**INFORMATION COLLECTION**
**FEDERAL RAILROAD ADMINISTRATION**
**SUPPORTING JUSTIFICATION**
**Track Safety Standards: Concrete Crossties**
**OMB No. 2130-0592**

Summary of Submission

- This is a request for an extension with change to the above last approved information collection submission cleared by OMB on **December 31, 2014**, which expires on **December 31, 2017**.

- FRA published the required 60-day **Federal Register** Notice on **June 30, 2017**. See 82 FR 29976. FRA received no comments in response to this published Notice.

- Total number of burden **hours requested** for this submission is **4,875 hours.**

- The number of burden **hours previously approved** by OMB is **5,677 hours**.

- Total number of **responses requested** for this submission is **2,318**.

- The total number of **responses previously approved** was **2,618.**

- **Adjustments** decreased the total burden **802 hours** and decreased the number of **responses** by **300** from the last approved submission.

- There are no **program changes** as the current rule remains unchanged.

- **The answer to question **number 12** itemizes the hourly burden associated with each requirement of this rule (See pp. 10-14).

- **The answer to question **number 15** itemizes all adjustments (See pp. 15-16). (*Note: This collection of information is mandatory under 49 CFR part 213. Respondents are Class I, large Class II railroads, intercity passenger railroads and commuter railroads or small governmental jurisdictions that serve populations greater than 50,000. This collection of information involves both reporting and recordkeeping requirements. The collection frequency of the required information occurs on an occasional basis. There is also one requirement occurring on an annual basis which pertains to employee training. Reporting requirements include production of exception reports relating to automated inspections of track constructed with concrete crossties, field verification of exception reports by designated employees, and affected railroads developing and instituting procedures for integrity of track data collected using the automated measurement system.*

*Recordkeeping information involves providing copies of exception reports to designated fully qualified railroad employees. These railroad employees receive/utilize the the information concerning automated track inspection reports. Railroads/track owners must also provide annual training in handling rail seat deterioration exceptions to all employees designated as fully qualified under section 213.7, and these records as well as information about data integrity procedures must be provided to FRA upon agency request. The purpose of this information collection is to promote and enhance rail safety by ensuring that automated inspections of track constructed with concreate crossties are carried out as specified in section 213.234 to supplement visual inspections carried out by Class I, Class II, intercity passenger railroads, commuter railroads to reduce the number and severity of rail accidents/ incidents and associated injuries, fatalities, and property damage. As noted above, this information collection request is for an <u>extension with change</u>.*

**1. <u>Circumstances that make collection of the information necessary.</u>**

<u>Background</u>

On August 26, 2010, FRA issued a Notice of Proposed Rulemaking (NPRM) as a first step to the agency's promulgation of concrete crosstie regulations per the Congressional mandate contained in Section 403(d), of the Rail Safety Improvement Act of 2008 (Pub. L. 110-432, Division A) (RSIA). <u>See</u> 75 Fed. Reg. 52,490. On April 1, 2011, following consideration of written comments received in response to the NPRM, FRA published a final rule mandating specific requirements for effective concrete crossties, for rail fastening systems connected to concrete crossties, and for automated inspections of track constructed with concrete crossties. <u>See</u> 76 Fed. Reg. 18,073. FRA received two petitions for reconsideration in response to the final rule.

On May 5, 2011, the International Brotherhood of Teamsters, Brotherhood of Maintenance of Way Employes Division (BMWED) filed a petition for reconsideration (BMWED Petition) of the final rule and on May 27, 2011, the Association of American Railroads (AAR) filed a petition for reconsideration (AAR Petition) of the final rule. In order to provide sufficient time to fully consider both Petitions, FRA delayed the effective date of the final rule until October 1, 2011. <u>See</u> 76 Fed. Reg. 34,890 (June 15, 2011).

The amendments contained in this revision generally clarify requirements currently contained in the final rule or allow for greater flexibility in complying with the rule, and are within the scope of the issues and options discussed, considered, or raised in the NPRM.

