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DIGITALLY VERIFIED RECORD

CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
'Thalamuthu Natarajan Building', No.1, Gandhi Irwin Road,
Egmore, Chennai-600 008.

PROFESSIONAL REGISTRATION CERTIFICATE

This is to certify that **Thiru. MAGESHRAJAA. N** has enrolled as **Registered Structural Engineer Grade-I (SE)** with Chennai Metropolitan Development Authority (CMDA) who has the qualification of **M.E., (Structural Engg.)** and experience in the relevant field for **8 years**.

He has been given the Registration No.**SE/GR-I/2022/06/325** on **24.06.2022.** He shall be required to comply with the duties and responsibilities prescribed by the Government of Tamil Nadu in Part-V, "Registration of Professionals", Tamil Nadu Combined Development and Building Rules, 2019 approved vide G.O.(Ms) No.18 MAWS (MA1) Dept. dated 04.02.2019.

This Registration is valid upto **23.06.2027.**

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CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY * CHENNAI-600 008. *

(A. MEGANATHAN)
Superintendent

DESIGN REPORT

FOR

PROPOSED APARTMENT BUILDING (S+5)

AT, SURVEY NO: 716/3, 716/4, 716/5,716/1D1, 716/1D2, AGARAM MAIN ROAD, TIRUVANCHERY, MADAMBAKKAM, CHENNAI- 600 073

CLIENT: M/s. RUSSEL FOUNDATIONS PVT. LTD.,
AIRFORCE STATION ROAD, EAST TAMBARAM,
CHENNAI – 600 059

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CMDA REG.No:SE/GR-I/2022/06/325
GCC REG.No:RSE101432021
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AME STRUCTURAL CONSULTANTS
NO: 28, JAWAHARLAL NEHRU STREET,
NEW PERUNGALATHUR,
CHENNAI – 600 063

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8346	45.00	0.00
8347	45.00	0.00
8348	45.00	0.00
8349	45.00	0.00
8350	45.00	0.00
8351	45.00	0.00
8352	45.00	0.00
8353	45.00	0.00
8354	45.00	0.00
8355	45.00	0.00
8356	45.00	0.00
8357	45.00	0.00
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8361	45.00	0.00
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8363	45.00	0.00
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8365	45.00	0.00
8366	45.00	0.00
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8368	45.00	0.00
8369	45.00	0.00
8370	45.00	0.00
8371	45.00	0.00
8372	45.00	0.00
8373	45.00	0.00
8374	45.00	0.00
8375	45.00	0.00
8376	45.00	0.00
8377	45.00	0.00
8378	45.00	0.00
8379	45.00	0.00
8380	45.00	0.00

SOFT STORY CHECK

VERTICAL STRUCTURAL IRREGULARITIES : SOFT STORY CHECK - IS 1893:2016

STORY	FL. LEVEL IN METE	S T A T U S	
		X	Z
1	6.60	OK	OK
2	9.60	OK	OK
3	12.60	OK	OK
4	15.60	OK	OK
5	18.60	OK	OK
6	21.60	OK	OK

NOTE : NO SOFT STOREY IS DETECTED.

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1. DESIGN ASSUMPTION

a) STRUCTURAL SYSTEM

The structural system for the "PROPOSED **RESIDENTIAL APPARTMENT AT TIRUVANCHERY, MADAMBAKKAM, CHENNAI",** consists of Stilt + 5 upper floors and OHT. The total height of the building is about 18 m from Ground floor level. The structure is supported on isolated foundation as per the soil test report recommendation.

2. DESIGN LOADS

a) Dead Load:

Dead Load considered on slab: Self Weight + 1.5 kN/m^2 for Floor Finish.

Wall load	= 5 kN/m (230mm thick)- AAC Block - Outer Wall
Wall load	= 2.5kN/m (115mm thick)- AAC Block- Inner Wall
Wall load (Parapet)	= 2kN/m (230mm thick)
Staircase load	= 10 kN/m (RCC staircase)
Sunken load	= 2.7kN/m^2 (Vermiculate)
Water Tank	= 18kN/m^2 (1800 mm height)
Floor finish	= 2kN/m^2 (Terrace)

b) Roof Live Load:

The super imposed load or otherwise live load is assessed based on the occupancy

classifications as per IS	= 0.75 kN/m^2 on Solar panel roof.
Live Load considered on slab	=2 kN/m^2
Live Load considered on slab	=3 kN/m^2 (Lobby & Staircase)
Live Load considered on slab	=1.5 kN/m^2 (Terrace)

3. EARTHQUAKE LOAD

The loading due to earthquake is assessed based on the provisions of IS: 1893(Part-1):2016

Seismic Zone	= III
Table-2 Zone factor (Z)	= 0.16
Table-6 Importance Factor (I)	= 1.2
Table-7 Response Reduction Factor (R)	= 5

Building frame system (SMRF) as per table 7 clause 6.4.2 of IS 1893 2016

Height of building (H) = 9 m

Base dimension of part of the building along the considered direction of lateral force (D) =

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Fundamental Natural time period

T_s $= 0.09H/\sqrt{d}$ from CL - 7.6.2 - IS 1893 (Part-I) 2016

S_a/g = from FIG-2 IS 1893 (part-I) 2016

The respective natural time period can be referred from the respective model.

Horizontal Seismic Co-efficient

Ah $= (Z/2) \times (I/R) \times (S_a/g)$

Seismic Base Shear

Vb $= Ah \times W$

Structure with ductile detailing is considered as per IS: 13920-2016

As per IS: 1893 – 2016, percentage of imposed loads to be considered for seismic weight calculation is mentioned below:

Imposed Uniformity Distributed Floor Load Loads (kN/ m2)	Percentage of Imposed
Up to & including 3.0	25
Above 3.0	50

4. LOAD COMBINATIONS

Strength combinations:

- 1.5DL + 1.5 LL
- 1.5DL (+/-)1.5 WL/EQ Load
- 1.2DL +1.2LL (+/-) 1.5 WL/EQ Load
- 0.9DL (+/-) 1.5 WL/EQ Load

Serviceability combinations:

- DL + LL
- DL +0.8 LL(+/-) 0.8 WL/EQ Load
- DL (+/-) WL/EQ Load

5. ANALYSIS METHOD

The structure is analyzed by static for gravity due to Earthquake loads and its combinations.

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6. DESIGN METHODOLOGY

All structures have been designed according to the Limit State Method as specified in IS: 456-2000 & IS 1893 - 2016. Appropriate loads and its combinations, as per relevant clauses in IS 456:2000 code, for the most unfavorable effects are chosen for design.

7. MATERIALS

The self-weight of the various elements is computed based on the built weight of materials as given below: -

Materials	Unit weight in kN/m^3
Steel	78.5
Plain concrete	24
Reinforced concrete	25
Soil	18
Red brick	19
AAC Block	5.7

8. CONCRETE

All the concrete items for the construction have the following characteristics

Grade of Concrete = M30

Aggregate = 20mm and down size, mechanically crushed Aggregate.

9. STEEL

Steel reinforcement shall be of Grade Fe500, Fe550 conforming to IS: 1786-2008.

10. COVER TO REINFORCEMENT

The clear cover to main reinforcement shall be as follows.

Footing	= Bottom: 50mm, Sides: 50mm
Slab	= 20mm
Columns	= 40mm
Beams	= 25mm

11. FOUNDATION SYSTEM

Foundation systems are based on recommendations given as per soil investigation report – VCE/23/GIR-011 by M/s. VELTECH CONSULTING ENGINEERS, CHENNAI – 600 073.

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12. CODES & STANDARDS

All the design are conforming to the relevant Indian Standards. Some of the relevant Indian Standard Codes, which have been followed for the structural design are given below.

	Description
IS:875 (Part-1)-1987	Code of Practice for Design Loads (Other than Earthquake) for Building and Structures-Unit Weights of Buildings Materials and Stored Material.
IS:875 (Part-2)-1987	Code of Practice for Design Loads (Other than Earthquake) for Building and Structures-Imposed loads
IS:875 (Part-3)-2015	Code of Practice for Design Loads (Other than Earthquake) for Buildings and Structures –Wind Load.
IS:456 (Part-1)-2000	Code of Practice for Plain and Reinforced Concrete
IS:1893 (Part-1)-2016	Indian Standard Criteria for Earthquake Resistant Design of Structures.
IS:432 (Part-2)-1982	Specification of Mild Steel and Medium Tensile Steel bars and Hard drawn Steel Wire for concrete reinforcement – Hard drawn Steel Wire.
IS:1786-2008	Specification for High Strength Deformed Steel Bars and Wires for Concrete Reinforcement
IS:1904	Indian Standard Code of practice for Design & Construction foundations in Soil: General Requirements.
IS:1642-1989	Indian Standard Code of practice for Fire Safety Of Buildings (General): Details Of Construction.

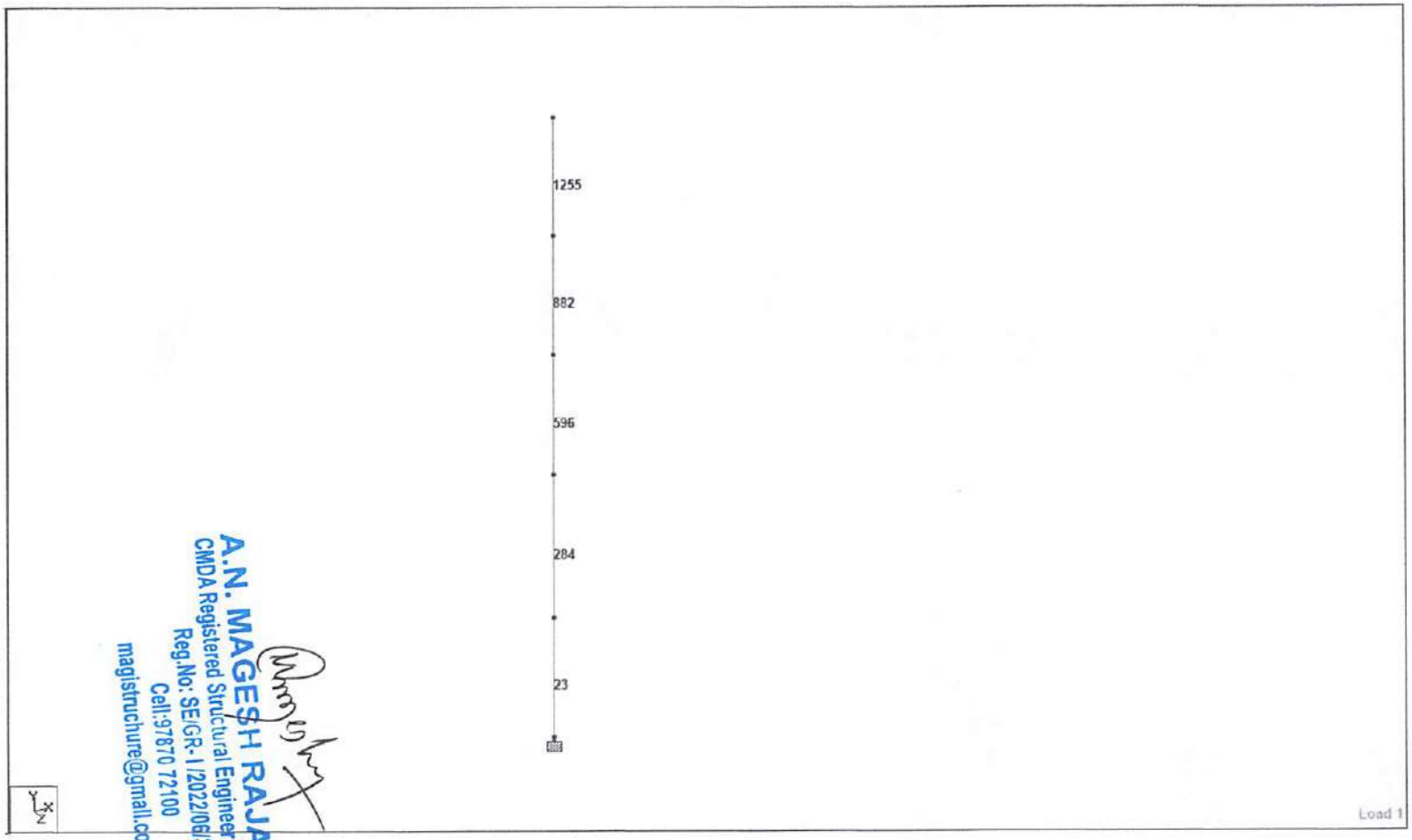
IS: 1786-2008 Specification for High Strength Deformed Steel Bars and Wires for Concrete Reinforcement. IS: 1904 Indian Standard Code of practice for Design & Construction foundations in Soil: General Requirements IS: 1642-1989 Indian Standard Code of practice for Fire Safety of buildings (General): Details of Construction.

13. STRUCTURAL ANALYSIS

The Building structures are analyzed using STAAD for various load combination as per Indian Codes.

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Bentley	Job No.	Sheet No. 1	Rev
Job Title	Part		Ref
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BEAM

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          IS-456   L I M I T   S T A T E   D E S I G N
        C O L U M N   N O.   1250  D E S I G N   R E S U L T S

     M25                    Fe500 (Main)              Fe500 (Sec.)

LENGTH:   500.0 mm   CROSS SECTION:  230.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  151 END JOINT:   464  SHORT COLUMN


REQD. STEEL AREA   :     2248.02 Sq.mm.
REQD. CONCRETE AREA:   135752.00 Sq.mm.
MAIN REINFORCEMENT : Provide  12 - 16 dia. (1.75%,   2412.74 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 230 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   2370.22   Muz1 :    234.46   Muy1 :     69.20

INTERACTION RATIO: 1.00 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   113
END JOINT:   464 Puz :   2430.14   Muz :    281.68   Muy :     79.99   IR: 0.79
=============================================================================


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          IS-456   L I M I T   S T A T E   D E S I G N
        C O L U M N   N O.   1255  D E S I G N   R E S U L T S

     M25                    Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  151 END JOINT:   674  SHORT COLUMN
```

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REQD. STEEL AREA    :     1299.67 Sq.mm.
REQD. CONCRETE AREA:   162458.44 Sq.mm.
MAIN REINFORCEMENT : Provide  12 - 12 dia. (0.50%,   1357.17 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   3510.25   Muz1 :    198.30   Muy1 :    144.37

INTERACTION RATIO: 0.99 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   123
END JOINT:   674 Puz :   3531.17   Muz :    245.51   Muy :    179.12   IR: 0.87
================================================================================


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            IS-456    L I M I T    S T A T E    D E S I G N
         C O L U M N   N O.   1256  D E S I G N   R E S U L T S

      M25                    Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  147 END JOINT:   675  SHORT COLUMN


REQD. STEEL AREA    :     1726.04 Sq.mm.
REQD. CONCRETE AREA:   215754.56 Sq.mm.
MAIN REINFORCEMENT : Provide  16 - 12 dia. (0.67%,   1809.56 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   3665.35   Muz1 :    236.88   Muy1 :    171.58

INTERACTION RATIO: 0.99 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   123
END JOINT:   675 Puz :   3695.73   Muz :    270.52   Muy :    196.35   IR: 0.94
```

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           IS-456   L I M I T   S T A T E   D E S I G N
        C O L U M N   N O.   882  D E S I G N   R E S U L T S

     M25                   Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  101 END JOINT:   328  SHORT COLUMN


REQD. STEEL AREA   :     1315.35 Sq.mm.
REQD. CONCRETE AREA:   164418.20 Sq.mm.
MAIN REINFORCEMENT : Provide  12 - 12 dia. (0.50%,   1357.17 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   3515.96   Muz1 :    287.32   Muy1 :    210.76

INTERACTION RATIO: 0.14 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   101
END JOINT:   328 Puz :   3531.17   Muz :    290.87   Muy :    213.01   IR: 0.14
=============================================================================


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           IS-456   L I M I T   S T A T E   D E S I G N
        C O L U M N   N O.   883  D E S I G N   R E S U L T S

     M25                   Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  102 END JOINT:   329  SHORT COLUMN
```

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            IS-456   L I M I T   S T A T E   D E S I G N
        C O L U M N   N O.   596  D E S I G N   R E S U L T S

     M25                   Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  101 END JOINT:   170  SHORT COLUMN


REQD. STEEL AREA   :     1409.60 Sq.mm.
REQD. CONCRETE AREA:   176199.89 Sq.mm.
MAIN REINFORCEMENT : Provide   8 - 16 dia. (0.60%,   1608.50 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 255 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   3550.24   Muz1 :    282.59   Muy1 :    207.30

INTERACTION RATIO: 0.23 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   101
END JOINT:   170 Puz :   3622.59   Muz :    299.46   Muy :    218.56   IR: 0.21
================================================================================


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            IS-456   L I M I T   S T A T E   D E S I G N
        C O L U M N   N O.   597  D E S I G N   R E S U L T S

     M25                   Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  102 END JOINT:   171  SHORT COLUMN
```

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```
REQD. STEEL AREA    :     1236.83 Sq.mm.
REQD. CONCRETE AREA:   136763.19 Sq.mm.
MAIN REINFORCEMENT : Provide  12 - 12 dia. (0.98%,   1357.17 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   2002.40   Muz1 :     53.73   Muy1 :     19.30

INTERACTION RATIO: 0.86 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   149
END JOINT:  2869 Puz :   2046.17   Muz :     82.38   Muy :     27.69   IR: 0.64
================================================================================


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            IS-456    L I M I T    S T A T E    D E S I G N
         C O L U M N   N O.   284  D E S I G N   R E S U L T S

      M25                    Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3600.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  101 END JOINT:    86  SHORT COLUMN


REQD. STEEL AREA    :     1913.23 Sq.mm.
REQD. CONCRETE AREA:   268086.78 Sq.mm.
MAIN REINFORCEMENT : Provide  20 - 12 dia. (0.84%,   2261.95 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   3733.44   Muz1 :    228.65   Muy1 :    167.43

INTERACTION RATIO: 0.26 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   101
END JOINT:   170 Puz :   3860.28   Muz :    259.20   Muy :    189.14   IR: 0.23
```

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            IS-456   L I M I T   S T A T E   D E S I G N
         C O L U M N   N O.    23  D E S I G N   R E S U L T S

      M25                    Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  101 END JOINT:    23  SHORT COLUMN


REQD. STEEL AREA    :     1987.70 Sq.mm.
REQD. CONCRETE AREA:   268012.31 Sq.mm.
MAIN REINFORCEMENT : Provide  20 - 12 dia. (0.84%,   2261.95 Sq.mm.)
                     (Equally distributed)
TIE REINFORCEMENT  : Provide  8 mm dia. rectangular ties @ 190 mm c/c

SECTION CAPACITY BASED ON REINFORCEMENT REQUIRED (KNS-MET)
----------------------------------------------------------
Puz :   3760.52   Muz1 :    216.66   Muy1 :    158.56

INTERACTION RATIO: 0.27 (as per Cl. 39.6, IS456:2000)

SECTION CAPACITY BASED ON REINFORCEMENT PROVIDED (KNS-MET)
----------------------------------------------------------
WORST LOAD CASE:   101
END JOINT:    23 Puz :   3860.28   Muz :    237.25   Muy :    173.20   IR: 0.24
=============================================================================


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            IS-456   L I M I T   S T A T E   D E S I G N
         C O L U M N   N O.    24  D E S I G N   R E S U L T S

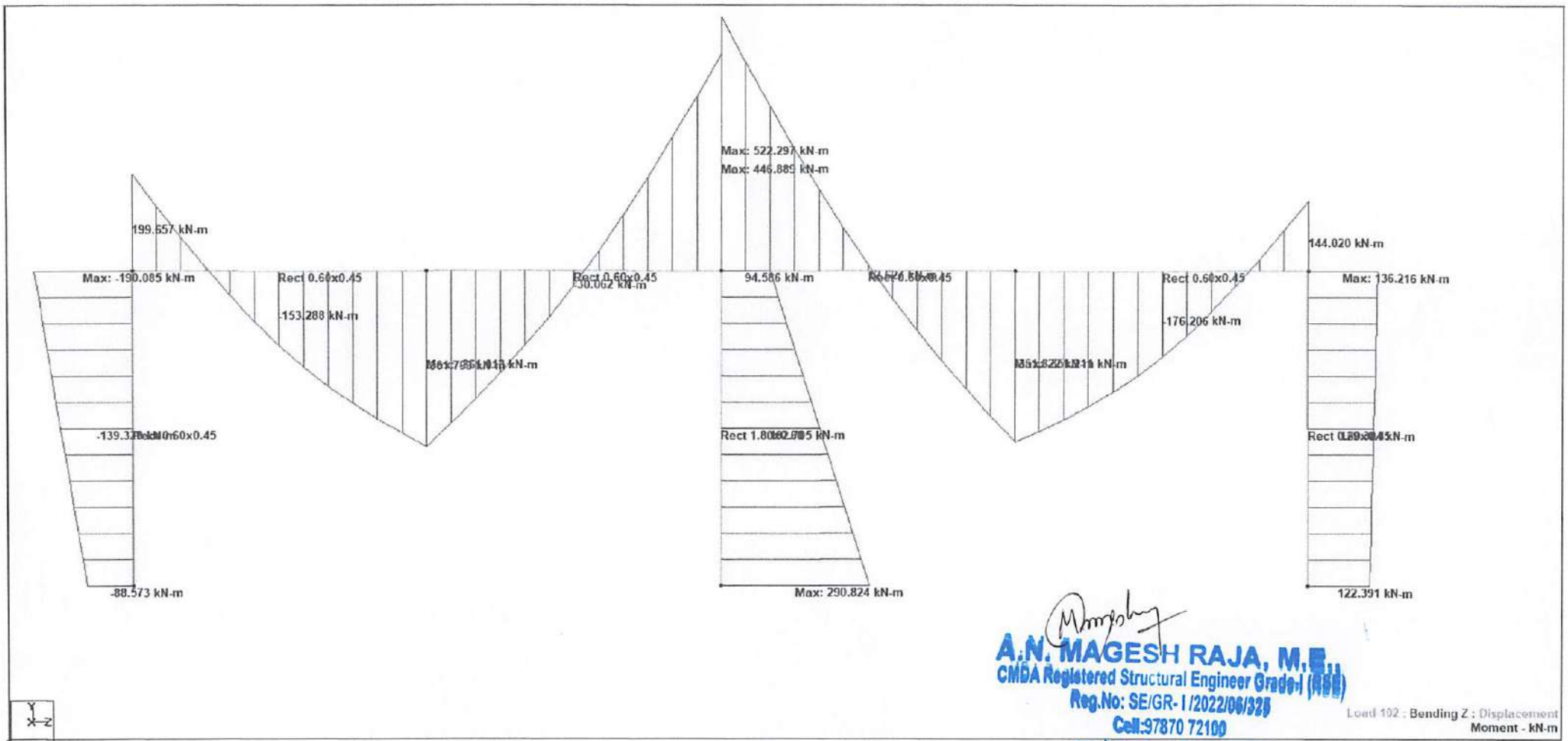
      M25                    Fe500 (Main)              Fe500 (Sec.)

LENGTH:  3000.0 mm   CROSS SECTION:  450.0 mm X  600.0 mm  COVER: 40.0 mm

** GUIDING LOAD CASE:  102 END JOINT:    24  SHORT COLUMN
```

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Job Title	Part		Ref
Client	By	Date 25-Sep-23	Chd
File A - BLOCK.std	Date Time 20-Nov-2025 13:31		



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Beam

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SFRB-38-GRID-3 to 10

MU/Bd^2	=	4.37	
d	=	517	mm
B	=	450	mm
D	=	600	mm
E-COVER		83	mm
M_u+M_t	=	525.7	kNm
M_U		523	kNm
Pt%-SP16	=	1.2	
Pc%-SP16	=	0.48	
Ast.Req	=	2792	mm^2
Asc	=	1117	mm^2
Mx	=	2	kNm
add Mu1	=	2.7	
25	0	0	mm^2
20	10	3140	mm^2
16	0	0	mm^2
12	0	0	mm^2
Ast.Pro	=	3140	mm^2

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STILT FLOOR ROOF SLAB-S2	BLOCK-A	
		slab Reff. S2

INPUT DATA

Slab				Loads			
Shorter Span	Lx =	2.750	m	Dead Load	DL =	3.75	kN/m²
Longer Span	Ly =	4.990	m	Live load	LL =	5.00	kN/m²
Thickness of Slab	D =	150	mm	Floor Finishes	FF =	1.50	kN/m²
Clear Cover	d' =	20	mm	False Ceilling Load	=	1.00	kN/m²
Ly/Lx ratio	k =	1.81	Two-Way Slab	Total Load	w =	11.25	kN/m²

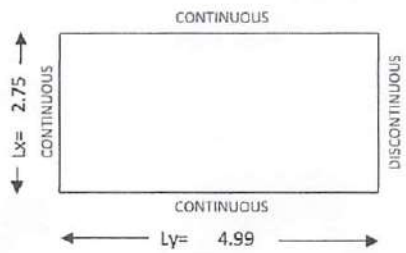
Panel Type			Materials			
Basic L/d ratio	=	26	Grade of Concrete	=	25	N/mm²
Edge Condition:	=	2	Grade of Reinf. Steel	=	500	N/mm²
One Short Edge Discontinuous			Young's Modulus E		2.50E+04	N/mm²

DESIGN

Direction	BM Coefficients (IS:456-2000)		Flexural Design			dia & Required Spacing				Provided Reinforcement			
			Mu	Ast_{req}	Ast_{pro}	8	10	12	16				
			kNm	mm²	mm²	mm	mm	mm	mm				
Shorter Span	αx (-) =	0.0650	8.299	155	352	300	300	300	300	8	@	150	Safe
	αx (+) =	0.0490	6.257	151	352	300	300	300	300	8	@	150	Safe
Longer Span	αy (-) =	0.0370	4.722	151	352	300	300	300	300	8	@	150	Safe
	αy (+) =	0.0280	3.573	151	352	300	300	300	300	8	@	150	Safe

CHECK FOR DEFLECTION

Area of Steel required = 151 mm²
Area of Steel Provided = 352 mm²
Steel stress of service load = 124.60 N/mm²
Provided reinforcement (%) = 0.28%
Modification ratio MF = 2.000
Effective depth required for deflection point of view
d_{req} = 52.88462 mm
Eff. depth provided d = 126 mm Safe



SLAB SUMMARY

Shorter Span: Provide T 8 @ 150 mm c/c + 1 T 8 Extra between the two cranked bars
Longer Span : Provide T 8 @ 150 mm c/c + 1 T 8 Extra between the two cranked bars

CHECK FOR SHEAR

Max Shear Force = 23 KN
Actual Shear stress τv = 0.184 N/mm2
P_t of A_{st} = 0.28%
Design Shear Stress τc = 0.38 N/mm²
Shear is less than Design Shear Stress, Hence Safe against shear

NOTES

1. Crank alternate bars at 0.3 times the respective span.
2. Provide 12mm dia chairs at 1000mm c/c in both directions.
3. Provide 5 mm thick cover blocks at 600mm c/c in both directions.

Reinforcement Summary:
Along Shorter Span
Provided T8@ 150mm c/c
Along Longer Span
Provided T8@ 150mm c/c

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DATA FOOTING TYPE-F7			
Longer dimension of column L	600	mm	
Shorter dimension of column B	450	mm	
Unfactored axial load P	1850	kN	
Unfactored moment in longer direction M1	9	kN-m	
Unfactored moment in shorter direction M2	11	kN-m	
Net soil bearing capacity	275	kN/m^2	
Gross safe bearing capacity	329	kN/m^2	
Height of footing below NGL	3	m	
Unit weight of soil	18	kN/m^3	
Total load on footing	2323	kN	
Gross pressures and check for tension			
P1 288 ok			
P2 292 ok			
P3 299 ok (No tension)			
P4 295 ok			
Required area	7.1	m^2	
Provided area	7.92	m^2	
Longer dimension of footing L1	3.30	m	
Shorter dimension of footing B1	2.40	m	
Overall depth of footing D	825	mm	
Effective depth of footing d	775	mm	
Edge depth of footing ed	825	mm	
Cover to the main reinforcement	50	mm	
Grade of concrete fck	25	N/mm2	
Grade of steel fy	550	N/mm2	
Diameter of bars	16	mm	
LONGER MOMENTS			
Maximum pressure Pmax	239	kN/m2	
Minimum pressure Pmin	235	kN/m2	
Cantilever length	1.35	m	
Average pressure	238	kN/m2	
Moment M11	521	kNm	
Effective width for moment	0.69	m	
Mu/bd^2	1.88		
Required percentage of steel	0.43	%	
Minimum steel area	2376	mm2	
Provided steel area Ast	2330	mm2	
Spacing of reinforcement	200	mm	
SHORTER MOMENTS			
Maximum pressure Pmax	239	kN/m2	
Minimum pressure Pmin	232	kN/m2	
Cantilever length	0.98	m	
Average pressure	238	kN/m2	
Moment M22	373	kN-m	
Effective width for moment	0.94	m	
Required percentage of steel	0.23	%	
Minimum steel area	3267	mm2	
Provided steel area Ast	1621	mm2	
Spacing of reinforcement	200	mm	
CHECK FOR ONE-WAY SHEAR			
Longitudinal Direction			
Effective width at the section	2000	mm	
Effective depth at the section	775	mm	
Shear Area at the section	1860000	mm2	
Pressure at distance d from the face	238.4	kN/m2	
Shear force at the section	329	kN	
Shear stress at the section Tv	0.266	N/mm2	
pt for shear stress	0.128	%	

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Allowable shear stress Tc	0.271	ok	
Revised pt from shear requirement	0.120	%	
Revised area of steel Ast	2232	mm2	
Spacing of reinforcement	210.000	mm	
Transverse Direction			
Effective width at the section	2118	mm	
Effective depth at the section	759	mm	
Shear Area at the section	2504700	mm2	
Pressure at distance d from the face	239	kN/m2	
Shear force at the section	145	kN	
Shear stress at the section Tv	0.087	N/mm2	
pt for shear stress	0.130	%	
Allowable shear stress Tc	0.273	ok	
Revised pt from shear requirement	0.120	%	
Revised area of steel Ast	3006	mm2	
Spacing of reinforcement	220.000	mm	
CHECK FOR PUNCHING SHEAR			
Average pressure	234	kN/m2	
Punching shear force	1457	kN	
Perimeter at distance d/2	5168	mm	
Effective depth at distance d/2	767	mm	
Shear area	3963856	mm2	
Shear stress at the section Tv	0.37	N/mm2	
Allowable shear stress Tc	1.25	ok	
TRANSFER OF LOAD AT BASE			
Supporting area for bearing (A1)	13135000	mm2	
Loaded area at column base (A2)	270000	mm2	
sqrt(A1/A2)	2		
Actual bearing stress	10.28	N/mm2	
Allowable bearing stress	22.5	ok	

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Basic Load Cases

Primary Load Cases

Number	Name	Type
1	EQX	Seismic-H
2	EQZ	Seismic-H
3	DEAD	Dead
4	LIVE	Live
5	TEMP MINI	Temperature
6	TEMPMAX	Temperature

Reference Load Cases

Number	Name	Type
R1	REF LOAD CASE 1	Dead

Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
101	1.5(DL+LL)	3	DEAD	1.500
		4	LIVE	1.500
102	1.5(DL+LL+TLMAX	3	DEAD	1.500
		4	LIVE	1.500
		6	TEMPMAX	1.000
103	1.5(DL+LL)+TLMIN	3	DEAD	1.500
		4	LIVE	1.500
		5	TEMP MINI	1.000
104	1.2DL+1.2LL+1.2EQX+0.36EQZ +TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	1.200
		2	EQZ	0.360
		5	TEMP MINI	1.000
105	1.2DL+1.2LL-1.2EQX+0.36EQZ+ TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	1.200
		2	EQZ	0.360
		5	TEMP MINI	1.000

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
106	1.2DL+1.2LL+1.2EQX-0.36EQZ+TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	1.200
		2	EQZ	-0.360
		5	TEMP MINI	1.000
107	1.2DL+1.2LL-1.2EQX-0.36EQZ+TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	-1.200
		2	EQZ	-0.360
		5	TEMP MINI	1.000
108	1.2DL+1.2LL+1.2EQZ+0.36EQX+TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		2	EQZ	1.200
		1	EQX	0.360
		5	TEMP MINI	1.000
109	1.2DL+1.2LL-1.2EQZ+0.36EQX+TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		2	EQZ	-1.200
		1	EQX	0.360
		5	TEMP MINI	1.000
110	1.2DL+1.2LL+1.2EQZ-0.36EQX+TLMIN	3	DEAD	1.200
		4	LIVE	1.200
		2	EQZ	1.200
		1	EQX	-0.360
		5	TEMP MINI	1.000
111	1.2DL+1.2LL-1.2EQZ-0.36EQX+TLMIN	3	DEAD	1.200

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
111	1.2DL+1.2LL-1.2EQZ-0.36EQX+TLMIN	4	LIVE	1.200
		2	EQZ	-1.200
		1	EQX	-0.360
		5	TEMP MINI	1.000
112	1.2DL+1.2LL+1.2EQX+0.36EQZ+TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	1.200
		2	EQZ	0.360
		6	TEMPMAX	1.000
113	1.2DL+1.2LL-1.2EQX+0.36EQZ+TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	-1.200
		2	EQZ	0.360
		6	TEMPMAX	1.000
114	1.2DL+1.2LL+1.2EQX-0.36EQZ+TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	1.200
		2	EQZ	-0.360
		6	TEMPMAX	1.000
115	1.2DL+1.2LL-1.2EQX-0.36EQZ+TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		1	EQX	-1.200
		2	EQZ	-0.360
		6	TEMPMAX	1.000
116	1.2DL+1.2LL+1.2EQZ+0.36EQX+TLMAX	3	DEAD	1.200
		4	LIVE	1.200

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
116	1.2DL+1.2LL+1.2EQZ+0.36EQX +TLMAX	2	EQZ	1.200
		1	EQX	0.360
		6	TEMPMAX	1.000
117	1.2DL+1.2LL-1.2EQZ+0.36EQX+ TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		2	EQZ	-1.200
		1	EQX	0.360
		6	TEMPMAX	1.000
118	1.2DL+1.2LL+1.2EQZ-0.36EQX+ TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		2	EQZ	1.200
		1	EQX	-0.360
		6	TEMPMAX	1.000
119	1.2DL+1.2LL-1.2EQZ-0.36EQX+ TLMAX	3	DEAD	1.200
		4	LIVE	1.200
		2	EQZ	-1.200
		1	EQX	-0.360
		6	TEMPMAX	1.000
120	1.5DL+1.5EQX+0.45EQZ+TLMIN	3	DEAD	1.500
		1	EQX	1.500
		2	EQZ	0.450
		5	TEMP MINI	1.000
121	1.5DL-1.5EQX+0.45EQZ+TLMIN	3	DEAD	1.500
		1	EQX	-1.500
		2	EQZ	0.450
		5	TEMP MINI	1.000
122	1.5DL+1.5EQX-0.45EQZ+TLMIN	3	DEAD	1.500
		1	EQX	1.500
		2	EQZ	-0.450

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
122	1.5DL+1.5EQX-0.45EQZ+TLMIN	5	TEMP MINI	1.000
123	1.5DL-1.5EQX-0.45EQZ+TLMIN	3	DEAD	1.500
		1	EQX	-1.500
		2	EQZ	-0.450
		5	TEMP MINI	1.000
124	1.5DL+1.5EQZ+0.45EQX+TLMIN	3	DEAD	1.500
		2	EQZ	1.500
		1	EQX	0.450
		5	TEMP MINI	1.000
125	1.5DL-1.5EQZ+0.45EQX+TLMIN	3	DEAD	1.500
		2	EQZ	-1.500
		1	EQX	0.450
		5	TEMP MINI	1.000
126	1.5DL+1.5EQZ-0.45EQX+TLMIN	3	DEAD	1.500
		2	EQZ	1.500
		1	EQX	-0.450
		5	TEMP MINI	1.000
127	1.5DL-1.5EQZ-0.45EQX+TLMIN	3	DEAD	1.500
		2	EQZ	-1.500
		1	EQX	-0.450
		5	TEMP MINI	1.000
128	1.5DL+1.5EQX+0.45EQZ+TLMAX	3	DEAD	1.500
		1	EQX	1.500
		2	EQZ	0.450
		6	TEMPMAX	1.000
129	1.5DL-1.5EQX+0.45EQZ+TLMAX	3	DEAD	1.500
		1	EQX	-1.500
		2	EQZ	0.450
		6	TEMPMAX	1.000
130	1.5DL+1.5EQX-0.45EQZ+TLMAX	3	DEAD	1.500
		1	EQX	1.500
		2	EQZ	-0.450
		6	TEMPMAX	1.000
131	1.5DL-1.5EQX-0.45EQZ+TLMAX	3	DEAD	1.500
		1	EQX	-1.500

