
VDOT
Virginia Department of Transportation

HB1615 WORK GROUP
VDOT NOISE ANALYSIS AND ABATEMENT

April 28, 2026

Agenda

1. HB1615
2. Work Group Considerations
3. Noise abatement regulations and guidance
   a. Type I, II, and III projects
   b. Noise abatement evaluation criteria
4. Regulatory considerations for a petition process
5. Discussion topics
   a. What could constitute a valid petition
   b. Noise barrier considerations
6. Next steps

HB 1615

- **Proposed amendment to § 33.2-276 of the Code of Virginia, relating to transportation infrastructure and projects; noise analysis:**

  C. Whenever the Board or the Department receives a valid petition for a noise analysis as authorized by law or regulation of the Board or the Department, such analysis shall commence within one year of receipt of such petition. Additionally, the Board or the Department shall complete a noise analysis for any retrofit noise abatement project undertaken or considered by the Board or the Department, with or without a petition to do so or a dedicated funding source identified for such project. Any noise analysis conducted by the Board or the Department shall be made available to the public on the websites of the Board and the Department.

- **The Infrastructure and Funding Subcommittee of the House Committee on Transportation voted unanimously to lay the bill on the table with the recommendation that the Department of Transportation study the issues identified in the legislation.**
- **The work group should submit a report of its findings and recommendations, if any, to the Chair of the House Committee on Transportation and Delegate Feggans by September 1, 2026.**

Work Group Considerations

Laws, Regulation, and Guidance

- What do relevant existing policies require and allow for?

Funding

- Who would fund the noise analysis and any construction of noise barriers?
- How much do noise barriers cost to construct and maintain?
- Who would maintain the noise barrier in perpetuity?

Process

- What would constitute a “valid petition”?
- What would be included in a noise analysis and who would complete it?
- What is a “retrofit noise analysis project”?
- Who would determine if the noise analysis was done appropriately and the construction of a barrier is appropriate?

Noise Abatement Regulation and Guidance

- Code, regulation, and guidance
- Type I, II, and III projects
- Noise abatement criteria
- VDOT's warranted, feasible, and reasonable criteria for noise abatement determinations

Federal Noise Regulation and VDOT Policy

- **FHWA Noise Regulation, 23 CFR Part 772 - Procedures for Abatement of Highway Traffic Noise and Construction Noise**
  - Requires State DOTs to investigate traffic noise impacts in areas adjacent to "Type I" projects for all federally-funded highways
  - State DOTs must consider noise abatement for all identified impacts
  - All feasible and reasonable barriers must be incorporated into project design
- **VDOT Highway Traffic Noise Policy and Guidance Manual**
  - Last Updated – April 13, 2026
  - Outlines VDOT's noise evaluation procedures
  - Compliant with 23 CFR Part 772 and FHWA-approved
  - Applied consistently throughout the Commonwealth

Type I Projects – Require a Noise Analysis

- Type I Federal-Aid Projects
  - Construction of highway on new location
  - Alteration of the horizontal or vertical geometry
  - Addition of through-traffic lanes
  - Addition of auxiliary lanes
    - 2500+ feet
  - Adding or relocating interchange lanes or ramps
  - Restriping pavement to add a new through lane
  - Weigh stations, rest stops, park-n-ride, and toll plazas

Type II (Retrofit) Projects

- **Type II Projects**
  - Federal-aid projects for constructing noise barriers on existing highways in the absence of a project
  - VDOT does not participate in a Type II program
  - A Type II program requires:
    - A priority ranking system for projects statewide evaluating cost per receiver, magnitude of impact, population density, achievable noise reduction, etc., and approved by FHWA
    - Land development must predate highway (or a significant percentage of it)
    - Not allowed in areas where noise abatement was previously determined to be not feasible and reasonable
  - Funding would still need to be allocated to initiate and administer Type II program, complete statewide ranking and individual noise studies, and construct and maintain noise barriers
  - Likelihood of petitioners meeting all above requirements is low

Type III Projects

- **Type III Projects**
  - Federal or Federal-aid highway projects that do not meet the classification of a Type I or Type II project
  - Examples: guardrail replacement projects, paving projects
  - A noise study is not required
  - Petition projects appear to best be handled as Type III projects
  - As such, federal funding may not be able to be used to fund a noise study or the construction of noise barriers

Noise Abatement Determinations

- **For Type I projects, VDOT uses a three-phased approach for noise abatement determinations**
  1. **Do the sensitive receptors *warrant* highway traffic noise abatement consideration?**
  2. **Is it *feasible* to provide noise abatement from an engineering and acoustical standpoint?**
  3. **Is it *reasonable* to provide noise abatement considering barrier design goals, barrier square footage per benefited receptor, and the desires of the affected entity?**

Noise Abatement Criteria – 23 CFR Part 772, Table 1

Activity Category	Noise Level	Location	Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[1]	67	Exterior	Residential
C[1]	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[1]	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A–D or F.
F	- -	Exterior	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	- -	- -	Undeveloped lands that are not permitted.

[1] Includes undeveloped lands permitted for this activity category.

Warranted

- Predicted highway traffic noise levels (for the design year) approach or exceed the highway traffic noise abatement criteria in Table 1. “Approach” has been defined by the approved VDOT policy as 1 dB(A) below the noise abatement criteria,

  or

- A substantial noise increase has been defined by the approved VDOT policy as a 10 dB(A) increase above existing noise levels for all noise-sensitive exterior activity categories. A 10 dB(A) increase in noise reflects the generally accepted range of a perceived doubling of the loudness.

