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RE REGULATORY RECORD

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Verified RealEstate™
3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai 600 097, India

hello@verified.realestate
+91 9996 12 9996
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DIGITALLY VERIFIED RECORD

Annexure – XIV

[See rule 51 (3)]

Form 1

Structural Design Basis Report

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

Part1	General Data		
S.No.	**Description**	**Information**	**Notes**
1.	Site Address	PLAN SHOWING THE PROPOSED CONSTRUCTION OF APARTMENT BUILDING RESIDENTIAL IN STILT + 5 FLOORS (40 DWELLINGS)- TOTAL FSI AREA OF 3675.23 SQM RS.NO:37/1A1, CHETTIKULAM VILLAGE/PANCHAYAT,MADURAI NORTH TALUK,MADURAI.	
2	Name of Owner	JAYAKUMAR .P	
3	Name of Registered Developer along with the Registration Number	JAYABHARATH HOMES PVT LTD GST NO : 33AACCJ5751C1ZY CIN : U70100TN2011PTC080121	
4	Name of Registered Architect/Engineer along with the Registration Number	Er.PRASANNA .K REG NO : RE/05/2022(Gr.I)	
5	Name of Registered Structural engineer along with the Registration Number	Er. JAGADEEESH.A.G REG NO : SE/06/2021(Gr . II)	
6	Use of the building	RESIDENTIAL PURPOSE	
7	Number of stories above ground level (including storeys to be added later, if any)	5	
8	Number of basements below ground level	-	

Er.A.G.JAGADEESH, B.Tech.,
Structural Engineers (MDTCP)
Reg. No - SE-06/2021 (Gr-II)
16/16, Indira Gandhi Street,
Villapuram, Madurai-625012
Cell: 8883342220

9	Type of structure Load bearing walls R.C.C. frame R.C.C. frame and Shear Walls Steel frame	RCC Framed structure	
10	Soil data Type of soil Design safe bearing capacity	Soft Disintegrated Rock 24 t/sqm	Is; 1893 C1.6.3.5.2 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	1.8 t/cum 1.0 t/cum 0.8 t/cum 2.4 t/cum 2.4 t/cum 2 t/cum	Is; 875 part 1
12	Imposed (live) loads Floor Loads Roof Loads	200 kg/sqm 150 kg/sqm	Is; 875 part 2
13	Cyclone/Wind • Speed • Design pressure intensity	50 m/sec 150 kg/sqm	Is; 875 part 3

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14	Seismic zone	II	Is;1893 (2002)
15	Importance factor	1.2	Is;1893 (2002) Table 6
16	Seismic zone factor (Z)	0.10	Is;1893 Table 2
17	Response reduction factor	5	Is;1893 Table 7
18	Fundamental natural period – approx.	0.50 sec	Is;1893 C1.7.6
19	Design horizontal acceleration spectrum value (A_h)	0.05	Is;1893 C1.6.4.2
20	♥ Expansion/Separation Joints	No	
21	Building is regular/irregular	Regular	Is;1893

♥ Enclose detailed drawings drawn to scale for each floor

♦ In case 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- NOT Applicable**		
Sl.No.	**Description**	**Information**	**Notes**
1	Building category	nil	IS: 4326 C1.7 Read with IS:1893 Zone / Bldg. — II III IV V Ordinary — B C D E Important — C D E E
2	Basement Provided		
3	Number of floors including Ground Floor (all floors including stepped floors in hill slopes)		
4	Type of wall masonry		
5	Type and mix of Mortar		IS;4326 C1.8.1.2
6	Re: size and position of openings (See note No.[i]) • Minimum distance (b_5) • Ratio $(b_1+b_2+b_3)/l_1$ or $(b_6+b_7)/l_2$ • Minimum pier width between consequent opening (b_4) • Vertical distance (h_3) • 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	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

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	• at eave level of sloping roof • at top of gable walls • at top of ridge walls	} } } } } } } } }	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 C1 8.4.8. IS: 4326 C1 8.4.9
9	Integration of prefab roofing/flooring elements through reinforced concrete screed.	} } }	IS:4326 C1 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	IS: 1893 C1 7.1
2	Number of basements	-	
3	Number of floors including ground floor	6 slabs	
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	Isolated Footing 24 t/sqm	IS: 1498

