Verified RealEstate™

Your trusted partner for buying, selling, and managing property, ensuring hassle-free service with 100% transparency.

3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai, India

hello@verified.realestate
+91 9996 12 9996

Official Property Record

Digitally Verified Record - Powered by Verified RealEstate™



B.S.MURALIDHARA, B.E. (Civil),M.Tech., F.I.E.
STRUCTURAL ENGINEER
CHARTERED ENGINEER No : F-119716-5

Phone : (Off) : 044 28555581
Email : belavadimdhara@gmail.com

Office : 827, Second Floor, North Wing, Dhun Building, Anna Salai, Chennai- 600 002, India.

Date: 31 MAY 2024

STABILITY CERTIFICATE

The Proposed Residential Flats of Single Block under AHP Scheme with Basement +Stilt+ Nineteen Floors with 244 nos Dwelling Units situated at NATAN EGATTUR ROAD, EGATTUR, CHENNAI -603103.Comprised in S. Nos, 113/2. 113/2A &130/2 of EGATTUR VILLAGE, THIRIPORUR TALUK, CHENGULPET DISTRICT. Is designed to resist for wind &earthquake loads and I hereby certify that

1. The min grade of concrete is M40 - for Columns and Shear Walls, M 30 - for Raft Slab and RC Wall & M 25- for Beam and Slab for Floor lvl.
2. Foundation will be designed for Basement +stilt and Nineteen Upper Floors only.
3. The design analysis is done using the code of practice,
   For loading standards as per IS -875 part 2 for Live load
   Wind Load as per SI -875 Part-3 and Seismic force as per the code IS 1893.
4. The Building RC Members are Designed and Detailed as per SI -456 and SI -13920.
5. Raft foundation provided at 4.5m below EGL, as per Soil Investigation Report No: GMEPL/M/s. Jain Housing LLP/034/2023-24 by GEO MINES ENGINEERS PVT, LTD, CHENNAI-37, MOBILE :9840157478. Dated 20-04-2023.
   We certify that the structural plan and details of building si designed to satisfy the structural safety requirements for all situations including natural disasters as applicable and as stipulated under part 6 structural design of the national building code of India and other relevant codes; and the information given therein is factually correct to the best of our knowledge and understanding structurally safe and sound.

Structural Design , Drawings for Foundation , Columns , Shear Walls has been Designed and analysed using ETABS Software and Has been Certified by PWD (Dated:28:03:2024) and Found generally in Order.(Enclosed PWD Approval Copy)

B.S.Muralidhara

B.S.MURALIDHARA
(STRUCTURAL ENGINEER)

31/05/2024.

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email :belavadimdhara@gmail.com
Mobile: +91 9840413933

