

Proposal to Provide Airport Noise Abatement Consultant Services

July 1, 2014

Submitted to:



City of Fort Lauderdale
100 North Andrews Avenue, Room 619
Fort Lauderdale, FL 33301

Submitted by:



HARRIS MILLER MILLER & HANSON INC.

Harris Miller Miller & Hanson Inc.
77 South Bedford Street
Burlington, MA 01803
T 781.229.0707
F 781.229.7939

HMMH Proposal No. P14-20237
Contact: Ted Baldwin
tbaldwin@hmmh.com

Contents

1	Bid / Proposal Signature Page and Non-Collusion Statement.....	1
2	Cost Proposal	11
3	Letter of Interest / Cover Letter	13
4	Proposal Summary	17
4.1	Overall Proposal Summary	17
4.2	Why the HMMH Team is Pursuing this Work.....	17
4.3	Why the HMMH Team is Uniquely Qualified.....	19
4.3.1	HMMH Mission Statement	19
4.3.2	HMMH Corporate Focus	20
4.3.3	Florida Experience	20
4.3.4	On-Call Noise Consulting Experience at Other Airports	21
4.3.5	Aviation Noise-Regulation and Policy-Making Qualifications.....	21
4.3.6	Aviation Noise Modeling Expertise	22
4.3.7	Public Communication Skills.....	23
4.3.8	Noise-Related Airport Advisory Committee Support	24
4.3.9	Noise and Operations Monitoring System Assistance	25
4.4	Compatible Land Use Planning.....	25
4.5	Highly Qualified and Complementary Subconsultants	26
5	Company Profile	29
5.1	Additional Information.....	29
6	Qualifications / Experience on Projects of Similar Scope.....	31
7	Key Project Staff Background	39
8	Task Area Descriptions.....	45
8.1	Task Area 1: Quarterly AAB Presentation	45
8.2	Task Area 2: On-Call Planning Services, Technical Support, Study Updates, and Reports	47
9	Project Work Plan	49
9.1	Schedule	49
9.2	Vendor Staff Assignments	50
9.3	Task Description and Work Products.....	50
9.4	Description of Deliverables.....	50
10	Licenses, Professional Certifications, Memberships, and Insurance.....	51
11	Joint Venture	59
Appendix A	Firm Owners	A-1
Appendix B	Resumes of Key Personnel.....	B-1

(This page intentionally left blank)



1 Bid / Proposal Signature Page and Non-Collusion Statement

This section contains the required Bid/Proposal Signature Page and non-collusion statement.

(This page intentionally left blank)



BID/PROPOSAL SIGNATURE PAGE

How to submit bids/proposals: Proposals must be submitted by hard copy only. It will be the sole responsibility of the Bidder to ensure that the bid reaches the City of Fort Lauderdale, City Hall, Procurement Department, Suite 619, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, prior to the bid opening date and time listed. Bids/proposals submitted by fax or email will NOT be accepted.

The below signed hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal I will accept a contract if approved by the CITY and such acceptance covers all terms, conditions, and specifications of this bid/proposal.

Please Note: All fields below must be completed. If the field does not apply to you, please note N/A in that field.

Submitted by: Ted Baldwin (signature) June 24, 2014 (date)

Name (printed) Ted Baldwin Title: Senior Vice President

Company: (Legal Registration) Harris Miller Miller & Hanson Inc.

CONTRACTOR, IF FOREIGN CORPORATION, MAY BE REQUIRED TO OBTAIN A CERTIFICATE OF AUTHORITY FROM THE DEPARTMENT OF STATE, IN ACCORDANCE WITH FLORIDA STATUTE §607.1501 (visit http://www.dos.state.fl.us/).

Address: 77 South Bedford Street

City Burlington State: Massachusetts Zip 01803

Telephone No. (781) 229-0707 FAX No. (781) 229-7939 Email: tbaldwin@hmmh.com

Delivery: Calendar days after receipt of Purchase Order (section 1.02 of General Conditions): N/A

Payment Terms (section 1.04): 45 days Total Bid Discount (section 1.05): N/A

Does your firm qualify for MBE or WBE status (section 1.09): MBE NO WBE NO

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No. Date Issued

P-CARDS: Will your firm accept the City's Credit Card as payment for goods/services?

YES X* NO
*if the City will pay the credit card fees

VARIANCES: State any variations to specifications, terms and conditions in the space provided below or reference in the space provided below all variances contained on other pages of bid, attachments or bid pages. No variations or exceptions by the Proposer will be deemed to be part of the bid submitted unless such variation or exception is listed and contained within the bid documents and referenced in the space provided below. If no statement is contained in the below space, it is hereby implied that your bid/proposal complies with the full scope of this solicitation. HAVE YOU STATED ANY VARIANCES OR EXCEPTIONS BELOW? BIDDER MUST CLICK THE EXCEPTION LINK IF ANY VARIATION OR EXCEPTION IS TAKEN TO THE SPECIFICATIONS, TERMS AND CONDITIONS. If this section does not apply to your bid, simply mark N/A in the section below.

Variations: N/A

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and free from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

****NOT APPLICABLE TO HARRIS MILLER MILLER & HANSON INC.**

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME

RELATIONSHIPS

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and free from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

****NOT APPLICABLE TO MONTGOMERY CONSULTING GROUP, INC.**

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME

RELATIONSHIPS

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and free from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

****NOT APPLICABLE TO BOBBY D. PRICE**

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME

RELATIONSHIPS

-----	-----
-----	-----
-----	-----
-----	-----

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

2 Cost Proposal

PART VII - PROPOSAL PAGES – COST PROPOSAL

Proposer Name **Harris Miller Miller & Hanson Inc.**

Proposer agrees to supply the products and services at the prices bid below in accordance with the terms, conditions and specifications contained in this RFP.

Cost to the City: Contractor must quote firm, fixed, annual rate for all services identified in this request for proposal. This firm fixed annual rate includes any costs for travel to the City. No other costs will be accepted. This firm fixed annual rate will be the same for the initial contract period.

Failure to use the City’s COST PROPOSAL Page and provide costs as requested in this RFP, may deem your proposal non-responsive.

Proposer **MUST** enter an Hourly Labor Billing Rate in column (A) for each Labor Category itemized in the Labor Category column then multiply those rates by the hours in the Estimated Hours column (B) then enter the extended amount in the Total Proposed Amount column (C), $A \times B = C$. Enter the totals from column (C), including \$5,000.00 for Allowance for Expenses, in The Grand Total Proposed Amount row (D).

LABOR CATEGORY (As requested, also identifies other applicable titles to which the billing rate will apply)	(A) HOURLY LABOR BILLING RATE	(B) ESTIMATED HOURS	(C) TOTAL PROPOSED AMOUNT
Principal Consultant (includes Supervisory Consultant and Senior Programmer)	\$275	85	\$23,375
Project Manager (includes Senior Project Support and Programmer)	\$190	2	\$380
Senior Consultant	\$175	10	\$1,750
Consultant	\$120	24	\$2,880
Senior Planner	\$205	24	\$4,920
Planner	\$105	45	\$4,725
Project Support/Technician	\$100	45	\$4,500
Clerical/Administrative Support	\$60	32	\$1,920
Allowance for Expenses	Not Applicable	Not Applicable	\$5,000
(D) GRAND TOTAL PROPOSED AMOUNT:			\$49,450

(This page intentionally left blank)



3 Letter of Interest / Cover Letter

(This page intentionally left blank)



HARRIS MILLER MILLER & HANSON INC.

77 South Bedford Street
Burlington, MA 01803
T 781.229.0707
F 781.229.7939
www.hmmh.com

July 1, 2014

Ms. AnnDebra Diaz
Procurement Specialist
City of Fort Lauderdale
Procurement Services Department
100 North Andrews Avenue, Room 619
Fort Lauderdale, FL 33301:

Subject: Proposal to Provide Noise Abatement Consulting Services

Reference: City of Fort Lauderdale RFP #545-11443; HMMH Proposal No. P14-20237

Dear Ms. Diaz:



Harris Miller Miller & Hanson (HMMH) is pleased to submit this proposal to provide airport noise abatement consultant services for the Fort Lauderdale Executive Airport (FXE). We are confident you will find our proposal addresses all of the requirements listed in the Request for Proposal (RFP).

Understanding of Services to Be Provided

HMMH has provided the City of Fort Lauderdale with noise consulting services for FXE since 1984. Our 30 years of direct experience provide us with an understanding of the City's needs and objectives that no other consultant can possibly provide. Moreover, we anticipate many of the initial tasks under this new agreement will build on or continue from tasks we recently completed or are wrapping up under our about-to-expire agreement, which clearly place HMMH in the optimum position assist in a timely, efficient, and insightful manner.

We are proud to have assisted the City to establish, implement, maintain, monitor, and improve a comprehensive and highly successful noise program, including noise abatement, compatible land use, and continuing program measures. Our assistance has included an extraordinarily diverse range of assignments; Tab 4 lists general areas and specific examples.

We are pleased to share the City's pride in the FXE noise program's success and industry recognition. However, we also share the City's recognition that a successful airport noise program is a *continuing process* that requires ongoing attention to maintain and advance its effectiveness. We understand the services to be provided under this agreement relate to supporting that continuing process, including implementation, monitoring, evaluation, enhancement, extension, and communication of the noise program, to ensure it maintains its high standards of creativity, comprehensiveness, and effectiveness.

Our team includes two subconsultants with qualifications and experience that complement HMMH's, and will assist us in serving the City in a technically comprehensive, timely, and efficient manner.

To augment HMMH's experience and capabilities, our proposal includes two subconsultants with directly relevant experience in key technical areas, including prior and ongoing FXE assignments. As we have under our current agreement, we will work with the City in scoping each assignment to ensure roles are distributed among firms in a manner that maximizes cost- and time-efficiency, and the technical excellence of the services delivered.

Montgomery Consulting Group (MCG) will continue to provide the diverse assistance provided under our current agreement, including local data collection, land use assessments, airport operation and planning assistance, and monitoring system assessment and application. HMMH has a long-term relationship with MCG; in addition to our collaboration at FXE, MCG currently is assisting HMMH with these same roles at Fort Lauderdale – Hollywood International Airport, recently assisted us on a Part 150 update at Naples Municipal Airport, and is working with us at multiple other airports

nationwide. MCG is a Class C Business as defined in City Ordinance No. C-12-04, and is certified in Florida and Broward County as a Woman-Owned Business Enterprise (WBE).

Bobby D. Price, Aviation Consultant will provide assistance related to air traffic control assessments, as he did in the Environmental Assessment we prepared for the City addressing extension of the hours of the I-95 noise abatement turn. HMMH has had a long-term working relationship with Mr. Price during and since his prior career in FAA air traffic control tower management at multiple south Florida airports.

Commitment to Perform According to the Requirements of the RFP

As an HMMH Senior Vice President, I am authorized to the firm and to make binding commitments on its behalf. Please address all correspondence related to this proposal to me at the physical address and telephone number provided in our letterhead, or via my mobile phone (781.852.3123) or email, tbaldwin@hmmh.com.

With my signature below, I attest to the firm's positive commitment to adhere to our proposal and cost schedule, and to perform according to the RFP requirements.

On a more personal level, I have been pleased to lead a majority of HMMH's airport noise consulting assistance to the City for the past 30 years and look forward to the potential opportunity to continue as the principal-in-charge for services to the City over the term of this procurement.

Please do not hesitate to contact me with any questions. We would be pleased to present our qualifications in person, should you choose to conduct interviews.

Sincerely,

HARRIS MILLER MILLER & HANSON INC.



Ted Baldwin
Senior Vice President

4 Proposal Summary

HMMH has provided the City with noise consulting services for FXE since 1984. We are proud to have assisted the City to establish, implement, maintain, monitor, and improve a comprehensive and highly successful noise program, including noise abatement, compatible land use, and continuing program measures.

4.1 Overall Proposal Summary

Our proposal adheres to the instructions and requested order of information in the RFP. The table below addresses the City’s evaluation criteria as it relates to the location of information in our proposal.

Reviewer’s guide to evaluation criteria

Evaluation criteria	Relevant materials
Team and Staff Quality and Overall Experience	Tabs 3, 4, 6, and 7
Previous Experience on Projects of Similar Scope	Tabs 3, 4, 6, and 7
Technical Approach/Resources	Tabs 3, 8, and 9
History of the Firm/Business References	Tabs 3, 4, and 6
Price Proposal	Tab 2

On an overall summary basis, we propose to provide the City with access to the same team of professionals who provided a majority of the assistance to the City under our current contract, and all of the professionals who are assisting the City on tasks still underway, which might be continued under the new agreement.

Most significant, HMMH staff members have assisted the City on noise-related assignments at FXE since 1984, starting at the top of the organization chart; since Ted Baldwin, our Principal-in-Charge, has had overall responsibility for every HMMH consulting assignment for the City over that time period.

The HMMH Team’s experience ensures that future tasks will be undertaken in a manner that takes advantage of our familiarity with FXE noise-related issues, matters of primary local concern, key stakeholders, noise reporting processes, prior noise studies, noise abatement

procedures, compatible land use measures, local land use control regulations, monitoring system operation, airport users/tenants, airport operations, and other “institutional knowledge.”

We also can take advantage of our in-house FXE databases, direct access to electronic and hard-copy versions of prior FXE noise studies, and other resources, without placing extra demand on FXE or other City staff. Moreover, as we have demonstrated on multiple occasions, (with City/FXE permission) we have the capability to access and process data directly from the monitoring system, once again reducing staff workload and taking maximum possible advantage of the investment the City has made in that powerful tool.

In summary, we will provide perspective, experience, and continuity that are sensitive to prior and ongoing issues, and maximizes both time- and cost-efficiency.

Our task area descriptions build on this foundation of prior assistance and local familiarity. As those descriptions – and other sections of this proposal indicate – we share the City’s recognition that a successful airport noise program is a *continuing process* that requires ongoing attention to maintain and advance its effectiveness.

4.2 Why the HMMH Team is Pursuing this Work

We are honored to have had the opportunity to assist the City to establish, implement, maintain, monitor, and improve a comprehensive and highly successful noise program, including noise abatement, compatible land use, and continuing program measures. We share the City’s pride in the program’s success and industry recognition.

The HMMH Team is pursuing this work because of our intense interest in continuing our highly productive partnership with the City in its continuing efforts to work in an open, constructive, and collaborative manner with all noise stakeholders.

We are eager to build on prior assignments, which have included the following major projects, grouped into major categories:

Part 150 Experience

- The original 1986 Part 150 Study
- 1996 Part 150 Update
- 2002 Part 150 Update
- 2005 noise contour update and use restriction analysis
- 2014/2019 Part 150 Noise Exposure Map Update (underway)

Noise and Operations Monitoring System

- Assistance with implementation of the original noise and operations monitoring system (1991)
- ANOMS™ upgrade and support services and “Y2K” transition (1995-2001)
- Noise monitor terminal (NMT) condition assessments, site descriptions for public information purposes, evaluation of the geographic coverage and technological status of the NMT installations, identification of the need for additional NMTs and hardware replacement or refurbishment; and recommend an action plan to implement the recommendations (2011-12)
- Assistance with community outreach, site-selection, specification, an RFP, and proposal review for procurement of a new noise monitor off the departure end of Runway 13 (2011-12)
- Assistance with specifications and RFP for four additional NMT installations (2014)

Environmental Assessments

- Noise analyses for the Environmental Assessment (EA) for initial establishment of the “I-95 turn” noise abatement departure flight track (1993-4)
- Overall responsibility for the EA for extending the hours of the I-95 turn and establishing a Standard Instrument Departure (2009-10)

Noise Abatement Program Implementation, Assessment, Enhancement, and Promotion

- Comprehensive review of the noise program implementation, and recommendation of improved communication, monitoring, and reporting mechanisms (2008-9)
- Comprehensive review of helicopter noise issues at FXE and the Fort Lauderdale Downtown Helistop (DT1), and preparation of recommendations for the most promising actions that the City might consider taking to address current and potential future concerns (2011-12)
- Review of pilot outreach materials, obtaining pilot input, recommendation of revisions, and implementing improvements, including new handouts, poster, web materials, etc. (2012-13)

Assistance with FAA Interactions

- Assistance with FAA interactions related to expanded tower service hours (2012)
- Assistance with FAA interactions related to airspace redesign proposals (2013)

Compatible Land Use Planning and Implementation

- Assessment, input, and testimony at land recommendations related to potential developments and changes in land use controls in the FXE environs, including testimony at related City hearings
- Review of City ordinances and zoning related to airport compatibility, and recommendation of changes (2013-14; underway)

Airport Planning

- Noise elements of 1986 Master Plan Update
- Noise elements of 1996 Master Plan Update
- Noise elements of 2002 Master Plan Update
- Assessment of the effectiveness and relevance of the current weight restriction (2013-14; underway)

Community Outreach

- Assistance in preparing and conducting a broad range of noise presentations to the Aviation Advisory Board, including the 2005 contour update and use restriction analysis, overall noise program publicity (2009), monitoring system review (2012), helicopter noise assessment (2012), and pilot outreach (2013)
- Preparation of a “Noise 101” presentation in a format for FXE staff to utilize independently (2011)

In addition to these major task areas and projects, the HMMH Team has assisted the City on a diverse range of relatively short-term noise-related assignments, which are too extensive to list. We are proud that the FXE staff know that we are always ready to respond in a very timely manner to phone-call or email inquiries, when we can leverage our local knowledge and background, experience gained by assisting other airports across the U.S. and abroad on similar issues, and the specialized tools and capabilities that we have developed to ensure this type of assistance is provided in the most accurate and advanced manner.

4.3 Why the HMMH Team is Uniquely Qualified

The RFP suggests using this section “to articulate why your firm is pursuing this work and how it is uniquely qualified to perform it.”

The primary answer to both of these questions relates to HMMH’s long-term involvement with, contributions to, and interest in the City’s noise abatement and land use compatibility planning efforts at FXE. We are proud of our mutual accomplishments and are particularly interested in pursuing this work as an opportunity to continue to build on them.

The City has a long and successful history of noise abatement and compatibility planning and implementation at FXE. The City considers noise compatibility to be a continuous, high-priority process. For an airport of its size, the City devotes an unusually high level of effort to develop and implement its noise abatement and

land use compatibility planning measures, monitor their effectiveness, and related communication with all stakeholders – including concerned citizens, local government officials, pilots, aircraft operators, airport businesses, etc.

We are pleased that the City was HMMH’s first client in Florida. We appreciate the opportunity the City provided us to establish our reputation as a leading noise consultant in the state, and particularly value our continuing role at FXE. Normally in proposals of this type, we are proud to cite the City and FXE as a reference.

Clearly, our 30 years of direct FXE experience provide us with background and understanding that no other consultant can possibly match.

Our prior experience and performance assisting the City on its very successful noise-related efforts are the strongest and most reliable basis on which the City can evaluate our qualifications for the current procurement.

While our direct FXE experience is exceptional, we also offer other unique qualifications in other areas, of relevance to this RFP, including: HMMH’s mission statement, corporate focus, Florida experience, similar “on-call” noise consulting experience at other airports, noise-regulation and policy-making credentials, related experience at other airports, noise model leadership, public communication capabilities, monitoring system credentials, compatible land use planning, and qualified and complementary subconsultants. These areas are addressed briefly below.

4.3.1 HMMH Mission Statement

HMMH’s mission statement reflects our core commitment to exactly the type of consulting assistance that the City seeks:

HMMH solves complex problems affecting our environment. Our core values are to serve clients with excellence and honesty, to respect others, foster teamwork, and seek growth opportunities.

4.3.4 On-Call Noise Consulting Experience at Other Airports

A large percentage of HMMH's aviation consulting is under on-call "as-needed" arrangements similar to this procurement. On-call arrangements provide flexible, timely, and cost-effective access to HMMH assistance in a diverse range of areas, and the ability to respond to unanticipated needs as they arise.

A hallmark of HMMH's assistance to airports is establishment of a close partnership with the client; we see ourselves as an adjunct to staff. As we have demonstrated at FXE over the past 30 years, we approach every issue and challenge with a level of commitment that is equal to that of the airport staff.

Most importantly, HMMH is first and foremost an aviation noise consulting firm. HMMH was founded and continues to exist for the purpose of assisting clients with complex aviation noise issues such as those presented by this project at Fort Lauderdale Executive Airport.

HMMH assistance to airports under on-call arrangements has included:

- Noise measurement and noise modeling
- Part 150 studies/updates and implementation
- Land use compatibility planning
- EA, EIS, and Master Plan noise elements
- Assistance in noise office establishment
- Noise office staffing and training
- Stakeholder outreach assistance
- Litigation and expert witness support
- Environmental documentation
- Preparation of annual contours
- Radar flight data acquisition and analysis
- Comprehensive noise and operations monitoring system support
- Sound insulation assistance
- Noise barrier, ground runup enclosure, and "hush-house" analysis and design
- Noise expertise on non-aviation transportation modes

HMMH offers the advantage of experience obtained in similar assignments. Currently or within the past five years, we have served (and in most cases continue to serve) as noise consultant to more than 25 airports across the U.S., including seven in Florida alone:

- Fort Lauderdale Executive
- Fort Lauderdale-Hollywood International
- North Palm Beach County
- North Perry Airport
- Palm Beach County Park - Lantana
- Palm Beach International
- Witham Field / Martin County Airport

4.3.5 Aviation Noise-Regulation and Policy-Making Qualifications

One of our three offices – in the Washington D.C. metropolitan area – provides us with a basis for interacting with FAA regulators, to permit us to represent clients at the national level when needed, and to ensure that FAA policy makers and regulators are familiar with and confident in HMMH's capabilities.

In addition to consulting to airports, HMMH provides internationally recognized assistance to standard-setting organizations and federal regulatory agencies.

This assistance ensures that our airport clients benefit from our understanding of and leadership in developing the most current noise-related polices, guidelines, standards, and regulations, as the following examples indicate:

HMMH is an international leader in noise effects research, standards-setting, and application. Four relevant examples include:

- From 1993 to the current date, HMMH has been lead consultant to the Federal Interagency Committee on Aviation Noise, which coordinates all federal agency research into aviation noise effects.
- In 2008, HMMH led development of the American National Standards Institute standard for estimating the likelihood of awakenings due to outdoor noise events heard in homes (ANSI S12.9-2008), which

FICAN recommends as the protocol for application in airport studies.