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
131	1.5DL-1.5EQX-0.45EQZ+TLMAX	2	EQZ	-0.450
		6	TEMPMAX	1.000
132	1.5DL+1.5EQZ+0.45EQX+TLMAX	3	DEAD	1.500
		2	EQZ	1.500
		1	EQX	0.450
		6	TEMPMAX	1.000
133	1.5DL-1.5EQZ+0.45EQX+TLMAX	3	DEAD	1.500
		2	EQZ	-1.500
		1	EQX	0.450
		6	TEMPMAX	1.000
134	1.5DL+1.5EQZ-0.45EQX+TLMAX	3	DEAD	1.500
		2	EQZ	1.500
		1	EQX	-0.450
		6	TEMPMAX	1.000
135	1.5DL-1.5EQZ-0.45EQX+TLMAX	3	DEAD	1.500
		2	EQZ	-1.500
		1	EQX	-0.450
		6	TEMPMAX	1.000
136	0.9DL+1.5EQX+0.45EQZ+TLMIN	3	DEAD	0.900
		1	EQX	1.500
		2	EQZ	0.450
		5	TEMP MINI	1.000
137	0.9DL-1.5EQX+0.45EQZ+TLMIN	3	DEAD	0.900
		1	EQX	-1.500
		2	EQZ	0.450
		5	TEMP MINI	1.000
138	0.9DL+1.5EQX-0.45EQZ+TLMIN	3	DEAD	0.900
		1	EQX	1.500
		2	EQZ	-0.450
		5	TEMP MINI	1.000
139	0.9DL-1.5EQX-0.45EQZ+TLMIN	3	DEAD	0.900
		1	EQX	-1.500
		2	EQZ	-0.450
		5	TEMP MINI	1.000
140	0.9DL+1.5EQZ+0.45EQX+TLMIN	3	DEAD	0.900

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
140	0.9DL+1.5EQZ+0.45EQX+TLMIN	2	EQZ	1.500
		1	EQX	0.450
		5	TEMP MINI	1.000
141	0.9DL-1.5EQZ+0.45EQX+TLMIN	3	DEAD	0.900
		2	EQZ	-1.500
		1	EQX	0.450
		5	TEMP MINI	1.000
142	0.9DL+1.5EQZ-0.45EQX+TLMIN	3	DEAD	0.900
		2	EQZ	1.500
		1	EQX	-0.450
		5	TEMP MINI	1.000
143	0.9DL-1.5EQZ-0.45EQX+TLMIN	3	DEAD	0.900
		2	EQZ	-1.500
		1	EQX	-0.450
		5	TEMP MINI	1.000
144	0.9DL+1.5EQX+0.45EQZ+TLMAX	3	DEAD	0.900
		1	EQX	1.500
		2	EQZ	0.450
		6	TEMPMAX	1.000
145	0.9DL-1.5EQX+0.45EQZ+TLMAX	3	DEAD	0.900
		1	EQX	-1.500
		2	EQZ	0.450
		6	TEMPMAX	1.000
146	0.9DL+1.5EQX-0.45EQZ+TLMAX	3	DEAD	0.900
		1	EQX	1.500
		2	EQZ	-0.450
		6	TEMPMAX	1.000
147	0.9DL-1.5EQX-0.45EQZ+TLMAX	3	DEAD	0.900
		1	EQX	-1.500
		2	EQZ	-0.450
		6	TEMPMAX	1.000
148	0.9DL+1.5EQZ+0.45EQX+TLMAX	3	DEAD	0.900
		2	EQZ	1.500
		1	EQX	0.450
		6	TEMPMAX	1.000

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
149	0.9DL-1.5EQZ+0.45EQX+TLMAX	3	DEAD	0.900
		2	EQZ	-1.500
		1	EQX	0.450
		6	TEMPMAX	1.000
150	0.9DL+1.5EQZ-0.45EQX+TLMAX	3	DEAD	0.900
		2	EQZ	1.500
		1	EQX	-0.450
		6	TEMPMAX	1.000
151	0.9DL-1.5EQZ-0.45EQX+TLMAX	3	DEAD	0.900
		2	EQZ	-1.500
		1	EQX	-0.450
		6	TEMPMAX	1.000
201	DL+LL	3	DEAD	1.000
		4	LIVE	1.000
202	DL+LL+TLMIN	3	DEAD	1.000
		4	LIVE	1.000
		5	TEMP MINI	1.000
203	DL+LL+TLMAX	3	DEAD	1.000
		4	LIVE	1.000
		6	TEMPMAX	1.000
204	DL+EQX+0.3EQZ+TLMIN	3	DEAD	1.000
		1	EQX	1.000
		2	EQZ	0.300
		5	TEMP MINI	1.000
205	DL-EQX+0.3EQZ+TLMIN	3	DEAD	1.000
		1	EQX	-1.000
		2	EQZ	0.300
		5	TEMP MINI	1.000
206	DL+EQX-0.3EQZ+TLMIN	3	DEAD	1.000
		1	EQX	1.000
		2	EQZ	-0.300
		5	TEMP MINI	1.000
207	DL-EQX-0.3EQZ+TLMIN	3	DEAD	1.000
		1	EQX	-1.000
		2	EQZ	-0.300

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
207	DL-EQX-0.3EQZ+TLMIN	5	TEMP MINI	1.000
208	DL+EQZ+0.3EQX+TLMIN	3	DEAD	1.000
		2	EQZ	1.000
		1	EQX	0.300
		5	TEMP MINI	1.000
209	DL-EQZ+0.3EQX+TLMIN	3	DEAD	1.000
		2	EQZ	-1.000
		1	EQX	0.300
		5	TEMP MINI	1.000
210	DL+EQZ-0.3EQX+TLMIN	3	DEAD	1.000
		2	EQZ	1.000
		1	EQX	-0.300
		5	TEMP MINI	1.000
211	DL-EQZ-0.3EQX+TLMIN	3	DEAD	1.000
		2	EQZ	-1.000
		1	EQX	-0.300
		5	TEMP MINI	1.000
212	DL+EQX+0.3EQZ+TLMAX	3	DEAD	1.000
		1	EQX	1.000
		2	EQZ	0.300
		6	TEMPMAX	1.000
213	DL-EQX+0.3EQZ+TLMAX	3	DEAD	1.000
		1	EQX	-1.000
		2	EQZ	0.300
		6	TEMPMAX	1.000
214	DL+EQX-0.3EQZ+TLMAX	3	DEAD	1.000
		1	EQX	1.000
		2	EQZ	-0.300
		6	TEMPMAX	1.000
215	DL-EQX-0.3EQZ+TLMAX	3	DEAD	1.000
		1	EQX	-1.000
		2	EQZ	-0.300
		6	TEMPMAX	1.000
216	DL+EQZ+0.3EQX+TLMAX	3	DEAD	1.000
		2	EQZ	1.000

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
216	DL+EQZ+0.3EQX+TLMAX	1	EQX	0.300
		6	TEMPMAX	1.000
217	DL-EQZ+0.3EQX+TLMAX	3	DEAD	1.000
		2	EQZ	-1.000
		1	EQX	0.300
		6	TEMPMAX	1.000
218	DL+EQZ-0.3EQX+TLMAX	3	DEAD	1.000
		2	EQZ	1.000
		1	EQX	-0.300
		6	TEMPMAX	1.000
219	DL-EQZ-0.3EQX+TLMAX	3	DEAD	1.000
		2	EQZ	-1.000
		1	EQX	-0.300
		6	TEMPMAX	1.000
220	DL+0.8LL+0.8EQX+0.24EQZ+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		1	EQX	0.800
		2	EQZ	0.240
		5	TEMP MINI	1.000
221	DL+0.8LL-0.8EQX+0.24EQZ+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		1	EQX	-0.800
		2	EQZ	0.240
		5	TEMP MINI	1.000
222	DL+0.8LL+0.8EQX-0.24EQZ+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		1	EQX	0.800
		2	EQZ	-0.240
		5	TEMP MINI	1.000
223	DL+0.8LL-0.8EQX-0.24EQZ+ TLMIN	3	DEAD	1.000

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
223	DL+0.8LL-0.8EQX-0.24EQZ+ TLMIN	4	LIVE	0.800
		1	EQX	-0.800
		2	EQZ	-0.240
		5	TEMP MINI	1.000
224	DL+0.8LL+0.8EQZ+0.24EQX+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	0.800
		1	EQX	0.240
		5	TEMP MINI	1.000
225	DL+0.8LL-0.8EQZ+0.24EQX+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	-0.800
		1	EQX	0.240
		5	TEMP MINI	1.000
226	DL+0.8LL+0.8EQZ-0.24EQX+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	0.800
		1	EQX	-0.240
		5	TEMP MINI	1.000
227	DL+0.8LL-0.8EQZ-0.24EQX+ TLMIN	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	-0.800
		1	EQX	-0.240
		5	TEMP MINI	1.000
228	DL+0.8LL+0.8EQX+0.24EQZ+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800

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Combination Load Cases Cont...

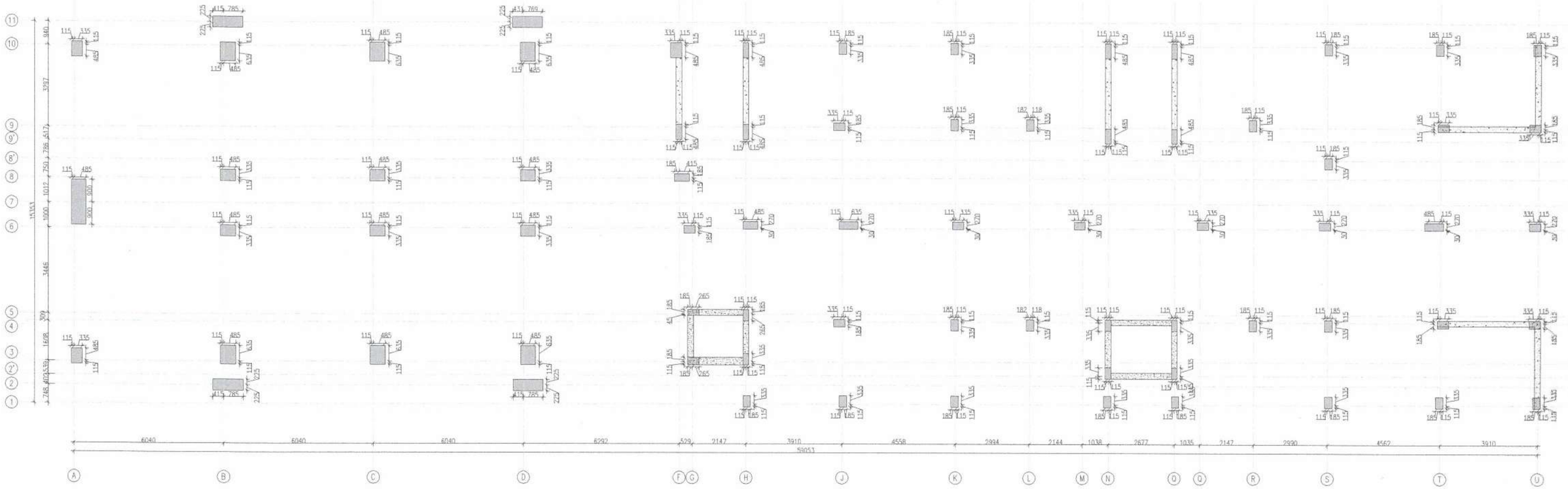
Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
228	DL+0.8LL+0.8EQX+0.24EQZ+ TLMAX	1	EQX	0.800
		2	EQZ	0.240
		6	TEMPMAX	1.000
229	DL+0.8LL-0.8EQX+0.24EQZ+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		1	EQX	-0.800
		2	EQZ	0.240
		6	TEMPMAX	1.000
230	DL+0.8LL+0.8EQX-0.24EQZ+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		1	EQX	0.800
		2	EQZ	-0.240
		6	TEMPMAX	1.000
231	DL+0.8LL-0.8EQX-0.24EQZ+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		1	EQX	-0.800
		2	EQZ	-0.240
		6	TEMPMAX	1.000
232	DL+0.8LL+0.8EQZ+0.24EQX+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	0.800
		1	EQX	0.240
		6	TEMPMAX	1.000
233	DL+0.8LL-0.8EQZ+0.24EQX+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	-0.800

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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
233	DL+0.8LL-0.8EQZ+0.24EQX+ TLMAX	1	EQX	0.240
		6	TEMPMAX	1.000
234	DL+0.8LL+0.8EQZ-0.24EQX+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	0.800
		1	EQX	-0.240
		6	TEMPMAX	1.000
235	DL+0.8LL-0.8EQZ-0.24EQX+ TLMAX	3	DEAD	1.000
		4	LIVE	0.800
		2	EQZ	-0.800
		1	EQX	-0.240
		6	TEMPMAX	1.000

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SETTING OUT PLAN

BLOCK - A

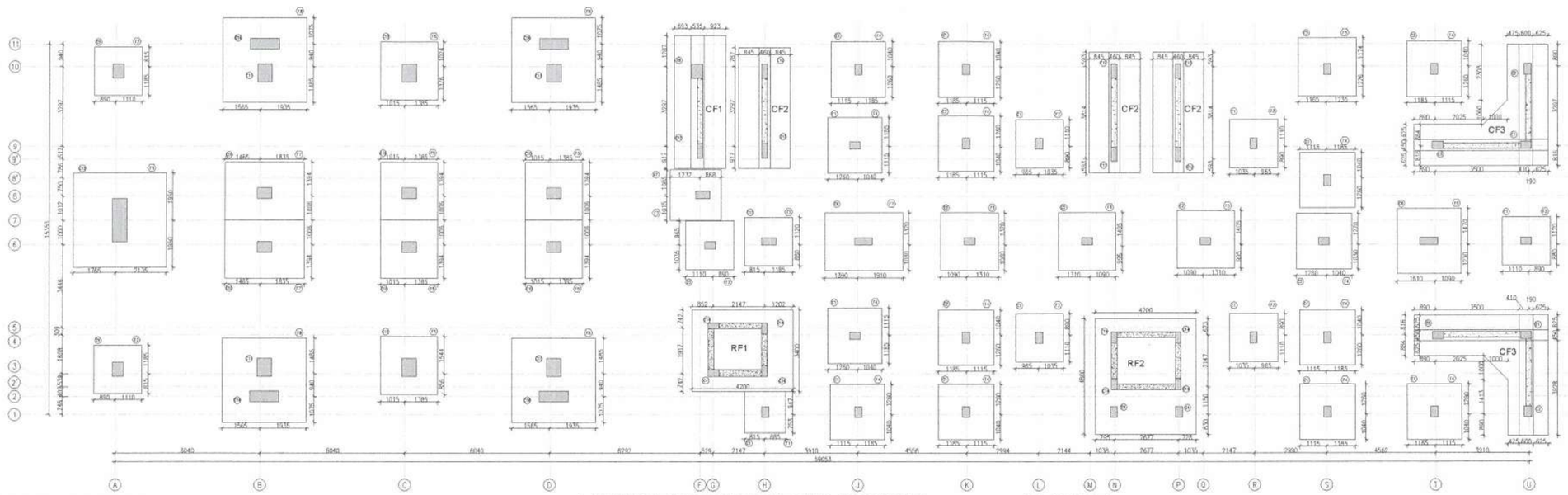
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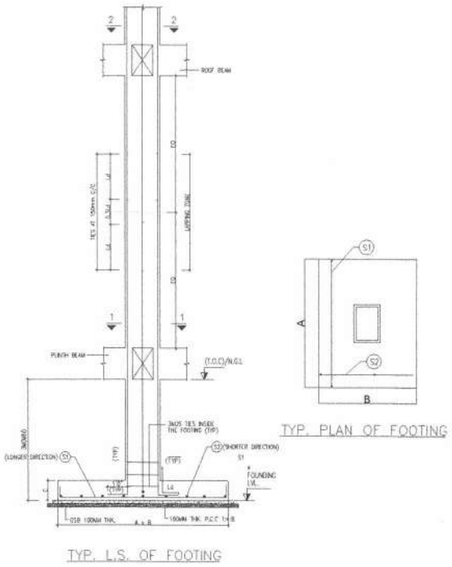
GRID - E REMOVED

REFER SEPARATE DRG. FOR COLUMN DETAILS

			3. 2. 1. REVISION HISTORY	DRAWN : EZHILAN	DRAWING TITLE SETTING OUT BLOCK - A	DRG. NO: ST-01-T C-A-58-2023	REVISION: R-9
				DESIGN : AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -
				DATE : 01.04.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198





TYP. L.S. OF FOOTING

TYP. PLAN OF FOOTING

LAYOUT OF COLUMN AND FOOTING BLOCK-A

COLUMN SCHEDULE :

SL.NO	COLUMN TYPE	GRID	REINFORCEMENT SECTION 1-1 (UPTO STILT FLOOR ROOF LVL.)	SECTION 2-2 (UPTO FIRST FLOOR ROOF LVL.)	SECTION 3-3 (ABOVE FIRST FLOOR ROOF LVL.)	NOS.
1	C1	H1,J1,J4,J9,J10,K1,K10,L4,L9,R4,R9,S1,S4,S8',T1,U4,U6,U9	300 × 450: 4-T20, 4-T16, T8 AT 175 C/C	230 × 450: 4-T20, 4-T16, T8 AT 175 C/C	230 × 450: 8-T16, T8 AT 175 C/C	18
2	C2	K4,K9,M6,Q6,S6,U1,U10	300 × 450: 8-T20, T8 AT 175 C/C	230 × 450: 8-T20, T8 AT 175 C/C	230 × 450: 8-T16, T8 AT 175 C/C	7
3	C3	K6,S10,T4,T9,T10	300 × 450: 4-T25, 4-T20, T8 AT 175 C/C	230 × 450: 4-T25, 4-T20, T8 AT 175 C/C	230 × 450: 8-T20, T8 AT 175 C/C	5
4	C4	N1,P1,G3	300 × 450: 4-T25, 4-T20, T8 AT 175 C/C	230 × 450: 4-T25, 4-T20, T8 AT 175 C/C	230 × 450: 4-T25, 4-T20, T8 AT 175 C/C	3
5	C5	G6	300 × 450: 4-T20, 6-T16, T8 AT 175 C/C	300 × 450: 4-T20, 6-T16, T8 AT 175 C/C	300 × 450: 4-T20, 6-T16, T8 AT 175 C/C	1
6	C6	J6,T6	300 × 750: 4-T25, 10-T20, T8 AT 175 C/C	300 × 750: 4-T25, 10-T20, T8 AT 175 C/C	230 × 750: 14-T20, T8 AT 175 C/C	2
7	C7	F8	300 × 600: 6-T20, 6-T16, T8 AT 175 C/C	300 × 600: 6-T20, 6-T16, T8 AT 175 C/C	300 × 600: 6-T20, 6-T16, T8 AT 175 C/C	1
8	C8	F10	450 × 600: 8-T20, 6-T16, T8 AT 175 C/C	450 × 600: 8-T20, 6-T16, T8 AT 175 C/C	450 × 600: 8-T20, 6-T16, T8 AT 175 C/C	1
9	C9	A3,A10	450 × 600: 8-T25, 6-T20, T8 AT 175 C/C	-	-	2

SL.NO	COLUMN TYPE	GRID	REINFORCEMENT SECTION 1-1 (UPTO STILT FLOOR ROOF LVL.)	SECTION 2-2 (UPTO FIRST FLOOR ROOF LVL.)	SECTION 3-3 (ABOVE FIRST FLOOR ROOF LVL.)	NOS.
10	C10	B6,B8,C6,C8,D6,D8	450 × 600: 18-T25, T8 AT 175 C/C	450 × 600: 18-T25, T8 AT 175 C/C	450 × 600: 18-T20, T8 AT 175 C/C	6
11	C11	B3,B10,C3,C11,D3,D10	600 × 750: 12-T25, 8-T20, T8 AT 175 C/C	600 × 750: 12-T25, 8-T20, T8 AT 175 C/C	600 × 750: 4-T25, 16-T20, T8 AT 175 C/C	6
12	C12	F9,H9,H10,N9',N10,P9',P10	230 × 600: 4-T20, 8-T16, T8 AT 175 C/C	230 × 600: 4-T20, 8-T16, T8 AT 175 C/C	230 × 600: 4-T20, 8-T16, T8 AT 175 C/C	7
13	C13	H6	300 × 600: 8-T20, T8 AT 175 C/C	230 × 600: 4-T20, 4-T16, T8 AT 175 C/C	230 × 600: 4-T20, 4-T16, T8 AT 175 C/C	1
14	C14	G3,G5,H3,H5,N2',N4,P2',P4	230 × 450: 8-T20, T8 AT 175 C/C	230 × 450: 8-T20, T8 AT 175 C/C	230 × 450: 8-T20, T8 AT 175 C/C	8

SL.NO	COLUMN TYPE	GRID	REINFORCEMENT SECTION 1-1 (UPTO STILT FLOOR ROOF LVL.)	SECTION 2-2 (UPTO FIRST FLOOR ROOF LVL.)	SECTION 3-3 (ABOVE FIRST FLOOR ROOF LVL.)	NOS.
15	C15	A7	600 × 1800: 20-T20, 40-T16, T10 AT 175 C/C	600 × 1800: 20-T20, 40-T16, T10 AT 175 C/C; 600 × 900: 10-T20, 20-T16, T10 AT 175 C/C	600 × 900: 10-T20, 20-T16, T10 AT 175 C/C; 600 × 900: 10-T20, 20-T16, T10 AT 175 C/C	1

SL.NO	COLUMN TYPE	GRID	REINFORCEMENT SECTION 1-1 (UPTO STILT FLOOR ROOF LVL.)	SECTION 2-2 (UPTO FIRST FLOOR ROOF LVL.)	SECTION 3-3 (ABOVE FIRST FLOOR ROOF LVL.)	NOS.
C16	C16	B2,B11,D2,D11	450 × 1200: 16-T20, 28-T16, T10 AT 175 C/C	450 × 1200: 16-T20, 28-T16, T10 AT 175 C/C; 450 × 600: 8-T20, 14-T16, T10 AT 175 C/C	450 × 600: 8-T20, 14-T16, T10 AT 175 C/C; 450 × 600: 8-T20, 14-T16, T10 AT 175 C/C	4

FOOTING SCHEDULE :

SL.NO	FOOTING TYPE	GRID	FOOTING SIZE A	FOOTING SIZE B	C	BOTTOM REINFORCEMENT S1 Ø	BOTTOM REINFORCEMENT S1 SPACING	BOTTOM REINFORCEMENT S2 Ø	BOTTOM REINFORCEMENT S2 SPACING	TOP REINFORCEMENT S1 Ø	TOP REINFORCEMENT S1 SPACING	TOP REINFORCEMENT S2 Ø	TOP REINFORCEMENT S2 SPACING	NOS.
1	F1	H1	1700	1700	450	T10	125	T10	125	-	-	-	-	1
2	F2	A3,A10,G6,H6,L4,L9,R4,R9,U6	2000	2000	525	T10	100	T10	100	-	-	-	-	9
3	F3	F8	2100	2100	600	T10	100	T10	100	-	-	-	-	1
4	F4	J1,J4,J9,J10,K1,K4,K9,K10,S1,S4,S6,S9',T1,T10	2300	2300	675	T12	125	T12	125	-	-	-	-	14
5	F5	C3,C6,C8,C10,D6,D8,K6,M6,Q6,S10	2400	2400	675	T12	100	T12	100	-	-	-	-	10
6	F6	T6	2700	2700	750	T16	125	T16	125	-	-	-	-	1
7	F7	B6,B8,J6	2400	3300	825	T16	125	T16	125	T10	150	T10	150	3
8	F8	(B2,B3),(B10,B11),(D2,D3),(D10,D11)	3500	3500	925	T16	150	T16	150	T10	150	T10	150	4
9	F9	A7	3900	3900	1000	T16	125	T16	125	T10	150	T10	150	1
10	CF1	(F9,F10)	5500	2150	REFER SEPERATE DRAWING FOR R.C DETAIL									1
11	CF2	(H9,H10),(N9',N10),(P9',P10),	5000	2100	REFER SEPERATE DRAWING FOR R.C DETAIL									3
12	CF3	(T4,U1,U4),(T9,U9,U10)	REFER SEPERATE DRAWING FOR R.C DETAIL											2
13	RF1	(G3,G5,H3,H5)	4200	3400	REFER SEPERATE DRAWING FOR R.C DETAIL									1
14	RF2	(N2,N2',N4,P2,P2',P4)	4200	4800	REFER SEPERATE DRAWING FOR R.C DETAIL									1

NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) FOR FOOTINGS - 50mm b) FOR COLUMNS - 40mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. FOOTING SHOULD BE FOUNDED AT 3m BELOW G.L OR AT THE LEVEL WHERE THE SOIL HAS THE CAPACITY OF 275KN/M² (AS PER SOIL REPORT)
8. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
9. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
10. FOUNDATION DESIGN FOR SBT+5 WITH AAC BLOCK 6.5KN/Cubm

3.
2.
1.
REVISION HISTORY

GRID – E REMOVED

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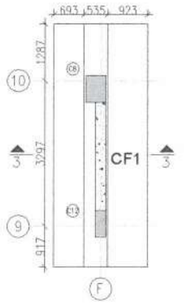
DRAWN : EZHILAN
DESIGN : AGILAN
DATE : 01.04.2024

DRAWING TITLE
LAYOUT & R.C DET. OF FOOTING & COLUMN BLOCK - A

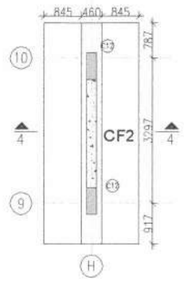
ISSUED FOR: CONSTRUCTION

DRG. NO: ST-02-T C-A-58-2023
REVISION: R-1
CLIENT: RUSSEL FOUNDATION
REFERANCE: -
PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY

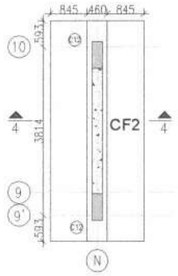
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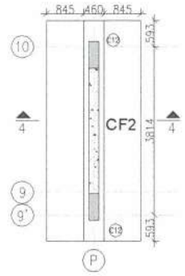
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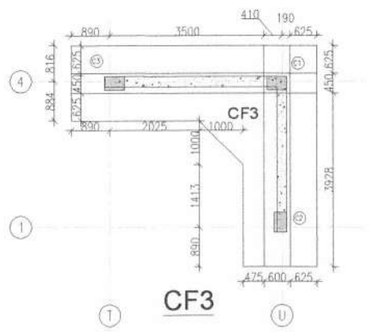
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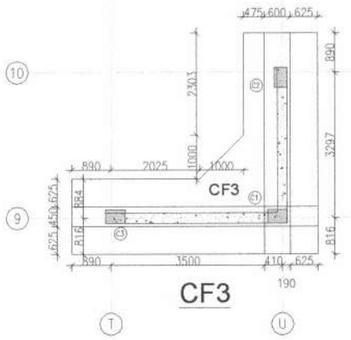
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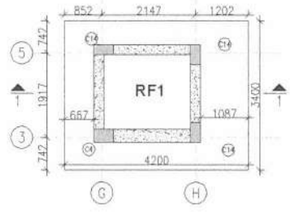
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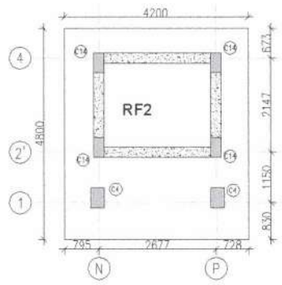
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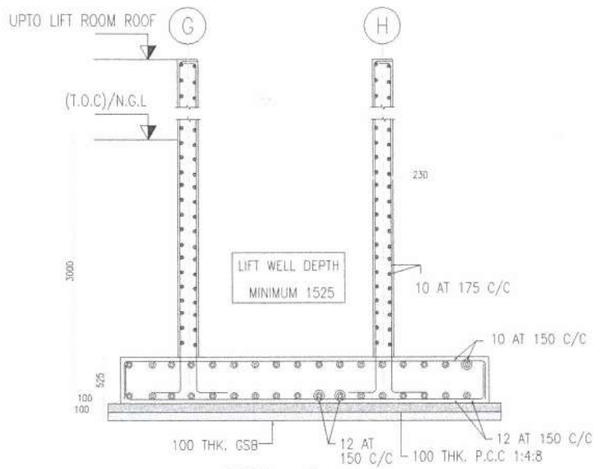
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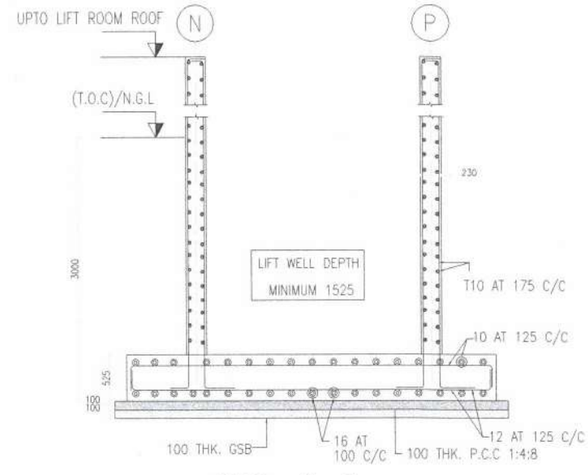
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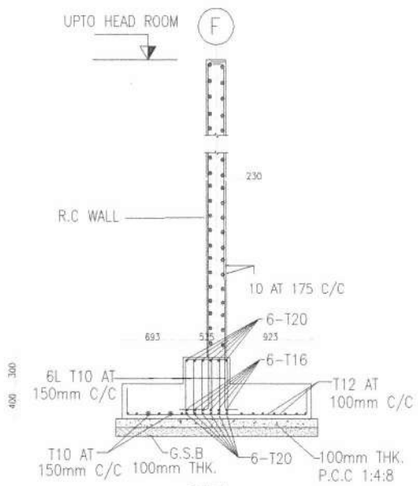
RF2



SEC. 1–1

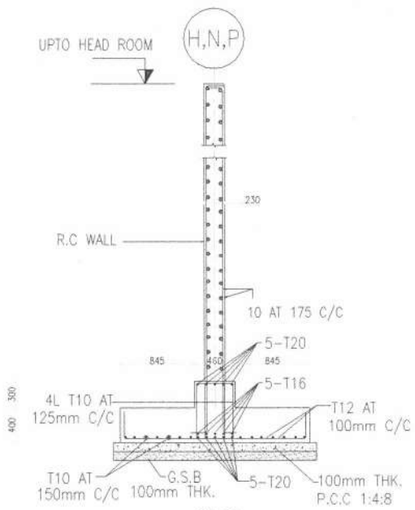


SEC. 2–2



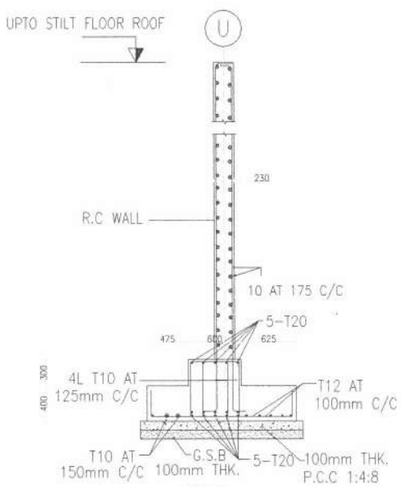
CF1

SEC. 3–3



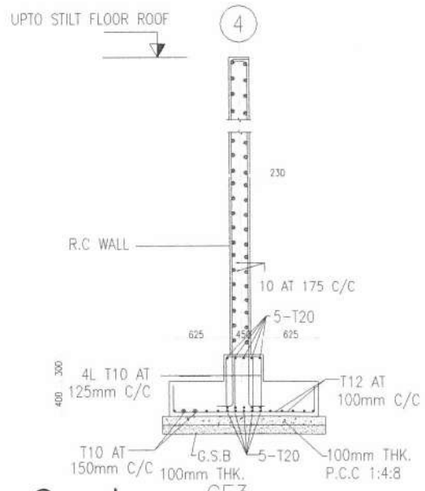
CF2

SEC. 4–4



CF3

SEC. 5–5



CF3

SEC. 6–6

LAYOUT & R.C DET. OF RAFT & COMBINED FOOTING

BLOCK - A

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Cell:9787072100
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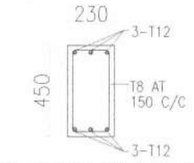
NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
a) FOR FOOTINGS - 50mm b) FOR COLUMNS - 40mm
5.T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. FOOTING SHOULD BE FOUNDED AT 3m BELOW G.L OR AT THE LEVEL WHERE THE SOIL HAS THE CAPACITY OF 275KN/M² (AS PER SOIL REPORT)
8. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY.
9. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
10. FOUNDATION DESIGN FOR SILT+5 WITH AAC BLOCK 6.5KN/Cubm

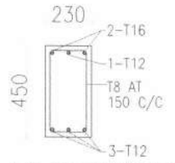
3.
2.
1.
REVISION HISTORY

DRAWN : EZHILAN	DRAWING TITLE: LAYOUT & R.C DET. OF FOOTING & COLUMN BLOCK - A	DRG. NO: ST-03-T C-A-58-2023	REVISION: R-4
DESIGN : AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -
DATE : 01.04.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

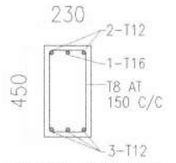
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



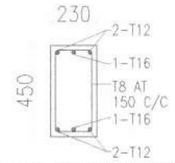
TYP. C/S OF PLINTH BEAM
PB1,PB2,PB4,PB6,PB7,PB9,
PB12,PB13,PB14,PB15,PB16,PB23,PB24,PB25,
PB26,PB27,PB28,PB29,PB30,PB31,PB32,PB33,
PB34,PB35,PB36,PB37,PB38,PB39 & PB40
(230 x 450)



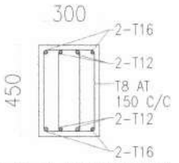
TYP. C/S OF PLINTH BEAM
PB3 & PB18
(230 x 450)



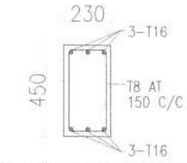
TYP. C/S OF PLINTH BEAM
PB5,PB8,PB11& PB17
(230 x 450)



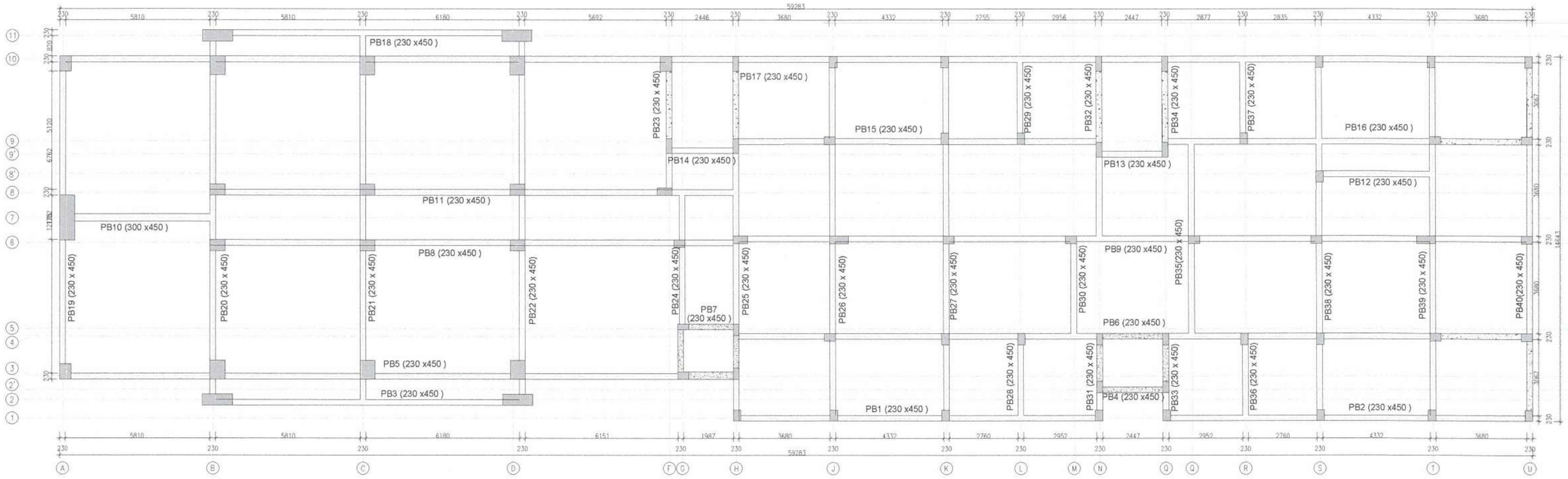
TYP. C/S OF PLINTH BEAM
PB21
(230 x 450)



