Testimony of Brigham A. McCown

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Before the U.S. House Committee on Transportation and Infrastructure
Subcommittee on Railroads, Pipelines, and Hazardous Materials
Hearing: "America Builds: The Role of Innovation and Technology in Rail Modernization"
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Executive Summary

This testimony presents both personal insights and research findings regarding the limitations of the current Federal Railroad Administration (FRA) regulatory framework and waiver process. Key points include:

- Approximately 70% of Class I railroads submitted FRA waivers in recent years involved relief from rules restricting modern safety technologies.
- Approximately 40% of those applicants experienced delays beyond 180 days.
- In *Union Pacific Railroad Co. v. FRA* (2023), the Fifth Circuit ruled FRA's waiver denials were "arbitrary and capricious."
- Aii identifies opportunities for Congress and FRA to modernize the framework through objective standards, increased transparency, and timeline accountability, building on the intent of the Infrastructure Investments and Jobs Act and the intent of draft Railway Safety legislation.

I. Introduction

Chairman Webster, Ranking Member Titus, and Members of the Subcommittee:

Thank you for the opportunity to appear before you today. My name is Brigham McCown, and I appear before you today in my capacity as the Chair of the Alliance for Innovation and Infrastructure (Aii). Aii is an independent, non-partisan think tank dedicated to advancing pragmatic, data-informed solutions with a goal of advancing infrastructure safety and efficiency across the United States.

Aii has written several white papers and policy briefs on innovation, safety, and regulatory reform for rail transportation in recent years and produced dozens of additional reports and resources on U.S. transportation and infrastructure systems. We create independent and objective analysis to achieve the best outcomes for public safety, infrastructure resilience, and innovation. Issues like the one before this committee today are precisely the reason I founded Aii over ten years ago.

The topic of this hearing, how America builds, raises a critical and timely point: the nation's regulatory infrastructure must evolve in parallel with our physical infrastructure. While our transportation systems have benefited from dramatic technological advances, our regulatory framework has not kept pace. Legacy rules and outdated procedures, particularly around the Federal Railroad Administration's waiver and inspection systems, may hinder rather than help efforts to improve rail safety. This hearing offers a valuable opportunity to consider how the federal government can modernize its regulatory approach to reflect today's capabilities and tomorrow's needs.

Today, I will share findings from Aii's most recent report, *Driving Regulatory Innovation for Safer Railroading*[1]. The report examines the current limitations of FRA's waiver process and regulatory structure and identifies potential reforms to support the safe integration of modern technologies, particularly Automated Track Inspection (ATI), into the national rail safety framework.

II. The Stakes: Why Reform Matters

Rail transportation is vital to the American economy, and the safety of our network must remain at the forefront. Yet the current regulatory framework under which the FRA operates remains rooted in an era before the emergence of technologies such as sensor-based defect detection, data-driven condition monitoring, and AI-supported inspections.

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[1] https://www.aii.org/wp-content/uploads/2025/04/Driving-Regulatory-Innovation-for-Safer-Railroading.pdf?

Aii's analysis shows that over the past five years, approximately 70 percent of Class I railroads submitted waiver applications to FRA related to the use of advanced safety technologies. Approximately 40 percent of those experienced delays longer than 180 days, with many decisions lacking detailed technical justification.

These regulatory bottlenecks have not only slowed innovation, but they have also drawn legal scrutiny. In *Union Pacific Railroad Co. v. Federal Railroad Administration* (2023)[2], the U.S. Court of Appeals for the Fifth Circuit ruled that FRA's denial of ATI waivers was "arbitrary and capricious" under the Administrative Procedure Act. The Court concluded that the FRA failed to meaningfully evaluate safety data already in its possession and failed to articulate a clear rationale for preferring visual inspections over technology-based alternatives. This ruling reinforced stakeholder concerns that FRA's waiver decisions often lack transparency, analytical rigor, and data-driven reasoning.

III. FRA's Proposed Rule and Observed Regulatory Gaps

FRA's October 2024 Notice of Proposed Rulemaking on ATI reflects a formal recognition that modernization is needed[3]. Aii's review finds that while the rule introduces structured considerations for ATI, it largely preserves a prescriptive posture that may limit flexibility to deploy emerging technologies.

For example, the proposal would continue to require a baseline level of manual visual inspections, even where ATI has demonstrated greater detection performance. Data analyzed by Aii suggests ATI systems outperform manual inspections in identifying geometry defects in several test environments.

