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STABILITY CERTIFICATE

The Detailed Engineering and structure design of the proposed construction of building comprising Block 1 to 9 of G+3 floors with 48 Dwelling Units each, totally 432 Dwelling Units at Anna Nagar in Keeranur TP comprised in S.F.No 62/3A2 Block 58, Keeranur Village within the limits of Keeranur Town Panchayat has been done by me/us based on the report of geo technical investigation (soil test) done by Government College of Engineering Bodinayakanur Report No.GCE/PCE/SOIL/008C/2022 Dated 03.08.2022 & 14-09-2022 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 M25

(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 2KN/m^2 as per IS 875 Part II and designed for earthquake resistant structure as per IS Code 1893-2016.

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

14/2/2025

Stamp and Signature

G. MAHENDIRAN, M.E.,
ASSISTANT EXECUTIVE ENGINEER
REGISTRATION No: SE/I/2024/4/0071
Registered Structural Engineer Grade-I (SE-I)
Tamil Nadu Urban Habitat Development Board
No. 5, Kamarajar Salai, Chennai-600 005.

Office of the Chief Engineer-I,
Tamil Nadu Urban Habitat
Development Board,
 # 5, KamarajarSalai, Chennai -5.

Memo.No. TNUHDB/SQC/7403/2024 **Dated: 13.09.2024.**

MEMO

Sub: TNUHDB-SE(South)- PID-I Sivaganga- Construction of 432 tenements (G+3)at Anna Nagar in Keeranur village ,Dindigul District under PMAY - HFA scheme - Structural Design – submitted –Reg.

Ref: 1)ExecutiveEngineer/PID-I Sivaganga Division,
Lr.No: 363-1/AE(P)/2022, Dated: 23.05.2024.
2) Soil investigation report done by Government College Engineering, Bodinayakkanur Report no:GCE/PCE/SOIL/008C/2022,Dated: 03.08.2022 and Received soil recommendation dated14.09.2022.

The structural drawings for the construction of 432 tenements (G+3) at Anna Nagar in Keeranur village ,Dindigul District under PMAY (HFA) have been prepared and the approved drawings are communicated herewith for adoption at site.

In this connection, the precautions laid by the Soil and Structural Consultant in the above references should be followed without fail. Also,

1. The quality of water to be used for construction has to be tested as per IS codes and if necessary precautionary measures have to be taken based on the test results.
2. Any change in soil strata observed during execution has to be reported to the higher authorities/ Soil Consultant immediately for review.

3. The testing of materials used for construction, frequency of testing, maintenance of documents at site, engagement of technical personnel etc should be as per the circulars issued from this office.
4. In case of, any clarifications in the issued drawings, the Executive Engineer/PID-I SivagangaDivision is requested to contact the undersigned and get it clarified before execution.
5. The Cover to the reinforcements, grade of concrete, grade of steel, mix design of concrete, water used for constructions and all other parameters, should satisfy the Circular Instructions, Codal requirements etc, in the interest of the Board.
6. Based on the information provided by the Executive Engineer/PID-I Sivaganga Division, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be the knowledge of the undersigned and revision if any needed should be made accordingly.
7. Fly ash bricks have been considered for masonry work in substructure & Stair area in superstructure. AAC Blocks have been considered for masonry work in superstructure as recommended by the Executive Engineer/PID-I Sivaganga Division.
8. Location and capacity of water tanks (Domestic) were considered as per approved TD–01/2024, Dt: 17.05.2024.

Encl: DWG.NO: 1) TNUHDB/ ANNA NAGAR - KEERANUR /GEN/01 & 03
2) TNUHDB/ ANNA NAGAR - KEERANUR /01 to 18.

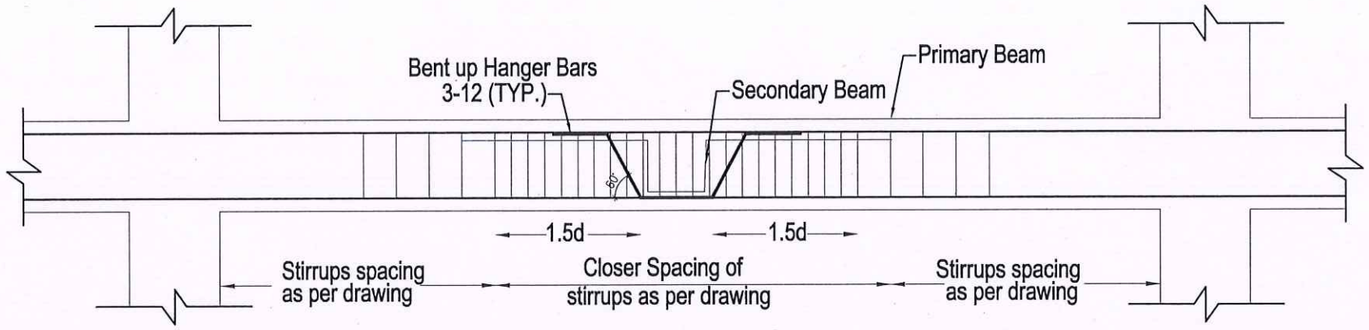
13/9/2024
For Chief Engineer-I

13/9/24

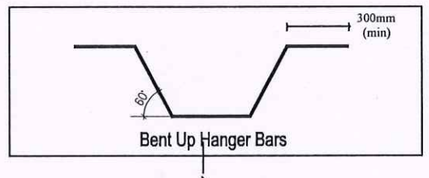
To
The Executive Engineer,
PID-I SivagangaDivision /TNUHDB (w.e).

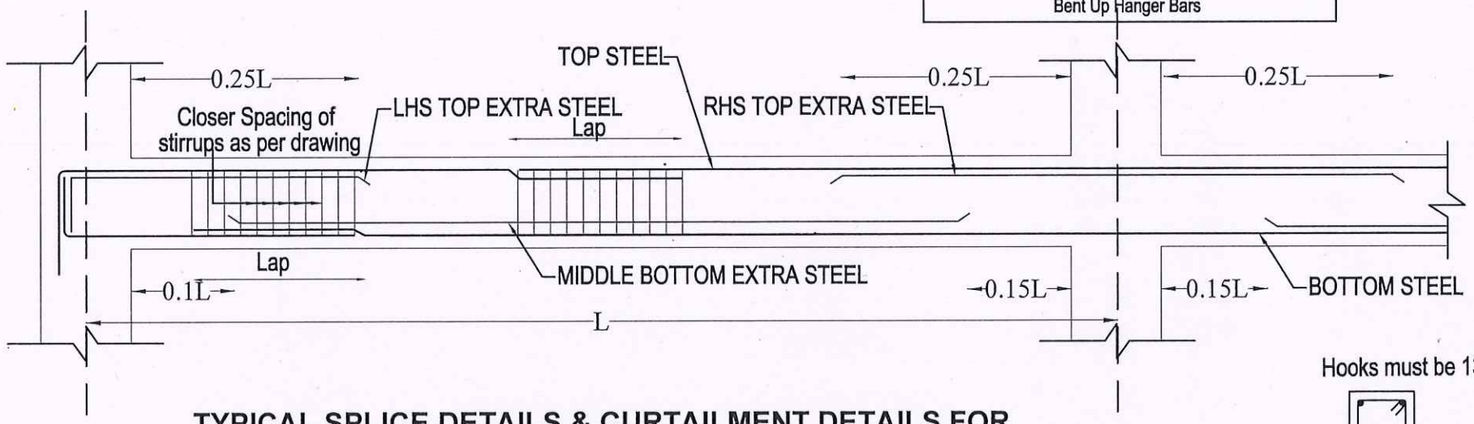
Copy to:
The Superintending Engineer,
South Circle/TNUHDB.

TYPICAL DETAILS FOR ALL THE FLOOR BEAMS

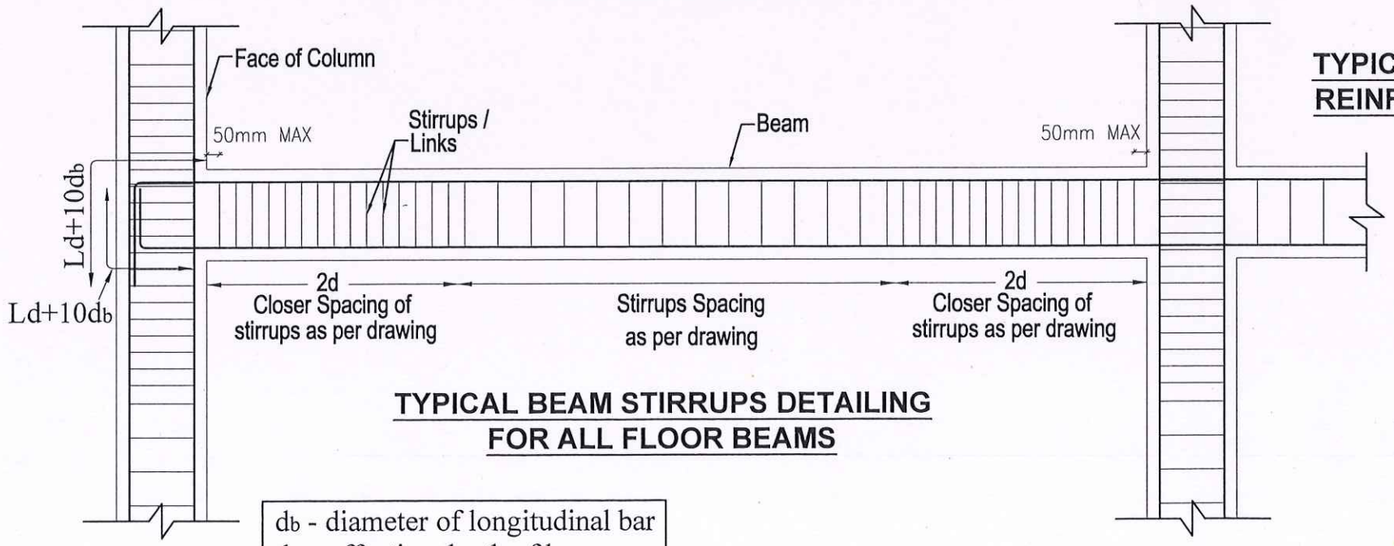


TYPICAL BENT UP HANGER BAR DETAILS AT MAIN AND SECONDARY BEAM JUNCTIONS



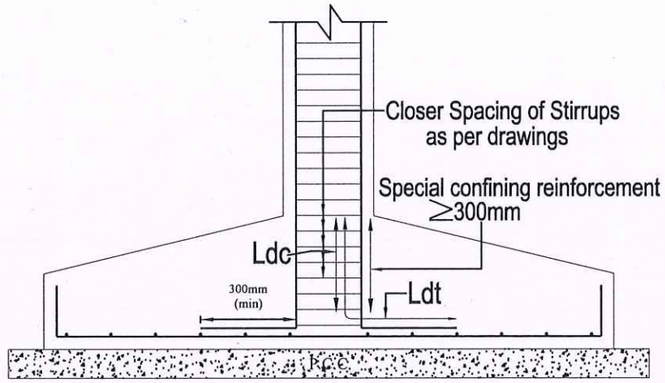


TYPICAL SPLICE DETAILS & CURTAILMENT DETAILS FOR ALL FLOOR BEAMS



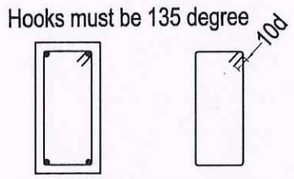
TYPICAL BEAM STIRRUPS DETAILING FOR ALL FLOOR BEAMS

d_b - diameter of longitudinal bar
d - effective depth of beam



TYPICAL SPECIAL CONFINING REINFORCEMENT DETAILS IN FOOTING

Grade of Concrete	Development length of bars in Tension		Development length of bars in Compression	
	Grade of Steel		Grade of Steel	
	Fe 500	Fe 550	Fe 500	Fe 550
M20	57Ø	63Ø	46Ø	50Ø
M25	49Ø	54Ø	39Ø	43Ø
M30	46Ø	50Ø	37Ø	40Ø
M35	40Ø	44Ø	32Ø	36Ø
≥M40	36Ø	40Ø	29Ø	32Ø
Ø - Diameter of bar.				



