

GOVERNMENT OF INDIA  
MINISTRY OF ROAD TRANSPORT AND HIGHWAYS  
RAJYA SABHA  
**STARRED QUESTION NO-39**  
ANSWERED ON-03/12/2025

**MAINTENANCE OF HIGHWAYS**

**39. DR. BHAGWAT KARAD:**

Will the Minister of ROAD TRANSPORT AND HIGHWAYS be pleased to state:

- (a) whether provisions exist for five-year post-construction maintenance of National Highways by contractors, if so, how these are enforced;
- (b) the measures to prevent cost-cutting that may compromise road quality and safety;
- (c) the steps to ensure transparency and public access to highway maintenance records;
- (d) whether Government is aware of the accident-prone Autram Ghat in Marathwada, if so, the details thereof; and
- (e) the current status and expected benefits of the ₹2,435-crore Telwadi–Bodhre tunnel project, including its impact on accidents and travel time?

**ANSWER**

THE MINISTER OF ROAD TRANSPORT AND HIGHWAYS

(SHRI NITIN JAIRAM GADKARI)

- (a) to (e) A statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF RAJYA SABHA  
STARRED QUESTION NO. 39 ANSWERED ON 03.12.2025 ASKED BY DR. BHAGWAT  
KARAD REGARDING MAINTENANCE OF HIGHWAYS

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(a) Yes sir.

National Highways (NHs) projects are executed on mainly three modes i.e. (i) Build Operate and Transfer (BOT), (ii) Hybrid Annuity Model (HAM) and (iii) Engineering Procurement and Construction (EPC). Concession period for projects on Build Operate and Transfer (BOT) is 15 to 20 years and on Hybrid Annuity Model (HAM) is generally 15 years. Concessionaire is responsible for maintenance of the respective NHs stretches within the concession period of the project. In case of EPC projects, Defect Liability period (DLP) is 5 years for bituminous pavement works and 10 years for concrete pavement works.

For Toll-Operate-Transfer (TOT) and Infrastructure Investment Trust (InvIT) projects, concession period including maintenance is for 20 to 30 years. Concession period for Projects on Operate, Maintain and Transfer (OMT) is generally 9 years.

Routine maintenance activities as per the schedules are carried out by respective Contractor / Concessionaire within the above mentioned DLP / concession period. Periodic major maintenance also is done by concessionaire in BOT / HAM projects. Further, repair of identified defects / issues in the road condition are rectified by the Contractor / Concessionaire within the stipulated timeline as per provisions of the Contract Agreement and its Schedules [Schedule E for EPC Projects / Schedule K for HAM Projects]. Compliance to the maintenance requirements is ensured through regular field visits and inspections by the Authority Engineer (AE) / Independent Engineer (IE) and Authority officers.

Further, Government has also directed Authority officers for thorough inspection of NHs stretches within six months of expiry of the DLP / Concession Period to check enforcement of defect rectification and maintenance status of NHs stretches. In the event of not fulfilling the Contractual obligations by Contractor / Concessionaire, DLP / Concession Period is also suitably extended.

(b) All NHs projects are scrutinized to ensure optimization of cost vis-à-vis the project deliverables and alignment before any approval.

Further, Government has reviewed and revised the selection mechanism for award of NHs projects with Additional Performance Security (APS) as one of the bidding parameters to

deter Contractors / Concessionaires from quoting abnormally low bids at the expense of project quality and deliverables and such APS to be released based on Contractor / Concessionaire performance.

Government encourages the adoption of innovative technologies or methods to enhance the durability and reduce the maintenance requirements of NHs (depending upon factors like rainfall, terrain type, soil category etc.). Such technologies or methods include stabilization of subgrade, geosynthetic reinforced layer(s) in sub-base / base, concrete roads / whitetopping, perpetual pavement, High performance bituminous mixes, modified bitumen / bituminous mixes, Fiber Reinforced Concrete, Cement Grouted Bituminous Mixes, etc.

The Government has taken the following initiatives for improvement of quality control systems in implementation of NHs works, some of which are as stated below: -

- i. Mandatory assessments of road conditions through Network Survey Vehicle (NSV) before start of work, before issue of completion certificate and thereafter at regular intervals of six months after completion of the work, thereby enabling quality assessment of NHs at regular intervals for (a) ensuring the maintenance during Concession period / DLP and (b) prioritizing maintenance requirements to maintain NHs in traffic worthy condition; Further revamping of NSV system for road condition assessment using analytics and enforcement of contractual provisions during Operation and Maintenance (O&M) through dedicated central cell;
  - ii. Analysis of High-Resolution Imagery collected from Drone Surveys in Drone Analytics Monitoring System (DAMS) integrated with Artificial Intelligence / Machine Learning algorithms for periodic evaluation of progress and quality of ongoing NHs works from time to time;
  - iii. Deployment of Mobile Quality Control Vans (MQCVs) equipped with Non-Destructive Testing Equipment in four States, namely in Gujarat, Rajasthan, Odisha and Karnataka as pilot, for diagnostic assessments of overall health and quality of works from time to time during project implementation phases;
  - iv. Deployment of Third Party Quality Auditors for independent quality audits of NH works on a case-to-case basis.
- (c) The Government has initiated monitoring of the quality including defect rectification in NHs projects through mobile based application NHAI One / Tatpar. This app is used by Field officers / Engineers / Contractors / Concessionaires directly from onsite, through digital

reporting of daily and monthly defects, submission of geo-tagged and time-stamped photos for inspections and digital uploading of test results.

The Government has also established system of receiving complaints through Public Grievance Portal, mobile based Rajmarg Yatra app for citizen feedback regarding issues / grievances related to National Highways (NHs) including the quality and maintenance issues. Further, for complaints received from various Social Media Platforms including complaints received from other sources about various issues concerning National Highways including issues related to quality of construction / maintenance, the Government has set up an internal mechanism to take cognizance of these complaints through web portal towards ensuring that necessary corrective actions are taken up by the Officials / Concessionaires / Contractors for the NHs projects.

(d) At present, 15 km long section having two lane carriageway from Telwadi to Bodhre of NH-52 passes through 8 km long Autram Ghat section in forest / wildlife sanctuary with 2 hair pin bends, steep gradient and deficient horizontal / vertical curves in hilly terrain. Hon'ble High Court has imposed ban on movement of heavy vehicles in Autram Ghat section with effect from 11.08.2023.

The Government has deployed an Agency for provision of Incident Management Services (including Route Patrolling Vehicle and Crane) in the Autram Ghat section of NH-52 with effect from 11.11.2022 to ensure hassle free movement and removal of breakdown vehicles and debris.

(e) The alignment from Telwadi to Bodhare was approved on 12.09.2025 with provision of tunnel and viaduct as wildlife mitigation measures and preparation of Detailed Project Report (DPR) has started. Generally, Project is taken up for approval based on the outcome of the DPR.

Development of the Autram Ghat section is expected to reduce the travel time to about 20 minutes for all types of traffic. Improved road geometry and Four Lane divided carriageway will also increase the road safety.

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