

Chapter 8. NOISE COMPATIBILITY PROJECTS

Section 1. GENERAL

800. GENERAL.

The Aviation Safety and Noise Abatement (ASNA) Act of 1979, as amended, and recodified without substantive change at Title 49, U.S.C., Sections 47501 – 47510, permits the FAA to provide funds for projects at both commercial service and general aviation airports to carry out an FAA approved noise compatibility program (NCP). In addition, the FAA may provide AIP funds for noise insulation projects in buildings used primarily for educational or medical purposes that are not included in an FAA approved NCP. Prior to programming noise compatibility projects, airport sponsors and FAA Airports Offices should review the Noise Exposure Maps upon which noise compatibility projects are based to ensure they are a reasonable representation of current and/or forecast conditions at the airport (See Noise Exposure Map Checklist, Part II, Section III.B at <http://www.faa.gov/arp/app600/14cfr150/index14.htm>). Grants for such projects may be made to airport sponsors as well as to eligible public agencies not owning airports (nonairport sponsors). However, noise mitigation associated with airport development projects will continue to be funded as airport development (See Paragraph 580 of this Order).

801. PROJECT ELIGIBILITY.

A proposed noise compatibility project is eligible for Federal participation if:

a. It is a measure in an NCP, as described under Section 47504(a) of Title 49, U.S.C., prepared by the airport sponsor, and the measure is approved by the FAA in accordance with FAR Part 150; or

b. It is a project to provide noise insulation for a building that is:

(1) Used primarily for educational or medical purposes in the noise impact area surrounding a public airport(s), and

(2) Determined to be adversely affected by airport noise; or

c. It is reimbursement for costs that were incurred:

(1) After February 1, 1980 (date of enactment of the ASNA Act), by the airport operator,

(2) Before, on, or after the execution of the grant agreement,

(3) To implement a part of the airport sponsor's approved NCP (including project formulation costs), subject to the following criteria:

(a) The approved NCP must show evidence that the acquisition was justified for noise compatibility purposes, and

(b) The acquisition must have been accomplished in accordance with provisions of the Uniform Relocation Assistance and Real Properties Acquisition Policies Act in effect at the time the land was acquired, and

d. It is in accordance with other exceptions as listed in Section 47504(c)(2) of Title 49, U.S.C.

802. SPONSOR ELIGIBILITY.

a. **Airport Sponsors.** Noise compatibility projects may be carried out by eligible airport sponsors as described in Chapter 2 of this Order.

b. Nonairport Sponsors (Public Agencies not Owning Airports). Noise compatibility projects may also be carried out by units of local government that are not airport sponsors. Section 47504(c)(1)(B) of Title 49, U.S.C., requires local governments to have the capability to carry out the projects for which applications are made. Though any unit of local government meeting this criterion is eligible, the FAA should encourage sponsorship by those units of local government with the widest or most direct authority for land use control so as to obtain more effective compliance with the compatible land use assurance.

803. COSPONSOR.

Any two or more units of local government may cosponsor a noise compatibility project, provided that such units jointly or severally are eligible sponsors. An airport sponsor may be a cosponsor on such a project. Cosponsorship should be encouraged, particularly where it would contribute to more effective compatible land use commitments on the part of local governments having jurisdiction over land use.

804. APPLICABILITY OF THE AIRPORT AND AIRWAY IMPROVEMENT ACT (AAIA) PROVISIONS.

Section 47504(c)(5) of Title 49, U.S.C. states that all of the provisions applicable to AIP grants shall be applicable to any grants for noise compatibility projects. Therefore, requirements pertaining to DBE, Davis-Bacon, NEPA, E.O. 12372, etc., apply to noise compatibility projects. (AGC Opinion, August 24, 1983.)

805. ENVIRONMENTAL CONSIDERATIONS.

Noise compatibility projects must receive appropriate FAA environmental determinations prior to consideration for AIP funding. The current version of Order 5050.4, Airport Environmental Handbook, indicates which noise compatibility projects require an environmental assessment or environmental impact statement, and which are categorically excluded. Environmental requirements for non-airport development projects, for air traffic procedures for example, are covered by the most current version of FAA Order 1050.1, Policies and Procedures for Considering Environmental Impacts. Contact the Community and Environmental Needs Division (APP-600) for assistance in this area.

