

## Quiet Zone Question and Answers

### **Are trains required to sound their horn at crossings?**

The Federal Railroad Administration (FRA) train horn rule requires a train engineer to sound a horn at least 15 seconds, and no more than 20 seconds, before reaching a public grade crossing. The horns must follow a pattern of 2 long blasts, 1 short blast, and 1 long blast. The minimum sound level for a horn is 96 decibels and the maximum sound level is 110 decibels.

### **What is a quiet zone?**

A quiet zone is a stretch of tracks – a minimum of ½ mile in length with a ¼ mile buffer on either end before the next crossing– where railroads are directed to not blow their horns when approaching at-grade street crossings except in the case of emergency situations. This can extend for 24 hours or just for specified hours such as at night. A quiet zone can only be established when there are other safety measures at the crossings to make up for the silencing of horns. These measures can include specific types of crossing gates, medians that prevent cars from going around gates, closing crossings, and wayside horns positioned at the crossing.

### **How does a city initiate a Quiet Zone?**

The process for establishing a quiet zone requires working with the FRA, ODOT Rail, City and the affected railroad companies. The process starts with an application to the FRA. Then ODOT Rail and the RR become involved. These agencies, along with the City form a diagnostic team to evaluate the risk of collision between trains and vehicles at each crossing, as well as any necessary improvements that need to be made to deem the crossing safe for a quiet zone. After that, it is up to the local jurisdictions to go through the various steps to get federal approval of the quiet zone and get authority from ODOT Rail to install the required safety equipment and signage.

### **Will a SSM at a crossing satisfy a QZ improvement at a crossing?**

Sometimes a Supplemental Safety Measure (SSM), which improves train safety will satisfy the requirement for a QZ improvement but not always. Each crossing is evaluated by the diagnostic team (FRA, ODOT Rail, the RR and the City). A SSM improvement at one crossing may not be the QZ solution at a different crossing. A QZ improvement is a livability issue and a SSM improvement is a train safety issue. They may be similar solutions but they are treated differently by the FRA.

### **Are there grants available to pay for the required crossing improvements?**

There are grants for SSM improvements at crossings but not QZ improvements to crossings. SSM is a train safety improvement and FRA funds may be available, but a QZ improvement is a livability issue and therefore costs must be borne by the community.

### **What safety measures are required at crossings for quiet zones?**

Examples of engineered supplemental safety improvements that may be necessary to reduce the risk of train-vehicle collisions include:

- permanent closure of the crossing to vehicle traffic;
- raised medians on one, or, both sides of the railroad tracks to prevent motorists from driving around lowered crossing gates;
- converting two-way streets to one-way travel; and
- 4 quadrant gates.

The use of wayside horns, in lieu of train horns, may also be evaluated as an option to train horns. If supplemental safety measures are found to be needed, it would be considered an alteration of the crossing, and they must be authorized by ODOT Rail Division in a crossing Order.

**Could Ashland designate a Quiet Zone without approval by FRA? The US code below references the Nationwide Significant Risk Threshold. How do we know if the crossings in Ashland are at or below that threshold?**

**§ 222.39 How is a quiet zone established?**

(a) *Public authority designation.* This paragraph (a) describes how a quiet zone may be designated by a public authority without the need for formal application to, and approval by, FRA. If a public authority complies with either paragraph (a)(1), (a)(2), or (a)(3) of this section, and complies with the information and notification provisions of § 222.43 of this part, a public authority may designate a quiet zone without the necessity for FRA review and approval.

(1) A quiet zone may be established by implementing, at every public highway-rail grade crossing within the quiet zone, one or more SSMs identified in appendix A of this part.

(2) A quiet zone may be established if the Quiet Zone Risk Index is at, or below, the Nationwide Significant Risk Threshold, as follows:

(i) If the Quiet Zone Risk Index is already at, or below, the Nationwide Significant Risk Threshold without being reduced by implementation of SSMs; or

(ii) If SSMs are implemented which are sufficient to reduce the Quiet Zone Risk Index to a level at, or below, the Nationwide Significant Risk Threshold.

(3) A quiet zone may be established if SSMs are implemented which are sufficient to reduce the Quiet Zone Risk Index to a level at or below the Risk Index With Horns.

**Under what circumstances can wayside horns be installed in lieu of crossing gates?**

Wayside horns are not an applicable replacement for crossing gates. Wayside horns are a one-for-one trade with a train horn

**Does an at-grade crossing with crossing gates automatically qualify for a quiet zone status?**

No it does not. The minimum requirement is train activated crossing gates and flashing lights. Most crossing require additional SSM's

**Is there any way to bypass the diagnostic study process?**

Possibly. If the proposed crossings meet, or exceed the required safety threshold and there are no private crossings or pedestrian crossings within the proposed Quiet Zone, and there are no public crossings within ¼ mile of the nearest crossing in the proposed Quiet Zone.

**What are some of the factors used by the FRA to determine the risk of vehicle/train collision risk?**

CFR 49 part 222, Appendix D, explains how the FRA determines the risk level, and is two pages in length. The basics are:

- Average annual daily traffic
- Total number of trains per day
- Number of highway lanes
- Number of tracks
- Maximum timetable train speed
- Whether the highway is paved or not
- Number of through trains per day during daylight hours
- History on incidents at crossing