RC WALL 20MM
6. LAP LENGHT FOR REINFORCEMENT BAR IS 45d
7. GRADE OF CONCRETE FOR
RAFT SLAB / RC WALL M30
COLUMNS / SHEAR WALL M40
BEAM & SLAB / FOR FLOOR LVL M25
LIFT I M40
8. STRUCTURE DESIGNED FOR BASEMENT + STILT + NINETEEN UPPER FLOORS ONLY.
ALL EXTERNAL & INTERNAL WALLS SHALL BE LIGHTWEIGHT AAC BLOCKS OF UNIT WEIGHT 650KG /CU.M
9. RAFT FOUNDATION PROVIDED AT 4.5M BELOW EXISTING GROUND LEVEL AND SAFE BEARING CAPACITY OF SOIL CONSIDERED AS 30 METRIC TON / SQ.M AS PER GEOTECHNICAL INVESTIGATION REPORT DONE BY GEO MINES ENGINEERS PVT LTD., CHENNAI-95
REPORT NUMBER GMEIPL/M/s. JAIN HOUSING LLP 034/2023/24 REPORT DATE 20.04.23
2LAYERS OF 12Y@150 C/C Top & Bot Bothways
1800 thk
16Y@150C/C Bothways
300 thk RC WALL
APP MEMBRANE 3.5MM thick
16Y@150C/C + 16Y@150C/C (Extra @ Top & Bot)
16Y@75c/c
1200 thk
LIFT -1
100 thk HOLLOW BLOCK PROTECCTIVE TO APP MEMBRANE
1800 thk
1800 thk
16Y@150C/C Bothways
2LAYERS OF 12Y@150 C/C Top & Bot Bothways
500 ALAROUND RC WALL
25 mm Expansion joint alaround
500 thk
2LAYERS OF 12Y@150 C/C Top & Bot Bothways
A
B
C
D
48625
75940
13327
2335
18300
2335
9466
22990
900
500
On behalf of DTCP HRB Panel the Structural Drawings are reviewed and found generally in order. It is the responsibility of the Site/Structural Engineers concerned to scrutinize the details and implement at site as per the detailed Drawings and Specifications
Superintending Engineer, P.W.D., Planning and Design Circle, CMDA, Chennai-8.
NOTE
ALL EXTERNAL & INTERNAL AAC BLOCKS SHALL BE LIGHT WEIGHT OF UNIT WEIGHT 650KG /CU.M.
B.S. MURALIDHARA, BE (Civil), M.Tech., Structural Engineer
CMDA-Reg. No.SE/GR-1/19/23/25
827, II Floor, North Wing, Dhun Building, Anna Salai, Chennai - 600 002.
Email : baluvadimdhara@gmail.com
Mobile : +91 9840413933
GOOD FOR CONSTRUCTION
PRO TITLE
PLAN SHOWING THE PROPOSED RESIDENTIAL FLATS OF SINGLE BLOCK UNDER APP SCHEME WITH BASEMENT + STILT + 19 FLOORS WITH 244 NOS DWELLING UNITS SITUATED AT NATTAN - EGATTUR ROAD, EGATTUR, CHENNAI - 603103. COMPRISED IN S.NOS. 113/2, 113/2A & 130/2 OF EGATTUR VILLAGE, THIRUPORUR TALUK, CHENGLEPATTU DISTRICT.
RAFT SLAB LAYOUT & DETAILS
TOWER RAFT SLAB 1200 thk
PODIUM RAFT SLAB 1800 thk.
OWNER
TAMILNADU GOVT. GAZETTE
S. SARAVANAN B.E. Civil Engineering, Construction Engineer, Reg.No.CSE/DIST/RCS/2022/1009, No.24/36 Habibullah Road, T. Nagar, Chennai-600017, Phone: 97870 02110
Architect
Dimensions
No.107 Habibullah Road, T.Nagar,Chennai -17, Email: info@dimensions2000.com, www.dimensions2010.com Tel:044 - 6450 5001
STRUCTURAL WORK OWNER
GOOD FOR CONSTRUCTION
B.S. MURALIDHARA, BE (Civil), M.Tech., Structural Engineer
CMDA-Reg. No.SE/GR-1/19/23/25
827, II Floor, North Wing, Dhun Building, Anna Salai, CHENNAI - 600 002.
Email : baluvadimdhara@gmail.com
Mobile : +91 9840413933

DISTRICT TOWN AND COUNTRY PLANNING

KANCHIPURAM DISTRICT

No.33I/95 Kottrampalayam Street, Near Rangasamikulam,
(Old Employment Office)Kancheepuram -631 501.
Phone No.044-27227937, E-mail: ddkanchidtcp@gmail.com.

PROFESSIONAL REGISTRATION CERTIFICATE

This is to certify that the Thiru. **B.S.MURALIDHARA** has enrolled as **Structural Engineer Grade-I (SE)** with Kanchipuram Local Planning Authority (KLPA) who has qualification of **M.Tech.,** and experience in the relevant field for **30** years.

He /She has been given the Registration No.**SE/Gr.I/004/2021** on **10.03.2021**. He/She 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 up to **9 .03.2026**.



Deputy Director (I/C)
District Town and Country Planning
Kanchipuram

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email :belavadimdhara@gmail.com
Mobile: +91 9840413933

Annexure – XIV

[See rule 51 (3)]