TYPICAL DETAILS OF TRANSVERSE REINFORCEMENT HOOKS IN BEAM.

TRUE COPY
13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 NOS (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE OF DINDIGUL DISTRICT.

TITLE:
TYPICAL DETAILS FOR ALL THE FLOOR BEAMS

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR - KEERANUR/ GEN/01.

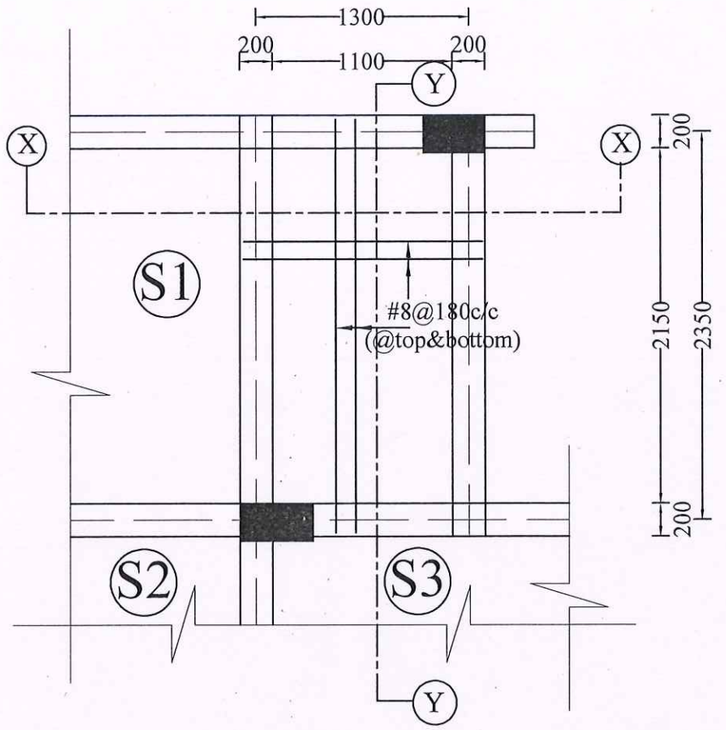
REVISION NO.:

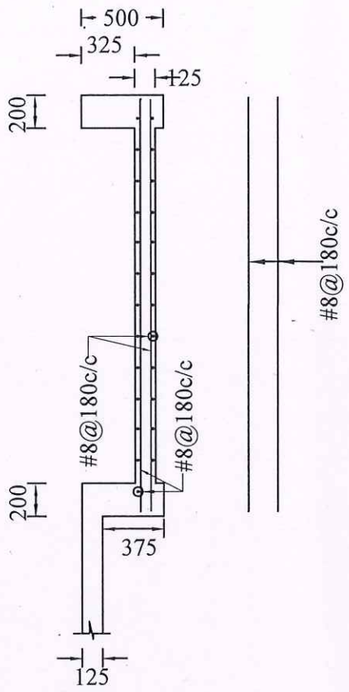
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
Chief Engineer -I

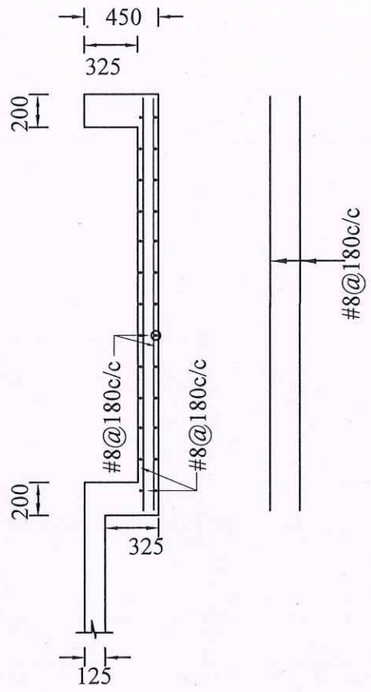
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABIAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL SUNKEN SLAB DETAILS

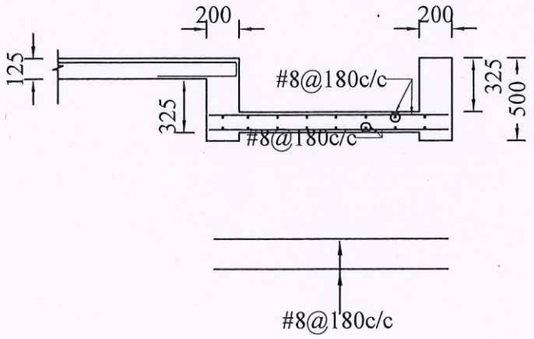




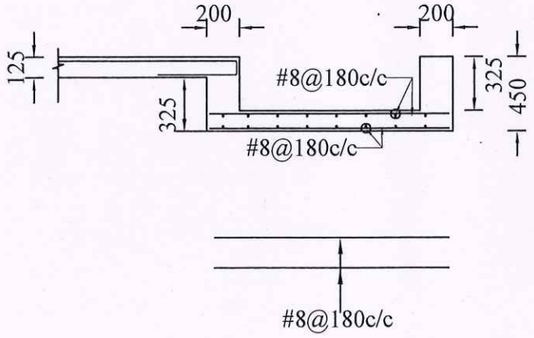
SECTION ALONG Y-Y FOR GROUND FLOOR



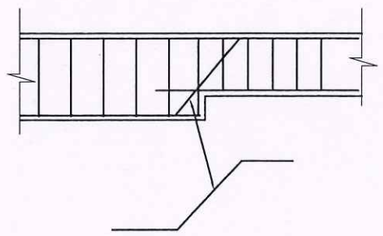
SECTION ALONG Y-Y FOR OTHER THAN GROUND FLOOR



SECTION ALONG X-X FOR GROUND FLOOR



SECTION ALONG X-X FOR OTHER THAN GROUND FLOOR



BEAMS AT DIFFERENT DEPTH

TRUE COPY

13/9/2024

EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.

13/9/24

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 **M25** 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 II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**G+3**) floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    - (a) Foundation - 50 mm
    - (b) Column/Shear wall - 40 mm
    - (c) Floor and roof beam - 30 mm
    - (d) Slab - 25 mm
    - (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report of Government College of Engineering - Bodinayakkanur, Report. No.:GCE/PCE/SOIL/008C/2022, Dt:03.08.2022 & additional soil recommendation Dt:14.09.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
TYPICAL SUNKEN SLAB DETAILS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR - KEERANUR/GEN/03.

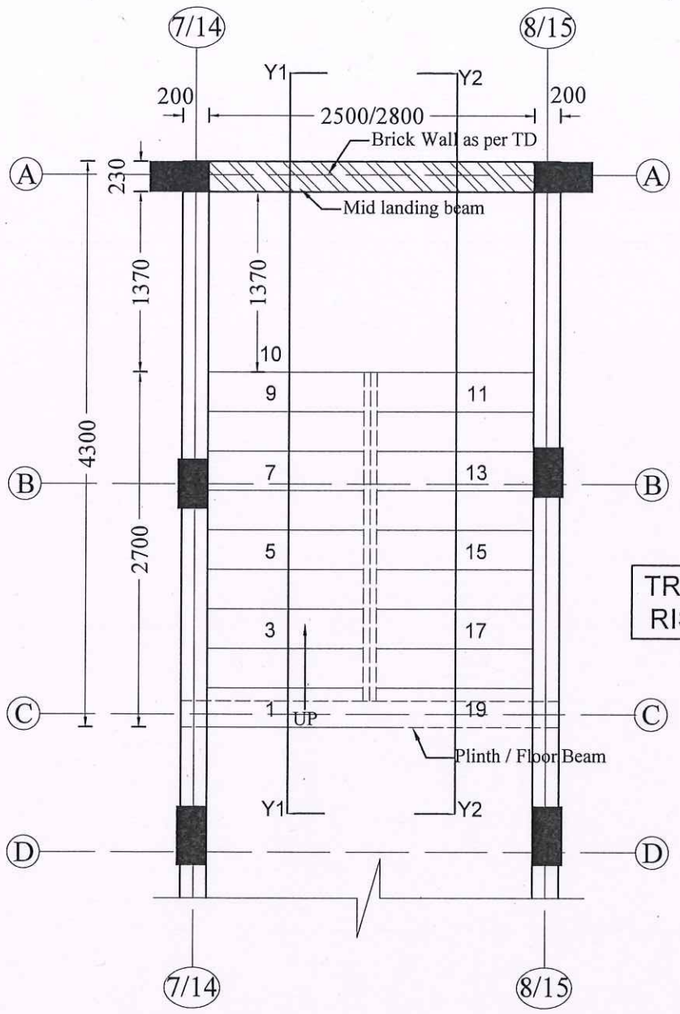
REVISION NO.:

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - South**

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

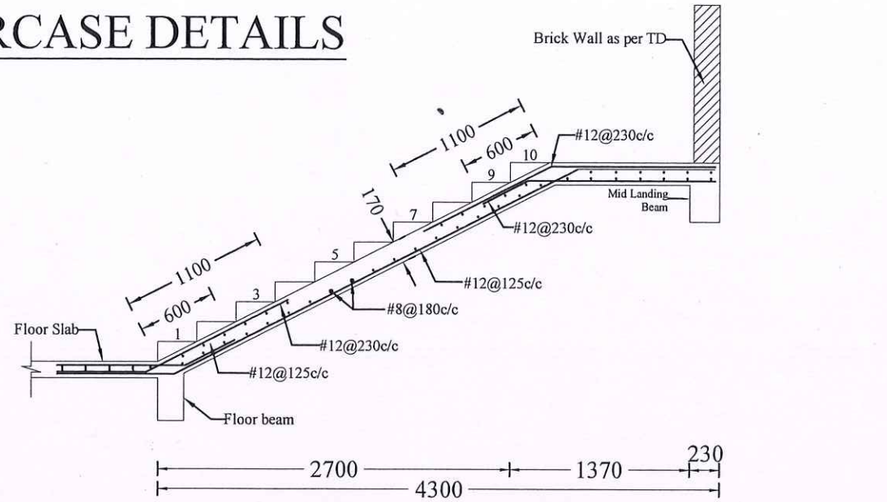
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL STAIRCASE DETAILS

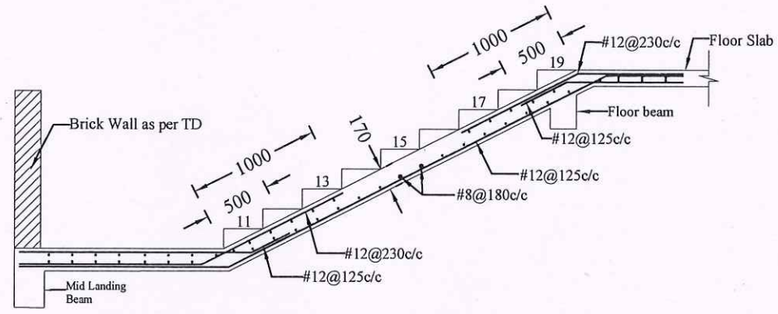


TREAD=300mm
RISE=152mm

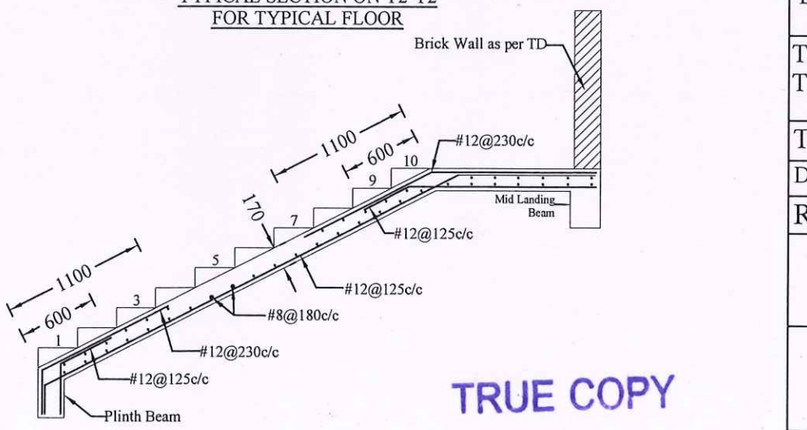
TYPICAL STAIRCASE PLAN



TYPICAL SECTION ON Y1-Y1
OTHER THAN GROUND FLOOR

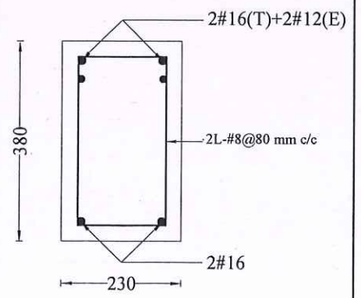
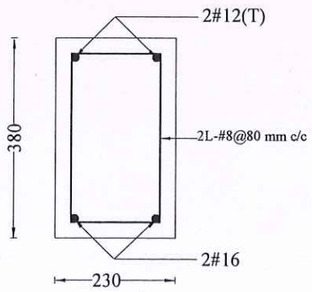


TYPICAL SECTION ON Y2-Y2
FOR TYPICAL FLOOR



TYPICAL SECTION ON Y1-Y1
FOR GROUND FLOOR

MID LANDING BEAM DETAILS

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
1.	MB 230 x 380		

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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
#5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

NOTE:

1. All the Dimensions are in mm.
2. M25 Concrete and Fe500D grade steel shall be adopted.
3. Waist slab thickness 170mm
4. Clear cover to waist slab is 25mm.
5. Concrete Steps considered for analysis.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE OF DINDIGUL DISTRICT.