Feasible

- VDOT requires that fifty percent (50%) or more of the impacted receptors experience 5 dB(A) or more reduction in noise to be feasible,

  and

- The determination that it is possible to design and construct the noise abatement measure. The factors related to the design and construction include safety, barrier height, topography, drainage, utilities, and maintenance of the abatement measure, and maintenance access to adjacent properties.

Reasonable

- **Noise Reduction Design Goal: VDOT's design goal is 7 dB(A) of insertion loss for at least one impacted receptor,**

  and

- **Cost-effectiveness: VDOT's noise barrier cost effectiveness value is based upon a Maximum Square Footage of Abatement per Benefited Receptor (MaxSF/BR) value of 1,600,**

  and

- **Viewpoints of the benefited receptors: Fifty percent (50%) or more of the respondents shall be required to favor the noise abatement measure in determining reasonableness.**

Code of Virginia § 33.2-276

Noise Abatement Practices and Technologies.

C. The governing body of any locality, at its own expense, may evaluate noise from highways it may designate for analysis. Such evaluation shall be accepted and relied upon by the Department *if such evaluation is prepared in accordance with and complies with applicable federal law, regulations, and requirements, as well as guidelines and policies issued by the Board*, relating to noise abatement and evaluation. This provision shall not apply to projects for which the Department is required to perform a noise analysis.

- Notwithstanding the "Type I" requirement that would trigger the need for a noise study, VDOT interprets this provision to mean that all petition studies must follow existing federal and state noise abatement policies and guidelines.

VDOT Highway Traffic Noise Policy and Guidance Manual

Section 12.4.3 - Third party Funding Options (Type I projects)

- Third-party funding is limited to aesthetic enhancements above and beyond those for which VDOT is responsible for a noise abatement measure that has previously been deemed warranted, feasible and reasonable.
- Third-party funding is limited to aesthetic enhancements such as wall graphics, plantings, etc., and cannot be used to offset the cost of the noise barrier if the reasonableness cost criterion is not met.
- Regardless of contribution sharing, no barrier shall be funded by VDOT which does not meet the Warranted, Feasible, and Reasonable requirements.
- Challenge: Identifying funding options for petition projects which are considered Type III projects

Example Noise Barrier Installation Costs

Potential Petition Barrier Cost Estimate

Example Barrier Dimensions	
Length (Feet)	1,840
Average Panel Height (Feet)	15
Surface Area (Sq. Feet)	27,600
Material and Installation cost per SF	$70.00
Number of Benefited Receptors (est.)	37
Square Feet per Benefited Receptor	746

Engineering and Construction Costs (2026 Dollars)	
Material and Installation (Total $)	$1,932,000.00
Noise Study and Barrier Design	$60,000
Public Involvement and Voting	$10,000
Project Design and Plans (15%*)	$289,800.00
Clearing and Grubbing (5%*)	$96,600.00
ROW and Utilities (5%*)	$96,600.00
Geotechnical (15%*)	$289,800.00
Maintenance of Traffic (30%*)	$579,600.00
Erosion and Sediment Control (10%*)	$193,200.00
Mobilization (10%*)	$193,200.00
CEI (20%*)	$386,400.00
Contingency (30%*)	$579,600.00
Estimated Total Cost	**$4,706,800.00**

**Line item cost as a percentage of Material and Installation cost developed in coordination with Senior VDOT Engineering Project Manager*

Discussion: What Could Constitute a Valid Petition?

- Support of local jurisdiction, e.g., Board resolution
- Identification of funding
  - For study
  - For construction of barriers *found to be feasible and reasonable*
- Qualified noise consultant to complete study
- Barrier evaluation methodology
  - Recommend following procedures outlined in VDOT's Highway Traffic Noise Policy and Guidance Manual
- Documentation of support by local residents
  - Majority of affected residents should indicate support
  - For Type I projects, VDOT requires 50% or more of benefited receptors to support barrier
- Schedule for completion of noise study
- Who determines if petition is valid?

Discussion: Noise Barrier Considerations

- **Placement on VDOT right-of-way (ROW)**
  - Noise barriers constructed off VDOT ROW do not require VDOT involvement
- **Long-term maintenance of noise barrier**
  - Does locality agree to bear maintenance costs
- **Noise barrier costs**
  - VDOT uses $\$70/ft^2$ for materials/installation costs
  - Additional associated costs vary by project
  - E.g., a barrier 15’ high x 2000’ long would cost ~$2,100,000 for materials and installation; other associated costs can bring total above $4,000,000

Next Steps

- **Utilizing today's feedback, VDOT will:**
  - Continue to review existing federal and state laws, regulations, policies, and guidelines that pertain to the viability of a noise abatement petition process
  - Survey other State DOTs that have petition-type barrier processes
  - Consider what may constitute a valid noise study petition
  - Evaluate potential processes to evaluate and construct barriers found to be feasible and reasonable through the noise study petition process
  - Additional items?

Timeline

- Next Work Group meeting late May or early June
  - Discussion of VDOT findings and their inclusion in the preparation of a draft final report
  - Remaining schedule to completion
    - 7/10 - Draft final report circulated to Work Group for review and comment
    - 7/27 - Comments from Work Group due
    - 8/14 - Final report circulated back to Work Group
    - 8/31 - Final report submitted to Chair of the House Committee on Transportation and Delegate Feggans


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