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RE REGULATORY RECORD

RERA Document

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CIN : U45201TN2005PTC055334

21 years Service of Excellence

A PERAMAIYAN (M.E. Struct., M.I.E.,)
Registered Structural Engineer,
Chennai Metropolitan Development Authority,
Registration No.SE/GR-I/19/03/026,
31/14, Besant Avenue Road,
Adayar, Chennai - 600 020.

Email: peram@buroengineers.in
Mobile: +91 9962545630

STABILITY CERTIFICATE

The detailed Engineering and Structure Design of the proposed High Rise Group Development of Commercial Building consists of Block-1:Basement Floor (for parking use)+Ground Floor (for Retail Shop) + 1st Floor (for Retail Shop) + 2nd Floor to 9th Floor (for Office use) Block-2: Ground Floor (Electrical transformer room & Meter room) + 1st Floor (Generator room), abutting G.N. Chetty Road & Thirumalai Lane, T. Nagar, Chennai -600 017, Comprised in Old S.No. 4797 part,T.S.No. 8380/4, Block No.109, T. Nagar Village, within the limits of Greater Chennai Corporation, has been done by me based on the report of geotechnical investigation (Soil Test) done by M/s. Prasad Armstrong Yen GEC (P) Ltd., vide Report No. 207/GI/22-23 dated 7th March 2023 and considering the functional requirement of the building.

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

3. I/We further certify that:

(i) The minimum grade of concrete is M25

(ii) The design and analysis has been done using the code of practice for plain and reinforced concrete as per IS-456, design loads as per IS Codes No. IS-875-Part I to V, and design of earth quake resistant structure as per IS Code No. IS-1893

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

Date : 20-05-2026
Place : Chennai

Stamp and Signature

Encl : Design Calculation

A. PERAMAIYAN, M.E., (Struct.), M.I.E.
REGISTERED STRUCTURAL ENGINEER
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
REGISTRATION No. SE/GR-I/19/03/026
NEW No. 31 (OLD No.14), BESANT AVENUE ROAD,
ADYAR, CHENNAI - 600 020.
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Mobile: +91 99625 45630

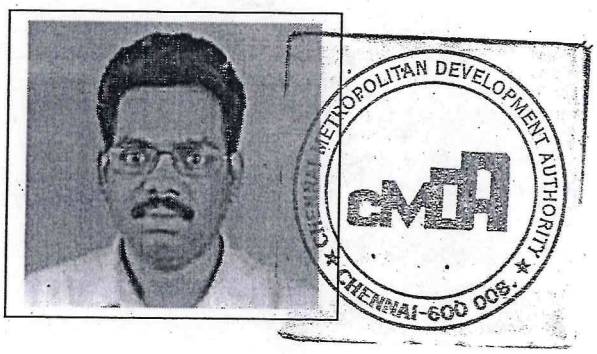
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
'ThalamuthuNatarajan Building', No.1, Gandhi Irwin Road,
Egmore, Chennai-600 008.

PROFESSIONAL REGISTRATION CERTIFICATE

This is to certify that the **Thiru. A. PERAMAIYAN** 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 **17years**.

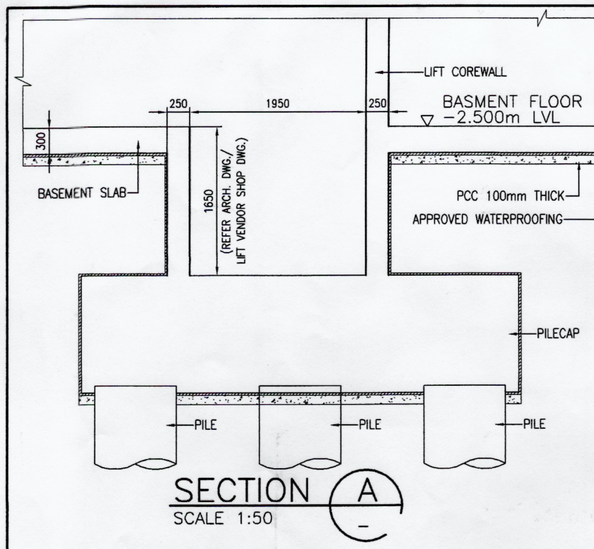
He has been given the Registration No. **SE/GR-I/2019/03/026** Renewed on **22.03.2024.** He shall be required to comply with the duties and responsibilities prescribed by the Government of Tamil Nadu in Part-V, "Registration of Professionals", Tamil Nadu Combined Development and Building Rules, 2019 approved vide G.O.(Ms) No.18 MAWS (MA1) Dept. dated 04.02.2019.

This Registration is valid upto **21.03.2029**.

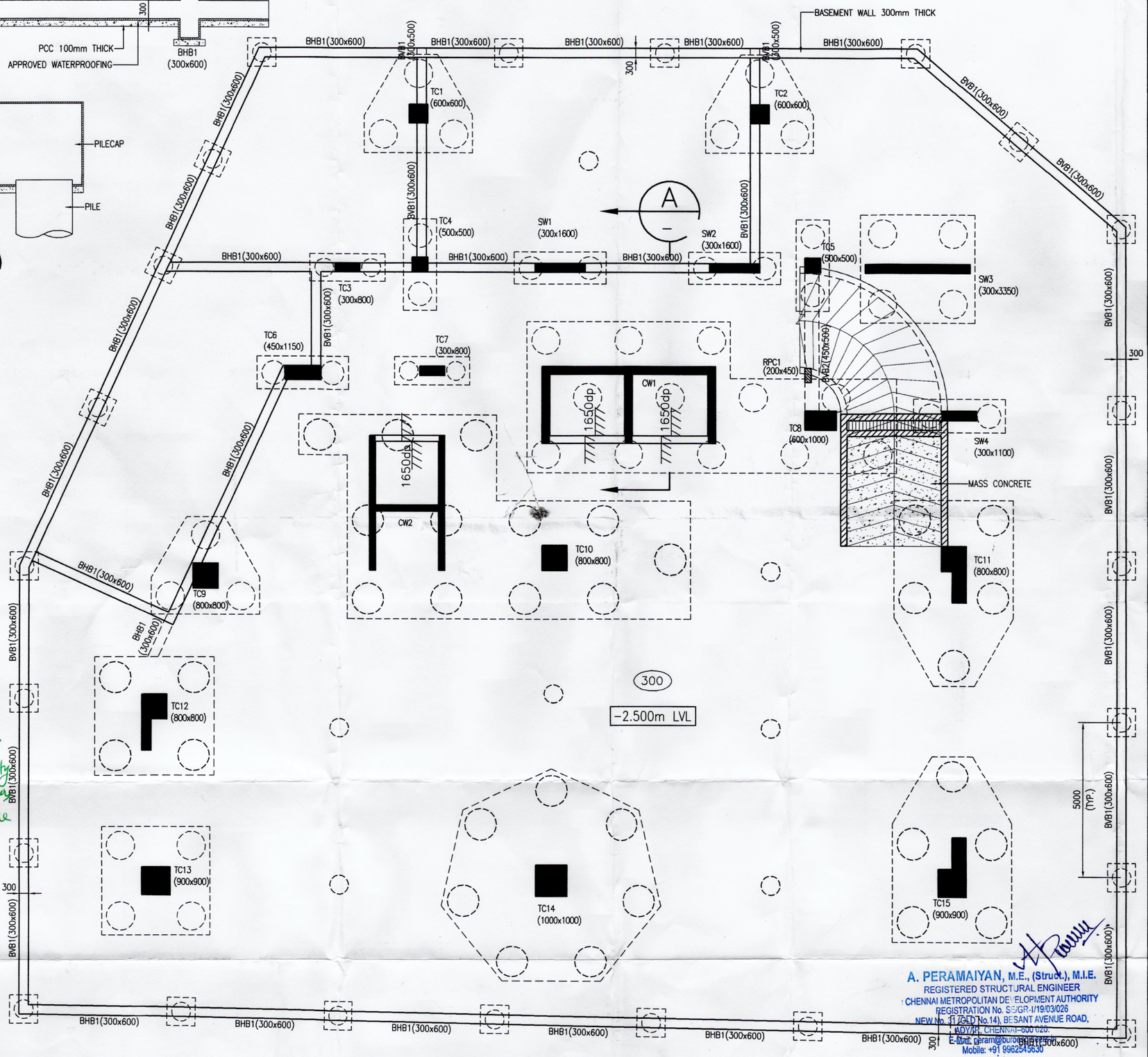


22/3/24.

(A. MEGANATHAN)
Superintendent



SECTION A
SCALE 1:50



BASEMENT FLOOR FRAMING PLAN
SCALE 1:100

On behalf of CMDA HRB Panel the Structural Drawing are reviewed and found generally in order. It is the responsibility of the Site/Structural Engineer Concerned to Scrutinize the details and implement at Site as per the detailed Drawings and Specification

Superintending Engineer, P.W.D.,
Planning and Designs Circle,
Chepauk, Chennai-5.

A. PERAMAIYAN, M.E., (Struct.), M.I.E.
REGISTERED STRUCTURAL ENGINEER
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
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E-Mail: peram@buroengineers.in
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NO.	AMENDMENTS	BY	DATE

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
GUINDY, CHENNAI-600 032

MEP CONSULTANT:

1/26

CONSULTANTS : ARCHITECTURE

NATARAJ & VENKAT ARCHITECTS
18, 3rd SEAWARD RD, VALMIKI NAGAR
THIRUVANMIYUR, CHENNAI 600041
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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

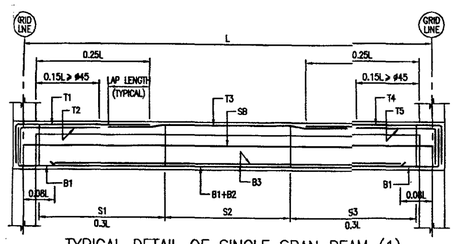
BASEMENT FLOOR FRAMING PLAN & SECTION DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/B-/--/01	revision	–

THIS DRAWING IS COPYRIGHT

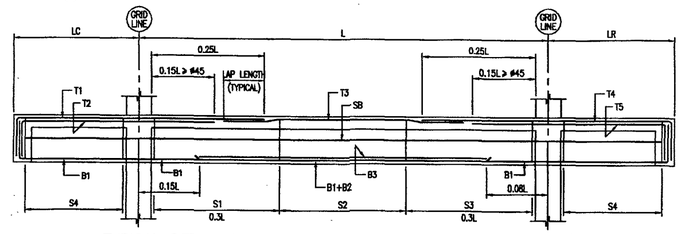
CAD FILE NAME: BEI707_S-FPB---01_.dwg

LOCATION			SIZE		SPAN			REINFORCEMENT								SIDE BAR EACH FACE (EF)	STIRRUPS					REMARKS
								SPAN														
BEAM MARKING	CATEGORY	GRID LINE OR BEAM MARK	WIDTH (mm)	DEPTH (mm)	LEFT END CANTILEVER Lc	SPAN (APPROX) L	RIGHT END CANTILEVER Rc	T1	T2	T3	T4	T5	B1	B2	B3	SB	S1	S2	S3	S4	TYPE	
GHB1	1	–	450	500	–	7150	–	4T16	2T20	4T16	4T16	–	4T16	–	–	–	T10–100	T10–150	T10–100	–	1	
GHB2	1	–	200	500	–	7150	–	2T16	–	2T16	2T16	–	2T20	–	–	–	T8–100	T8–200	T8–100	–	1	
GHB4	1	–	200	500	–	5350	–	2T20	2T16	2T20	2T20	2T16	2T20	–	–	–	T8–100	T8–150	T8–100	–	1	
GHB7	1	–	200	500	–	3300	–	2T25	2T20	2T20+ 2T25	2T25	–	2T25	–	2T25	–	T10–100	T10–125	T10–100	–	1	
GHB8	1	–	200	500	–	3550	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
GHB9	1	–	200	600	–	4400	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
GHB10	1	–	200	500	–	5300	–	2T16	2T20	2T16	2T16	2T12	2T16	–	–	–	T12–100	T12–200	T12–100	–	1	
GHB11	1	–	200	600	–	2400	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
GHB15	1	–	200	1000/500	–	4350/800	–	2T25	–	2T25	2T25	–	2T25	–	–	2T12	T10–100	T10–100	T10–100	–	1	
GHB20	1	–	450	500	–	5300	–	4T16	2T20	4T16	4T16	2T16	4T16	–	2T16	–	4T8–100	4T8–125	4T8–100	–	2a	
GHB21	1	–	450	500	–	4500	–	4T16	–	4T16	4T16	–	4T20	–	–	–	4T8–100	4T8–125	4T8–100	–	2a	
GHB24	1	–	450	500	–	4500	–	4T16	–	4T16	4T16	–	4T20	–	–	–	4T8–100	4T8–125	4T8–100	–	2a	
GHB27	1	–	450	500	–	5300	–	4T16	2T16	4T16	4T16	2T16	4T20	–	–	–	4T8–100	4T8–125	4T8–100	–	2a	
GVB1	1	–	450	500	–	4300	–	4T16	–	4T16	4T16	–	4T16	–	–	–	4T8–100	4T8–125	4T8–100	–	2a	
GVB2	1	–	800	800	–	5700	–	7T25	–	7T25	7T25	–	7T25	–	–	2T12	7T8–100	7T8–150	7T8–100	–	3a	
GVB3	1	–	300	700	–	3400	–	3T16	–	3T16	3T16	–	3T16	–	–	–	T10–100	T10–150	T10–100	–	1	
GVB4	1	–	300	500	–	5250	–	3T16	–	3T16	3T16	–	3T16	–	–	–	T8–100	T8–125	T8–100	–	1	
GVB5	1	–	300	500	–	5250	–	3T16	–	3T16	3T16	–	3T16	–	–	–	T8–100	T8–125	T8–100	–	1	
GVB6	1	–	300	500	–	7200	–	3T16	2T16	3T16	3T16	2T16	3T16	–	–	–	T8–100	T8–125	T8–100	–	1	
GVB7	1	–	200	500	–	3600	–	2T20	–	2T20	2T20	–	2T20	–	–	–	T8–100	T8–125	T8–100	–	1	
GVB8	1	–	200	500	–	4600	–	2T20	–	2T20	2T20	2T25	2T20	–	2T16	–	T10–100	T10–150	T10–100	–	1	
GVB9	1	–	200	600	–	2600	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
GVB10	1	–	200	600	–	2600	–	2T16	2T12	2T16	2T16	–	2T20	–	–	–	T8–100	T8–100	T8–100	–	1	
GVB11	1	–	200	500	–	4600	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–200	T8–100	–	1	
GVB12	1	–	300	500	–	7200	–	3T16	2T16	3T16	3T16	2T16	3T16	–	–	–	T8–100	T8–125	T8–100	–	1	SIMILAR BEAM GVB14
GVB13a	1	–	450	500	–	4800	–	4T16	–	4T16	4T16	–	4T16	–	–	–	4T8–100	4T8–125	4T8–100	–	2a	
GVB13	1	–	800	800	–	10350	–	7T32	5T32	7T32	7T32	5T32	7T32	–	7T32	2T12	7T8–100	7T8–150	7T8–100	–	3a	
GVB18a	1	–	450	500	–	5200	–	4T16	–	4T16	4T16	–	4T16	–	–	–	4T8–100	4T8–125	4T8–100	–	2a	
GVB18	1	–	800	800	–	10350	–	7T25	5T25	7T25	7T25	5T25	7T25	–	5T25	2T12	7T8–100	7T8–150	7T8–100	–	3a	
GVB19	1	–	450	600	–	4750	–	4T16	–	4T16	4T16	–	4T16	–	2T16	–	4T8–100	4T8–150	4T8–100	–	2a	
GVB20	1	–	200	700	–	4900	–	2T20	2T16	2T20	2T20	2T20	2T20	–	–	–	T8–100	T8–125	T8–100	–	1	
GVB21	1	–	450	500	–	6000	–	4T16	2T20	4T16	4T16	2T12	4T16	–	2T20	–	T10–100	T10–150	T10–100	–	1	
MARKING BEAM	CATEGORY	BEAM MARK OR GRID LINE	(mm) WIDTH	(mm) DEPTH	CANTILEVER LEFT END	(APPROX) SPAN	CANTILEVER RIGHT END	T1	T2	T3	T4	T5	B1	B2	B3	BAR SIDE	S1	S2	S3	S4	TYPE	REMARKS
LOCATION			SIZE		SPAN			REINFORCEMENT									STIRRUPS					



TYPICAL DETAIL OF SINGLE SPAN BEAM (1)

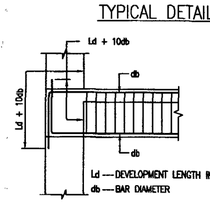
L --- LENGTH OF SPAN UNDER CONSIDERATION
LC --- LENGTH OF LEFT END CANTILEVER
RC --- LENGTH OF RIGHT END CANTILEVER
(1) --- CATEGORY



TYPICAL DETAIL OF SINGLE SPAN BEAM WITH CANTILEVERS (2)

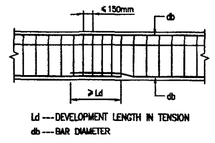
NOTES :

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN AND ALL OTHER RELEVANT DRAWINGS.
2. IF THE REINFORCEMENT IS PROVIDED IN TWO LAYERS OR MORE, THEN SPACER BARS BETWEEN THE LAYERS NEED TO BE PROVIDED
3. SPACER BARS TO BE T25 OR MAIN BAR SIZE (WHICHEVER IS GREATER) AT 900c/c BETWEEN EACH LAYER OF MAIN STEEL.
4. THE SPAN LENGTH INDICATED ARE NOT TO BE USED FOR SETTING OUT OR MEASUREMENT.
5. IF SAME SIZE OF THE REINFORCEMENT BARS IS INDICATED THROUGHOUT FOR BOTTOM OR TOP REINFORCEMENT, THE LAP PROVIDED FOR THE REINFORCEMENT CAN BE OMITTED BY PROVIDING STRAIGHT BARS FOR THE WHOLE LENGTH OF THE BEAM
6. LAP LENGTH FOR BARS SHOULD BE SAME AS TENSION ANCHORAGE LENGTH BASED UPON THE LARGER BAR DIAMETER FOR UNEQUAL SIZE OF BARS
7. FIRST STIRRUP OF BEAM SHOULD BE 50mm (MAXIMUM) FROM THE COLUMN FACE



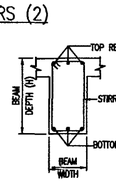
ANCHORAGE OF BEAM BARS AT BEAM AND COLUMN JUNCTION (EXTERNAL JOINT)

NOTE:
IN AN INTERNAL JOINT, BOTH TOP & BOTTOM BARS OF THE BEAM SHALL PASS THROUGH THE CORE SUFFICIENTLY WITHIN THE COLUMN

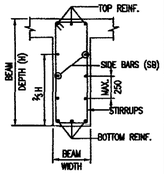


LAP/SPLICE IN BEAM

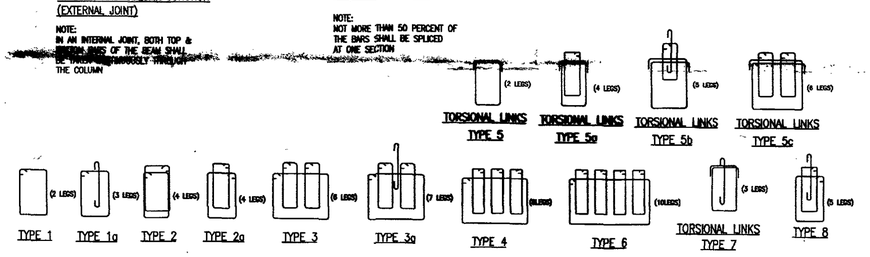
NOTE:
NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION



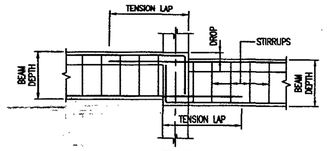
TYP. BEAM SECTION



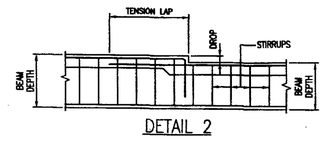
TYP. SIDE BARS DETAIL FOR BEAM DEPTH > 750



STIRRUPS TYPE

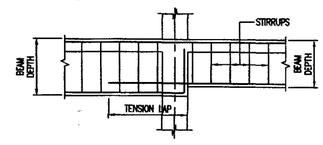


DETAIL 1

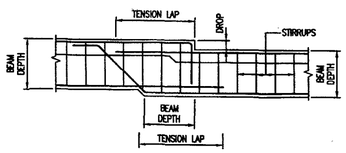


DETAIL 2

Wherever the drop is less than or equivalent to 50
The reinforcement bars can be bent at 1:10 and continued



DETAIL 3



DETAIL 4

A. PERAMAIYAN, M.E., (Struct.), M.I.E.
REGISTERED STRUCTURAL ENGINEER
: CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
REGISTRATION No. SE/STR/19/03/026
NEW No. 31 (OLD No.14), BESANT AVENUE ROAD,
ADYAR, CHENNAI-600 020.
E-Mail: peram@buroengineers.in
Mobile: +91 9962545630

* – INDICATES IN 2ND LAYER
** – INDICATES IN 3RD LAYER

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S–/NT/–/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S–/SD/–/01 & BEI707_S–/SD/–/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893–2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456–2000, NBC(SP7–2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
GUINDY, CHENNAI-600 032

MEP CONSULTANT:

CONSULTANTS : ARCHITECTURE
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Civil & Structural Engineer :
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EMail : buroindia@buroengineers.in

STRUCTURAL

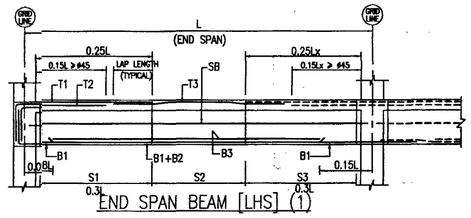
project title
PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title
GROUND FLOOR BEAM SCHEDULE

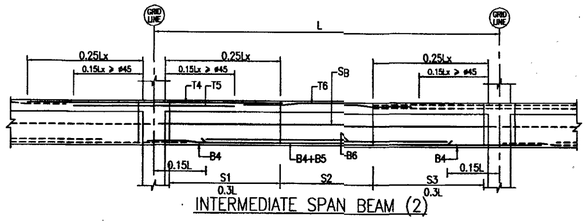
scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JUNE 2023	approved by	–
drawing no.	BEI707_S–/BM/G–/–/–/02	revision	–

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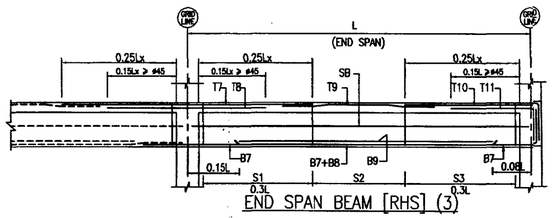
CAD FILE NAME: BEI707_S–BMG–––02_.dwg



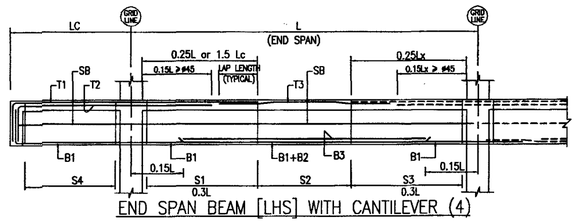
END SPAN BEAM [LHS] (1)



INTERMEDIATE SPAN BEAM (2)



END SPAN BEAM [RHS] (3)

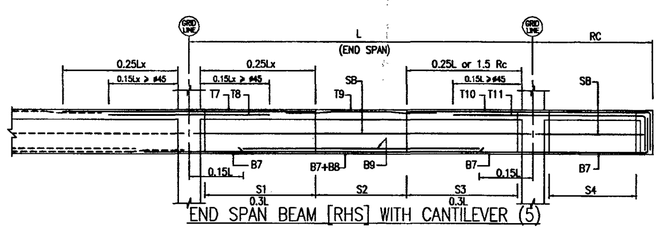


END SPAN BEAM [LHS] WITH CANTILEVER (4)

LEGEND

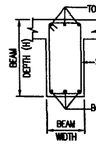
L ------LENGTH OF SPAN UNDER CONSIDERATION
La------LENGTH OF ADJACENT SPAN TO THE SPAN UNDER CONSIDERATION
Lc------LENGTH OF LEFT END CANTILEVER
Rc------LENGTH OF RIGHT END CANTILEVER
(1)-----CATEGORY

Lx = Length of span under consideration or Length of adjacent span whichever is greater



END SPAN BEAM [RHS] WITH CANTILEVER (5)