<u>Additional Background</u>

On April 3, 2005, an Amtrak passenger train traveling at 60 miles per hour on BNSF Railway's line through the Columbia River Gorge (near Home Valley, Washington) derailed on a 3degree curve. According to the National Transportation Safety Board (NTSB), 30 people sustained injuries. Property damage totaled about $854,000. See NTSB/RAB-06-03. According to the NTSB, the accident was caused in part by excessive concrete crosstie abrasion, which allowed the outer rail to rotate outward and create a wide gage track condition. This accident illustrated the potential for track failure with subsequent derailment under conditions that might not be readily evident in a normal visual track inspection. Conditions giving rise to this risk may include concrete tie rail seat abrasion, track curvature, and operation of trains through curves at speeds leading to unbalance (which is more typical of passenger operations). Subsequently, this accident also called attention to the need for clearer and more appropriate requirements for concrete ties, in general.

Traditionally, crossties have been made of wood, but due to improved continuous welded rail processes, elastic fastener technology, and concrete pre-stressing techniques, the use of concrete crossties is widespread and growing. On major railroads in the United States, concrete crossties make up an estimated 20 percent of all installed crossties. A major advantage of concrete crossties is that they transmit imposed wheel loads better than traditional wood crossties, although they are susceptible to stress from high-impact loads. Another advantage of concrete crossties over wood ties is that temperature change has little effect on concrete's durability, and concrete ties often provide better resistance from track buckling.

There are, however, situations that can negatively impact a concrete crosstie's effectiveness. For example, in wet climates, eccentric wheel loads and noncompliant track geometry can cause high-concentrated non-uniform dynamic loading, usually toward the field-side of the concrete rail base. This highly-concentrated non-uniform dynamic loading puts stress on the crosstie which can lead to the development of a fracture. Additionally, repeated wheel loading rapidly accelerates rail seat deterioration where the padding material fails and the rail steel is in direct contact with the concrete. The use of automated technology can help inspectors ensure rail safety on track constructed of concrete crossties. While wood and concrete crossties differ structurally, they both must still support the track in compliance with the Federal Track Safety Standards.

The use of concrete crossties in the railroad industry, either experimentally or under revenue service, dates back to 1893. The first railroad to use concrete crossties was the Philadelphia and Reading Company in Germantown, PA. In 1961, the Association of American Railroads (AAR) carried out comprehensive laboratory and field tests on pre-stressed concrete crosstie performance. Replacing timber crossties with concrete crossties on a one to one basis at 19 ½ inch spacing proved acceptable based on engineering performance, but was uneconomical.

Increasing crosstie spacing from the conventional 20 inches to 30 inches increased the rail bending stress and the load that each crosstie transmitted to the ballast; however, the increased rail bending stress was within design limits. Further, by increasing the crosstie base to 12 inches the pressure transmitted from crosstie to ballast was the same as for timber crossties. Thus, by increasing the spacing of the crossties while maintaining rail, crosstie, and ballast stress at acceptable levels, the initial research showed that fewer concrete crossties than timber could be used, making their application an economical alternative to timber crossties.

Early research efforts in the 1960s and 1970s were focused on the strength characteristics of concrete crossties, i.e., bending at the top center and at the bottom of the crosstie under the rail seat or the rail-crosstie interface, and material optimization such as aggregate and pre-stressing tendons and concrete failure at the rail-crosstie and ballast-crosstie interface. Renewed efforts regarding the use of concrete crossties in the United States in the 1970s were led by a major research effort to optimize crosstie design at the Portland Cement Association Laboratories (PCA).

The PCA's research included the use of various shapes, sizes, and materials to develop the most economically desirable concrete crosstie possible. Extensive use of concrete crossties by railroads all over the world since the 1970s indicates that concrete crossties are an acceptable design alternative for use in modern track. Test sections on various railroads were set up in the 1970s to evaluate the performance of concrete crossties. Such installations were on the Alaska Railroad, Chessie System, Santa Fe, Norfolk and Western and the Facility for Accelerated Service Testing (FAST) in Pueblo, Colorado. During the 1970s, PCA addressed several of the initial concrete design problems, including quality control issues and abrasion. Abrasion, or failure of the concrete surface between the rail and crossties, became apparent when large sections of track were converted to concrete crossties, especially on high-curvature and high-tonnage territories. This phenomenon, commonly termed "rail seat abrasion," was noted in one form or another on four major railroads in North America: Canadian Pacific Railway (CP), Canadian National Railway (CN), BNSF Railway Company (BNSF) and Union Pacific Railroad. CN's concrete crosstie program started in 1976 and researchers noted rail seat abrasion less than 0.2 inches by 1991.

