

§ 222.21 When must a locomotive horn be used?

(a) Except as provided in this part, the locomotive horn on the lead locomotive of a train, like locomotive consist, individual locomotive or lead cab car shall be sounded when such locomotive or lead cab car is approaching a public highway-rail grade crossing. Sounding of the locomotive horn with two long blasts, one short blast and one long blast shall be initiated at a location so as to be in accordance with paragraph (b) of this section and shall be repeated or prolonged until the locomotive occupies the crossing. This pattern may be varied as necessary where crossings are spaced closely together.

(b) (1) Railroads to which this part applies shall comply with all the requirements contained in this paragraph (b) beginning on December 15, 2006. On and after June 24, 2005, but prior to December 15, 2006, a railroad shall, at its option, comply with this section or shall sound the locomotive horn in the manner required by State law, or in the absence of State law, in the manner required by railroad operating rules in effect immediately prior to June 24, 2005.

(2) Except as provided in paragraphs (b)(3) and (d) of this section, or when the locomotive horn is defective and the locomotive is being moved for repair consistent with section 229.9 of this chapter, the locomotive horn shall begin to be sounded at least 15 seconds, but no more than 20 seconds, before the locomotive enters the crossing. It shall not constitute a violation of this section if, acting in good faith, a locomotive engineer begins sounding the locomotive horn not more than 25 seconds before the locomotive enters the crossing, if the locomotive engineer is unable to precisely estimate the time of arrival of the train at the crossing for whatever reason.

(3) Trains, locomotive consists and individual locomotives traveling at speeds in excess of 60 mph shall not begin sounding the horn more than one-quarter mile (1,320 feet) in advance of the nearest public highway-rail grade crossing, even if the advance warning provided by the locomotive horn will be less than 15 seconds in duration.

(c) As stated in § 222.3(c) of this part, this section does not apply to any Chicago Region highway-rail grade crossing at which railroads were excused from sounding the locomotive horn by the Illinois Commerce Commission, and where railroads did not sound the horn, as of December 18, 2003.

(d) Trains, locomotive consists and individual locomotives that have stopped in close proximity to a public highway-rail grade crossing may approach the crossing and sound the locomotive horn for less than 15 seconds before the locomotive enters the highway-rail grade crossing, if the locomotive engineer is able to determine that the public highway-rail grade crossing is not obstructed and either:

(1) The public highway-rail grade crossing is equipped with automatic flashing lights and gates and the gates are fully lowered; or

(2) There are no conflicting highway movements approaching the public highway-rail grade crossing.

(e) Where State law requires the sounding of a locomotive audible warning device other than the locomotive horn at public highway-rail grade crossings, that locomotive audible warning device shall be sounded in accordance with paragraphs (b) and (d) of this section.

§ 222.25 How does this rule affect private highway-rail grade crossings?

This rule does not require the routine sounding of locomotive horns at private highway-rail grade crossings. However, where State law requires the sounding of a locomotive horn at private highway-rail grade crossings, the locomotive horn shall be sounded in accordance with § 222.21 of this part. Where State law requires the sounding of a locomotive audible warning device other than the locomotive horn at private highway-rail grade crossings, that locomotive audible warning device shall be sounded in accordance with §§ 222.21(b) and (d) of this part.

(a) Private highway-rail grade crossings located within the boundaries of a quiet zone must be included in the quiet zone.

(b) (1) Private highway-rail grade crossings that are located in New Quiet Zones or New Partial Quiet Zones and allow access to the public, or which provide access to active industrial or commercial sites, must be evaluated by a diagnostic team and equipped or treated in accordance with the recommendations of such diagnostic team.

(2) The public authority shall provide the State agency responsible for grade crossing safety and all affected railroads an opportunity to participate in the diagnostic team review of private highway-rail grade crossings.

(c) (1) At a minimum, each approach to every private highway-rail grade crossing within a New Quiet Zone or New Partial Quiet Zone shall be marked by a crossbuck and a "STOP" sign, which are compliant with MUTCD standards unless otherwise prescribed by State law, and shall be equipped with advance warning signs in compliance with § 222.35(c) of this part.

(2) At a minimum, each approach to every private highway-rail grade crossing within a Pre-Rule Quiet Zone or Pre-Rule Partial Quiet Zone shall, by June 24, 2008, be marked by a crossbuck and a "STOP" sign, which are compliant with MUTCD standards unless otherwise prescribed by State law, and shall be equipped with advance warning signs in compliance with § 222.35(c) of this part.

§ 222.27 How does this rule affect pedestrian grade crossings?