- HMMH, with MCG assistance, is finalizing documentation of Airport Cooperative Research Program Project 02-35, “Research Methods for Understanding Aircraft Noise Annoyance and Sleep Disturbance.”
- HMMH, again with MCG assistance, is also working on an FAA-sponsored project to apply the research approach validated in the preceding ACRP project at 20 airports across the U.S. *These surveys will help determine whether changes to the FAA’s 65 DNL standard for determining residential compatibility with airports are warranted.*

4.3.6 Aviation Noise Modeling Expertise

Aviation noise modeling is a key component of many noise assessments. HMMH is an acknowledged international leader in this area, as the following examples indicate:

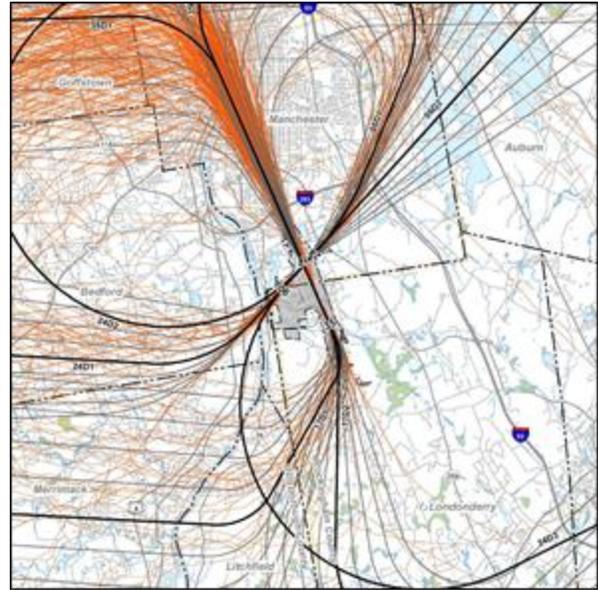
FAA’s Integrated Noise Model

The FAA’s INM is the most relevant noise model, worldwide. HMMH has been a lead member of the FAA’s Design Review Group for INM versions 5 through 7. The FAA’s acknowledgement of HMMH’s expertise is reflected by the fact that the agency requests that the firm (led by Mr. Mentzer) conduct detailed reviews of the beta-release versions of the software. *The FAA has stated that they are not comfortable with releasing a new version of the INM without HMMH review.*

A highlight of HMMH’s modeling approach is to maximize use of actual operations data using our advanced in-house tools, including:

Flight Track Data Collection, Processing, and Analysis: Radar data are an essential part of nearly any HMMH project. HMMH extracts aircraft flight paths from a broad range of FAA radar formats. HMMH efficiently converts actual aircraft flight paths into INM tracks for noise calculations, using proprietary software and other algorithms that result in statistically accurate and defensible modeling assumptions.

HMMH works with large datasets of actual aircraft flight paths to ensure that the representative tracks produce the most accurate noise modeling results. The figure below depicts a typical analysis prepared for INM use.



Integrated Noise Model (INM) flight tracks (black and gray) overlaid on actual aircraft flight paths (red) at Manchester Airport, New Hampshire

Flight Track Monitoring Software: HMMH’s InFLIGHT™ enables advanced visualization, analysis, and reporting of flight operations. This software has been developed in order to monitor compliance with noise abatement departure procedures, monitor runway usage, respond to noise issues in the surrounding communities, and assist in airspace analysis.

Noise Model Training

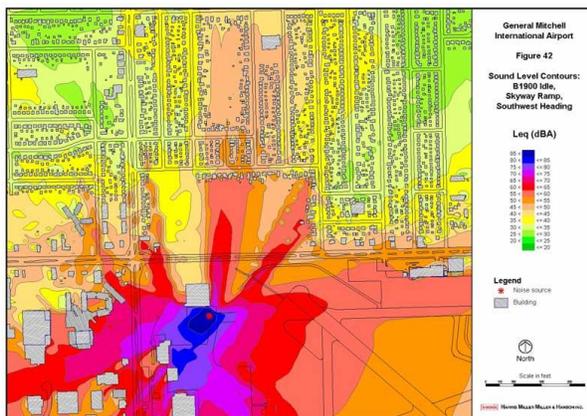
HMMH’s modeling credentials are further demonstrated by the fact that our INM course is the most widely attended worldwide. We have taught it over 45 times on four continents to over 450 attendees from airports, industry groups, the FAA, other government agencies, airframe and powerplant manufacturers, and consultants.

Ground Noise Analyses

Ground noise issues can arise from a variety of sources including maintenance run-ups, taxiing

aircraft and surface vehicles. As overall noise airport exposure levels have gone down, due to reductions in aircraft arrival and departure emissions levels, many airports have found increased community focus on ground sources.

The most advanced tool available for ground noise analyses is a sophisticated sound propagation model called SoundPlan®. The figure below depicts results of a SoundPlan analysis noise from an **engine run-up** occurring on an apron area immediately in front (south) of a maintenance hangar; the intense levels represented by reds, purples, and blues are partially shielded or reflected off the hangar doors away from the nearby neighborhood.



General Mitchell International Airport ground Noise modeling results

When ground-to-ground propagation is an issue, HMMH uses SoundPLAN, because it takes into account the following important elements, which the INM does not address:

- Noise source spectra and directivity
- Terrain features including elevations of noise sources, receivers, and intervening objects
- Atmospheric effects on sound propagation
- Shielding and reflections from barriers
- Ground effects due to areas of pavement, unpaved ground, and water
- Attenuation through absorption areas such as dense forest

HMMH has a license for the use of the most SoundPlan current release, and staff with extensive experience in its application.

4.3.7 Public Communication Skills

HMMH understands that the success of a project often hinges on community understanding and acceptance. The firm excels at presenting difficult technical issues both clearly and concisely to help build public understanding.

In airport planning studies, "public" refers not only to the citizens of neighboring communities, but also to other airport interests, such as the business community, airport tenants, pilots and others. HMMH develops public involvement programs to ensure that every interest has opportunity to express views and input in a non-confrontational manner, through tools such as:

- Advisory committee processes
- Public information workshops
- Technical working groups
- Project newsletters
- Project websites
- Summary brochures
- Mediation/facilitation

HMMH is particularly skilled in presenting complex technical information in a manner that is easily grasped by non-technical parties or even individuals with strong technical skills, but whom might not be familiar with aviation or acoustical terminology and properties.

HMMH is a strong advocate of communicating through the use of clear graphical techniques. One example that we believe can be extremely effective in a broad range of noise studies is the use of flight track "density plots," which provide clear bases for depicting and major flight corridors for different time periods, aircraft types, procedures, etc.

For example, the following two figures compare helicopter arrivals and departures at East Hampton (NY) airport from June 26 to October 8, 2011 – clearly depicting the differing inbound and outbound routes followed on the north side of the airport that year.

The advantages of this type of graphical presentation are clear.

4.3.8 Noise-Related Airport Advisory Committee Support

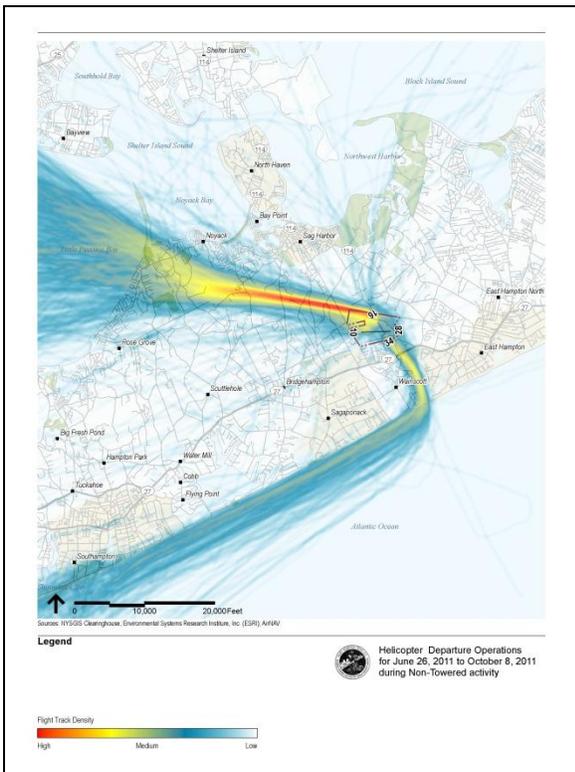
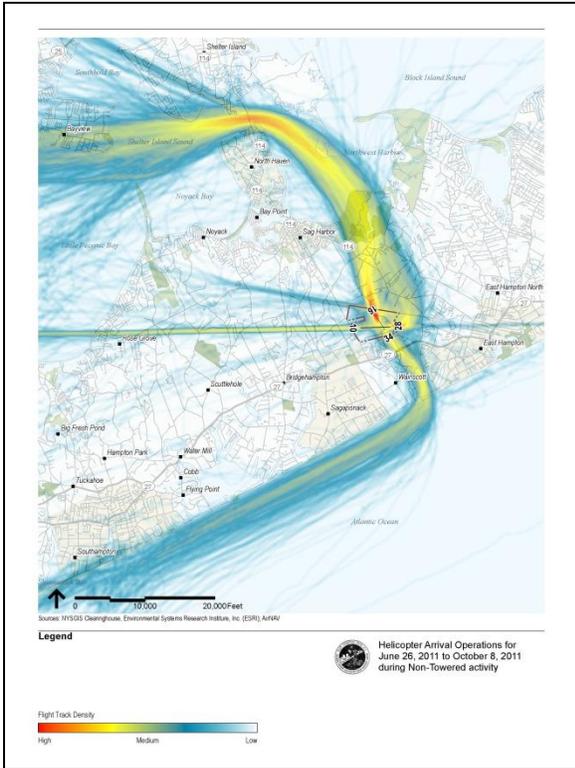
Public involvement is a central element of nearly every HMMH aviation project. For example, HMMH has assisted over 70 airports with Part 150 studies and implementation. Each of those studies has involved extensive public outreach.

Advisory committee support is a specialized type of outreach in which HMMH is a recognized industry leader. HMMH has supported – *and in most cases continues to support* – advisory committees at airports across the country. In almost every instance, we provide this support as part of a comprehensive noise consulting arrangement, similar to that which the City seeks in this procurement.

These committees have a variety of names, such as “Airport / Community Noise Roundtable,” “Airport Noise Advisory Committee,” “Airport Noise Abatement committee,” “Citizens Advisory Committee,” “Citizens Committee on Aircraft Noise,” “Noise Compatibility Committee,” “Technical Advisory Committee.”

“Ted and HMMH are valuable assets to the BCAD and Noise Abatement Committee (ANAC). It would be a loss to the citizens and to your noise abatement efforts if they were no longer available... I have come to appreciate the objective and informative technical assistance Ted and his team bring to the committee meetings...he is always patient and willing to offer any support that we need... I believe the stability offered by having Ted and his company continue in this role is particularly important in this time of change at the airport.”

– Debora Van Valkenburgh, City of Fort Lauderdale resident, Fort Lauderdale - Hollywood International Airport Noise Abatement Committee (ANAC) member, and former FXE Aviation Advisory Board member



HMMH-Developed Helicopter Arrival and Departure Flight Track Density Plots

In Florida alone, HMMH is currently assisting noise committees at Fort-Lauderdale Hollywood

International, Palm Beach International, and Naples Municipal, and is on-call to provide assistance at Martin County Airport / Witham Field, Palm Beach County Park (Lantana), and North Palm Beach County airports. Outside Florida, HMMH currently regularly supports noise advisory committees at more than a dozen additional airports.

4.3.9 Noise and Operations Monitoring System Assistance

Many of the task areas identified in the RFP relate to noise and operations monitoring system (NOMS) issues. HMMH has the most NOMS-related experience of any consulting firm. We were the first to provide NOMS consulting services to airports over 28 years ago and continue to provide similar services today.

Our capabilities are recognized across the country and throughout the world; HMMH staff have had lead roles at over 55 airports related to the design, specification, procurement, installation monitoring, acceptance training, and use of monitoring systems across the U.S. and overseas, including 10 Florida airports:

- Martin County / Witham Field, FL (2008)
- Tampa, FL (2000)
- Naples, FL (1998, 2013)
- Miami, FL (1997)
- North Perry Airport
- Palm Beach International (1993)
- Palm Beach County Park – Lantana (1993)
- North Palm Beach County G.A. (1993)
- Fort Lauderdale-Hollywood, FL (1991)
- Fort Lauderdale Executive, FL (1990)

HMMH installed and supported airport monitoring systems at over 30 airports in the U.S., Canada, the United Kingdom, and Europe, as part of the ANOMST™ division we operated in the mid-1990s prior to Lochard (now Brüel & Kjær) purchasing it from us.

Most directly relevant is our relationship with the FXE ANOMS installation, starting with arranging for the airport to serve as the “beta” installation for the software, when it was under

development by its originator (Technology Innovation and Development Group).

Since that time (the early 1990s), HMMH has provided comprehensive NOMS assistance to the City, including multiple assignments under our current agreement to ensure that the FXE system is as up-to-date, comprehensive, and appropriately configured for local needs.

4.4 Compatible Land Use Planning

Compatible land use planning is a key element of the FXE noise program. As noted in Section 4.2, we have provided related assistance to the City under our prior and current consulting arrangements.

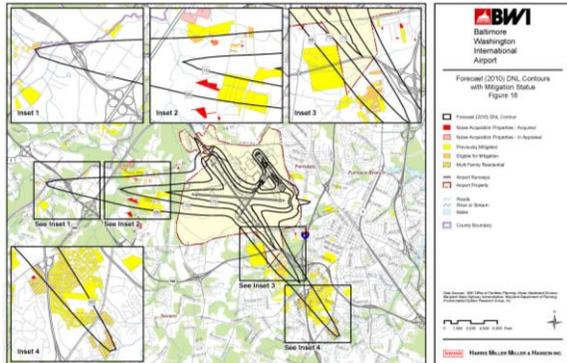
HMMH has worked with many other airports and land use planners in their communities to develop comprehensive plans that address airport noise issues, including airport overlay zones, easements, and other strategies.

Our recent work on the Transportation Research Board’s Airport Cooperative Research Program Study on Enhancing Land Use Compatibility around airports is exemplary of these capabilities. HMMH’s role on the project included:

- Review of Federal, state and local legislation and laws affecting land use around airports
- Review of accident statistics and literature
- Survey of airports regarding land use constraints on development or operations
- Identification and preparation of case studies for specific airports that provide highly illustrative examples of common constraining issues, and airport / community success in addressing them
- Preparation of a guidance manual for airport reference on steps to take to protect against incompatible land uses

FAA has recently placed greater emphasis on airport compliance with grant assurance requirements related to identification and reuse of land acquired with noise grants that no longer is needed for compatibility purposes. HMMH is currently working with the Maryland Aviation

Administration to update its land use database on a sophisticated GIS platform, in order to submit a Noise Land Inventory, Map, & Reuse Plan consistent with FAA Program Guidance on Disposal of Noise Land.



Noise Exposure Maps from Baltimore-Washington International Noise Land Reuse Plan

4.5 Highly Qualified and Complementary Subconsultants

While HMMH could provide all the services identified in the RFP, we propose a team that includes subconsultants, to meet a number of objectives, including, but not limited to:

- Ensuring that the City has access to the highest possible caliber of assistance in the all areas, including disciplines that might not be specifically anticipated at this time.
- Providing access to qualified firms with local offices – including in in Fort Lauderdale, for cost efficiency and rapid response.
- Providing “depth on the bench” when circumstances require significant staff commitments in a short time frame.
- Providing fresh perspectives on all technical areas related to noise compatibility, balanced by HMMH’s “institutional memory.”

Therefore, to augment HMMH’s experience and capabilities, our proposal includes two subconsultants with relevant qualifications in key technical areas. Both subconsultants have assisted us on prior FXE projects and at other airports, in the same roles we have identified for them under this consulting agreement. Our qualifications and those of our subconsultants complement each other and overlap in some

areas; we will work with the City in scoping each assignment, to ensure roles are distributed among firms in a manner that maximizes cost- and time-efficiency, and the technical excellence of the services delivered.

These firms’ anticipated roles, most relevant qualifications and experience, and prior working relationships with HMMH include:

Montgomery Consulting Group

Montgomery Consulting Group (MCG) will continue to provide the diverse assistance the firm has provided under our current agreement, including local data collection, land use assessments, airport operation and planning assistance, and monitoring system assessment and application.

HMMH has a long-term relationship with MCG; in addition to our collaboration at FXE, MCG currently is assisting HMMH with these same roles at Fort Lauderdale – Hollywood International Airport, recently assisted us on a Part 150 update at Naples Municipal Airport, and is working with us at multiple other airports nationwide. MCG is a Class C Business as defined in City Ordinance No. C-12-04, and is certified in Florida and Broward County as a Woman-Owned Business Enterprise (WBE).

MCG specializes in aviation planning, including airport development planning, encompassing aviation and non-aviation land uses, airport economic development planning, airport environs planning, land use analysis and conceptual site layout for highest and best economic use, facility planning, long-term land use planning and zoning for airport environs using geographic information systems, air cargo planning, MRO planning, general aviation planning, aviation research, cost estimating, DBE support services, and environmental overviews.

MCG staff is quite experienced at consulting for general aviation airports, reliever airports, and international hub airports. The staff is proud of providing quality deliverables that can be counted on to be accurate, timely, and professionally presented.

MCG's recent relevant experience includes:

- Aircraft Noise and Operations Monitoring System (ANOMS) Analysis - Fort Lauderdale-Hollywood International Airport
- Part 150 Study, Land Use/ GIS/ and Plan Production Support - Fort Lauderdale-Hollywood International Airport
- Noise Monitor Assessment - Fort Lauderdale-Hollywood International Airport
- Property Turnover Characteristics in Projected Noise Impacted Area - Fort Lauderdale-Hollywood International Airport
- Guiding Land Use Principles - Fort Lauderdale-Hollywood International Airport
- Environs Plan - Fort Lauderdale-Hollywood International Airport
- Master Plan Update - North Perry Airport
- Master Plan Update - Phase II - Airport Layout Plan Development - Fort Lauderdale-Hollywood International Airport
- Master Plan Update - Phase I - Strategic Economic Development and Land Use - Fort Lauderdale-Hollywood International Airport
- Update Airport Layout Plan - Venice Municipal Airport

Bobby D. Price, Aviation Consultant

Mr. Price will provide assistance related to air traffic control assessments, as he did in the Environmental Assessment we prepared for the City addressing extension of the hours of the I-95 noise abatement turn.

Mr. Price provides exceptional independent consultation that requires extensive corporate knowledge of air traffic control operations, rules, airspace and procedures, noise alternatives, and developing air traffic control scenarios.

Mr. Price has provided services regarding aircraft accidents, provided an air traffic evaluation for a company trying to obtain rights to build a new baseball stadium for Boston Red Sox spring training games, completed air traffic evaluation for a client in Las Vegas wishing to build close to the airport, and completed an air traffic evaluation for the City of Fort Lauderdale

to determine if feasible to extend hours of noise procedures now in effect.

Mr. Price's experience is extensive and includes several years as an Air Traffic Controller (FLL, MIA, and ATL), one year as ATC Automation Specialist (MIA), seven years as an Operational Supervisor (MIA), ten years as an Assistant Air Traffic Manager (PBI), and twelve years as an Operations Manager (MIA). For ten years he served as FAA Technical Advisor to the Palm Beach County Citizens Committee against Airport Noise.

In addition to collaboration with HMMH on the FXE EA, Mr. Price has had a long-term working relationship with HMMH during his prior career in FAA air traffic control tower management at Fort Lauderdale – Hollywood International and Palm Beach International.

(This page intentionally left blank)



5 Company Profile

This section includes the requested corporate information for HMMH and Montgomery Consulting Group subcontractor.

Name/Address	# Years in Business	Gross Revenue	# of Clients	Ownership	Project Office
Harris Miller Miller & Hanson Inc. Headquarters and Project Office: 77 South Bedford Street Burlington, MA 01803 T 781.229.0707 / F 781.229.7939 www.hmmh.com / tbaldwin@hmmh.com	33	\$8.7million	Total Current: 134 Total Public Sector: 64	Privately owned. See list of owners in Appendix A.	National firm, work will primarily be conducted from headquarters office in Burlington, MA.
Montgomery Consulting Group, Inc. Headquarters and Project Office: 501 S. New York Avenue, Suite 210 Winter Park, FL 32789 T 407.539.7030 F 407.539.7035 http://www.mcqi-us.com / montymcg@aol.com	19	\$2.04 million	Total Current: 20 Total Public Sector: 3	Privately owned. Monty Gettys, President (sole owner, same address). T 407.539.7030 x15	National firm, work will be conducted from local offices in FL.
Bobby D. Price, Aviation Consultant Headquarters and Project Office: 8742 Estate Drive West Palm Beach, Fl. 33411 T 561.628.4381 / F 561.798.2878 specialistprice@yahoo.com	40 years of experience in air traffic control	Negligible in 2013. Mr. Price provides consulting services on a part-time, on-demand basis only.		Independent Consultant / Privately owned. Bobby Price, (same address and phone).	Regional firm, work will be conducted from offices in FL

Appendix A contains a list of owners or Board of Directors for HMMH. Tab 10 contains HMMH's and MCG's Florida Department of State Business License. Mr. Price's will be provided in the event that he is called upon to assist on a specific task and the City deems it is required for this independent contractor.

5.1 Additional Information

The RFP states that this section may be used to provide “any additional information that the Proposer wishes to supply to augment its proposal (i.e. firm’s technical, educational, and training accomplishments, awards and recognition).” Sections 6 and 7 of this proposal provide extensive information on the HMMH team’s corporate and staff qualifications. The breadth and depth of HMMH’s experience alone over the past 33 years have resulted in the firm accumulating recognitions that are far too numerous to summarize here. Instead, we would like to highlight two very recent awards, which HMMH received when assisting another Florida general aviation airport client (Martin County, the owner and operator of Martin County Airport / Witham Field).

This project was the Martin County Airport / Witham Field Noise Abatement Departure Profile (NADP) Demonstration Project. The project won two awards in 2009:

- The Florida Airports Council (FAC) Noise Abatement & Community Affairs Committee 2009 "Noise Abatement Award," recognizing “an airport / aviation project that reduces the impact of operations on a neighboring community.”
- The Florida Department of Transportation (FDOT) 2009 Florida Aviation Award for General Aviation Project recognizing "outstanding achievements in airport aesthetics, safety, and service."

"We are proud to receive industry recognition for our highly successful NADP demonstration project, which shows that citizens and airport users can work as a team to develop noise abatement procedures, and that our technical experts can show the procedures actually reduce noise,"

- Michael C. Moon, Airport Director, Martin County Airport / Witham Field

This project and its associated awards is just one example of the types of recognition that HMMH and its team members regularly receive in the course of serving clients. This example is particularly relevant to this procurement for at least the following reasons:

- The project is for another east coast Florida general aviation airport, with similar community, environmental, airspace, operational, fleet mix, and other noise-related characteristics.
- The project included involvement by two HMMH team members, demonstrating our prior working relationship.
- Similar to the City's approach to noise abatement at FXE, the project and its success reflected a high level of direct and cooperative involvement by the full range of noise stakeholders; e.g., the airport owner, local fixed base operators, local pilots, citizens, etc.
- The project focused on maximizing noise abatement results through cooperative effort, which has been a consistent hallmark of the City's approach at FXE.
- The project was performed under a task-order-based consulting agreement, with a major noise-related focus.

6 Qualifications / Experience on Projects of Similar Scope

The RFP requests information about and references for a minimum of five projects with similar scopes over the past three years. Due to HMMH's industry leadership, we could list many multiples of that number. We have selected the following six clients, covering 14 airports, based on their recent nature, services that are directly relevant to the task areas identified in the RFP, and, in many cases, south Florida location, general aviation focus, and involvement of other proposed team members.

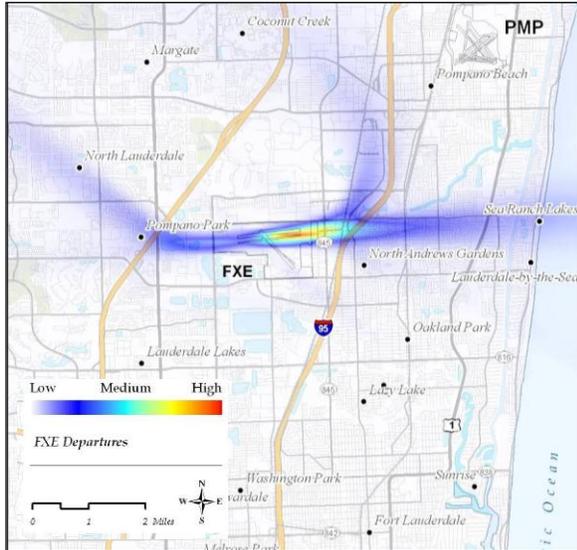
Part VIII, Tab 6 of the RFP requests that we provide a website address for a final project report for each reference client. HMMH has provided noise consulting assistance to each of these airport clients for at least one decade and, in most cases, two or three decades. Over these extended periods we have undertaken large numbers of assignments for each of these clients, with dozens of final reports in each case. To limit the burden on reviewers, the individual discussions for each client provide links to one or two recent work products that we believe are of direct relevance to the City's assessment.

