

2010 - YEAR OF RENEWAL & REAFFIRMATION

Revisions to the FHWA Highway Noise Regulation 23CFR 772

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Outline

- ⦿ Highway Traffic Noise Abatement
 - Regulatory Basis
 - Noise Barriers - How They Get built
 - Definitions
 - MdSHA Noise Program/Policy History
- ⦿ Changes to 23 CFR 772
- ⦿ Implications related to MD SHA Policy
- ⦿ Summary

Highway Noise Abatement :

" Why Do We Do It?"

- Noise is pervasive
- Quality of Life
- Health considerations - (level/duration dependent)
- *AND.....*

It's the Law

Regulatory Basis

- NEPA – National Environmental Policy Act
 - 1969
 - Mandated establishment of regulations & standards for considering environmental impacts
- Federal Aid Highway Act of 1970
 - Formalized mandate for FHWA
 - First regulation – PPM 90-2 (1972)
 - FHPM 7-7-3 / 23 CFR Part 772 (1976 / 1991)
 - 23 CFR Part 772 (2010/11)

How Highway Noise Barriers Get Built



- ◎ **Type I** – Impacts resulting from highway improvements
 - Mandatory “consideration” under NEPA
 - “Feasible and Reasonable” determination
- ◎ **Type II** – Impacts from existing highways (with no other improvements)
 - Development must pre-date original highway
 - Voluntary (not all states choose to participate)
 - Finite set of eligible communities/projects

Definitions

- ⦿ Noise Abatement Criteria (NAC)
 - Noise levels (based on land use) at which noise abatement must be considered
 - Ex. – Residences (67 dBA) – exterior
- ⦿ Noise Impact
 - Noise levels that “approach or exceed” the NAC
 - Approach = minimum of 1 dBA
 - Substantial increase in noise over existing levels

Definitions

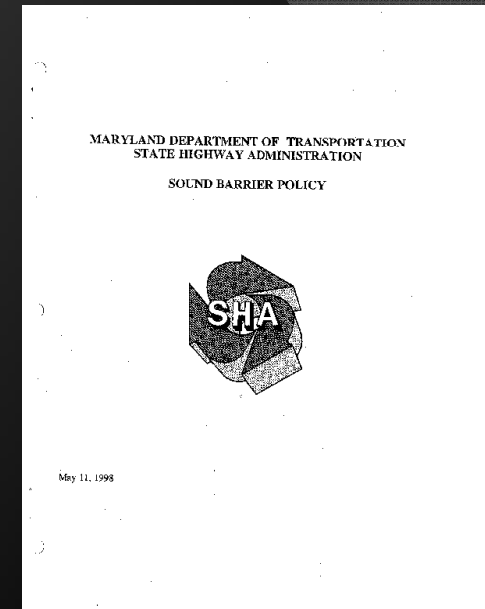
● Feasibility

- Combination of the acoustical and engineering factors in evaluating a noise abatement measure
- “Can an effective barrier be physically built?”

● Reasonableness

- Combination of the social, economic and environmental factors in evaluating a noise abatement measure
- “Is the proposed barrier cost-effective and acceptable to the community?”

Policy Evolution



- Mid 1970's Program started
- First version – 1987
- Latest / Current Version – 1998
 - 1995 FHWA mandate
- Revisions pending – 2009/10
 - Clarifications / refinements
 - Required based on new 23 CFR (New Rule)

23 CFR 772

Summary of Changes

Procedures for Abatement of Highway Traffic Noise and Construction Noise

- 1995 “Highway Traffic Noise Analysis and Abatement Policy and Guidance”
 - Substantive provisions/features incorporated into the new regulation
 - Updated “guidance” document also produced
- Reorganization of sections
- Expansion/clarification of some definitions
- NAC revised & reorganized
- State Policy approval required by July 2011