TITLE:
TYPICAL STAIRCASE DETAILS

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB/ANNA NAGAR-KEERANUR/GEN - 02.

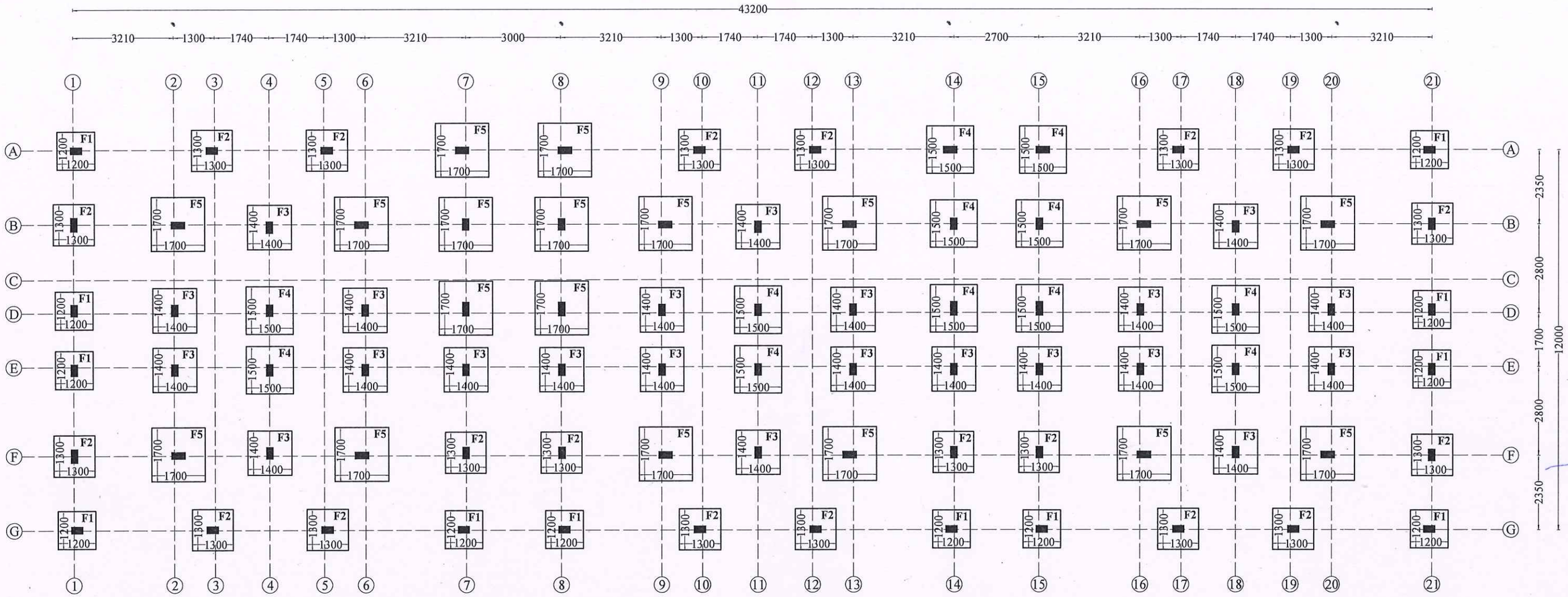
REVISION NO.:

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - South**

sd.xxxx 11.09.2024
Chief Engineer - I

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

PLAN AT FOUNDATION LEVEL



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 **M25** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe500D** grade conforming to IS 1786 - 2008.
5. The structure is designed for seismic zone II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure & Staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**G+3**) floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
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19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report of Government College of Engineering - Bodinayakkanur, Report. No.:GCE/PCE/SOIL/008C/2022, Dt:03.08.2022 & additional soil recommendation Dt:14.09.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
PLAN AT FOUNDATION LEVEL

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/01.

REVISION NO.:

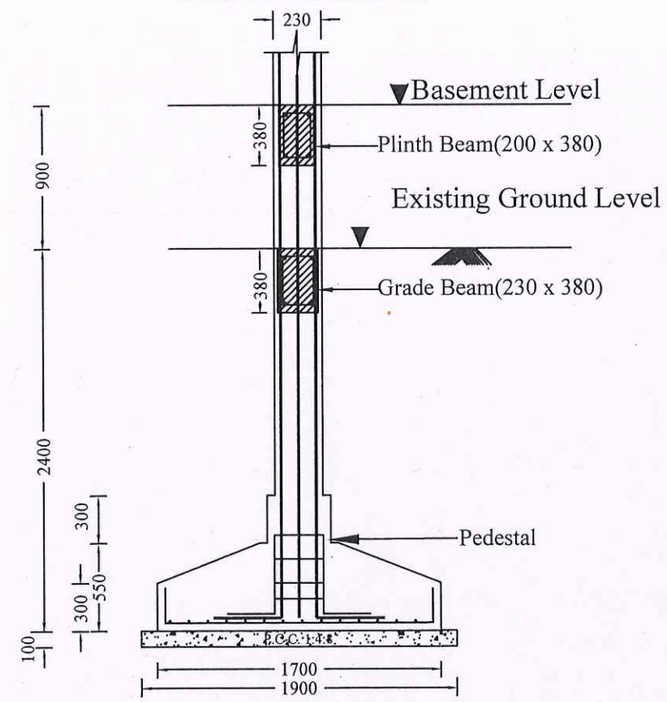
TRUE COPY
13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

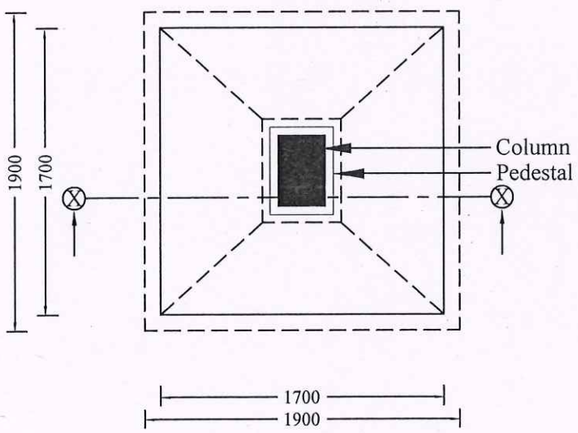
sd.xxxx 11.09.2024
Chief Engineer - I

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

TYPICAL CROSS SECTION
OF COLUMN FOOTING

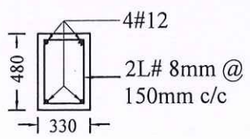


CROSS SECTION @Ⓧ-Ⓧ

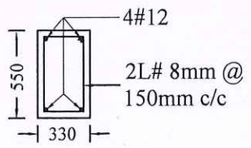


TYPICAL PEDESTAL DETAIL

FOR COLUMN
230 x 380



FOR COLUMN
230 x 450



SCHEDULE OF COLUMN FOOTINGS

Sl.No.	Footing Marking	Numbers of Footing	Pedestal Size (mm x mm x mm)	PCC Mat (mm x mm)	RCC Footing (mm x mm)	Thickness Near Column (mm)	Edge Thickness (mm)	Reinforcement in Footing (mm)
SQUARE FOOTING								
1.	F1	12	330 x 480 x 350	1400 x 1400	1200 x 1200	350	230	Bottom : # 12 mm @ 180 mm C/C both ways
2.	F2	20	330 x 480 x 300 & 330 x 550 x 300	1500 x 1500	1300 x 1300	400	250	Bottom : # 12 mm @ 180 mm C/C both ways
3.	F3	22	330 x 480 x 250	1600 x 1600	1400 x 1400	450	250	Bottom : # 12 mm @ 180 mm C/C both ways
4.	F4	12	330 x 480 x 200 & 330 x 550 x 200	1700 x 1700	1500 x 1500	500	300	Bottom : # 12 mm @ 150 mm C/C both ways
5.	F5	18	330 x 480 x 300 & 330 x 550 x 300	1900 x 1900	1700 x 1700	550	300	Bottom : # 12 mm @ 150 mm C/C both ways

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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

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 **M25** 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 II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**G+3**) floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report of Government College of Engineering - Bodinayakkanur, Report. No.:GCE/PCE/SOIL/008C/2022, Dt:03.08.2022 & additional soil recommendation Dt:14.09.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
SCHEDULE OF COLUMN FOOTINGS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR-KEERANUR / 02.

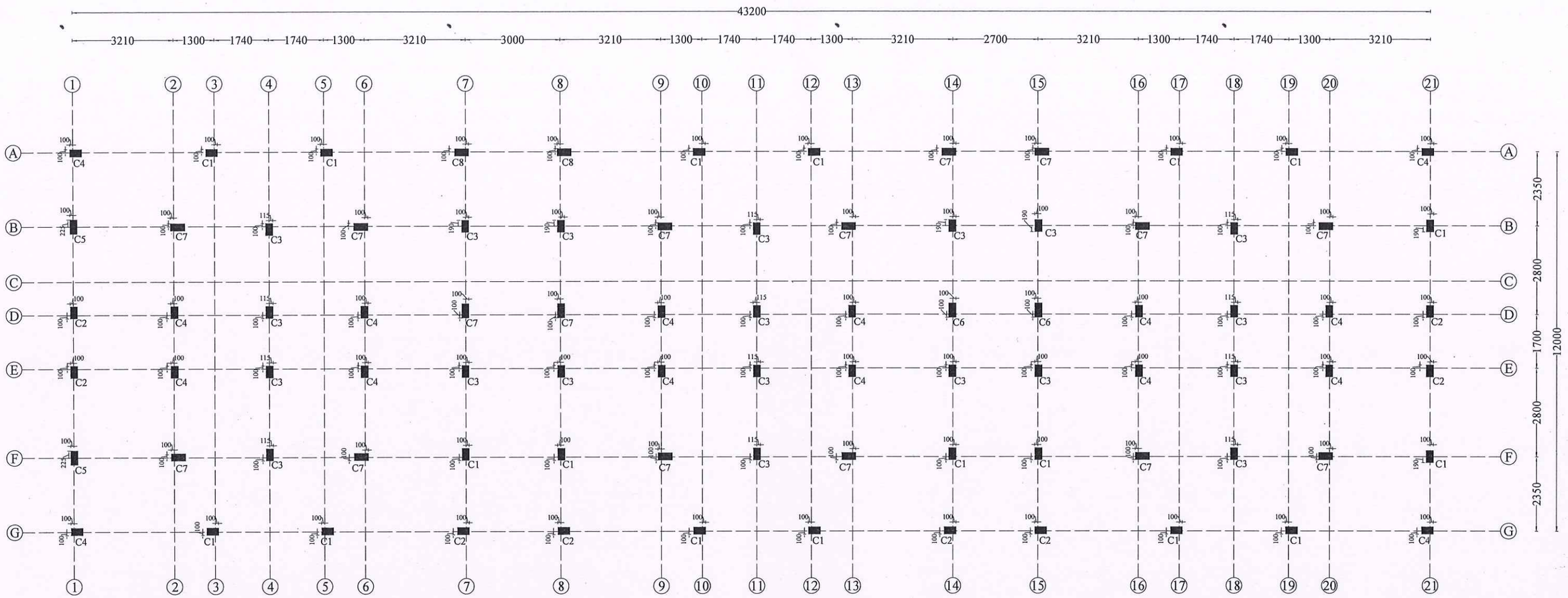
REVISION NO.:

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - South**

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

COLUMN LAYOUT



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 **M25** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe500D** grade conforming to IS 1786 - 2008.
5. The structure is designed for seismic zone II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure & Staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for **(G+3)** floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
COLUMN LAYOUT

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR-KEERANUR/ 03.