A. G. J

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Structural Engineers (MDTCP)
Reg. No - SE-06/2021 (Gr-II)
16/16, Indira Gandhi Street,
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Cell: 88837[illegible]

	• Recommended type, length, diameter and load capacity of piles • Depth of water table • Chemical analysis of ground water • Chemical analysis of soil	More than 1.2 m Within BIS Limit	
6	Foundations Depth below ground level Type Independent Interconnected Raft Piles	Isolated	
7	System of interconnecting foundations Plinth beams Foundation beams	Foundation beams	IS: 1893 C1 7.12.1
8	Grades if concrete used in different parts of building	M35, M30, M25	
9	Method of analysis used	Dynamic Analysis – 3D	
10	Computer software used	ETAB	
11	Torsion included	Yes	IS: 1893 C1 7.9
12	Base shear a. Based on approximate fundamental period b. Based on dynamic analysis c. Ratio of a/b		IS: 1893 Cl. 7.5.3
13	Distribution of seismic height of forces along the building.	As per 3D analysis	IS:1893 Cl.7.7 (Provide sketch)
14	The Column of soft ground storey specially designed.	No soft storey (Forces with in limit)	IS: 1893 Cl.7.10
15	Clear minimum cover provided in • Footing • Column • Beams • Slabs • Walls	 50 mm 40 mm 30 mm 25 mm 30 mm	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 • Ratio of capacity of beams in shear to capacity of beams in flexure • Maximum percentage of reinforcement in column	 Fe 500 200 mm 200 – 600 mm 0.24 1.8 100 Within limit 3.6	 IS: 456 Cl. 5.6 IS: 13920 Cl.6.1 IS: 13920 Cl.7.1.2 IS: 456 Cl.26.5.1(a) IS: 13920 Cl.6.2.1 IS: 45 Cl.26.5.1.1(b) IS: 13920 Cl.6.2.2 IS: 13920 Cl.6.3.5 IS: 456 Cl.26.5.3.1 IS: 13920 Cl. 7.4

Er.A.G.JAGADEESH, B.Tech.,
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Cell: 8883342220

	• 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.	100 8mm dia 1	
17	Does the features require clearance by SDRP Example: High rise building Prefab building Building in hazard prone areas	Non High Rise Building	

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. In case 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

i. 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

ii. Indicate the idealization of frames and shear walls adopted in the analysis with the help of sketches.

iii. Submit framing plans of each floor

iv. In case of basements, indicate the system used to contain earth pressures.

Part 4	**Buildings in structural steel**		
1	Adopted method of design		IS:800 Cl 3.4.4 IS:800 Cl.3.4.5 IS:800 Cl.3.5.6
2	Design based on		IS: 800 Section-9 SP;6 (6)
3	Floor construction		
4	Roof construction		
5	Horizontal force resisting system adopted		Note: Seismic force As per IS:1893 Would depend on system
6	Slenderness ratios maintained		IS 800; Cl.3.7
7	Member deflection		IS:800 Cl.3.13

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16/16, Indira Gandhi Street,
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	limited to		
8	Structural members		IS: 800 Section-10
9	Proposed material		IS: 2062 IS: 8500 IS: 801, 811 IS: 806
10.	Minimum metal thickness Specified for corrosion protection		IS: 800, Cl.3.8 Cl.3.8.1 to Cl.3.8.4 Cl.3.8.5
11	Structural connections		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	Minimum Fire rating with proposed, method		IS: 1641, 1642, 1643