Policy Implications of 23 CFR 772 Revisions

Definition of Type I projects

- Current Policy
 - Significant changes in horizontal or vertical alignment (new location or alteration of existing highway)
 - Increase in through-lane capacity (“minimum” length of 1.5 miles)
- Policy implications
 - More detailed -expands kinds of projects and broaden scope of projects requiring analyses (e.g. specifies distance criteria for alignment changes)
 - Careful coordination will be needed with FHWA Division
 - Potential increases in analysis costs
 - 1.5 mile minimum length eliminated

Policy Implications of 23 CFR 772 Revisions

Build vs No-Build Comparison

○ Current Policy

- Requires a 3 dBA increase for abatement to be considered reasonable
- Consideration of cumulative effects from interim improvements

○ Policy implications

- New Rule disallows this criterion
- Related cumulative effects consideration is also disallowed in New Rule
- Analysis greatly simplified
- Cost savings

Policy Implications of 23 CFR 772 Revisions

Substantial Noise Increase

Current Policy

- Current SHA Policy requires a minimum 10 dBA increase over existing level **and** a level threshold of 57 dBA or more
- Consideration of cumulative effects from interim improvements

Policy implications

- New Rule defines an acceptable range of 5-15 dBA (State-specified)
- **No level threshold allowed**
- Related cumulative effects consideration is also disallowed in New Rule

Policy Implications of 23 CFR 772 Revisions

Cost effectiveness determination

- Current Policy
 - Cost based on system installed (\$18-20/sq.ft.)
 - Maximum \$50,000 per benefited residence
 - Cost-averaging - for areas over \$50K but less than \$100K/residence (Type I only)
- Policy implications
 - New Rule allows a number of cost-based options
 - Also allows consideration of sq.ft./benefited residence (SHA proposed)
 - Cost-averaging concept allowed

Policy Implications of 23 CFR 772 Revisions

Square feet /benefited residence

- Reasonableness/Cost effectiveness determination
 - Eliminates problem of varying cost over time (still based on same QUANTITY, upon which \$/resid is based)
 - Includes process (under feasibility) to identify and assess excessive costs/conditions (e.g. utility relocations)
 - Overall cost is NOT ignored, just not the primary basis for judging reasonableness
 - Beneficial for planning studies / time-lag in NEPA process and design/construction

Policy Implications of 23 CFR 772 Revisions

Funding by Third Parties

○ Current Policy

- Allows for supplemental funding of noise abatement (to cover costs over the per-residence limit) (e.g. CABN)
- County 20% cost-share required for Type II advancement

○ Policy implications

- Disallowed based on EJ considerations
- Can be used if project already meets reasonable determination (e.g. special finishes)
- **County Type II cost-share requirement acceptable.**

Analysis Implications of 23 CFR 772 Revisions

Benefited Receptor Definition

- ⦿ Current Policy
 - Impacted and benefited – 3 dBA minimum reduction
 - Non-impacted and benefited – 5 dBA minimum reduction
- ⦿ Policy implications
 - Requires minimum of 5 dBA reduction for impacted and non-impacted

Analysis Implications of 23 CFR 772 Revisions

Noise Reduction Design Goal

- ⦿ Current Policy
 - 7-10 dBA minimum reduction
- ⦿ Policy implications
 - Requires single number to be established (in the range of 7-10 dBA)

Analysis Implications of 23 CFR 772 Revisions

Activity Category Changes

○ Current Policy

- Hotels/motels –
Category B @ 67
dBA

○ Policy implications

- Newly defined as
Category E @ 72
dBA

Summary Remarks

Revisions to 23 CFR 772

- Handout – Section by Section Analysis
- Collaborative/cooperative spirit from FHWA in guiding the states “new” policy development
 - HQ staff consultations welcomed/encouraged
 - Pre-clearance/approvals given for specific policy provisions/ideas

Summary Remarks

Revisions to 23 CFR 772

- New Draft Policies from States due to FHWA by January 13, 2011
- **Effective Date July 13, 2011**
- Grandfathering in consultation with FHWA Division Office

RESOURCES

www.fhwa.dot.gov/environment/noise

Thank You

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