REVISION NO.:

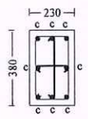
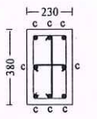
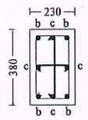
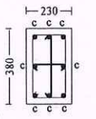
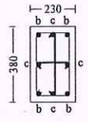
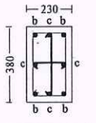
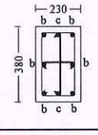
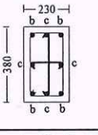
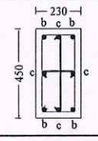
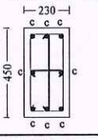
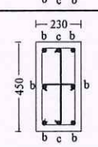
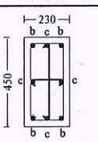
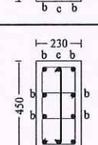
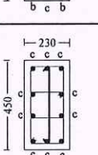
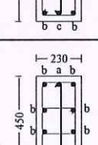
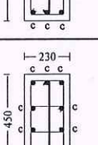
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12/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

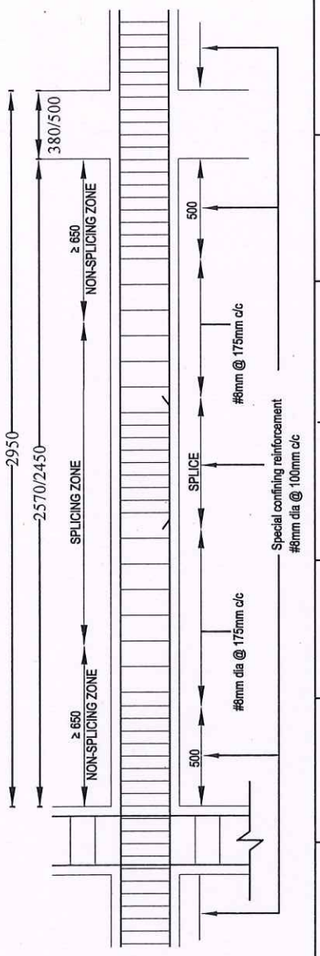
sd.xxxx 11.09.2024
Chief Engineer - I

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

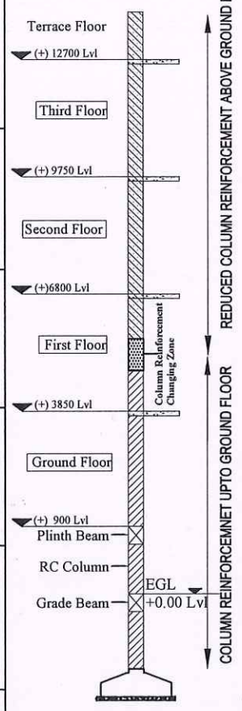
SCHEDULE OF COLUMNS

Sl. No.	Column Marking	No. of Columns	Size (mm x mm)	Upto Ground Floor		Above Ground Floor		Lateral Ties	Ties Profile	
				Column Verticals	Cross Section	Column Verticals	Cross Section			
1.	C1	18	230 x 380	#12 - 8 Nos		#12 - 8 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
2.	C2	08	230 x 380	#16 - 4 Nos + #12 - 4 Nos		#12 - 8 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
3.	C3	20	230 x 380	#16 - 4 Nos + #12 - 4 Nos		#16 - 4 Nos + #12 - 4 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
4.	C4	16	230 x 380	#16 - 6 Nos + #12 - 2 Nos		#16 - 4 Nos + #12 - 4 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
5.	C5	02	230 x 450	#16 - 4 Nos + #12 - 4 Nos		#12 - 8 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
6.	C6	02	230 x 450	#16 - 6 Nos + #12 - 2 Nos		#16 - 4 Nos + #12 - 4 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
7.	C7	16	230 x 450	#16 - 8 Nos + #12 - 2 Nos		#12 - 10 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		
8.	C8	02	230 x 450	#20 - 2 Nos + #16 - 8 Nos		#12 - 10 Nos		1) Upto Plinth Beam: # 8 @ 100 mm c/c 2) Above Plinth Beam: # 8 @ 100 mm c/c for 500 mm at top and bottom near beam - column junction and the rest #8 @ 175mm c/c		

Notes: In Cross Section a - # 20 mm b - # 16 mm c - # 12 mm



TYPICAL COLUMN SPLICING AND CONFINING REINFORCEMENT DETAILS



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 **M25** 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 II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (G+3) floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
SCHEDULE OF COLUMNS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR-KEERANUR / 04.

REVISION NO.:

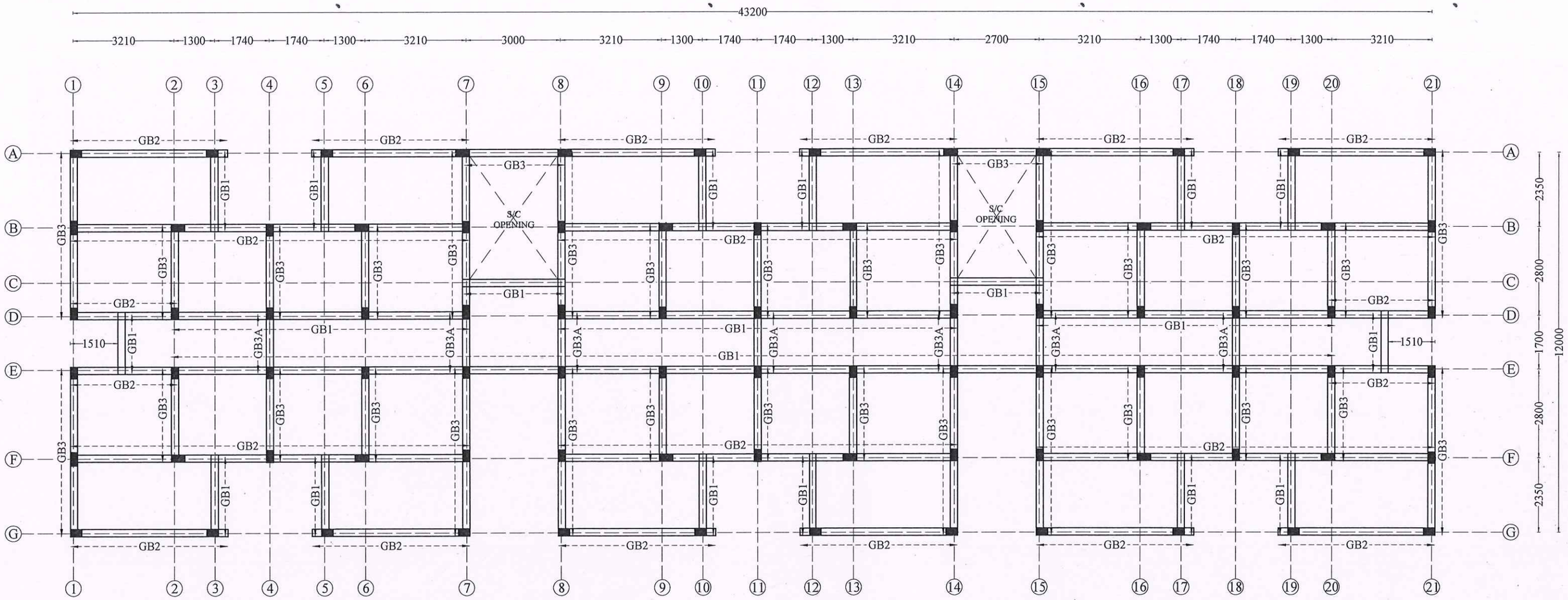
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

GRADE BEAM LAYOUT



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 **M25** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe500D** grade conforming to IS 1786 - 2008.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
GRADE BEAM LAYOUT

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/05.

REVISION NO.:

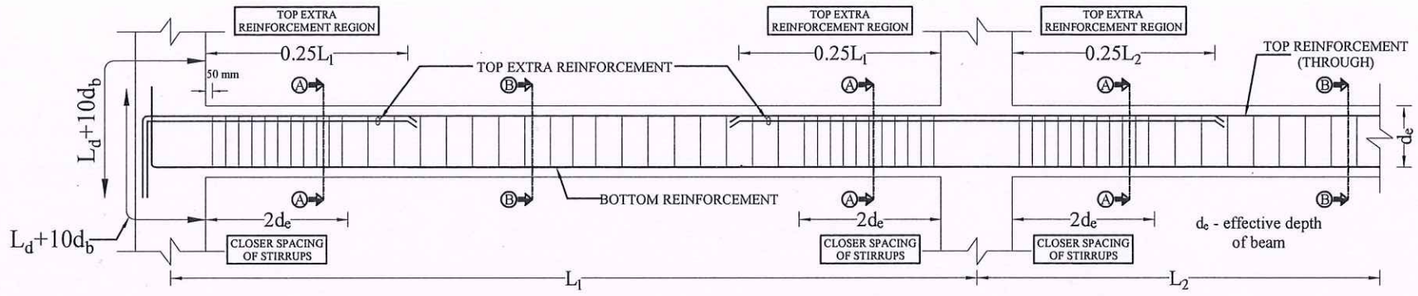
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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

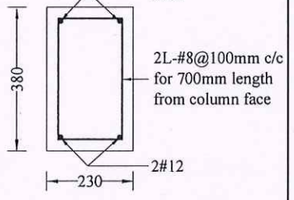
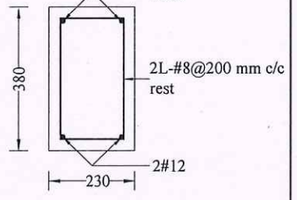
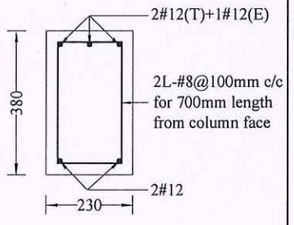
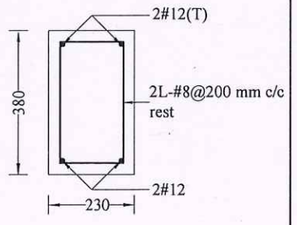
sd.xxxx 11.09.2024
Chief Engineer - I

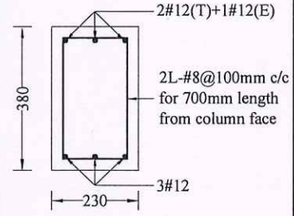
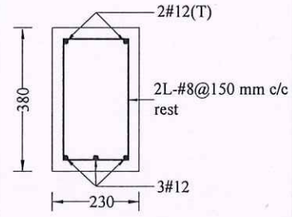
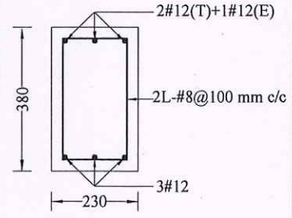
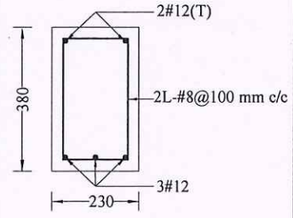
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT
DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL CURTAILMENT & STIRRUPS DETAILS



GRADE BEAM DETAILS

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
1.	GB1 230 x 380		
2.	GB2 230 x 380		

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
3.	GB3 230 x 380		
4.	GB3A 230 x 380		

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 **M25** 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 II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**G+3**) floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report of Government College of Engineering - Bodinayakkanur, Report. No.:GCE/PCE/SOIL/008C/2022, Dt:03.08.2022 & additional soil recommendation Dt:14.09.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
GRADE BEAM DETAILS.

