

erception	Sound Perception	
Percepti	Change in Sound Level	
Barely Perce	3 dB(A)	
Clearly Perce	5 dB(A)	
Twice as Lo	10 dB(A)	

## Noise Abatement Criteria (NAC) NOISE ABATEMENT CRITERIA [Hourly A-Weighted Sound Level-decibels (dB(A))] Activity Leq(h)<sup>1</sup> Evaluation FHWA FDOT location Description of activity category Lands on which serenity and quiet are of extraordinary significance and serve an 56 Exterior important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended B<sup>2</sup> 67 66 Exterior Residential Active sports areas, amphitheaters, auditoriums Active spors areas, aniphiliteaters, additionaris, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, pichic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossions Noise levels at which 66 Exterior FDOT must consider Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording noise abatement Interior studios, schools, and television studios. Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. E<sup>2</sup> 72 71 Exterior Agriculture, airports, bus yards, emergenc services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water testerart, ela chical) water treatment, electrical), and warehousing Undeveloped lands that are not permitted. (Based on Table 1 of 23 CFR Part 772) 1 The Leq(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures. <sup>2</sup> Includes undeveloped lands permitted for this activity category. Note: FDOT defines that a substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels or more as a result of the transportation improvement project. When this occurs, the

# requirement for abatement consideration will be followed.

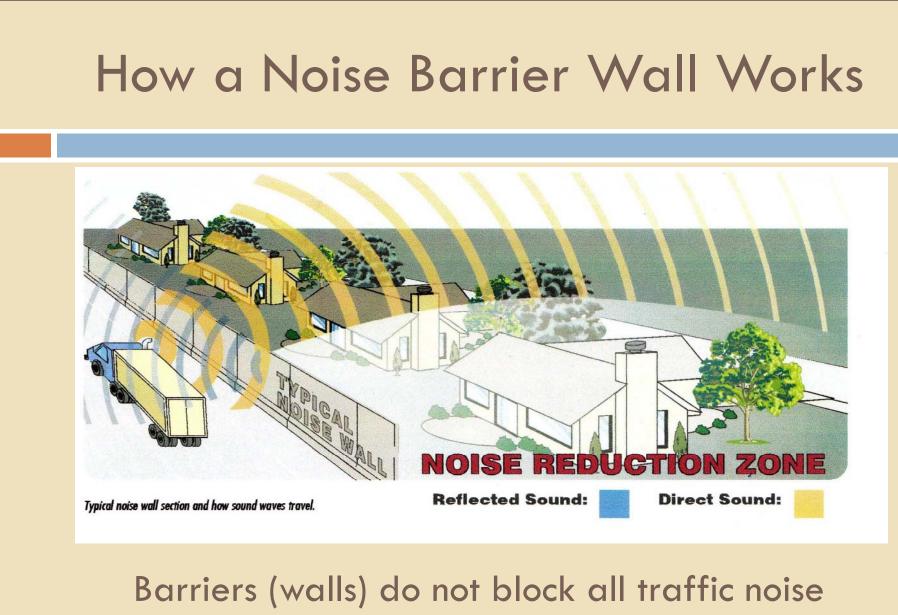
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# What is Noise? Noise = Unwanted Sound Noise Definitions Decibels (dB) – unit of measure of sound level $\Box$ dB(A) – decibel with A-scale weighting resembles human hearing Noise Abatement Criteria (NAC) – noise level at which FDOT must consider noise abatement Receptor – location of a noise sensitive area/site Impacted – Receptor is impacted by traffic noise Benefited – Receptor will receive a



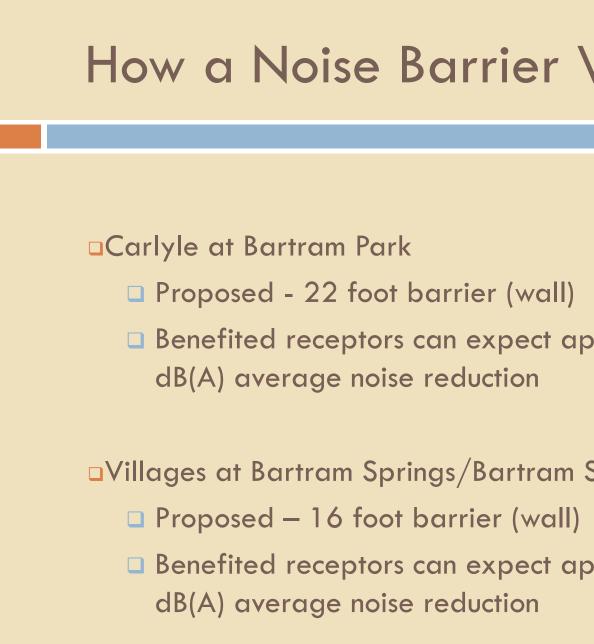
They <u>reduce</u> the overall noise level

- minimum 5 db(A) reduction

# FDOT Decision Making Process

- □ Step 1 Feasibility:
- receptor
- YES
- Step 2 Reasonableness: YES
- Step 3 Public Viewpoint





Can the noise barrier (wall) physically be built and provide the FHWA required 5 dB(A) noise reduction for two (2) receptors AND achieve the FDOT required 7 dB(A) noise reduction design goal for at least one (1)

Can the feasible noise barrier (wall) be built under FDOT cost criteria?

Do the impacted and benefited receptors desire a noise barrier (wall)?

# Common Noise Levels

or	Noise Levels	Common Indoor Noise Levels
50m)	(decibels, dB) 105	Rock Band
(1m)	95 100	Inside Subway Train (NY)
15m )	85 90	Food Blender at 3ft (1m)
	75 80	Garbage Disposal at 3ft (1m) Shouting at 10ft (3m)
30m) Area	65 70	Vacuum Cleaner at 10ft (3m)
Alea	60	Normal Speech at 3ft (1m)
	55 50	Large Business Office Dishwasher in Next Room
	45 40	
	35 30	Library
	25 20	
	15 10	
	5 0	Threshold of Hearing
sportation Officia		

# How a Noise Barrier Wall Works

Benefited receptors can expect approximately a 8.2

Villages at Bartram Springs/Bartram Springs/Flagler Station Benefited receptors can expect approximately a 7.9