806. AGREEMENTS FOR NOISE COMPATIBILITY PROJECTS ON PUBLIC PROPERTY NOT OWNED BY THE SPONSOR.

a. General. Where a noise compatibility project is located on public property not owned by the sponsor, Assurance 5 requires the sponsor to enter into an agreement with that unit of local government to ensure that such a beneficiary complies with the same general requirements to protect the Federal investment, regardless of whether or not it "sponsors" the project. The agreement should be modeled on the Nonairport Sponsors assurances (available on the FAA web site at the following address: <http://www.faa.gov/arp/pdf/assrnna.pdf> found on the arp/510home web page.) and may take one of two forms, depending on whether the noise compatibility project is sponsored by an airport sponsor or a nonairport sponsor. The specific assurances that should be incorporated into each agreement are listed below, although circumstances unique to the project, sponsor, or unit of local government may require ad hoc variations. For example, when the sponsor is administering the procurement and construction, and the other unit of local government is not directly involved in project accomplishment, Assurances 8, 9, 10, 11, and 12 need not be incorporated into the agreement. For the purposes of this Paragraph 806, a Nonsponsoring unit of local government is not a party to the actual grant with the Federal Government but is the actual owner of the public property. A sponsoring unit of local government is the unit of government that is a party to the grant agreement with the FAA.

b. Agreements between Airport Sponsors and Nonsponsoring Units of Local Government. Except as discussed in Subparagraph a., the agreement between the airport sponsor and the non-sponsoring unit of local government should incorporate the substance of the following nonairport sponsor assurances, as applicable:

(1) Assurance 1, General Federal Requirements. It is only necessary to include the first paragraph. Reference to and listing of laws and regulations may be deleted;

(2) Assurance 2, Responsibility and Authority of the Sponsor;

(3) Assurance 3b, Sponsor Fund Availability;

(4) Assurance 8, Accounting System, Audit, and Record keeping Requirements;

(5) Assurance 9, Minimum Wage Rates;

(6) Assurance 10, Veterans Preference;

(7) Assurance 11, Conformity to Plans and Specifications;

(8) Assurance 12, Construction Inspection and Approval;

(9) Assurance 13, Operation and Maintenance;

(10) Assurance 16, Reports and Inspections; and

(11) Assurance 17, Civil Rights.

The airport sponsor may also add any other terms and conditions, consistent with the Assurances, which it believes are necessary.

c. Agreements between Sponsoring and Non sponsoring Units of Local Government. Except as discussed in Subparagraph a., an agreement between the nonairport sponsor and another unit of local government should include the following nonairport sponsor assurances, as applicable:

(1) Assurance 1, General Federal Requirements. It is only necessary to include the first paragraph. Reference to and listing of laws and regulations may be deleted;

(2) Assurance 2, Responsibility and Authority of the Sponsor;

(3) Assurance 3b, Sponsor Fund Availability;

(4) Assurance 8, Accounting System, Audit, and Record keeping Requirements;

(5) Assurance 11, Conformity to Plans and Specifications;

(6) Assurance 12, Construction Inspection and Approval;

(7) Assurance 13, Operation and Maintenance;

(8) Assurance 14, Hazard Prevention;

(9) Assurance 15, Compatible Land Use; and

(10) Assurance 17, Civil Rights.

The nonairport sponsor may also add any other terms and conditions, consistent with the assurances, which it believes are necessary.

807. PROJECTS ON PRIVATELY OWNED PROPERTY - CONDITION IN GRANT AGREEMENT.

a. **Requirement for Agreement.** Assurance 5 requires the sponsor and the private property owner to enter into an agreement that contains provisions specified by the Secretary. To aid in satisfying this requirement, the special condition in Appendix 7, shall be included in the grant agreement.

b. **Responsibility for Operation and Maintenance.** The purpose of requiring item M of the special condition in Appendix 7 is to establish that the owner is responsible for maintenance and operation of the noise compatibility improvements, not that the owner is required to conduct any specific operation and maintenance activities. In the case where the private property is a parochial school, for example, this condition should not be construed to mean that the owner is obligated to operate the facility as a school for the useful life of the noise compatibility measures. It should generally be understood, however, that noise compatibility projects should be implemented only in those buildings that can reasonably be expected to be used for a period of time equal to or exceeding the useful life of the project.

808. EASEMENT IN CONJUNCTION WITH SOUNDPROOFING.

A grant under the AIP may not include a requirement that a property owner donate an easement (or other property interest) to the airport sponsor in exchange for noise insulation. FAA policy, however, encourages sponsors to work out such voluntary arrangements locally, exclusive of FAA grant stipulations. Alternatively, the airport sponsor may agree to acquire an easement at the time the structure receives noise insulation. See Paragraph 811 for additional discussion of easement acquisition.

809. REVENUE FROM NOISE COMPATIBILITY PROJECTS.

In some noise compatibility projects, sponsors may acquire property that produces net revenue, such as rents and royalties. Such revenue earned prior to final project closeout shall be deducted from the total cost of that project for determining the net costs on which the grant will be based. Revenue earned after final project closeout shall be considered airport revenue. (See Section 3 for the use of proceeds from the disposal of land acquired for noise compatibility).