TYPE DESIGN NO.: 01/2024

DWG. NO.: TNUHDB / ANNA NAGAR-KEERANUR / 06.

REVISION NO.:

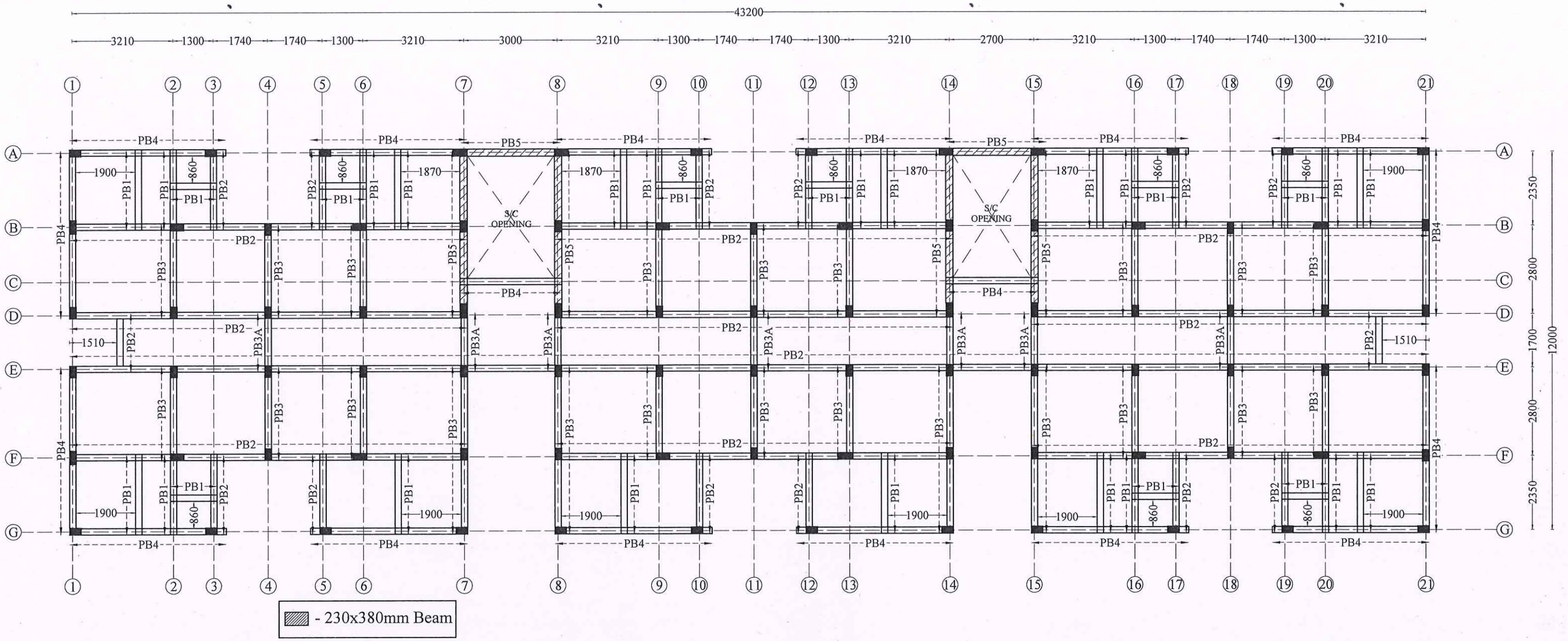
Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - South**

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

PLINTH BEAM LAYOUT



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 **M25** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe500D** grade conforming to IS 1786 - 2008.
5. The structure is designed for seismic zone II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure & Staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for **(G+3)** floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
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    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
PLINTH BEAM LAYOUT

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/07

REVISION NO.:

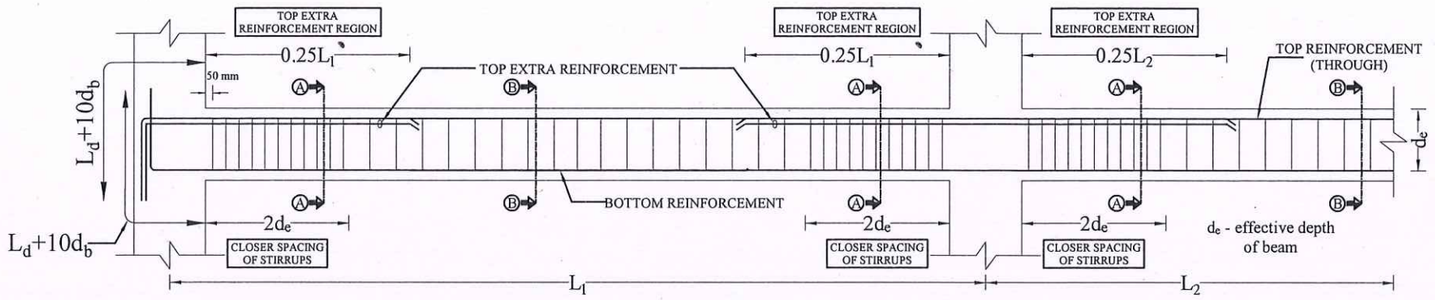
TRUE COPY
13/9/2024
EXECUTIVE ENGINEER (A/C)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
Chief Engineer - I

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

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 200 x 230	2#12(T) 230 2L-#8@100mm c/c for 400mm length from column face 2#12 200	2#12(T) 230 2L-#8@200 mm c/c rest 2#12 200
2.	PB2 200 x 380	2#12(T)+1#12(E) 380 2L-#8@100mm c/c for 700mm length from column face 2#12 200	2#12(T) 380 2L-#8@200 mm c/c rest 2#12 200
3.	PB3 200 x 380	2#12(T)+1#12(E) 380 2L-#8@100mm c/c for 700mm length from column face 3#12 200	2#12(T) 380 2L-#8@200 mm c/c rest 3#12 200
4.	PB3A 200 x 380	2#12(T)+1#12(E) 380 2L-#8@100 mm c/c 3#12 200	2#12(T) 380 2L-#8@100 mm c/c 3#12 200
5.	PB4 200 x 380	2#12(T)+1#16(E) 380 2L-#8@100mm c/c for 700mm length from column face 3#12 200	2#12(T) 380 2L-#8@150 mm c/c rest 3#12 200
6.	PB5 230 x 380	2#12(T)+1#16(E) 380 2L-#8@100 mm c/c 3#12 230	2#12(T) 380 2L-#8@100 mm c/c 3#12 230

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 **M25** 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 II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for (**G+3**) floors only.
8. Design of the structure carried out with Limit State Method.
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10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
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    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
PLINTH BEAM DETAILS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 08.

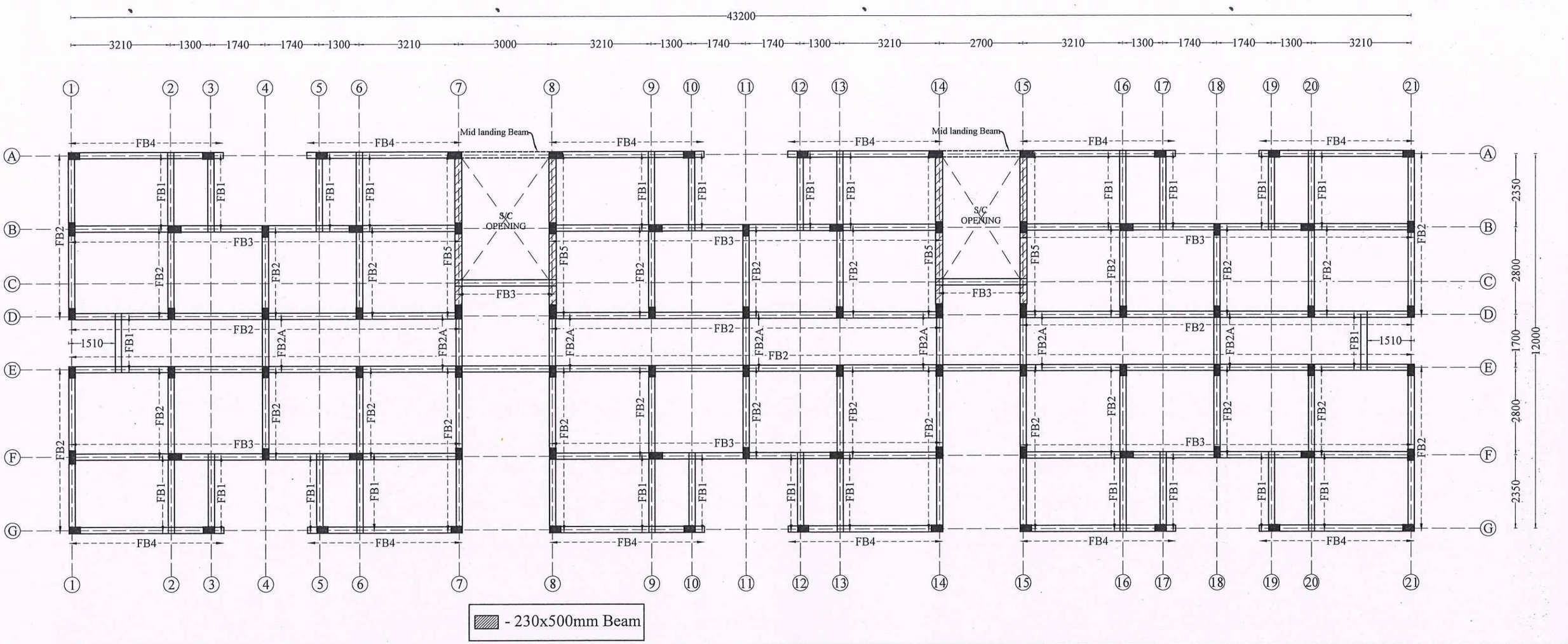
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

GROUND FLOOR BEAM LAYOUT



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 **M25** grade, conforming to IS: 456 - 2000.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
GROUND FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 09.

REVISION NO.:

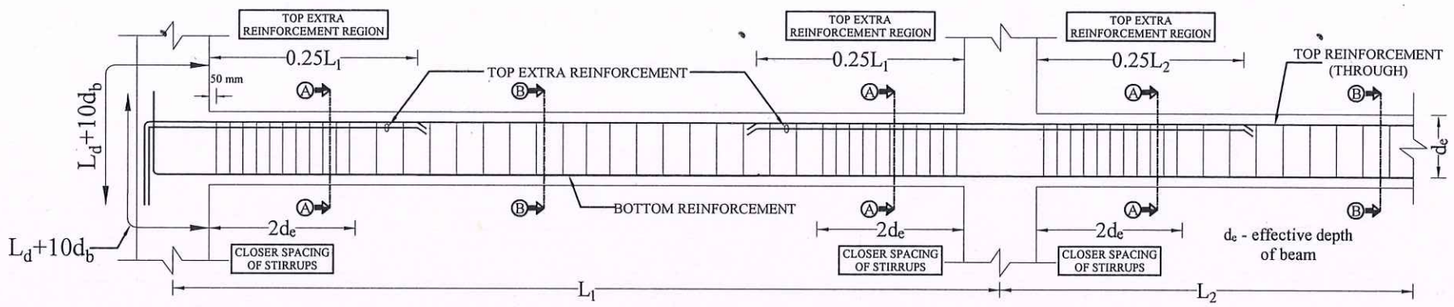
TRUE COPY
13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

