

ACRP

AIRPORT
COOPERATIVE
RESEARCH
PROGRAM

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2016 ANNUAL REPORT OF PROGRESS



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AIRPORT COOPERATIVE RESEARCH PROGRAM

Airports are vital national resources. They serve a key role in transportation of people and goods and in regional, national, and international commerce. They are where the nation's aviation system connects with other modes of transportation and where federal responsibility for managing and regulating air traffic operations intersects with the role of state and local governments that own and operate most airports. Research is necessary to solve common operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the airport industry. The Airport Cooperative Research Program (ACRP) serves as one of the principal means by which the airport industry can develop innovative near-term solutions to meet demands placed on it.

The need for ACRP was identified in *TRB Special Report 272: Airport Research Needs: Cooperative Solutions* in 2003, based on a study sponsored by the Federal Aviation Administration (FAA). ACRP carries out applied research on problems that are shared by airport operating agencies and not being adequately addressed by existing federal research programs. ACRP is modeled after the successful National Cooperative Highway Research Program (NCHRP) and Transit Cooperative Research Program (TCRP). ACRP undertakes research and other technical activities in various airport subject areas, including design, construction, legal, maintenance, operations, safety, policy, planning, human resources, and administration. ACRP provides a forum where airport operators can cooperatively address common operational problems.

ACRP was authorized in December 2003 as part of the Vision 100—Century of Aviation Reauthorization Act. The primary participants in the ACRP are (1) an independent governing board, the ACRP Oversight Committee (AOC), appointed by the Secretary of the U.S. Department of Transportation with representation from airport operating agencies, other stakeholders, and relevant industry organizations such as the Airports Council International-North America (ACI-NA), the American Association of Airport Executives (AAAE), the National Association of State Aviation Officials (NASAO), Airlines for America (A4A), and the Airport Consultants Council (ACC) as vital links to the airport community; (2) TRB as program manager and secretariat for the governing board; and (3) the FAA as program sponsor. In October 2005, the FAA executed a contract with the National Academy of Sciences formally initiating the program.

ACRP benefits from the cooperation and participation of airport professionals, air carriers, shippers, state and local government officials, equipment and service suppliers, other airport users, and research organizations. Each of these participants has different interests and responsibilities, and each is an integral part of this cooperative research effort.

Research problem statements for ACRP are solicited periodically but may be submitted to TRB by anyone at any time. It is the responsibility of the AOC to formulate the research program by identifying the highest priority projects and defining funding levels and expected products.

Once selected, each ACRP project is assigned to an expert panel appointed by TRB. Panels include experienced practitioners and research specialists; heavy emphasis is placed on including airport professionals, the intended users of the research products. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, ACRP project panels serve voluntarily without compensation.

Primary emphasis is placed on disseminating ACRP results to the intended users of the research: airport operating agencies, service providers, and academic institutions. ACRP produces a series of research reports for use by airport operators, local agencies, the FAA, and other interested parties; industry associations may arrange for workshops, training aids, field visits, webinars, and other activities to ensure that results are implemented by airport industry practitioners.

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Cover photos courtesy of Morristown Municipal Airport, Morristown, New Jersey.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The **National Academy of Sciences** was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, non-governmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The **National Academy of Engineering** was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. C. D. Mote, Jr., is president.

The **National Academy of Medicine** (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the **National Academies of Sciences, Engineering, and Medicine** to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the National Academies of Sciences, Engineering, and Medicine at www.national-academies.org.

The **Transportation Research Board** is one of seven major programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to increase the benefits that transportation contributes to society by providing leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board's varied committees, task forces, and panels annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

Learn more about the Transportation Research Board at www.TRB.org.

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Letter from the AOC Chair

In 2016, we began a new decade of research and investigation amidst many positive industry projections: higher profitability, continued low fuel prices, growth in enplanements, and new advanced security and aircraft technologies. The future continues to look bright for the airport industry—especially for airport practitioners equipped with knowledge about the evolving world around them.

We also observed a world and industry more connected than ever. Domestic economic events are felt around the globe; environmental and technological disruptions highlight our global interdependence; airports engage actively with their communities; drones enter the airspace; and passengers connect with airlines on their smart phones. In short, a more integrated, automated, and online world creates challenges to overcome—and opportunities to grasp.



ACRP is responding to this more connected world by being more connected in turn, by finding new ways to engage and encourage knowledge sharing among more practitioners, addressing emerging issues in near real time, and using insights gained in the field to continue improving program offerings.

In our eleventh annual report, we review our 2016 accomplishments and research priorities on the horizon. We'll take a close look at how ACRP is impacting airport operations, in order to verify and ensure that we are truly equipping airport operators to proactively and effectively lead the industry into this more connected world.

Sincerely,

A handwritten signature in cursive script that reads "Kitty Freidheim". The signature is written in dark ink on a white background.

Kitty Freidheim

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AIRPORT COOPERATIVE RESEARCH PROGRAM

Annual Report of Progress

December 31, 2016

Overview

Today’s airport practitioners need access to tools and knowledge that help them understand the evolving world around them and address the challenges facing airports today—which is why the Airport Cooperative Research Program (ACRP) continues convening subject matter experts to develop research, tools, and guidance designed to serve airports.

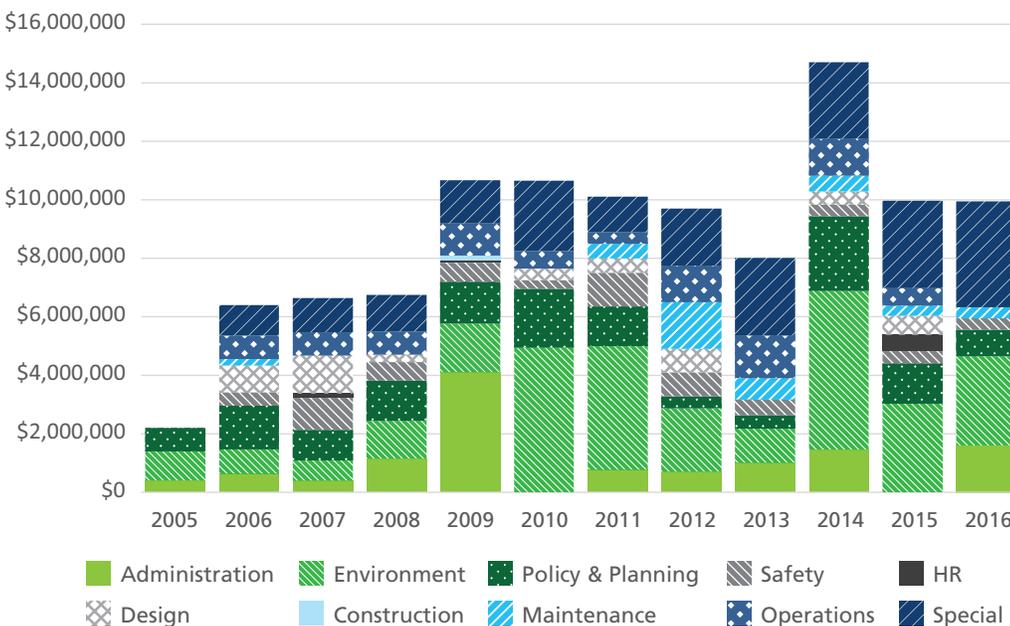
ACRP is an applied research program managed by the Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine and sponsored by the Federal Aviation Administration. Together with public- and private-sector industry experts, ACRP produces reports, syntheses, webinars, and digests that cover a diverse set of research fields: safety, policy & planning, airport design, construction, legal issues, maintenance, operations, human resources (HR), sustainability, and administration.

In 2014, ACRP introduced its new Strategic Plan outlining the particular priorities for the program in 2015 through 2020. These included ensuring high-quality and relevant problem statements; aligning program products with the interests of key audiences; expanding and diversifying product dissemination; and implementing processes to monitor quality, relevance, and timeliness.

“ACRP provides the airport industry insight and guidance with the vast amount of material assembled by top level practitioners. It has been my pleasure to be active in content creation as well as consumption. The information provided by ACRP is the core to keeping our airports system strong and vibrant.”

Joshua Abramson

*Manager
Easterwood Airport*



Annual Funding by Research Area

Strategic Priority 1:
Ensure that problem statements are of the highest quality and greatest relevance to the airport industry.

In 2016, ACRP published 42 new resources for airports and practitioners, covering topics ranging from improving the customer experience, to cybersecurity, to water efficiency, and to generating revenue with renewable energy. As the challenges facing airports continue to grow and diversify, they also become more interconnected and interdependent, making integrated and holistic solutions more important than ever. It is within this landscape that ACRP continues to engage airport practitioners in identifying the topics that matter most to them today.

Research Progress and Priorities

Practitioner input—especially in the form of problem statements that propose new research topics—is critical to ACRP’s ability to identify priorities for the industry and plan research around them. In 2015, ACRP identified the development of high-quality problem statements as a priority and began exploring how to expedite the submittal and review process, and ultimately how to deliver valuable research results into practitioner hands more quickly.

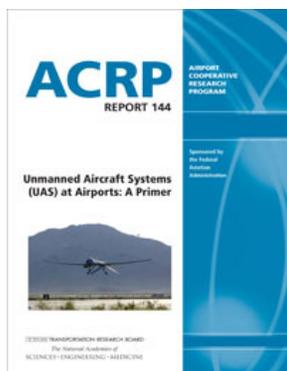
ACRP received 124 problem statements for FY2017 research, submitted by airport operators, airlines, federal and state transportation agencies, universities, aviation consultants, and other entities. These submittals reflected a growing interest in cutting-edge developments, including online connectivity of airports, automated passenger arrivals, unmanned aircraft systems (UAS), climate resiliency, integrated resource management, renewable energy, intergovernmental relations in aviation, compatibility between airports and new aircraft models, and airport security and emergency management, among others.

In response to these problem statements, ACRP committed \$7.4 million to 16 new research projects for FY2017, each of which will yield one or more actionable new resources for airport practitioners. This investment will bring the total amount of project funding since 2005 to nearly \$117 million. Ultimately, projects undertaken in FY2017 will bring the number of ACRP projects authorized since 2006 to 510.

Of special note is a \$1 million investment into researching the integration of UAS into airports, in ACRP Project 03-42, “Integrating UAS into Airports.” This research will build upon preceding ACRP research—including the *ACRP Report 144: Unmanned Aircraft Systems (UAS) at Airports: A Primer* published in 2016, and ACRP Project 11-01/Topic 08-03, “Evolving Law on Airport Implications by Unmanned Aerial Systems Operations” (research currently underway)—to provide additional guidance and information related to UAS at airports. New topics in 2017 include engaging relevant stakeholders in UAS, potential UAS use by airports, and integration into the airport-controlled movement areas.

“Today, more and more entrepreneurs are finding new and ingenious uses for advancing unmanned flight technologies.... The possibilities for UAS use are only limited by the imagination of the developers and users, and the continuation of the efforts to safely integrate the systems into the NAS.”

– ACRP Report 144: *Unmanned Aircraft Systems (UAS) at Airports: A Primer*, Chapter 1



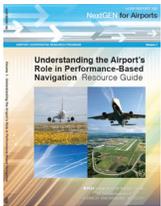
*ACRP Report 144:
Unmanned Aircraft
Systems (UAS) at
Airports: A Primer*

Noteworthy 2016 Research Publications

As the aviation landscape evolves and new challenges and opportunities emerge, ACRP looks ahead to the ongoing transformation of the aviation system into the next generation of technologies and programs—coined “NextGen.” NextGen refers to the federal programs (predominately airspace, air traffic, or avionics related) that are designed to modernize the National Airspace System (NAS).

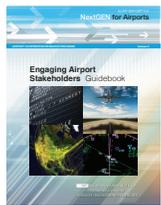
ACRP’s NextGen initiative (published as the *ACRP Report 150: NextGen for Airports* five-volume series) aims to inform airport operators about some of these programs and how the resulting practices, data, and technologies will affect airports and change how they operate.

The *ACRP Report 150: NextGen for Airports* series comprises:



Volume 1: Understanding the Airport’s Role in Performance-Based Navigation: Resource Guide

This report provides comprehensive information to practitioners regarding Performance-Based Navigation (PBN) and how it affects airport safety measures, performance, and other critical factors both in the short term and long term.



Volume 2: Engaging Airport Stakeholders: Guidebook

This guidebook provides tools to create proactive communication and highlights different engagement methods (e.g., a guidebook, social media, website, workshops and forums, community roundtables, town hall meetings). Users will take away methods that will enable airports to proactively engage with and to solicit and consider input from stakeholders about the environmental and economic benefits, as well as costs, of NextGen implementation.



Volume 3: Resources for Airports

Volume 3 provides a primer for airport decision makers on available resources related to NextGen, as well as a public information toolkit that can be used by airport operators to communicate high-level, universal facts about NextGen and airports to local pilots, community members, local leaders, and the flying public.



Volume 4: Leveraging NextGen Spatial Data for Airports: Guidebook

This guidebook highlights the benefits of data sharing with stakeholders and provides case studies that illustrate best practices. Additionally, the guide includes a discussion of how data may be monetized to generate revenue for the airport.



Volume 5: Airport Planning and Development

This report describes how specific NextGen capabilities affect airport planning and development and provides methods to assess the improvements in safety, capacity, efficiency, and environmental performance related to NextGen.

“As someone new to the airport sector last year, I found the ACRP and its library of resources extremely helpful for quickly learning about this industry’s unique challenges and opportunities and for connecting with other airport practitioners across the country. I hope to now deepen my engagement with ACRP by serving on a research project panel and by submitting a report proposal.”

Brendan Reed

Director of Environmental Affairs

San Diego Airport

Strategic Priority 2:

Align program products with the interests of key audiences.

“ACRP provides effective solutions and varied but relevant points of view on many issues facing U.S. aviation of all sizes and locations. The resources that ACRP provides in these solutions provides opinions, facts, methodologies, and the basis for the potential for improvement in aviation operational performance levels.”

Charles Marshall

Director of Asset Management

Hartsfield-Jackson Atlanta International Airport

Disseminating Research Products in the Industry

ACRP is preparing a survey that will inform a new application of metadata to existing and future publications, using the same profile dimensions that already apply to practitioners. These metatags will help practitioners more quickly locate and access resources that relate to their interests and areas of expertise.

The original ACRP Dissemination Plan was created in 2010 and adopted in 2011. Since its adoption, ACRP has implemented many of its recommended activities. Some are ongoing and can now be considered mature, and some have been discontinued. Over the past five years, since adoption of the original Dissemination Plan, ACRP has gained valuable experience and insight by implementing the variety of dissemination activities.

Further, ACRP also introduced its new Strategic Plan in 2014, which includes Strategic Priority 3: Expand and Diversify Product Dissemination. The plan lays out two key corresponding strategies: diversifying the dissemination methods and expanding outreach to increase dissemination. In 2016, ACRP examined ongoing activities and promising new methods for delivering ACRP research to the industry and distilled its revised approach, a newly revised 2016 Dissemination Plan. That plan is expected to be published and distributed to ACRP participants in 2017.

As a preview, proposed activities include an overhaul of the conference exhibit, enhancements to the ACRP website and search functionality, development of a new ACRP app, new methods for gathering insight about challenges in the industry needing research, a more integrated approach to social media and traditional media coverage, and more.

Measuring Impacts in the Industry

Program effectiveness isn't just about providing valuable resources and opportunities. As reflected in ACRP's 2015–2020 Strategic Plan, it's equally important to measure and verify the impact of those resources on the industry, among active practitioners and in real airports of all shapes, sizes, and types across the nation.

“How Often Do You Use ACRP?”



“What Topics Have Greatest Impact?”



