

Fatality Analysis of Maintenance-of-way
Employees and Signalmen



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Dedication:

The FAMES Committee dedicates its efforts to all roadway workers who have lost their lives in the performance of duty and to the families, loved ones, and coworkers they have left behind.

Fatal Striking Accidents
with
Roadway Maintenance
Machines Present

Mission Statement:

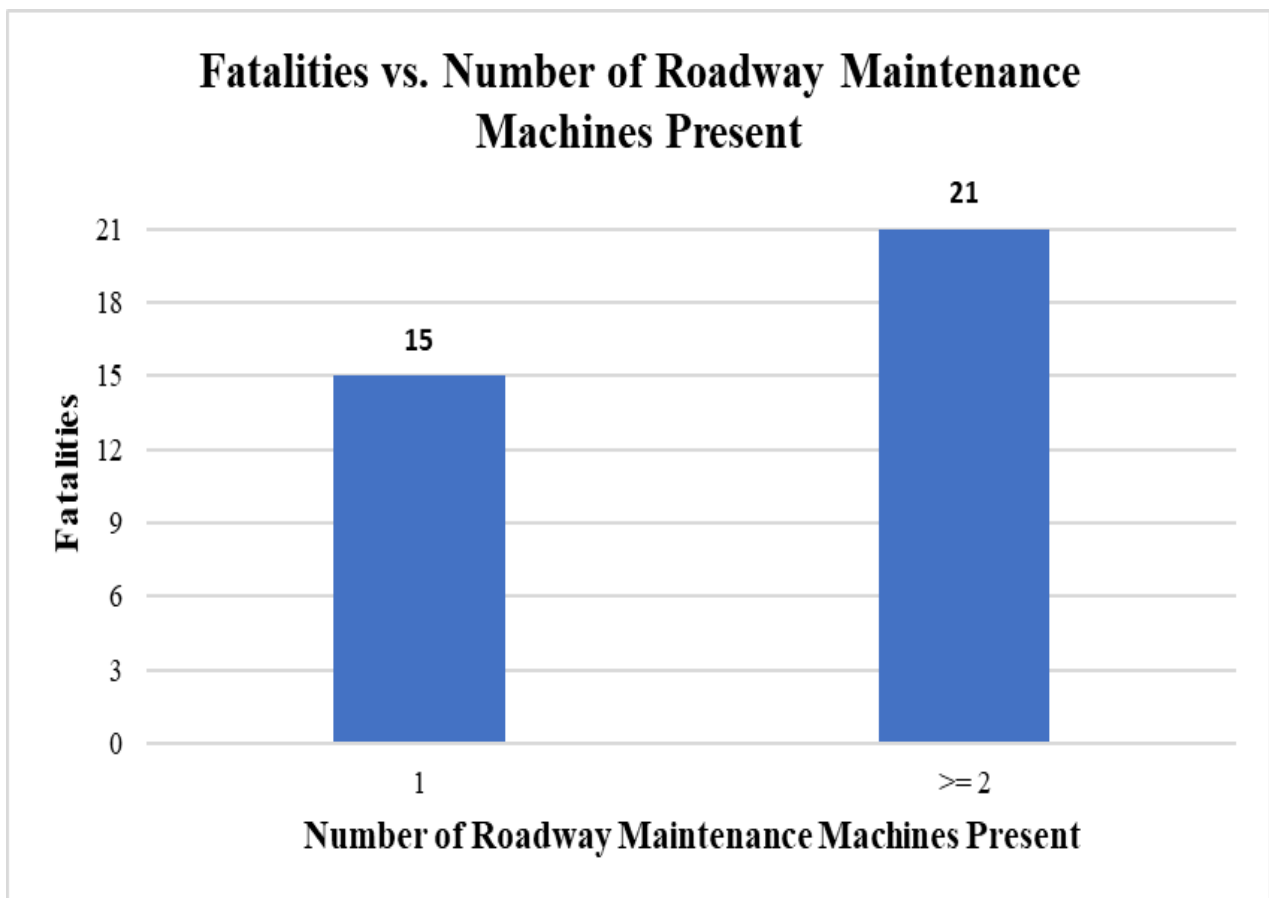
The Mission of the Fatality Analysis of Maintenance-of-way Employees and Signalmen (FAMES) Committee is to analyze all fatalities and selected related incidents in order to make recommendations to reduce the risk of future occurrences and eliminate fatalities to roadway workers.