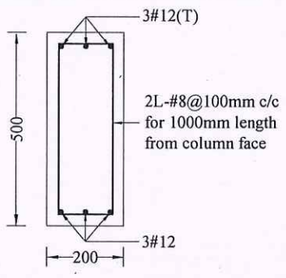
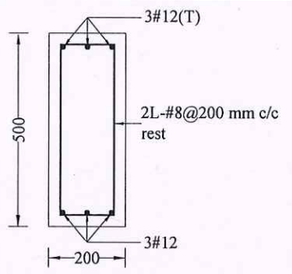
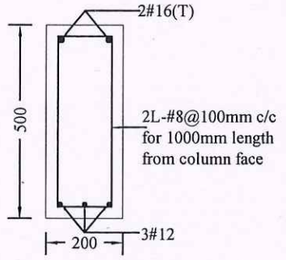
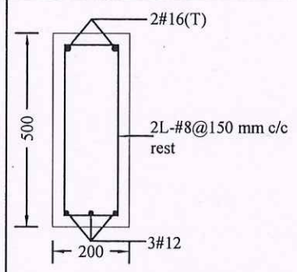
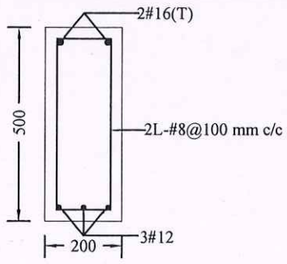
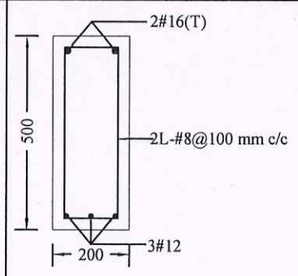
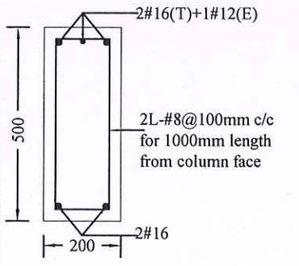
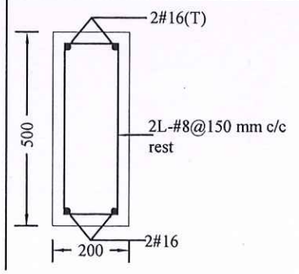
sd.xxxx 11.09.2024
Chief Engineer - I

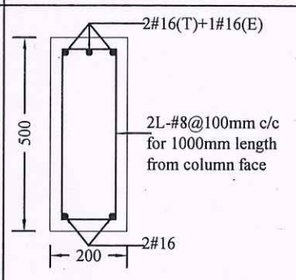
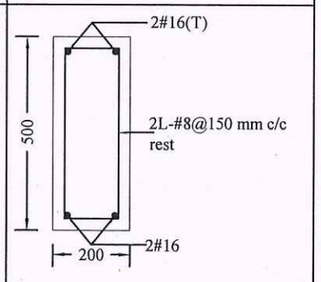
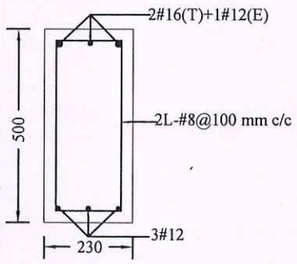
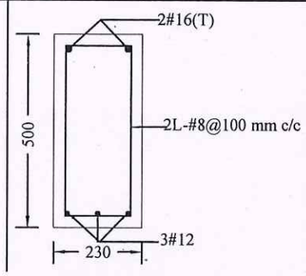
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL CURTAILMENT & STIRRUPS DETAILS



GROUND FLOOR BEAM DETAILS

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
1.	FB1 200 x 500		
2.	FB2 200 x 500		
3.	FB2A 200 x 500		
4.	FB3 200 x 500		

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
5.	FB4 200 x 500		
6.	FB5 230 x 500		

NOTE:
1. All the dimensions are in mm unless noted otherwise.
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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
GROUND FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 10.

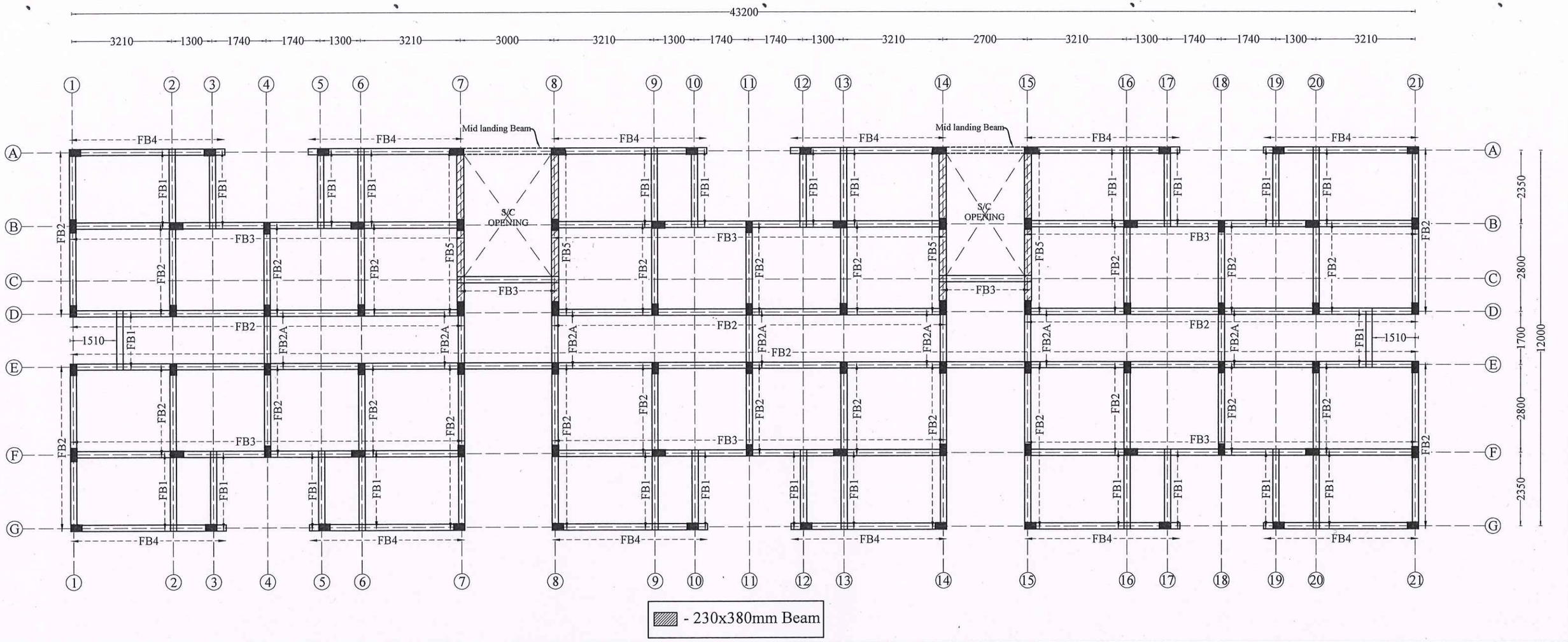
REVISION NO.:

Assistant Engineer	**Asst. Exe. Engineer**
Executive Engineer	**SE - South**

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

FIRST & SECOND FLOOR BEAM LAYOUT



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 **M25** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe500D** grade conforming to IS 1786 - 2008.
5. The structure is designed for seismic zone II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure & Staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for **(G+3)** floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
FIRST & SECOND FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 11.

REVISION NO.:

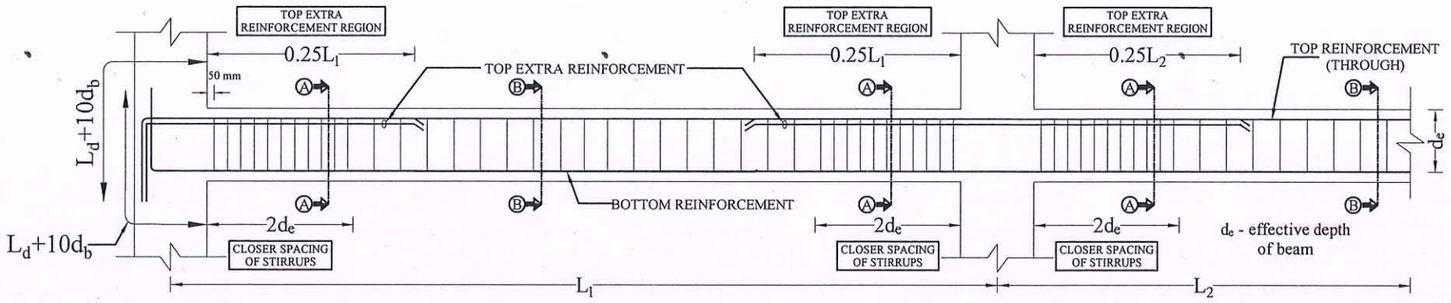
TRUE COPY
13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

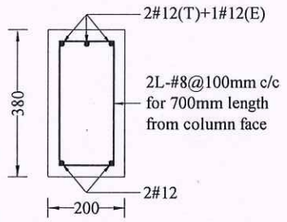
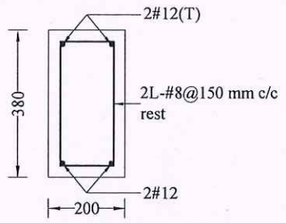
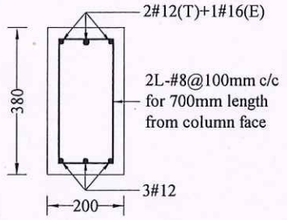
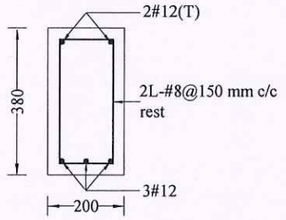
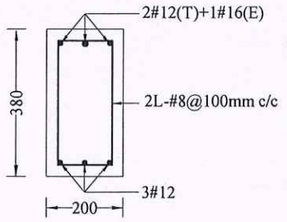
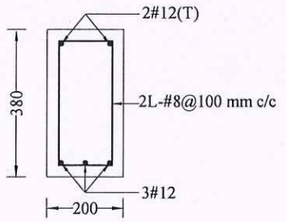
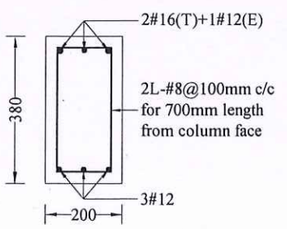
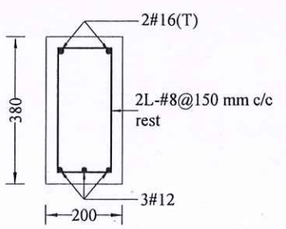
sd.xxxx 11.09.2024
Chief Engineer - I

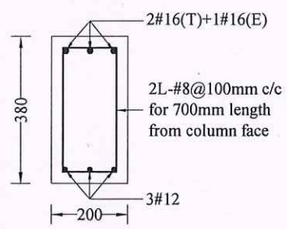
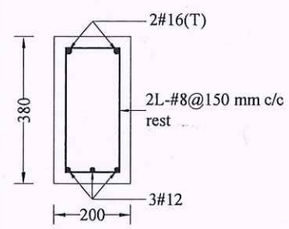
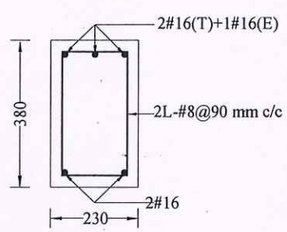
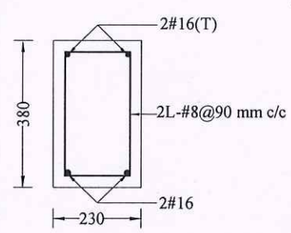
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT
DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL CURTAILMENT & STIRRUPS DETAILS



FIRST & SECOND FLOOR BEAM DETAILS

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
1.	FB1 200 x 380		
2.	FB2 200 x 380		
3.	FB2A 200 x 380		
4.	FB3 200 x 380		

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
5.	FB4 200 x 380		
6.	FB5 230 x 380		

NOTE:
1. All the dimensions are in mm unless noted otherwise.
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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
FIRST & SECOND FLOOR BEAM DETAILS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 12.

