



*UNITED STATES*  
**DEPARTMENT OF TRANSPORTATION**

**Saxton Transportation Operations Laboratory**  
**at the**  
**Turner Fairbank Highway Research Center**

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# Three Integrated Testbeds



# Indoor Facilities

## ■ Lab Workstations:

- State-of-the-Art Simulation and Analysis Tools
- High-Bandwidth Internet2 Connectivity
- High-Capacity Data Servers
- Test Bench/Conference Table



## ■ Vehicle Preparation Bay

- Storage and Maintenance
- OBE installation/testing



# Outdoor Facilities

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## ▪ Intelligent Intersection:

- State-of-the-art traffic signal controller and cabinet (both NEMA and 2070)
- Roadside Communications and Information Processing (RSE and SPaT processor)
- Instrumented Vehicles (OBE)
- Advanced Positioning Equipment
- Digital Mapping of Intersection
- Remote Monitoring Capabilities



# STOL Research Activities

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- Evaluation of Roadside Equipment (RSE) for the research Qualified Product List (rQPL)
- Development of the Signal Phase and Timing (SPaT) Interface and processor
- Validation of the Security Credential Management System (SCMS)
- Development and Testing of AERIS Environmental Performance Application



# Role of STOL in Affiliated Testbed Concept

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- Support bench testing of new connected vehicle devices, standards and applications
  - RSE and SPaT
  - OBE
  - SCMS
  - AERIS, DMA and other V2I applications (including V2I safety)
- Serve as a controlled environment for testing new concepts and applications prior to testing on real roads
  - Analysis, Modeling and Simulation
  - Intelligent Intersection (closed track)
- Common Data Repository (Research Data Exchange)



# For More Information.....

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