INVITATION TO SUBMIT A RESEARCH PROPOSAL ON AN ASHRAE RESEARCH PROJECT

0001-PRP, Update of 2 ASHRAE Publications: Application of Manufacturers' Sound Datae, @1998, and Practical Guide to Noise and Vibration Control, © 1991, © 2005"

Attached is a Request-for-Proposal (RFP) for a project dealing with a subject in which you, or your institution have expressed interest. Should you decide not to submit a proposal, please circulate it to any colleague who might have interest in this subject.

Sponsoring Committee: TC 2.6 Sound & Vibration
Co-sponsored by: N/A

Budget Range: $110,000 may be more or less as determined by value of proposal and competing proposals.

Scheduled Project Start Date: **April 1, 2026** or later.

All proposals must be received at ASHRAE Headquarters by 8:00 AM, EDT, December 15th, 2025. NO EXCEPTIONS, NO EXTENSIONS. Electronic copies must be sent to rpbids@ashrae.org. Electronic signatures must be scanned and added to the file before submitting. The submission title line should read: 001-PRP, Update of 2 ASHRAE Publications: Application of Manufacturers' Sound Datae, @1998, and Practical Guide to Noise and Vibration Control, © 1991, © 2005", and *"Bidding Institutions Name"* (electronic pdf format, ASHRAE's server will accept up to 10MB)

If you have questions concerning the Project, we suggest you contact one of the individuals listed below:

For Technical Matters
Technical Contact
Steve Wise
Wise Associates
Phone: (608) 233-7683
E-Mail: stevewise@att.net

For Administrative or Procedural Matters:
Manager of Research & Technical Services (MORTS)
Steve Hammerling
ASHRAE, Inc.
180 Technology Parkway, NW
Peachtree Corners, GA 30092
Phone: 404-636-8400
Fax: 678-539-2111
E-Mail: MORTS@ashrae.net

Contractors who plan to submit a proposal must notify the Manager of Research and Technical Services (MORTS) via email by December 1st. This will ensure that they receive any late or additional information regarding the RFP before the bid due date. Monday, December 1st, 2025 is the deadline for submitting technical inquiries.

All proposals must be submitted electronically. Electronic submissions require a PDF file containing the complete proposal preceded by signed copies of the two forms listed below in the order listed below. **ALL electronic proposals are to be sent to rpbids@ashrae.org.**

All other correspondence must be sent to ddaniel@ashrae.org and shammerling@ashrae.org. In all cases, the proposal must be submitted to ASHRAE by 8:00 AM, EDT, Monday, December 15th 2025. NO EXCEPTIONS, NO EXTENSIONS.

The following forms (Application for Grant of Funds and the Additional Information form have been combined) must accompany the proposal:

(1) ASHRAE Application for Grant of Funds (electronic signature required) and
(2) Additional Information for Contractors (electronic signature required) ASHRAE Application for Grant of Funds (signed) and

ASHRAE reserves the right to reject any or all bids.

State of the Art (Background)

In 1990, ASHRAE TC 2.6 - Sound and Vibration Control recognized that one of its primary functions was to facilitate the generation of quality up-to-date acoustical information in a practical format for use by ASHRAE members, particularly practicing mechanical engineers. To this end, a first publication resulted: (RP-526) A Practical Guide to Noise and Vibration Control for HVAC Systems in 1991, which was well received by the Society. In 1998, TC 2.6 followed with a second publication (RP-786), Application of Manufacturers' Sound Data. The purpose of this publication was to clarify how HVAC manufacturers' acoustical data and application information can best be used.

In spite of a 2nd edition of "Practical Guide", both books have become obsolete because HVAC equipment designs, testing and rating standards have evolved.

The ASHRAE Handbook chapters on Noise and Vibration, in both the Fundamentals and Applications volumes, fully describe the theory and general application principles for noise control engineers to understand the sources of noise and vibration from HVAC equipment, the paths of sound and vibration transmission in buildings and outdoors, and the desired targets for resulting sound pressure levels.

The devil is in the details, which cannot be fully expressed within the finite number of pages that this topic warrants in the handbook.

Publication Need

Bookstore sales of the prior publications serve in part to prove the potential value of this new book.

