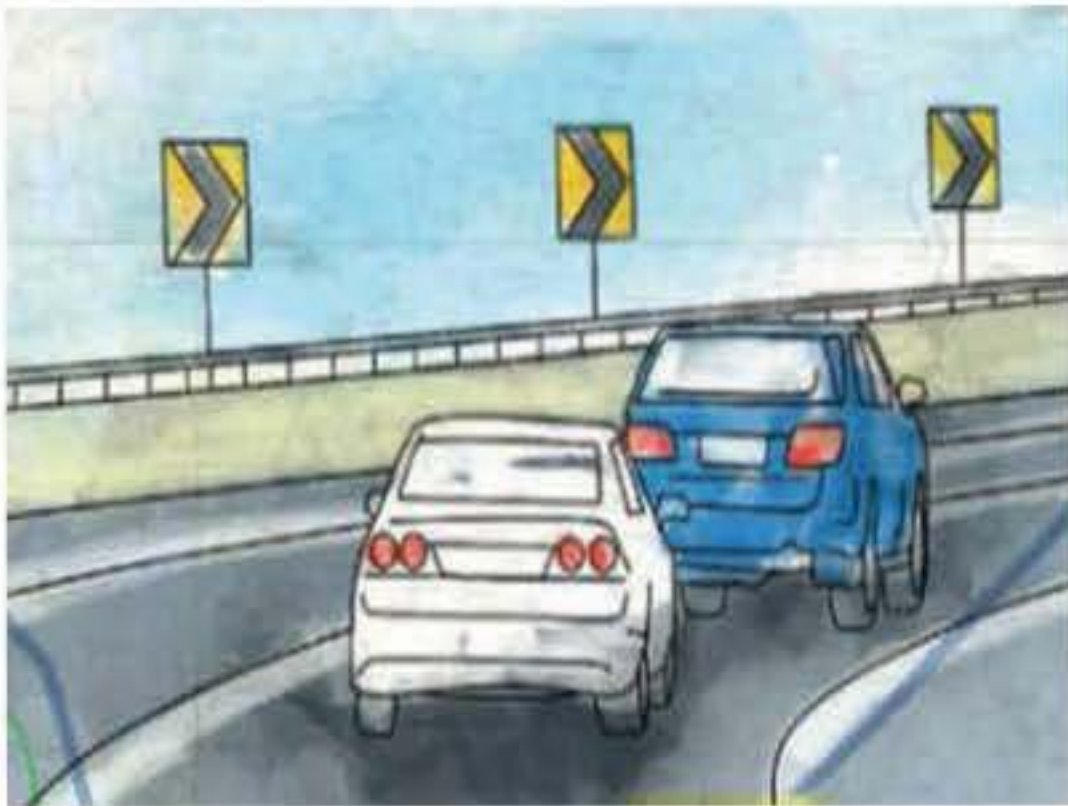


# Lucknow-Kanpur expressway first to use 3D AMG technology

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NEW DELHI: In a first, the National Highways Authority of India (NHA) will use 3D Automated Machine Guidance (AMG) module for highway building, which almost doubles the construction speed and enables officials and contractors to get live updates of the progress on their phones or computer.

The 63-km Kanpur-Lucknow expressway will be the first such project to use the technology.

## KANPUR-LUCKNOW EXPRESSWAY



Union defence minister Rajnath Singh and road transport minister Nitin Gadkari will lay the foundation stone for this Rs 4,200 crore expressway on Wednesday, which will reduce travel time between the two cities to barely 40 minutes by December 2023.

Project will help implement 3D AMG systems in highway sector

The 3D AMG uses data from sources such as 3D engineered models to guide construction equipment during earthwork and paving.

The AMG links sophisticated design software with construction equipment to direct the operations of construction machineries with a high level of precision, and improves the speed and accuracy of the construction process, officials said.

An NHA official said these systems integrate a computer within the cab of construction equipment with Global Navigation Satellite System (GNSS) satellites to relay position information from the GNSS receivers mounted on the machines.

"The computer evaluates the machine's actual horizontal and vertical position relative to its location in a proposed computer-generated model of the project. The operator uses information from the onboard computer to control the machine's equipment. The onboard computer is directly linked to the machine hydraulics, controlling their operation with minimal input from the operator," the official added.

This module has been used by some private players in civil constructions in India but this has not been used widely.

"The NHA has chosen this expressway project to evaluate the system. The learning from this project will help us for widespread implementation of the 3D AMG systems in the highway sector," said another official.

The expressway starts from Amausi airport and will connect with the proposed Ring Road in Kanpur via Unnao. About 13 km of the expressway will be elevated.