

TECH NEWS

TECHNOLOGY NEWS

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Safe rail crossings without train horns

Effective April 1, 2005, Iowa communities will be able to establish “quiet zones” at qualifying public highway-rail grade crossings. A quiet zone is a section of rail line in which trains do not generally sound their horns except in emergencies.

Quality of life

Silencing train horns in approved quiet zones can improve the quality of community life without increasing the risk of collisions at highway-rail crossings.

Wayside horns (stationary horns located at crossings that warn motorists of approaching trains) may be used in conjunction with quiet zones.

In communities that continue to allow train horns, new maximum horn sound levels and horn sounding requirements, also effective April 1, will reduce noise at public crossings.

Quiet zone requirements

The Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings will be issued in January 2005 and becomes effective April 1. The following information is based on the Interim Final Rule published on December 18, 2003.

To qualify a section of rail line as a quiet zone, the government agency responsible for motor vehicle safety at the affected crossings must apply to the Federal Railroad Administration (FRA).

In general, a proposed quiet zone must meet the following requirements:

- It must be at least one-half mile long (there is no maximum length).
- Automatic grade crossing warning devices (flashing lights and gates) must be installed at all crossings within the proposed zone, and advance signs installed on all roadway approaches warning motorists that train horns are not sounded.
- Supplemental safety measures, like installing gates with medians or installing four-quadrant gates to fully close off access to the

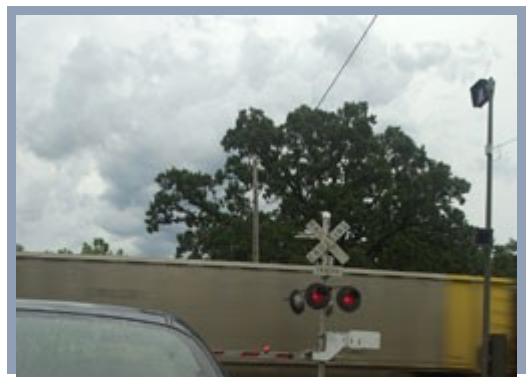


Clark Avenue, Ames. *Photo courtesy of the Iowa DOT*

Funding safety improvements at RR crossings

When considering funding for safety improvements at crossings in potential quiet zones, remember that the Iowa DOT can fund only improvements that would ordinarily qualify as Section 130 grade crossing safety improvements.

For example, Marshalltown is planning to install median barriers at several crossings in a potential quiet zone; only one of the installations qualified for safety funding under the Iowa DOT guidelines.



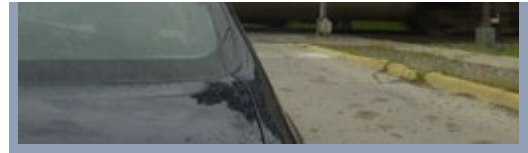
crossing, may be necessary.

Proposed quiet zones receive safety ratings based on the entire proposed corridor. It is possible that not every crossing within the corridor will need supplemental measures.

The Interim Final Rule provides for direct substitution of wayside horns (like those used in Ames) for the train horn without going through the above safety rating process.

The goal is to adequately compensate for the lack of train horns and/or reduce the risk to a level below the Nationwide Significant Risk Threshold. The FRA has developed a Quiet Zone Calculator to help local planners consider a variety of options for adequately reducing risk.

The local agency is also responsible for funding any necessary improvements. In some situations, the Iowa DOT and public utilities may be partners in the effort. See the sidebar at left.



Hazel Avenue, Ames. *Photo courtesy of the Iowa DOT*

Will quiet zones really be quiet?

Establishing a quiet zone does not guarantee that train horns will never be sounded within the zone.

The train engineer may sound the horn in an emergency, and must sound it if automatic warning devices are not functioning properly or if workers are present in track work zones.

Safety remains the ultimate “authority.”

Quiet zones in Iowa

There are more than 4,500 public highway-rail crossings in Iowa, most of which are at grade.

Several communities affected by train noise—including Nevada, Fairfield, State Center, Colo, Tama, Ames, Marshalltown, and Carroll—are investigating or have indicated interest in the possibility of establishing quiet zones. Some towns, however, do not have the resources to investigate options for their communities. And questions remain about implementing the Final Rule.

Concerns include the following:

- What is the role of railroads in establishing and complying with quiet zones, and in accommodating the installation of supplementary safety measures?
- How will multiple highway authorities affected by a quiet zone work together?
- Who is responsible for maintaining new crossing warning devices?
- Will some crossings need to be closed to qualify a section of line as a quiet zone?

Walt McDonald, retired special projects coordinator at the Iowa DOT, is the newly appointed chair of the Iowa League of Cities’ Railroad Task Force. Quiet zones is one of the issues being addressed by the task force.

McDonald would like to see clear criteria established to identify Iowa communities that might be logical candidates for quiet zones. Helpful information could then be targeted to those communities and efforts coordinated with the involved railroads, the FRA, and the Iowa DOT.

City of Nevada

There are approximately 80 train movements a day through Nevada, a central Iowa community of about 6,600 people located at the intersection (and traffic interchange) of the Union Pacific Railroad’s east-west and north-south mainlines.

The city has investigated various options and is preparing to submit a quiet zone application for the east-west track through town, which carries about 65 trains daily.

This track crosses 2nd, 6th, 8th, and 10th Streets, all of which have automatic lights and gates.

The city has installed supplemental safety measures—yellow median barriers—on 2nd, 6th, and 8th Streets. Barriers have

not been installed on 10th Street, providing a route for wide vehicle movements.

McDonald, who is also a Nevada city council member, says that, depending on the actual criteria published in the Final Rule, additional safety enhancements may be required at any or all of the four crossings.

After this initial quiet zone process is completed, the other eight highway-rail crossings on other tracks in the city will be evaluated for development of quiet zones.

For more information

To learn more about Nevada's experience with the quiet zone process, contact Walt McDonald, 515-382-6320, waltis@yahoo.com.

For related information from the Iowa DOT, contact Jim Gibson, Office of Rail Transportation, 515-239-1549, james.gibson@dot.state.ia.us.

For information from the FRA, contact Bennie Howe, regional manager for grade crossings (region 6), 816-407-9651, bennie.howe@fra.dot.gov.

The [Interim Final Rule is published on the FRA website](#), along with frequently asked questions and other information. The [Quiet Zone Calculator is also online](#).
