

INDRA BRINGS CONNECTED VEHICLE TOLLING (C-V2X TOLL) TO NORTH CAROLINA'S I-485 EXPRESS LANES, THE FIRST HIGHWAY IN THE U.S. TO DEPLOY THIS TECHNOLOGY

- **I-485 Express Lanes will be the first in the United States to feature C-V2X tolling, a pioneering project led by Indra to optimize toll operations and enhance driver experience**
- **In line with Indra's goal of reducing roadside hardware, the company will also leverage the 3D LiDAR installed as part of its tolling system to also detect safety events in real time and share this information with motorists via C-V2X**
- **The North Carolina Turnpike Authority (NCTA) has previously awarded Indra a contract to equip a section of I-485 Express Lanes with its all-overhead open road tolling system, one of the most innovative solutions in the market**

Madrid, August 29th, 2025.- Indra will bring its connected vehicle tolling solution (C-V2X Toll) to the I-485 Express Lanes in North Carolina, making it the first highway in the United States to integrate C-V2X tolling technology into the roadside and the host systems. This breakthrough will allow connected vehicles to receive tolling information directly through their in-vehicle systems, eliminating the need for mobile applications or additional devices.

The North Carolina Turnpike Authority (NCTA) has selected Indra to promote this next generation of toll payment systems for connected vehicles equipped with V2X technology in the U.S.

"We are working with our partners to unleash the next generation of driving" said JJ Eden, Executive Director of the North Carolina Turnpike Authority. This project will help us build a safer, more convenient transportation network that can support the future needs of drivers everywhere".

Indra had previously successfully tested this technology in the U.S. through its collaboration with Audi and Qualcomm Technologies during the most recent OmniAir PlugFest at Florida's Turnpike Enterprise's SunTrax facility in Orlando, where it showcased the system's performance, user experience, and full integration within an open road tolling system. These demonstrations laid the groundwork for the use of C-V2X-equipped vehicles to reduce congestion on toll roads, standardize toll payments, and improve the overall driver experience.

Currently, tolling in the U.S. relies on multiple hubs which have not yet achieved nationwide interoperability. This creates challenges for drivers traveling between states and for agencies managing customers across regions. Indra's C-V2X tolling solution will enable true interoperability, delivering toll information and historical data directly to drivers' dashboards. The result is a simplified process and opportunities for added benefits for motorists in connected vehicles.

This initiative will also reuse tolling V2X infrastructure to enhance road safety. By combining C-V2X with Indra's advanced 3D LiDAR perception and processing technology, roadside sensors will analyze traffic conditions in real time. Events such as wrong-way drivers, stopped vehicles, pedestrians on the roadway, or slow-moving traffic will be detected and broadcast immediately to connected vehicles using C-V2X, significantly improving roadway safety.

"Indra once again demonstrates that collaboration and a strong commitment to innovation result in disruptive technologies that benefit transportation operators, mobility, and travelers alike. We are proud that the North Carolina Turnpike Authority continues to trust our technology to deliver a differential experience for its customers," said Raúl Ripio, Senior Vice President of Mobility & Technology at Indra.

Indra has also deployed its all-overhead open road tolling system in the I-485 Express Lanes, comprising ten (10) gantries that enable automatic vehicle payments at highway speeds. This state-of-the-art market solution integrates all equipment onto the gantries themselves, avoiding intrusive installations in the pavement and offering a more sustainable, efficient approach that promotes safer, smoother traffic flow.

Indra is showcasing its C-V2X Toll and Safety technology to visitors during the demonstration program at the ITS World Congress in Atlanta, Georgia.

With a solid and growing presence in the U.S. mobility market, Indra continues to transform highway mobility across the country, with projects such as I-66 Outside the Beltway, equipped with overhead open road tolling, high-occupancy vehicle (HOV) detection, LiDAR and connected vehicle technologies. Indra has also deployed HOV systems on the I-95, I-495, and I-395 Express Lanes in Northern Virginia.

About Indra

Indra, one of the most foremost global technology companies, is a world leader in smart mobility, having completed over 2,500 projects in more than 100 cities and 50 countries on the five continents. Over the last twenty years, Indra has provided tolling systems to more than 20+ countries, with over 3,300 lanes in operation and over 50 Back Office Systems for toll motorways in 13 countries, Indra most recent delivery, I-66 Express Outside the Beltway, of an integrated all-overhead tolling, video-occupancy detection, ATMS, and ITS for managed lanes, with C-V2X infrastructure and Connected vehicle platform, is considered one-of-a-kind in the United States today. Indra has been awarded with the IBTTA Toll Excellence Award in the Private Sector Innovation in 2024 for this project in Virginia. Indra is part of the Indra Group, a holding company with more than 60,000 employees, local presence in 49 countries and commercial operations in more than 140 countries.

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