U.S. Department
of Transportation

**Federal Railroad
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

December 13, 2024

Ms. Debra L. Miller
Committee Chair
[redacted]

Dear Ms. Miller:

On September 17, 2024, the National Academy of Sciences (NAS) issued a report titled, "Long Freight Trains: Ensuring Safe Operations, Mitigating Adverse Impacts" (Report). The Federal Railroad Administration (FRA) appreciates the NAS' efforts to identify and examine the safety challenges arising from the operation of longer freight trains, and particularly from the increased use of longer manifest trains that transport a mix of freight in many different types of rail cars. In the Report, the NAS makes recommendations on several distinct topics. FRA takes these recommendations seriously and will work toward appropriate actions as practicable. FRA's responses to the Report's recommendations are discussed below.

> ***Recommendation 1:*** *The Federal Railroad Administration should revise the Risk Reduction Program (RRP) rule to require railroads to address all major operational changes in their RRPs in an explicit and comprehensive manner. Current RRP requirements do not obligate railroads to address planned operational changes that can affect safety. To the contrary, railroads should be required—consistent with the principles of safety management systems—to identify and analyze the risks associated with all planned significant operational changes and to explain and justify the procedural, technological, and human-systems means that will be used to eliminate or reduce the risks.*

> ***Recommendation 1a:*** *The revisions to the RRP rule should be written in such a way as to make it clear to railroads that an operational change that is known to increase and add new train integrity and handling challenges, as lengthening manifest trains can do, constitutes an operational change that should be addressed in an RRP. Compliant railroads should be expected to have an RRP that is thorough in describing any operational and handling challenges, assessing their safety risks, explaining how the risks will be managed through procedural and technological means, and describing how those risk reduction means will be monitored and assessed for effectiveness.*

> ***Recommendation 1b:*** *The Federal Railroad Administration (FRA) should seek from Congress the resources required to hire and train a team of auditors skilled in reviewing safety management systems to regularly and critically assess the completeness and quality of each railroad's Risk Reduction Program (RRP) and its key components. The auditors in turn should enlist FRA inspectors to verify that a railroad's risk reduction measures are implemented in the field. For trains whose length creates new and increased operational and handling challenges, the FRA auditors and safety inspectors should expect to find that compliant railroads, at a minimum, have: • Train makeup rules and procedures for implementing them that are well justified and informed by best practices applicable to train types and a range of operating conditions and terrains encountered. • Descriptions of the technologies to be deployed to control operational risks, including the use of distributed power, engineer-assist programs, and braking systems, and explanations of how their effectiveness will be monitored and evaluated. • Assessments of the skills and competencies needed by crew members to perform safely when encountering the operational and handling challenges and how these needs will be met through crew training programs and other means. • Explanations of any other challenges that added train length can create and that could have a bearing on safety, such as from the added work and complexity of train assembly and disassembly, added inspection times, and maintaining crew radio communications. Measures to address these safety-related challenges should be described and justified.*

As part of its findings, the Report made several recommendations regarding the role of FRA's Risk Reduction Program (RRP) rule, found at 49 CFR Part 271—Risk Reduction Program (Part 271), in addressing the hazards and risks associated with long trains. FRA has reviewed the report's RRP analysis and will seriously consider the associated recommendations. As a preliminary matter, however, FRA would like to identify and address three areas where the Report misconstrues the RRP rule.

First, the Report incorrectly states that an RRP is acceptable if it focuses on (1) operating rules; (2) the implementation of new technology; and (3) reductions in crew staffing levels. Specifically, on page 86, the Report states that "[a]ccording to the rule, an RRP is acceptable if it simply concentrates on managing risks arising from changes in (1) operating rules, (2) the implementation of new technology, and (3) reductions in crew staffing levels."

This section of the Report mischaracterizes the requirement. The language referenced in the report is not from the rule itself, but from the preamble's section-by-section analysis of § 271.105, Safety performance evaluation. *See* 85 FR 9296. In context, the three areas identified by the Report were clearly only mentioned in the preamble as examples of emerging risks and were not intended to be interpreted as the only risks required to be assessed as part of an acceptable RRP. The relevant paragraph of the preamble states:

> *This section contains requirements for safety performance evaluations. Safety performance evaluation is a necessary part of a railroad's RRP because it determines whether the RRP is effectively reducing risk. It also monitors the railroad's system to identify emerging or new risks.* ***The following are examples of changes to a railroad's system that may constitute a new or emerging risk****:*

