

# **Quiet Zone Design and Establishment**

Please read the following in the order presented:

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- 5. 49 CFR 222 – USE OF LOCOMOTIVE HORNS AT PUBLIC HIGHWAY-RAIL GRADE CROSSINGS. “THE RULE” (*Separate Attachment*)**
- 6. CREATING A NEW QUIET ZONE**
- 7. CHART 2 and CHART 3A**
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- 9. NOTICE OF ESTABLISHMENT (NOE)**

For further assistance, please contact your FRA Regional Grade Crossing Team.

## TRAIN HORN RULE HISTORY AND TIMELINE

July 26, 1991	FRA Administrator Gil Carmichael issues <i>Emergency Order 15</i> that pre-empts 1984 Florida statute permitting local whistle bans at highway-rail grade crossings along the Florida East Coast (FEC) Railway between Jacksonville to Miami.
Nov. 2, 1994	Original statutory mandate enacted by Congress ( <i>Federal Railroad Safety Authorization Act of 1994</i> ) requiring the sounding of locomotive horns at all public highway-rail grade crossings, and to provide exceptions under specific conditions and circumstances.
April 1995	FRA completes and issues <i>Nationwide Study of Train Whistle Bans</i> .
June 1995	Initial public outreach to affected communities begins.
Oct. 9, 1996	<i>Federal Aviation Administration (FAA) Reauthorization Act</i> amends original statutory mandate, requiring FRA to take into consideration the interests of communities with longstanding whistle bans.
Nov. 2, 1996	Deadline for issuing a Final Rule is missed because of expanded public outreach required by previous legislative action, and preparation of Draft Environmental Impact Statement (DEIS).
Jan. 12, 2000	Notice of Proposed Rulemaking (NPRM) and DEIS is issued. FRA conducts extensive stakeholder briefings and outreach.
Jan. 13, 2000	NPRM is published in the <i>Federal Register</i> .
Mar.-May, 2003	FRA conducts twelve (12) public hearings in nine (9) states across the country from March 6, through May 3, 2000.
May 10, 2000	FRA conducts technical conference on train horn acoustics.
May 26, 2000	NPRM comment period concludes (Total: 133 days).
July 18, 2000	Deputy Administrator Jack Wells testified before Surface Transportation Subcommittee of House Transportation and Infrastructure Committee (T&I), the first dedicated congressional hearing ever on this topic.
Dec. 21, 2000	<i>Omnibus Consolidated Appropriations Act</i> requires FRA to delay of issuance of a Final Rule until after July 1, 2001.
Dec. 18, 2003	IFR published in the Federal Register; effective date of Dec. 18, 2004.

## TRAIN HORN RULE HISTORY AND TIMELINE

Feb. 4, 2004	FRA conducts public hearing on IFR.
Feb. 17, 2004	IFR Public comment period scheduled to close, but extended at the request of various stakeholders seeking additional time to prepare and submit comments.
April 19, 2004	Extended IFR comment period concludes.
Nov. 22, 2004	IFR effective date changed to April 1, 2005.
Mar. 18, 2005	IFR effective date changed to June 24, 2005.
April 22, 2005	Final Rule on display at the <i>Federal Register</i> .
April 27, 2005	Final Rule published in the <i>Federal Register</i> .
June 24, 2005	Final Rule goes into effect.



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## **THE “TRAIN HORN” FINAL RULE**

### **Quick Facts**

#### **BACKGROUND**

- Fulfills the legislative requirement that locomotive horns be sounded at public highway-rail crossings and provides flexibility to localities to silence horns. The rule will go into effect on June 24, 2005, at which time state and local laws governing the same subject matter will be preempted.
- Provides important risk-based exceptions so that many communities can establish and maintain quiet zones without making significant investments.
- Provides flexibility to select “” and “alternative” safety measures that compensate for loss of the train horn. Communities may propose alternative engineering solutions along with risk reduction effectiveness estimates.
- Outside of quiet zones established in accordance with the rule, requires railroad to sound horn 15 – 20 seconds prior to arrival at the crossing rather than for ¼ mile (as required by most applicable state laws) regardless of speed. This results in horns sounding over shorter distances and/or duration at many locations. The rule prescribes both a *minimum* and *maximum* volume level for the train horn. Overall effect: less noise.

#### **NEW QUIET ZONES:**

A new quiet zone may be created if all public crossings along the designated rail line are equipped with conventional flashing lights and gates; and either –

- After adjusting for increased risk resulting from the silencing the train horn, the average risk at the crossings is less than the national average for gated crossings where the train horn sounds (National Significant Risk Threshold or “NSRT”); or
- Safety improvements are made that reduce the risk to a level either less than the NSRT or a level that compensates for loss of the train horn as a warning device.

## **EXISTING “Whistle Bans”:**

Existing whistle bans may be converted to quiet zones (Pre-Rule Quiet Zones) if:

- The average risk at the crossings is less than NSRT; or
- The average risk is less than twice the NSRT and no relevant collisions have occurred within the past 5 years; or
- The community undertakes actions to compensate for lack of the train horn as a warning device (or at least to reduce average risk to below the NSRT).
- Train horns will not sound in existing whistle ban areas if authorities provide proper notification to maintain Pre-Rule Quiet Zones and do whatever is required (see above) within 5 years of the effective date of the Final Rule (8 years if the State agency provides at least some assistance to communities in that State).
- “Intermediate Quiet Zones” are whistle bans that were implemented after October 9, 1996 and were in existence as of December 18, 2003. Train horns will not sound for one year (until June 24, 2006) if authorities provide proper notification by June 3, 2005 according to the rule. During this one-year period, the authorities may implement necessary improvements to qualify as a New Quiet Zone.

## **Automated Wayside Horns**

- Permits automated wayside horns as a substitute for the locomotive horn at crossings equipped with flashing lights and gates.