Form 1

Structural Design Basis Report

(1) This report to accompany the application for Building Developments

Part 1	General Data		
S.NO.	Description	Information	Notes
1.	Site Address	The proposed residential flats with single block with Basement+Stilt+19 floors with 244 Nos Dwelling units situated at Nattan – Egattur Road, Egattur, Chennai – 603103. Comprised in S.No.113/2 & 2A & 130/2 of Egattur village, Tiruporur taluk, Chenglepattu District	
2.	Name of Owner	Chenaram Seni	
3.	Name of Registered Developer along with the Registration number		
4.	Name of the Registered Architect/Engineer along with the Registration Number	Ravuthar Naina Mohamed. Reg.No: CGLRGN/RA/Gr-I/2019/12/058	
5.	Name of the Registered Structural Engineer along with the Registration Number	B.S. Muralidhara Reg No. SE/Gr.I/004/2021	
6.	Use of the Building	Residential	
7.	Number of stories above ground level (including storeys to be added later,if any)	Stilt+19 floors	
8.	Number of basements below ground level	1 basement	
9.	Type of structure Load bearing walls R.C.C. frame R.C.C. frame and shear walls Steel frame	R.C.C FRAME AND SHEAR WALLS	
10.	Soil data	SOFT DISINTEGRATED	IS:1893 C1.6.3.5.2

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email :belavadimdhara@gmail.com

	Type of soil Design safe bearing capacity	ROCK ✓ S.B.C 30TONNE/SQM @ 4.5 METER LEVEL below EGL	IS:1904 IS:1892 IS:2131 IS:2720
11.	Dead loads (unit weight adopted) • Earth • Water • Brick masonry • Plain cement concrete • Reinforced cement concrete • Floor finish • Other fill materials	 15 TO 19 KN/CU.M 9.8 KN/CU.M 19 KN/CU.M 24 KN/CU.M 25 KN/CU.M 1.5 KN/CU.M	IS:875 Part 1
12.	Imposed (live) loads		
	Floor loads Roof loads	2 KN/SQ.M	IS:875 Part 2
13.	Cyclone/Wind • Speed • Design pressure intensity	 50 M/S 1.5 KN / SQ.M	IS:875 Part 3
14.	Seismic zone	ZONE II (Z = 0.16)	IS:1893(2002)
15.	Importance factor	I = 1.2	IS1893(2002) Table 6
16.	Seismic zone factor (Z)	Z=0.16	IS:1893 Tabe 2
17.	Response reduction factor	R-5	IS:1893 Table 7
18.	Fundamental natural period – approx.	1.325 SECONDS	IS:1893 C1.7.6
19.	Design horizontal acceleration spectrum value (Ah)	0.048	IS:1893 C1.6.4.2
20.	Expansion/Separation Joints	SINGLE EXPANSION JOINT	
21.	Building is regular/irregular	REGULAR	IS:1893

- Enclose detailed drawings drawn to scale for each floor
- Incase terrace garden is provided, indicate additional fill load and live load along with the detailed drawings drawn to scale

Part 2	Load bearing masonry buildings		
S.NO.	Desription	Information	Notes
1.	Building category		IS:4326 C1.7 Read with IS:1893 Zone: II III IV V ORDINARY: B C D E IMPORTANT: C D E E
2.	Basement Provided		

N.A

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email :belavadimdhara@gmail.com
Mobile: +91 9840413933

B.S. Muralidhara

3.	Number of floors including Ground floors (all floors including stepped floors in hill slopes)		
4.	Type of wall masonry		
5.	Type of mix of mortar		IS:4326 C1.8.1.2
6.	• Re: size and position of openings • (See note No.[I]) • Minimum distance (b5) • Ratio (b1+b2+b3)/l2 or (b6+b7)/l2 • Minimum pier width between consequent opening (b4) • Vertical distance(h3) • Ratio of wall height to thickness 4 • Ratio of wall length between cross wall to thickness		IS:4326 Table 4,Fig.7
7.	Horizontal seismic band • At plinth level • At window sill level • At lintel level • At ceiling level • At eave level of sloping roof • At top of gable walls • At top of ridge walls	P IP NA	(See note No.2) IS:4326 C1 8.4.6 IS:4326 C1 8.3 IS:4326 C1 8.4.2 IS:4326 C1 8.4.3 IS:4326 C1 8.4.3 IS:4326 C1 8.4.4
8.	Vertical reinforcing bar at corners and T junction of walls at jambs of doors and window openings		IS: 4326 C I 8.4.8. IS: 4326 C I 8.4.9
9.	Integration of prefab roofing/flooring elements through reinforced concrete screed.		IS:4326 C I 9. 1.4
10.	Horizontal bracings in pitched truss in horizontal plane at the level of ties in the slopes of pitched roofs		

