INFORMATION COLLECTION
FEDERAL RAILROAD ADMINISTRATION
SUPPORTING JUSTIFICATION
Track Safety Standards: Concrete Crossties

Summary of Submission

- This is a new collection of information.
- FRA is publishing a Notice of Proposed Rulemaking titled Track Safety Standards; Concrete Crossties in the **Federal Register** on August 26, 2010. See 75 FR 52490.
- Total number of burden hours requested for this submission is **17,647 hours.**
- Total number of responses for this submission is 2**,468.**
- **The answer to question **number 12** itemizes the hourly burden associated with each requirement of this rule (See pp. 12-15).

1. Circumstances that make collection of the information necessary.

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 3 degree 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.

Although timber crossties are more prevalent throughout track in the United States, 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 proposed 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 proposed 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) concrete cross tie pad wear limits;
(2) missing or broken rail fasteners
(3) loss of appropriate toeload pressure;
(4) improper fastener configurations; and
(5) excessive lateral rail movement.

The Federal Railroad Administrator was delegated this responsibility at 49 C.F.R. § 1.49.

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 NPRM proposes 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. This NPRM addresses these shortcomings and proposes new methodologies for inspection.

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

This is a new collection of information. The information to be collected will be used by FRA to monitor regulatory compliance with 49 CFR 213. Specifically, the information collected under <u>new</u> § 213.234 will be 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. Track owners are required to maintain a record of the inspection data and the exception data for a minimum of two years. FRA inspectors will 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 will 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.

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

Finally, track owners are required (under § 213.234(h)) 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. FRA inspectors will ensure that all persons required to comply with this proposed regulation are properly trained and that they understand the basic principles provided in the training.

3. <u>Extent of automated information collection.</u>

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 proposed rule, the required exception reports are the result the automated inspection measurement system. Also, track owners may maintain electronically the required record of inspection data/exception record electronically.

Finally, it should be noted that the estimated burden of this proposed collection of information is fairly small.

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 U.S. Small Business Administration (SBA) stipulates in its ASize Standards@ that the largest a railroad business firm that is Afor-profit@ may be, and still be classified as a Asmall entity,@ is 1,500 employees for ALine-Haul Operating Railroads,@ and 500 employees for ASwitching and Terminal Establishments.@ ASmall 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=s ASize 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 Asmall entities@ as railroads which meet the line haulage revenue requirements of a Class III railroad. The revenue requirements are currently $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 (STB) 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 account for about twenty percent 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. Small railroads were consulted during the RSAC Working Group deliberations and their interests have been taken into consideration in this NPRM. FRA believes that there will be no significant impact on a substantial number of small entities.

An estimated total of 18 railroads will be affected by the proposed collection of information, very few of them small railroads. It should be pointed out that the total estimated burden for this entire collection of information is fairly small (less than 18,000 hours). Thus, this collection of information will not have a significant impact on a substantial number of small entities.

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

If this information were not collected or collected less frequently, FRA would be unable to carry out a Congressional mandate and FRA's goal of enhancing national rail safety would be significantly impeded. Specifically, if FRA were unable to collect the proposed 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 these required inspections, serious crosstie deterioration and abrasion, including rail seat deterioration, might go unnoticed and unremedied. 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 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 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 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, 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.

FRA is publishing this Notice of Proposed Rulemaking on August 26, 2010, in the Federal Register. See 75 FR 52490. FRA is hereby soliciting public comments on the proposed rule and its accompanying information collection requirements. FRA will respond to any comments it receives in the agency final rulemaking and accompanying Supporting Justification.

Background

In March 1996, FRA established the Railroad Safety Advisory Committee (RSAC), which provides a forum for developing consensus recommendations to FRA=s Administrator on rulemakings and other safety program issues. The RSAC includes representation from all of the agency=s major customer groups, including railroads, labor organizations, suppliers and manufacturers, and other interested parties. A list of RSAC members follows:

American Association of Private Railroad Car Owners (AARPCO);
American Association of State Highway & Transportation Officials (AASHTO);
American Chemistry Council;
American Petrochemical Institute;
American Public Transportation Association (APTA);
American Short Line and Regional Railroad Association (ASLRRA);
American Train Dispatchers Association (ATDA);
Association of American Railroads (AAR);
Association of Railway Museums (ARM);
Association of State Rail Safety Managers (ASRSM);
Brotherhood of Locomotive Engineers and Trainmen (BLET);
Brotherhood of Maintenance of Way Employees Division (BMWED);
Brotherhood of Railroad Signalmen (BRS);
Chlorine Institute;
Federal Transit Administration (FTA)*;
Fertilizer Institute;
High Speed Ground Transportation Association (HSGTA);
Institute of Makers of Explosives;
International Association of Machinists and Aerospace Workers;
International Brotherhood of Electrical Workers (IBEW);
Labor Council for Latin American Advancement (LCLAA)*;
League of Railway Industry Women*;