This Final Rule will be effective on June 24, 2005.

Extensive information about the Final Rule is available at: <http://www.fra.dot.gov>

*Disclaimer: This summary of the final rule is for initial briefing purposes only. Entities subject to the rule should refer to its text as published in the Federal Register on April 27, 2005.*

# THE “TRAIN HORN” FINAL RULE

## Summary

### 1. Overview:

- The Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings, published in the Federal Register on April 27, 2005, is intended to:
  - Maintain a high level of public safety;
  - Respond to the varied concerns of many communities that have sought relief from unwanted horn noise; and
  - Take into consideration the interests of localities with *existing* whistle bans.
- Currently, state laws and railroad operating rules govern use of the horn at highway-rail grade crossings. When this rule takes effect, it will determine when the horn is sounded at public crossings (and private crossings within “quiet zones”).
- This Final Rule was mandated by law <sup>1</sup>and was issued by the Federal Railroad Administration (FRA) after consideration of almost 1,400 public comments on the Interim Final Rule (IFR) (68 FR 70586) published December 18, 2003.
- Consistent with the statutory mandate requiring its issuance, the rule requires that locomotive horns be sounded at public highway-rail grade crossings, but provides several exceptions to that requirement.
- Local public authorities may designate or request approval of, quiet zones in which train horns may not be routinely sounded. The details for establishment of quiet zones differ depending on the type of quiet zone to be created (Pre-Rule or New) and the type of safety improvements implemented (if required).
- Horns may continue to be silenced at Pre-Rule Quiet Zones provided certain actions are taken.
- Intermediate Quiet Zones (whistle bans that were implemented after October 9, 1996 but before December 18, 2003) may continue to have the horns silenced for one year (until June 24, 2006) provided certain actions are taken; after which time they must comply with the provisions for a New Quiet Zone if the horns are to remain silent.

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<sup>1</sup> 49 U.S.C. 20153

- The rule goes into effect on June 24, 2005.
- Pre-Rule Quiet Zones in the six county Chicago region are excepted from the provisions of this rule pending further evaluation of the data.

## **2. Requirement to sound the locomotive horn:**

- Outside of quiet zones, railroads must sound the horn 15-20 seconds prior to a train's arrival at the highway-rail grade crossing, but not more than ¼ mile in advance of the crossing.
  - ❖ NOTE: Most State laws and railroad rules currently require that the horn be sounded beginning at a point ¼ mile in advance of the highway-rail grade crossing and continued until the crossing is occupied by the locomotive. Under the rule, for trains running at less than 45 mph, this will reduce the time and distance over which the horn is sounded. This will reduce noise impacts on local communities.
- The pattern for sounding the horn will remain, as it currently exists today (two long – one short – one long) repeated or prolonged until the locomotive occupies the highway-rail grade crossing).
- Locomotive engineers may vary this pattern as necessary where highway-rail grade crossings are closely spaced; and they will also be empowered (but not required) to sound the horn in the case of an emergency, even in a quiet zone.
- The rule addresses use of the horn only with respect to highway-rail grade crossings. Railroads remain free to use the horn for other purposes as prescribed in railroad operating rules on file with FRA, and railroads must use the horn as specified in other FRA regulations (in support of roadway worker safety and in the case of malfunctions of highway-rail grade crossing active warning devices).
- The rule prescribes both a minimum and maximum volume level for the train horn. The minimum level is retained at 96 dBA and the new maximum will be 110 dBA. This range will permit railroads to address safety needs in their operating territory (see discussion in the preamble).
- The protocol for testing the locomotive horn will be altered to place the sound-level meter at a height of 15 feet above top of rail, rather than the current 4 feet above the top of the rail. Cab-mounted and low-mounted horns will continue to have the sound-level meter placed 4 feet above the top of the rail.
  - ❖ NOTE: The effect of this change will be to permit center-mounted horns to be “turned down” in some cases. The previous test method was influenced by the “shadow effect”

created by the body of the locomotive to indicate a lower sound level than would otherwise be expected several hundred feet in front of the locomotive (where the crossing and approaching motorists are located).

- The effect of these changes will reduce noise impacts for 3.4 million of the 9.3 million people currently affected by train horn noise.

### 3. Creation of Quiet Zones

- The rule provides significant flexibility to communities to create quiet zones; both where there are existing whistle bans and in other communities that heretofore have had no opportunity to do so.
- The Final Rule permits implementation of quiet zones in low-risk locales without requiring the addition of safety improvements.
  - This concept utilizes a risk index approach that estimates expected safety outcomes (that is, the likelihood of a fatal or non-fatal casualty resulting from a collision at a highway-rail crossing).
  - Risk may be averaged over crossings in a proposed quiet zone.
  - Average risk within the proposed quiet zone is then compared with the average nationwide risk at gated crossings where the horn is sounded (the “National Significant Risk Threshold” or “NSRT”). FRA will compute the NSRT annually.
  - The effect of this approach is that horns can remain silenced in over half of Pre-Rule Quiet Zones without significant expense; and many New Quiet Zones can be created without significant expense where flashing lights and gates are already in place at the highway-rail grade crossings.
  - If the risk index for a proposed New Quiet Zone exceeds the NSRT, then supplementary or alternative safety measures must be used to reduce that risk (to fully compensate for the absence of the train horn or to reduce risk below the NSRT).
- **The Final Rule:**
  - Retains engineering solutions known as “supplementary safety measures” for use without FRA approval.
  - Retains explicit flexibility for the modification of “supplementary safety measures” to receive credit as “alternative safety measures.” For instance: shorter traffic channelization arrangements can be used with reasonable effectiveness estimates.