- **City of Fort Lauderdale; one airport – Fort Lauderdale Executive.** Clearly our 30 years of assistance to the City at FXE is the most directly relevant comparable experience that we can offer.
- **Broward County; two airports – Fort Lauderdale – Hollywood International and North Perry General Aviation Airport.** HMMH, with ongoing MCG assistance, has provided comprehensive airport noise consulting services to the Broward County Aviation Department since 1990 that are identical to the services the City seeks in this procurement. This assistance has focused on noise issues at Fort Lauderdale-Hollywood International Airport, and has also included assistance as needed at North Perry General Aviation Airport
- **Palm Beach County Department of Airports; three airports – Palm Beach International Airport, Palm Beach County Park Airport (Lantana), and North Palm Beach County General Aviation Airport.** HMMH has provided comprehensive airport noise consulting services to the Palm Beach County Department of Airports since 1991 that are identical to the services the City seeks in this procurement.
- **Naples Airport Authority; one airport – Naples Municipal Airport.** HMMH has provided comprehensive noise consulting to the Authority since 1995, with MCG as a subconsultant since 2000.
- **City and County of Denver; one airport – Denver International Airport.** HMMH has continuously provided comprehensive airport noise consulting services to Denver since 1981 – starting at Stapleton International, before the new airport was contemplated. The range of services is identical to the services the City seeks in this procurement.
- **Los Angeles World Airports; three airports – Los Angeles International, Ontario International, and Van Nuys Airport.** HMMH provides a broad range of noise consulting to LAWA for all three of its airports. Van Nuys is a west coast general aviation airport with many noise-related parallels to FXE.
- **Massachusetts Port Authority; two airports – Boston -Logan International Airport and L.G. Hanscom Field.** HMMH has continuously provided comprehensive airport noise consulting services to Massport since 1981. The range of services is identical to the services the City seeks in this procurement.
- **Town of East Hampton (NY); one airport East Hampton Airport.** From 2003-2013, HMMH served as the town's on-call noise consultant on a broad range of assignments.

Comprehensive Aviation Noise Consulting, Fort Lauderdale Executive Airport, FL

Project Information	Response
Project Name and Location	Comprehensive Noise Consulting, Fort Lauderdale Executive Airport
Client Contact	Ms. Florence Straugh, Noise Officer 954.828.4955 fstraugh@fortlauderdale.gov
Contract Duration	Continuing since 1984
Contract Value	\$750,000+

HMMH is proud to have provided noise consulting services to the City of Fort Lauderdale, for Executive Airport (FXE) since 1984. The cover letter to this proposal and the Section 2 “Proposal Summary” summarize our prior experience and qualifications; they are not repeated here. Clearly this experience is the most directly relevant that we can offer.



FXE Departure Flight Track Density Plot

HMMH looks forward to this opportunity to assist the City with further noise program advances under this procurement.

Report(s): We have not offered a website address for a report example for FXE, because the City is in possession of all our work products over the past 30 years. We would be pleased to

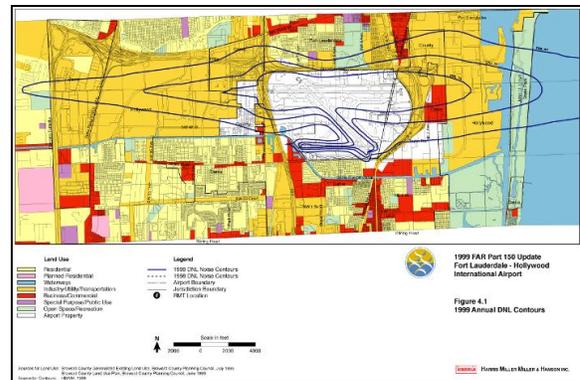
provide work products in electronic or hard-copy formats at your request.

Comprehensive Aviation Noise Consulting, Fort Lauderdale–Hollywood International Airport, FL

Project Information	Response
Project Name and Location	Noise Consulting Services, Fort Lauderdale–Hollywood International Airport, FL
Client Contact	Mr. Winston Cannicle, Noise Officer, 954.359.6181 wcannicle@broward.org
Contract Duration	Continuing since 1990
Contract Value	\$1 million + cumulatively

HMMH provides comprehensive airport noise-related consulting services to the Broward County Aviation Department (BCAD), primarily related to Fort Lauderdale – Hollywood International Airport (FLL). HMMH has provided these services to the BCAD in an uninterrupted fashion, since 1990. HMMH assistance to the BCAD has covered the full spectrum of projects that an airport may consider relate to noise compatibility, and noise elements of airport planning, design, and efforts.

MCG has assisted HMMH on Broward County projects. *Our work at FLL – combined with our FXE experience – provides us with local aviation noise experience that no other firm or group of firms can match.*



Annual Contours for Fort Lauderdale – Hollywood International Airport

Major HMMH services to the BCAD have included the following:

- Two Part 150 studies
- Noise elements of an Master Plan Study
- Noise elements of Environmental Impact Study (EIS) for a runway extension
- Initial and ongoing implementation of the Airport Noise Abatement Committee
- Monitoring system design, specification, implementation, support, and use
- Design and establishment of noise office staffing and functions and staff training
- Annual noise contours
- Ground run up control and noise barrier effectiveness analyses
- Sound insulation program design, implementation, and testing
- Implementation of an aviation easement and sales assistance program
- Litigation support

Report(s): For Broward County we suggest consideration of materials provided on the Broward County Aviation Department (BCAD) Noise information website for the “Partnership for Quieter Skies” quarterly reports at: <https://www.broward.org/Airport/Community/Pages/NoiseInformation.aspx#quieter>

The “PQS” reports are designed to provide an objective and easily understood basis for tracking progress on noise abatement goals at Fort Lauderdale – Hollywood International Airport (FLL), using primarily graphical presentations. HMMH developed the reports in collaboration with BCAD staff, the FLL Airport Noise Abatement Committee (ANAC), and airport users. HMMH and MCG prepare the reports for BCAD review and posting using data the two firms’ access from the FLL ANOMS installation.

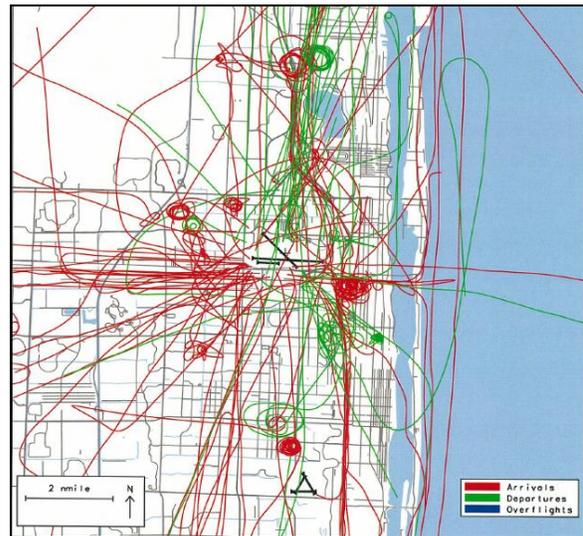
HMMH and MCG arrange for the “.pdf” version of the report to be ready for public consumption. Part of that requirement involves setting up the document so that it will meet the United States Department of Justice Civil Rights Division for Americans with Disabilities Act of 1990 (ADA) compatible.

Comprehensive Noise Consulting for Palm Beach County Dept. of Airports

Project Information	Response
Project Name and Location	Comprehensive Noise Consulting, Palm Beach County, Florida
Client Contact Info	Ms. Casandra Davis, Noise Officer 561.471.7412 cdavis@pbia.org
Contract Duration	Continuing since 1991
Contract Value	\$ 1 million + cumulatively

HMMH has provided comprehensive airport noise-related consulting services to Palm Beach County since 1991 for three County-run airports – Palm Beach International (PBI), Palm Beach County Park (Lantana), and North Palm Beach County. Major services have included:

- 1993 and 2002 PBI Part 150 Updates
- noise elements of PBI Master Plan Update
- installation of a 3-airport monitoring system
- PBI sound insulation program management
- noise office staff training and support
- preparation of annual noise contours
- continuing assistance to the PBI Citizens Committee on Aircraft Noise (CCAN)
- expert support for litigation
- helicopter flight track development and pilot outreach for all three airports



Palm Beach County Helicopter Flight Tracks

Report(s): The Palm Beach County Department of Airports does not post noise reports on its website. For this client, we have provided a pdf on the CDs provided with this submission for a 2013 report presenting noise contours and related documentation for 2012 historic and 2032 forecast noise contours at Palm Beach International Airport.

“We have been extremely pleased with HMMH’s assistance since 1991, including the quality of the firm’s technical analyses, its ability to assist in communication with the public, and its implementation-related focus.”

- Bruce Pelly, Director, Department of Airports

Comprehensive Noise Consulting for Naples Municipal Airport

Project Information	Response
Project Name and Location	Comprehensive Noise Consulting, Naples Municipal Airport, Florida
Client Contact Info	Sheila Dugan, Deputy Executive Director 239.643.0733 sdugan@flynaples.com
Contract Duration	Continuing since 1995
Contract Value	\$ 2 million+ cumulatively

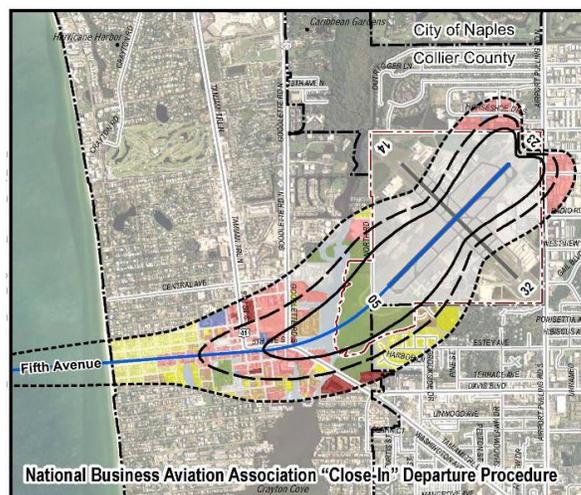
HMMH has provided – and continues to provide – comprehensive of noise consulting services for Naples Municipal Airport since 1995, including:

- Noise analysis for a 2011 runway extension Environmental Assessment
- Part 150 Updates for 1996, 1998, and 2000
- Noise analysis for 1996 Master Plan
- Part 161 Study for restriction of Stage 2 general aviation jet operations
- Flight tracking, noise monitoring and complaint software, and staff training
- Diverse continuing noise consulting assistance to support the noise program.

The Part 150 Updates and Part 161 study set national precedent by leading to bans on Stage 1 and 2 general aviation jet operations.

Prior to pursuing the use restriction options, HMMH assisted the Authority in designing and implementing non-restrictive measures to the maximum feasible extent, including a preferential runway program, noise abatement flight tracks, noise abatement departure procedures, runup procedures, and compatible land use measures.

A common criticism of noise studies is use – at FAA direction – of cumulative exposure, in terms of DNL. HMMH utilizes “supplemental metrics” to address these concerns. The following figure presents an example of single event contours HMMH used in a recent study at Naples, which clearly depicted the combined benefits of a noise abatement flight track and noise abatement departure procedures.



Sound Exposure Level Contours for Lear 35 Noise Abatement Departure at Naples Airport

Our team experience at APF is particularly relevant to the City’s procurement, because it is a Florida general aviation airport with many noise-related factors similar to FXE.

Report(s): For Naples, we offer the Naples Municipal Airport 2010 and 2015 Noise Exposure Maps that HMMH and MCG prepared in August 2010, which is available on the airport website at:

<http://flynaples.com/media/Final APF 2010 2015 NEM Update.pdf>. Naples is a highly comparable general aviation airport on the west coast of Florida.

Comprehensive Noise Consulting, Denver International Airport

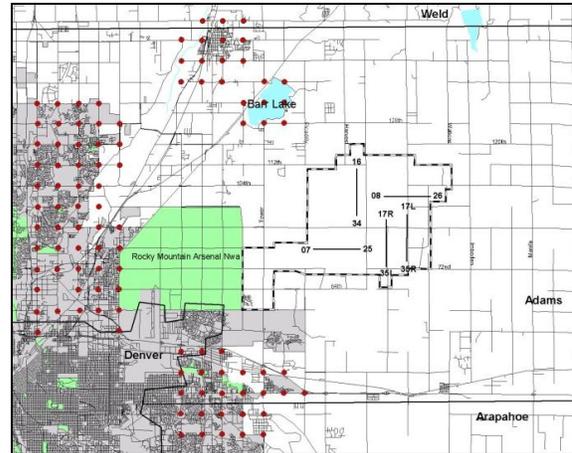
Project Information	Response
Project Name and Location	Comprehensive Noise Consulting, Denver Stapleton International and Denver International Airport
Client Contact Info	Mr. Mike McKee, Airport Noise Officer 303.342.2361 mike.mckee@diadenver.net
Contract Duration	Continuing since 1995
Contract Value	\$2 million + cumulatively

HMMH has worked at Denver International Airport (DEN) to measure, compute, and mitigate noise, and provide litigation support on noise issues at the facility since early planning stages more than 20 years ago. Prior to the opening of DEN, HMMH provided all noise consulting services to Denver-Stapleton.

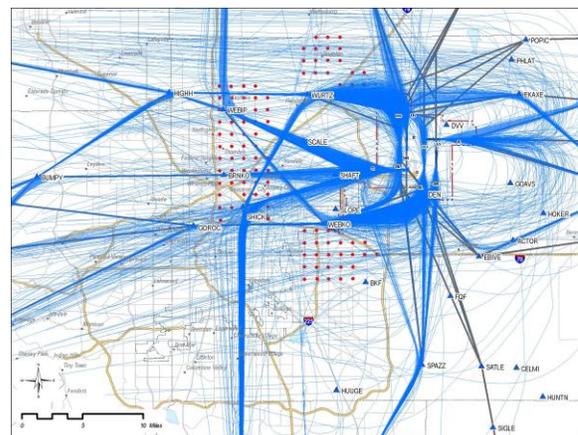
Most HMMH assistance to Denver relates to measurement, modeling, abatement and land use planning, outreach, and other tasks associated with complying with a precedent-setting intergovernmental agreement (IGA) between Denver and Adams County dictating noise requirements that Denver was required to meet in return for the annexation of land for the new airport.

The Agreement sets maximum Noise Exposure Performance Standards (NEPS) at 101 points around the airport. Exceedences over 2 dB in a year result in a fine of \$500,000 per point.

Since then, HMMH has worked with DEN staff on a variety of unique projects pertaining to the IGA. These include the computation of noise exposure levels using radar data to model the actual flight path and climb profile (critical at Denver's 5,431 foot elevation) for every operation, and recent development of a noise abatement program to lower exposure levels at NEPS points and essentially eliminate fines.



DEN Noise Exposure Performance Points



Top: actual radar data that represents the existing flight paths; Bottom: modified flight tracks that HMMH prepared to represent the FAA's proposed RNAV procedures.

The figures above compare an 82-day sample of radar data. The top figure shows the actual radar data that represents the existing flight paths. The bottom figure shows modified flight tracks that HMMH prepared to represent the FAA's proposed RNAV procedures. Initial analysis indicated that the FAA's proposal would create NEPS violations. HMMH suggested two changes to the proposed procedures that would likely eliminate the NEPS violations.

We anticipate that FAA implementation of RNAV procedures is likely to concentrate operations in a manner that raises noise issues at many airports; our experience with them at DEN and other airports provides us with exceptional experience related to anticipating and avoiding potential concerns.

Report(s): For Denver, we offer the quarterly and annual noise reports that present noise contours that are automatically prepared (on a daily basis) using HMMH software called “ARTSMAP,” using data downloaded from the DIA ANOMS installation. ARTSMAP calculates airport noise exposure by modeling every flight operation at the airport in the exact track that it followed, rather than using a small number of representative tracks, as in typical noise modeling exercise. This approach is necessitated in order to meet legal obligations that the City and County of Denver entered into as part of the annexation of land from Adams County for construction and operation of the new airport.

Report for first quarter of 2014:
<http://business.flydenver.com/community/noise/reports/1q2014.pdf>

Report for calendar year 2013:
http://business.flydenver.com/community/noise/reports/2013_ar.pdf

Comprehensive Aviation Noise Consulting of the Los Angeles World Airports, CA

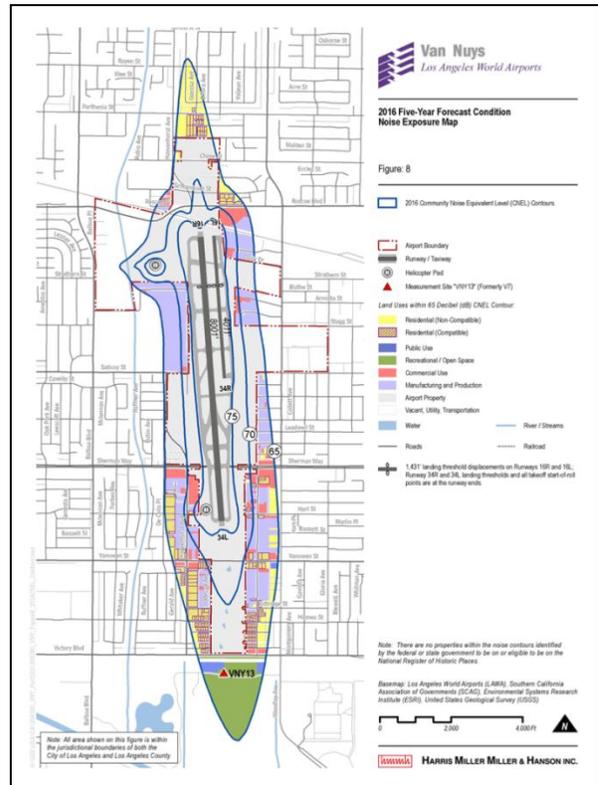
Project Information	Response
Project Name and Location	Comprehensive Noise Consulting, Los Angeles International Airport, Ontario International Airport and Van Nuys Airport
Client Contact Info	Scott Tatro, Environmental Affairs Officer 424.646.6499 statro@lawa.org
Contract Duration	Continuing since 2005
Contract Value	\$8.3M
Project Report	See Section 6.3.

HMMH is assisting Los Angeles World Airports (LAWA) with a broad range of aviation noise consulting at Los Angeles International (LAX), Ontario International (ONT), and Van Nuys Airport (VNY), including:

- Part 150 Noise Exposure Maps
- Automated daily contours at all airports

- Part 161 studies at VNY and LAX
- Ground noise analyses
- Advisory Committee Support

Our work at VNY included a precedent-setting Part 161 study – the first to simultaneously address multiple restrictions (a total of nine), several of which would limit noisier operations.



2016 Van Nuys Airport Noise Exposure Map

Based on our multi-year study, in July 2006, the Los Angeles Board of Airport Commissioners directed LAWA staff and HMMH to prepare an Environmental Impact Report, under the California Environmental Quality Act, for a seven-year phaseout of noisier aircraft under a Part 161 provision that “grandfathers” rules proposed before October 2, 1990. In 2009, the Board approved the phaseout, which the Los Angeles City Council approved and the Mayor signed into effect in 2010.

LAWA subsequently retained HMMH to prepare 2011 / 2016 Part 150 Noise Exposure Maps to reflect the reduced contour size associated with the phaseout.

Report(s): For LAWA, we offer the 2011 Van Nuys Airport (VNY) Noise Exposure Map Update. VNY is a highly comparable general aviation airport serving the Los Angeles metropolitan area. The report is provided in sections at:

http://www.lawa.org/welcome_VNY.aspx?id=6645. Report in one file at: http://www.lawa.org/uploadedFiles/VNY/Part150/final_vny_nem%20signed.pdf

Reviewers may also consider the VNY “Friendly Flyer” noise abatement program that HMMH assisted LAWA to update and enhance. HMMH’s final report is at: http://www.lawa.aero/welcome_VNY.aspx?id=4245

The HMMH report presenting the background analyses and recommendations is presented at: <http://www.lawa.aero/uploadedFiles/VNY/pdf/VNY%20Revised%20Fly%20Friendly%20Target%20Noise%20Level%20Program%20Report.pdf>

An HMMH presentation on the report is at: <http://www.lawa.aero/uploadedFiles/VNY/pdf/VNY%20Part%20161%20Revised%20Fly%20Friendly%20Program%20Presentation%20to%20CAC.pdf>

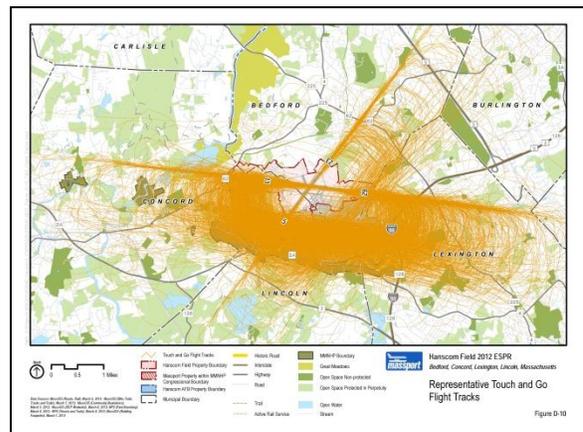
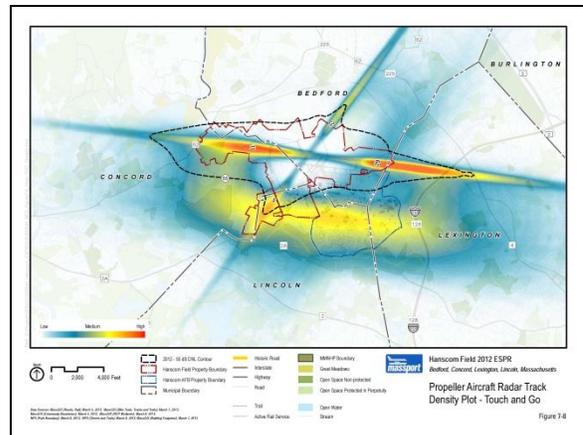
Comprehensive Aviation Noise Consulting, for Boston-Logan International and Hanscom Field, for the Massachusetts Port Authority

Project Information	Response
Project Name and Location	Comprehensive Noise Consulting at Boston-Logan and Hanscom Field
Client Contact Info	Mr. Frank Iacovino, Noise Abatement Unit 617.561.1841 fiacovino@massport.com
Contract Duration	Continuing since 1981
Contract Value	\$3.4M
Project Report	See Section 6.3.

HMMH has provided a comprehensive range of noise consulting to Massport for both its airports since 1982. Major assignments have included.

- Environmental studies for a diverse range of airside and landside improvements at Logan
- Monitoring system design, specification, procurement, acceptance, and application
- Sound insulation program acoustical design
- Diverse stakeholder outreach assistance

HMMH’s work for Hanscom Field (BED), New England’s premier full-service general aviation airport and reliever for Logan, is particularly relevant to FXE. BED is located in the middle of four noise-sensitive communities, and adjacent to Minute Man National Historic Park, which is listed by activists as an “endangered” national park. Most recently, HMMH completed Hanscom’s 2012 “Environmental Status and Planning Report,” which compares environmental conditions for current, past, and future scenarios.