> *(1) A change in operating rules; (2) implementation of new technology, or (3) a reduction in crew staffing levels. Safety performance evaluation is essential for ensuring that a railroad's RRP is an ongoing process, and not merely a one-time exercise.*

In terms of what a railroad must do as part of its safety performance evaluation, the rule text clearly goes beyond these three areas cited as examples in the preamble. Specifically, § 271.105(b) states a railroad must include data/information from the following (at a minimum):

- Continuous monitoring of operational processes and systems (including any operational changes, system extensions, or system modifications);
- Periodic monitoring of the operational environment to detect changes that may generate new hazards;
- Investigations of accidents/incidents, injuries, fatalities, and other known indicators of hazards;
- Investigations of reports regarding potential non-compliance with Federal railroad safety laws or regulations, railroad operating rules and practices, or mitigation strategies established by the railroad; and
- A reporting system through which employees can report safety concerns (including, but not limited to, hazards, issues, occurrences, and incidents) and propose safety solutions and improvements.

The Report's discussion also only references the safety monitoring requirements of § 271.105(b), and does not reflect the areas specified in paragraph (b) of § 271.103, Risk-based hazard management program, that a railroad's risk-based hazard analysis must address, including (at a minimum):

- Infrastructure;
- Equipment;
- Employee levels and work schedules;
- Operating rules and practices;
- Management structure;
- Employee training; and
- Other areas impacting railroad safety that are not covered by railroad safety laws or regulations or other federal laws or regulations.

The rule also specifies in § 271.103(b)(1) that when conducting a risk-based hazard analysis, a railroad must identify hazards by analyzing "aspects of the railroad's system, including any operational changes, system extensions, or system modifications" and "accidents/incidents, injuries, fatalities, and other known indicators of hazards."

Second, the Report incorrectly implies that because the RRP rule is "streamlined," it does not constitute or utilize a safety management system (SMS) approach, stating on p. 13, "[h]owever, FRA's RRP requirements and compliance audits are (in FRA's words) 'streamlined,' and as a result, it is unclear whether railroads are being deliberate and systematic in controlling the risks from longer trains."

The Report's analysis of FRA's RRP requirements is incomplete. The Report notes that the four foundational pillars of an SMS are:

> *the development and faithful execution of (1) safety policies (including management commitment, accountability, responsibilities, and documentation), (2) safety risk management (including hazard identification, risk assessment, and mitigation), (3) safety assurance (monitoring/measuring, managing change, and continuous improvement), and (4) safety promotion (training, education, and safety communication).* p. 29

FRA agrees that these are essential elements of any SMS; however, the Report fails to note that Part 271 requires covered railroads to develop a program that includes all of these elements. FRA, in consultation with the Railroad Safety Advisory Committee (RSAC) Risk Reduction Program Working Group (RRP Working Group), worked to ensure that the regulation included essential elements of an SMS, while also reflecting the statutory requirements contained in the Rail Safety Improvement Act of 2008. Importantly, the few specific items excluded do not in any way relieve the railroads of the core requirement to proactively identify hazards, analyze risks associated with those hazards, prioritize those risks systematically, and implement mitigations to reduce those risks.

The Report is correct that Part 271 does not specifically require RRPs to include processes for change management that would require risk-based hazard analyses prior to the implementation of changes to the system, including operational changes that could have a significant effect on safety. FRA observes, however, that operational changes to run longer trains would not have been subject to a change management process, even if one were included in the rule, because these operational changes were made before Class I freight railroads were required to fully implement their RRPs. A railroad subject to the RRP rule must fully implement its RRP within 36 months of FRA approving its RRP plan, and no plan for a Class I freight railroad was approved before spring 2022. *See* §§ 271.103(a)(2) and 271.225(a).

This does not mean, however, that the RRP rule does not address risks associated with very long trains, as railroads are still required to address the risks associated with long train hazards through the risk-based hazard management program required under § 271.103. Note that under § 271.105, railroads monitor the performance of their system to determine whether their mitigations are effective, and to identify any emerging safety issues. Any emerging issue related to operation of longer trains discovered under the safety evaluation required under § 271.105 would then need to be assessed using the processes described in § 271.103.

As required by § 271.103, a railroad's risk-based hazard management program must have integrated, system-wide, and ongoing processes to proactively identify hazards and to mitigate the risks associated with identified hazards. As part of this program, and as noted above, railroads must analyze, at a minimum, infrastructure, equipment, employee levels and work schedules, operating rules and practices, management structure, employee training, and other areas impacting railroad safety that are not covered by railroad safety laws or regulations or other federal laws or regulation. Railroads must consider all of these factors as they examine, among other things, "operational changes" or "system modifications." § 271.103(b)(1)(i).

Third, the Report draws premature conclusions about FRA oversight and the RRP rule's efficacy in promoting railroad safety as Class I freight railroads have not yet fully implemented their RRPs. Page 26 of the Report states, "[t]he derailment trends presented above, and concerns raised in FRA safety advisories, suggest that either more effective rules or more consistent compliance may be needed."

Because Class I freight railroads are not required to fully implement their RRPs until 2025 (based on when FRA approved their RRP plans, dates range between March and July, 2025), it is premature to conclude that the trends the Report identifies reveal inconsistent compliance with or necessitate revising the RRP rule. SMS-type programs generally do not generate safety improvements immediately but establish a systematic framework that can drive continued safety improvements over a number of years. For example, in discussing the requirement that a railroad with inadequate safety performance must comply with the RRP rule for a minimum period of five years, FRA explained in the final rule's preamble that "a five-year compliance period provides the minimum time necessary for an RRP to improve a railroad's safety performance," including the three years that a railroad has to fully implement its program. *See* 85 FR 9291. FRA further explained that it did not expect an RRP, in itself, to improve a railroad's safety performance during the three-year implementation period, as a railroad would need this time to, with ongoing involvement with its directly affected employees, conduct a risk-based hazard analysis, prioritize risks, and develop mitigation strategies. Only after completing this preliminary work during the implementation period would a railroad begin applying mitigation strategies, and FRA estimated that an RRP would begin creating a full level of benefits within four years.

Taking the above into consideration, while FRA shares the concerns reflected in the Report regarding derailment trends (concerns which are reflected in FRA safety advisories), FRA nevertheless does not believe that these data can be interpreted as demonstrating a need to revise the RRP rule, as railroads have not yet fully implemented all program elements of their RRPs, and therefore FRA would not yet expect to see significant safety improvements generated by RRPs.

The Report further states, "Historically, most FRA requirements for the rail industry can be characterized as minimum standards and their compliance is verified and enforced by FRA inspection personnel." P. 28. However, in contrast with FRA regulations that establish universal minimum standards, Part 271 is intended to provide railroads flexibility to identify hazards and risks that reflect their unique operating systems. To be clear, that does not mean that Part 271 does not also impose certain minimum requirements enforced by FRA. Specifically, while Part 271 is partly a performance-based regulation because it permits a railroad to establish its own performance standards and to design RRP processes that reflect its operational needs and characteristics, the rule does require that a railroad's RRP processes meet the minimum standards established in Part 271 (e.g., a railroad's risk-based hazard analysis must address the areas identified in § 271.103(b)). Once railroads fully implement their programs, FRA will conduct performance audits to determine whether the programs meet the minimum standards required under Part 271 *and* to assess the effectiveness of the programs at improving railroad safety. During the implementation period, however, FRA's audits have and will primarily focus on whether a railroad is meeting its implementation milestones and whether the program elements that have been fully implemented comply with both the regulation and the individual railroad's plan.

The Report further noted, in reference to FRA's audit of a railroad's RRP,

> *As a general matter, however, the audit's focus was on verifying that the railroad's program was in place and following the written plan and that all administrative requirements were being met. The audit did not include critical evaluations of the quality and thoroughness of the RRP risk evaluations, analyses, and promised mitigation actions.* p. 30.

Part 271, published in February 2020, gave covered railroads 18 months to develop an RRP plan, consult on the plan with directly affected employees, and submit it to FRA for review and approval. *See* § 271.301(b)(1). After additional consultations and resubmissions, FRA approved all Class I RRP plans in the first half of 2022. Each railroad has three years after approval of its plan to fully implement that plan, and no Class I railroad has yet reached that deadline. *See* §§ 271.103(a)(2) and 271.225(a).

To date, FRA has conducted two audits of a Class I railroad's RRP; because the railroads have not implemented all elements of their RRPs, FRA examined those elements that had been put in place at the time of the audit. Once the Class I railroad RRPs are fully implemented, FRA will conduct performance audits consistent with Generally Accepted Government Auditing Standards to evaluate the effectiveness of RRPs at reducing railroad safety risks.

