North Carolina In-Vehicle Payment Pilot

JJ Eden, CEO and Manish Chourey, CTO

North Carolina Turnpike Authority

Providing drivers more choices for their commute

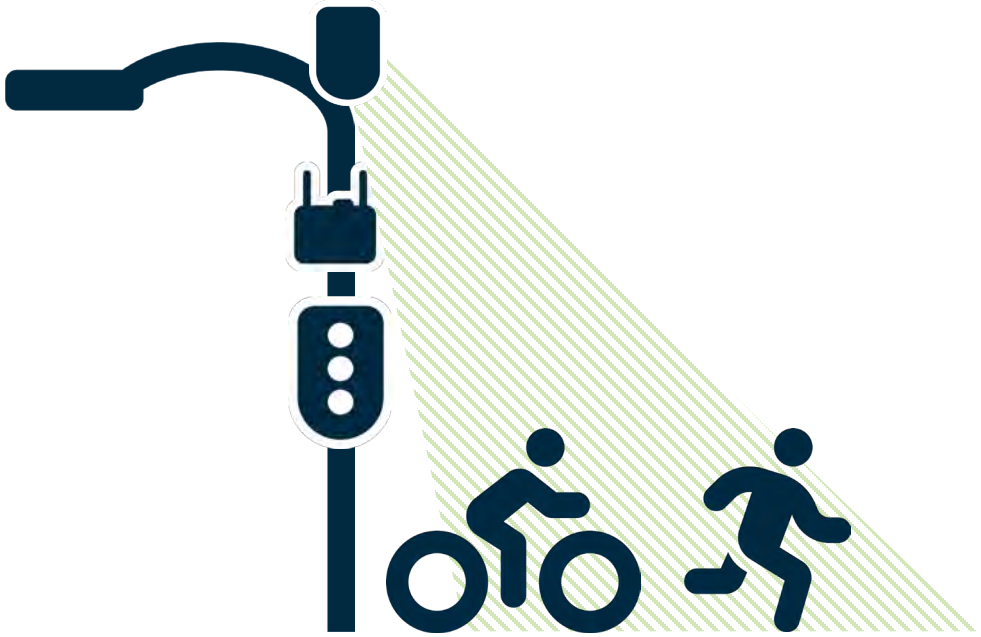
NORTH CAROLINA
Turnpike Authority

Industry Challenges

Why Alternate Technology Pilots?

1. Aging transponder technology and needed evolution
2. Outdated customer experience and back office
3. High operation costs and heavy infrastructure

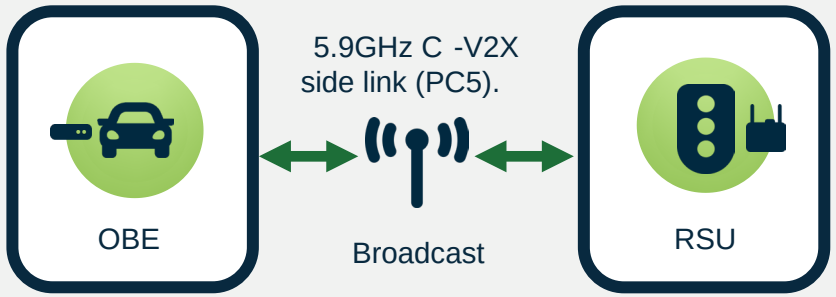
In-Vehicle Payment Pilots



Direct V2X for Toll Payments

Network V2X App for
Toll Payments

Direct V2X and Network V2X

	Direct V2X	Network V2X
Range	Direct radio connection, short range	Broader range for edge devices (cellular)
Latency	Low network latency	Inherent higher network latency
Specifications	SAE J3217 specification (TAM and TUMs)	Open API standards
Requirements for Use	Physical hardware (RSU and OBE)	Requires cars with data connection and in -car apps
Certification	RSU and OBE hardware Omni Air certification	In-car app with OS (Android) certification
Diagram		

How do we scale?

In-Vehicle Pilot Priorities

Customer-first design: Enroll and pay from the car

Utilize advanced in-vehicle technology: No additional hardware required

Information accuracy: Real-time data integration with geolocation services

Prioritize data security: Encrypted, Secure, PCI -compliant payments

Payment assurance: Seamless settlement via payment processor

In-Vehicle Payment Pilot Partners

1

Customer Toll
Travel & Amount

2

Customer Vehicle

3

Transaction
Middleware

4

Payment
Processed

In-Vehicle Payment Pilot

Projected Timeline

Announcement of Pilot

September 2025

Demonstrate Usability

IBTTA Tech Summit
May 2026

Complete

Pilot Begins with 100 Vehicles in NC

Third Quarter

Interoperability Between Agencies

Fourth Quarter

2026

Add More OEMs and Agencies

2027

Thank you!

Contact Us

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@NorthCarolinaTurnpikeAuthority

ncquickpass.com

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