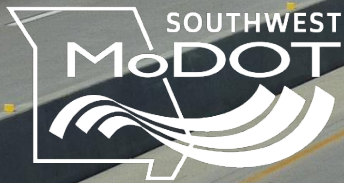


US 60 / James River Freeway Sound Wall

Kansas Expressway to National Avenue



Warner "Bud" Sherman
Missouri Department of Transportation

Outline of Discussion

- What initiated the sound wall study?
- Highway noise
- Sound wall
- Sound wall criteria
- Study location of sound wall
- What's next? – the vote

What initiated the sound wall study? Addition of Lanes



Main Causes of Noise

Truck Exhaust



Tire/Road Noise

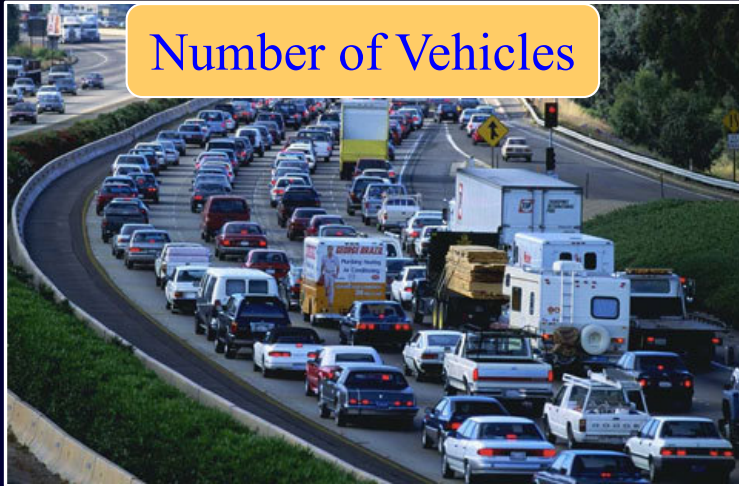


Vehicle Engines



What Determines Noise Level

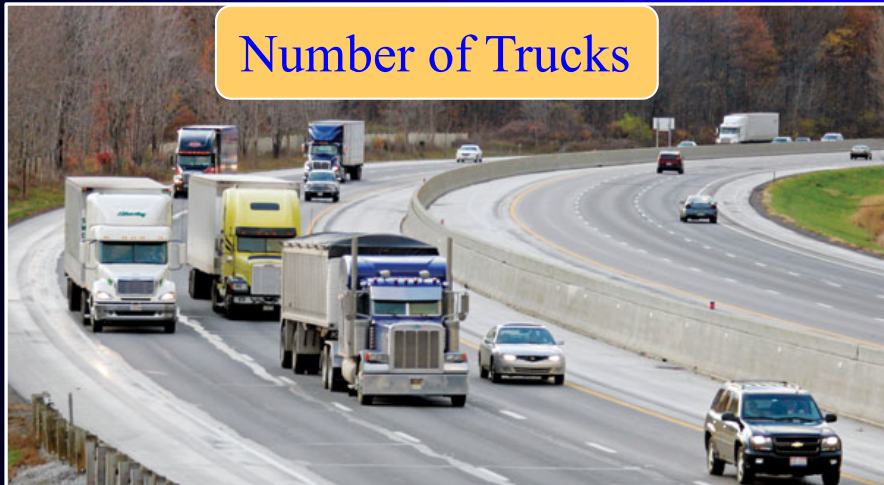
Number of Vehicles



Speed of Traffic



Number of Trucks



Example of Noise Level



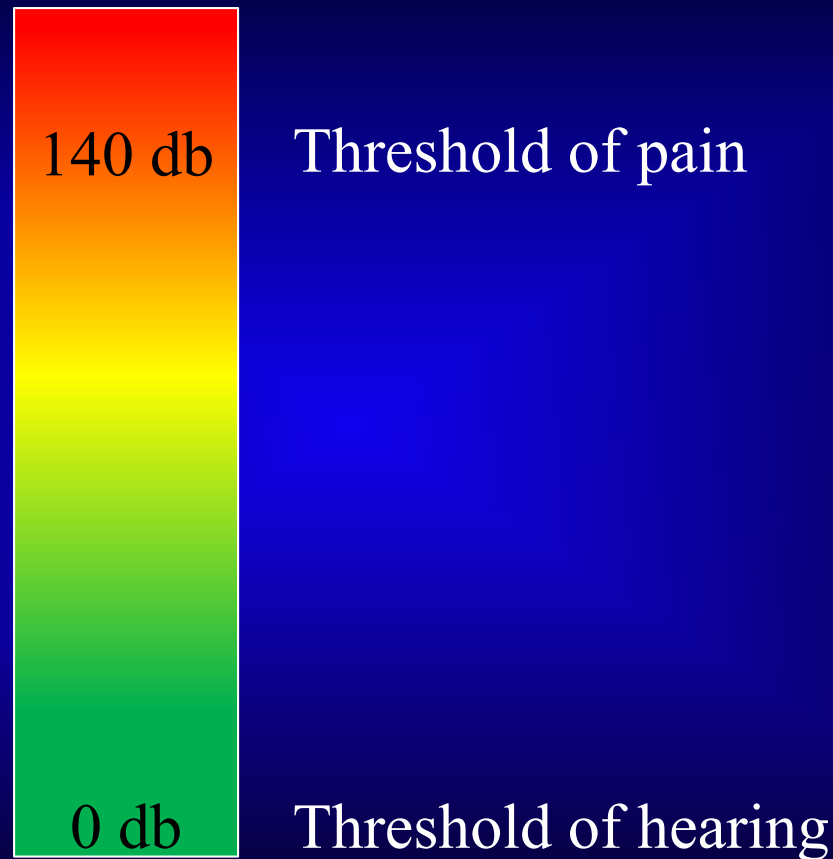
V.S.



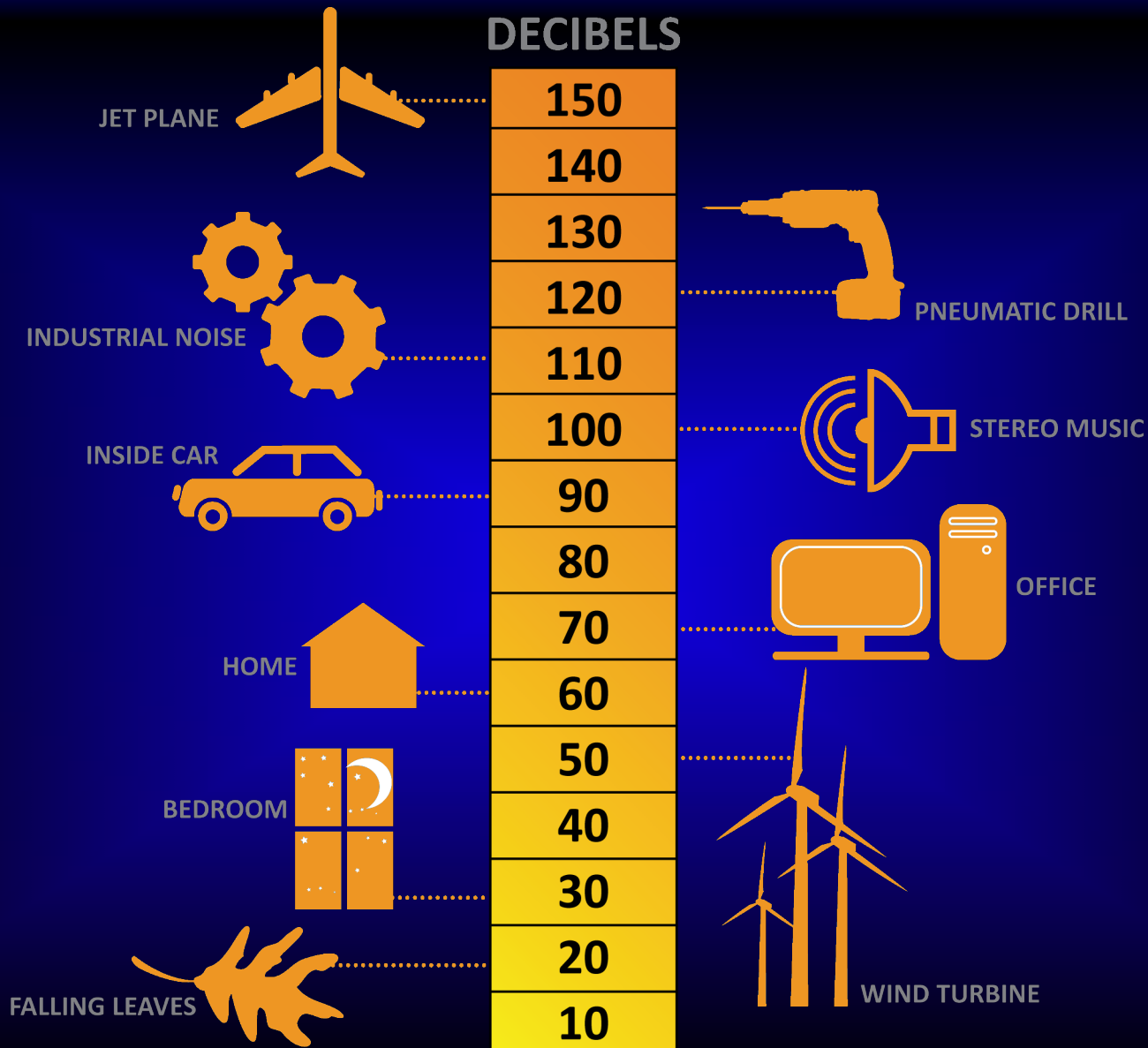
Traffic traveling at 60 MPH is twice as loud as traffic traveling at 30 MPH

