



**Structural Analysis Report.**

**Date:**

**1 Owner(s) information:**

- a. Name.....
- b. Plot No..... c. Thram No..... d. Location.....

**2 Designer(s) information:**

- a. Name.....
- b. Name of last University.....
- c. Graduation from the last university (month and year) .....
- d. Experience in designing.....
- e. Type of software used.....

**3 Type of structure (Tick) and specify the Grade applied in analysis**

- RCC.....
- Steel.....
- Load-bearing wall
- Others (Please specify) .....

**4 No. of the story.....**

(Example (S or B/S+G+4+J)

B=Basement floor below lowest natural ground level

S=Stilt Floor above ground level

**5 Modelled and analyzed the structure, incorporating all elements as specified in the architectural drawings, including projected slabs, verandas, rabseys, and staircases.**

- Yes
- No

**6 Types of imposed load applied to the external and internal walls, and specify its unit weight per meter.**

- Brick wall
- Autoclaved Aerated Concrete (AAC block)
- Other (specify).....
  - External wall load applied .....KN/m
  - Internal wall load applied.....KN/m

**7 For a proposed water tank on the roof floor, specify the water tank capacity and applied unit weight.**

- a. Capacity of water tank each..... Liters



- b. Water tank load applied.....KN/m<sup>2</sup>
- 8 If the roof trusses are not modelled with the structural members, what unit weight of the roof truss and CGI sheets has been applied to the structural model?**
- a. Total roof dead load.....KN/m<sup>2</sup>  
or  
b. Total point dead load.....KN
- 9 If the moment of inertia has been applied to columns and beams, specify its percentage below:**
- a. Column.....  
b. Beam.....
- 10 Design base shears for the structure by applying static and dynamic methods. If vertical excitation/motion is applied, provide its value separately.**
- a. Design base shear for Static (VB) along X-axis principle (major/minor): .....KN  
b. Design base shear for Dynamic (VB) along X-axis principle (major/minor): .....KN
- a. Design base shear for Static (VB) along Y-axis principle (major/minor): .....KN  
b. Design base shear for Dynamic (VB) along Y-axis principle (major/minor): .....KN
- 11 Applied design base shear factor through dynamic analysis**
- a. Design base shear factor along X-axis principle (major/minor): .....KN  
b. Design base shear factor along Y-axis principle (major/minor): .....KN
- 12 Have the IS Code provisions for earthquake resistance (1893-2016) and ductile detailing specified in IS 13920:2016, been applied during the structural design process?**
- Yes  
 No
- 13 Under which category does the structure fall? (tick):**
- a. Under Plan irregularities:**
- Torsional irregularity (**if the structure has an asymmetrical configuration, then check for Torsional is compulsory**)
  - Re-entrance Corner
  - Floor slab having excessive cut-out or opening
  - Out-of-Plane in offsets in vertical elements
  - non-parallel lateral force system
- b. Under Vertical Irregularities:**
- Stiffness irregularity (**soft story**) (**if the structure has stilt for parking, then check for the soft story is compulsory**)



# ཐིམ་ཕུག་ཐྲོམ་གྲོང་ཁའི། Thimphu Thromde

Building No: 08  
Gongdzin lam

Thimphu -11001: Bhutan



- Mass irregularity
- Vertical Geometric Irregularity
- In-plane discontinuity in Vertical Elements Resisting Lateral Force
- Structural Analysis Report Date:
- Strength Irregularity (Weak Story)
- Floating or Strut Column (avoid proposed)
- Irregular modes of Oscillation in two principal Plan Directions

**14 Type of footing in the structural drawing (Tick):**

- Isolated footing
- Combined footing
- Raft footing
- Other

**15 Assumption made for settlement of soil under service loads while, analyzing and designing of any of the footings, if used any software or use other methods (hand calculation) (Tick):**

- Isolated footing.....mm Or  Other Method (hand calculation)
- Combined footing.....mm Or  Other Method (hand calculation)
- Raft footing.....mm Or  Othe Method (hand calculation)

**16 Assumption made for soil bearing capacity while analyzing and designing of following the footings:**

- Isolated footing.....mm
- Combined footing.....mm
- Raft footing.....mm

I, the undersigned, hereby declare that the above-furnished data and information are **true and accurate** as per the analysis report of the proposed building. I understand that any discrepancies or inaccuracies in the provided data may lead to structural failures or other issues.

In the event of such discrepancies, **I shall bear full liability and responsibility** for any consequences arising from the failure of the structure, provided that other factors such as **construction quality** and **supervision** are maintained as per the approved standards and guidelines

Legal Stamp:

Signature:

Date: