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RCC DESIGN & STRUCTURE ANALYSIS, VALUATION. Address: H. No. 764, Sector-23, Sonipat(HR)

Annexure D

BUILDING SAFETY CERTIFICATE

No: 01ARKD

Dated: 20.09.2025

It is certified that the existing building TDI INTERNATIONAL SCHOOL at. Block E sec-59 kundli in sonipat distt.

Details of Blocks in School	Block Shool Building	Block Staff Quarters
No. of Floors in the Block	G+3	G+2

The building is owned / occupied by TDI SHIKSHA SANSTHAN TRUST, SONIPAT, HARYANA have complied with the building safety requirement in accordance with national building code rules, and verified by the Structure Consultant concerned of Building Design and analysis on 19.09.2025 in the presence of Director Mr. Dinesh jindal & that the Building/ premises is fit for the occupancy for running school with effect from 20.09.2025 for a period of two years in accordance with rule and subject to compliance of the specific conditions as appended.

1. Visual Inspection Report
2. Audit Report attached with
3. NDT Report attached with
4. Analysis and design with Structure Drawings.

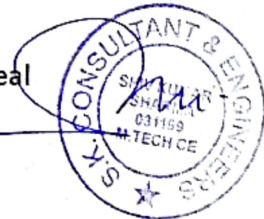
Issued on 20.09.2025 at TDI City Sonipat By:

Signature with Seal

Name:

Designation:

Name & Address: As Above



RCC DESIGN & STRUCTURE ANALYSIS, VALUATION.

Ref. No. _____

Date: 19.09.2025

AUDIT REPORT FOR STABILITY CERTIFICATE FOR TDI INTERNATIONAL SCHOOL BUILDING

I hereby certify that I had inspected the above referred structure with a view to ascertain the Structural Stability of the building. The structural elements inspected included foundations, columns, beams & slabs at each floor. The observations have been recorded as per the Structural Audit Format as enclosed herewith.

I have also gone through the Structural drawings available for the existing structures and have gone through the actual calculations and prepared our own calculations to test the stability of the structure

SUGGESTED FORMATS FOR STRUCTURAL AUDIT REPORT FIRST HAND INFORMATION

1. Name of the Building: TDI INTERNATIONAL SCHOOL
2. Description: EDUCATIONAL BUILDING
3. Address: BLOCK E, SECTOR 59, TDI CITY, KUNDLI, SONIPAT
4. Age of the Building: 11 YEARS
5. Inspection Report Date: SEP-2025
6. INSPECTED BY: SELF
7. COVERED AREA : 6836.36 SQM

OBSERVATIONS & EVALUATION REPORT

1. FOUNDATION STRATA

- Type of Foundation : Raft foundation in Basement and Isolated footing for blocks
- Settlement of Columns : No Settlement seen
- Settlement of Walls : No Settlement seen
- Cracks in col., walls, Joint at Plinth : NO cracks seen .

2. SUPER STRUCTURE INSPECTION

- Cracks in columns/ rusting of Steel , / exposed steel: No cracks and no rust seen.
- Cracks in beams / rusting of Steel , / exposed steel : No cracks and no rust seen.
- Cracks in slabs / rusting of steel / exposed steel: No cracks and no rust seen.
- Cracks in external walls : Some Hair cracks observed.
- Cracks in internal walls : No cracks observed

3. Leakages & dampness in external walls : No leakage and dampness found

4. Toilet leakages, cracks, : No leakage found

5. Terrace water proofing Inspection : Terrace has proper drainage system with water proofing.

6. Leakage & dampness on the top floor slab : No leakage & dampness found.

7. Inspection of water tank above terrace : Water Tanks are Properly Placed and well cleaned inside.

8. Inspection of underground Water tank :

9. Leakages & damages:-plumbing lines/waterlines, drainage lines : well Maintained

10. Electrical line : follow the electric safety norms.

11. Building last repaired details : NO REPAIR NEEDED

12. Date of construction of building : 2013



13. R.C.C./ load bearing structure : **Framed RCC structure and BRICK WORK.**

14. Idea about foundation strata from surrounding areas & enquiry : **Strap & Isolated type footing** 15. High flood level

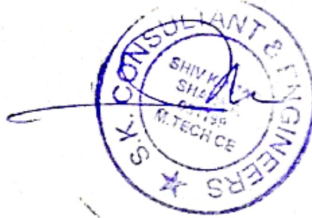
- HFL during this monsoon : **-1.5' Below Plinth level**

- HFL during last five years : **-1'-5" Below plinth level**

16. Any cracks observed during Earthquake : **No cracks observed**

17. Architectural plans available: **yes**

18. Structural plans available: **- Yes**





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RCC DESIGN & STRUCTURE ANALYSIS, VALUATION.

CERTIFICATE OF STABILITY

Name of the Building : TDI INTERNATIONAL SCHOOL BUILDING.

Address : TDI CITY, KUNDLI, Distt Sonipat.