- Adds a provision that provides risk reduction credit for pre-existing SSMs and pre-existing modified SSMs that were implemented prior to December 18, 2003.
  - Continues education and enforcement options, including photo enforcement, subject to verification of effectiveness<sup>2</sup>.
- The public authority responsible for traffic control or law enforcement at the highway-rail grade crossing is the only entity that can designate or apply for quiet zone status.
  - FRA will provide a web-based tool for communities to use in performing “what if” calculations and preparing submissions necessary to create or retain quiet zones. The tool may be found at: <http://safetydata.fra.dot.gov/quiet/>
  - In order to ensure proper application of the risk index, the National Highway-Rail Crossing Inventory must be accurate and complete. In the absence of timely filings to the inventory by the States or Railroads, local authorities may file updated inventory information, and railroads must cooperate in providing railroad-specific data.
  - FRA regional personnel will be available to participate in diagnostic teams evaluating options for quiet zones.
  - Once a quiet zone is established (including the continuation of Pre-Rule or Intermediate Quiet Zones pending any required improvements), the railroad is barred from routine sounding of the horn at the affected highway-rail grade crossings.
  - See below for discussion of **Pre-Rule Quiet Zones** and **New Quiet Zones**.

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<sup>2</sup> The rule neither approves nor excludes the possibility of relying upon regional education and enforcement programs with alternative verification strategies. FRA is providing funding in support of an Illinois Commerce Commission-sponsored regional program. The law provides authority for use of new techniques when they have been demonstrated to be effective.

## **New Quiet Zones may be created if –**

All public highway-rail grade crossings are equipped with flashing lights and gates; and either –

- After adjusting for excess risk created by silencing the train horn, the average risk at the crossings is less than the NSRT; or
- Supplemental Safety Measures are present at each public crossing; or
- Safety improvements are made that compensate for loss of the train horn as a warning device (or at least to reduce average risk to below the NSRT).

Detailed instructions for establishing or requesting recognition of a quiet zone are provided in the regulation.

### **4. Length of quiet zones:**

- Generally, a quiet zone must be at least ½ mile in length and may include one or more highway-rail grade crossings.
- Pre-Rule Quiet Zones may be retained at the length that existed as of October 9, 1996, even if less than ½ mile. A Pre-Rule Quiet Zone that is greater than ½ mile may be reduced in length to no less than ½ mile and retain its pre-rule status. However, if its length is increased from pre-rule length by the addition of highway-rail grade crossings that are not pre-rule quiet zone crossings, pre-rule status will not be retained.

### **5. Supplementary and Alternative Safety Measures:**

- Supplementary safety measures are engineering improvements that clearly compensate for the absence of the train horn. If employed at every highway-rail grade crossing in the quiet zone, they automatically qualify the quiet zone (subject to reporting requirements). They also may be used to reduce the average risk in the corridor in order to fully compensate for the lack of a train or to below the NSRT.
  - Temporary closure used with a partial zone;
  - Permanent closure of a highway-rail grade crossing;
  - Four-quadrant gates;
  - Gates with traffic channelization arrangements (i.e., non-mountable curb or mountable curb with delineators) at least 100 feet in length on each side of the crossing (60 ft. where there is an intersecting roadway);
  - One-way street with gate across the roadway.

- Alternative safety measures may be applied such that the combination of measures at one or more highway-rail grade crossings reduces the average risk by the required amount across the quiet zone (so-called “corridor approach”).
  - Any modified supplementary safety measure (i.e. barrier gate and median; shorter channelization); or
  - Education and/or enforcement programs (including photo enforcement) with verification of effectiveness; or
  - Engineering improvements other than modified SSMs; or
  - Combination of the above.
- The rule provides that pre-existing SSMs and pre-existing modified SSMs will be counted towards risk reduction.

## **6. Recognition of the automated wayside horn:**

- The rule authorizes use of the automated wayside horn at any highway-rail grade crossing with flashing lights and gates (inside or outside a quiet zone) as one-to-one substitute for the train horn.
- Certain technical requirements apply, consistent with the successful demonstrations of this technology.
- The Federal Highway Administration (FHWA) has issued an interim approval for the use of wayside horns as traffic control devices. Communities interested in employing this option should contact FHWA to ensure that they comply with the provisions of the interim approval.

## **7. Special Circumstances:**

- A community or railroad that views the provisions of the rule inapplicable to local circumstances may request a waiver from the rule from FRA.
- A railroad or community seeking a waiver must first consult with the other party and seek agreement on the form of relief. If agreement cannot be achieved the party may still request the relief by a waiver, provided the FRA Associate Administrator determines that a joint waiver petition would not be likely to contribute significantly to public safety.
- FRA grants waivers if in the public interest and consistent with the safety of highway and railroad users of the highway-rail grade crossings.

## 8. Summary of major changes to the Interim Final Rule

- The final rule provides a one-year grace period to comply with New Quiet Zone standards for communities with pre-existing whistle bans that were in effect on December 18, 2003, but were adopted after October 9, 1996. These communities are considered “Intermediate” Quiet Zones under the final rule.
- The final rule addresses quiet zones that prohibit sounding of horns during the evening and/or nighttime hours. These are referred to as Partial Quiet Zones.
- The final rule requires diagnostic team reviews of pedestrian crossings that are located within proposed New Quiet Zones and New Partial Quiet Zones.
- The final rule requires quiet zone communities to retain automatic bells at public highway-rail grade crossings that are subject to pedestrian traffic.
- The final rule extends “recognized State agency” status to State agencies that wish to participate in the quiet zone development process.
- The final rule contains a 60-day comment period on quiet zone applications.
- The final rule requires public authorities to provide notification of their intent to create a New Quiet Zone. During the 60-day period after the Notice of Intent is mailed, comments may be submitted to the public authority.
- The final rule provides quiet zone risk reduction credit for certain *pre-existing* SSMs.
- The final rule provides quiet zone risk reduction credit for *pre-existing* modified SSMs.
- The final rule contains a new category of ASMs that addresses engineering improvements other than modified SSMs.

