

REPORT

KTH/Report.No.0817 - 1356/2024-2025
SAFETY CHECK REPORT ON THE EXISTING GROUND +
TWO FLOOR SCHOOL BUILDING FOR MAHESH MEMORIAL
KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR
SCHOOL ROAD, DODDABOMMASANDRA,
VIDYARANYAPURA POST, BENGALURU - 560 097,
KARNATAKA.
FOR
SRI GURU RAGHAVENDRA EDUCATION TRUST (R),
#33, RR SCHOOL CAMPUS, RR SCHOOL ROAD,
DODDABOMMASANDRA, VIDYARANYAPURA POST,
BENGALURU - 560 097, KARNATAKA.



KARNATAKA TEST HOUSE PVT. LTD.

778/44, Gokula 1st Stage, 2nd Phase, 8th Cross, Triveni Road,
Yeshwanthpur, Bangalore - 560 054.

Tele : 23375326, 23378383 E-mail : kthblr@gmail.com
Website : www.karnatakatesthouse.com

KTH/Report.No.0817 - 1356/2024-2025
SAFETY CHECK REPORT ON THE EXISTING GROUND +
TWO FLOOR SCHOOL BUILDING FOR MAHESH MEMORIAL
KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR
SCHOOL ROAD, DODDABOMMASANDRA,
VIDYARANYAPURA POST, BENGALURU - 560 097,
KARNATAKA.
FOR
SRI GURU RAGHAVENDRA EDUCATION TRUST (R),
#33, RR SCHOOL CAMPUS, RR SCHOOL ROAD,
DODDABOMMASANDRA, VIDYARANYAPURA POST,
BENGALURU - 560 097, KARNATAKA.

NAME OF THE PROJECT

SAFETY CHECK REPORT ON THE EXISTING GROUND + TWO FLOOR SCHOOL BUILDING FOR MAHESH MEMORIAL KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR SCHOOL ROAD, DODDABOMMASANDRA, VIDYARANYAPURA POST, BENGALURU - 560 097, KARNATAKA.

REPORT NUMBER

KTH/Report. No. 0817 - 1356/2024-2025

CLIENTS REFERENCE

Telephonic Enquiry

FIELD TEST CONDUCTED by

Mr. Akash

Site Engineer

M/s. KARNATAKA TEST HOUSE. PVT. LTD.

FIELD TEST CONDUCTED UNDER THE GUIDANCE OF

Mr. SREENIVASA.C

Technical Manager

M/s. KARNATAKA TEST HOUSE. PVT. LTD.

FIELD TEST CONDUCTED IN PRESENCE OF

Mr. Guru Prasad Manur (Administration Representative)

REPORT SUBMITTED TO

SRI GURU RAGHAVENDRA EDUCATION TRUST (R),
#33, RR SCHOOL CAMPUS, RR SCHOOL ROAD, DODDABOMMASANDRA,
VIDYARANYAPURA POST, BENGALURU - 560 097, KARNATAKA.

REPORT SUBMITTED ON

17.01.2025



KARNATAKA TEST HOUSE PVT. LTD.

No.778/44, 8th Cross, Triveni Road, Gokul 1st Stage, 2nd Phase, Bangalore - 560 054.
Tele: 23378383 / 23375326.

E-Mail: kthblr@gmail.com Web Site: www.karnatakatesthouse.com

NABL Accredited Laboratory as per ISO/IEC 17025

KTH/Report. No. 0817 - 1356/2024-2025

SAFETY CHECK REPORT ON THE EXISTING GROUND + TWO FLOOR SCHOOL BUILDING FOR MAHESH MEMORIAL KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR SCHOOL ROAD, DODDABOMMASANDRA, VIDYARANYAPURA POST, BENGALURU - 560 097, KARNATAKA.

INTRODUCTION:

The Administration of Sri Guru Raghavendra Education Trust (R), #33, Rr School Campus, Rr School Road, Doddabommasandra, Vidyaranyapura Post, Bengaluru - 560 097, Karnataka., Have requested to conduct safety check and submit a report of the Existing Ground + Two Floor School Building For Mahesh Memorial Kendriya Vidyashala At #33, Rr School Campus, Rr School Road, Doddabommasandra, Vidyaranyapura Post, Bengaluru - 560 097, Karnataka., Accordingly, necessary field tests were conducted and the results with recommendation are furnished herein.

PHYSICAL OBSERVATION:

Building consists of: School Block.

