

• If school buses or transit buses use crossings within the proposed quiet zone corridor, can they be rerouted to a use single crossing within or outside of the quiet zone?

#### Private Crossings Within a Proposed Quiet Zone

In addition to the items discussed above, a diagnostic team should examine the following for any private crossings within a proposed quiet zone:

- How often is the private crossing used?
- What kind of signing or pavement markings are in place at the private crossing?

• What types of vehicles use the private crossing?

School buses  
Large trucks  
Hazmat carriers  
Farm equipment

- What is the volume, speed and type of train traffic over the crossing?
- Do passenger trains use the crossing?
- Do approaching trains sound the horn at private crossings?
- State or local law forbids or requires it?
- Railroad safety rule requires it?

• Are there any nearby crossings where train horns sound that might also provide some warning at the private crossing where no horns sound?

- What are the approach (corner) sight distances?
- What is the clearing sight distance for all approaches?
- What are the private roadway approach grades?
- What are the private roadway pavement surfaces?

#### Appendix G to Part 222—Schedule of Civil Penalties <sup>1</sup>

Section	Violation	Willful violation
<b>Subpart B—Use of Locomotive Horns</b>		
§ 222.21 Use of locomotive horn:		
(a) Failure to sound horn at grade crossing .....	\$5,000	\$7,500
Failure to sound horn in proper pattern .....	1,000	3,000
(b) Failure to sound horn at least 15 and no more than 20 seconds before crossing .....	5,000	7,500
Sounding horn more than ¼ mile in advance of crossing .....	1,000	4,000
§ 222.33 Failure to sound horn when conditions of § 222.33 are not met .....	5,000	7,500
§ 222.45 Sounding locomotive horn at a grade crossing within a quiet zone .....	1,500	5,000
§ 222.49 (b) Failure to provide Grade Crossing Inventory Form information .....	2,500	5,000
§ 222.59 (c) Routine sounding locomotive horn at a grade crossing equipped with wayside horn .....	5,000	7,500

<sup>1</sup> A penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$20,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A.

## PART 229—[AMENDED]

■ 2. The authority citation for part 229 continues to read as follows:

**Authority:** 49 U.S.C. 20102–20103, 20107, 20133, 20137–20138, 20143, 20701–20703, 21301–20302, 21304; 49 CFR 149(c), (m).

■ 3. Section 229.129 is revised to read as follows:

#### § 229.129 Audible warning device.

(a) Each lead locomotive shall be provided with an audible warning device that produces a minimum sound level of 96dB(A) and a maximum sound level of 110 dB(A) at 100 feet forward of the locomotive in its direction of travel. The device shall be arranged so that it can be conveniently operated from the engineer's usual position during operation of the locomotive.

(b)(1) Each locomotive built on or after December 18, 2004, shall be tested in accordance with this section to ensure that the horn installed on such locomotive is in compliance with paragraph (a) of this section.

(2) Each locomotive built before December 18, 2004, shall be tested in accordance with this section before December 18, 2008, to ensure that the horn installed on such locomotive is in compliance with paragraph (a) of this section.

(3) Each locomotive when rebuilt, as determined pursuant to 49 CFR 232.5, shall be tested in accordance with this section to ensure that the horn installed

on such locomotive is in compliance with paragraph (a).

(c) Testing of horn locomotive horn sound level shall be in accord with the following requirements:

(1) A properly calibrated sound level meter shall be used that, at a minimum, complies with the requirements of International Electrotechnical Commission (IEC) Standard 61672–1 (2002–05) for a Class 2 instrument.

(2) An acoustic calibrator shall be used that, at a minimum, complies with the requirements of IEC Standard 60942 (1997–11) for a Class 2 instrument.

(3) The manufacturer's instructions pertaining to mounting and orienting the microphone; positioning of the observer; and periodic factory recalibration shall be followed.

(4) A microphone windscreen shall be used and tripods or similar microphone mountings shall be used that minimize interference with the sound being measured.

(5) The test site shall be free of large reflective structures, such as barriers, hills, billboards, tractor trailers or other large vehicles, locomotives or rail cars on adjacent tracks, bridges or buildings, within 400 feet in front of the locomotive and within 200 feet to the sides of the locomotive and microphone. The locomotive shall be positioned on straight, level track.

(6) Measurements shall be taken only when ambient air temperature is between 36 degrees and 95 degrees Fahrenheit inclusively; relative humidity is between 20 percent and 95

percent inclusively; wind velocity is not more than 12 mile per hour and there is no precipitation.

(7) The microphone shall be located 100 feet forward of the front knuckle of the locomotive, 15 feet above the top of rail, at the center line of the track, and oriented with respect to the sound source according to the manufacturer's recommendations. The observer shall not stand between the microphone and the horn.

(8) Background noise shall be minimal: the sound level at the test site immediately before and after each horn sounding event shall be at least 10 dB(A) below the level measured during the horn sounding.

(9) *Measurement procedures.* The sound level meter shall be set for A-weighting with slow exponential response and shall be calibrated with the acoustic calibrator immediately before and after compliance tests. Any change in the before and after calibration levels shall be less than 0.5 dB. After the output from the locomotive horn system has reached a stable level, the A-weighted equivalent sound level (slow response) for a 20 second duration (LAeq,20s) shall be obtained either directly using an integrating-averaging sound level meter, or recorded once per second and calculated indirectly. The arithmetic-average of a series of at least six such readings shall be used to determine compliance. The standard deviation of the readings shall be less than 1.5 dB.