Hanscom Field Patterns Displayed as Individual Tracks and in a Density Plot

Other HMMH projects for Hanscom since 1982 have included:

- Evaluating benefits of a weight-based surcharge on nighttime operations
- Noise contours and supplemental metrics
- Preparation of annual noise reports
- Noise sections of environmental reports
- Noise measurements
- Noise berm design and construction testing
- Support to the Hanscom Noise Workgroup
- Examination of noise effects of tree cutting
- Monitoring system design, specification, procurement, and acceptance assistance

One special aspect of our Massport experience is that Mr. Baldwin started his career in the noise abatement office. His Massport experience provides him with a clear perspective of the issues that City and FXE staff members face as the day-to-day front line on noise issues.

Report(s): For Massport, we offer the 2012 Hanscom Field “Environmental Status and Planning Report” (“ESPR”), for which HMMH was the prime contractor.

The main body of the report is presented at: https://www.massport.com/media/234499/hanscom_2012_espr_12-23-13_finalversion.pdf

A webpage providing links to appendices, the report scope, public presentation material, and related items is at:

<https://www.massport.com/hanscom-field/overview/publications-reporting/>

Noise Consulting Services, East Hampton Airport, East Hampton, NY

Project Information	Response
Project Name and Location	Noise Consulting Services, East Hampton Airport, East Hampton, NY
Client Contact Info	Jim Brundige, Airport Director T 631.537.1130 brundige@optonline.net
Contract Duration	2003-2013
Contract Value	\$400,000 + cumulatively

From 2003-2013, HMMH was the town’s on-call noise consultant tasked with developing and implementing a noise abatement program for East Hampton’s non-towered airport. Activity consists of numerous corporate jets and helicopters that serve many of the Hamptons’ wealthy summer residents. HMMH has assisted the Town with a broad range of noise consulting assignments, including the following:

- The 2003 “Noise Study Advisory Group” process, including meetings, measurements, modeling, abatement analyses, and mitigation and outreach recommendations.
- Recruiting and training a combined airport manager / noise officer. (2004)
- Noise abatement implementation. (2004-6)
- Development of a noise abatement pilot handout in Jeppesen insert format. (2004-6)
- Design, procurement, and acceptance of the initial monitoring system. (2004-7)
- Assessment of ongoing data-collection and recommendation of enhancements. (2012)
- Review of effectiveness of enhanced data-collection tools. (2013)
- Noise analyses for the Seasonal Airport Traffic Control Tower EA. (2013)

Report(s): For East Hampton, we offer the list of airport-related reports that includes several HMMH final reports and presentations at: <http://www.town.east-hampton.ny.us/HtmlPages/Airport/AirportGEIS.htm>, including work conducted in 2003 that established the airport’s noise abatement, monitoring, and reporting programs, through 2013, when we prepared all noise-related elements of an EA for a “seasonal airport traffic control tower.”

7 Key Project Staff Background

Taken as a whole, the HMMH Team offers unsurpassed qualifications. The success of the project, however, will result from the collective contributions and utilization of highly-qualified *individuals*. We have carefully considered the City needs at FXE and have assembled a team with the direct project experience, technical knowledge, project management skills, and available work capacity to provide successful, on-schedule projects under this contract. Following the key staff organizational chart we have described each individual's qualifications by firm. *Appendix B provides full resumes for all identified project staff.*

Harris Miller Miller & Hanson Inc.

Ted Baldwin, Principal in Charge and Project Manager

Ted Baldwin has 37 years of experience in airport noise, including 30 years at HMMH. He has managed or been Principal-in-Charge of HMMH assistance to the City of Fort Lauderdale and Fort Lauderdale Executive Airport since 1984.

No other consultant can offer his familiarity with FXE's noise abatement and compatible land use measures, background to their development, and local issues of concern. He has repeatedly demonstrated his ability to interact effectively with all members of the FXE airport "public," including aviation, residential, government, and other interests. His FXE experience includes overall responsibility for all assignments undertaken for the City that are discussed in this submission.

Mr. Baldwin has led major noise studies at over 60 airports in the U.S. and abroad, including Part 150 studies and program implementation at over 35 airports – representing more than one airport in eight involved in the Part 150 program nationally, and at nine airports in Florida alone.

Through his Part 150 work, he has received an FAA award for "Recognition for Achievement and Excellence" for his "ability to deal

objectively with the controversial issue of airport noise," "reflect sensitivity and balance in representing both the pro and con of the noise issue," and "successfully develop noise control programs that are consistent with aviation and community goals."

Mr. Baldwin's consulting qualifications cover a broad range of other airport planning and environmental areas, including: state and federal environmental impact studies, noise elements of Airport Master Plan studies, the design and use of permanent noise and operations monitoring systems, noise measurement and modeling, expert testimony and other related activities.

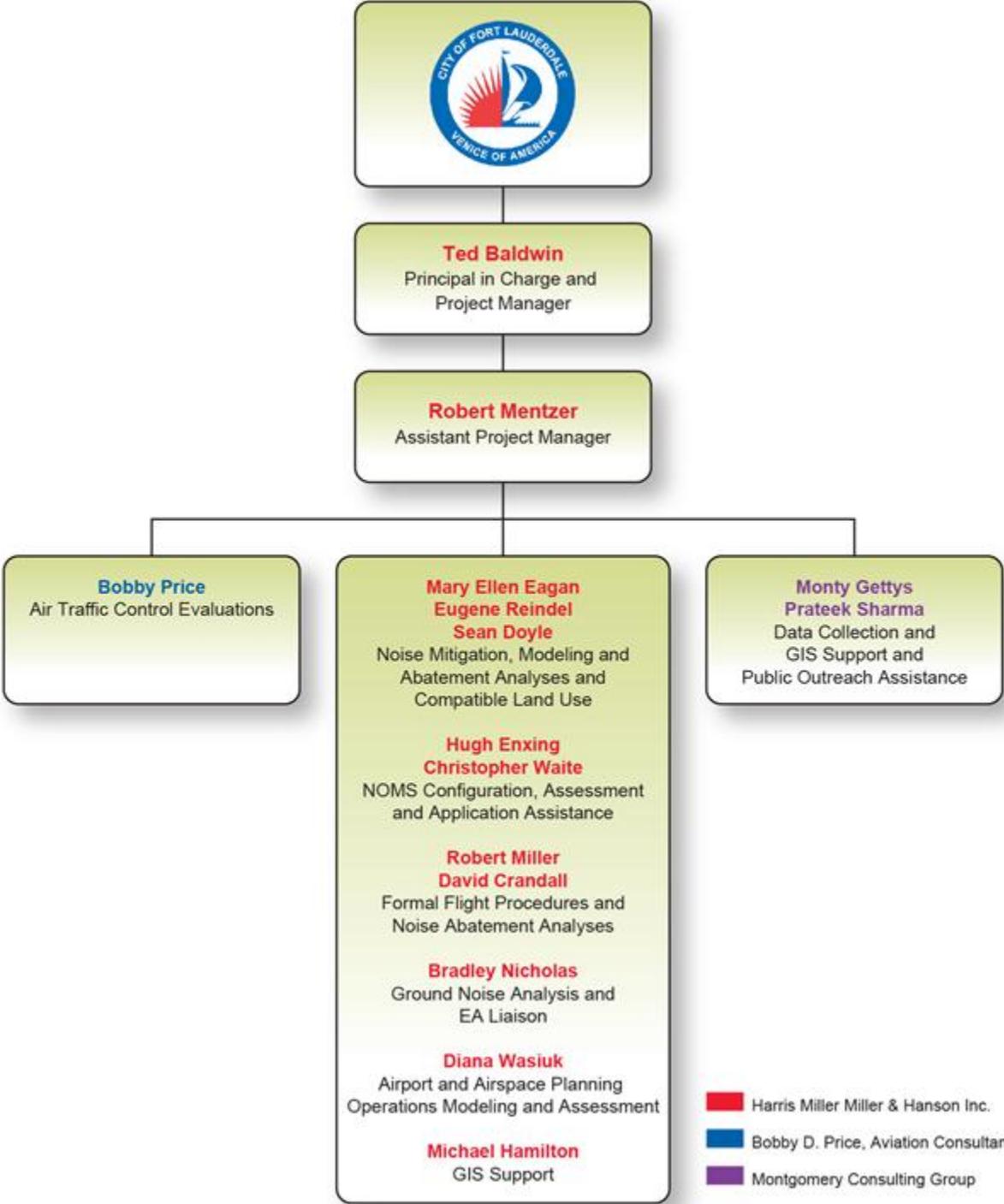
Perhaps the most meaningful evidence of Mr. Baldwin's qualifications and experience, and the quality of the service he provides to airports comes from stakeholder testimonials. His active involvement on projects at both Fort Lauderdale – Hollywood International (FLL) and FXE has provided him with high visibility in the City among citizens active on noise issues. The introduction to Section 6 included one such testimonial from a Fort Lauderdale resident. The following testimonial is from a second:

"I have been on the Noise Abatement Committee (ANAC) for over 17 years. I have seen many consultants come and go and by far the best for FLL is HMMH and Ted Baldwin.

"With Ted's help, the ANAC has made major progress in recent years. Ted has always acted in a totally factual and unbiased manner. We always know Ted will tell us the truth."

Bud Johnson, City of Fort Lauderdale resident and FLL ANAC member

Project Organization



Robert Mentzer, Assistant Project Manager

Robert Mentzer specializes in noise analyses for airports. He currently is managing the FXE Part 150 Noise Exposure map Update.

Mr. Mentzer is nationally recognized as one of the most experienced users of the FAA's Integrated Noise Model (INM). The FAA has acknowledged that he is the most active contributor to the INM design review process. He assists in the preparation and presentation of HMMH's INM course, which over 400 students have attended worldwide.

Mr. Mentzer has led preparation of contours for over 50 airports, including noise elements of Part 150 Land Use Compatibility Planning Studies, Part 161 Noise and Access Restriction Studies, Environmental Assessments, Environmental Impact Statements, Airport Master Plan Studies, and other studies concerning airport noise.

As the leader of HMMH's "aircraft noise modeling center of excellence," Mr. Mentzer has assisted on essentially every FXE noise contour analysis over the past 19 years, in both quality control and direct modeling roles.

Mary Ellen Eagan, Noise Abatement, Compatible Land Use, and Noise Abatement Analyses

Mary Ellen Eagan specializes in aviation noise analysis. Her experience includes 14 CFR Part 150 studies, state and federal environmental evaluations, comprehensive field measurements and state-of-the-art noise modeling. She also provides on-call noise consulting at a number of airports, assisting them with responding to day-to-day noise issues.

Ms. Eagan has supported the Federal Interagency Committee on Aviation Noise (FICAN) since 1993, which provides her thorough familiarity with federal aviation noise research conducted throughout FICAN member agencies, especially as it relates to the effects of noise on people. She is principal author of all of FICAN's findings and reports to date and was

lead investigator for FICAN's study of the effects of aircraft noise on children's learning.

As President of HMMH, Ms. Eagan can assure the Department that appropriate resources of the company will be available to conduct this project in a cost-effective and timely manner.

Eugene Reindel, Noise Abatement and Compatible Land use Analyses

As a Vice President and Manager of HMMH's Sacramento Office, Gene Reindel manages a wide range of noise consulting projects and provides technical support on aviation-related noise studies and noise measurement programs. He also leads HMMH's sound insulation practice. His professional experience includes 14 CFR Part 150 noise/land use compatibility studies, 14 CFR Part 36 aircraft noise certification measurements, aircraft ground noise studies including low-frequency noise and ground run-up enclosures, and modeling of aircraft operations noise. He is often involved in preparing for and carrying out major field measurement programs and advising on the acquisition and analysis of data. Because of his experience and education, Mr. Reindel is a training leader at HMMH and teaches courses in acoustics, sound measurements, and the FAA's Integrated Noise Model (INM).

Sean Doyle, Noise Abatement Analyses

Sean Doyle has worked on a variety of aviation projects including Part 150 and Part 161 studies, Environmental Impact Studies, and other studies related to State and local requirements. He is an expert user of the FAA's airport noise models, including the INM, the Area Equivalent Method, and Noise Integrated Routing System.

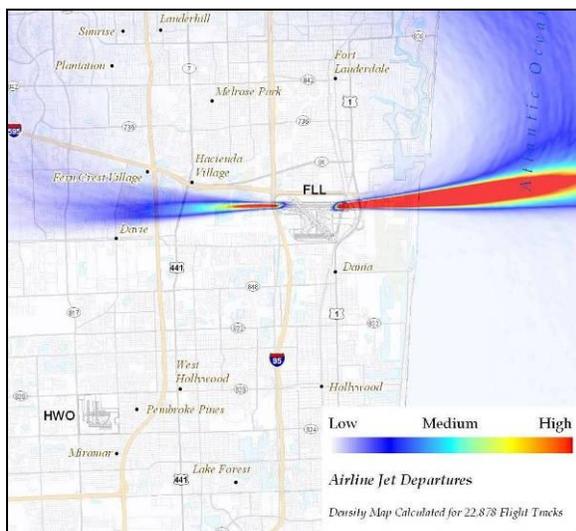
Mr. Doyle is an expert user of various simulation/modeling tools which gives him insight into the various types of data generated by various modeling tools and how in-turn to manipulate the data to gain information needed. Additionally he is closely involved in the testing and development of systems-related projects to streamline radar data acquisition and analysis through new tools and techniques.

Hugh Enxing, Noise and Operations Monitoring System Configuration, Assessment, and Application Assistance

Hugh Enxing has over thirty years of experience in software products and tools design, implementation and support. Mr. Enxing is an experienced project manager and technical leader with excellent communication skills excelling in client-server and scalable n-tier web application architectures. Mr. Enxing has been the architect of various flight track and noise monitoring systems, having provided the complete re-implementation of ANOMS versions 5 and 6 in preparation for its sale to Lochard.

His primary focus over the past few years has been deploying HMMH's technologies throughout the World Wide Web using cloud computing architectures, software-as-a-service (SaaS) delivery models, and business-to-business (B2B) web services.

Mr. Enxing brings the City unparalleled experience and capabilities related to the inner workings of ANOMS and its data acquisition components, ensuring the highest possible accuracy in the application and interpretation of the system's output. His experience includes assisting with FXE ANOMS support, upgrades, and applications since 1995.



Flight Track Density Graphic for FLL Fly Quiet Report

Christopher Waite, Noise and Operations Monitoring System Configuration, Assessment, and Application Assistance

Christopher Waite is a proficient user of various noise modeling systems including the Federal Aviation Administration (FAA) Integrated Noise Model (INM), Noise Integrated Routing System Model (NIRS), and the Federal Highway Administration Traffic Noise Model.

Mr. Waite has conducted field measurements for a variety of projects including projects in Grand Canyon and Glacier National Parks, performed sound insulation testing near Buffalo Niagara International Airport, and noise modeling for the Federal Aviation Administration Aircraft Noise and Annoyance Survey.

Mr. Waite is providing significant assistance to Mr. Mentzer and Mr. Doyle on the previously cited number of events above a threshold analyses as part of our ongoing assessment of alternative designs, operations, and locations for London-Heathrow Airport.

Robert Miller, Formal Flight Procedures and Noise Abatement Analyses

A co-founder of HMMH, Robert Miller is active in all facets of HMMH's aviation consulting practice and has consulting on aviation noise issues for more than 35 years.

In prior years, Mr. Miller supported the Federal Interagency Committee on Aviation Noise (FICAN), has served as a member of the FAA's Design Review Group for the Integrated Noise Model, and has organized and chaired an international symposium on aircraft noise modeling for the Transportation Research Board.

Mr. Miller's has led the design, production, and installation of state-of-the-art data acquisition and analysis systems for 16 commercial and military airports throughout the U.S. He has developed noise mitigation programs at air carrier, general aviation, and joint use facilities, and has conducted assessments of noise and accidents at Naval and Marine Corps Air Stations.

Mr. Miller's consulting activities include managing major projects at Los Angeles, Philadelphia, Logan, and Denver, as well as occasional tasks at several smaller airports. He serves as an expert witness on aviation noise. He is a former Air Force pilot and holds a commercial pilot's license. Mr. Miller managed the recently completed Part 150 studies at Portland Jetport (ME) and Denver International Airport. His current work for Los Angeles World Airports includes project management of a Part 161 study at Los Angeles International, and overall project direction for the contract that also includes a second 161 study at Van Nuys.

David Crandall, Aircraft Noise and Performance Analyses

David Crandall has participated in a variety of aircraft noise related projects ranging from preparing environmental assessments / environmental impact statements (EA/EIS), 14 CFR Part 150 studies, residential sound insulation/field testing, and airport noise monitoring system analysis. He manages major elements of complex projects including aircraft noise modeling, radar data analyses, and airline fleet analyses. He contributes to public meetings and participates in documenting and presenting project results. Mr. Crandall is an experienced user of the Federal Aviation Administration's (FAA) airport noise models, the Integrated Noise Model (INM) and the Area Equivalent Method (AEM), and airspace noise model, the Noise Integrated Routing System (NIRS).

Bradley Nicholas, Ground Noise Analysis and EA Liaison

As a Senior Consultant, Bradley Nicholas participates in projects that include noise modeling/analysis for airports, aviation noise field measurements and data processing, and environmental assessment and impact studies. He has provided the technical lead on a variety of projects by performing airline fleet analysis, aircraft noise measurements and analysis, radar data analysis, and aircraft noise modeling. He is an experienced user of the FAA's INM, and the lead instructor for HMMH's INM Training

Course. Additionally, has completed many detailed acoustical modeling projects using Braunstein + Berndt's SoundPLAN.

Diana Wasiuk, Airport and Airspace Planning, and Operations Modeling and Assessment

Ms. Wasiuk is the Director of Airport and Airspace Planning at HMMH. Ms. Wasiuk specializes in working with FAA, NASA, the military, and a variety of non-federal aviation stakeholders on issues relating to aviation capacity expansion, ATM technology implementation, and aviation related environmental protection topics. Ms. Wasiuk has expertise in airfield and airspace operations of both complex commercial airports as well as smaller GA airports. Ms. Wasiuk is one of the veteran users of the Total Airspace and Airport Modeler (TAAM) and has been an active TAAM user group participant and has been influential in working with the developers of TAAM to constantly better and upgrade the tool to suit the complex needs of airport design.

Ms. Wasiuk led and participated in numerous airport expansion projects where she worked with state and regional governments, airport owners, airport tenants, local communities, and opponents of airport expansion plans that would satisfy often conflicting interests of various stakeholders. She has in-depth understanding of the evolving National Airspace System structure. She conducted comparative case studies of the effectiveness of the Free Flight technologies, and participated in drafting of a Concept of Operations for the New York Integrated Complex and the Consolidated Sun Coast TRACON.

Michael Hamilton, GIS Support

Michael Hamilton's experience at HMMH encompasses a wide variety of transportation noise-related GIS, CAD, and graphics applications, including noise contour creation and overlay, contour manipulation, noise sensitive mapping, land use mapping, noise barrier mapping, and noise mitigation mapping.

Mr. Hamilton brings to HMMH six years of experience in environmental, transportation and land development consulting practice utilizing GIS applications. In this capacity, he utilized GIS to support environmental compliance and development projects. Mr. Hamilton's experience also includes the organization, collection, and creation of spatial data to meet project requirements, develop database queries based on geographic references, and produce thematic maps as output.

HMMH has over 40 technical staff members upon whom Mr. Baldwin can call depending on specific services desired by the City and the timing of specific projects. Our key subconsultant staff members provide additional "depth-on-the-bench."

Montgomery Consulting Group

Montgomery Consulting Group staff will provide data collection and GIS support and public outreach assistance

Monty Gettys, Public Outreach

Monty Gettys has over 30 years of experience in planning, environmental analysis, and engineering design for transportation, aviation, and infrastructure projects. She has extensive planning experiences including master plan and facility development, industry research, feasibility studies, forecasting, demand/capacity analyses and alternative analyses and capital improvement program development for transportation facilities. Ms. Gettys has significant recent and relevant expertise in noise compatibility planning, airport land use issues both on and off airport property, environmental assessments, public outreach, airport economic development, airport business planning and cost consulting expertise for airside and landside projects.

Prateek Sharma, Data Collection and GIS Assistance

Prateek Sharma is an Aviation Planner with over 9 years of experience in aviation planning,

geographic information systems (GIS), urban planning, noise consulting, and asset management systems. He has strong experience in various capacities of GIS and web application development involving the software development cycle, implementation, and maintenance.

Since joining Montgomery Consulting Group as an Aviation Planner in 2005, he has been involved in infrastructure data collection for a variety of systems including airport, highways, utilities, and environmental management using geographic information system (GIS) solutions. He also led analyses and integrating solutions to meet client's needs.

Mr. Sharma has been responsible for noise monitoring at Fort Lauderdale – Hollywood International Airport and has ongoing responsibilities to assist BCAD's noise officer.

Bobby D. Price, Aviation Consultant

Mr. Price provides exceptional independent consultation that requires extensive corporate knowledge of air traffic control operations, rules, airspace and procedures, noise alternatives, and developing air traffic control scenarios.

Mr. Price has provided services regarding aircraft accidents, provided an air traffic evaluation for a company trying to obtain rights to build a new baseball stadium for Boston Red Sox spring training games, completed air traffic evaluation for a client in Las Vegas wishing to build close to the airport, and completed an air traffic evaluation for the City of Fort Lauderdale to determine if feasible to extend hours of noise procedures now in effect.

Mr. Price's experience is extensive and includes several years as an Air Traffic Controller (FLL, MIA, and ATL), one year as ATC Automation Specialist (MIA), seven years as an Operational Supervisor (MIA), ten years as an Assistant Air Traffic Manager (PBI), and twelve years as an Operations Manager (MIA). For ten years he served as FAA Technical Advisor to the Palm Beach County Citizens Committee against Airport Noise.

8 Task Area Descriptions

HMMH is proud to have had the opportunity to collaborate with the City in establishing an advanced, comprehensive, highly-refined, and highly effective “noise compatibility program,” for FXE, which includes noise abatement, compatible land use, program implementation, and stakeholder outreach elements.

As a result of the noise program’s “mature” status, the focus of recent City efforts has centered on two primary objectives:

- First, the City has pursued a continuing process to implement, monitor, evaluate, enhance, extend, communicate, and promote FXE the noise program, to ensure it maintains its high standards of creativity, comprehensiveness, and effectiveness.
- Second, the City seeks to be prepared to rapidly respond to both opportunities that might arise for advancing the program’s effectiveness and to changing conditions that represent potential threats to its effectiveness.

HMMH services to the City under our current contract have focused on addressing these two objectives. The primary approach to the first objective has involved outreach-related services. Task area 1 of the scope, “Quarterly AAB Presentations,” continues this approach, taking advantage of the transparent operations of this well-established, well-publicized, formal institution. As noted in Section 4.2 of this submission, HMMH (and its team members) has made numerous presentations to this body over the course of our current contract, and under prior consulting arrangements.

Task area 2 of the scope, “On-Call Planning Services, Technical Support, Study Update, and Reports,” focusses on addressing the City’s second ongoing objective. Under our current contract, the HMMH Team has provided a diverse array of on-call task support of this type, as summarized in Section 4.2 of this submission.

Our prior and ongoing experience in providing exactly these two categories of assistance to the

City places HMMH in a unique position of readiness to continue in its current role.

8.1 Task Area 1: Quarterly AAB Presentation

As discussed in Sections 4.3.4, 4.3.7, and 4.3.8, a major component of HMMH’s aviation noise practice is assisting airports and other entities, such as city, county, state, or federal agencies that operate or oversee airports, with public outreach and ongoing airport advisory committee support.

The RFP specifically identifies two ongoing services under this task area:

- Develop presentation and prepare for quarterly meeting.
- Attend quarterly meeting, conduct presentation, and answer questions.