Sl. No.	Details	Observation	Remarks
1)	Non-destructive test	UPV and RH conducted	Results are tabulated
2)	Dampness in roof / wall	Not observed	-
3)	Leakage in bathrooms / toilets	Not observed	-
4)	Visible cracks in a) Roofs b) Walls c) Flooring	Not observed	-
5)	Rainwater disposal / harvesting	Provided	-
6)	All round flagging round the building	Provided	-
7)	Exposure reinforcement	Not observed	-
8)	Distress in any part	Not observed	-
9)	Status of maintenance of building	Good	-
10)	Safety on roof tops • Parapet / Railings	Parapet Constructed	-



KARNATAKA TEST HOUSE PVT. LTD.

No.778/44, 8th Cross, Triveni Road, Gokul 1st Stage, 2nd Phase, Bangalore – 560 054.
Tele: 23378383 / 23375326.

E-Mail: kthblr@gmail.com Web Site: www.karnatakatesthouse.com

NABL Accredited Laboratory as per ISO/IEC 17025

KTH/Report. No. 0817 - 1356/2024-2025

INVESTIGATIVE STUDIES

a. Non-destructive tests to assess the quality / strength of in-situ concrete in RC members using Ultrasonic pulse velocity equipment.

Ultra-sonic pulse velocity test was conducted on to assess the Quality of the in-situ concrete. The test was conducted using PUNDIT Lab+ (Portable ultrasonic non-destructive Digital Indicating Tester) equipment from M/s. Proceq S.A. Switzerland as per the guidelines in Indian Standards IS: 516 (Part 5/Sec 1):2018. The estimation of the compressive strength of the in-situ concrete is based on Calibration Chart developed for the Ultra sonic pulse velocity test equipment in **Table-1A**. The test results obtained at the site are tabulated in **Table-1** and they indicate the probable compressive strength in the reliable range of estimation.

b. Rebound hammer test.

The Rebound Hammer test was conducted to assess the surface hardness of RC members and estimate in-situ strength of surface concrete. The test was conducted using Schmidt Rebound Hammer from M/s. Proceq, Switzerland as per the guidelines in Indian Standards IS: 516 (Part 5/sec 4): 2020. The test results are tabulated in **Table-2** and they indicate the probable compressive strength in the reliable range of estimation.

CONCLUSION:

- ❖ From the test results of the **Ultrasonic Pulse Velocity Test**, it is inferred that quality of concrete in the tested region of **Reinforced Concrete Column, Roof Beam & Roof Slab** comes under the category of “**Good Concrete**” as per IS:516 (Part 5/Sec1)2018.
- ❖ From the test results of the **Rebound Hammer Test**, the strength of the **Reinforced Concrete Column & Roof Slab** is found to be in the range of **22 N/mm² to 25 N/mm²**.

However, the proper maintenance of the existing buildings is to be maintained.

Hence, it is concluded that the structure is in sound condition.

For KARNATAKA TEST HOUSE PVT.LTD.



Sreenivasa.C
Reviewed & approved by
SREENIVASA.C
TECHNICAL MANAGER





KARNATAKA TEST HOUSE PVT. LTD.

No.778/44, 8th Cross, Triveni Road, Gokul 1st Stage, 2nd Phase,
Bangalore - 560 054. Tele: 23378383 / 23375326.
E-Mail: kthblr@gmail.com Web Site: www.karnatakatesthouse.com
NABL Accredited Laboratory as per ISO/IEC 17025



TC-6011

KTH/Report. No. 0817 - 1356/2024-2025

ULR: TC601125000000109F

TABLE - 1

TEST RESULTS OF ULTRASONIC PULSE VELOCITY TEST

Site Location : Existing Ground + Two Floor School Building for Mahesh Memorial Kendriya Vidyashala At #33, Rr School Campus, RR School Road, Doddabommasandra, Vidyaranyapura Post, Bengaluru - 560 097, Karnataka.

Date of Test : 17.01.2025

Members tested : Reinforced Concrete Column, Roof Beam & Roof Slab.

Grade of Concrete* : -

Temperature of RCC member: 29° C
at the time of test

Age of Concrete* : Above 28 days

Technical Reference : IS: 516 (Part 5/Sec1):2018.

Sl. No.	Member Identification •	Average Pulse Velocity (Km/Sec)	Concrete Quality Grading	Method of Test
School & P.U Block - Ground Floor				
1.	Column in Class Room	3.68	Good	Direct
2.	Roof Beam in Class Room	3.74	Good	--
3.	Roof Slab in Corridor area	3.58	Good	In-Direct
4.	Column in Corridor area	3.52	Good	--
First Floor				
5.	Column in Class Room	3.50	Good	Direct
6.	Roof Beam in Class Room	3.72	Good	--
7.	Roof Slab in Corridor area	3.63	Good	In-Direct
8.	Column in Corridor area	3.52	Good	--
Second Floor				
9.	Column in Class Room	3.74	Good	Direct
10.	Roof Beam in Class Room	3.52	Good	--

Note : 1) This report is not to be reproduced except in full without our prior permission in writing.
2) The results listed refer only to the tested samples and applicable parameters.



