

Street Transportation Department

City of Phoenix Traffic Signal Technologies

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Traffic Services Division
September 12, 2026

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STREET TRANSPORTATION DEPARTMENT

Neighborhood SYNERGY Conference

What is Intelligent Transportation Systems (ITS)?

Intelligent Transportation Systems (ITS) is the application of advanced technologies used to improve the safety, efficiency, and reliability of transportation networks. ITS combines sensors, communications, software, and control systems to help us monitor, manage, and optimize traffic operations.

- How We Keep Traffic Moving
- Smarter Tools for Watching Traffic
- Traffic Information We Gather Now and Over Time
- Traffic Signals That Adjust to Changing Conditions
- Cars That Communicate With Signals and the Road
- Bringing All the Information Together to Make Better Decisions

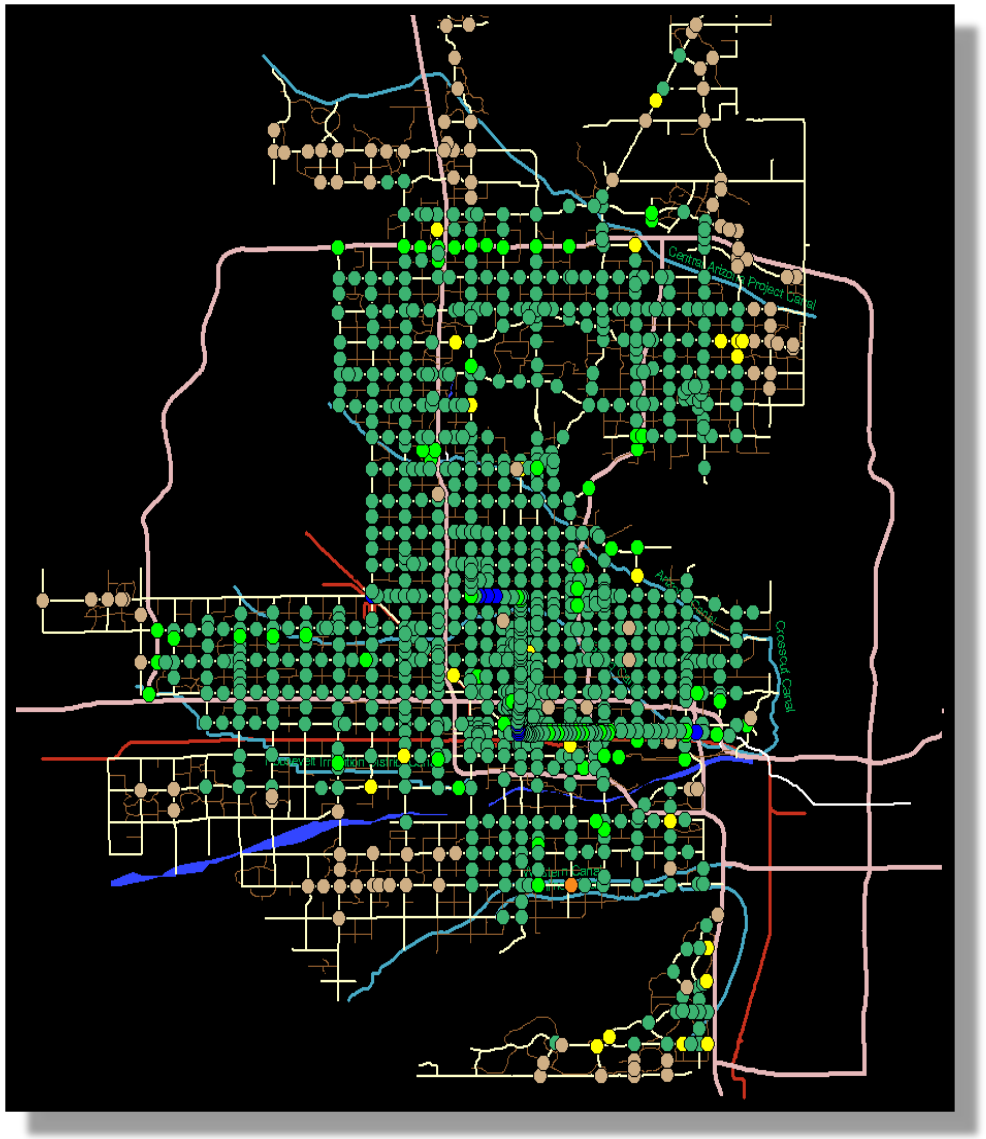
"Smarter systems, not wider roads."



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City of Phoenix Traffic Management Center





- Monday to Friday - 6AM to 8PM
- 24-7 On-call Support
- 602-228-0527
- phxtmc@phoenix.gov

Advanced Traffic Management System (ATMS)



