## STRUCTURAL CONDITION ASSESSMENT REPORT FOR

MVP SAMAJ HORIZON INTERNATIONAL ACADEMY, 24, S.S.C., SHRAVAN SECTOR, NEAR SAMBHAJI STADIUM, NEW CIDCO, NASHIK 422010.



# बहुजन हिताय बहुजन सुखाय

### **MARATHA VIDYA PRASARAK SAMAJ'S**

# Karmaveer Adv. Baburao Ganpatrao Thakare College of Engineering



Permanently Affiliated to Savitribai Phule Pune University Vide Letter No.: CA/1542 & Approved by AICTE New Delhi - Vide Letter No.: 740-89-32 (.".) ET/98 AISHE Code - C-41622

MVP's/KBTCOE/ Civil/ 2100/2023-24

Date 18/12/2023

### **Building Safety Certificate**

Name of School - Maratha Vidya Prasarak Samaj's Horizon International Academy, Nashik.

Address -24, S.S.C., Shravan Sector, Near Sambhaji Stadium, New Cidco, Nashik 422010.

We certify that we have inspected the Building. MVP Samaj Horizon International Academy, 24, S.S.C., Shravan Sector, Near Sambhaji Stadium, New Cidco, Nashik 422010, occupied by Maratha Vidya Prasarak Samaj, the plans, with its built up area about 5129.63 Sq.m. of which have been/approved by the Nashik Municipal Corporation, Vide their letter.

We have carried out structural Audit based on technical inspection of the accessible Parts / areas of the building referred above.

Based on the technical observations, visual symptoms & manifestations shown by the structure and the data collected from site and after structural analysis, I am of the opinion that the said structure / building is structurally sound and their stability will not be endangered by using it as school Buildings for which structure / building is intended. A structural Audit report covering details about structures, site observations along with photographic survey is attached with this certificate.

I hereby certify that Maratha Vidya Prasarak Samaj's Udoji Horizon International Academy, Nashik ;is found safe structurally for the purpose of utility of this building.

Validity of this Report is for Ten years.

Mr. D.N. Nathe M.E. Structures

Assistant Professor

Dr. S. J. Kadbane Dean Consultancy DEPT. OF CIVIL ENGG.

Mr. S. M. Waysal M.E. Structures Assistant Professor

Dr. P. D. Nemade

HOD Civil

Dr. S. R. Devane Principal



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Date: 18/12/2023

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MVPS's/KBTCOE/Civil/ 2-09g /2023-24

### STRUCTURAL CONDITION ASSESSMENT REPORT

Report for

: Property Physical Condition Assessment and Remedial Measures Report for MVP Samaj Horizon International Academy, 24,S.S.C., Shravan Sector, Near Sambhaji Stadium,

New Cidco, Nashik 422010.

Client

: Principal, MVP Samaj Horizon International Academy, 24,S.S.C., Shravan Sector, Near Sambhaji Stadium, New Cidco,

Nashik 422010.

Ref.

: Your letter outward no 563/2023-24, dated 09/12/2023

#### **PREAMBLE**

At the request of "Principal, MVP Samaj Horizon International Academy, Nashik," for review and condition assessment report with remedial measures of "School building of MVP Samaj Horizon International Academy, 24, S.S.C., Shravan Sector, Near Sambhaji Stadium, New Cidco, Nashik 422010. The purpose of the review was to inspect the general condition of the building identify items which may found distress or damage during the inspection of the accessible structural elements. All descriptions, references to conditions and other details and are given as our opinion based on visual site inspection and Non-Destructive Testing (NDT) of the damaged structural elements; From our MVP's KBT COE, Department of Civil Engineering, Mr. S. M. Waysal, (M.E. Structures) Assistant Professor, and Mr. D.N. Nathe, (M.E. Structures) Assistant Professor, along with the Principal, Ms. Richa Pekhkale, MVP Samaj Horizon International Academy.

### 1.2 SCOPE OF REVIEW

In order to from our opinion on the elements, the following review was undertaken.

- 1. Visual inspection and photographs of accessible areas of the building.
- 2. To identify causes of distress and their sources.
- 3. The residual strength of structural and its rehabilitee. using carbonation and NDT

Visual assessments of accessible areas of the building have been taken and rebound hammer are performed to identify the reduction in strength of concrete, this report covers the observation based on visual inspection and NDT results to access the damage to the building only.