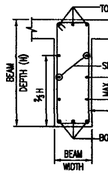
LOCATION			SIZE		SPAN			REINFORCEMENT																		SIDE BAR EACH FACE (EF)	STIRRUPS					REMARKS
								LEFT END SPAN						INTERMEDIATE SPAN						RIGHT END SPAN											
BEAM MARKING	CATEGORY	GRID LINE OR BEAM MARK	WIDTH (mm)	DEPTH (mm)	LEFT END CANTILEVER Lc	SPAN (APPROX) L	RIGHT END CANTILEVER Rc	T1	T2	T3	B1	B2	B3	T4	T5	T6	B4	B5	B6	T7	T8	T9	T10	T11	B7	B8	B9	SB	S1	S2	S3	S4	TYPE	
1HB2	4	–	300	750/600	600	2350	–	3T16	2T20	3T16	2T20	–	2T16*	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	3T10–100	3T10–150	3T10–100	3T10–100	1a	
1HB3	2	–	300	600	–	4500	–	–	–	–	–	–	–	3T16	2T20	3T16	2T20	–	2T12	–	–	–	–	–	–	–	–	–	3T10–100	3T10–150	3T10–100	–	1a	
1HB4	2	–	300	600	–	5600	–	–	–	–	–	–	–	3T16	2T20	3T16	2T20	–	–	–	–	–	–	–	–	–	–	–	3T10–100	3T10–150	3T10–100	–	1a	
1HB5	2	–	300	600	–	2500	–	–	–	–	–	–	–	3T16	2T25	3T16	2T20	–	2T16*	–	–	–	–	–	–	–	–	–	3T10–100	3T10–150	3T10–100	–	1a	
1HB6	3	–	300	750	–	2400	–	–	–	–	–	–	–	–	–	–	–	–	–	3T16	2T20	3T16	3T16	3T25	3T20	–	2T20*	2T10	3T10–100	3T10–125	3T10–100	–	1a	
1HB8	1	–	200	600	–	4000	–	2T20	2T16	2T20	2T20	–	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T12–100	T12–150	T12–100	–	1	
1HB9	3	–	200	600	–	3800	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	2T16	2T20	2T20	2T16	2T20	–	2T25*	–	T8–100	T8–100	T8–100	–	1	
1HB11	1	–	200	500	–	3600	–	2T20	2T16	2T20	2T20	–	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–100	T8–100	–	1	
1HB12	3	–	200	600	–	4400	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	–	2T20	2T20	2T16	2T20	–	–	–	T10–100	T10–150	T10–100	–	1	
1HB14	1	–	250	750	–	2900	–	2T16	–	2T16	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	T8–100	T8–100	T8–100	–	1	
1HB15	5	–	250	750	–	2900	1050	–	–	–	–	–	–	–	–	–	–	–	–	2T16	–	2T16	2T16	2T20	2T16	–	–	2T10	T10–100	T10–150	T10–100	T10–100	1	
1HB17	1	–	200	750	–	5300	–	2T20	2T20	2T20	2T20	–	2T20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T10–100	T10–150	T10–100	–	1	
1HB18	3	–	200	750	–	2300	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	–	2T20	2T20	2T20	2T20	–	–	–	T10–100	T10–100	T10–100	–	1	
1HB19	1	–	800	600	–	12700	–	7T25	2T25	7T25	7T25	–	2T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
1HB20	3	–	800	600	–	12700	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	2T25	7T25	7T25	2T25	7T25	–	2T25	–	7T8–100	7T8–150	7T8–100	–	3a	
1HB17a	2	–	200	750	–	7000	–	2T25	2T25	2T25	2T25	–	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	T10–100	T10–150	T10–100	T10–100	1	
1HB2a	2	–	200	600	–	3750	–	–	–	–	–	–	–	2T25	2T16	2T25	2T25	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–150	T8–100	–	1	
1HB1a	3	–	200	750	–	7350	–	–	–	–	–	–	–	–	–	–	–	–	–	2T25	–	2T25	2T25	2T16	2T25	–	2T25*	2T10	T8–100	T8–150	T8–100	–	1	
1VB1	1	–	800	600	–	5650	–	7T25	–	7T25	7T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
1VB2	3	–	800	600	–	4500	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	–	7T25	7T25	–	7T25	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
1VB11	1	–	200	500	–	1050	–	2T20	2T20	2T20	2T20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–100	T8–100	–	1	
1VB12	3	–	200	500	–	4900	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	2T16	2T20	2T20	2T16	2T20	–	2T20	–	T8–100	T8–100	T8–100	–	1	
1VB15	1	–	800	600	–	10400	–	7T25	2T25	7T25	7T25	–	2T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
1VB16	3	–	800	600	–	4750	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	–	7T25	7T25	–	7T25	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
MARKING BEAM	CATEGORY	BEAM MARK OR GRID LINE	(mm) WIDTH	(mm) DEPTH	Lc CANTILEVER LEFT END	L (APPROX) SPAN	Rc CANTILEVER RIGHT END	T1	T2	T3	B1	B2	B3	T4	T5	T6	B4	B5	B6	T7	T8	T9	T10	T11	B7	B8	B9	BAR SIDE	S1	S2	S3	S4	TYPE	REMARKS
LOCATION			SIZE		SPAN			LEFT END SPAN						INTERMEDIATE SPAN						RIGHT END SPAN								STIRRUPS					
								REINFORCEMENT																									



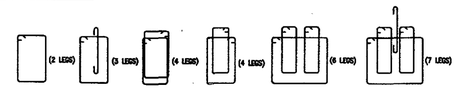
TYP. BEAM SECTION

NOTES :

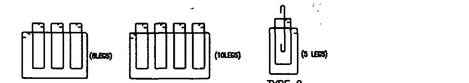
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN AND ALL OTHER RELEVANT DRAWINGS.
2. IF THE REINFORCEMENT IS PROVIDED IN TWO LAYERS OR MORE, THEN SPACER BARS BETWEEN THE LAYERS NEED TO BE PROVIDED
3. SPACER BARS TO BE T25 OR MAIN BAR SIZE (WHICHEVER IS GREATER) AT 900c/c BETWEEN EACH LAYER OF MAIN STEEL.
4. THE SPAN LENGTH INDICATED ARE NOT TO BE USED FOR SETTING OUT OR MEASUREMENT.
5. IF SAME SIZE OF THE REINFORCEMENT BARS IS INDICATED THROUGHOUT FOR BOTTOM OR TOP REINFORCEMENT, THE LAP PROVIDED FOR THE REINFORCEMENT CAN BE OMITTED BY PROVIDING STRAIGHT BARS FOR THE WHOLE LENGTH OF THE BEAM
6. LAP LENGTH FOR BARS SHOULD BE SAME AS TENSION ANCHORAGE LENGTH BASED UPON THE LARGER BAR DIAMETER FOR UNEQUAL SIZE OF BARS
7. FIRST STIRRUP OF BEAM SHOULD BE 50mm (MAXIMUM) FROM THE COLUMN FACE



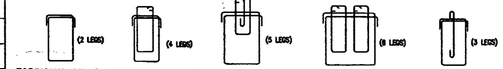
TYP. SIDE BARS DETAIL FOR BEAM DEPTH > 750



TYPE 1 TYPE 1a TYPE 2 TYPE 2a TYPE 3 TYPE 3a

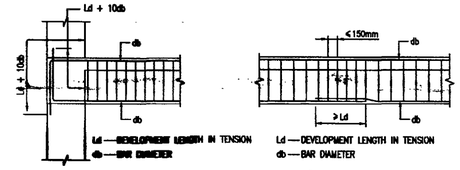


TYPE 4 TYPE 6 TYPE 8



TORSIONAL LINKS TYPE 5 | TORSIONAL LINKS TYPE 5a | TORSIONAL LINKS TYPE 5b | TORSIONAL LINKS TYPE 5c | TORSIONAL LINKS TYPE 7

STIRRUPS TYPE

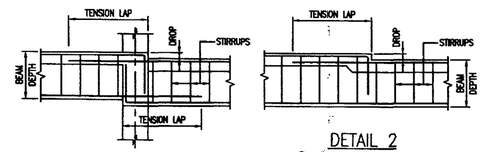


ANCHORAGE OF BEAM BARS AT BEAM AND COLUMN JUNCTION (EXTERNAL JOINT)

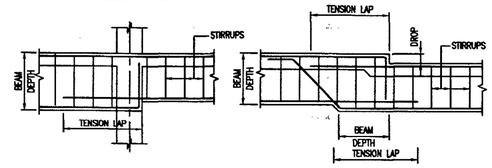
NOTE:
IN AN INTERNAL JOINT, BOTH TOP & BOTTOM BARS OF THE BEAM SHALL BE TAKEN CONTINUOUSLY THROUGH THE COLUMN

LAP/SPLICE IN BEAM

NOTE:
NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION



DETAIL 1 DETAIL 2



DETAIL 3 DETAIL 4

Wherever the drop is less than or equivalent to 50 The reinforcement bars can be bent at 1:10 and continued

A. PERAMAIYAN, M.E., (Struct.), M.I.E.
REGISTERED STRUCTURAL ENGINEER
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
REGISTRATION No. S : GR-I/19.03/026
NEW No. 31 (OLD No.14), BESANT AVENUE ROAD,
ADYAR, CHENNAI-600 020.
E-Mail: peram@buroengineers.in
Mobile: +91 9952545630

* – INDICATES IN 2ND LAYER
** – INDICATES IN 3RD LAYER

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S-/NT/---/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S-/SD/---/01 & BEI707_S-/SD/---/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893–2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456–2000, NBC(SP7–2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE
			08/04/24

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
GUINDY, CHENNAI-600 032

MEP CONSULTANT:

CONSULTANTS : ARCHITECTURE
NATARAJ & VENKAT ARCHITECTS
18, 3rd SEAWARD RD, VALMIKI NAGAR
THIRUVANMIYUR, CHENNAI 600041
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Civil & Structural Engineer :
BURO ENGINEERS (I) PRIVATE LTD.,
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CHENNAI 600020 TEL: 044-2491 2755
EMail : buroindia@buroengineers.in

STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

FIRST FLOOR BEAM SCHEDULE

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JUNE 2023	approved by	–
drawing no.	BEI707_S-/BM/01/---/01	revision	–

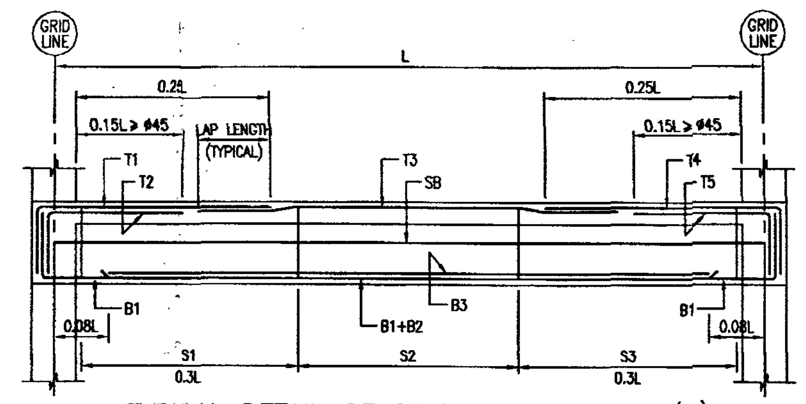
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CAD FILE NAME: BEI707_S-BM01---01_.dwg

8/2

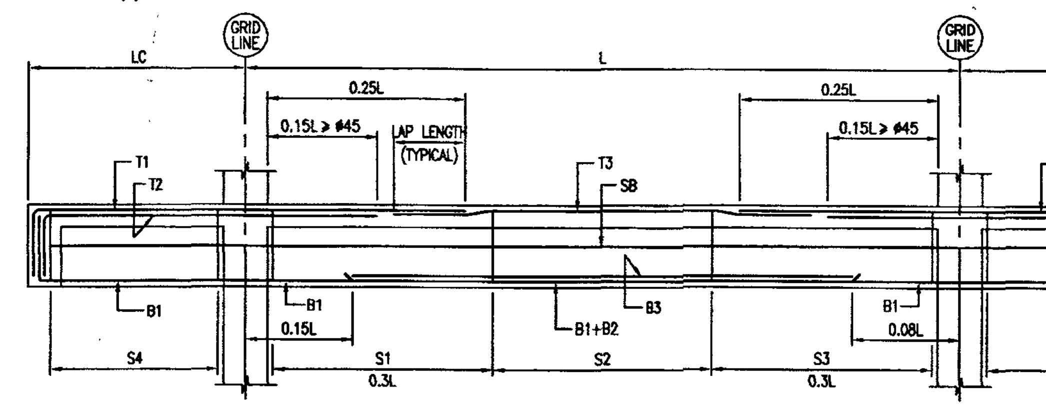
MARKING	CATEGORY	GRID LINE OR BEAM MARK	WIDTH (mm)	DEPTH (mm)	LEFT END CANTILEVER Lc	SPAN (APPROX) L	RIGHT END CANTILEVER Rc	T1	T2	T3	T4	T5	B1	B2	B3	SIDE BAR EACH FACE (EF) SB	S1	S2	S3	S4	TYPE	REMARKS
	1	–	300	750	–	10900	–	3T20	2T20	3T20	3T20	2T20	3T20	–	2T25	3T10	3T8–100	3T8–150	3T8–100	–	1a	
a	1	–	300	750	–	9900	–	3T25	2T25	3T25	3T25	2T25	3T25	–	2T20	3T10	3T8–100	3T8–150	3T8–100	–	1a	
	1	–	200	500	–	3650	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–200	T8–100	–	1	
0	1	–	200	500	–	1200	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–200	T8–100	–	1	
3	1	–	200	600	–	2400	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
6	1	–	200	600	–	1200	–	2T20	2T20	2T20	2T20	2T25	2T25	–	–	–	T10–100	T10–150	T10–100	–	1	
7	1	–	200	750	–	5300	–	2T20	2T20	2T20	2T20	2T20	2T20	–	–	–	T10–100	T10–150	T10–100	–	1	
	1	–	200	500	–	3600	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–200	T8–100	–	1	
	1	–	200	600	–	2700	–	2T25	2T25	2T25	2T25	–	2T25	–	2T16*	–	T8–100	T8–125	T8–100	–	1	
	2	–	300	750	–	5100	1900	3T25	2T20	3T25	3T25	2T25	3T25	–	2T20*	3T10	3T10–100	3T10–150	3T10–100	3T10–100	1a	
	1	–	200	500	–	3600	–	2T16	2T20	2T16	2T16	2T12	2T16	–	2T12*	–	T8–100	T8–200	T8–100	–	1	
	1	–	200	600	–	3600	–	2T25	2T25	2T25	2T25	2T20	2T25	–	2T20*	–	T12–100	T12–125	T12–100	–	1	
	1	–	200	600	–	4650	–	2T20	2T16	2T20	2T20	–	2T20	–	2T20*	–	T8–100	T8–150	T8–100	–	1	
	1	–	200	500	–	3600	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
0	1	–	200	500	–	3600	–	2T20	2T20	2T20	2T20	–	2T20	–	–	–	T10–100	T10–125	T10–100	–	1	
3	2	–	300	750	–	5100	1900	3T25	2T20	3T25	3T25	2T25	3T25	–	2T20*	3T10	3T10–100	3T10–150	3T10–100	3T10–100	1a	
4	1	–	200	500	–	5250	–	2T20	2T25	2T20	2T20	2T20	2T20	–	2T16	–	T10–100	T10–150	T10–100	–	1	
7	1	–	200	500	–	5250	–	2T25	2T25	2T25	2T25	2T25	2T25	–	–	–	T10–100	T10–150	T10–100	–	1	

MARKING | CATEGORY | BEAM MARK OR GRID LINE | (mm) WIDTH | (mm) DEPTH | CANTILEVER LEFT END | (APPROX) SPAN | CANTILEVER RIGHT END | T1 T2 T3 T4 T5 B1 B2 B3 SPAN | SB BAR SIDE | S1 S2 S3 S4 TYPE STIRRUPS | REMARKS
LOCATION | SIZE | SPAN | REINFORCEMENT

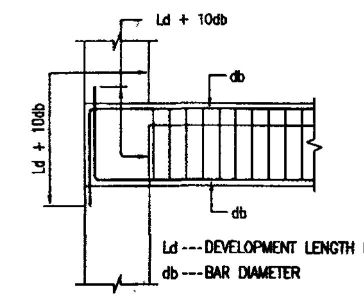


TYPICAL DETAIL OF SINGLE SPAN BEAM (1)

L --- LENGTH OF SPAN UNDER CONSIDERATION
LC --- LENGTH OF LEFT END CANTILEVER
RC --- LENGTH OF RIGHT END CANTILEVER
(1) --- CATEGORY



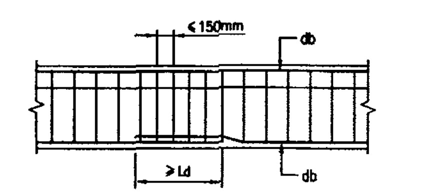
TYPICAL DETAIL OF SINGLE SPAN BEAM WITH CANTILEVERS (2)



Ld --- DEVELOPMENT LENGTH IN TENSION
db --- BAR DIAMETER

ANCHORAGE OF BEAM BARS AT BEAM AND COLUMN JUNCTION (EXTERNAL JOINT)

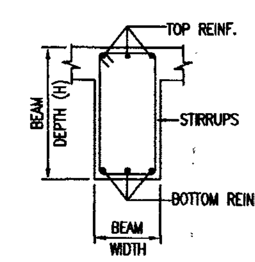
NOTE:
IN AN INTERNAL JOINT, BOTH TOP & BOTTOM BARS OF THE BEAM SHALL BE TAKEN CONTINUOUSLY THROUGH THE COLUMN



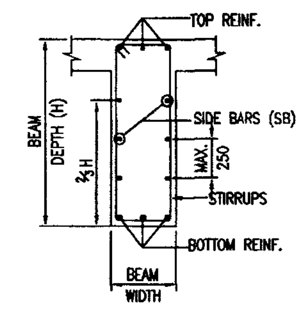
Ld --- DEVELOPMENT LENGTH IN TENSION
db --- BAR DIAMETER

LAP/SPLICE IN BEAM

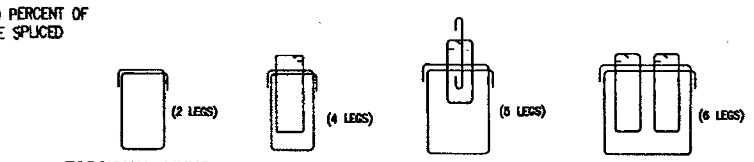
NOTE:
NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION



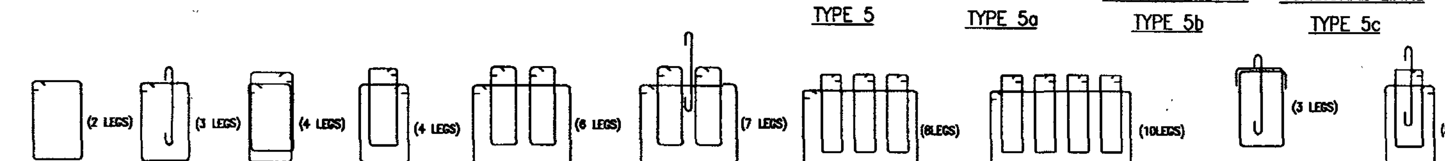
TYP. BEAM SECTION



TYP. SIDE BARS DETAIL FOR BEAM DEPTH > 750

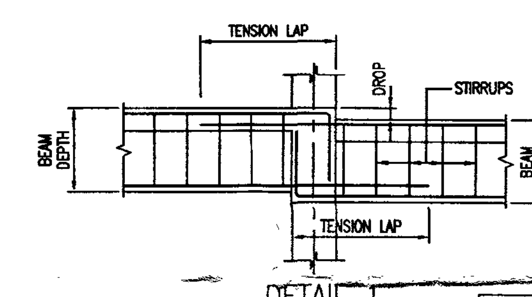


TORSIONAL LINKS TYPE 5 | TORSIONAL LINKS TYPE 5a | TORSIONAL LINKS TYPE 5b | TORSIONAL LINKS TYPE 5c

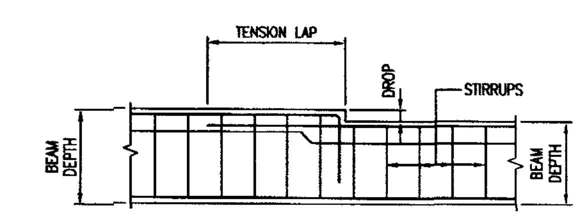


TYPE 1 | TYPE 1a | TYPE 2 | TYPE 2a | TYPE 3 | TYPE 3a | TYPE 4 | TYPE 6 | TORSIONAL LINKS TYPE 7 | TYPE 8

STIRRUPS TYPE

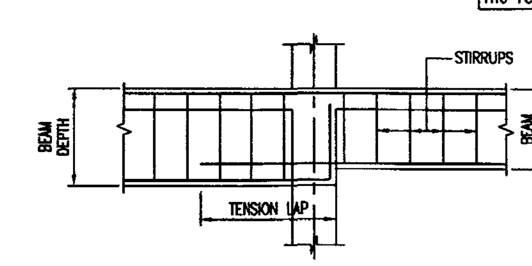


DETAIL 1

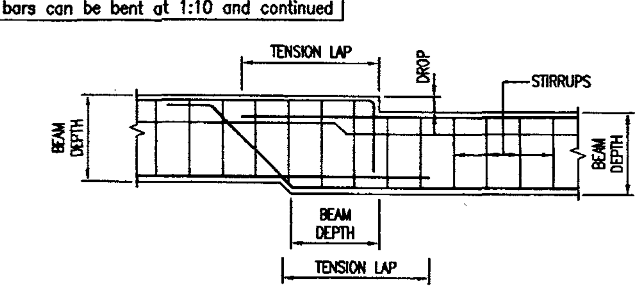


DETAIL 2

Wherever the drop is less than or equivalent to 50
The reinforcement bars can be bent at 1:10 and continued



DETAIL 3



DETAIL 4

NOTES :

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN AND ALL OTHER RELEVANT DRAWINGS.
2. IF THE REINFORCEMENT IS PROVIDED IN TWO LAYERS OR MORE, THEN SPACER BARS BETWEEN THE LAYERS NEED TO BE PROVIDED
3. SPACER BARS TO BE T25 OR MAIN BAR SIZE (WHICHEVER IS GREATER) AT 900c/c BETWEEN EACH LAYER OF MAIN STEEL
4. THE SPAN LENGTH INDICATED ARE NOT TO BE USED FOR SETTING OUT OR MEASUREMENT.
5. IF SAME SIZE OF THE REINFORCEMENT BARS IS INDICATED THROUGHOUT FOR BOTTOM OR TOP REINFORCEMENT, THE LAP PROVIDED FOR THE REINFORCEMENT CAN BE OMITTED BY PROVIDING STRAIGHT BARS FOR THE WHOLE LENGTH OF THE BEAM
6. LAP LENGTH FOR BARS SHOULD BE SAME AS TENSION ANCHORAGE LENGTH BASED UPON THE LARGER BAR DIAMETER FOR UNEQUAL SIZE OF BARS
7. FIRST STIRRUP OF BEAM SHOULD BE 50mm (MAXIMUM) FROM THE COLUMN FACE

A. PERAMAIYAN, M.E., (Struct.), M.I.E.
REGISTERED STRUCTURAL ENGINEER
CHENNAI METROPOLITAN ... AUTHORITY
REGISTRA...

* – INDICATES IN 2ND LAYER
** – INDICATES IN 3RD LAYER

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S–/NT/––/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S–/SD/––/01 & BEI707_S–/SD/––/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893–2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456–2000, NBC(SP7–2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
GUINDY, CHENNAI-600 032

MEP CONSULTANT:

CONSULTANTS : ARCHITECTURE
NATARAJ & VENKAT ARCHITECTS
18, 3rd SEAWARD RD, VALMIKI NAGAR
THIRUVANMIYUR, CHENNAI 600041
T/ + 91 44 2457 2457

Civil & Structural Engineer :
BURO ENGINEERS (I) PRIVATE LTD.,
Civil & Structural Consultants
NEW NO:31,OLD NO.:14, BESANT AVENUE ROAD,ADYAR,
CHENNAI 600020 TEL: 044-2491 2755
EMail : buroindia@buroengineers.in

9/26

STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

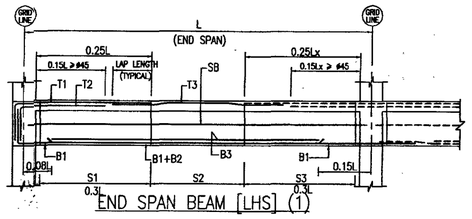
drawing title

FIRST FLOOR BEAM SCHEDULE

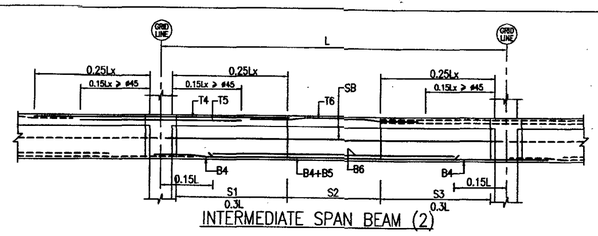
scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JUNE 2023	approved by	–
drawing no.	BEI707_S–/BM/01/––/02	revision	–