Section 2. NOISE COMPATIBILITY PROJECTS**810. GENERAL.**

a. Eligible noise compatibility projects generally fall into the following categories: land acquisition (including relocation assistance), noise insulation, runway and taxiway construction (including associated land acquisition, lighting and NAVAIDs), noise monitoring equipment, noise barriers and other Part 150 approved noise abatement/compatibility measures. Sponsors may from time to time propose noise compatibility measures not described in this section. In such a case, contact APP-600 for assistance in determining the scope of FAA approval in the sponsor's NCP; contact APP-510 for assistance in determining the scope of eligible work in such proposals.

b. Noise compatibility projects usually are located in areas where aircraft noise exposure is significant, as measured in day-night average sound level (DNL) of 65 decibels (dB) or greater. However, projects may also be eligible in areas of less noise exposure, i.e., where the airport sponsor has determined that noncompatible land uses exist, that local determinations should be substituted for Federal guidelines, or that the sponsor has adequately demonstrated that specific noise sensitive properties are adversely affected by noise, or that a noise buffer should be established in areas of moderate noise exposure. Proposals for noise compatibility projects below DNL 65 dB must be supported by appropriate documentation from the sponsor. These measures, when proposed for approval in a Part 150 document, are subject to the same FAA review and approval processes as noise compatibility projects above DNL 65 dB. Contact APP-600 for assistance in advising sponsors of documentation requirements. The priority ranking assigned to projects below DNL 65 dB would be lower. In addition, projects within DNL 65 dB may be expanded beyond the DNL 65 dB contour to

include a reasonable additional number of otherwise ineligible parcels contiguous to the project area, if necessary to achieve equity in the neighborhood. Neighborhood or street boundary lines may help determine what is reasonable, in addition to numbers of properties. Other projects that produce community-wide benefits (development of a noise attenuation standard in a local building code, for example) are also eligible.

c. Individual recipients (e.g., homeowner or school) of noise compatibility projects may be entitled to more than one mitigation measure if the additional measures are approved in the sponsor's NCP, enhance land use compatibility, provide additional protection for the airport, and the total cost of the measures is reasonable in relation to the property value. For example, noise insulation may be combined with acquisition of an easement; or a sponsor may acquire residential property and install noise insulation before offering it for resale.

d. Noise compatibility proposals in an NCP that are not approved by the FAA are not eligible under the AIP when eligibility depends on Part 150 approval. This guidance also applies to remedial noise mitigation measures that are disapproved under Part 150 for new noncompatible development constructed after October 1, 1998. Other ineligible noise compatibility proposals include development of new or modified flight procedures or environmental assessments prepared by the FAA for flight procedures approved in an NCP, projects which are not described in sufficient detail to determine their noise mitigation benefits, projects which cannot be implemented by an eligible sponsor, operational or administrative costs of a sponsor's ongoing noise mitigation program, and demonstration programs intended to test the effectiveness of new noise mitigation technology.

811. ACQUISITION OF LAND OR INTERESTS IN LAND FOR NOISE COMPATIBILITY.

Both airport and nonairport sponsors are eligible to acquire land for noise compatibility purposes. Acquisition may occur under three general conditions:

a. **Land Acquisition to Change Land Use.** These programs acquire non-compatible property within the designated eligible areas and relocate the occupants from the noise impact. Acquired land is assembled for reuse as an airport compatible land use. Procedures and requirements for such acquisition are identical to those outlined in Chapter 7 of this Order and must conform to the Uniform Act as described in Order 5100.37A and AC 150/5100-17. Under these "Buy-out" programs, displaced homeowners and tenants are entitled to relocation assistance and payments prescribed in the Uniform Act. The following factors should also be considered when acquiring land for noise compatibility purposes when the objective is to convert to compatible uses.

(1) The FAA should work closely with the sponsor in such land acquisition projects to develop a long-term plan for land reuse. (See Paragraph e. below regarding the land disposal assurance.) Land acquisition projects should include development of land use conversion, economic feasibility, and marketing plans to ensure that subsequent land uses are consistent with local land use plans and policies, including compatibility with noise exposure levels in the area, and that the sponsor recoups a reasonable amount upon resale. Such planning is eligible in conjunction with a land acquisition project or as a separate project. However, costs to implement the marketing plan are considered operational costs and as such are not allowable. (See Section 3 of this Chapter and Order 5190.6A on the use of resale proceeds.)

