"Train Horn Rule" Glossary

Alternative Safety Measure (ASM): A safety system or procedure provided by the appropriate traffic control authority which, after individual review and analysis, is determined by the Federal Railroad Administration (FRA) to be an effective substitute for the locomotive horn at specific highway-rail grade crossings. ASMs include:

- Modified Supplementary Safety Measures (SSMs) (see definition below)
- Engineering Alternative Safety Measures (ASMs) (see definition below)
- Non-engineering Alternative Safety Measures (ASMs) include the following:
    - Programmed law enforcement
    - Programmed public education and awareness
    - Photo enforcement

Diagnostic Team: A group of specially trained and qualified experts assembled to make objective judgments about physical and or operating characteristics and conditions at highway-rail crossings. In the context of this rule, a diagnostic team assesses grade crossing safety requirements according to safety management principles.

Engineering Alternative Safety Measures (ASMs): Engineering improvements other than modified SSMs include improvements that address underlying geometric conditions, including sight distance, that are a source on increased risk at the crossing.

Environmental Impact Statement (EIS): Environmental Impact Statements are required of Federal agencies for major regulatory projects or legislative proposals that may significantly affect the physical or natural environment. These statements describe the positive and negative effects of the proposed undertaking and cite possible alternative actions and are required by the National Environmental Policy Act. The U.S. Environmental Protection Agency (EPA) reviews and responds to filed impact statements and makes available a national EIS filing system as well as publishing a weekly notice of EIS documents available for review.

Emergency Order 15 (E.O. 15): Emergency Order 15, issued by the Federal Railroad Administration (FRA) in 1991, required the Florida East Coast Railroad (FEC) to sound locomotive horns at all public highway-rail grade crossings. The Emergency Order preempted state and local laws that permitted nighttime prohibitions on the use of locomotive horns.

Federal Aviation Administration (FAA) Reauthorization Act of 1996: This legislation added two paragraphs to 49 U.S.C. 20153 (the section of the United States Code requiring this rulemaking). One paragraph required that FRA take into account the interests of communities that had existing whistle bans in-effect during a specified time period. The second required that any rule issued under section 20153 could not become effective until at least 365 days after its publication in the *Federal Register*.

Four-Quadrant Gate: Train-activated warning gates that, when lowered, fully block highway traffic from entering the highway-rail grade crossing. Gates lower across both approach and departure lanes on both sides of the grade crossing. Four –quadrant gate systems must conform to standards contained in the *Manual on Uniform Traffic Control Devices* (MUTCD) and satisfy the requirements of the Final Rule.

Intermediate Quiet Zone: A segment of rail line containing one or more public highway-rail grade crossings at which State or local ordinances prohibited the sounding of locomotive horns after October 9, 1996, but were in-effect as of December 18, 2003.

Modified Supplementary Safety Measure (SSM): An SSM that has in some way been adjusted to accommodate unique circumstances existing at a specific highway-rail grade crossing and no longer conforms to the SSM requirements. Modified SSMs are considered ASMs (see definition above). An example would be traffic channelization devices that due to a nearby intersection are only 45 feet in length instead of the required 60 feet.

MUTCD: *The Manual on Uniform Traffic Control Devices*; a guidance document published by the Federal Highway Administration (FHWA) establishing specifications for highway signs, signals, and pavement markings.

Non-engineering Alternative Safety Measure (ASM): Photo enforcement, or a consistent and systematic program of traffic law enforcement, public education programs, or a combination thereof, that produces a measurable reduction of risk at designated quiet zone highway-rail grade crossings.

Nationwide Significant Risk Threshold (NSRT): The average Risk Index of all public, gated highway-rail grade crossings in the nation at which train horns are routinely sounded.

Partial Quiet Zones: A segment of rail line with one or more consecutive public highway-rail grade crossings at which locomotive horns are not routinely sounded for a specified period of time during the evening and/or nighttime hours.

Private Highway-Rail (Grade) Crossing: A location where a private roadway crosses railroad tracks at grade.

Public Highway-Rail (Grade) Crossing: A location where a public highway, road, or street crosses railroad tracks at grade. For this rule, this includes crossings where a public authority maintains the roadway on both sides of the crossing.

Quiet Zone: A quiet zone is a section of a rail line at least one half mile in length that contains one or more consecutive public highway-rail grade crossings at which locomotive horns are not routinely sounded.

Quiet Zone Risk Index: The average risk index for all public crossings in a proposed quiet zone taking into consideration the increased risk caused by the absence of train horns and any decrease in risk attributable to the use of SSMs or ASMs.

Relevant Collision: A highway-rail crossing collision that FRA believes could be prevented by the sounding of the train horn. Specifically, the term excludes collisions with motor vehicles resulting from an activation failure of an active grade crossing warning system; collisions in which there is no driver in the motor vehicle; and collisions where the highway vehicle struck the side of the train beyond the fourth locomotive unit or rail car.

Risk Index: The predicted cost to society of casualties that are expected to result from collisions at an individual crossing.

Risk Index With Horns (RIWH): A measure of risk to the motoring public when locomotive horns are routinely sounded at every public highway-rail grade crossing within a quiet zone.

Supplementary Safety Measure (SSM): SSMs are engineering improvements, which when installed at highway-rail grade crossings within a quiet zone, would reduce the risk of a collision at the crossing. SSMs are installed to reduce the risk level either to the level that would have existed if the train horn were sounded (compensating for the lack of the train horn) or to a level below the Nationwide Significant Risk Threshold. Approved SSMs include:

- Four quadrant gates
- Gates with medians or channelization devices, also known as traffic separators
- One-way streets equipped with gates that fully block the street
- Temporary closure (i.e., nighttime closure)
- Permanent closure

Wayside Horn: A stationary horn located at a highway-rail grade crossing that is designed to provide audible warning to oncoming motorists when a train is approaching. A wayside horn is controlled by the same track circuitry that is configured to activate automatic warning devices at highway-rail grade crossings.

***Whistle ban* or Pre-Rule Quiet Zone:** A *whistle ban* is a local prohibition of the sounding of locomotive horns at specific highway-rail grade crossings. Historically, *whistle bans* were established by local ordinance or through agreements with specific railroads in accordance with existing state law. At whistle ban crossings, no specific safety improvements have been made to compensate for the absence of the audible warning. Pre-Rule Quiet Zones established under this rule may only consist of Whistle Ban crossings that were in effect on October 9, 1996 and on December 18, 2003.