Fatal Striking Accidents with Roadway Maintenance Machines Present

Following the implementation of the Roadway Worker Protection (RWP) Rule in 1997, there have been a total of 61 fatal RWP accidents, in which 65 roadway workers have perished. The FAMES Committee analysis is based on the available data.

For purposes of this report, “RMMs Present” means one or more Roadway Maintenance Machines (RMMs) were working within the fatally injured employee’s work group at the time of the accident.

At least one RMM was present in 36 of the 65 roadway worker fatalities reviewed. The chart below compares the fatalities where a single RMM was present versus multiple RMMs present.



The following table breaks down the location of the fatally injured employee and the type of striking equipment that was involved in the fatality.

Location of Employee and Type of Striking Equipment

		Location of Employee		
		Fatalities on Ground	Fatalities on Equipment	Total
Type of Strike	Struck by RMM ¹	9	0	9
	Struck by Train ²	46	3	49

Given the nature of RMMs, there is an increased risk that roadway workers can become engrossed in their tasks, leading to a diminished ability to detect an approaching train or RMM movement.

The available data indicates that noise, task complexity, sight lines, and the presence of an adjacent track all warrant heightened on-track safety awareness, especially when working around surfacing equipment.

¹ Struck by RMM includes: *Collision RMM – RMM; Struck by RMM; and Struck by Hi-Rail Car/Truck.*

² Struck by Train includes: *Collision Train – Hi-Rail Car/Truck; Collision Train – Hi-Rail Truck; Collision Train – RMM; Struck by Freight Train; Struck by Passenger Train; and Struck by Work Train.*

Findings:

- Even a single RMM adds a level of complexity to the work environment and can cause distraction.
- RMMs may obscure sight lines and affect a worker's ability to visually detect approaching trains and equipment.
- Noise generated by RMMs may reduce the ability to hear approaching trains and equipment.
- RMM stopping distance is increased when rails are slick (e.g., wet, icy, oily/greasy).
- Inadequate on-track safety briefings and crew communication are the most common contributing factors related to the fatalities with RMMs present.

The FAMES Committee makes the following recommendations:

- During the on-track safety briefing, identify if RMMs will be present and take actions to manage any additional risks associated with their presence.
- Assess any risk associated with movements on adjacent tracks.
- Before fouling the adjacent track, RMMs must have proper protection on the adjacent track. Consideration must be given to RMMs equipped with movable or extendable components.
- An adjacent track must never be used as a platform from which to observe work or walk around work/equipment, **unless an appropriate form of on-track safety is in effect on the adjacent track.**
- Maintain a safe distance between RMMs when traveling or working.
- Mount and dismount RMMs on the field side, not on a live track side, when possible.
- Identify and discuss environmental conditions (e.g., wet, icy, oily/greasy rails) affecting the stopping distance of RMMs.
- RMM operators must clearly communicate signals for initiating movement, slowing, stopping, and changing direction--**communicating change in direction is imperative.**
- Establish clear communication and maintain proper clearance between RMM operators and workers on the ground.

The FAMES Committee consists of safety representatives from a cross section of rail labor, railroad management, and federal regulators. FAMES is a continuous improvement process that relies on the candid sharing of available data and the views of its participants. To enable the process, FAMES explicitly refrains from making any findings regarding whether any past or present practice or protocol satisfies any legal duty or standard of care.

The views, opinions, and recommendations contained in this report are those of the FAMES Committee and do not necessarily represent the views, opinions, or recommendations of any specific railroad, labor organization, or governmental agency.
