

(vii) Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur under a no-build scenario;

(viii) Change in accessibility will not substantially diminish the utilization of the section 4(f) resource; or

(ix) Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of the section 4(f) resource.

(6) When a constructive use determination is made, it will be based, to the extent it reasonably can, upon the following:

(i) Identification of the current activities, features, or attributes of a resource qualified for protection under section 4(f) and which may be sensitive to proximity impacts;

(ii) An analysis of the proximity impacts of the proposed project on the section 4(f) resource. If any of the proximity impacts will be mitigated, only the net impact need be considered in this analysis. The analysis should also describe and consider the impacts which could reasonably be expected if the proposed project were not implemented, since such impacts should not be attributed to the proposed project;

(iii) Consultation, on the above identification and analysis, with the Federal, State, or local officials having jurisdiction over the park, recreation area, refuge, or historic site.

(7) A temporary occupancy of land is so minimal that it does not constitute a use within the meaning of section 4(f) when the following conditions are satisfied:

(i) Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;

(ii) Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the section 4(f) resource are minimal;

(iii) There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;

(iv) The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least

as good as that which existed prior to the project; and

(v) There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.

[52 FR 32660, Aug. 28, 1987; 53 FR 11066, Apr. 5, 1988, as amended at 56 FR 13279, Apr. 1, 1991; 57 FR 12411, Apr. 10, 1992]

**§ 771.137 International actions.**

(a) The requirements of this part apply to:

(1) Administration actions significantly affecting the environment of a foreign nation not participating in the action or not otherwise involved in the action.

(2) Administration actions outside the U.S., its territories, and possessions which significantly affect natural resources of global importance designated for protection by the President or by international agreement.

(b) If communication with a foreign government concerning environmental studies or documentation is anticipated, the Administration shall coordinate such communication with the Department of State through the Office of the Secretary of Transportation.

**PART 772—PROCEDURES FOR ABATEMENT OF HIGHWAY TRAFFIC NOISE AND CONSTRUCTION NOISE**

- Sec.
- 772.1 Purpose.
- 772.3 Noise standards.
- 772.5 Definitions.
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- 772.9 Analysis of traffic noise impacts and abatement measures.
- 772.11 Noise abatement.
- 772.13 Federal participation.
- 772.15 Information for local officials.
- 772.17 Traffic noise prediction.
- 772.19 Construction noise.

**TABLE 1 TO PART 772—NOISE ABATEMENT CRITERIA**

**APPENDIX A TO PART 772—NATIONAL REFERENCE ENERGY MEAN EMISSION LEVELS AS A FUNCTION OF SPEED**

AUTHORITY: 23 U.S.C. 109(h), 109(i); 42 U.S.C. 4331, 4332; sec. 339(b), Pub. L. 104-59, 109 Stat. 568, 605; 49 CFR 1.48(b).

SOURCE: 47 FR 29654, July 8, 1982; 47 FR 33956, Aug. 5, 1982, unless otherwise noted.

**§ 772.1 Purpose.**

To provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways approved pursuant to title 23 U.S.C.

**§ 772.3 Noise standards.**

The highway traffic noise prediction requirements, noise analyses, noise abatement criteria, and requirements for informing local officials in this regulation constitute the noise standards mandated by 23 U.S.C. 109(i). All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the Federal Highway Administration (FHWA) noise standards.

**§ 772.5 Definitions.**

(a) *Design year.* The future year used to estimate the probable traffic volume for which a highway is designed. A time, 10 to 20 years, from the start of construction is usually used.

(b) *Existing noise levels.* The noise, resulting from the natural and mechanical sources and human activity, considered to be usually present in a particular area.

(c)  $L_{10}$ . The sound level that is exceeded 10 percent of the time (the 90th percentile) for the period under consideration.

(d)  $L_{10}(h)$ . The hourly value of  $L_{10}$ .

(e) *Leq*—the equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period.

(f) *Leq(h)*. The hourly value of *Leq*.

(g) *Traffic noise impacts.* Impacts which occur when the predicted traffic noise levels approach or exceed the noise abatement criteria (Table 1), or when the predicted traffic noise levels substantially exceed the existing noise levels.

(h) *Type I projects.* A proposed Federal or Federal-aid highway project for the construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical

alignment or increases the number of through-traffic lanes.

(i) *Type II projects.* A proposed Federal or Federal-aid highway project for noise abatement on an existing highway.

**§ 772.7 Applicability.**

(a) *Type I projects.* This regulation applies to all Type I projects unless it is specifically indicated that a section applies only to Type II projects.

(b) *Type II projects.* The development and implementation of Type II projects are not mandatory requirements of 23 U.S.C. 109(i) and are, therefore, not required by this regulation. When Type II projects are proposed for Federal-aid highway participation at the option of the highway agency, the provisions of §§ 772.9(c), 772.13, and 772.19 of this regulation shall apply.