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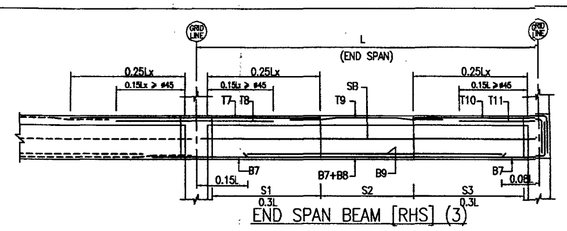
CAD FILE NAME: BEI707_S–BM01––02_.dwg



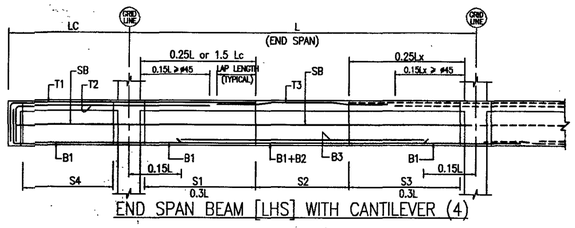
END SPAN BEAM [LHS] (1)



INTERMEDIATE SPAN BEAM (2)



END SPAN BEAM [RHS] (3)

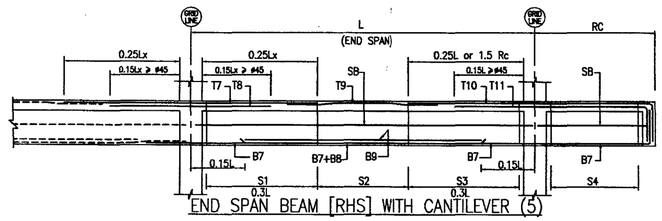


END SPAN BEAM [LHS] WITH CANTILEVER (4)

LEGEND

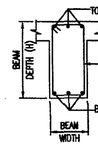
L ------LENGTH OF SPAN UNDER CONSIDERATION
Lo------LENGTH OF ADJACENT SPAN TO THE SPAN UNDER CONSIDERATION
Lc------LENGTH OF LEFT END CANTILEVER
Rc------LENGTH OF RIGHT END CANTILEVER
(1)-----CATEGORY

Lx = Length of span under consideration or Length of adjacent span whichever is greater



END SPAN BEAM [RHS] WITH CANTILEVER (5)

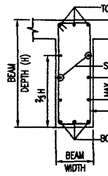
LOCATION			SIZE		SPAN			REINFORCEMENT																		SIDE BAR EACH FACE (EF)	STIRRUPS					REMARKS
BEAM MARKING	CATEGORY	GRID LINE OR BEAM MARK	WIDTH (mm)	DEPTH (mm)	LEFT END CANTILEVER Lc	SPAN (APPROX) L	RIGHT END CANTILEVER Rc	LEFT END SPAN						INTERMEDIATE SPAN						RIGHT END SPAN													
								T1	T2	T3	B1	B2	B3	T4	T5	T6	B4	B5	B6	T7	T8	T9	T10	T11	B7	B8	B9	SB	S1	S2	S3	S4	TYPE	
THB2b	4	–	300	750/600	600	2350	–	3T20	–	3T20	3T20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	3T8–100	3T8–150	3T8–100	3T8–100	1a	
THB3a	2	–	300	600	–	4500	–	–	–	–	–	–	–	3T20	2T16	3T20	3T20	–	2T12	–	–	–	–	–	–	–	–	–	3T10–100	3T10–150	3T10–100	–	1a	
THB4a	2	–	300	600	–	5600	–	–	–	–	–	–	–	3T20	2T25	3T20	3T20	–	2T20*	–	–	–	–	–	–	–	–	–	3T12–100	3T12–150	3T12–100	–	1a	
THB5a	2	–	300	600	–	2500	–	–	–	–	–	–	–	3T20	3T25	3T20	3T20	–	2T20*	–	–	–	–	–	–	–	–	–	3T12–100	3T12–125	3T12–100	–	1a	
THB6b	3	–	300	600	–	2400	–	–	–	–	–	–	–	–	–	–	–	–	–	3T20	2T16	3T20	3T20	3T25	3T20	–	3T20*	–	3T12–100	3T12–200	3T12–100	–	1a	
THB8	1	–	200	600	–	4000	–	2T20	2T20	2T20	2T20	–	2T16*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T12–100	T12–150	T12–100	–	1	
THB9	3	–	200	600	–	3800	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	2T16	2T25	2T20+ 2T25	2T25	2T25	–	2T20*	–	T10–100	T10–100	T10–100	–	1	
THB11	1	–	200	500	–	3600	–	2T20	2T16	2T20	2T20	–	2T16*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T10–100	T10–125	T10–100	–	1	
THB12	3	–	200	600	–	4400	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	2T16	2T20	2T20	2T16	2T20	–	–	–	T10–100	T10–125	T10–100	–	1	
THB14	1	–	250	750	–	2900	–	2T16	2T12	2T16	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	T10–100	T10–125	T10–100	–	1	
THB15	5	–	250	750	–	2900	1050	–	–	–	–	–	–	–	–	–	–	–	–	2T16	–	2T16	2T16	2T25	2T16	–	–	2T10	T10–100	T10–125	T10–100	T10–100	1	
THB19	1	–	800	600	–	12700	–	7T25	2T25	7T25	7T25	–	2T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7T8–100	7T8–200	7T8–100	–	3a	
THB20	3	–	800	600	–	12700	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	2T25	7T25	7T25	2T25	7T25	–	2T25	–	7T8–100	7T8–200	7T8–100	–	3a	
THB17a	1	–	200	750	–	7000	–	2T25	2T25	2T25	2T25	–	2T20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	T10–100	T10–150	T10–100	–	1	
THB2a	2	–	200	600	–	3750	–	–	–	–	–	–	–	2T25	2T16	2T20	2T20	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–100	T8–100	–	1	
THB1a	3	–	200	750	–	7350	–	–	–	–	–	–	–	–	–	–	–	–	–	2T25	2T20	2T25	2T25	2T20	2T25	–	–	–	T8–100	T8–150	T8–100	–	1	
TVB1	1	–	800	600	–	5650	–	7T25	–	7T25	7T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7T8–100	7T8–200	7T8–100	–	3a	
TVB2	3	–	800	600	–	4500	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	–	7T25	7T25	–	7T25	–	–	–	7T8–100	7T8–200	7T8–100	–	3a	
TVB11	1	–	200	500	–	1050	–	2T20	2T20	2T12+ 2T20	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–100	T8–100	–	1	
TVB12	3	–	200	500	–	4900	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	2T16	2T20	2T20	2T20	2T20	–	2T16*	–	T8–100	T8–150	T8–100	–	1	
TVB15	1	–	800	600	–	10400	–	7T25	2T25	7T25	7T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
TVB16	3	–	800	600	–	4750	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	–	7T25	7T25	–	7T25	–	–	–	7T8–100	7T8–150	7T8–100	–	3a	
THB2	4	–	300	750/600	600	2350	–	3T20	–	3T20	3T20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	3T8–100	3T8–150	3T8–100	3T8–100	1a	
THB3	2	–	300	600	–	4500	–	–	–	–	–	–	–	3T20	2T16	3T20	3T20	–	2T12	–	–	–	–	–	–	–	–	–	3T10–100	3T10–150	3T10–100	–	1a	
THB4	2	–	300	600	–	5600	–	–	–	–	–	–	–	3T20	2T25	3T20	3T20	–	2T20*	–	–	–	–	–	–	–	–	–	3T12–100	3T12–150	3T12–100	–	1a	
THB5a	2	–	300	600	–	2500	–	–	–	–	–	–	–	3T20	3T25	3T20	3T20	–	2T20*	–	–	–	–	–	–	–	–	–	3T12–100	3T12–125	3T12–100	–	1a	
THB6	3	–	300	600	–	2400	–	–	–	–	–	–	–	–	–	–	–	–	–	3T20	2T16	3T20	3T20	3T25	3T20	–	3T20*	–	3T12–100	3T12–200	3T12–100	–	1a	
MARKING BEAM	CATEGORY	BEAM MARK OR GRID LINE	(mm) WIDTH	(mm) DEPTH	Lc CANTILEVER LEFT END	L (APPROX) SPAN	Rc CANTILEVER RIGHT END	T1	T2	T3	B1	B2	B3	T4	T5	T6	B4	B5	B6	T7	T8	T9	T10	T11	B7	B8	B9	BAR SIDE	S1	S2	S3	S4	TYPE	REMARKS
LOCATION			SIZE		SPAN			LEFT END SPAN						INTERMEDIATE SPAN						RIGHT END SPAN								STIRRUPS					
								REINFORCEMENT																									



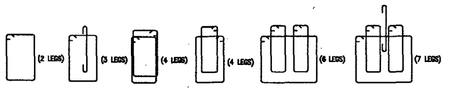
TYP. BEAM SECTION

NOTES :

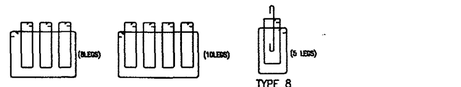
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6. LAP LENGTH FOR BARS SHOULD BE SAME AS TENSION ANCHORAGE LENGTH BASED UPON THE LARGER BAR DIAMETER FOR UNEQUAL SIZE OF BARS
7. FIRST STIRRUP OF BEAM SHOULD BE 50mm (MAXIMUM) FROM THE COLUMN FACE



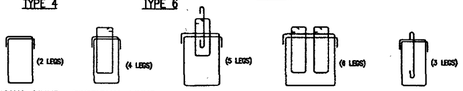
TYP. SIDE BARS DETAIL FOR BEAM DEPTH > 750



TYPE 1 TYPE 1a TYPE 2 TYPE 2a TYPE 3 TYPE 3a

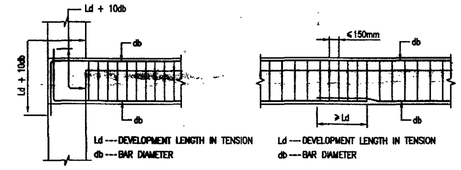


TYPE 4 TYPE 6 TYPE 8



TORSIONAL LINKS TYPE 5 TORSIONAL LINKS TYPE 5a TORSIONAL LINKS TYPE 5b TORSIONAL LINKS TYPE 5c TORSIONAL LINKS TYPE 7

STIRRUPS TYPE

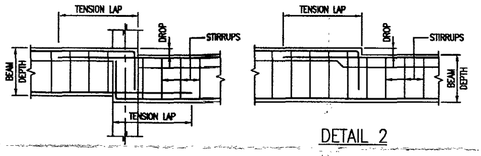


ANCHORAGE OF BEAM BARS AT BEAM AND COLUMN JUNCTION (EXTERNAL JOINT)

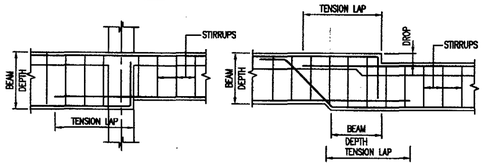
NOTE:
IN AN INTERNAL JOINT, BOTH TOP & BOTTOM BARS OF THE BEAM SHALL BE TAKEN CONTINUOUSLY THROUGH THE COLUMN

LAP/SPLICE IN BEAM

NOTE:
NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION



DETAIL 1 DETAIL 2



DETAIL 3 DETAIL 4

Wherever the drop is less than or equivalent to 50 The reinforcement bars can be bent at 1:10 and continued

*– INDICATES IN 2ND LAYER
**– INDICATES IN 3RD LAYER

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NOTES:

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2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S-/MT/--/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S-/SD/--/01 & BEI707_S-/SD/--/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893–2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456–2000, NBC(SP7–2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

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M/s. ALWARPET PROPERTIES PVT LTD.,
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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

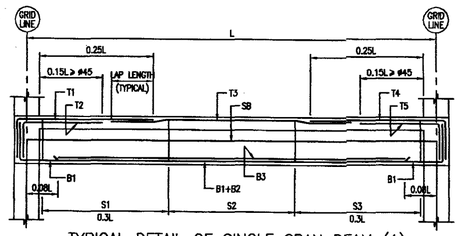
TYPICAL FLOOR (2nd TO 9th FLOORS) & ROOF BEAM SCHEDULE

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JUNE 2023	approved by	–
drawing no.	BEI707_S–/BM/T–/–/01	revision	–

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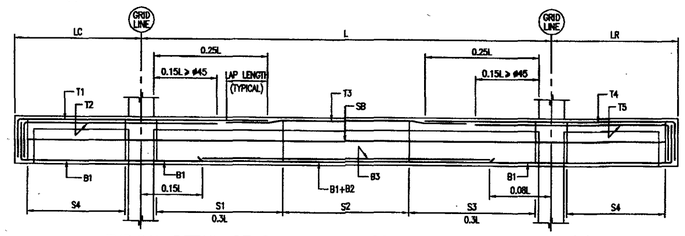
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LOCATION			SIZE		SPAN			REINFORCEMENT								SIDE BAR EACH FACE (EF)	STIRRUPS					REMARKS
BEAM MARKING	CATEGORY	GRID LINE OR BEAM MARK	WIDTH (mm)	DEPTH (mm)	LEFT END CANTILEVER Lc	SPAN (APPROX) L	RIGHT END CANTILEVER Rc	SPAN T1	T2	T3	T4	T5	B1	B2	B3	SB	S1	S2	S3	S4	TYPE	
THB6a	1	–	300	750	–	9900	–	3T20	2T20	3T20	3T20	2T20	3T25	–	2T25*	3T10	3T8–100	3T8–125	3T8–100	–	1a	
THB7	1	–	200	500	–	3650	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
THB10	1	–	200	500	–	1200	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–100	T8–100	–	1	
THB13	1	–	200	600	–	2400	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–125	T8–100	–	1	
THB16	1	–	200	600	–	1200	–	2T20	2T20	2T20	2T20	2T25	2T25	–	–	–	T10–100	T10–150	T10–100	–	1	
THB17	1	–	200	750	–	5300	–	2T25	–	2T25	2T25	2T25	2T25	–	–	–	T12–100	T12–150	T12–100	–	1	
TVB3	1	–	200	500	–	3600	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
TVB4	1	–	200	600	–	2700	–	2T25	2T25	2T25	2T25	–	2T25	–	–	–	T8–100	T8–100	T8–100	–	1	
TVB6	1	–	200	500	–	3600	–	2T16	2T16	2T16	2T16	–	2T16	–	–	–	T8–100	T8–100	T8–100	–	1	
TVB7	1	–	200	600	–	3600	–	2T25	2T25	2T25	2T25	–	2T25	–	2T16*	–	T12–100	T12–125	T12–100	–	1	
TVB8	1	–	200	600	–	4650	–	2T20	2T16	2T20	2T20	–	2T20	–	2T20	–	T8–100	T8–200	T8–100	–	1	
TVB9	1	–	200	500	–	3600	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T8–100	T8–150	T8–100	–	1	
TVB10	1	–	200	500	–	3600	–	2T16	2T25	2T16	2T16	–	2T20	–	–	–	T10–100	T10–125	T10–100	–	1	
TVB14	1	–	200	500	–	5250	–	2T20	2T20	2T20	2T20	2T20	2T20	–	2T20*	–	T10–100	T10–125	T10–100	–	1	
THB1b	1	–	300	750	–	9800	–	3T20	2T16	3T20	3T20	2T16	3T20	–	2T20	–	3T8–100	3T8–125	3T8–100	–	1a	
THB1c	2	–	600	750	900	9800	2250	6T25	4T25	6T25	6T25	6T25	6T25	–	2T25	–	6T8–100	6T8–150	6T8–100	6T8–100	3	
THB6b	2	–	450	750	2100	9800	–	4T25	2T25	4T25	4T25	4T25	4T20	–	–	2T10	4T8–100	4T8–150	4T8–100	4T8–100	2a	
TVB17	1	–	200	500	–	5250	–	2T25	2T25	2T25	2T25	2T25	2T25	–	–	–	T10–100	T10–150	T10–100	–	1	
THB1d	2	–	450	750	2100	9800	–	4T25	2T25	4T25	4T25	4T25	4T20	–	–	2T10	4T8–100	4T8–150	4T8–100	4T8–100	2a	
THB1	1	–	300	750	–	10900	–	3T20	2T20	3T20	3T20	2T20	3T20	–	2T25	3T10	3T8–100	3T8–150	3T8–100	–	1a	
TVB5	2	–	300	750	–	5100	1900	3T25	2T20	3T25	3T25	2T25	3T25	–	2T20*	3T10	3T10–100	3T10–150	3T10–100	3T10–100	1a	
TVB5	2	–	300	750	–	5100	1900	3T25	2T20	3T25	3T25	2T25	3T25	–	2T20*	3T10	3T10–100	3T10–150	3T10–100	3T10–100	1a	
MARKING BEAM	CATEGORY	BEAM MARK OR GRID LINE	(mm) WIDTH	(mm) DEPTH	CANTILEVER LEFT END	(APPROX) SPAN	CANTILEVER RIGHT END	T1	T2	T3	T4	T5	B1	B2	B3	BAR SIDE	S1	S2	S3	S4	TYPE	REMARKS
LOCATION			SIZE		SPAN			REINFORCEMENT									STIRRUPS					

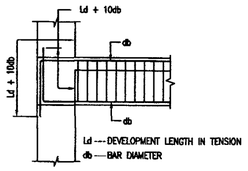


TYPICAL DETAIL OF SINGLE SPAN BEAM (1)

L ---- LENGTH OF SPAN UNDER CONSIDERATION
LC ---- LENGTH OF LEFT END CANTILEVER
RC ---- LENGTH OF RIGHT END CANTILEVER
(1) ---- CATEGORY



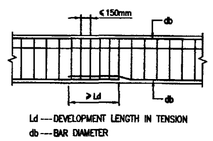
TYPICAL DETAIL OF SINGLE SPAN BEAM WITH CANTILEVERS (2)



Ld ---DEVELOPMENT LENGTH IN TENSION
db ---BAR DIAMETER

ANCHORAGE OF BEAM BARS AT BEAM AND COLUMN JUNCTION (EXTERNAL JOINT)

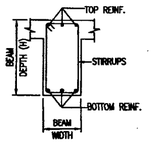
NOTE:
IN AN INTERNAL JOINT, BOTH TOP & BOTTOM BARS OF THE BEAM SHALL BE TAKEN CONTINUOUSLY THROUGH THE COLUMN



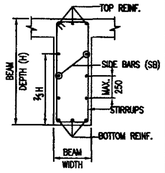
Ld ---DEVELOPMENT LENGTH IN TENSION
db ---BAR DIAMETER

LAP/SPLICE IN BEAM

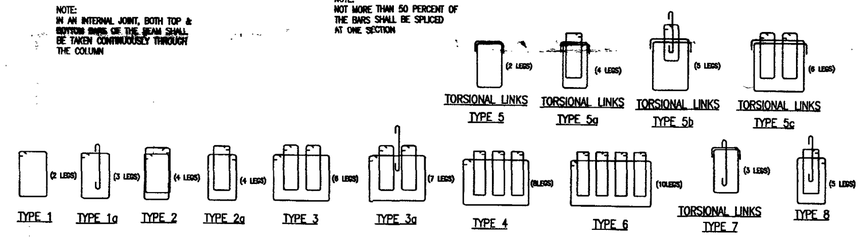
NOTE:
NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION



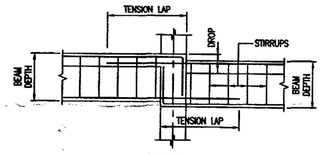
TYP. BEAM SECTION



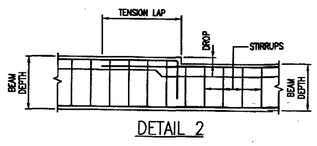
TYP. SIDE BARS DETAIL FOR BEAM DEPTH > 750



STIRRUPS TYPE

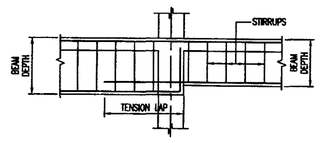


DETAIL 1

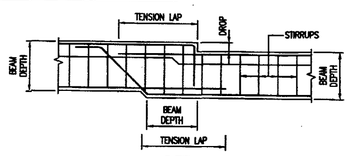


DETAIL 2

Wherever the drop is less than or equivalent to 50
The reinforcement bars can be bent at 1:10 and continued



DETAIL 3



DETAIL 4

NOTES :

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN AND ALL OTHER RELEVANT DRAWINGS.
2. IF THE REINFORCEMENT IS PROVIDED IN TWO LAYERS OR MORE, THEN SPACER BARS BETWEEN THE LAYERS NEED TO BE PROVIDED
3. SPACER BARS TO BE T25 OR MAIN BAR SIZE (WHICHEVER IS GREATER) AT 900c/c BETWEEN EACH LAYER OF MAIN STEEL
4. THE SPAN LENGTH INDICATED ARE NOT TO BE USED FOR SETTING OUT OR MEASUREMENT.
5. IF SAME SIZE OF THE REINFORCEMENT BARS IS INDICATED THROUGHOUT FOR BOTTOM OR TOP REINFORCEMENT, THE LAP PROVIDED FOR THE REINFORCEMENT CAN BE OMITTED BY PROVIDING STRAIGHT BARS FOR THE WHOLE LENGTH OF THE BEAM
6. LAP LENGTH FOR BARS SHOULD BE SAME AS TENSION ANCHORAGE LENGTH BASED UPON THE LARGER BAR DIAMETER FOR UNEQUAL SIZE OF BARS
7. FIRST STIRRUP OF BEAM SHOULD BE 50mm (MAXIMUM) FROM THE COLUMN FACE

NOTES:

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STRUCTURAL

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drawing title

TYPICAL FLOOR (2nd TO 9th FLOORS) & ROOF BEAM SCHEDULE

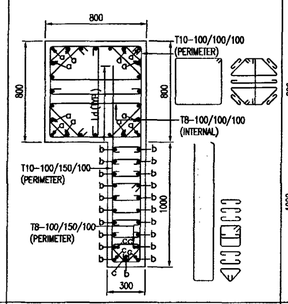
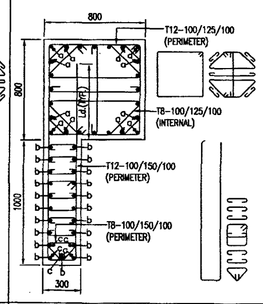
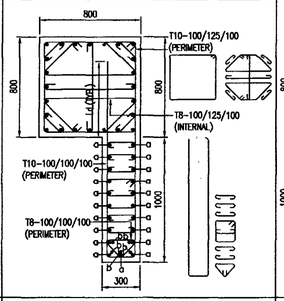
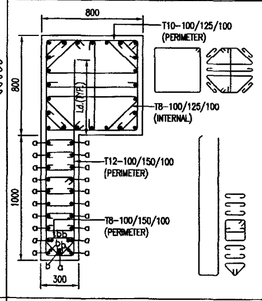
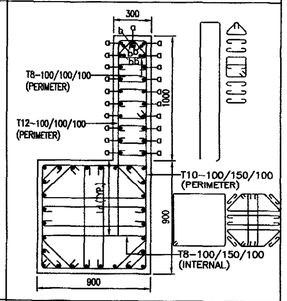
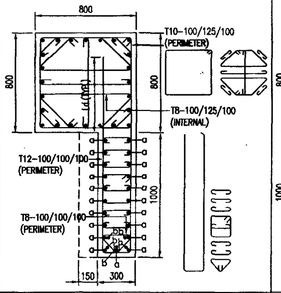
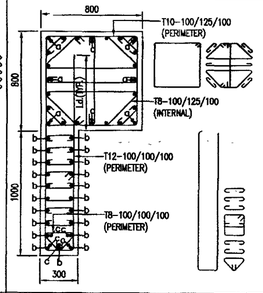
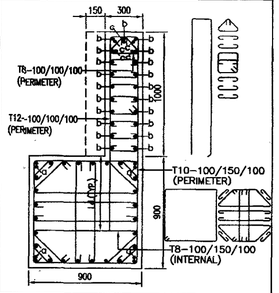
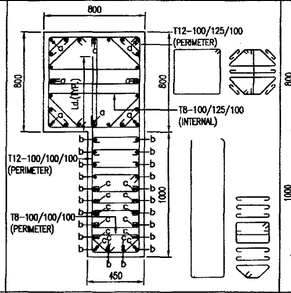
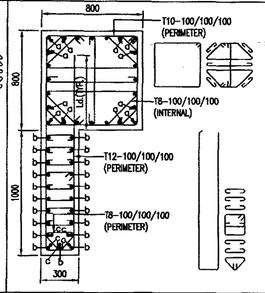
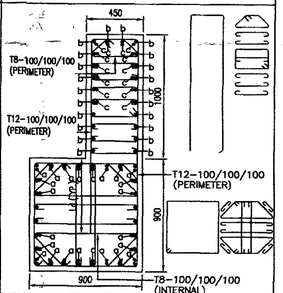
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drawn by	CDR	checked by	AP
date	JUNE 2023	approved by	–
drawing no.	BEI707_S-/BM/T-/--/02	revision	–

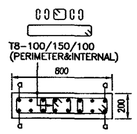
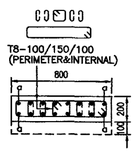
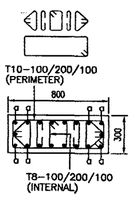
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* – INDICATES IN 2ND LAYER
** – INDICATES IN 3RD LAYER