We enthusiastically endorse the City’s interest in developing and conducting noise quarterly presentations to the Aviation Advisory Board. While Ted Baldwin and other HMMH Team members have assisted FXE staff to make such presentations on a project-specific basis in the past, we support the concept of making a noise-related presentation a regular agenda item.

The HMMH team suggest considering the following subtasks to address Task area.

- Subtask 1. Develop Initial List of Topics and Presentation Plan
- Subtask 2. Develop Presentation and Prepare for Ongoing Quarterly Meetings
- Subtask 3. Attend Quarterly Meetings, Conduct Presentations, and Answer Questions

These subtasks are discussed more fully below:

Subtask 1. Develop Initial List of Topics and Presentation Plan

As a starting point, we recommend that HMMH Team members and City staff initiate the AAB presentation process by working together to

develop a list of topics to present over the first year. Following that initial period, we assume the list of topics would evolve based on discussions at ongoing meetings and on issues of interest that arise.

This topic identification task could be conducted most efficiently through a modest number of telephone conference calls including FXE and City staff, and key HMMH Team members. The HMMH Team would kick the process off by preparing a brief background memorandum that summarizes information such as prior AAB presentations, topics of recent interest at FXE, recent topics of interest addressed at other similar bodies, recent presentations of particular interest to other Florida airports, evolving noise issues within the industry in general, etc.

For efficiency, we would look for opportunities to conduct these meetings on a face-to-face basis with City staff, when HMMH and MCG staff members are in the greater Fort Lauderdale area for other purposes. In all aspects of our assistance to the City under this contract, we will continue our current practice of looking for opportunities to take advantage of local travel for other purposes to call on FXE and City staff.

For efficiency, to the extent feasible, we also suggest seeking to identify topics that can build on materials the HMMH Team has prepared under prior FXE assignments, or for presentations to similar bodies at other airports, conferences, etc.

We are confident we have demonstrated in prior and continuing assistance to the City, HMMH's national leadership in public outreach and communication provide us with a wealth of up-to-date materials from which we might draw. The airport websites identified in Section 6 include links to many examples of these types of presentations. As a local example, FXE staff members regularly attend quarterly meetings of the Fort Lauderdale-Hollywood International Airport Noise Abatement Committee, at which Mr. Baldwin and other HMMH and MCG staff members almost always make a presentation.

As part of this initial topic identification process, we also might seek AAB input, perhaps at the first quarterly meeting attended by HMMH Team members. A highly effective approach that HMMH has assisted the Naples Airport Authority to implement for its "Noise Compatibility Committee" (NCC) is the establishment of a "work program," aimed at identifying and working in a collaborative manner toward achieving improvements in the Naples noise program, though improved NCC understanding of and involvement in its elements. We would like to discuss that concept with the FXE and other City staff, for potential discussion with the AAB. An advantage of this approach is that it sets specific objectives for the sequence of presentations, so that they are more than simply briefings.

The primary "work product" of this first subtask would be a description of the overall objectives of the AAB presentations, a list of promising topics, relevance of the topics to specific FXE conditions and interests, existing materials that might be available on which to partially or wholly base the presentations, additional research that might be required complete the presentations, appropriate presenters, a recommended schedule for making the presentations, based on local priorities and other considerations, and other relevant matter identified in discussions with FXE and other City staff.

We suggest that presenting this work product to the AAB might be an appropriate topic for the first quarterly presentation. We anticipate that the AAB would provide valuable feedback, as they do in all situations.

Subtask 2. Develop Presentations and Prepare for Ongoing Quarterly Meetings

Based on the results of the presentation plan developed in Subtask 1, the project team members will prepare the presentations in the order identified. The presentations will be in PowerPoint format. The assigned team member will prepare the draft, review it with HMMH, then submit it to FXE and City staff for review

and comment, then revise and finalize the presentation based on FXE and City staff input.

Subtask 3. Attend Quarterly Meetings, Conduct Presentations, and Answer Questions

An HMMH or MCG staff member will attend each AAB meeting, either Mr. Baldwin – or, with City approval, substituted for – another HMMH team member, who has particular knowledge, experience, or other qualifications related to a particular topic.

For example, we anticipate that:

Mary Ellen Eagan of HMMH might report on advancements in understanding of aircraft noise metrics and effects, through her role as the lead consultant for the Federal Interagency Committee on Aircraft Noise (FICAN) through which federal research and standards setting in these areas are coordinated.

Robert Mentzer of HMMH might provide presentations related to the Part 150 Noise Exposure Map update that he currently is managing for the City.

Diana Wasiuk of HMMH, who leads our airspace planning, modeling, and assessment practice, might make presentations on airspace “redesign” initiatives underway across the U.S. and under consideration in Florida.

Bobby Price might provide presentations on air traffic control or airspace design factors that affect establishment or implementation of noise abatement procedures

Monty Gettys of MCG might make presentations on recent and ongoing tasks on which her firm is taking the lead at FXE, including the review of City ordinances and zoning related to airport compatibility, and recommendation of changes, and the assessment of the effectiveness and relevance of the current weight restriction.

8.2 Task Area 2: On-Call Planning Services, Technical Support, Study Updates, and Reports

The RFP identifies a range of potential on-call planning services, technical support, study updates, and reports that the City might request the HMMH team to conduct on an “on-call” basis. As discussed in Section 4.3.4, the HMMH Team has extensive prior experience providing on-call assistance of this type, often working together.

In addition, HMMH has provided these types of services to the City for FXE multiple times over the past 30 years, including the types of assignments listed in Section 4.1. As a result, the City and FXE staff members have extensive familiarity with the quality of HMMH work scopes and products.

The HMMH Team understands that the City may request services for a broad range of assignments of the types suggested by the list or potential services identified in RFP Part IV.

We understand that the City will identify specific tasks for the selected consultant to perform, and require the Consultant to prepare detailed scope of work and budget proposals on a task-by-task basis.

As we have throughout our current contract, the HMMH Team will prepare assignment-specific task authorizations that include:

- Project understanding
- Proposed scope of services
- Proposed deliverables
- Proposed schedule
- Project staffing
- Other topics of relevance to the assignment

We believe the task authorizations that we have prepared under our current contract provide clear evidence of our ability to supply the City with appropriate scopes, budgets, schedules, and other information necessary to define each assignment.

(This page intentionally left blank)

9 Project Work Plan

This section addresses the four project implementation plan requirements specified in RFP Part V, Section 9:

- A schedule (“GANTT” chart) showing beginning and end dates of all tasks in Part VI – Technical Specification / Scope of Services
- A table listing vendor staff assignments and proposed labor hours for all tasks
- A brief description of each task and its work products
- A description of each deliverable

Only Task Area 1, “Quarterly AAB Presentation,” is defined in sufficient detail for the HMMH team to address these four items in detail. Once again, we are confident the task authorizations we have prepared under our current contract provide clear evidence of our ability to supply the City with appropriate scopes, budgets, schedules, and other information necessary to define each assignment under Task Area 2, “On Call Planning Services, Technical Support, Study Updates, and Reports,” because the specific assignments will be identified on an as-needed basis.

9.1 Schedule

The following chart presents the requested schedule information for Task Area 1 in the RFP, “Quarterly AAB Presentation.”

Task Area 1: First Year Quarterly AAB Presentations												
Months from Notice-to-Proceed:	1	2	3	4	5	6	7	8	9	10	11	12
Prepare for and Attend First AAB Meeting (Subtasks 1 and 2)												
Kick-off conference call	●											
Prepare draft memorandum		□										
Conference call to discuss plan		●										
Finalize plan			■									
Make first AAB presentation				▲								
Prepare for and Make Presentations to Second, Third and Fourth AAB Meetings (Subtask 3)												
Draft presentation				●	□			●	□		●	□
Final presentation					●	■		●	■		●	■
Attend 2 nd , 3 rd , and 4 th AAB mtg.s								▲			▲	▲

- Telephone conference call with City / FXE staff: ●
- Field work: ◆
- Draft deliverable: □
- Final deliverable: ■
- Meeting: ▲

9.2 Vendor Staff Assignments

The following two tables present the requested vendor staff assignment information for Task Area 1 in the RFP, “Quarterly AAB Presentation.”

The first table covers the first year of Quarterly AAB Presentations, and includes the initial effort associated with initiating the identification of topics for succeeding meetings respectively. For purposes of this initial AAB involvement, we assume that only HMMH and MCG staff will be involved. As discussed in Section 8.1, we assume that later AAB presentation topics may involve Mr. Price.

Task Area 1: First Year of Quarterly AAB Presentations							
	Tentative Labor Hours by City-Identified Labor Categories						Total
	Principal Consultant	Senior Consultant	Consultant	Senior Planner	Planner	Support / Clerical	
Subtask 1. Develop Initial List of Topics and Presentation Plan							
HMMH	8	2	8			4	22
MCG				2	4	4	10
Total	8	2	8	2	4	8	32
Subtask 2. Develop Presentations and Prepare for Ongoing Quarterly Meetings							
HMMH	16	8	16			4	44
MCG				4	12	4	22
Total	16	8	16	6	12	8	66
Subtask 3. Attend Quarterly Meetings, Conduct Presentations, and Answer Questions							
HMMH	48					4	52
MCG				16	16	4	36
Total	48			16	16	8	88
TOTAL	72	10	24	24	32	24	186

9.3 Task Description and Work Products

Section 8.1 provides the detailed task and work product descriptions.

9.4 Description of Deliverables

Section 8.1 describes the task deliverables.

10 Licenses, Professional Certifications, Memberships, and Insurance

HMMH encourages all employees to join and participate in activities sponsored by societies and organizations in fields related to their professions, both technical and administrative. Such participation -which we strongly encourage - provides professional growth opportunities for our staff and creates an opportunity to be part of a wider network of professionals. Our staff members serve as board members or chairs of many of these organizations. HMMH also is a corporate member of various organizations through annual memberships. Listed below are professional societies with which we are affiliated.

- Acoustical Society of America
- Airport Consultants Council
- Airports Council International-NA
- Air and Waste Management Association
- Air Traffic Control Association
- Aircraft Owners and Pilots Association
- American Council of Engineering Companies
- American Association of Airport Executives
- America Railway Engineering and Maintenance
- American Meteorological Society
- American Wind Energy Association
- American Public Transportation Association
- American Planning Association
- American Society of Mechanical Engineers
- American Physical Society
- AeroClub of Washington
- Association of California Airports
- Clean Power Now
- Environmental Business Council of New England
- Florida Aviation Council
- International Institute of Acoustics and Vibration
- Institute of Noise Control Engineering
- National Contract Management Association
- National Air Traffic Controllers Association

- SAE Aerospace Committee A-21
- Sigma Gamma Epsilon
- Society for Human Resource Management
- Society for Marketing Professional Services
- Society of Physics Students
- Transportation Research Board
- UC Berkeley Institute of Transportation Studies
- US High Speed Rail Association
- Women in Aviation International
- Women's Transportation Society

There are no professional licenses related to practice in the field of acoustics. While the RFP does not identify any requirement for engineering services or registrations under this procurement, HMMH has two registered Professional Engineers on staff (one in Florida), and one Board-certified Member of the Institute of Noise Control Engineering (INCE).

Our subconsultant firms also are members of various professional organizations and have registered Professional Engineers, pilots, and a Certified Air Traffic Controller. We would be pleased to provide details upon request.

We have included certificates of insurance for HMMH and MCG. All team members in Tab 10, as requested in the RFP. Note: As an independent consultant, Bobby Price does not have a corporate insurance policy. We will address this item with the City if an assignment is identified for which he will have a role, perhaps by having him be covered under the HMMH policy.

(This page intentionally left blank)

State of Florida

Department of State

I certify from the records of this office that HARRIS MILLER MILLER & HANSON, INC. is a Massachusetts corporation authorized to transact business in the State of Florida, qualified on January 9, 1985.

The document number of this corporation is P04611.

I further certify that said corporation has paid all fees due this office through December 31, 2013, that its most recent annual report/uniform business report was filed on April 23, 2013, and its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twenty-second day of January,
2014*



Ken Detzner
Secretary of State

Authentication ID: CU6079857734

To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

<https://efile.sunbiz.org/certauthver.html>

State of Florida

Department of State

I certify from the records of this office that MONTGOMERY CONSULTING GROUP, INC. is a corporation organized under the laws of the State of Florida, filed on April 27, 1995.

The document number of this corporation is P95000033296.

I further certify that said corporation has paid all fees due this office through December 31, 2014, that its most recent annual report/uniform business report was filed on January 13, 2014, and its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Thirteenth day of January,
2014*



Ken DeJoy
Secretary of State

Authentication ID: CC6640100075

To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

<https://efile.sunbiz.org/certauthver.html>

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local BUSINESS preference classification as indicated herein, and further certifies and agrees that it will re-affirm it's local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this ITB. Violation of the foregoing provision may result in contract termination.

(1) _____ is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the City of Fort Lauderdale current year Business Tax Receipt **and** a complete list of full-time employees and evidence of their addresses shall be provided within 10 calendar days of a formal request by the City.
Business Name

(2) _____ is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Business Tax Receipt **or** a complete list of full-time employees and evidence of their addresses shall be provided within 10 calendar days of a formal request by the City.
Business Name

(3) Montgomery Consulting Group, Inc.
3900 W. Commercial Blvd. Suite 227,
Ft. Lauderdale, FL 33309 is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Broward County Business Tax Receipt shall be provided within 10 calendar days of a formal request by the City.
Business Name

(4) _____ requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.
Business Name

(5) _____ requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.
Business Name

(6) _____ is considered a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. and does not qualify for Local Preference consideration.
Business Name

BIDDER'S COMPANY: Montgomery Consulting Group, Inc.

AUTHORIZED COMPANY PERSON: Monty Gettys  6/23/14
NAME SIGNATURE DATE

11 Joint Venture

HMMH is not submitting this proposal as a joint venture.

(This page intentionally left blank)



Appendix A Firm Owners

(This page intentionally left blank)



HARRIS MILLER MILLER & HANSON INC.

77 South Bedford Street
Burlington, Massachusetts 01803
T 781.229.0707
F 781.229.7939
www.hmmh.com

LIST OF CORPORATE OFFICERS AND STOCKHOLDERS AS OF 12 December 2013

NAME	ADDRESS	TITLE	% OWNERSHIP
Mary Ellen Eagan (1) (2)	77 South Bedford Street Burlington, MA 01803	President and CEO	12%
Nicholas P. Miller (1)	77 South Bedford Street Burlington, MA 01803	Senior Vice President	12%
Robert L. Miller (1) (2)	77 South Bedford Street Burlington, MA 01803	Senior Vice President	7%
Christopher W. Menge (1)	77 South Bedford Street Burlington, MA 01803	Senior Vice President / Principal Consultant	10%
Edward M. Baldwin III (1) (2)	77 South Bedford Street Burlington, MA 01803	Senior Vice President / Principal Consultant	15%
Eugene M. Reindel (1)	8880 Cal Center Dr., Ste 430 Sacramento, CA 95826	Vice President / Principal Consultant	8%
Alison J. Moore (1)	77 South Bedford Street Burlington, MA 01803	Vice President/ Human Resources Manager	3%
Jason C. Ross (1) (2)	77 South Bedford Street Burlington, MA 01803	Vice President / Director, Transit Noise and Vibration	6%
Stephen B. Barrett (2)	77 South Bedford Street Burlington, MA 01803	Principal Consultant/Director	1%
Richard Orton (2)	9 Penzance Road Rockport, MA 01966	Outside Director	0%
Tom Kinton (2)	62 Emerson Road Winchester, MA 01890	Outside Director	0%
Evan Mead (2)	15 Ridgefield Road Winchester, MA 01890	Outside Director	0%
25 Other Employee Stockholders in varying amounts			21%

(1) Denotes Officer

(2) Denotes Director

Appendix B Resumes of Key Personnel

(This page intentionally left blank)





HARRIS MILLER MILLER & HANSON INC.

Ted Baldwin

Senior Vice President

Experience

HMMH 1984-present
Bolt Beranek and Newman Inc. 1981-84
Massachusetts Port Authority 1977-81

Education

M.C.R.P., Harvard University,
Cambridge, MA, 1977, Department
Scholar
B.S., Engineering, Cornell University,
Ithaca, NY, 1975, Honors Graduate

Affiliations

Federal Aviation Administration
Certificate of Appreciation, 1989
Member, Institute of Noise Control
Engineering, 2004-present
Associate Member, Acoustical Society
of America, 1985-present

**“Ted Baldwin is a man upon
whom we can rely to be
informed, accurate, and truthful
in what he tells us.”**
**Cormac Giblin, Chairman of the
City of Naples (FL) Airport
Authority**

Ted Baldwin specializes in airport environmental analysis. His professional experience includes 14 CFR Part 150 noise compatibility studies, Part 161 use restriction studies, state and federal environmental impact assessments, noise elements of Airport Master Plan studies, aircraft noise abatement and compatible land use planning, design and use of noise and operations monitoring systems, noise measurement and modeling, and expert testimony.

In 1989, Mr. Baldwin received the first "Federal Aviation Administration Certificate of Appreciation" awarded by the New England Region to a non-FAA employee. The award recognized his "ability to deal objectively with the controversial issue of airport noise," and his "sensitivity and balance in representing both the pro and con of the noise issue."

In 2008, he was technical lead on a team assisting Martin County Airport / (Stuart, Florida) in a "noise abatement departure profile demonstration" that won the first "Noise Abatement Award" presented by the Florida Airports Council "to recognize a project that reduces the impact of operations on a neighboring community using operational measures." Florida Department of Transportation subsequently presented the team with "2009 General Aviation Airport Project" award "in recognition of outstanding achievements in airport aesthetics, safety, and service in the State of Florida."

Before entering consulting, Mr. Baldwin held several responsible staff positions at the Massachusetts Port Authority (Massport), operator of Boston-Logan International and L.G. Hanscom Field (Bedford, MA). Through his Massport experience he gained an understanding of an airport operator's perspective on planning, operational, and environmental issues.

Representative Projects

14 CFR Part 150 Studies

- Akron-Canton, OH (2013), Project Manager
- Burlington International, VT (1989, 2008, 2013), Principal-in-Charge
- Portsmouth International, NH (2013), Principal-in-Charge
- Metropolitan Nashville International, TN (2012), Principal-in-Charge
- Van Nuys Airport, CA (2011), Principal-in-Charge
- Witham Field / Martin County, FL (2011), HMMH Project Manager
- Naples Municipal, Naples, FL (1997, 1998, 2000, 2010), Project Manager
- Fresno Yosemite International, Fresno, CA (2008), Principal-in-Charge
- Lehigh Valley Internat'l, Allentown, PA (1992, 2005), Project Manager
- Manchester Airport, Manchester, NH (2004), Principal-in-Charge
- Scottsdale Airport, AZ (2004), Part 161 assistance, Project Manager
- St. Lucie County International, Fort Pierce, FL (2004), Project Manager
- Piedmont Triad International, Greensboro, NC (2004), Project Manager
- Vero Beach Municipal, Vero Beach, FL (2004), Project Manager
- Fort Lauderdale Executive, FL (1985, 1997, 2002), Project Manager
- Tampa International, Tampa, FL (2000), Project Manager
- Salt Lake City International, UT (1986, 1998), Project Manager
- Myrtle Beach Jetport, SC (1994), Principal-in-Charge
- Chattanooga Municipal Airport, TN (1994), Project Manager

Mr. Baldwin “demonstrated [his] ability to deal effectively with the controversial issue of airport noise,” “reflected a sensitivity and balance in representing both the pro and con of the noise issue,” and “successfully developed noise control programs that are consistent with aviation and community goals.”

Arlene B. Feldman, FAA New England Regional Administrator, when awarding Mr. Baldwin the first “Certificate of Appreciation for a non-FAA individual who has most significantly helped to promote recognition of the FAA

14 CFR Part 161 and Related Studies

- Partial Nighttime Curfew, Los Angeles International Airport, CA (2012)
- Multi-Element Part 161 Study for Fixed-Wing and Helicopter Operations, Van Nuys, CA (2010), Project Manager
- FAA Part 161 Grandfather Application for Stage 1 and 2 Phaseout, Van Nuys Airport, CA (2010), Project Manager
- FAA Part 161 Grandfather Application for Terminal Capacity Agreement Extension, Westchester County Airport, NY (2003) Noise Element
- Stage 2 Jet Ban, Naples Municipal Airport, FL (2001), Project Manager

Airport Noise and Operations Monitoring Systems

- Charlotte County Airport, Punta Gorda, FL (2014), Principal-in-Charge
- Witham Field / Martin County Airport, Stuart, FL (2011), Project Manager
- Centennial Airport, Arapahoe County, CO (2010), Senior Advisor
- Denver International Airport, Denver, CO (2008), Project Manager
- Reno-Tahoe International, Reno, NV (2006), Assistant Project Manager
- San Francisco International, CA (2004), Assistant Project Manager
- East Hampton Airport, NY (2004) Senior Advisor

Airport Master Plan Noise Analyses

- Akron-Canton Regional Airport, OH (2013), Principal-in-Charge
- Metropolitan Nashville International, TN (2012), Principal-in-Charge
- Fort Lauderdale Executive, FL (1985, 1997, 2002), Project Manager
- Tampa International, Tampa, FL (2000), Project Manager

Other Noise Exposure, Abatement, and Land Use Compatibility Studies

- Helicopter Use Restriction Feasibility Analyses, East Hampton, NY (2012), Project Manager
- Helicopter Noise Abatement Procedure Effectiveness and Options, Fort Lauderdale Executive, FL (2012), Principal-in-Charge
- Noise Data Collection Assessment and Recommendations, East Hampton, NY (2011), Project Manager
- Noise Task Force Assistance, Ormond Beach, FL (2009), Project Manager
- Airport Noise / Hazard Zoning, Gainesville, FL (2009) , Project Manager
- Noise Abatement Profile Study, Stuart, FL (2007), Principal-in-Charge
- Helicopter Facility Relocation Noise Analyses, Witham Field, Stuart, FL (2006), Principal-in-Charge

Environmental Assessments or Impact Studies

- Displaced Runway Thresholds EA, Naples Municipal Airport, FL (2011), Noise Element Project Manager
- Noise Abatement Departure Flight Track EA, Fort Lauderdale Executive, FL, (2010), Principal-in-Charge
- California Environmental Quality Act (CEQA) Environmental Impact Report (EIR) for Stage 1 and 2 Phaseout, Van Nuys Airport, CA (2010), Noise Element Project Manager
- Runway Extension EA, Lehigh Valley International, Allentown, PA (2007), Noise Element Project Manager



HARRIS MILLER MILLER & HANSON INC.

Bradley Nicholas

Senior Consultant

Experience

HMMH, 2001-present

Education

B.A., Physics, Franklin & Marshall
College, Lancaster PA, 1997

M.A., Education, College of William &
Mary, Williamsburg VA, 1999

Affiliations

Member, Institute of Noise Control
Engineering, 2007-present

Since joining HMMH, Brad Nicholas has participated in projects that have included noise modeling/analysis for airports, aviation noise field measurements and data processing, and environmental assessment and impact studies. He has provided the technical lead on a variety of projects by performing airline fleet analysis, aircraft noise measurements and analysis, radar data analysis, and aircraft noise modeling. He is an experienced user of the Federal Aviation Administration's airport and airspace noise model, the Integrated Noise Model (INM), and the lead instructor for HMMH's INM Training Course. Additionally, has completed many detailed acoustical modeling projects using Braunstein + Berndt's SoundPLAN.