(2) Costs attributable to removal of structures from land acquired for noise compatibility, when properly justified, are allowable costs under a grant for land acquisition or for reimbursement. Such removal costs may include, but are not limited to, demolition of structures, sale of structures for removal by purchaser, and relocation of structures to another site. Removal costs and proceeds from sale of structures may be used to adjust the net proceeds from resale of the property.

(3) Costs attributable to preparing land for resale may be deducted from the proceeds of disposal, but are not allowable costs under a grant. Such costs may include, but are not limited to, removal of structures, rezoning, replatting and upgrading of utilities and services. Costs associated with

holding land are not allowable under a grant, nor may they be deducted from the proceeds of resale. Such holding costs may include, but are not limited to, property taxes assessed against the sponsor during the period of ownership, charges for utilities and public services, insurance, financing charges, and assessments.

Example: A sponsor acquires 10 parcels of land for a total cost of \$1.0 million; the sponsor removes all structures, assembles the parcels into one marketable unit, prepares requests for zoning changes, resurveys, determines consistency with local land use plans and files necessary documents with local officials; utilities and public services improvements are made at sponsor expense; a marketing plan is prepared and the property is sold for \$750,000. The proceeds of the sale are calculated as follows:

Acquisition Cost = \$1,000,000 (\$800,000 Federal/\$200,000 Local)

Development and Sale Costs:

Remove Structures	\$250,000
Revise Zoning, Local Plans, Maps, etc.	\$100,000
Improve Utilities and Public Services	\$100,000
Marketing and Sales	\$ 50,000
Total Costs	\$500,000
Sales Price	\$750,000
Less Total Costs	\$500,000
	<hr/>
	\$250,000
Net Proceeds	(\$200,000 Federal/ \$50,000 local)

Note: Costs associated with holding the land (taxes, fees, assessments, insurance, etc.) may not be used in calculating the net proceeds.

b. Land Acquisition without Change to Land Use. An airport sponsor's approved NCP may include "Purchase Assurance", "Sales Assurance", or "Transaction Assistance" measures (described below) to acquire for resale or assist a market sale of eligible noncompatible property without changing the existing land use. These measures assist homeowners to move from the noise impact by facilitating a timely market sale of their noise-impacted property. Noise insulation of residences is eligible prior to sale or resale. Also, pre-existing noise insulation will not disqualify a property from these programs. Under these programs, the sponsor shall ensure that potential buyers are provided with an appropriate disclosure statement that describes the airport noise exposure on the property and the intention of the sponsor to retain an easement or similar interest.

(1) Purchase Assurance. Under Purchase Assurance, a property that fails to sell within a specified time period is purchased by the airport and then resold for continued residential use. The airport purchases the property at the appraised fair market value of the homeowners' fee interest "as is" subject to airport noise. Typically, noise insulation is provided and the property is then listed and sold subject to the airport's easement.

(2) Sales Assurance. Under Sales Assurance the appraised fair market value of the homeowner's residence is guaranteed on a timely market sale, however the airport does not acquire the property. Should the property sell for less than the appraised value, the selling owner is compensated for the short fall by the airport. Property is appraised at its current fair market value of the homeowners' fee interest "as is" subject to airport noise. The property is listed and sold subject to the airport's easement that is conveyed to the airport at sale of the property.

(3) Transaction Assistance. Transaction assistance generally involves an agreement by the airport sponsor to pay certain costs associated with the sale of residential property. Allowable costs should generally be limited to the real estate sales commission (consult with APP-600 for other allowable transaction costs). The property is listed and sold subject to the airport's easement that is conveyed to the airport at the assisted sale of the property.

c. Easements and Other Property Interests.

(1) Purchase of easements or similar property interests for noise compatibility is eligible if it is an approved measure of a sponsor's NCP. Depending on local real estate laws and other site factors, sponsors may propose to acquire restrictive covenants, development rights, or other specified interests. The requirements and procedures applicable to acquisition of such property interests with Federal assistance are described in Chapter 7 of this Order.

(2) Easement compensation is difficult to appraise because of limited market information. Acceptable appraisal procedures are described in FAA Order 5100.37A and specific considerations and methods to appraise easements acquired for noise compatibility are provided in FAA AC 150/5100-17. As provided in this guidance appraised just compensation owed for an easement acquisition shall be based on application of the "Before and After Appraisal" method. The estimated or actual costs of acquiring easements should be carefully reviewed prior to approving the project or approving payment to the sponsor to confirm adherence to this valuation guidance. Where the cost for acquiring easements seems disproportionately high, the FAA office administering the project should consider whether it meets the reasonable cost criterion as discussed in Paragraphs 310 and 1022. Where costs appear to be unreasonable when compared to costs associated with other, more tangible mitigation measures, airport sponsors should be encouraged to consider revising the NCP and developing these means to achieve compatibility.