9th FLOOR LEVEL TO ROOF LEVEL			SAME AS BELOW
SIZE	AS SHOWN	800x800	
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	
REINFORCEMENT/STEEL GRADE Fe	24T20+12T20(a)+21T25(b)+5T25(c)/Fe 500	24T20+12T20(a)+21T25(b)+5T25(c)/Fe 500	
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	
5th FLOOR LEVEL TO 8th FLOOR ROOF LEVEL			
SIZE	AS SHOWN	800x800	900x900
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	24T20+21T25(a)+5T25(b)/Fe 500	24T20+21T25(a)+5T25(b)/Fe 500	28T20+21T25(a)+5T25(b)/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	AS SHOWN
1st FLOOR LEVEL TO 4th FLOOR ROOF LEVEL			
SIZE	AS SHOWN	800x800	900x900
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	24T20+21T25(a)+5T25(b)/Fe 500	24T20+8T20(a)+21T25(b)+5T25(c)/Fe 500	28T25+4T20(a)+21T25(b)+5T25(c)/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	AS SHOWN
PILECAP/BASEMENT LEVEL TO GROUND FLOOR ROOF LVL			
SIZE	AS SHOWN	800x800	900x900
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	24T25+8T25(a)+22T25(b)+14T25(c)/Fe 500	24T25+12T25(a)+22T25(b)+5T25(c)/Fe 500	28T25+24T25(a)+22T25(b)+14T25(c)/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	AS SHOWN
COLUMN MARK	TC11	TC12	TC15

ROOF LEVEL TO LMR LEVEL	SAME AS BELOW
SIZE	
CONCRETE GRADE/COVER	
REINFORCEMENT/STEEL GRADE Fe	
LINKS/TIES/STEEL GRADE Fe	
8th FLOOR LEVEL TO ROOF LEVEL	
SIZE	200x800
CONCRETE GRADE/COVER	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	4T25(a)+12T20/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
7th FLOOR LEVEL TO 7th FLOOR ROOF LEVEL	
SIZE	200x800
CONCRETE GRADE/COVER	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	4T25(a)+12T20/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
1st FLOOR LEVEL TO 6th FLOOR ROOF LEVEL	SAME AS BELOW
SIZE	
CONCRETE GRADE/COVER	
REINFORCEMENT/STEEL GRADE Fe	
LINKS/TIES/STEEL GRADE Fe	
PILECAP/BASEMENT LEVEL TO GROUND FLOOR ROOF LVL	
SIZE	300x800
CONCRETE GRADE/COVER	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	8T25(a)+10T20/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
COLUMN MARK	TC7

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S-/NT/--/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S-/SD/--/01 & BEI707_S-/SD/--/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786-2008
7. CLEAR COVER FOR COLUMN-40mm, SHEAR WALL -30mm, SLAB-25mm. BEAM-30mm, PILE & PILE CAP-75mm BASEMENT RC WALL, UG SUMP&STP RC WALL -40mm BASEMENT SLAB-50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893-2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456-2000, NBC(SP7-2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:

M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
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MEP CONSULTANT:

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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

COLUMN SCHEDULE

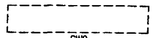
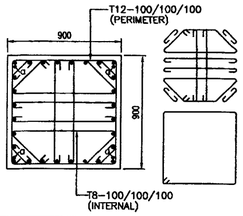
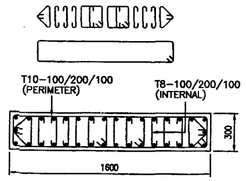
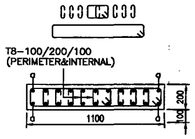
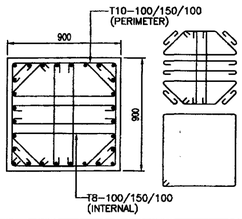
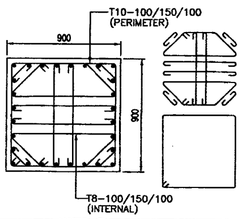
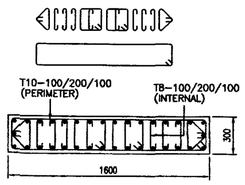
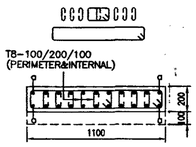
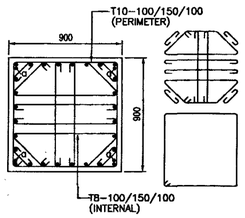
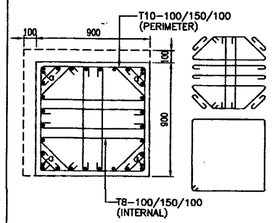
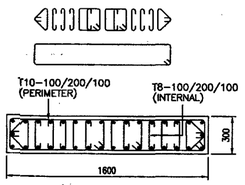
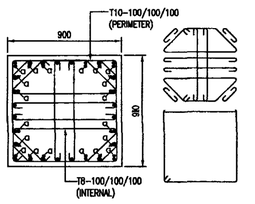
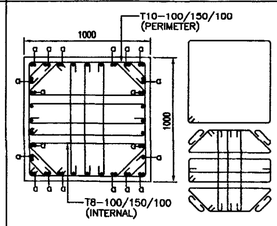
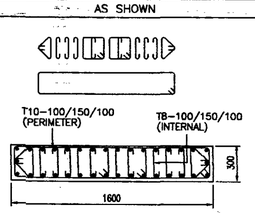
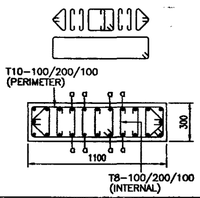
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drawn by	CDR	checked by	AP
date	AUG 2022	approved by	–
drawing no.	BEI707_S-/CL/SH/--/03	revision	–

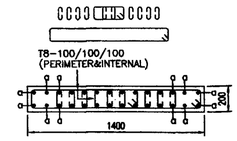
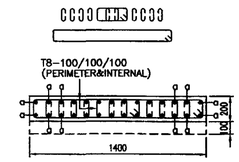
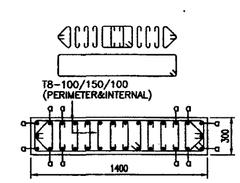
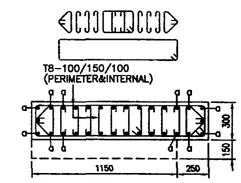
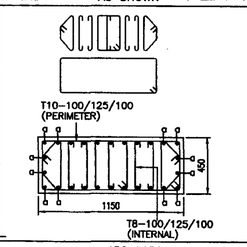
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A. PERAMAIYAN, M.E., (Struct.), M.I.E.
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REGISTRATION No. S/GR-I/19/03/026
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ADYAR, CHENNAI-600 020.
E-Mail: peram@buroengineers.in
Mobile: +91 9632545630

12

ROOF LEVEL TO LMR LEVEL			 SAME AS BELOW	SAME AS BELOW
SIZE				
CONCRETE GRADE/COVER				
REINFORCEMENT/STEEL GRADE Fe				
LINKS/TIES/STEEL GRADE Fe				
9th FLOOR LEVEL TO ROOF LEVEL	SAME AS BELOW			
SIZE		900x900	300x1600	200x1100
CONCRETE GRADE/COVER		M45/40mm	M45/30mm	M45/30mm
REINFORCEMENT/STEEL GRADE Fe		28T20+4T20(a)/Fe 500	34T16/Fe 500	4T25(a)+18T20/Fe 500
LINKS/TIES/STEEL GRADE Fe		AS SHOWN	AS SHOWN	AS SHOWN
5th FLOOR LEVEL TO 8th FLOOR ROOF LEVEL				
SIZE	900x900	900x900	300x1600	200x1100
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	M45/30mm	M45/30mm
REINFORCEMENT/STEEL GRADE Fe	28T25/Fe 500	28T20/Fe 500	34T16/Fe 500	4T25(a)+18T20/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
1st FLOOR LEVEL TO 4th FLOOR ROOF LEVEL				SAME AS BELOW
SIZE	900x900	900x900	300x1600	
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	M45/30mm	
REINFORCEMENT/STEEL GRADE Fe	28T25+4T25(a)/Fe 500	28T25+4T25(a)/Fe 500	34T20/Fe 500	
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	AS SHOWN	
PILECAP/BASEMENT LEVEL TO GROUND FLOOR ROOF LVL				
SIZE	900x900	1000x1000	300x1600	300x1100
CONCRETE GRADE/COVER	M45/40mm	M45/40mm	M45/30mm	M45/30mm
REINFORCEMENT/STEEL GRADE Fe	28T25+20T25(a)/Fe 500	32T25+20T25(a)/Fe 500	34T25/Fe 500	16T25+8T20(a)/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN	AS SHOWN	AS SHOWN	AS SHOWN
COLUMN MARK	TC13	TC14	SW1, SW2	SW4

8th FLOOR LEVEL TO ROOF LEVEL	
SIZE	200x1400
CONCRETE GRADE/COVER	M45/30mm
REINFORCEMENT/STEEL GRADE Fe	12T16(a)+16T12/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
7th FLOOR LEVEL TO 7th FLOOR ROOF LEVEL	
SIZE	200x1400
CONCRETE GRADE/COVER	M45/30mm
REINFORCEMENT/STEEL GRADE Fe	12T16(a)+16T12/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
3rd FLOOR LEVEL TO 6th FLOOR ROOF LEVEL	
SIZE	300x1400
CONCRETE GRADE/COVER	M45/30mm
REINFORCEMENT/STEEL GRADE Fe	12T16(a)+18T12/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
GROUND FLOOR LEVEL TO 2nd FLOOR ROOF LVL	
SIZE	300x1400
CONCRETE GRADE/COVER	M45/30mm
REINFORCEMENT/STEEL GRADE Fe	12T25(a)+18T20/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
PILECAP/BASEMENT LEVEL TO BASEMENT FLOOR ROOF LVL	
SIZE	450x1150
CONCRETE GRADE/COVER	M45/40mm
REINFORCEMENT/STEEL GRADE Fe	12T25(a)+14T20/Fe 500
LINKS/TIES/STEEL GRADE Fe	AS SHOWN
COLUMN MARK	TC6

A. PERAMAIYAN, B.E., (Struct.), M.I.E.
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Mobile: +91 9[illegible]2545630

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S-/NT/--/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S-/SD/--/01 & BEI707_S-/SD/--/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 - PILE
   2) M35 - BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 - RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786-2008
7. CLEAR COVER FOR COLUMN-40mm, SHEAR WALL -30mm, SLAB-25mm, BEAM-30mm, PILE & PILE CAP-75mm BASEMENT RC WALL, UG SUMP&STP RC WALL -40mm BASEMENT SLAB-50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893-2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456-2000, NBC(SP7-2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:
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MEP CONSULTANT:

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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

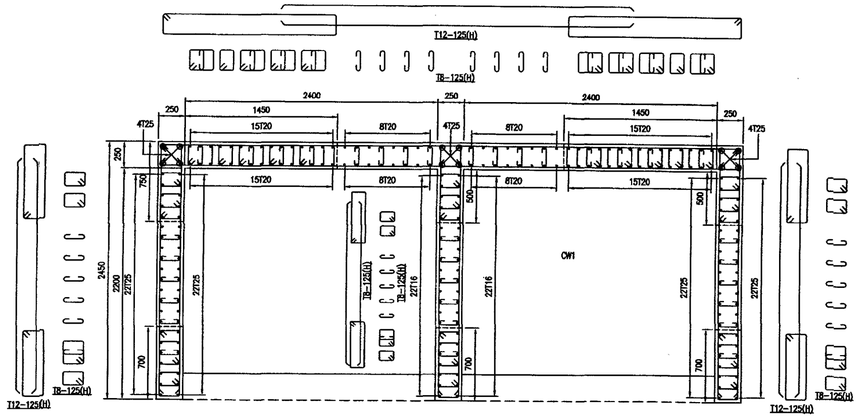
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COLUMN SCHEDULE

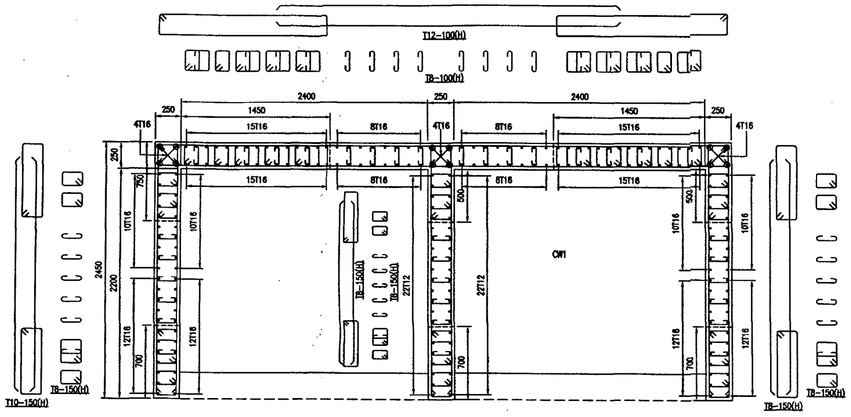
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drawing no.	BEI707_S-/CL/SH/--/02	revision	–

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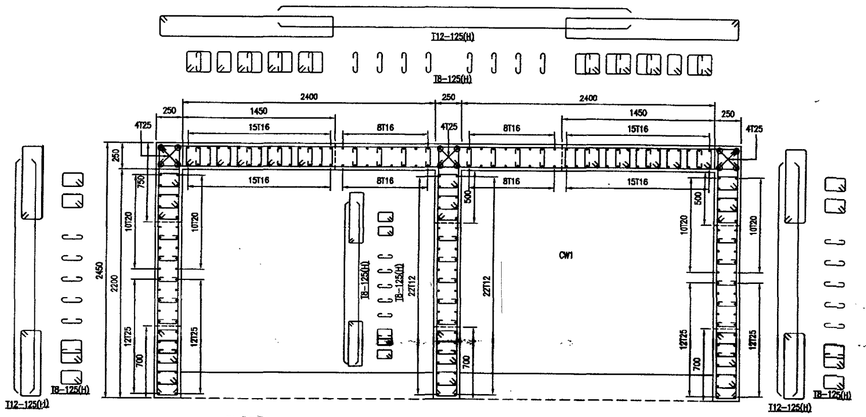
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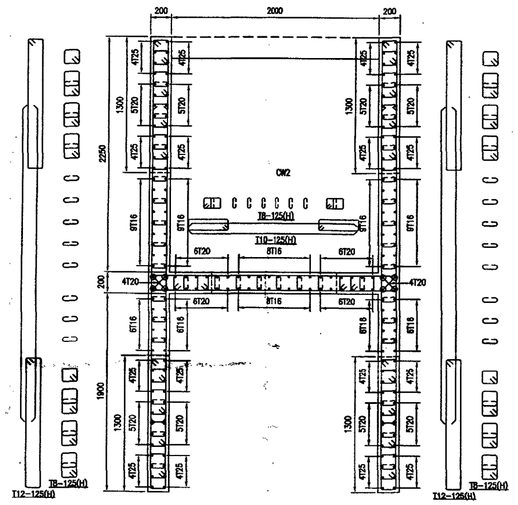
PILECAP/BASEMENT LEVEL TO GROUND FLOOR ROOF LEVEL(CW1)
SCALE 1:30



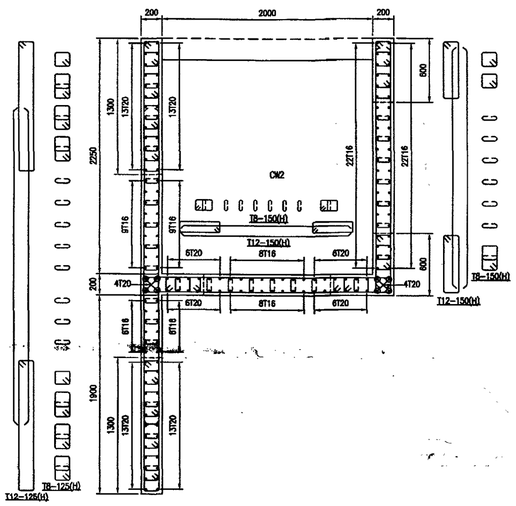
5th FLOOR LEVEL TO LMR LEVEL(CW1)
SCALE 1:30



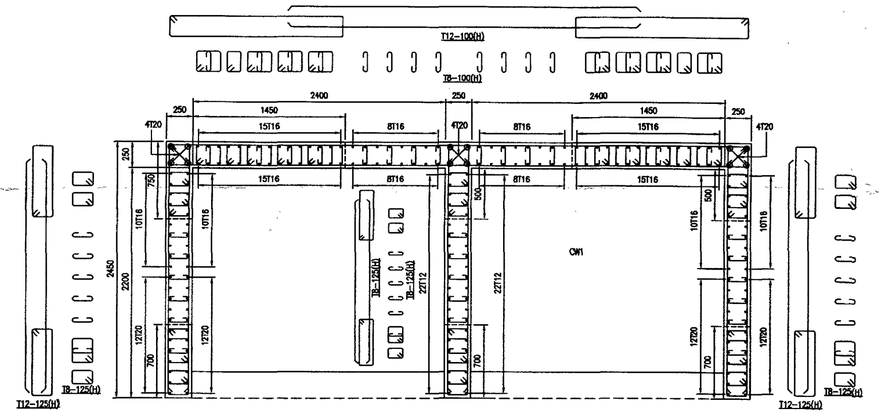
1st FLOOR LEVEL TO 2nd FLOOR ROOF LEVEL(CW1)
SCALE 1:30



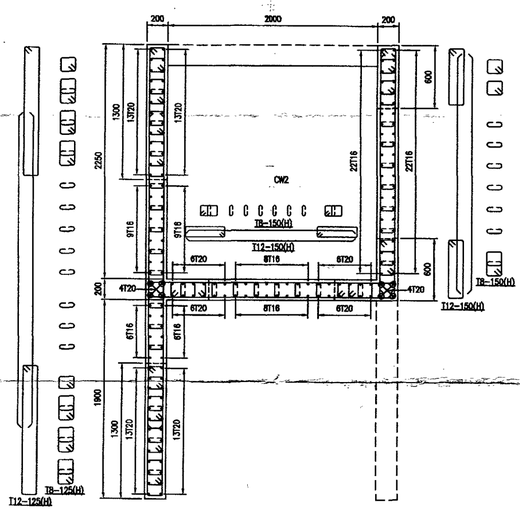
PILECAP/BASEMENT LEVEL TO GROUND FLOOR ROOF LEVEL(CW2)
SCALE 1:30



2nd FLOOR LEVEL TO 3rd FLOOR ROOF LEVEL(CW2)
SCALE 1:30



3rd FLOOR LEVEL TO 4th FLOOR ROOF LEVEL(CW1)
SCALE 1:30



1st FLOOR LEVEL TO 1st FLOOR ROOF LEVEL(CW2)
SCALE 1:30



4th FLOOR LEVEL TO LMR LEVEL(CW2)
SCALE 1:30

NOTES:

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3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S-/SD/--/01 & BEI707_S-/SD/--/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
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   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
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11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
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MEP CONSULTANT:

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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

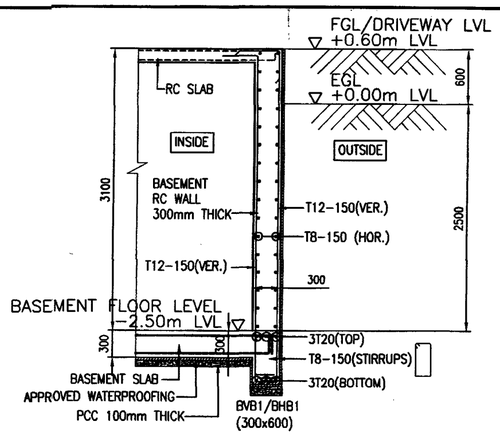
LIFT COREWALL (CW1&CW2) DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JUL 2020	approved by	–
drawing no.	BEI707_S-/CW/DT/--/01	revision	0

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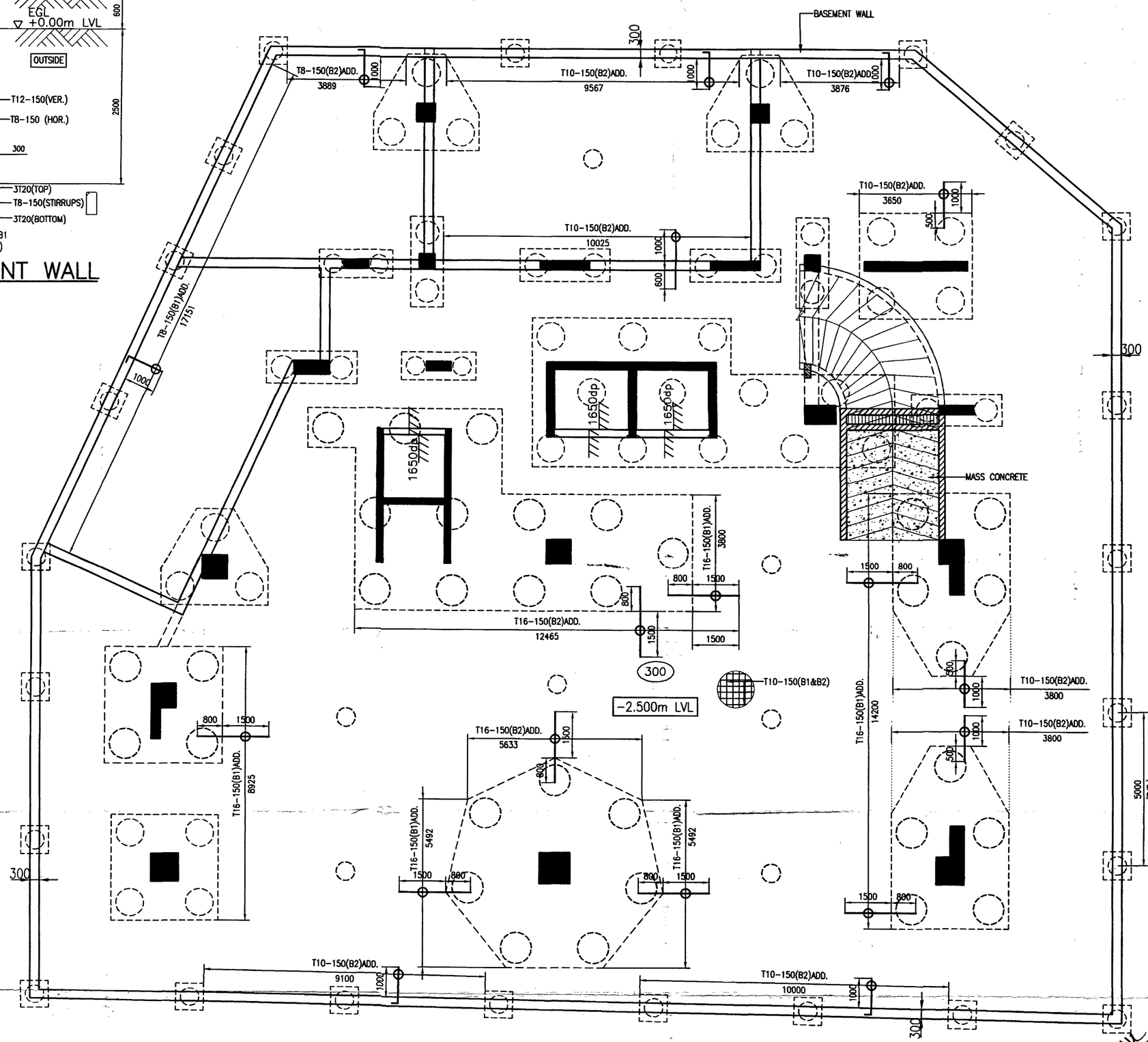
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TYPICAL BASEMENT WALL REINFT. DETAILS

SCALE-1:50



BASEMENT FLOOR SLAB REINFT. DETAILS(BOTTOM&BOTTOM ADD. REINFT.)

