

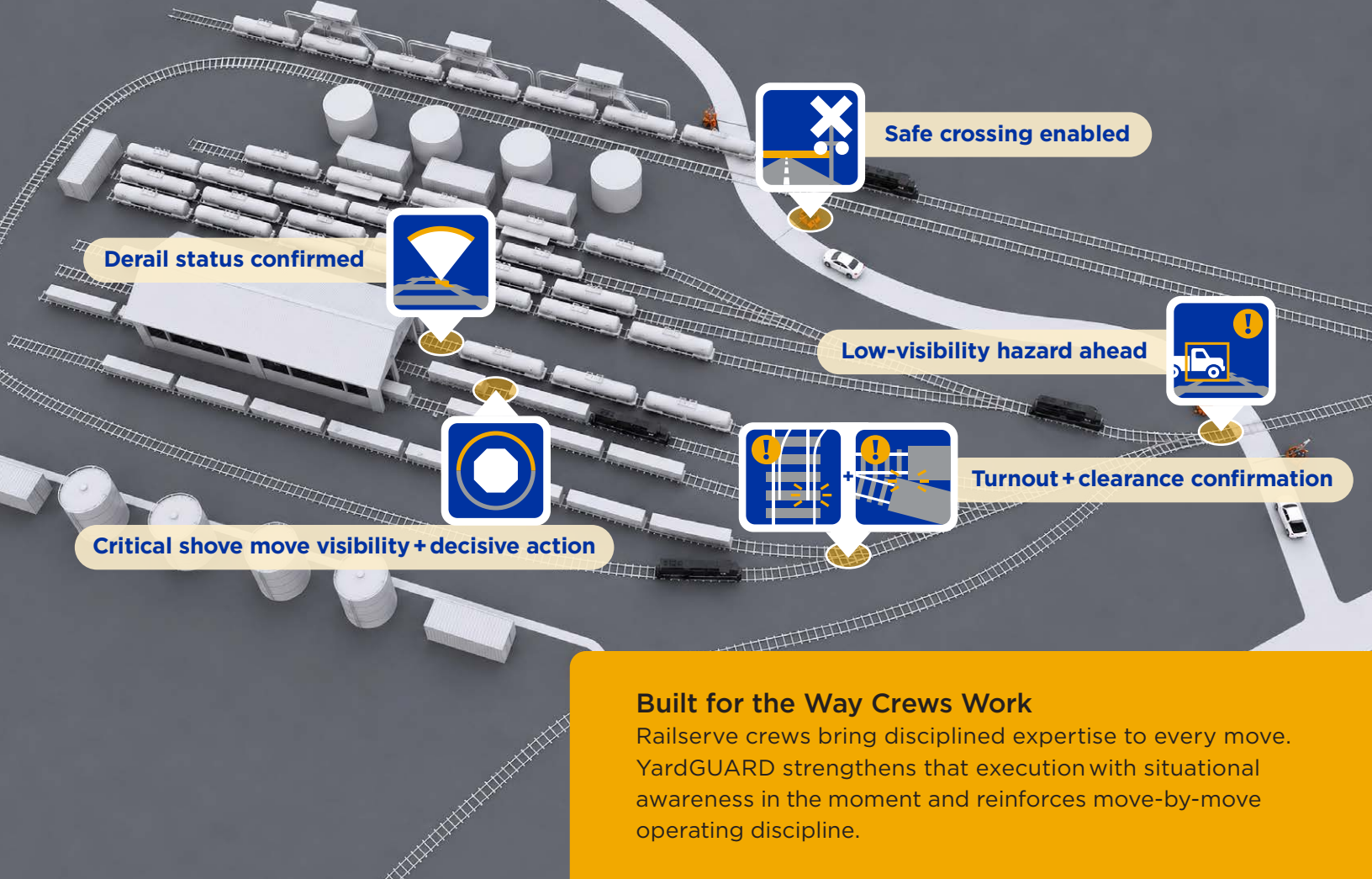


## Safety Intelligence for the Yard

YardGUARD™ is Railserve's integrated railyard safety system that brings real-time engineered controls into day-to-day switching operations. Developed as a coordinated network of technologies embedded within Railserve's service delivery, YardGUARD represents a new approach to managing risk, improving execution, and strengthening operating discipline across all industrial rail environments.



**Railserve. What the Yard Needs.**



## An Integrated System – Built to Work Together

YardGUARD solves the yard’s biggest safety problems with solution-built technologies – and then unifies them into one coordinated system embedded in Railserve service. That’s what makes YardGUARD different: safeguards are designed to work in

concert across the yard’s highest-risk zones, turning critical conditions into consistent, actionable safety intelligence. The result is clearer confirmation before a move, stronger discipline during execution, and fewer disruptions when conditions change fast.