(3) Nonairport sponsors are also eligible for grants to acquire easements only; however, the easement should be written specifically to protect the airport.

d. Currently Compatible Land-Use. If the airport sponsor proposes to acquire land presently in compatible use (e.g., parking lot, agricultural, vacant) on the grounds that noncompatible development is highly likely, and local controls are inadequate to prevent that development, and if the FAA has approved the sponsor's recommendation in an approved NCP, the acquisition is eligible. In such cases, it is advisable to urge the sponsor to first consider acquisition of an interest less than fee simple (e.g., development rights, easement). If fee simple acquisition is approved, the sponsor should be advised of the requirement for timely disposal.

e. Sponsor Assurance Regarding Disposal of Land Acquired for Noise Compatibility. Section 47107(c)(2)(A) of Title 49, U.S.C., provides that for land purchased under a grant for airport noise compatibility purposes, the airport owner will dispose of the land, when the land is no longer needed for such purposes, at fair-market value, at the earliest practicable time. Any disposal must assure that the land is re-used compatibly with aircraft noise exposure levels, including land that was purchased within the DNL 65 dB contour and is now subject to "moderate" noise exposure (DNL 64-55 dB) with Stage 3 transition. Further, the portion of the proceeds of such disposition that is proportionate to the United States' share of acquisition of such land will, at the discretion of the FAA acting on behalf of the Secretary of Transportation, 1) be repaid to the Airport and Airway Trust Fund, or 2) be reinvested in an approved noise compatibility project. Reinvestment of proceeds from the sale of noise land at the original airport is the option preferred by the FAA. See Section 3 of this Chapter for more information on the use of proceeds from the sale of such land.

812. NOISE INSULATION PROJECTS.

a. General. Noise insulation, if approved in an airport sponsor's NCP, or if qualified as a school or hospital under Section 47504, Title 49, U.S.C.), is eligible under the AIP. Eligible sponsors include units of local government having jurisdiction over the project location, airport sponsors, and special purpose

units of local government (e.g., school and hospital districts). Eligible structures include residences (single family and multifamily), schools, hospitals, churches, and other noncompatible structures identified in the sponsor's NCP. In addition, noise insulation may be installed in buildings near an airport without an approved NCP if the buildings are used for educational or medical purposes and they are demonstrated to be adversely affected by airport noise.

(1) Noise insulation projects are subject to the general guidance governing noise compatibility projects within and below DNL 65 dB in Paragraph 810.b. In addition, unless extenuating circumstances dictate, noise insulation should normally not be considered for a number of types of noise sensitive structures (e.g., residences, schools, hospitals, churches, auditoriums, concert halls) within a DNL 75 dB or greater noise contour since it is preferable to change the land use. Noise insulation is not a viable noise compatibility project for mobile homes.

(2) The purpose of noise insulation projects is to reduce the adverse impact of airport-related noise on building occupants or residents. These projects are not intended to compensate for inadequate maintenance, to bring nonconforming structures up to building code standards, or to improve the comfort or attractiveness of a building, although these benefits may result indirectly from the project. Therefore, if a noise insulation project requires that new windows be installed, or that upgraded electrical service be provided for ventilation equipment to achieve noise reduction objectives, the costs associated with those work elements are allowable costs. If, however, it is determined in the course of designing a project that a building needs several improvements to conform to local building codes, the costs of such improvements are not allowable under the grant program.

(3) Where noise insulation is being proposed as a single project for a large number of structures, and where a standard package of noise insulation improvements will be included, the qualifying criteria need not be so restrictively applied that it would prevent an incidental number of homes within the project area from receiving the standard package of improvements. For example, if acoustical windows are to be installed in a preponderant number of homes within the project area, eligibility may be extended to an incidental number of homes within the project area, even though they would not qualify for window installation if considered individually.

(4) Sponsors must certify to the FAA that the engineering plans and specifications for the noise insulation measures conform to the local building code.

(5) A noise level reduction (NLR) of 25-35 dB from exterior noise levels to interior levels usually can be achieved with some combination of window and door replacement, ceiling insulation, caulking, weather-stripping, and central air ventilation (or air conditioning as limited below) systems. Therefore, project eligibility will normally be limited to these measures plus "before and after" noise testing. APP-510 should be consulted if additional measures are recommended.