SCALE 1:100

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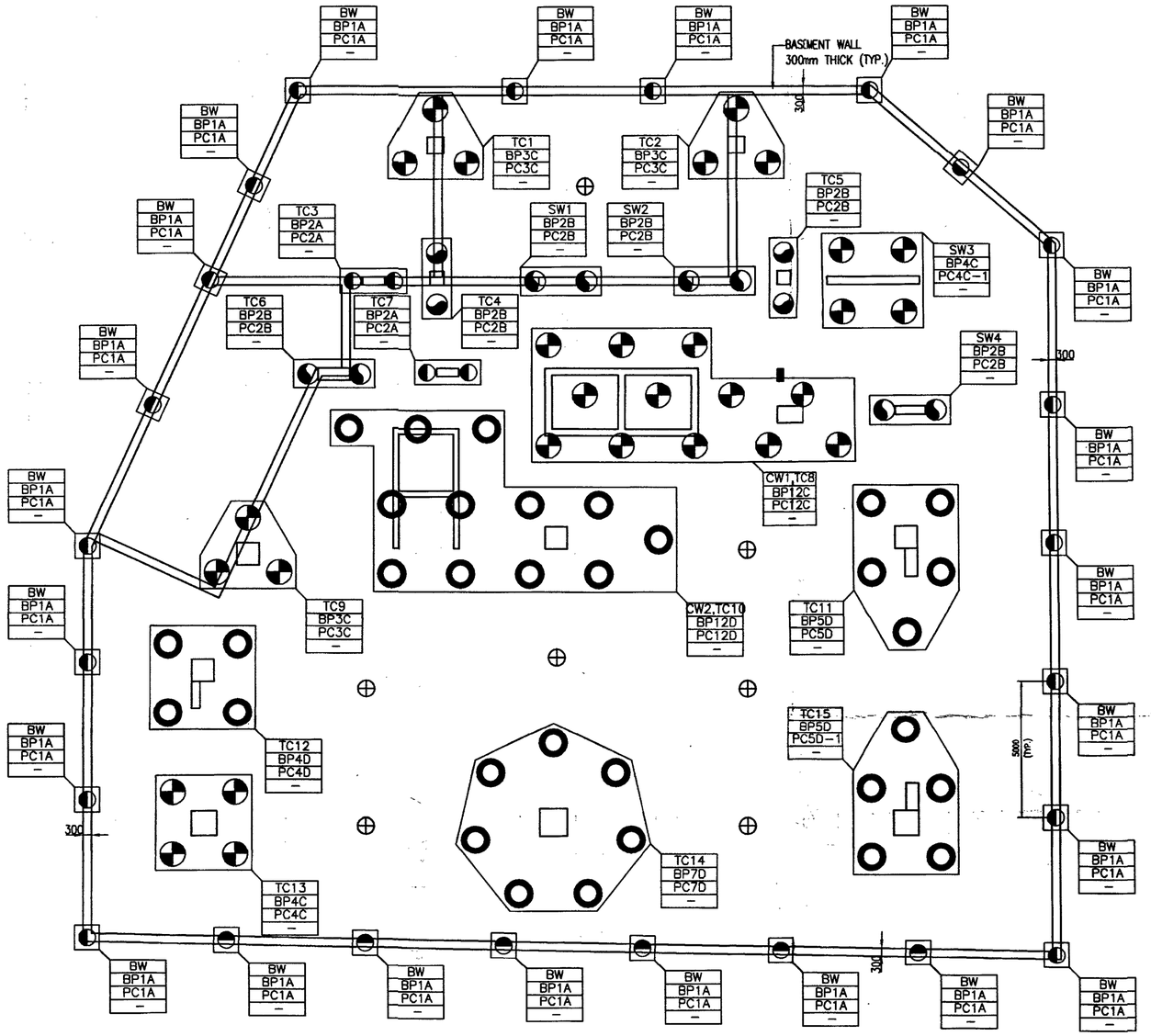
BASEMENT FLOOR SLAB REINFT. DETAILS
(BOTTOM&BOTTOM ADD. REINFT.)

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
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PILING & PILECAP LAYOUT PLAN

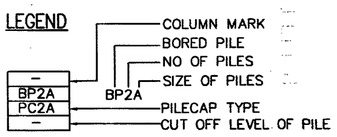
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NOTES

UNLESS OTHERWISE SPECIFIED

1. APPROVED WATER PROOFING SHALL BE DONE FOR BOTH SKIN WALL/ BASEMENT RETAINING WALL, UNDER GROUND WATER TANK WALL AND RAFT SLAB AS PER THE APPROVED METHODOLOGY.

LEGEND



PILE CUTOFF LEVELS ARRIVED WITH BASEMENT FLOOR LEVEL –.––m LVL

THIS DRAWING TO BE READ IN CONJUNCTION WITH THE DWG. NO. BEI707_S–/PL/––/––/02 (LATEST REVISION)

TABLE–1(COMPRESSION PILE)

PILE MARK/TYPE	SIZE IN (mm)	WORKING COMPRESSION CAPACITY (TONS)	WORKING TENSION CAPACITY (TONS)	NOS. OF PILES	REMARKS
TYPE A	600ø	95	52	28	–
TYPE B	750ø	130	65	12	–
TYPE C	900ø	170	79	29	–
TYPE D	1000ø	200	89	33	–

TABLE–2

PILE MARK/TYPE	SIZE IN (mm)	TENSION CAPACITY (TONS)	NOS. OF PILES	LONGITUDINAL REINFORCEMENT
TENSION PILE ⊕ TYPE D	600ø	52	7	12T16
TENSION PILE – PILE CUT OFF LEVEL IS –.––m LVL				

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NO.	AMENDMENTS	BY	DATE
–	ISSUED FOR CONSTRUCTION	CDR	10/04/24

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MEP CONSULTANT:

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CONSTRUCTION DRAWING

STRUCTURAL

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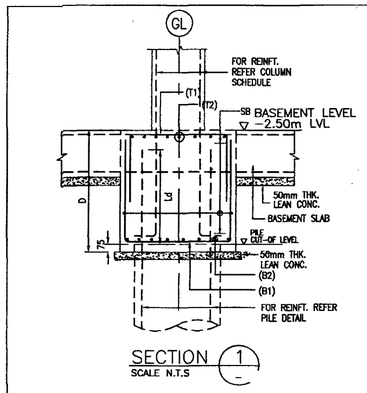
drawing title

PILING & PILECAP LAYOUT PLAN

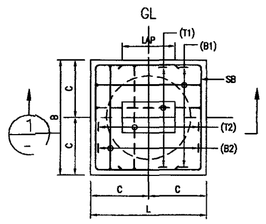
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date	JAN 2023	approved by	–
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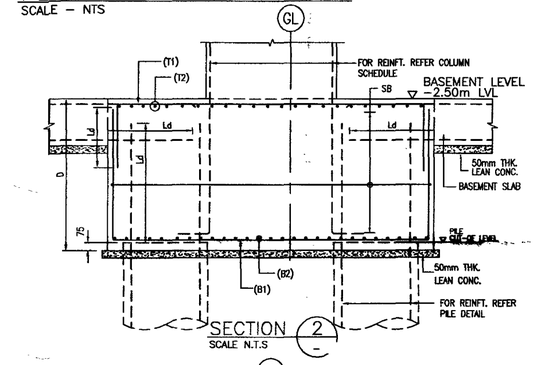
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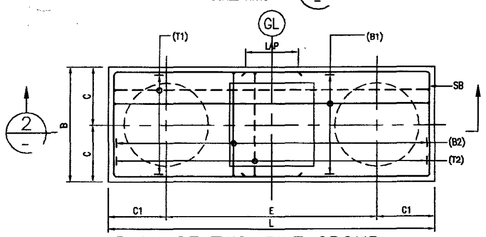
SECTION 1
SCALE N.T.S



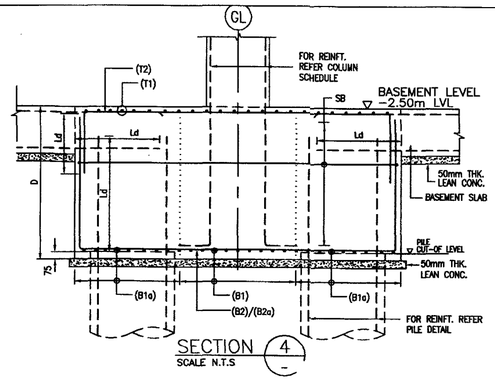
PLAN OF ONE-PILE GROUP
SCALE - NTS



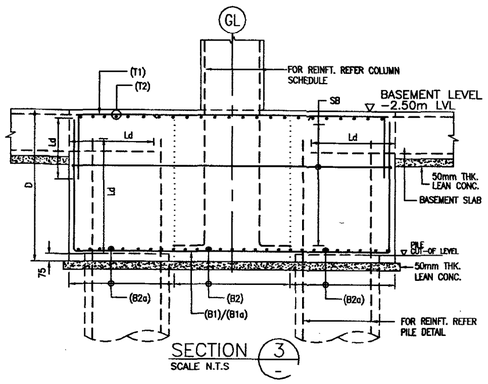
SECTION 2
SCALE N.T.S



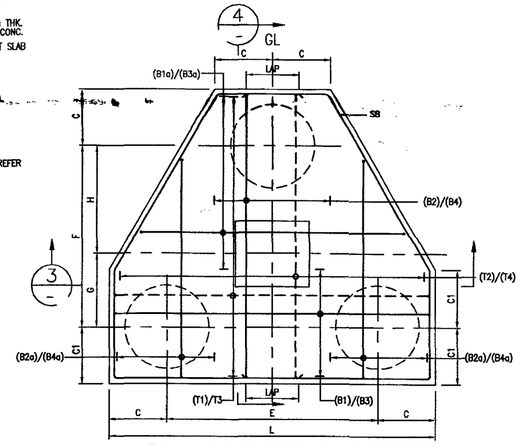
PLAN OF TWO-PILE GROUP
SCALE N.T.S



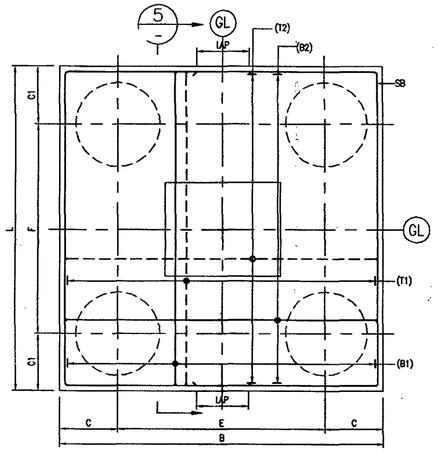
SECTION 4
SCALE N.T.S



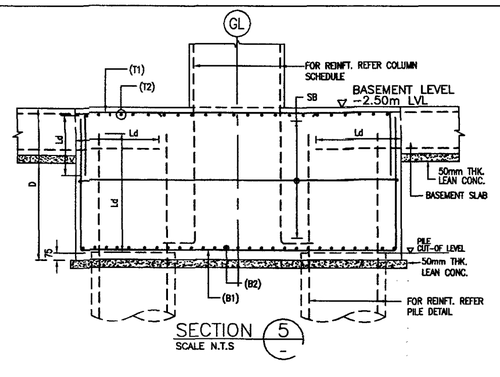
SECTION 3
SCALE N.T.S



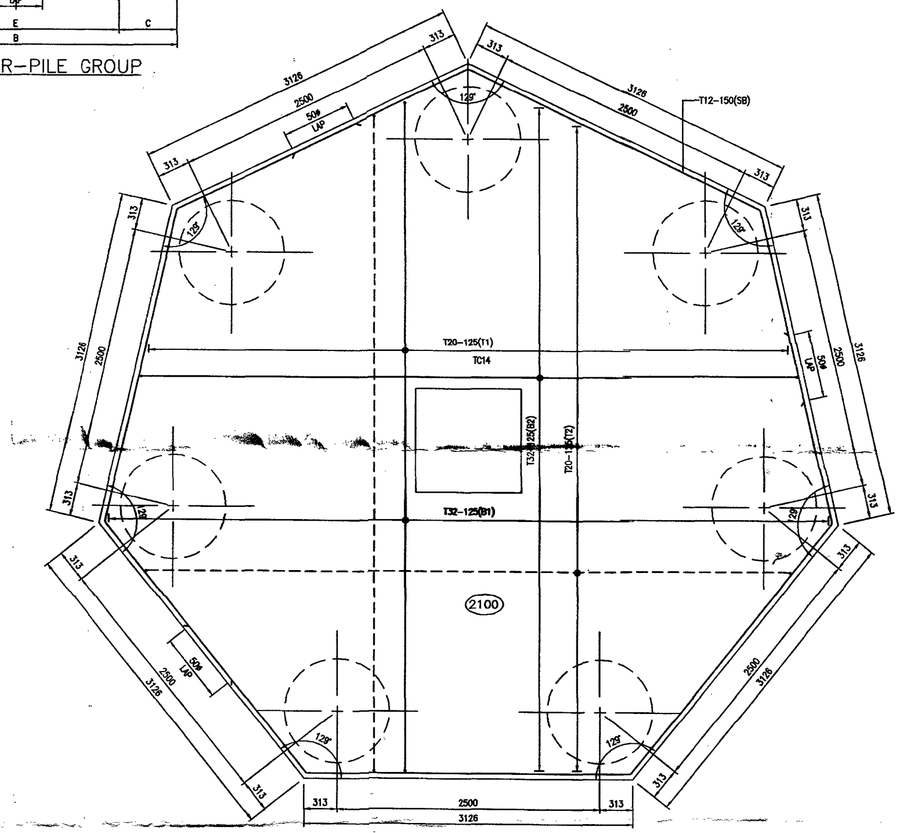
PLAN OF THREE-PILE GROUP
SCALE N.T.S



PLAN OF FOUR-PILE GROUP
SCALE N.T.S



SECTION 5
SCALE N.T.S



PLAN OF 7-PILE GROUP (PC7D)
SCALE - NTS

PILECAP REINFORCEMENT DETAILS FOR ONE, TWO, THREE & FOUR PILE GROUP

TYPE OF PILE	TYPE OF PILECAP	PILECAP DIMENSIONS									PILECAP REINFORCEMENTS												REMARKS
		L (mm)	B (mm)	D (mm)	C (mm)	C1 (mm)	E (mm)	F (mm)	G (mm)	H (mm)	B1	B2	B1a	B2a	B3	B4	B3a	B4a	T1	T2	T3	T4	SB	
ONE-PILE GROUP																								
BP1A	PC1A	900	900	1000	450	–	–	–	–	–	8T16	8T16	–	–	–	–	–	–	T10-150+ T10-150	T10-150+ T10-150	–	–	T12-150	
TWO-PILE GROUP																								
BP2A	PC2A	2400	900	1200	450	450	1500	–	–	–	9T20	20T16	–	–	–	–	–	–	T16-150+ T10-150	T16-150+ T10-150	–	–	T12-150	
BP2B	PC2B	2925	1050	1600	600	600	2250	–	–	–	9T25	20T20	–	–	–	–	–	–	T20-150+ T10-150	T20-150+ T10-150	–	–	T12-150	
THREE-PILE GROUP																								
BP3C	PC3C	3450	–	1900	600	600	2250	1949	650	1299	11T25	11T25	14T20	7T20	–	–	–	–	T20-150+ T10-150	T20-150+ T10-150	–	–	T12-150	
FOUR-PILE GROUP																								
BP4C	PC4C	3450	3450	1800	600	600	2250	2250	–	–	24T25	24T25	–	–	–	–	–	–	T20-150+ T10-150	T20-150+ T10-150	–	–	T12-150	
	PC4C-1	3650	3450	1800	700	600	2250	2250	–	–	24T25	24T25	–	–	–	–	–	–	T20-150+ T10-150	T20-150+ T10-150	–	–	T12-150	

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drawing title
PILECAP DETAILS

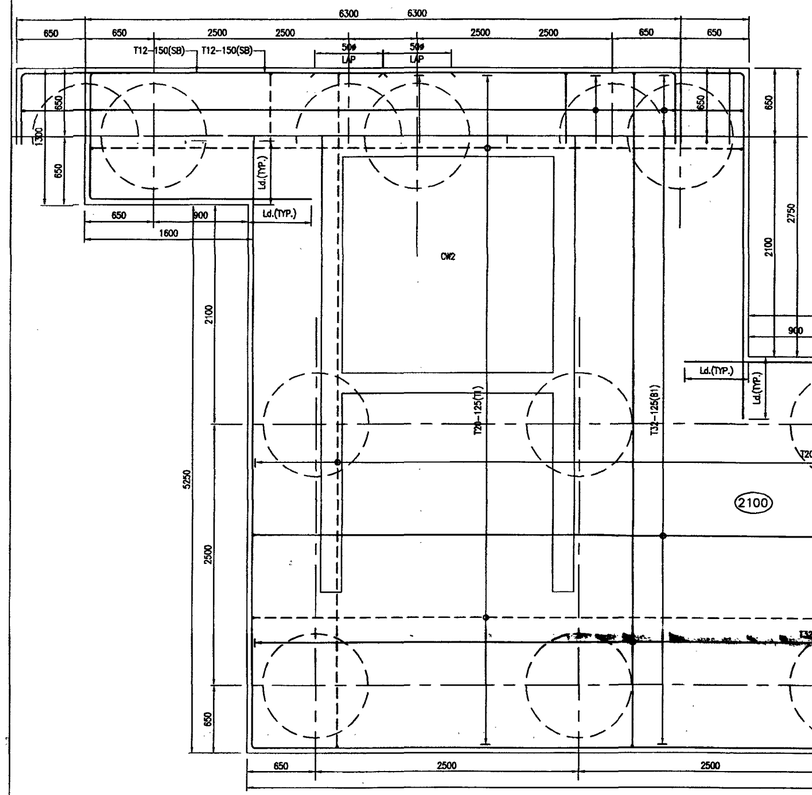
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date	JAN 2023	approved by	–
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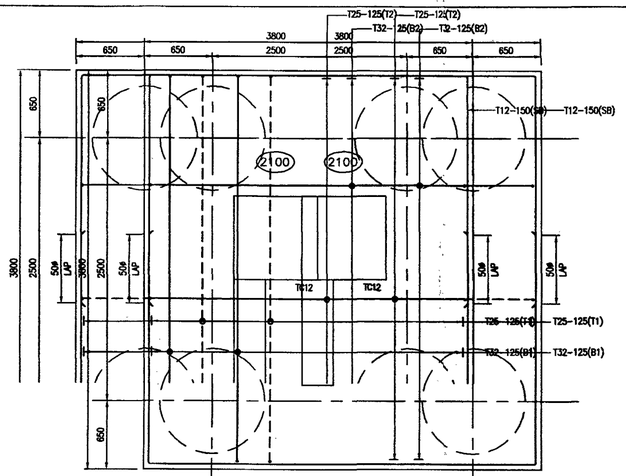
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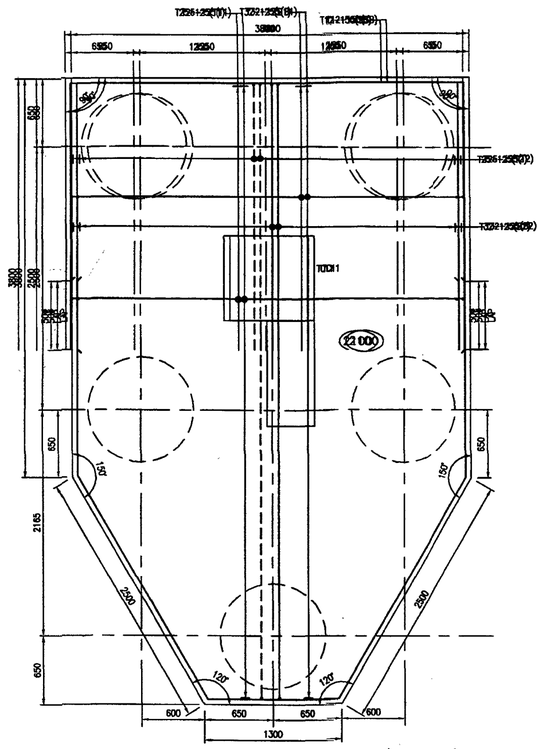
NOTES:
APPROVED INTEGRAL WATER PROOFING SHALL BE DONE FOR ALL STRUCTURAL ELEMENTS LIKELY TO BE IN CONTACT WITH EARTH AND WATER.



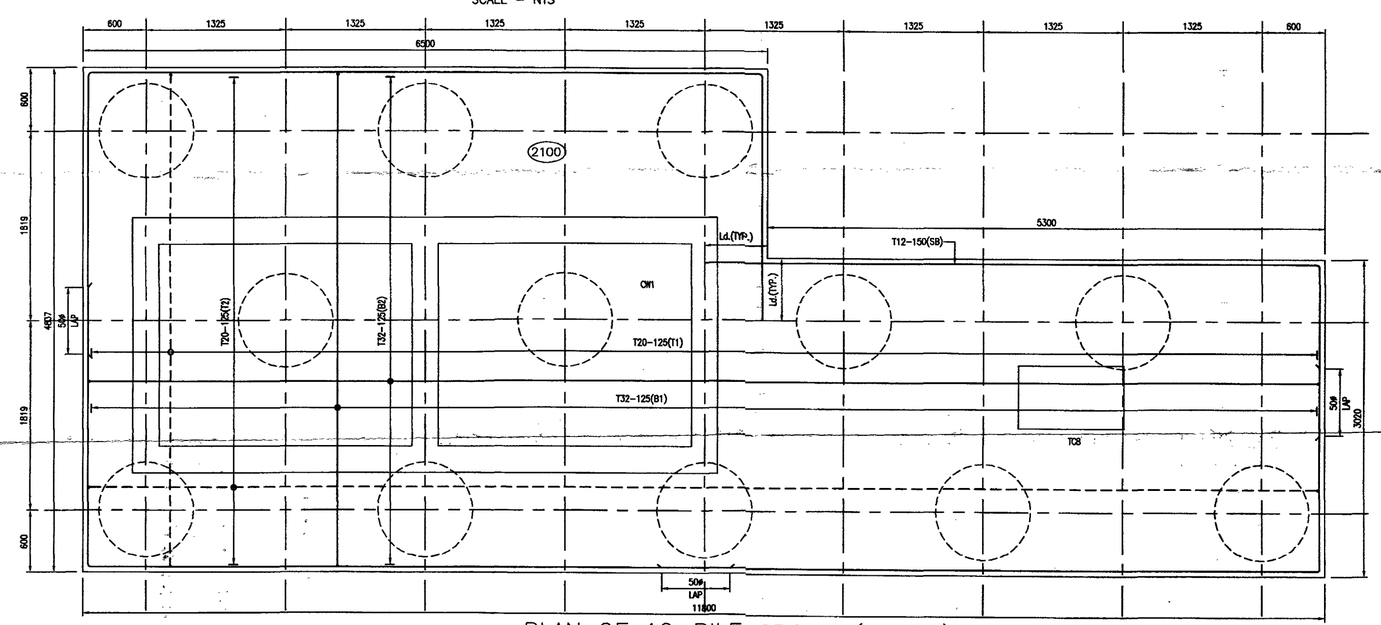
PLAN OF 12-PILE GROUP (PC12D)
SCALE - NTS



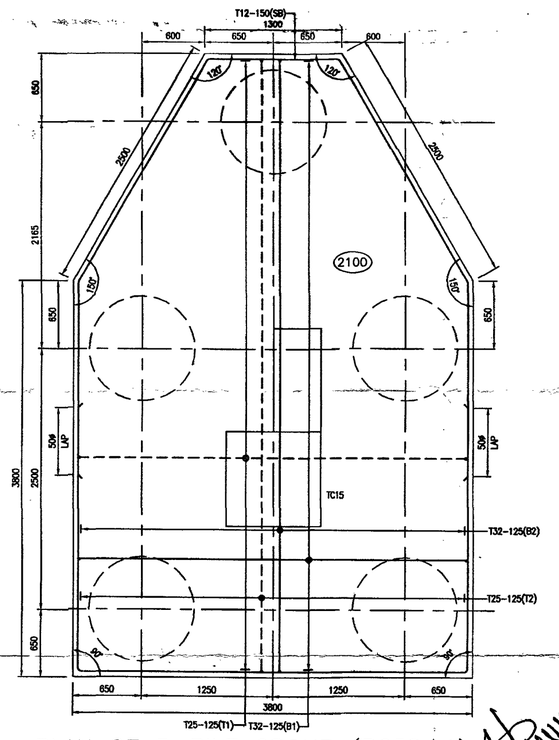
PLAN OF 4-PILE GROUP (PC4D)
SCALE - NTS



PLAN OF 5-PILE GROUP (PC5D)
SCALE - NTS



PLAN OF 12-PILE GROUP (PC12C)
SCALE - NTS



PLAN OF 5-PILE GROUP (PC5D-1)
SCALE - NTS

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   3) M45 - RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786-2008
7. CLEAR COVER FOR COLUMN-40mm, SHEAR WALL -30mm, SLAB-25mm, BEAM-30mm, PILE & PILE CAP-75mm BASEMENT RC WALL, UG SUMP&STP RC WALL -40mm BASEMENT SLAB-50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893-2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456-2000, NBC(SP7-2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
NO.1, SIDCO INDUSTRIAL ESTATE,
GUINDY, CHENNAI-600 032

MEP CONSULTANT:

CONSULTANTS : ARCHITECTURE
NATARAJ & VENKAT ARCHITECTS
18, 3rd SEAWARD RD, VALMIKI NAGAR
THIRUVANMIYUR, CHENNAI 600041
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Civil & Structural Engineer :
BURO ENGINEERS (I) PRIVATE LTD.,
Civil & Structural Consultants
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CHENNAI 600020 TEL: 044-2491 2755
EMail : buroindia@buroengineers.in

STRUCTURAL

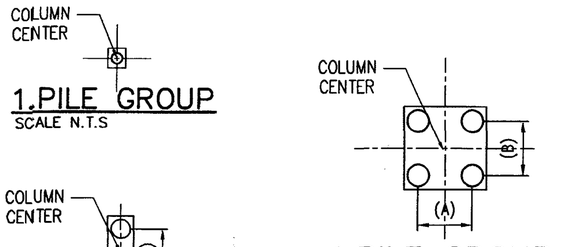
project title
PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title
PILECAP DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	-
drawing no.	BEI707_S-/PC/DT/--/02	revision	-