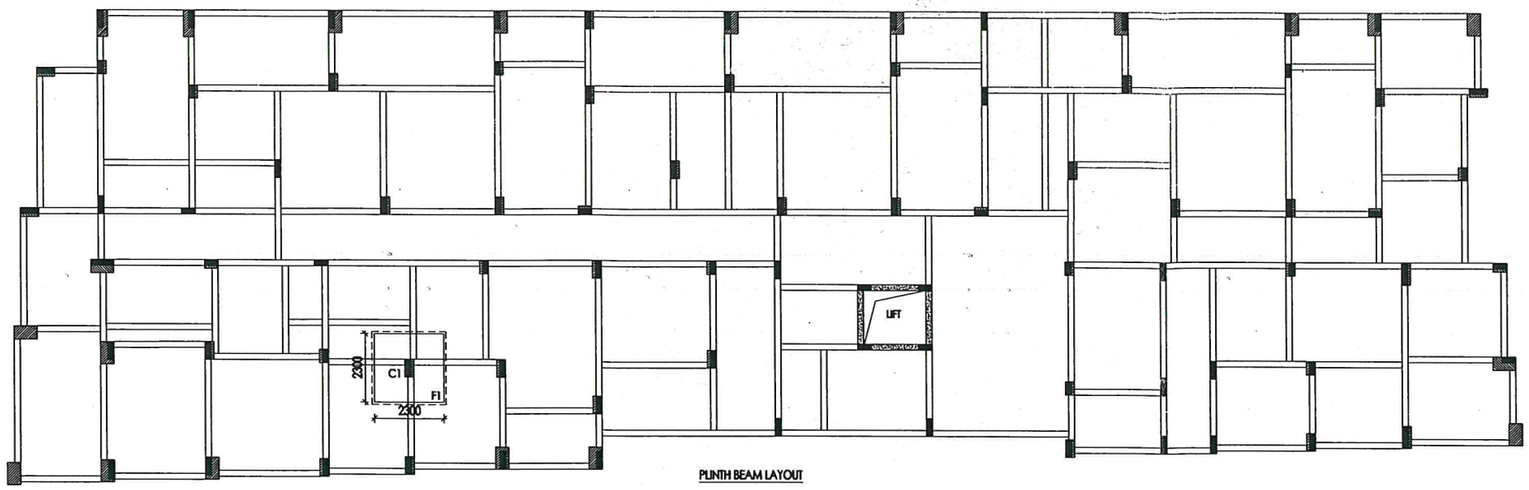
Part-5

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.