The ASHRAE handbooks address some of these subjects. However, print space in those publications is limited and some of the detail to be provided here would be a distraction from the core message those handbook chapters are tasked with.

This new book will serve as 1) a primer for beginning engineers; 2) a handy bookshelf reference for practicing engineers; 3) a go-to reference for building owners/contractors/designers for important noise control considerations.

Sales of prior publications, as of Jan 2024:

A Practical Guide to Noise and Vibration Control (I-P): Print = 611
A Practical Guide to Noise and Vibration Control (SI): Print = 974
A Practical Guide to Noise and Vibration Control, Second Edition (I-P):
Print = 1328, Digital = 143
A Practical Guide to Noise and Vibration Control, Second Edition (SI):
Print = 333, Digital = 83
Application of Manufacturers' Sound Data:
Print = 1641 (No digital sales found)

The total above is about 5000 books. Notice that 2nd editions showed an increase. We believe that since they are all outdated by 20+ years, a replacement market of 5000 books is easily envisioned.

We believe that the market of potential buyers has further increased, perhaps 30% = 2000 new books.

We also think that the general interest level can be increased for this new booklet by the use of enhanced graphics, etc. Potentially 30-50% on top of the 7000 books forecast above.

In sum, we forecast a potential market of 10,000+ book sales.

Objectives

The target audience for this publication are mechanical engineers, noise consulting engineers, and architects who are designing residential and commercial buildings.

The proposed publication update will combine sound test methods, sound rating procedures and research from numerous ASHRAE, AHRI and AMCA publications, as well as noise control methods summarized in a form for practicing mechanical engineers and architects. A key deliverable for each HVAC product will be an example specification and analysis for specific building applications.

The content of the publication will be condensed to include only what a practicing engineer needs to know to specify and apply HVAC equipment and components. Acoustic fundamentals and design best practices are included and augment the existing ASHRAE Handbooks: Ch. 8 of the 2021 ASHRAE Fundamentals Handbook and Ch. 49 of the 2023 ASHRAE Application Handbook.

Proposed Table of Contents:

Scope of Work / Technical Approach

Bidder shall have technical manual writing experience to refine technical content agglomerated in a draft document. The draft incorporates elements from two older publications, and provides updates to cover the current state of the art, but needs a fresh review of the text for good flow (harmonized), no conflicts, limited redundancies, etc.

Bidder shall have experience with software (Excel/Powerpoint/Photoshop, etc) to create new figures (including 3-D graphics), refined tables and graphs, and formatted/labeled pictures.

The oversight ASHRAE committee remains responsible for the technical content. The successful contractor is not expected to be an expert in noise and vibration nor are they expected to create content. But they do need enough basic engineering knowledge to read and understand information conveyed in the book, and be able to identify information gaps, contradictions, etc. These will be resolved with regular meetings with the volunteers. It is the volunteers that are producing the basic state-of-the-art content.

The draft as it stands now has 10 chapters on various topics covering HVAC noise from a multitude of mechanical equipment.

The text is estimated at +/- 100,000 words, with 75+ tables, 20 graphs, 150+ graphic arts (some simple, some complicated 3-D), and 75+ photos which might need added text highlights. The text etc. may need adjustment as figure size is finalized.

The old booklets were 6x9 format. The new publication is planned for 8.5x11 size pages and will also have an on-line version of dimensions t.b.d.

The project will kick off with the TC transmitting to successful contractor a draft document of +/- 300 pages including all chapters: text, initial graphics, etc.

To facilitate coordination, it is envisioned to have monthly web meetings.

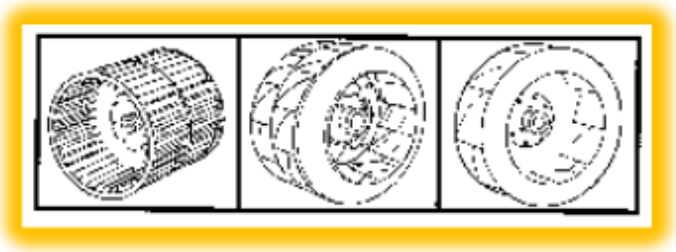
Timeline and tasks are as follows:
Duration 6-12 months, beginning sometime late 2025.
Monthly web meetings with ASHRAE TC task force, for progress review.
….beginning with initial draft read-through to identify major text areas that need enhancement.
Primary tasks: Text refinement / graphics creation and enhancement / standardization of tables and charts.

