

# Leading the way in complex lane reversal systems

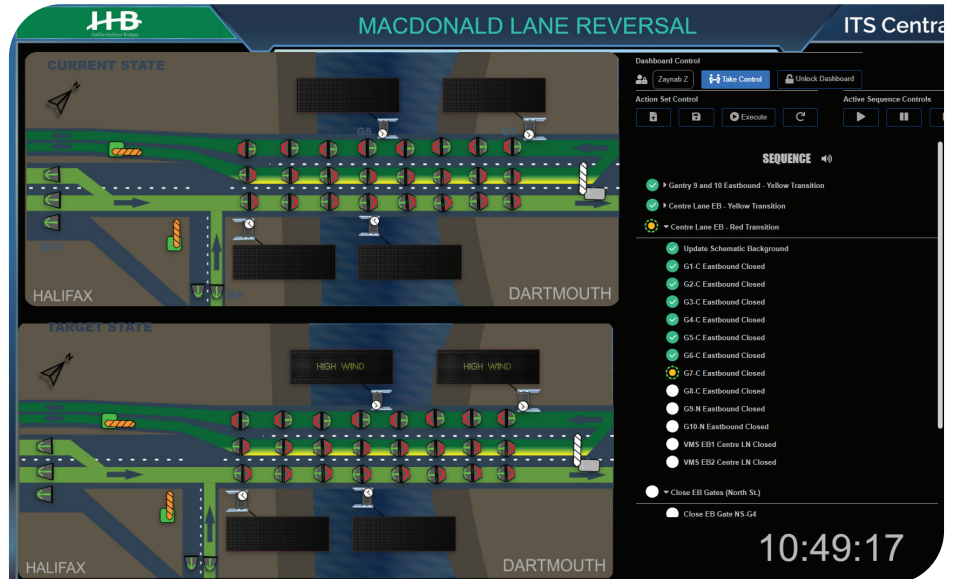


Halifax's Angus L. Macdonald and A. Murray MacKay bridges aren't just crossings—they're economic lifelines. With 45,000 daily trips and \$120M in annual impact, these sensor-monitored suspension bridges keep the region moving, connecting people and commerce.

**ITS Central**  
(ATMS Software)

## Result

The Halifax Harbour Bridges (HHB) Lane Reversal and Advanced Traffic Management System (ATMS)—a collaboration between HHB, Transnomis, and Black & McDonald—modernized the Angus L. Macdonald Bridge's operations. Its new highly-configurable and automated lane reversal system replaces manual work, cuts delays, and boosts safety. Live, user-friendly dashboards enhance real-time traffic control and improve emergency response, while proactive device monitoring prevents disruptions. The result: smoother commutes, safer roads, and optimized traffic flow for tens of thousands of daily travelers and businesses.



**“Biggest benefit we’re starting to see is...  
the ability to make our own dashboards,  
add our own devices, modify schedules,  
[and] change how things look and feel  
without having to engage the vendor.”**

*David Greenfield, CIO, Halifax Harbour Bridges*

## Challenge

In the summer of 2024, HHB set out to replace its 25-year-old traffic management system with a modern platform. It's to improve notoriously congested traffic on the bridges and tackle key transportation issues such as lane control, congestion management, and infrastructure monitoring.

At the heart of the challenge was the Macdonald Bridge lane reversal, a system which needed to orchestrate over 100 devices: sensors, gates, cameras, signage, weather systems, and more. Operators required seamless automation—a process where dozens of intricate steps like switching signals, opening gates, updating Variable Messaging Signs (VMS), and verifying via CCTV could execute on schedule or at the push of a button. Reliability, speed, and precision were non-negotiables. Given the critical role of these traffic corridors, industry giants lined up to bid. Among them stood Transnomis—a “David” among Goliaths.

# Transnomis experience

The RFP landed in summer, and by December, they fully deployed the system. Unlike traditional solutions that take months for updates, Transnomis impressed the HHB team with new feature releases in weeks—or even days—thanks to its highly configurable software.

ITS Central's modular, flexible interface allows operators to tailor sequences, configure automations, and design dashboards on the fly.

HHB values its adaptability, from automating Macdonald Bridge lane reversals to optimizing urban traffic flow.

Real-time dashboards and pre-configured automation workflows streamline operations, while proactive sensor monitoring ensures reliability. Scalable and future-proof, the Transnomis platform empowers HHB to manage critical infrastructure with precision, efficiency, and confidence.



Traffic management software.  
For smart, safe and **connected** communities.



## Smarter monitoring, safer roads

Real-time traffic insight instantly shows congestive corridors, closures and more to secure road safety and improve traffic flow.



## Situational awareness backed mobility

Traffic devices and sensors integrated into one platform to offer full-scale awareness of traffic, road use and devices that require maintenance.



## Built-in edge reliability

The system boasts an average 99.999% uptime with triple-redundant edge controllers, making it reliable for agencies.

Find out how Transnomis can move you in the **right direction**.



[transnomis.com](https://transnomis.com)



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# Key features

The Transnomis platform integrates critical infrastructure— lane control signs, VMS, Smartmicro sensors, CCTV cameras, and weather stations— into a centralized, map-based system.

Key features include:

- **Automated lane reversal:** Precisely manages the Macdonald Bridge's center lane reversal with pre-programmed sequences, enhancing safety and efficiency.
- **Live situational awareness:** Real-time dashboards with bridge schematics and state previews help operators monitor traffic and respond proactively.
- **Pre-programmed scenarios:** Automates responses to incidents like lane closures, breakdowns, and adverse weather, reducing reaction time.
- **Proactive device monitoring:** Detects hardware failures and communication issues, ensuring rapid maintenance and uninterrupted operations.
- **Flawless system integration:** Unifies diverse traffic control components into a single, user-friendly interface for streamlined management.