Survey Responses (Larger Words Reflect Higher Number of Respondants)

In 2016, ACRP began taking inventory of the impacts of its program offerings, to ensure that it is reaching practitioners, responsive to their interests, and helping them address common and emerging challenges and opportunities. In September, ACRP surveyed individuals in the aviation industry to better understand the impact of ACRP on the industry. The 520 respondents (88% domestic) consisted of airport staff, consultants, government, academics, and private industry, and provided the data ACRP needed to provide a clear picture of these impacts. In addition, ACRP began systematizing this annual survey process in order to measure changes over time and continuously identify priorities. Results and analysis are expected in 2017.

Main Benefit from Engaging with ACRP	Percentage
Increased Operational Efficiency	12
Improved Compliance with Regulations	11
Improved Safety	11
Improved Customer Satisfaction	8
Reduced Operating Costs	8
Reduced Environmental Impact	7
Improved Airport Communications	7
Improved Community-Airport Interaction	7
Improved Emergency Response	6
Increased Revenue Generation	6
Improved Tenant Relationships	5
Improved System Reliability	4
Workforce Development	4
Reduced Airline Congestion	2
Other	2

Survey Responses to the Question, “What Is the Main Benefit of ACRP Research?”

Additionally, following the success of the 2016 Symposium on ACRP Research in Progress at the TRB Annual Meeting, the second annual symposium slotted for 2017 is aimed at improving ACRP research through the sharing of best practices. The symposium will once again take place during the TRB Annual Meeting and will feature presentations by both ACRP staff members and researchers covering obstacles, lessons learned, best practices, and recommendations.

Engaging Airport Practitioners

In a more interconnected world, the opportunity is ripe to expand on the ways ACRP distributes its research findings, engages practitioners, and connects them to each other to encourage the sharing of knowledge and best practices. Following are a few examples of how ACRP is moving in this direction.

“Our pledge is to deliver the best airport system in the world. ACRP reports help us fulfill that pledge... We employ a business-like-plan assessment for all major decisions and we rely on the findings of ACRP reports to help guide that business planning.”

Tony Cugno
Chief Operating Officer
 Jacksonville Aviation Authority

Strategic Priority 3:
Expand and diversify
product dissemination.

**Applying ACRP Research to Improve Safety and Security:
A Case Study at Jacksonville Aviation Authority**



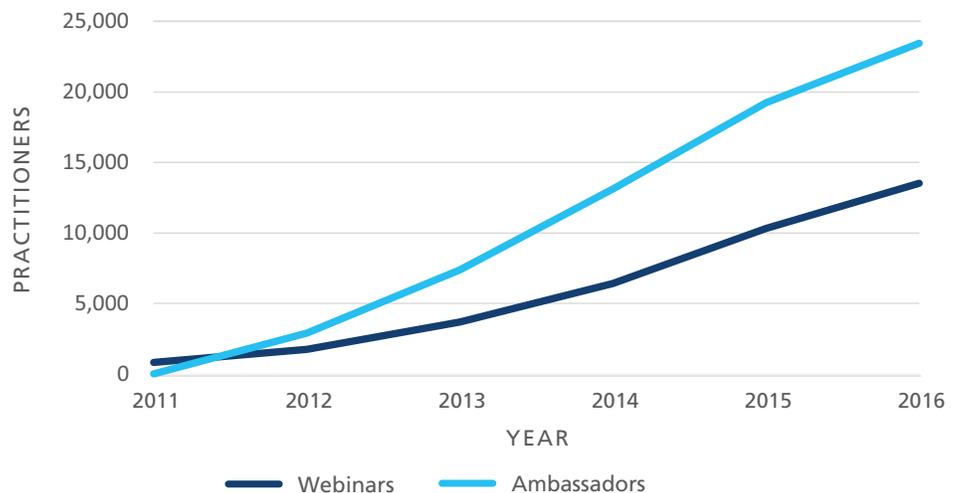
Jacksonville Aviation Authority (JAA) owns and manages the Jacksonville Airport System serving the commercial, business, and recreational aviation needs of northeast Florida and southeast Georgia.

Its strategic focus on safety and security has relied heavily on ACRP resources covering risk management, disaster preparedness, incident response planning, post-event recovery practices, and mutual aid agreements with local jurisdictions. JAA Risk

Management Administrator Roger Sudenski observes, “I rely on the findings in ACRP reports for insight as I develop policies and procedures for JAA.”

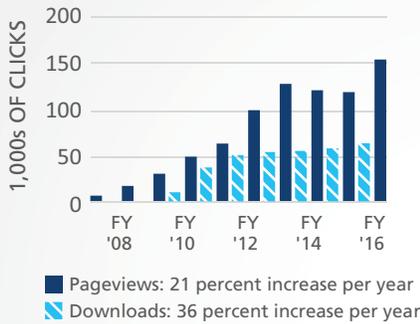
Administrative personnel have reported relying on several safety-related ACRP resources, including:

- *ACRP Synthesis 60: Airport Emergency Post-Event Recovery Practices*
- *ACRP Synthesis 45: Model Mutual Aid Agreements for Airports*
- *ACRP Synthesis 50: Effective Cooperation Among Airports and Local and Regional Emergency Management Agencies for Disaster Preparedness and Response*
- *ACRP Report 112: Airport Terminal Incident Response Planning*
- *ACRP Report 74: Application of Risk Management at Airports*

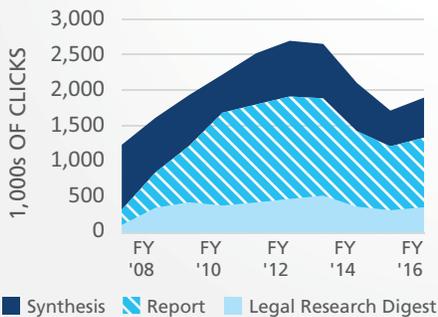


Practitioners Reached Through ACRP Outreach

Top 5 ACRP Publications of All Time Pageviews and Downloads



Pageviews & Downloads by Publication Type



Top 5 ACRP Publications of All Time Pageviews and Downloads



"I just received the package of the ACRP Report 54: Resource Manual for Airport In-Terminal Concessions. I will spend the weekend ... going through it in detail. I would like to use it, or at least parts of it, for my classes in airport retail ... I am one lucky instructor, and we have 24 very lucky airport operations students. Thank you so much."

Heather Madden-Johns,
 Instructor at British Columbia Institute of Technology

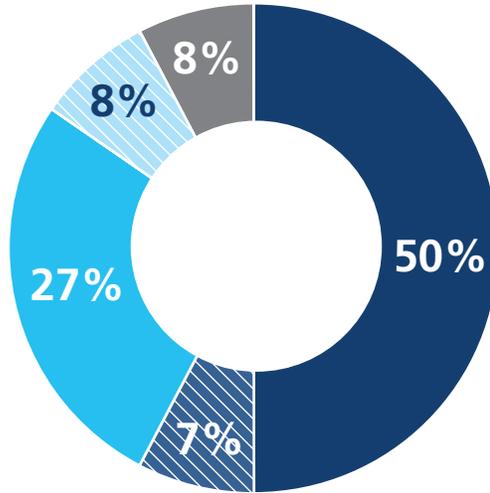
Expanding our engagement to experienced practitioners

ACRP's Ambassadors are a group of well-established airport industry practitioners with a great deal of experience and broad professional networks. In 2016, ACRP expanded its successful Ambassadors program to include the new Ambassadors Emeritus program, which allows former Ambassadors to continue their close relationship with the ACRP program and provide special insight into the industry.

Shaping the future aviation workforce

ACRP continues its commitment to preparing the next generation of airport leaders. The new ACRP Champions program for up-and-coming practitioners completed its first year and exceeded its initial goal of 50 Champions. This summer saw the creation of the new ACRP Champion Mentorship Program, which launched in September 2016. ACRP will pair the young professionals in its ACRP Champions program with ACRP Ambassadors Emeritus. Participation is voluntary, and mentors and mentees will decide among themselves how and when to communicate. ACRP will facilitate the matching process and provide initial contact information. This is an exciting new initiative, as professional mentorship programs offer benefits for mentors and mentees.

Strategic Priority 4:
Implement processes to monitor product quality, relevance, and timeliness.



Champion Participation

- To get involved in ACRP (50%)
- To increase exposure/reputation within organization (7%)
- To grow professional network (27%)
- Manager encouraged involvement (8%)
- Other (8%)

Why Did Participants Become Champions?

“The security line is a big part of the whole airport experience so any sort of delay or disruption makes a huge impact on passengers. It was great to be able to create a method that could, theoretically, solve the wasted idle time at the airport.”

Harleen Vohra

Member of the winning team from Stevens Institute of Technology in the 2015–2016 University Design Competition

2015–2016 University Design Competition

Celebrating Student Ideas and Creative Solutions

In 2016, the winners of the 2015–2016 University Design Competition were announced, with first, second, and third place honors awarded across four distinct categories.

In the Airport Operations and Maintenance category, first place was awarded to a four-member team from the School of Systems and Enterprises at Stevens Institute of Technology, with its design titled “SimpleQ.” SimpleQ is an “Innovative Security Queue Management System” designed to improve the customer experience while increasing airport revenue.



Competition winners from left to right: Harleen Vohra, Asbely Oliver, Samantha Scarpone-Jones, and Shuyuan Jin

View the complete design at http://vsgc.odu.edu/ACRPDesignCompetition/Competition_Winners.html

ACRP also introduced the University Design Competition for Addressing Airport Needs for the 2016–2017 Academic Year. This national competition builds upon the former FAA Design Competition for Universities, to engage students in addressing issues related to airports and the National Airspace System. The competition challenges individuals and teams of undergraduate and/or graduate students to consider innovative approaches to airport challenges, focusing on design solutions in airport planning, operation, and maintenance, runway safety, environmental interactions, and more. Submissions are due in April 2017, and the winners will be announced later in 2017.

Website	Annual Growth (%/year)
ACRP Impacts on Practice Downloads	22
ACRP Synthesis Downloads	21
Total ACRP Pageviews	19
ACRP Legal Research Digest Downloads	13
ACRP Research Report Downloads	9

Average Annual Growth Rate of Web Traffic between 2010 and 2016

Lastly, in 2016 ACRP observed tangible impacts of *ACRP Report 75: Airport Leadership Development Program*. This program identified a gap in the availability of leadership training in the airport industry and proposed a curriculum focused on conflict resolution, performance management, negotiation, and culminating commitments to change. This curriculum has since been adapted into Florida’s well-received, three and a half-day Airport Leadership Development Program. In 2016, 93 percent of graduates expressed that they would recommend this course to their colleagues and peers, and 33 of the graduates have moved their careers forward either through a promotion or by accepting a new position in the aviation field.

Connecting online

Webinars

In 2016, ACRP reached an estimated 4,363 practitioners and other individuals through 15 webinars, with an average of 291 attendees per webinar. This outreach brings the estimated total number of practitioners reached since the program’s inception to 14,691.

For several years now, ACRP special webinars focused on the most recent findings and results of program research, often covering two or three publications in each session. In response to practitioner and stakeholder requests, ACRP is expanding its webinar program by adding a new webinar format that will focus each session on an in-depth look at a single publication, with a corresponding quiz at the end to verify and recognize training completion and new knowledge acquired. This new webinar format will be premiered in 2017.

On a related note, ACRP continually assesses the value and utility of its programs and products. To gather feedback from webinar presenters, ACRP has launched webinar presenter surveys after every webinar that has been held over the past year. Of the respondents who report receiving assistance from an ACRP representative in preparing slides, 100 percent found the practice sessions and coaching provided by ACRP as helpful. Additionally, all presenters responding recommend serving on an ACRP

2016 Webinar Series

Reaching more than
4,000
 participants

Average audience satisfaction rating

— **>88%** —

15 Webinars
 Hosted in
2016

Topics covered

28

different ACRP
 publications

Average #
 of webinar
 participants

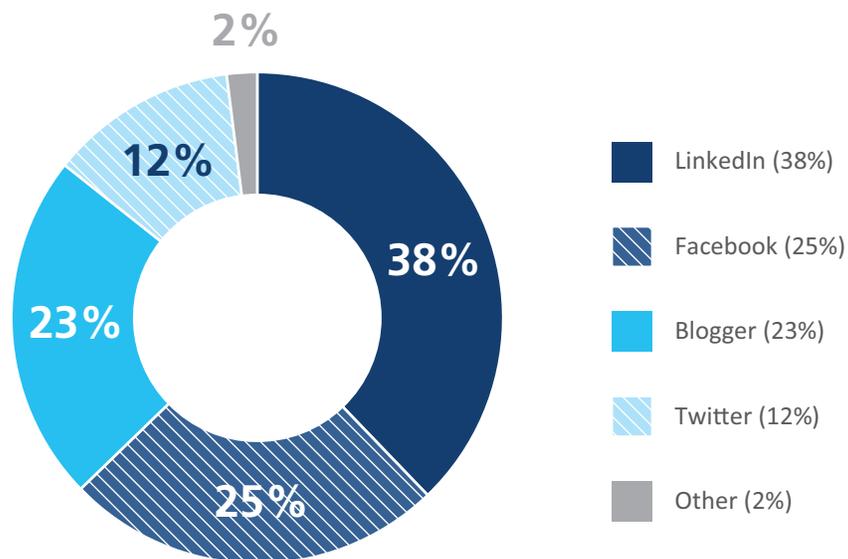
— **291** —

Highlights of 2016 Webinar Series

webinar panel to a colleague.

Social media

In 2016, ACRP continued maintaining an active presence on various social media platforms to deliver real-time announcements and ensure accessibility to practitioners. Ambassadors and Champions also shared their travel and conference attendance via

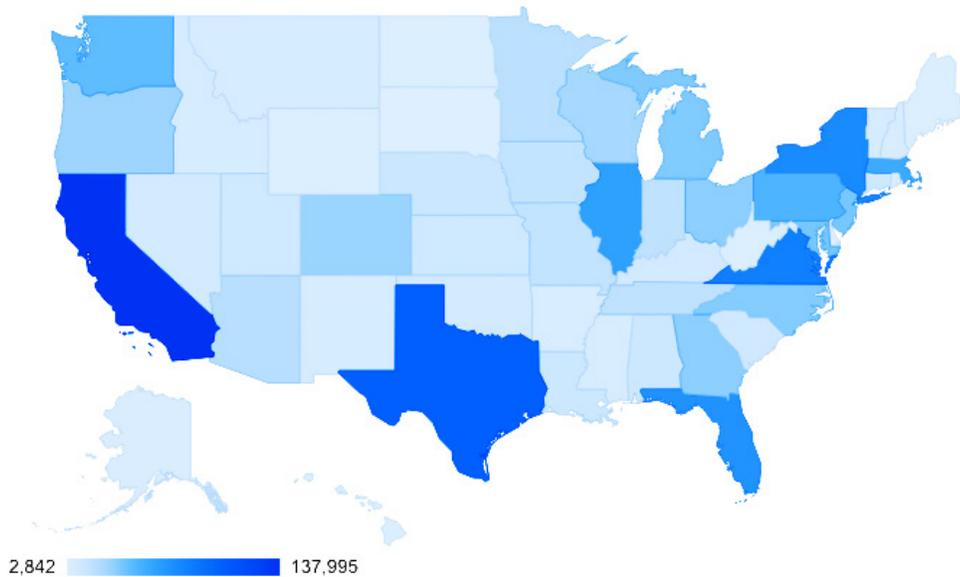


Social Media Referrals to ACRP Website

photos and status updates to the @ACRPambassadors handle.

Web trends

As described earlier, this year ACRP began preparing a survey that will inform a new application of metadata to existing and future publications, using the same profile dimensions that already apply to practitioners. These metatags will help practitioners



ACRP Web Sessions by State

more quickly locate and access resources that relate to their interests and areas of expertise.

2016 Publications

In 2016, ACRP continued addressing emerging challenges in aviation. Relying on its proven collaborative process, ACRP published dozens of research reports, syntheses, and research digests, covering a diverse range of real-world challenges and topics critical to airport practitioners today, including water efficiency and renewable energy, emergency planning and communications, mixed-use flight operations, and much more. In 2016, ACRP produced 18 reports (8 reports include tools, spreadsheets, videos, and more), 10 synthesis reports, 1 research results digest, 4 legal research digests, and 3 web-only documents.