Video Management Software



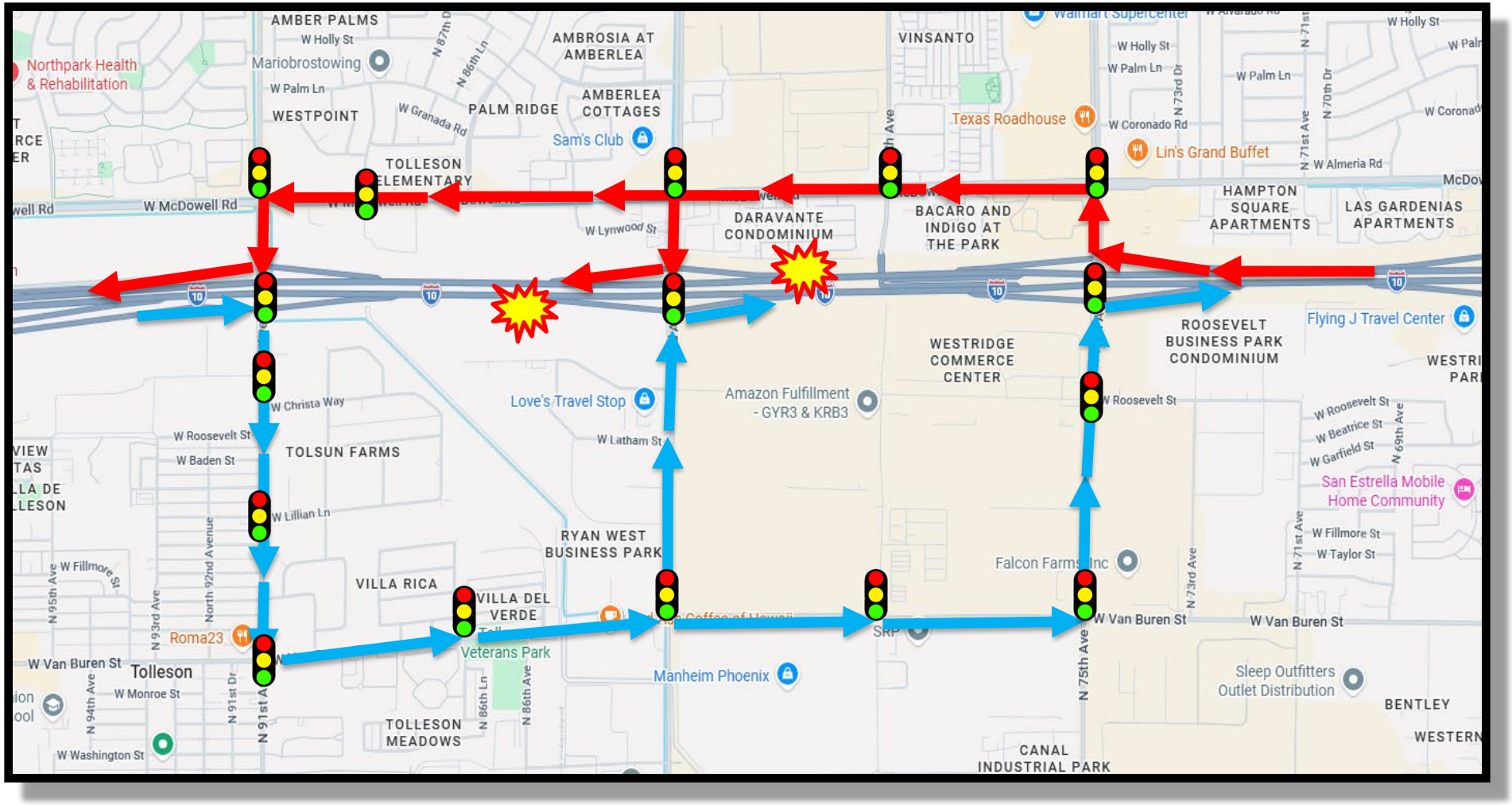
Modeling Intersection Operations



Modeling Arterial Operations



Keeping Traffic Moving During Crashes



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Traffic Signal Cabinet Equipment