Additional information, including the full text of the Final Rule, the Final Environmental Impact Statement, and background documents, are available at <http://www.fra.dot.gov>.

### **Horns may continue to be silenced at Pre-Rule Quiet Zones if –**

- The average risk at the crossings is less than the NSRT; or
- The average risk is less than twice the NSRT and no relevant collisions have occurred within the past 5 years; or
- The community undertakes actions to compensate for lack of the train horn as a warning device (or at least to reduce average risk to below the NSRT).

Train horns will not sound in existing whistle ban areas if authorities state their intention to maintain “Pre-Rule Quiet Zones” and do whatever is required (see above) within **5 years** of the effective date (June 24, 2005) (**8 years** if the State agency provides at least some assistance to communities in that state).

A “Pre-Rule Quiet Zone” is a quiet zone that contains one or more consecutive grade crossings subject to a whistle ban that has been actively enforced or observed as of October 9, 1996 and December 18, 2003.

To secure Pre-Rule Quiet Zone status, communities must provide proper notification to FRA and other affected parties by June 3, 2005 and file a plan with FRA by June 24, 2008 (if improvements are required).

# THE “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 of increased risk at the crossing.

**Environmental Impact Statement (EIS):** Environment 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.

**National 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 (QZRI):** 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.

## Creating a New Quiet Zone Using SSMs (Chart 2)

1. Select the crossings to be included in the New Quiet Zone.
2. A Quiet Zone may include highway-rail grade crossings on a segment of rail line crossing more than one political jurisdiction, or there may be roads within a particular area that are the responsibility of different entities (State or county roads within a town, for example). If the selected crossings are the responsibility of more than one entity, obtain the cooperation of all relevant jurisdictions.
3. A New Quiet Zone must be at least ½ mile in length along the railroad tracks.
4. A New Quiet Zone must have, at a minimum, flashing lights and gates in place at each public crossing. These must be equipped with constant warning time devices where reasonably practical, and power out indicators. Any necessary upgrades must be completed before calculating risk for the quiet zone.
5. Are there any private crossings within the proposed Quiet Zone? If any private crossings allow access to the public or provide access to active industrial or commercial sites, you must conduct a diagnostic team review of those crossings. Following the diagnostic review, you must comply with the diagnostic team's recommendations concerning those crossings.
6. Update the USDOT Grade Crossing Inventory Form to reflect conditions at each public and private crossing; this update should be complete, accurate, and dated within 6 months prior to the Quiet Zone implementation<sup>3</sup>. For instructions on how to complete the update, see the FRA website at <http://www.fra.dot.gov/Content3.asp?P=801>.
7. Using the FRA's Quiet Zone Calculator, a web-based tool that can be found at <http://safetydata.fra.dot.gov/quiet/>, determine whether the Quiet Zone Risk Index (QZRI) of the proposed Quiet Zone is less than or equal to the Nationwide Significant Risk Threshold (NSRT). If the QZRI is less than or equal to the NSRT, you can establish the Quiet Zone through public authority designation by completing the following steps:
  - a. Install required signage at each crossing. (Refer to rule sections 222.25 and 222.35 for details.)
  - b. Notify the parties listed in the rule. (Refer to rule section 222.43 for details.)

Disclaimer: This summary of the interim final rule is for informational purposes only. Entities subject to the interim final rule should refer to the rule text as published in the Federal Register on December 18, 2003. Should any portion of this summary conflict with the interim final rule, the language of the interim final rule shall govern.

**Note:** Quiet Zones established by comparison to the NSRT are subject to annual FRA review. (Refer to rule section 222.51 for details.)

**Note:** Periodic updates, including updated USDOT Grade Crossing Inventory Forms, must be submitted to FRA every 2.5-3 years. (Refer to rule section 222.47 for details.)

8. The step described above involves qualifying a quiet zone without implementing any Supplementary Safety Measures (SSMs) or Alternative Safety Measures (ASMs). If FRA's Quiet Zone Calculator indicates that the proposed quiet zone will not qualify on that basis, install any measures that are needed. To qualify for Public Authority Designation, you must implement SSMs, build grade separations, close crossings, or install wayside horns.

Note: If you would like to implement any ASMs, their use must be approved in advance by FRA, in accordance with Appendix B of the rule. For guidance on ASM use, see Section IV, Creating Quiet Zones using Engineering Alternative Safety Measures (modified SSMs) or Section V, Creating Quiet Zones using Non-engineering Alternative Safety Measures.

9. If every public crossing in the proposed Quiet Zone is equipped with one or more SSMs, you can establish the Quiet Zone through public authority designation by completing the following steps:
  - a. Install required signage at each crossing. (Refer to rule sections 222.25 and 222.35 for details.)
  - b. Update the National Grade Crossing Inventory to reflect current conditions at each public and private crossing within the Quiet Zone.
  - c. Notify the parties listed in the rule. (Refer to rule section 222.43 for details.)

**Note:** Periodic updates, including updated USDOT Grade Crossing Inventory Forms, must be submitted to FRA every 4.5-5 years. (Refer to rule section 222.47 for details.)

10. If every public crossing is not equipped with an SSM, use FRA's Quiet Zone Calculator to determine whether enough SSMs have been implemented to reduce the QZRI to the level of risk that would exist if the train horns were still sounded (RIWH). The Quiet Zone Calculator can be found at <http://safetydata.fra.dot.gov/quiet/>.

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If the **QZRI** is less than or equal ( $\leq$ ) to the **RIWH**, you can establish the Quiet Zone through public authority designation by completing the following steps:

- a. Install required signage at each crossing. (Refer to rule sections 222.25 and 222.35 for details.)
- b. Update the National Grade Crossing Inventory to reflect current conditions at each public and private crossing within the Quiet Zone.
- c. Notify the parties listed in the rule. (Refer to rule section 222.43 for details.)