The 18 reports produced by ACRP in 2016 have included:

- *ACRP Report 154: Water Efficiency Management Strategies for Airports* (June 2016) – This report assists airport operators with designing and instituting a water efficiency management program within their facilities. It includes tools for establishing a baseline and targets for water efficiency performance,

ACRP on Twitter

Are you in Helena? Look for #ACRP Ambassador Ben Mello at this booth! Be sure to browse the free reports on hand.

@ACRPambassadors. The Maryland Aviation meeting was singing to the choir. They all love, use, and participate in ACRP.

Repping @ACRPambassadors /@TRBofNA at the #Missouri #Airport #Aviation meeting. I spy @AOPACentralSW. #avgeek

evaluating water efficiency measures, and developing an action plan.

- *ACRP Report 153: Guidebook for IROPS Stakeholder Communication & Coordination* (April 2016) – This report assists airport operators in planning communication and coordination among stakeholders in response to irregular operations (IROPS). It is accompanied by a spreadsheet tool for assessing likelihood and severity of IROPS, tabletop exercises and case studies, and more.
- *ACRP Report 151: Developing a Business Case for Renewable Energy at Airports* (April 2016) – This report provides instructions and tools to evaluate proposed

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
General Marketing	1	1	0	1	0	2	1	3	1	1	11
Reports	1	9	15	15	20	23	19	20	30	18	170
Research Results Digests	3	0	4	4	1	4	1	4	1	1	23
Legal Research Digests	0	4	4	2	2	5	4	1	4	4	30
Syntheses	4	8	5	4	10	7	11	10	9	10	78
Web-only Documents	0	0	8	2	2	1	3	6	7	3	32
CDs	0	1	2	5	10	12	9	9	13	5	66
Conference Proceedings	0	1	0	1	0	0	0	0	0	0	2
TOTAL	9	24	38	34	45	54	48	53	65	42	412

ACRP Publications

renewable energy projects and their alternatives. The guidance is designed to assist airports with making informed energy decisions that maximize financial, self-sustainability, environmental, and social benefits.

The 10 2016 synthesis reports, each of which draws on multiple sources to provide practitioners with a single resource addressing a topic of interest for airport management included:

- *ACRP Synthesis 73: Emergency Communications Planning for Airports* (July 2016) – This synthesis explores emergency communications planning and is specifically designed for use by airport senior management, public information officers, and first responders and emergency managers. The report includes sample communication plan tables of contents, field operations guides, and a checklist of effective communications plans.
- *ACRP Synthesis 74: Combining Mixed-Use Flight Operations Safely at Airports* (June 2016) – This synthesis documents practices in safely accommodating mixed-use aeronautical activity at airports. Mixed-use aeronautical activity refers to the various categories of aircraft that a public-use airport is intended to accommodate in compliance with FAA sponsor assurances.
- *ACRP Synthesis 69: Airport Sustainability Practices—Drivers and Outcomes for Small*

Commercial and General Aviation Airports (April 2016) – This synthesis explores drivers and outcomes of green initiatives undertaken at small commercial and general aviation airports. Drivers could include financial viability, staffing considerations, or other social or environmental factors.

In 2016, ACRP published six Impacts on Practice publications:

- *ACRP Impact on Practice: Preparing the Next Generation of Airport Leaders* (August 2016) – This Impact on Practice report explores how *ACRP Report 75: Airport Leadership Development Program* influenced a collaborative effort in Florida to develop a three and a half-day program to develop and train future leaders. Since its inception, 150 professionals from 40 different Florida airports have completed the program. The impact of the training is perhaps best demonstrated by the fact that 33 of the graduates have moved their careers forward either through a promotion or by accepting a new position in the aviation field.
- *ACRP Impact on Practice: Improving Customer Experience at Airport Restroom Facilities* (September 2016) – This Impact on Practice explores how Austin–Bergstrom International Airport (ABIA) is using *ACRP Report 130: Guidebook for Airport Terminal Restroom Planning and Design*, to help guide remodeling plans for restrooms at the airport. The report addresses topics such as: cleanliness and customer safety for passengers, traffic flow, maintenance, and improved visual aspects of the restroom environment.
- *ACRP Impact on Practice: ACRP Ambassadors: Sharing Research Peer-To-Peer* (October 2016) – This Impact on Practice report examines the impacts of the ACRP Ambassadors program, which has identified, trained, and commissioned 37 Ambassadors, from every FAA region. They have participated in 120 aviation industry events and communicated ACRP research results to over 20,000 industry practitioners.
- *ACRP Impact on Practice: Using Airfield LED Lighting to Save Energy and Costs* (November 2016) – This Impact on Practice examines how the impacts of *ACRP Synthesis 35: Issues with Use of Airfield LED Light Fixtures at King County International Airport (BFI)*. The report found that the synthesis reduced concerns regarding installation and system compatibility and that a 7% reduction in energy use was realized due partly to new LED lighting.
- *ACRP Impact on Practice: Moving Customers, Cost-Savings and Energy Reduction in the Right Direction* (December 2016) – This Impact on Practice examines how *ACRP Report 117: Airport Escalators and Moving Walkways—Cost Savings and Energy Reduction Technologies* was used at Manchester-Boston Regional Airport (MHT). This report helped inform the decision to install energy-saving variable demand/variable speed motors on the moving walkways and escalators at MHT.

Legal and Research Results Digests published in 2016 include:

- *ACRP Legal Research Digest 29: Impact of Firearms Laws on Airports* (August 2016) – This Legal Research Digest analyzes recent court cases on federal and state laws that have been challenged for restricting or prohibiting the carrying of firearms in public and other places. The digest also includes *ACRP Web-Only Document 29: Compendium of State and Federal Laws Affecting the Possession of Firearms at Airports* that

“This report [*ACRP Report 103*] was an exceptional tool to gain additional information concerning the value and application of NIMS and one of its operational components, ICS.”

Kimberly Castro

*Operations Coordinator,
Kissimmee Gateway Airport*

Top 5 Downloaded Reports in 2016

ACRP Report 157: Improving the Airport Customer Experience

ACRP Report 25: Airport Passenger Terminal Planning and Design, Volume 2: Spreadsheet Models and User's Guide

ACRP Synthesis 72: Tabletop and Full-Scale Emergency Exercises for General Aviation, Non-Hub, and Small Hub Airports

ACRP Report 144: Unmanned Aircraft Systems (UAS) at Airports: A Primer

ACRP Report 148: LED Airfield Lighting System Operation and Maintenance

pertains to the carrying of guns at airports and elsewhere.

- *ACRP Legal Research Digest 28: Operational and Legal Issues with Fuel Farms* (June 2016) – This Legal Research Digest provides guidance to assist airport sponsors and their legal counselors in understanding the basic legal and operational issues of fuel farms that provide the storage and dispensing of aviation fuels to multiple users at an airport. The digest will assist airports with evaluating the appropriate ownership and operating model for use at airports.
- *ACRP Legal Research Digest 27: The Fourth Amendment and Airports* (April 2016) – This Legal Research Digest discusses the Fourth Amendment generally as it pertains to its application to people, houses, papers, and effects. The digest focuses on the application at airports and respective court decisions, and will assist airport operators by providing the background and application of the Fourth Amendment as they review their procedures with their attorneys.
- *ACRP Research Results Digest 23: Synthesis of Information Related to Airport Practices* (January 2016) – This Research Results Digest examines the progress and status of ACRP Project 11-03, “Synthesis of Information Related to Airport Practices.”
- *ACRP Research Results Digest 24: Recommended Community Noise Model Enhancements to Improve Prediction of Helicopter Activity Impacts* (January 2016) – This Research Results Digest provides an overview of research conducted to identify improvements to the most common methods for predicting helicopter community noise, including

Top 5 Impacts of ACRP Research Publications	Percentage
Improved operational efficiency	13
Reduced operating costs	11
Reduced environmental impact	9
Improved system reliability	9
Improved safety	8

Impact of ACRP Research Publications

Top 5 Uses of ACRP Research Publications	Percentage
Use as guidance document	23
Use for management decisions	17
Use for design or layout of airport	12
Use to make changes to standards, specifications, or guidance.	11
Use to validate current practice	10

Implementation of ACRP Research Publications

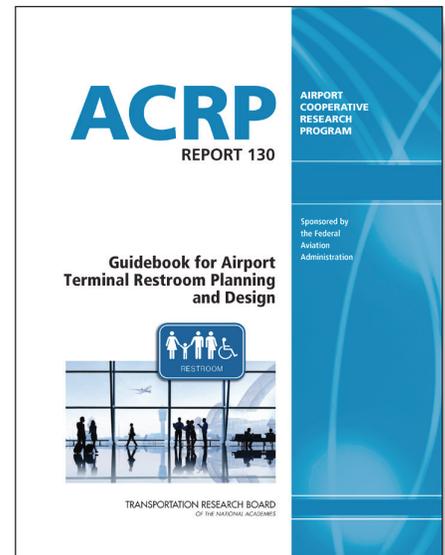
Improving Customer Experience at Airport Restroom Facilities

As passenger expectations and operational and maintenance needs change over time, airports are paying greater attention to restroom design when planning improvements to terminal facilities.

ACRP Report 130: Guidebook for Airport Terminal Restroom Planning and Design is a resource for airport staff as they work to provide quality restroom facilities for their customers. Every airport faces unique challenges and *ACRP Report 130* presents a variety of tools for airports and designers to use to meet those challenges. Rather than a comprehensive guide, the report aims to help airport practitioners navigate through creative hurdles and unforeseen issues.

The Austin–Bergstrom International Airport (ABIA) in spring 2013 began a terminal renovation project that included remodeling its restroom facilities. ABIA has partnered with consulting firms Sunland Group Inc., BLGY Architecture, and Corgan Associates on the restroom improvements since the project’s launch. The goals of the remodeling are twofold: to improve the convenience of the customers and the maintenance staff, while also improving visual aspects of the restrooms.

Rohini Kumarage, PMP, aviation project manager for the City of Austin, Texas, leads the renovation project and routinely references ACRP



research reports in her work. “ACRP has something on every topic we could think of,” says Kumarage. In her review of *ACRP Report 130*, published after ABIA completed some initial renovations, Kumarage found that many of the restroom remodeling plans aligned with the report’s guidance. Going forward, Kumarage continues to reference the report for additional ideas to ensure customer convenience in the terminal restrooms.

As outlined in *ACRP Report 130*, cleanliness and customer safety are two principal aspects in restroom design. To this end, ABIA followed the report’s recommendation to install touch-free automatic sensors to the toilets and sink faucets. A flip-down step at the sink allows children to wash their hands unassisted. The floor was replaced with a new terrazzo floor and base that is more durable and water resistant than the original ceramic tile and requires less maintenance. Hand dryers were installed next to the faucets



Above: Renovated terminal restroom at Austin–Bergstrom International Airport (ABIA). Airport staff referenced ACRP Report 130 to improve remodeling plans. The renovation features contemporary design materials including granite sink basins and countertops, wood veneer and stainless steel wall panels, and LED lighting strips. Photo courtesy of ABIA.

continued on page 2

Airport Terminal Restroom Planning and Design—continued

and above the sinks as recommended by the report to further protect against water damage to the floor.

Traffic flow is also an important aspect of restroom design. Based on recommendations from *ACRP Report 130*, ABIA added two new features to its remodeling plan: a grooming area and a full-length mirror. Both features offer convenience to customers in an area separate from the main stall area and free up space at the sinks. These features are typically placed along the exit path, but away from incoming and outgoing customers not using the grooming area or mirror.

Hooks for holding personal belongings are another new addition to the restrooms at ABIA. *ACRP Report 130* recommends a strong metal for secure mounting and placement either in the toilet stall or near the urinals and sinks. ABIA positioned hooks at the end of the sinks closest to the exits in order to help ensure that customers would not accidentally leave their personal belongings.

Restroom design also incorporated considerations for making maintenance easier. Heavy gauge metal stud framing was added to reinforce the walls and designed to provide adequate

spacing for personnel working in the plumbing chase. Due to the need for regular plumbing maintenance under the sinks, ABIA installed continuous stainless steel wainscoting to allow for full access, as well as removable metal ceiling panels and sliding panels for other high maintenance areas.

While restroom function is the highest priority when attending to customer convenience, aesthetics also play an important role in improving the customer experience. ABIA organized its redesign around clean modern lines and materials commonly used in contemporary interiors. Glass-encased wood veneer wall panels were installed between mirrors above the sinks to add warmth. Light paint colors were chosen to increase the perception of cleanliness. Long, narrow LED lighting strips were added to give the restrooms a modern look while also decreasing the amount of maintenance required. Six-foot tall toilet partitions, made from solid surface polyester/acrylic resin, were installed to increase customer privacy. The resin surface can be sanded when needed to remove graffiti and scratches.

The design for the sinks and countertops improved the aesthetics

Airport terminal restrooms are used by the full diversity of humanity in terms of mobility, age, gender, and culture. The further an airport goes to accommodate this spectrum, the more likely a traveler will choose one hub over another.

—ACRP Report 130:
Guidebook for Airport Terminal Restroom Planning and Design

as well as cleanliness and ease of maintenance. The sink basins have a unique washplane design, with two granite slabs forming a continuous trough with a center stainless steel slot drain. This keeps water away from the user and provides easy access for maintenance staff to clean the drain.

Lessons learned from the original restroom redesign and early renovation work prompted ABIA to make some adjustments to its remodeling plans. The updated redesign and remodeling plans also will be in line with the recommendations from *ACRP Report 130*. “ACRP offers such good reference materials; you can learn a lot from them,” says Kumarage. “It helped us think of practical ideas that will result in new restrooms that will meet customer needs and require less maintenance.”



Above: Remodeling improvements to the terminal restrooms at Austin–Bergstrom International Airport (ABIA) include solid surface sink basins with touch-free faucets and hand dryers (left photo), metal stall doors with full louvers (center photo), and updated wall treatments featuring locally available limestone and pecan wood materials. ABIA staff used *ACRP Report 130* to help guide their restroom redesign and remodeling plans. Photos courtesy of ABIA.

ACKNOWLEDGMENT OF SPONSORSHIP: This work was sponsored by the Federal Aviation Administration and was conducted in the Airport Cooperative Research Program, which is administered by the Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine.

DISCLAIMER: The opinions and conclusions expressed or implied in ACRP publications are those of the research agencies. They are not necessarily those of the Transportation Research Board or the program sponsors.

Preparing the Next Generation of Airport Leaders

On a Sunday evening in February 2013, 20 airport professionals from Florida gathered in Tampa for the inaugural session of Florida's Airport Leadership Development Program—an exciting new education initiative built upon the research and curricula contained in *ACRP Report 75: Airport Leadership Development Program*.

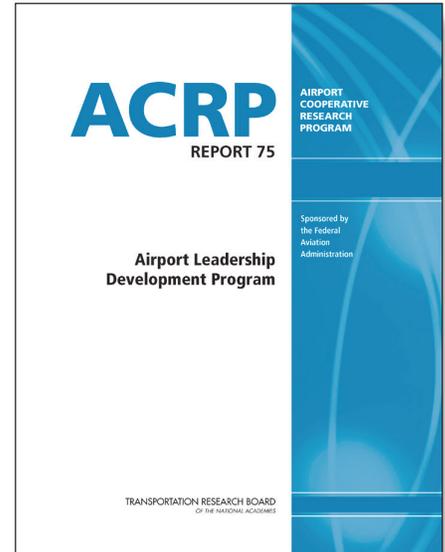
The successful program, now in its fourth year, is a collaborative effort between the Florida Department of Transportation (FDOT) Aviation and Spaceports Office, the Florida Airports Council (FAC), the Center for Urban Transportation Research (CUTR) at the University of South Florida, and Direct Effect Solutions. FDOT supports the program financially, while the FAC is responsible for its promotion. Michael Audino from CUTR, working with subcontractor Mindy Price from Direct Effect Solutions, facilitates the training course. Audino chaired the *ACRP Report 75* project panel that oversaw the research, and Price co-authored the report's training curriculum.