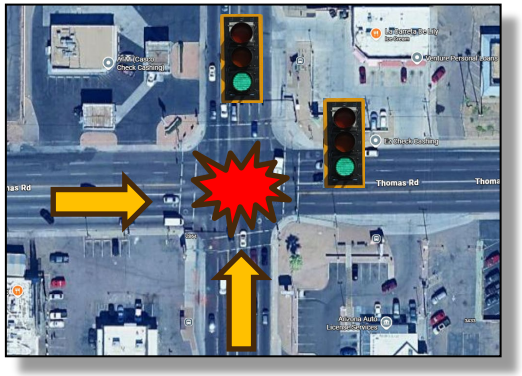


Traffic Signal Controller

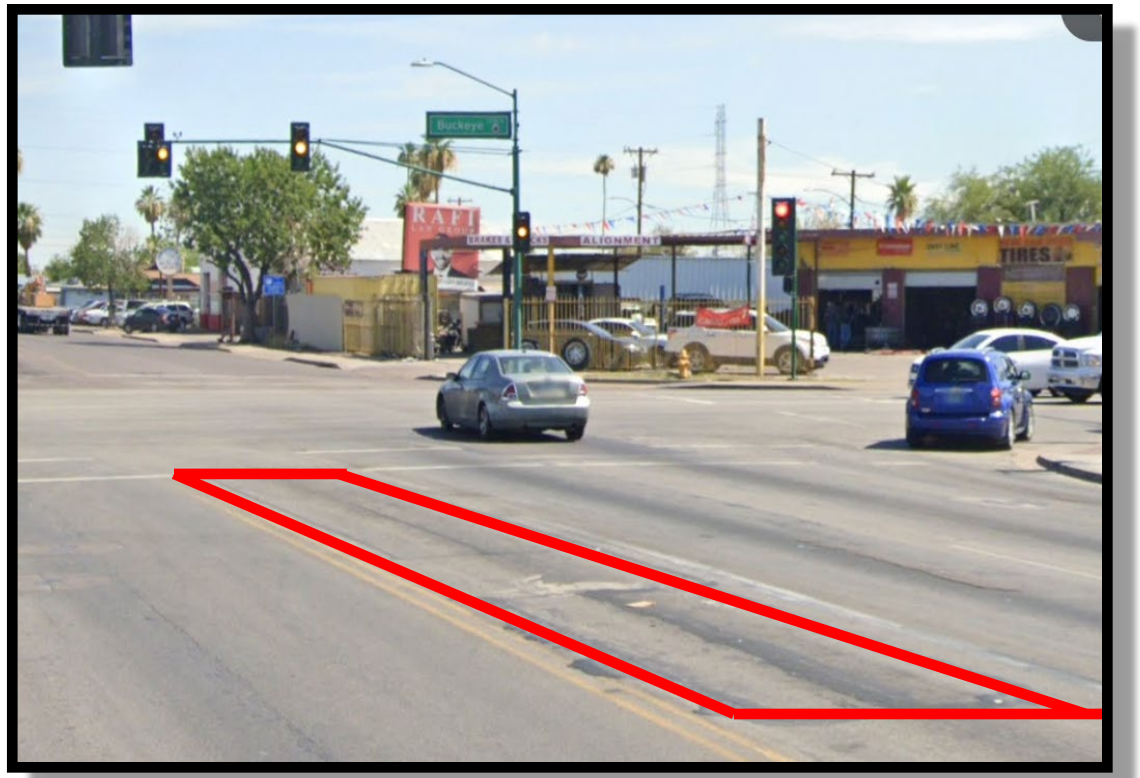


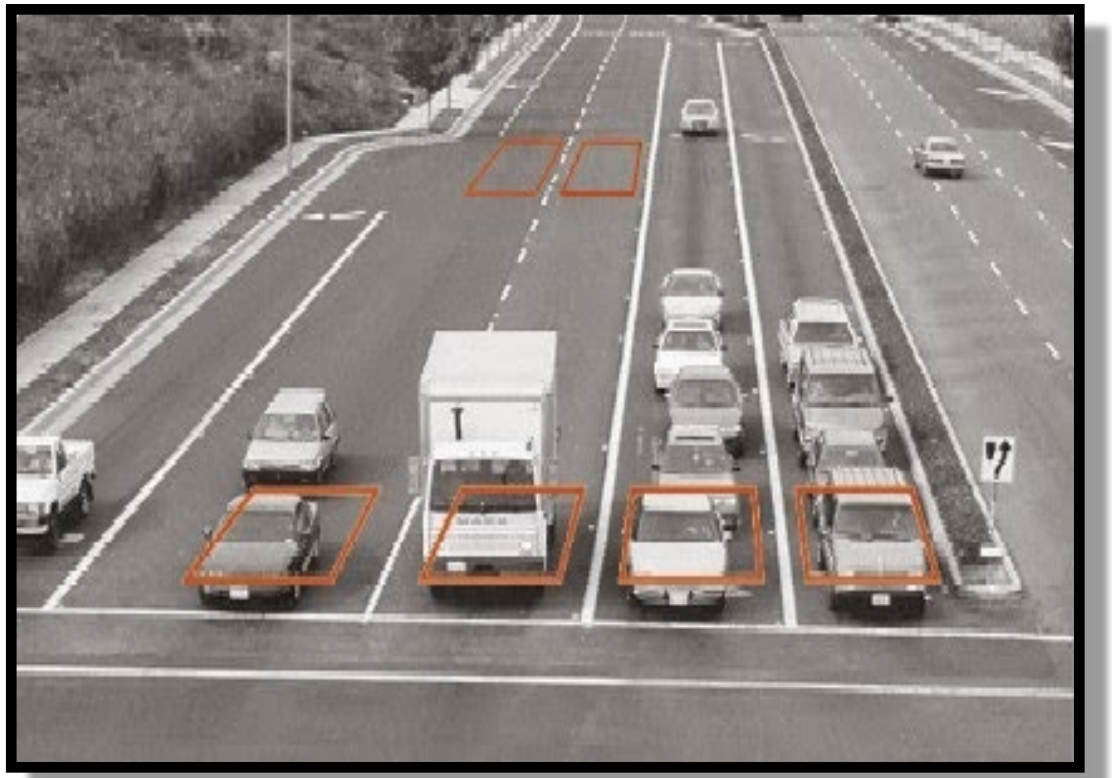
Malfunction Management Unit (MMU)