C/S OF PLINTH BEAM
PB10
(300 x 450)



TYP. C/S OF PLINTH BEAM
PB19,PB20 & PB22
(230 x 450)



LAYOUT OF PLINTH BEAM

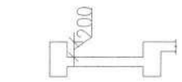
BLOCK-A

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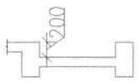
NOTES:

REVISION HISTORY

DRAWN : EZHILAN	DRAWING TITLE LAYOUT & R.C DET. OF PLINTH BEAM BLOCK - A	DRG. NO: ST-05-T C-A-58-2023	REVISION: R-0	AME STRUCTURAL CONSULTANTS NO:28, JAWAHARLAL NEHRU ST, PERUNGALATHUR, CHENNAI-600 063 PH: 9840127487, 8760031196
DESIGN : AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -	
DATE : 25.04.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY		



TYP. SEC. OF A



TYP. SEC.- OF B



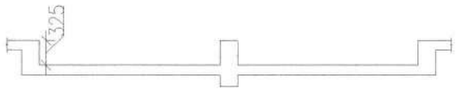
TYP. SEC. OF C



TYP. SEC. OF D



TYP. SEC. OF E



TYP. SEC. OF F



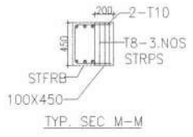
SEC. OF G



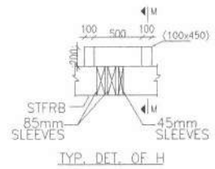
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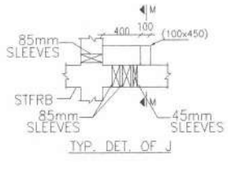
SEC. OF P



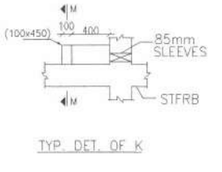
TYP. SEC M-M



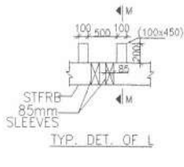
TYP. DET. OF H



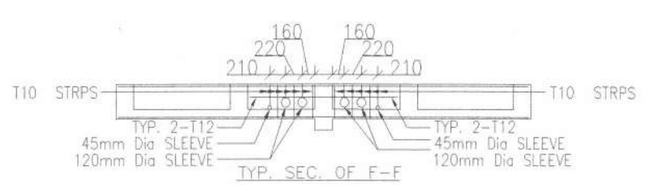
TYP. DET. OF J



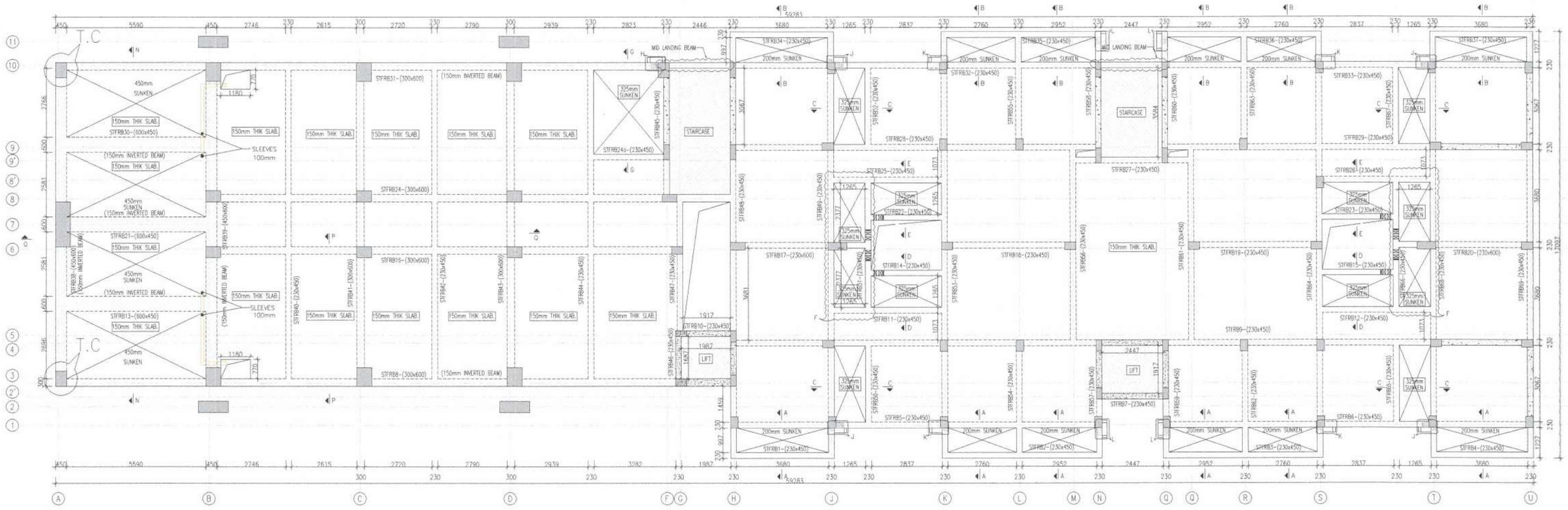
TYP. DET. OF K

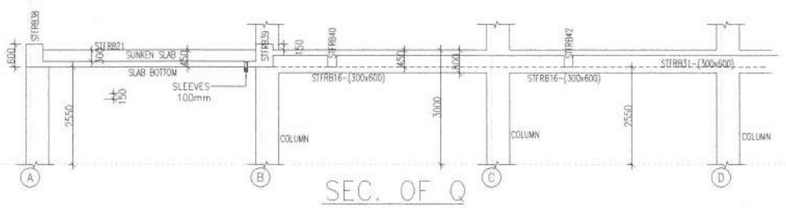


TYP. DET. OF L



TYP. SEC. OF F-F





SEC. OF Q

LAYOUT OF STILT FLOOR ROOF BEAM
BLOCK - A

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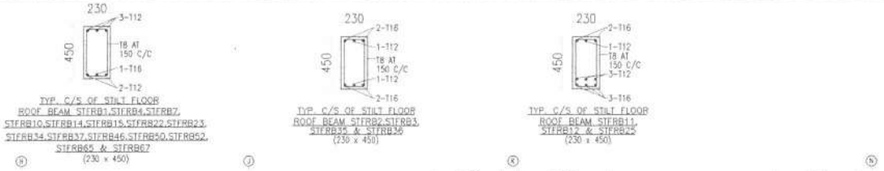
*T.C- TERMINATED COLUMN

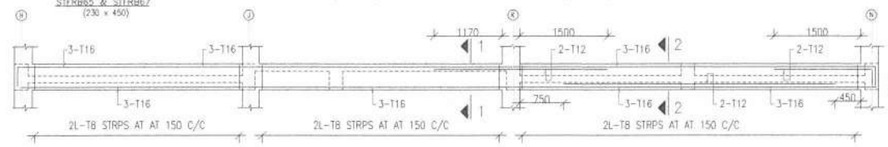
NOTES:

NOTES:

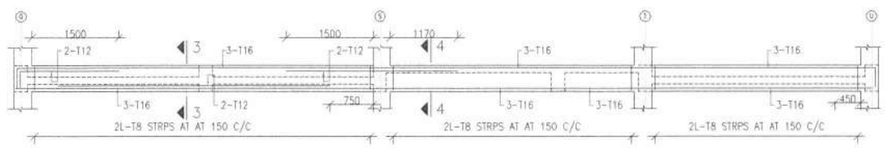
3.
2.
1.
REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE: LAYOUT OF STILT FLOOR ROOF BEAM	DRG. NO: ST-06-T C-A-58-2023	REVISION: R-1	AME STRUCTURAL CONSULTANTS NO:28, JAWAHARLAL NEHRU ST, PERUNGALATHUR, CHENNAI-600 063 PH: 9840127487, 8760031198
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -	
CHECKED : G.AGILAN				
DATE : 31.07.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY		

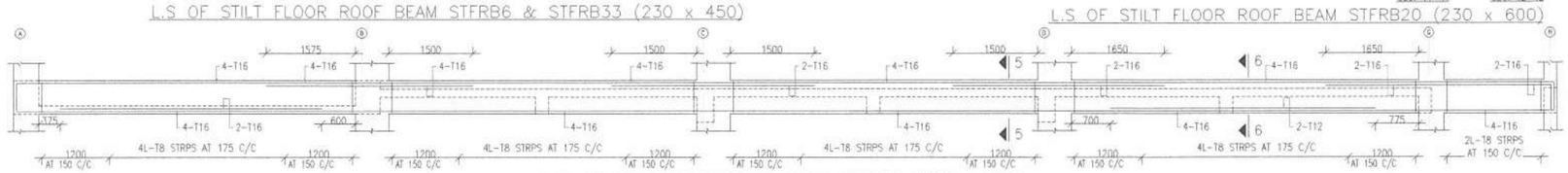




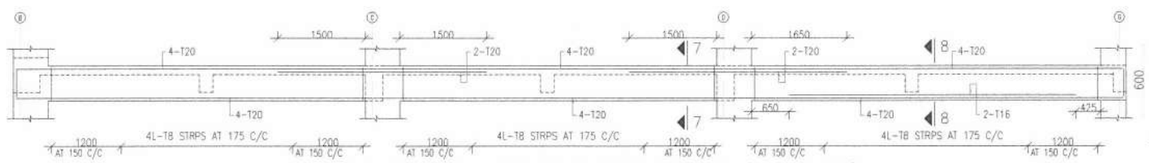
L.S OF STILT FLOOR ROOF BEAM STFRB5 & STFRB32 (230 x 450)



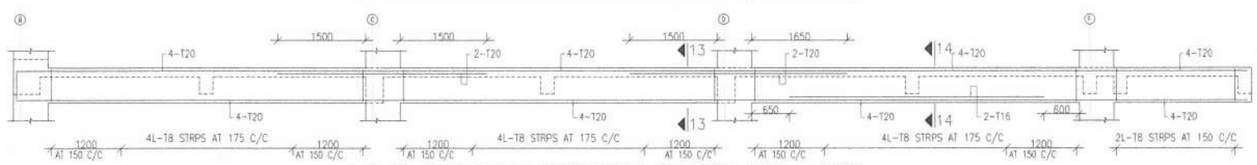
L.S OF STILT FLOOR ROOF BEAM STFRB6 & STFRB33 (230 x 450)



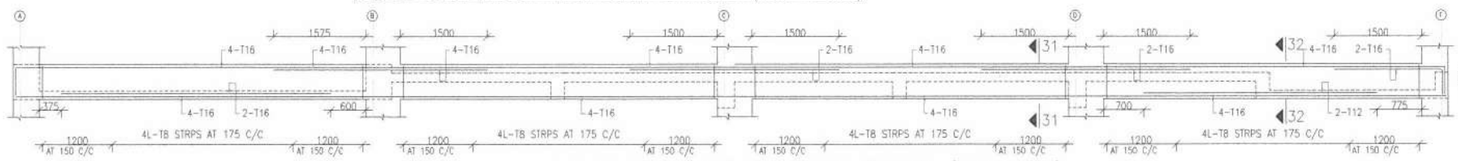
L.S OF STILT FLOOR ROOF BEAM STFRB8 (300 x 600)



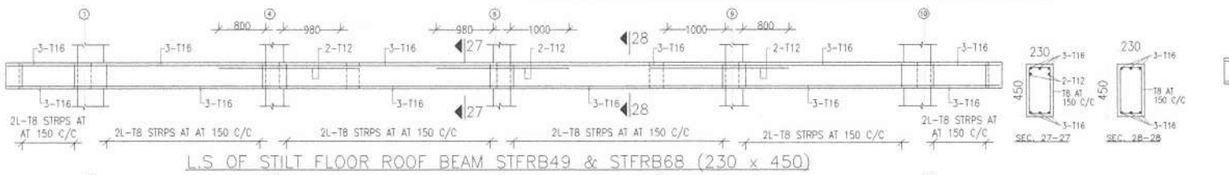
L.S OF STILT FLOOR ROOF BEAM STFRB16 (300 x 600)



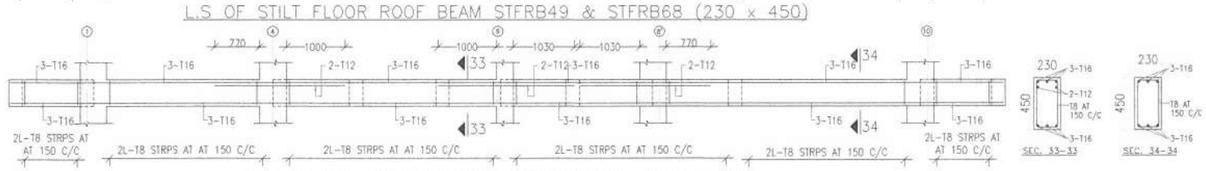
L.S OF STILT FLOOR ROOF BEAM STFRB24 (300 x 600)



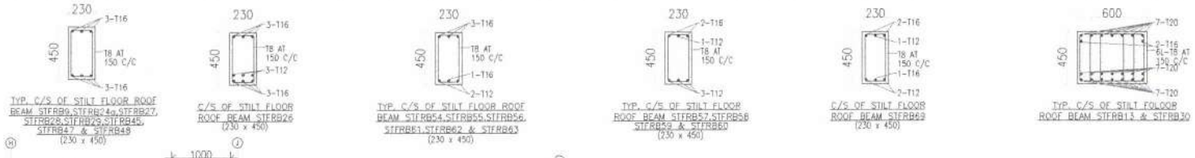
L.S OF STILT FLOOR ROOF BEAM STFRB31 (300 x 600)

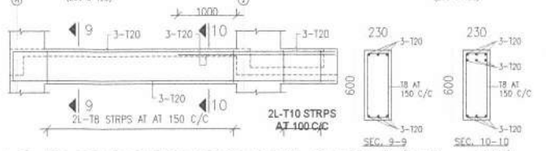


L.S OF STILT FLOOR ROOF BEAM STFRB49 & STFRB68 (230 x 450)

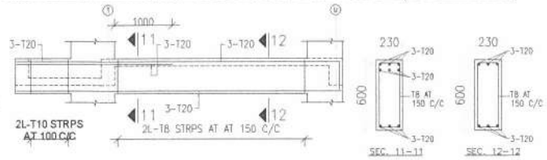


L.S OF STILT FLOOR ROOF BEAM STFRB64 (230 x 450)

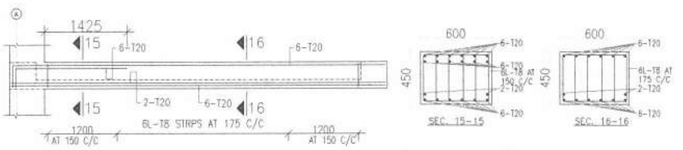




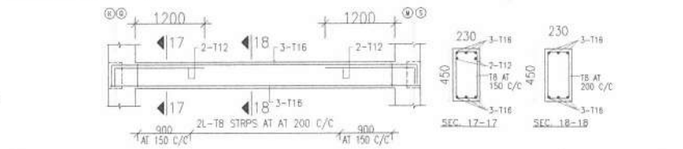
L.S OF STILT FLOOR ROOF BEAM STFRB17 (230 x 600)



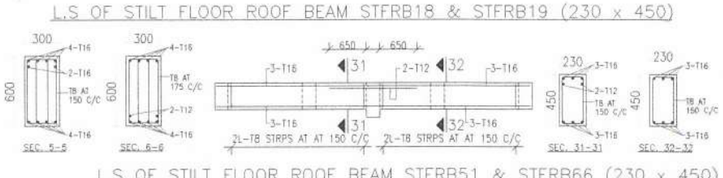
L.S OF STILT FLOOR ROOF BEAM STFRB20 (230 x 600)



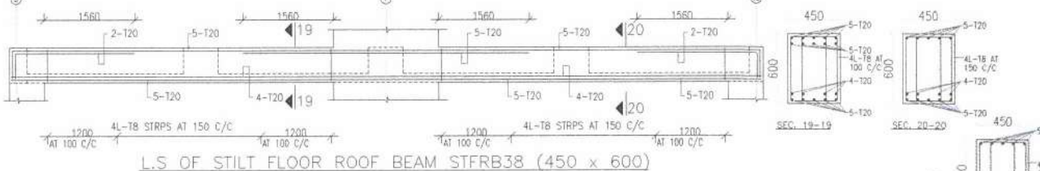
L.S OF STILT FLOOR ROOF BEAM STFRB21 (600 x 450)



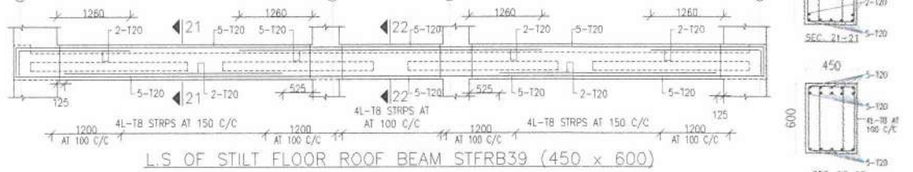
L.S OF STILT FLOOR ROOF BEAM STFRB18 & STFRB19 (230 x 450)



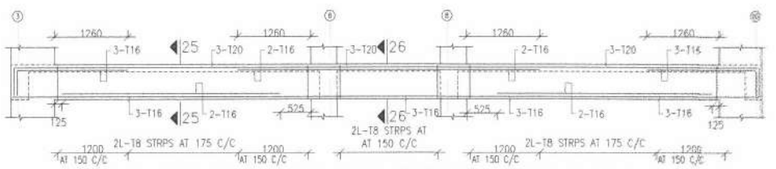
L.S OF STILT FLOOR ROOF BEAM STFRB51 & STFRB66 (230 x 450)



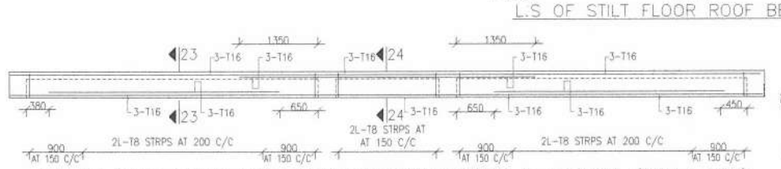
L.S OF STILT FLOOR ROOF BEAM STFRB38 (450 x 600)



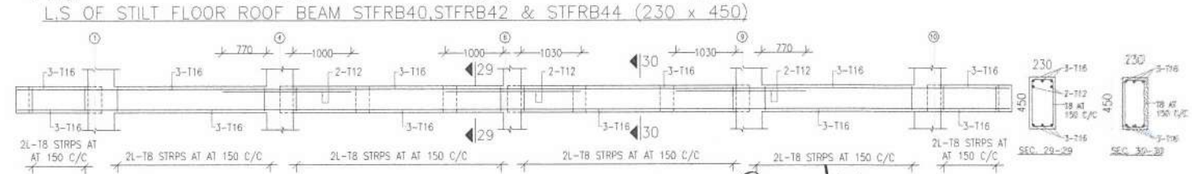
L.S OF STILT FLOOR ROOF BEAM STFRB39 (450 x 600)



L.S OF STILT FLOOR ROOF BEAM STFRB41 & STFRB43 (300 x 600)



L.S OF STILT FLOOR ROOF BEAM STFRB40,STFRB42 & STFRB44 (230 x 450)



L.S OF STILT FLOOR ROOF BEAM STFRB53 (230 x 450)

NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

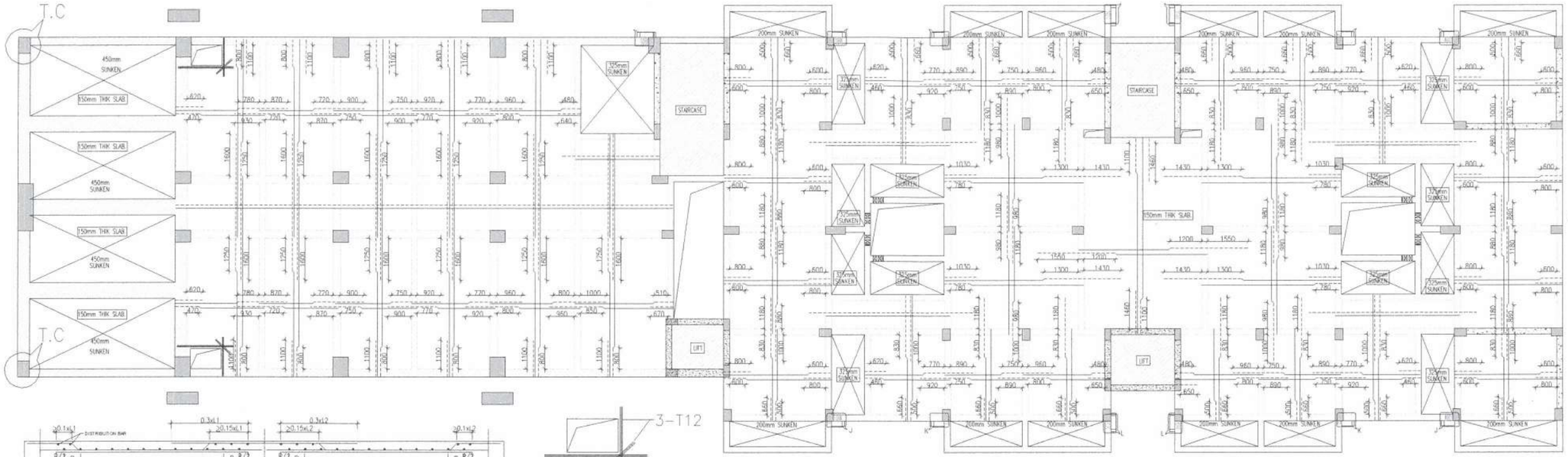
NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

REVISION HISTORY
3.
2.
1.

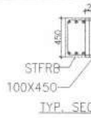
DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF STILT FLOOR ROOF BEAM	DRG. NO: ST-07-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE:
CHECKED : G.AGILAN			
DATE : 03.07.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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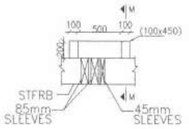
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



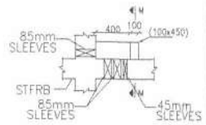
*T.C- TERMINATED COLUMN



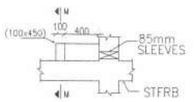
TYP. SEC M-M



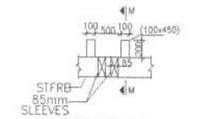
TYP. DET. OF H



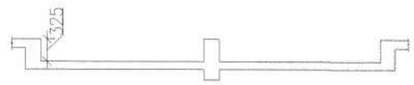
TYP. DET. OF J



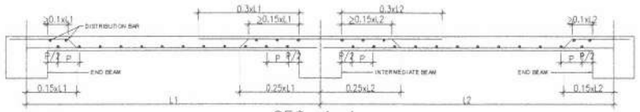
TYP. DET. OF K



TYP. DET. OF L

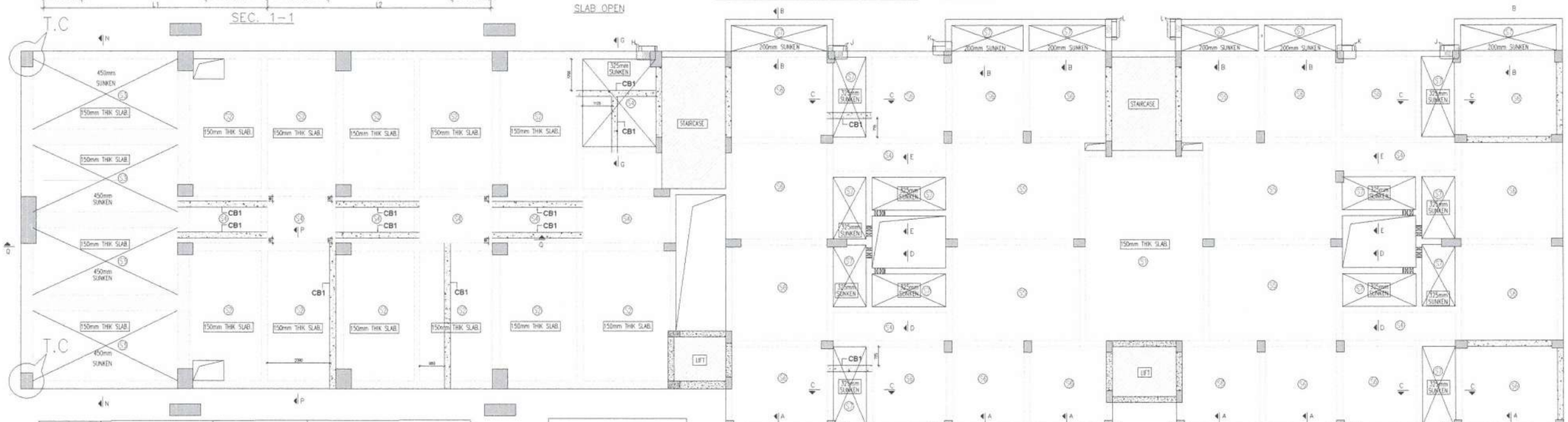


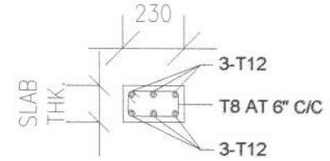
TYP. SEC. OF F



SEC. 1-1

R.C DET. OF STILT FLOOR ROOF SLAB BLOCK - A



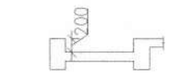


TYP. DET. OF CONCEALED BEAM-CB1

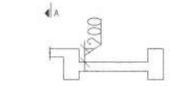
S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (TWO WAY)	150	T10 AT 150 C/C (SHORTER) T8 AT 150 C/C (LONGER)
2	S2 (TWO WAY)	150	T8 AT 150 C/C (SHORTER) T8 AT 150 C/C (LONGER)
3	S3 (DOUBLE MAT)	150	T10 AT 100 C/C (SHORTER) T8 AT 150 C/C (LONGER)
4	S4 (DOUBLE MAT)	150	T8 AT 150 C/C (DOUBLE MAT)
5	S5 (TWO WAY)	125	T8 AT 100 C/C (SHORTER) T8 AT 150 C/C (LONGER)
6	S6 (TWO WAY)	125	T8 AT 150 C/C (BOTH WAYS)
7	S7 (DOUBLE MAT)	125	T8 AT 150 C/C (SHORTER) T8 AT 175 C/C (LONGER)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)

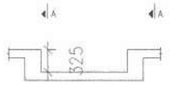
TOP ROD
BOTTOM ROD



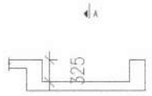
TYP. SEC. OF A



TYP. SEC. OF B



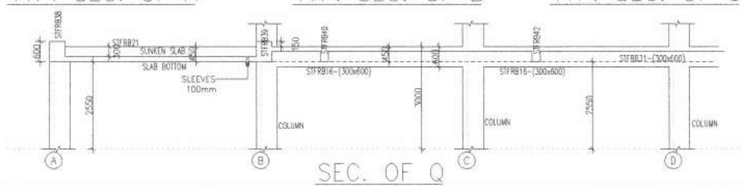
TYP. SEC. OF C



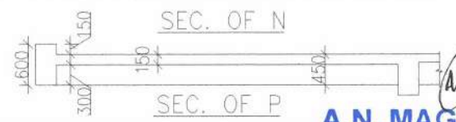
TYP. SEC. OF D



TYP. SEC. OF E

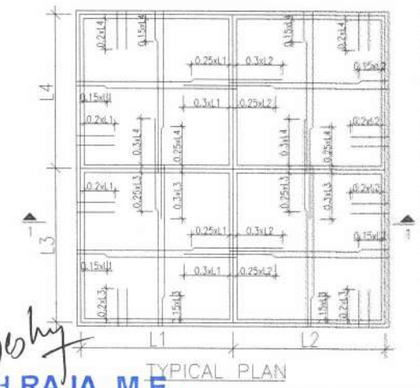


SEC. OF Q



SEC. OF N

SEC. OF P



TYPICAL PLAN

NOTES:

1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) SLAB - 20mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

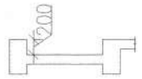
3.
2.
1.
REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET. OF STILT FLOOR ROOF SLAB
DESIGN : G.AGILAN	
CHECKED : G.AGILAN	
DATE : 31.07.2024	ISSUED FOR: CONSTRUCTION

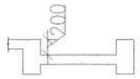
DRG. NO: ST-08-T C-A-58-2023	REVISION: R-1
CLIENT: RUSSEL FOUNDATION	REFERANCE:
PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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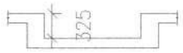
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PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



TYP. SEC. OF A



TYP. SEC. OF B



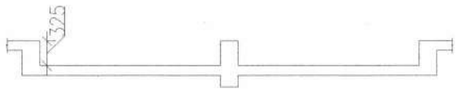
TYP. SEC. OF C



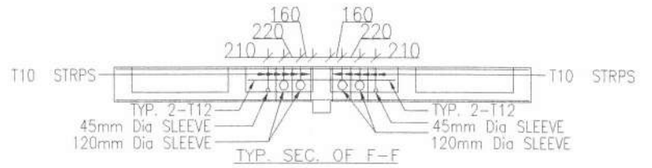
TYP. SEC. OF D



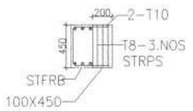
TYP. SEC. OF E



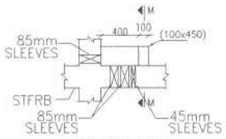
TYP. SEC. OF F



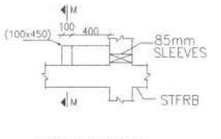
TYP. SEC. OF F-F



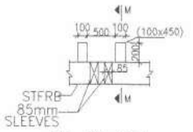
TYP. SEC M-M



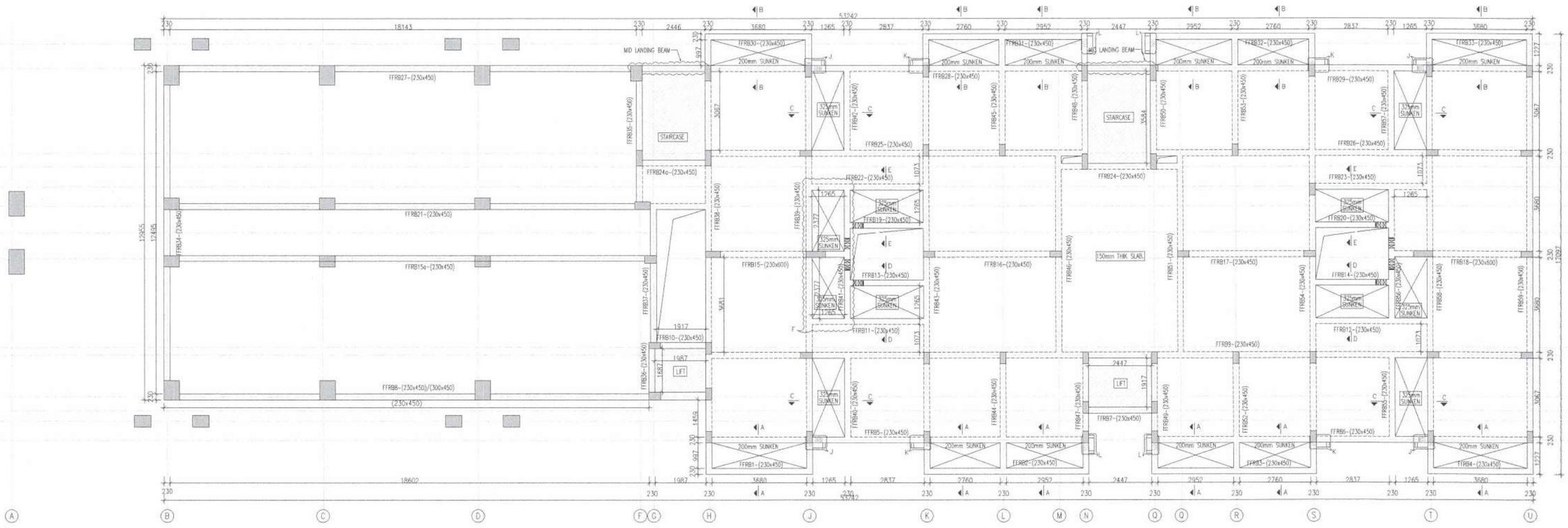
TYP. DET. OF J



TYP. DET. OF K



TYP. DET. OF L

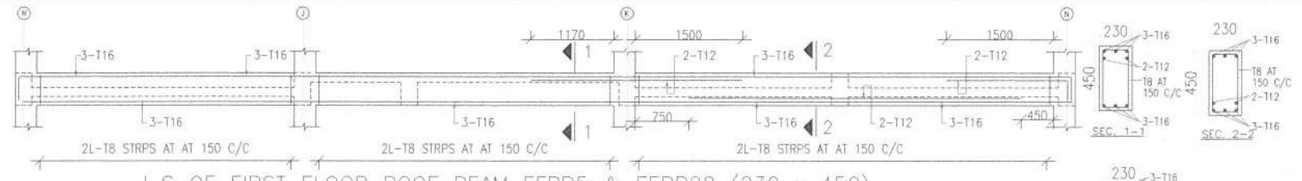


LAYOUT OF FIRST FLOOR ROOF BEAM
BLOCK - A

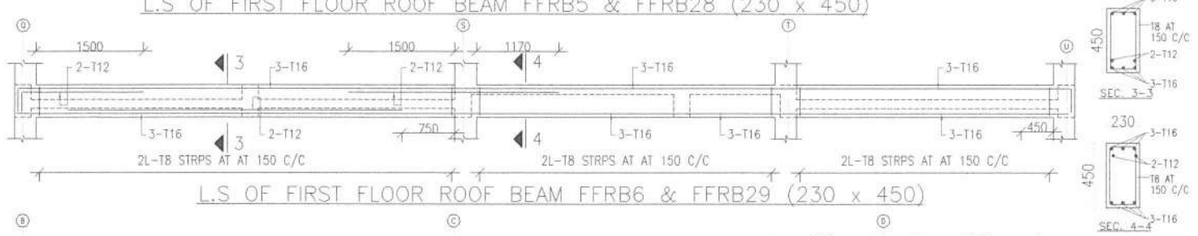
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	NOTES:	NOTES:		DRAWN : G.EZHILAN	DRAWING TITLE LAYOUT OF FIRST FLOOR ROOF BEAM	DRG. NO: ST-10-T C-A-58-2023	REVISION: R-0
				DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -
			3. 2. 1. REVISION HISTORY	CHECKED : G.AGILAN			
				DATE : 31.08.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

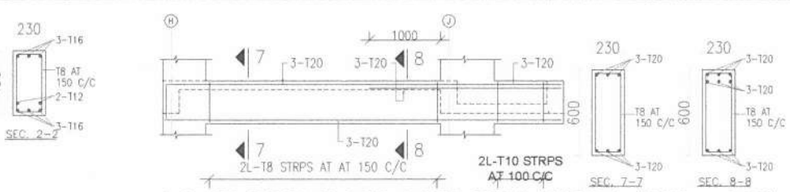
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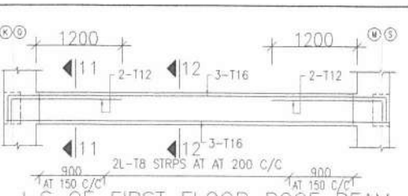
L.S OF FIRST FLOOR ROOF BEAM FFRB5 & FFRB28 (230 x 450)



