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## December 10, 2008 Documents

<b>Meeting Notice</b>	Federal Register Meeting Notice (radcms rsac/File/DownloadFile?id=334)
<b>Meeting Agenda</b>	December 10, 2008 Meeting Agenda (radcms.rsac/File/DownloadFile?id=335)
<b>Minutes</b>	Final Meeting Minutes September 10, 2008 RSAC (radcms rsac/File/DownloadFile?id=336)
<b>Working Group Update</b>	Federal Register RSAC Working Group Activity Update (radcms.rsac/File/DownloadFile?id=337)
	<b>Handouts:</b> <ul style="list-style-type: none"><li>• Organizations Summary Report (radcms.rsac/File/DownloadFile?id=338)</li><li>• RSAC Membership List (radcms.rsac/File/DownloadFile?id=339)</li><li>• Proposed Concrete Tie Draft Rule Text for RSAC VOTE (radcms.rsac/File/DownloadFile?id=340)</li><li>• Proposed Crashworthiness Draft Rule Text for RSAC VOTE (radcms rsac/File/DownloadFile?id=341)</li><li>• RSAC Task Statement 08-04- Positive Train Control (PTC) (radcms.rsac/File/DownloadFile?id=342)</li><li>• RSAC Task Statement 08-05- Railroad Bridge Safety Assurance (radcms.rsac/File/DownloadFile?id=343)</li><li>• RSAC Task Statement 08-06- Hours of Service Record Keeping (radcms.rsac/File/DownloadFile?id=344)</li><li>• RSAC Task Statement 08-07- Conductor Certification (radcms.rsac/File/DownloadFile?id=345)</li></ul>
<b>Handouts</b>	<b>Presentations:</b> <ul style="list-style-type: none"><li>• Rail Safety Improvement Act (RISA) Presentation (radcms rsac/File/DownloadFile?id=346)</li><li>• Railroad Bridge Task Presentation (radcms rsac/File/DownloadFile?id=347)</li><li>• Track Safety Standards Working Group Update (radcms.rsac/File/DownloadFile?id=348)</li><li>• Locomotive Safety Standards Working Group Update (radcms.rsac/File/DownloadFile?id=349)</li><li>• Medical Standards Working Group Update (radcms.rsac/File/DownloadFile?id=350)</li><li>• Passenger Safety Working Group Update (radcms rsac/File/DownloadFile?id=351)</li><li>• RSAC Crashworthiness Presentation (radcms rsac/File/DownloadFile?id=352)</li></ul>

### **§213.109 Crossties.**

- (a) Crossties shall be made of a material to which rail can be securely fastened,
- (b) Each 39 foot segment of track shall have at a minimum—
  - (1) A sufficient number of nondefective crossties, which in combination provide effective support that will—
    - (i) Hold gage within the limits prescribed in §213.53(b);
    - (ii) Maintain alinement within the limits prescribed in §213.55;
    - (iii) Maintain surface within the limits prescribed in §213.63;
  - (2) The minimum number and type of crossties specified in paragraphs (c) and described in (d) and (e) of this section effectively distributed to support the entire segment; and
  - (3) At least one crosstie of the type specified in paragraphs (d) and (e) of this section that is located at a joint location as specified in paragraph (f) of this section.
- (c) Each 39 foot segment of track shall have the minimum number of crossties as indicated in the following table.

<b>FRA Track Class</b>	<b>Tangent, Turnouts, and Curves</b>	
	<b>Tangent and Curve track less than or equal to 2 degrees</b>	<b>Turnouts and Curved track greater than 2 degrees</b>
Class 1	5	6
Class 2	8	9
Class 3	8	10
Class 4 & 5	12	14