**Note:** Periodic updates, including updated USDOT Grade Crossing Inventory Forms, must be submitted to FRA every 2.5-3 years. (Refer to rule section 222.47 for details.)

11. Use FRA's Quiet Zone Calculator to determine whether enough SSMs have been implemented to reduce the QZRI to the Nationwide Significant Risk Threshold (NSRT). The Quiet Zone Calculator can be found at <http://safetydata.fra.dot.gov/quiet/>.

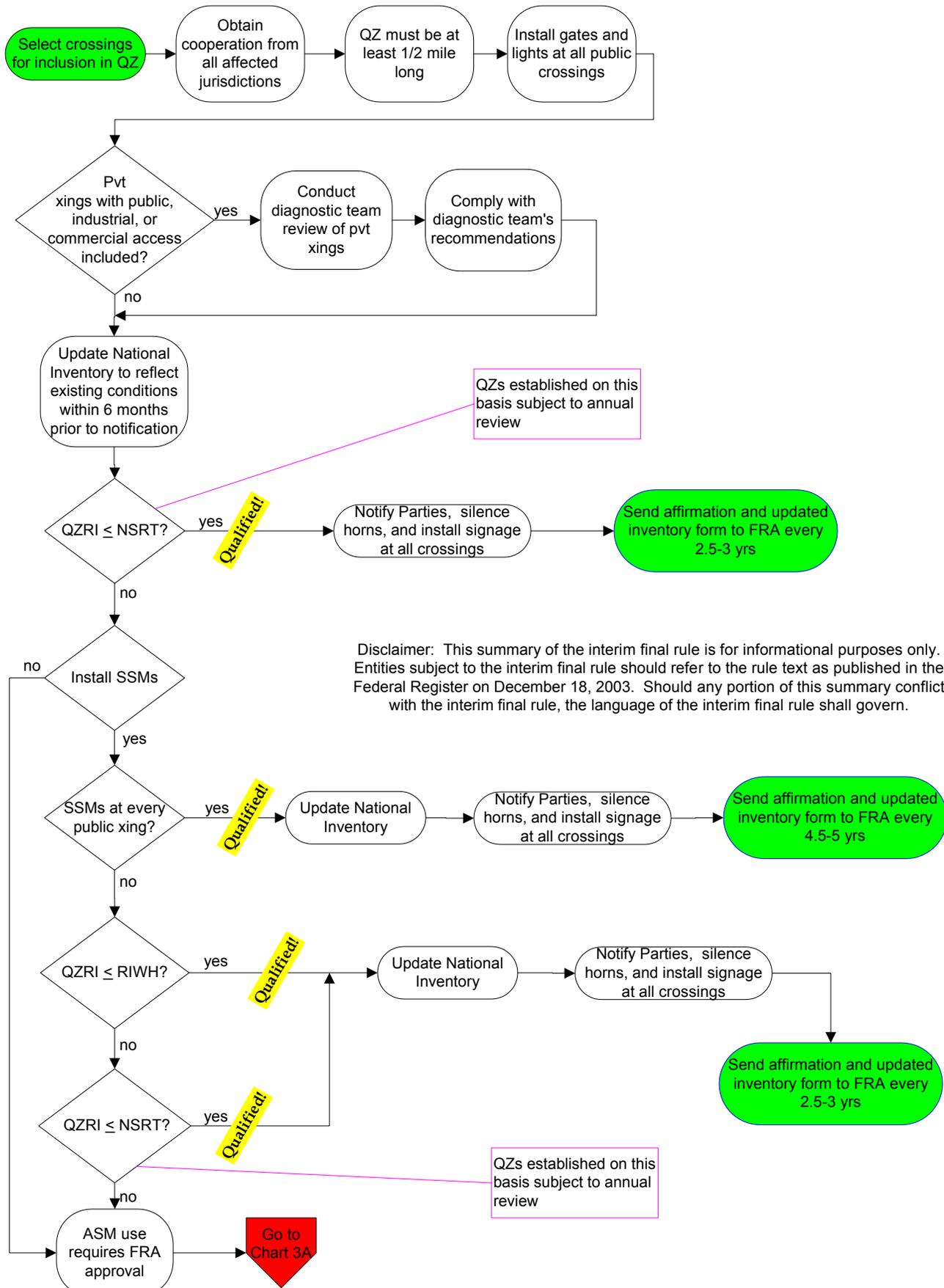
If the **QZRI** is less than or equal ( $\leq$ ) to the current **NSRT**, you can establish the Quiet Zone through public authority designation by completing the following steps:

- a. Install required signage at each crossing. (Refer to rule sections 222.25 and 222.35 for details.)
- b. Update the National Grade Crossing Inventory to reflect current conditions at each public and private crossing within the Quiet Zone.
- c. Notify the parties listed in the rule. (Refer to rule section 222.43 for details.)