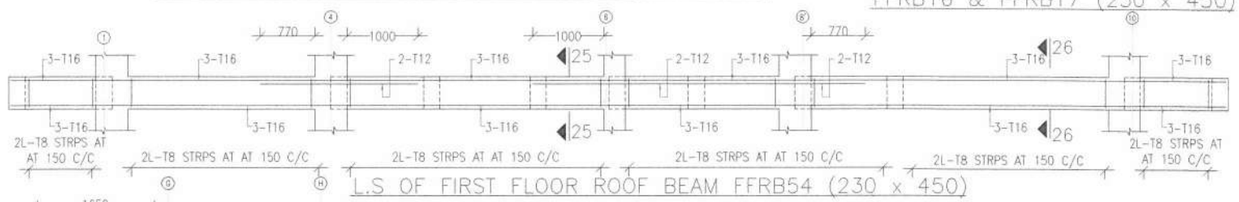
L.S OF FIRST FLOOR ROOF BEAM FFRB6 & FFRB29 (230 x 450)



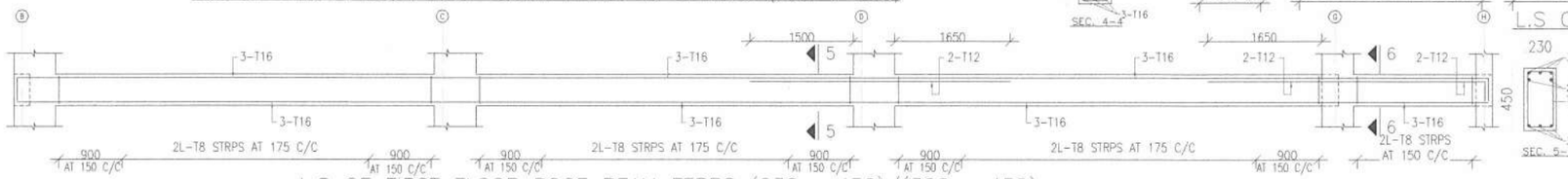
L.S OF FIRST FLOOR ROOF BEAM FFRB15 (230 x 600)



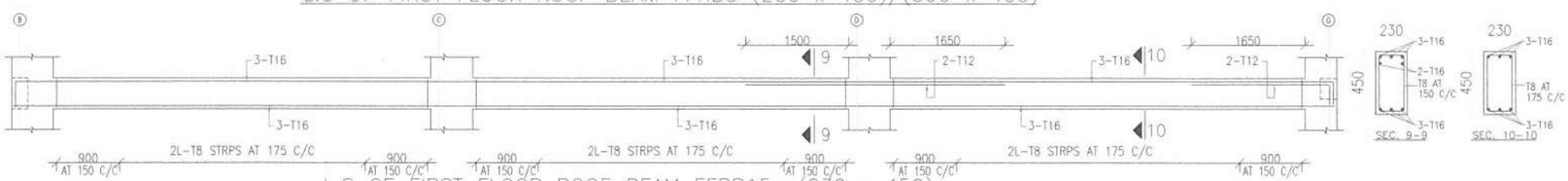
L.S OF FIRST FLOOR ROOF BEAM FFRB16 & FFRB17 (230 x 450)



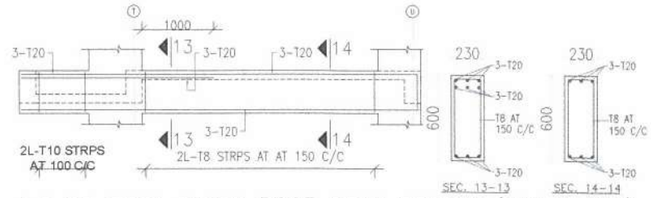
L.S OF FIRST FLOOR ROOF BEAM FFRB54 (230 x 450)



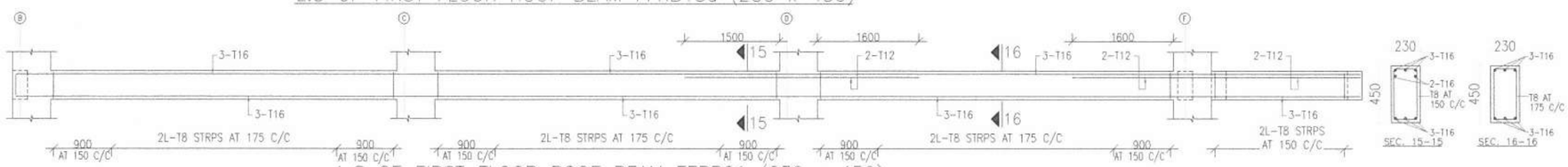
L.S OF FIRST FLOOR ROOF BEAM FFRB8 (230 x 450)/(300 x 450)



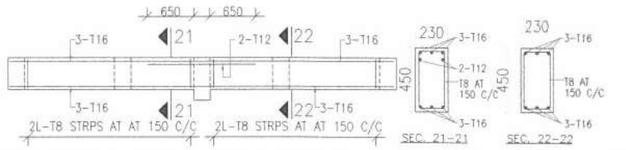
L.S OF FIRST FLOOR ROOF BEAM FFRB15a (230 x 450)



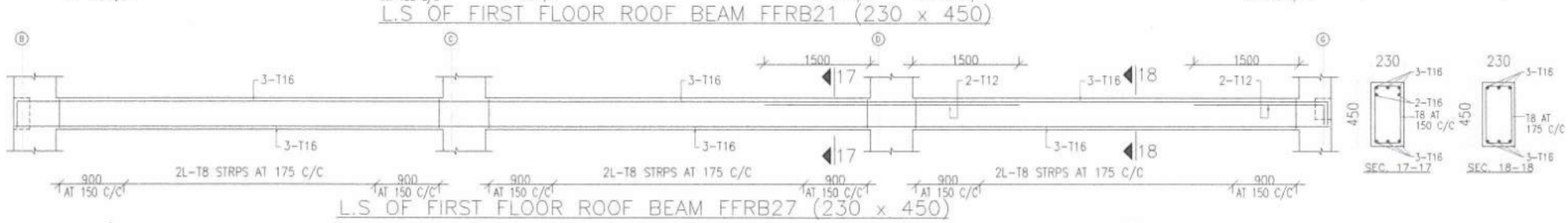
L.S OF FIRST FLOOR ROOF BEAM FFRB18 (230 x 600)



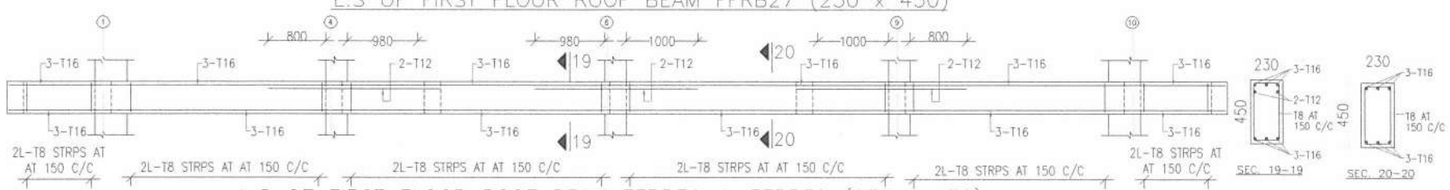
L.S OF FIRST FLOOR ROOF BEAM FFRB21 (230 x 450)



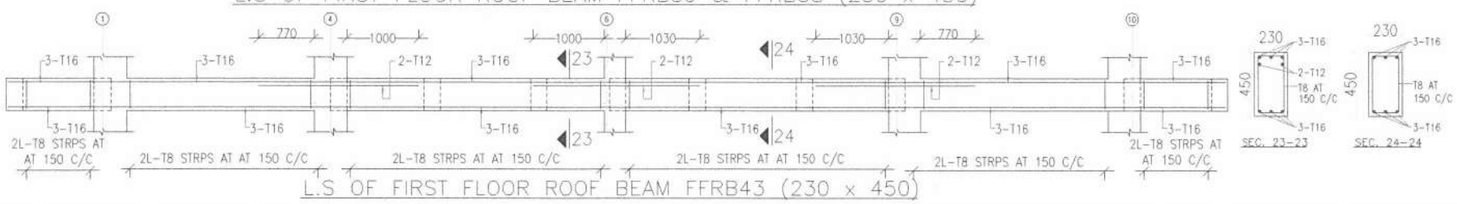
L.S OF FIRST FLOOR ROOF BEAM FFRB41 & FFRB56 (230 x 450)



L.S OF FIRST FLOOR ROOF BEAM FFRB27 (230 x 450)



L.S OF FIRST FLOOR ROOF BEAM FFRB39 & FFRB58 (230 x 450)



L.S OF FIRST FLOOR ROOF BEAM FFRB43 (230 x 450)



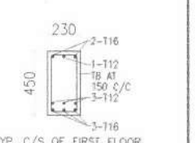
TYP. C/S OF FIRST FLOOR ROOF BEAM FFRB1,FFRB4,FFRB7, FFRB10,FFRB13,FFRB14,FFRB19,FFRB20, FFRB30,FFRB33,FFRB36,FFRB40,FFRB42, FFRB55 & FFRB57 (230 x 450)



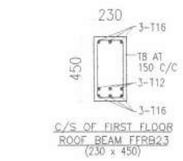
TYP. C/S OF FIRST FLOOR ROOF BEAM FFRB2,FFRB3, FFRB29,FFRB31 & FFRB32 (230 x 450)



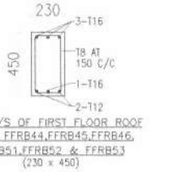
TYP. C/S OF FIRST FLOOR ROOF BEAM FFRB9,FFRB24,FFRB25 FFRB26,FFRB34,FFRB35, FFRB37 & FFRB38 (230 x 450)



TYP. C/S OF FIRST FLOOR ROOF BEAM FFRB11, FFRB12 & FFRB22 (230 x 450)



C/S OF FIRST FLOOR ROOF BEAM FFRB23 (230 x 450)



TYP. C/S OF FIRST FLOOR ROOF BEAM FFRB44,FFRB45,FFRB46, FFRB51,FFRB52 & FFRB53 (230 x 450)



TYP. C/S OF FIRST FLOOR ROOF BEAM FFRB47,FFRB48 FFRB49 & FFRB50 (230 x 450)



C/S OF FIRST FLOOR ROOF BEAM FFRB59 (230 x 450)

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NOTES:

1. ALL DIMENSIONS ARE IN MM &M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

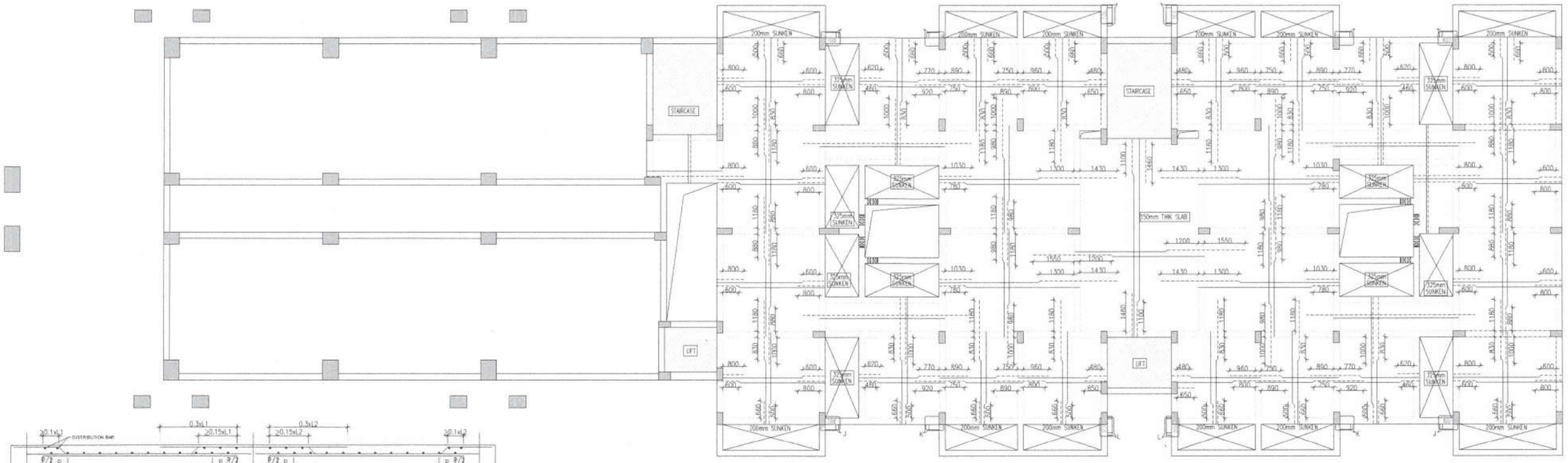
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

3.
2.
1.

REVISION HISTORY

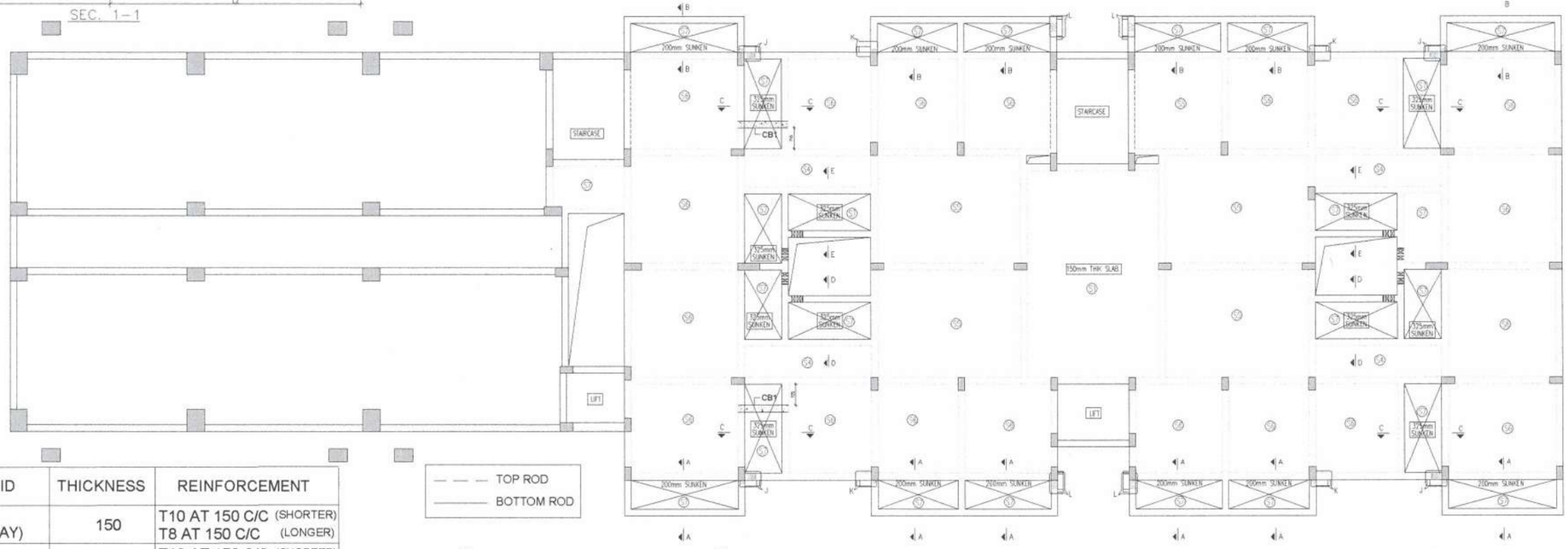
DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF FIRST FLOOR ROOF BEAM	DRG. NO: ST-11-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -
CHECKED : G.AGILAN			
DATE : 03.09.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



R.C DET. OF FIRST FLOOR ROOF SLAB BLOCK - A

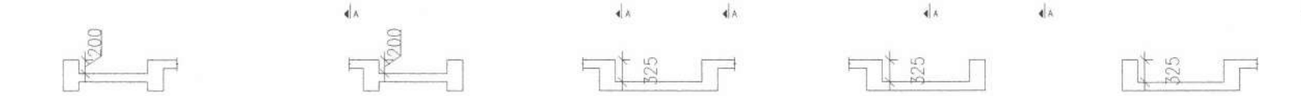
SEC. 1-1



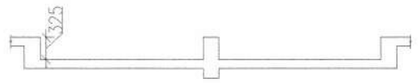
S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (TWO WAY)	150	T10 AT 150 C/C (SHORTER) T8 AT 150 C/C (LONGER)
2	S2 (TWO WAY)	125	T10 AT 150 C/C (SHORTER) T8 AT 150 C/C (LONGER)
3	S3 (DOUBLE MAT)	150	T10 AT 100 C/C (SHORTER) T8 AT 150 C/C (LONGER)
4	S4 (DOUBLE MAT)	125	T8 AT 150 C/C (DOUBLE MAT)
5	S5 (TWO WAY)	125	T8 AT 100 C/C (SHORTER) T8 AT 150 C/C (LONGER)
6	S6 (TWO WAY)	125	T8 AT 150 C/C (BOTH WAYS)
7	S7 (DOUBLE MAT)	125	T8 AT 150 C/C (SHORTER) T8 AT 175 C/C (LONGER)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)

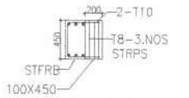
TOP ROD
BOTTOM ROD



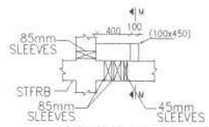
TYP. SEC. OF A | TYP. SEC. OF B | TYP. SEC. OF C | TYP. SEC. OF D | TYP. SEC. OF E



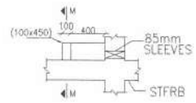
TYP. SEC. OF F



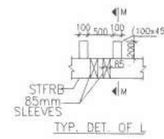
TYP. SEC M-M



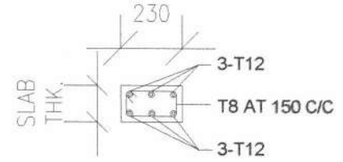
TYP. DET. OF J



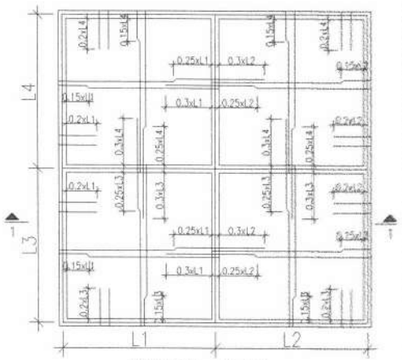
TYP. DET. OF K



TYP. DET. OF L



TYP. DET. OF CONCEALED BEAM-CB1



TYPICAL PLAN

A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I /2022/06/325
Cell:97870 72100
magistruchure@gmail.com.

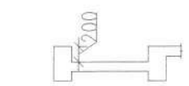
NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) SLAB - 20mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

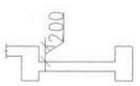
3.
2.
1.
REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET. OF FIRST FLOOR ROOF SLAB	DRG. NO: ST-12-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REFERANCE: -
CHECKED : G.AGILAN			
DATE : 31.08.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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PH: 9840127487, 8760031198



TYP. SEC. OF A



TYP. SEC. OF B



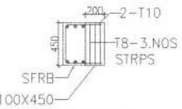
TYP. SEC. OF C



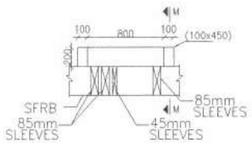
TYP. SEC. OF D



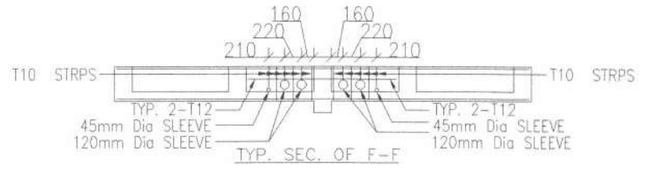
TYP. SEC. OF E



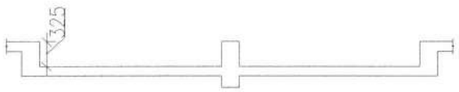
TYP. SEC M-M



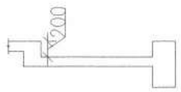
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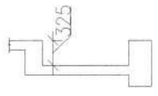
TYP. SEC. OF F-F



TYP. SEC. OF F



TYP. SEC. OF G



TYP. SEC. OF Q



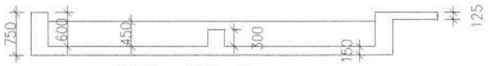
TYP. SEC. OF R



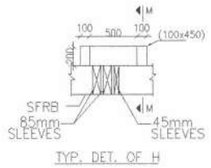
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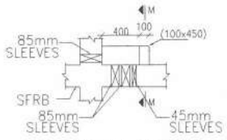
TYP. SEC. OF S



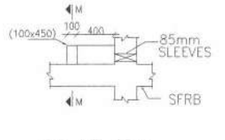
SEC. OF T



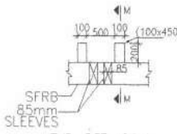
TYP. DET. OF H



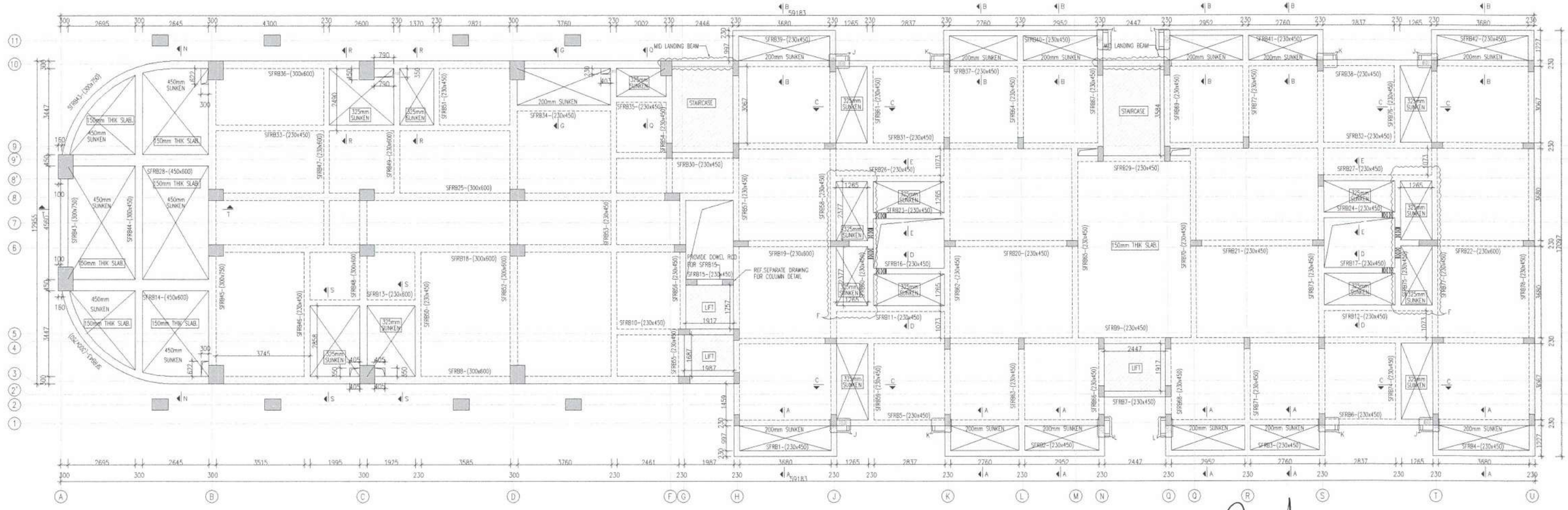
TYP. DET. OF J



TYP. DET. OF K



TYP. DET. OF L



LAYOUT OF SECOND FLOOR ROOF BEAM
BLOCK - A

A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I/2022/06/325
Cell:97870 72100
magistruchure@gmail.com.

NOTES:

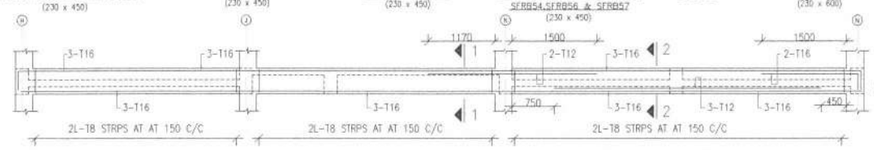
NOTES:

3.
2.
1.
REVISION HISTORY

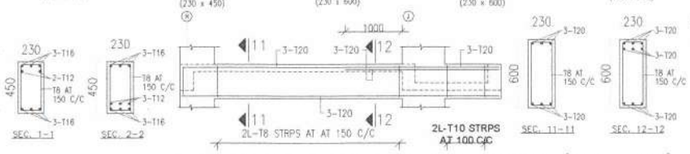
DRAWN : G.EZHILAN	DRAWING TITLE: LAYOUT OF SECOND FLOOR ROOF BEAM	DRG. NO: ST-13-T C-A-58-2023	REVISION: R-4
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: 21.11.2024
CHECKED : G.AGILAN			
DATE : 30.09.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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PH: 9840127487, 8760031198





L.S OF SECOND FLOOR ROOF BEAM SFRB5 & SFRB37 (230 x 450)

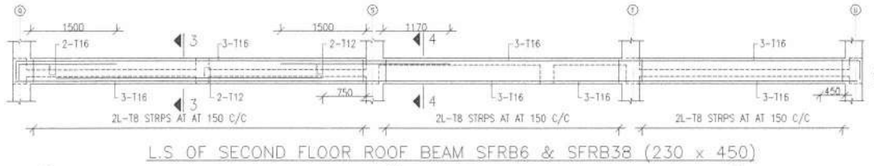


L.S OF SECOND FLOOR ROOF BEAM SFRB19 (230 x 600)

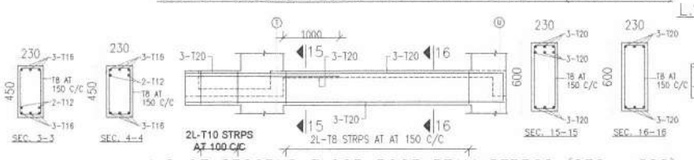


L.S OF SECOND FLOOR ROOF BEAM SFRB14 & SFRB28 (450 x 600)

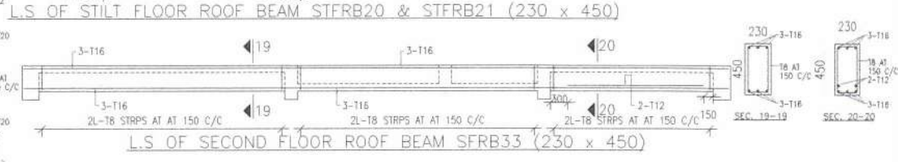
L.S OF SECOND FLOOR ROOF BEAM SFRB60 & SFRB75 (230 x 450)



L.S OF SECOND FLOOR ROOF BEAM SFRB6 & SFRB38 (230 x 450)

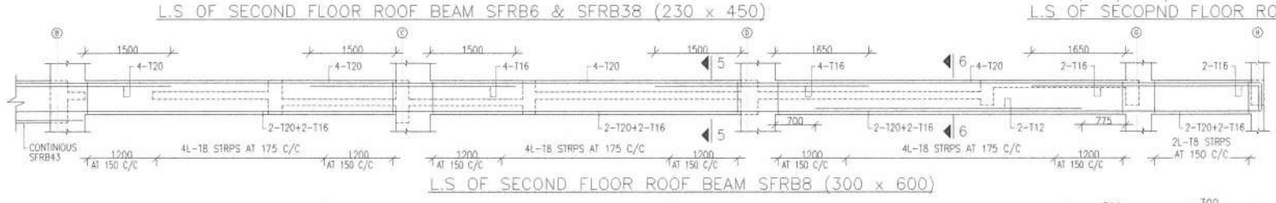


L.S OF SECOPND FLOOR ROOF BEAM SFRB22 (230 x 600)

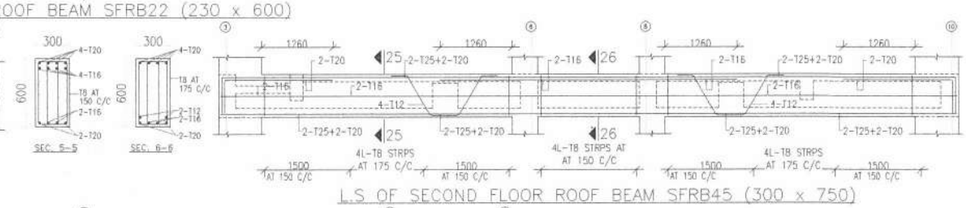


L.S OF SECOND FLOOR ROOF BEAM SFRB33 (230 x 450)

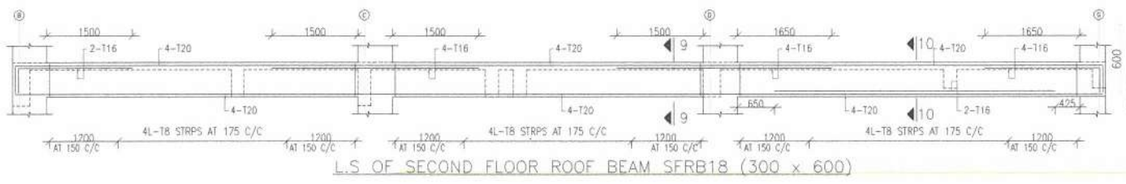
L.S OF STILT FLOOR ROOF BEAM STFRB20 & STFRB21 (230 x 450)



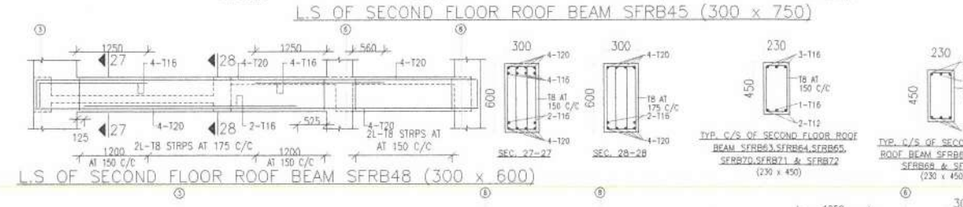
L.S OF SECOND FLOOR ROOF BEAM SFRB8 (300 x 600)



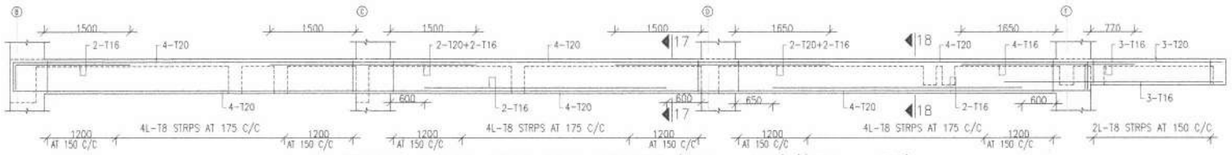
L.S OF SECOND FLOOR ROOF BEAM SFRB45 (300 x 750)



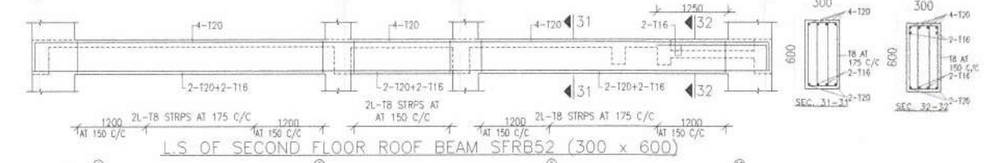
L.S OF SECOND FLOOR ROOF BEAM SFRB18 (300 x 600)



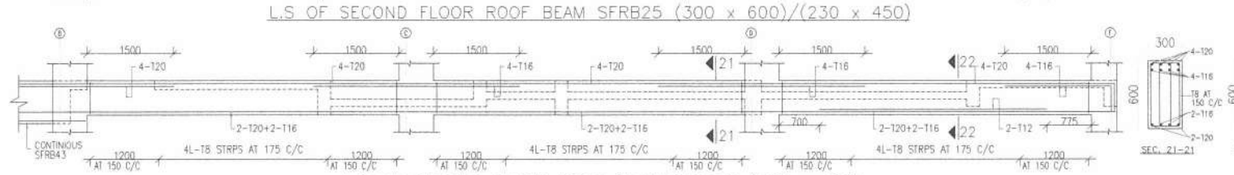
L.S OF SECOND FLOOR ROOF BEAM SFRB48 (300 x 600)



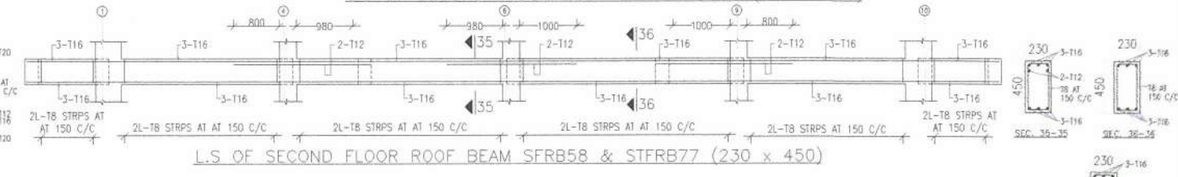
L.S OF SECOND FLOOR ROOF BEAM SFRB25 (300 x 600)/(230 x 450)



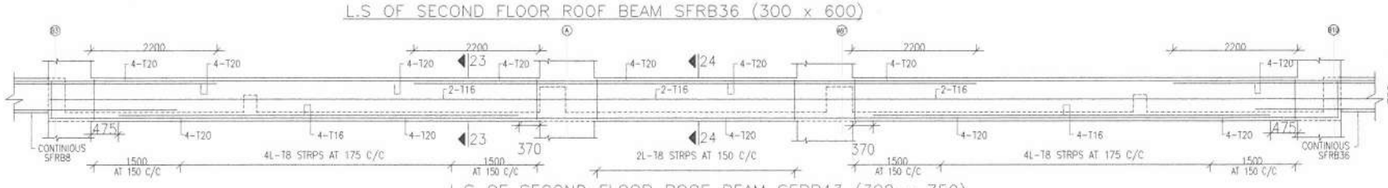
L.S OF SECOND FLOOR ROOF BEAM SFRB52 (300 x 600)



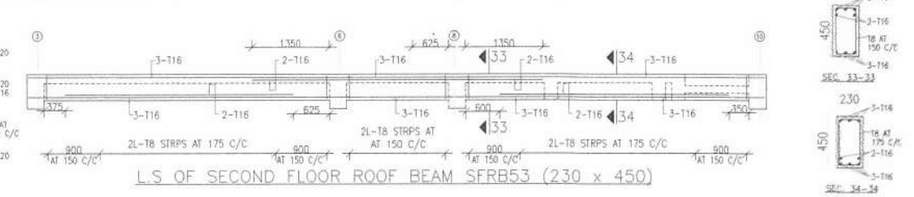
L.S OF SECOND FLOOR ROOF BEAM SFRB36 (300 x 600)



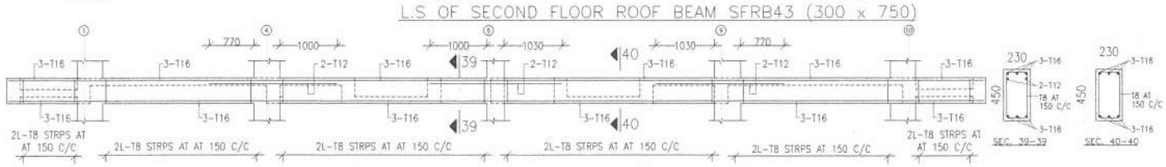
L.S OF SECOND FLOOR ROOF BEAM SFRB58 & STFRB77 (230 x 450)



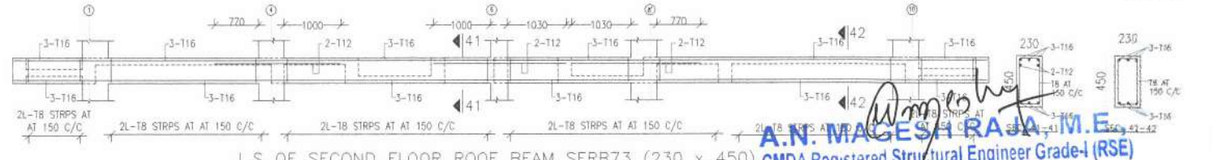
L.S OF SECOND FLOOR ROOF BEAM SFRB43 (300 x 750)



L.S OF SECOND FLOOR ROOF BEAM SFRB53 (230 x 450)



L.S OF SECOND FLOOR ROOF BEAM SFRB62 (230 x 450)



L.S OF SECOND FLOOR ROOF BEAM SFRB73 (230 x 450)

