

**FEDERAL RAILROAD ADMINISTRATION**  
**Grade Crossing Signal System Safety Regulations**  
**(Title 49 Code of Federal Regulations Part 234)**  
**SUPPORTING JUSTIFICATION—Part A**  
**OMB Control No. 2130-0534**

Summary of Submission

- This submission is a request for a three-year extension with a change of the previous approval granted by the Office of Management and Budget (OMB) on **January 17, 2017**, which now expires on **January 31, 2020**.
  - The Federal Railroad Administration (FRA) published the required 60-day Notice in the *Federal Register* on **October 2, 2019**. See 84 FR 52588. FRA received one comment in response to this Notice.
  - The total number of burden **hours** requested for this information collection submission is **5,042 hours**. The total number of burden hours **previously approved** for this information collection was **3,425 hours**.
  - The total number of **responses** requested for this information collection submission is **60,252**. The total number of responses **previously approved** for this information collection submission was **15,372**.
  - Adjustment(s) increased the burden by *1,617* hours and responses by *44,880*.
  - There are no program changes at this time.
  - **\*\*The answer to question number 12 itemizes the hourly burden associated with each requirement of this rule (see page 6).**
  - **\*\*The answer to question number 15 itemizes all adjustments associated with this rule (see page 7).**
1. **Circumstances that make collection of the information necessary**

Background

Section 23 of the Rail Safety Improvement Act of 1988 (P.L. 100-342) amended section 202 of the Federal Railroad Safety Act of 1970, 45 U.S.C. 431, by adding a new subsection "q" as follows: "The Secretary shall, within one year after the date of the enactment of the Rail Safety Improvement Act of 1988, issue such rules, regulations, orders, and standards as may be necessary to ensure the safe maintenance, inspection, and testing of signal systems and devices at railroad highway grade crossings."

FRA believes that the risks to the traveling public and railroad employees from highway-rail grade crossing accidents resulting from warning system failures and malfunctions can be reduced. Motorists lose faith in warning systems that constantly warn of an oncoming train when none is present. Therefore, the fail-safe feature built into a warning system loses its effectiveness if the system is not repaired in a reasonable amount of time. There is an even greater risk of an accident when a warning system fails to activate when a train approaches. FRA's rule requires railroads to take specific responses in the event of a false activation or an activation failure.

FRA's rule requires railroads to take the following actions when they have been notified that a highway-rail grade crossing warning system has failed: (1) Notify train crews and law enforcement agencies of the malfunctioning warning system; (2) Take appropriate actions to warn and control highway traffic pending inspection and repair of the warning system; and (3) Repair the system.

## **2. How, by whom, and for what purpose the information is to be used**

This submission is a request for an extension with change to the last approved submission. FRA uses telephone notifications to assemble a database of every accident/incident involving on-track railroad equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian at a highway-rail grade crossing resulting from a crossing signal activation failure. These notifications must be provided to the National Response Center at a toll-free number within 24 hours of such an accident/incident. FRA uses this information to discern different types of grade crossing accident/incident patterns or trends and to develop and implement appropriate safety strategies – both immediate and long-term – to prevent similar accidents/incidents.

Railroads use credible reports of warning system malfunctions, partial activations, or false activations to notify FRA, train employees, and appropriate law enforcement agencies when a warning system malfunctions so that immediate appropriate alternative measures can be taken to protect motorists and railroad employees at the subject crossing until repairs have been completed.

FRA uses grade crossing signal system failure reports to craft better solutions to the problems of crossing device malfunctions. In particular, FRA reviews these reports to obtain information that it uses in implementing more effective safety programs to prevent accidents/incidents attributable to these types of failures from occurring in the future. With this information, FRA can correlate accident experience and equipment malfunctions with types of circuits and age of equipment. FRA can then pinpoint the causes of crossing system failures and investigate them, if necessary, to determine whether periodic maintenance, inspection, and testing standards are effective. Thus, if FRA finds that a disproportionate number of system failures are in systems with critical components that are 30 years old, it can take appropriate regulatory steps for that type of

malfunction, which would be significantly different than if a disproportionate number of malfunctions occur in relatively new systems on specific railroads.