In general, FRA believes that because the Class I railroads have not yet fully implemented their RRPs, drawing any conclusions about the effectiveness of either the railroads' programs or of the RRP regulation and FRA's oversight is premature. FRA will bear these recommendations in mind, however, as the railroads' programs mature, and FRA begins conducting performance audits to evaluate RRP effectiveness at reducing risks.

> ***Recommendation 2:*** *The Federal Railroad Administration should stand up separate working groups under the Railroad Safety Advisory Committee that are tasked with evaluating and providing advice on the following: 2a. Methods and technologies that can be implemented to improve the capabilities, competencies, and training that train crews and other railroad employees require for the safe operation, assembly, and inspection of trains as they become longer; and 2b. Technological means and performance standards for ensuring that train crew members have the capability to communicate, including while inspecting and riding equipment, in a manner that can be continuously maintained and does not create personal safety hazards.*

FRA is open to developing RSAC tasks and working with stakeholders to explore approaches to more fully exploring the safety implications of operating longer trains. The RSAC facilitates collaboration among the federal government, railroad companies, labor unions, and other industry stakeholders in identifying railroad safety issues and recommending solutions to address them, including regulatory options. FRA will need to propose a task statement to the RSAC membership. If a simple majority of the 51 RSAC members agree to the proposed task, it will be accepted; tasks proposed by FRA are almost always accepted.

RSAC currently has 10 open tasks, though not all of them are actively being worked on, as priority has been given to those tasks related to the February 2023 East Palestine derailment.

Should RSAC accept new task statements related to this recommendation, they will need to be prioritized among the list of open tasks.

Once work is ready to begin on a task statement, FRA will seek nominations from interested parties within RSAC for leaders, subject matter experts, attorneys, etc., to represent the organization on forming individual working groups. Working groups have a year from their first meeting to accomplish their task, though typically, an extension to the working group's activities is permitted by the full Committee, as tasks often take longer than a year to complete.

> ***Recommendation 3:*** *Congress should authorize and direct the Federal Railroad Administration to obtain data on an ongoing basis from railroads on blocked highway-rail grade crossings. The railroads should be obligated to deploy automated means for efficiently collecting and reporting the data on a regular and expeditious basis. Data collection should focus first on crossings with gates and other active warning devices that are indicative of higher traffic locations where blockages are likely to be the most disruptive; then data collection should expand to more public highway-rail grade crossings. Individual blockage incidents that exceed defined thresholds of duration should be prioritized for reporting, such as when a crossing is occupied for more than 10 minutes.*
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> ***Recommendation 3a:*** *The Federal Railroad Administration (FRA) should use these grade crossing reports to gain a better understanding of the incidence, magnitude, and scope of the blockage problem. For this purpose, FRA should make the reports available to states and their transportation agencies, regional and metropolitan planning organizations, local communities, and the public through means such as portals and other self-service data retrieval tools. FRA should seek from these stakeholders contextual information about problem sites experiencing frequent and lengthy blockages such as by requesting data on the affected roadway's traffic volumes, emergency response activity, and significance for accessing neighborhoods, schools, hospitals, and other essential facilities and services during times when crossings were blocked.*
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> ***Recommendation 3b:*** *Informed by the reports of blockages, the Federal Railroad Administration, should negotiate with the railroads individually and collectively to find solutions to the most problematic blockage sites, reduce the incidence and severity of the problem generally, and determine whether the trend toward increasing train length is creating special problems such as more blocked crossings near rail yards that require targeted remedies.*
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> ***Recommendation 3c:*** *Congress should give the Federal Railroad Administration authority to impose financial penalties on railroads for problematic blocked crossings. The penalties should be sufficient in magnitude to prompt good faith negotiations to resolve problematic crossing blockages.*

Recognizing that Recommendation 3 is directed to Congress, FRA notes that its investigative and outreach efforts to date have demonstrated that there is no "one size fits all" solution to effectively address the impacts of blocked highway-rail grade crossings. All stakeholders, including FRA, railroads, states and their transportation agencies, regional and metropolitan planning organizations, local communities, and the workforce, need to work together to

determine the underlying causes of blocked crossings and develop proposed solutions based on the specific circumstances surrounding individual highway-rail grade crossings. Additionally, FRA agrees that reliable data is needed to effectively address blocked crossings. Although much of the relevant data is available to all stakeholders through FRA's Blocked Crossing Data website (https://www.fra.dot.gov/blockedcrossings/incidents), FRA recognizes that the data collected through the portal is not comprehensive. Accordingly, in its 2023 Report to Congress,[1] FRA discusses its process for verifying the accuracy of the data submitted to the portal and recommends that Congress provide FRA the authority to require Class I railroads to gather information on the occurrence of blocked crossing incidents on PTC-equipped routes and report that information to FRA. FRA also recommends Congress require that Class I railroads respond to FRA's requests for information on specific blocked crossing events with any information they have relevant to those events.

