



Noise walls

Frequently Asked Questions

What is a noise wall?

It is a specially designed structure built to reduce noise levels created by nearby highway traffic. It is built only after noise impact studies are conducted and certain conditions are met.

What is a Type I project?

A Type I project is defined by FHWA and VDOT as: (1) The construction of a highway on new location; or, (2) The physical alteration of an existing highway where there is either: (i) Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or, (ii) Substantial Vertical Alteration. A project that removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor; or, (3) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a HOV lane, High-Occupancy Toll (HOT) lane, bus lane, or truck climbing lane; or, (4) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or, (5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or, (6) Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or, (7) The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza.

What is a Type II project?

A Type II project is defined by FHWA and VDOT as a proposed federal or federal-aid highway project for noise abatement on an existing highway. VDOT does not participate in Type II projects.

What is a Type III project?

A Type III project is a Federal or Federal-aid highway project that does not meet the classifications of a Type I

or Type II project. Type III projects do not require a noise analysis.

Does VDOT allow participation of Third Party Funding?

Third-party funding is limited to aesthetic and functional enhancements above and beyond that for which VDOT is responsible.

What is a significant alteration to the vertical/horizontal?

A Substantial Horizontal Alteration is when a project halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition and a Substantial Vertical Alteration is when a project removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor.

What defines an increase in through-traffic lanes?

The increase in through-traffic lanes requires consideration of the through-traveled way – the portion of the highway constructed for the movement of vehicles, exclusive of the shoulders and auxiliary lanes. An increase in through traffic lanes involves those projects that include continuous full lane additions and increase the facility's capacity.

What is considered an auxiliary lane?

Auxiliary lanes are those lanes adjoined to the traveled way intended for speed change, storage, weaving, climbing, and other purposes supplementary to through-traffic movement. Auxiliary lanes are aimed at reducing interference with through-traffic and are not usually intended to increase capacity. Turning lanes at intersections, center-turning lanes, weaving lanes between interchanges, truck climbing lanes, etc. are considered auxiliary lanes.

Is an auxiliary lane considered a Type I Project?

Yes. Except for when the auxiliary lane is a turn lane



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If the project does not fall under the Type I project description, is it exempt from a noise analysis?

It depends. While not common, a project may sometimes affect the acoustical environment without adding lanes or significantly altering the horizontal/vertical alignment. Situations when the project itself causes potential noise concerns can arise during minor improvements.

Is a detailed noise analysis required for a bridge replacement?

It depends. If the project consists of a significant alteration to the horizontal and/or vertical alignment or if there is an increase in through-traffic lanes then yes a detailed noise study would be required. However, bridge replacements and rehabilitations within the existing footprint generally are exempt from noise analyses

Is a noise analysis required if mitigation is clearly not feasible?

Yes. The noise analysis procedure is a three-step process: warranted, feasible, and reasonable. The first step is to determine whether noise-sensitive receptors are impacted by noise (to determine if abatement consideration is warranted). The next step is to determine if the abatement is feasible; absent a noise analysis and a determination of whether abatement is warranted, it would be difficult to make a determination that abatement is not feasible. An evaluation of this nature may be suitable for the screening analysis procedures. The NEPA document needs to address impacts, regardless of whether abatement is likely.

Is a mitigation analysis required in Preliminary Design?

Yes. Highway traffic noise abatement commitments are made at two times during a project's development: at the conclusion of the NEPA process and during Final Design. While drafting the environmental document during preliminary design, approximate barrier locations and heights need to be determined and a preliminary feasible and reasonable assessment made. Please note: identification of mitigation during the NEPA process does not guarantee mitigation will be

constructed. This mitigation is subject to additional consideration during the Final Design phase once more detailed information is available, and this information needs to be clearly documented in the NEPA document.

Is a noise analysis required for undeveloped lands?

Yes. A noise analysis is required for undeveloped lands

What is considered to be permitted?

Undeveloped lands are deemed to be permitted if a noise-sensitive receptor(s) has received approval from the local agency (i.e., a building permit has been issued) prior to the date of public knowledge.

What is considered the date of public knowledge?

State Highway Administrations must identify when the public is officially notified of the adoption of the location of a proposed highway project. This date establishes the "date of public knowledge" and determines the date when the federal/state governments are no longer responsible for providing noise abatement for new development that occurs adjacent to the proposed highway project. While Virginia has used a "date of public knowledge" consistent with state law (date of location approval by the Commonwealth Transportation Board), FHWA has determined that the "date of public knowledge" will coincide with the date of approval of CEs, FONSI, or RODs.

Who maintains noise walls?

Noise barriers constructed by VDOT are maintained and repaired by VDOT.

How can I get more information about noise walls in my area?

Learn more through these useful resources:

Links

- [FAQs \(FHWA\)](#)
- [Highway Traffic Noise \(FHWA\)](#)
- [Environmental Division at your local VDOT office](#)