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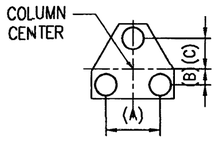
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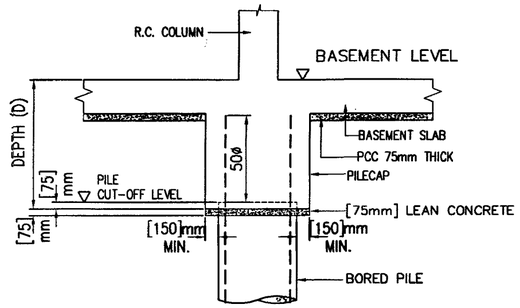
1.PILE GROUP
SCALE N.T.S

2.PILE GROUP
SCALE N.T.S

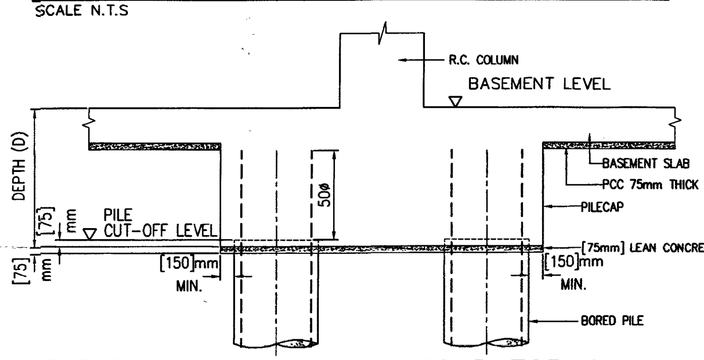
4.PILE GROUP
SCALE N.T.S



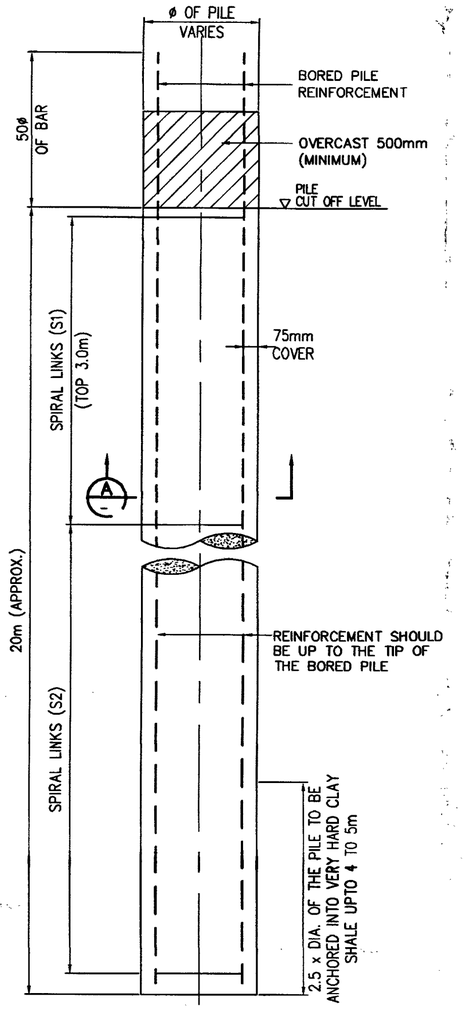
3.PILE GROUP
SCALE N.T.S



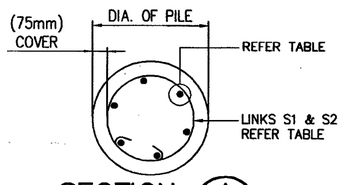
TYPICAL SECTION OF PILECAP FOR 1 PILE
SCALE N.T.S



TYPICAL SECTION OF PILECAP FOR 2 PILE
SCALE N.T.S



TYPICAL DETAIL OF BORED PILE
SCALE N.T.S



SECTION A
SCALE-NTS

NOTE:-
1. GRADE OF CONCRETE: M30.
2. GRADE OF STEEL: Fe500

GENERAL NOTES FOR PILING WORKS:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS ON SITE AND RESOLVE ANY DISCREPANCY WITH THE ARCHITECT OR ENGINEER BEFORE COMMENCEMENT OF WORK.
2. A COPY OF PILE SETTING OUT PLAN PREPARED BY A LICENSED SURVEYOR SHALL BE SUBMITTED BY THE CONTRACTOR TO ARCHITECT AND ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORK.
3. GRADE OF CONCRETE FOR PILE SHALL BE M30 (FCU = 30 N/MM2) WITH MINIMUM CEMENTITIOUS CONTENT NOT LESS THAN 400kg/cum
4. REINFORCEMENT SHALL BE HIGH STRENGTH DEFORMED BARS (FY = 500 N/MM2)
   A) LONGITUDINAL REINFORCEMENT SHALL BE EXTENDED UP TO THE TIP OF THE PILE (BASE OF THE PILE)
   B) ANY ADDITIONAL REINFORCEMENT BARS RERQUIRED TO STIFFEN THE REINFORCEMENT CAGE SHALL BE ALLOWED IN THE TENDER.
5. ALL PILES SHALL BE INSTALLED TO HAVE AN ULTIMATE CAPACITY OF NOT LESS THAN 2.5 TIMES THE SPECIFIED WORKING CAPACITY OF PILE.
6. THE WORKING PILES SHALL BE INSTALLED UPON SUCCESSFUL COMPLETION OF PRELIMINARY ULTIMATE PILE LOAD TEST
7. ALL PILES SHALL HAVE EMBEDMENT IN TO HARD LAYER OF VERY HARD CLAY SHALE. THE MINIMUM ESTIMATED PILE LENGTH TO BE 23m(APPROX.) FROM EGL AND IT'S TO BE 20m(APPROX.) FROM THE PILE CUT-OFF LEVEL. THE LENGTH OF PILE IS SUBJECT TO RETAIN BASED ON SUCCESSFUL COMPLETION OF LOAD TEST.
8. THE MAXIMUM PERMISSIBLE DEVIATION OF THE CENTRE OF EACH PILE AT CUT-OFF LEVEL IN A GROUP FROM THE CORRECT CENTRE POINT AS APPROVED BY THE ENGINEER SHALL BE 75MM IN ANY DIRECTION. ALLOWABLE DEVIATION OF THE CENTRE OF PILES FOR ANY SINGLE PILE OR SINGLE LINE OF PILES CARRYING STRUCTURAL LOAD SHALL NOT BE MORE THAN 40MM LATERALLY FROM ITS CORRECT POSITION. ALL PILES SHALL BE INSTALLED USING ROTARY PILING RIG ONLY.
9. THE FORMAT OF THE PILING RECORD SHALL BE SUBMITTED TO THE ENGINEER'S APPROVAL BEFORE COMMENCEMENT OF WORK. COMPLETE PILING RECORDS SHALL BE KEPT BY THE CONTRACTOR DURING THE INSTALLATION OF PILE. THE CONTRACTOR SHALL SUBMIT THE RECORDS OF ALL PILES AS THE WORK PROCEEDS.
10. AFTER THE COMPLETION OF THE PILING WORK, THE CONTRACTOR SHALL SUBMIT AS-BUILT DRAWING PREPARED BY A REGISTERED LICENSED SURVEYOR WHICH INCLUDES THE SIZE AND TYPE OF PILES, ECCENTRICITIES AND PENETRATION DEPTH FROM CUTOFF LEVEL. ECCENTRICITY OF PILE IS TO BE TAKEN AT CUTOFF LEVEL FOR THE PILE.
11. THE STRIPPING AND CUTTING OF PILE TO THE REQUIRED CUTOFF LEVEL IS TO BE CARRIED OUT BY THE PILING CONTRACTOR, WHEN THE EXCAVATION FOR CONSTRUCTION OF PILECAP IS COMPLETED BY THE OTHER CONTRACTOR. THE CONTRACTOR SHALL ALLOW IN HIS TENDER FOR THE SAME.
12. DISTANCE BETWEEN CENTRE TO CENTRE OF THE PILE IN A PILE GROUP SHALL BE 2.5 TIMES THE DIAMETER OF THE PILE.
13. THE CONTRACTOR SHALL ENSURE AND PROVIDE NECESSARY PROTECTION, THAT THE ADJACENT BUILDINGS ARE NOT AFFECTED AND DAMAGED DURING THE INSTALLATION OF BORED PILES
14. ROUTINE LOAD TEST TO BE CARRIED OUT TO A LOAD OF 1.5 TIMES SPECIFIED WORKING CAPACITY OF PILE.

THIS DRAWING TO BE READ IN CONJUNCTION WITH THE DWG. NO. BEI707_S-/PL/--/--/01 (LATEST REVISION)

TABLE-2 (PILE SPACING)

BORED PILE MARK / TYPE	SIZE	2 PILE GROUP	3 PILE GROUP			4 PILE GROUP	
		(A)	(A)	(B)	(C)	(A)	(B)
TYPE A	600ø	1500	-	-	-	-	-
TYPE B	750ø	1875	-	-	-	-	-
TYPE C	900ø	2250	2250	650	1299	2250	2250
TYPE D	1000ø	-	-	-	-	2500	2500

TABLE 1

BORED PILE MARK / TYPE	SIZE	PILE LENGTH FROM PILE CUTOFF LVL (APPROX.)	WORKING COMPRESSION CAPACITY (TONS)	WORKING TENSION CAPACITY (TONS)	NOS. OF PILES	LONGITUDINAL REINFORCEMENT	LINKS		REMARKS
							S1	S2	
TYPE A	600ø	REFER SECTION	95	52	28	8T16	T8-150	T8-250	
TYPE B	750ø	REFER SECTION	130	65	12	8T20	T8-150	T8-250	
TYPE C	900ø	REFER SECTION	170	79	29	10T20	T8-150	T8-250	
TYPE D	1000ø	REFER SECTION	200	89	33	13T20	T8-150	T8-250	

NO.	AMENDMENTS	BY	DATE

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STRUCTURAL

project title
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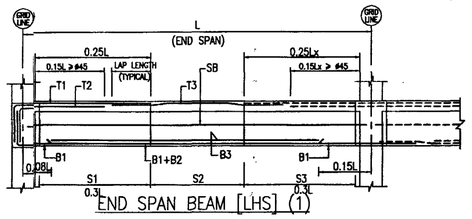
A. PERAMAIYAN, M.E., (Struct.), M.I.E.
REGISTERED STRUCTURAL ENGINEER
CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY
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drawing title
PILING DETAILS

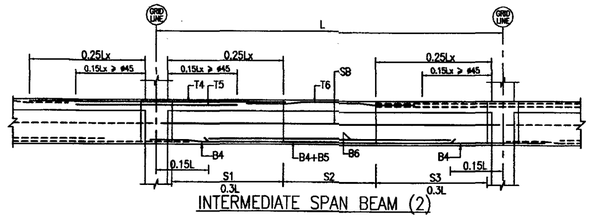
scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	-
drawing no.	BEI707_S-/PL/--/--/02	revision	-

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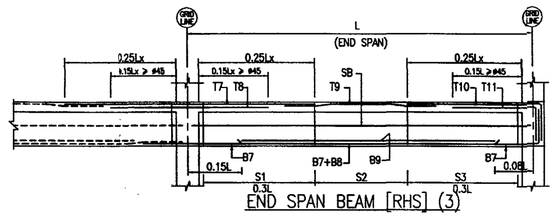
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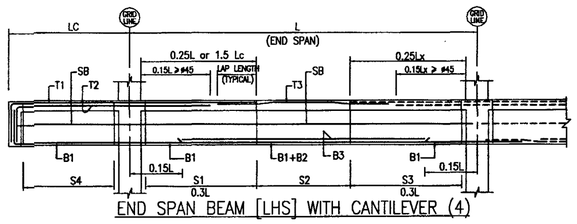
END SPAN BEAM [LHS] (1)



INTERMEDIATE SPAN BEAM (2)



END SPAN BEAM [RHS] (3)

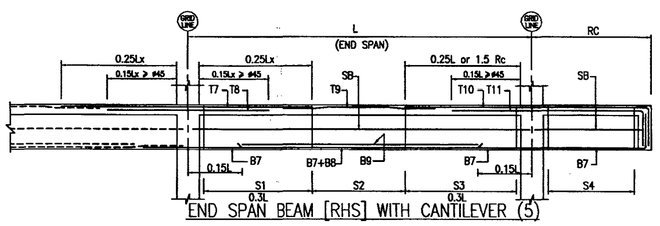


END SPAN BEAM [LHS] WITH CANTILEVER (4)

LEGEND

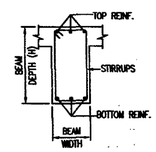
L ------LENGTH OF SPAN UNDER CONSIDERATION
La------LENGTH OF ADJACENT SPAN TO THE SPAN UNDER CONSIDERATION
Lc ------LENGTH OF LEFT END CANTILEVER
Rc ------LENGTH OF RIGHT END CANTILEVER
(1)------CATEGORY

Lx = Length of span under consideration or Length of adjacent span whichever is greater



END SPAN BEAM [RHS] WITH CANTILEVER (5)

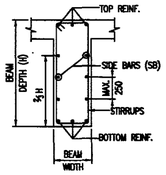
LOCATION			SIZE		SPAN			REINFORCEMENT																				SIDE BAR EACH FACE (EF)	STIRRUPS					REMARKS
BEAM MARKING	CATEGORY	GRID LINE OR BEAM MARK	WIDTH (mm)	DEPTH (mm)	LEFT END CANTILEVER Lc	SPAN (APPROX) L	RIGHT END CANTILEVER Rc	LEFT END SPAN						INTERMEDIATE SPAN						RIGHT END SPAN												S1	S2	S3	S4	TYPE	
								T1	T2	T3	B1	B2	B3	T4	T5	T6	B4	B5	B6	T7	T8	T9	T10	T11	B7	B8	B9	SB						
GHB3a	1	–	300	600	–	2200	–	3T16	2T12	3T16	3T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3T10–100	3T10–125	3T10–100	–	1a	
GHB3	3	–	300	800	–	2000	–	–	–	–	–	–	–	–	–	–	–	–	–	3T16	2T12	3T16	3T16	2T12	3T16	–	2T12	2T10	3T10–100	3T10–125	3T10–100	–	1a	
GHB5	1	–	300	800	–	4200	–	3T20	2T16	3T20	3T20	–	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	T8–100	T8–125	T8–100	–	1	
GHB6	3	–	200	500	–	3750	–	–	–	–	–	–	–	–	–	–	–	–	–	3T20/2T20	–	2T20	2T20	–	2T20	–	–	–	T8–100	T8–150	T8–100	–	1	
GHB12	1	–	250	750	–	2800	–	2T16	–	2T16	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–200	T8–100	–	1	
GHB13	2	–	250	750	–	2650	–	–	–	–	–	–	–	2T16	–	2T16	2T16	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–200	T8–100	–	1	
GHB14	3	–	200	500	–	3200	–	–	–	–	–	–	–	–	–	–	–	–	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T10–100	T10–200	T10–100	–	1	
GHB16	1	–	200	750	–	5350	–	2T16	2T12	2T16	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–150	T8–100	–	1	
GHB17	3	–	200	750	–	2300	–	–	–	–	–	–	–	–	–	–	–	–	–	2T16	–	2T16	2T16	–	2T16	–	–	–	T10–100	T10–200	T10–100	–	1	
GHB18	1	–	800	800	–	3700	–	7T25	–	7T25	7T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T12	7T8–100	7T8–150	7T8–100	–	3a	
GHB19	3	–	800	800	–	12700	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	7T25	7T25	7T25	7T25	7T25	–	4T25	2T12	7T8–100	7T8–150	7T8–100	–	3a	
GHB22	1	–	800	800	–	12700	–	7T25	4T25	7T25	7T25	–	4T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T10	7T8–100	7T8–150	7T8–100	–	3a	
GHB23	3	–	800	800	–	12700	–	–	–	–	–	–	–	–	–	–	–	–	–	7T25	7T25	7T25	7T25	4T25	7T25	–	4T25	2T12	7T8–100	7T8–150	7T8–100	–	3a	
GHB25	1	–	800	800	–	12700	–	8T25	8T25	8T25	8T25	–	6T25	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T12	8T8–100	8T8–150	8T8–100	–	4	
GHB26	3	–	800	800	–	12700	–	–	–	–	–	–	–	–	–	–	–	–	–	8T25	8T25	8T25	8T25	8T25	8T25	–	6T25	2T12	8T8–100	8T8–150	8T8–100	–	4	
GVB15	1	–	200	1000/800	–	2800	–	2T25	–	2T25	2T25	–	2T16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2T12	T12–100	T12–125	T12–100	–	1	
GVB16	2	–	200	500	–	2650	–	–	–	–	–	–	–	2T25	2T25	2T20	2T20	–	–	–	–	–	–	–	–	–	–	–	T8–100	T8–200	T8–100	–	1	
GVB17	3	–	200	500	–	3200	–	–	–	–	–	–	–	–	–	–	–	–	–	2T20	–	2T20	2T20	–	2T20	–	–	–	T8–100	T8–200	T8–100	–	1	UPSTAND
MARKING BEAM	CATEGORY	BEAM MARK OR GRID LINE	(mm) WIDTH	(mm) DEPTH	Lc CANTILEVER LEFT END	L (APPROX) SPAN	Rc CANTILEVER RIGHT END	T1	T2	T3	B1	B2	B3	T4	T5	T6	B4	B5	B6	T7	T8	T9	T10	T11	B7	B8	B9	BAR SIDE	S1	S2	S3	S4	TYPE	REMARKS
LOCATION			SIZE		SPAN			LEFT END SPAN						INTERMEDIATE SPAN						RIGHT END SPAN									STIRRUPS					
								REINFORCEMENT																										



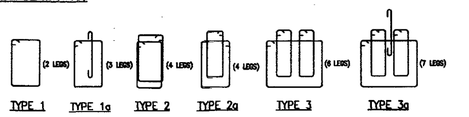
TYP. BEAM SECTION

NOTES :

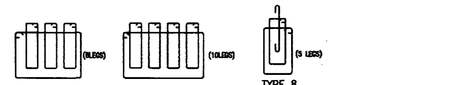
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN AND ALL OTHER RELEVANT DRAWINGS.
2. IF THE REINFORCEMENT IS PROVIDED IN TWO LAYERS OR MORE, THEN SPACER BARS BETWEEN THE LAYERS NEED TO BE PROVIDED
3. SPACER BARS TO BE T25 OR MAIN BAR SIZE (WHICHEVER IS GREATER) AT 900c/c BETWEEN EACH LAYER OF MAIN STEEL.
4. THE SPAN LENGTH INDICATED ARE NOT TO BE USED FOR SETTING OUT OR MEASUREMENT.
5. IF SAME SIZE OF THE REINFORCEMENT BARS IS INDICATED THROUGHOUT FOR BOTTOM OR TOP REINFORCEMENT, THE LAP PROVIDED FOR THE REINFORCEMENT CAN BE OMITTED BY PROVIDING STRAIGHT BARS FOR THE WHOLE LENGTH OF THE BEAM
6. LAP LENGTH FOR BARS SHOULD BE SAME AS TENSION ANCHORAGE LENGTH BASED UPON THE LARGER BAR DIAMETER FOR UNEQUAL SIZE OF BARS
7. FIRST STIRRUP OF BEAM SHOULD BE 50mm (MAXIMUM) FROM THE COLUMN FACE



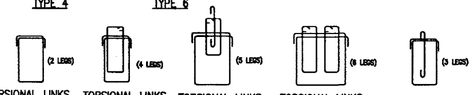
TYP. SIDE BARS DETAIL FOR BEAM DEPTH > 750



TYPE 1 TYPE 1a TYPE 2 TYPE 2a TYPE 3 TYPE 3a

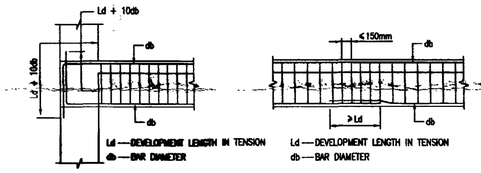


TYPE 4 TYPE 6 TYPE 8



TORSIONAL LINKS TYPE 5 TORSIONAL LINKS TYPE 5a TORSIONAL LINKS TYPE 5b TORSIONAL LINKS TYPE 5c TORSIONAL LINKS TYPE 7

STIRRUPS TYPE

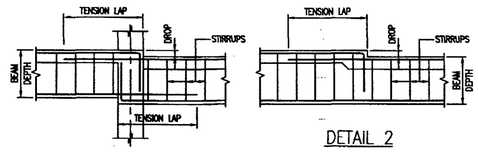


ANCHORAGE OF BEAM BARS AT BEAM AND COLUMN JUNCTION (EXTERNAL JOINT)

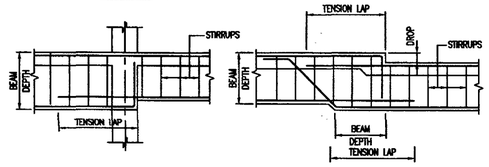
NOTE:
IN AN INTERNAL JOINT, BOTH TOP & BOTTOM BARS OF THE BEAM SHALL BE TAKEN CONTINUOUSLY THROUGH THE COLUMN

LAP/SPLICE IN BEAM

NOTE:
NOT MORE THAN 50 PERCENT OF THE BARS SHALL BE SPLICED AT ONE SECTION



DETAIL 1 DETAIL 2



DETAIL 3 DETAIL 4

Wherever the drop is less than or equivalent to 50 The reinforcement bars can be bent at 1:10 and continued

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* – INDICATES IN 2ND LAYER
** – INDICATES IN 3RD LAYER

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S–/NT/–/–/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S–/SD/–/01 & BEI707_S–/SD/–/–/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893–2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456–2000, NBC(SP7–2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE
–	ISSUED FOR CONSTRUCTION	CDR	10/04/24

CLIENT:
M/s. ALWARPET PROPERTIES PVT LTD.,
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CONSTRUCTION DRAWING
STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

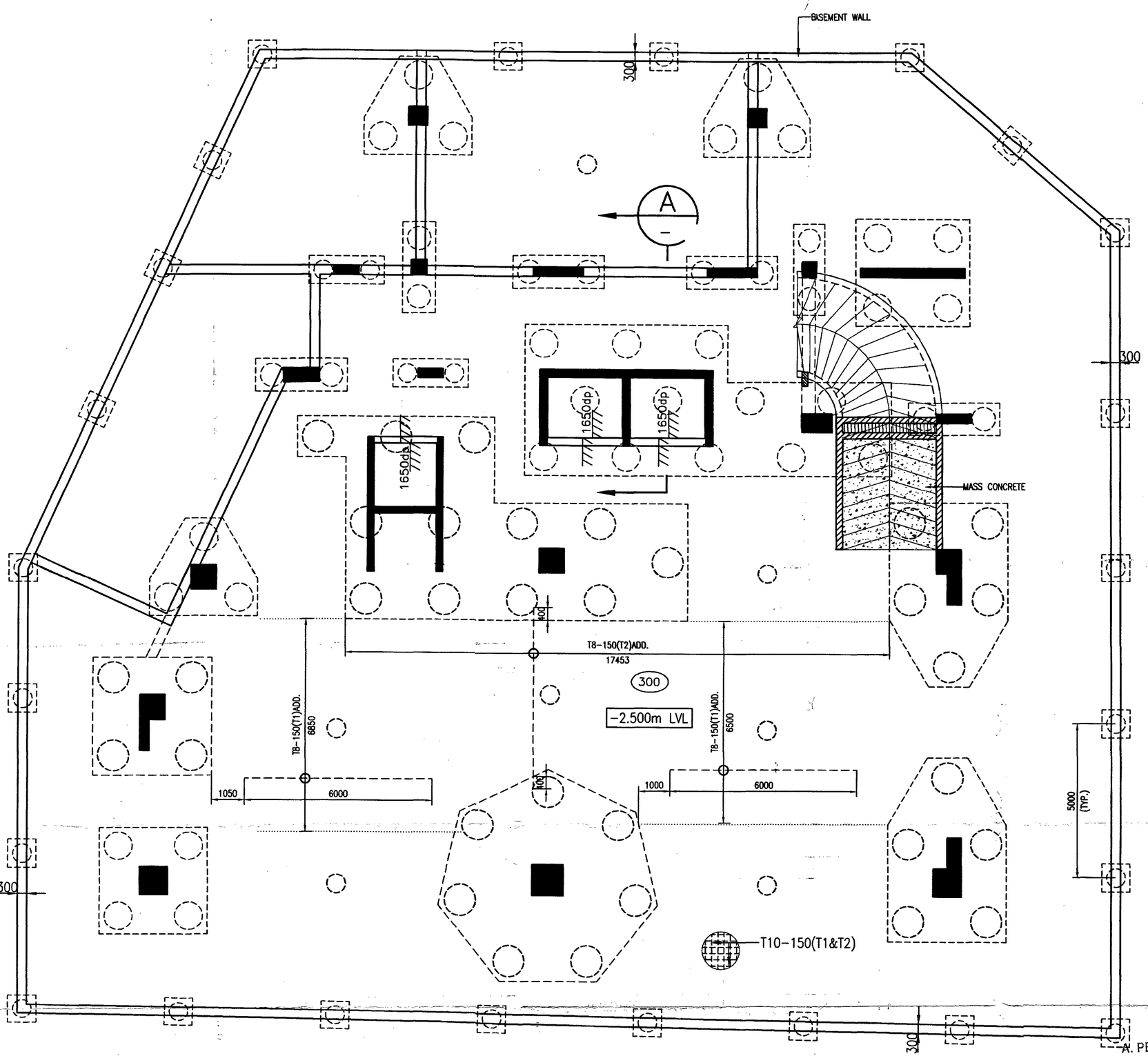
drawing title

GROUND FLOOR BEAM SCHEDULE

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JUNE 2023	approved by	–
drawing no.	BEI707_S–/BM/G–/–/–/01	revision	–

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BASEMENT FLOOR SLAB REINFT. DETAILS(TOP&TOP ADD. REINFT.)