This rule does not require the routine sounding of locomotive horns at pedestrian grade crossings. However, where State law requires the sounding of a locomotive horn at pedestrian grade crossings, the locomotive horn shall be sounded in accordance with § 222.21 of this part. Where State law requires the sounding of a locomotive audible warning device other than the locomotive horn at pedestrian grade crossings, that locomotive audible warning device shall be sounded in accordance with §§ 222.21(b) and (d) of this part.

(a) Pedestrian grade crossings located within the boundaries of a quiet zone must be included in the quiet zone.

(b) Pedestrian grade crossings that are located in New Quiet Zones or New Partial Quiet Zones must be evaluated by a diagnostic team and equipped or treated in accordance with the recommendations of such diagnostic team.

(c) The public authority shall provide the State agency responsible for grade crossing safety and all affected railroads an opportunity to participate in diagnostic team reviews of pedestrian grade crossings.

(d) Advance warning signs.

(1) Each approach to every pedestrian grade crossing within a New Quiet Zone shall be equipped with a sign that advises the pedestrian that train horns are not sounded at the crossing. Such sign shall conform to the standards contained in the MUTCD.

(2) Each approach to every pedestrian grade crossing within a New Partial Quiet Zone shall be equipped with a sign that advises the pedestrian that train horns are not sounded at the crossing or that train horns are not sounded at the crossing between the hours of 10 p.m. and 7 a.m., whichever is applicable. Such sign shall conform to the standards contained in the MUTCD.

(3) Each approach to every pedestrian grade crossing within a Pre-Rule Quiet Zone shall be equipped by June 24, 2008 with a sign that advises the pedestrian that train horns are not sounded at the crossing. Such sign shall conform to the standards contained in the MUTCD.

(4) Each approach to every pedestrian grade crossing within a Pre-Rule Partial Quiet Zone shall be equipped by June 24, 2008 with a sign that advises the pedestrian that train horns are not sounded at the crossing or that train horns are not sounded at the crossing for a specified period of time, whichever is applicable. Such sign shall conform to the standards contained in the MUTCD.

Section-by-Section Analysis

Section 222.21 When must a locomotive horn be used?

This section has been revised in order to address the movement of locomotives with inoperative horns, extend the compliance date of paragraph (b) of this section by 120 days, provide a good-faith exception for locomotive engineers who sound the locomotive horn for more than 20 seconds when approaching public crossings, address the sounding of locomotive audible warning devices at public highway-rail grade crossings when required by State and local law and provide a limited exception to the minimum audible warning requirement for trains and locomotives that have stopped in close proximity to a public highway-rail grade crossing.

Paragraph (a) of this section requires locomotive engineers to initiate locomotive horn sounding, in accordance with paragraph (b) of this section, and to continue sounding the locomotive horn until the lead locomotive blocks access to the crossing from all roadway approaches. FRA received a petition for reconsideration on this issue from James Adams, a resident of Placentia, California, who suggested that FRA require the locomotive engineer to sound only those locomotive horns which point in the direction of locomotive travel, in order to reduce unnecessary horn noise impacts from the sounding of locomotive horns that are pointed against the direction of travel. Most locomotive horns, particularly in freight service, are designed to provide warning in both directions of travel; and the engineer has no ability to select warning only in the forward direction. FRA will, however, continue research into more selective and effective means of providing audible warnings and may make further proposals in subsequent proceedings.

Minor typographical revisions have been made in paragraph (a) of this section. Paragraph (b) of this section has been revised to provide an exception to the locomotive horn sounding requirements for locomotive engineers who discover that the locomotive horn on the lead locomotive has failed enroute. Should this situation occur, the locomotive must be moved for repair in accordance with § 229.9 of this chapter. In addition, any movement of the locomotive with the inoperative horn over highway-rail grade crossings must be made in accordance with all applicable railroad operating rules.

Paragraph (b) of this section has also been revised in response to petitions for reconsideration that were submitted by the AAR and the BNSF Railway Company (BNSF), as well as letters that were submitted by the Brotherhood of Locomotive Engineers and Trainmen (BLET) and the United Transportation Union (UTU), which were submitted in support of certain provisions contained within the AAR's petition for reconsideration.

In the AAR's petition for reconsideration, the AAR asserted that the current compliance date for the locomotive horn sounding requirements set forth in this paragraph would require a rapid transition from State law. The AAR asserted that such a transition would not be in the public interest, as locomotive engineers would be required to comply with time-based audible warning requirements without the benefit of training and/or properly placed whistle posts. Therefore, the AAR requested that FRA postpone the [71 Fed. Reg. 47618] compliance date of these requirements for one year.