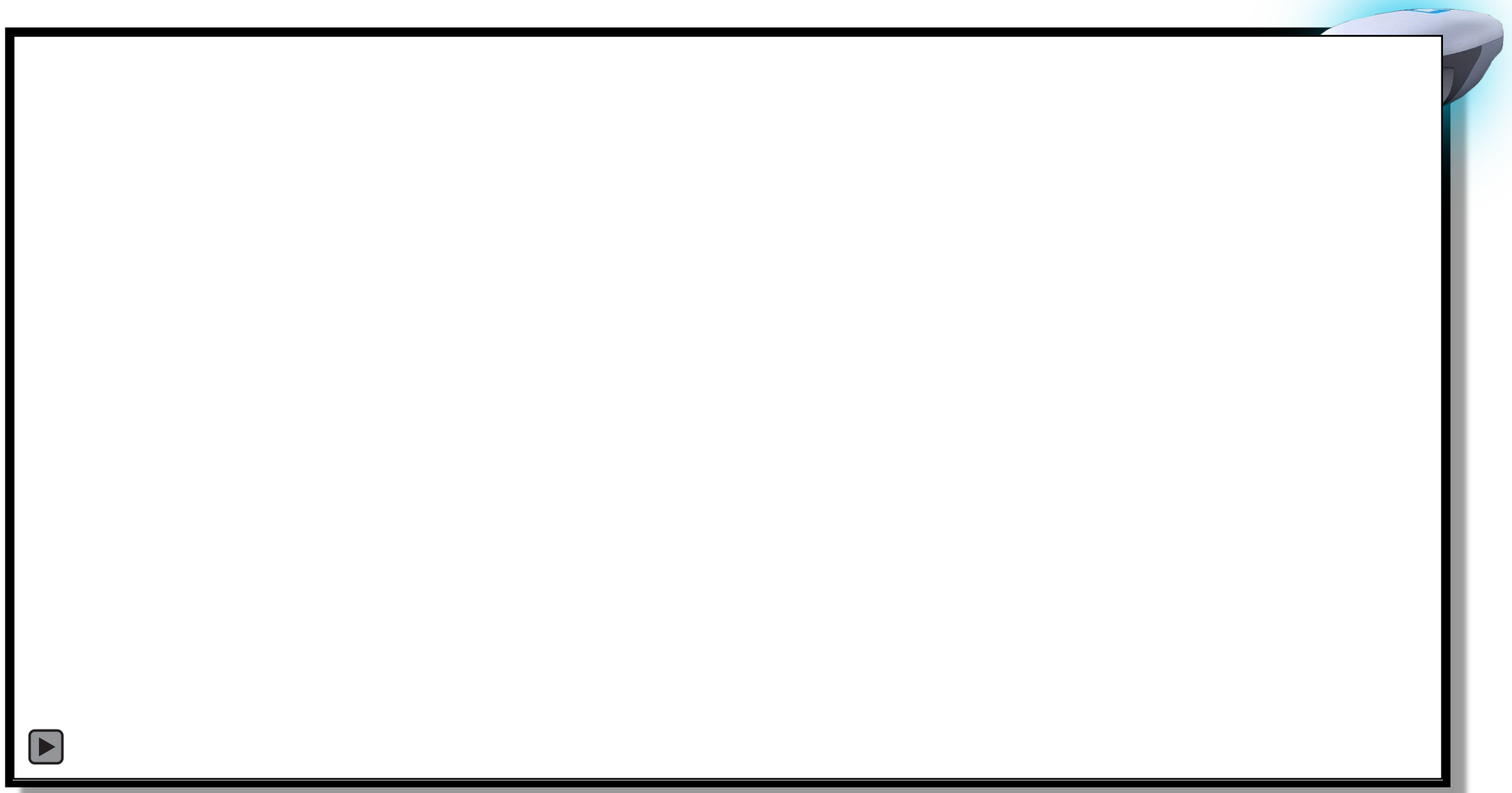


Detection Systems





Smart Detection Systems



Smart Detection Systems



Smart Detection Systems



LiDAR – Light Detection and Ranging System



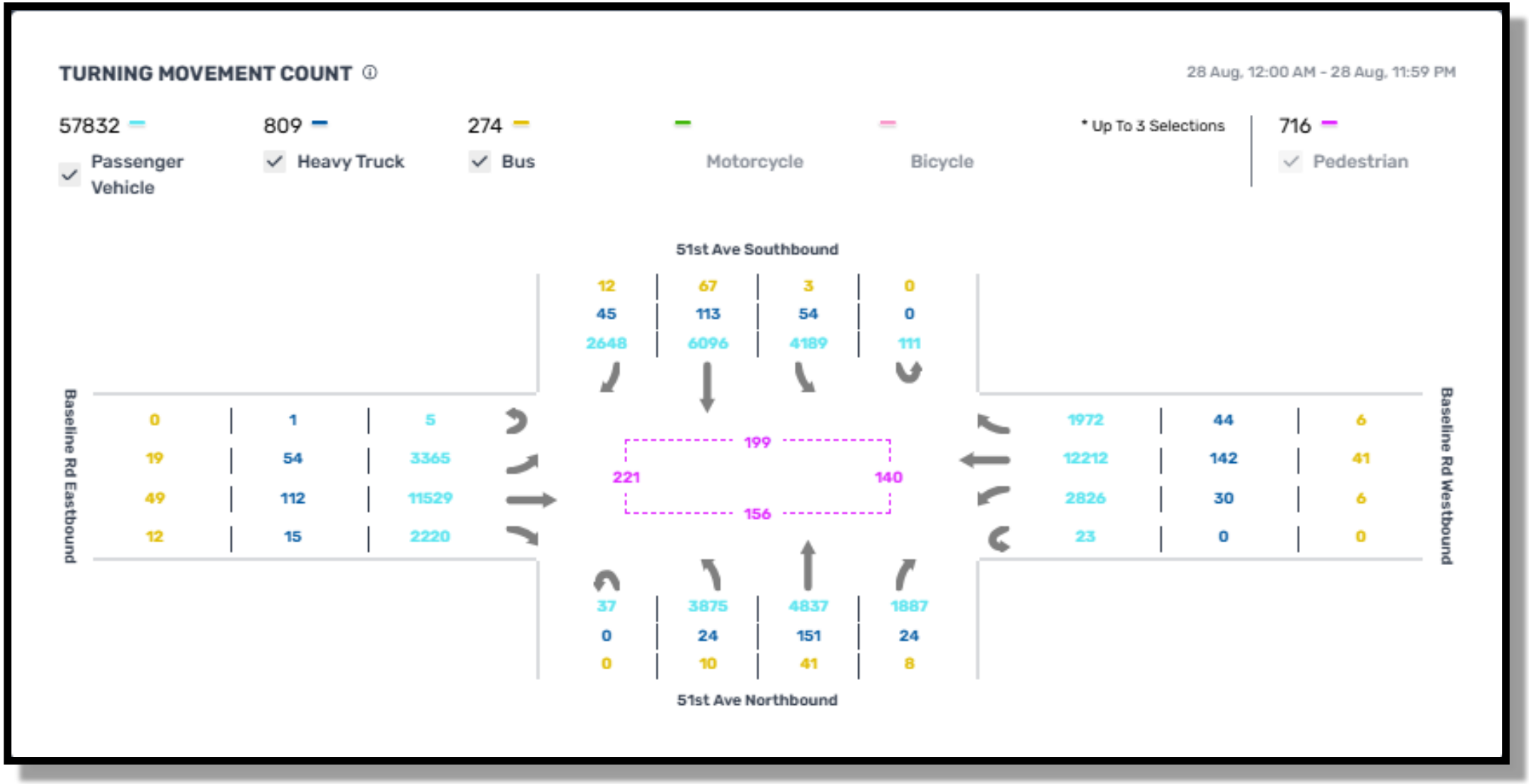
LiDAR – Light Detection and Ranging System