SCALE 1:100

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STRUCTURAL

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PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

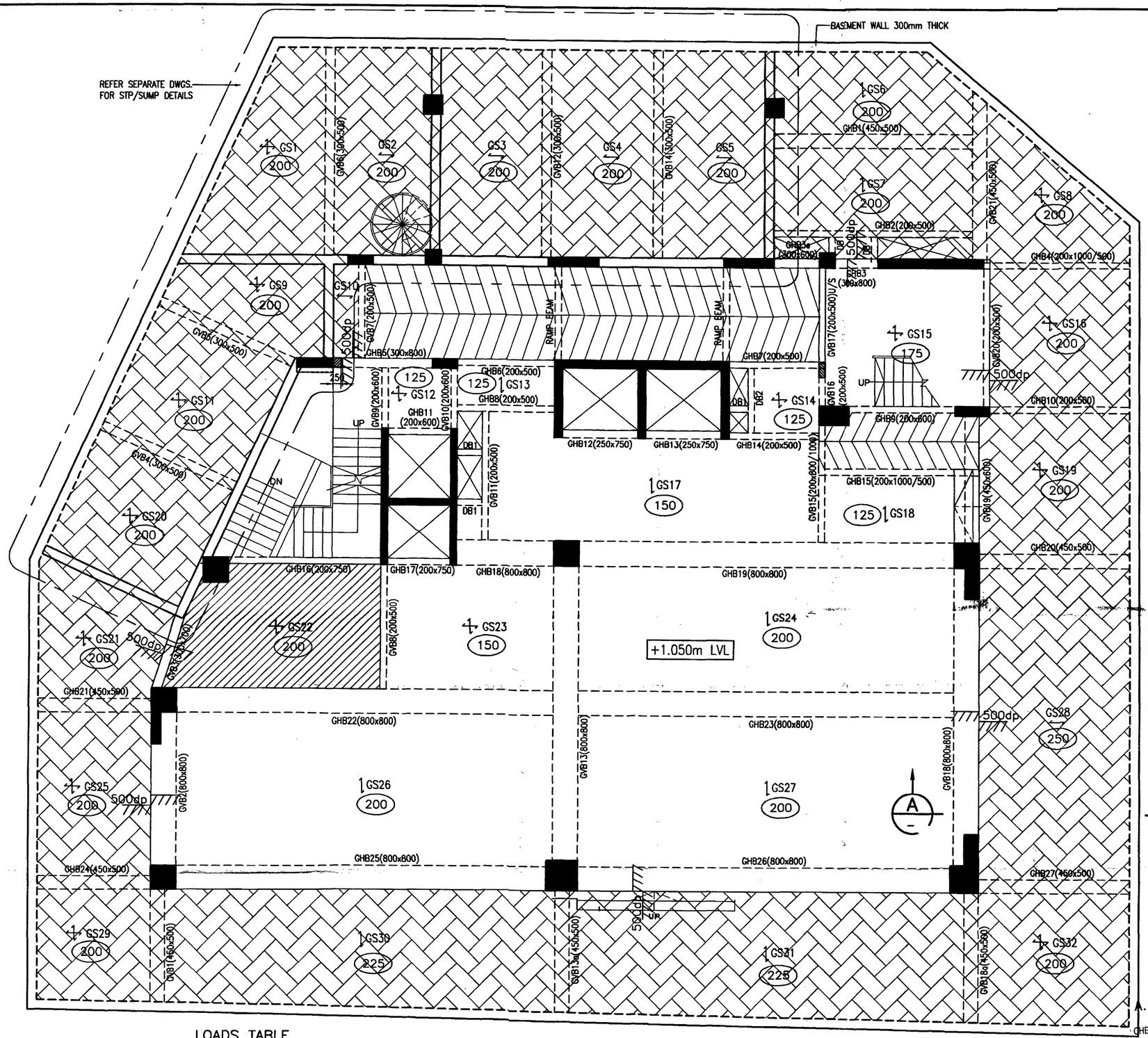
BASEMENT FLOOR SLAB REINFT. DETAILS
(TOP&TOP ADD. REINFT.)

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FT/DT/--/02	revision	–

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CAD FILE NAME: BEI707_S-FTDT--02_.dwg



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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

LOADS TABLE

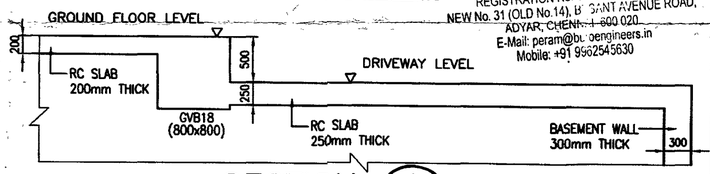
LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4
RETAIL	5.0	2.4
MECHANICAL PARKING	12.0	2.4

GROUND FLOOR FRAMING PLAN

SCALE 1:100

NOTES
UNLESS OTHERWISE SPECIFIED
1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 150mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

LEGEND:
– TOILET SUNKEN 100mm



SECTION A
SCALE 1:50

A. PERAMAIYAN, M.E., (Struct.), M.I.E.
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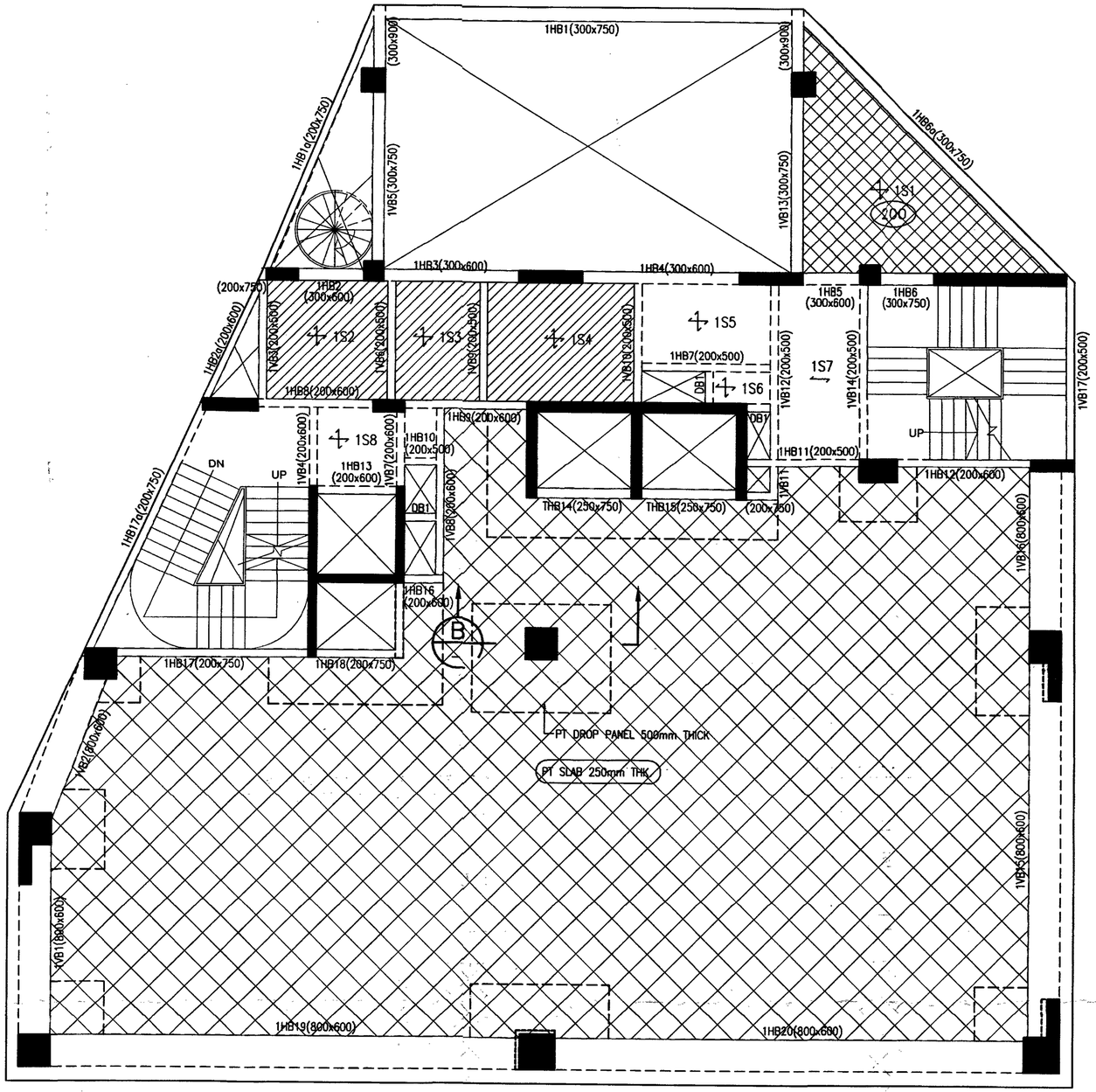
drawing title

GROUND FLOOR FRAMING PLAN & SECTION DETAILS

scale	AS SHOWN	design by	MP
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S–/FP/G–/––/01	revision	–

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FIRST FLOOR FRAMING PLAN

SCALE 1:100

NOTES

UNLESS OTHERWISE SPECIFIED

1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

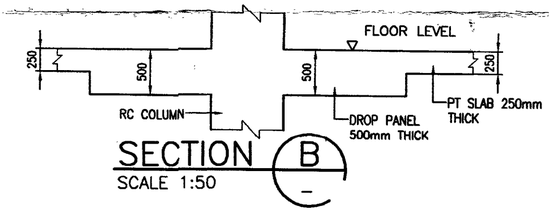
LEGEND:

– TOILET SUNKEN 100mm

– PT SLAB

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	1.4
RETAIL	5.0	2.4



SECTION B

SCALE 1:50

NO.	AMENDMENTS	BY	DATE

CLIENT:

M/s. ALWARPET PROPERTIES PVT LTD.,
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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

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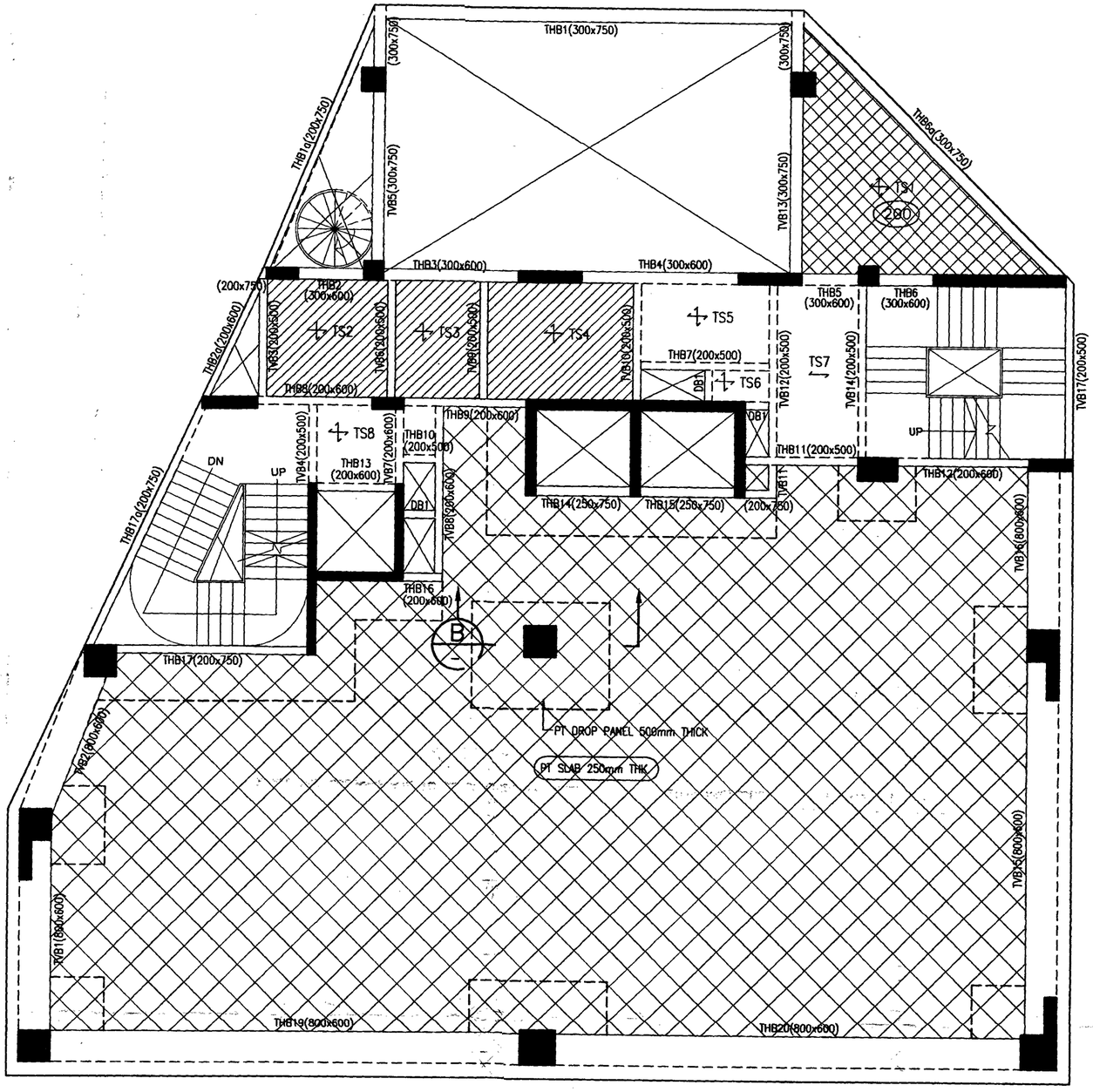
drawing title

FIRST FLOOR FRAMING PLAN & SECTION DETAILS

scale	AS SHOWN	design by	MO
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/01/--/01	revision	–

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TYPICAL FLOOR FRAMING PLAN (2nd TO 4th FLOORS)

SCALE 1:100

NOTES

UNLESS OTHERWISE SPECIFIED

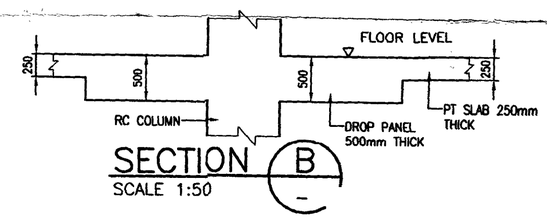
1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

LEGEND:

- TOILET SUNKEN 100mm
- PT SLAB

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4



SECTION B

SCALE 1:50

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NO.	AMENDMENTS	BY	DATE

CLIENT:

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STRUCTURAL

project title

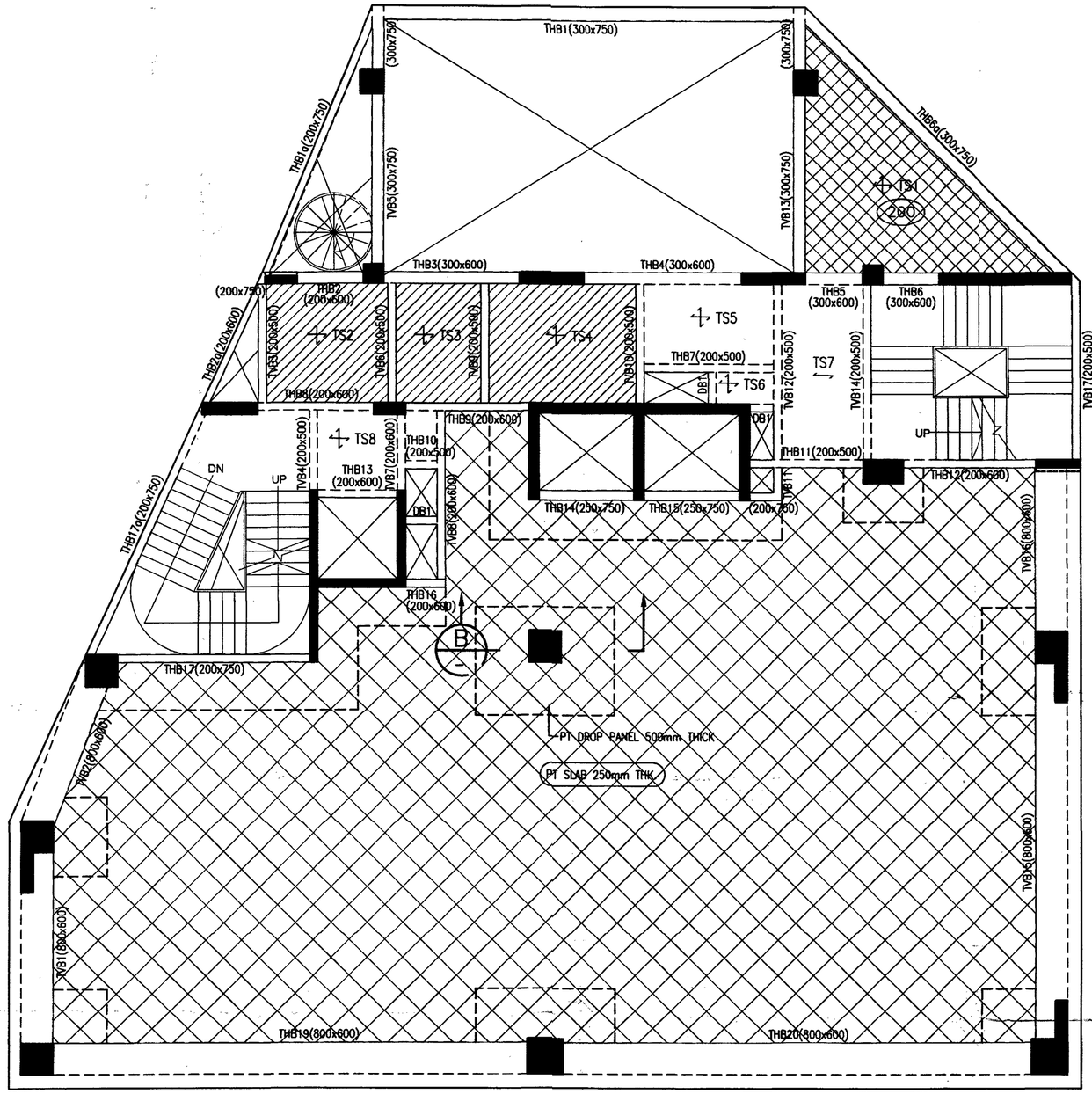
PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

TYPICAL FLOOR FRAMING PLAN
(2nd TO 4th FLOORS) & SECTION DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/T-/--/01	revision	–

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5th FLOOR FRAMING PLAN

SCALE 1:100

NOTES

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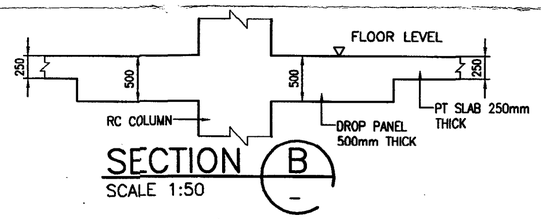
1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

LEGEND:

- TOILET SUNKEN 100mm
- PT SLAB

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4



SECTION B

SCALE 1:50

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STRUCTURAL

project title

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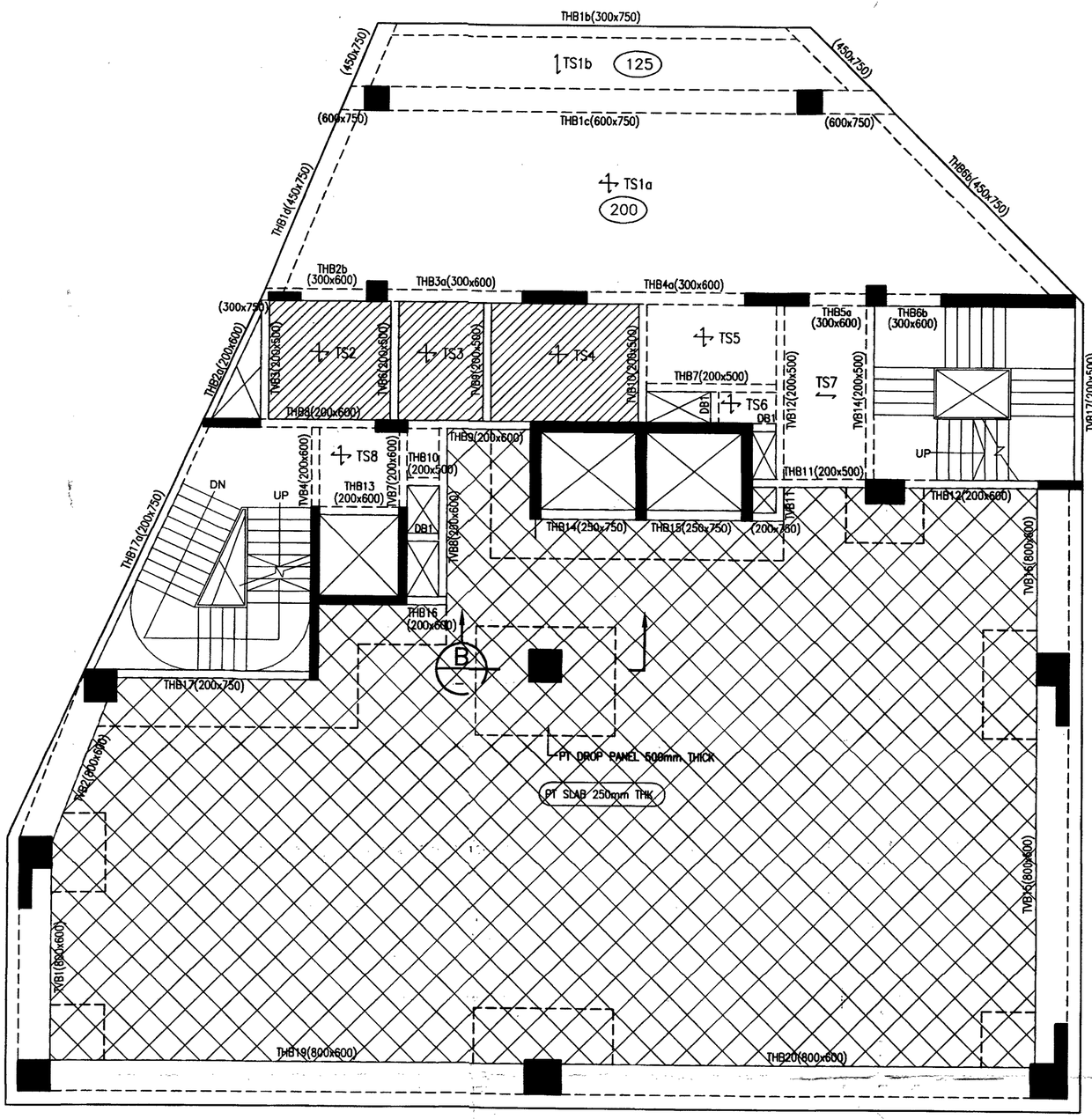
drawing title

5th FLOOR FRAMING PLAN&SECTION DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/05/--/01	revision	–

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TYPICAL FLOOR FRAMING PLAN (8th TO 9th FLOORS)

SCALE 1:100

NOTES

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1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

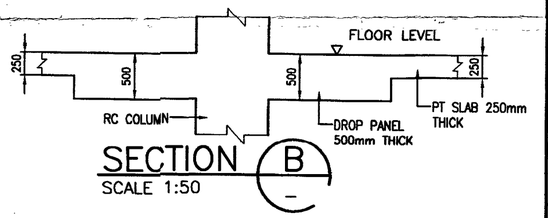
LEGEND:

– TOILET SUNKEN 100mm

– PT SLAB

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4



SECTION B–

SCALE 1:50

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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