Notes: (i) Information in Item 6 should be given on separate A4 sheets for all walls with large number of openings

(ii) IP indicated "Information Provided"

IP indicates "Information to be provided "

NA indicates "Not Applicable "

Tick mark one box

Part 3	Reinforced concrete framed buildings		
Sl. No.	**Description**	**Information**	**Notes**
1.	Type of building • Regular frames • Regular frames with Shear Walls • Irregular frames • Irregular frames with Shear Walls • Soft storey	• Regular frames with Shear Walls	IS: 1893 C I 7.1
2.	Number of basements	ONE	
3.	Number of floors including ground floor	20 FLOORS	
4.	Horizontal floor system • Beams and slabs • Waffles • Ribbed floor • Flat slab with drops • Flat plate without drops	BEAMS & SLABS	
5.	Soil data • Type of soil • Recommended type of • foundation -Independent footings -Raft -Piles • Recommended bearing capacity of soil • Recommended type, length, diameter and load capacity of piles • Depth of water table • Chemical analysis of ground water • Chemical analysis of soil	SOFT DISINTEGRATED ROCK RAFT FOUNDATION. 30 TONNES /SQ.M WATER TABLE 2.00M FROM E.G.L P.H = 6.87; CHLORIDE = 293 PPM ; SULPHATE = 329 PPM. WITHIN LIMITS NORMAL	IS: 1498
6.	Foundations Depth below ground level Type Independent Interconnected Raft	RAFT FOUNDATION @ 4.5M FROM E.G.L	

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email :belavadimdhara@gmail.com

B. S. Muralidhara

	Piles		
7.	System of interconnecting foundations Plinth beams Foundation beams	FOUNDATION BEAMS	IS: 1893 Cl 7. 12.I
8.	Grades if concrete used in different parts of building	COLUMN – M40 ALL OTHER STRUCTURES – M25	
9.	Method of analysis used	RESPONSE SPECTRUM ANALYSIS (DYNAMIC METHOD)	
10.	Computer software used	STAAD	
11.	Torsion included	YES	IS: 1893 Cl 7.9
12.	Base shear • Based on approximate fundamental period • Based on dynamic analysis • Ratio of a/ b	886.79 KN. 886.24 KN	IS: 1893 Cl. 7.5.3
13.	Distribution of seismic forces along the height of the building.	YES	IS:1893 Cl.7.7 (Provide sketch)
14.	The Column of soft ground storey specially designed.	YES	IS: 1893 Cl.7.10
15.	Clear minimum cover provided in • Footing • Column • Beams • Slabs • Walls	50MM 40MM 25MM 15MM 25MM	IS: 456 Cl. 26.4
16.	Ductile detailing of RC frame • Type of reinforcement used • Minimum dimension of beams • Minimum dimension of columns • Minimum percentage of reinforcement of beams at any cross section • Maximum percentage of reinforcement at any section of beam • Spacing of transverse reinforcement in 2-d length of beams near the ends	DUCTILE DETAILING DONE	IS: 456 Cl. 5.6 IS: 13920 Cl.6.1 IS: 13920 Cl.7. I.2 IS: 456 Cl.26.5. I (a) IS: 13920 Cl.6.2.1 IS: 456 Cl.26.5. 1. 1(b) IS: 13920 Cl.6.2 .2 IS: 13920 Cl.6.3.5

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email :belavadimdhara@gmail.com

	• Ratio of capacity of beams in shear to capacity of beams in flexure • Maximum percentage of reinforcement in column • Confining stirrups near ends of columns and in beam-column joints Diameter Spacing • Ratio of shear capacity of columns to maximum seismic shear in the • storey.		IS: 456 Cl.26.5.3.1 IS: 13920 Cl. 7.4
17.	Does the features require clearance by SDRP Example: High rise building Prefab building Building in hazard prone areas	YES	

Foundation

i. In case raft foundation has been adopted, indicate K value used for analysis of the raft.
ii. Incase pile foundations have been used , give full particulars of the piles, type ,dia, length, capacity
iii. Incase of high water table, indicate system of countering water pressure, and indicate the existing water table, and that assumed to design foundations.