Further, FRA recognizes that the operation of longer trains may, in certain instances, mean that trains are occupying highway-rail grade crossings for longer periods of time. Accordingly, FRA has begun collecting data on the length of trains the Class I railroads operate on their networks.[2] The Office of Management and Budget approved this request in March 2024 and FRA began receiving data in June 2024.[3] FRA will use the data collected, along with the findings of its own research and the Report, to continue to collaborate with all stakeholders, including railroads and impacted communities, to reduce the number and severity of blocked crossings, including crossings blocked by long train consists.

> ***Recommendation 4:*** *Congress should direct and empower the Federal Railroad Administration (FRA) to enforce the performance of host freight railroads in giving preference to Amtrak passenger trains on single-track route segments where there is a mismatch between the length of freight trains being operated and the infrastructure available on the route segment to accommodate them without delaying Amtrak trains. Under these circumstances, when an Amtrak train experiences delays because of an inability to meet or pass a freight train, the host railroad should be subject to financial penalties. The penalties should be substantial and certain enough to deter this practice and to motivate solutions, including the rightsizing of freight trains to sidings and investments by host railroads in longer sidings. This FRA function would need to be allied with the Surface Transportation Board's jurisdiction over railroad practices and service. This FRA function would need to be allied with the Surface Transportation Board's jurisdiction over railroads practices and service.*

Federal law requires that, except in an emergency, Amtrak passenger transportation be provided preference over freight transportation in using a rail line, junction, or crossing. 49 U.S.C. § 24308(c). The Surface Transportation Board (Board) can investigate substandard on-time performance of intercity passenger trains of its own initiative, or in response to Amtrak (or

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[1] Report to Congress: Blocked Crossing Portal, Infrastructure Investment and Jobs Act (IIJA), Section 22404(i) (available at: https://railroads.dot.gov/sites/fra.dot.gov/files/2024-01/FRA%20Report%20to%20Congress_Blocked%20Crossing%20Portal.pdf).

[2] OMB 2130-0639 Class I Freight Train Length Reporting form, FRA F 6180.277, is available in FRA's e-library a https://railroads.dot.gov/elibrary/class-1-freight-train-length-reporting-fillable.

[3] Pursuant to IIJA Section 22421, FRA also began collecting data on the length of trains involved in reportable accidents. The first month of reporting (December 2023) became available March 2024.

others) by filing a complaint. 49 U.S.C. § 24308(f)(1).[4] If the Board determines the substandard performance is attributable to a rail carrier's failure to provide preference to Amtrak, then it may award damages against the rail carrier and may prescribe other relief. 49 U.S.C. § 24308(f)(2)-(4). In addition, the Attorney General of the United States can bring a civil action against a rail carrier for failing to comply with the statutory requirements of 49 U.S.C. § 24308(c) to provide preference. 49 U.S.C. § 24103.[5]

The Report and its recommendations clearly show that use of longer trains has the potential to affect both safety and network efficiency. FRA appreciates the insights provided by the committee, and FRA will work to develop and implement appropriate actions in response to the findings. FRA appreciates NAS' focus on these critical safety issues.

If FRA can provide further information or assistance, please contact Mr. Karl Alexy, Associate Administrator for Railroad Safety and Chief Safety Officer, at 202-493-6282 or karl.alexy@dot.gov.

Sincerely,

Amit Bose
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[4] On December 8, 2022, Amtrak filed its complaint and petition for Board investigation and other relief for substandard performance of Amtrak's Sunset Limited Trains 1 and 2. STB Docket No. NOR 42175, *Complaint and Petition of the National R.R. Passenger Corp. under 49 U.S.C. § 24308(f) – For Substandard Performance of Amtrak's Sunset Limited Trains 1 and 2*. The Board's investigation remains ongoing.

[5] On July 30, 2024, the Department of Justice filed a complaint in the U.S. District Court for the District of Columbia against Norfolk Southern Corporation and Norfolk Southern Railway to enforce the statutory requirement at 49 U.S.C. § 24308(c) to provide preference to Amtrak passenger trains over freight trains on Amtrak's Crescent route. United States v. Norfolk Southern Corp. et al., No. 24-2226 (D.D.C.).

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