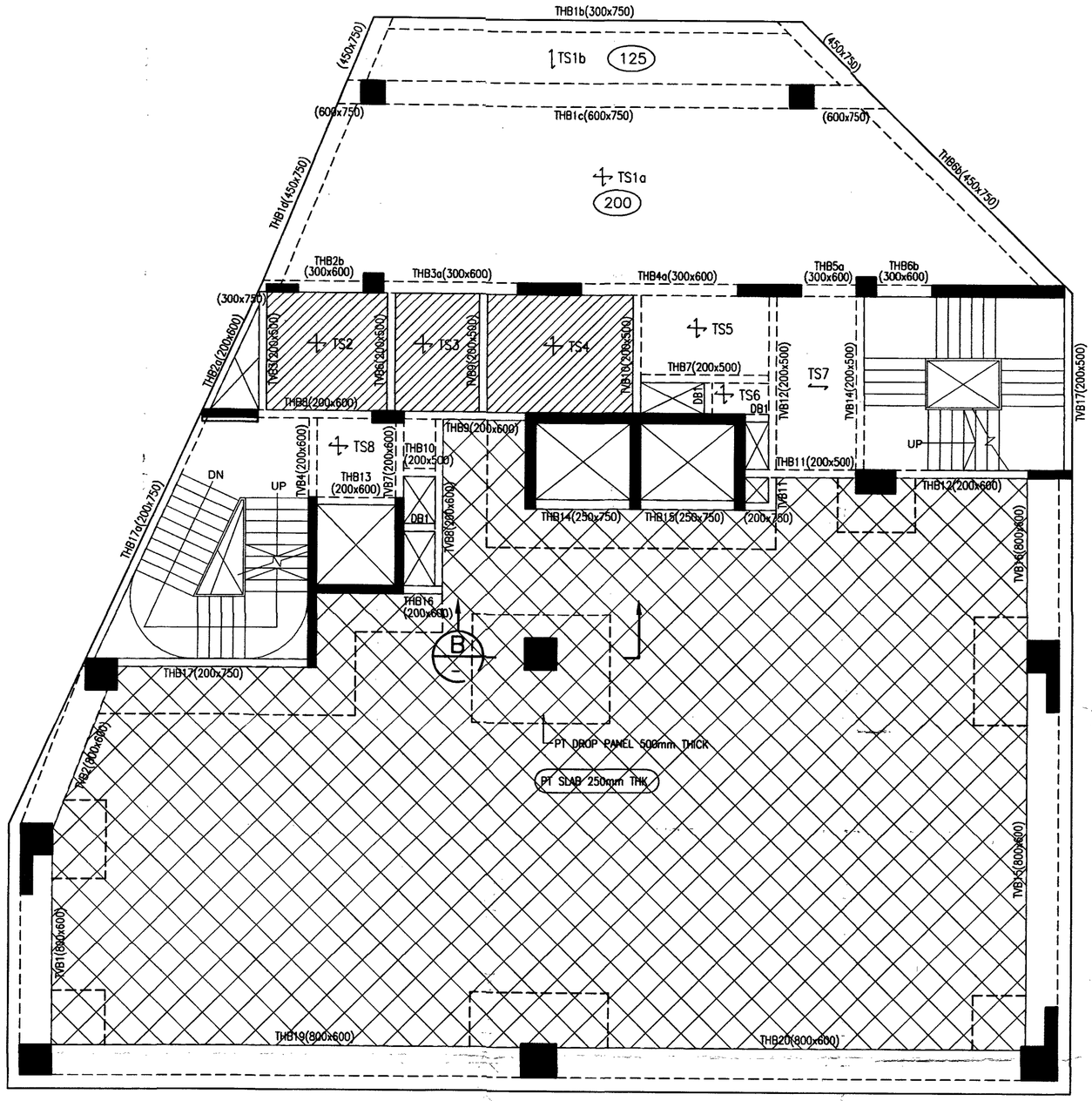
TYPICAL FLOOR FRAMING PLAN & SECTION DETAILS (8th&9th FLOORS)

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/T-/--/02	revision	–

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CAD FILE NAME: BEI707_S-FPT---02_.dwg



7th FLOOR FRAMING PLAN

SCALE 1:100

NOTES

UNLESS OTHERWISE SPECIFIED

1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.
4. REMOVED BEAMS THB1,TVB5,TVB13

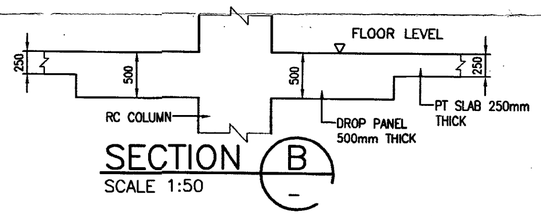
LEGEND:

– TOILET SUNKEN 100mm

– PT SLAB

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4



SECTION B–

SCALE 1:50

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NO.	AMENDMENTS	BY	DATE

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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

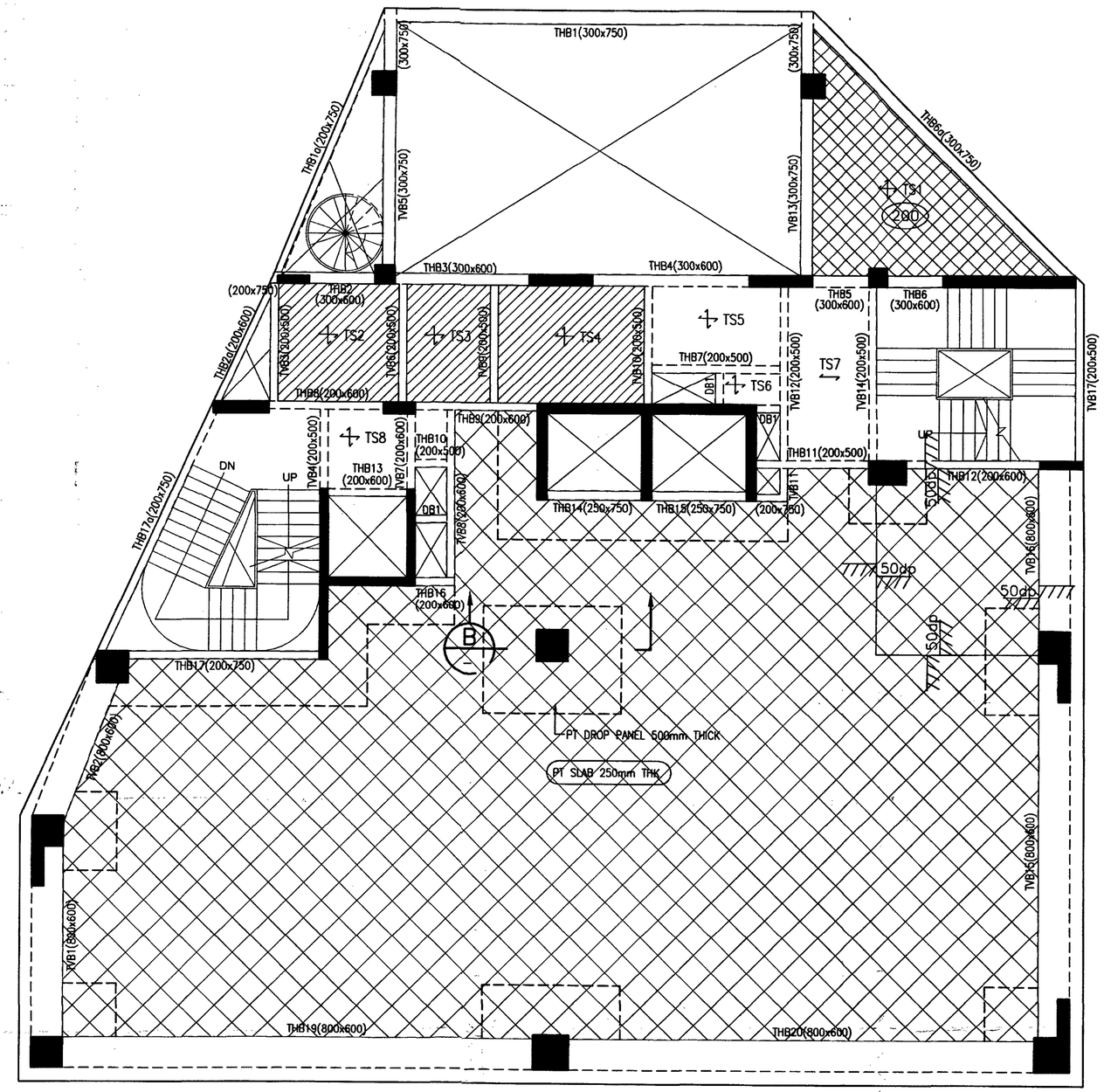
drawing title

7th FLOOR FRAMING PLAN&SECTION DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/07/--/01	revision	–

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6th FLOOR FRAMING PLAN

SCALE 1:100

NOTES

UNLESS OTHERWISE SPECIFIED

1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

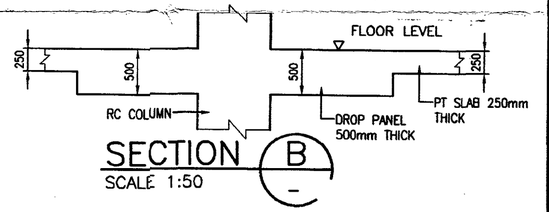
LEGEND:

– TOILET SUNKEN 100mm

– PT SLAB

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4



SECTION B

SCALE 1:50

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NO.	AMENDMENTS	BY	DATE

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STRUCTURAL

project .title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

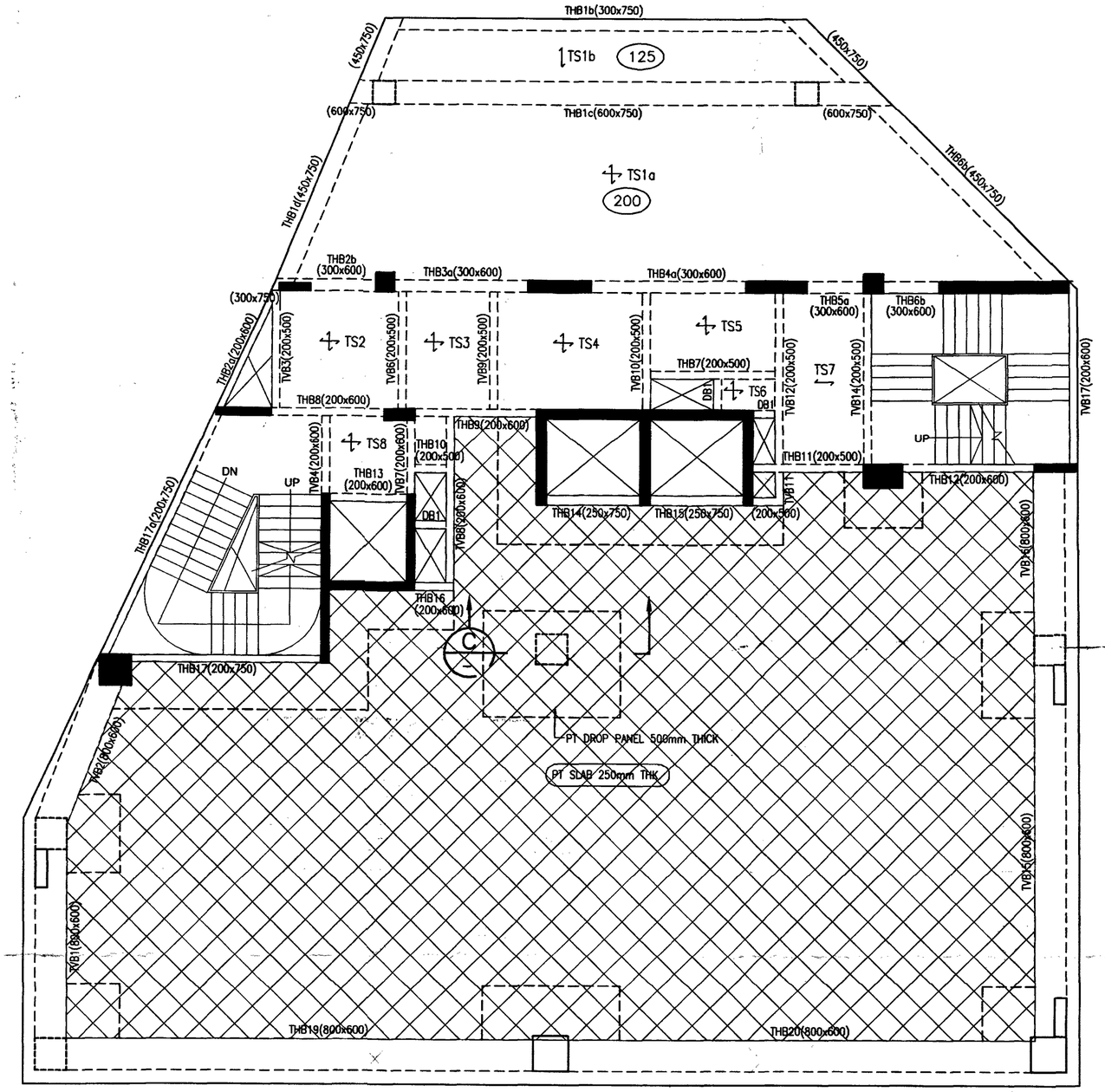
drawing title

6th FLOOR FRAMING PLAN&SECTION DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/06/--/01	revision	–

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ROOF FRAMING PLAN

SCALE 1:100

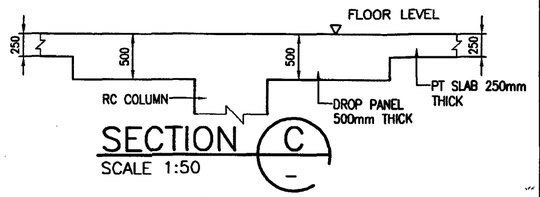
NOTES

UNLESS OTHERWISE SPECIFIED

1. ALL THE BEAMS ARE TO BE 200x500mm
2. ALL THE SLAB THICKNESS ARE TO BE 125mm
3. ALL THE COLUMNS ARE TO BE 800x800mm SIZE.

LEGEND:

– PT SLAB



SECTION C

SCALE 1:50

NO.	AMENDMENTS	BY	DATE

CLIENT:

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STRUCTURAL

project title

PLAN SHOWING THE PROPOSED CONSTRUCTION OF HIGH RISE GROUP DEVELOPMENT OF COMMERCIAL BUILDING CONSISTS OF BLOCK-1: BASEMENT FLOOR (FOR PARKING USE) + GROUND FLOOR (FOR RETAIL SHOP) + 1ST FLOOR (FOR RETAIL SHOP) + 2ND FLOOR TO 9TH FLOOR (FOR OFFICE USE) BLOCK-2: GROUND FLOOR (ELECTRICAL TRANSFORMER ROOM) + 1ST FLOOR (GENERATOR ROOM), ABUTTING G.N. CHETTY ROAD & THIRUMALAI LANE, T.NAGAR, CHENNAI -600 017. COMPRISED IN OLD S.NO. 4797 PART, T.S.NO. 8380/4, BLOCK NO. 109, T.NAGAR TOWN, WITHIN THE LIMITS OF GREATER CHENNAI CORPORATION

drawing title

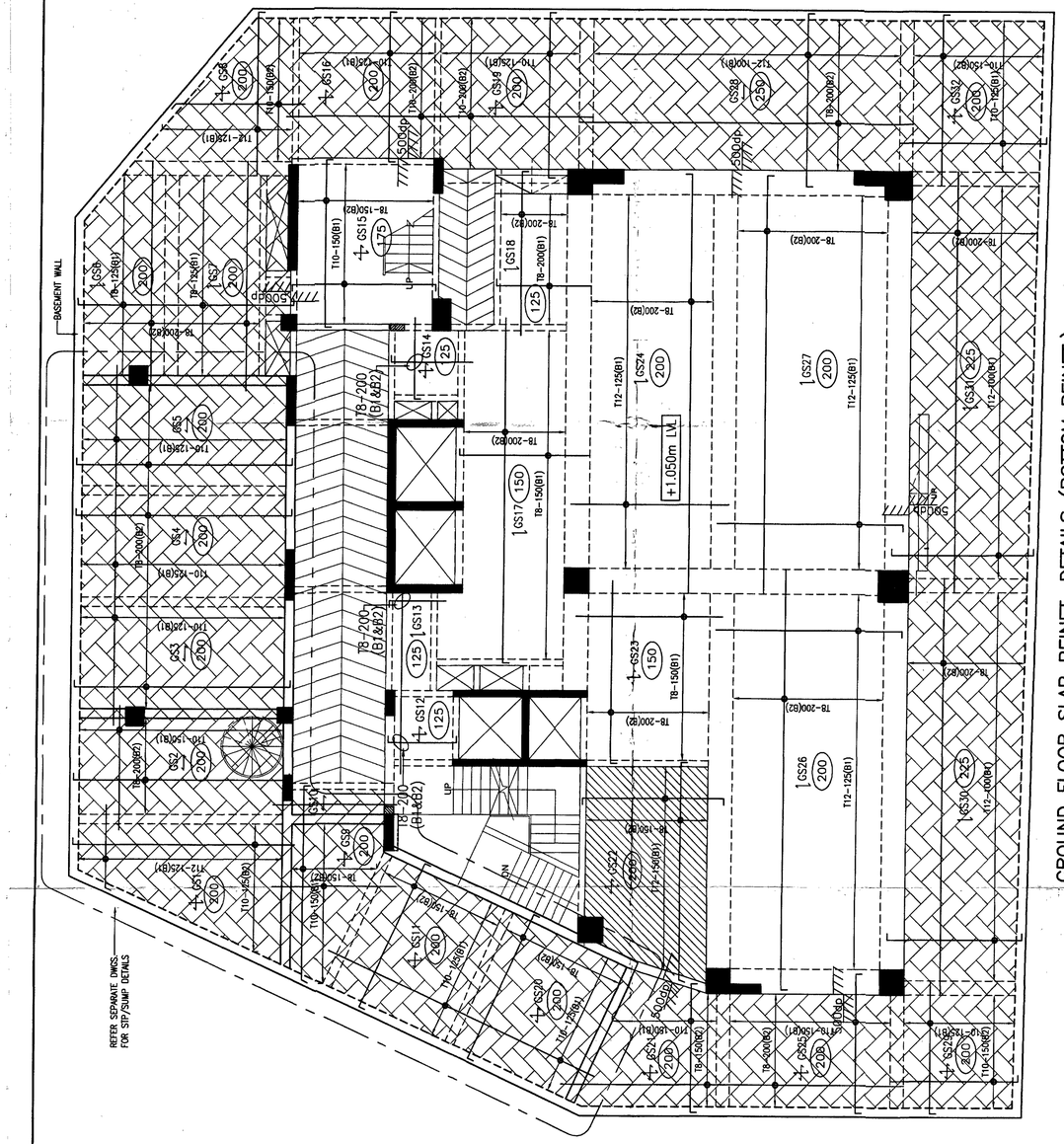
ROOF FRAMING PLAN & SECTION DETAILS

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S-/FP/R-/--/01	revision	–

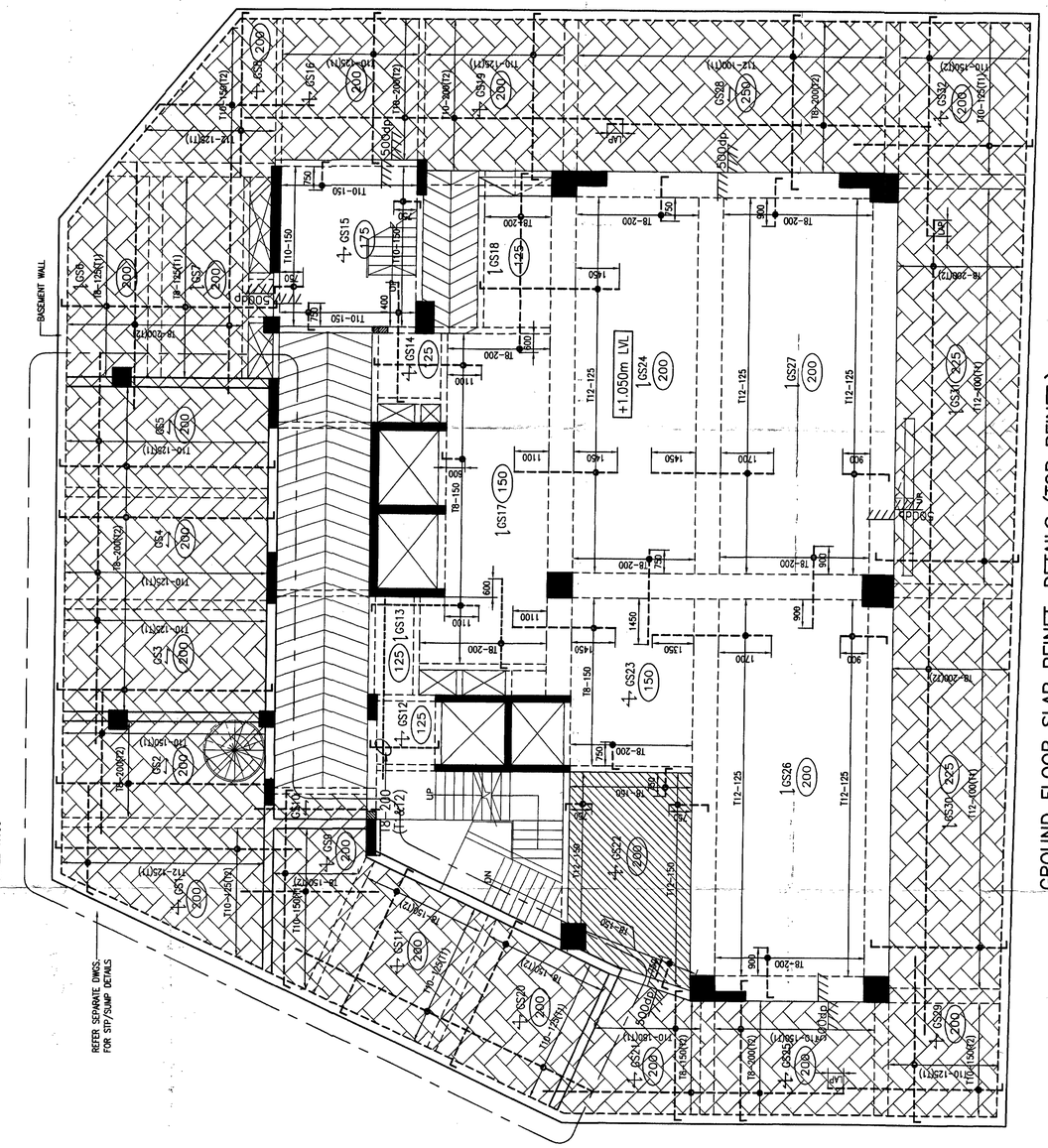
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GROUND FLOOR SLAB REINFT. DETAILS (BOTTOM REINFT.)
SCALE 1:100



GROUND FLOOR SLAB REINFT. DETAILS (TOP REINFT.)
SCALE 1:100

LOADS TABLE

LOCATION	LL (kN/m2)	SDL (kN/m2)
STAIRCASE/LOBBY	4.0	2.4
ELECTRICAL ROOM	3.0	7.5
TOILET	2.0	4.4
RETAIL	5.0	2.4
MECHANICAL PARKING	12.0	2.4

BAR LAYING SEQUENCE

LEGEND: —— BOTTOM REINFORCEMENT; - - - - TOP REINFORCEMENT

NOTES: FOR CLARITY PURPOSE DISTRIBUTION BARS NOT SHOWN. ALL DISTRIBUTION BARS ARE TO BE T8-200(B2&T2) UNLESS OTHERWISE INDICATED

NOTES:

1. ALL DIMENSIONS ARE IN MM.
2. FOR GENERAL NOTES REFER TO DWG. NO. BEI707_S-/NT/--/01.
3. FOR STANDARD DETAILS REFER TO DWG. NO. BEI707_S-/SD/--/01 & BEI707_S-/SD/--/02
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE KEY PLAN, ARCHITECTURAL AND ALL OTHER RELEVANT DRAWINGS.
5. GRADE OF CONCRETE:
   1) M30 – PILE
   2) M35 – BASEMENT SLAB, BASEMENT RC WALLS, PILECAP, RC FLOOR BEAMS & RC FLOOR SLABS
   3) M45 – RC COLUMNS & RC SHEAR WALLS
6. STEEL GRADE: Fe 500 CONFIRMING TO IS:1786–2008
7. CLEAR COVER FOR COLUMN–40mm, SHEAR WALL –30mm, SLAB–25mm, BEAM–30mm, PILE & PILE CAP–75mm BASEMENT RC WALL, UG SUMP&STP RC WALL –40mm BASEMENT SLAB–50mm
8. UNLESS OTHERWISE SPECIFIED, LAP/DEVELOPEMENT LENGTH SHALL NOT BE LESS THAN 50 X DIA OF BAR
9. SEISMIC LOAD HAS BEEN CONSIDERED AS PER IS:1893–2016 WITH SEISMIC ZONE III
10. STRUCTURE TO BE CONSTRUCTED IN ACCORDANCE WITH IS:456–2000, NBC(SP7–2015) AND RELEVANT INDIAN CODE STIPULATIONS
11. ONUS OF CONSTRUCTION LIES WITH CONTRACTOR/PROMOTOR/BUILDER/OWNER

NO.	AMENDMENTS	BY	DATE

CLIENT:
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STRUCTURAL

project title

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drawing title

GROUND FLOOR SLAB REINFT. DETAILS (BOTTOM&TOP REINFT.)

scale	AS SHOWN	design by	HARI
drawn by	CDR	checked by	AP
date	JAN 2023	approved by	–
drawing no.	BEI707_S–/SB/G–/–/01	revision	–

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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

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+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.