Remote-Controlled Technology Assessment for Safer Pavement Construction and QA/QC

Lucio Salles, Lev Khazanovich

IRISE ANNUAL MEETING

MAY 17, 2023

The Problem

- Pavement Construction, Inspection and Maintenance often require active workers' presence at the construction site

- Increases the potential for accidents due to traffic interaction

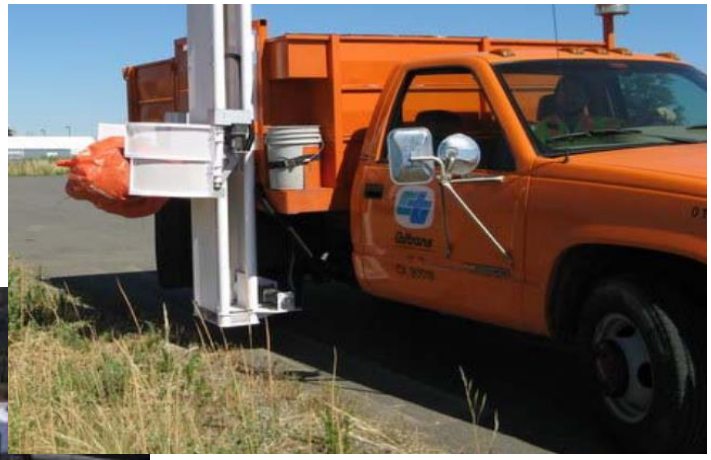
Project Objectives

- Recent developments in drones, robotics, artificial intelligence, and other remote-controlled related areas

- Identify and review new and emerging remote-controlled processes with focus on pavement construction and QA/QC

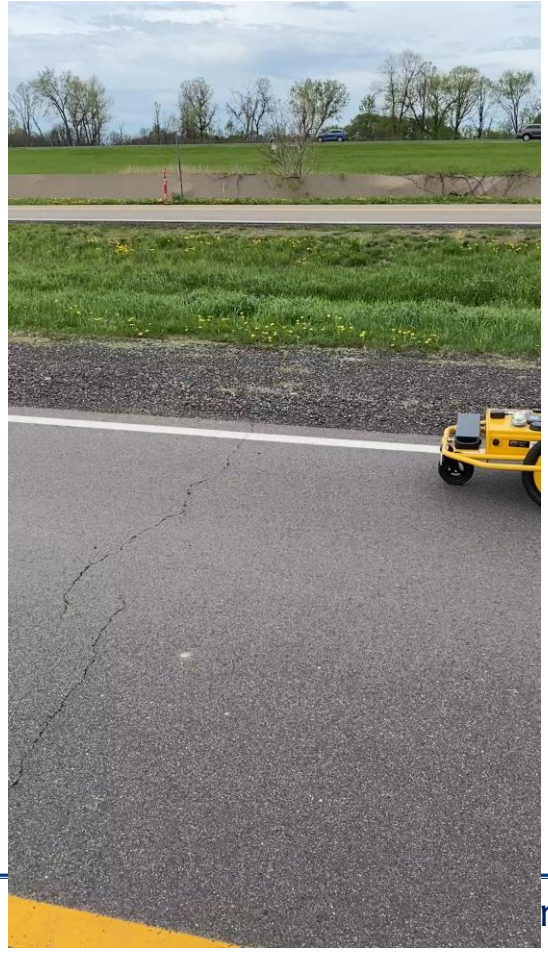
Tech Scan

- Over 20 potential technologies identified for pavement construction, inspection and maintenance



3 Selected Technologies

- #1 - Remote-Controlled GPR for Asphalt Density



3 Selected Technologies

- #2 - Automated Real-Time Thermal Profiling for Asphalt Paving

3 Selected Technologies

- #3 - Work Zone safety: Autonomous Impact Protection Vehicle

Technology Transfer Workshops

- AIPV – April 2022
- DPS & Thermal Profiling – May 2022

Final Report:
https://www.engineering.pitt.edu/contentassets/aedb2643d595419faa1c48b99f462a54/1sheet_irise_saferpvmnts_091422_fnlhq.pdf