

April 25, 2023

Needham Select Board
1471 Highland Avenue
Needham, MA 02492



Dear Chairwoman Cooley and the Needham Select Board:

I am writing on behalf of Safer Quieter Needham to pass along our concerns with the ongoing discussions surrounding Article #28. We hope this letter, along with the prior letter sent on April 20th, serves as a concise statement on why we believe Article #28 Phase 1: Design & Engineering is the only prudent option for Town Meeting to consider at this time.

- **Project cost certainty:** The Finance Committee and Members of the Select Board have expressed concern over the lack of certainty on the full project cost. *It is not possible to create a total project budget with cost certainty until the design and engineering called for in Article # 28 is completed.* This process is very different from constructing a building, and the bulk of the cost certainty will come from detailed design and engineering. The reason why is this project involves addressing unique existing conditions at each crossing and responding to feedback from several federal, state, and local stakeholders, all while keeping the railroads, roads, and sidewalks safely operational.
- **A New Feasibility Study:** Including a new feasibility study will not provide new, actionable information on a Quiet Zone. We already know that a four-quad gate project the practicable solution for Needham. The federal Train Horn Rule that allows for Quiet Zones, and the associated Supplemental Safety Measures outlined, has not changed since the last feasibility study was completed in 2015/2016. The path forward for Needham remains the same, which is to implement four-quadrant gates at each crossing. The reasonable and prudent next step is to proceed with Article #28, amended to be paid in full by available free cash, and obtain the detailed design and engineering necessary to once and for all establish the total cost with certainty, avail ourselves of all possible external sources of funding, and then evaluate whether the costs and benefits of proceeding with construction is the will of Needham.
- **Leveraging funds:** Currently, the Town proposes to use Chapter 90 funds to offset a portion of the Great Plain Avenue upgrades. Delaying Phase 1: Design & Engineering may jeopardize the ability to use these funds. Further, the Town cannot apply for state or federal grants without Phase 1, which limits the Town's ability to further lower the Town's overall cost share. (For example, Chelsea received \$1.13 million in federal grants for its Quiet Zone initiative.) There are potentially millions of dollars available after the detailed design and engineering is completed.

We hope the Select Board will maintain its support of Article #28, amended to free cash, at Town Meeting.

[SAFER QUIETER NEEDHAM](http://www.safერიquieterneedham.com)

Lars Unhjem, Chair
Executive Committee
Town Meeting Member, Precinct F



April 20, 2023

Needham Select Board
Town Hall
1471 Highland Avenue
Needham, MA 02492

Re: Support for Warrant Article #28

Dear Chairwoman Cooley and the Needham Select Board:

At last night's meeting of the Needham Finance Committee, several comments and questions were raised regarding Article # 28 of the 2023 Town Meeting Warrant. We offer this letter to provide information on matters that were raised.

There is uncertainty around the total cost of implementing a Needham Quiet Zone. Would updating the 2015-2016 Feasibility Study by BETA provide certainty regarding the total cost?

To implement a Quiet Zone, there is a predefined menu of Supplemental Safety Measures (SSMs) that can be employed to achieve the necessary safety improvements. An important result of the 2015-2016 Feasibility Study was identifying that the SSM that is practicable to employ in Needham is four-quadrant gates. This result provides significant clarity around the magnitude of potential costs.

There have been no major changes to the applicable Federal Railroad Administration (FRA) regulations since 2015. Thus, the SSM to employ in Needham remains four-quadrant gates.

No feasibility study, no short memo from a transit agency, and no reference to like-kind projects (such as the recently completed Quiet Zone in Chelsea, MA) can provide Needham with cost certainty. Determining the total cost with certainty requires the design and engineering called for by Article # 28. There are three major reasons why.

1. Unlike the construction of a new building, the solution is highly dependent on the unique circumstances of existing conditions at each individual rail crossing. That requires an extensive amount of detailed study.

2. The process defined by the FRA to establish a Quiet Zone calls for the participation of many stakeholders at the federal, state, and local level in what is called a Diagnostic Team Review. There is a significant effort required to coordinate collaboration and agreement among all of these stakeholders.
3. Unlike the construction of a building that is unoccupied during construction, implementing the safety enhancements must occur while an active commuter rail system and active public roads and sidewalks remain safely operational. Given the stakes involved, this heightens the relative importance of fully designed and engineered plans.

Only with fully designed and engineered plans can cost certainty be achieved.

The framework put forth by the Finance Committee creates a paralyzing “catch 22” dilemma:

- We cannot achieve cost certainty without investing in the design and engineering.
- We cannot invest in the design and engineering because it is presumed that approval of the first phase means approval of the whole project.
- We cannot approve the whole project because we do not have cost certainty.

This framework is a false choice. The Select Board has wisely put forth a phased approach to the project that does include cost certainty for the first phase of design and engineering. This will enable Needham to understand cost certainty for the total project. Only then can Needham decide as to whether the construction and implementation of a Quiet Zone is prudent.

For typical major capital projects such as a building, the design and engineering costs are around 10% of the total project cost. For the current Needham Quiet Zone estimate, the design and engineering costs are around 30% of the total project cost. Why the difference?