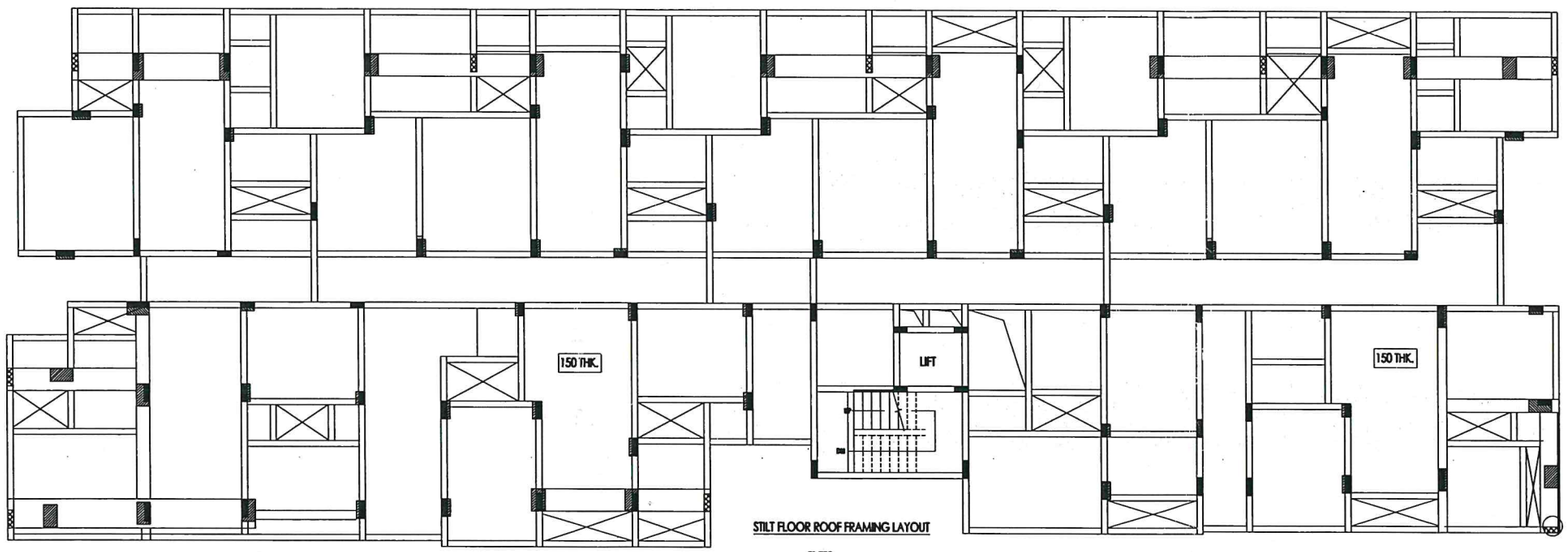
Part-6

Recommendations of structural engineer with respect to special requirements needed with respect to structural 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 should be included.

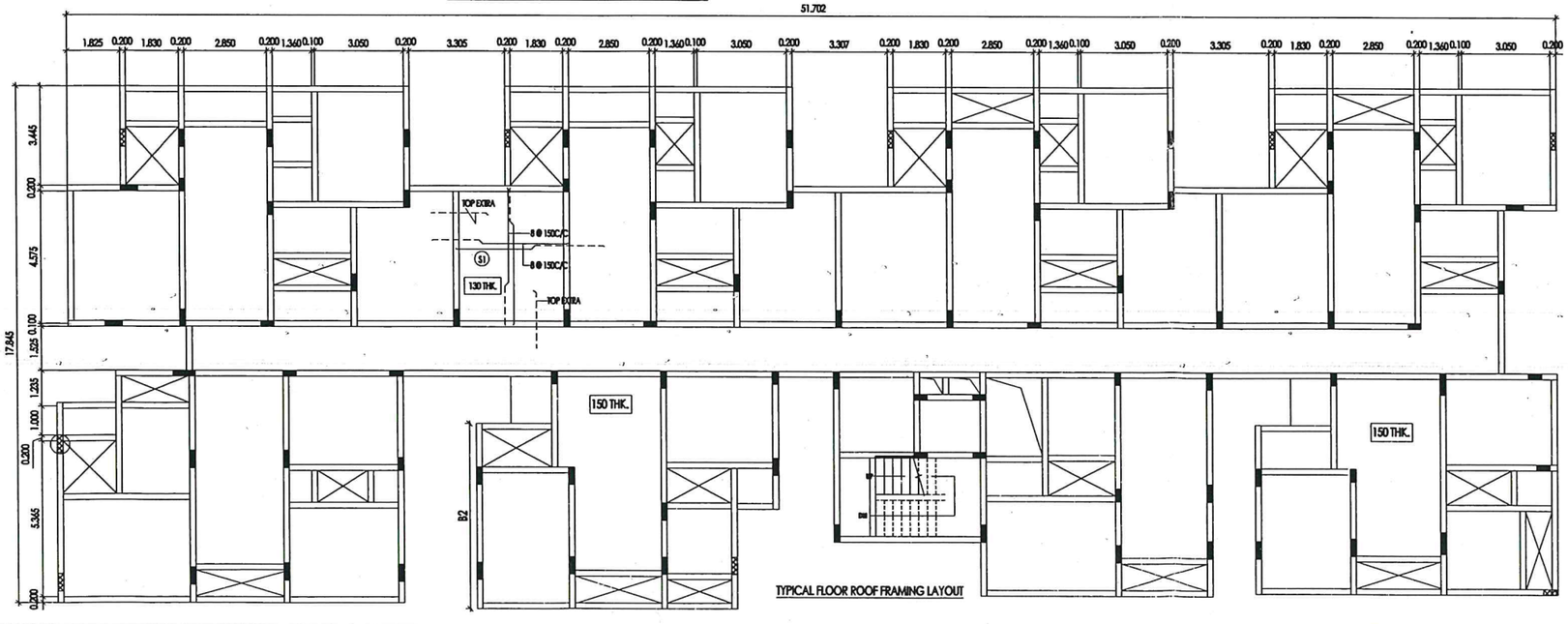
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16/16, Indira Gandhi Street,
Villapuram, Madurai-625012
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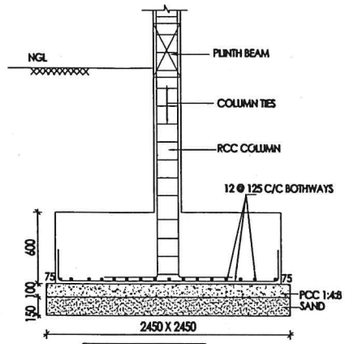
PLINTH BEAM LAYOUT



