Highway 169 Redefine Traffic Noise Analysis

DEPARTMENT OF TRANSPORTATION

169 REDEFINE

FIELD MEASUREMENTS

- Document existing noise levels at representative sites
- Validate noise models (measured levels +/- 3 dBA of model levels)

COMPLETED

ONGOING

NOISE LEVEL MODELING

- Develop noise models of project area roadways and topology
- Model noise levels at receptor sites (homes, businesses, parks, etc.)
- Model existing, future no-build and future build conditions (Use 20-year traffic projections)

IMPACTS IDENTIFIED?

NO

NOISE ANALYSIS IS COMPLETE

YES

- Noise levels approaching or exceeding FHWA noise abatement criteria
- 66 dBA (Leq for residential use)
- Substantial noise increase (5 dBA or more increase between future build noise levels)

NOISE MITIGATION MODELING
(FEASIBILITY AND REASONABLENESS)

Defined in MnDOT Noise Requirements

Feasibility

- Acoustic feasibility (5 dBA reduction to be considered benefited)
- Site Constraints

Reasonableness

- Noise reduction design goal (reduction of at least 7 dBA at minimum of one benefited receptor)
- Cost effectiveness ($78,500 per benefited receptor)
- Noise wall voting (viewpoints of benefited residents and property owners)

MEETS FEASIBILITY AND REASONABLENESS ?

NO

NOISE ANALYSIS IS COMPLETE

YES

FEASIBLE AND REASONABLE NOISE WALLS ARE PROPOSED FOR CONSTRUCTION