



# ENVIRONMENTAL NOISE STUDY PROCESS

## Project Types

### TYPE I PROJECT

- New Roadway
- New travel lanes
- Substantial alteration

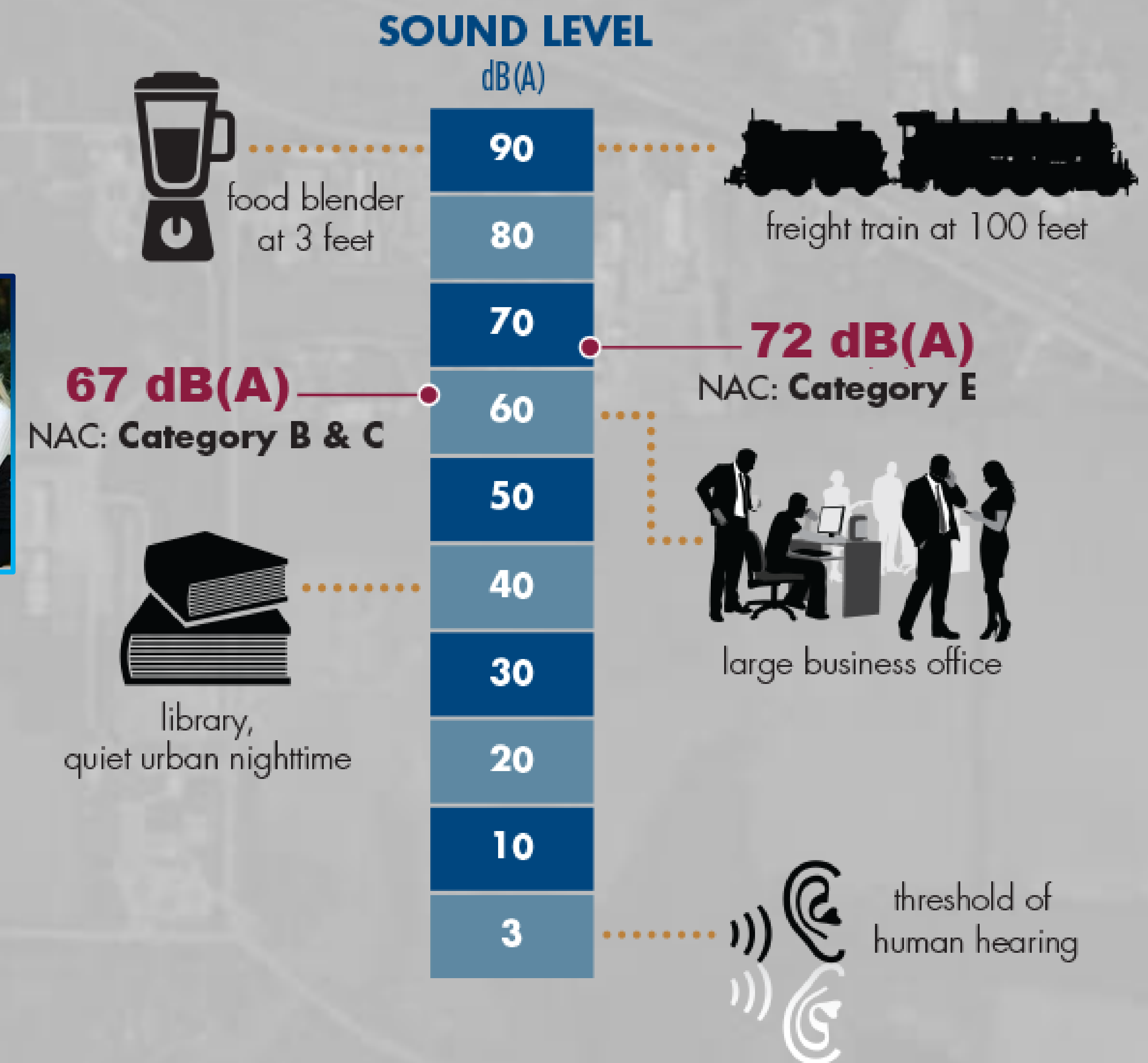


### TYPE II PROGRAM

Illinois has **NO** Type II (retrofit) Program



## Common Sound Levels



Noise studies are conducted for **TYPE I PROJECTS** in Illinois

## Traffic Noise Study Process

Identify Noise Receptors



Traffic Noise Field Measurement

Determine Noise Levels

**Predicted Traffic Noise Using FHWA Traffic Noise Model**

- Existing Conditions (validated by field measurements)
- Future 2050 – Without Improvements (No Build)
- Future 2050 – With Improvements (Build)

Recognize Noise Impacts

**Impacts Identified for Worst-Case Receptors**

1. Future noise levels approach, meet or exceed the FHWA Noise Abatement Criteria
  - CAT B/C: Residential, cemetery, library, hospital, parks: > 65 dB(A)
  - CAT E: Hotels, motels, office, restaurants > 71 dB(A)
2. Substantial increase in noise (+15 dB(A) or greater)

Traffic Noise Abatement Analysis

Noise Walls **MUST** be **FEASIBLE** and **REASONABLE**

### Feasibility

- Must achieve at least 5 dB(A) noise reduction for two impacted receptors.
- Must be feasible to construct.

### Reasonableness

- Must achieve an 8 dB(A) reduction for at least one benefitted receptor.
- Must be cost-effective (generally <\$24,000 per benefitted receptor).
- Viewpoint Solicitation – Majority vote by benefitted receptors in favor of abatement.



**RESPONSE GOAL OF 33%**  
of benefitted receptors per proposed barrier

**IF RESPONSE GOAL IS NOT MET**  
a second mailing will be sent to maximize response rate for voting