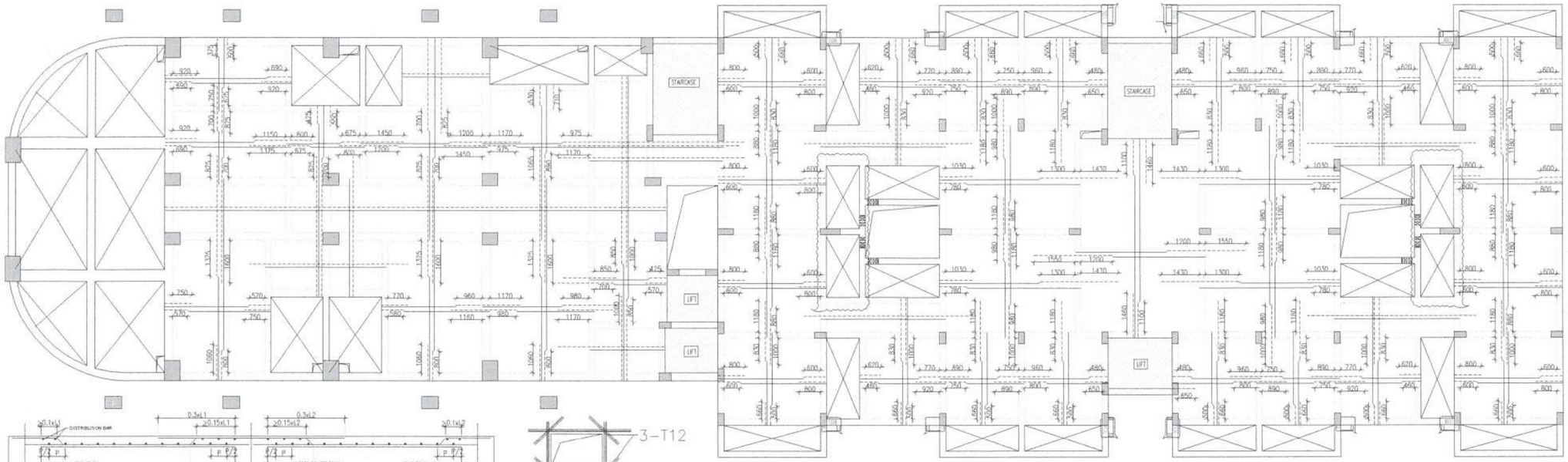
NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

3.
2.
1.
REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF SECOND FLOOR ROOF BEAM	DRG. NO: ST-14-T C-A-58-2023	REVISION: R-2
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: 19.11.2024
CHECKED : G.AGILAN			
DATE : 21.10.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

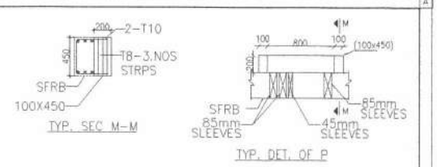
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PERUNGALATHUR, CHENNAI-600 063
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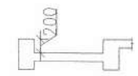


LAYOUT OF SECOND FLOOR ROOF BEAM BLOCK - A

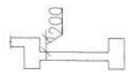
SEC. 1-1

TYP. DUCT OPEN

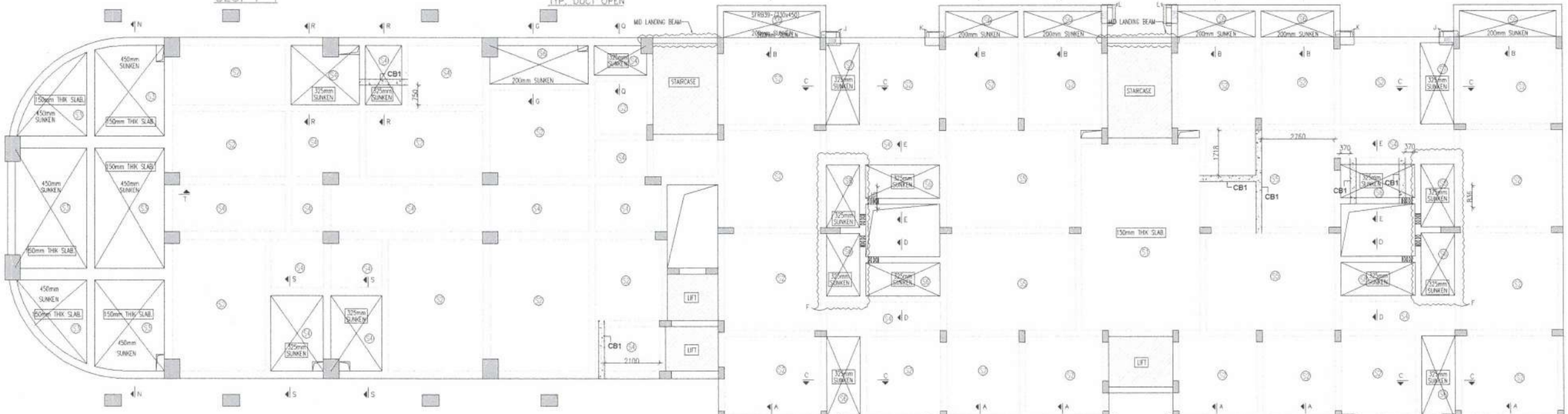


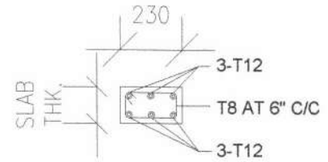


TYP. SEC. OF A



TYP. SEC. OF B

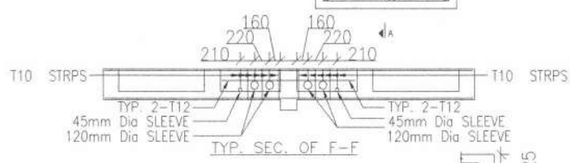




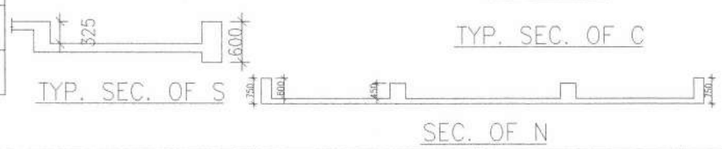
TYP. DET. OF CONCEALED BEAM-CB1

S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (TWO WAY)	150	T10 AT 150 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
2	S2 (TWO WAY)	125	T8 AT 150 C/C (BOTH WAYS)
3	S3 (DOUBLE MAT)	150	T10 AT 125C/C (SHORTER ROD) T8 AT 125 C/C (LONGER ROD)
4	S4 (DOUBLE MAT)	125	T8 AT 150 C/C (DOUBLE MAT)
5	S5 (TWO WAY)	125	T8 AT 125 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
6	S6 (DOUBLE MAT)	125	T8 AT 150 C/C (SHORTER ROD) T8 AT 175 C/C (LONGER ROD)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)

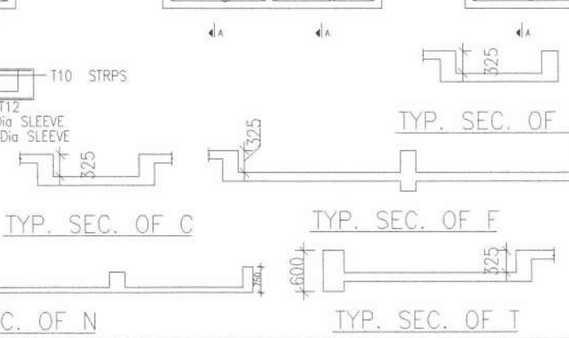


TYP. SEC. OF F-F



TYP. SEC. OF S

SEC. OF N

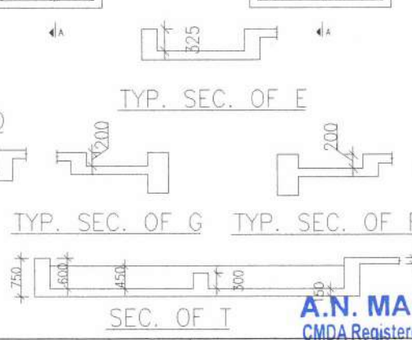


TYP. SEC. OF C

TYP. SEC. OF D

TYP. SEC. OF F

TYP. SEC. OF T

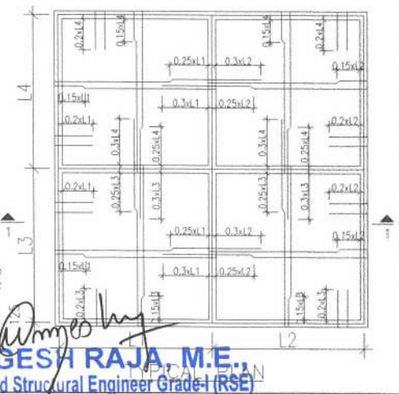


TYP. SEC. OF E

TYP. SEC. OF G

TYP. SEC. OF R

SEC. OF T



PLAN

NOTES:

1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) SLAB - 20mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

3.
2.
1.
REVISION HISTORY

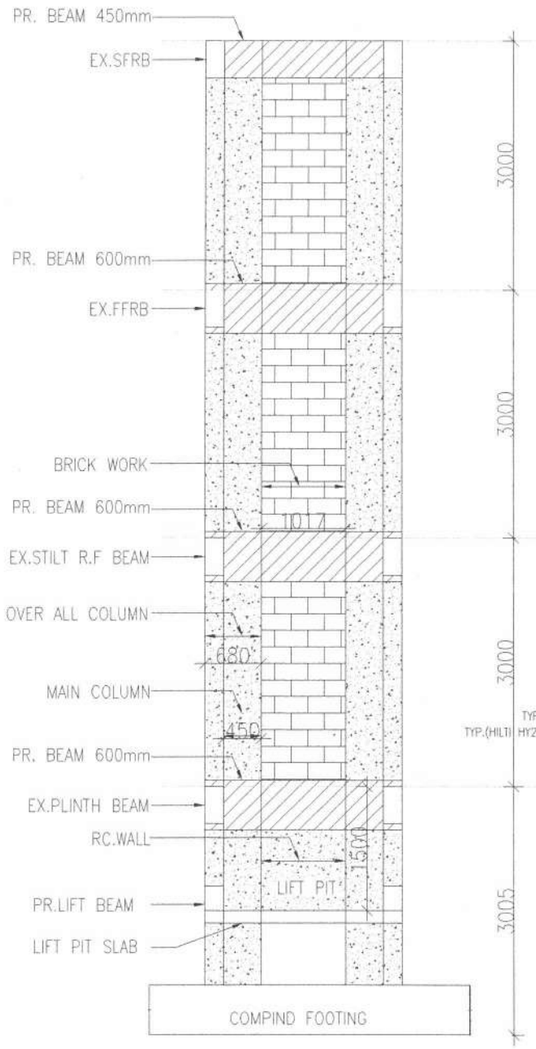
DRAWN : G.EZHILAN
DESIGN : G.AGILAN
CHECKED : G.AGILAN
DATE : 30.09.2024

DRAWING TITLE
R.C DET. OF SECOND FLOOR ROOF SLAB

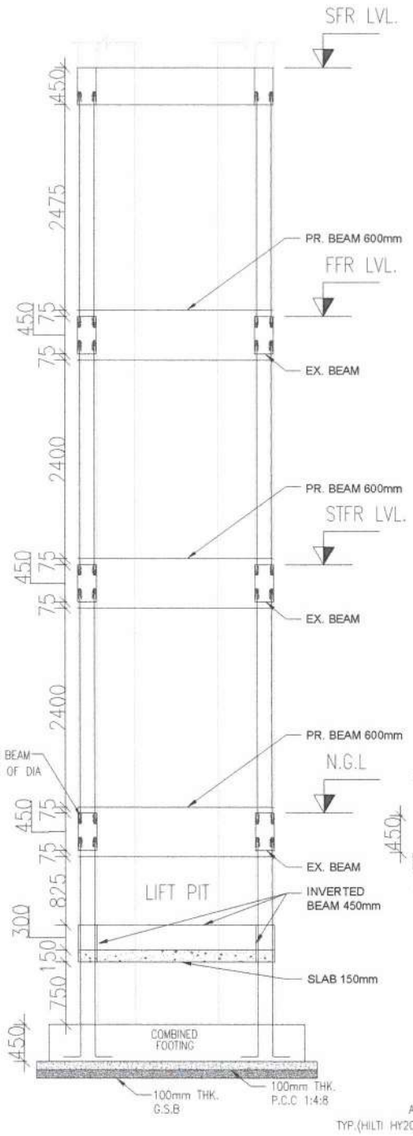
ISSUED FOR: CONSTRUCTION

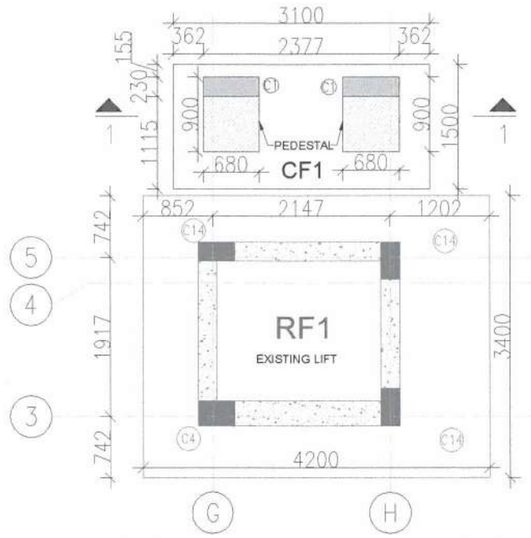
DRG. NO: ST-15-T C-A-58-2023 | REVISION: R-4
CLIENT: RUSSEL FOUNDATION | REV. DATE: 21.11.2024
PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY

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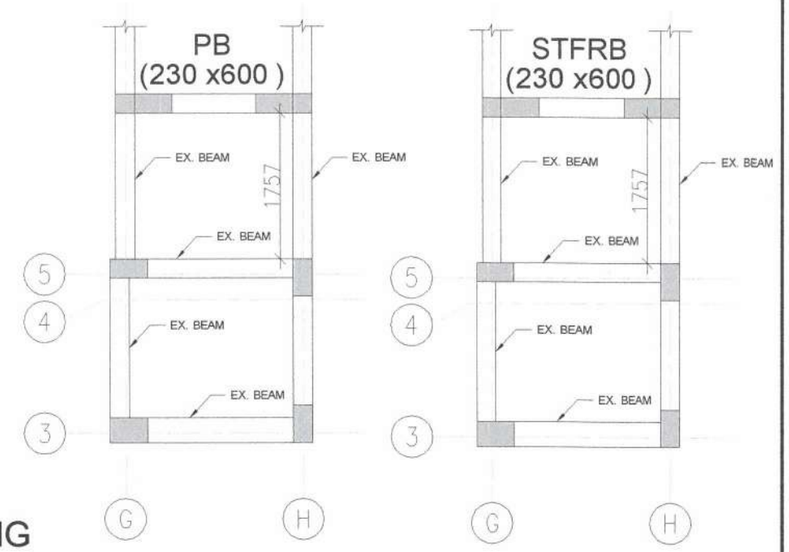


LIFT SECTION



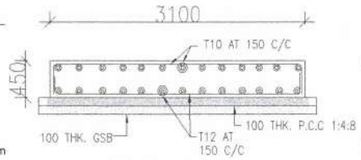


LAYOUT OF COLUMN AND FOOTING



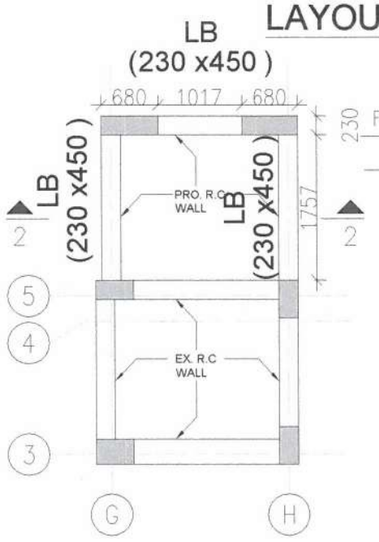
LAYOUT OF PLINTH BEAM

LAYOUT OF STFRB

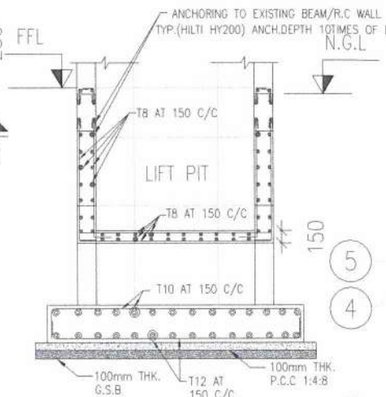


SEC. 1–1

CF1

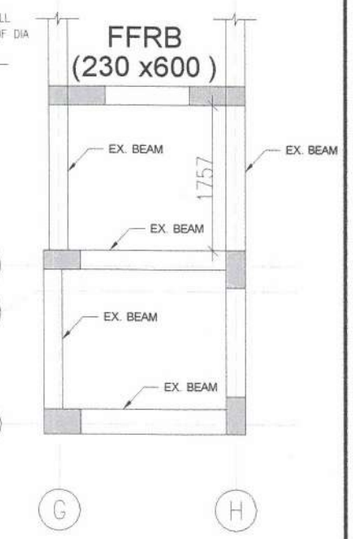


LAYOUT OF LIFT PIT

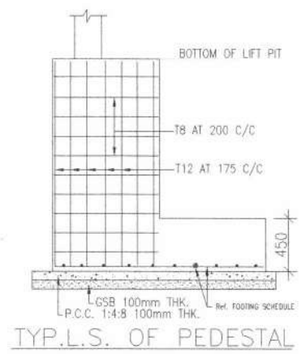


C/S OF LIFT PIT

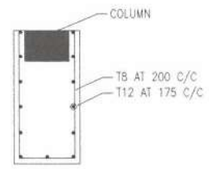
SEC. 2–2



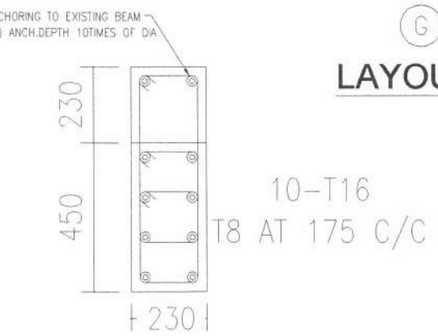
LAYOUT OF FFRB



TYP.L.S. OF PEDESTAL



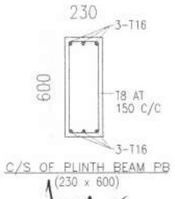
TYP.C/S. OF PEDESTAL



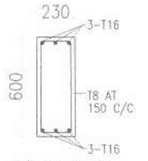
C/S OF COLUMN C1



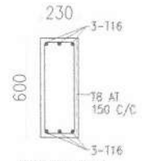
C/S OF LIFT BEAM LB (230 x 450)



C/S OF PLINTH BEAM PB (230 x 600)



C/S OF STFRB (230 x 600)



C/S OF FFRB (230 x 600)

TYP.(HILTI HY200) ANCH.DEPTH 10TIMES OF DIA

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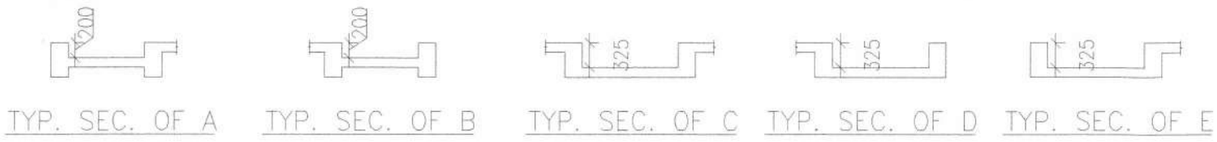
NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) FOR FOOTINGS – 50mm b) FOR COLUMNS – 40mm
   c) BEAM – 25mm d) SLAB – 20mm e) R.C WALL – 20mm
5. T– DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786–1985.

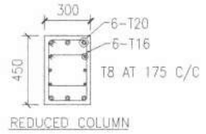
NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. FOOTING SHOULD BE FOUNDED AT 3m BELOW G.L OR AT THE LEVEL WHERE THE SOIL HAS THE CAPACITY OF 275KN/M² (AS PER SOIL REPORT)
8. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY.
9. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
10. FOUNDATION DESIGN FOR SILT+5 WITH AAC BLOCK 6.5kN/Cubm

3.
2.
1.
REVISION HISTORY

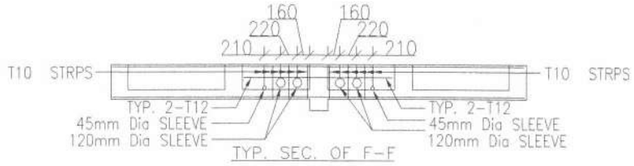
DRAWN : EZHILAN	DRAWING TITLE	DRG. NO: ST-16-T C-A-58-2023	REVISION: R-0
DESIGN : AGILAN	LAYOUT & R.C DET. OF LIFT BLOCK - A	CLIENT: RUSSEL FOUNDATION	REV. DATE :-
DATE : 02.12.2024	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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PERUNGALATHUR, CHENNAI-600 063
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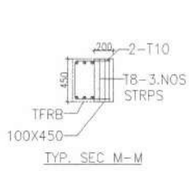




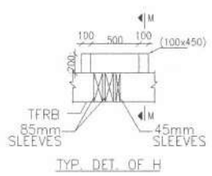
REDUCED COLUMN



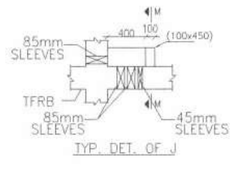
TYP. SEC. OF F-F



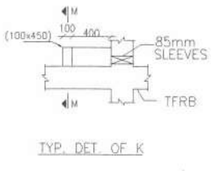
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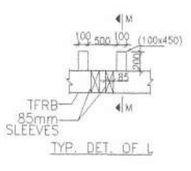
TYP. DET. OF H



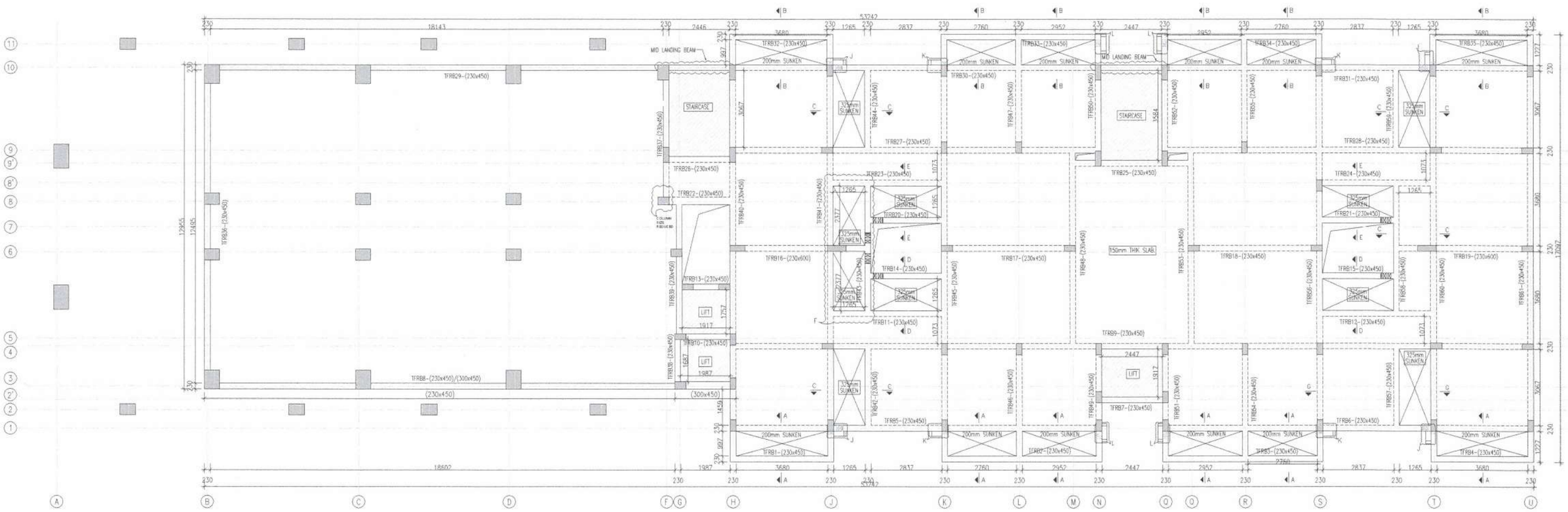
TYP. DET. OF J



TYP. DET. OF K



TYP. DET. OF L



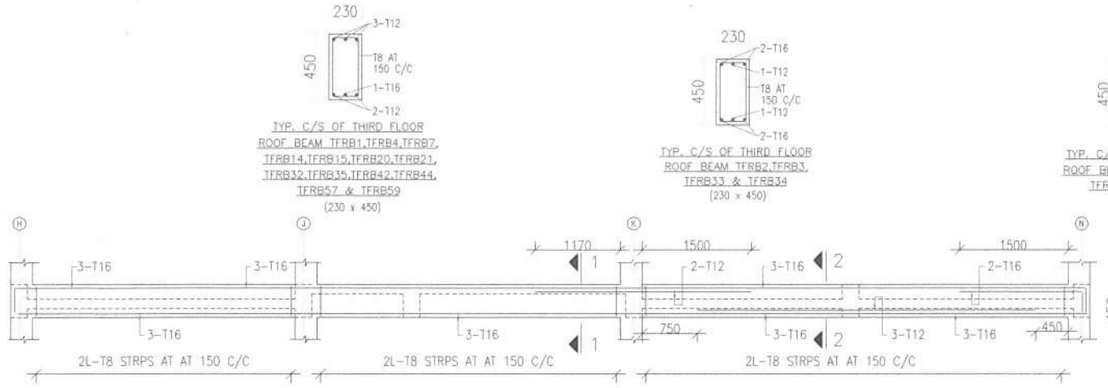
LAYOUT OF THIRD FLOOR ROOF BEAM

BLOCK - A

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Reg.No: SE/GR-I /2022/06/325
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magistruchure@gmail.com.

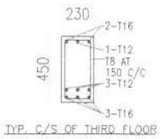
	NOTES:	NOTES:		DRAWN : G.EZHILAN	DRAWING TITLE LAYOUT OF THIRD FLOOR ROOF BEAM	DRG. NO: ST-17-T C-A-58-2023	REVISION: R-0
				DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
			3. 2. 1. REVISION HISTORY	CHECKED : G.AGILAN			
				DATE : 04.01.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



TYP. C/S OF THIRD FLOOR ROOF BEAM TFRB1,TFRB4,TFRB7, TFRB14,TFRB15,TFRB20,TFRB21, TFRB32,TFRB35,TFRB42,TFRB44, TFRB57 & TFRB59 (230 x 450)

TYP. C/S OF THIRD FLOOR ROOF BEAM TFRB2,TFRB3, TFRB33 & TFRB34 (230 x 450)



TYP. C/S OF THIRD FLOOR ROOF BEAM TFRB11,TFRB12, TFRB23 & TFRB24 (230 x 450)



TYP. C/S OF THIRD FLOOR ROOF BEAM TFRB9,TFRB10,TFRB13, TFRB26,TFRB27,TFRB28,TFRB37, TFRB38,TFRB39 & TFRB40 (230 x 450)

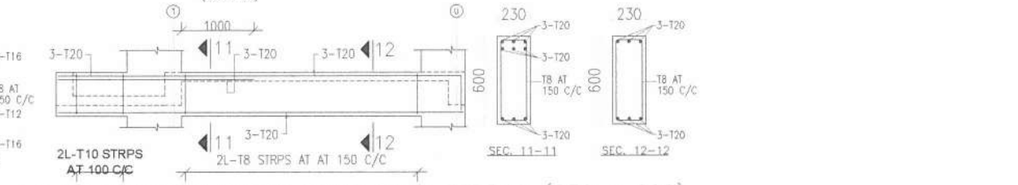


C/S OF THIRD FLOOR ROOF BEAM TFRB22 (230 x 450)

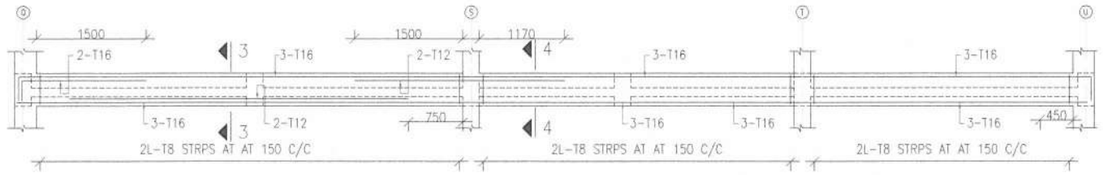


C/S OF THIRD FLOOR ROOF BEAM TFRB25 &TFRB29 (230 x 450)

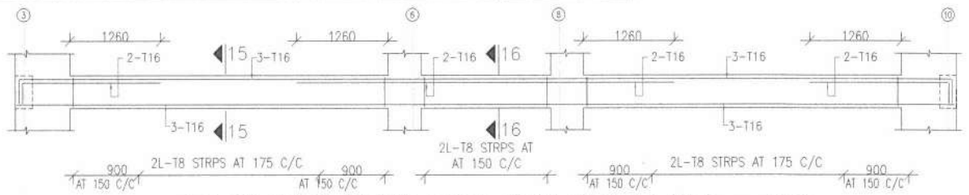
L.S OF THIRD FLOOR ROOF BEAM TFRB5 & TFRB30 (230 x 450)



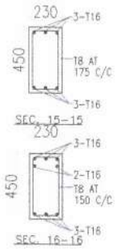
L.S OF SECOPND FLOOR ROOF BEAM TFRB19 (230 x 600)

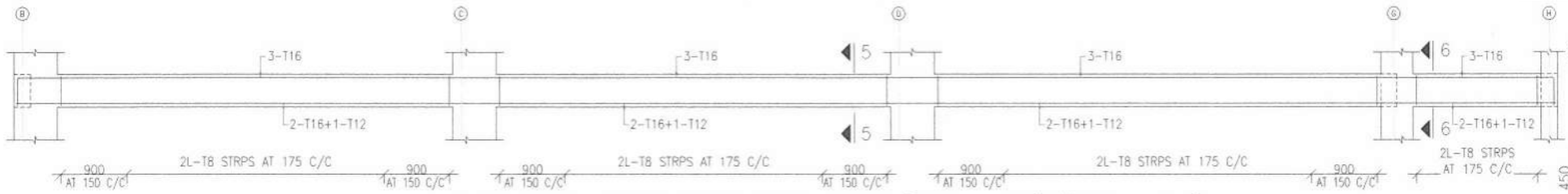


L.S OF THIRD FLOOR ROOF BEAM TFRB6 (230 x 450)

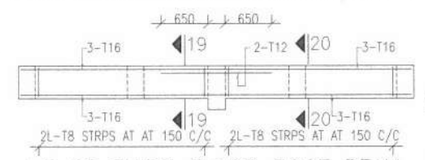


L.S OF THIRD FLOOR ROOF BEAM TFRB36 (230 x 450)

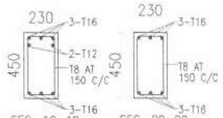


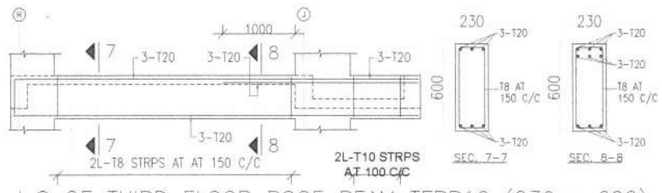


L.S OF THIRD FLOOR ROOF BEAM TFRB8 (230 x 450)/(300 x 450)

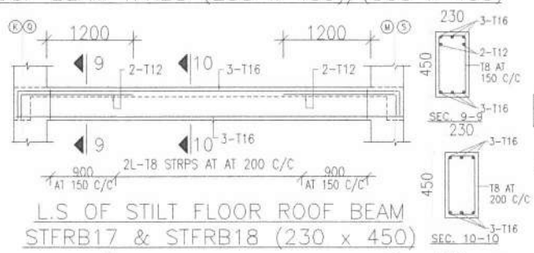


L.S OF THIRD FLOOR ROOF BEAM TFRB43 & TFRB58 (230 x 450)

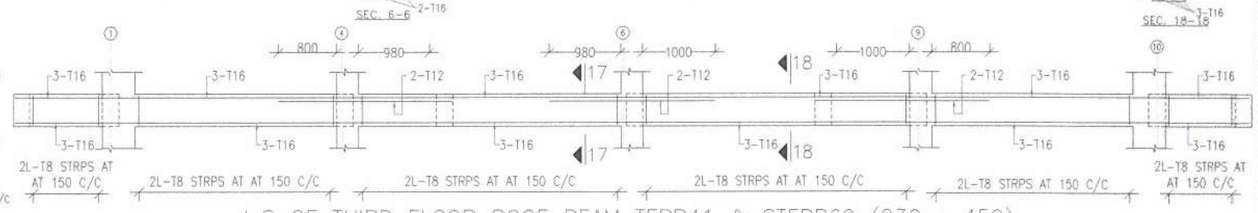




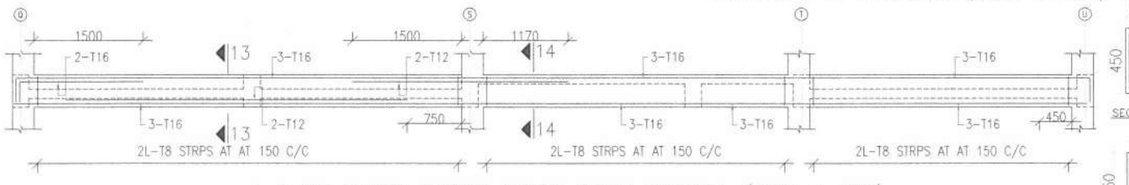
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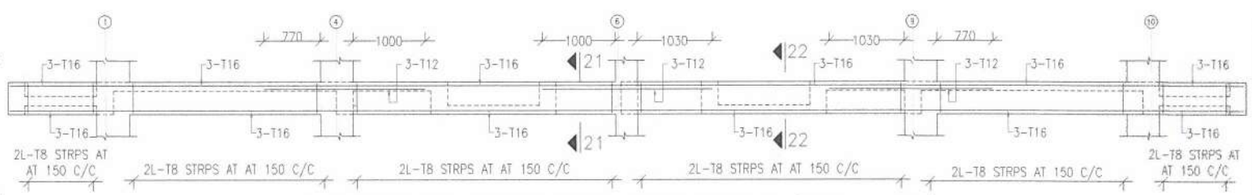
L.S OF STILT FLOOR ROOF BEAM STFRB17 & STFRB18 (230 x 450)



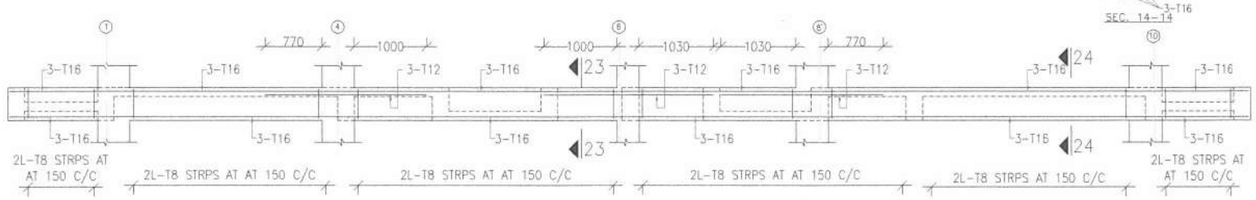
L.S OF THIRD FLOOR ROOF BEAM TFRB41 & STFRB60 (230 x 450)



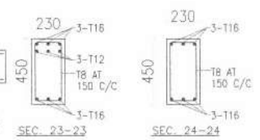
L.S OF THIRD FLOOR ROOF BEAM TFRB31 (230 x 450)

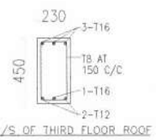


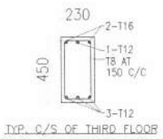
L.S OF THIRD FLOOR ROOF BEAM TFRB45 (230 x 450)