Finally, FRA uses the required records, which railroads must keep for one year, as a ready resource to analyze possible causes and contributing factors related to grade crossing accident/incidents and to devise effective strategies and programs that will serve FRA, railroad, law enforcement, and other entities interested in reducing the number and severity of these types of accidents/incidents and in promoting greater rail safety throughout the United States.

**3. Extent of automated information collection**

FRA highly encourages and strongly endorses the use of advanced information technology, wherever possible, to reduce burden on respondents. Under § 234.109, railroads have the option of keeping the required records electronically or on forms they provide. Also, FRA has installed all its safety forms on its website for easy downloading by railroads and other users. The forms being used to collect the required information are simple to complete. For the collection of information concerning grade crossing failure information, FRA has provided railroads with a revised “fill-in-the-blank” form, containing two digit “failure codes,” with an additional comments section to be used if necessary. Since telephone notifications under Section 234.7 are electronic by their very nature, notifications to train crews of credible reports of a signal malfunction, partial activation, or false activation under section 234.105/106/107 are completed via radio, and railroads keep reports/records of grade crossing signal malfunctions under Section 234.109 electronically, approximately 66 percent of responses are kept electronically.

It should be remarked that the burden for this collection of information is minimal.

**4. Efforts to identify duplication**

The information collection requirements, to our knowledge, are not duplicated anywhere. Similar data are not available from any other source.

**5. Efforts to minimize the burden on small businesses**

The burden incurred from this collection of information is fairly minimal. The larger railroads operate the majority of grade-crossings and

**6. Impact of less frequent collection of information**

If this information were not collected or were collected less frequently, railroad safety throughout the United States would be considerably jeopardized. Specifically, without the required telephonic notifications, FRA, railroads, and law enforcement agencies

would not quickly know which signal systems were malfunctioning, resulting in accidents/incidents between on-track railroad equipment and automobiles, buses, trucks, motorcycles, bicycles, farm vehicles, or pedestrians at highway-rail grade crossings.

Without this collection of information, FRA, railroads, and law enforcement agencies could not take and implement immediate effective safety measures to protect railroad workers and the public at these affected grade crossings.

Also, without the required notification to train crews and proper law enforcement authorities upon receiving a credible report of a warning system malfunction, railroads having maintenance responsibility for that particular warning system might not promptly initiate efforts to warn highway users and railroad employees about that grade crossing, thereby increasing the risk of a serious accident/incident with corresponding injuries and possible fatalities. The collection of information enhances safety because it requires railroads to take certain immediate steps. Specifically, railroads must take the following actions: (1) Prior to any train's arrival at the crossing, notify the train crew of the report of activation failure and notify any other railroads operating over the crossing; (2) Notify the law enforcement agency having jurisdiction over the crossing, or railroad police capable of responding and controlling vehicular traffic; and (3) Provide for alternative means of actively warning highway users of approaching trains, consistent with the requirements of this section. As a result, all affected parties—train crew, law enforcement agencies, and motorist/pedestrians—can be forewarned and take effective measures to reduce the likelihood of an accident/incident occurring.

Without the required records, FRA could not be able to compile both an immediate and historical database regarding grade crossing signal system malfunctions. As a result, FRA's safety program would be significantly impaired. In particular, FRA and other investigators would not have essential information to determine the types, locations, times, and dates of signal system malfunctions, as well as the time and date of any repair actions taken by railroads prior to the repair and reactivation of the affected system. Without these records, FRA might be missing critical information that could be used to establish the cause(s) of an accident/incident and to devise effective strategies and programs to prevent similar types of accidents/incidents from occurring in the future.

It should be noted that the frequency of submission of information is presently as minimal as possible. Requesting any of the required information less frequently would impede FRA's safety program and put at risk railroad employees and the traveling public. The burden for this collection of information is minimal.