In addition to documenting the need for programs to develop future airport leaders, *ACRP Report 75* finds that the current gap in leadership development

is in part because of affordability and availability of pertinent courses. The report's findings also indicate that the leadership skills needed at airports are needed also in other industries, but the circumstances in which airport leaders apply the skills are unique.

"According to the research, most airport leaders receive some supervisory training to meet mandatory technical requirements. But after that, there may be limited or even no additional leadership-specific courses," says Bill Johnson, former executive director of the FAC. "Further, the report found that existing and emerging leaders aren't learning the skills needed to lead an organization as complex as an airport."

The 3½ day training and education program provides participants greater knowledge and skills they can apply immediately to circumstances at their airport, and helps participants acquire tools and techniques to focus energy on leadership appropriate to the immediate needs in their current airport environments. The program also helps participants expand their self-awareness and design a developmental roadmap to guide their leadership journey.



Since its inception, 150 professionals from 40 different Florida airports have completed the program. To date, 16 Florida airports have sent three or more representatives to the class and six Florida airports have seven or more graduates. The impact of the training is perhaps best demonstrated by the fact that 33 of the graduates have moved their careers forward either through a promotion or by accepting a new position.

According to Aaron Smith, state aviation manager for FDOT, many airport leaders and most future airport leaders need this training. "We reviewed *ACRP Report 75* and agreed with their conclusion—today's airport leaders are lacking [programs designed to teach] effective leadership skills, and the training and education received by these airport leaders is not current to the needs for leading the dynamically changing airport environments of today."

Course participants begin their leadership training journey several weeks prior to

continued on page 2



Above: Inaugural class of Florida's Airport Leadership Development Program, a collaborative education initiative built upon the research and curricula contained in *ACRP Report 75*. Front row (left to right): Erik Treudt, Cyrus Callum, Cynthia Barrow, Bill Johnson, Debra Lemke, Clara Bennett, Nina Demeo, Terry Lloyd, Tom Jewsbury, Michael Stewart, and Mindy Price. Back row (left to right): Alan Penska, Brian Hunter, Andy Wilson, James Parrish, Jeff Bunting, Ted Soliday, George Stokus, Richard Cloutier, and Michael Audino.

Preparing the Next Generation of Airport Leaders—continued

the first day of class. Each participant must complete a “360 degree” assessment instrument before they arrive on the USF campus. Course facilitator Mindy Price calls this the “ticket for admission.” The 360 assessment requires participants to capture input from their organizational peers, organizational subordinates, and a small group of individuals who hold higher positions within the participant’s organizational structure. These audiences provide a “360 degree” view of perceptions of leadership behaviors in the current environment that the participants can compare against their own ratings. The insights afforded by the 360 assessment helps participants focus on specific leadership topics during the training.

The first full day of training focuses on self-management and leadership fundamentals. Participants learn about and begin to formulate their personal leadership “brand.” Participants discuss various leadership styles, their personal leadership journey, leadership passages, and “followership”—a concept new to many participants. This first day includes increasing awareness of participant’s communication and conflict style that are demonstrated in their day-to-day behaviors at work. The topic of “generational differences” is also discussed, as we now have five generations working side-by-side in the workforce.

During the second day of training, participants focus on leadership engagement and competencies and address relationship building, motivating employees, performance management, critical thinking, decision making, building a business case, and negotiation topics. On the final day, participants concentrate on leadership application and focus on developing culture, strategy execution, and change management.

Throughout the 3½ days, participants have an opportunity to apply what they have learned through four “assessment centers.” Each of the assessment centers creates an opportunity for class facilitators to observe whether key learning objectives need to be reinforced or reviewed based on the participant’s ability to deliver. The four assessment centers are:

- Conflict Management,
- Performance Management,
- Negotiation, and
- Culminating Commitments to Change.

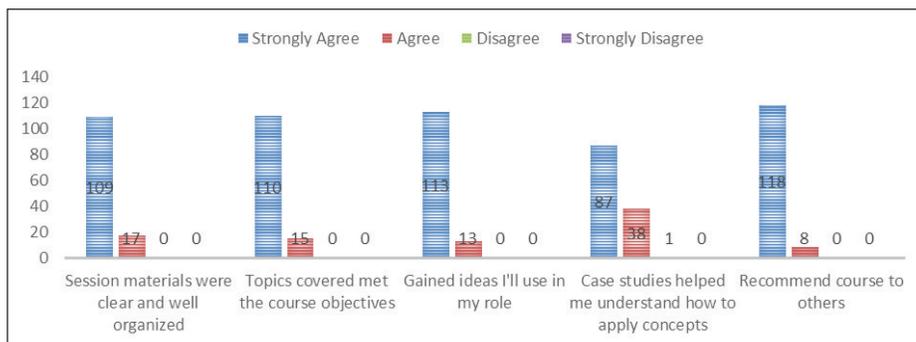
The culminating assessment center activity provides participants the opportunity to compile what they’ve learned throughout the course and create a personal leadership development roadmap, which participants present to their fellow classmates. The quality of the curriculum and the facilitators is graphically demonstrated in the bar chart below, which reveals more

“The Airport Leadership Development class was by far one of the best leadership training classes that I’ve had the privilege to attend. Highly qualified facilitators with professional aviation experience provided real-life applications that pertain to day-to-day leadership practices and principles within the airport industry. I highly recommend this class to my fellow airport colleagues and peers.”

—Tom Jewsbury, St. Petersburg / Clearwater International Airport

than 93% of graduates would recommend this course to their colleagues and peers.

Michael Stewart, director of Governmental Affairs for the Jacksonville Aviation Authority and former president of the FAC is committed to making the ACRP-produced curriculum sustainable on a long-term basis. “It can have such an impact on developing future leadership,” he explains. “There is a lot of good young talent out there, but they need opportunities presented to them that will help them reach the next step on their career ladder. This course focuses on helping them define a direction instead of just grabbing the next job that may come along.”



Above: Survey data (through March 2016) from graduates of Florida’s Airport Leadership Development Program, which was developed using the research and curricula presented in ACRP Report 75. The bar chart on the far right shows that more than 93% of graduates would recommend the training course to others.

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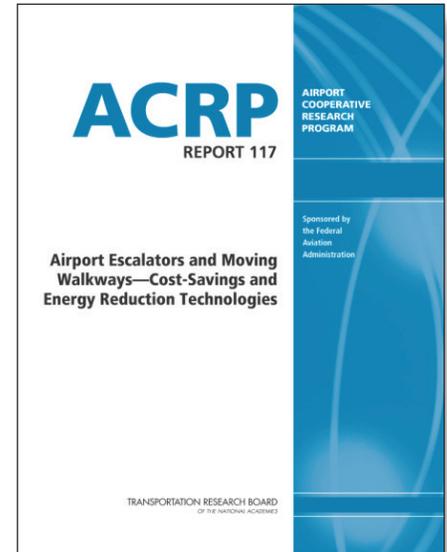
Moving Customers, Cost-Savings and Energy Reduction in the Right Direction

Airports use escalators and moving walkways to carry customers safely and efficiently between floors and over long walking distances. While these devices improve customer experience, they often can have significant maintenance and energy costs, accounting for up to five percent of electric energy use in airports.

New escalator and moving walkway technologies offer airports great potential for cost savings and reduced energy use. In addition, recent safety code changes for these devices allow for variation of their speed, expanding the options for airport operators for modernizing their equipment with more sustainable components.

ACRP Report 117: Airport Escalators and Moving Walkways—Cost-Savings and Energy Reduction Technologies is a comprehensive resource designed to help airport managers in identify energy savings technologies currently available for these devices. The report includes information on the selection, implementation, benefits, and limitations of each technology.

A spreadsheet-based financial tool accompanies the guidebook, enabling users to input their airports' particular requirements. The tool then provides a summary of each technology's potential energy savings and financial considerations to help determine which technologies are appropriate for the airport.

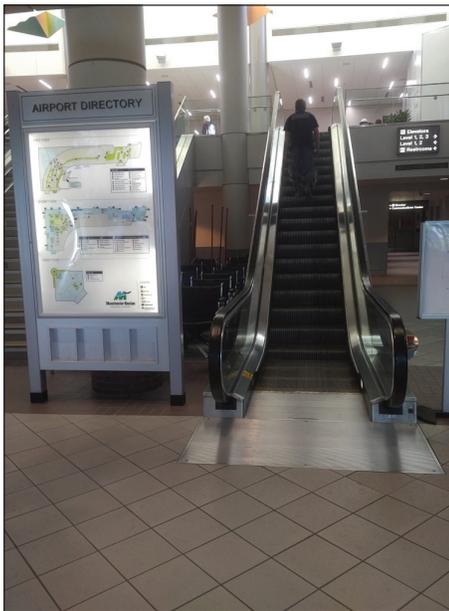


ACRP Report 117 notes that some states have yet to adopt the latest U.S. safety codes for energy saving technologies, such as those that would allow the use of escalators and moving walkways with variable-speed intermittent drives. The guidance recommends completion of a safety analysis and review of current codes prior to installing any of the technologies described in the report.

Carlton Braley is assistant airport director of operations and facilities at the Manchester-Boston Regional Airport (MHT). According to Braley, *ACRP Report 117* helped with the decision to install energy-saving variable demand/variable speed motors on the moving walkways and escalators at MHT.

“As a small hub airport we have just over two million passengers coming

continued on page 2



Above: Escalators at the Manchester-Boston Regional Airport (MHT). *ACRP Report 117* helped inform the airport's decision to install variable speed / variable demand motors on its escalators to reduce energy use and operational costs. Photos courtesy of MHT.

Airport Escalators and Moving Walkways—continued

in and out of our facility in a year,” noted Braley. “Within our building, we have nine escalators and four moving walkways. We installed new motors on them that operate at lower energy until there is a demand. The moving walkways and escalators run at the same speed but not as much torque is used until somebody steps on them, until it is required. So far we have had no issues with the new motors.”

MHT also used *ACRP Report 117* as a reference when deciding to install LED lighting and motion detection on moving walkways to reduce energy use. The report also provided MHT with information regarding best practices in the maintenance of escalators and moving walkways, such as cleaning escalator components regularly as well as lubricating components in order to reduce friction-related energy losses. Braley noted that these best practices had been in place at MHT prior to reading *ACRP Report 117*, but the report “drew attention to these practices so now we do it more often.”

Braley, who has worked at MHT for over 21 years, has used multiple ACRP reports to gather information on various operational, maintenance, and security topics. “I wish I could remember them all,” said Braley.

In addition to *ACRP Report 117*, for example, Braley has referenced *ACRP Report 67* to understand passenger flow as it relates to the locations of elevators and escalators. In his oversight of MHT’s snow removal and winter operations, Braley has relied on guidance in *ACRP Synthesis 12* to help prevent vehicle-aircraft incidents during winter and low-visibility weather. Braley also has studied *ACRP Report 1* on Safety Management Systems (SMS), which helps airports identify and address safety problems before aircraft accidents and incidents occur.

“I’ve referenced nearly every ACRP publication that deals with human factors, winter operations, and both

Manufacturers offer multiple energy saving technologies for escalators and moving walkways. This report and the accompanying financial tool provide a resource to help airport managers identify the right energy saving technology for a given airport and estimate the potential savings that would result from the installation of an energy saving technology.

—ACRP Report 117:
Airports Escalators and
Moving Walkways—Cost-Savings and
Energy Reduction Technologies



Above: Moving walkways at Manchester-Boston Regional Airport (MHT). Staff at MHT referenced *ACRP Report 117* in the decision to install lower energy motors, LED lighting, and motion detection switches on moving walkways to reduce energy use at the airport. Photos courtesy of MHT.

of the SMS volumes,” Braley recalled. “There’s a ton of stuff, right down to shift scheduling. I have a couple of publications on my desk now. I’ll look for ACRP publications in the library if I’m having a unique issue.”

“We can reference information from the ACRP for justification for improvements related to new equipment, budget changes, or aiding and implementing a new regulation,” Braley added. “We don’t have to re-invent the wheel when we’re trying to solve a problem.”

ACKNOWLEDGMENT OF SPONSORSHIP: This work was sponsored by the Federal Aviation Administration and was conducted in the Airport Cooperative Research Program, which is administered by the Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine.

DISCLAIMER: The opinions and conclusions expressed or implied in ACRP publications are those of the research agencies. They are not necessarily those of the Transportation Research Board or the program sponsors.

