

Automated Roadway Pavement Marker Placement System

Highways for LIFE Partnerships 2008 Award \$405,560

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Accelerating Innovation for the American Driving Experience.



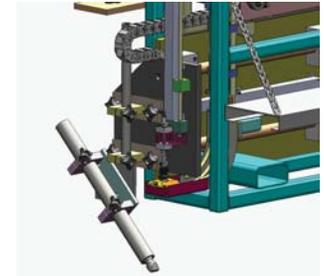
The automated pavement marking placement system fits on a flatbed truck and is operated from the cab, reducing safety risks for highway workers.

Need for Innovation

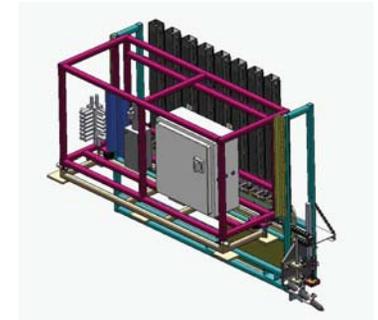
Manual installation of raised roadway pavement markers is time-consuming and one of the most dangerous activities in the industry. Traffic delays and vehicle crashes at work zones have resulted in significant economic consequences. Automating the process can reduce congestion by requiring less stoppage on roadways and achieve cost savings from reduced labor and accelerated installation time.

Project Overview

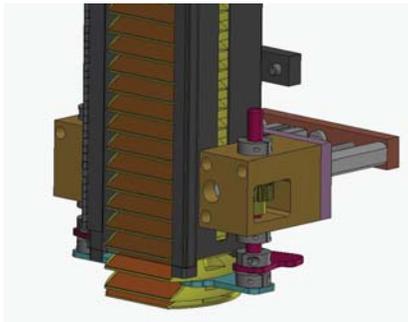
Stay Alert Safety Services refined the four sub-systems of the automated roadway pavement marker placement system which automates the installation of raised pavement markers on roadways. Initial field tests demonstrated that the system reduced labor hours, installation time and risk of worker injury. Two week long field trials will take place in early 2010.



The vacuum system that holds the RPM in place is mounted to the vertical cylinder and will deliver the RPM down after the bituminous material has been applied.



The control panel and hydraulic pump are mounted to the main frame on top of the bed. This allows for most of the weight to be absorbed by the truck. The remainder of the weight is absorbed through air shocks mounted on the main frame.



The de-gater system allows for one RPM to drop on the conveyor at a time.



Stack up markers in magazine



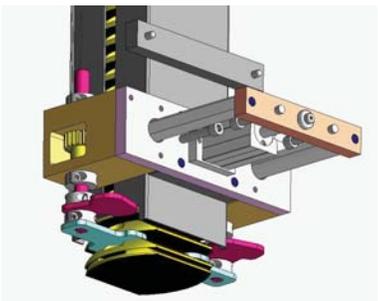
Hit the road



Apply adhesive



Place marker



The de-gater is completely mechanical, with a hydraulic cylinder for the in-and-out motion.

Project Team

Stay Alert Safety Services
Detail Technologies
North Carolina DOT

Contact Information

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