

Smarter Layout, Safer Roads: How the LifeMark® -100 Is Redefining Pavement Marking

by [Greg Driskell](#) | Apr 13, 2025 |



Meet the LifeMark®-100: Smarter Pavement Layout for Safer Roads

The LifeMark®-100 is an advanced automated layout system that transforms the way road contractors approach pavement marking layout. Combining computer vision, robotics, high-definition GPS, and artificial intelligence, it delivers unmatched efficiency, accuracy, and safety on roadway maintenance and construction projects.

How It Works

In a typical pavement marking application—such as after asphalt overlay or milling—a single operator deploys the LifeMark®-100 **before** resurfacing begins. The system surveys and records existing pavement markings using high-definition imaging and centimeter-accurate GPS. At posted traffic speeds, the LifeMark®-100 captures and processes this data in real-time with onboard computing and AI.

With the push of a button, the collected data is uploaded to the secure LimnTech Portal for storage and protection.

ON THE LINE

Limntech.com/company/ontheline

After the resurfacing is complete, the same operator redeploys the LifeMark®-100 to perform layout. Accessing the previously recorded data, the system automatically places a sequence of precise layout dots directly on the pavement at approximately 10 mph. These layout markings guide the pavement marking crew with clarity and confidence.

If equipped with the optional **Pattern Automation System (PAS)**, the LifeMark®-100 can also apply smart pattern codes to indicate upcoming changes—like transitions from double solid to passing zones—adding even more value and reducing interpretation errors on site.

Alternatively, layout data can be uploaded to the LifeMark®-100 through the portal from preformatted high-definition GPS files, making the system flexible for multiple project approaches. Recorded data can also be downloaded for other use cases, with some limitations on volume.

Key Features:

- **Single Operator Efficiency:** Survey and layout done by one person—no survey crew required.
- **Post-Speed Surveying:** Data can be collected at normal traffic speeds—no slowdowns or closures needed.
- **High-Definition GPS + AI:** Real-time image recognition paired with near-exact geolocation.
- **Smart Carriage Layout:** Robotic precision applies conventional layout dots and optional pattern codes at up to 10 mph.
- **Secure Data Storage & Access:** Upload to the LimnTech Portal for safe keeping and project continuity.
- **Pattern Change Recognition:** Optional PAS upgrade provides visual cues for complex marking transitions.

Why It Matters:

The LifeMark®-100 bridges the gap between old-school manual layout and the demands of modern infrastructure projects. With it, contractors can minimize crew exposure to live traffic, reduce human error, increase layout speed, and ensure accuracy—every time.

LifeMark®-100: Because every line starts with precision.