APPENDIX A. Publications of the Airport Cooperative Research Program

Research Reports		
No.	Proj. No.	Title, Pages, Publication Year
1	11-02/Task 04	Safety Management Systems for Airports, Vol. 1: Overview, 40 p. (2007)
1	04-05	Safety Management Systems for Airports, Vol. 2: Guidebook, 174 p. (2009)
2	11-02/Task 03	Evaluation and Mitigation of Aircraft Slide Evacuation Injuries, 86 p. (2008)
3	04-01	Analysis of Aircraft Overruns and Undershoots for Runway Safety Areas, 58 p. (2008)
4	11-02/Task 02	Ground Access to Major Airports by Public Transportation, 214 p. (2008)
5	11-02/Task 05	Quarantine Facilities for Arriving Air Travelers: Identification of Planning Needs and Costs, 34 p. (2008)
6	02-04	Research Needs Associated with Particulate Emissions at Airports, 64 p. (2008)
7	02-03	Aircraft and Airport-Related Hazardous Air Pollutants: Research Needs and Analysis, 64 p. (2008)
8	04-02	Lightning-Warning Systems for Use by Airports, 80 p. (2008)
9	02-04A	Summarizing and Interpreting Aircraft Gaseous and Particulate Emissions Data, 90 p. (2008)
10	07-01	Innovations for Airport Terminal Facilities, 78 p. (2008)
11	02-06	Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories (& WOD 2), 62 p. (2009)
12	05-01	An Airport Guide for Regional Emergency Planning for CBRNE Events, 52 p. (2009)
13	01-03	Integrating Airport Information Systems, 98 p. (2009)
14	02-02	Deicing Planning Guidelines and Practices for Stormwater Management Systems, 208 p. (2009)
15	02-05	Aircraft Noise: A Toolkit for Managing Community Expectations (& CD 70), 162 p. (2009)
16	01-01	Guidebook for Managing Small Airports (& WOD 5), 140 p. (2009)
17	10-04	Airports and the Newest Generation of General Aviation Aircraft, Vol. 1: Forecast, 36 p. (2009)
17	10-04	Airports and the Newest Generation of General Aviation Aircraft, Vol. 2: Guidebook, 124 p. (2009)
18	03-08	Passenger Air Service Development Techniques, 168 p. (2009)
19	01-06	Developing an Airport Performance-Measurement System (& CD 79), 154 p. (2010)
19A	01-09	Resource Guide to Airport Performance Indicators (& CD 94), 288 p. (2011)
20	03-09	Strategic Planning in the Airport Industry (& CD 73), 136 p. (2009)
21	01-05	A Guidebook for Selecting Airport Capital Project Delivery Methods, 100 p. (2009)
22	06-01	Helping Airport and Air Carrier Employees Cope with Traumatic Events, 82 p. (2009)
23	03-02	Airport Passenger-Related Processing Rates Guidebook, 126 p. (2009)
24	10-03	Guidebook for Evaluating Airport Parking Strategies and Supporting Technologies, 162 p. (2009)
25	07-05	Airport Passenger Terminal Planning and Design, Vol. 1: Guidebook, 426 p. (2010)
25	07-04	Airport Passenger Terminal Planning and Design, Vol. 2: Spreadsheet Models and User's Guide (& CD 75), 82 p. (2010)
26	03-04	Guidebook for Conducting Airport Users Surveys, 256 p. (2009)
27	03-03	Enhancing Airport Land Use Compatibility, Vol. 1: Land Use Fundamentals and Implementation Resources, 316 p. (2010)
27	03-03	Enhancing Airport Land Use Compatibility, Vol. 2: Land Use Survey and Case Study Summaries, 296 p. (2010)
28	01-04	Marketing Guidebook for Small Airports, 196 p. (2010)
29	07-03	Developing Improved Civil Aircraft Arresting Systems, 206 p. (2010)
30	10-05	Reference Guide on Understanding Common Use at Airports (& CD 74), 244 p. (2010)
31	03-10	Innovative Approaches to Addressing Aviation Capacity Issues in Coastal Mega-regions, 178 p. (2010)
32	04-06	Guidebook for Addressing Aircraft/Wildlife Hazards at General Aviation Airports, 192 p. (2010)
33	01-02	Guidebook for Developing and Managing Airport Contracts (& CD 81), 82 p. (2011)
34	10-06	Handbook to Assess the Impacts of Constrained Parking at Airports (& CD 80), 112 p. (2010)
35	10-02	Planning for Offsite Airport Terminals, 94 p. (2010)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
36	01-07	Airport/Airline Agreements—Practices and Characteristics, 112 p. (2010)
37	03-06	Guidebook for Planning and Implementing Automated People Mover Systems at Airports (& CD 82), 226 p. (2010)
37A	03-07	Guidebook for Measuring Performance of Automated People Mover Systems at Airports, 134 p. (2012)
38	03-13	Understanding Airspace, Objects, and Their Effects on Airports, 164 p. (2010)
39	09-01	Recommended Guidelines for the Collection and Use of Geospacially Referenced Data for Airfield Pavement Management, 108 p. (2010)
40	07-02	Airport Curbside and Terminal Area Roadway Operations, 40 p. (2010)
41	10-07	Guide to the Decision-Making Tool for Evaluating Passenger Self-Tagging (& CD 83; & WOD 10), 70 p. (2011)
42	08-01	Sustainable Airport Construction Practices (& CD 88), 320 p. (2011)
43	02-13	Guidebook of Practices for Improving Environmental Performance at Small Airports (& CD 89), 364 p. (2011)
44	03-11	A Guidebook for the Preservation of Public-Use Airports (& CD 102), 62 p. (2011)
45	10-01	Optimizing the Use of Aircraft Deicing and Anti-Icing Fluids, 180 p. (2011)
46	02-07	Handbook for Analyzing the Costs and Benefits of Alternative Aviation Turbine Engine Fuels at Airports (& CD 91), 78 p. (2011)
47	01-08	Guidebook for Developing and Leasing Airport Property, 140 p. (2011)
48	03-15	Impact of Jet Fuel Price Uncertainty on Airport Planning and Development (& CD 93), 72 p. (2011)
49	01-10	Collaborative Airport Capital Planning Handbook, 136 p. (2011)
50	04-08	Improved Models for Risk Assessment of Runway Safety Areas (& CD 98), 182 p. (2011)
51	04-09	Risk Assessment Method to Support Modification of Airfield Separation Standards, 136 p. (2011)
52	07-06	Wayfinding and Signing Guidelines for Airport Terminals and Landside, 252 p. (2011)
53	02-11	A Handbook for Addressing Water Resource Issues Affecting Airport Development Planning, 170 p. (2011)
54	01-11	Resource Manual for Airport In-Terminal Concessions, 268 p. (2011)
55	03-05	Passenger Level of Service and Spatial Planning for Airport Terminals, 70 p. (2011)
56	02-10	Handbook for Considering Practical Greenhouse Gas Emission Reduction Strategies for Airports (& CD 95), 158 p. (2011)
57	11-02/Task 18	The Carbon Market: A Primer for Airports, 80 p. (2011)
58	11-02/Task 15	Airport Industry Familiarization and Training for Part-Time Airport Policy Makers, 64 p. (2011)
59	01-12	Information Technology Systems at Airports: A Primer, 108 p. (2012)
60	02-18	Guidelines for Integrating Alternative Jet Fuel into the Airport Setting, 136 p. (2012)
61	10-09	Elimination or Reduction of Baggage Recheck for Arriving International Passengers, 142 p. (2012)
62	04-07	Airport Apron Management and Control Programs, 64 p. (2012)
63	02-03A	Measurement of Gaseous HAP Emissions from Idling Aircraft as a Function of Engine and Ambient Conditions, 112 p. (2012)
64	02-25	Handbook for Evaluating Emissions and Costs of APUs and Alternative Systems (& CD 113), 90 p. (2012)
65	10-10	Guidebook for Airport Irregular Operations (IROPS) Contingency Planning, 258 p. (2012)
66	01-14	Considering and Evaluating Airport Privatization (& CD 109), 124 p. (2012)
67	03-14	Airport Passenger Conveyance Systems Planning Guidebook (& CD 110), 68 p. (2012)
68	07-07	Guidebook for Evaluating Terminal Renewal Versus Replacement Options (& CD 112), 152 p. (2012)
69	01-16	Asset and Infrastructure Management for Airports: Primer and Guidebook, 136 p. (2012)
70	10-08	Guidebook for Implementing Intelligent Transportation Systems Elements to Improve Airport Traveler Access Information (& CD 114), 138 p. (2012)
71	02-08	Guidance for Quantifying the Contribution of Airport Emissions to Local Air Quality (& CD 115), 76 p. (2012)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
72	02-14	Guidebook for Selecting Methods to Monitor Airport and Aircraft Deicing Materials, 276 p. (2012)
73	04-10	Airport-to-Airport Mutual Aid Programs, 192 p. (2012)
74	01-18	Application of Enterprise Risk Management at Airports (& CD 117), 72 p. (2012)
75	06-02	Airport Leadership Development Program (& CD 133), 334 p. (2013)
76	03-22	Addressing Uncertainty about Future Airport Activity Levels in Airport Decision Making, 152 p. (2012)
77	01-17	Guidebook for Developing General Aviation Airport Business Plans (& CD 119), 174 p. (2012)
78	02-16	Airport Ground Support Equipment (GSE): Emission Reduction Strategies, Inventory, and Tutorial (& CD 123), 114 p. (2012)
79	03-17	Evaluating Airfield Capacity (& CD 124), 172 p. (2012)
80	02-22	Guidebook for Incorporating Sustainability into Traditional Airport Projects (& CD 125), 104 p. (2012)
81	02-19	Winter Design Storm Factor Determination for Airports, 60 p. (2012)
82	03-12	Preparing Peak Period and Operational Profiles—Guidebook (& CD 126; & WOD 14), 146 p. (2013)
83	02-36	Assessing Opportunities for Alternative Fuel Distribution Programs (& CD 129), 128 p. (2013)
84	02-21	Guidebook for Preparing Airport Emissions Inventories for State Implementation Plans (& CD 131), 68 p. (2013)
85	03-21	Developing and Maintaining Support for Your Airport Capacity Project, 40 p. (2013)
86	02-12	Environmental Optimization of Aircraft Departures: Fuel Burn, Emissions, and Noise (& CD 136), 104 p. (2013)
87	01-20	Procuring and Managing Professional Services for Airports, 120 p. (2013)
88	04-11	Guidebook on Integrating GIS in Emergency Management at Airports (& CD 139), 138 p. (2013)
89	02-24	Guidelines for Airport Sound Insulation Programs, 324 p. (2013)
90	03-25	Impact of Regulatory Compliance Costs on Small Airports (& WOD 15 Vol. 1; & WOD 15 Vol. 2), 92 p. (2013)
91	02-20A	Infectious Disease Mitigation in Airports and on Aircraft, 38 p. (2013)
92	10-11	Guidebook to Creating a Collaborative Environment Between Airport Operations and Maintenance, 148 p. (2013)
93	03-18	Operational and Business Continuity Planning for Prolonged Airport Disruptions (& CD 140), 152 p. (2013)
94	04-12	Integrating Web-Based Emergency Management Collaboration Tools into Airport Operations—A Primer, 56 p. (2013)
95	04-13	Integrating Community Emergency Response Teams (A-Certs) at Airports, 168 p. (2013)
96	07-09	Apron Planning and Design Guidebook, 168 p. (2013)
97	02-17	Measuring PM Emissions from Aircraft Auxiliary Power Units, Tires, and Brakes, 52 p. (2013)
98	03-26	Understanding Airline and Passenger Choice in Multi-Airport Regions, 100 p. (2013)
99	02-29	Guidance for Treatment of Airport Stormwater Containing Deicers, 330 p. (2013)
100	02-15	Recycling Best Practices—A Guidebook for Advancing Recycling from Aircraft Cabins, 86 p. (2014)
101	09-02	Best Practices Manual for Working In or Near Airport Movement Areas (& CD 150), 62 p. (2014)
102	02-33	Guidance for Estimating Airport Construction Emissions (& CD 142), 138 p. (2014)
103	10-13	A Guidebook for Integrating NIMS for Personnel and Resources at Airports, 128 p. (2014)
104	03-20	Defining and Measuring Aircraft Delay and Airport Capacity Thresholds, 74 p. (2014)
105	02-31	Guidelines for Ensuring Longevity in Airport Sound Insulation Programs, 56 p. (2014)
106	10-14	Being Prepared for IROPS: A Business-Planning and Decision-Making Approach (& CD 144), 88 p. (2014)
107	04-14	Development of a Runway Veer-Off Location Distribution Risk Assessment Model and Reporting Template (& CD 145), 136 p. (2014)
108	02-38	Guidebook for Energy Facilities Compatibility with Airports and Airspace, 94 p. (2014)
109	07-08	Improving Terminal Design to Increase Revenue Generation Related to Customer Satisfaction, 114 p. (2014)
110	09-06	Evaluating Impacts of Sustainability Practices on Airport Operations and Maintenance (& CD 149), 132 p. (2014)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
111	01-21	A Guidebook for Airport-Airline Consortiums, 132 p. (2014)
112	04-15	Airport Terminal Incident Response Planning (& CD 151), 98 p. (2014)
113	07-10	Guidebook on General Aviation Facility Planning, 146 p. (2014)
114	10-12	Guidebook for Through-the-Fence Operations, 186 p. (2014)
115	02-32	Understanding Microbial Biofilms in Receiving Waters Impacted by Airport Deicing Activities, 84 p. (2014)
116	01-22	Guidebook for Successfully Assessing and Managing Risks for Airport Capital and Maintenance Projects, 130 p. (2014)
117	07-11	Airport Escalators and Moving Walkways—Cost-Savings and Energy Reduction Technologies (& CD 156), 50 p. (2014)
118	03-23	Integrating Aviation and Passenger Rail Planning (& CD 157), 276 p. (2015)
119	02-28	Prototype Airport Sustainability Rating System—Characteristics, Viability, and Implementation Options, 242 p. (2014)
120	01-19	Airport Capital Improvements: A Business Planning and Decision-Making Approach (& CD 158; & WOD 18), 70 p. (2014)
121	01-15	Innovative Revenue Strategies—An Airport Guide, 304 p. (2015)
122	11-02/Task 21	Innovative Airport Responses to Threatened and Endangered Species (& CD 160), 60 p. (2015)
123	10-15	A Guidebook for Airport Winter Operations, 138 p. (2015)
124	09-03	Airport Parking Garage Lighting Solutions, 74 p. (2015)
125	09-08	Balancing Airport Stormwater and Bird Hazard Management (& CD 159), 56 p. (2015)
126	01-25	A Guidebook for Increasing Diverse and Small Business Participation in Airport Business Opportunities, 104 p. (2015)
127	01-23	A Guidebook for Mitigating Disruptive WiFi Interferences at Airports, 106 p. (2015)
128	11-02/Task 23	Alternative IT Delivery Methods and Best Practices for Small Airports, 122 p. (2015)
129	03-27	Evaluating Methods for Counting Aircraft Operations at Non-Towered Airports, 170 p. (2015)
130	07-12	Guidebook for Airport Terminal Restroom Planning and Design (& CD 164), 86 p. (2015)
131	04-16	A Guidebook for Safety Risk Management for Airports, 216 p. (2015)
132	03-28	The Role of U.S. Airports in the National Economy, 68 p. (2015)
133	02-34	Best Practices Guidebook for Preparing Lead Emission Inventories from Piston-Powered Aircraft with the Emission Inventory Analysis Tool (& CD 167; & WOD 21), 46 p. (2015)
134	02-39	Applying Whole Effluent Toxicity Testing to Aircraft Deicing Runoff, 120 p. (2015)
135	02-42	Understanding Airport Air Quality and Public Health Studies Related to Airports, 102 p. (2015)
136	10-17	Implementing Integrated Self-Service at Airports (& CD 168), 114 p. (2015)
137	10-19	Guidebook for Advancing Collaborative Decision Making (CDM) at Airports, 82 p. (2015)
138	10-18	Preventative Maintenance at General Aviation Airports: Primer and Guidebook (& CD 170), 180 p. (2015)
139	09-04	Optimizing Airport Building Operations and Maintenance Through Retrocommissioning: A Whole-Systems Approach (& CD 169), 192 p. (2015)
140	05-02	Guidebook on Best Practices for Airport Cybersecurity (& CD 171), 160 p. (2015)
141	01-24	Renewable Energy as an Airport Revenue Source, 212 p. (2015)
142	03-29	Effects of Airline Industry Changes on Small- and Non-Hub Airports, 194 p. (2015)
143	03-24	Guidebook for Air Cargo Facility Planning and Development (& CD 174; & WOD 24), 120 p. (2015)
144	03-30	Unmanned Aircraft Systems (UAS) at Airports: A Primer, 94 p. (2015)
145	04-17	Applying an SMS Approach to Wildlife Hazard Management (& CD 173), 242 p. (2015)
146	10-16	Commercial Ground Transportation at Airports: Best Practices (& WOD 25), 156 p. (2015)
147	02-40	Climate Change Adaptation Planning: Risk Assessment for Airports (& CD 175), 128 p. (2015)
148	09-09	LED Airfield Lighting System Operation and Maintenance, 86 p. (2015)
149	02-46	Improving Ground Support Equipment Operational Data for Airport Emissions Modeling, 152 p. (2015)

Research Reports

No.	Proj. No.	Title, Pages, Publication Year
150	03-34	NextGen for Airports, Vol. 1: Understanding the Airport's Role in Performance-Based Navigation: Resource Guide, 164 p. (2016)
150	01-28	NextGen for Airports, Vol. 2: Engaging Airport Stakeholders: Guidebook, 88 p. (2016)
150	01-27	NextGen for Airports, Vol. 3: Resources for Airports, 96 p. (2016)
150	09-12	NextGen for Airports, Vol. 4: Leveraging NextGen Spatial Data for Airports: Guidebook, 104 p. (2016)
151	02-56	Developing a Business Case for Renewable Energy at Airports (& CD 177), 168 p. (2016)
152	02-51	Evaluating Methods for Determining Interior Noise Levels Used in Airport Sound Insulation Programs, 148 p. (2016)
153	10-23	Guidebook for IROPS Stakeholder Communication & Coordination (& CD 180), 234 p. (2016)
154	02-59	Water Efficiency Management Strategies for Airports (& CD 181), 144 p. (2016)
155	03-31	Aligning Community Expectations with Airport Roles: User Guide (& WR A03-31) (In Production)
156	10-21	Guidebook for Managing Compliance with Federal Regulations: An Integrated Approach (& CD 182), 64 p. (2016)
157	01-26	Improving the Airport Customer Experience, 240 p. (2016)
158	02-50	Deriving Benefits from Alternative Aircraft-Taxi Systems, 28 p. (2016)
159	09-11	Pavement Maintenance Guidelines for General Aviation Airport Management, 234 p. (2016)
160	02-49	Addressing Significant Weather Impacts on Airports: Quick Start Guide and Toolkit, 90 p. (2016)
161	03-35	Guidelines for Improving Airport Services for International Customers, 248 p. (2016)
162	02-57	Guidebook for Assessing Airport Lead Impacts, 32 p. (2016)
163	03-32	Guidebook for Preparing and Using Airport Design Day Flight Schedules, 158 p. (2016)
164	02-54	Exhaust Emissions from In-Use General Aviation Aircraft, 122 p. (2016)
165	02-65	Tracking Alternative Jet Fuel, 66 p. (2016)