In a few cases, particularly on curved track, rail seat abrasion of as much as one (1) inch has been noted. In the majority of cases, especially on tangent or light curvature track, rail seat abrasion was uniform across the rail seat. BNSF started their program in 1986 and noted the same pattern of abrasion as CN with most of the abrasion occurring on curves. At CP, rail seat abrasion was present on 5-degree curves and CP used a bonded pad to reduce rail seat abrasion. CP's experience indicated that evidence of abrasion appeared shortly after failure of the bonded pad. At other locations where test sites were set up under less severe environments, concrete crossties were installed with no apparent sign of rail seat abrasion.

Mechanisms that lead to rail seat abrasion include the development of abrasive slurry between the rail pad and the concrete crosstie. Slurry is made up of various materials including dust particles, fine material from the breakdown of the ballast particles, grinding debris from rail grinders, and sand from locomotive sanding or blown by the wind. This slurry, driven by the rail movement, abrades the concrete surface and leaves the concrete aggregate exposed, generating concentrated forces on the rail pads. This abrasion process is accelerated once the pad is substantially degraded and the rail base makes direct contact with the concrete crosstie.

Recently, a new form of rail seat abrasion, which is believed to be attributable to excessive compression forces on the rail seat area, was noted on high curvature territory. The wear patterns in these locations have a triangular shape when viewed from the side of the crosstie. This wear patterns is similar in shape to the rail seat pressure distribution calculated when a vertical load and overturning moment are applied. The high vertical and lateral forces applied to the high rail by a curving vehicle provide such a vertical load and an overturning moment that loads the rail base unevenly.

Anecdotal evidence indicates that once this pattern develops and moves beyond the two-thirds point of the rail seat, as referenced from the field side, a high negative cant is created, leading to high compressive forces on the field side. These forces are high even in the absence of an overturning moment since the rail is now bearing on only a fraction of the original bearing area. Further, it is believed that once the rail seat wears to this triangular shape, the degradation rate is accelerated due to the high compressive forces.

It is apparent that, at this time, elimination of rail seat abrasion in existing concrete crossties would be difficult in areas with severe operating conditions. Mitigation of the problem on new or existing crossties is required. For new crosstie construction, it is possible to focus research efforts on strengthening the rail seat area with use of high-strength concrete or with embedding a steel plate at the time new crossties are cast. Both options have a high probability of success, but could render concrete crossties uneconomical.

Modern concrete crossties are designed to accept the stresses imposed by irregular rail head geometry and loss, excessive wheel loading caused by wheel irregularities (out of round), excessive unbalance speed, and track geometry defects. In developing the regulatory text, FRA considered the worst combinations of conditions, which can cause excessive impact and eccentric loading stresses that would increase failure rates. FRA also considered other measures in the requirements concerning loss of toeload and longitudinal and lateral restraint, in addition to improper rail cant.

On October 16, 2008, President Bush signed into law, the Railroad Safety Improvement Act of 2008 (Public Law 110-432) ("RSIA"). Section 403(d) states:

(d) Concrete Cross ties – Not later than 18 months after the date of enactment of this Act, the Secretary shall promulgate regulations for concrete cross ties. In developing the regulations for class 1 through 5 track, the Secretary may address, as appropriate—

(1) limits for rail seat abrasion;
(2) concrete cross tie pad wear limits;
(3) missing or broken rail fasteners;
(4) loss of appropriate toeload pressure;
(5) improper fastener configurations; and
(6) excessive lateral rail movement.

The Secretary delegated his responsibilities under RSIA to the Administrator of FRA. See 49 CFR 1.49(oo).

Regulations governing the use of concrete crossties currently only address high speed rail operations (Class 6 track and above). For Classes 1 through 5, the lower speed classes of track, concrete crossties have been treated, from the regulatory aspect, as timber crossties. While this approach works well for the major concerns with concrete crossties, it does not address the critical issue of rail seat abrasion, which this rule aims to address. Also not addressed in the current regulation is the longitudinal rail restraint provided by concrete crossties, which is totally different than the restraint provided by timber crossties.