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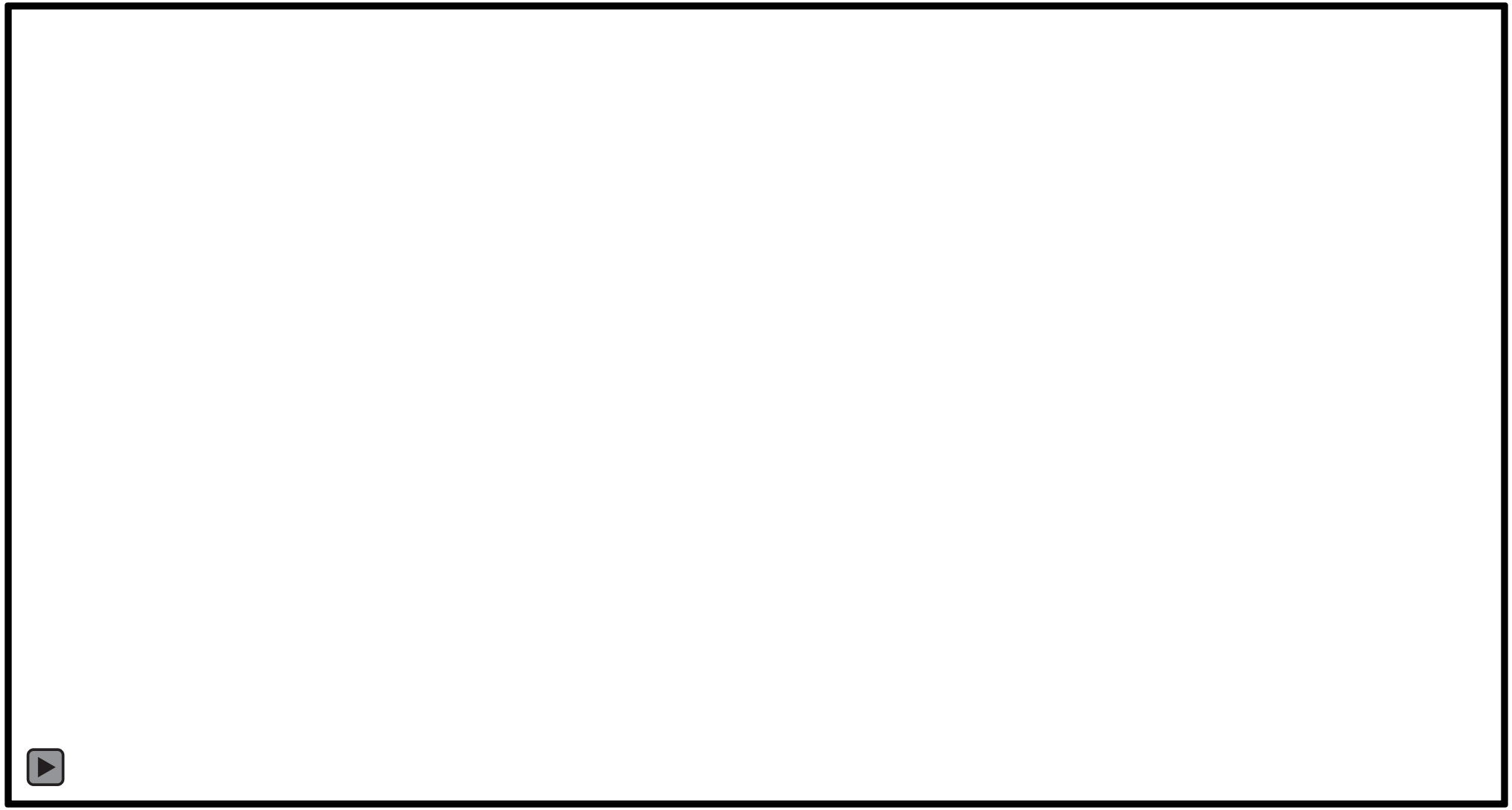