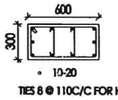
STILT FLOOR ROOF FRAMING LAYOUT



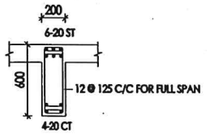
TYPICAL FLOOR ROOF FRAMING LAYOUT



TYPICAL DETAILS OF ISOLATED FOOTING



COLUMN-C1



BEAM-B2

ISSUE: SUBMISSION DRAWING

NOTES:

1. ALL DIMENSIONS ARE IN METERS & MILLIMETERS.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWING
3. ANY DISCREPANCY/DOUBT WHILE EXECUTING SHOULD BE BROUGHT TO NOTICE OF THE STRUCTURAL CONSULTANT
4. DO NOT SCALE THE DRAWING, FOLLOW SPECIFIED DIMENSIONS
5. CONCRETE MIX FOR FOR M30 SHOULD BE IN IN (1:1:2) MIX WITH MINIMUM CEMENT CONTENT 380 kg/cu.m
6. REINFORCEMENT SHOULD BE OF GRADE Fe500
7. LAP LENGTH FOR REINFORCEMENT IS 50d
8. CONDUIT PIPES SHOULD NOT GO THROUGH COLUMNS BOTH IN TRANSVERSE OR LONGITUDINAL DIRECTIONS
9. FOOTING CENTRE AND COLUMN CENTRE ARE SAME UNLESS OTHERWISE SPECIFIED

MEMBER	CONCRETE GRADE	COVER
FOOTING	M-30 WITH 380Kg/cu.m CEMENT	50
COLUMN	M-30 WITH 380Kg/cu.m CEMENT	40
BEAM	M-30 WITH 380Kg/cu.m CEMENT	30
SLAB	M-30 WITH 380Kg/cu.m CEMENT	25

A. FOUNDATION DESIGNED FOR STILT +5 UPPER FLOORS

B. FOUNDATION PROVIDED AS PER SOIL REPORT S.B.C =24 t/m2 AT 2.1M DEPTH FROM N.G.L

REV No.	DESCRIPTION	BY	DATE

PROJECT TITLE:

PLAN SHOWING THE PROPOSED CONSTRUCTION OF APARTMENT BUILDING(RESIDENTIAL) IN RS.NO:37/1A1, CHETTIKULAM VILLAGE/PANCHAYAT, MADURAI NORTH TALUK,MADURAI.

DRAWING TITLE:

FOUNDATION ,STILT & TYPICAL FLOOR ROOF DETAILS

DRAWING No:	SCALE:	SHEET SIZE:
01	1:100	A1

NORTH POINT:	DRAWN:	DESIGN:
	M.H	BNP
	CHECKED:	DATE: 25/04/2025
	SHEET NO: 1	REVISION: R0

STRUCTURAL ENGINEER:

A.G.J

Er.A.G.JAGADEESH, B.Tech.,
Structural Engineers (MDTCP)
Reg. No - SE-06/2021 (Gr-II)
16/16, Indira Gandhi Street,
Villapuram, Madurai-625012
Cell: 8883342220

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

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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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3/350/2 Mettukuppam,
OMR Thoraipakkam,
Chennai 600 097, India
hello@verified.realestate
+91 9996 12 9996

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