The purpose of FRA's amendments to the Federal Track Safety Standards is to promote the safety of railroad operations over track constructed with concrete crossties. In particular, FRA is mandating specific requirements for effective concrete crossties, for rail fastening systems connected to concrete crossties, and for automated inspections of track constructed with concrete crossties.

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

This collection of information is entirely associated with this rule. The information collected is used by FRA to monitor regulatory compliance with 49 CFR 213. Specifically, the information collected under § 213.234 is used by FRA to ensure that automated track inspections of track constructed with concrete crossties are carried out as specified in this section to supplement visual inspections by Class I and Class II railroads, intercity passenger railroads, and commuter railroads or small governmental jurisdictions that serve populations greater than 50,000.

Automated inspections must identify and report exceptions to conditions described in § 213.109(d)(4) of this Part. Each exception report must be located and field verified no later than 48 hours after the automated inspection. The information collected under § 213.234(e)(1) that provides persons fully qualified under § 213.7 be provided with or have ready access to a copy of the exception report will be used by railroad track inspectors to carry out the required field verifications.

Track owners are required to maintain a record of the inspection data and the exception data for a minimum of two years. FRA inspectors review these records to ensure that concrete crosstie deterioration or abrasion prohibited by § 213.109(d)(4) is identified and reported, particularly rail seat deterioration. FRA inspectors closely scrutinize exception reports/records not only to verify that they accurately reflect the conditions of the track, but also to ensure that a qualified person has taken appropriate remedial actions in a timely manner.

Under § 213.234(g), track owners are required to institute procedures for maintaining the integrity of the data collected by the measurement system. FRA staff review these documented procedures to ensure correlation between measurements made on the ground and those recorded by instrumentation. Essentially, FRA checks to ensure that the equipment used by the track owners to comply with this regulation accurately detects what such equipment is designed to detect.

Finally, under § 213.234(h), track owners are required to provide training in handling rail seat deterioration exceptions to all persons fully qualified under § 213.7 and whose territories are subject to the requirements of § 213.234. At a minimum, this training must address interpretation and handling of exception reports generated by the automatic inspection measurement system, locating and verifying exceptions in the field and required remedial action, and recordkeeping requirements. As part of their duties, FRA inspectors ensure that all persons required to comply with this regulation are properly trained and that they understand the basic principles provided in the training.

**3. Extent of automated information collection.**

FRA strongly supports and highly encourages the use of advanced information technology, wherever possible, to reduce burden on respondents. FRA has championed the use of advanced information technology, particularly electronic recordkeeping, for many years now. In this rule, the required exception reports are the result of the automated inspection measurement system. Also, track owners may maintain the required record of inspection data/exception record electronically.

Approximately 12 percent of responses are now collected electronically.

**4. Efforts to identify duplication.**

The information collection requirements are entirely associated with this rulemaking and are, therefore, unique. To our knowledge, they are not duplicated anywhere.

Similar data are not available from any other source.

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

Background

The U.S. Small Business Administration (SBA) stipulates in its Size Standards that the largest a railroad business firm that is for-profit may be, and still be classified as a small entity, is 1,500 employees for Line-Haul Operating Railroads, and 500 employees for Switching and Terminal Establishments. Small entity is defined in the Act as a small business that is independently owned and operated, and is not dominant in its field of operation. SBA Size Standards may be altered by Federal agencies after consultation with SBA and in conjunction with public comment.

Pursuant to that authority, FRA has published a final policy that formally establishes "small entities" as Class III railroads, contractors, and shippers meeting the economic criteria established for Class III railroads in 49 CFR 1201.1-1, and commuter railroads or small governmental jurisdictions that serve populations of 50,000 or less. 49 CFR Part 209, App. C. FRA believes that <u>no</u> shippers, contractors, or small governmental jurisdictions would be affected by this final rule. At present, there are <u>no</u> commuter railroads that would be considered small entities. The revenue requirement for Class III railroads is currently nominally $20 million or less in annual operating revenue. The $20-million limit (which is adjusted by applying the railroad revenue deflator adjustment) is based on the Surface Transportation Board's threshold for a Class III railroad carrier. FRA uses the same revenue dollar limit to determine whether a railroad or shipper or contractor is a small entity.