No responsibility or liability is accepted as a result of the use of this report by any other party, and is not to be used for any other purpose. It must not be used for any criminal cases/purpose.

### 1.3 BRIEF DETAILS OF TEST METHOD (Rebound Hammer Test) (As per I.S 13311 - Part-2)

When the various performance characteristics of concrete in a structure are required to be assessed, the Non-Destructive Testing is taken into consideration to estimate the overall quality, uniformity, and residual compressive strength of structural elements.

The Rebound hammer is an easy-to-use instrument, which provides a quick and simple nondestructive test for obtaining an immediate indication of concrete strength in various parts of a structure.

The methodology adopted for Non-Destructive Testing by Rebound Hammer method is in such a way that, when the plunger of rebound hammer is pressed against the surface of the concrete, the spring-controlled mass rebounds and the extent of such rebound depends upon the surface hardness of concrete. The surface hardness and therefore the rebound are taken to be related to the compressive strength of the concrete. The rebound is read off along a graduated scale and is designated as the rebound number or rebound index.

The conversion of rebound number to compressive strength can be achieved by producing a calibration graph for the concrete concerned. This is undertaken by testing previously sampled concrete cubes strength or cores which extracted from the sample test location and crushed to determine the in-situ strength. The calibration chart may then be used to convert rebound number to estimated cube strength. If it is not possible to produce a calibration graph, most manufacture of rebound hammer are supplied with a conversion curve, which will enable the average rebound value to be converted to an estimated concrete strength in N/mm². The angle (Horizontal, Vertical & Inclined) of application needs to be taken into account to give the correct reading.



The Schmidt hammer measures the true rebound co-efficient, so called "Q - Value". It represents the physical rebound co-efficient. The Schmidt hammer measures the velocity of impact and of rebound, immediately before and after the impact, computing the fraction of energy restored by the specimen under test. The Q-Value is virtually free of error sources inherent in traditional concrete test hammers measuring the "compressive strength"

For testing, smooth, clean, and dry surface is to be selected. Any loosely adhering scale observed, is to be rubbed with a grinding wheel or stone, consisting of medium grain texture silicon carbide or equivalent material (the points of impact on the specimen was not nearer an edge than 20 mm and should be not less than 20 mm from each other). The same points should not be impacted more than once. The points of impart should be more than 20 mm from edge and should not be less than 20 mm from each other.

The rebound numbers are influenced by a number of factors like type of cement, type of aggregate, surface condition and moisture content of concrete curing and age of concrete and carbonation of concrete surface etc.

Considering the limitation of the method into account the Rebound hammer is still a valuable tool in the NDT to assess the condition of in-situ concrete, rapidly, impartially and in difficult locations.

#### 1.4 CONDITION ASSESSMENT:

- Diagonal cracks in partitions.
- Sign of leakage.
- Water ponding
- During the inspection a number of site notes (refer table) and photographs. (Refer Appendix) were recorded.

### 1.5 PRELIMINARY STUDY AND VISUAL INSPECTION

No inspection was possible for the foundation. Scope of work is limited for observable parts of the property. Accurate visual inspection of the damage was performed as a first step; the property is found to in good conditions.

Main objectives of condition assessment are as below.

- 1. To check the condition assessment of building.
- 2. Suggest suitable changes according to necessity



The property details are as follows

01	Address	MVP's Horizon International Academy, 24,S.S.C., Shravan Sector, Near Sambhaji Stadium, New Cidco,
		Nashik 422010
02	Date of Inspection	13/12/2023
03	Total Built up Area	5129.63Sq. m (Building1 2071.50 Sq.m + Building 2 3058.13 Sq.m).
04	Approximately Age	Building 1- 7 years Building 2-2 years
05	Structural Grading	GRADE - I (Safe & Stable)
06	Building Floors	Building 1- Basement+ Ground + First floor.  Building 2 - Ground + First floor + Second floor

Deterioration and diagonal cracks were observed in external wall. (Appendix),

### **OBSERVATIONS**

Sr. No.	Description	REMARKS
1.	Plinth	Inspection done . No cracks and settlement in plinth.
2	Type of foundation	R.C.C. No visual observation was possible.
3	Super structure inspection	Done
	Floor	Building 1 (Basement+ Ground+ First floor)
		Building 2 (Ground + First floor+ Second floor)
	Type of roof	RCC roof.
	Cracks in floor beams /	All floor beams are in good conditions for building 1 and
	rusting of Steel, / exposed	building 2
	steel	
	Cracks in columns / rusting	All columns are in good conditions for building 1 and
	of Steel, / exposed steel	building 2