### Safer moves. Confident execution.

Disciplined expertise + real-time safety intelligence strengthens move-by-move operating discipline – helping keep people safe and customer railyards running.



### Safety intelligence in motion.

During active moves, YardGUARD helps teams verify conditions, identify risk sooner, and act with confidence – even in darkness, adverse weather, and fast-changing conditions.



### One real-time yard conditions view.

Inputs come together into a shared operational view – delivering actionable safety intelligence so operators, crews, and leaders align on the same conditions and coordinate decisions in the moment.



### Built into service delivery. Everywhere we work.

This is how Railserve is revolutionizing industrial switching services – building safety intelligence into day-to-day service delivery and making safety tangible in the moments that matter.

## Functional Benefits

### One coordinated system

YardGUARD's interconnected components work as one coordinated system across critical zones—so safeguards work together throughout the railyard.

### One shared real-time view — where decisions happen

YardGUARD brings system inputs into one shared real-time view so operators, crews, and leaders can work from the same picture and coordinate decisions in the moment.

### Beyond radio — see what the crew sees

YardGUARD adds real-time crew-worn camera views so operators can see what the crew sees—reducing reliance on radio-only communication during critical moves.

### Multi-layered verification

YardGUARD reinforces move-by-move operating discipline with multiple layers (yard-side indication plus in-cab status) of go/no-go confirmation in the moment.

### Ready for the unexpected

YardGUARD provides in-the-moment alerts during active moves—supporting rapid response, including automatic intervention in defined scenarios—to help prevent incidents and avoid yard disruption.

### Built for real yard conditions

YardGUARD maintains continuous awareness and decision support—even in low light, adverse weather, and fast-changing conditions.

## What Powers YardGUARD

YardGUARD's safety intelligence is powered by layered technologies working together—so the right alerts reach the right people during active moves, when decisions matter most. It combines sensing and vision inputs, location awareness, resilient communications, cloud-backed system health monitoring, and automatic emergency braking to help teams verify conditions, identify risk sooner, and act with confidence.

**Detection + sensing:** Mechanical sensors + vision/cameras + GPS/location context

**Operator experience:** In-cab display + AR-style overlays on the yard layout

**Resilient communications:** Multiple network paths to provide redundancy

**Cloud-backed system monitoring:** Status monitoring to confirm components are active and operating as expected.

**Centralized logic:** Monitors component inputs to initiate automatic emergency braking when needed.



## Six Components

# One Integrated System

Six components address different risk points across the yard. Together, they work as one integrated system — turning yard status and hazards into real-time safety intelligence where decisions happen.



## Component Highlights

- 1 CrossingGUARD™:** High-visibility control that keeps yard crossings coordinated and safe.
- 2 DerailGUARD™:** Multi-layered confirmation of derail status with activation of emergency braking as needed.
- 3 FoulGUARD™:** Foul-zone clearance visibility that reinforces operating discipline and helps prevent sideswipes with automatic braking support.
- 4 GapGUARD™:** Switch alignment/gap awareness that confirms status before a move proceeds and activates emergency braking as needed.
- 5 StopGUARD™:** Automated emergency braking and crew awareness support when seconds matter.
- 6 WatchGUARD™:** In-cab hazard and alignment monitoring that improves visibility and activates emergency braking as needed.

## Safety Intelligence in Action

- Low-visibility hazard
- Turnout + clearance confirmation
- Derail status confirmed
- Critical shove move visibility + immediate action

## Why Railsolve

This is how Railsolve is revolutionizing industrial switching services — building safety intelligence into day-to-day service delivery and making safety tangible in the moments that matter. With YardGUARD embedded in how we operate, Railsolve delivers safer, more consistent execution across sites — keeping people safe and operations running.