Class I railroads have significant segments of concrete crossties, and own the overwhelming majority of all installed crossties. About a dozen Class II railroads that were formerly parts of Class I systems may have limited segments, and some Class III railroads may have remote locations with concrete crossties, typically in turnouts and other segment locations less than 600 feet in length. Small railroads were consulted during the RSAC Working Group deliberations, and their interests have been taken into consideration in this rule. The provisions requiring automated inspections do not apply to Class III railroads or any commuter railroads that may be considered small entities. Such entities would only be subject to requirements for tie and fastener conditions; however, small railroads typically do not have large numbers of concrete ties, and the cost associated with meeting such requirements is not significant.

According to the regulatory impact analysis (RIA) accompanying this revision, none of the amended provisions in response to the petitions for reconsideration would have affected small entities under the final rule. Consequently, the amendments in this revision to the rule will not have a significant economic impact on a substantial number of small entities.

## 6. <u>**Impact of less frequent collection of information.**</u>

If this information were not collected or collected less frequently, rail safety throughout the country would be greatly jeopardized. Specifically, if FRA were unable to collect this information, FRA would have no way to know whether main track constructed of concrete crossties received the necessary automated inspections or later follow-up in person field verifications to detect unsafe conditions spelled out in § 213.109(d)(4).

Without the information collected under § 213.234(e)(1), persons fully qualified under § 213.7 would not receive copies of exception reports and thus would be unable to carry out field verifications/inspections to detect as early as possible crosstie deterioration and abrasion, particularly rail seat deterioration. Without these essential inspections, these conditions might go unnoticed and un-remedied. Such situations could lead to costlier repairs for railroads and more accidents/incidents, including derailments, that could have been avoided, that result in increased injuries and fatalities to railroad employees and to members of the general public, as well as significant property damage.

Without this collection of information, FRA would have no way to examine records of the inspection data and exception reports. Without such information, FRA would have no way to know the date and location of exception reports, no way to know the type and location of each exception milepost, and would have no way to know the results of railroad employee field verifications and whether proper remedial action was taken, if needed. Without such information, FRA could not carry out its safety oversight function because it would not know where problematic concrete crosstie areas are and whether proper measures were taken or whether other action was needed by the railroads and/or FRA to avoid preventable accident/incidents and corresponding casualties.

Without submission of automated track inspection procedures, FRA could not determine -- and be assured -- that track owners have instituted necessary procedures for maintaining the integrity of the data collected and thus would have no way to know whether the equipment used by the track owners to comply with this regulation actually accurately detects what it is designed to detect. Inaccurate, inconsistent, or unreliable data might lead to increased numbers of derailments and corresponding injuries/fatalities.

Finally, without the information submitted on the training of necessary rail employees in the interpretation and handling of the exception reports generated by the automated inspection system, training in locating and verifying exceptions in the field and required remedial action, and training in recordkeeping requirements, FRA would have no way to know whether railroads are employing qualified personnel to carry out effective inspection regimes and whether these employees are taking effective action to prevent concrete crosstie rail seat deterioration and other deterioration/abrasion problems before more rail accidents/incidents occur.

In sum, the collection of information is an important part of FRA's safety program, fulfills a Congressional mandate, and helps FRA to promote safe rail transportation throughout the United States. In this, it furthers both DOT's top goal and its core agency mission.

**7. Special circumstances.**

All the information collection requirements contained in the rule 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 June 30, 2017, soliciting public comment on this particular information collection. See 82 FR 29976.

FRA received no comments in response to this 60-day Federal Register Notice.

**9. Payments or gifts to respondents.**

There are no monetary payments provided or gifts made to respondents in connection with this information collection.