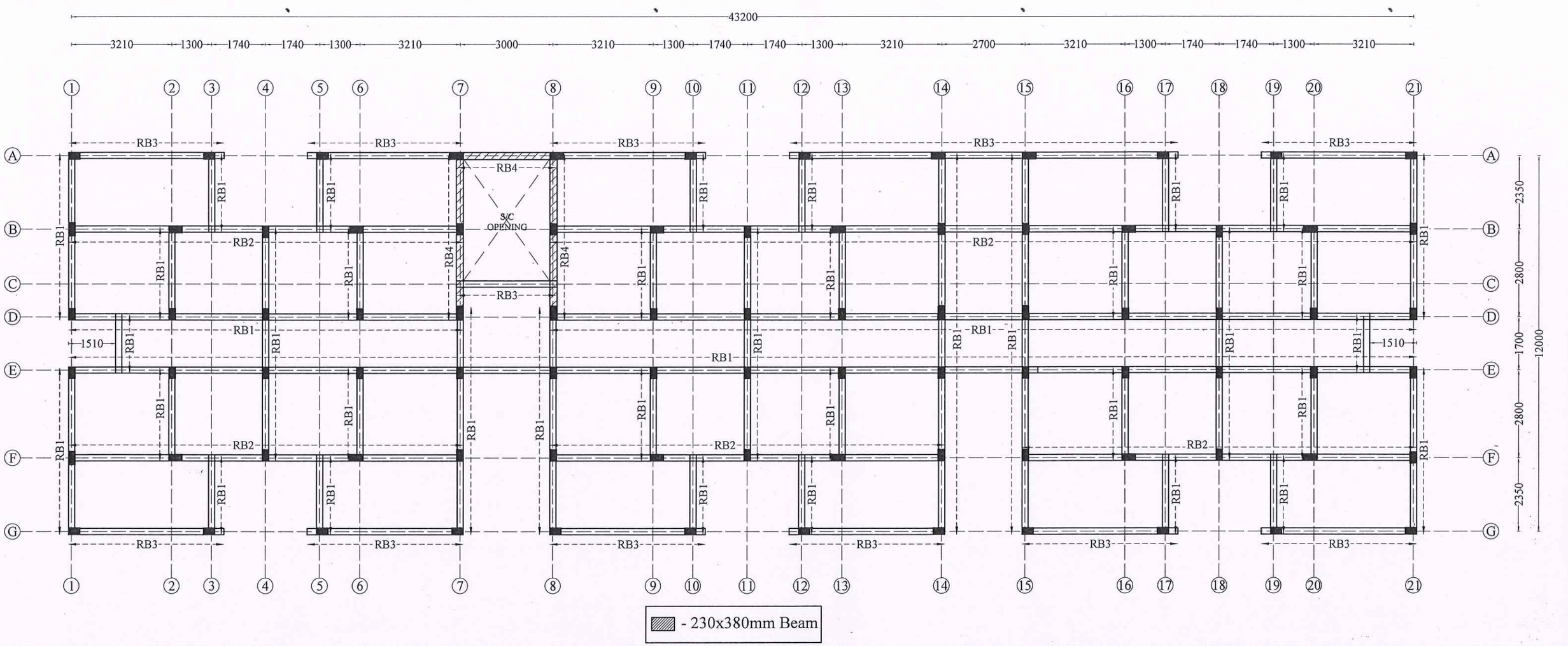
REVISION NO.:

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

TERRACE FLOOR BEAM LAYOUT



NOTE :

1. All the dimensions are in mm unless noted otherwise.
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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
TERRACE FLOOR BEAM LAYOUT

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 13.

REVISION NO.:

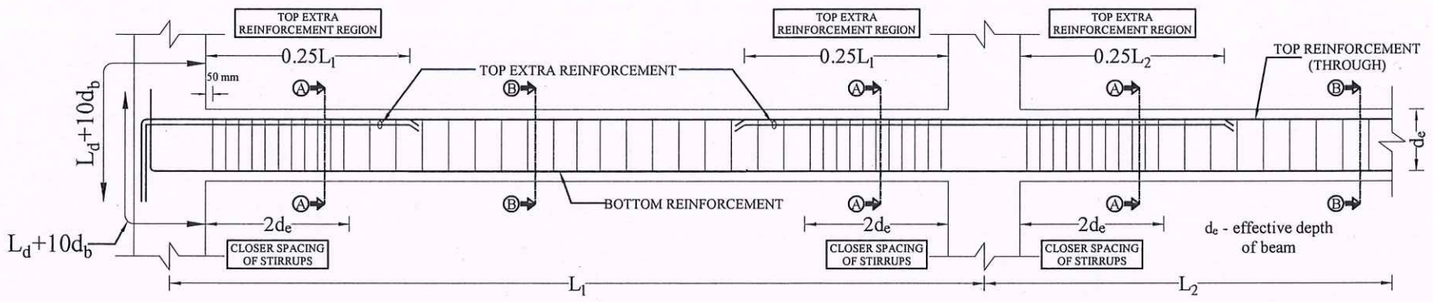
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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

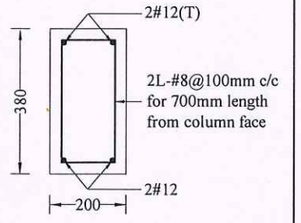
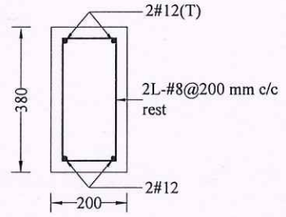
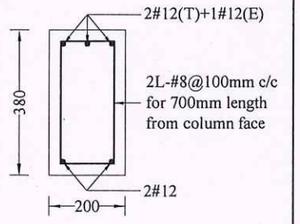
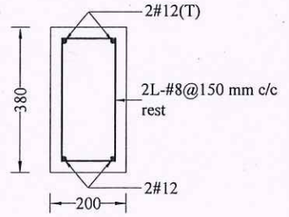
sd.xxxx 11.09.2024
Chief Engineer - I

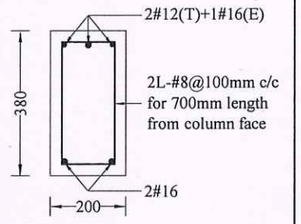
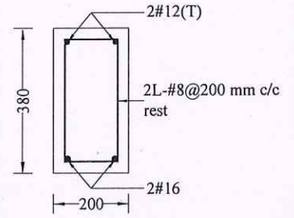
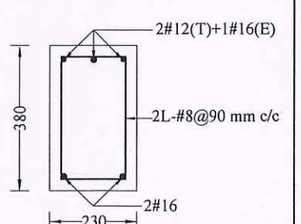
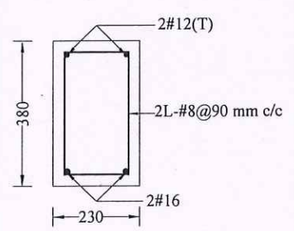
STRUCTURAL & QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT
DEVELOPMENT BOARD
NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL CURTAILMENT & STIRRUPS DETAILS



TERRACE BEAM DETAILS

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
1.	RB1 200 x 380		
2.	RB2 200 x 380		

Sl. No	Beam Notation & Size (mm x mm)	SECTION ALONG A-A (SUPPORT)	SECTION ALONG B-B (SPAN)
3.	RB3 200 x 380		
4.	RB4 230 x 380		

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STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
TERRACE BEAM DETAILS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 14.

REVISION NO.:

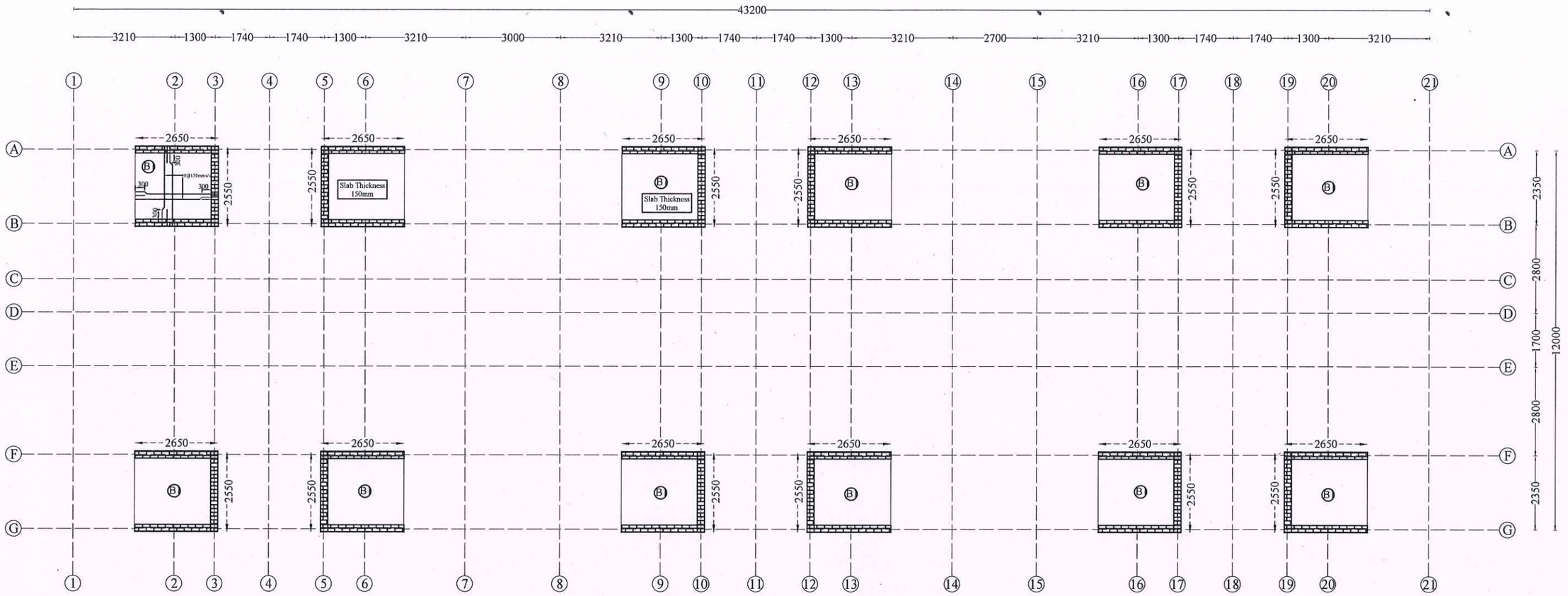
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
CHIEF ENGINEER - I

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

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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

LOCATION OF WATER TANK PLATFORM SLAB & SLAB DETAILS



- 230mm Fly Ash Brick work

NOTE:
1. Water Tank Base Slab can be rested in Brick Work

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 **M25** grade, conforming to IS: 456 - 2000.
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5. The structure is designed for seismic zone II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure & Staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for **(G+3)** floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report of Government College of Engineering - Bodinayakkanur, Report. No.:GCE/PCE/SOIL/008C/2022, Dt:03.08.2022 & additional soil recommendation Dt:14.09.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
LOCATION OF WATER TANK PLATFORM SLAB & SLAB DETAILS.

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR/ 15.