National Association of Railroad Passengers (NARP);
National Association of Railway Business Women*;
National Conference of Firemen & Oilers;
National Railroad Construction and Maintenance Association;
National Railroad Passenger Corporation (Amtrak);
National Transportation Safety Board (NTSB)*;
Railway Supply Institute (RSI);
Safe Travel America (STA);
Secretaria de Comunicaciones y Transporte*;
Sheet Metal Workers International Association (SMWIA);
Tourist Railway Association Inc.;
Transport Canada*;
Transport Workers Union of America (TWU);
Transportation Communications International Union/BRC (TCIU/BRC);
Transportation Security Administration (TSA); and
United Transportation Union (UTU).
**Indicates associate, non-voting membership*.

When appropriate, FRA assigns a task to the RSAC, and after consideration and debate, RSAC may accept or reject the task. If the task is accepted, RSAC establishes a working group that possesses the appropriate expertise and representation of interests to develop recommendations to FRA for action on the task. These recommendations are developed by consensus. A working group may establish one or more task forces to develop facts and options on a particular aspect of a given task. The task force then provides that information to the working group for consideration.

If a working group comes to a unanimous consensus on recommendations for action, the package is presented to the full RSAC for a vote. If the proposal is accepted by a simple majority of RSAC, the proposal is formally recommended to FRA. FRA then determines what action to take on the recommendation. Because FRA staff members play an active role at the working group level in discussing the issues and options and in drafting the language of the consensus proposal, FRA is often favorably inclined toward the RSAC recommendation.

However, FRA is in no way bound to follow the recommendation, and the agency exercises its independent judgment on whether the recommended rule achieves the agency=s regulatory goals, is soundly supported, and is in accordance with policy and legal requirements. Often, FRA varies in some respects from the RSAC recommendation in developing the actual regulatory proposal or final rule. Any such variations would be noted and explained in the rulemaking document issued by FRA. If the working group or RSAC is unable to reach consensus on recommendations for action, FRA moves ahead to resolve the issue through traditional rulemaking proceedings.

The Track Safety Standards Working Group ("Working Group") was formed on February 22, 2006. On October 27, 2007, the Working Group formed two subcommittees; the Rail Integrity Task Force ("RITF") and the Concrete Crosstie Task Force ("CCTF"). Principally in response to NTSB recommendation R-06-19, the task statement description for the CCTF was to consider improvements in the Track Safety Standards related to fastening of rail to concrete crossties.

The newly formed CCTF was directed to: (1) provide background information regarding the amount of concrete crossties in the U.S. rail network and related causal factors; (2) review minimum safety requirements in the track safety standards for crossties at 49 CFR §§ 213.109 and 213.335, as well as relevant AREMA concrete construction specifications; (3) understand the science (mechanical and compressive forces) of rail seat failure; (4) develop a performance specification for all types of crosstie material for FRA class 2 through 5 main line track; (5) develop specifications for missing or broken concrete fastener and crosstie track structure components and/or establish wear limits for rail seat deterioration and rail fastener integrity; and (6) develop manual and automated methods to detect rail seat failure.

The CCTF met on November 26-27, 2007; February 13-14, 2008; April 16-17, 2008; July 9-10, 2008; and November 19-20, 2008. The CCTF's findings were reported to the Working Group on November 19, 2008. The Working Group reached a consensus on the majority of the CCTF's work and forwarded a proposal to RSAC on December 10, 2008. RSAC voted to approve the Working Group's recommended text, which is the basis of this NPRM.

In addition to FRA staff, the members of the Working Group include the following:

AAR, including members from BNSF Railway Company (BNSF), Canadian National Railway (CN), Canadian Pacific Railway (CP); CSX Transportation, Inc. (CSX), Kansas City Southern Railway Company (KCS), Norfolk Southern Railway Company (NS), and Union Pacific Railroad Company (UP);
Amtrak;
APTA, including members from Port Authority Trans-Hudson Corporation (PATH), LTK Engineering Services, Northeast Illinois Regional Commuter Railroad Corporation (Metra), and Peninsula Corridor Joint Powers Board (Caltrain); ASLRRA (representing Class III/smaller railroads);
Brotherhood of Locomotive Engineers and Trainmen (BLET);
Brotherhood of Maintenance of Way Employees Division (BMWED);
Brotherhood of Railroad Signalmen (BRS);
Transportation Technology Center, Inc. (TTCI); and
United Transportation Union (UTU).