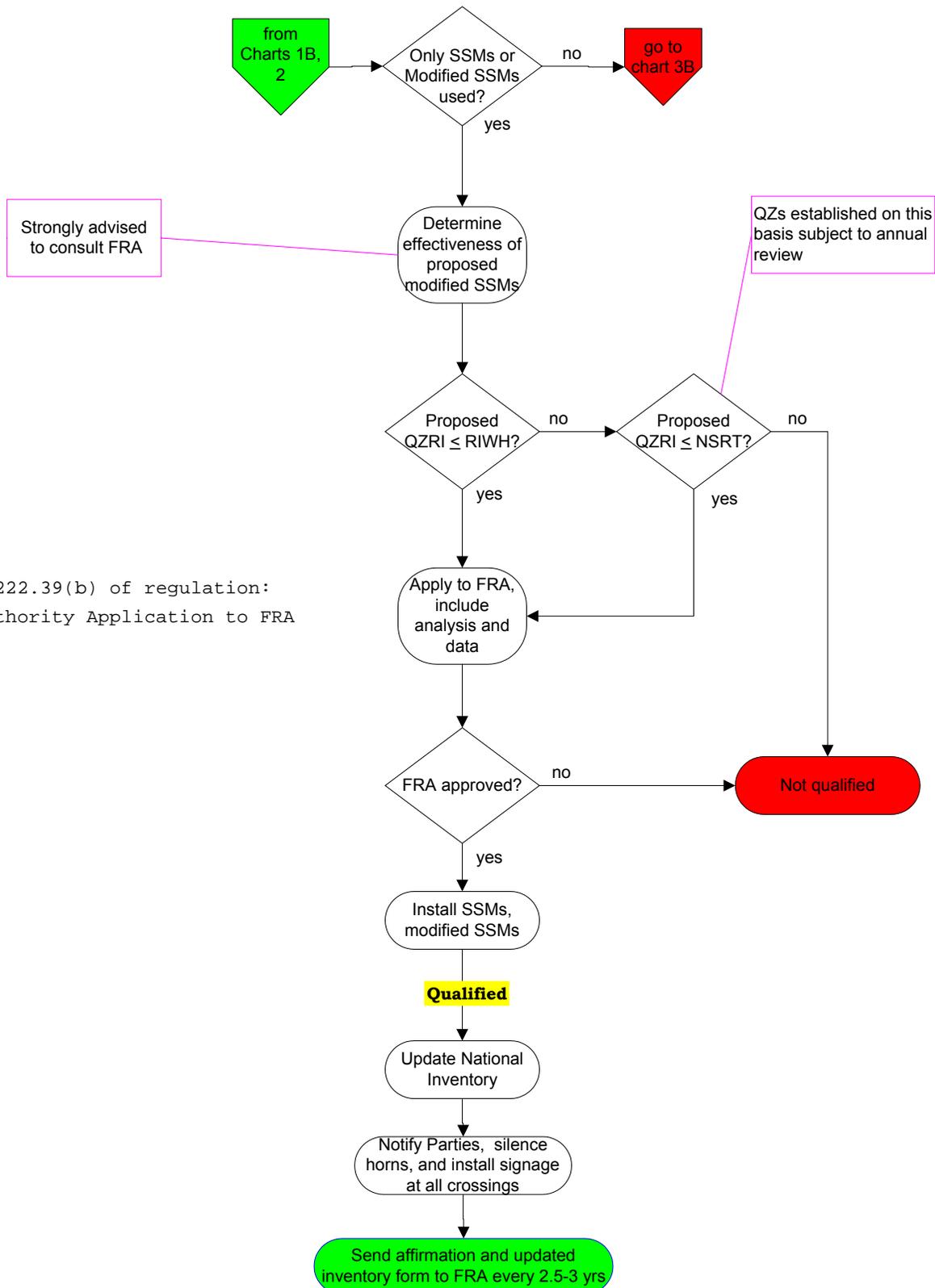
**Note:** Quiet Zones established by comparison to the NSRT are subject to annual FRA review. (Refer to rule section 222.51 for details.)

**Note:** Periodic updates, including updated USDOT Grade Crossing Inventory Forms, must be submitted to FRA every 2.5-3 years. (Refer to rule section 222.47 for details.)

# Chart 2 - Creating a New Quiet Zone using SSMs



# Chart 3A - Creating a Quiet Zone using Engineering ASMs (Modified SSMs)



See Part 222.39(b) of regulation:  
Public Authority Application to FRA

# Notice of Intent to Create a Quiet Zone

## ***Who should submit this notice:***

A public authority seeking to create a New Quiet Zone or a New Partial Quiet Zone should submit notice of its intent.

## ***Parties to be notified:***

Before a public authority establishes a quiet zone either through public authority designation or through FRA approval, it must provide written notice to several parties. These parties include the following:

- All railroads operating over the public highway-rail grade crossings within the quiet zone;
- The State agency responsible for highway and road safety, and
- The State agency responsible for grade crossing safety.

**All notices must be provided by certified mail, return receipt requested.**

## ***Deadlines:***

A party may submit information or comments to the public authority during the 60-day period after the date on which the Notice of Intent was mailed. This 60-day comment period may terminate early, if the public authority obtains from each party either written comments or written statements that the parties do not have any comments.

## ***Notification contents:***

- The notice must unambiguously state which crossings will be contained within the quiet zone. Each public, pedestrian, and private crossing must be identified by both the U.S. DOT National Highway-Rail Grade Crossing Inventory number and street or highway name.
- The notice must indicate the time period during which train horn restrictions would be imposed (i.e. 24 hours or from 10 pm to 7 am).
- The notice must contain a brief explanation of the tentative plans for implementing improvements within the quiet zone.
- The notice must clearly indicate the name, title, and contact information for the person who will act as point of contact during the development process.
- All notifications must contain a list of the names and addresses of each party notified.

# SAMPLE NOI

**THIS IS PRESENTED AS A SUGGESTION AND IS NOT OMB APPROVED**

**DATE** \_\_\_\_\_

Railroad Name  
Railroad Address

DOT Name  
DOT Address

RE: Notice of Intent to Establish a Quiet Zone

This letter is a Notice of Intent for the creation of a quiet zone at the following public highway-rail grade crossings in **CITY / COUNTY** \_\_\_\_\_, **STATE** \_\_\_\_\_.

**LIST BY USDOT # and Street Name (in geographical order, i.e.: n-s, DOT# SEQUENCE) (Include Private and Pedestrian Crossings within the Quiet Zone).**

**THE LIST CAN BE INCLUDED HERE OR AN AS ATTACHMENT, DEPENDING ON SIZE OF LIST.**

This Quiet Zone will be in effect 24 hours per day.