REVISION NO.:

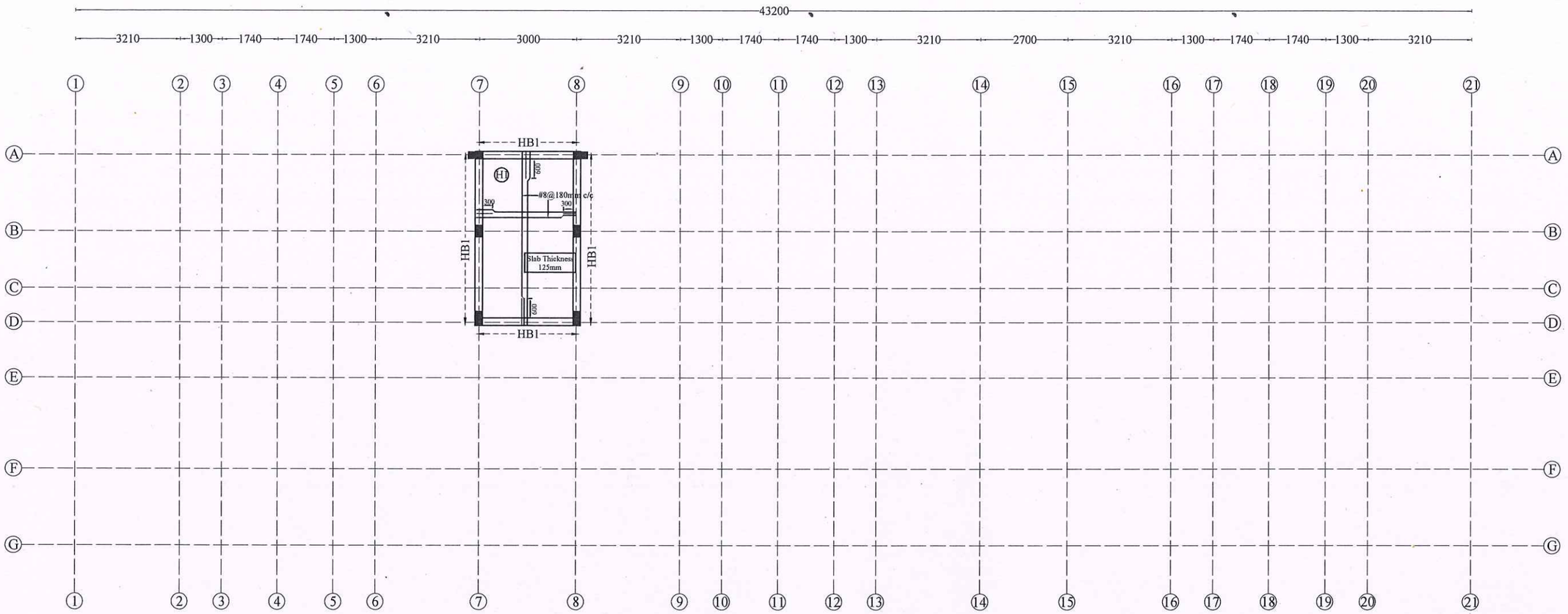
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13/9/2024
EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

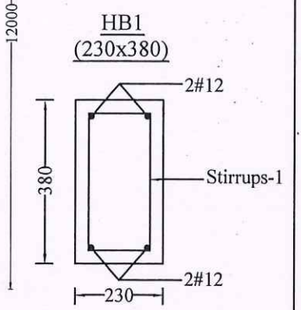
Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
Chief Engineer - I

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

HEAD ROOM BEAM LAYOUT & DETAILS





NOTE:
Stirrups-1 : 2 Legged # 8 mm stirrups at 100 mm c/c for 700 mm length on all sides near Beam - Column junctions and the rest at 200 mm c/c.

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 **M25** grade, conforming to IS: 456 - 2000.
4. All the reinforcement shall be of **Fe500D** grade conforming to IS 1786 - 2008.
5. The structure is designed for seismic zone II as per IS 1893:2016.
6. Flyash bricks has been considered for masonry work in sub structure & Staircase area and AAC blocks has been considered for masonry work in super structure.
7. Structure is designed for **(G+3)** floors only.
8. Design of the structure carried out with Limit State Method.
9. The depth of foundation is 2.4 m from the existing ground level & Safe Bearing Capacity at this level is 250 kN/sq.m. as recommended in Soil Report.
10. Analysis of the structure done with **ETABS**.
11. Clear cover for reinforcement are as follows:
    (a) Foundation - 50 mm
    (b) Column/Shear wall - 40 mm
    (c) Floor and roof beam - 30 mm
    (d) Slab - 25 mm
    (e) Water Tank Platform 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. Based on the information provided by the EE, the analysis has been done considering the bottom level of footing is same in a block. In case of change in level of the footing during construction, this has to be brought to the knowledge of the undersigned and revision if any needed should be made accordingly.
18. 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.
19. Ground water quality has to be conformed for suitability to construction work.
20. The ground water / soil to be tested for chlorides & sulphates and remedial measures if any should be taken accordingly.
21. Dimensions and levels are to unfinished surface excluding finishes,coating etc,. unless noted otherwise. The dimension should be checked with type design drawing.
22. The recommendations detailed in the soil investigation report of Government College of Engineering - Bodinayakkanur, Report. No.:GCE/PCE/SOIL/008C/2022, Dt:03.08.2022 & additional soil recommendation Dt:14.09.2022 should be followed scrupulously.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
HEAD ROOM BEAM LAYOUT & DETAILS

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB /ANNA NAGAR-KEERANUR / 16.

REVISION NO.:

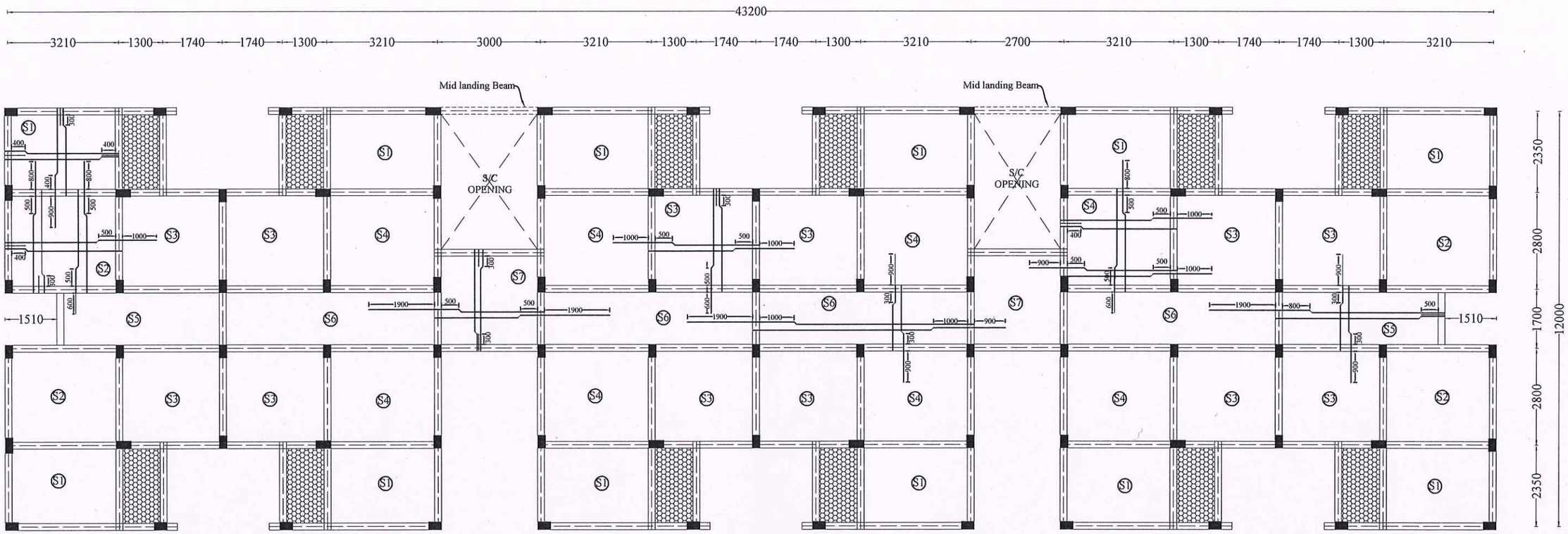
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STRUCTURAL AND QUALITY CONTROL CELL
TAMIL NADU URBAN HABITAT DEVELOPMENT BOARD
5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
Chief Engineer - I

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NO.5, KAMARAJAR SALAI
CHENNAI - 600 005.

TYPICAL FLOOR SLAB DETAILS



SLAB SUNKEN BY 325mm

Note:
1. ALL SLAB 125mm THICK
2. ALL SLAB REINFORCEMENT ARE #8@180mm c/c
3. For sunken slab details refer drawing **TNUHDB/ANNA NAGAR - KEERANUR /Gen/03.**

NOTE:

1. All the Dimensions are in mm.
2. M25 Concrete and Fe500D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-------" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
TYPICAL FLOOR SLAB DETAILS

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR-KEERANUR/ 17.

REVISION NO.:

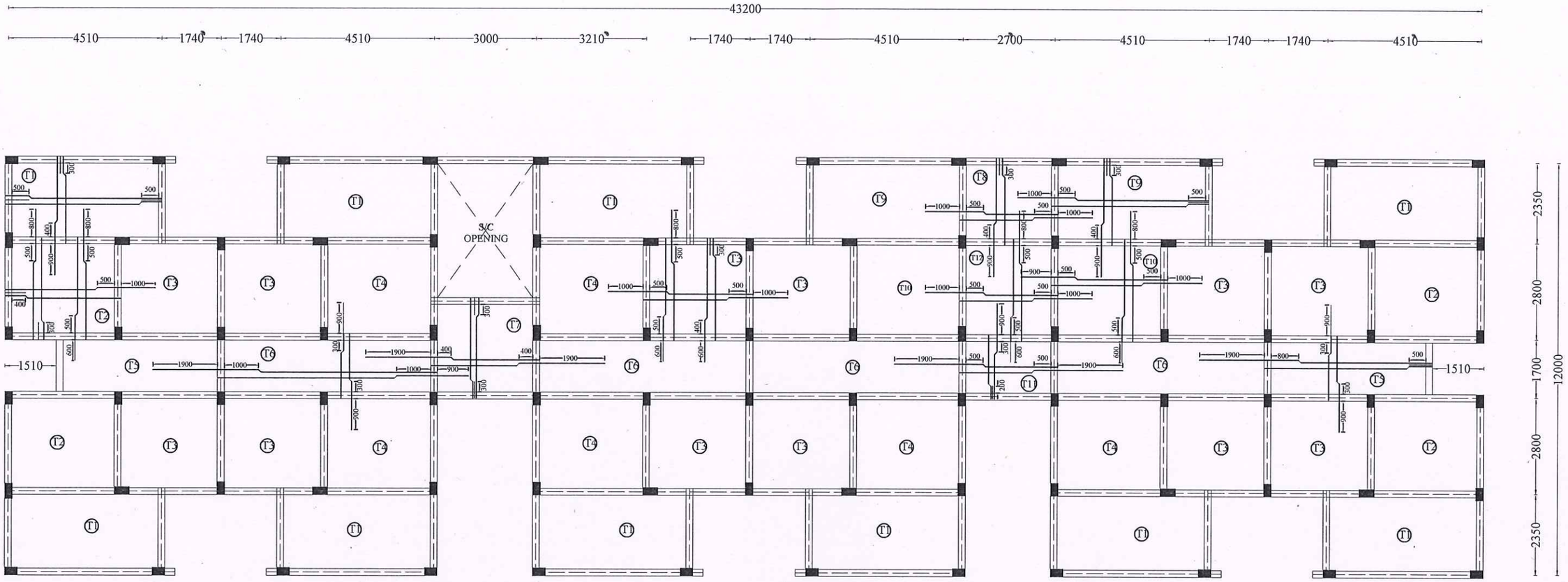
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5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
Chief Engineer - I

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

TERRACE FLOOR SLAB DETAILS



Note:
1.ALL SLAB 125mm THICK
2.ALL SLAB REINFORCEMENT ARE #8@180mm c/c

NOTE:

1. All the Dimensions are in mm.
2. M25 Concrete and Fe500D grade steel shall be adopted.
3. Slab Thickness is 125mm.
4. Clear cover to slab is 25mm.
5. Crank point distances are as shown.
6. "-------" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF 432 (G+3) TENEMENTS AT ANNA NAGAR IN KEERANUR VILLAGE, DINDIGUL DISTRICT.

TITLE:
TERRACE FLOOR SLAB DETAILS

TYPE DESIGN NO.: 01/2024

DWG.NO.: TNUHDB / ANNA NAGAR-KEERANUR / 18.

REVISION NO.:

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EXECUTIVE ENGINEER (A/c)
STRUCTURAL AND QUALITY CONTROL CELL
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5, KAMARAJAR SALAI, CHENNAI-600 005.
13/9/24

Assistant Engineer	Asst. Exe. Engineer
Executive Engineer	SE - South

sd.xxxx 11.09.2024
Chief Engineer - I

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



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Zoning & Land Use Analysis

Land Use Zone Finder, CRZ Zone Check, Aquifer Zone Check, CBA Check, EWS Check, Road Width Check, Proposed Road Widening Check, FSI Calculator

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Vastu & Property Management Tools

Home Vastu Shastra, Plot Vastu Shastra, Property Management

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