Staff from the Department of Transportation=s John A. Volpe National Transportation Systems Center (Volpe Center) attended all of the meetings and contributed to the technical discussions. In addition, NTSB staff attended all of the meetings and contributed to the discussions as well.

FRA has worked closely with the RSAC in developing its recommendations and believes that the RSAC has effectively addressed concerns with regard to the safety of concrete crossties. FRA has greatly benefited from the open, informed exchange of information during the meetings. There is a general consensus among railroads, rail labor organizations, State safety managers, and FRA concerning the primary principles FRA sets forth in this NPRM. FRA believes that the expertise possessed by the RSAC representatives enhances the value of the recommendations, and FRA has made every effort to incorporate them in this proposed rule.

The Working Group was unable to reach consensus on one item that FRA has elected to include in this NPRM. The Working Group could not reach consensus on a single technology or methodology to measure the rail seat deterioration. Also, the group debated over whether or not the revised standards should contain language to accommodate the present technology. Encouraging public comment on this particular issue, FRA is proposing at § 213.234(e) that the automated inspection measurement system must be capable of measuring and processing rail cant requirements which specify: (1) an accuracy angle, in degrees, to within ½ of a degree; (2) a distance-based sampling interval, that shall not exceed two feet; and (3) calibration procedures and parameters assigned to the system, which assure that measured and recorded values accurately represent rail cant.

9. <u>Payments or gifts to respondents.</u>

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

10. <u>Assurance of confidentiality.</u>

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

11. <u>Justification for any questions of a sensitive nature.</u>

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.

§ 213.234 Automated Inspection of Track Constructed with Concrete Crossties

(a) General. Except for track described in paragraph (c) of this section, in addition to the track inspection required under §233 of this part, on 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, 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) of this part.

(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) Nonapplication. 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 cant requirements that specify the following: (1) An accuracy angle, in degrees, to within ½ of a degree; (2) A distance-based sampling interval, which shall not exceed two feet; and (3) Calibration procedures and parameters assigned to the system, which assure that measured and recorded values accurately represent rail cant.

(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. Each exception must be located and field verified no later than 48 hours after the automated inspection. All field-verified exceptions are subject to all the requirements of this part.

FRA estimates that approximately 150 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 1,200 hours.

Respondent Universe: 18 Railroads

Burden time per response: 8 hours

Frequency of Response: On occasion

Annual number of Responses: 150 exception reports
Annual Burden: 1,200 hours

Calculation: 150 exception reports x 8 hrs. = 1,200 hours

Additionally, FRA estimates that approximately 150 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 300 hours.

Respondent Universe:

18 Railroads

Burden time per response:

2 hours

Frequency of Response: On occasion

Annual number of Responses: 150 exception report field verifications
Annual Burden: 300 hours

Calculation: 150 exception report field verifications x 2 hrs. = 300 hours

(f) Recordkeeping requirements. The track owner must maintain 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 remedial action if required.

FRA estimates that approximately 150 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 75 hours.

Respondent Universe:

18 Railroads

Burden time per response:

30 minutes

Frequency of Response: On occasion

Annual number of Responses: 150 records
Annual Burden: 75 hours

Calculation: 150 records x 30 min. = 75 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 shall 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 is accurate to within 1/8th of an inch for rail seat deterioration.

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: 18data integrity procedures
Annual Burden: 72 hours

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

(h) Training. The track owner must provide 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 under the above requirement. It is estimated that it will take approximately eight (8) hours to train each employee. Total annual burden for this requirement is 16,000 hours.

Respondent Universe: 18 Railroads

Burden time per response: 8 hours

Frequency of Response: On occasion

Annual number of Responses: 2,000 trained employees
Annual Burden: 16,000 hours

Calculation: 2,000 trained employees x 8 hrs. = 16,000 hours

Total annual burden for this entire information collection is 17,647 hours (1,200 + 300 + 75 + 72 + 16,000).

13. Estimate of total annual costs to respondents.

There are no additional costs to respondents other than those noted above in the answer question number 12.

14. Estimate of Cost to Federal Government.

There are no 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. Explanation of program changes and adjustments.

This is a new collection of information required by Section 403(d) of the Rail Safety Improvement Act (RSIA) of 2008. The proposed rule and its associated information collection seek to fulfill the Congressional mandate, and will incur an estimated burden increase of 17,647 hours as a result. By definition, this new collection of information is a **program change**.

There are no other or additional costs to respondents besides those estimated in the answer to question number 12 of this document.

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 unremedied. 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 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, 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.