Counting Vehicles and Pedestrians



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Studying Driver Behavior



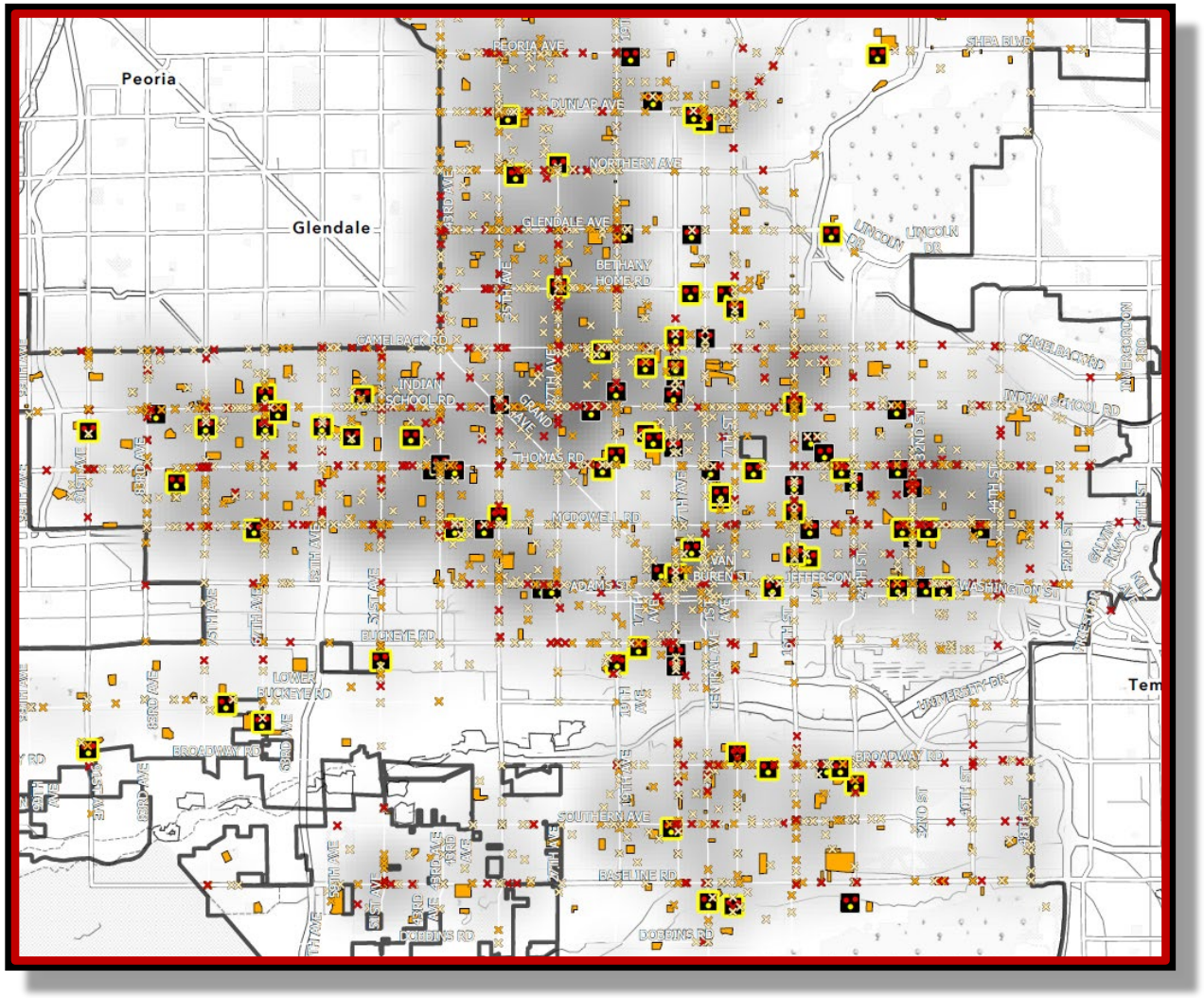
Red Clearance Time Extension