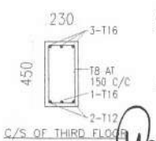


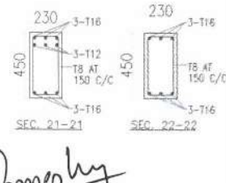
L.S OF THIRD FLOOR ROOF BEAM TFRB56 (230 x 450)











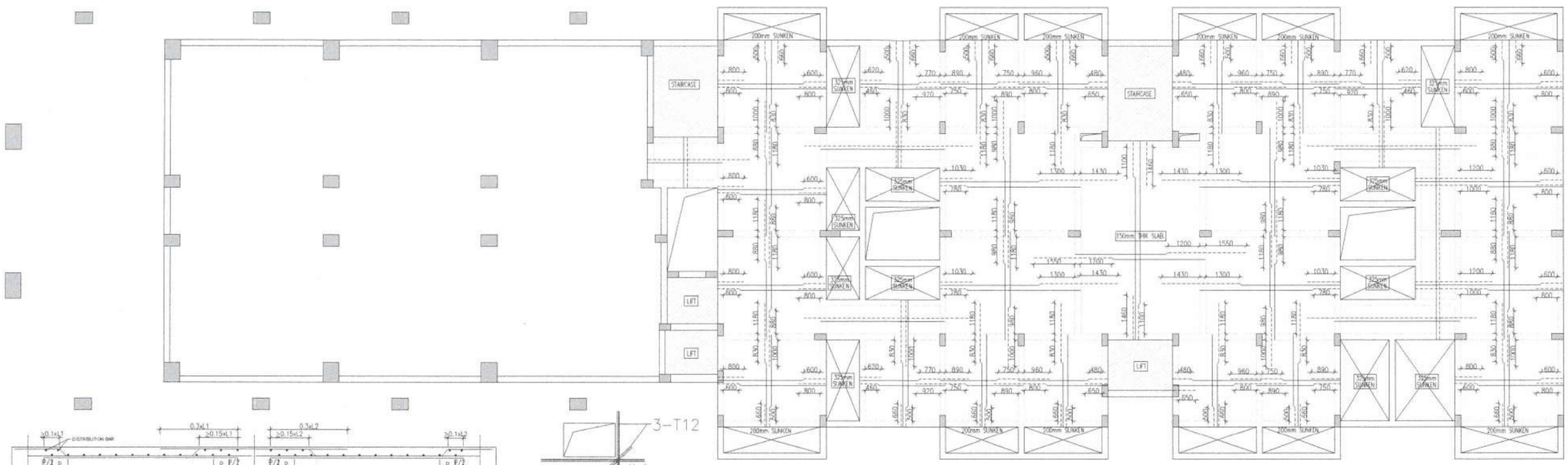
NOTES:
1. ALL DIMENSIONS ARE IN MM &M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

3.
2.
1.
REVISION HISTORY

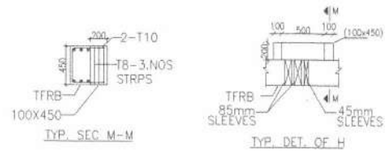
DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF THIRD FLOOR ROOF BEAM	DRG. NO: ST-18-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 06.01.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

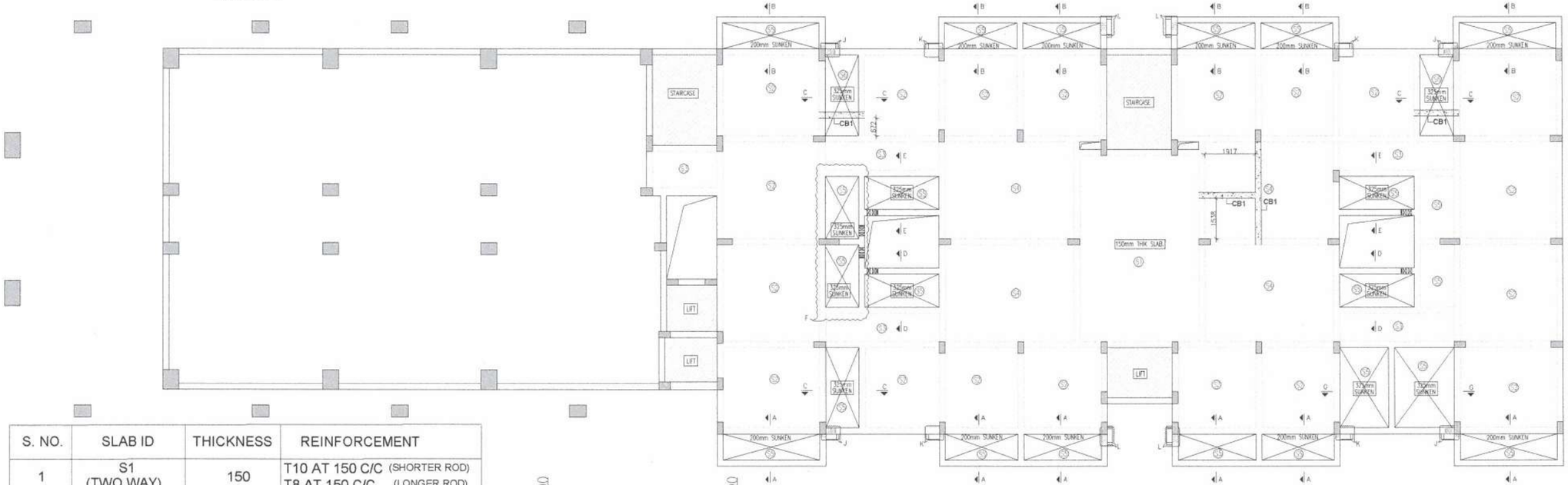
A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I/2022/06/235
Cell:97870 72100
magistruchure@gmail.com
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STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198

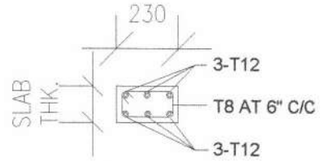


SEC. 1-1

R.C DET. OF THIRD FLOOR ROOF SLAB BLOCK - A



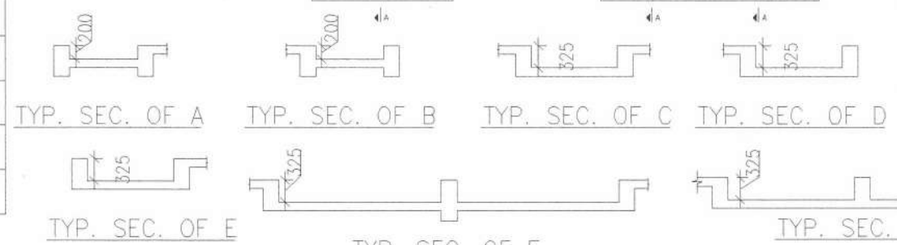


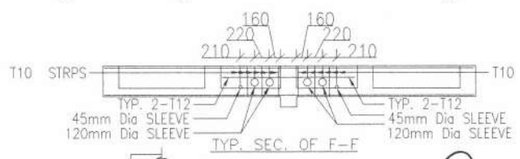


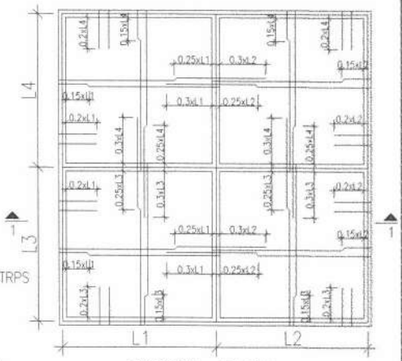
TYP. DET. OF CONCEALED BEAM-CB1

S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (TWO WAY)	150	T10 AT 150 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
2	S2 (TWO WAY)	125	T8 AT 150 C/C (BOTH WAYS)
3	S3 (DOUBLE MAT)	125	T8 AT 150 C/C (DOUBLE MAT)
4	S4 (TWO WAY)	125	T8 AT 100 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
5	S5 (DOUBLE MAT)	125	T8 AT 150 C/C (SHORTER ROD) T8 AT 175 C/C (LONGER ROD)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)







TYPICAL PLAN

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Reg.No: SE/GR-I/2022/06/325
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magistruchure@gmail.com.

NOTES:

1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) SLAB - 20mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

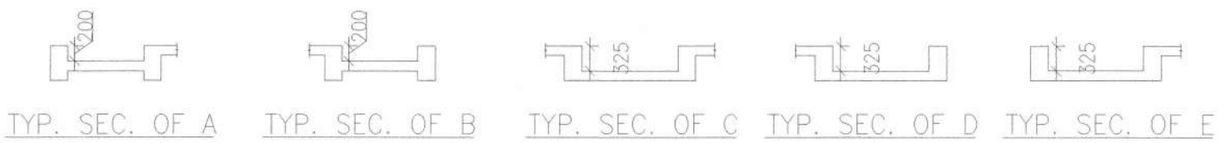
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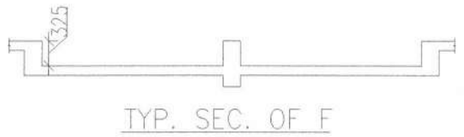
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
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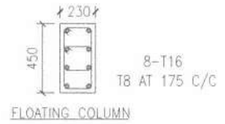
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2.
1.
REVISION HISTORY

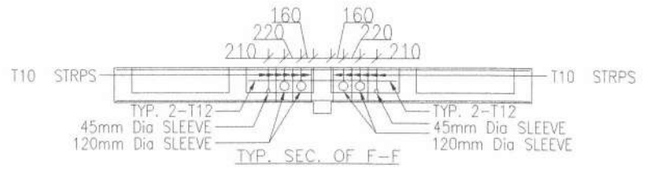
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DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 04.01.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

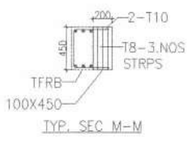
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198

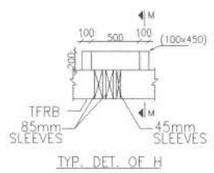


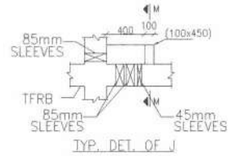


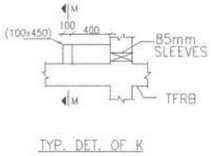


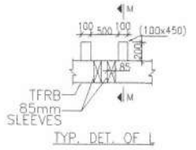


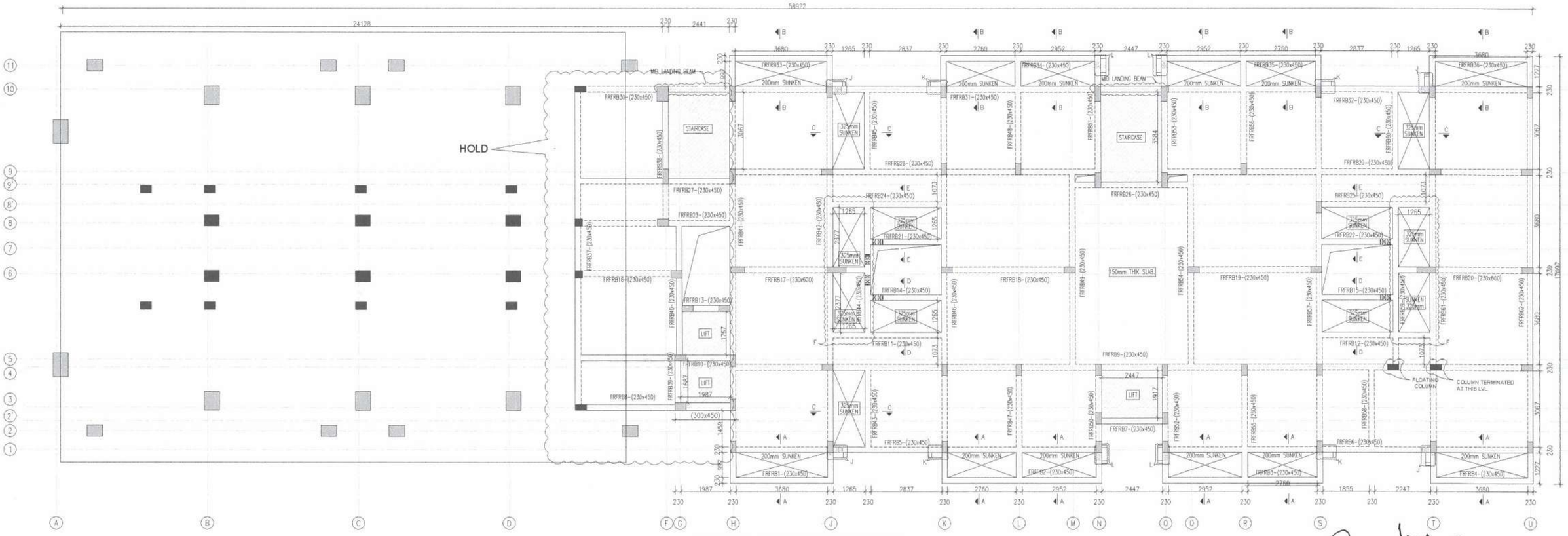












LAYOUT OF FOURTH FLOOR ROOF BEAM
BLOCK - A

A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I/2022/06/325
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magistruchure@gmail.com.

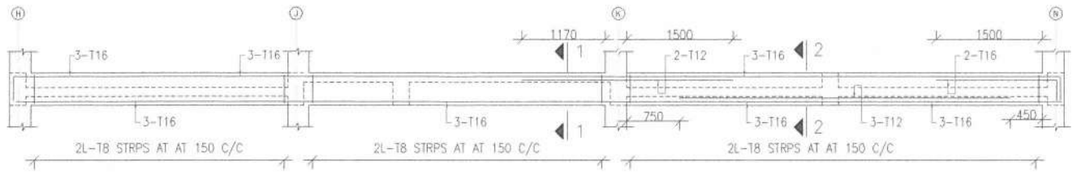
NOTES:

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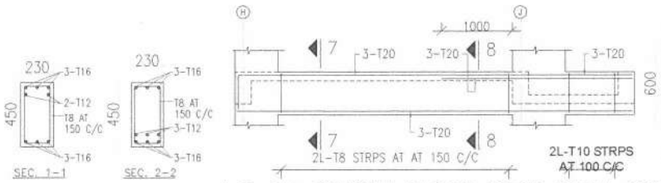
3.
2.
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REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE: LAYOUT OF FOURTH FLOOR ROOF BEAM	DRG. NO: ST-20-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 10.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

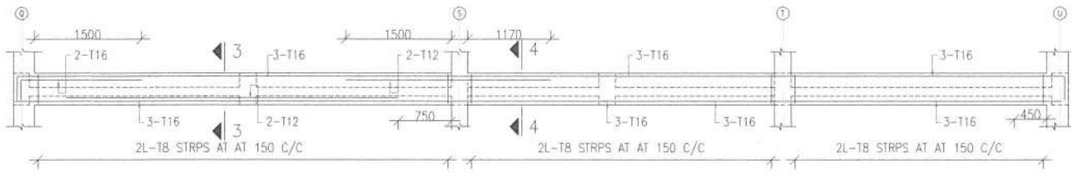
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



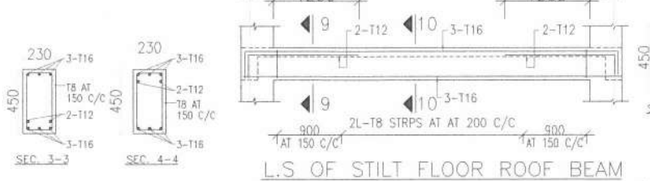
L.S OF FOURTH FLOOR ROOF BEAM FRFRB5 & FRFRB31 (230 x 450)



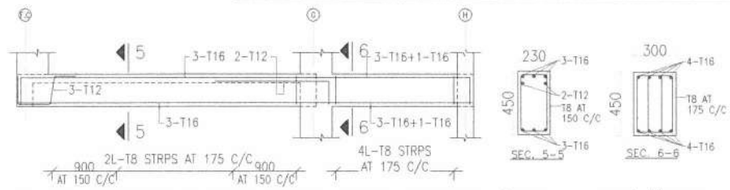
L.S OF FOURTH FLOOR ROOF BEAM FRFRB17 (230 x 600)



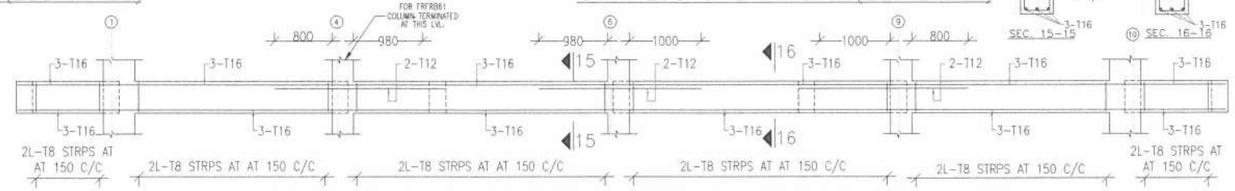
L.S OF FOURTH FLOOR ROOF BEAM FRFRB6 (230 x 450)



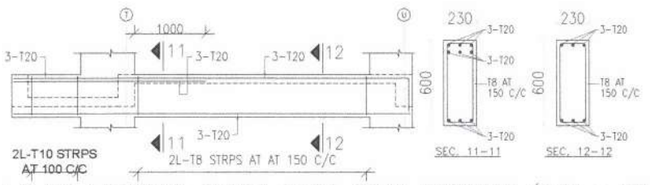
L.S OF STILT FLOOR ROOF BEAM SFRFRB18 & SFRFRB19 (230 x 450)



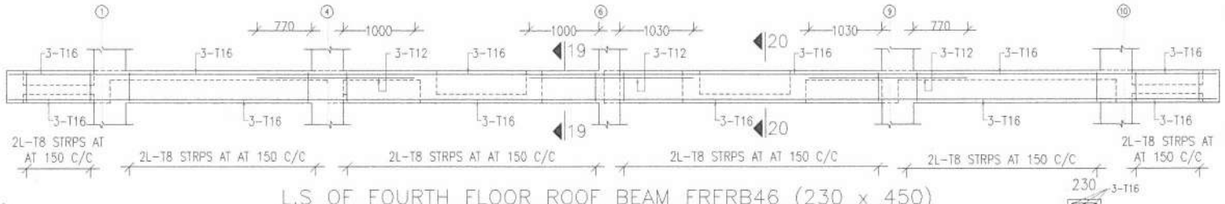
L.S OF FOURTH FLOOR ROOF BEAM FRFRB8 (230 x 450)/(300 x 450)



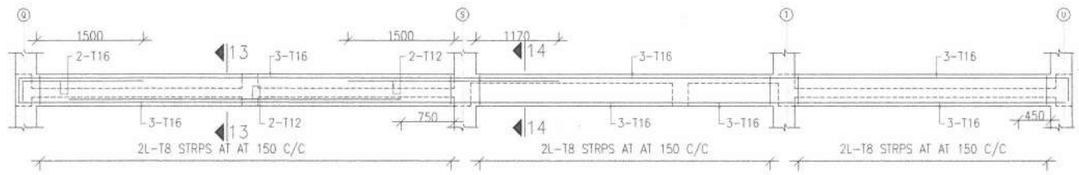
L.S OF FOURTH FLOOR ROOF BEAM FRFRB42 & FRFRB61 (230 x 450)



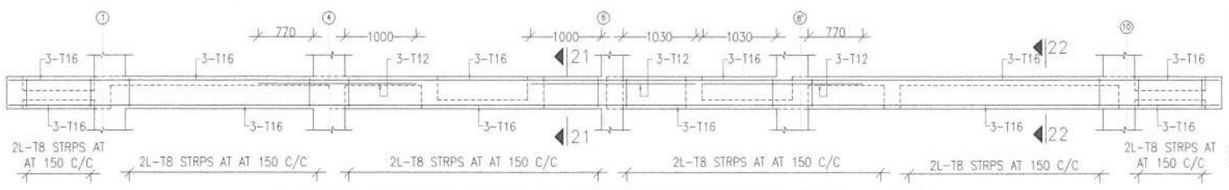
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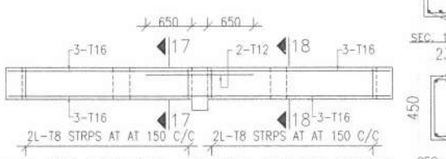
L.S OF FOURTH FLOOR ROOF BEAM FRFRB46 (230 x 450)



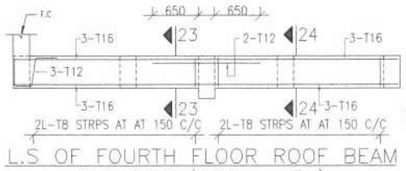
L.S OF FOURTH FLOOR ROOF BEAM FRFRB32 (230 x 450)



L.S OF FOURTH FLOOR ROOF BEAM FRFRB57 (230 x 450)



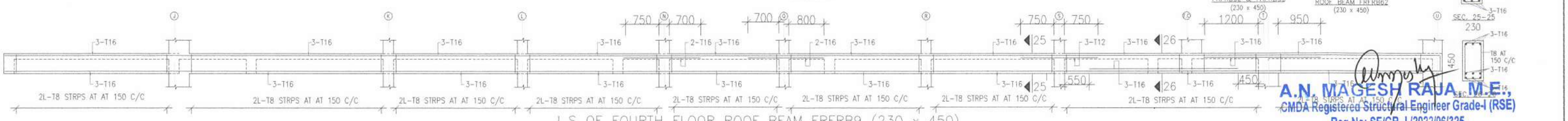
L.S OF FOURTH FLOOR ROOF BEAM FRFRB44 (230 x 450)



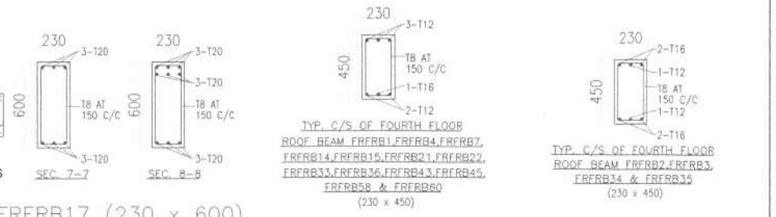
L.S OF FOURTH FLOOR ROOF BEAM FRFRB59 (230 x 450)



L.S OF FOURTH FLOOR ROOF BEAM FRFRB10 (230 x 450)

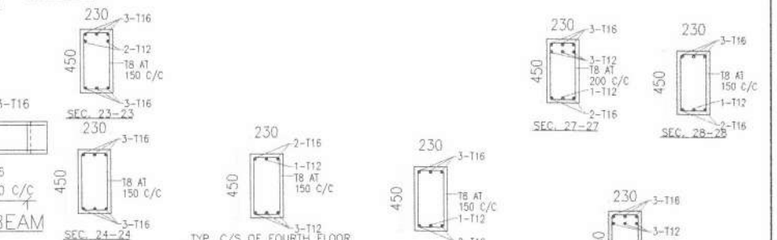


L.S OF FOURTH FLOOR ROOF BEAM FRFRB9 (230 x 450)









NOTES:

1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

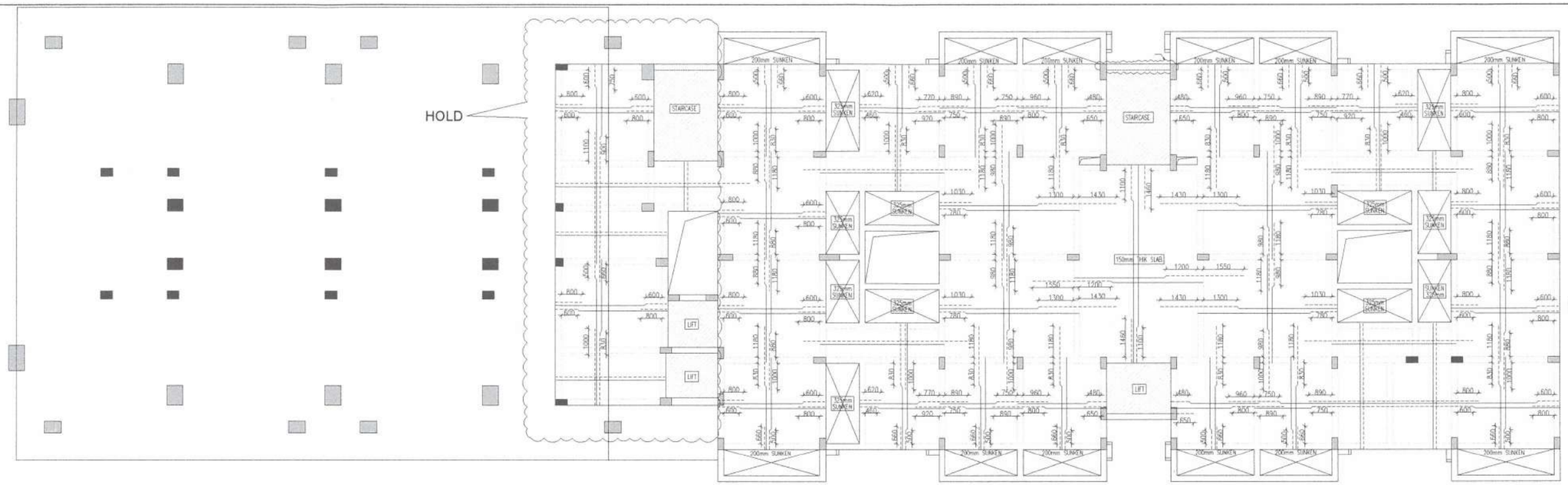
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
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10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

REVISION HISTORY

3.
2.
1.

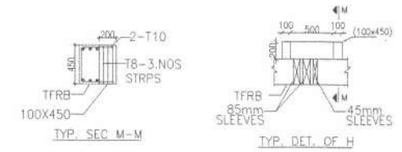
DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF FOURTH FLOOR ROOF BEAM	DRG. NO: ST-21-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 10.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

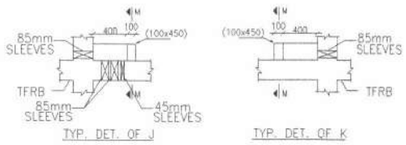
A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I /2022/06/325
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NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198

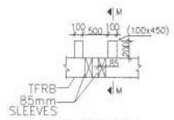


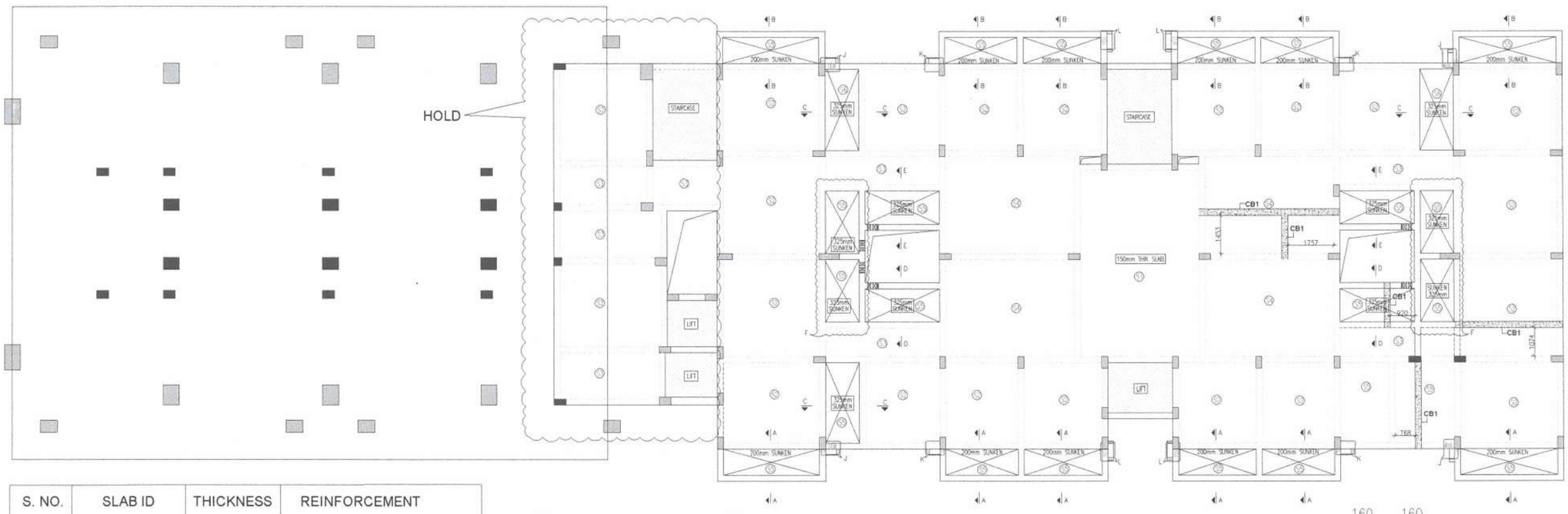
R.C DET. OF FOURTH FLOOR ROOF SLAB

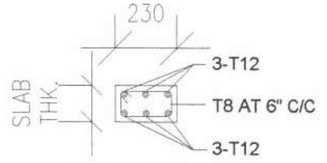
BLOCK - A

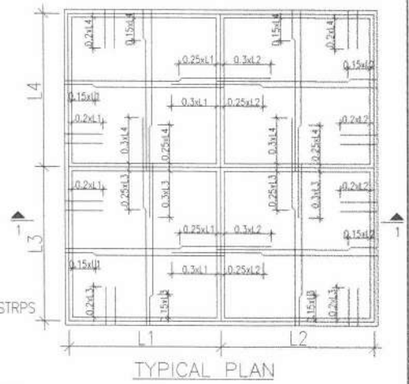






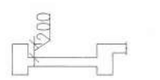




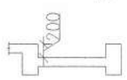


S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (TWO WAY)	150	T10 AT 150 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
2	S2 (TWO WAY)	125	T8 AT 150 C/C (BOTH WAYS)
3	S3 (DOUBLE MAT)	125	T8 AT 150 C/C (DOUBLE MAT)
4	S4 (TWO WAY)	125	T8 AT 100 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
5	S5 (DOUBLE MAT)	125	T8 AT 150 C/C (SHORTER ROD) T8 AT 175 C/C (LONGER ROD)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)



TYP. SEC. OF A



TYP. SEC. OF B



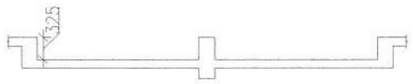
TYP. SEC. OF C



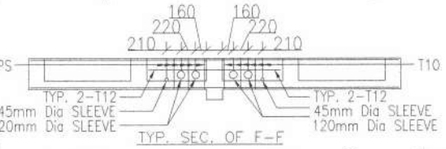
TYP. SEC. OF D

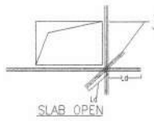


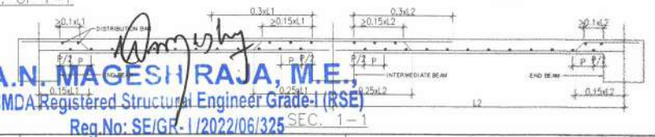
TYP. SEC. OF E



TYP. SEC. OF F







A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I/2022/06/325
Cell:97870 72100
magistruchure@gmail.com.

NOTES:

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3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) SLAB - 20mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

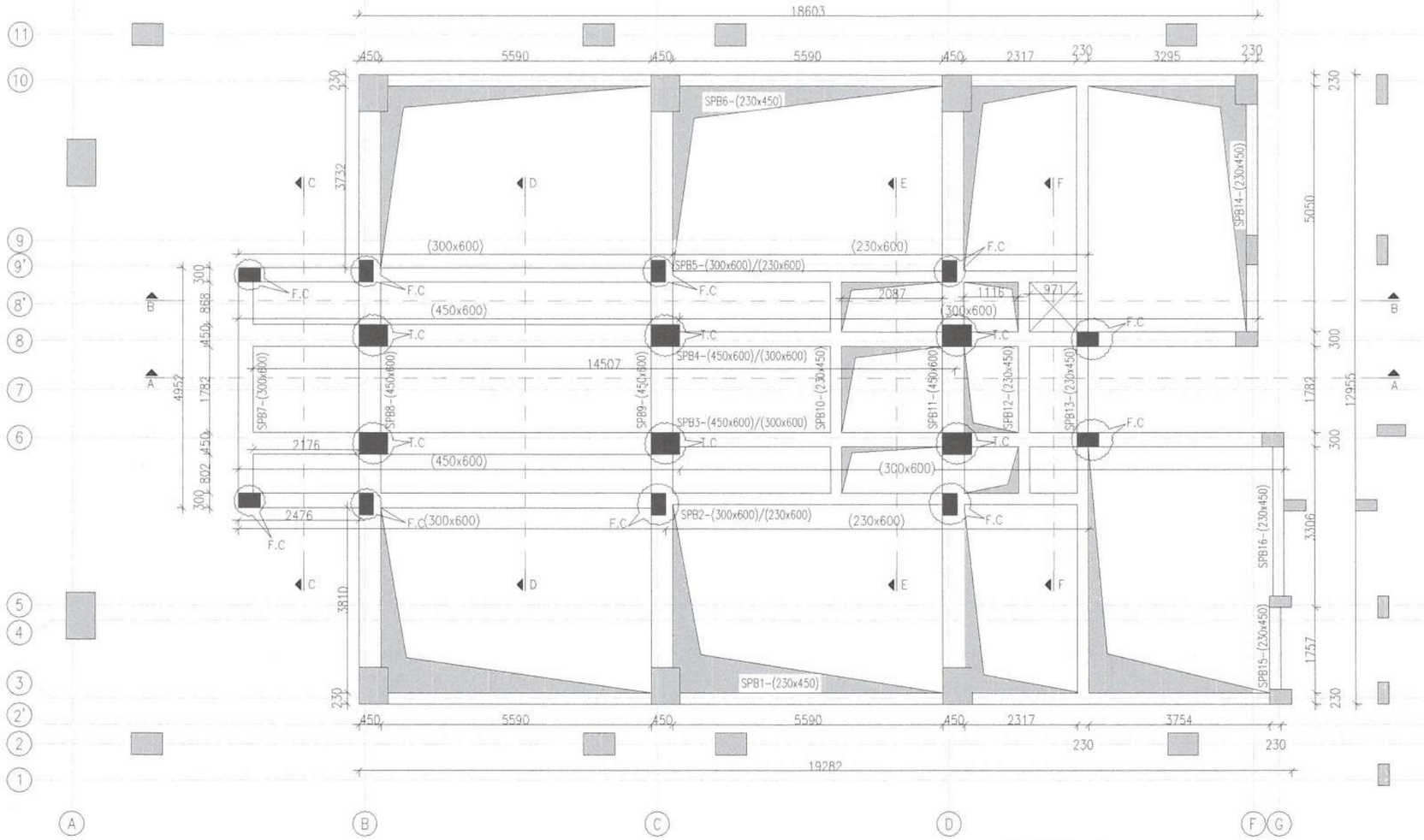
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REVISION HISTORY

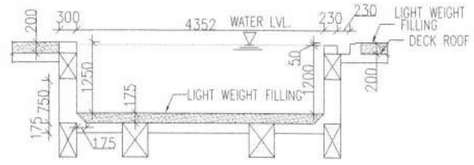
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DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET. OF FOURTH FLOOR ROOF SLAB	DRG. NO: ST-22-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 10.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

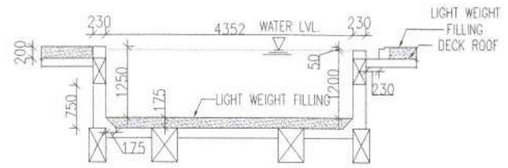
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



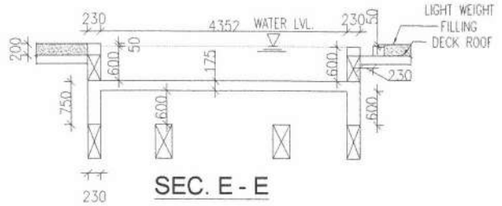
LAYOUT OF SWIMMING POOL BEAM BLOCK - A



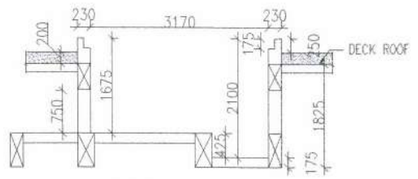
SEC. C - C



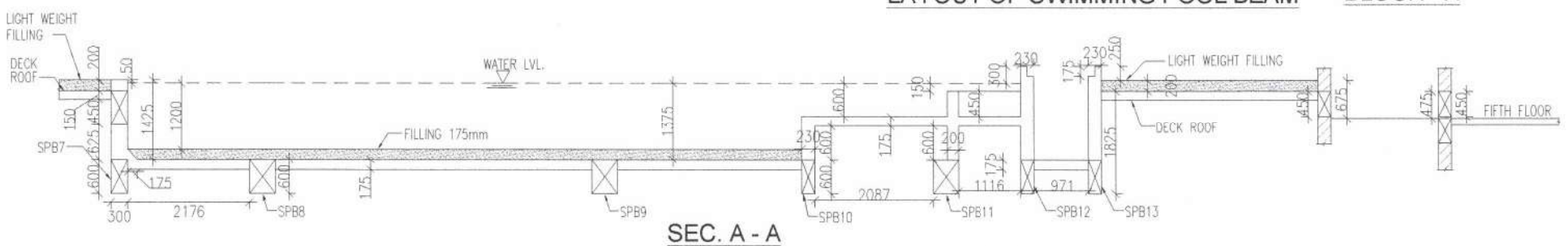
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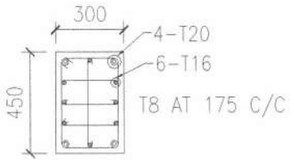
SEC. E - E



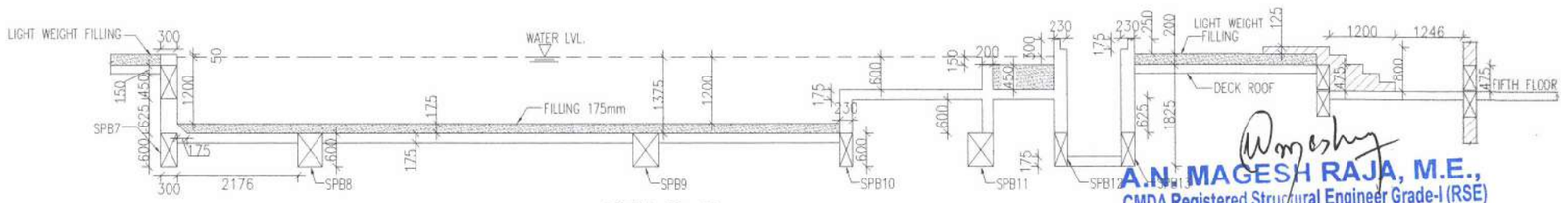
SEC. F - F



SEC. A - A



FLOATING COLUMN



SEC. B - B

A.N. MAGESH RAJA, M.E.,
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Reg.No: SE/GR-I /2022/06/325
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magistruchure@gmail.com

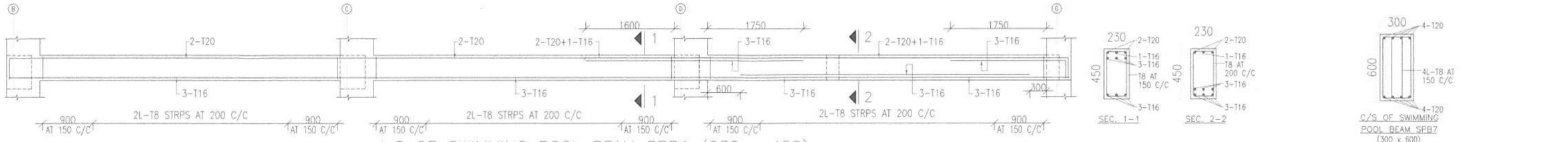
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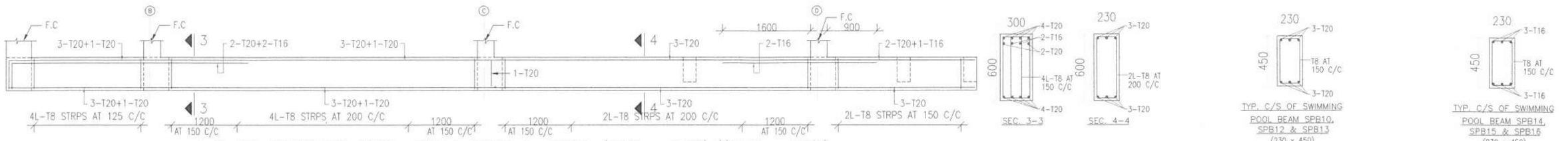
REVISION HISTORY
1.
2.
3.