How is Noise Measured?

A scale known as Decibel



Examples of Noise Levels



Sound Wall



Can be constructed within existing highway right of way

Most are made of concrete (durability and low maintenance)

Able to withstand elements (sun, temperature, moisture)

Definitions

Impacted Receiver/Receptor

- Any receptor (property) that approaches 66 decibels or greater.

Benefited Receiver/Receptor

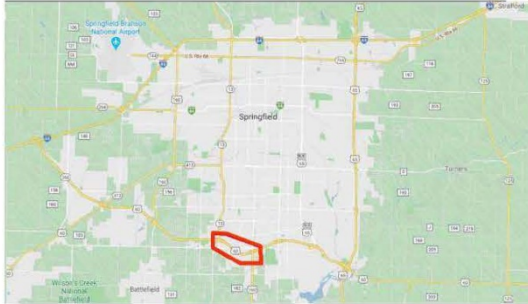
- A receptor (property) that receives at least a 7 decibel reduction in noise level with the addition of a sound wall.

Noise Policy Criteria

- Noise level must exceed 66 dBA
- Wall must provide a minimum 7 dBA reduction
- Wall must be no higher than 20 feet
- Wall must be built on state property and meet safety and maintenance needs
- Majority of impacted receptors must agree to wall
- Can't exceed 1300 Sq. Ft. of wall per benefited receptor