Research Results Digests

No.	Proj. No.	Title, Pages, Publication Year
1	11-03	Synthesis of Information Related to Airport Practices, 4 p. (2007)
2	11-02/Task 01	Model for Improving Energy Use in U.S. Airport Facilities, 20 p. (2007)
3	11-03	Synthesis of Information Related to Airport Practices, 4 p. (2007)
4	11-03	Synthesis of Information Related to Airport Practices, 4 p. (2009)
5	11-02/Task 07	Current and Emerging Issues Facing the Airport Industry, 32 p. (2009)
6	04-03	Guidance for Identifying and Mitigating Approach Lighting System Hazards, 16 p. (2009)
7	11-02/Task 11	A Summary of How Proposed Firefighting Standards Would Impact Airports, 20 p. (2009)
8	11-03	Synthesis of Information Related to Airport Practices, 4 p. (2010)
9	02-01	Alternative Aircraft and Pavement Deicers and Anti-Icing Formulations with Improved Environmental Characteristics, 12 p. (2010)
10	03-01	Light Detection and Ranging (LIDAR) Deployment for Airport Obstruction Surveys, 30 p. (2010)
11	11-02/Task 14	Helping Airports Understand Payment Card Industry Data Security Standard (PCI DSS), 30 p. (2010)
12	11-03	Synthesis of Information Related to Airport Practices, 6 p. (2011)
13	11-03	Synthesis of Information Related to Airport Practices, 8 p. (2012)
14	11-04	Graduate Research Award Program on Public-Sector Aviation Issues, 20 p. (2012)
15	04-07A	Use of Towbarless Tractors at Airports—Best Practices, 16 p. (2012)
16	11-01	Legal Aspects of Airport Programs, 12 p. (2012)
17	11-03	Synthesis of Information Related to Airport Practices, 8 p. (2013)
18	11-03	Synthesis of Information Related to Airport Practices, 8 p. (2014)

Research Results Digests

No.	Proj. No.	Title, Pages, Publication Year
19	11-04	Graduate Research Award Program on Public-Sector Aviation Issues Update: 2008–2013, 20 p. (2014)
20	11-07	Taking Inventory of ACRP Research and the Next Challenges Facing the Airport Industry, 76 p. (2014)
21	11-02/Task 22	Best Practices for General Aviation Aircraft Fuel-Tank Sampling, 20 p. (2014)
22	11-03	Synthesis of Information Related to Airport Practices, 12 p. (2015)
23	11-03	Synthesis of Information Related to Airport Practices, 12 p. (2016)
24	02-44	Recommended Community Noise Model Enhancements to Improve Prediction of Helicopter Activity Impacts, 6 p. (2015)
25	11-04	Graduate Research Award Program on Public-Sector Aviation Issues Update: 2008–2016 (In Production)

Legal Research Digests (Project 11-01)

No.	Topic No.	Title, Pages, Publication Year
1	01-03	Compilation of Airport Law Resources, 38 p. (2008)
2	01-02	Theory and Law of Airport Revenue Diversion, 30 p. (2008)
3	01-04	Survey of Laws and Regulations of Airport Commercial Ground Transportation, 186 p. (2008)
4	01-01	Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters Through December 31, 2007 (CD 68), 0 p. (2008)
5	01-05	Responsibility for Implementation and Enforcement of Airport Land-Use Zoning Restrictions, 68 p. (2009)
6	01-07	The Impact of Airline Bankruptcies on Airports, 62 p. (2009)
7	01-08	Airport Governance and Ownership, 72 p. (2009)
8	01-06	The Right to Self-Fuel, 82 p. (2009)
9	02-03	Case Studies on Community Challenges to Airport Development, 64 p. (2010)
10	02-04	Analysis of Federal Laws, Regulations, and Case Law Regarding Airport Proprietary Rights, 52 p. (2010)
11	03-03	Survey of Minimum Standards: Commercial Aeronautical Activities at Airports, 60 p. (2011)
12	03-01	Fair Disclosure and Airport Impact Statements in Real Estate Transfers, 70 p. (2011)
13	03-06	An Index and Digest of Decisions: Compilation of Airport Law Resources (CD 108), 0 p. (2012)
14	02-05	Achieving Airport-Compatible Land Uses and Minimizing Hazardous Obstructions in Navigable Airspace, 74 p. (2012)
15	03-02	Compilation of State Airport Authorizing Legislation, 108 p. (2012)
16	04-07	Procurement of Airport Development and Planning Contracts, 50 p. (2012)
17	03-05	State and Federal Regulations That May Affect Initiatives to Reduce Airports' GHG Emissions, 70 p. (2012)
18	04-04	Buy America Requirements for Federally Funded Airports, 72 p. (2013)
19	04-02	Legal Issues Related to Developing Safety Management Systems and Safety Risk Management at U.S. Airports, 48 p. (2013)
20	04-01	Airport Responsibility for Wildlife Management, 162 p. (2013)
21	04-05	Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters Through December 2012 (CD 141), 0 p. (2013)
22	04-06	The Role of the Airport Sponsor in Airport Planning and Environmental Reviews of Proposed Development Projects under the National Environmental Policy Act (NEPA) and State Mini-NEPA Laws, 62 p. (2014)
23	05-04	A Guide for Compliance with Grant Agreement Obligations to Provide Reasonable Access to an AIP-Funded Public Use General Aviation Airport, 64 p. (2015)
24	05-02	Sovereign Immunity for Public Airport Operators, 188 p. (2015)

Legal Research Digests (Project 11-01)

No.	Topic No.	Title, Pages, Publication Year
25	04-03	Analysis of Federal Laws, Regulations, Case Law, and Survey of Existing Airport NPDES Permits Regarding Tenant-Operator Responsibilities under NPDES and Stormwater Management BMPs under Owner/Airport's Operating Permits, 82 p. (2015)
26	05-01	Regulations Affecting the Exercise of First Amendment Activities at Airports, 82 p. (2015)
27	05-03	The Fourth Amendment and Airports, 48 p. (2016)
28	06-01	Operational and Legal Issues with Fuel Farms, 36 p. (2016)
29	07-01	Impact of Firearms Laws on Airports (& WOD 29), 66 p. (2016)
30	06-02	Contract Risk Management for Airport Agreements, 40 p. (2016)

Syntheses (Project 11-03)

No.	Topic No.	Title, Pages, Publication Year
1	S01-01	Innovative Finance and Alternative Sources of Revenue for Airports, 52 p. (2007)
2	S03-01	Airport Aviation Activity Forecasting, 32 p. (2007)
3	S04-01	General Aviation Safety and Security Practices, 44 p. (2007)
4	S10-01	Counting Aircraft Operations at Non-Towered Airports, 33 p. (2007)
5	S03-02	Airport Ground Access Mode Choice Models, 151 p. (2008)
6	S10-03	Impact of Airport Pavement Deicing Products on Aircraft and Airfield Infrastructure, 68 p. (2008)
7	S03-03	Airport Economic Impact Methods and Models, 76 p. (2008)
8	S10-02	Common Use Facilities and Equipment at Airports, 132 p. (2008)
9	S02-01	Effects of Aircraft Noise: Research Update on Selected Topics, 100 p. (2008)
10	S02-02	Airport Sustainability Practices, 120 p. (2008)
11	S09-01	Impact of Airport Rubber Removal Techniques on Runways, 116 p. (2008)
12	S04-02	Preventing Aircraft-Vehicle Incidents During Weather Operations and Periods of Low Visibility, 80 p. (2008)
13	S03-05	Effective Practices for Preparing Airport Improvement Program Benefit-Cost Analysis, 76 p. (2009)
14	S03-04	Airport System Planning Practices, 80 p. (2009)
15	S04-03	Identification of the Requirements and Training to Obtain Driving Privileges on Airfields, 52 p. (2009)
16	S02-03	Compilation of Noise Programs in Areas Outside DNL 65, 112 p. (2009)
17	S02-04	Approaches to Integrating Airport Development and Federal Environmental Review Process, 44 p. (2009)
18	S06-01	Aviation Workforce Development Practices, 44 p. (2010)
19	S01-02	Airport Revenue Diversification, 64 p. (2010)
20	S08-01	Airport Terminal Facility Activation Techniques, 136 p. (2010)
21	S10-04	Airport Energy Efficiency and Cost Reduction, 82 p. (2010)
22	S09-02	Common Airport Pavement Maintenance Practices, 112 p. (2011)
23	S04-05	Bird Harassment, Repellent, and Deterrent Techniques for Use on and Near Airports, 40 p. (2011)
24	S02-05	Strategies and Financing Opportunities for Airport Environmental Programs, 228 p. (2011)
25	S03-06	Strategies for Reuse of Underutilized or Vacant Airport Facilities, 72 p. (2011)
26	S04-06	Current Airport Inspection Practices Regarding FOD (Foreign Object Debris/Damage), 96 p. (2011)
27	S06-02	Airport Self-Inspection Practices, 122 p. (2011)
28	S10-06	Investigating Safety Impacts of Energy Technologies on Airports and Aviation, 48 p. (2011)
29	S10-05	Ramp Safety Practices, 68 p. (2011)
30	S01-03	Airport Insurance Coverage and Risk Management Practices, 60 p. (2011)
31	S01-04	Airline and Airline-Airport Consortium to Manage Terminals and Equipment, 102 p. (2011)
32	S04-08	Managing Aerial Firefighting Activities on Airports, 44 p. (2012)
33	S02-06	Airport Climate Adaptation and Resilience, 96 p. (2012)
34	S09-03	Subsurface Utility Engineering Information Management for Airports, 58 p. (2012)

Syntheses (Project 11-03)

No.	Topic No.	Title, Pages, Publication Year
35	S09-04	Issues with Use of Airfield LED Light Fixtures, 44 p. (2012)
36	S06-03	Exploring Airport Employee Commute and Parking Strategies, 70 p. (2012)
37	S04-07	Lessons Learned from Airport Safety Management Systems Pilot Studies, 72 p. (2012)
38	S10-07	Expediting Aircraft Recovery at Airports, 108 p. (2012)
39	S10-09	Airport Wildlife Population Management, 78 p. (2013)
40	S01-05	Issues with Airport Organization and Reorganization, 40 p. (2013)
41	S10-08	Conducting Aeronautical Special Events at Airports, 130 p. (2013)
42	S02-07	Integrating Environmental Sustainability into Airport Contracts, 76 p. (2013)
43	S02-08	Environmental Assessment of Air and High-Speed Rail Corridors, 44 p. (2013)
44	S02-09	Environmental Management System Development Process, 58 p. (2013)
45	S04-09	Model Mutual Aid Agreements for Airports, 64 p. (2013)
46	S01-07	Conducting Airport Peer Reviews, 48 p. (2013)
47	S09-05	Repairing and Maintaining Airport Parking Structures While in Use, 54 p. (2013)
48	S01-06	How Airports Measure Customer Service Performance, 102 p. (2013)
49	S06-04	Helping New Maintenance Hires Adapt to the Airport Operating Environment, 60 p. (2013)
50	S04-11	Effective Cooperation Among Airports and Local and Regional Emergency Management Agencies for Disaster Preparedness and Response, 52 p. (2014)
51	S07-01	Impacts of Aging Travelers on Airports, 36 p. (2014)
52	S10-10	Habitat Management to Deter Wildlife at Airports, 84 p. (2014)
53	S02-10	Outcomes of Green Initiatives: Large Airport Experience, 72 p. (2014)
54	S10-11	Electric Vehicle Charging Stations at Airport Parking Facilities, 70 p. (2014)
55	S03-08	Backcountry Airstrip Preservation, 88 p. (2014)
56	S01-08	Understanding the Value of Social Media at Airports for Customer Engagement, 157 p. (2014)
57	S10-12	Airport Response to Special Events, 148 p. (2014)
58	S04-10	Safety Reporting Systems at Airports, 65 p. (2014)
59	S03-07	Integrating Airport Geographic Information System (GIS) Data with Public Agency GIS, 74 p. (2014)
60	S04-12	Airport Emergency Post-Event Recovery Practices, 86 p. (2015)
61	S03-10	Practices in Preserving and Developing Public-Use Seaplane Bases, 96 p. (2015)
62	S03-09	Cell Phone Lots at Airports, 72 p. (2015)
63	S10-13	Overview of Airport Fueling System Operations, 118 p. (2015)
64	S04-10	Issues Related to Accommodating Animals Traveling Through Airports, 86 p. (2015)
65	S10-14	Practices to Develop Effective Stakeholder Relationships at Smaller Airports, 70 p. (2015)
66	S02-11	Lessons Learned from Airport Sustainability Plans, 98 p. (2015)
67	S09-06	Airside Snow Removal Practices for Small Airports with Limited Budgets, 110 p. (2015)
68	S01-10	Strategies for Maintaining Air Service, 60 p. (2015)
69	S02-12	Airport Sustainability Practices—Drivers and Outcomes for Small Commercial and General Aviation Airports, 116 p. (2016)
70	S09-07	Building Information Modeling for Airports, 96 p. (2016)
71	S04-14	Airport Safety Risk Management Panel Activities and Outcomes, 128 p. (2016)
72	S04-17	Table Top and Full-Scale Emergency Exercises for General Aviation, Non-Hub, and Small Hub Airports, 164 p. (2016)
73	S04-16	Emergency Communications Planning for Airports, 100 p. (2016)
74	S04-13	Combining Mixed-Use Flight Operations Safely at Airports, 172 p. (2016)
75	S04-15	Airport Advisories at Non-Towered Airports, 68 p. (2016)
76	S02-13	Helicopter Noise Information for Airports and Communities, 144 p. (2016)
77	S02-14	Airport Sustainability Practices, 52 p. (2016)
78	S01-11	Continuity of Operations Planning for Small Airports, 236 p. (2016)