**§ 772.9 Analysis of traffic noise impacts and abatement measures.**

(a) The highway agency shall determine and analyze expected traffic noise impacts and alternative noise abatement measures to mitigate these impacts, giving weight to the benefits and cost of abatement, and to the overall social, economic and environmental effects.

(b) The traffic noise analysis shall include the following for each alternative under detailed study:

(1) Identification of existing activities, developed lands, and undeveloped lands for which development is planned, designed and programmed, which may be affected by noise from the highway;

(2) Prediction of traffic noise levels;

(3) Determination of existing noise levels;

(4) Determination of traffic noise impacts; and

(5) Examination and evaluation of alternative noise abatement measures for reducing or eliminating the noise impacts.

(c) Highway agencies proposing to use Federal-aid highway funds for Type II projects shall perform a noise analysis of sufficient scope to provide information needed to make the determination required by § 772.13(a) of this chapter.

**§ 772.11 Noise abatement.**

(a) In determining and abating traffic noise impacts, primary consideration is to be given to exterior areas. Abatement will usually be necessary only where frequent human use occurs and a lowered noise level would be of benefit.

(b) In those situations where there are no exterior activities to be affected by the traffic noise, or where the exterior activities are far from or physically shielded from the roadway in a manner that prevents an impact on exterior activities, the interior criterion shall be used as the basis of determining noise impacts.

(c) If a noise impact is identified, the abatement measures listed in § 772.13(c) of this chapter must be considered.

(d) When noise abatement measures are being considered, every reasonable effort shall be made to obtain substantial noise reductions.

(e) Before adoption of a final environmental impact statement or finding of no significant impact, the highway agency shall identify:

(1) Noise abatement measures which are reasonable and feasible and which are likely to be incorporated in the project, and

(2) Noise impacts for which no apparent solution is available.

(f) The views of the impacted residents will be a major consideration in reaching a decision on the reasonableness of abatement measures to be provided.

(g) The plans and specifications will not be approved by FHWA unless those noise abatement measures which are reasonable and feasible are incorporated into the plans and specifications to reduce or eliminate the noise impact on existing activities, developed lands, or undeveloped lands for which development is planned, designed, and programmed.

**§ 772.13 Federal participation.**

(a) Federal funds may be used for noise abatement measures where:

(1) A traffic noise impact has been identified,

(2) The noise abatement measures will reduce the traffic noise impact, and

(3) The overall noise abatement benefits are determined to outweigh the

overall adverse social, economic, and environmental effects and the costs of the noise abatement measures.

(b) For Type II projects, noise abatement measures will only be approved for projects that were approved before November 28, 1995, or are proposed along lands where land development or substantial construction predated the existence of any highway. The granting of a building permit, filing of a plat plan, or a similar action must have occurred prior to right-of-way acquisition or construction approval for the original highway. Noise abatement measures will not be approved at locations where such measures were previously determined not to be reasonable and feasible for a Type I project.

(c) The noise abatement measures listed below may be incorporated in Type I and Type II projects to reduce traffic noise impacts. The costs of such measures may be included in Federal-aid participating project costs with the Federal share being the same as that for the system on which the project is located, except that Interstate construction funds may only participate in Type I projects.

(1) Traffic management measures (e.g., traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive land designations).

(2) Alteration of horizontal and vertical alignments.

(3) Acquisition of property rights (either in fee or lesser interest) for construction of noise barriers.

(4) Construction of noise barriers (including landscaping for esthetic purposes) whether within or outside the highway right-of-way. Interstate construction funds may not participate in landscaping.

(5) Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise. This measure may be included in Type I projects only.

(6) Noise insulation of public use or nonprofit institutional structures.

(d) There may be situations where (1) severe traffic noise impacts exist or are

expected, and (2) the abatement measures listed above are physically infeasible or economically unreasonable. In these instances, noise abatement measures other than those listed in §772.13(c) of this chapter may be proposed for Types I and II projects by the highway agency and approved by the Regional Federal Highway Administrator on a case-by-case basis when the conditions of §772.13(a) of this chapter have been met.

[47 FR 29654, July 8, 1982; 47 FR 33956, Aug. 5, 1982, as amended at 61 FR 45321, Aug. 29, 1996]

**§ 772.15 Information for local officials.**

In an effort to prevent future traffic noise impacts on currently undeveloped lands, highway agencies shall inform local officials within whose jurisdiction the highway project is located of the following:

(a) The best estimation of future noise levels (for various distances from the highway improvement) for both developed and undeveloped lands or properties in the immediate vicinity of the project,

(b) Information that may be useful to local communities to protect future land development from becoming incompatible with anticipated highway noise levels, and

(c) Eligibility for Federal-aid participation for Type II projects as described in § 772.13(b) of this chapter.