Mr. Nicholas' recent experience includes extensive analyses of airport ground noise issues at Philadelphia International Airport, T. F. Green State Airport, General Mitchell International Airport, Logan International Airport, Port Columbus International Airport, and Reid Hillview Airport. He conducted community noise measurements of aircraft operations as well as aircraft source spectral and directivity measurements. He evaluated existing ground noise conditions as well as proposed alternatives involving taxiway improvements, revised aircraft fleet, optimal aircraft orientation and placement, and barrier construction using SoundPLAN, the INM, and custom spreadsheet noise models.

Representative Projects

14 CFR Part 150 Studies

- Update, Portsmouth International Airport at Pease, Portsmouth, NH (2013), *Project Manager*
- Update, San Diego International, San Diego, CA (2008), *Noise Measurements, Soundscape Measurement and Audio Processing*
- Update, Manchester Airport, Manchester, NH (2004), *Noise Modeling*
- Update, Lehigh Valley International, Allentown, PA (2002), *Noise Measurements, Modeling, Public Workshop, and Documentation*
- Fort Lauderdale International, Fort Lauderdale, FL (2002), *Noise Modeling*
- Bradley International Airport, Windsor Locks, CT (2001), *Noise Modeling*

Other Aviation Noise Studies

- Environmental Status and Planning Report, Hanscom Field, Bedford, MA (2013), *Noise Technical Lead*
- Runway Extension EA, Watertown International Airport, Watertown, NY (2013) *Project Manager*
- Airport Cooperative Research Program Study of INM Accuracy for General Aviation Aircraft (2013) *Noise and Statistical Analysis*
- National Parks Acoustic Monitoring, Grand Canyon, AZ (2011), *Aircraft Noise Measurements Runway Safety Area EA, Rocky Mountain Metro Airport, Broomfield, CO (2011), Project Manager*
- Annual Noise Contours, Raleigh-Durham International Airport, Morrisville, NC (2011, 2012), *Project Manager*

Bradley Nicholas, Senior Consultant

Mr. Nicholas assisted with a first-of-its-kind tool for San Diego International Airport to communicate the benefits of its residential sound insulation program to homeowners. He recorded and processed the ambient and aircraft sounds for the tool. "It was great to listen to an aircraft in the final demonstration and be able to switch instantly between indoors and outdoors or from before to after sound insulation and have it sound right."

- Airport Noise Exposure Software Development, , Hanscom Field, Bedford, MA (2011), *Project Manager*
- Runway Extension EA, Unalaska Airport, Unalaska, AK (2010), *Project Manager*
- Southern Nevada Supplemental Airport EIS, Ivanpah Valley, NV (2010),
- Study of Aviation Noise and Sleep Disturbance for FICAN (2010), *Statistical Analysis*
- Regional Airport System Plan Analysis Update, San Francisco Bay Area, CA (2009), *Project Manager*
- New Training Runway EA, Pueblo Memorial, Pueblo, CO (2009), *Project Manager*
- Noise Contour Update, Bellingham International, Bellingham, WA (2008), *Project Manager*
- Runway Rehabilitation and Extension EA, Portland International, Portland, OR (2008), *Noise Modeling*
- Noise Mitigation Study, Beijing Capitol International, Beijing, PRC (2008) *Noise Modeling*
- Airport Master Plan, Stockton Metropolitan, Stockton, CA (2008) *Project Manager*
- Commercial Launch Noise and Sonic Boom Study, Office of Commercial Space Transportation, Washington, DC (2008), *Research*
- Soundscape Kiosk, San Diego International Airport, San Diego, CA (2007), *Soundscape Measurement and Audio Processing*
- Floatplane Noise Study, Willow, AK (2007), *Project Manager*
- Environmental Status and Planning Report, Hanscom Field, Bedford, MA (2006), *Project Manager*
- Commercial Launch Facility EA, Brazoria County, TX (2006), *Project Manager*
- 14 CFR Part 161 Study, Van Nuys Airport, Van Nuys, CA (2006), *Helicopter Noise Measurements*
- Sound Insulation Program, Monterey Peninsula, Monterey, CA (2006), *Measurements*
- Sound Insulation Program, San Diego International, San Diego, CA (2005 to present), *Measurements*
- Runway Extension EA, Erie International, Erie, PA (2005), Flight Noise Measurements and Modeling
- Departure Headings Analysis, Denver International, Denver, CO (2005), Noise Modeling and Documentation
- INM Version Comparison Study for NASA (2005), *Statistical Analysis*
- Runway Extension EIS, Philadelphia International, Philadelphia, PA (2004-2005), *Flight Noise Measurements*
- Annual Noise Contours, Fort Lauderdale International Airport, Fort Lauderdale, FL (2003-2004), *Noise Modeling and Documentation*
- Noise Study, East Hampton Airport, East Hampton, NY (2003), *Flight Noise Measurements and Modeling*
- Study of Aviation Noise and Student Achievement for FICAN (2002), *Data Collection and Statistical Analysis*
- Corridor Compliance, Baltimore/Washington International, Baltimore, MD (2002), *Flight Track Analysis and Reporting Template Creation*
- Airside EIS, Logan International, Boston, MA (2002), *Noise Modeling*



HARRIS MILLER MILLER & HANSON INC.

Robert Mentzer, Jr.

Principal Consultant

Experience

HMMH, 1994-present
Sigma Research Corporation, 1988-1992

Education

B.S., Meteorology, University of Massachusetts, Lowell, 1989

Affiliations

Member, Air & Waste Management Association, 1995-present
Vice-Chair, ET-3 Transportation and Community Noise & Vibration Committee, AWMA, Elected June 2011
Member, Sigma Gamma Epsilon (National Honor Society for the Earth Sciences), 1989-present
Member, FAA Aviation Environmental Design Tool (AEDT) Design Review Group, 2004 - present
Member, FAA Integrated Noise Model (INM) Design Review Group, 1996 - present
Member, SAE A-21 Aircraft Noise Measure Noise Aviation Emission Modeling Committee

Robert Mentzer specializes in airport environmental noise analyses for airports. He manages HMMH's Aviation Noise Modeling Center for Excellence. He has recently worked as Project Manager and Lead Technical Analyst for two major airport Environmental Impact Studies (EIS). Mr. Mentzer is currently and has managed Part 150 Noise Exposure Map (NEM) Updates and various airport on-call tasks.

Mr. Mentzer is nationally recognized as one of the most experienced users of the Federal Aviation Administration (FAA) Integrated Noise Model (INM). The FAA has acknowledged that he is the most active contributor to the INM's design review process. He assists in the preparation and presentation of HMMH's INM course, which over 400 students have attended worldwide.

He is experienced in the use of HMMH's proprietary software packages, InFLIGHT, PREFLIGHT, ARTSMAP and RealContours™, that the firm uses to process and analyze data from the FAA's Automated Radar Terminal Service (ARTS) system and various NOMS vendors. He also is a highly skilled user of the FAA's Helicopter Noise Model (HNM) and the Department of Defense's NOISEMAP.

Mr. Mentzer has led the preparation of noise contours for over 50 airports, including noise elements of Part 150 Land Use Compatibility Planning Studies, Part 161 Noise and Access Restriction Studies, Environmental Assessments, Environmental Impact Statements, Airport Master Plan Studies, and other studies concerning airport noise.

As a consultant with Sigma Research Corporation (now EarthTech), Mr. Mentzer worked with most of the current Environmental Protection Agency (EPA) Guideline models. He was involved in several power plant permitting projects and dispersion modeling studies.

Representative Projects

14 CFR Part 150 and 161 Studies

- 14 CFR Part 150 Update Study, Fort Lauderdale Executive Airport (2010-present), *Project Manager*
- 14 CFR Part 150 Update Study, Akron-Canton Regional Airport, Canton, OH (2011- present), *Assistant Project Manager*
- 14 CFR Part 150 Update Study, Nashville International, Nashville, TN (2010- present), *Project Manager*
- 14 CFR Part 150 Update Study, Baltimore Washington International Airport (2011-2013), *Assistant Project Manager*
- 14 CFR Part 150 Update Study, T.F. Green Airport, Providence, RI (2010), *Project Manager*
- 14 CFR Part 150 Update Study, Naples Airport, Naples, FL (2008-2009), *Lead Noise Modeler*
- 14 CFR Part 150 Update Study, Witham Field Airport, Stuart, FL (2008-2010), *Lead Noise Modeler*
- 14 CFR Part 150 Study, Piedmont-Triad International, Greensboro, NC (2000-2002), *Lead Noise Modeler*

Master Plan and Environmental Assessment or Impact Studies

Mr Mentzer has been instrumental in the development of the annual noise contours and report for Massport for over ten years. Recently he led the switch from Massport's process of developing noise contours to utilizing the RealContours™/RealProfiles™ system from HMMH. This system allows Massport to utilize its investment in radar tracking to fully support noise contour development by modeling every radar track captured by the Massport system.

- Seasonal Airport Traffic Control Tower, Noise Analyses for EA, East Hampton, NY (2013), *Noise Modeling Guidance*
- Master Plan Update, Nashville International, Nashville, TN (2011-2013), *Project Manager*
- Master Plan Update, Akron-Canton Regional Airport, Canton, OH (2010-2011), *Project Manager*
- FAA North Texas OAPM EA, North Texas Metroplex (2012-2014), *Noise Technical Lead*
- T.F. Green Airport Improvement Program EIS, Providence, RI (2004-2012), *Project Manager & Lead Technical Analyst*
- Capacity Enhancement Program EIS, Philadelphia International, Philadelphia, PA (2004 - 2010), *Lead Technical Analyst*
- I-95 Turn EA, Fort Lauderdale Executive, Fort Lauderdale, FL (2008 - 2010), *Lead Technical Analyst*
- Runway 17-35 Extension EIS, Philadelphia International, Philadelphia, PA (2004-2006), *Lead Technical Analyst*
- EA noise contours, Piedmont Triad International, Greensboro, NC (2006), *Lead Technical Analyst*
- Final EA for Proposed Rerouting of Aircraft within Boston Consolidated TRACON Airspace, MA (2004-2005), *Lead Technical Analyst*
- EA for the Installation of CAT II/III ILS for Runways 27L & 27R, Chicago O'Hare International Airport, Chicago, IL (2003 - 2004), *Lead Technical Analyst*
- Runway Extension EIS, Fort Lauderdale International, Fort Lauderdale, FL (2002), *Noise Modeling*
- Operational Noise Mitigation Procedures EA, Miami International, Miami, FL (2002-2006), *Lead Technical Analyst*
- New Runway EIS, Piedmont Triad International, Greensboro, NC (1998 - 2001), *Lead Technical Analyst*
- Runway Extension EA, Erie International, Erie, PA (2001), *Noise modeling*

Helicopter Noise Analyses

- Helicopter Noise Analysis, Martin County Airport, FL (2006)
- Helicopter Noise Analysis, Martin State Airport, MD (2001)
- Helipad Noise Study, Redding Medical Center, Redding, CA (2001)

Other Airport Noise Exposure, Abatement and Land Use Compatibility Studies

- Noise Office On-call, Boston-Logan International, Boston, MA (1998-present), *Noise Modeling & Technical Support*
- Existing and Future Noise Contours and Evaluation of a Runway Extension, Kendall-Tamiami Executive Airport, Miami-Dade County, FL (2004-2005), *Project Manager*
- Environmental Data Report/ Environmental Status & Planning Report, Boston-Logan International, Boston, MA (1995-present), *Project Manager*
- Noise Contour Preparation and Analysis, Westchester County, White Plains, NY (2001), *Noise Modeling*



HARRIS MILLER MILLER & HANSON INC.

Mary Ellen Eagan

President and Chief Executive Officer

Experience

HMMH, 1984-present

Education

B.S., Operations Research, Cornell University, Ithaca, NY 1984

M.B.A., Simmons College, Boston, MA 2002, *magna cum laude*

Affiliations

Member, Institute of Noise Control Engineering

Chair, Transportation Research Board Committee on Effects of Aviation on the Environment (AV030)

Joint Planning and Development Office (JPDO) Airports Working Group and Environmental Working Group (Policy Standing Committee)

Past Chair, Airport Consultants Council (ACC) Environmental Committee

Chair, Airport Consultants Council 2011 FAA-ACC Summer Workshop

Vice-Chair, Airports Council International North America (ACI-NA) Noise Working Group

Appointed Member, Airports Council International World Environment Standing Committee

UC Berkeley Institute of Transportation Studies Aviation Noise & Air Quality Symposium Program Committee

Mary Ellen Eagan's consulting practice focuses on the environmental impacts of aviation, with a particular emphasis on noise. Her experience includes noise compatibility planning studies, state and federal environmental evaluations, and on-call consulting at a number of airports.

Ms. Eagan serves as consultant to the Federal Interagency Committee on Aviation Noise (FICAN). Ms Eagan is familiar with federal aviation noise research conducted throughout FICAN member agencies, especially as it relates to the effects of noise on people. Ms. Eagan is principal author of all of FICAN's findings and reports to date and is the lead investigator for FICAN's study of the effects of aircraft noise on children's learning. Ms. Eagan developed HMMH's Integrated Noise Model (INM) and other aviation training courses. She has taught the course throughout the U.S. and around the world.

Ms. Eagan is very active in the industry. She chairs the Transportation Research Board's (TRB's) Aviation Committee and is past chair for TRB's Committee on the Environmental Impacts of Aviation. She is past chair of the Airport Consultants Council's Environmental Committee; she co-chairs the Airport Council International – North America Environmental Committee's Noise Working Group and serves on the ACI World Environment Standing Committee; she was a member of the FAA's Joint Planning and Development Office (JPDO) Airports Integrated Product Team and Environmental Policy Working Group. She also and serves on the University of California's Aviation Environmental Symposium Program Committee.

Ms. Eagan became HMMH's third President in July 2004. Notably, Ms. Eagan is the first non-founder in that role. Widely known throughout the aviation industry, Ms. Eagan also has participated in rail and highway noise projects since joining HMMH in 1984. She holds a BS in Engineering from Cornell University and an MBA from Simmons College.

Ms. Eagan's current assignments include:

- FICAN Support: administrative and technical support
- On-call consulting to the Palm Beach County Department of Airports
- On-call consulting to the Maryland Aviation Administration
- On-call consulting to the Massachusetts Port Authority

Representative Projects

Environmental Assessments, Environmental Impact Studies

- Greener Skies over Seattle Environmental Assessment, Seattle, WA (2011-2012), *Outreach Lead*
- T.F. Green, Providence, RI (2005-2010), *Principal in Charge*
- New Bedford Regional, New Bedford, MA (2005), *Principal in Charge*
- Baltimore-Washington International, Baltimore, MD (2002), *Project Manager*

Mary Ellen Eagan President

14 CFR Part 150 Studies

- Baltimore-Washington International, Baltimore, MD (2004-2007), *Principal in Charge*
- Burlington International, Burlington, VT (2006-2007), *Principal in Charge*
- Palm Beach International, West Palm Beach, FL (1991-1993 and 2000-2002), *Project Manager*
- Naples Municipal, Naples, FL (1994-1996 and 1998), *Project Manager*

“The industry has always needed ways to make the scientific findings about aircraft noise more understandable to the public and to courts. My hat is off to Mary Ellen for taking the time to think this through and try some objective approaches to mapping noise effects.”

– Burr Stewart (retired), Port of Seattle

Specialized Noise Analyses / On-call Noise and Acoustics Consulting

- On-call noise consulting, Rhode Island Airport Corporation (2005-present), *Project Manager*
- Support to the RTCA CATEX 2 Task Force Evaluating Implementation of FAA Reauthorization requirements (2013), *Principal Investigator*
- Support to the Federal Interagency Committee on Aviation Noise (FICAN) (1994-present), *Project Manager*
- Study on the Effects of Aircraft Noise on Children’s Learning (2001-2004), *Project Manager*
- On-call noise consulting, Maryland Aviation Administration (1998-present), *Principal in Charge*
- On-call noise consulting, Palm Beach County Department of Airports (1999- present), *Project Manager*
- Development of Fly Quiet Program, Ft. Lauderdale International Airport (2006 -2007), *Principal in Charge*
- HMMH INM Training (1996-2006), *Lead Instructor*

Representative Publications and Presentations

- *Critical Issues in Aviation and the Environment 2011*, Transportation Research Board Circular, E-C148 (March 2011)
- *TRB Airport Cooperative Research Program (ACRP) Synthesis 16: Compilation of Noise Programs in Areas Outside DNL 65*, August 2009.
- *Transportation Research Record: Journal of the Transportation Research Board*, “Supplemental Metrics to Communicate Aircraft Noise Effects”, Volume 2011, 2007.
- *Critical Issues in Aviation and the Environment 2005*, Transportation Research Board Circular, E-C089 (November 2006)
- *Relation Between Aircraft Noise Reduction in Schools and Standardized Test Scores*, Federal Interagency Committee on Aviation Noise, (February, 2004)



HARRIS MILLER MILLER & HANSON INC.

Eugene Reindel

Vice President

Experience

HMMH, 1997-present
The Boeing Company, Noise Engineering Laboratory, 1990-1997

Education

M.E., Acoustics, Pennsylvania State University, State College, PA, 1995
B.S., Physics Engineering, Pacific Lutheran University, Tacoma, WA, 1989
Skilled Facilitator Intensive Workshop, Roger Schwartz & Associates Inc., Scottsdale, AZ 2009
Pathway to Principal, ZweigWhite, Boston, MA, 2005
FAA's Integrated Noise Model, HMMH Burlington, MA, 1997
Experiment and Uncertainty Analysis, Coleman and Steele, Seattle, WA, 1996
Occupational Hearing Conservation: A view from the '90s, American Speech-Language Hearing Association, Seattle, WA, 1994
High Frequency Damping Measurements, Cambridge Collaborative, Inc., Seattle, WA, 1994
Structural Dynamics Adequacy of High Tech Facilities: Rational Evaluating Methods, National Technology University, Seattle, WA, 1993
Occupational Noise and Vibration, Northwest Center for Occupational Health and Safety, Seattle, WA, 1993
Noise Control for Buildings and Manufacturing Plants, Hoover & Keith Inc, Seattle, WA 1991
Hearing Protection Devices and Hearing Conservation Programs, EAR Division, Cabot Corporation, Seattle, WA 1990

Affiliations

Member, Institute of Noise Control Engineering, 1995-present
Corporate Member, Southwest Chapter of the American Association of Airport Executives, 2000-present

As Aviation Environmental Services Group Leader, Vice President and Manager of the Sacramento Office, Gene Reindel manages a wide range of aviation noise consulting projects and provides technical support on aviation-related noise studies and noise measurement programs. His professional experience includes 14 CFR Part 150 Airport Noise Compatibility Planning studies, 14 CFR Part 161 Airport Noise and Access Restriction projects, aircraft noise certification measurements using 14 CFR Part 36 requirements, aircraft ground noise studies including low-frequency noise and ground run-up enclosures, residential sound insulation projects, and modeling of aircraft operations noise. He is often involved in preparing for and directing major field measurement programs and advising on the acquisition and analysis of data. Mr. Reindel is a trained facilitator and leads public outreach programs associated with controversial noise studies and programs. Because of his experience and education, Mr. Reindel is a training leader at HMMH and teaches courses in acoustics, sound measurements, and the FAA's Integrated Noise Model (INM).

Before joining HMMH, Mr. Reindel worked at the Boeing Commercial Airplane Company's Noise Engineering Laboratory in Seattle, WA. During his eight years at Boeing, he conducted a variety of work in acoustics and project management, ranging from hearing conservation to aircraft model testing inside an aero-acoustic wind tunnel, and actual aircraft flight tests.

Representative Projects

Aviation Projects

Aircraft Noise and/or Flight Track Monitoring Systems

- Centennial Airport, Centennial, CO (2009-present), *Project Manager*
- Los Angeles World Airports, NOMS Maintenance Scope of Work, Los Angeles, CA (2010-2011), *Project Manager*
- East Hampton Airport, East Hampton, NY (2006-2007), *Acceptance Test Manager*
- Reno-Tahoe International, Reno, NV (2005-2009), *Project Manager*
- Beijing Capital International, Beijing, China (2004-2008), *Project Manager*
- Reid-Hillview, East San Jose, CA, (2002-2010), *Project Manager*
- San Antonio International, San Antonio, TX, (2002-2010), *Project Manager*
- San Francisco International, San Francisco, CA, (2000-2007), *Project Manager*

Airport Sound Insulation Programs

- T.F. Green International Airport, Providence, RI (2013-present), *Principal in Charge*
- George W. Bush Intercontinental, Houston, TX (2011-present), *Principal in Charge*
- St. Louis International, St. Louis, MO (2009-present), *Principal in Charge*
- Martin County Airport / Witham Field, Stuart, FL (2009-present), *Principal in Charge*

Eugene Reindel, Vice President

- Louisville International, Louisville, KY (2008-present), *Principal in Charge*
- Cleveland Hopkins International, Cleveland, OH (2007-present), *Principal in Charge*
- Buffalo International, Buffalo, NY (2006-present), *Principal in Charge*
- Fort Lauderdale Hollywood International, Fort Lauderdale, FL (2008-2012), *Principal in Charge*
- Tulsa International, Tulsa, OK, (2006-2012), *Principal in Charge*
- Los Angeles International, Inglewood, CA (2004-2012), *Principal in Charge*
- Boston's Logan International, Boston, MA, (2004-2010), *Principal in Charge*

Airport Noise On-Call and Facilitation Projects

- Salt Lake City International Airport, Salt Lake City, UT (2003-present), *Project Manager*
- Oakland International Airport, Oakland, CA (2007-present), *Project Manager*
- City of Fresno, Department of Airports, Fresno, CA (2010-present), *Project Manager*
- Raleigh-Durham International Airport, Raleigh, NC (2010-2011), *Principal in Charge*
- Los Angeles International Airport/Community Noise Roundtable, Los Angeles, CA (2009-2010), *Facilitator*
- San Francisco International Airport, San Francisco, CA (1999-2007), *Project Manager*

14 CFR Part 150 Noise Studies

“Most important to me has been the ability to call Mr. Reindel at anytime throughout the process and get answers to important questions as they arise.”

Mr. Bert Ganoung, Manager, Aircraft Noise Abatement, San Francisco International Airport

“Mr. Reindel presents noise information that is easily understood and that no other acoustical expert with whom my firm has worked has communicated this information as well.”

Mr. Michael Hotaling, Vice President, C&S Engineers, Inc.

- Merrill Field, Anchorage, AK (2012-2013), *Principal in Charge*
- Louisville International, Louisville, KY (2010-2011), *Project Manager*
- San Diego International, San Diego, CA (2007-2011), *Project Manager*
- Fresno Yosemite International, Fresno, CA (2004-2007), *Assistant Project Manager*
- Boca Raton Airport, Boca Raton, FL (2001), *Technical Writer/Reviewer*
- Reid-Hillview, San Jose, CA (1999-2004), *Assistant Project Manager*
- Anchorage International, Anchorage, AK (1999), *Airport Staff Trainer*

14 CFR Part 161 Airport Noise and Access Restriction Project

- Los Angeles International Airport, Los Angeles, CA (2011-present), *Assistant Project Manager*

Airport Environmental Studies

- Reid-Hillview Airport EIR Noise Element, East San Jose, CA (2010-2012), *Principal in Charge*
- Runway Extension EA, Portland International, Portland, OR, (2007-2008), *Project Manager*
- New Ivanpah Airport EIS, Ivanpah Valley, NV (2006-2010), *Technical Lead for Noise Measurement Program*
- Modernization Program EIS, Chicago O'Hare, Chicago, IL, (2003-2005), *Project Manager*
- Runway Extension EA, Eagle County Airport, Eagle, CO, (2003-2005), *Project Manager*



HARRIS MILLER MILLER & HANSON INC.