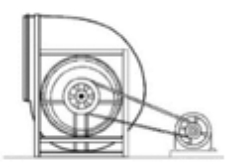
Deliverables:

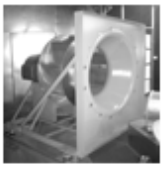
Mo.	Monthly Task
1	Kickoff *PMS presents 300-page Word.doc draft to contractor *Decision on best means for document exchange (Dropbox, Basecamp, etc.) *Misc. support files (graphics, spreadsheets, etc.) *Establish format for sub-headings, keywords, bookmarks, etc.
2	General Text Content Review Initial Review of Text, Format, and beginning Tabulation of Keywords, etc. Presentation of initial template to Update Existing Figures: Starting with minimum 1 each of: a) 3-D Graphic for initial Overall Building Layout; b) Excel graph with suitable fonts and colors for both print and on-line viewing; c) Formatted Table with optimal fonts and format. List candidates for new figures Determine additional items that need 3-D Graphics

3	Content Review with Redundancy Corrections Present re-structured Chapter sub-headings, etc. that eliminate unnecessary redundancies. More Updates of Existing Figures: Present new art following template established in Month 2
4	Detailed review of updated chapters. Perhaps Ch 1,2, and 10 which are most complete. Agree on which chapters to focus on for next meeting.
5	Detailed review of more updated chapters. Perhaps Ch 4-Airside, Ch-5 Waterside, and Ch-6 Packaged Equipment. Agree on which chapters to focus on for next meeting.
6	Detailed review of more updated chapters. Perhaps Ch 7-Auxiliary Equipment, Ch-8 -Noise and Vibration Control Products, and Ch-9-Startup, Troubleshooting and Commissioning.
7	Detailed review of last updated chapter. Perhaps Ch 3- Noise Control Overview (because it is meant to be the "1st place to look") as a framework for basic acoustic analysis, that may or may not lead to further details found in other chapters.
8	Final signoffs It is assumed that after meetings in Months 4,5,6,7 that a "to-do" list is drawn up that contractor and/or PMS can resolve any open items…..and that this can be done in parallel with the work necessary to achieve the next month's task. Thus, the document may be ready to turn over to ASHRAE at this point.

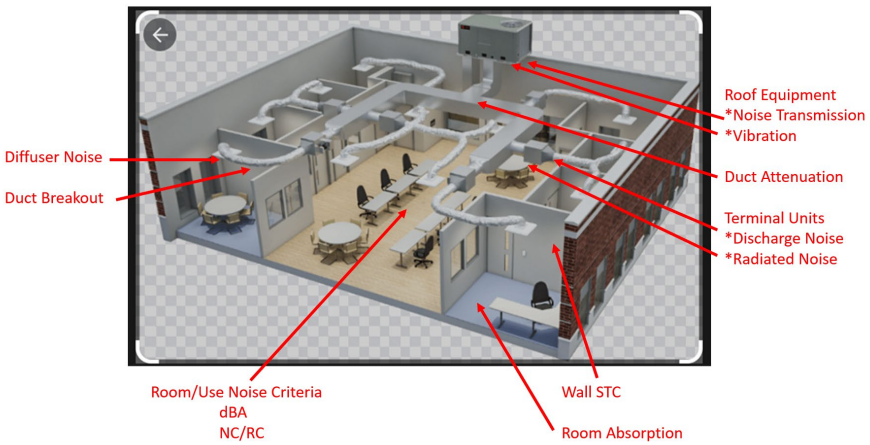
Examples of present art that needs enhancement, and/or non-proprietary photos:

