The structure is designed for seismic zone III as per IS 1893:2016 and detailed as per IS13920:2016.
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7. Structure is designed for (PS+11) floors only.
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  - (c) Floor and roof beam - 30 mm
  - (d) Slab - 25 mm
  - (e) Water Tank Walls & Slab - 30 mm
12. Design mix report should be got approved by the Anna University/IIT Madras/PWD.
13. All PCC works should be carried out with PCC 1:4:8 conforming IS: 456 - 2000.
14. Cut lintels to be provided in all floors.
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18. Ground water quality has to be confirmed for suitability to construction work.
19. The ground water / soil to be tested for chlorides & sulphate and remedial measures if any should be taken accordingly.
20. Dimensions and levels are to unfinished surface excluding finishes, coating etc., unless noted otherwise. The dimension should be checked with type design drawing.
21. The Recommendations of the Soil Report prepared by ANNA UNIVERSITY Job No:SM&FE291/Consultancy/2024, Dt: 24.05.2024, & Job No:SM&FE291(a)/Consultancy/2024, Dt: 30.08.2024 should be followed scrupulously.

## STRUCTURAL DETAILS

PROJECT:  
CONSTRUCTION OF 1500 NOS OF (PS+11)  
TENEMENTS AT EAST CEMENTRY ROAD,  
CHENNAI CORPORATION, Dn No.51, ZONE V.

TITLE:  
PLINTH BEAM DETAILS.

TYPE DESIGN NO.:

DWG.NO.: TNUHDB/EAST CEMENTRY ROAD-A/16.

REVISION NO.:

|                                      |                     |
|--------------------------------------|---------------------|
| Assistant Engineer                   | Asst. Exe. Engineer |
| Executive Engineer                   | SE - North II       |
| sd,xxxx 13.11.2025<br>Chief Engineer |                     |



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NO.5, KAMARAJAR SALAI  
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