Sean Doyle

Senior Scientist

Sean Doyle has worked on a variety of aviation projects including Part 150 and Part 161 studies, Environmental Impact Studies, and other studies related to State and local requirements. Mr. Doyle is an expert user of the Federal Aviation Administration's (FAA) airport noise models, the Integrated Noise Model (INM) and the Area Equivalent Method (AEM) as well as an experienced user of the Noise Integrated Routing System (NIRS) and Emissions and Dispersion Modeling System (EDMS).

Experience

HMMH, 2006-present
Sea-Bird Electronics, 2005-2006

Education

B.S., Physics and B.S., Astronomy,
University of Washington, Seattle, 2000
Graduate course work, Astrophysical
and Planetary Sciences Dept., 2001-
2004

He is very familiar with various sources of data and how the data is processed to gain valuable information to assist in making informed decisions. Mr. Doyle has been the HMMH technical lead for several studies ranging from general aviation airport runway extensions to airspace redesign projects. Mr. Doyle has also participated in many aspects of the NEPA process and is familiar with the inter-dependencies of the various technical analyses, such as noise, air quality and airspace, required for these projects. The airspace redesign projects have varied scope from modification of a single procedure to multi-TRACON airspace redesigns.

Mr. Doyle is an expert user of various simulation/modeling tools which gives him insight into the various types of data generated by various modeling tools and how in-turn to manipulate the data to gain information needed. Additionally he is closely involved in the testing and development of systems-related projects to streamline radar data acquisition and analysis through new tools and techniques.

He has completed the ACC Institute NEPA workshop and has actively participated in multiple Environmental Impact projects involving the NEPA process. His computational skills include extensive knowledge both Windows and UNIX/Linux based systems and their use with an array of scientific computational software. In addition he is an advanced user of SQL database technologies for data management and querying including the use of T-SQL and MySQL for database design and evaluation, including the use of views, stored procedures and functions. Mr. Doyle is a licensed private pilot.

Representative Projects

14 CFR Part 150 and 161 Studies

- Baltimore/Washington International, Baltimore, MD (2006 - 2007) and (2013-present), *Noise Modeling and Project Management*
- Van Nuys Airport, Van Nuys, CA (2007 - 2012), *Operations Development, Noise Modeling and Impact Assessment*
- Los Angeles International Airport, Los Angeles, CA (2007-2013), *Data Development and Noise Modeling*
- Cleveland Hopkins Airport, Cleveland, OH (2009-2013), *Data Development and Noise Modeling*

Environmental Assessments/Impact Statements

- Seasonal Airport Traffic Control Tower, Noise Analyses for Environmental Assessment, East Hampton, NY (2013), *Lead Noise Modeler*
- Federal Aviation Administration, Houston Optimization of Airspace and Procedures in the Metroplex (OAPM) (2012-2013), *Data management and Noise Modeling*
- Philadelphia International Airport, Philadelphia, PA Capacity Enhancement Program (2006-2011), *Noise Modeling and Impact Assessment*
- T.F. Green Airport Improvement Program, Providence, RI (2006-present), Noise Study, *Noise Modeling and Impact Assessment*
- Fort Lauderdale Executive Airport, Fort Lauderdale, FL (2008-2009), *Noise Modeling*

Other Airport Noise Studies

- Master Plan Update, London Heathrow Airport, London UK (2012-present), *Noise Modeling and Environmental Impact Assessment*
- Noise Zone Update, Baltimore/Washington International, Baltimore, MD (2006 - 2007) and (2013-Present), *Data Development Noise Modeling*
- Malta International Airport, Malta, (2008-2009), *Noise Modeling*
- Annual Environmental Data Report, Boston Logan International Airport, Boston, MA (2007-Present), *Noise Modeling*



HARRIS MILLER MILLER & HANSON INC.

Hugh Enxing

Chief Technology Officer

Hugh Enxing has over thirty years of experience in software products and tools design, implementation and support. Mr. Enxing is an experienced project manager and technical leader with excellent communication skills excelling in client-server and scalable n-tier web application architectures. Mr. Enxing has been the architect of various flight track and noise monitoring systems, having provided the complete re-implementation of ANOMS versions 5 and 6 in preparation for its sale to Lochard.

His primary focus over the past few years has been deploying HMMH's technologies throughout the World Wide Web using cloud computing architectures, software-as-a-service (SaaS) delivery models and business-to-business (B2B) web services.

Prior to joining HMMH, Mr. Enxing was a freelance consultant developing database-enabled web applications as well as integrating new radar system interfaces with live, animated web presentations.

Experience

HMMH, 2004-present
Rannoch (ERA), 2004
Lochard, Corp, 2002-2004
BAA, 2001
KPMG, 2000-2001
HMMH, 1995-2000

Education

B.S.E.E., University of Lowell, Lowell, MA, 1981

Real-World Java Conference, 2007
Introduction to C++ Programming, December 1992
Semaphore Training Windows NT Professional Developers Conference, July 1992

IEEE Seminar - March & April 1989, Instructor, 3D Computer Graphics

University of Massachusetts, Spring 1984, Courses in CAD/CAM and VLSI Design

GenRad Internal Management Development Program, 1984

Representative Projects

InFLIGHT Product Development

- Architected and designed a state-of-the-art software product for Flight Track Monitoring.
- Developed advanced visualization capabilities with Air Traffic Density plots and 4D flight track displays.
- Algorithm development for 4D computational geometry solutions to airport and airspace analyses using radar flight tracks.

RealContours Product Development, Installation and Support

- Architect of HMMH's next generation of RealContours technology for Web-enabled deployment and Multi-Airport (regional) support.
- Provided installation and support services for RealContours at many airports including PANYNJ.
- Trained the trainers at HMMH to scale up operations.

Other Project Experience (prior to joining HMMH)

- Lochard's Flight Track Display, Stoneham, MA, 2002-2004, *Software Architect/Developer*; Public web site animating actual flight paths in the vicinity of an airport
- Rannoch (ERA) WebScene Flight Track Display, Nashua, NH, 2004, *Software Architect/Developer*; Public web site animating actual flight paths
- BAA, Radar and Noise Data Archival System (DAS), London, UK, 2001, *Project Manager, Team Leader, Architect*; Develop a robust, fault-tolerant data collection system for radar and noise data at Heathrow, Gatwick and Stansted airports
- KPMG, KWorld™ Knowledge Management System, 2000-2001, *Director, Software Development*; Intranet knowledge archival, search and retrieval web site; 80,000 world-wide end-users with data centers on two continents



HARRIS MILLER MILLER & HANSON INC.

Christopher Waite

Consultant

Christopher Waite supports HMMH's aviation, highway, and rail noise projects. Mr. Waite is a proficient user of various noise modeling systems including the Federal Aviation Administration (FAA) Integrated Noise Model (INM), Noise Integrated Routing System Model (NIRS) and the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM). He is also experienced with Microsoft Excel, Access and SQL Server database.

Experience

HMMH, 2011-present
Guided Discoveries (Physics Instructor),
2010
Middlebury College, Teaching Assistant,
2007-2008

Education

B.A., Physics, Middlebury College, VT,
2008

Mr. Waite was a Technical lead of the Midway RNAV EA and was an integral part of the North Texas OAPM modeling team. He has conducted field measurements for a variety of projects including GIS measurements for an inventory of noise barriers in New York, noise measurements in Grand Canyon and Glacier National Parks, and sound insulation testing near Buffalo Niagara International Airport.

Prior to joining HMMH, Mr. Waite worked as a summer research intern in Professor Frank Winkler's astrophysics lab in 2008, collecting extensive data on the supernova remnant Puppis A. He also has experience with a variety of laboratory instruments and lab reporting procedures.

Representative Projects

- Environmental Assessment for North Texas Optimization of Airspace and Procedures in the Metroplex, North TX (2012-2013), *Noise Modeling*
- Midway RNAV Environmental Assessment, Chicago Midway Airport, Chicago IL (2011-2013), *Technical Lead*
- Aircraft Noise and Annoyance Survey (2013-present), Federal Aviation Administration, *Noise Modeling*
- Part 150 Update, Portsmouth International Airport at Pease, Portsmouth, NH (2013), *Noise Modeling*
- Environmental Status and Planning Report, Hanscom Field, Bedford, MA (2013), *Noise Modeling*
- Runway 22R RNAV Analysis, Boston-Logan International Airport (2013), *Noise Modeling and Track Analysis*
- T.F. Green Airport Improvement Program EIS, Providence, RI (2011), *Noise Study, Report Support*
- Part 161 Study, Van Nuys Airport, Van Nuys, CA (2011), *Report Support*
- Annual Environmental Data Report, Boston Logan International Airport, Boston, MA (2011-present), *Noise Modeling*
- ANOMS Flight Track Evaluation Study, Denver, CO (2011), *Flight Track Analysis*
- Noise Barrier Inventory, New York State Department of Transportation, New York, NY (2011), *GIS Measurements*
- Sound Insulation Program, Buffalo Niagara International, Buffalo, NY (2011), *Noise Measurement Technician*
- 14 CFR Part 161, Los Angeles International Airport, Los Angeles, CA (2011-present), *Data Development and Noise Modeling*
- Dose Response National Parks Acoustical Monitoring, Grand Canyon National Park and Glacier National Park, (2011), *Acoustic Monitoring and Support, On-Site Noise Measurements and Logging*



HARRIS MILLER MILLER & HANSON INC.

Robert Miller

Senior Vice President

Experience

HMMH, 1981-present
Bolt Beranek & Newman Inc., Senior
Technical Staff, 1972-1981
U.S. Air Force, F-102 pilot, 1967-1972

Education

B.A., Mathematics, Carleton College,
Northfield, MN; 1967
Graduate courses, Computer Science
and Architectural Acoustics,
Northeastern and Harvard Universities,
Boston, MA 1973 to 1975

Affiliations

Member, Acoustical Society of America,
1976-present
Member, Institute of Noise Control
Engineering, 1978-2012

Mr. Robert Miller is active in all facets of HMMH's aviation consulting practice. He has recently served as Manager of a prominent Environmental Assessment for proposed Area Navigation (RNAV) procedures at Seattle-Tacoma International Airport (SEA). Popularly known as "Greener Skies", the procedural changes included two new STARS from the Airport's northwest and southwest cornerposts, plus over 20 Required Navigation Performance (RNP) and RNP-to-ILS procedures to the Airport's six runway ends. Optimized Profile Descents (OPDs) at flight-idle thrust were also built into each RNP approach where feasible. Despite an early two month delay over technical issues, the project was completed in 10 months from start-up to the signing of the FONSI/ROD, on time and on budget. Over 200 comments were received on the Draft EA; however, no appeal was made on the final document and the procedures were published in April 2013.

Mr. Miller is also the Project Manager for a ground-breaking multi-year 14 CFR Part 161 Study of a proposed use restriction at Los Angeles International Airport (LAX). Conceded by Los Angeles World Airports, the operator of LAX, in a stipulated agreement with surrounding communities, the proposed rule would eliminate non-conforming easterly departures over the city from midnight to 6:30 a.m. when the Airport is in "Over Ocean Operation" – currently a voluntary flow condition where both arrivals and departures occur over the Pacific at tailwinds less than 10 knots. The proposed rule is shown to meet the six statutory conditions for FAA grant agreements, and if approved, is expected to affect approximately 65 flights per year. The Part 161 application is being filed in early 2014.

Recent but earlier projects have included two EISs at Philadelphia International Airport for near-term and longer-term capacity enhancement, and an assessment of proposed new nighttime operations at Toronto's Pearson International Airport in conjunction with plans to expand the facility into a major world hub. He also manages long-term contracts at Denver and Logan International Airports.

In previous years, Mr. Miller's consulting activities have included supporting the Federal Interagency Committee on Aviation Noise (FICAN). He also has served as a member of the FAA's Design Review Group for the Integrated Noise Model, and he has organized and chaired an international symposium on aircraft noise modeling for the Transportation Research Board. Mr. Miller's technology projects have included design, production, and installation of state-of-the-art radar data acquisition and analysis systems for 16 commercial and military airports throughout the U.S. He has managed 14 CFR Part 150 Programs at air carrier, general aviation, and joint use facilities, and has conducted assessments of noise and accidents at Naval and Marine Corps Air Stations.

Mr. Miller contributed to the book "*Community Noise*", edited by Peppin and Rodman, published by ASTM Press, Kansas City, MO. He also has served as an expert witness in litigation, is a former military pilot, and holds a commercial pilot's license.

Representative Projects

Regarding the streamlined EIS for Runway 17-35 at PHL managed by Mr. Miller:

“HMMH prepared excellent presentations and materials, and staffed the meetings with knowledgeable experts that related well to the public. ...Their attention to detail and ease in addressing audiences ranging from several hundred to one, in a calm, rational manner was instrumental in making FAA’s public outreach successful.

“During the project, the only challenge was related to noise impacts. The FAA was so confident in HMMH’s work that not only did we provide the requested information, but we also allowed HMMH to assist the challenger in understanding and recreating the noise results. As expected HMMH’s work stood up to the challenge and the issue quickly disappeared.”

Susan L. McDonald,
Environmental Protection
Specialist, Harrisburg ADO,
January 23, 2006

Environmental Assessments/Impact Statements

- Seasonal Airport Traffic Control Tower, Noise Analyses for EA, East Hampton, NY (2013), *Principal-in-Charge/Project Manager*
- EA for “Greener Skies Over Seattle”; Proposed Arrival Procedures to Seattle-Tacoma International Airport, WA (2011-2012), *Project Manager*
- EIS for a Southern Nevada Supplemental Airport, Las Vegas, NV, (2005-2010), *Project Director*
- EA for a runway extension, Portland International Airport, Portland, OR (2007-2009), *Project Advisor*
- Two EIS for Philadelphia International Airport, Philadelphia, PA – an extension to Runway 17-35 (2003-2005), and a Capacity Enhancement Program (2003-2007), *Project Manager*
- EIS for the O’Hare Modernization Program, Chicago, IL (2004-2006), *Project Director*
- EA for the Cleveland-Detroit Airspace Redesign (OH, MI, and Canada) (2005), *Project Director*
- EIS/EIR and litigation support for airside improvements, including a new unidirectional runway, Logan International, Boston, MA (1995-2002), *Project Manager*

14 CFR Part 150 and 161 Studies

- Part 161 Studies, Los Angeles International and Van Nuys, Los Angeles, CA (2004-ongoing), *LAX Project Manager; overall Project Director*
- Part 150 Noise Compatibility Plan Update, Cleveland-Hopkins International Airport, Cleveland, OH (2008-2011), *Project Manager*
- Part 150 Noise Compatibility Plan Update, Portland International Jetport, Portland, ME (2002-2004), *Project Manager*
- Part 150 Noise Compatibility Study, Denver International, Denver, CO (2001-2002), *Project Manager*
- Part 150 Noise Compatibility Study, University Park Airport, State College, PA (2001-2002), *Project Manager*
- Feasibility and Programming Study of a 14 CFR Part 150 Noise Compatibility Model for the FAA’s Office of Environment and Energy, Washington, D.C. (1995), *Project Manager*

Other Airport Noise Studies

- Nighttime Regimes Analyses Review, Toronto Pearson International Airport, Toronto, Canada (2011-2012), *Project Manager*
- Noise Analysis of Area Navigation (RNAV) Implementation at Denver International Airport, Denver, CO (2008-2011), *Project Director*
- Noise Operations Monitoring System, East Hampton Airport, East Hampton, NY (2004-2007), *Principal-in-Charge/Project Manager*
- Analysis of Proposed Intersection Takeoffs on Denver International Airport’s Runway 34L, Denver, CO (2004), *Project Manager*
- Noise Exposure Measurements, East Hampton Airport, East Hampton, NY (2003), *Principal-in-Charge/Project Manager*
- Installation of radar data processing software with automated reporting of potential noise rule violations, Logan International, Boston, MA (2002-2003), *Project Manager*



HARRIS MILLER MILLER & HANSON INC.

David Crandall

Principal Consultant

Experience

HMMH, 1998-present

Education

B.S., Aeronautical Engineering,
Clarkson University, Potsdam, NY,
1998, Honors Graduate

Affiliations

Senior Member, American Institute of
Aeronautics and Astronautics
1994-present

SAE Aerospace Committee A-21
Aircraft Noise Measurement and Aircraft
Noise/Aviation Emission Modeling
2007-present

David Crandall has participated in a variety of aircraft noise related projects ranging from preparing environmental assessments/environmental impact statements (EA/EIS), 14 CFR Part 150 studies, residential sound insulation/field testing, and airport noise monitoring system analysis. He manages major elements of complex projects including complete Environmental Assessments, aircraft noise modeling, radar data analyses, and airline fleet analyses. He contributes to public meetings and participates in documenting and presenting project results. Mr. Crandall is an experienced user of the Federal Aviation Administration's (FAA) airport noise models, the Integrated Noise Model (INM) and the Area Equivalent Method (AEM), and airspace noise model, the Noise Integrated Routing System (NIRS). He teaches HMMH's INM training course.

Mr. Crandall was the overall Contractor Technical Lead for the Environmental Assessment (EA) for Houston Optimization of Airspace and Procedures in the Metroplex (OAPM). His role included managing all the contractor technical activities of the EA and served as the primary contractor point of contact with the Federal Aviation Administration (FAA). The Houston OAPM is the one of the 14 Initial High Priority projects listed on the Federal Infrastructure Projects Permitting Dashboard in response to the Presidential memorandum, *Speeding Infrastructure Development through More Efficient and Effective Permitting and Environmental Review* (August 31, 2011). The Houston OAPM EA is the first of several OAPM EAs nationwide and was completed on schedule.

Before joining HMMH, Mr. Crandall studied aircraft design and performance. Notable projects include investigating noise generation from turbulent jet streams, research into the successful elements of foreign high-speed rail systems, design of wide-body passenger aircraft, and the design and demonstration of an unmanned aerial vehicle.

Representative Projects

Environmental Assessments/Impact Statements

- Environmental Assessment for Houston Optimization of Airspace and Procedures in the Metroplex, TX (2012- 2013), *Contractor Technical Lead*
- Environmental Assessment for "Greener Skies Over Seattle"; Proposed Arrival Procedures to Seattle-Tacoma International Airport, WA (2011-2012), *Noise Technical Lead*
- Charted Visual Flight Procedure Approaches EA, Ted Stevens Anchorage International, Anchorage, AK (2005), *Assistant Project Manager*
- Cleveland-Detroit Airspace Redesign EA (MI, OH, Canada) (2005), *Technical Lead*
- Omaha Airspace Redesign EA (NE, MO, IA) (2005) *Assistant Project Manager*
- New Entrant Operations Specification for Eos Airlines Inc. (formerly Atlantic Express Inc, New York, NY (2005), *Assistant Project Manager*
- Runway Extension EA, Erie International, Erie, PA (2005), *Project Manager*

David Crandall, Principal Consultant

Of the Potomac EIS, the client writes, "David continues to impress me and the FAA folks... His professional approach has gone a long way toward keeping the client highly satisfied with our Team's performance."

- Instrument Landing System EA, Leesburg Executive, Leesburg, VA (2005-2007), *Assistant Project Manager*
- Airport Improvements Project EIS/EIR, New Bedford Regional, New Bedford, MA (2003-2010), *Project Manager*
- Potomac Consolidated TRACON Airspace Redesign EIS (MD, VA) (2003), *Project Manager*
- Runway Extension EA/EIR, Pittsfield Municipal, Pittsfield, MA (2001-2003), *Project Manager*
- New Runway EIS, Piedmont Triad International, Greensboro, NC (2001), *Consultant*
- Runway Extension EA, Turners Falls Municipal, Turner Falls, MA (2001-2002), *Project Manager*
- Runway Departure EA, Bradley International, Windsor Locks, CT (2000), *Assistant Project Manager*
- Noise Impact Assessment, Juan Santamaría International, Costa Rica (2000), *Technical Lead*

Airport Noise Studies

- Analysis of Proposed RNAV Procedures at Denver International Airport, Denver, CO (2010 - 2012), *Project Manager and Technical Lead*
- Noise Zone Updates, Baltimore/Washington International, Baltimore, MD (2013-present and 2006-2007), *Project Manager*
- 14 CFR Part 150 Studies, Baltimore/Washington International, Baltimore, MD (2006 - 2007), *Assistant Project Manager*
- 14 CFR Part 150, Bradley International, Windsor Locks, CT (2004), *Assistant Project Manager*
- 14 CFR Part 150 Studies, Burlington International, Burlington, VT (2012-present 2006-2008), *Project Manager*
- 14 CFR Part 150 Study, Charlotte-Douglas International, Charlotte, NC (2002-2010), *Project Manager*
- Master Plan Update, Lawrence Municipal, Lawrence, MA (2004), *Project Manager*
- Sound Insulation Program, Pittsburgh International, Pittsburgh, PA (2001), *Technical Lead - Measurements*
- Monthly Radar Analysis and Annual DNL Contour Preparation, Raleigh-Durham International, Raleigh, NC (1998-2010), *Project Manager*
- Master Plan, Syracuse Hancock International, Syracuse, NY (2004), *Project Manager*
- Annual Noise Contours, Louisville International Airport, Louisville, KY (2008 - 2009), *Assistant Project Manager*
- Noise Contour Preparation for Cape Town and Johannesburg Airports, Airports Company South Africa, South Africa (2002)
- Noise Impact Study, San Pedro Sula and Tegucigalpa Airports, Honduras (2000), *Technical Lead - Modeling*



HARRIS MILLER MILLER & HANSON INC.

Diana Wasiuk, PMP

Director, Airport and Airspace Planning/ Chief Operating Officer (COO)

Experience

HMMH, 2007-present
Crown Consulting Inc., 2001-2007

Education

M.B.A, Masters of Business Administration in Aviation, Embry-Riddle Aeronautical University, FL, 2000
B.A., Aviation Business Administration, Embry-Riddle Aeronautical University, FL, 1998

Affiliations

Member, Women in Aviation International (WIAI), 1998-present
Member, Airport Consultants Council (ACC), 2001-present
Member, Airports Council International (ACI), 2001-present
Member, American Association of Airport Executives (AAAE), 2001-present
Member, Air Traffic Control Association (ATAC), 2001-present
Member, Aircraft Owners & Pilots Association (AOPA), 1992-present

“HMMH consistently provides high quality products and their advice has been invaluable in guiding the JPDO’s effort to frame important policy issues to key government decision makers. Analyses of key issues demonstrate detailed understanding of advanced aviation and air traffic management concepts and the overarching policy considerations of a network enabled, aircraft enteric, satellite based environmentally friendly, safe and secure transportation system.”

-Claire Robinson, Federal Aviation Administration

www.hmmh.com

Ms. Diana Wasiuk is a certified Project Management Professional and technical performer on studies supporting both airport environmental and planning efforts. Ms. Wasiuk has expertise in airfield and airspace operations of both complex commercial airports as well as smaller GA airports. She has a strong understanding of the National Airspace System and hands-on experience with modeling tools such as the Total Airspace and Airport Modeler (TAAM), Sector Design and Analysis Tool (SDAT), and Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS).

As a managing Director and an expert in airfield and airspace operations, Ms. Wasiuk provides clients with valuable insight into the operational realities of air traffic providers, domestic and international airlines, as well as general and military aviation. Ms. Wasiuk has experience working with federal, state, local governments and community groups to find balanced solutions to issues involving the effect of new capacity enhancing technologies, procedures, and policies on the environment.