Web-Only Documents

No.	Proj. No.	Title, Pages, Publication Year
1	01-03	Analysis and Recommendations for Developing Integrated Airport Information Systems, 80 p. (2009)
2	02-06	Appendices to ACRP Report 11: Guidebook on Preparing Airport GHG Emissions Inventories (& Rep. 11), 87 p. (2009)
3	02-01	Formulations for Aircraft and Airfield Deicing and Anti-Icing: Aquatic Toxicity and Biochemical Oxygen Demand, 121 p. (2009)
4	04-03	Guidance for Identifying and Mitigating Approach Lighting System Hazards, 88 p. (2009)
5	01-01	Development of a Guidebook for Managing Small Airports (& Rep. 16), 124 p. (2009)
6	01-05	Evaluation and Selection of Airport Capital Project Delivery Methods, 213 p. (2009)
7	11-02/Task 11	How Proposed ARFF Standards Would Impact Airports, 115 p. (2009)
8	02-01	Alternative Aircraft Anti-Icing Formulations with Reduced Aquatic Toxicity and Biological Oxygen Demand, 141 p. (2010)
9	11-02/Task 08	Enhanced Modeling of Aircraft Taxiway Noise, Vol. 1: Scoping, 153 p. (2009)
9	02-27	Enhanced Modeling of Aircraft Taxiway Noise, Vol. 2: Aircraft Taxi Noise Database and Development Process, 138 p. (2013)
10	10-07	Appendix A: Documentation for ACRP Report 41 (& CD 83; & Rep. 41), 85 p. (2011)
11	02-09	A Comprehensive Development Plan for a Multimodal Noise and Emissions Model, 296 p. (2010) Risk
12	11-02/Task 17	Assessment of Proposed ARFF Standards, 105 p. (2011)
13	02-23	Alternative Fuels as a Means to Reduce PM2.5 Emissions at Airports, 175 p. (2012)
14	03-12	Guidelines for Preparing Peak Period and Operational Profiles (& CD 126; & Rep. 82), 316 p. (2013)
15	03-25	Data Supporting the Impact of Regulatory Compliance on Small Airports, Vol. 1: Appendixes A, B, & C (& Rep. 90), 121 p. (2013)
15	03-25	Data Supporting the Impact of Regulatory Compliance on Small Airports, Vol. 2: Technical Appendixes (& Rep. 90), 151 p. (2013)
16	02-26	Assessing Aircraft Noise Conditions Affecting Student Learning, Vol. 1: Final Report, 71 p. (2014)
16	02-26	Assessing Aircraft Noise Conditions Affecting Student Learning, Vol. 2: Appendixes, 143 p. (2014)
17	02-35	Research Methods for Understanding Aircraft Noise Annoyance and Sleep Disturbance, 174 p. (2014)
18	01-19	Airport Capital Improvements: Developing a Cost-Estimating Model and Database (& CD 158; & Rep. 120), 45 p. (2014)
19	02-37	Integrated Noise Model Accuracy for General Aviation Aircraft, 92 p. (2014)
20	03-16	Guidebook for Estimating the Economic Impact of Air Cargo Operations at Airports, 360 p. (2014)
21	02-34	Quantifying Aircraft Lead Emissions at Airports (& Rep. 133), 218 p. (2015)
22	03-19	Passenger Value of Time, Benefit-Cost Analysis, and Airport Capital Investment Decisions, Vol. 1: Guidebook for Valuing User Time Savings in Airport Capital Investment Decision Analysis, 50 p. (2015)
22	03-19	Passenger Value of Time, Benefit-Cost Analysis, and Airport Capital Investment Decisions, Vol. 2: Final Report, 113 p. (2015)
22	03-19	Passenger Value of Time, Benefit-Cost Analysis, and Airport Capital Investment Decisions, Vol. 3: Appendix A: Background Research and Appendix B: Stated Preference Survey, 345 p. (2015)
23	09-05	Guidance on Successful Computer Maintenance Management Systems (CMMS) Selection and Practices, 166 p. (2015)
24	03-24	Air Cargo Facility Planning and Development—Contractor's Final Report (& Rep. 143), 395 p. (2015)
25	10-16	Commercial Ground Transportation at Airports: Best Practices, Appendixes C through H (& Rep. 146), 822 p. (2015)
26	02-45	Methodology to Improve EDMS/AEDT Quantification of Aircraft Taxi/Idle Emissions, 97 p. (2016)
27	09-10	Methodology to Develop the Airport Terminal Building Energy Use Intensity (ATB-EUI) Benchmarking Tool (& CD 178), 34 p. (2016)
28	06-04	Identifying and Evaluating Airport Workforce Requirements--Phase 1 Report (In Production)

Web-Only Documents

No.	Proj. No.	Title, Pages, Publication Year
29	11-01/Topic 07-01	Compendium of State and Federal Laws Affecting the Possession of Firearms at Airports (& LRD 29), 727 p. (2016)

CDs

No.	Proj. No.	Title, Publication Year
68	11-01/Topic 01-01	Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters Through December 31, 2007 (LRD 4) (2008)
70	02-05	ACRP Report 15 Toolkit (& Rep. 15) (2009)
73	03-09	Workbook for ACRP Report 20: Strategic Planning in the Airport Industry (& Rep. 20) (2009)
74	10-05	Supplemental Materials for ACRP Report 30 (& Rep. 30) (2010)
75	07-04	Airport Passenger Terminal Planning Spreadsheet Models for ACRP Report 25, Volume 2 (& Rep. 25 Vol. 2) (2010)
79	01-06	Workbook for ACRP Report 19: Developing an Airport Performance-Measurement System (& Rep. 19) (2010)
80	10-06	Parking Forecast Model and Instructions for Use: Supplemental Materials for ACRP Report 34 (& Rep. 34) (2010)
81	01-02	Appendixes to ACRP Report 33 (& Rep. 33) (2011)
82	03-06	Database of APM Systems for ACRP Report 37 (& Rep. 37) (2010)
83	10-07	Decision-Making Tool for Evaluating Passenger Self-Tagging (& Rep. 41; & WOD 10) (2011)
88	08-01	Collection of Practices for ACRP Report 42 (& Rep. 42) (2011)
89	02-13	Practices That Enhance Environmental Stewardship (& Rep. 43) (2011)
91	02-07	The Alternative Fuels Investigation Tool (AFIT) for ACRP Report 46 (& Rep. 46) (2011)
93	03-15	Airport Forecasting Risk Assessment Program for ACRP Report 48 (& Rep. 48) (2011)
94	01-09	Interactive Resource Guide for ACRP Report 19A (& Rep. 19A) (2011)
95	02-10	AirportGEAR and Supplemental Material (& Rep. 56) (2011)
98	04-08	Runway Safety Area Risk Analysis Tool for ACRP Report 50 (& Rep. 50) (2011)
102	03-11	Supplemental Materials for ACRP Report 44 (& Rep. 44) (2011)
108	11-01/Topic 03-06	An Index and Digest of Decisions: Compilation of Airport Law Resources (LRD 13) (2012)
109	01-14	Appendices for ACRP Report 66 (& Rep. 66) (2012)
110	03-14	Resource CD for ACRP Report 67 (& Rep. 67) (2012)
112	07-07	Analysis Templates for ACRP Report 68 (& Rep. 68) (2012)
113	02-25	Tools for Evaluating Emissions and Costs of APUs and Alternative Systems (TEECAAS) for ACRP Report 64 (& Rep. 64) (2012)
114	10-08	Applying Intelligent Transportation Systems to Improve Airport Traveler Access Information (& Rep. 70) (2012)
115	02-08	Appendixes to ACRP Report 71 (& Rep. 71) (2012)
117	01-18	Airport ERM Tool for ACRP Report 74 (& Rep. 74) (2012)
119	01-17	Digital Files for ACRP Report 77: Guidebook for Developing General Aviation Airport Business Plans (& Rep. 77) (2012)
123	02-16	Airport Ground Support Equipment: Tutorial and Database (& Rep. 78) (2012)
124	03-17	Supplemental Material to ACRP Report 79: Prototype Airfield Capacity Spreadsheet Model (& Rep. 79) (2012)
125	02-22	Evaluation Tool to Supplement ACRP Report 80 (& Rep. 80) (2012)
126	03-12	Guidebook and Toolboxes for ACRP Report 82 (& Rep. 82; & WOD 14) (2013)
129	02-36	Toolkit for Evaluating Alternative Fuel Distribution Programs and Appendixes to ACRP Report 83 (& Rep. 83) (2013)
131	02-21	Airport Emissions Estimator Tool and Other Support Material for ACRP Report 84 (& Rep. 84) (2013)

CDs		
No.	Proj. No.	Title, Publication Year
133	06-02	Supplemental Materials for ACRP Report 75: Airport Leadership Development Program (& Rep. 75) (2013)
136	02-12	Departure Optimization Investigation Tool (DOIT) (& Rep. 86) (2013)
137	02-20	The Vector-Borne Disease Airport Importation Risk Tool (2013)
139	04-11	Tool Set for Integrating GIS in Emergency Management at Airports (& Rep. 88) (2013)
140	03-18	Airport Business Continuity Planning Software Tool (& Rep. 93) (2013)
141	11-01/Topic 04-05	Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters Through December 2012 (LRD 21) (2013)
142	02-33	Airport Construction Emissions Inventory Tool (ACEIT) (& Rep. 102) (2014)
144	10-14	IROPS Investment Support Tool (IRIS) (& Rep. 106) (2014)
145	04-14	Lateral Runway Safety Area Risk Analysis (LRSARA) Tool (& Rep. 107) (2014)
149	09-06	Evaluation Process and Cost-Benefit Tool (& Rep. 110) (2014)
150	09-02	Supplemental Materials for ACRP Report 101 (& Rep. 101) (2014)
151	04-15	Airport Terminal Incident Response Plan (TIRP) Tool (& Rep. 112) (2014)
156	07-11	Supplemental Material to ACRP Report 117 (& Rep. 117) (2014)
157	03-23	Air/Rail Diversion Model (& Rep. 118) (2015)
158	01-19	ACCE: Airport Capital Cost Estimation Tool (& Rep. 120; & WOD 18) (2014)
159	09-08	Bird Strike Risk Analysis and Stormwater Management Decision Tool (& Rep. 125) (2015)
160	11-02/Task 21	Airport Toolbox for ACRP Report 122 (& Rep. 122) (2014)
161	02-41	Estimating Takeoff Thrust Settings for Airport Emissions Inventories (2015)
164	07-12	Appendixes for the Guidebook for Airport Terminal Restroom Planning and Design (& Rep. 130) (2015)
167	02-34	Emissions Inventory Analysis Tool (& Rep. 133) (2015)
168	10-17	Integrated Self-Service Tools for ACRP Report 136 (& Rep. 136) (2015)
169	09-04	Spreadsheet Tool and Appendices to ACRP Report 139 (& Rep. 139) (2015)
170	10-18	Checklists and PowerPoint Template for ACRP Report 138 (& Rep. 138) (2015)
171	05-02	Multimedia Materials Supporting the Guidebook on Best Practices for Airport Cybersecurity (& Rep. 140) (2015)
173	04-17	WHaMRAT Tool, User Guide, and Quick-Start Guides (& Rep. 145) (2015)
174	03-24	Air Cargo Facility Planning Model (& Rep. 143) (2015)
175	02-40	ACROS Tool and Other Resources to Accompany ACRP Report 147 (& Rep. 147) (2015)
177	02-56	Supplemental Information for ACRP Report 151 (& Rep. 151) (2016)
178	09-10	Airport Terminal Building Energy Use Intensity (ATB-EUI) Benchmarking Tool (& WOD 27) (2016)
180	10-23	IROPS Tools for Planning, Communication & Coordination (& Rep. 153) (2016)
181	02-59	End Use Water Audit Tool (& Rep. 154) (2016)
182	10-21	Regulation Compliance Management Tool (& Rep. 156) (2016)

Conference Proceedings

No.	Proj. No.	Title, Pages, Publication Year
41	11-02	Interagency-Aviation Industry Collaboration on Planning for Pandemic Outbreaks, 52 p. (2008)
47	11-02/Task 13	Research on the Transmission of Disease in Airports and on Aircraft, 70 p. (2010)

Note

Publications in parentheses with an ampersand (&) are companion publications.

Publications in parentheses without an ampersand are reports or digests published as stand-alone CDs.

