

ACTIVE-AURORA

CANADA'S FIRST CONNECTED VEHICLE TEST BED NETWORK



Northwest Anthony Henday Drive in Edmonton, Alberta | Photo courtesy of NorthwestConnect General Partnership

What is ACTIVE-AURORA?

ACTIVE-AURORA is the first network of test beds for connected vehicles (CV) in Canada, with ACTIVE based in Edmonton, Alberta, and AURORA based in Vancouver, British Columbia. CV technology enables vehicles to wirelessly “talk” to other vehicles and roadside infrastructure in real time, communicating information such as location, speed, following distance, inclement weather, adverse road conditions, and more.

This project provides real-world test zones, combined with laboratory settings, where conditions can be customized to simulate various situations. These facilities offer cutting-edge learning opportunities and hands-on experience for the next generation of transportation experts. With test beds located in Edmonton, ACTIVE-AURORA will provide a harsh winter environment in which to test CV systems and their impact on the transportation system (e.g., safety, mobility and the environment).

ACTIVE-AURORA launched in 2014 as a collaborative effort by the Government of Canada, the Government of Alberta, the City of Edmonton, the University of Alberta’s Centre for Smart Transportation (CST), and the University of British Columbia. From industry, Stantec is providing project management, design and construction administration services, and EPCOR and Can-Traffic are installing the roadside infrastructure.

ACTIVE - Alberta Cooperative Transportation Infrastructure and Vehicular Environment
AURORA - Automotive Test Bed for Reconfigurable and Optimized Radio Access





ACTIVE-AURORA provides researchers, industry and government with the opportunity to determine how the technology performs in mixed traffic on highways and arterial roads in a wide range of climatic conditions. This unique collaboration among government, research centres and private industry will result in several tangible benefits for both the partners and the universities, including readily applicable transportation solutions, new technologies and practices, and enhanced knowledge for researchers, practitioners and decision-makers.

The ACTIVE-AURORA test bed network provides a unique opportunity to address capacity constraints and bottlenecks on the transportation network to improve Alberta's and Canada's international trade flows; advance knowledge and understanding of multimodal transportation systems; and enhance the capacity, safety, security, efficiency and environmental performance of provincial and national transportation networks. ACTIVE-AURORA will also provide road authorities with a better understanding of the policies and infrastructure needed to support large-scale deployment of CV technology in Canada.

“As an engineer, I am pleased that the Government of Canada is involved in funding our country's first connected vehicle technology test-bed network. This innovative technology has the potential to make Canada's transportation system safer, more efficient, and secure for passenger and commercial traffic throughout the country.”

The Honourable Marc Garneau,
Federal Minister of Transport

ACTIVE currently includes 42 advanced roadside equipment units in Edmonton, Alberta that establishes wireless connections with on-board equipment in passing test vehicles.

“Alberta is a leader in seeking out, testing and adopting new and innovative technologies, like the ACTIVE-AURORA project, that improve the safety and efficiency of travel on our highways for both personal and commercial drivers. Our government is proud to be a partner in this cutting-edge project which could ultimately support Alberta's economic diversification and create jobs by fostering local expertise and attracting new talent and employing the engineers, specialists and researchers needed to design, install and operate this technology.”

Honourable Brian Mason,
Alberta Minister of Transportation and
Alberta Minister of Infrastructure

“The City of Edmonton is proud to participate in a project that is so cutting-edge and has the potential to make our roads safer for our citizens. We eagerly anticipate the results from the testing on our streets.”

Mayor Don Iveson,
City of Edmonton

About the CST

The CST's Steering Committee, comprised of public and private sector representatives, identifies projects that have the broadest possible impact. The CST Steering Committee and other project partners work together to support transportation-related initiatives. To this end, the CST works under four core research themes: Connected Vehicle Technology, Multimodal Transportation, Traffic Monitoring, and Traffic Safety. Through partnerships with government agencies at all levels and with private industry, the CST leads innovative and efficient technical studies and solutions with real-world applications.

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