**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.**

*Note: Respondent universe is approximately 18 railroads.*

*FRA is including the dollar equivalent cost for each of the itemized hours below using the AAR publication Railroad Facts 2016 as the basis for each cost calculation. For railroad executives, officials, and staff assistants, the hourly wage rate is $117 per hour. For professional and administrative staff, the hourly wage rate is $75 per hour. For railroad train and engine employees (e.g., locomotive engineers, conductors, etc.), the hourly wage rate is $73 per hour. For maintenance of way and structures employees (e.g., signalmen), the hourly wage rate is $69 per hour. For maintenance of equipment and stores, the hourly wage rate is $61. For transportation other than train and engine employees, the hourly wage is $72 per hour. Note: All hourly wage calculations include 75% overhead costs.*

**§ 213.234 Automated Inspection of Track Constructed with Concrete Crossties**

(a) General. Except for track described in paragraph (c) of this section, the provisions in this section are applicable on and after January 1, 2012. In addition to the track inspection required under § 213.233, for Class 3 main track constructed with concrete crossties over which regularly scheduled passenger service trains operate and for Class 4 and 5 main track constructed with concrete crossties, automated inspection technology shall be used as indicated in paragraph (b) of this section, as a supplement to visual inspection, by Class I railroads (including Amtrak), Class II railroads, other intercity passenger railroads, and commuter railroads or small governmental jurisdictions that serve populations greater than 50,000. Automated inspection shall identify and report exceptions to conditions described in § 213.109(d)(4).

(b) Frequency of automated inspection. Automated inspections shall be conducted at the following frequencies:

(1) If annual tonnage on Class 4 and 5 main track and Class 3 main track, with regularly scheduled passenger service, exceeds 40 million gross tons (mgt) annually, at least twice each calendar year, with no less than 160 days between inspections.

(2) If annual tonnage on Class 4 and 5 main track and Class 3 main track, with regularly scheduled passenger service, is less than 40 mgt annually, at least once each calendar year.

(3) On Class 3, 4 and 5 main track, with exclusively passenger service, either an automated inspection or walking inspection must be conducted once per calendar year.

(4) Track not inspected in accordance with paragraph (b)(1) and (b)(2) of this section because of train operation interruption shall be re-inspected within 45 days of the resumption of train operations by a walking or automated inspection. If this inspection is conducted as a walking inspection, the next inspection shall be an automated inspection as prescribed in this paragraph.

(c) Non-application. Sections of tangent track 600 feet or less constructed of concrete crossties, including, but not limited to, isolated track segments, experimental or test track segments, highway/rail crossings, and wayside detectors, are excluded from the requirements of this section.

(d) Performance standard for automated inspection measurement system. The automated inspection measurement system must be capable of measuring and processing rail seat deterioration requirements that specify the following: (1) An accuracy, to within 1/8 of an inch; (2) A distance-based sampling interval, which shall not exceed five feet; and (3) Calibration procedures and parameters assigned to the system, which assure that measured and recorded values accurately represent rail cant deterioration.

(e) Exceptions reports to be produced by the system; duty to field-verify exceptions. The automated inspection measurement system shall produce an exception report containing a systematic listing of all exceptions to § 213.109(d)(4), identified so that an appropriate person(s) designated as fully qualified under § 213.7 can field verify each exception.

(1) Exception reports must be provided to or made available to all persons designated as fully qualified under §213.7 and whose territories are subject to the requirements of §213.234.

(2) Each exception must be located and field verified no later than 48 hours after the automated inspection.

(3) All field-verified exceptions are subject to all the requirements of this part.

(4) Exception reports must note areas identified between 3/8 of an inch and ½ of an inch as an "alert."

FRA estimates that approximately 75 exception reports will be produced under the above requirement. It is estimated that it will take, on average, approximately eight (8) hours to complete each exception report. Total annual burden for this requirement is 600 hours.

Respondent Universe: 18 Railroads

Burden time per response: 8 hours

Frequency of Response: On occasion

Annual number of Responses: 75 exception reports
Annual Burden: 600 hours
Annual Cost: $36,600 ($61 x 600 hrs.)

**Calculation**: 75 exception reports x 8 hrs. = 600 hours

Also, in keeping with the new requirement above under § 213.234(e)(1), FRA estimates that approximately 75 exception reports copies will be provided/made available to designated persons under the above requirement. It is estimated that it will take approximately 12 minutes to complete each copy. Total annual burden for this requirement is 15 hours.

Respondent Universe: 18 Railroads

Burden time per response: 12 minutes

Frequency of Response: On occasion

Annual number of Responses: 75 exception report copies
Annual Burden: 15 hours
Annual Cost: $1,125 ($75 x 15 hrs.)