3rd Part Probe Vehicle Data



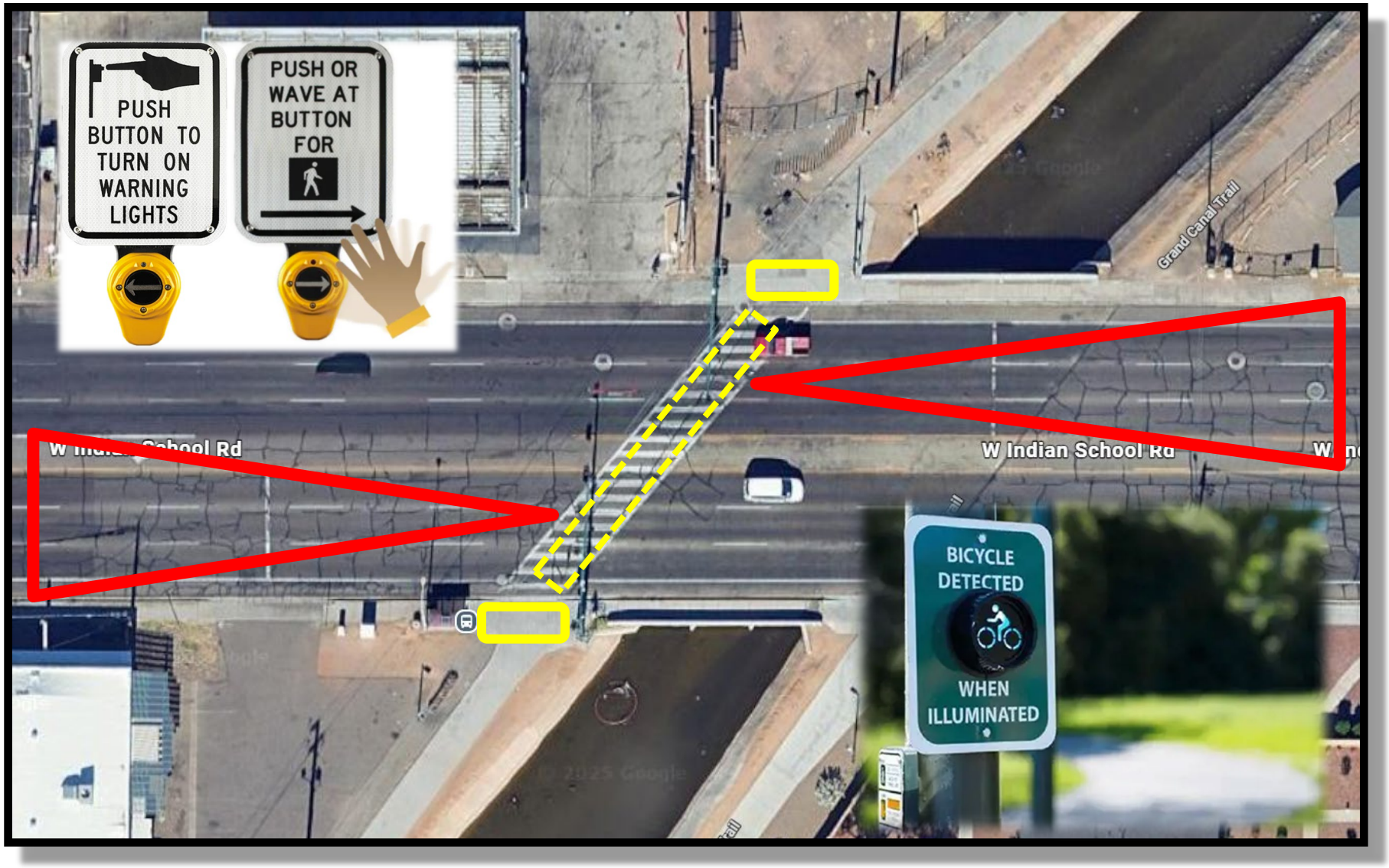
Pedestrian Safety Applications





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Pedestrian Safety Applications