Sr. No.	Description	REMARKS
	Cracks in slabs / rusting of steel / exposed steel	All slabs are in good conditions for building 1 and building 2
	Crack/ Leakage and dampness in walls	No leakages and dampness are in good conditions for building 1 and building 2
	Terrace water proofing Inspection	Waterproofing is done and are in good condition for both buildings.
	Plaster	All internal and external plaster are in good conditions for both building.
	Doors and windows	All doors and windows are in good and working conditions for both buildings.
	Staircase	All staircase are in good conditions of both buildings.
	Toilet and Bathroom	All toilet blocks are in good conditions without leakages.
	Flooring	All floorings are in good conditions without any settlement.
	Balcony/ Chajja/ cantilever projection	All Balcony/ Chajja/ cantilever projection are in good conditions.
	Parapet wall	All parapet wall are in good conditions.
	Leakages & damages: - plumbing Lines/waterlines, drainage lines	All plumbing and sewer line are in good conditions, without leakages and dampness.
5	Date of commencement	Available
	construction of building	Building 1- NSK/ADM/2015/376; Date-03/07/20215
		Building 2 LND/BP/132/96/2023; Date-27/06/2023
7	Architectural plans available	Available
9	Building plan approval date	Building 1- Date-03/07/20215
		Building 2 Date-27/06/2023

Sr. No.	Description	REMARKS
11	Building is designed for earthquake code IS 1893-2002/ IS 1893-2016	Building is designed for earthquake load
12	Rebound Hammer test	Wall – 28.50 N/mm <sup>2</sup> Beam – 28.00 N/mm <sup>2</sup>
		Column – 29.50 N/mm <sup>2</sup>
		Slab – 24.50 N/mm <sup>2</sup>

### 1.5 OBSERVATIONS

Based on the visual inspection, rebound hammer test IS 13311 part 2

- All the structural element of building, beam, column and slabs are in good and, stable conditions.
- 2. All external and internal walls are in good conditions; no dampness and leakages were observed.
- 3. All water and sewer line are in good condition.
- 4. Chajja and cantilever projection of buildings are in good condition.
- 5. Overall strength of structural element is good.
- 6. The buildings are safe for utilization.

### **Concluding Remark**

The said structure building-1 (Basement +ground+ First floor) is 7 years old, and building-2 (G+3) is 2 years old. The building is designed and constructed as RCC building. After technical inspection and analytical checking, all the structural and non-structural suits are found to be structurally safe and stable, periodic checking shall be carried out as mentioned in the observation.

This building 1 and building 2 shall be structurally audited after every 10 years by the competent structural consultant.

Validity of this Report is for 10 years.

Category: GRADE - 1 (Streeturally safe & stable)

### **Important Note**

This report was prepared based on our past experience & visual judgment. Moreover, above report was based on observations made till date 13/12/2023 only. If any addition or alteration/structural modifications or breaking of any structural components, by any person, agency is made then MVPS's KBT COE expert team is not at all responsible.

Above report is prepared based on visual observation, & conducting rebound hammer t.

This certificate or report may not be published for commercial purpose except in full permission for the publication of an approved abstract has been obtained from the Principal, MVPS's KBT CoE, Nashik.

Mr. D.N. Nathe M.E. Structures

Assistant Professor

Mr. S. M. Waysal M.E. Structures

Assistant Professor

Dr. S. J. Kadbane

Dean Consultancy

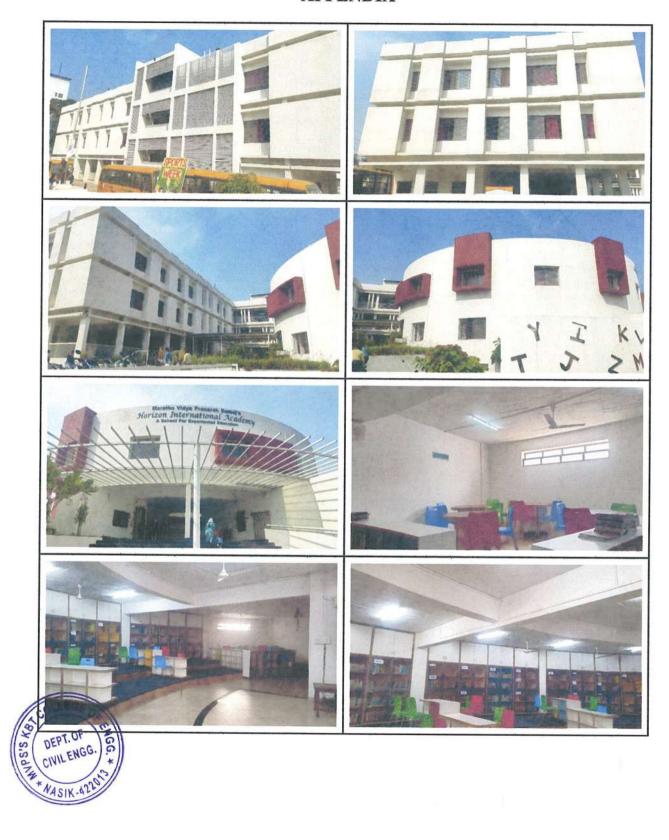
Dr. P. D. Nemade

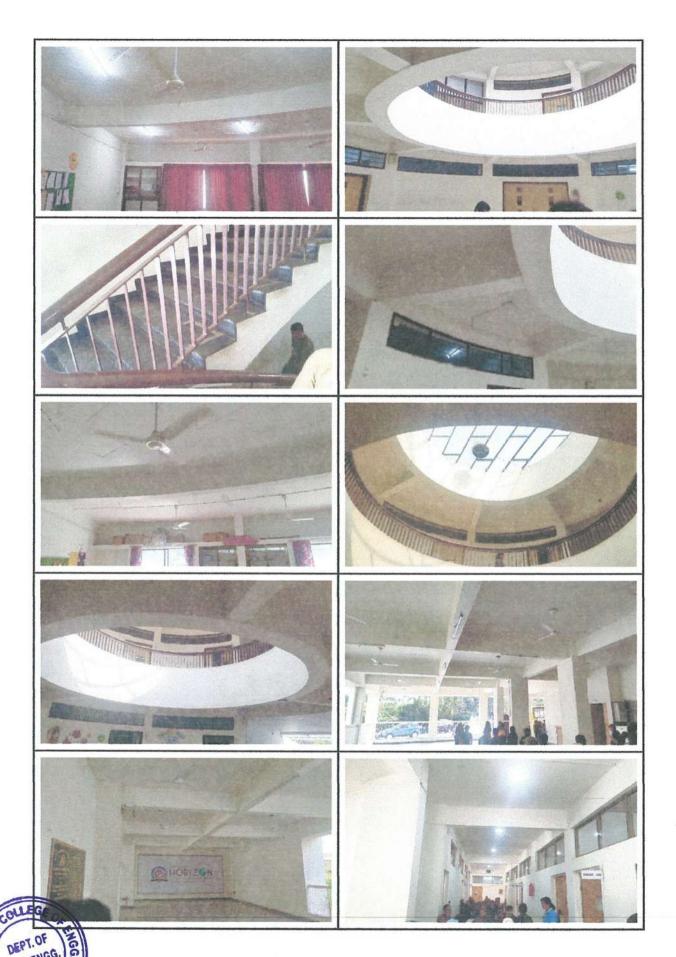
HOD Civil

Dr. S. R. Devane

Principal

### APPENDIX





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### नाशिक महानगरपालिका, नाशिक

राजीव गांधी भान, शरणपुर रोड, पोस्ट बॉक्स नं, १२, नाशिक ४२२ ००२

Visit us at ... www.nashikeorporation.gov.in ... E-mail::eeplanning@dataone.in

च्या वी.बी प्रक्सः : २५७५६३१, २५७५६३२, २५७५६३३, २५७५६३४, २५७७९२१, २५७७९२३, २५७१४७९, २५७१८७२, २५७७९४२, २३१५९६७, २५८१२५२ • फॅक्सः (०२५३): २५७७९३६, २३१५७०४

> जा.क./मनपा/नरवि/संरचना परिक्षण/ 900 /२०१४ विनांक 9ह /०६ /२०१४

प्रति,

9) मिक्क देक, जिलाती वादिन भारों, कार्नेरेवाडी, लाजिक -9.