**Calculation**: 75 exception report copies x 12 min. = 15 hours

Additionally, FRA estimates that approximately 75 exception reports will be field verified within 48 hours under the above requirement. It is estimated that it will take approximately two (2) hours to complete each exception report field verification. Total annual burden for this requirement is 150 hours.

Respondent Universe: 18 Railroads

Burden time per response:

2 hours

Frequency of Response: On occasion

Annual number of Responses: 75 exception report field verifications
Annual Burden: 150 hours
Annual Cost: $9,150 ($61 x 150 hrs.)

**Calculation**: 150 exception report field verifications x 2 hrs. = 150 hours

(f) Recordkeeping requirements. The track owner shall maintain and make available to FRA a record of the inspection data and the exception record for the track inspected in accordance with this paragraph for a minimum of two years. The exception reports must include the following: (1) Date and location of limits of the inspection; (2) Type and location of each exception; and (3) Results of field verification, and (4) Remedial action if required.

FRA estimates that approximately 75 records will be kept under the above requirement. It is estimated that it will take approximately 30 minutes to complete each record. Total annual burden for this requirement is 38 hours.

Respondent Universe:

18 Railroads

Burden time per response:

30 minutes

Frequency of Response: On occasion

Annual number of Responses: 75 records
Annual Burden: 38 hours
Annual Cost: $2,850 ($75 x 38 hrs.)

**Calculation**: 75 records x 30 min. = 38 hours

(g) Procedures for integrity of track data. The track owner shall institute the necessary procedures for maintaining the integrity of the data collected by the measurement system. At a minimum, the track owner must do the following: (1) Maintain and make available to FRA documented calibration procedures of the measurement system that, at a minimum, specify an instrument verification procedure that ensures correlation between measurements made on the ground and those recorded by the instrumentation; and (2) Maintain each instrument used for determining compliance with this section such that it accurately measures the depth of rail seat deterioration in accordance with paragraph (d)(1) of this section.

FRA estimates that approximately 18 data integrity procedures will be developed under the above requirement. It is estimated that it will take approximately four (4) hours to develop each procedure. Total annual burden for this requirement is 72 hours.

Respondent Universe: 18 Railroads

Burden time per response: 4 hours

Frequency of Response: On occasion

Annual number of Responses: 18 data integrity procedures
Annual Burden: 72 hours
Annual Cost: $8,424 ($117 x 72 hrs.)

**Calculation**: 18 data integrity procedures x 4 hrs. = 72 hours

(h) Training. The track owner must provide annual training in handling rail seat deterioration exceptions to all persons designated as fully qualified under §213.7 and whose territories are subject to the requirements of §213.234. At a minimum, the training must address the following: (1) Interpretation and handling of the exception reports generated by the automated inspection measurement system; (2) Locating and verifying exceptions in the field and required remedial action; and (3) Recordkeeping requirements.

FRA estimates that approximately 2,000 employees will be trained each year under the above requirement. It is estimated that it will take approximately two (2) hours to train each employee and keep the necessary record. Total annual burden for this requirement is 4,000 hours.

Respondent Universe: 18 Railroads

Burden time per response: 2 hours

Frequency of Response: Annually

Annual number of Responses: 2,000 trained employees/records
Annual Burden: 4,000 hours
Annual Cost: $244,000 ($61 x 4,000 hrs.)

**Calculation**: 2,000 trained employees/records x 2 hrs. = 4,000 hours

Total annual burden for this entire information collection is **4,875 hours** (600 + 15 + 150 + 38 + 72 + 4,000), and the total annual dollar equivalent cost is **$301,049**.

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

As noted above in the answer question number 12, railroads are required to make copies of exception reports under § 213.234(e)(1). For the estimated 75 exception report copies that will need to be made, the cost to respondent is as follows:

75 exception report copies (avg. 10 pages each @.03 cents per page) = $23.

**TOTATL COST** = **$23**

**14. <u>Estimate of Cost to Federal Government.</u>**

There are <u>no</u> additional costs to the Federal Government, since the FRA Headquarters personnel and Federal and State track safety inspectors will carry out the requirements of the rule in the normal course of their duties.

