Noise Impact Analysis Where There are Existing Noise Barriers
Noise Impact Analysis Where There are Existing Noise Walls

- FHWA Guidance: “Consideration of Existing Noise Barriers in a Type I Noise Analysis” (August 2012)

- Outlines the process for considering the feasibility and reasonableness of replacing or improving existing noise barriers.
- **Step 1:**
  - Conduct noise analysis for noise sensitive areas with existing noise barriers using the new project configuration.
  - If there are no noise impacts behind the existing barrier, the process is complete.
  - If impacts are predicted with the project, further consideration is necessary.
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• Step 2:
  • Predict the design year noise levels for the noise sensitive area without the existing barrier.

• Step 3:
  • Compare the “no barrier” case to the “with barrier” case to determine whether the existing noise barrier satisfies the requirements of the state noise policy (feasibility and reasonableness).
  • If the existing barrier meets the requirements, no further action is necessary. Leave existing barrier as is.
  • Approach is acceptable, even though impacts still exist, because the goal of noise abatement is to achieve a substantial reduction in noise levels; not to reduce noise levels below the Noise Abatement Criteria (existing noise barrier achieves an abatement design that is acceptable under the SHA noise policy).
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• Step 4:
  • If the existing barrier does not meet the current policy requirements should retrofit, or replace the existing barrier to meet the requirements of the state noise policy.
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- Evaluate combinations of lengthening, supplementing, or removing and replacing the barrier.
  - Is a parallel barrier required?
  - If yes, optimize. If no, consider lengthening.
    - If length reasonable and feasible, optimize.
  - If lengthening is not reasonable and feasible, consider removal and replacement to increase height.
    - If removal and replacement reasonable and feasible, optimize
    - If not keep existing barrier.