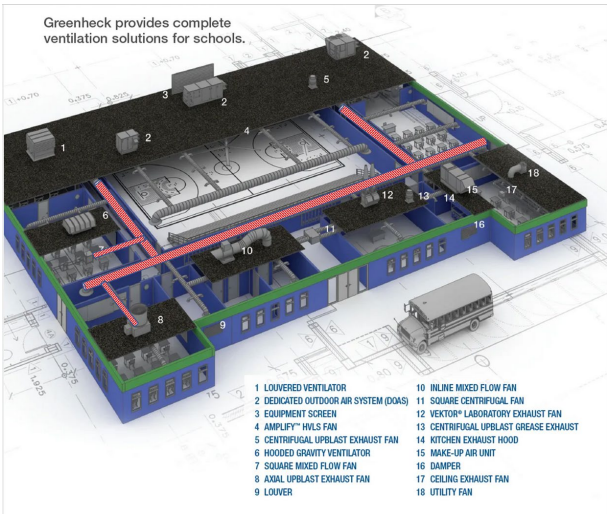


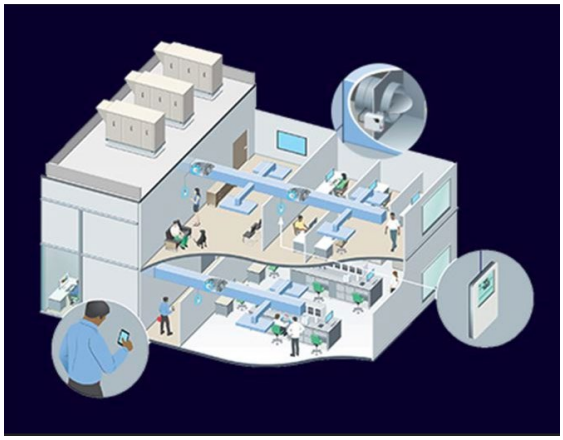




Examples of proprietary 3-D graphics that are desired in ASHRAE-owned alternative forms:


Roof Equipment
*Noise Transmission
*Vibration
Diffuser Noise
Duct Breakout
Duct Attenuation
Terminal Units
*Discharge Noise
*Radiated Noise
Room/Use Noise Criteria
dBA
NC/RC
Wall STC
Room Absorption


Greenheck provides complete ventilation solutions for schools.
1 LOUVERED VENTILATOR
2 DEDICATED OUTDOOR AIR SYSTEM (DOAS)
3 EQUIPMENT SCREEN
4 AMPLIFY™ HVLS FAN
5 CENTRIFUGAL UPBLAST EXHAUST FAN
6 HOODED GRAVITY VENTILATOR
7 SQUARE MIXED FLOW FAN
8 AXIAL UPBLAST EXHAUST FAN
9 LOUVER
10 INLINE MIXED FLOW FAN
11 SQUARE CENTRIFUGAL FAN
12 VEKTOR® LABORATORY EXHAUST FAN
13 CENTRIFUGAL UPBLAST GREASE EXHAUST
14 KITCHEN EXHAUST HOOD
15 MAKE-UP AIR UNIT
16 DAMPER
17 CEILING EXHAUST FAN
18 UTILITY FAN



Progress, Financial and Final Reports, Technical Paper(s), and Data shall constitute the deliverables ("Deliverables") under this Agreement and shall be provided as follows:

a. Progress and Financial Reports

Progress and Financial Reports, in a form approved by the Society, shall be made to the Society through its Manager of Research and Technical Services at quarterly intervals; specifically, on or before January 1, April 1, June 10, and October 1 of the contract period.

The following deliverables shall be provided to the Project Monitoring Subcommittee (PMS) as described in the Scope/Technical Approach section above, as they are available:

Furthermore, the Institution's Principal Investigator, subject to the Society's approval, shall, during the period of performance and after the Final Report has been submitted, report in person to the sponsoring Technical Committee/Task Group (TC/TG) at the annual and winter meetings, and be available to answer such questions regarding the research as may arise.

b. Final Report

A written report, design guide, or manual, (collectively, "Final Report"), in a form approved by the Society, shall be prepared by the Institution and submitted to the Society's Manager of Research and Technical Services by the end of the Agreement term, containing complete details of all research carried out under this Agreement, including a summary of the control strategy and savings guidelines. Unless otherwise specified, the final draft report shall be furnished, electronically for review by the Society's Project Monitoring Subcommittee (PMS).

Tabulated values for all measurements shall be provided as an appendix to the final report (for measurements which are adjusted by correction factors, also tabulate the corrected results and clearly show the method used for correction).

