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ANNEXURE-III
[SeeGuidelineNo.5(vi)]

Structural Stability Requirements for a Building

1. The applicant shall to engage an Architect / Engineer, Structural Engineer, Geo-technical Engineer and Construction Engineer as per the guidelines.

2. For ordinary building, the applicant shall submit the required site plan and detailed structural plans duly prepared by the registered civil engineer.

3. The applicant shall get the building evaluated structurally and geo-technically by the relevant registered professional and submit are port on the stability of the building endangered by either the violation or otherwise, along with the application. The applicant shall also submit all the building and site details as per the proposed guidelines for evaluation as per Structural Design Format appended here in.

4. The Competent Authority will evaluate the building and site detailssubmittedbytheapplicantandtheCompetentAuthorityshalldecide on the corrective measures, if any, and communicate the same to the applicant for carrying out the corrections, within a time period as specified by the Competent Authority but not more than six months. The applicant shall carry out the corrective measures and submit compliance report to the competent authority within the stipulated time failing which the regularization application shall be rejected.

Note: The structure is safe and sound

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Annexure – XIV

[See rule 51 (3)]

Form 1

Structural Design Basis Report

This report to accompany the application for Building Developments

Part1	General Data		
S.No.	**Description**	**Information**	**Notes**
1	Site Address	Plot No .2329, Ad Block,Door No.Ad-74, Shanthi Colony 4Th Avenue, Anna Nagar, Chennai .	
2	Name of Owner	M/S. Manghalam Properties Rep. By Its Sole Proprietor, Mr.T.V.Aanand	
3	Name of Registered Developer along with the Registration Number		
4	Name of Registered Architect/Engineer along the Registration Number		
5	Name of Registered Structural engineer along with the Registration Number	SE/GR-II/2019/04/047	
6	Use of the building	Residential	
7	Number of stories above ground level (including storeys to be added later, if any)	G+5	
8	Number of basements below ground level	-	
9	Type of structure Load bearing walls R.C.C.frame R.C.C.frame and Shear Walls Steel frame	R. C. C. frame	
10	Soil data Type of soil Design safe bearing capacity	 Rock 50.0 T/m2	IS:1893C1.6.3 .5.2IS:1904
11	Dead loads(unit weight adopted) • Earth • Water • Brick masonry • Plain cement concrete • Reinforced cement concrete • Floor finish • Other fill materials	 - 10KN/m^3 20KN/m^3 24KN/m^3 25KN/m^3 1KN/m^2 -	IS:875Part1
12	Imposed(live)toads Floor loads Roof loads	 2KN/m^2	 IS:875Part 2
13	Cyclone/wind • Speed • Design pressure intensity	 50Km/h 0.2	IS:875Part 3
14	Seismic zone	3	IS:1893(2002)
15	Importance factor	1.0	IS:1893(2002) Table6
16	Seismic zone factor(Z)	0.16	IS:1893Table2

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17	Response reduction factor	3.0	IS:1893Table7
18	Fundamental natural period-approx.	0.484	IS:1893C1.7.6
19	Design horizontal acceleration spectrum value(A_h)	0.25	IS:1893C1.6.4.2
20	*Expansion/Separation Joints	-	
21	Building is regular/irregular	regular	IS :1893

*Enclose detailed drawings drawn to scale for each floor

Note:

In case terrace garden Is provided ,indicate additional fill load and Live load along with the detailed drawings drawn to scale

Part2	**Load bearing masonry buildings**		
S.No.	**Description**	**Information**	**Notes**
1	Building category		IS:4336C1.7 ReadwithIS: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:4326C1.8.1.2
6	Re: size and position of openings(See note No.[i]) • Minimum distance(b5) • Ratio $(b_1+b_2+b_3)/1_1$ or$(b_6+b_7)/1_2$ • Minimum pier width between consequent opening ((b_4) • Vertical distance(h_3) • Ratio of wall height tothickness4Ratio of wall length between cross wall to thickness		IS:4326Table4,Fig.7

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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	(seenoteNo.2)IS:4326C18.4.6 IS:4326C18.3 IS:4326C18.4.2. IS:4326C18.4.3 IS:4326C18.4.3 IS:4326C18.4.4
8	Vertical reinforcing bar at corners and T junction of walls at jambs of door sand window openings		IS:4326C18.4.8 IS:4326C18.4.9
9	Integration of prefab roofing/flooring elements through reinforced concrete screed.		IS:4326C19.1.4
10	Horizontal bracings in pitched truss in horizontal plan eat the level of Ties in the slopes of pitched roofs		

Notes: (i)InformationinItem6shouldbegivenonseparateA4sheetsforallwallswithlarge number of openings

