I-43 Noise Wall Frequently Asked Questions

Q: What does it mean to be feasible and reasonable?
A: To be considered for construction, a noise barrier must be both "feasible" and "reasonable".

First, is it *feasible* to build? Factors to determine if a barrier is physically feasible include whether it's possible given the surrounding land and site conditions, taking safety, drainage and other engineering factors into account. Secondly, the barrier must be acoustically feasible and reduce noise levels by at least 5dB.

Second, the barrier must also be *reasonable* to build. Reasonableness takes into account two factors:

- At least one receptor receives an 9 dB reduction in noise levels
- Cost per receptor that receives an 8 dB or more reduction, must be less than $47,000

Lastly, once a wall is deemed both feasible and reasonable, a simple majority of property owners that receive an 8 dB or more reduction (benefited receptors) must vote in favor of building the barrier.

Q. What is an impacted and benefited receptor?
A. An *impacted* receptor is a listener or common use area with a predicted future traffic sound level which approaches or exceeds the WisDOT Noise Level Criteria (NLC) for considering barriers by land use categories. To be considered *benefited*, an impacted receptor must receive a minimum of eight (8) dB noise reduction.

Q: Why won't there be a wall built where I live?
A: Because "reasonableness" takes into account the number of impacted noise receptors, population density plays a roll. In order for a wall to be built, cost for each impacted/benefited receptor must be less than $47,000. Because the walls cost $28 per foot to construct, having more impacted properties increases the chances that the cost will go down per receptor and make the wall "reasonable" to build. Additionally, homes that are further than 300' from the freeway would receive little to no decibel reduction in noise if a wall would be constructed, so often times, larger plots of land with deeper setbacks to homes do not qualify.

Q: Will I have to pay for the wall?
A: The walls will be constructed as part of the overall I-43 NS project and paid for out of project funds. No direct costs will be passed onto property owners.

Q: Will it be louder on the side opposite the wall?
A: No, the walls will be built with absorptive materials, which ensures that noise does not reflect.

Q: Will there still be a freeway fence? Who maintains the back of the wall and/or vegetation?
A: Most freeway fences and vegetation in the immediate area of the proposed noise wall will be removed in order to construct the noise walls. Unless the noise wall is directly adjacent to the freeway, the freeway fence will not be replaced. If the freeway fence is not replaced, homeowners are welcome to mow or maintain grass up to the back of the wall at their discretion.

Q: What is the PLE for?
A: A 20-foot strip of land is needed behind each barrier for maintenance and WisDOT will purchase a permanent limited easement (PLE) where possible to provide for the 20' for maintenance of the wall.

Q: How do I know if I'm eligible to vote?
A: Only those who are impacted and benefited get to vote on the wall (see above for a definition of those terms). If you were deemed impacted/benefitted, you will have received a certified letter along with additional information in the mail. If you did not receive a certified letter, you are not a voting party.

Q: What does logarithmic mean? How does it affect decibel measurement?
A: A decibel (dB) is the unit used to measure a sound's strength. Because the range of sound intensity is so large it makes sense to write them as powers of 10 and simply keep track of their exponents. This is the reason the decibel scale is not linear, but logarithmic and that noise levels can't be added directly like other numbers.

On the decibel scale, the smallest audible sound (near total silence) is 0 dB. A sound 10 times more powerful is 10 dB. A sound 100 times more powerful than near total silence is 20 dB. A sound 1,000 times more powerful than near total silence is 30 dB.

For example, a backhoe and a compressor each producing 90 dB have a combined output of 93 dB, not 180. But 93 dB is still twice as much noise as 90 dB. In other words, sound intensity doubles every 3 dB. Hearing protection should be used for any level over 85 dB and double protection for any level over 105 dB.