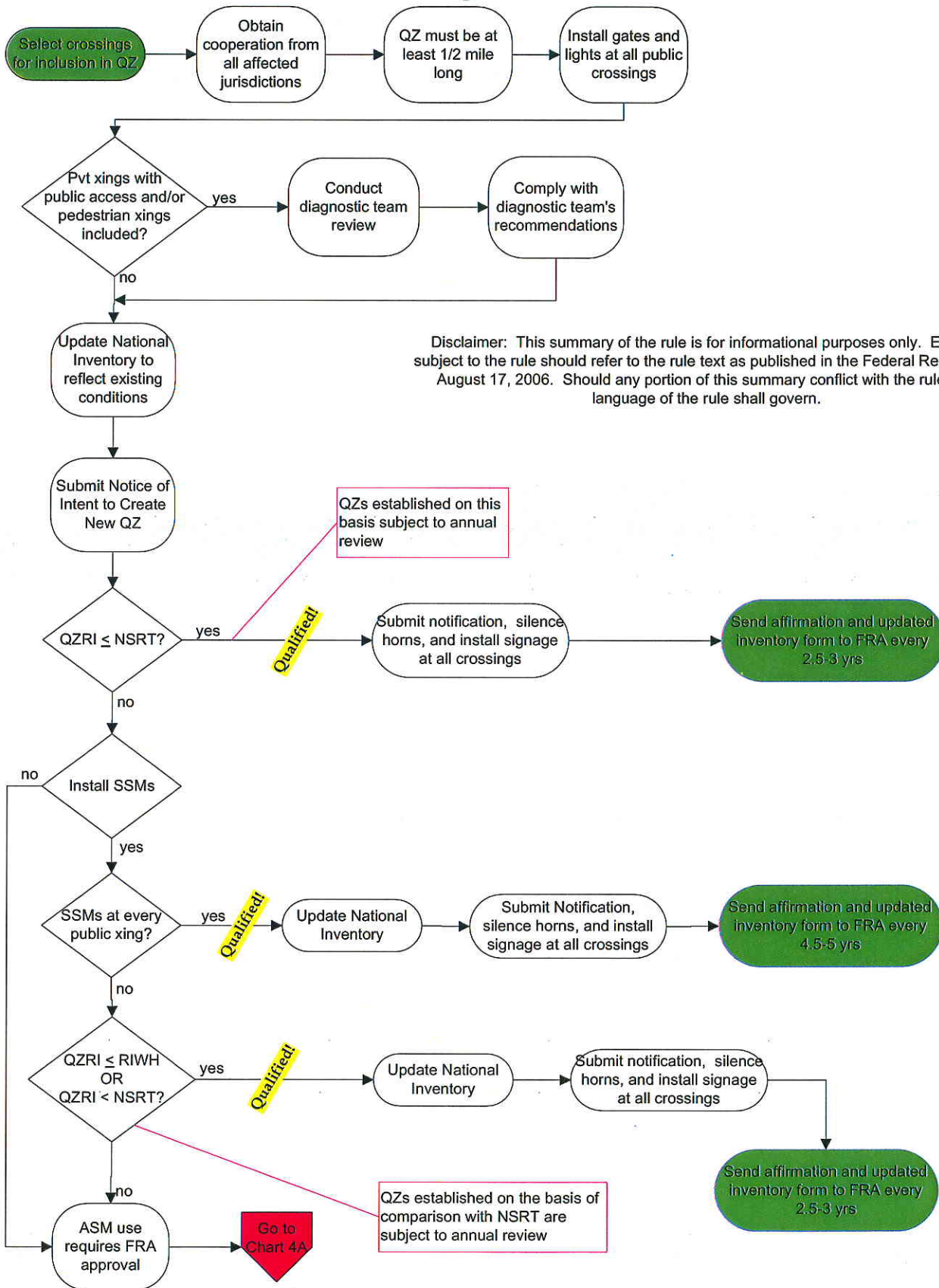


# Chart 3 - Creating a New Quiet Zone or New Partial Quiet Zone using SSMs



## Chart 4B, Creating a Quiet Zone using Engineering ASMs

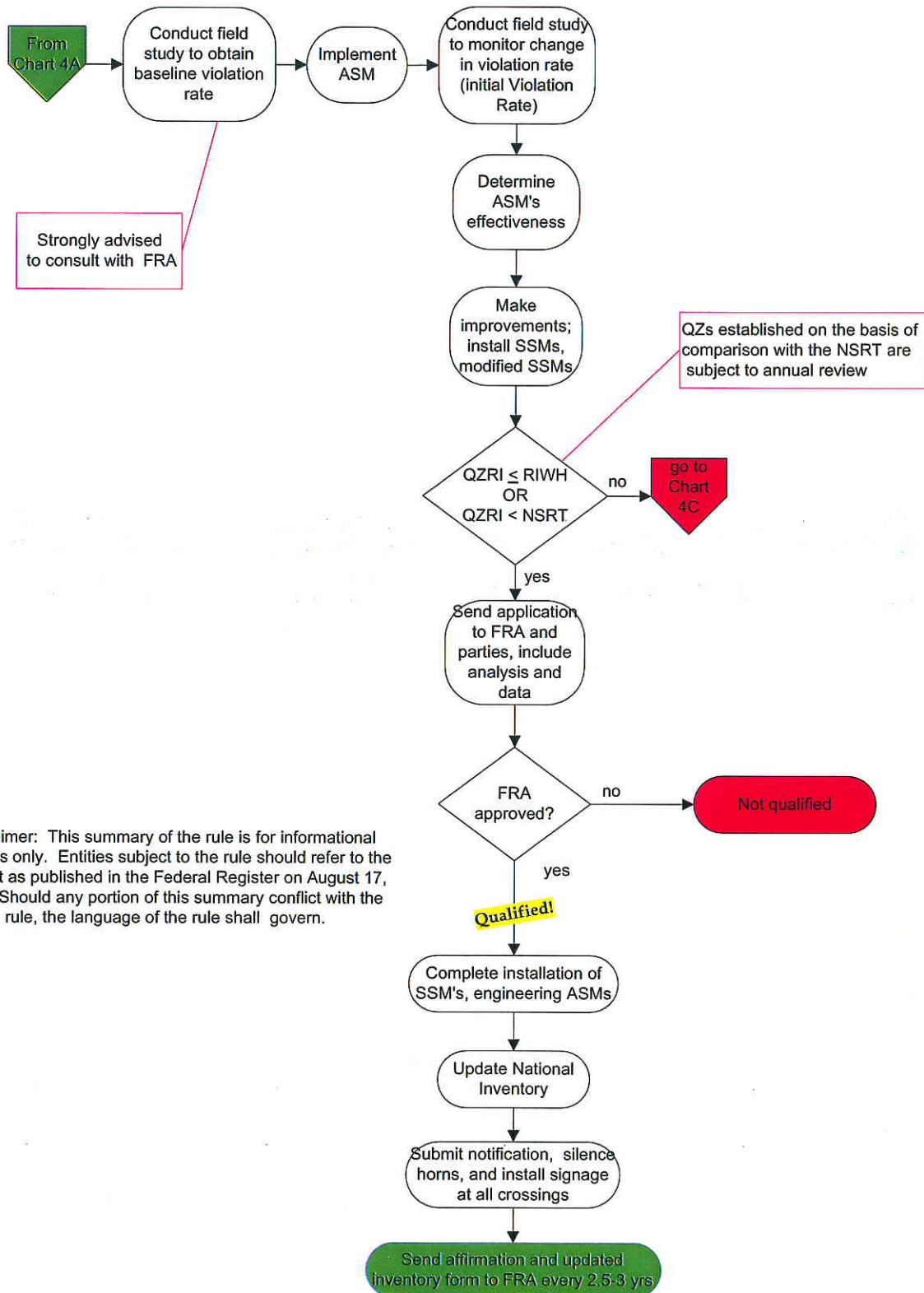
The following section describes the steps involved in creating a Quiet Zone through the implementation of Alternative Safety Measures that are not modified SSMs. For details, see Appendix B of the rule.

1. Prior to implementing any ASM, conduct a field study for at least one quarter to obtain the baseline violation rate. For details, see Appendix B of the rule.
2. Initiate implementation of the ASM.
3. In the first quarter following implementation, use the same methodology you employed in step 1. to determine a post-implementation violation rate.
4. Calculate the violation rate change and corresponding effectiveness rate for the ASM using the formulae in Appendix B.
5. If you plan to implement any SSMs or wayside horns in addition to the proposed ASMs, install any such measures that are needed.
6. Using the FRA's Quiet Zone Calculator, a web-based tool that can be found at <http://safetydata.fra.dot.gov/quiet/>, determine the initial Risk Indices of each crossing in the proposed Quiet Zone, as well as the entire Quiet Zone's level of risk that would be present if the horns continued to sound (RIWH). The Quiet Zone Calculator is not equipped to allow the use of modified effectiveness rates, so take the initial values from the calculator, and apply the modified effectiveness rates by hand to determine the Quiet Zone Risk Index (QZRI). If the QZRI is less than or equal to the RIWH, or if the QZRI is at or below the NSRT, you can submit an application to the FRA and other parties listed in the rule for approval.
5. If the FRA has approved the Quiet Zone application, you can establish the Quiet Zone by completing the necessary steps:
  - a. Install all SSMs or modified SSMs at the Quiet Zone's crossings,
  - b. Install required signage at each crossing. (Refer to rule sections 222.25, 222.27, and 222.35 for details.)
  - c. Update the National Grade Crossing Inventory to reflect current conditions at each public and private crossing within the Quiet Zone.
  - d. Submit notification in accordance with 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.)

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# Chart 4B: Creating a Quiet Zone using engineering ASMs



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## Notice of Intent to Create a Quiet Zone<sup>1</sup>

### *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.

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<sup>1</sup> The information collection submission for the final rule has been approved by the OMB. The OMB control number is 2130-0560.

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## Notice of Quiet Zone Establishment<sup>1</sup>

### *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 requested.

### *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 can not 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

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<sup>1</sup> The information collection submission for the final rule has been approved by the OMB. The OMB control number is 2130-0560.

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- § 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<sup>th</sup>, 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.

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## “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*.

**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.