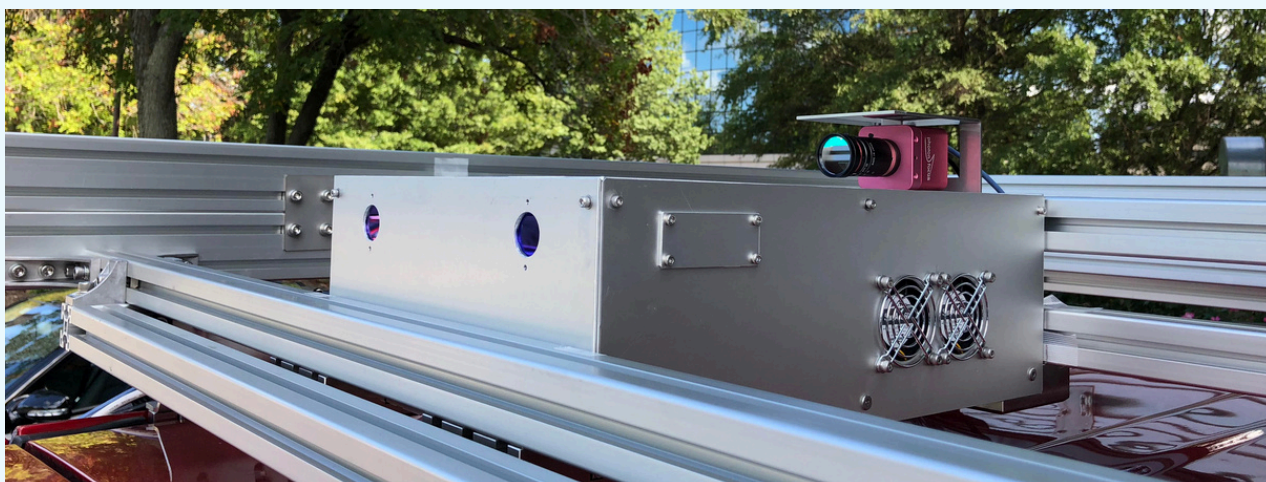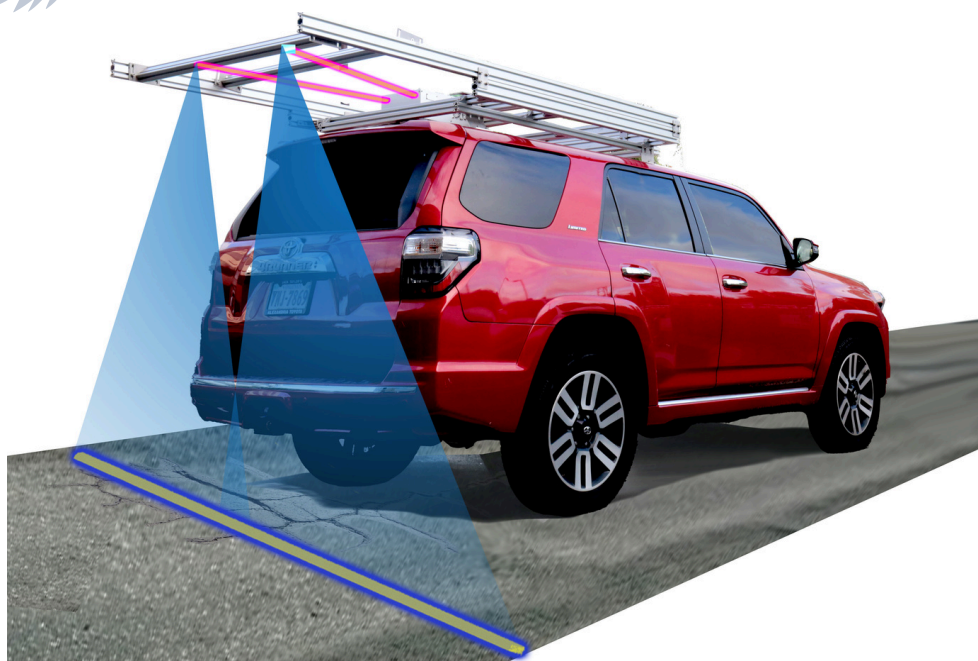# Smart-EAGLE
Pavement 3D Scanning System

Laser Box & 3D Camera

What Does Smart-EAGLE Do?

Smart-EAGLE is an advanced roadway scanning vehicle equipped with a GPS location mapping system and a 3D camera to capture pavement surface profiles.
It can simultaneously acquire height and visual images with GPS coordinates, detect surface distresses such as cracks and potholes, and calculate rutting depth.