As referenced above, there is a significant level of effort involved in designing and engineering a solution that responds to complicated existing conditions while keeping the trains, roads, and sidewalks operating safely and meets the requirements of the many federal, state, and local stakeholders involved. Implementing a Quiet Zone is not the same as constructing a building. The relative amount of physical, tangible infrastructure involved is substantially less, and the relative amount of studying, measuring, planning, engineering, and coordinating is substantially more.

Why is Article # 28 for design and engineering being proposed to be funded through debt?

At the time the FY2024 Capital Improvement Plan was adopted, the amount of free cash for FY2024 was unknown. From what we understand based on the Finance Committee’s discussion last night, there is approximately \$2.5 million of unobligated free cash remaining as we head into Town Meeting. **We respectfully request the Select Board to support Article #28 as written, with an amendment to fund the appropriation from available free cash.**

Is a Needham Quiet Zone safer than Needham's current conditions using train horns?

According to the FRA, Needham's current conditions using train horns is 33% less safe than the national average. By implementing a Quiet Zone with four-quad gates, Needham's crossings would be 49% safer than the national average and 62% safer than current conditions using train horns.

Implementing a Quiet Zone means that train horns are no longer routinely used at each approach to a crossing. All other safety elements remain the same. There are gates with flashing lights and ringing bells. There is a ringing bell on the train. And the engineer has full use of the train horn if there is any kind of an emergency. The only thing that changes is not sounding the horn 4 times for 15-20 seconds at 95-100 decibels at each rail crossing from 4:45 AM until after midnight.

The FRA's Quiet Zone Calculator tells us that for Needham, implementing a Quiet Zone using quad-gates at each crossing will make a dramatic improvement in the safety of our rail crossings. And coincidentally it will have a dramatic impact on the quality of life and economic vitality of Needham at the same time.

Does investing in the Needham Quiet Zone offer a prudent return?

We believe investing in the Needham Quiet Zone would be highly accretive. There are over 4,700 properties within ½-mile of the rail crossings. These properties would need to achieve, *on average*, an improvement in assessed value of roughly 0.60%, or \$6,600, to pay back the investment over 10 years. After that, the gains accrue to Needham.

Two well-known studies (Bellinger, 2006 and Walker, 2016) indicate property value assessments can grow anywhere from 4% to 14% upon implementation of a Quiet Zone.

Anticipating property assessment improvements is speculative, of course. But intuitively we all understand that a home or business located one block away from a rail crossing will be more attractive and more valuable if there the trains are running with no train horns as compared to what is occurring today. When we consider that the average home value in Needham is approaching \$1.1 million and that the train travels along some of the most valuable properties in town, we can be confident that investing in the Needham Quiet Zone is indeed a prudent investment long term.

Who Pays for Crossing Infrastructure Maintenance, and How Much Is It?

The maintenance of the grade crossing equipment (gates, flashers, signal box) will always stay with the MBTA and their operator Keolis. Every five years Needham would need to recertify its Quiet Zone status with the FRA, which involves inspecting and affirming that the equipment at each crossing is operating as designed.

What About the Recent Lawsuit Regarding Beverly? Should Needham wait to move forward until the resolution of the lawsuit?

The recent Beverly lawsuit essentially theorizes that the 2005 FRA Train Horn Rule which allows for Quiet Zones only governs public road crossings, and as a result, only the 1941 Massachusetts Train Horn Rule (M.G.L. c.160 § 138) governs at-grade pedestrian station crossings. As stated in the lawsuit, “[t]he MBTA contends that at-grade pedestrian crossings located within passenger rail stations are excluded from the reach and application of [the Massachusetts Train Horn Rule].”

Prior to filing the lawsuit, the Plaintiff sought the installation of additional safety measures at the at-grade pedestrian station crossings in Beverly. Beverly’s Quiet Zones are “Pre-Rule”, meaning legacy Quiet Zones with different standards than what will be required of Needham’s “New Rule” Quiet Zone. It should be noted that according to the FRA, Beverly’s Quiet Zone safety rating is over 3 times less safe than the national average. We believe the most likely outcome of the lawsuit is that added pedestrian safety measures, like the kinds discussed in the lawsuit, may be required at Needham Center and Hersey, *the only 2 stations that have at-grade pedestrian station crossings*.

In the unlikely, very worst outcome that the plaintiff prevails entirely, Needham still has further protection of its investment in the Needham Quiet Zone. The lawsuit pertains specifically to the at-grade pedestrian station crossings. Needham could simply eliminate those at-grade pedestrian station crossings. This would impose the inconvenience that some parkers at Needham Center and at Hersey would need to walk to Great Plain Avenue and over to the boarding side of the stations, but would otherwise preserve all of the safety, quality of life, and economic development benefits that investing in the Needham Quiet Zone would provide.

We hope this information is helpful. We would be happy to discuss further at your convenience and appreciate the Select Board’s continued efforts on this important matter.

Respectfully,

Lars Unhjem
Volunteer, Safer Quieter Needham