US 60 Wall Study Location

NSA 3 - Receiver Map (Barrier Design 3a) US-60 Traffic Noise Study



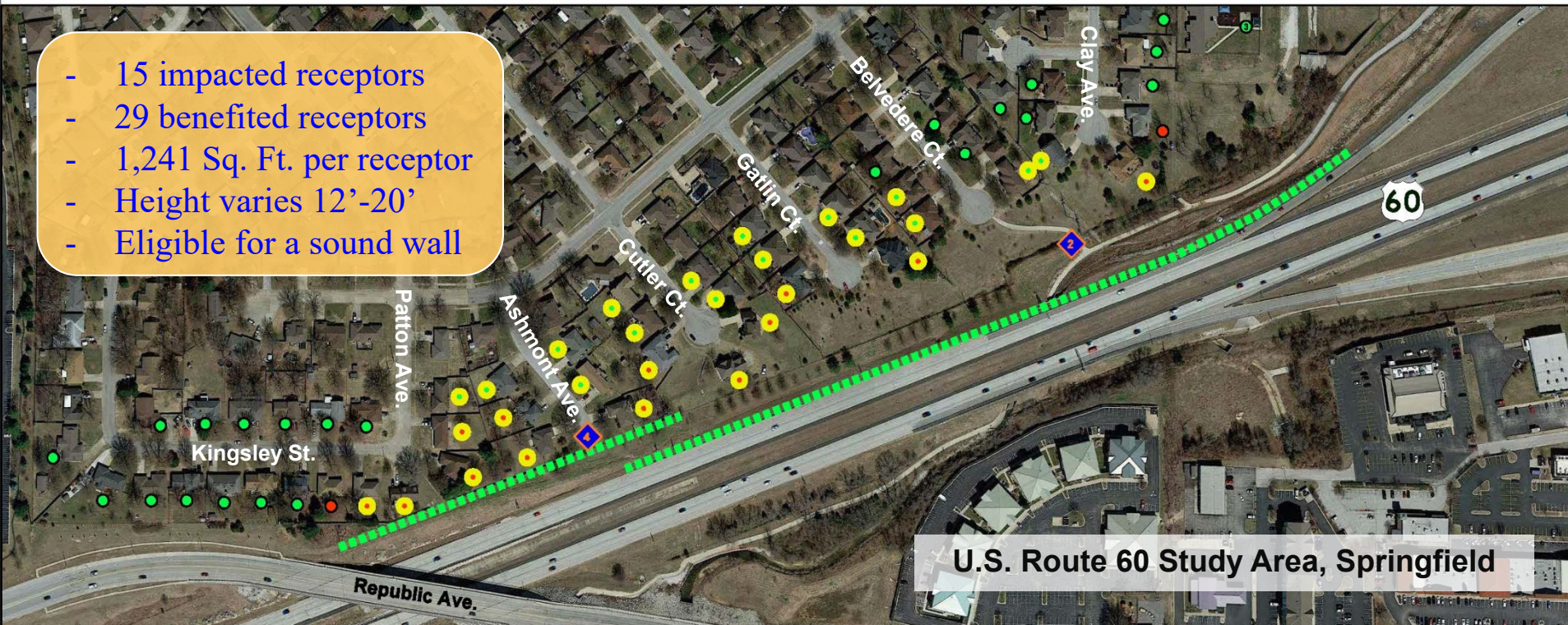
Not To Scale

NOTE: Noise Levels Based
On 2040 Traffic Projections

Legend

- Non-Impacted Receiver
- Impacted Receiver
- ⊗ Non-Impacted Receiver (Multiple Receptors)
- ⊗ Impacted Receiver (Multiple Receptors)
- ⊗ Benefitted Receiver
- ▬ Sound Wall
- ◆ Field Measurement Location

- 15 impacted receptors
- 29 benefited receptors
- 1,241 Sq. Ft. per receptor
- Height varies 12'-20'
- Eligible for a sound wall



U.S. Route 60 Study Area, Springfield

What's next?



Letters for voting will be sent out to all first-row impacted receptors.

Majority of property owners and tenants must vote 'yes' for wall to be built.

MoDOT to evaluate tallied votes and make determination.

Results to be posted on MoDOT website at modot.org/james-river-freeway-us-route-60-sound-barrier

Additional Information

www.fhwa.dot.gov/environment/noise/

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[Resources](#)

[Tire Pavement Noise](#)

[Traffic Noise Model](#)

[Training](#)

 **Sign up for FHWA Noise Program updates.**

Contacts

For more information, please contact:

FHWA Headquarters

Aileen Varela-Margolles
Phone: 305-978-7780

Cecilia Ho
Phone: 202-366-9862

[FHWA](#) → [Environment](#)

Highway Traffic Noise



The Federal Highway Administration (FHWA) is the agency responsible for administering the Federal-aid highway program in accordance with Federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, applies to highway construction projects where a State department of transportation has requested Federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally-aided highways for proposed construction of a highway on a new location or the reconstruction of an existing highway to either significantly change the horizontal or vertical alignment or increase the number of through-traffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the project design.

However, effective control of the undesirable effects of highway traffic noise requires a 3-part approach: Noise Compatible Planning, Source Control and Highway Project Noise Mitigation.

Recent Items

- Updated: [Training](#) (3/26/21)

Hot Topics

- Updated Noise Policy FAQs ([HTML](#) or [PDF \(190Kb\)](#))
- [NCHRP 791: Supplemental Guidance on the Application of FHWA's Traffic Noise Model \(TNM\)](#)

Related Topics

- [Pavements](#)
- [Construction](#)

Questions or Comments

Warner “Bud” Sherman

Transportation Project Manager, MoDOT

417.895.7690

Warner.Sherman@modot.mo.gov