FRA notes that railroads have been aware of the time-based audible warning requirements of this section for some time, as FRA's Interim Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings, which was published on December 18, 2003, contained a 15–20 second audible warning requirement. While FRA is aware of the fact that the AAR objected to the 15–20 second audible warning requirement in its comments on the Interim Final Rule, the 15–20 second audible warning requirement contained within the Final Rule should not have been

a complete surprise to the railroad industry. Nonetheless, in the interest of railroad safety, FRA has added paragraph (b)(1) to this section, which delays the compliance date of the time-based audible warning requirement by 120 days from the date of publication of this Notice in order to give railroads additional time within which to adjust whistle posts and/or issue appropriate instructions to train crews. In the interim, railroads must either comply with the locomotive horn sounding requirements that were in effect immediately prior to June 24, 2005 (i.e., State law or, in the absence of State law, railroad operating rules) or this section.

The AAR, BNSF, BLET, and UTU also indicated significant concerns that situations may arise in which engineers are unable to precisely estimate the point at which sounding of the horn should be initiated in order to meet the 15–20 second criterion of the final rule. The AAR, BLET and UTU suggest that a good faith exception be employed where circumstances make it difficult to estimate the time of arrival, citing concerns about liability. This could include cases where whistle boards are placed irregularly (confounding an engineer's attempt to begin a "countdown" at a fixed point), where weather conditions make identification of landmarks difficult, where the train is accelerating or braking on approach to the crossing, and under other circumstances.

In sum, AAR's petition appeared to focus on short and long audible warnings, while the BLET and the UTU expressed concern with respect to exceeding the 20-second audible warning requirement. On the other hand, BNSF expressed concern with the time-based nature of the locomotive horn sounding requirement and requested that the locomotive horn continue to be sounded from a fixed point of reference, such as a whistle post.

FRA appreciates these concerns. FRA is also cognizant that previously existing State law requirements, and requirements of railroad operating rules have required distance-based use of the horn for many years, with attendant liability for non-compliance where collisions occur. However, FRA believes that adjustment to a time-based approach can, and should be readily accomplished, since locomotive engineers are required to be familiar with their territory and are accustomed to meeting these kinds of challenges. The time-based approach will allow the railroads to provide effective warning without incurring the animus of local communities associated with sounding the horn for a full quarter-mile when trains are operated at a low speed. The time-based approach incorporates the strategy used by the locomotive engineer who "took mercy" on the community by exercising discretion, when operating a slow-moving train, to delay the onset of horn sounding at grade crossings.

FRA believes that it is important that sufficient warning be provided to the motorist who needs time to recognize the audible signal, understand its message, initiate a reaction, and take appropriate action when approaching the crossing. Other standards for other active warning at highway-rail crossings call for at least 20 seconds of advance warning (see 49 CFR 234.225), and it is typical for basic signal arrangements to provide 30 seconds' warning or more. At crossings equipped with active warning devices, the locomotive horn generally provides a last-minute, additional warning to the motorist of the impending arrival of a train. Thus, it appears quite necessary and appropriate to retain the minimum 15-second warning requirement, given the need for uniformity and the wide range of conditions on the roadway approach to highway-rail crossings (including road speeds as high as 55 miles per hour).

Nevertheless, FRA agrees that employees should err on the side of safety when there is any uncertainty. In a case where situational awareness is partially compromised, an employee should not hesitate to begin a horn sounding sequence because of fear that excessive warning might be provided. Accordingly, former paragraph (b)(1), which has been renumbered as paragraph (b)(2) of this section, has been amended to state explicitly that exceeding the maximum warning time

up to a limit of 25 seconds will not constitute a violation of this section if the action is taken in good faith. This is intended to affirm the action of an employee who errs on the side of safety in a particular instance, and not to condone the actions of an engineer who willfully disregards the 20-second limitation for normal operations. FRA will also utilize enforcement discretion for cases in excess of 25 seconds where unusual circumstances provide a justification.

Former paragraph (b)(2), which has been renumbered as paragraph (b)(3) of this section, has also been revised in order to correct a typographical error. Trains, locomotive consists (two or more locomotives traveling together without any train cars attached), and individual locomotives traveling at speeds in excess of 60 mph are prohibited from providing an advance warning more than one-quarter mile in advance of public grade crossings, even if this means that high-speed trains, locomotive consists, and individual locomotives cannot provide an advance warning of at least 15 seconds in duration.

Paragraph (c) of this section has not been revised.