(ii)Pindicates" Information provided"
IP indicates "Information to be provided"
NA indicates "Not Applicable"
Tick mark one box

Part3	Reinforced concrete framed buildings		
S.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: 1893C17.1
2	Number of basements	0	
3	Number of floors including ground-floor	6	
4	Horizontal floor system • Beam sand slabs • Waffles • Ribbed floor • Flat slab with drops • Flat plate without drops	Beams and slabs	

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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	Rock Pile 50.0 T/m2	IS:1498
6	Foundations Depth below ground level Type Independent Interconnected Raft Piles	30.0m	
7	System of interconnecting foundations Plinth beams Foundation beams	Plinth beams	IS:1893C17.12.1
8	Grades if concrete used indifferent parts of building	M20	
9	Method of analysis used	Limits	
10	Computer software used	Stadd Pro	
11	Torsion included		IS:1893C17.9
12	Base shear a. Based on approximate fundamental period b. Based on dynamic analysis c. Ratio of a/b		IS:1893C1.7.5.3
13	Distribution-of seismic forces along the height of the building		IS:1893C1.7.7 (Providesketch)
14	The column of soft ground storey specially designed.		IS:1893C1.7.10
15	Clear minimum cover-provided in • Footing • Column • Beams • Slabs • Walls	50mm 40mm 25mm 20mm	IS:456C1.26.4

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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 in2-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 • Confining stirrups near ends of Column sand in beam-column joints Diameter Spacing • Ratio of shear capacity of Columns to maximum seismic Shear in the storey.	 TMT 230X375 300X600 0.02% 0.03% 100mm - 3% 8mm 100mm -	 IS:456C1.5.6 IS:13920C1.6.1 IS:13920C1.7.1.2 IS:456C1.26.5.1(a) IS:13920C1.6.2.1 IS:456 C1.26.5.1.1(b) IS:13920C1.6.2.2 IS:13920C1.6.3.5 1S:456C1.26.5.3.1 1S:13920C1.7.4
17	Does the features require clearance by SDRP Example: Multistory building Prefab building Building in hazard prone areas		

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, givedistributionofbaseshearinthetwosystemsonthebasisofanalysis,an dthat used for design of each system

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ii. Indicatetheidealizationofframesandshearwallsadoptedintheanalysisw iththe help of sketches.
iii. Submit framing plans of each floor
iv. In case of basements, indicate the system used to contain earth pressures.

Part4	Buildings In structural steel		
1	Adopted method of design	o Simple o Semi-rigid o Rigid	IS:800C13.4.4 IS:800C13.4.5 IS:800C13.5.6
2	Design based on	o Elastic analysis o Plastic analysis	IS:800Section-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	Frames Braced frames Frames &shear walls	Note: Seismic force As per IS:1893Wouldde pendon system
6	Slenderness ratios maintained	MembersdefinedinTable3. 1,IS:800	IS800;C1.3.7
7	Member deflection limited to	Beams, Rafters Crane Girders, Purlins Top of columns	IS:800C1.3.13
8	Structural members	o Encasedin concrete Noten cased	IS:800Section-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, C1.3.8C1.3.8.1toC1. 3.8.4C1.3.8.5
11	Structural connections	o Rivets o CT Bolts o SH FG 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

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12	Minimum Fire rating proposed, with method	o Rating.....hours o Method proposed - Intumescet painting - Spraying - Quilting - Fire retardant boarding	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 in corporation of swimming pool, heavy load on roof, prefabricated structure or any other hazardous features should be included.

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ANNEXURE-VI.

[SeeGuidelineNo.5(ix)]

Certificate of the Structural Engineer specifying the Stability of the Building

To

.....

.....

Ref: Proposed regularization of ..... (Title of the project).....at.....
.....[Site address].....for.....
(Name of Owner/Developer/Builder),.....
[his address and Tel.No] .....
.....

1. This is to certify that I have been appointed as the Structural Engineer to prepare the Structural design basis report, detailed structural design and detailed structural drawings for above mentioned existing building seeking regularization herein.
2. I have prepared and signed a structural design basis report (SDBR) for repair/retrofitting.
3. I undertake to carry out a detailed structural design and prepare detailed structural drawings of the proposed repair/retrofitting of building as per the latest BIS and National Building Code, and as indicated in the structural design basis report.
4. I under take to supply the detailed structural drawings to the owner.
5. I undertake to submit the certificates /reports as required under this rule.
6. I will not carry out any works in contravention of the Act sand Rules.

Signature:

Reg.No. SE/GR-II/2019/04/047 Date: 17.10.2024

Name: D.Kabilan

Address: Plno:13, Shiridi Sai Nagar , Poonamallee, Chennai -56.

Tel.No.: 9884399903

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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

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