7. **Special circumstances**

Two of the information collection requirements are not within the guidelines established in 5 CFR § 1320.5. The first requirement is the telephonic notification by railroads to

FRA within 24 hours of every impact between on-track railroad equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian at a highway-rail grade crossing involving a signal activation failure. The second, and closely related, requirement is the filing of a complete grade crossing signal failure report under § 234.9, which stipulates 15 days as the time frame for reporting each activation failure. The frequency of reporting grade crossing signal failures is not subject to FRA's control.

Activation failures are inherently dangerous to the motoring public, and to railroad employees and passengers, especially when there is any type of collision. The prevention of loss of life/additional loss of life and any further injuries to railroad employees and the motoring public and rail passengers when there is a collision demands that FRA, law enforcement authorities, and other first responders be immediately notified so that necessary action can be quickly taken. The timely filing of such complete reports and other grade crossing signal activation failure reports (where there is no collision) is essential so that stakeholders can take long-term actions to protect railroad employees and the rail and motoring public and to prevent any such signal failures from happening in the future. In particular, FRA needs to constantly monitor such signal activation failures in order to be able to institute timely remedial action(s) to protect railroad workers and the public and to head-off a major, perhaps even catastrophic, accident/incident from occurring.

All other information collection requirements are in compliance with this section.

**8. Compliance with 5 CFR § 1320.8**

As required by the Paperwork Reduction Act of 1995, FRA published a notice in the Federal Register on **October 2, 2019**, soliciting comment on this particular collection of information. See 84 FR 52588.

FRA received one comment from the Brotherhood of Railroad Signalmen (BRS), the collective bargaining representative for approximately 10,000 signal employees. BRS supports this information collection activity, considering it necessary to FRA's regulatory duties and public safety responsibilities. BRS urges FRA to continue to collect this information, noting that the information provided from this collection can help guide FRA in solving highway-rail grade crossing accidents resulting from warning system failures at crossings.

**9. Payments or gifts to respondents**

There are no monetary payments or gifts made to respondents associated with the information collection requirements contained in this regulation.

**10. Assurance of confidentiality**

Information collected is not of a confidential nature, and FRA pledges no confidentiality.

**11. Justification for any questions of a sensitive nature**

There are no questions or information of a sensitive nature or data that would normally be considered private contained in this information collection.

**12. Estimate of burden hours for information collected**

CFR Section	Respondent universe	Total Annual responses	Average time per responses	Total annual burden hours	Total cost equivalent	Hourly wage rate <sup>1</sup>
234.7—Accidents involving grade crossing signal failure—Telephone Notification	746 railroads	2 phone calls	2 minutes	.1 hour	\$7	\$68
234.9—Grade crossing signal system failure reports—Form 6180.83	746 railroads	250 reports	10 minutes	42 hours	\$2,856	\$68
234.105/106/107—Activation failure/partial activation/false activation—Notification to train crew and law enforcement due to credible report of warning system malfunction	746 railroads	30,000 notifications	5 minutes	2,500 hours	\$170,000	\$68
234.109—Recordkeeping	746 railroads	30,000 records	5 minutes	2,500 hours	\$170,000	\$68
Total	746 railroads	60,252 responses	N/A	5,042 hours	\$342,863	N/A

<sup>1</sup> The hourly wage rate is obtained from the Surface Transportation Board’s Full Year Wage A&B data series using the appropriate employee group hourly wage rate that includes 75-percent overhead charges.

**13. Estimate of total annual costs to respondents**

\$138 Postage (250 signal system failure reports @ \$.55)

\$22,502 Telephone calls (2 calls + 30,000 calls/notifications @ \$.75; train crews are notified by radio so there is no cost involved.)

