



Ensuring Safer Roads Through Enhanced Pavement Marking Retroreflectivity

The WSDOT Reflectivity Testing Project 2023

A Brief by Skip-Line, LLC

Overview



Ensuring visible pavement markings is critical for road safety. The Washington State Department of Transportation (WSDOT), partnering with Skip-Line, LLC, embarked on a pioneering project to enhance pavement marking retroreflectivity, aligning with new federal requirements. This initiative aims to significantly improve driver safety by maintaining brighter, more visible road markings across the state.

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New Federal Regulations and Requirements



On August 5, 2022, the Federal Highway Administration (FHWA) published a final rule in the Federal Register, introducing new provisions to the Manual on Uniform Traffic Control Devices (MUTCD).

This rule mandates maintaining minimum retroreflectivity levels for longitudinal pavement markings on all public roads with speed limits of 35 mph or greater.

The new federal regulations require agencies to implement a method for maintaining these levels, with a four-year compliance date (2026).

WSDOT's Proactive Approach

Recognizing the importance of these new requirements, WSDOT initiated the development of a comprehensive Pavement Marking Management Plan.

The goal was to capture data from pavement marking application and reflectivity performance, enabling the state to assess needs and prioritize resources effectively.

The Reflectivity Testing Project

After researching alternatives to meet the new regulations, WSDOT selected Skip-Line, LLC, to commence a project in April 2023 to test pavement marking retroreflectivity performance on Washington State roads.

This project was essential to establishing a baseline of reflectivity performance, aiding in priority planning and cost avoidance in the statewide painting program.

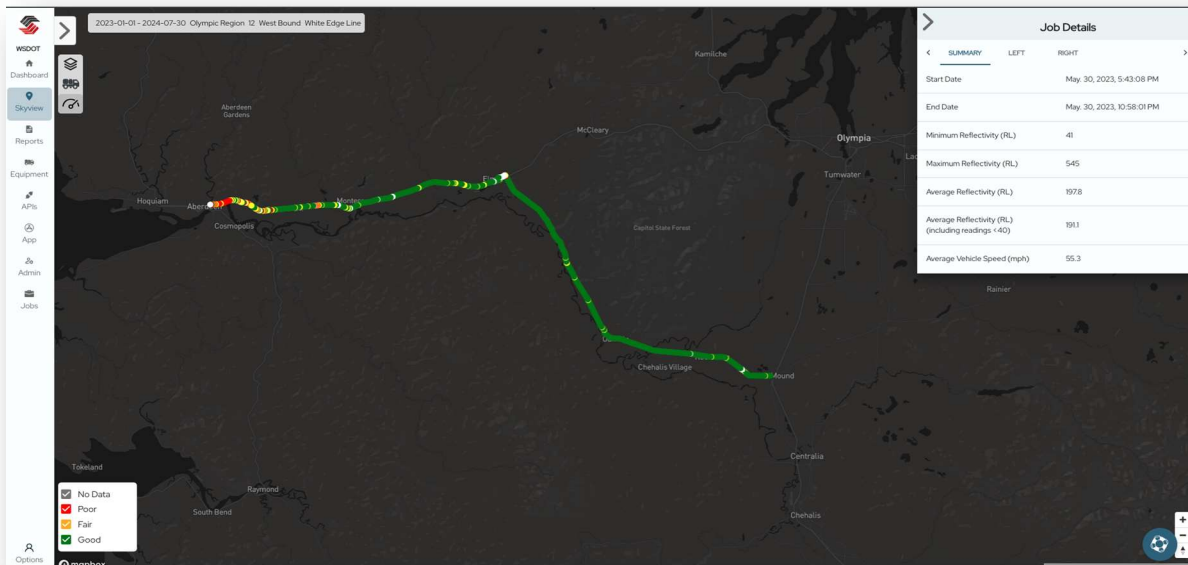
Data Collection and Analysis

Jim Weston, WSDOT Roadways Operations Manager, stated,

"Because not all WSDOT Regions could collect retro data, we wanted a consistent statewide look at retroreflectivity.

