James River Freeway Sound Wall
Public Meeting

Glenstone Ave. to National Ave.

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Missouri Department of Transportation
Outline of Discussion

- What initiated the noise/sound wall study?
- Highway noise
- Types of noise abatement (ways to lessen noise)
- Sound wall criteria
- The study areas for US 60
- What’s next? – the vote
How was noise study initiated?

Limits of auxiliary lanes

Source: Bing Maps

Disney Elementary School

Wal-Mart

YMCA
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

Traffic traveling at 65 MPH is twice as loud as traffic traveling at 30 MPH
How is Noise Measured?

A scale known as Decibel

140 db
Threshold of pain

0 db
Threshold of hearing
Examples of Noise Levels

- Jet Plane: 150
- Industrial Noise: 140
- Inside Car: 130
- Home: 120
- Bedroom: 110
- Stereo Music: 100
- Office: 90
- Computer: 80
- Wind Turbine: 70
- Falling Leaves: 60
- Office: 50
- Bedroom: 40
- Home: 30
- Inside Car: 20
- Industrial Noise: 10
- Jet Plane: 10
Examples to Decrease Noise

- Sound Wall
- Dense Trees
- Earth Berm
Earth Berm

Requires more right of way due to width of berm

80’-100’
Dense Wall of Trees

Requires 20’ of width to reduce decibel level by 1 decibel

Requires more right of way due to width of trees

Takes time to establish growth
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)
US 65 Sound Walls
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 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 benefited property owners must agree to wall
- Can’t exceed 1300 Sq. Ft. of wall per benefited receptor
Wall Study Location No. 1

- 68 impacted receptors
- 40 benefited receptors
- 636 Sq. Ft. per receptor
- Height varies 8’-14’
- Eligible for a sound wall
- 36 impacted receptors
- 12 benefited receptors
- 1083 Sq. Ft. per receptor
- Height varies 8’-18’
- Eligible for a sound wall
Wall Study Location No. 3

Exhibit 2 - Receiver Map
US-60 Traffic Noise Study

- No receptors were over the 71 decibel level
- No impacted receptors
- Not eligible for sound wall
What’s next?

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

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

Visit other areas with walls and ask questions.
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, 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 federal-aided highways for proposed construction of a highway, in new locations 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.

Land Use Planning and Control

State and local governments have the authority to regulate land use planning or the land development process. The FHWA and other Federal agencies encourage State and local governments to practice land use planning and control in the vicinity of highways to avoid future noise impacts and the need to provide noise abatement for future highway projects. The Federal Government advocates use of local government authority to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized.
Questions or Comments

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