KARNATAKA TEST HOUSE PVT. LTD.

No.778/44, 8th Cross, Triveni Road, Gokul 1st Stage, 2nd Phase,
Bangalore – 560 054. Tele: 23378383 / 23375326.
E-Mail: kthblr@gmail.com Web Site: www.karnatakatesthouse.com
NABL Accredited Laboratory as per ISO/IEC 17025



TC-6011

KTH/Report. No. 0817 - 1356/2024-2025

ULR: TC601125000000109F

Sl. No.	Member Identification •	Average Pulse Velocity (Km/Sec)	Concrete Quality Grading	Method of Test
	Second Floor			
11.	Roof Slab in Corridor area	3.66	Good	In-Direct
12.	Column in Corridor area	3.52	Good	---

• As furnished by the client



KARNATAKA TEST HOUSE PVT. LTD.

No.778/44, 8th Cross, Triveni Road, Gokul 1st Stage, 2nd Phase,
Bangalore - 560 054. Tele: 23378383 / 23375326.
E-Mail: kthblr@gmail.com Web Site: www.karnatakatesthouse.com
NABL Accredited Laboratory as per ISO/IEC 17025



TC-6011

KTH/Report. No. 0817 - 1356/2024-2025

ULR: TC601125000000109F

TABLE -1A

REFERENCE QUALITY GRADING & STRENGTH CHART FOR ULTRASONIC PULSE VELOCITY TEST

As per IS 516 (Part 5/Sec 1): 2018

Sl. No.	Pulse Velocity by Cross Probing (km/s)	Concrete Quality Grading
For Concrete (\leq M 25)		
1	Above 4.50	Excellent
2	3.50 to 4.50	Good
3	Below 3.50	Doubtful
For Concrete ($>$ M 25)		
1	Above 4.50	Excellent
2	3.75 to 4.50	Good
3	Below 3.75	Doubtful

In case of "DOUBTFUL" quality it may be necessary to carry out further tests.

EQUIPMENT USED FOR THE PURPOSE OF TESTING

1. Type of Equipment : PUNDIT Lab+ Portable ultrasonic non-destructive Digital indicating Tester.
2. Make : M/s. Proceq S.A. Switzerland
3. Operations Temperature / Humidity : -10° C to 60° C / $<95\%$ RH
4. Type of Transducers : SinCle - crystal.
5. Resonance frequency of Transducers : 54 KHZ
6. Accuracy of measurement of travel time : ± 0.1 micro sec.

* * * * *



KARNATAKA TEST HOUSE PVT. LTD.

No.778/44, 8th Cross, Triveni Road, Gokul 1st Stage, 2nd Phase,
 Bangalore – 560 054. Tele: 23378383 / 23375326.
 E-Mail: kthblr@gmail.com Web Site: www.karnatakatesthouse.com
NABL Accredited Laboratory as per ISO/IEC 17025



TC-6011

KTH/Report. No. 0817 - 1356/2024-2025

ULR: TC601125000000109F

TABLE – 2 TEST RESULTS OF REBOUND HAMMER TEST

Site Location : Existing Ground + Two Floor School Building for Mahesh Memorial Kendriya Vidyashala At #33, Rr School Campus, RR School Road, Doddabommasandra, Vidyaranyapura Post, Bengaluru - 560 097, Karnataka.

Date of Test : 17.01.2025

Members tested : Reinforced Concrete Column, Roof Beam & Roof Slab.

Grade of Concrete* : -

Age of Concrete* : Above 28 days

Technical Reference : IS: 516 (Part 5/Sec4):2020.

Sl. No	Member Identification *	Rebound Hammer Test				Probable Compressive Strength in N/mm ²
		Position			Average Value●	
		(0 ⁰)	(-90 ⁰)	(+90 ⁰)		
	School & P.U Block - Ground Floor					
1.	Column in Class Room	✓			30	25
2.	Roof Slab in Corridor area		✓		33	22
	First Floor					
3.	Column near staircase area	✓			30	25
4.	Roof Beam in Corridor area	✓			29	24
	Second Floor					
5.	Column in Class Room	✓			29	24
6.	Roof Slab in Corridor area		✓		34	24

* As furnished by the client ● Average of 6 values

Note: As per IS: 516 (Part 5/sec 4): 2020, the estimation of strength of concrete by rebound hammer method cannot be held to be very accurate and probable accuracy of prediction of concrete strength in a structure can be up to ± 25 percent depending upon correlation curve and methodology adopted for establishing correlation between rebound index and likely compressive strength. It is also pointed out that rebound indices are indicative of compressive strength of concrete to a limited depth from the surface.