I certify that I have inspected the building of the TDI INTERNATIONAL SCHOOL BUILDING / structure, the plans of which have been approved by Authority.

I have done the Structural Audit based on the visual inspection of the accessible parts / areas of the building. Based on the visual observations, visual symptoms & manifestations shown by the structure and the data collected from site, I am of the opinion that the said structure / building is structurally sound and that its stability will not be endangered by their use as a residential/ Educational for which structure / building is intended. A detailed Audit report covering details about structure, site observations along with photographic survey is attached with this certificate.

This certificate will come in force only after, conducting detail investigation such as studing drawings, soil investigation, repairs, strengthening, retrofitting or any other measures required are carried out to make the building / structure safe, as recommended in the attached structural audit report if any. If structures shows any signs / symptoms / manifestations of any distresses such as, cracks, corrosion of reinforcement, spalling of concrete, deflection / sag in any structural members / walls, settlement of foundations / floors / ground, leakages etc.; after submission of this structural audit report, it shall be immediately brought to my notice. If found

necessary, the structure may be inspected again and validity of this stability certificate may be modified if required.

This Certificate is valid for a period of maximum Two years and is issued on the clear understanding that my overall responsibility for the structural stability of the building and its proper structural performance will cease, the moment any additions or alterations, change in loads, structural changes to the structural frame are carried out without any structural engineer's advice or by accident or due to tampering by the users/ occupants for any reasons whatsoever. This certificate ceases in the event of overloading or lack of proper maintenance of structure or distress / unbalance caused by any adjoining structure or construction activity or any such act, which is detrimental to the structure.

Further this certificate do not guarantee stability of the structure, if there are any inbuilt deficiencies, faults in original structural design / detailing and construction quality or workmanship of the said building; including incorrect assessment of bearing capacity of the strata on which foundations are resting & possibility of settlement, incorrect assessment of water table and its effects etc. at the time of construction. The stability of the structure is assessed only for dead and live load and that too, based on the visual observations of superstructure and it do not cover any risk arising due to earthquake, wind, fire, vibrations etc. and any other unforeseen forces causing distress and instability to the structure.

Signed by -----

Encl. – Structural Audit Report,



**NDT AUDIT REPORT OF STRUCTURE ANALYSIS FOR M/S HOLY CROSS EDUCATIONAL SOCIETY
BUILDING**

1. In this report, findings of NDT conducted at Different Blocks have been formulated and detailed. These should not be considered enough for (any subsequent) detailed structural analysis of the Buildings as a whole. I recommend conducting more tests on the each Block for any structural analysis or behavioural predictions of the buildings.

2. Structural analysis is based on the study of the structural drawings provided by the client .

3 Scope of Report has carried out structural assessment survey for formulating audit Report of the buildings of Different Blocks at TDI International School, TDI City Kundli, Sonipat, Haryana by carrying out visual condition survey, necessary Non-Destructive tests. The scope of work under present report involves following:

1.1. Non-Destructive Tests

The following non-destructive tests were conducted on few structural members of the building including beams, pillars and slabs & Steel Trusses The samples were randomly selected based on extent of the building in Block PRIMARY AND MIDDLE WING.

S.NO	DESCRIPTION	NO. OF TEST
1	REBOUND HAMMER TEST	10
2	Ultrasonic Pulse Velocity Test	3
3	Drilling out & testing of concrete cores of 50/75 mm dia	3
4	HCP Test for determining extent of corrosion in rebars	2
5	Carbonation Test	1

Desired Output

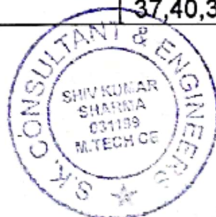
General assessment of structural strength of members of the building, grade of concrete used in the building, extent of corrosion in reinforcement bars, chemical analysis of concrete and existence of internal construction flaws.

2.2. Non-Destructive Testing For the Different blocks of Factory buildings the survey was aimed at devising an efficient strategy to check the strength of load bearing horizontal and vertical members (beams) concrete and steel members whether the building is safe and stable for working. In this report, findings of NDT conducted at blocks have been formulated and detailed. These should not be considered enough for (any subsequent) detailed structural analysis of the factory building as a whole.

The following conclusions are drawn on the basis of non-destructive tests conducted:

1. **Rebound Hammer:** A perusal of compressive strength data computed from results of rebound hammer tests reveals that the concrete in beams , Columns at different level falls in following grade for the corresponding blocks.

S.NO	BLOCK	READING	GRADE RANGE
1	BLOCK- School Building gr floor & 1 st floor	38,39,35,40,37,39	M25-M26
2	BLOCK – School Building 2 nd & 3 rd floor	39,42,36,36,	M25-M26
3	BLOCK – Staff Quarters	37,40,36,36	M23



The rebound hammer tests were conducted on RCC beam elements of the buildings at selected locations based on findings of preliminary rapid visual assessment of the building. The results obtained are summarized as below: (Refer Table 1)

A perusal of in situ compressive strength values determined based on rebound hammer tests given in Table 1 reveal that the compressive strength is 25.2 N/mm², with the concrete being categorized as M 25 grade concrete.