- (d) Crossties, other than concrete, counted to satisfy the requirements set forth in the table in paragraph (c) of this section shall not be:
  - (1) Broken through;
  - (2) Split or otherwise impaired to the extent the crossties will allow the ballast to work through, or will not hold spikes or rail fasteners;
  - (3) So deteriorated that the tie plate or base of rail can move laterally ½ inch relative to the crossties;
  - (4) Cut by the tie plate through more than 40 percent of a crosstie's thickness.
- (e) Concrete crossties counted to satisfy the requirements set forth in the table in paragraph (c) , of this section shall not be:
  - (1) Completely broken through;

- (2) Deteriorated or broken off in the vicinity of the shoulder or insert so that the fastener assembly can either pull out or move laterally more than  $\frac{3}{8}$  inch relative to the crosstie;
  - (3) Deteriorated such that the base of either rail can move laterally more than  $\frac{3}{8}$  inch relative to the crosstie on curves of 2 degrees or greater; or can move laterally more than  $\frac{1}{2}$  inch relative to the crosstie on tangent track or curves of less than 2 degrees;
  - (4) Deteriorated or abraded at any point under the rail seat to a depth of  $\frac{1}{2}$  inch or more.
  - (5) Deteriorated such that the crosstie's fastening or anchoring system is unable to maintain longitudinal rail restraint, or maintain rail hold down, or maintain gage due to insufficient fastener toeload.
    - i. If rail anchors are applied to concrete track, the combination of the crosstie, fastening, and rail anchor shall provide effective longitudinal restraint.
    - ii. Where fastener placement impedes insulated joints from performing as intended, the fastener may be modified or removed, provided that the crosstie supports the rail.
  - (6) So deteriorated that the pre-stressing material has separated from or lost bond with the concrete resulting in the crosstie's partial break-up, or cracks, which visibly expose pre-stressing material.
  - (7) Configured with less than two fasteners on the same rail except as provided in e(5)(ii) of this paragraph.
- (f) FRA Class 1 and 2 track shall have one crosstie whose centerline is within 24 inches of each rail joint (end) location. FRA Class 3, 4 and 5 track shall have one crosstie whose centerline is within 18 inches of each rail joint location or, two crossties whose centerlines are within 24 inches either side of each rail joint location. The relative position of these crossties is described in the following three diagrams:

Each rail joint in FRA Class 1 and 2 track shall be supported by at least one crosstie specified in paragraphs (d) and (e) of this paragraph whose centerline is within 48 inches as shown in Figure 1.

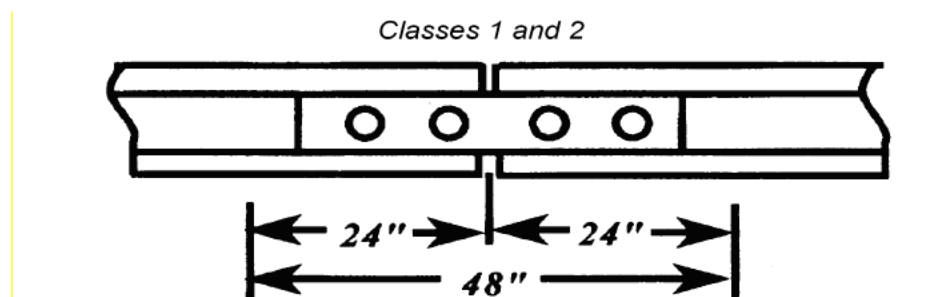


Figure 1

Each rail joint in FRA Class 3, 4, and 5 track shall be supported by either at least one crosstie specified in paragraphs (d) and (e) of this paragraph whose centerline is within 36 inches as shown in Figure 2, or:

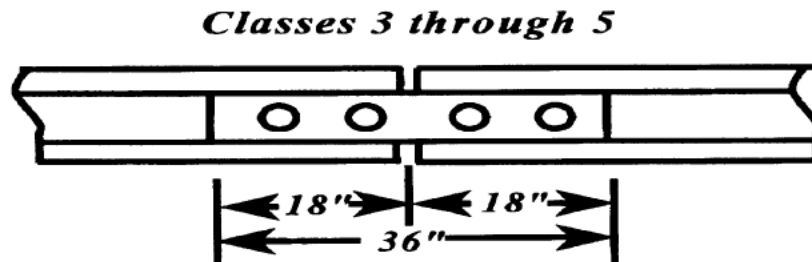


Figure 2

Two crossties, one on each side of the rail joint, whose centerlines are within 48 inches of the rail joint location as shown in Figure 3.