GROUND + TWO FLOOR SCHOOL BUILDING
MAHESH MEMORIAL KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR
OL ROAD, DODDABOMMASANDRA, VIDYARANYAPURA POST, BENGALURU - 560 097,
KARNATAKA.

Report. No. 0817 - 1356/2024-2025



**SAFETY CHECK REPORT ON THE EXISTING GROUND + TWO FLOOR SCHOOL BUILDING
R MAHESH MEMORIAL KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR
HOOOL ROAD, DODDABOMMASANDRA, VIDYARANYAPURA POST, BENGALURU - 560 097,
KARNATAKA.**

H/Report. No. 0817 - 1356/2024-2025



Ultra Sonic Pulse velocity test



**SAFETY CHECK REPORT ON THE EXISTING GROUND + TWO FLOOR SCHOOL BUILDING
FOR MAHESH MEMORIAL KENDRIYA VIDYASHALA AT #33, RR SCHOOL CAMPUS, RR
SCHOOL ROAD, DODDABOMMASANDRA, VIDYARANYAPURA POST, BENGALURU - 560 097,
KARNATAKA.**

KTH/Report. No. 0817 - 1356/2024-2025



Rebound Hammer test



*****End of the Report*****

Object to be calibrated:

Device and Type:

Device SN:

Transducer:

Test set-up:

Calibration rod ref.:

Ambient temperature:

PUNDIT LAB
PL02-006-0184B0
54KHz

25.4 μ s / 1.00 μ s
25 \pm 2 $^{\circ}$ C / 40% ch.

Date of calibration:

Calibration result:

Inspector:

Next calibration due:

23th Aug'24 No:76

In calibration

B S NAGESH

22th August'2025

Customer Name:

Address

zip code - City

M/s Karnataka Test House Pvt Ltd.,

2nd Phase, 8th Cross,

Triveni Road, Yeshwanthpur,

BANGALORE- 560054.



Transit Time (μ s)		Reference	
regard to calibration rod (710 100 28)		1	25.4
		2	25.4
		3	25.4
		4	25.4
		5	25.4
Mean Value (μ s)		25.4	
Range	Standard deviation	Deviation to reference	
0.00	0.00	0	
Transit Time (μ s)		Reference	
regard to calibration rod (710 100 29)		1	100.4
		2	100.4
		3	100.4
		4	100.4
		5	100.4
Mean Value (μ s)		100.4	
Range	Standard deviation	Deviation to reference	
0.00	0.00	100.4	

Version 1.0



SAMHITHA INNOVATIONS

BANGALORE- 560003

Mob: 9886000953

Object to be calibrated:

Concrete Test Hammer

Hardness measurements series A
reported in hardness scale $^{10}R^A$

Device and Type:
Impact device SN:

Original Schmidt
170791

Test set-up:

Calibration Anvil SN:
Ambient temperature:

E/14/061
81
23 ± 2 °C / 40% r.h.

No.	Reading
A-1	79
A-2	80
A-3	80
A-4	79
A-5	81
A-6	80
A-7	79
A-8	80
A-9	79
A-10	80

Mean A 79.7

Stdev A 0.7

Max 81.0

Min 79.0

Range A 2.0

Date of calibration:

23th AUG'24 No.74

Calibration result:

In calibration

Inspector:

B S NAGESH

Next calibration due:

22th August 2025



Company Name

M/s Karnataka Test House Pvt Ltd.

Address

2nd Phase, 8th Cross,

Zip code - City

Triveni Road, Yeshwanthpur,

BANGALORE- 560054.

SAMHITHA INNOVATIONS

BANGALORE- 560003

Mob: 9886000953

proceq
CERTIFIED
SERVICE CENTER

Version 1.0



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

KARNATAKA TEST HOUSE PVT LTD

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

44, GOKUL 1ST STAGE, 2ND PHASE, 8TH CROSS, TRIVENI ROAD, YESHWANTHPUR, BENGALURU,
KARNATAKA, INDIA

in the field of

TESTING

Certificate Number: TC-6011

Issue Date:

12/07/2024

Valid Until:

11/07/2026

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued
satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: KARNATAKA TEST HOUSE PVT LTD

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer