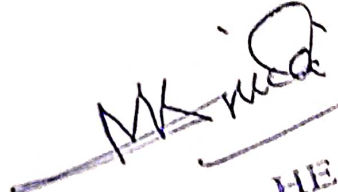
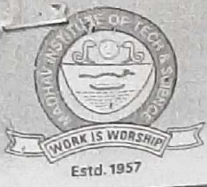


MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR  
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)  
DEPARTMENT OF CIVIL ENGINEERING

CONSULTANCY RECORD  
(Financial Year: April 2021 - March 2022)

Names of the teacher-consultants	Name of the consultancy project	Consulting/Sponsoring agency with contact details	Revenue generated (INR in Rup)
Dr. M. K. Trivedi	Welcome Door Data	Chief Engg. MPRDC Ltd., Bhopal	38350
TOTAL			38350

  
HEAD  
CIVIL Engg. Deptt.  
M.I.T.S. Gwalior



# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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Ref.No. 1110

## TESTING / CONSULTANCY REPORT

Date 30/06/21

To

The Chief Engineer  
Madhya Pradesh Road Development Corporation Ltd. (MPRDC)  
45-A Arera Hills,  
Bhopal - 462011



MITS Dispatch

Subject:- Regarding technical reasons of collapse of one welcome gate and stability of second gate in front of Maa Pitambara Peeth, Datia.

Your Ref: 1896/Datia-welcome Gate/MPRDC/2021, Bhopal Dated 01.06.2021.

Sir,

With reference to above letter, a technical team from Civil Engg. Department of Madhav Institute of Technology & Science, Gwalior visited the site on 12<sup>th</sup> June 2021. The team has critically examined the collapsed Gate materials and the existing second Gate. Following are the deliberations:

### Part A: Regarding collapse of First welcome Gate

1. The whole structure is resting on stone pillars. These stone pillars are capable in bearing vertical downward loads. These pillars are erected from the base of the foundation. Therefore, it is capable of transferring the vertical loads evenly to the ground surface.
2. The structure of Gate is made of red sand stone (pillars), RCC beam and slab. The red sand stone is good in bearing compression load. The concrete material used in the construction of beam & slab is as per standard.
3. The tractor trolley by the mistake of the driver hit one of the base platform of the foundation of the pillar laterally due to this a heavy lateral impact load was generated. Since the pillar is comprised of four small sizes of pillars and fall of one pillar made the other small pillars to fall simultaneously and whole structure collapsed eccentrically.
4. The column made by stone pillars is incapable in bearing lateral impact load. This is the reason of fall of pillars and ultimately collapse of whole structure.

Book No.: MITS TCR/ XXIII

*MK*

Sr. No.: 2020 029



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## TESTING / CONSULTANCY REPORT MITS Dispatch

5. A new construction of gate is proposed with RCC columns. The design and drawing has to be prepared by the architecture and the structural engineer or agencies.

Part B: Regarding second existing welcome gate.

Following are suggested:

1. Temporarily, a M.S. Guard of sufficient strength is to be provided all round the gate platforms.
2. To prevent in future such type of accident following guidelines are suggested:
  - A. RCC columns are to be constructed as shown in the sketches as given by the authority.
  - B. The slab load is to be transferred on these columns by connecting these columns with beams and bracings.
  - C. A proper design & drawing is to be prepared by the architecture and structural agencies.

Note :

Received Rs. 38350/- against consultancy charges by NEFT vide UTR No. IBKL210604202021 dated 04.06.21.

*MK Trivedi*  
16/06/2021

Dr. M. K. Trivedi,  
Professor & Head,  
Department of Civil Engineering,  
MITS, Gwalior, M.P.

### Forwarded:

This Testing/Consultancy report is forwarded on the recommendations of the Department Responsibility of Test/Consultancy Report lies with the concerning department.

Testing/Consultancy Amount Paid

Rs. 38350/-

UTR No. IBKL2106042021

Date: 4.6.21

Book No.: MITS TCR/XXXXP

Finance cum Accounts Officer

*Copy P*  
DIRECTOR 28.6.21

Sr. No.: 2020028