

Center for Transportation Advancement

A Project of the Parkview Institute

Federal Register: 2025-09282

Comments of the Center for Transportation Advancement in the matter of: Association of American Railroads (AAR) petition for relief from certain regulations concerning track inspections.

America is known by her iconic structures, from the Empire State Building to the U.S. Capitol. Building and maintaining structures like these has evolved over centuries, with changes in construction processes and ongoing inspections evolving hand-in-hand with innovations in safety and economics.

One of the most iconic structures in America is railroad track. With rails sitting 4 feet, 8 and one-half inches apart in most cases, railroad tracks are substantial structures, beginning with the critically important subgrade and going all the way up to the top of the rail. In addition to being iconic, these structures are also some of the most economically significant in our Nation, allowing billions of dollars of commerce to move on a daily basis.

I. Support for the Waiver & Historical Precedent

The Association of American Railroads (AAR) has petitioned for a waiver to permit the testing of automated railroad track inspections. The Center for Transportation Advancement fully supports this waiver and it is surprising to us why such a waiver has not already been granted. After all, given that railroad tracks are structures, efforts to continually evaluate and update inspection procedures must be a core aspect of American railroad safety culture.

Automation has become a key part of everyday life and has been part of the railroad lexicon for more than a century. So-called “primitive” systems such as Automatic Train Control, where automation could be used to stop a train that was not in compliance with its operating authority, proved to be reasonable enhancements to the well-trained human beings tasked with the safe operation of trains.

More recently, automated defect detectors, which scan the temperature of wheel bearings on passing trains and radio to crews key data on axle bearing heat levels, became a mainstay of rail operations.

These forms of automation proved themselves such that in 1949, the Interstate Commerce Commission, predecessor to FRA in conducting rail safety oversight, chose to mandate a form of automation in order to permit passenger trains to exceed 79mph. Likewise, in the period immediately following the 2023 East Palestine rail accident, calls came from a variety of corners for an increase in automated defect detectors.

In short, railroading is well-accustomed to the idea of automation as a safety enhancement. Thus, adoption of the automated track inspection waiver sought by AAR is simply a continuation of proven safety policies by FRA and its predecessor.

II. FRA’s Dual Mandate

The Center for Transportation Advancement believes FRA has a dual mandate. The first is to be the Nation’s safety watchdog for the American railroad system. In this role, FRA is duty bound to develop, evaluate, mandate, and cross-check inspection and documentation processes for railroad track. This is a solemn task because while railroaders are the most qualified individuals to operate and maintain railroads, the presence of a neutral umpire of sorts serves as a “failsafe” to not only protect those who work with trains themselves, but the communities they serve.

FRA's second mandate is fostering an environment where safety innovation is led by railroad operators, suppliers, consultants, and other industry participants. Doing so offers substantial benefits including more new approaches to improve safety, more capital to continue existing procedures, while developing new ones, and less complacency from railroaders, managers, and FRA supervisory personnel. This latter point is critical, because a ritualized devotion to safety checks boxes, but ignores true underlying risks, thus setting the stage for future incidents and accidents which need not take place.

III. Burlington Northern's ARES

Neither FRA alone, nor an individual rail carrier, nor even the most enthusiastic entrepreneur can find or solve every existing or potential safety problem within the industry. Thus, maintaining an environment where an industry participant with a new idea can receive a waiver to responsibly test that idea (with the full understanding, knowledge, and monitoring of FRA), means more new ideas will go beyond the concept stage.

An example of what such an industry could look like comes from a July, 1989 pamphlet produced by the Burlington Northern Railroad describing its proposed "ARES" system. This comprehensive system indicated a variety of capabilities, including graphical displays of territory, providing far greater insight for dispatchers than was presently available, and a provision that "...automatically applies a full-service brake if the crew is disabled or violates movement authority."¹

The latter, of course, describes the core of Positive Train Control, which did not become active on most of the American railroad network until more than 3 decades later. Burlington Northern had been permitted to test ARES on a portion of its railroad network just two years after the creation of the initial concept, making it possible to continue perfecting the core idea itself and various derivatives.¹

If railroads are able to follow the example of Burlington Northern's AREAS strategy, the additional capital flowing into the industry will permit carriers to maintain the high levels of safety they have become known for in the post-Staggers era. FRA can set the stage for this by approving this waiver for automated track inspections.

IV. Conclusion

The Center for Transportation Advancement looks forward to not only the approval of AAR's waiver on track inspections, but also for a future where the railroad industry is a sea of enthusiastic review and innovation on every aspect of safety. The result will be a safety culture built on risk mitigation rather than ritualistic compliance, more lives saved, more incidents and accidents avoided, and a greater amount of capital available to sustain both the present and future of this core American industry.

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¹ ARES for Safety and Security. Burlington Northern Railroad. July, 1989.