DRAWN : G.EZHILAN	DRAWING TITLE: LAYOUT OF SWIMMING POOL BEAM	DRG. NO: ST-23-T C-A-58-2023	REVISION: R-1
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: 10.03.2025
CHECKED : G.AGILAN			
DATE : 24.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

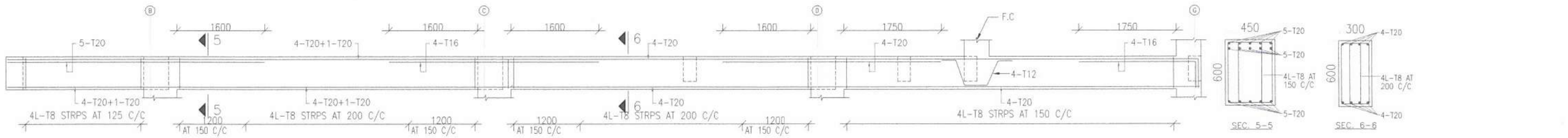
AME
STRUCTURAL CONSULTANTS
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PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



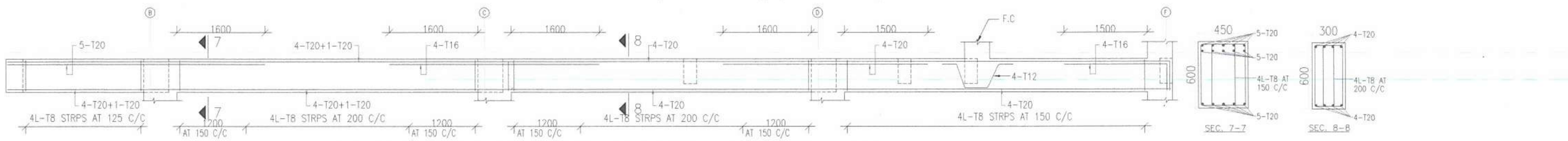
L.S OF SWIMMING POOL BEAM SPB1 (230 x 450)



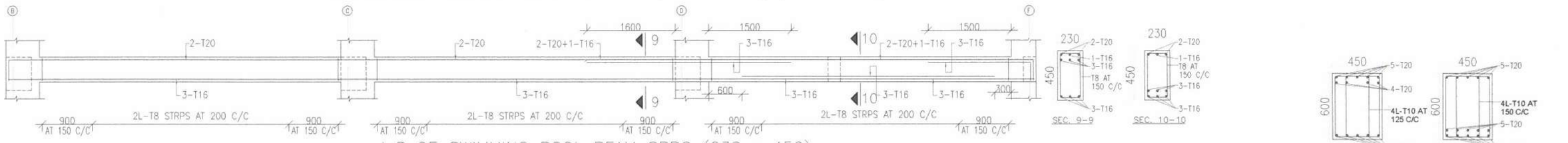
L.S OF SWIMMING POOL BEAM SPB2 & SPB5 (300 x 600)/(230 x 600)



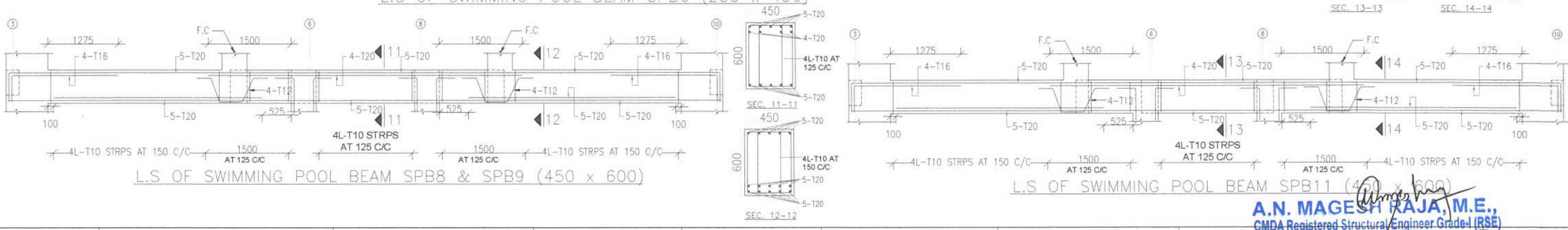
L.S OF SWIMMING POOL BEAM SPB3 (450 x 600)/(300 x 600)



L.S OF SWIMMING POOL BEAM SPB4 (450 x 600)/(300 x 600)



L.S OF SWIMMING POOL BEAM SPB6 (230 x 450)



L.S OF SWIMMING POOL BEAM SPB8 & SPB9 (450 x 600)

L.S OF SWIMMING POOL BEAM SPB11 (450 x 600)

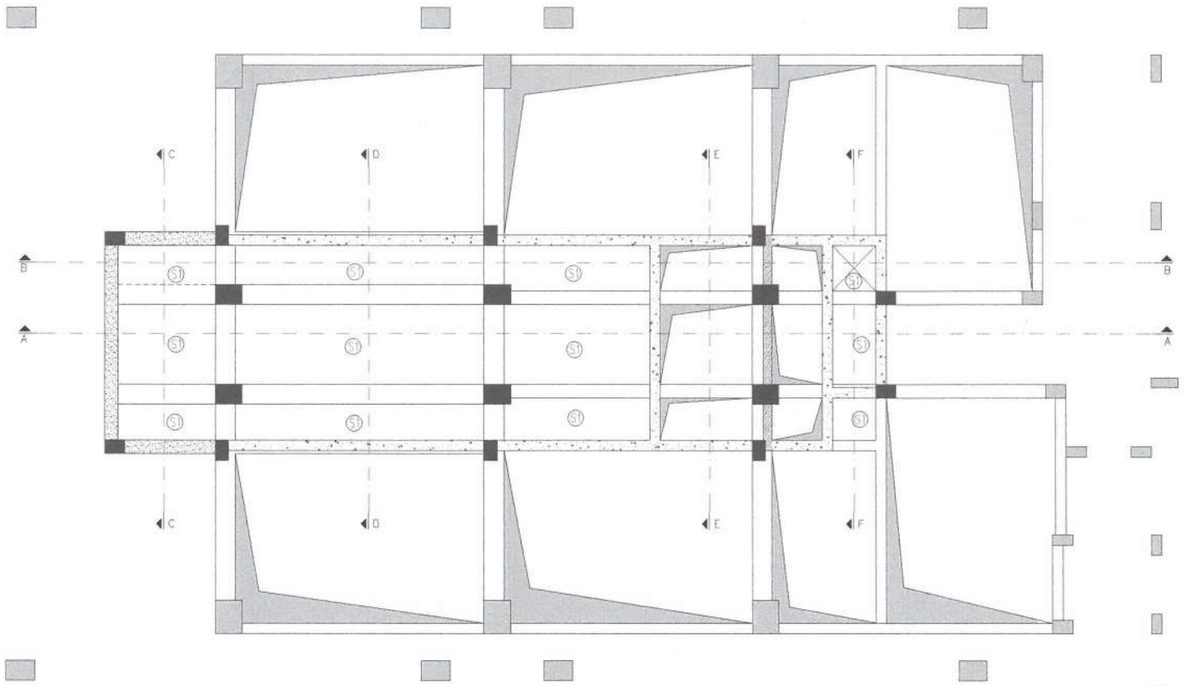
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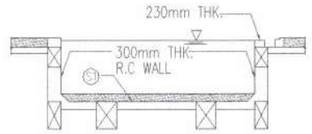
REVISION HISTORY
3.
2.
1.

DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF SWIMMING POOL BEAM	DRG. NO: ST-24-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 10.03.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

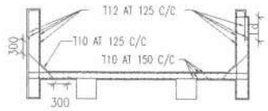
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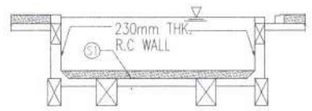
R.C DET. OF SWIMMING POOL SLAB BLOCK - A



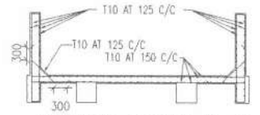
SEC. C - C



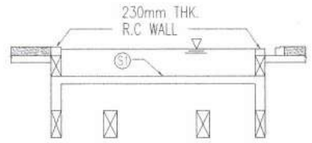
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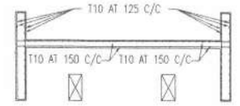
SEC. D - D



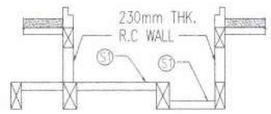
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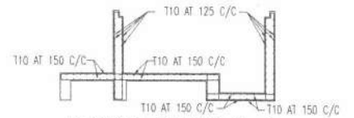
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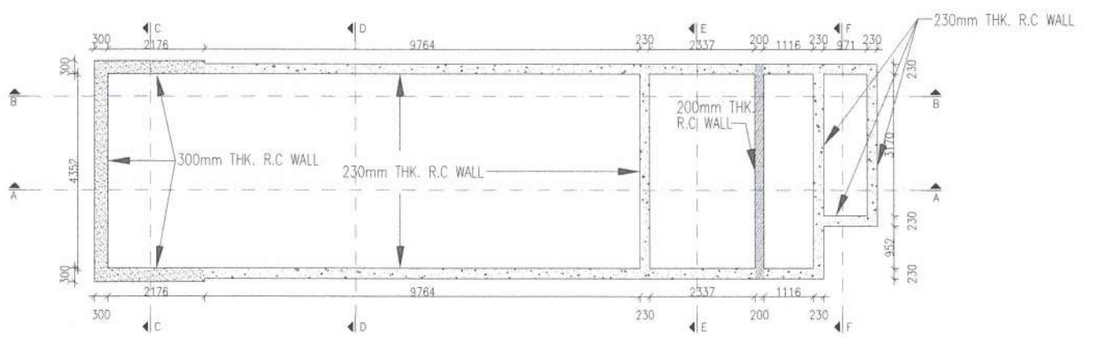
R.C DET. OF SEC. E - E



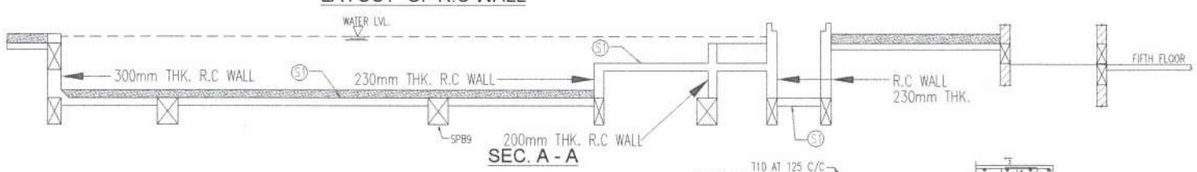
SEC. F - F



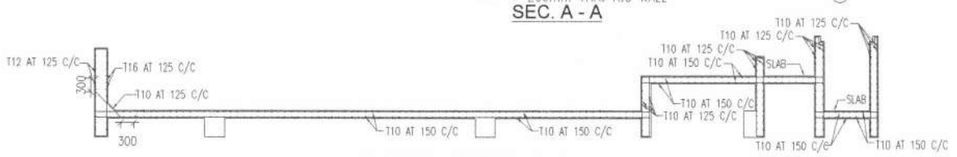
R.C DET. OF SEC. F - F



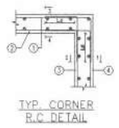
LAYOUT OF R.C WALL



SEC. A - A

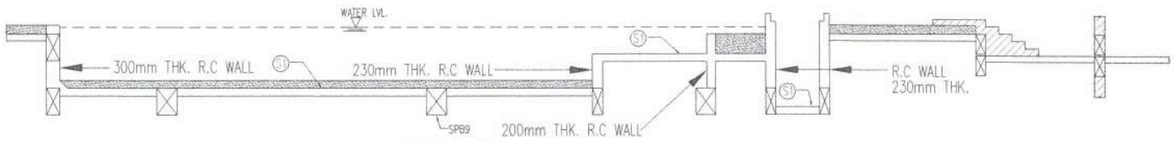


R.C DET. OF SEC. A - A

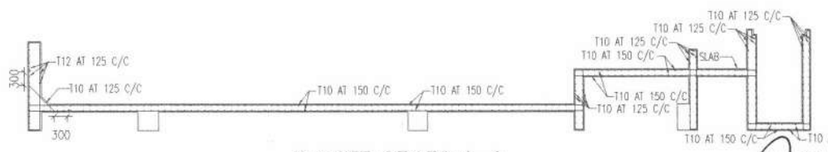


S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (DOUBLE MAT)	175	T10 AT 150 C/C (BOTH WAYS)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)



SEC. B - B



R.C DET. OF SEC. A - A

NOTES:

1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS : a) SLAB - 20mm b) R.C WALL - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

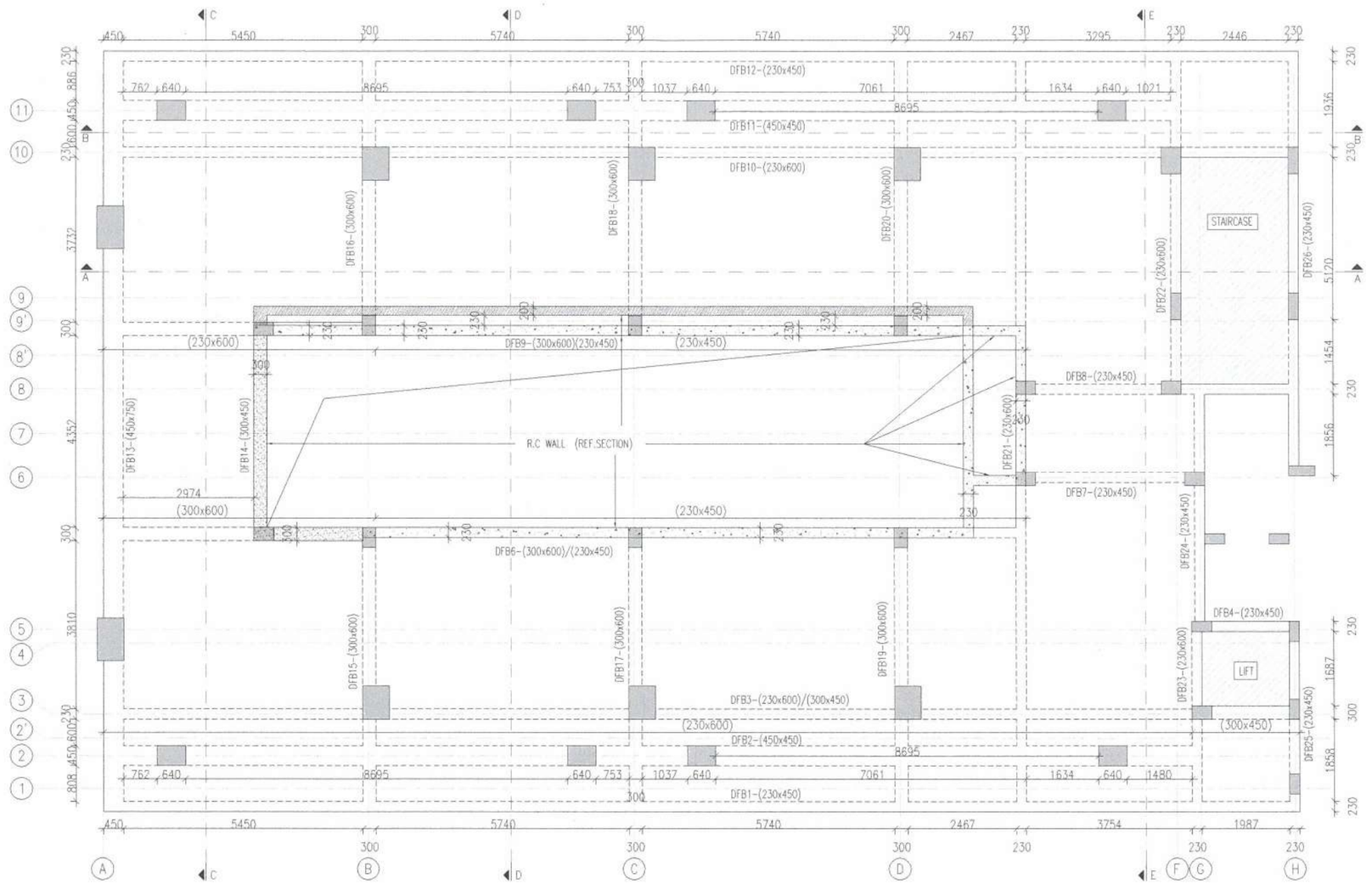
NOTES:

6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

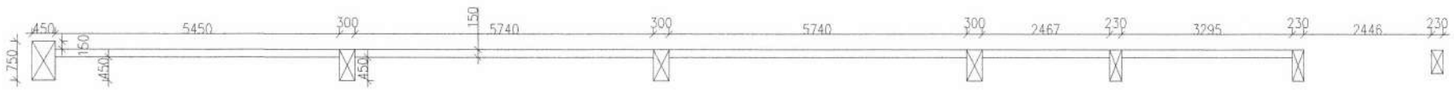
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REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET. OF SWIMMING POOL SLAB	DRG. NO: ST-25-T C-A-58-2023	REVISION: R-1
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: 10.03.2025
CHECKED : G.AGILAN			
DATE : 24.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

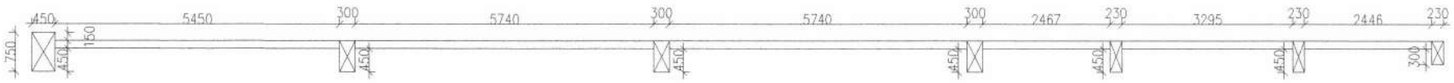
A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-1/2022/06/325
Cell:97870 72100
magistruchure@gmail.com.
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



LAYOUT OF DECK ROOF BEAM
BLOCK - A



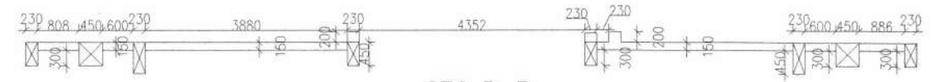
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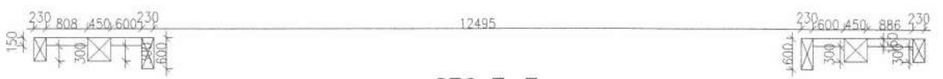
SEC. B - B



SEC. C - C



SEC. D - D



SEC. E - E

A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I/2022/06/325
Cell:97870 72100
magistruchure@gmail.com.

*-DFB5-NOT USED

NOTES:

NOTES:

3.
2.
1.
REVISION HISTORY

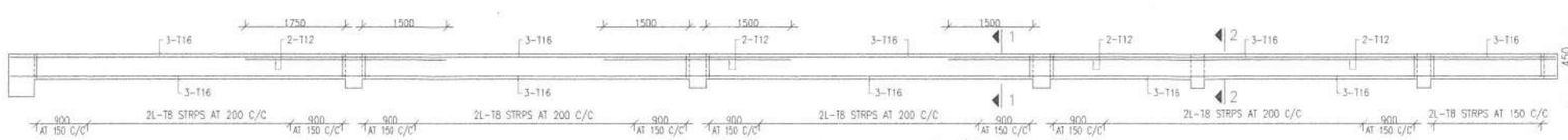
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DESIGN : G.AGILAN
CHECKED : G.AGILAN
DATE : 21.02.2025

DRAWING TITLE
LAYOUT OF DECK ROOF BEAM

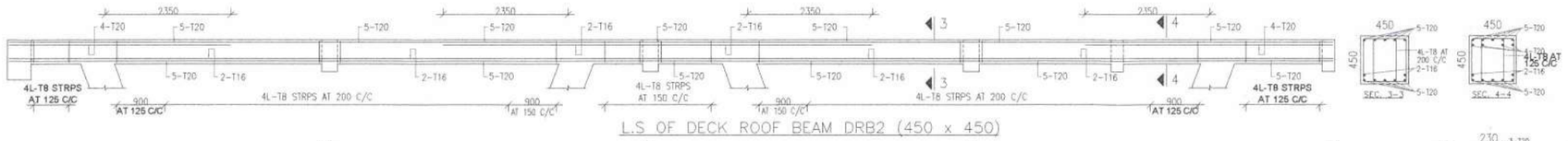
ISSUED FOR: CONSTRUCTION

DRG. NO: ST-26-T C-A-58-2023
REVISION: R-1
CLIENT: RUSSEL FOUNDATION
REV. DATE: 01.03.2025
PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY

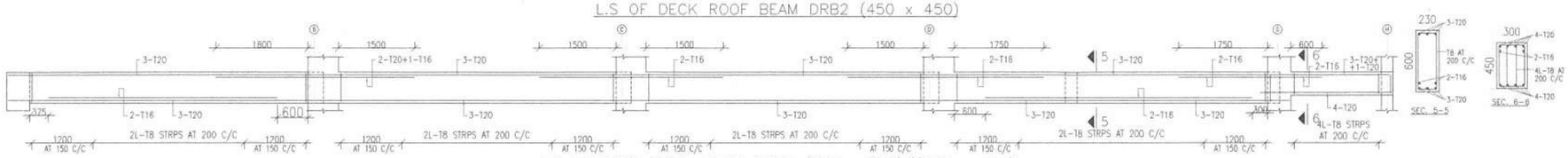
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063.
PH: 9840127487, 8760031198



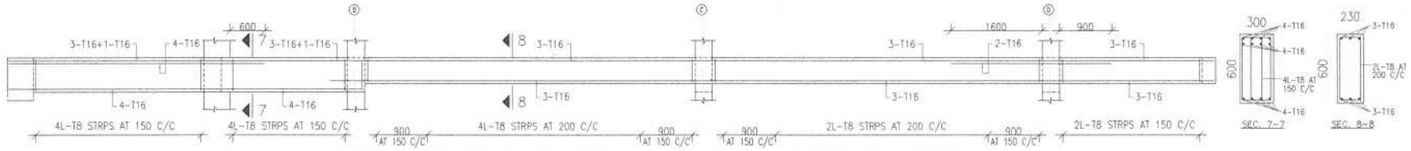
L.S OF DECK ROOF BEAM DRB1 (230 x 450)



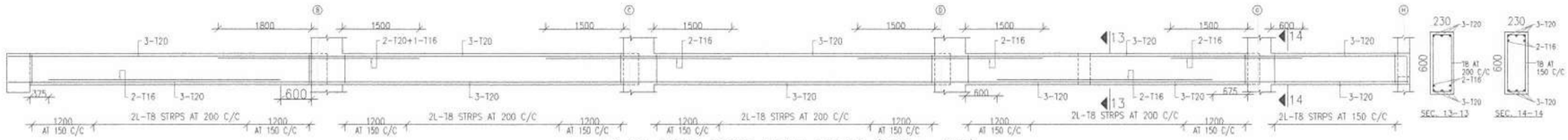
L.S OF DECK ROOF BEAM DRB2 (450 x 450)



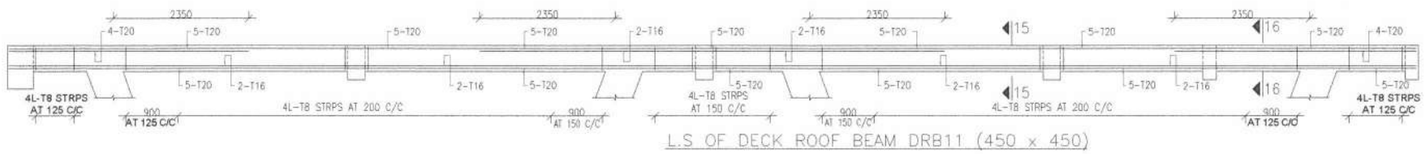
L.S OF DECK ROOF BEAM DRB3 (230 x 600)/(300 x 450)



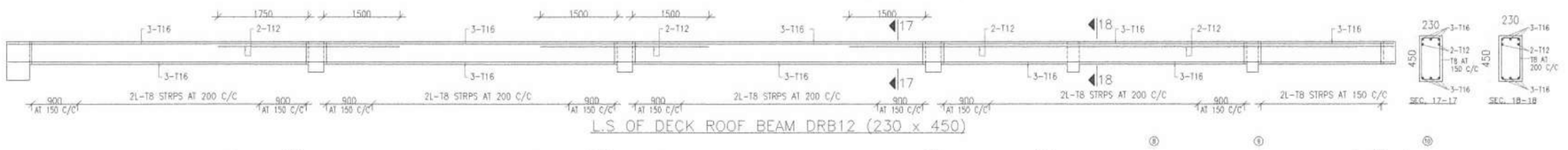
L.S OF DECK ROOF BEAM DRB6 & DRB9 (300 x 600)/(230 x 450)



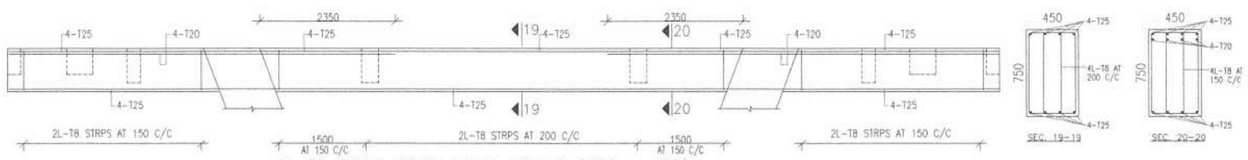
L.S OF DECK ROOF BEAM DRB10 (230 x 600)



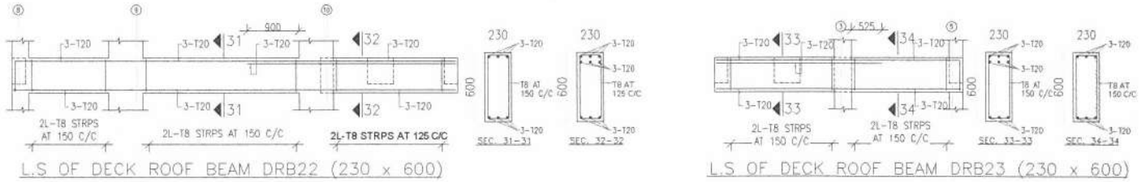
L.S OF DECK ROOF BEAM DRB11 (450 x 450)



L.S OF DECK ROOF BEAM DRB12 (230 x 450)

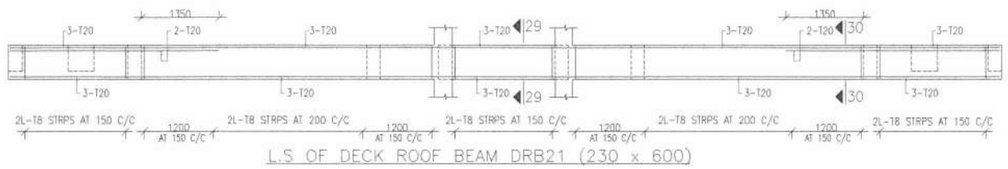


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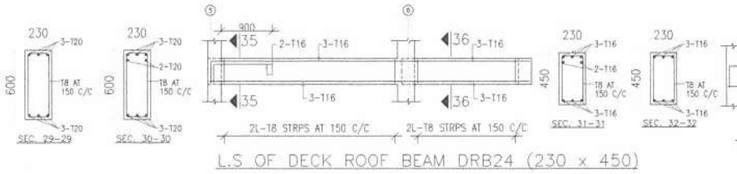


L.S OF DECK ROOF BEAM DRB22 (230 x 600)

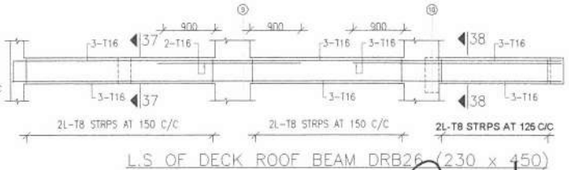
L.S OF DECK ROOF BEAM DRB23 (230 x 600)



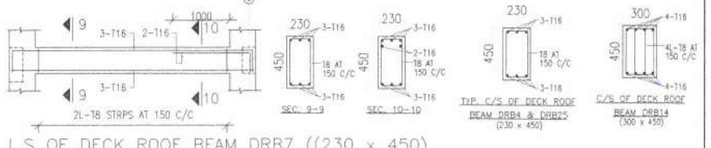
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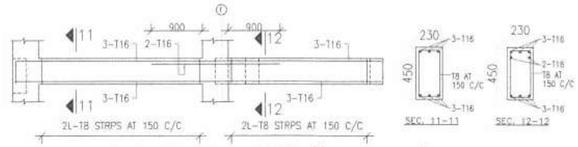
L.S OF DECK ROOF BEAM DRB24 (230 x 450)



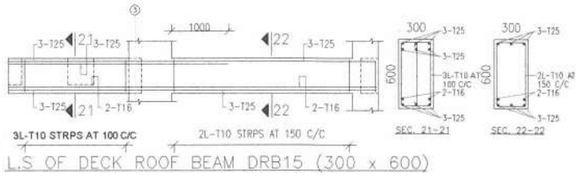
L.S OF DECK ROOF BEAM DRB26 (230 x 450)



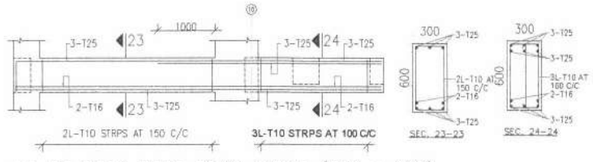
L.S OF DECK ROOF BEAM DRB7 ((230 x 450)



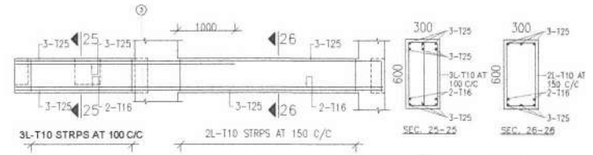
L.S OF DECK ROOF BEAM DRB8 ((230 x 450)



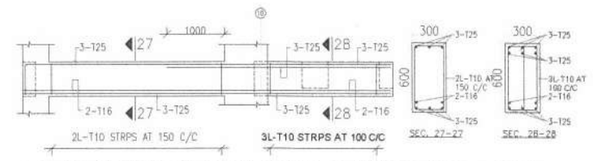
L.S OF DECK ROOF BEAM DRB15 (300 x 600)



L.S OF DECK ROOF BEAM DRB16 (300 x 600)



L.S OF DECK ROOF BEAM DRB17 & DRB19 (300 x 600)



L.S OF DECK ROOF BEAM DRB18 & DRB20 (300 x 600)

*-DFB5-NOT USED

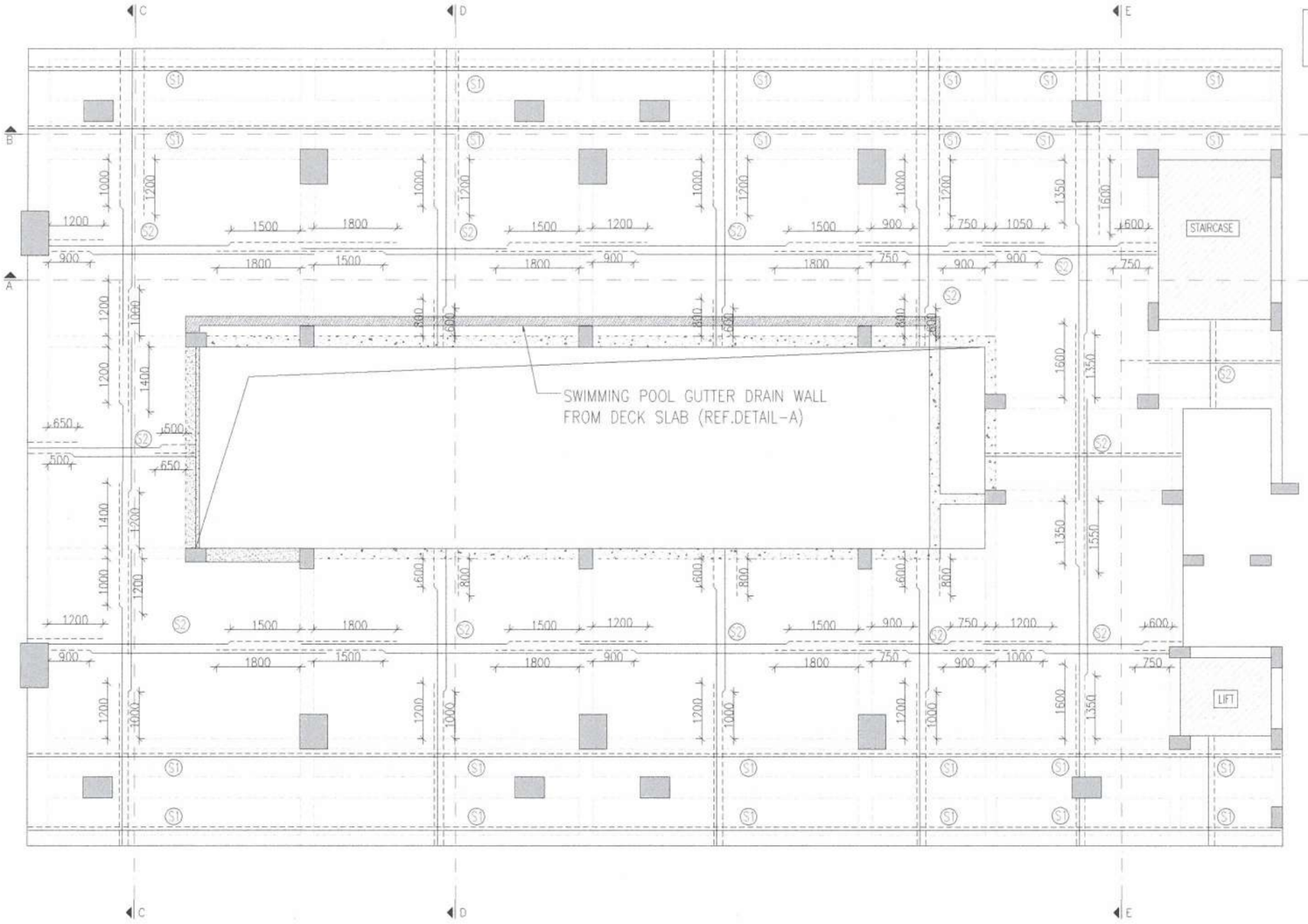
NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

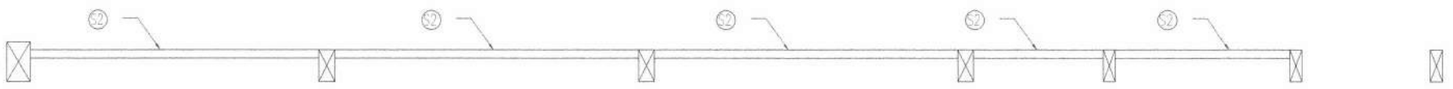
REVISION HISTORY
3.
2.
1.