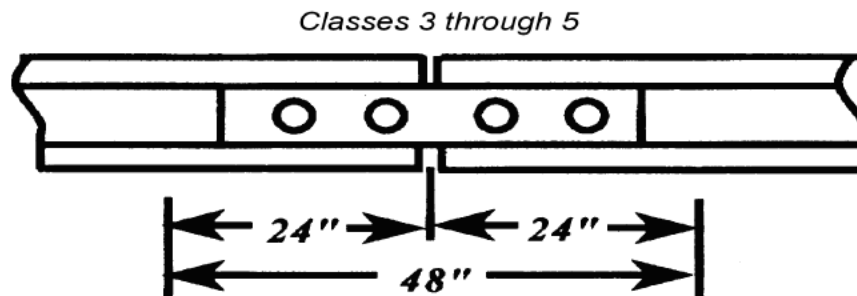


Figure 3

- (g) For track constructed without crossties, such as slab track, track connected directly to bridge structural components, track over servicing pits etc, the track structure shall meet the requirements of paragraphs (b)(1) (i), (ii), and (iii), of this paragraph.

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

- (a) In addition to the track inspection required under §213.233 of this part, on Class 3 main track over which regularly scheduled passenger service trains operate, and for Class 4 and 5 main track, automated inspection technology shall be used as indicated in paragraph (b) below as a supplement to visual inspection. Automated Inspection shall identify and report exceptions to conditions described in §213.109 (e)(4) of this part.
- (b) Automated inspections shall be conducted at the following frequencies:
  - (1) At least twice each calendar year, with no less than 160 days between inspections, if annual tonnage on Class 4 and 5 main track and Class 3 main track with regularly scheduled passenger service, exceeds 40 mgt annually; and

- (2) At least once each calendar year, if annual tonnage Class 4 and 5 main track and Class 3 main track with regularly scheduled passenger service is less than 40 mgt annually.
  - (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 (b)(1) and (b)(2) of this paragraph because of operational discontinuity shall be inspected within 45 days by a walking or automated inspection. If this inspection is conducted as a walking inspection, the next frequency inspection shall be an automated inspection as prescribed in this paragraph.
- (c) 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, shall be excluded from the requirements of this paragraph.
- (d) The automated inspection measurement system of concrete crossties must be capable of determining exceptions to §213.109(e)(4) of this part.
- (e) RESERVED
- (f) The automated inspection measurement system shall produce an exception report containing a systematic listing of all exceptions to §213.109(e)(4) of this part, identified so that an appropriate person(s) designated as fully qualified under §213.7 of this part could field verify each exception.
  - (1) Each exception must be located and field verified no later than 48 hours after the automated inspection.
  - (2) All field-verified exceptions are subject to all the requirements of part 213.
- (g) The track owner shall 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 (2) years. The exception reports must include:
  - (1) Date and location of limits of the inspection;
  - (2) Magnitude and location of each exception; and
  - (3) Results of field verification, and remedial action if required.

- (h) 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:
  - (1) Maintain and make available to FRA documented calibration procedures by the measurement system which, at a minimum, shall specify an instrument verification procedure that will ensure correlation between measurements made on the ground and those recorded by the instrumentation.
  - (2) Maintain each instrument used for determining compliance with this section such that it is accurate to within 1/8<sup>th</sup> of an inch for rail seat deterioration.
- (i) The track owner shall provide training for handling rail seat deterioration exceptions to all persons designated as fully qualified under §213.7 of this part and whose territories are subject to the requirements of §213.234. At a minimum, the training shall address:
  - (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
  - (3) Recordkeeping requirements