

Understanding the Limits and Power of GPS in Road Markings

by [Greg Driskell](#) | Apr 16, 2025 |



If You Can't See the Sky, You Can't See the Satellites: Understanding the Limits of GPS-Based Layout Systems

GPS-based layout systems have revolutionized the pavement marking industry—bringing speed, precision, and safety improvements to jobs of all sizes. But like any advanced tool, they come with certain limitations. One common challenge? Operating in environments where the system can't get a clear view of the sky.

Why Line of Sight Matters

All GPS-based layout systems, regardless of brand, rely on high-precision satellite signals to determine exact positioning. In areas with heavy tree canopies, tunnels, bridges, or even tall urban structures, those signals can be blocked or distorted—reducing accuracy or halting operations altogether.

A good rule of thumb is this:

If you can't see the sky, the system can't reliably see the satellites.

Real-World Impact

ON THE LINE

Limntech.com/company/ontheline

That doesn't mean GPS layout systems aren't useful in these areas—far from it. In most cases, users find that even with occasional GPS interruptions, they still benefit from increased **efficiency, safety, and layout consistency**. A few spots may require manual layout or adjustments, but the overall gains remain substantial.

Flexible Data Workflows

Modern systems allow layout data to be **uploaded, reviewed, and modified**—either by your in-house experts or trusted third parties. For users of the **LifeMark® -100 Auto Layout System**, this means you can collaborate with professional partners like [SOLO – Speed of Light Optics](#) to fine-tune or complete layout files, particularly in areas where satellite visibility is poor.

The Right Tool for the Job

Just like every tool in your arsenal, GPS-based layout systems aren't always ideal for every situation—but they're often the best solution for the vast majority of roadway marking projects. When used strategically, they help crews work faster, safer, and with greater accuracy than ever before.

Final Thought

Understanding the capabilities and constraints of GPS-driven layout systems helps teams plan smarter and perform better. Whether you're using LifeMark® or another advanced system, the key is knowing when to rely on automation—and when to complement it with experience and adaptability.

#GPSTechnology #PavementMarking #RoadSafety #SmartInfrastructure
#LayoutAutomation #CivilEngineering #WorkZoneSafety