DRAWN : G.EZHILAN	DRAWING TITLE R.C DET.OF DECK ROOF BEAM	DRG. NO: ST-27-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 11.03.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

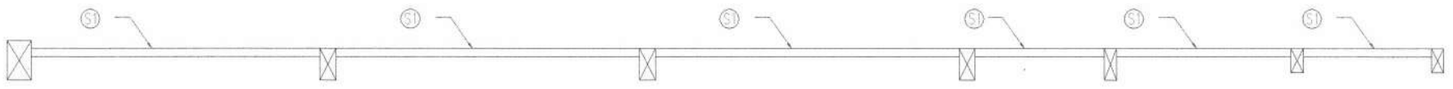
A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade I (PSE)
Reg.No: SE/GR-I/2022/[illegible]25
Cell:97870 32800
magistructuralconsultants@gmail.com
AME STRUCTURAL CONSULTANTS
NO.28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
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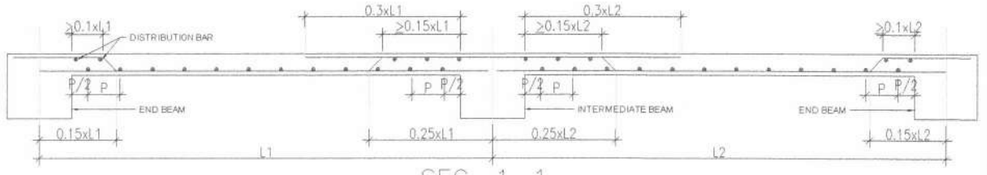
R.C DET. OF DECK ROOF SLAB
BLOCK - A



SEC. A - A

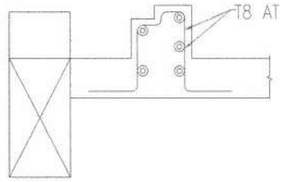


SEC. B - B

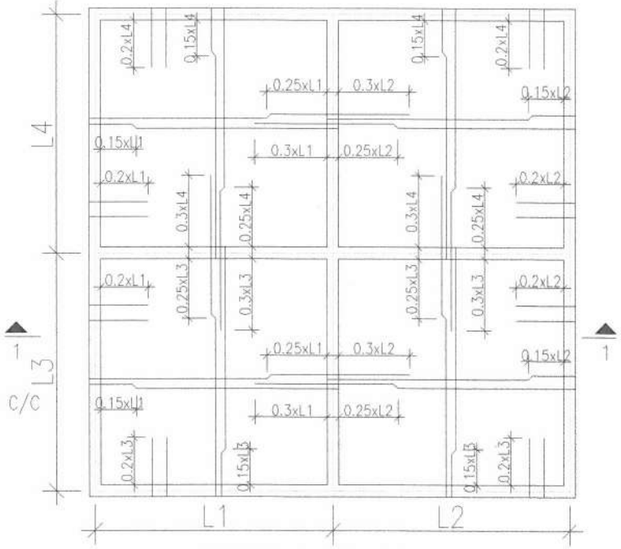


SEC. 1-1

TOP ROD
BOTTOM ROD



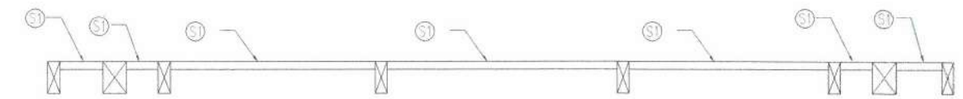
SWIMMING POOL GUTTER DRAIN WALL
DETAIL-A



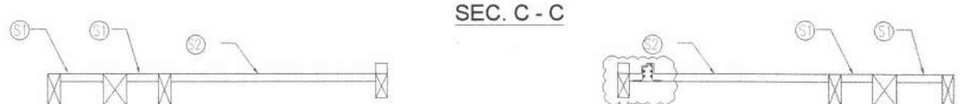
TYPICAL PLAN

S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (DOUBLE MAT)	150	T8 AT 150 C/C (SHORTER ROD) T8 AT 175 C/C (LONGER ROD)
2	S2 (TWO WAY)	150	T8 AT 150 C/C (BOTH WAYS)

(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)



SEC. C - C



SEC. D - D



SEC. E - E

DETAIL-A

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CMDA Approved Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I /2022/06/325
Cell:97870 72100
magistruchure@gmail.com.

NOTES:

1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) SLAB - 20mm b) R.C WALL - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

3.
2.
1.
REVISION HISTORY

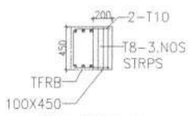
DRAWN : G.EZHILAN
DESIGN : G.AGILAN
CHECKED : G.AGILAN
DATE : 25.02.2025

DRAWING TITLE
R.C DET. OF DECK ROOF SLAB

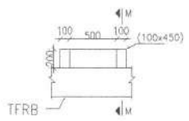
ISSUED FOR: CONSTRUCTION

DRG. NO: ST-28-T C-A-58-2023 | REVISION: R-0
CLIENT: RUSSEL FOUNDATION | REV. DATE: -
PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY

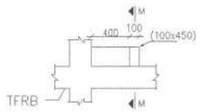
AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198



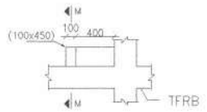
TYP. SEC M-M



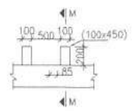
TYP. DET. OF H



TYP. DET. OF J

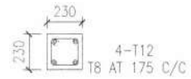


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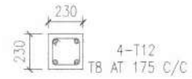


TYP. DET. OF L

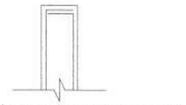
* T.C - TERMINATED COLUMN
* R.C - COLUMN SIZE REDUCED FROM THIS ROOF TOP UPTO PARAPET LEVEL



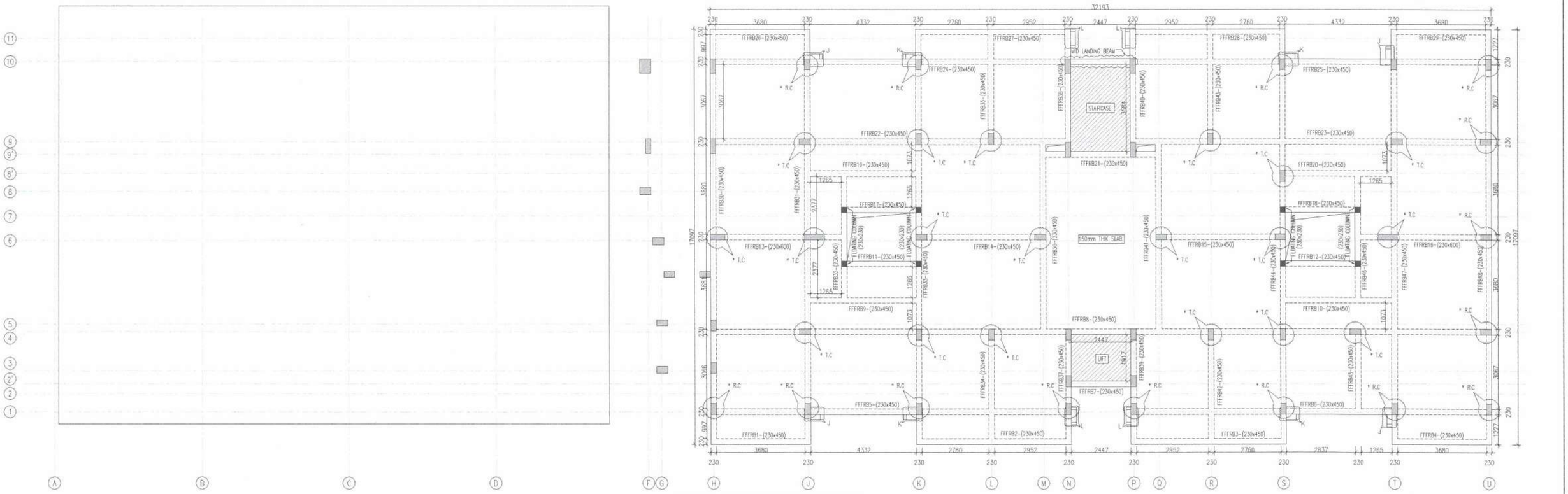
FLOATING COLUMN
(230x230)



REDUCED COLUMN
(230x230)



TYP. C/S OF TERMINATED COLUMN

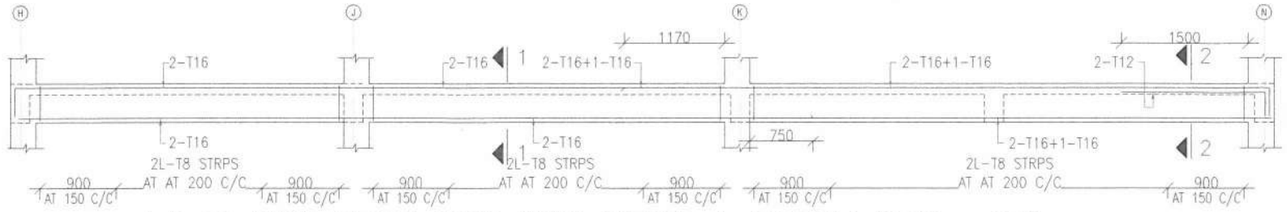


LAYOUT OF FIFTH FLOOR ROOF BEAM
BLOCK - A

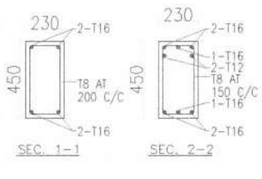
A.N. MAGESH RAJA, M.E.,
CMDA Registered Structural Engineer Grade-I (RSE)
Reg.No: SE/GR-I/2022/06/325
Cell:97870 72100
magistruchure@gmail.com

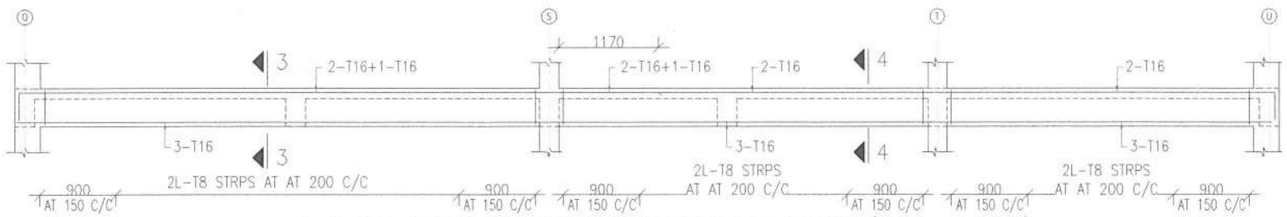
	NOTES:	NOTES:		DRAWN : G.EZHILAN	DRAWING TITLE LAYOUT OF FIFTH FLOOR ROOF BEAM	DRG. NO: ST-26-T C-A-58-2023	REVISION: R-0
				DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
			3. 2. 1. REVISION HISTORY	CHECKED : G.AGILAN			
				DATE : 10.03.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

AME
STRUCTURAL CONSULTANTS
NO:28, JAWAHARLAL NEHRU ST,
PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198

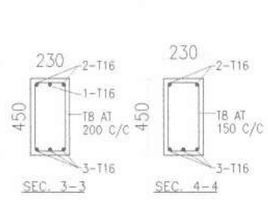


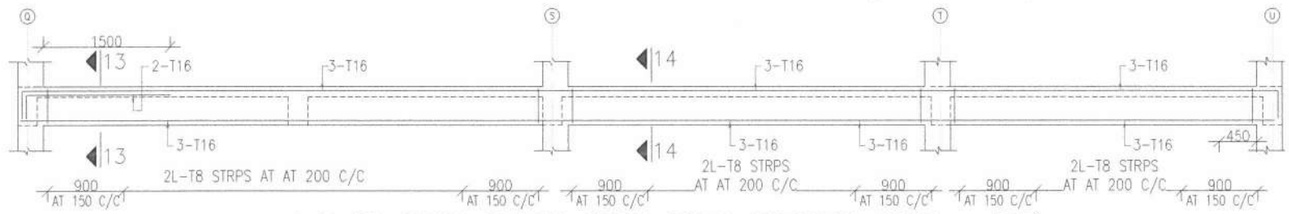
L.S OF FIFTH FLOOR ROOF BEAM FFFRB5 & FFFRB24 (230 x 450)



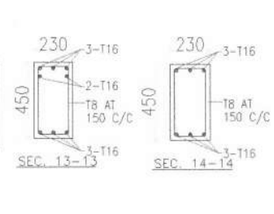


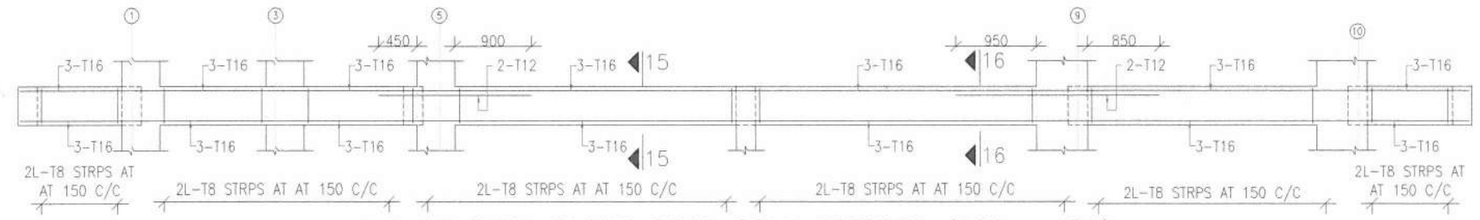
L.S OF FIFTH FLOOR ROOF BEAM FFFRB6 (230 x 450)



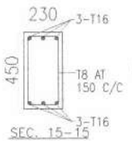


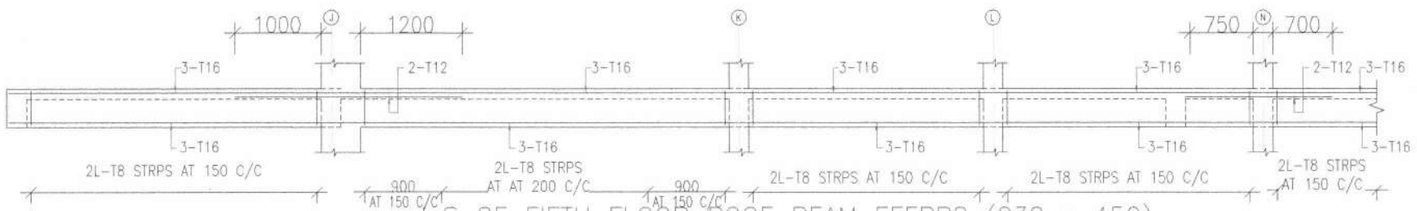
L.S OF FIFTH FLOOR ROOF BEAM FFFRB25 (230 x 450)



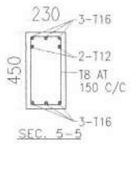


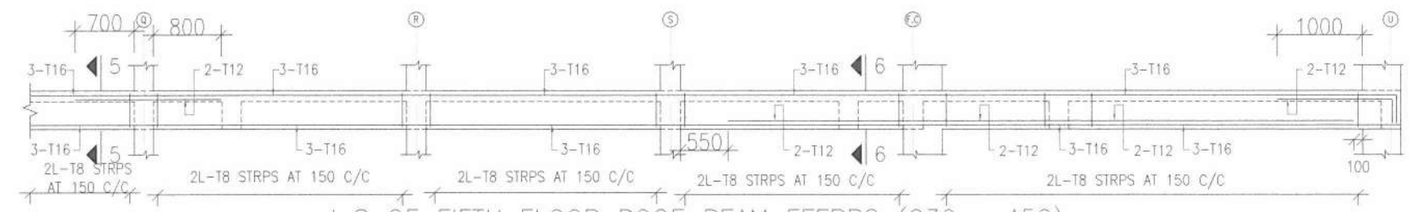
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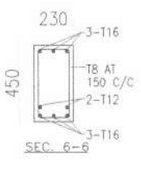


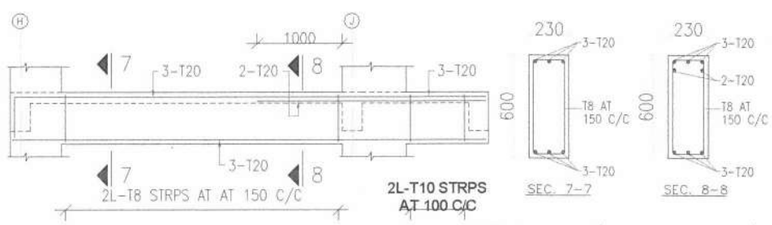
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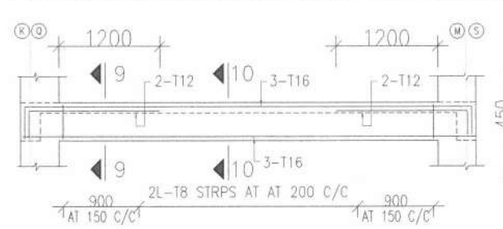


L.S OF FIFTH FLOOR ROOF BEAM FFFRB8 (230 x 450)

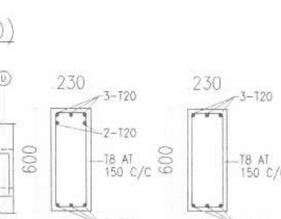


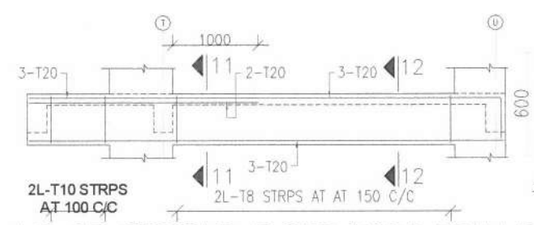


L.S OF FIFTH FLOOR ROOF BEAM FFFRB13 (230 x 600)

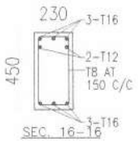


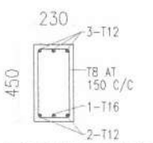
L.S OF STILT FLOOR ROOF BEAM SFFFRB14 & SFFFRB15 (230 x 450)



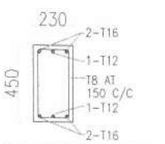


L.S OF SECOPND FLOOR ROOF BEAM FFFRB16 (230 x 600)

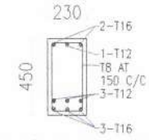




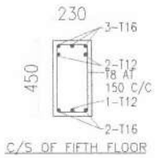
TYP. C/S OF FIFTH FLOOR ROOF BEAM FFFRB1,FFFRB4,FFFRB7, FFFRB11,FFFRB12,FFFRB17,FFFRB18, FFFRB26,FFFRB29 & FFFRB45 (230 x 450)



TYP. C/S OF FIFTH FLOOR ROOF BEAM FFFRB2,FFFRB3, FFFRB27 & FFFRB28 (230 x 450)



TYP. C/S OF FIFTH FLOOR ROOF BEAM FFFRB9,FFFRB10, FFFRB19 & FFFRB20 (230 x 450)



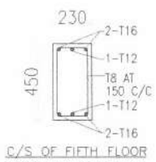
C/S OF FIFTH FLOOR ROOF BEAM FFFRB21 (230 x 450)



TYP. C/S OF FIFTH FLOOR ROOF BEAM FFFRB22,FFFRB23 FFFRB31,FFFRB32,FFFRB33, FFFRB37,FFFRB38,FFFRB39,FFFRB40, FFFRB44,FFFRB46 & FFFRB47 (230 x 450)



TYP. C/S OF FIFTH FLOOR ROOF BEAM FFFRB34,FFFRB35,FFFRB36, FFFRB41,FFFRB42 & FFFRB43 (230 x 450)



C/S OF FIFTH FLOOR ROOF BEAM FFFRB48 (230 x 450)

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Reg.No: SE/GR-I /2022/06/325
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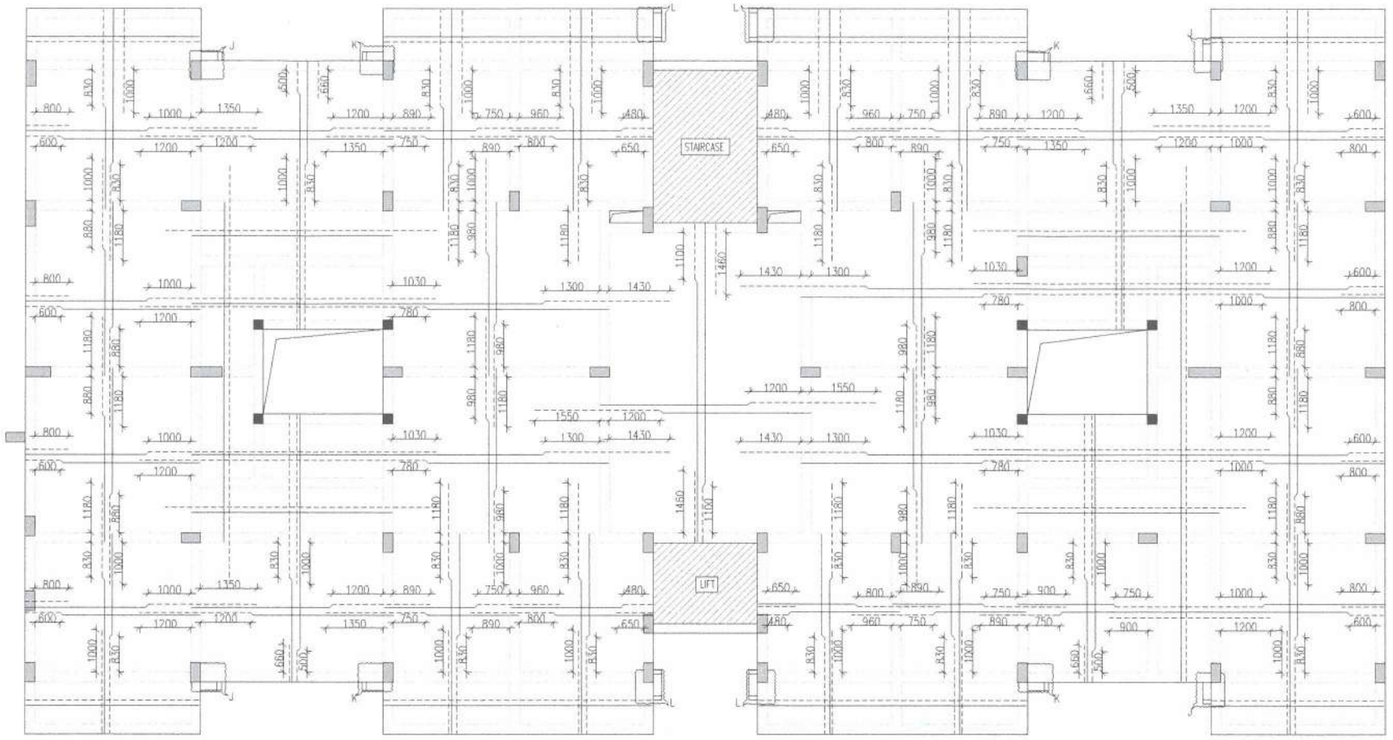
NOTES:
1. ALL DIMENSIONS ARE IN MM & M
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE LATEST ARCHITECTURAL DRAWING
3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) BEAM - 25mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:
6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
7. TOP BARS OF BEAMS AND SLABS TO BE LAPPED AT MID ZONE AND NOT NEAR SUPPORTS.
8. BOTTOM BARS TO BE LAPPED AT END ONE THIRD SPAN
9. STRUCTURAL ENGINEERS RESPONSIBILITY IS LIMITED TO DESIGN & ISSUAL OF STRUCTURAL DRAWING ONLY
10. RESPONSIBILITY OF CONSTRUCTION LIES WITH CONTRACTOR / OWNER
11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

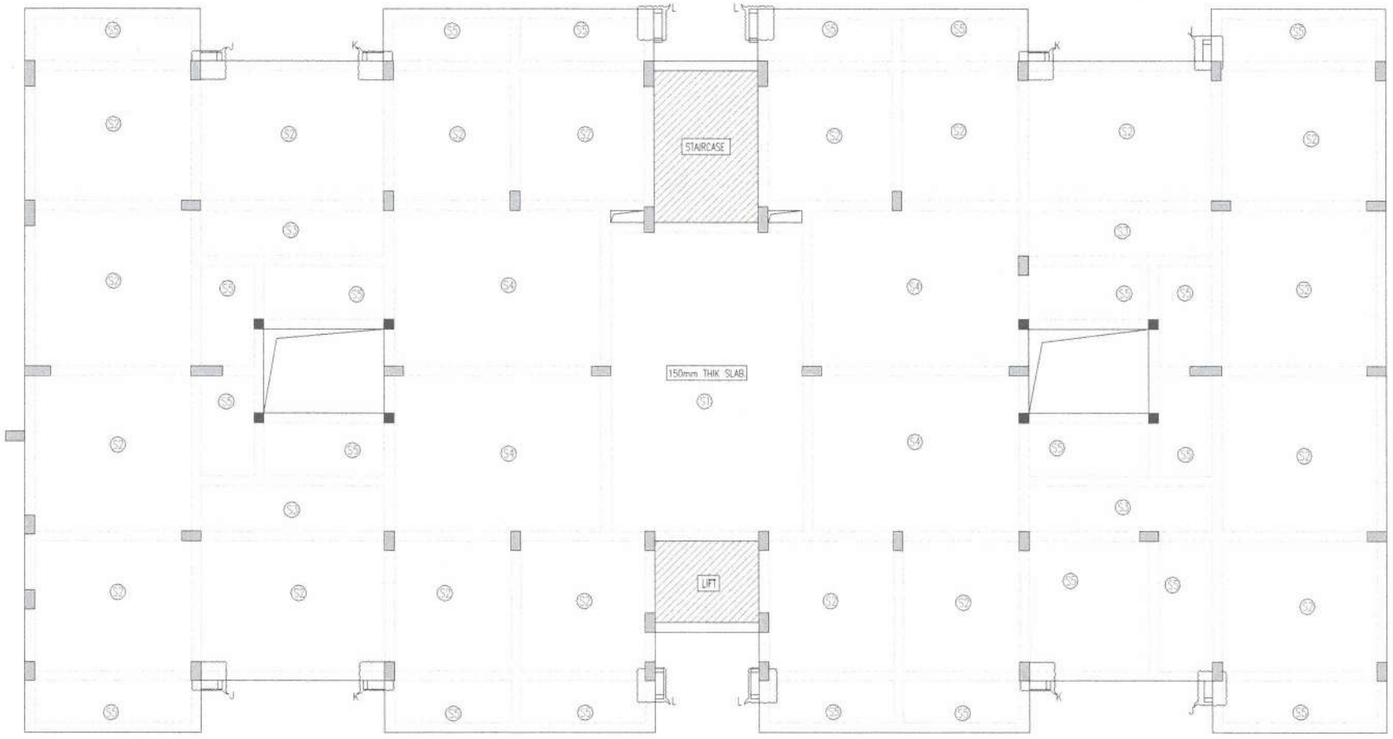
3.
2.
1.
REVISION HISTORY

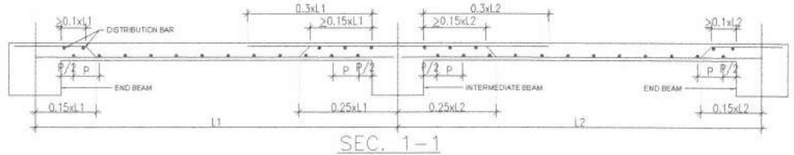
DRAWN : G.EZHILAN	DRAWING TITLE: R.C DET.OF FIFTH FLOOR ROOF BEAM	DRG. NO: ST-27-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 12.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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PH: 9840127487, 8760031198



R.C DET. OF FIFTH FLOOR ROOF SLAB BLOCK - A

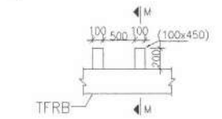




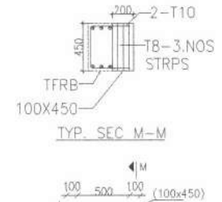
SEC. 1-1

S. NO.	SLAB ID	THICKNESS	REINFORCEMENT
1	S1 (TWO WAY)	150	T10 AT 150 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
2	S2 (TWO WAY)	125	T8 AT 150 C/C (BOTH WAYS)
3	S3 (DOUBLE MAT)	125	T8 AT 150 C/C (DOUBLE MAT)
4	S4 (TWO WAY)	125	T8 AT 100 C/C (SHORTER ROD) T8 AT 150 C/C (LONGER ROD)
5	S5 (DOUBLE MAT)	125	T8 AT 150 C/C (SHORTER ROD) T8 AT 175 C/C (LONGER ROD)

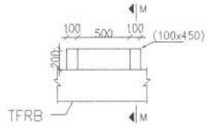
(PROVIDE T8 AT 8" C/C AS DISTRIBUTOR BARS WHEREVER NECCESSARY)



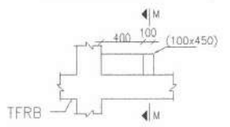
TYP. DET. OF I



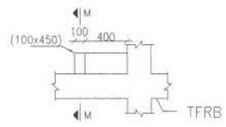
TYP. SEC M-M



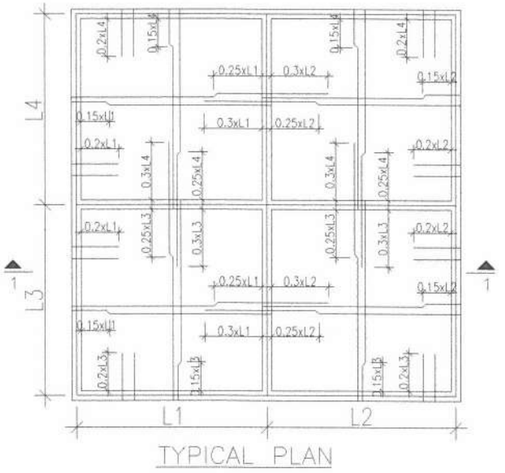
TYP. DET. OF H



TYP. DET. OF J



TYP. DET. OF K



TYPICAL PLAN

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Reg.No: SE/GR-I/2022/06/325
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magistruchure@gmail.com.

NOTES:

1. ALL DIMENSIONS ARE IN MM & M
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3. GRADE OF CONCRETE SHALL BE M30 U.O.S
4. CLEAR COVER FOR REINFORCEMENTS SHALL BE AS FOLLOWS :
   a) SLAB - 20mm
5. T- DENOTES HIGH TENSILE STRENGTH DEFORMED BARS HAVING TENSILE STRENGTH NOT LESS THAN 500 N/mm² CONFORMING TO IS: 1786-1985.

NOTES:

6. LAP LENGTH SHALL BE 45 TIMES DIA. OF BAR AND SHALL BE KEPT STAGGERED.
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11. SUNKEN SHOULD BE FILL WITH LIGHT WEIGHT MATERIAL

3.
2.
1.
REVISION HISTORY

DRAWN : G.EZHILAN	DRAWING TITLE R.C DET. OF FIFTH FLOOR ROOF SLAB	DRG. NO: ST-28-T C-A-58-2023	REVISION: R-0
DESIGN : G.AGILAN		CLIENT: RUSSEL FOUNDATION	REV. DATE: -
CHECKED : G.AGILAN			
DATE : 16.02.2025	ISSUED FOR: CONSTRUCTION	PROJECT: PROPOSED RESIDENTIAL BUILDING AT THIRUVANCHERY	

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PERUNGALATHUR, CHENNAI-600 063
PH: 9840127487, 8760031198

THE LANDLENS SUITE

Eight ways to know a piece of land before you pay for it.

This report covers one part of the picture. These cover the rest, drawn from the same government records, for any property in Tamil Nadu.

LandLens One
Ask anything about a property and get an answer grounded in live government records, with the sources shown.
/landlens/one

Verify My Land
Every record check run on one property and returned as a single report.
/landlens/verify-my-land

Legal Opinion
An advocate's written opinion on the title, built on the records we pull for it.
/landlens

One Map
Every layer on one map: the parcel, its boundary, zoning, water bodies and what sits around it.
/landlens/one/map

PriceMap
What land actually changed hands for around this plot, taken from the registered deeds.
/landlens/pricemap

Build Scope
What you are allowed to build here: floor space, height, coverage and setbacks.
/landlens/build-scope

Property Tracker
Watch a property and hear about it when something new is registered against it.
/landlens/property-tracker

Deal Room
Run the transaction in one place: documents, stamping, signatures and the parties.
/landlens/deal-room

FREE TOOLS · NO ACCOUNT NEEDED

Twenty-four checks you can run yourself, at no cost.

Records and verification

The registers themselves, read for you.

- Encumbrance Certificate
- Patta and Chitta
- Field Measurement Sketch
- EC Analyzer
- Bank charge check
- Court case search
- Seller background check
- Approval check by survey

Value and duty

What it is worth and what it costs to register.

- Guideline value by street
- Guideline value by survey
- Stamp duty and registration fees
- Capital gains
- Floor space index
- Area unit converter

Zoning and land use

What the plan says can happen on this land.

- Land use zone finder
- CMDA land use check
- Coastal regulation zone
- Master plan check
- Water bodies finder
- Airport height clearance

Registers and directories

Who holds it, and which office keeps the record.

- Find your registering office
- Temple property check
- Waqf property check
- RERA register

Every free tool
/tools

Services we run for you
/services

The LandLens suite
/landlens/one

Verified RealEstate™

Every claim in this document traces back to a government record.

- Legal opinions, due diligence and title verification
- Building plan, layout and sub-division approvals
- Completion and occupancy certificates, regularisation
- Escrow, negotiation and NRI property management
- Land survey, soil testing, architecture and construction

Verified RealEstate
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OMR Thoraipakkam,
Chennai 600 097, India
hello@verified.realestate
+91 9996 12 9996

Prepared from the registers named on the page each finding sits on. Where a register could not be read, this document says so in its place rather than leaving the gap to be read as a clean result.