The **CITY / COUNTY'S** \_\_\_\_\_ plan to implement a quiet zone includes upgrading the crossings, where needed, to include gates, lights, constant warning time (where practicable) and power-out indicators. Supplemental Safety Measures will be installed as indicated by the FRA Quiet Zone Calculator.

The point of contact for the **CITY / COUNTY** \_\_\_\_\_ is:

**LIST INFO FOR CONTACT PERSON**

*This is provided as a guide only.*

Please consider the date of this notice as the beginning date of the 60-day comment period. This notice is being mailed to: **LIST REQUIRED PARTIES ONLY HERE. REQUIRED PARTIES MUST BE NOTIFIED BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED. NOTE COURTESY COPIES AS "CC" AND LIST AT END OF NOTICE.**

Signed,

cc: as needed

**SEND CERTIFIED MAIL / RETURN RECEIPT**

**PLEASE CONTACT YOUR FRA REGIONAL GRADE CROSSING MANAGER BEFORE SUBMITTING A NOTICE OF INTENT (NOI). INVOLVEMENT OF FRA STAFF IS NOT MANDATORY, BUT STRONGLY RECOMMENDED.**

*This is provided as a guide only.*

## Notice of Quiet Zone Establishment

### *Who should submit this notice:*

A public authority wishing to establish a New Quiet Zone, a New Partial Quiet Zone, a Pre-Rule Quiet Zone, or a Pre-Rule Partial Quiet Zone must submit a notice of Quiet Zone Establishment.

### *Parties to be notified ((§222.43 (a)(4))*

The public authority must provide written notice to several parties. These parties include the following:

- All railroads operating over the public highway-rail grade crossing within the quiet zone,
- The highway or traffic control authority, or the law enforcement authority with jurisdiction over motor vehicle traffic at the quiet zone crossings,
- Landowners with control over any private crossings within the quiet zone,
- The State agency responsible for highway and road safety,
- The State agency responsible for grade crossing safety, and
- The FRA Associate Administrator.

**All notices must be provided by certified mail / return receipt .**

### *Deadlines:*

Notice of the establishment of a Quiet Zone should be mailed no later than 21 days before the date on which train horns are scheduled to cease sounding. For New Quiet Zones and New Partial Quiet Zones, the Notice of Quiet Zone Establishment cannot be served earlier than 60 days after the Notice of Intent was mailed, unless the Notice of Quiet Zone Establishment contains a written statement affirming that written comments and/or 'no comment' statements have been received from each party that received the Notice of Intent. For Pre-Rule Quiet Zones that qualified for automatic approval, the Notice of Quiet Zone Establishment should be mailed out before December 24, 2005.

***Notification contents (§222.43 (e)):***

- The notice must unambiguously state which crossings are contained within the quiet zone. All public, pedestrian, and private crossings must be identified by both the U.S. DOT National Highway-Rail Grade Crossing Inventory Number, and by street or highway name.
- The notification must clearly cite the regulatory provision that provides the basis for establishing the Quiet Zone:
  - § 222.39 (a)(1), implementation of SSMs at every public crossing in the New Quiet Zone or New Partial Quiet Zone;
  - § 222.39 (a)(2)(i), the QZRI is at or below the NSRT without installation of any SSMs at the New Quiet Zone or New Partial Quiet Zone;
  - § 222.39 (a)(2)(ii), SSMs were implemented at some crossings in the New Quiet Zone or New Partial Quiet Zone to bring the QZRI to a level at or below the NSRT;
  - § 222.39 (a)(3), SSMs were implemented at some crossings in the New Quiet Zone or New Partial Quiet Zone to bring the QZRI to a level at or below the RIWH; or
  - § 222.39 (b), public authority application to the FRA for a New Quiet Zone or New Partial Quiet Zone;
  - § 222.41 (a)(i), Pre-Rule Quiet Zones that qualify for automatic approval because every crossing is equipped with an SSM;
  - § 222.41 (a)(ii) Pre-Rule Quiet Zones that qualify for automatic approval because  $QZRI \leq NSRT$ ;
  - § 222.41 (a)(iii) Pre-rule Quiet Zones that qualify for automatic approval because  $NSRT < QZRI < 2 * NSRT$ , and there have been no relevant collisions within the 5 years preceding April 27, 2005;
  - § 222.41 (b)(i) Pre-Rule Partial Quiet Zones that qualify for automatic approval because every crossing is equipped with an SSM;
  - § 222.41 (b)(ii) Pre-Rule Partial Quiet Zones that qualify for automatic approval because  $QZRI \leq NSRT$ ;
  - § 222.41 (b)(iii) Pre-Rule Partial Quiet Zones that qualify for automatic approval because  $NSRT < QZRI < 2 * NSRT$ , and there have been no relevant collisions within the 5 years preceding April 27, 2005;