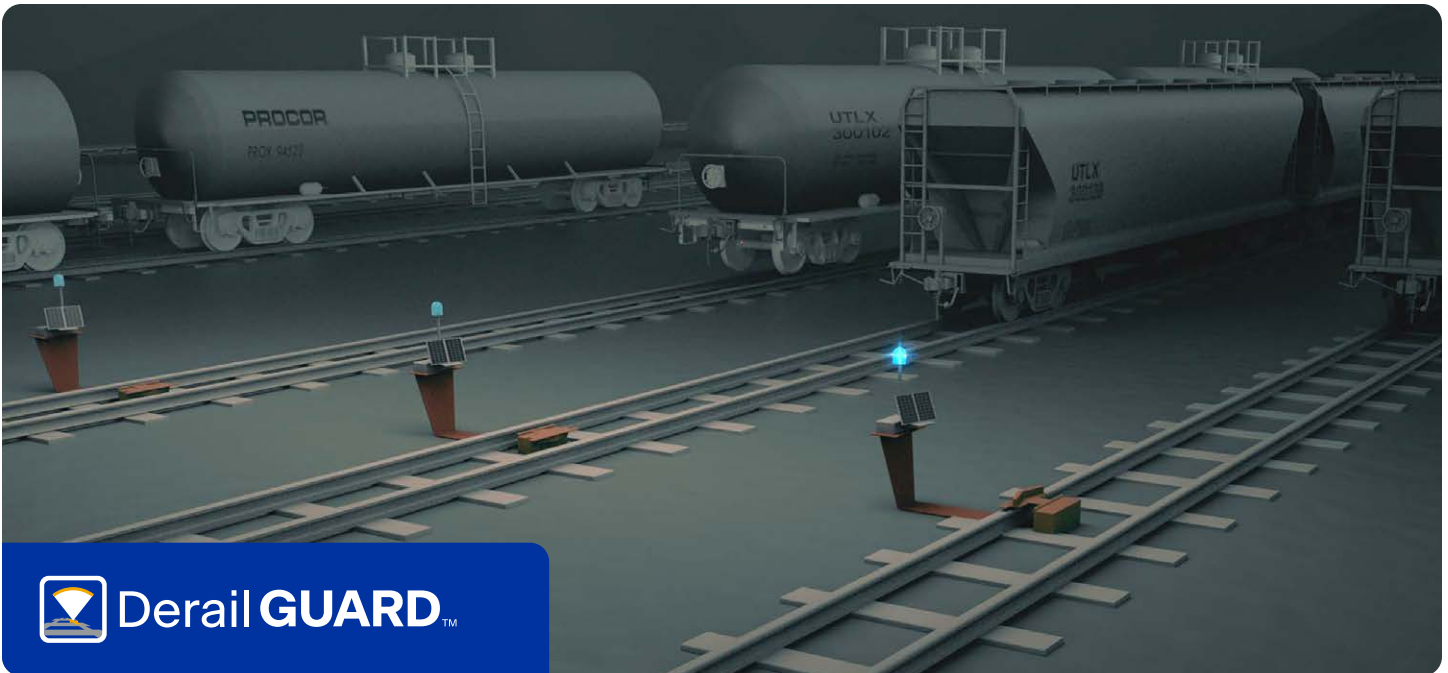


 **Crossing GUARD™**

**Crossing Control for Active Moves**

CrossingGUARD creates a clear, unmistakable crossing-control signal during active moves, helping protect people and keep access decisions consistent. Crossing status is also displayed on the

YardGUARD in-cab screen for real-time operator confirmation — supporting smoother flow and fewer preventable interruptions where people and equipment intersect.



 **Derail GUARD™**

**High-Visibility Derail Status**

DerailGUARD provides unmistakable derail-status indication at a glance — adding multi-layered verification day or night and emergency braking activation as needed. A clear yard-side status signal plus an on-screen alert on the YardGUARD in-cab

display gives operators and crews clear confirmation in the moment. By reinforcing move-by-move discipline, DerailGUARD helps prevent the damage, delays, and disruptions that can follow when an engaged derail is missed.



**FoulGUARD™**

### Foul-Zone Clearance Awareness

FoulGUARD makes foul-zone and adjacent-track status visible in the moment — helping prevent sideswipes and reinforce safe clearance discipline. Yard-side indication plus YardGUARD in-cab status

supports clear go/no-go confirmation and if needed automated emergency braking near turnouts and other high-risk areas, helping teams execute with steadier flow and fewer disruption-driven delays.



**GapGUARD™**

### Switch Alignment & Gap Status

GapGUARD helps crews confirm switch alignment and point-gap conditions before a move proceeds — strengthening go/no-go decisions at a high-consequence moment. Yard-side indication plus

YardGUARD in-cab status and automated emergency braking gives teams clearer confirmation in the moment, helping prevent derailments, damage, and delay tied to misalignment events.



### Crew-Wearable Emergency Stop + Video

StopGUARD gives crews emergency braking capability when seconds matter — helping prevent harm and reduce disruption during critical moves. It also provides live crew-worn camera video to the

operator through the YardGUARD in-cab display, adding real-time visual context beyond radio-only calls. Automatic stop activation is available in defined crew-down scenarios.



### In-Cab Hazard Awareness

WatchGUARD monitors hazards and alignment conditions in real time from the cab, improving low-visibility awareness so operators can identify risk sooner and respond with more confidence. When

risk is detected, WatchGUARD can automatically brake to help prevent impacts — supporting safer execution during active moves.



**YARD GUARD**<sup>TM</sup>  
MARMON RAIL TECHNOLOGIES

**Safety Intelligence for the Yard**

To schedule a YardGUARD walkthrough or for more information please contact us:



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Learn more at [Railserve.com/YardGUARD](https://Railserve.com/YardGUARD)