Paragraph (d) has been added to this section to address locomotive horn sounding when a train, locomotive consist, or individual locomotive has stopped in close proximity to a public highway-rail grade crossing. Trains and locomotives may stop in close proximity to public grade crossings during switching and/or commuter rail operations, especially when passenger stations are located in close proximity to public highway-rail grade crossings. In light of the low train speed associated with initiating train or locomotive movement from a complete stop, as well as FRA's intent to minimize local noise impacts where feasible, paragraph (d) will allow the locomotive engineer to sound the locomotive horn for less than 15 seconds before entering a public highway-rail grade crossing, when initiating movement from a complete stop in the close proximity of a public highway-rail grade crossing. Even though passenger stations located adjacent to public highway-rail grade crossings were the impetus for this revision, FRA notes that this limited exception may apply in other situations where trains have stopped in close proximity to public highway-rail grade crossings.

FRA is refraining from providing an exact distance that would constitute "close proximity" as the length of time that it will take for a train to reach the crossing will vary greatly depending on the type and weight of the train. If a train is stopped at a location such that it will take less than fifteen seconds for it to occupy the crossing, it is deemed to be in close proximity.

[71 Fed. Reg. 47619] Paragraph (e) has also been added to this section, in response to a petition for reconsideration submitted by the AAR, in which the AAR requested that 49 CFR Part 222 be revised to preempt State laws that govern the sounding of all locomotive audible warning devices at public highway-rail grade crossings. Without such preemption, the AAR asserted that railroads would be required to initiate locomotive bell sounding at a location specified by State law, which may be inconsistent with the time-based locomotive horn sounding requirement set forth in this section.

FRA is not exercising complete preemption of State laws on the sounding of locomotive audible warning devices at public highway-rail grade crossings. Complete preemption of State laws on this issue could inadvertently remove the valuable warning currently provided by locomotive audible warning devices other than the locomotive horn because the Final Rule does not require the sounding of locomotive audible warning devices, other than the locomotive horn, at public highway-rail grade crossings.

FRA has, however, added this section to ensure that a consistent locomotive audible warning will be provided at public highway-rail grade crossings. Therefore, if State law requires the sounding of a locomotive audible warning device other than the locomotive horn at public high-

way-rail grade crossings, that locomotive audible warning device must be sounded in accordance with paragraphs (b) and (d) of this section. By exercising preemption in this limited manner, FRA hopes to alleviate any potential confusion on the part of the locomotive engineer who might otherwise have been forced to comply with distance-based locomotive bell sounding requirements, as well as time-based locomotive horn sounding requirements, at the same public highway-rail grade crossing.

Section 222.25 How does this rule affect private highway-rail grade crossings?

This section has been revised in response to the AAR petition for reconsideration. In its petition for reconsideration, the AAR expressed support for FRA's decision to refrain from requiring locomotive horn sounding at every private highway-rail grade crossing. However, noting that some States require the sounding of a locomotive horn or the ringing of the locomotive bell at private highway-rail grade crossings, the AAR requested that FRA amend 49 CFR Part 222 by adding an explicit statement of FRA's intent to preempt State law, to the extent that State law requires the sounding of a locomotive audible warning device for a period of time or in a pattern different from the locomotive horn sounding requirements set forth in § 222.21 of this part. After considering this request, as well as the potential for confusion that may result from requiring the locomotive engineer to provide a different audible warning at public highway-rail grade crossings than at private highway-rail grade crossings, FRA revised this section. Thus, if State law requires the sounding of locomotive audible warning devices at private highway-rail grade crossings, the locomotive audible warning device must be sounded in accordance with the locomotive horn sounding requirements set forth in § 222.21 of this part as of December 15, 2006. However, in recognition of the fact that some locomotive audible warning devices (such as the locomotive bell) cannot be sounded in accordance with the locomotive horn sounding pattern required by § 222.21(a) of this part (i.e., two long blasts, one short blast, and one long blast), locomotive audible warning devices other than the locomotive horn need only be sounded in accordance with the time-based locomotive horn sounding requirements set forth in §§ 222.21(b) and (d) of this part.

Paragraph (a) of this section has also been revised, in response to the AAR's petition for reconsideration. In its petition for reconsideration, the AAR asserted that the permissive language in this provision could mislead public authorities into thinking that they are not required to address private highway-rail grade crossings when establishing their quiet zones. After considering this assertion, FRA noted that public authorities located in States that do not require locomotive horn sounding at private highway-rail grade crossings might erroneously assume that it will not be necessary to include and/or improve private highway-rail grade crossings located within the boundaries of their quiet zone. Therefore, FRA revised this paragraph in order to clarify that all private highway-rail grade crossings located within the boundaries of a quiet zone must be treated in accordance with this part.