Pedestrian Safety Applications



FLIR – Forward Looking Infra-Red Thermal Imaging Systems

Pedestrian Safety Applications

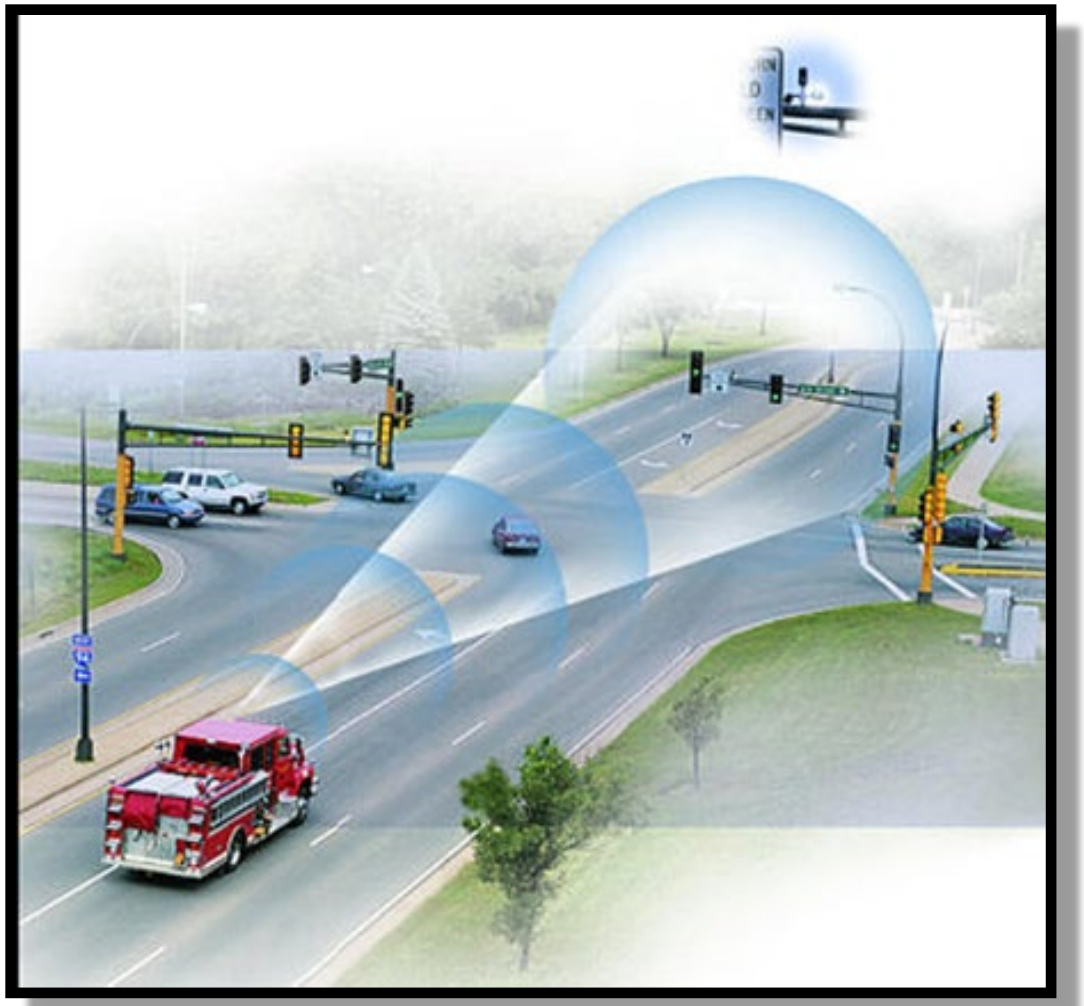


SmartCycle Bike Indicator and PedSafe Light and Radar

Pedestrian Clearance Time Extension



Emergency Vehicle Preemption (EVP)





Connected Vehicles to Everything (CV2X) Technologies



Connected Vehicles to Everything (CV2X) Technologies

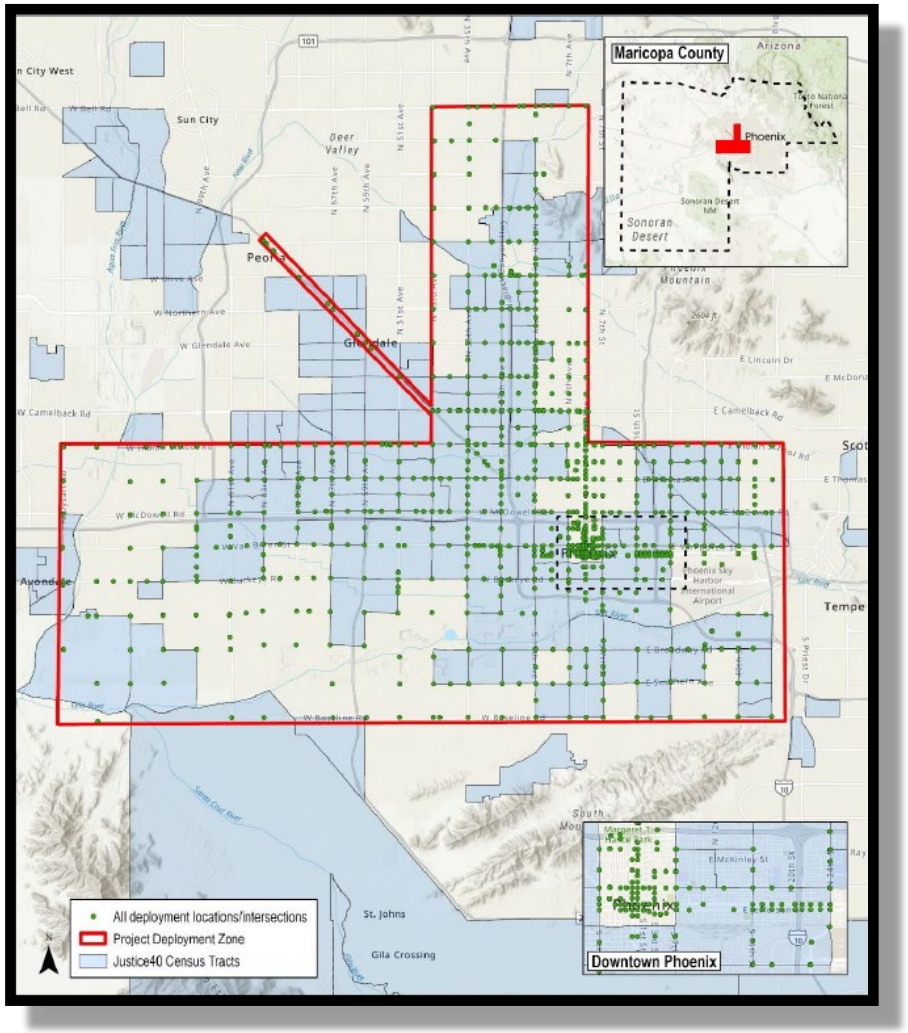


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Connected Vehicle Acceleration Zone (CVAZ)
"Saving Lives with Connectivity"

650 - City of Phoenix Traffic Signals





Applications:

- Emergency Vehicle Preemption (EVP)
- Transit Signal Priority (TSP)
  - Buses/Bus Rapid Transit (BRT)
  - Light Rail Transit (LRT)
- Freight Signal Priority (FSP)
- Vulnerable Road User (VRU) Safety

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