**§ 772.17 Traffic noise prediction.**

(a) Any traffic noise prediction method is approved for use in any noise analysis required by this regulation if it generally meets the following two conditions:

(1) The methodology is consistent with the methodology in the FHWA Highway Traffic Noise Prediction Model (Report No. FHWA-RD-77-108).\*

(2) The prediction method uses noise emission levels obtained from one of the following:

(i) National Reference Energy Mean Emission Levels as a Function of Speed (appendix A).

(ii) Determination of reference energy mean emission levels in Sound Procedures for Measuring Highway Noise: Final Report, DP-45-IR.\*

(b) In predicting noise levels and assessing noise impacts, traffic characteristics which will yield the worst hourly traffic noise impact on a regular basis for the design year shall be used.

**§ 772.19 Construction noise.**

The following general steps are to be performed for all Types I and II projects:

(a) Identify land uses or activities which may be affected by noise from construction of the project. The identification is to be performed during the project development studies.

(b) Determine the measures which are needed in the plans and specifications to minimize or eliminate adverse construction noise impacts to the community. This determination shall include a weighing of the benefits achieved and the overall adverse social, economic and environmental effects and the costs of the abatement measures.

(c) Incorporate the needed abatement measures in the plans and specifications.

TABLE 1 TO PART 772—NOISE ABATEMENT CRITERIA  
[Hourly A-Weighted Sound Level—decibels (dBA)<sup>1</sup>]

Activity Category	Leq(h)	L <sub>10</sub> (h)	Description of activity category
A .....	57 (Exterior) .....	60 (Exterior) .....	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B .....	67 (Exterior) .....	70 (Exterior) .....	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.

\*These documents are available for inspection and copying as prescribed in 49 CFR part 7, appendix D.

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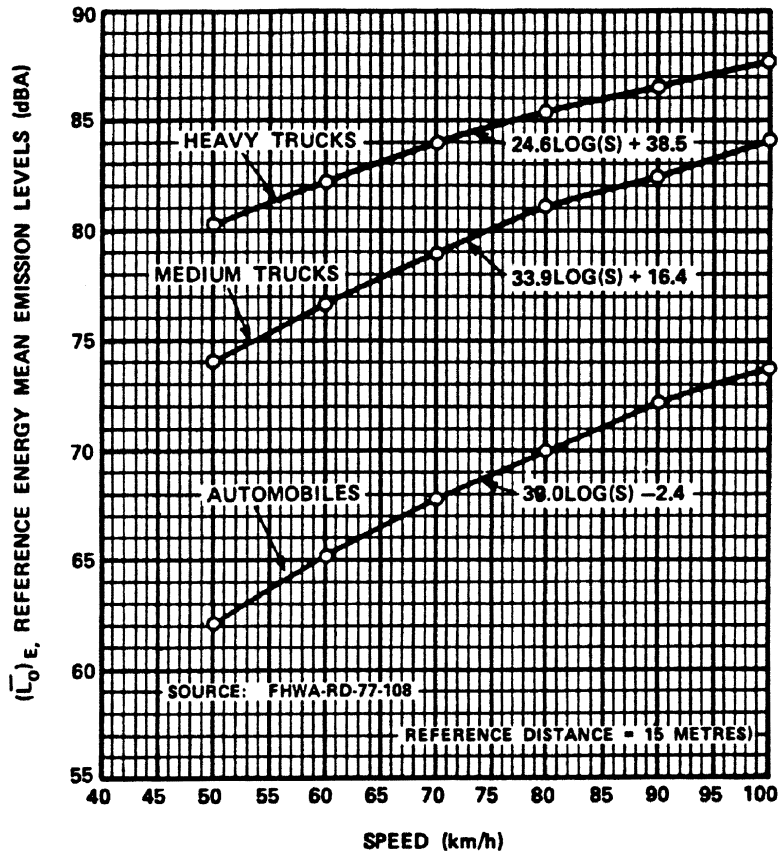
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[Hourly A-Weighted Sound Level—decibels (dBA)<sup>1</sup>]

Activity Category	Leq(h)	L <sub>10</sub> (h)	Description of activity category
C .....	72 (Exterior) .....	75 (Exterior) .....	Developed lands, properties, or activities not included in Categories A or B above.
D .....	.....	.....	Undeveloped lands.
E .....	52 (Interior) .....	55 (Interior) .....	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

<sup>1</sup> Either L<sub>10</sub>(h) or Leq(h) (but not both) may be used on a project.

APPENDIX A TO PART 772—NATIONAL REFERENCE ENERGY MEAN EMISSION LEVELS AS A FUNCTION OF SPEED



LEGEND:

1. AUTOMOBILES: ALL VEHICLES WITH TWO AXLES AND FOUR WHEELS.
2. MEDIUM TRUCKS: ALL VEHICLES WITH TWO AXLES AND SIX WHEELS.
3. HEAVY TRUCKS: ALL VEHICLES WITH THREE OR MORE AXLES.

**National Reference Energy Mean Emission Levels as a Function of Speed**