Representative Projects

Airport/ Airspace Planning and Environmental Studies

- EA for the North Texas Optimization of Airspace and Procedures in the Metroplex (NTx OAPM) project, Federal Aviation Administration (2012-present), *Project Manager*
- EA for the Houston Optimization of Airspace and Procedures in the Metroplex (HOU OAPM) project, Federal Aviation Administration (2012-present), *Outreach SME*
- EIS for Capacity Enhancement Program (CEP), Philadelphia International Philadelphia, PA (2006-2011), *Air Traffic Control (ATC) SME*
- EIS for new Ivanpah Valley Airport, Las Vegas, NV (2006-2011), *ATC and Airport Planning SME*
- EA for Seattle Greener Skies project (2011-present), *Project Manager, Air Traffic Control (ATC) SME*

Other Projects

- Joint Planning & Development Office (JPDO) for the Next Generation Air Transportation System (NGATS) (2005-2012), *Project Manager; Senior Policy Analyst*
- ACRP Project 03-20 Defining and Measuring Aircraft Delay and Airport Capacity Thresholds (2010-present), *Airport Planning SME*
- FAA Commercial Space Division – Noise and Scope Study for Commercial Space Launches (2009), *Project Manager*

Projects with other firms

- FAA Commercial Space ConOps Development, FAA (2006), NAS and ATM SME
- Airport Master Plans, Deer Valley and Good Year Airports, Phoenix, AZ

Diana Wasiuk, Director, Airport and Airspace Planning

(2005-2006)

- Regional Airspace Capacity Planning Study, Southern California Association of Governments (SCAG) (2002-2006)
- National Airspace Redesign – Program Support, FAA, (2001-2006)
- 4th Runway Analysis, Miami International, Miami, FL (2003)
- Modernization Program Master Plan, Chicago O’Hare International, Chicago, IL (2002-2004)
- Concept of Operations for the New York Integrated Control Complex; (2001-2002)
- FAA’s Suncoast TRACON Design Study (2000-2001)
- Risk Assessment Study for Free Flight Tools, *Location*, (2001-2002)
- Risk Assessment of Flight Operations Risk Assessment System (FORAS) (1995-1996)
- Risk Assessment of Controlled Flight Into Terrain (CFIT) Program, (1996)



HARRIS MILLER MILLER & HANSON INC.

Michael Hamilton

Senior Geographic Information Specialist

Experience

HMMH, 2004-present
VHB, Inc., 2001-2003
Sasaki Associates, Inc., 1984-2001

Education

B.S., Geographic Information Systems &
Cartography, Salem State College,
Salem, MA, 2001, Honors Graduate
A.S., Survey and Highway Engineering
Technology, Northeastern University,
Boston, MA, 1996

Michael Hamilton's experience at HMMH encompasses a wide array of environmental and transportation noise-related GIS and CAD analysis. Utilizing graphics applications to build and support the decision making process, his responsibilities include noise contour creation, overlay, manipulation, environmental noise impacts, Census data analysis including environmental justice and population impacts, noise sensitive mapping, land use mapping and analysis, noise barrier and noise mitigation mapping.

Mr. Hamilton brings to HMMH more than a decade of experience in environmental, transportation, architectural, landscape and land development consulting practice utilizing GIS and CAD applications. In this capacity, he utilized GIS to support environmental compliance for private and public development projects. Mr. Hamilton's experience also includes the organization, collection, and creation of spatial data used to streamline existing workflows, facilitate information sharing and develop spatial database queries based on geographic references resulting in enhanced thematic maps, and graphic information products to satisfy project requirements.

Representative Projects

- Annual Noise Contours, Louisville International Airport, Louisville, KY (2008 - present), *GIS Specialist*
- Van Nuys Airport, Van Nuys, CA (2007 - present), *GIS Specialist*
- Airport Noise Zone Update, Baltimore/Washington International, Baltimore, MD (2006-present), *GIS Specialist*
- 14 CFR Part 161 Studies, Los Angeles International and Van Nuys Airports, Los Angeles, CA (2006-present), *GIS Specialist*
- Capacity Enhancement Program EIS, Philadelphia International, Philadelphia, PA (2005-present), *GIS Specialist*
- Seasonal Airport Traffic Control Tower, Noise Analyses for Environmental Assessment, East Hampton, NY (2013), *GIS Specialist*
- 14 CFR Part 150 Study, Burlington International Airport, Burlington, VT (2006), *GIS Specialist*
- Runway Extension 17/35, Philadelphia International, Philadelphia, PA (2003-2006), *GIS Specialist*
- Cleveland-Detroit Airspace Redesign EA, MI, OH, and Canada (2005), *GIS Specialist*
- Runway Extension EA, Erie International, Erie PA, (2005), *GIS Specialist*
- 14 CFR Part 150 Study, Baltimore/Washington International, Baltimore, MD (2005), *GIS Specialist*
- Annual Contour Update, Raleigh Durham International, Raleigh, NC (2004), *GIS Specialist*
- 14 CFR Part 150 Study, Portland International Jetport, Portland, ME (2004), *GIS Specialist*
- 14 CFR Part 150 Study Update, Lehigh Valley International, Allentown, PA (2004), *GIS Specialist*
- 14 CFR Part 150 Noise Exposure Map Update, Manchester Airport, Manchester NH (2004), *GIS Specialist*



Monty Gettys has over thirty (30) years of experience in planning, environmental analysis and engineering design for transportation, aviation, and infrastructure projects. She has performed civil design projects for numerous airport and air traffic projects. Her personal design experience includes development of plans and specifications for over \$400 million of construction on civil transportation projects.

Ms. Gettys has extensive planning experiences including master plan and facility development, industry research, feasibility studies, forecasting, demand/capacity analyses and alternative analyses and capital improvement program development for transportation facilities. Ms. Gettys has significant recent and relevant expertise in noise compatibility planning, airport land use issues both on and off airport property, environmental assessments, public outreach, airport economic development, airport business planning and cost consulting expertise for airside and landside projects.



INDUSTRY EXPERIENCE

The following examples highlight Ms. Gettys' variety of recent airport planning expertise:

- Ft. Lauderdale Executive Airport, Ft. Lauderdale, FL Compatibility Ordinance and Zoning Evaluation – Phase 1 (2013)
Reviewed land use and existing zoning districts and other relevant city ordinance regarding airport compatibility issues to promote compatible land use development. Evaluated and identified the implementation for change process and managed the development of the GIS database for land use and determined ordinance and zoning related to airport compatibility.
- Ft. Lauderdale Executive Airport, Ft. Lauderdale, FL White Paper on Potential Lifting of FXE Runway Weight-Bearing Limit (2013)
Provided support in collecting data identifying weight limit, pavement and airport design condition, tenants and economic related impact of changes to assist the City of Fort Lauderdale in developing background information.
- Ft. Lauderdale-Hollywood International Airport, Broward County, FL ACRP Project 02-37 Integrated Noise Model Accuracy for General Aviation Aircraft (2007 – ongoing)
Responsible for conducting a web-based survey of FAA Integrated Noise Model (INM) users, developed a database of individuals to survey, developed questions, created a web-based survey, documented the results, and produced a memorandum describing present “state-of-the practice” of the INM use. Followed-up the web-based survey with a telephone survey with select respondents who had identified concerns and documented identified issues.
- Ft. Lauderdale-Hollywood International Airport, Broward County, FL ACRP Project 02-35 Research Methods for Understanding Aircraft Noise Annoyance and Sleep Disturbance (2007 – ongoing)
Assisted in developing a survey instrument to measure community reaction to aircraft noise, and developed a protocol to address public questions regarding the telephone and

EDUCATION

Master of Business Administration in Aviation, 1990
Embry Riddle Aeronautical University
Daytona Beach, FL

Bachelor of Science in Civil Engineering 1983
Michigan State University
East Lansing, MI

SPECIALIZATIONS

Senior Project Management
Airport Planning
Public Outreach
Compatibility Planning

PROFESSIONAL ORGANIZATIONS

Airport Consultants Council
Florida Airports Council
Women in Aviation
International TEAMFL



mailed survey data collection process. Developed questions to engage and query airport staff regarding their airport and community relationship.

- North Perry Airport, Pembroke Pines, FL - Master Plan Update (2008 – 2010)
Developed comprehensive airport master plan update, including airport layout plan, economic impact analysis, leasing and development standards, business plan and update of minimum standards. Developed and executed tenant and pilot questionnaires to gain input for needs analysis.
- Ft. Lauderdale–Hollywood International Airport, FL – FAR Part 150 Noise Study and Land Use Policies (2006 – 2010)
Providing land use analysis and development of land use strategies and mitigation policies associated with the Part 150 project. Responsibilities include GIS database development, estimates of impacted population, land use analysis, and development of Noise Exposure Maps (NEMs).
- Cecil Field, FL – Maintenance, Repair, Overhaul (MRO) Market Survey and Incentives Program (2000-2001)
Provided research on MRO incentives at U.S. airports, lead developer and implementer of market survey and benchmark comparison of MRO marketing opportunities.
- Phoenix Sky Harbor International Airport, AZ – Planning & Development Management Analysis (1999-2000)
Reviewed planning and programming methodologies and management policies for 3 airports operated by City of Phoenix. Researched benchmarking of cost control and management of airport functions by research of ½ dozen case studies. Research included questionnaires and meetings with airport clients.
- Dallas-Ft. Worth International Airport, TX - Air Cargo Marketing Analyses (2000-2001)
Responsible for identifying volumes between potential gateways including research, analysis of Commerce data, and development country-by-country volumes of import and export air cargo for presentation to air carriers.
- Boston Logan International Airport, MA - Environmental Impact Statement Review and Public Participation Program (2000-2002)
Lead Planner as part of the EIS/EIR process for the airside improvements at Boston Logan International Airport taking a lead role in the public participation program in the airside review committee (ARC). Acting as a technical advisor to the Citizen Advisory Committee (CAC), which is composed of members from over 24 communities surrounding Logan Airport. The airside improvements include the development of a new runway, taxiway improvements, peak period pricing, and other regional transportation issues.



Prateek Sharma is an Aviation Planner with over 9 years of experience in aviation planning, geographic information systems (GIS), urban planning, noise consulting and asset management systems. He has strong experience in various capacities of GIS and web application development involving the software development cycle, implementation and maintenance.

Since joining Montgomery Consulting Group as an Aviation Planner in 2005, he has been involved in infrastructure data collection for a variety of systems including airport, highways, utilities, and environmental management using geographic information system (GIS) solutions. He also lead analyses and integrating solutions to meet client’s needs.



INDUSRTY EXPERIENCE

Mr. Sharma has been involved in the following projects:

- **Ft. Lauderdale-Hollywood International Airport, Broward County, FL – Noise Monitoring -** Calibrated noise monitoring equipment at the Remote Monitoring Towers (RMTs), manually monitored noise events for system accuracy check, and analyzed field collected data to define parameters for noise monitors.
- **Ft. Lauderdale-Hollywood International Airport, Broward County, FL – ANOMS Assistance** Involved in flight track matching and data quality control, noise complaint data gathering and integration, and conducted analyses of noise and flight data to generate various noise and runway use reports.
- **Naples Municipal Airport, Florida - Federal Aviation Regulation (FAR) Part 150 Noise and Airport Compatibility Study** - Collected demographic information from multiple sources (including field data collection and investigation); developed and integrated information into a geographic information system database, and provided estimates of impacted dwelling unit numbers in order to estimate the population impacted based on noise contours for the existing and +5 year conditions.
- **North Perry Airport, Pembroke Pines, FL – Master Plan Update and GIS utilities development** - Integrated Geographic Information Systems (GIS) to reflect land use information around the airport. Information for water, power, sewer and phone utilities was collected from various agencies in multiple formats and incorporated into the GIS system. Lease information was obtained in Adobe PDF format and converted to GIS Shapefile format for graphical representation.
- **Ft. Lauderdale-Hollywood International Airport, Broward County, FL – FAR Part 150 Study Update** - Collected demographic information from multiple sources (including field data collection and investigation) and developed and integrated information into a GIS database. Also developed noise maps (NEMs) and studied alternative flight patterns.
- **Ft. Lauderdale-Hollywood International Airport, Broward County, FL – Master Plan Update** – Developed an interim airport layout plan set, property map, land use and airspace analysis.
- **Broward County, FL – Real Estate Disclosure Notice Development** – Developed analysis of aircraft operation and identified noise-sensitive land uses and drafted a final part 150 report.
- **Greater Orlando Aviation Authority, Orlando, FL - CAD and GIS support** – Developed a multi-source GIS database for property tracking and noise impact analysis for the Greater Orlando Aviation Authority. Design an airport parcel geodatabase, incorporating boundary survey data into the geodatabase, generating property parcels from legal documents and developing property mapbooks. Supervised on site personnel providing GIS assistance to the client.

EDUCATION

Master of City & Regional Planning,
2004

Ohio State University
Columbus, OH

Bachelor of Architecture,
1998

Institute of
Environmental Design
Vallabh Vidyanagar,
India

SPECIALIZATIONS

Airport Planning
Geographic
Information Systems
Noise Impact Analysis
Land Use Compatibility
Pavement
Management Systems

PROFESSIONAL ORGANIZATIONS

Airport Consultants
Council
Florida Airports Council

BOBBY D. PRICE

8742 Estate Drive, West Palm Beach, Fl 33411 Tel. (561) 628-4381
Fax. 561-798-8784, e-mail: specialistprice@yahoo.com

OBJECTIVE

To provide exceptional professional service as a Subject Matter Expert to a progressive company that requires extensive corporate knowledge of Air Traffic Control Operations, Air Traffic Accident/Incident Investigations, Simulator Programs Development and Operations, Safety, Quality Assurance, Evaluations, Rules, Airspace and Procedures, Noise Alternatives, and developing air traffic control specialists.

SUMMARY OF QUALIFICATION

1. Four years experience developing and maintaining Air Traffic Scenarios for Adacel Systems Inc. for Miami, Ft. Lauderdale, Ft. Lauderdale Executive and Tamiami ATC Towers. I assisted in the training of new air traffic controllers using these scenarios. Developed over seventy scenarios for Miami Tower alone and over thirty for Ft. Lauderdale Hollywood International Tower. All scenarios had to be adapted to the current procedures for Runway Safety Procedures, Quality Assurance Issues, Taxi into Position and Hold (TIPH), and Land and Hold Short (LASHO). Given access to a simulator I can usually develop a reenactment of an Air Traffic Incident/Accident.
2. Seven years as an Air Traffic Controller (FLL, MIA, ATL), one year as ATC Automation Specialist (MIA), seven years as an Operational Supervisor (MIA), four years Assistant Manager for Plans and Programs (AMPP) (PBI), six years as an Assistant Air Traffic Manager (PBI), and twelve years as an Operations Manager (MIA).
3. Twenty-six awards (outstanding/exceptional/special achievement) presented in conjunction with annual performance rating.
4. Ability to develop ATC Procedures and present them to a large group in a logical, common sense manner.
5. Extensive experience in negotiating with users of the FAA Air Traffic Service, particularly Airport Sponsors (Runway Safety Issues, Noise Issues), Airlines (Runway Safety Program, Aircraft Delay Issues, LAHSO and TIPH changes, and other FAA entities (Flight Standards, Airports District Office, etc.)
6. As Operations Manager at Miami Tower for twelve years I was assigned the task of Subject Matter Expert for Safety, requiring expertise in the entire processes associated with the investigation of Operational Errors, Pilot Deviations, Operational Deviations, Runway Incursions, Vehicle Incursions, Near Mid-Air Collisions, and Aircraft Accident/Incidents. Because of my extraordinary interest in Safety, I am intrigued with the relatively new Safety Management System and have spent uncountable hours reading and understanding FAA Orders such as the SMS Manual, ATO Safety Management System, ATO Terminal Service SMS, ATO SMS Implementation Plan, Air Traffic Safety Oversight and SMS Oversight
7. As the Operations Manager at Miami Tower, I implemented the FAA Quality Assurance Report (QAR) Program.. I attended a course in FAA Headquarters, Washington , D.C., concerning the implementation procedures and expected outcome of the program. I was always the operations point of contact and the facility expert for regional and/or national Quality / Safety Assurance Evaluations.
8. In May 1997 I was selected to participate in a national work group addressing "Operational Excellence", a Safety Program entitled Surface Error Prevention.

9. As Assistant Air Traffic Manager at Palm Beach Tower, the facility completed four years without a reported operational error. In two of those years they were awarded an “Outstanding Quality Assurance Evaluation” and in one of those years the facility was selected as the “Southern Region Level IV/V Facility of the Year”.
10. Designed, developed and briefed to the flying public the ARSA Program (now referred to as Class C Airspace) at Palm Beach Airport.
11. Designed, developed and demonstrated the Final Approach Radar Position at Palm Beach Approach Control. Prior to my development, there had never had this position.

TRAINING

The following FAA training was completed during my ATC Career.

1. Partners in Problem Solving – 1990
2. Effective Communications _ 1983
3. Essentials of Situational Leadership – 1988
4. The Manager’s Course – 1984
5. The Supervisor’s Course – 1977
6. EEO Counselor – 1981
7. EEO Investigator – 1986
8. Managing Negativity in Workplace – 1993
9. National Traffic Management Course – 1999
10. Attended class to develop Digital Terrain Maps (DTM). I then developed the first FAA Minimum Safe Altitude Warning (MSAW) Map for a dual beacon system at Miami International Tower – 1975
11. Air Traffic Interviewer’s Course – 1988, subsequently I conducted 63 pre-employment interviews during 1989.
12. Program/Budget Training – 1991
13. OJT Evaluation Techniques for ATC Examiners - 1993

RECOGNITION

The following recognition was awarded during my ATC Career

1. Letters of Commendation – 16
2. Performance Awards in conjunction with annual rating – 26
3. Certificate of Appreciation from the Director of Secret Service for outstanding service to Air Force One movement on Palm Beach Airport during George H W Bush’s Presidency in the 1980’s. - 1991
4. Nominated by MIA Air Traffic Manager for the William A. Parentau Memorial Award presented by The ATCA each year. – 1999
5. Time-Off Award (32 hours) for operational management of the control tower during Super Bowl XXXIII. Later received a letter of appreciation from the National Football League (NFL) Commissioner for this successful venture that had never been tried before. - 1999
6. Special Act Award from PBI Manager for developing a procedure to provide radar service to PBI Approach Control by using the Ft. Lauderdale Radar when Palm Beach Radar was down. - 1984
7. Received a Plaque from the South Florida EEO Council for dedicated support of the Hispanic Heritage Week seminars conducted annually in Miami. – 1986
8. Received recognition from AAT-1 for outstanding performance during period immediately following the tragedy of September 11, 2001. I was the Operations Manager at Miami Tower charged with recalling all aircraft in the air from Vero

Beach to Key West, Florida. I continued to work for 13 hours until the airspace and air traffic system were considered safe.

SIGNIFICANT ACHIEVEMENT

A. In April 1998 I was the Operations Manager at Miami FAA Tower when the National Football League (NFL) requested the FAA provide a temporary Air Traffic Control Tower at Pro Player Stadium for Super Bowl XXXIII. This was the first time ever for such a request. I was selected to be project manager for this endeavor. It was a very successful venture. Quoting from an award presented to me after the event. "This task required detailed coordination and planning with all air traffic facilities in South Florida, local and state agencies, law enforcement, and event sponsors to bring this challenge to reality. Bob Price was up to the challenge. He developed the procedures. He attended over 30 meetings, personally briefed all pilots (130) with safety as a priority, and supervised the tower during the Super Bowl Game itself." I received thirty-two hours time-off-award for my efforts and certificates of achievement from the NFL and the Secretary of Transportation.

B. From 1983 to 1993 I was FAA Technical Advisory to the Palm Beach County Citizens Committee against Airport Noise. I worked with Palm Beach County on noise issues, airside construction issues, fire/rescue issues, and letters of agreement. I was the author of Palm Beach Airport's first "Runway Use Program Order" in 1984. Many airports throughout the nation copied the content of this order. I was presented a plaque of appreciation from Palm Beach County Aviation Director when I left Palm Beach Tower.

C. In 1985, as Assistant Manager for Plans and Programs, I was assigned the task of developing and implementing the Airport Radar Surface Area (now known as Class C Airspace) at Palm Beach Approach Control. All pilots in the local area were invited to attend the implementation briefings at Palm Beach Community College. Several areas of the country had fierce opposition to the program, but the implementation at Palm Beach was met with very little opposition.

D. In 1988 the former Miami Center Air Traffic Manager and I were requested by the Division Manager to fly to Cincinnati, Ohio to evaluate their procedures due to the fact they were experiencing frequent operational errors. We traveled to the facility twice and determined they were using antiquated procedures, which did not work after Delta began hubbing there. The two of us met at the regional office in Atlanta and completely rewrote the Cincinnati Standard Operating Procedures Manual in two days. Those procedures were implemented immediately and the operational errors quickly diminished.

E. During my tenure at Palm Beach Tower as the Assistant Air Traffic Manager, I organized a quarterly blood drive at the tower and for six years I organized an annual golf tournament with proceeds to the Children's Home Society. I received a plaque from the Blood Bank and several certificates of appreciation from the Children's Home Society. In 1992, after Level V Hurricane Andrew struck Miami, I organized a caravan of vehicles delivering ice, water, bread, roof repair supplies, generators, fuel, etc. to FAA Employees who could not get out of their house or neighborhood due home and/or vehicle destruction.

F. From 1993 to 2005 I was Operations Manager at Miami FAA Tower/TRACON. I was first level supervisor for 15 Operational Supervisors and second level supervisor for 100 Air Traffic Controllers. A part of my duties was to evaluate noise abatement documents on a monthly basis to determine if, when, and where noise abatement procedures may have been violated. I followed

up by taking corrective action and giving report to my manager. I was also required to review all QAR's (Quality Assurance Reports) for accuracy and validity.

G. On May 11, 1996 a ValuJet Flight out of Miami International crashed 12 miles northwest of Miami International Airport. All aboard perished. At the time I was the only Operations Manager at Miami Tower. I was called at home by the supervisor in charge requesting that I come to the tower to assist in the initial investigation. I was requested by the facility manager to lead a team of FAA supervisors, staff specialists, and staff officers to investigate the accident and submit a written report to the FAA Administrator as soon as possible. The report was completed in 12 hours enabling the Administrator to provide an accurate briefing to the news media the following morning. I received letters of commendation from the FAA Administrator and Regional Director.

BIOGRAPHY

1963 – 1967 – USAF Air Traffic Controller – Hurlburt Field & Galena AFB, Alaska.

1967 - 1971 – FAA – Air Traffic Controller – Ft. Lauderdale International Tower

1971 - 1974 – FAA – Air Traffic Controller – Miami Approach Control

1974 - 1975 – FAA – Automation Specialist – Miami Approach Control

1975 – 1982 – FAA – First Level Supervisor – Miami Approach Control

1982 – 1983 – FAA – Air Traffic Controller – Atlanta Approach Control

1983 – 1987 – FAA – Assistant Manager for Plans & Procedures (Includes Quality/Safety Assurance) – Palm Beach Approach Control

1987 – 1993 – FAA – Assistant Air Traffic Manager – Palm Beach Approach

1993 – 2005 – FAA – Operations Manager – Miami Approach Control

2005 – 2006 – Retired

2006 – 2010 – Field Service Rep for Adacel Systems Inc., Miami ATC Simulator

2011 – Present – Part-time - RVA Inc. Assisted in administering the ATSA Test to determine if testees qualified for hiring as an Air Traffic Controller with the FAA.

2011 – Present – Part-time - Aviation Consultant – Broward College. Air Traffic Control, Operations and Leadership for Global Commerce.

41 years Government service

4 years Air Traffic Subject Matter Expert for Simulator Development

3 years Aviation Consultant – Broward College

REFERENCES AVAILABLE UPON REQUEST