Paragraph (b)(1) of this section has been revised to clarify that all private highway-rail grade crossings that are located in New Quiet Zones or New Partial Quiet Zones must be evaluated by a diagnostic team and then equipped or treated in accordance with the diagnostic team recommendations, if the private highway-rail grade crossings allow access to the public or provide access to active industrial or commercial sites. Paragraph (b)(2) of this section has not been revised.

Paragraph (c) of this section has also been revised to clarify that crossbucks and "STOP" signs must be installed at each approach to private highway-rail grade crossings that are located within quiet zones.

Section 222.27 How does this rule affect pedestrian grade crossings?

This section has been revised in response to the AAR petition for reconsideration. In its petition for reconsideration, the AAR expressed [71 Fed. Reg. 47620] support for FRA's decision to refrain from requiring locomotive horn sounding at pedestrian grade crossings. However, after asserting that some States may require the sounding of a locomotive audible warning device at pedestrian grade crossings, the AAR requested that FRA amend 49 CFR Part 222 by adding an explicit statement of FRA's intent to preempt State law, to the extent that State law requires the sounding of a locomotive audible warning device for a period of time or in a pattern different from the locomotive horn sounding requirements set forth in § 222.21 of this part. After considering this request, as well as the potential for confusion that may result from requiring the locomotive engineer to provide a different audible warning at public highway-rail grade crossings than at pedestrian grade crossings, FRA revised this section. Therefore, if State law requires the sounding of a locomotive audible warning device at pedestrian grade crossings, the locomotive audible warning device must be sounded in accordance with the locomotive horn sounding requirements set forth in § 222.21 of this part as of December 15, 2006. However, in recognition of the fact that some locomotive audible warning devices (such as the locomotive bell) cannot be sounded in accordance with the locomotive horn sounding pattern required by § 222.21(a) of this part (i.e., two long blasts, one short blast, and one long blast), locomotive audible warning devices other than the locomotive horn need only be sounded in accordance with the time-based locomotive horn sounding requirements set forth in §§ 222.21(b) and (d) of this part.

Paragraph (a) of this section has also been revised, in response to the AAR's petition for reconsideration. In its petition for reconsideration, the AAR expressed concern that the permissive language contained in paragraph (a) of this section could mislead public authorities into thinking that they are not required to address pedestrian crossings when establishing their quiet zones. After considering this assertion, FRA noted that public authorities located in States that do not require locomotive horn sounding at pedestrian grade crossings might erroneously assume that it will not be necessary to include and/or improve pedestrian grade crossings located within the boundaries of their quiet zone. Therefore, FRA revised this paragraph in order to clarify that all pedestrian grade crossings located within the boundaries of a quiet zone must be treated in accordance with this part.

Paragraph (b) of this section has been revised to clarify that all pedestrian grade crossings that are located in New Quiet Zones or New Partial Quiet Zones must be evaluated by a diagnostic team and then equipped or treated in accordance with the diagnostic team recommendations, if the pedestrian grade crossings allow access to the public or provide access to active industrial or commercial sites.

A minor typographical edit has been made to paragraph (c) of this section.

Paragraph (d) of this section has also been revised in response to the AAR petition for reconsideration. In its petition for reconsideration, the AAR asserted that paragraph (d) of this section requires the installation of signs at pedestrian crossings that could potentially be misleading. In light of the fact that partial quiet zones may be established in States that do not require locomotive horn sounding at pedestrian grade crossings, the AAR expressed concern that pedestrians encountering time-specific warning signs when the partial quiet zone is not in effect might assume that the locomotive horn will be sounded by approaching trains. After considering this issue, FRA agreed that the Final Rule's warning sign requirement could be misleading to pedestrians. Therefore, in order to minimize confusion, paragraphs (d)(2) and (d)(4) of this section have been revised to give public authorities the flexibility to install warning signs which ad-

advise pedestrians that train horns will not be sounded, but do not list the hours within which the partial quiet zone will be in effect. Thus, if State law does not require locomotive horn sounding at pedestrian grade crossings, signs that indicate that horns are not sounded would be appropriate. However, if State law requires locomotive horn sounding during non-quiet zone hours, then signs indicating that horns are not sounded between stated hours of the partial quiet zone would be appropriate. Paragraph (d) of this section has also been revised to clarify that advance warning signs must be installed on each approach to pedestrian grade crossings located within quiet zones.