



Residential Sound

Insulation Program

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MILHOUSE

The following are some of the key steps involved in an effective residential sound insulation program management:

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Assess the Need:

The first step in managing a residential sound insulation program is to assess the need for the program in the target area. This can be done through noise surveys, community feedback, and other data collection methods.

Develop a Plan:

Once the need has been identified, a plan should be developed that outlines the goals, objectives, and strategies for the program. This plan should include details on the budget, timeline, and resources needed to implement the program.

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Identify Eligible Homes:

The program should identify eligible homes that qualify for sound insulation measures. This can be done through property assessments, homeowner applications, or other eligibility criteria.

Implement Sound Insulation Measures:

The program should then implement the sound insulation measures, which may include adding insulation to walls, central air conditioning, installing soundproof windows and doors in the home.

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Monitor Progress:

Throughout the program, progress should be monitored to ensure that the sound insulation measures are being implemented effectively and achieving their intended goals. This may involve regular inspections, data collection, and analysis.

Evaluate Outcomes:

After the program has been completed, an evaluation should be conducted to assess the outcomes and effectiveness of the sound insulation measures. This evaluation can inform future program improvements and help to identify areas for further investment.

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Introduction

Many residents of major cities like the convenience of living near an airport; however, many don't realize just how loud takeoffs and landings of jet airplanes can be. This is particularly problematic for older homes that haven't been updated with the latest sound insulation technology. Without proper sound insulation, the noise from jet airplanes creates constant interruptions of everyday activities such as television watching, telephone conversations, face-to-face conversations, and sleep.

Cities are working with residents to help mitigate these constant interruptions by replacing their windows and doors with modern versions that include high-quality sound insulation. Since many older homes were not built with central air conditioning, modern windows and doors alone will not totally eliminate the noise intrusion since residents typically open windows throughout the year for fresh air and to help cool the house. In these situations, the city program may include installing central air conditioning as well—a welcome bonus for the resident!

Executive Summary

Sound insulation is the process of reducing the amount of sound that enters or exits a building or room. For residential properties, sound insulation is an effective solution to reducing aircraft noise pollution.





Measures for Success

The Residential Sound Insulation Program in Chicago has successfully sound insulated more than 21,000 homes located at both Chicago's O'Hare International Airport and Chicago's Midway International Airport.

Chicago's O'Hare International Airport 11,500+ homes

Chicago's Midway International Airport 10,000+ homes

13
participating communities
surrounding O'Hare
International Airport



165,000+
windows installed

2
participating communities
surrounding Midway
International Airport



150,000+
windows installed



23,000+
doors installed



20,000+
doors installed



Benefits for Residents



Noise Reduction:

The primary benefit of sound insulation is that it reduces noise levels inside buildings. By preventing sound from traveling through walls, sound insulation can create a quieter and more peaceful environment for people to live and work in. This is particularly important for residential areas that are in close proximity to major airports, where aircraft noise can be a significant source of disturbance.



Enhanced Comfort:

Sound insulation can also enhance comfort by reducing the impact of noise on people's well-being. High noise levels can be a source of stress, fatigue, and irritation, and can disrupt sleep and concentration. By reducing noise levels, sound insulation can create a more comfortable and relaxing environment for people to live in.



Energy Efficiency:

Sound insulation can also improve energy efficiency by preventing heat loss with the installation of new acoustic thermal pane windows that not only provide superior sound dampening but also act as thermal barriers, helping to keep indoor spaces warmer in winter and cooler in summer.



Effective Residential Sound Insulation Program Management requires careful planning, implementation, and monitoring to ensure that the program achieves its intended goals and benefits the community. By using sound insulating materials, soundproofing techniques, window and door insulation, and HVAC system insulation, these processes can significantly reduce noise pollution from external sources can be significantly reduced, improving the homeowner's quality of life.

If the communities in your city are struggling with noise pollution from airplanes it may be time to consider a Residential Sound Insulation program. Milhouse can assist municipalities with Feasibility Studies, Planning, and Funding your program. Contact us to start the discussion.





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"Chicago O'Hare International Airport Approved Noise Contour." Sound Insulating Your Home Handbook, Fly Chicago, <https://www.flychicago.com/SiteCollectionDocuments/Community/Noise/OHare/SIP/ORDSIYHbooklet2021.12.pdf>.

About Milhouse

Milhouse is a full-service engineering firm offering expertise in civil, mechanical, electrical, structural and environmental engineering, as well as construction and program management. We deliver creative solutions to complex problems around Chicago and across the globe. Driven by our diverse perspectives, we challenge the status quo to pursue a brighter future for the communities we serve.

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