(6) Sponsors may offer a continuous positive ventilation system or air conditioning to owners of eligible structures in conjunction with noise insulation projects. The goal of a continuous positive ventilation system is to provide two volume changes of air per hour. This roughly equates to a condition where windows in the structure are open. Likewise, an air conditioning system will provide air exchanges along with temperature and humidity reduction. The added benefits are preferred by most residents. Either option preserves the noise attenuation benefits achieved with the insulation project by eliminating the need to open windows to maintain an acceptable level of indoor comfort. However, we believe that an air conditioning system would be comparable in cost, and perhaps less expensive than customized air handling systems. Consequently, air conditioning could be offered as an eligible noise attenuation measure in lieu of the positive air handling equipment. There is no need to compile a price comparison and to prorate cost differentials between options offered for selection. Two caveats should be discussed with sponsors and recipients who receive air conditioning or a continuous positive ventilation system:

(a) The recipient will be expected to operate the system installed under the AIP to preserve the noise attenuation benefits achieved with the insulation project. Failure to use the installed system will negate the benefits and will not be grounds for making complaints about noise levels.

(b) Property owners and residents should be presented with information about utility and maintenance costs for the installed equipment. Increased utility costs are to be expected. Also, routine maintenance costs should be planned to keep the system operating at peak efficiency. Maintenance service contracts tend to minimize disruptions by providing regular checks of the installed system. The costs of these contracts are a responsibility of the property owner.

(7) Sponsors are encouraged to obtain a noise easement in return for the noise insulation provided by the project, but it is not a mandatory AIP requirement. (See Paragraph 808.).

b. Residential Noise Insulation.

(1) The design objective in a residential noise insulation project generally should be to achieve the requisite NLR when the project is completed. (This is mathematically equivalent to achieving a DNL of 45 dB in all habitable rooms.) For residences located in areas where exterior noise exposure is DNL 65 dB, the requisite NLR provided by the structure should be at least 20 dB in major habitable rooms. The requisite NLR should be increased commensurate with any increase in exterior DNL above 65 dB. The project design should be based on exterior DNL and the existing NLR in the structure. The existing construction must provide less than the needed noise level reduction for the noise exposure level at the location of the residence. For example, a house having 30 dB noise level reduction located at the DNL 68 dB is nominally compatible because the interior noise level would be approximately equivalent to 38 dB, well below the target 45 dB. Although such a dwelling is nominally compatible, some lesser level of noise insulation (replacement of depreciated windows, storm doors, caulking and weather stripping, etc.) may be provided to assure conformity of improvements and perceived equity of application in the project neighborhood.

(2) Since it takes an improvement of at least 5 dB in NLR to be perceptible to the average person, any residential noise insulation project should be designed to provide at least that increase in NLR as a marginal minimum.

(3) Examples.

(a) A residence located in an area where the DNL is 73 dB has existing NLR of 26 dB. The requisite NLR in that area is 28 dB (73 - 45). However, to meet the requirement for increasing the NLR by not less than 5 dB, a noise attenuation project for that residence should result in NLR of 31 dB (26 + 5).

(b) A residence located in an area where the DNL is 67 dB has existing NLR of 16 dB. The requisite NLR in that area is 22 dB (67 - 45). Therefore, the noise insulation project should be designed to increase the NLR by 6 dB (22 - 16).

c. Noise Insulation in Schools.

(1) For schools, the usual design objective for classroom environment is a time-average A-weighted sound level of 45 dB resulting from aircraft operations during normal school hours. As with residential noise insulation, a school project should reduce existing noise levels by at least 5 dB.

(2) Eligible schoolrooms include classrooms, libraries, offices, and other rooms for which noise insulation is specifically justified because of the substantial and disruptive effect of aircraft noise. Facilities, such as gymnasiums, cafeterias, and hallways are usually not eligible, unless the facility is also used substantially for purposes that qualify for noise insulation. Consequently, eligibility for these areas should take into consideration the extent they are used for instructional activities and assemblies.

d. Other Buildings. Churches, concert halls, offices, and other structures identified as noncompatible, and for which noise insulation has been recommended by the airport sponsor in its NCP and approved by the FAA, are also eligible. Such proposals should be evaluated carefully on a case-by-case basis and should involve consultation with APP-510 and APP-600.

813. NOISE MONITORING EQUIPMENT/SYSTEMS.

A project for noise monitoring may be as modest as a few portable noise monitors or as extensive as a system of a dozen or more fixed monitors linked to a central processing unit, perhaps incorporating air traffic, weather and land use data. Such projects are eligible, subject to the following criteria:

a. Noise monitoring must be an approved item in the sponsor's NCP. Procurement of noise monitoring equipment in conjunction with master planning or noise compatibility planning is not eligible. In the case of a planning product, such as a master plan or NCP, the noise monitoring equipment is only a tool used by the consultant in the planning process. However, the NCP may include an ongoing requirement for the sponsor to monitor noise conditions. In that case, acquisition of equipment to be installed by the sponsor on the airport and used exclusively for that purpose is eligible. Consult with APP-600 for clarification.)