- § 222.41 (c) Pre-Rule Quiet Zones and Pre-Rule Partial Quiet Zones that do not qualify for automatic approval;
  - § 222.41 (d) Pre-Rule Partial Quiet Zones that will be converted to 24-hour New Quiet Zones;
  - § 222.42 (a) Intermediate Quiet Zones or Intermediate Partial Quiet Zones;
  - § 222.42 (b) Intermediate Partial Quiet Zones that will be converted to 24-hour New Quiet Zones.
- If the notice contains a reference to § 222.39 (a)(2)(i), 222.39 (a)(2)(ii), 222.39 (a)(3), 222.41 (a)(2), 222.41 (a)(3), 222.41 (b)(2), or 222.41 (b)(3), that is, any time a determination of QZRI is used to justify establishment of a quiet zone, the notification must include a copy of the FRA Quiet Zone Calculator web page that contains the data on which the public authority is relying;
  - If the notice contains a reference to § 222.39 (b), the notice must include a copy of the FRA's notification of approval;
  - If a diagnostic team is required under § 222.25 (private crossings) or § 222.27 (pedestrian crossings), the notice must include a statement affirming that the State agency responsible for grade crossing safety and all affected railroads were provided an opportunity to participate in the diagnostic team review. The notice must also include a list of the diagnostic team's recommendations;
  - The notice must contain a statement indicating the time period during which horn restrictions will be observed;
  - An accurate and complete Grade Crossing Inventory Form for each public, pedestrian, and private crossing within the quiet zone that accurately reflects conditions at the crossing before any new SSMs or ASMs were implemented;
  - An accurate, complete, and current Grade Crossing Inventory Form for each public, pedestrian, and private crossing within the quiet zone that accurately reflects SSMs and ASMs in place upon establishment of the Quiet Zone. SSMs and ASMs that cannot fully be described on the Inventory form shall be described separately;
  - If the public authority was required to file a Notice of Intent (New Quiet Zones and New Partial Quiet Zones), the Notice of Quiet Zone Establishment shall contain a written

statement affirming that the Notice of Intent was provided in accordance with the rule, and indicating the date on which the Notice of Intent was mailed;

- If the public authority was required to file a Notice of Intent, and did so less than 60 days before mailing the Notice of Quiet Zone Establishment, they must also include a written statement affirming that they received written comments and/or 'no comment' statements from the parties that received the Notice of Intent;
- If the public authority was required to submit a Notice of Detailed Plan, they must include a written statement affirming that the Notice of Detailed Plan was provided in accordance with the rule, and they must state the date on which it was provided;
- The name and title of the person responsible for monitoring compliance with the requirements of the rule and his/her contact information. In addition to the person's name, title, and organization, contact information should include his/her business address, telephone number, fax number, and email address;
- Names and addresses of all parties notified in accordance with the rule; and
- A statement signed by the Chief Executive Officer (CEO) of each public authority continuing the quiet zone. In the CEO's statement, he/she must certify that the information submitted by the public authority is accurate and complete to the best of his/her knowledge and belief.



## **SAMPLE NOE**

***THIS IS PRESENTED AS A SUGGESTION AND IS NOT OMB APPROVED.***

Associate Administrator for Safety  
Federal Railroad Administration  
1200 New Jersey Ave., S.E.  
Washington, DC 20590

**DATE** \_\_\_\_\_

The **CITY / COUNTY** of \_\_\_\_\_, **STATE** \_\_\_\_\_ is establishing a New 24-hour Quiet Zone effective \_\_\_\_\_. **(At least 21 calendar days from date of letter)**

This Quiet Zone is established under authority of 49 CFR 222 **(REGULATORY PROVISION)**. i.e. **IF QZ HAS 4 CROSSINGS AND 2 HAVE SSMs, AND THE QZRI is ≤ RIWH, THE REGULATORY PROVISION WOULD BE 49 CFR 222.39 (a)(3).**

A Notice of Intent was sent on **DATE** \_\_\_\_\_ and (no comments were received from any applicable parties) **OR** (comments were received and addressed) **ATTACH COMMENTS IF RECEIVED.**

The crossings in this Quiet Zone are:

**LIST BY USDOT # and Street Name (In geographical order: i.e. – n-s, DOT# SEQUENCE)  
(Include Private and Pedestrian Crossings within the Quiet Zone)**

**THIS LIST CAN BE INCLUDED HERE OR AS AN ATTACHMENT, DEPENDING ON SIZE OF LIST.**

Attached are Grade Crossing Inventory forms for the crossings in this Quiet Zone reflecting conditions at the crossings before any modifications and reflecting any modifications made to establish the Quiet Zone. **(PRINT TWO (2) COPIES OF DOT INVENTORY FORMS AND HAND-CORRECT ONE TO REFLECT BEFORE AND AFTER CONDITIONS, MAKING CORRECTIONS (in red) TO ALL FIELDS)**

**MAKE THIS AN ATTACHMENT, MAKING PAIRS OF THE INVENTORY FORMS AND SHOW IN SAME ORDER AS ABOVE.**

This notice is being mailed to: **LIST ALL REQUIRED PARTIES ONLY HERE. NOTE COURTESY COPIES AS "cc:" AND LIST AT END OF NOTICE.**

The contact person for **CITY / COUNTY** \_\_\_\_\_ is:  
**LIST INFO FOR CONTACT PERSON**

I certify that the information submitted herein is accurate, correct, and complete to the best of my knowledge and belief, **(this statement can be the signature block)**.

---

**MAYOR, CEO, COMMISSIONER, etc.**

**cc: as needed**

**SEND CERTIFIED MAIL / RETURN RECEIPT.**

*This is provided as a guide only.*

*The Notice of Establishment does not need to be an intimidating document.*

**PLEASE CONTACT YOUR FRA REGIONAL GRADE CROSSING MANAGER BEFORE SUBMITTING A NOTICE OF ESTABLISHMENT. IF YOU HAVE ERRORS OR OMISSIONS, IT WILL BE KICKED BACK AND YOUR QUIET ZONE WILL BE DELAYED.**

**INVOLVEMENT OF FRA STAFF IS NOT MANDATORY, BUT STRONGLY RECOMMENDED.**

**THE RAILROADS HAVE BEEN VERY HELPFUL IN REVIEWING NOTICES OF ESTABLISHMENT AND THEY WILL ALERT YOU OF PROBLEMS THAT THEY FIND. ALONG WITH THIS, THEY WILL CONTINUE TO SOUND THE HORN UNTIL ERRORS ARE CORRECT AND PROPER NOTICE OF ESTABLISHMENT IS PROVIDED.**