**15. <u>Explanation of program changes and adjustments.</u>**

The burden for this collection of information has <u>decreased</u> by **802 hours and by 300 responses from the last approved submission**. The <u>decrease</u> in burden is due to solely to **adjustments** depicted in the following table:

**<u>TABLE FOR ADJUSTMENT(S)</u>**

| Part 213 Section | Responses & Avg. Time (Previous Submission) | Responses & Avg. Time (This Submission) | Burden Hours (Previous Submission) | Burden Hours (This Submission) | Difference (plus/minus) |
|---|---|---|---|---|---|
| 213234(e) – Automated Inspection of track constructed with concrete crossties: Exception reports listing all exceptions to section 213.109(d)(4) | 150 reports<br>8 hours | 75 reports<br>8 hours | 1,200 hours | 600 hours | -- 600 hours<br>-- 75 responses |
| - Copies of exception report provided to designated persons under this section<br>- | 150 report copies<br>12 minutes | 75 report copies<br>12 minutes | 30 hours | 15 hours | -- 15 hours<br>-- 75 responses |
| -Field verification of exception reports | 150 field verifications<br>2 hours | 75 field verifications<br>2 hours | 300 hours | 150 hours | -- 150 hours<br>-- 75 responses |
| 213234(f) – Records of inspection data | 150 records<br>30 minutes | 75 records<br>30 minutes | 75 hours | 38 hours | -- 37 hours<br>-- 75 responses |

**Adjustments** above decreased the burden by **802 hours** and decreased the number of **responses** by **300.**

The current OMB inventory exhibits a total of *5,677 hours* and 2*,618 responses*, while the present submission requests a total of *4,875 hours* and *2,318 responses*. Hence, there is a decrease in burden of **802 hours** and **300 responses.**

The cost to respondents decreased by $22 from the last submission. This change in cost is due to an **adjustment** in the estimate for the number of exception report copies (from 150 copies to 75 copies, which changed the estimated cost from $45 to $23).

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

There are no plans for publication of this submission. The information will be used exclusively for purposes of determining compliance with U.S. laws and FRA safety regulations.

**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.

Meting Department of Transportation (DOT) Strategic Goals

This information collection supports DOT's top strategic goal, namely transportation safety. By collecting the required information, FRA is able to enhance rail safety by ensuring that necessary automated inspections of main track constructed of concrete crossties are conducted to detect unsafe conditions spelled out in § 213.109(d)(4). Without these required inspections, serious crosstie deterioration and abrasion, including rail seat deterioration, might go unnoticed and un-remedied. Such situations could cause derailments and other serious avoidable accidents/incidents that result in injuries and fatalities to railroad employees and the public, as well as significant property damage.

Without this collection of information, FRA would have no way to examine records of the inspection data and exception reports/records. Without such information, FRA would have no way to know the date and location of exception reports, no way to know the type and location of each exception milepost, and would have no way to know the results of railroad employee field verifications and whether proper remedial action was taken, if needed. Without such information, FRA could not carry out its safety oversight function because it would not know where problematic concrete crosstie areas are and whether proper measures were taken or whether other action was needed by the railroads/FRA to avoid preventable rail accident/incidents and corresponding casualties.

Without submission of automated track inspection procedures, FRA could not determine -- and be assured -- that track owners have instituted these necessary procedures for maintaining the integrity of the data collected and thus would have no way to know whether the equipment used by the track owners to comply with this regulation actually accurately detects what it is designed to detect. Inaccurate, inconsistent, or unreliable data might lead to increased numbers of derailments and corresponding injuries/fatalities.

Finally, without the information submitted on the training of the specified rail employees in the interpretation and handling of the exception reports generated by the automated inspection system, training in locating and verifying exceptions in the field and required remedial action, and training in recordkeeping requirements, FRA would have no way to know whether railroads are employing qualified personnel to carry out effective inspection regimes and whether these employees are taking effective action to prevent concrete crosstie rail seat deterioration and other deterioration/abrasion problems before more rail accidents/incidents occur.

In sum, the collection of information is an important part of FRA's safety program, fulfills a Congressional mandate, and helps FRA to promote safe rail transportation throughout the United States. In this, it furthers both DOT's top goal and its core agency mission.

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.