b. Nonairport sponsors (e.g., school districts, municipalities) are eligible only for portable noise monitoring equipment when used in connection with noise insulation projects managed by that sponsor. In cases where more than one sponsor is expected to engage in noise insulation programs, however, the airport sponsor should be encouraged to acquire the equipment and make it available to other local agencies as needed.

c. Eligibility for a fixed (permanent) monitoring system will be limited to circumstances where sponsors can clearly show that portable monitors would be inadequate. Fixed noise monitoring equipment is ineligible where the Part 150 noise exposure maps (existing and forecast) show no noncompatible land uses. In all cases, sponsors should be encouraged to acquire the least costly system that will satisfy the purposes used to justify the project.

d. A noise-monitoring proposal should not be an end in itself, nor an instrument for enforcement of a noise rule or procedure. Rather, noise monitors should provide an ongoing stream of useful products and data in support of the overall noise compatibility program. A primary justification should be to provide information necessary to carry out other noise compatibility projects in the approved NCP, or to monitor progress in achieving noise compatibility objectives. Some sample uses of noise monitoring data include:

- (1) Selection of dwelling units or other structures for noise insulation;
- (2) Pre- and post-insulation interior/exterior noise measurement;
- (3) Compliance with a monitoring requirement of State noise law;
- (4) Aiding implementation of other noise compatibility projects; or
- (5) Providing noise data for future revision of the NCP.

e. Allowable costs include system design, noise monitoring equipment, dedicated data processing equipment and software, equipment installation, site preparation and one-time costs for installation of electrical power and data transmission lines. All costs for permanent monitoring systems should be minimized. Sponsors should be encouraged to obtain low cost monitoring locations by using existing utility poles and easements, accessible public land, or donated access to private property.

f. Costs for vehicles to be used in a noise-monitoring program, general-purpose computer software, operating costs, and equipment to be used only for public information purposes (equipment for visual presentations at public meetings or hearings, for example) are not allowable.

814. NOISE BARRIERS.

Noise barriers may be effective in certain locations to reduce adverse noise impacts from aircraft on the ground, particularly from maintenance areas and loading gates. Generally, such activities do not make a substantial contribution to total noise exposure, but single event occurrences may disrupt nearby classrooms or residences. Noise barriers, earth berms, wall structures, "hush houses" and other devices designed to shield areas from noise generated on the airport are eligible with the following provisions:

a. Noise barriers must be located and constructed in areas that benefit noncompatible uses affected by a single event ground operation noise that interferes with sleep and conversation. A single event noise reduction of at least 5 decibels should be realized at the nearest noncompatible land uses.

b. The construction or installation must mitigate noise from a variety of airport users. For example, a hush house in the leased area of an airline maintenance facility is not eligible. If the airport sponsor proposes to designate an area on the airport for all engine runups, however, a noise barrier or hush house may be eligible to shield nearby areas from such activities.

c. Noise barriers must be designed to ensure that they do not violate airport design standards or Part 77 surfaces.

d. Landscaping costs in conjunction with noise barrier or berm construction are allowable only for materials necessary to stabilize soil against wind or water erosion.

e. If not done in conjunction with evaluation of alternatives in the Part 150 study, a cost-benefit analysis should be conducted which compares the effectiveness of the proposed noise barrier with other feasible alternatives, such as land acquisition and noise insulation. Noise barriers constructed outside of the Part 150 process may not be counted toward satisfying the noise set aside.

815. MISCELLANEOUS NOISE COMPATIBILITY PROJECTS.

The following types of projects, when they are approved measures in a sponsor's NCP, are eligible and the Federal share shall be calculated as other noise compatibility projects:

a. **Runway and Taxiway Construction.** Runways and taxiways, including land acquisition, lighting and marking, if it can be shown that the primary purpose and benefit is noise relief. For example, if a proposed project is part of development shown in a master plan for capacity or safety purposes and has incidental noise benefits, it is not an eligible noise compatibility project. It may, however, be eligible as airport development.

b. **Lighting and/or Visual Markers.** Lights or other visual devices to help pilots fly specific noise abatement VFR flight tracks or traffic patterns.

c. **Special Studies.** Special studies are eligible if they are approved in an NCP. Studies to redevelop a noncompatible area, to determine the most effective location for a hush house or sound barrier, to determine the most effective noise abatement departure procedures (not the actual flight procedure itself) at various runways, to evaluate airport noise and access restrictions, to address noise compatibility problems that were beyond the scope of the basic Part 150 study, or to prepare noise elements of local building codes, are typically appropriate to be included in a Part 150. In the case of noise and access restriction studies, the measure to study restrictions must be included in an NCP, approved by the FAA for study, and included in a Part 150 update. Studies are eligible provided that they result in definitive, implementable products. Usually, these studies are accomplished by the airport

operator's consultant. Studies whose implementation would be within the jurisdiction of a local land use planning jurisdiction (for noise elements of local building codes, for example) may be accomplished by a local agency sponsor by force account. In the latter case, however, sponsors should clearly understand that routine administrative costs are not allowable under the AIP. (Refer to the discussion of force account work in Chapter 4.)

d. **Other.** Consult with APP-510 for other noise compatibility proposals.