Captures laser reflections from the pavement surface using a 3D camera
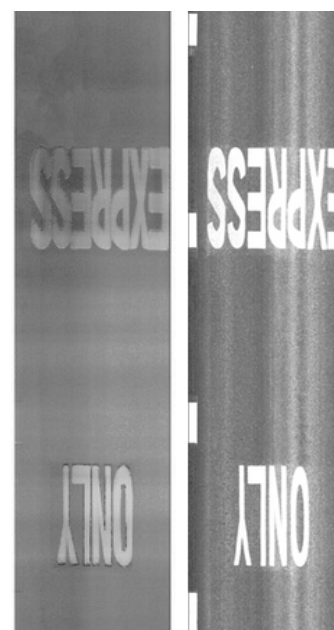
Height image   Visual image

Benefits of Using Smart-EAGLE

Smart-EAGLE can acquire data at speeds of up to 60 mph (100 km/h), eliminating the need for lane closures and ensuring that surveys do not disrupt traffic. With high-precision location data, we provide lane-by-lane evaluation results on a map, enabling data-driven strategic maintenance planning for clients.

Additionally, NEXCO offers analysis services for ride quality (IRI). By integrating these services with Smart-EAGLE measurements, we deliver a comprehensive assessment of road surface conditions.
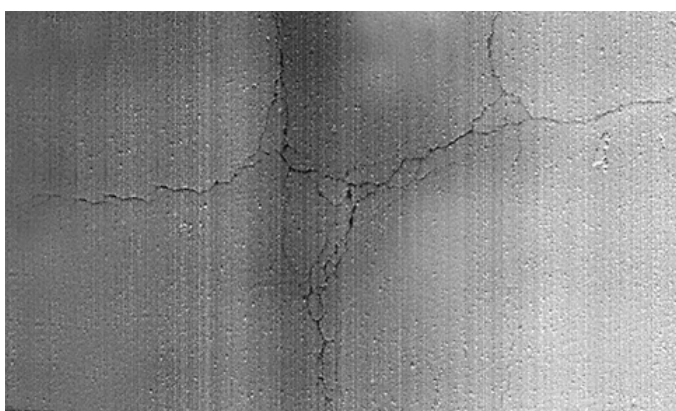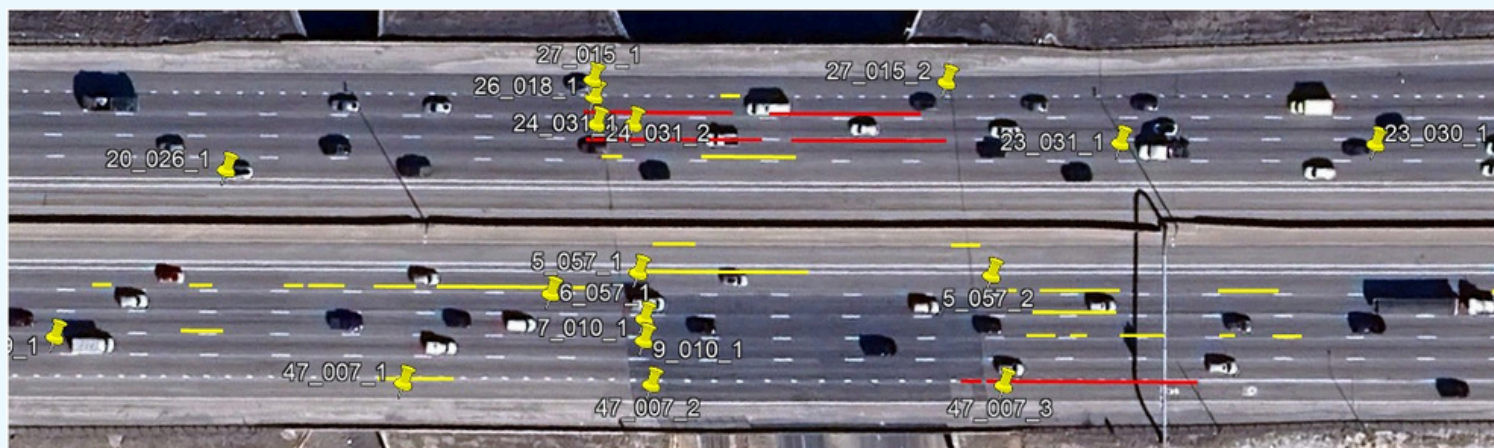

Cracks in the height image
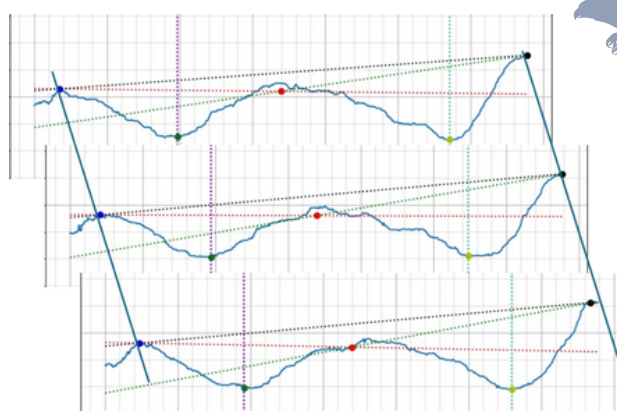
AASHTO R87-compliant Rutting Analysis

Deliverable

Google Earth Lane-by-Lane Mapping Deliverable

📌 : Distresses   ━━━ : Ruts

Evaluation Metrics

Evaluation metrics can be customized to meet your specific needs. The most common metrics include cracking length/area, rutting depth, and IRI. However, we can also propose reporting formats with additional indicators based on the performance target values set for each road.