२) नामिक निका लाशहा विहार प्रभारक समान, छंड - टातुत्यव अण्यतस्य राज्येर कॉलेन साँक रिने. इदोनी भारारा छोडीं अर्थेश वंधीं स्थेयन रोड, मिर्ग्छ - १३ २) प्रान्याच्ये, स्थित वॉक्टिकनीक, संदिप फाइन्केंसन, मिर्शियारीं , निष्ये ४२२२१३,

विषय: नाशिक महानगरपालिकेकरीता संरचना अभियंता म्हणून नेमणुकी बाबत.

संदर्भ :- आपला संरचना अभियंता नेमणूक होणेबाबत प्रस्ताव दि.

नाशिक महानगरपालिका हदीतील ३० वर्षे किंवा त्यापेक्षा जास्त कालावधी झालेल्या इमारती/धाडे इत्यावीचे संरचनात्मक परिक्षण करुन त्यात सुधारणा सूचवुन त्याप्रमाणे घरणालक/वापर कर्ता यांचेकडून दुरुस्ती करुन घेणेकामी नाशिक म.न.पा.ने चुतपत्रात जाहीर नोटीस प्रसिध्द् देऊन संरचना अभियंता नेमणुकीबाबत अर्ज/प्रस्ताव मागविले होते.

सदर जाहीर नोदीसच्या अनुषंगाने आपण संदर्भ क्र. १ अन्वये म.न.पा. पॅनलवर संरचना अभियंता म्हणून काम करण्यास तयार असले बाबत प्रस्ताव सादर केला. तसेच प्रस्तावाबावत आपण र.रु. २३/- प्रति चौ.गी.+सर्क्सीस टॅक्स किंवा कमीत कमी '२०००-सर्व्हींस टॅक्स या दराबाबत स.सं.नं.र. यांचे दालनात दि. २३/०५/२०१४ रोजी संमती दर्शविलेली आहे. त्यानुसार आपली संरचना अभियंता कामी नेमणूक करणेत येत आहे.

नाशिक महानगरपालिका,नाशिक

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27.0614

N.D.M.V.P SAMAJ'A K.B.G.T.
COLLEGE OF ENGINEERING
INWARD RO.:- 64/14-15
DATE:- 27-06/14

D



### Nashik Municipal Corporation, Nashik

Rajiv Gandhi Bhawan, Sharanpur Road, Post Box No. 12, Nashik 422002.

visit us at www.nashikcorporation gov.in E-mail: eeplanning@dataone.in

TPBX 2575631, 2575632, 2575633, 2575634, 2577921, 2577923,

2571479, 2571872, 2577952, 2315967, 2581252 • Fax (0253) 2577936, 2315704

Outward.No./MunCorp/Narvi/Structure Inspection/100/2014

Date: 16/06/2014

To,

1) Civil Tech, Behind Shivaji Garden, Kanherewadi, Nashik-1.

2) Nashik District Maratha Vidya Prasarak Samaj, Adv. Baburao

Ganpatrao Thakre College of Engineering. Udoji Maratha

Boarding Campus, Pumping Station Road, Nashik - 13

Principal, Sandeep Polytechnic Sandeep Foundation, Maharavani,

Nashik 422213

Subject:- Regarding Appointment as Structural Engineer for

Nashik Municipal Corporation

Reference: - Your Proposal regarding the appointment of

Structural Engineer

NOTARIAL NONE S

NOTARRAL 5

The Municipal Corporation has published a public notice regarding Structural examination of existing buildings/houses etc. who have completed more than 30 years or more, located within the Nashik Municipal Corporation limits and suggesting improvements in the same.

Accordingly, notice was published regarding repairs to be made by the home owner / user in the newspaper and applications/proposals were invited regarding the appointment of structural engineer.

Pursuant to the said public notice you have issued reference no. 1 by submitting a proposal on being willing to work as a Structural Engineer on the Municipal Corporation Panel. Also regarding the proposal you have shown interest and accepted to the rates as per Rs. 23/- per sq.m. + Service Tax or at least 5000 + Service Tax on 23/05/2014. According to this you are been hereby appointed as Structural Engineer.

Sd/-xxx

Commissioner

Nashik Municipal Corporation, Nashik

N.D.M.V.P. SAMAJ 's A K.B.G.T.

**COLLEGE OF ENGINEERING** 

INWARD NO.: - 64/14-15

DATE: 27-06114

Towns of or

BEFORE ME

ASHOK S. RUMANE Advocate & Notary Govt. of India Madhushri Apt., D. K. Nagar, Gangapur Road, Nashik. Mob.: 9622289184 Identified By me Darshan Pankhedkav