2. UPV TEST:

The test results of ultrasonic pulse velocity indicate satisfactory level of workmanship of cast in-situ concrete of all RCC structural elements of the building resulting in the concrete quality to be homogeneous with likely presence of no flaws, deficiencies etc. The results of ultrasonic pulse velocity test conducted on structural members show the concrete quality to vary from 'Doubtful' to 'Medium' at various test locations. The ultrasonic pulse velocity test results are summarized as below:

S.NO	BLOCK	READING	Characterization of Concrete	REMARKS
1	BLOCK- School Building Gr fl & 1 st fl	3800,3500	MEDIUM TO GOOD	UPV test results obtained at various test locations reveal the quality of concrete to fall in Good category as per IS : 13311 (Part-I) – 1992. Therefore, based on UPV test results, the overall quality of concrete can be categorized as satisfactory .
2	BLOCK- School Building 1 st fl & 2 nd fl	3700	MEDIUM TO GOOD	UPV test results obtained at various test locations reveal the quality of concrete to fall in Good category as per IS : 13311 (Part-I) – 1992. Therefore, based on UPV test results, the overall quality of concrete can be categorized as satisfactory .
3	BLOCK – Staff Quarter	3600	GOOD	UPV test results obtained at various test locations reveal the quality of concrete to fall in Good category as per IS : 13311 (Part-I) – 1992. Therefore, based on UPV test results, the overall quality of concrete can be categorized as satisfactory .

3. Core Test:

The above test results reveal that the concrete in various structural elements of the building falls in M 23 & M25 grade categories with 3 nos. Thus, the overall grade of concrete for RCC works for this building can be considered as M 25 grade .The results of compressive strength of concrete in RCC structural members at various floor levels are summarized below:

S.NO	LEVEL	Equivalent Cube Comp. Strength (MPa)
1	BLOCK -OFFICE	23 to 26
2	BLOCK -PRIMARY	26 TO 27
3	BLOCK - MIDDLE WING	23 to 26

For determining in situ compressive strength of concrete, a total of 3 Nos. of concrete core samples were drilled out from various structural elements of the building. A portable diamond core, rotary type drilling equipment was used for taking out all the concrete core samples. The drilled concrete core samples were prepared and tested as per clauses 4 & 5 respectively of IS:516-1959. As per IS:456-2000, the concrete in the member represented by a core test shall be considered acceptable if the average equivalent cube strength of cores is equal to at least 85 %



The rebound hammer tests were conducted on RCC beam elements of the buildings at selected locations based on findings of preliminary rapid visual assessment of the building. The results obtained are summarized as below: (Refer Table 1)

A perusal of in situ compressive strength values determined based on rebound hammer tests given in Table 1 reveal that the compressive strength is 25.2 N/mm², with the concrete being categorized as M 25 grade concrete.

2. UPV TEST:

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2	BLOCK- School Building 1 st fl & 2 nd fl	3700	MEDIUM TO GOOD	UPV test results obtained at various test locations reveal the quality of concrete to fall in Good category as per IS : 13311 (Part-I) – 1992. Therefore, based on UPV test results, the overall quality of concrete can be categorized as satisfactory .
3	BLOCK – Staff Quarter	3600	GOOD	UPV test results obtained at various test locations reveal the quality of concrete to fall in Good category as per IS : 13311 (Part-I) – 1992. Therefore, based on UPV test results, the overall quality of concrete can be categorized as satisfactory .

3. Core Test:

The above test results reveal that the concrete in various structural elements of the building falls in M 23 & M25 grade categories with 3 nos. Thus, the overall grade of concrete for RCC works for this building can be considered as M 25 grade .The results of compressive strength of concrete in RCC structural members at various floor levels are summarized below:

S.NO	LEVEL	Equivalent Cube Comp. Strength (MPa)
1	BLOCK –School Building	23 to 26
2	BLOCK –Staff Quarter	26 TO 27

For determining in situ compressive strength of concrete, a total of 3 Nos. of concrete core samples were drilled out from various structural elements of the building. A portable diamond core, rotary type drilling equipment was used for taking out all the concrete core samples. The drilled concrete core samples were prepared and tested as per clauses 4 & 5 respectively of IS:516-1959. As per IS:456-2000, the concrete in the member represented by a core test shall be considered acceptable if the average equivalent cube strength of cores is equal to at least 85 %



and the cube strength of the grade of concrete specified for the corresponding age & no individual core has strength less than 75 %.

4.HCP Test for determining extent of corrosion in rebars:

No corrosion found in on the steel used in RCC Structure in HCP Test

5. Carbonation Test:

Clear cover is found satisfactory for steel used in columns and Beams.

Hence Safe!

