



RW/NH-34049/1/2014-S&R(B)(pt)
GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
S&R -(Bridges)

Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 12.12.2022

To

1. The Chief Secretaries of all the State Governments / UTs.
2. The Principal Secretaries / Secretaries of all States / UTs Public Works Department dealing with National Highways, other Centrally sponsored schemes.
3. The Engineers-in-Chief and Chief Engineers of Public Works Department of States/UTs dealing with National Highways, other Centrally sponsored schemes.
4. The Director General (Border Roads), Seema Sadak Bhavan, Ring Road, Delhi 110010.
5. The Chairperson, National Highways Authority of India, Plot G-5 & 6, Sector-10, Dwarka, New Delhi 110075.
6. The Managing Director, NHIDCL, PTI Building, Parliament Street, New Delhi 110001.

Subject: Bridges in severely damaged and precarious conditions on National Highways - Identification and Rectification - reg

Sir,

Bridges are very important and critical links in the National Highways network and for that matter in any other category of road and as such play a vital role for unhindered goods and passenger movement. It has however been noticed in recent past that there has been several cases of collapse of old and distressed bridges in different parts of the country. Similarly, there are several failures during construction of bridges and flyovers. There have been instances of human deaths and grievous injuries due to such collapse/failures. Recurring incidences of such collapse/failure is quite alarming flags the necessity of revisiting the existing bridge management system as well as the construction practices. To avoid such untoward incidents leading to disruption of traffic movement and loss of life, it is essential to identify bridges in severely damaged and precarious condition and to implement the follow up actions including remedial measures without much loss of time.

2. Different types of distresses crop up in the bridges and structures during their service life, some of which relate to their (i) serviceability and some others to their (ii) structural safety and stability. The distresses of former category are usually the result of wear and tear during the course of use of the bridge structure and progressive deterioration due to weathering effects and can be attended to through regular maintenance and repair activities. For example: damages to wearing coat, damages to railing, damages to drainage spouts, sporadic damages/minor isolated cracks in the bridge components, isolated spalling of concrete due to inadequate cover or other reasons, damages to approach slabs, isolated damages to return walls /wing walls etc. The distresses in the latter category are severe structural distresses which make the bridges dangerous and unsafe for traffic and may lead to calamitous situation. For example: severe scouring around piers and abutments, tilting/settlement of foundations, corrosion of per-stressing cables/ strands, etc. For better appreciation, some examples of such severe distresses are enclosed at Annexure-I. This list is not exhaustive and is only indicative to make the intent clear in identifying the dangerous/ precarious bridge structures which need immediate attention and remedial actions on top priority.

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3. Such bridges may be preliminarily identified through various sources like details collected through earlier Indian Bridge Management Systems Consultancy, through the knowledge of the Regional Offices based on their past inspections, through discussions with National Highway field officers of different executing agencies, through any media reports or any other sources. These bridges and other bridges which are more than 50 years old irrespective of their condition should be inspected immediately by the Regional Officers or the officers authorized by them and the preliminary details collected therefrom should be furnished in the cumulative monthly report in the format given at **Annexure-II** supported with photographs etc., to the Zonal/Divisional Heads. Even if no such bridges are there in the jurisdiction of a RO/PD report should be submitted indicating nil.
4. Based on these details, the bridges/ structures identified for immediate remedial action be got inspected by a team of three bridge experts/engineers and a report thereon be submitted to the Zonal/ Divisional Heads bringing out various details about such dangerous/precarious bridges covering the extent of the damages, the remedial measures required, the need for imposition of any restrictions on such bridges like load restrictions/vehicle restrictions/speed restrictions etc., the time in which such remedial measures are to be implemented and the cost estimates etc., supported by photographs by 15.01.2023. The Bridge Experts (preferably from renowned institutes with good faculty in structural engineering/ experts from private sector) may be procured through appropriate mode of inviting proposals on short term mode and the expenditure on such bridge inspection by Bridge expert team may be met from the contingencies of the sanctioned National Highway projects by the respective Regional Offices.
5. On receipt of the report, immediate remedial measures like repair and rehabilitation measures, immediate traffic diversion arrangements with or without bailey bridges, diversion of traffic through other alternate routes, taking up of reconstruction of the bridge etc., may be taken up and got sanctioned on high priority by including them in the same year annual plan (Such proposals shall be deemed agreed for inclusion in the current annual plan). However, immediate temporary measures like imposition of load/vehicle/speed restrictions, installation of traffic calming/road safety measures including cautionary signs, installation of lighting etc., based on the report of the bridge expert team cited above may immediately be taken. The implementation of the remedial measures may be completed within 03 months except in the cases where reconstruction of bridges/large scale rehabilitation of major bridges are involved.
6. The report on precarious/dangerous bridges shall be a cumulative report to be submitted by 10th of every month covering the details up to the last date of previous month. The cumulative report shall be initially up to March, 2024, thereafter it will be for each financial year. Any laxity in submission of these reports or its follow up actions would be viewed seriously.
7. The contents of this Circular may please be brought to the notice of all the Concerned in your Organization for strict implementation. This circular will be implemented from the date of its issuance.
8. This issues with the approval of competent authority.

Yours faithfully



(Jitendra Kumar)
SE, S&R(Bridges)

For Director General (RD)& Special Secretary

Copy to:

1. All Technical Officers in the Ministry of Road Transport & Highways.
2. All Joint Secretaries in the Ministry of Road Transport & Highways.
3. All ROs & ELOs of the Ministry of Road Transport & Highways.
4. The Secretary General, Indian Roads Congress with a request to incorporate the contents of this circular in the revised Ministry's Specifications for Road and Bridge Works.
5. The Director, IAHE.
6. Technical circular file of S, R&T (B) Section.
7. NIC for uploading on Ministry's website under "what's new".

Copy for kind information to:

1. PS to Hon'ble Minister (RT&H) / PS to Hon'ble MOS (RT&H).
2. Sr. PPS to Secretary (RT&H).
3. PPS to DG (RD) & SS.
4. PPS to AS & FA
5. PPS to ADG

***** End*****

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Annexure-I

Indicative examples of structural distresses which are likely to make the bridge structures dangerous / precarious

- Severe Scour around foundations of piers & abutments
- Tilting /settlement of foundations
- Tilting of abutments/ piers in vertical plane
- Major vertical cracks in the wells of foundations
- Major cracks in pile cap/piers/pier cap
- Heavy vegetation within bridge components like sub-structures /foundations/superstructure
- Dislocation of bearings
- Large vibrations in super structure
- Excessive deflection in super structure
- Major cracks (vertical, diagonal, etc) in super structure
- Severe corrosion of reinforcement of bridge components in substantial areas
- Severe corrosion of pres-stressing cable/ strands
- Severely damaged articulations
- Heavy spoiling, scaling, honeycombing, delamination of superstructure
- Cracks and punching of bearing pedestals
- Any other precarious conditions in the bridge which warrant urgent remedial actions

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Monthly Cumulative Report on precarious and dangerous Bridge

Name of the Executive Agency :													
Name of the State :			Date:										
Reporting month :													
S.No	NH Location No./chainage Km	Type of Bridge		Span arrangement (No of spans X Span length in m)	Type of dangerous/precarious conditions prompting immediate remedial action	Details of inspection of the Bridge		Details of follow up action			Remarks		
		Type of Bridge structure	Type of Sub- Structure			Name and Designation of Inspecting Officer	Date of Inspection	Status of action taken / proposed for detailed inspection, if any	Status of action for immediate temporary measures , if any	Status of remedial actions based on detailed inspection, if any			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

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