816. ALLOWABLE PROJECT COSTS.

Costs for work that is necessary to accomplish a noise compatibility project are allowable in the same way that such costs are allowable for airport development projects as discussed in Chapter 5. For example, if construction of a noise barrier would require the demolition of a structure on the airport, those costs are allowable. If the structure were occupied by a tenant under a lease, the cost of relocating the tenant and the cost associated with terminating the lease, as provided for under the Uniform Act, are also allowable. The Federal share of such costs associated with a noise compatibility project is the same as the Federal share of the cost for noise compatibility projects at that airport, rather than the share applicable to airport development projects.

817. - 819. RESERVED.

Section 3. USE OF PROCEEDS FROM SALE OF NOISE COMPATIBILITY LAND

820. DISPOSAL REQUIREMENT.

When land acquired for noise compatibility purposes is no longer needed for that purpose, the sponsor is required to dispose of the property. The proceeds, at the discretion of the FAA, may be returned to the Airport and Airway Trust Fund or reinvested in approved noise compatibility projects. Reinvestment of proceeds from the sale of noise land at the original airport is the option preferred by the FAA.

821. USE OF FUNDS.

In accordance with Section 47107(f), proceeds from the sale of noise compatibility land that are returned to the Trust Fund may be reissued in grants for airport development and airport planning and are not subject to obligation limitations. Contact APP-520 for information on procedures for depositing such proceeds and their subsequent reuse. To avoid unnecessary actions, in lieu of returning the funding to the Trust Fund and reissuance, Regions may request approval from APP-500 to allow use of the proceeds directly in an airport development or planning project. Project files will contain enough of an audit trail so that these actions are clearly understood.

822. EVALUATING REINVESTMENT PROPOSALS.

In many cases, it will be desirable to reinvest proceeds from the sale of noise land in another noise compatibility project at the original airport or vicinity. The following factors should be considered, however, prior to approving local reinvestment of such funds:

- a. The sponsor's financial management procedures should be able to account for the proceeds and track their subsequent use in new projects.
- b. Projects at that airport should be of sufficient priority to justify their reuse locally, and the FAA should concur in the sponsor's project selection for use of the proceeds.

823. REQUIREMENTS FOR REINVESTMENT.

Where the proceeds are to be reinvested in another noise compatibility project, the following provisions apply:

- a. The project must be an eligible noise compatibility project as described in Paragraph 801. In addition to those eligible projects in an NCP, the FAA may allow the reinvestment of revenues for projects not in an NCP such as; noise insulation projects in buildings used primarily for educational or medical purposes.
- b. The project must be at the same airport or vicinity as that where the land sale proceeds were realized.
- c. The project must be sponsored by the same sponsor who disposed of the land and realized the proceeds of sale.
- d. When Federal assistance is used to acquire land, and the land is subsequently sold and the proceeds are used to acquire additional land, that acquisition is also subject to the provisions of the Uniform Act, even if no "new" Federal funds are provided for the later acquisition. (Regional/General Counsel Opinion 3/1/88) By extension, it follows that other conditions and assurances are renewed when such proceeds are used in follow-on projects. The sponsor should be advised of this continuing obligation early in the original grant application process, if possible, but no later than prior to use of the proceeds in a new project. The following actions are normally applied to facilitate tracking these sponsor obligations:
 - (1) Award a grant with "new" (current year) Federal grant funds when a project is to be undertaken with proceeds from the sale of noise land to ensure sponsor/FAA cognizance of the renewed grant obligations; and/or
 - (2) Use the proceeds for noise insulation or another noise related improvement project which uses up the funds and eliminates the need to track the proceeds and sponsor obligations through subsequent iterations; and/or
 - (3) Amend the original grant to make use of the proceeds if the grant amendment requirements and limitations can be met.

824. CONVERSION TO AIRPORT DEVELOPMENT LAND.

Land acquired for noise compatibility purposes may subsequently be redesignated as airport development land without any further certifications or adjustment in the Federal share of the cost of acquisition, provided that the land being redesignated as airport development land is justified. In addition to the justification, the land must be depicted on a new or revised airport master plan, depicted as future development land, and unconditionally approved by the FAA on the most current approved airport layout plan.

825. - 899. RESERVED.

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