**\$22,640** Total

**14. Estimate of Cost to Federal Government**

FRA estimates that approximately forty-two hours (at the GS-14 level) are spent reviewing the activation failure reports submitted by respondents. To calculate the government administrative cost, the 2019 Office of Personnel Management wage rates were used. The average wage (of step 1 through step 10) was used as a midpoint. Wages were considered at the burdened wage rate by multiplying the actual wage rate by an overhead cost of 75 percent (or times 1.75). Multiplying 47 times \$64.58 per hour times 1.75 (75 percent for overhead) equals \$4,746 in annualized costs.

**15. Explanation of program changes and adjustments**

Currently, the OMB inventory for this collection of information shows a total burden of 3,425 hours and 15,372 responses, while this updated submission reflects a total burden of 5,042 hours and 60,252 responses. Overall, the adjustments increased by 1,617 hours and responses by 44,880 from the last approved submission.

FRA provided a thorough review of this package and determined many of our initial figures were based on rough estimates. Thus, our latest review has refined our estimates to be more accurate.

The table for adjustments below provides specific information on the review of any of the estimates that have changed.

**TABLE FOR ADJUSTMENTS**

CFR Section	Responses & Avg. Time (Previous Submission)	Responses & Avg. Time (This Submission)	Burden Hours (Previous Submission)	FRA Burden Hours (This Submission)	Difference (plus/minus)
234.7—Accidents involving grade crossing signal failure—Telephone Notification	6 phone calls 15 minutes	2 phone calls 2 minutes	2 hours	.1 hour	-1.9 hours -4 responses
234.9—Grade crossing signal system failure reports—Form 6180.83	250 reports 15 minutes	250 reports 10 minutes	63 hours	42 hours	-21 hours 0 responses
234.105/106/107—Activation failure/partial activation/false activation—Notification to train crew and law enforcement due to credible report of warning system malfunction	10,080 notifications 15 minutes	30,000 notifications 5 minutes	2,520 hours	2,500 hours	-20 hours +19,920 responses
234.109—Recordkeeping	5,040 records 10 minutes	30,000 records 5 minutes	840 hours	2,500 hours	+1,660 hours +24,960 responses

**Adjustments** also increased the cost to respondents from the last approved submission. Based on the revised estimate of the number of telephone calls shown above in section 234.7 of the table (from 6 to 2) and based on the revised number of calls/notifications to law enforcement authorities (train crews are notified by radio) in sections 234.105/106/107 of the table (from 5,040 to 30,000), the cost to respondents increased by **\$18,742** (from \$3,898 to \$22,640).



**16. Publication of results of data collection**

There is no tabulation, collection or publication of responses.

**17. Approval for not displaying the expiration date for OMB approval**

Once OMB approval is received, FRA will publish the approval number for these information collection requirements in the Federal Register.

**18. Exception to certification statement**

No exceptions are taken at this time.

Meeting Department of Transportation (DOT) Strategic Goals

This information collection supports the top DOT strategic goal, namely transportation safety. Without this collection of information, rail safety in the United States would be seriously hampered. Specifically, without this collection of information, FRA, railroads, and law enforcement authorities would not know which signal systems are malfunctioning throughout the country. This could lead to an increased number of accidents/incidents in which train crews and the traveling public are injured and possibly killed. The collection of information promotes safety by allowing FRA, railroads, and law enforcement authorities to take necessary safety measures upon learning that a grade crossing signal system has malfunctioned.

The collection of information also promotes safety by providing critical information that the agency can use in investigating accidents/incidents to determine the cause(s) of these events and prevent future accidents/incidents from occurring. Furthermore, the collection of information promotes safety by enabling FRA to set up an ongoing database that provides necessary and vital information regarding accidents/incidents involving on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian at a highway-grade crossing resulting from a signal activation failure. This information can be used by FRA, railroads, and law enforcement authorities to make highway-grade crossings safer.

In summary, this collection promotes the top DOT Strategic Goal as well FRA's primary mission, namely transportation/railroad safety. In this information collection, as in all its information collection activities, FRA seeks to do its utmost to fulfill DOT Strategic Goals and to be an integral part of One DOT.