

# Infrastructure for Autonomous and Advanced Services

Austin, TX

## SCENARIO

Congestion on corridors like the 865-plus miles of roadways connecting Austin, Dallas-Fort Worth, Houston and San Antonio pose many challenges to mobility, freight and the safe movement of goods and services.

Intelligent byways powered by autonomous infrastructure can help. Such solutions improve mobility by relaying to drivers real-time traffic and safety information regarding accidents, severe weather activity or roadside hazards to drivers. Autonomous infrastructure also holds many benefits in fleet tracking, deployment and operations. Yet this infrastructure is both complicated and capital-intensive.

## SOLUTION

To address these challenges and deliver these benefits in Austin, Texas, the Autonomy Institute is standing up intelligent and autonomous infrastructure labs and mobility corridors.

This infrastructure includes public infrastructure network nodes (PINN), which provide a unified open standard to support 5G wireless, edge computing, radar, sensors, enhanced GPS and intelligent transportation systems. Intelligent and autonomous infrastructure is also composed of edge computing on PINN and at cell towers/substations and open software platforms that support intelligent and autonomous systems.

All of these nodes and systems require substantial funding. In this area, the Autonomy Institute is creating public-private partnership programs to fund intelligent transportation systems and infrastructure by reaching out to infrastructure partners.

## RESULTS

The intelligent transportation infrastructure will offer many smart cities solutions—starting in Texas and ultimately nationwide.

GNSS antenna, radars, RF analysis, C-V2X, LIDAR, environmental sensors, E-GPS, 360 cameras and beacons are just some of the PINN applications for intelligent and autonomous transportation systems.

