Press Release:

NHAI to Deploy Network Survey Vehicles across the country for over 20,000 km of National Highways

New Delhi, 22nd October 2025: To enhance the riding experience of the commuters on National Highways, NHAI will deploy Network Survey Vehicles (NSV) in 23 states covering 20,933 km for collection, processing and analysing Road inventory and Pavement condition data of National Highway stretches. The deployment of NSVs will enable NHAI to collect necessary data related to road inventory and pavement condition including all relevant road defects like surface cracking, potholes and patches etc. The data collected through NSV surveys will highlight deficiencies in road conditions, prompting NHAI to take corrective measures for better upkeep of National Highways.

Data collected through NSV survey will be uploaded on NHAI's 'AI' based portal Data Lake, where it will be analysed by a dedicated team of experts at NHAI to transform data into knowledge and subsequent actionable insights. Finally, the data collected at regular intervals as per Government of India guidelines shall be preserved for future technical purposes in Road Asset Management system in prescribed formats.

The pavement condition surveys will be carried out using 3D laser based NSV system capable of capturing and reporting road defects automatically without any human intervention with the help of high resolution 360-degree cameras, DGPS (Differential Global Positioning System), IMU (Inertial Measurement Unit), and DMI (Distance Measuring Indicator). These are equipped with versatile data acquisition & processing software to accurately measure and report the inventory & pavement condition data. The data shall be collected for all projects involving 2/4/6 and 8 lanes with NSV before start of work and thereafter at regular intervals of six months. To implement this initiative, NHAI has invited bids from qualified companies.

Network Survey Vehicle (NSV) System is a specialized infrastructure management tool comprising vehicles equipped with advanced sensors and data acquisition systems. These vehicles systematically collect data on road inventory and condition of National Highways. The collected data is useful to take decisions for pavement maintenance, asset management, and infrastructure planning, contributing to the enhancing safety and efficiency of the National Highway Network across the country.

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