Following approval by the PMS and the TC/TG, in their sole discretion, final copies of the Final Report will be furnished by the Institution as follows:

-An executive summary in a form suitable for wide distribution to the industry and to the public.
-Two copies; one in PDF format and one in Microsoft Word.

c. *Science & Technology for the Built Environment*

One or more papers shall be submitted first to the ASHRAE Manager of Research and Technical Services (MORTS) and then to the "ASHRAE Manuscript Central" website-based manuscript review system in a form and containing such information as designated by the Society suitable for publication. Papers specified as deliverables should be submitted to Research Papers for HVAC&R Research for ASHRAE Transactions. Research papers contain generalized results of long-term archival value, whereas technical papers are appropriate for applied research of shorter-term value, ASHRAE Conference papers are not acceptable as deliverables from ASHRAE research projects. The paper(s) shall conform to the instructions posted in "Manuscript Central" for HVAC&R Research papers. The paper title shall contain the research project number (0001-PRP) at the end of the title in parentheses, e.g., (0001-PRP).

All papers or articles prepared in connection with an ASHRAE research project, which are being submitted for inclusion in any ASHRAE publication, shall be submitted through the Manager of Research and Technical Services first and not to the publication's editor or Program Committee.

d. Data

Data is defined in General Condition VI, "DATA"

e. Project Synopsis

A written synopsis totaling approximately 100 words in length and written for a broad technical audience, which documents 1. Main findings of research project, 2. Why findings are significant, and 3. How the findings benefit ASHRAE membership and/or society in general shall be submitted to the Manager of Research and Technical Services by the end of the Agreement term for publication in ASHRAE Insights

The Society may request the Institution submit a technical article suitable for publication in the Society's ASHRAE JOURNAL. This is considered a voluntary submission and not a Deliverable. Technical articles shall be prepared using dual units, e.g., rational inch-pound with equivalent SI units shown parenthetically. SI usage shall be in accordance with IEEE/ASTM Standard SI-10.

Level of Effort
Estimate the cost and amount of time to successfully complete the project
The project anticipates a 9 to 12-month timeframe.
Monthly web meetings: Contractor and PMS.
Cost is estimated to be $110,000.

Other Information to Bidders (Optional): N/A

Project Milestones:

No.	Major Project Completion Milestone	Deadline Month
1	General Text Content Review Initial Review of Text and Tabulation of Keywords Establish Templates to Update Existing Figures: Minimum 1 each of: a) 3-D Graphic for initial Overall Building Layout; b) Excel graph with suitable fonts and colors for both print and on-line viewing; c) Formatted Table with optimal fonts and format.	2
2	Content Review with Redundancy Corrections Present re-structured Chapter sub-headings, etc. that eliminate unnecessary redundancies. More Updates of Existing Figures: Present additional updates new art following template established in Month 2 Detailed review of updated chapters. Perhaps Ch 1,2, and 10 which are most complete.	4
3	Detailed review of more updated chapters. Perhaps Ch 4-Airside, Ch-5 Waterside, and Ch-6 Packaged Equipment.	5
4	Detailed review of more updated chapters. Perhaps Ch 7-Auxiliary Equipment, Ch-8 -Noise and Vibration Control Products, and Ch-9-Startup, Troubleshooting and Commissioning.	6
5	Detailed review of last updated chapter. Perhaps Ch 3- Noise Control Overview	7
6	Final signoffs Document may be ready to turn over to ASHRAE Pub's Staff at this point.	8

Proposal Evaluation Criteria
Proposals submitted to ASHRAE for this project should include the following minimum information:

No.	Proposal Review Criterion	Weighting Factor
1	Contractors' capability in terms of graphics creation	30%
2	Contractors' previous experience with technical manuals, including resumes of copy-editing team	40%

3	Quality and detail of contractor's proposal and methodology, including affirmation of ASHRAE policy on the use of AI technology.	30%

References

1. Application of Manufacturers' Sound Data, © 1998
2. Practical Guide to Noise and Vibration Control, © 1991, © 2005
3. ASHRAE Policy for Use of Artificial Intelligence (AI) Board of Directors Approved February 9, 2025