WSDOT has been hindered by personnel turnover, was unable to purchase retro data collection equipment, and can't provide the needed training and support to accomplish this task in a timely manner.

This approach allowed WSDOT to receive retro data in a manner that provided consistency in a relatively short amount of time."



The project encompassed:

- Over 17,000 driving miles
- nearly 23,000 tested line miles,
- was completed in June 2023.
- It covered 185 unique routes and
- generated over 480,000 data points.
- Over 66% of all markings tested were Impressively rated as Good or Fair.

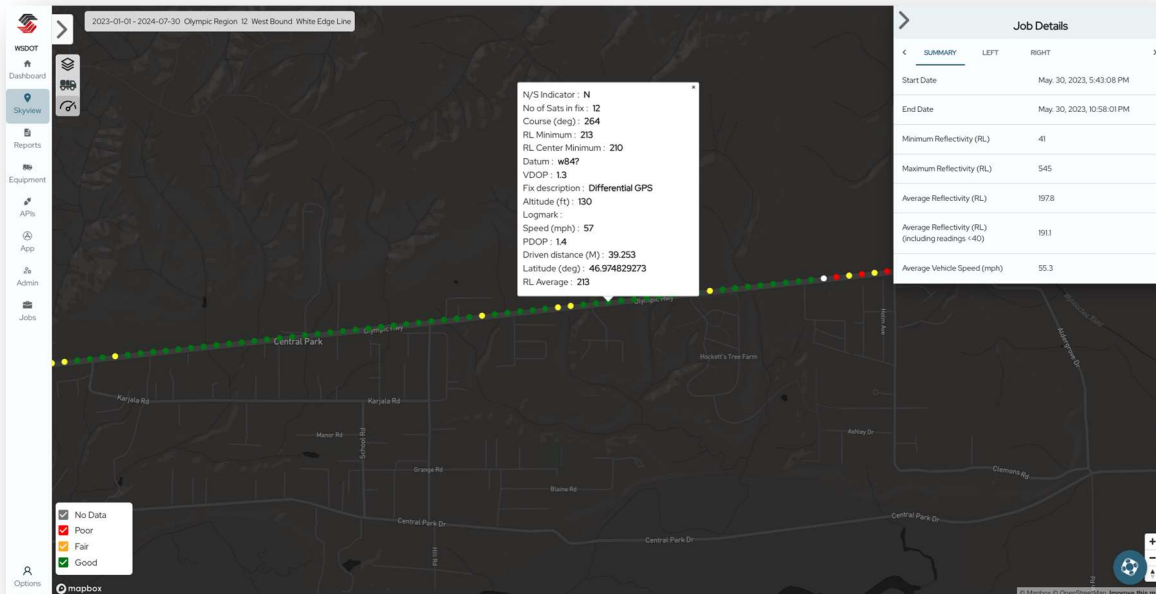
Key Findings and Results

The results were delivered to WSDOT through Skip-Line's Spec-Rite Online (SRO) software platform, which allowed key stakeholders to visualize and analyze the data in raw data form.

Weston commented, "We are hoping that the data collected will help support performance-based decision making where necessary, and potentially identify where to prioritize future work activities."

Future Implications and Benefits

The project utilized two dedicated long-line reflectometers, with project resources including field personnel, a project manager, and data/software support working closely with WSDOT representatives to ensure consistent scope and deliverables throughout the engagement.



Conclusion

Weston commented, *“Our agency currently utilizes Skip-Line to collect data from striping operations, as well as Spec-Rite Online for reporting.”*

Other teams within WSDOT, including the Traffic Office, have shown interest in the data to examine correlations between marking conditions and specific traffic safety instances.

With limited personnel, equipment, and other constraints, WSDOT’s partnership with Skip-Line was the optimal solution for meeting new federal reflectivity requirements. This collaboration ensures compliance and enhances road safety for all drivers in Washington State, paving the way for performance-based decision-making and future improvements in pavement marking practices.

For more information on how SkipLine's Retroreflectivity services and technology could empower your retroreflectivity initiatives, contact Rob Oram at Rob.Oram@skipline.com.