Idealization for Earthquake analysis

B.S. MURALIDHARA, B.E.,(Civil),M.Tech.,
Structural Engineer
DTCP Reg No. SE/GR-I/004/2021
827, II Floor, North Wing, Dhun Building,
Anna Salai, Chennai - 600 002.
Email: bsmuralidhara@gmail.com
Mobile: +91 9840413933

a. In case of composite system of shear walls and rigid frames, give distribution of base shear in the two systems on the basis of analysis, and that used for design of each system.
b. Indicate the idealization of frames and shear walls adopted in the analysis with the help of sketches.
c. Submit framing plans of each floor
d. In case of basements, indicate the system used to contain earth pressures .

Part 4	Buildings in structural steel		
1	Adopted method of design	o Simple o Semi-rigid o Rigid	IS:800 Cl 3.4.4 IS:800 Cl.3.4.5 IS:800 Cl.3.5.6
2	Design based on	o Elastic analysis o Plastic analysis	IS: 800 Section-9 SP;6 (6)
3	Floor construction	o Composite o Non composite o Boarded	
4	Roof construction	o Composite o Non composite	

		o Metal o Any other	
5	Horizontal force resisting system adopted	Roof constructionFramesBraced frames Frames & shear walls	Note: Seismic force As per IS:1893 Would depend on system
6	Slenderness ratios maintained	Members defined in Table 3. 1, IS:800	IS 800; Cl.3.7
7	Member deflection limited to	Beams, Rafters Crane Girders, Purlins Top of columns	IS:800 Cl.3.13
8	Structural members	Encased in concrete Not encased	IS: 800 Section-10
9	Proposed material	o General weld-able o High strength o Cold formed o Tubular	IS: 2062 IS: 8500 IS: 801, 811 IS: 806
10	Minimum metal thickness Specified for corrosion protection	o Hot rolled sections o Cold formed sections o Tubes	IS: 800, Cl.3.8 Cl.3.8.1 to
11	Structural connections	o Rivets o CT Bolts o S H F G Bolts o Black Bolts o Welding field Shop (Specify welding type proposed) Composite	IS: 800, Section-8 IS: 1929, 2155, 1149 IS 6639 , 1367 IS 3757, 4000 IS: 1363, 1367 IS: 816, 814, 1395, 7280 , 3613, 6419, 6560, 813, 9595
12			IS: 1641, 1642, 1643

Part-5

Any special weakness in the building making it vulnerable for stability related failure and the precaution to be taken during execution/ completion and finishing to be indicated.

Part-6

Recommendations of structural Engineer with respect to special requirements needed respect to strucutral safety and stability to be taken note of by competent authority feature like incorporation of swimming pool , heavy load on roof prefabricated structure or any other hazardous features should be included.



our services doesn't just end there

Buying & Selling Services

Property Buying Assistance, Property Selling Support, Market Price Analysis, Owner Outreach and Negotiation.

Legal & Documentation Services

Certified EC, Patta, legal opinions, property verification, due diligence, litigation solutions, and legal heir certificates.

Property Development & Approvals

Building plan approvals, construction, layout and sub-division approvals, zone conversion, and occupancy certification.

NRI & Investment Services

Escrow Services, Rentals, Litigation Solutions, Property Valuation and Property Management

Compliance & Special Services

Demolition, Vaasthu checks, regularization of unauthorized buildings, and office space solutions.



empowering your real estate decisions with smart tools

Property Valuation & Cost Estimation

Guideline Value, Apartment Composite Value, Stamp Duty & Registration Fees Calculator, Building Value Calculator, Capital Gains Calculator, Area Unit Converter, Length Unit Converter

Ownership, Compliance & Legal Verification

Encumbrance Certificate (EC) Search, Find Your SRO, Temple Property Check, WAQF Property Check, View Patta/Chitta, View FMB, Patta Analyzer, EC Analyzer

Zoning & Land Use Analysis

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

Property Documentation & Workflow Tools

Forms & Templates, Document Generator, Document Translation, Dictionary

Vastu & Property Management Tools

Home Vastu Shastra, Plot Vastu Shastra, Property Management

Verified RealEstate™

We're honored to be part of your real estate journey

3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai, India

hello@verified.realestate
+91 9996 12 9996
www.verified.realestate