Current waiver criteria still rely heavily on broad statutory terms such as "public interest" or "consistent with rail safety." Aii's findings suggest that the use of more objective evaluation

[2] https://law.justia.com/cases/federal/appellate-courts/ca8/22-3648/22-3648-2024-08-20.html

[3] https://www.federalregister.gov/documents/2024/12/23/2024-30595/track-geometry-measurement-system-tgms-inspections-extension-of-comment-period

standards, such as quantifiable safety outcomes, operational efficiency, and third-party validation, could improve clarity and consistency.

Transparency also remains limited. While the proposed rule provides an avenue for stakeholder input, it does not commit to publishing Railroad Safety Board member identities, voting records, or technical rationales. Aii notes that increasing transparency may build public trust and institutional accountability.

Timeliness continues to be an issue. Aii observed that approximately 40 percent of relevant Class I railroads experienced waivers with significant delays. Structured timelines, especially those aligned with validated safety data, may help ensure the timely integration of modern technologies.

These findings reflect broader provisions within the Infrastructure Investments and Jobs Act (IIJA)[4], which instructs the FRA to act within defined timeframes and reassess frequently waived regulations. Aii's analysis indicates that a structured waiver review trigger, such as three waivers granted on the same provision, could provide a pathway for proactive modernization consistent with legislative intent.[5]

IV. Lessons from Other Modal Agencies in DOT:

The FRA is not the first agency to encounter tension between safety mandates and the pace of technological change. During my federal service, I was involved in the creation of the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Integrity Management Program. That initiative moved PHMSA away from rigid compliance checklists and toward a performance-based model grounded in risk assessment and verifiable safety metrics.

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[4] See https://www.congress.gov/bill/117th-congress/house-bill/3684/text and https://railroads.dot.gov/sites/fra.dot.gov/files/2022-12/Guidance%20on%20Submitting%20Waiver%20Special%20Approval%20Other%20Requests%20for%20Approval%20to%20FRA%20%28Dec%202022%29%20final.pdf?utm_source=chatgpt.com.

[5] Aii Report Recommendation 5, p. 16.

The results were significant. Between 2014 and 2024, hazardous liquid pipeline incidents decreased by 36 percent, even as mileage and throughput increased. Notably, these improvements coincided with stricter incident reporting standards, ruling out underreporting as the cause. This suggests that performance-based frameworks can enable innovation while enhancing safety.

These principles, clearly defined performance goals, flexibility in achieving them, and strong oversight, may also be applicable to the rail sector. The PHMSA model demonstrates that federal regulators can embrace modernization without sacrificing their safety mission.

V. Observed Regulatory Opportunities

Based on Aii's research and policy analysis, several areas appear to offer Congress and the FRA avenues for enhancing the effectiveness of the waiver and rulemaking processes:

- The Infrastructure Investments and Jobs Act provisions on waiver timeliness could be further supported by clearer deadlines and agency accountability mechanisms.
- Evaluation of waivers may benefit from the use of quantifiable performance metrics, rather than broad or subjective terminology.
- Public transparency in waiver decisions, such as the release of voting records and technical justifications, could strengthen public confidence.
- In instances where ATI or other validated technologies consistently meet or exceed safety standards, there may be grounds to reassess the need for parallel manual inspection requirements.
- Patterns of recurring waivers could be used to signal that existing rules may no longer reflect technological or operational realities.

These findings are intended to support ongoing oversight and bipartisan efforts to modernize the regulatory framework without compromising safety or accountability.

VI. Conclusion: A Legislative Opportunity to Modernize Rail Safety

The current regulatory structure, while rooted in safety, was designed for a different era. It does not fully accommodate the tools and technologies available today. Aii's research highlights examples where validated innovations have faced delays or denial under existing procedures, despite measurable safety benefits.

Congress, through mechanisms such as the proposed Railway Safety bills and future surface transportation reauthorization, can build a regulatory framework that is both rigorous and adaptable. Observed outcomes in other transportation sectors suggest that performance-based, transparent models can enhance safety, accelerate innovation, and strengthen public trust.

I thank this Subcommittee for its continued, bipartisan attention to these issues. Your leadership in oversight and modernization efforts reflects a deep commitment to improving transportation safety and resilience.

On behalf of the Alliance for Innovation and Infrastructure and the professionals who support our work, thank you for the opportunity to contribute to today's hearing. I welcome your questions and the opportunity to support further dialogue on these important issues.