APPENDIX B. SUMMARY OF PROJECT STATUS THROUGH DECEMBER 31, 2016

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
01: Administration									
01-01	Guidebook for Managing Small Airports	\$400,000(06)	\$397,230	University of Minnesota	1/24/2007	3/31/2009	Completed - Published as Report 16 and Web-Only Document 5		
01-02	Guidebook for Developing and Managing Airport Contracts	\$400,000(07)	\$315,000	HNTB	4/24/2007	2/28/2010	Completed - Published as Report 33		
01-03	Integrating Airport Information Systems	\$300,000(07)	\$300,000	Aero Tech Consulting	8/10/2007	11/22/2008	Completed - Published as Report 13 and Web-Only Document 1		
01-04	Marketing Guidebook for Small Airports	\$200,000(07)	\$200,000	Eclat Consulting	10/26/2007	9/30/2009	Completed - Published as Report 28		
01-05	Guidebook for Airport Capital Project Delivery Systems	\$100,000(07) \$25,000(08) \$70,000(10)	\$194,994	Northeastern University	4/4/2007	7/30/2009	Completed - Published as Report 21		
01-06	A Guidebook for Developing an Airport Performance Measurement System	\$400,000(08)	\$400,000	Infrastructure Management Group	5/6/2008	4/2/2010	Completed - Published as Report 19		
01-07	Airport/Airline Agreements - Practices and Characteristics	\$400,000(08)	\$393,005	Ricondo & Associates	5/30/2008	4/5/2010	Completed - Published as Report 36		
01-08	Guidebook for Developing and Leasing Airport Property	\$400,000(08)	\$350,000	R. W. Armstrong and Associates	6/24/2008	9/30/2010	Completed - Published as Report 47		
01-09	Resource Guide to Airport Performance Indicators	\$400,000(09)	\$400,000	Oliver Wyman, Inc.	5/8/2009	12/31/2010	Completed - Published as Report 19A		
01-10	A Handbook for Developing, Implementing and Overseeing Airport Capital Plans	\$400,000(09)	\$399,955	HNTB	7/10/2009	12/31/2010	Completed - Published as Report 49		
01-11	Understanding Airport In-Terminal Concession Programs	\$350,000(09)	\$350,000	Leigh Fisher	6/17/2009	5/31/2011	Completed - Published as Report 54		
01-12	A Primer for Information Technology Systems at Airports	\$350,000(09)	\$348,843	Faith Group, LLC	7/7/2009	5/31/2011	Completed - Published as Report 59		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
01-13	Developing a Database-Driven Web Application for Benchmarking Airport Performance	\$500,000(09A) \$100,000(10)	\$549,727	Amadeus Consulting	9/30/2010	7/31/2016	Completed		
01-14	Considering and Evaluating Airport Privatization	\$500,000(09A)	\$500,000	Leigh Fisher	5/10/2010	12/31/2011	Completed - Published as Report 66		
01-15	Innovative Revenue Strategies - An Airport Guide	\$400,000(10)	\$400,000	Kramer Aerotech, Inc.	5/14/2010	12/31/2014	Completed - Published as Report 121		
01-16	Asset and Infrastructure Management for Airports	\$400,000(10)	\$400,000	GHD Consulting	6/16/2010	12/1/2011	Completed - Published as Report 69		
01-17	Guidebook for Developing General Aviation Airport Business Plans	\$400,000(10)	\$398,350	Aviation Management Consulting Group	6/28/2010	6/1/2012	Completed - Published as Report 77		
01-18	Application of Enterprise Risk Management at Airports	\$350,000(10)	\$350,000	Marsh, USA	6/30/2010	3/30/2012	Completed - Published as Report 74		
01-19	Airport Capital Improvements: A Business Planning and Decision-Making Approach	\$400,000(11)	\$400,000	MCR Federal, LLC	7/13/2011	7/31/2014	Completed - Published as Report 120 and Web-Only Document 18		
01-20	Procuring and Managing Professional Services for Airports	\$350,000(11)	\$350,000	HNTB	6/15/2011	1/20/2013	Completed - Published as Report 87		
01-21	A Guidebook for Airport-Airline Consortia	\$400,000(12)	\$387,642	AVAirPros	6/1/2012	4/1/2014	Completed - Published as Report 111		
01-22	Guidebook for Successfully Assessing and Managing Risks for Airport Capital and Maintenance Projects	\$300,000(12)	\$300,000	Direct Effect Solutions, Inc.	8/14/2012	5/14/2014	Completed - Published as Report 116		
01-23	A Guidebook for Mitigating Disruptive WiFi Interference at Airports	\$350,000(13)	\$349,489	System Planning Corp.	5/2/2013	8/1/2014	Completed - Published as Report 127		
01-24	Renewable Energy as an Airport Revenue Source	\$400,000(13)	\$399,612	Harris Miller Miller & Hanson	8/13/2013	3/31/2015	Completed - Published as Report 141		
01-25	A Guidebook for Increasing Diverse and Small Business Participation in Airport Business Opportunities	\$250,000(13)	\$250,000	Exstare Federal Services, LLC	8/13/2013	9/6/2014	Completed - Published as Report 126		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
01-26	Improving the Airport Customer Experience	\$400,000(14)	\$400,000	Leigh Fisher	7/11/2014	2/15/2016	Completed - Published as Report 157		
01-27	NextGen - A Primer	\$750,000(14)	\$750,000	Logistics Management Institute	6/16/2014	1/31/2017	Completed - Published as Report 150, Volume 3		
01-28	NextGen - Guidance for Engaging Airport Stakeholders	\$300,000(14)	\$300,000	Grafton Technologies, Inc.	6/4/2014	5/6/2016	Completed - Published as Report 150, Volume 2		
01-29	Design and Development of a State Aviation Information Database	\$150,000(16)	\$149,975	iEngineering Corporation	8/31/2016	2/27/2018	Research in Progress	S. Glasgow C. Suomi	J. Navarrete
01-30	Airport Management Guide for Providing Aircraft Fuel Services	\$350,000(16)	\$350,000	Kramer Aerotek, Inc.	10/1/2016	12/28/2017	Research in Progress	K. Hehir	T. Schatz
01-31	Innovative Solutions to Facilitate Accessibility for Airport Travelers with Disabilities	\$350,000(16)	\$349,973	Open Doors Organization	6/16/2016	12/15/2017	Research in Progress	R. Bornhorst L. Miller	T. Schatz
01-32	Updating ACRP Report 16: Guidebook for Managing Small Airports	\$350,000(16)	\$349,948	Hanson Professional Services, Inc	8/18/2016	12/17/2017	Research in Progress	G. Mahns A. Velayos	T. Schatz
01-33	Preparing for the Connected Airport and the Internet of Things	\$400,000(16)	\$400,000	Texas A&M Transportation Institute	6/22/2016	10/21/2017	Research in Progress	X. Lee	M. Greenberger
01-34	Developing Innovative Strategies for Aviation Education and Participation	\$400,000(16)	\$350,000	Mead & Hunt Inc.	9/21/2016	3/20/2018	Research in Progress	M. Hovan	J. Navarrete
02: Environment									
02-01	Alternative Aircraft and Pavement Deicers and Anti-Icing Formulations with Improved Environmental Characteristics	\$600,000(06)	\$600,000	University of South Carolina	11/1/2006	2/28/2010	Completed - Interim report published as Web-Only Document 3; summary of final report published as Research Results Digest 9; full final report published as Web-Only Document 8		
02-02	Deicing Planning Guidelines and Practices for Stormwater Management Systems	\$300,000(06)	\$300,000	CH2M Hill	10/9/2006	9/12/2008	Completed - Published as Report 14 and Deicing Practices 1-41		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-03	Aircraft and Airport-Related Hazardous Air Pollutants: Research Needs and Analysis	\$100,000(06)	\$100,000	Aerodyne Research, Inc.	12/19/2006	12/18/2007	Completed - Published as Report 7		
02-03A	Measurement of Gaseous HAP Emissions from Idling Aircraft as a Function of Engine and Ambient Conditions	\$500,000(06)	\$499,741	Aerodyne Research, Inc.	1/12/2009	3/30/2012	Completed - Published as Report 63		
02-04	Research Needs Associated with Particulate Emissions at Airports	\$100,000(06)	\$99,897	Environmental Consulting Group, Inc.	1/2/2007	3/1/2008	Completed - Published as Report 6		
02-04A	Summarizing and Interpreting Aircraft Gaseous and Particulate Emissions Data	\$350,000(07)	\$349,470	University of Missouri-Rolla	4/12/2007	7/11/2008	Completed - Published as Report 9		
02-05	Aircraft Noise: A Toolkit for Managing Community Expectations	\$500,000(07)	\$399,982	Landrum & Brown	4/20/2007	3/31/2009	Completed - Published as Report 15		
02-06	Guidebook on Preparing Airport Greenhouse Gas (GHG) Emissions Inventories	\$200,000(07)	\$199,403	Wyle Laboratories, Inc.	10/9/2007	9/8/2008	Completed - Published as Report 11 and Web-Only Document 2		
02-07	Handbook for Analyzing the Costs and Benefits of Alternative Turbine Engine Fuels at Airports	\$500,000(07)	\$499,960	CSSI, Inc.	10/22/2007	10/29/2010	Completed - Published as Report 46		
02-08	Quantifying Contributions to Local Air Quality Impacts from Airport-Related Emissions	\$600,000(08)	\$599,970	Wyle Laboratories, Inc.	6/4/2008	4/30/2012	Completed - Published as Report 71		
02-09	A Comprehensive Development Plan for a Multimodal Noise and Emissions Model	\$200,000(08)	\$199,630	Wyle Laboratories, Inc.	7/7/2008	10/29/2010	Completed - Published as Web-Only Document 11		
02-10	Handbook for Considering Practical Greenhouse Gas Emission Reduction Strategies for Airports	\$500,000(09)	\$499,921	CDM	6/9/2009	6/9/2011	Completed - Published as Report 56		
02-11	A Handbook for Addressing Water Resource Issues Affecting Airport Capacity Enhancement Planning	\$150,000(09)	\$150,000	Gresham, Smith and Partners	5/11/2009	5/31/2011	Completed - Published as Report 53		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-12	Environmental Optimization of Aircraft Departures: Fuel Burn, Emissions, and Noise	\$300,000(09)	\$300,000	Wyle Laboratories, Inc.	4/20/2009	3/29/2013	Completed - Published as Report 86		
02-13	Guidebook of Practices for Improving Environmental Performance at Small Airports	\$200,000(09) \$75,000(08)	\$200,000	Gresham, Smith and Partners	6/16/2009	8/20/2010	Completed - Published as Report 43		
02-14	Guidebook for Selecting Methods to Monitor Airport and Aircraft Deicing Materials	\$200,000(09A)	\$150,000	Gresham, Smith and Partners	6/3/2010	2/28/2012	Completed - Published as Report 72		
02-15	Recycling Best Practices - A Guidebook for Advancing Recycling from Aircraft Cabins	\$300,000(09A)	\$300,000	Cascadia Consulting Group	9/22/2010	7/15/2013	Completed - Published as Report 100		
02-16	Airport Ground Support Equipment (GSE) Inventory and Emission Reduction Strategies	\$600,000(09A)	\$599,717	CDM	6/18/2010	6/30/2012	Completed - Published as Report 78		
02-17	Measuring PM Emissions from Aircraft Auxiliary Power Units, Tires and Brakes	\$500,000(09A)	\$500,000	Missouri University of Science and Technology	9/3/2010	5/31/2013	Completed - Published as Report 97		
02-18	Guidelines for Integrating Alternative Jet Fuel Into the Airport Setting	\$250,000(09A)	\$249,982	Metron Aviation	6/17/2010	10/16/2011	Completed - Published as Report 60		
02-19	Winter Design Storm Factor Determination for Airports	\$300,000(09A)	\$249,999	CH2M Hill	6/24/2010	12/1/2012	Completed - Published as Report 81		
02-20	The Role of Air Travel in the Transmission and Spread of Insect-Borne Diseases	\$250,000(10)	\$249,995	University of Florida	9/7/2010	9/30/2013	Completed - Published as CRP-CD-137		
02-20A	Infectious Disease Mitigation in Airports and on Aircraft	\$200,000(11)	\$200,000	Environmental Health & Engineering	7/6/2011	5/31/2013	Completed - Published as Report 91		
02-21	Guidebook for Preparing Airport Emissions Inventories for State Implementation Plans	\$500,000(10)	\$499,805	KB Environmental Sciences	8/31/2010	2/28/2013	Completed - Published as Report 84		
02-22	Incorporating Sustainability into Traditional Airport Projects	\$300,000(09A)	\$300,000	Landrum & Brown	7/12/2010	5/31/2012	Completed - Published as Report 80		

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-23	Alternative Fuels as a Means to Reduce PM2.5 Emissions at Airports	\$500,000(10)	\$499,798	Project Performance Corp.	7/6/2010	4/30/2012	Completed - Published as Web-Only Document 13		
02-24	Guidelines for Airport Sound Insulation Programs	\$200,000(10)	\$200,000	Jones Payne Group	8/27/2010	3/8/2013	Completed - Published as Report 89		
02-25	Handbook for Evaluating Emissions and Costs of APUs and Alternative Systems	\$200,000(10)	\$199,773	Environmental Science Associates	7/7/2010	12/31/2011	Completed - Published as Report 64		
02-26	Assessing Aircraft Noise Conditions Affecting Student Learning	\$450,000(10)	\$449,672	Wyle Laboratories, Inc.	6/26/2010	11/30/2013	Completed - Published as Web-Only Document 16		
02-27	Aircraft Taxi Noise Database for Airport Noise Modeling	\$150,000(10)	\$149,779	Wyle Laboratories, Inc.	6/11/2010	3/29/2013	Completed - Published as Web-Only Document 9, Volume 1		
02-27A	Developing a Generic Commercial Jet Taxi Noise Directivity Pattern for AEDT	\$75,000(12)	\$74,767	Wyle Laboratories, Inc.	2/22/2012	3/29/2013	Completed - Published as Web-Only Document 9, Volume 2		
02-28	Prototype Airport Sustainability Rating System - Characteristics, Viability, and Implementation Options	\$800,000(11) \$87,104(14)	\$687,103	Vanasse Hangen Brustlin, Inc.	6/27/2011	12/31/2014	Completed - Published as Report 119		
02-29	Guidance for Treatment of Airport Stormwater Containing Deicers	\$600,000(11)	\$500,000	Gresham, Smith and Partners	5/31/2011	9/30/2013	Completed - Published as Report 99		
02-30	Enhancing the Airport-Industry Database of Sustainable Practices	\$500,000(11) \$196,320(14) \$224,823(15)	\$846,320	CDM	7/18/2011	12/30/2016	Research in Progress	P. Magnotta	J. Navarrete
02-31	Guidelines for Ensuring Longevity in Airport Sound Insulation Programs	\$350,000(11)	\$349,980	Wyle Laboratories, Inc.	7/8/2011	9/15/2013	Completed - Published as Report 105		
02-32	Understanding Microbial Biofilms in Receiving Waters Impacted by Airport Deicing Activities	\$400,000(11)	\$300,000	CH2M Hill	7/20/2011	5/30/2014	Completed - Published as Report 115		
02-33	Guidance for Estimating Airport Construction Emissions	\$350,000(11)	\$349,980	Wyle Laboratories, Inc.	7/1/2011	9/30/2013	Completed - Published as Report 102		

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-34	Best Practices Guidebook for Preparing Lead (Pb) Emission Inventories from Piston-Powered Aircraft	\$500,000(11)	\$500,000	Sierra Research, Inc.	6/3/2011	10/21/2014	Completed - Published as Report 133; and Web-Only Document 21		
02-35	Research Methods for Understanding Aircraft Noise Annoyance and Sleep Disturbance	\$600,000(11)	\$599,993	Harris Miller Miller & Hanson	9/20/2011	6/30/2014	Completed - Published as Web-Only Document 17		
02-36	Assessing Opportunities for Alternative Fuel Distribution Programs	\$500,000(11)	\$400,000	Metron Aviation	5/26/2011	12/6/2012	Completed - Published as Report 83		
02-37	Integrated Noise Model Accuracy for General Aviation Aircraft	\$400,000(11)	\$350,000	Harris Miller Miller & Hanson	6/13/2011	9/30/2014	Completed - Published as Web-Only Document 19		
02-38	Guidebook for Energy Facilities Compatibility with Airports and Airspace	\$450,000(12)	\$449,850	Harris Miller Miller & Hanson	5/2/2012	11/2/2013	Completed - Published as Report 108		
02-39	Applying Whole Effluent Toxicity Testing to Aircraft Deicing Runoff	\$500,000(12)	\$339,803	NewFields Government Services, LLC	10/5/2012	1/30/2015	Completed - Published as Report 134		
02-40	Climate Change Adaptation Planning: Risk Assessment for Airports	\$500,000(12)	\$491,923	Dewberry & Davis, LLC	1/20/2012	3/20/2015	Completed - Published as Report 147		
02-41	Estimating Takeoff Thrust Settings for Airport Emissions Inventories	\$450,000(12)	\$449,998	The Cadmus Group	9/1/2012	10/31/2014	Completed - Published as CD-161		
02-42	Understanding Air Quality and Public Health Studies Related to Airports	\$200,000(12)	\$199,675	Wyle Laboratories, Inc.	9/25/2012	2/28/2015	Completed - Published as Report 135		
02-43	Development of NOx Chemistry Module for EMDS/AEDT to Predict NO2 Concentrations	\$400,000(13)	\$399,577	KB Environmental Sciences	7/10/2013	1/31/2017	Research in Progress		J. Navarrete
02-44	Recommended Community Noise Model Enhancements to Improve Prediction of Helicopter Activity Impacts	\$250,000(13)	\$249,811	Wyle Laboratories, Inc.	5/2/2013	9/30/2015	Completed - Published as Research Results Digest 24		
02-45	Methodology to Improve EDMS/AEDT Quantification of Aircraft Taxi/Idle Emissions	\$250,000(13)	\$249,959	KB Environmental Sciences	7/8/2013	1/29/2016	Completed - Published as Web-Only Document 26		

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-46	Improving Ground Support Equipment (GSE) Operational Data for Airport Emissions Modeling	\$275,000(13)	\$275,000	KB Environmental Sciences	7/5/2013	12/15/2015	Completed - Published as Report 149		
02-47	Assessing Aircraft Noise Conditions Affecting Student Achievement--Case Studies	\$600,000(14) \$75,429(17)	\$599,939	Harris Miller Miller & Hanson, Inc.	5/22/2014	3/31/2017	Research in Progress	J. Beyers J. Dipardo	L. Goldstein
02-48	Assessing Community Annoyance of Helicopter Noise	\$700,000(14)	\$699,778	Landrum & Brown, Inc.	6/3/2014	3/31/2017	Research in Progress	N. Sizov	J. Navarrete
02-49	Addressing Significant Weather Impacts on Airports	\$550,000(14)	\$550,000	ICF Incorporated, LLC	5/22/2014	2/29/2016	Completed - Published as Report 160		
02-50	Deriving Benefits from Alternative Aircraft-Taxi Systems	\$300,000(14)	\$300,000	Cadmus Group, Inc.	7/15/2014	4/30/2016	Completed - Published as Report 158		
02-51	Evaluating Methods for Determining Interior Noise Levels Used in Airport Sound Insulation Programs	\$300,000(14)	\$299,678	CSDA Design Group	6/9/2014	10/30/2015	Completed - Published as Report 152		
02-52	Improving AEDT Noise Modeling of Hard, Soft and Mixed Ground Surfaces	\$250,000(14)	\$249,603	Wyle Laboratories, Inc.	6/11/2014	1/31/2017	Research in Progress	B. Tong	J. Navarrete
02-53	Interpreting Airport Water Monitoring Results	\$250,000(14)	\$250,000	Gresham, Smith and Partners	8/8/2014	6/30/2016	Completed - Publication Pending	C. Pociask	M. Salamone
02-54	Measuring and Understanding Emission Factors for General Aviation (GA) Aircraft	\$500,000(14)	\$499,971	Aerodyne Research, Inc.	5/20/2014	6/30/2016	Completed - Published as Report 164		
02-55	Enhanced AEDT Modeling of Aircraft Arrival and Departure Profiles	\$350,000(14)	\$349,921	ATAC Corporation	6/9/2014	6/30/2017	Research in Progress	J. DiPardo	J. Navarrete
02-56	Developing a Business Case for Renewable Energy at Airports	\$300,000(14)	\$299,903	Harris Miller Miller & Hanson, Inc.	5/27/2014	10/26/2015	Completed - Published as Report 151		
02-57	Reducing the Impact of Lead Emissions at Airports	\$200,000(14)	\$199,971	Sierra Research, Inc.	7/28/2014	6/8/2016	Completed - Published as Report 162		
02-58	Dispersion Modeling Guidance for Airports Addressing Local Area Quality Health Concerns	\$400,000(14)	\$399,999	University of North Carolina	6/10/2014	1/31/2017	Research in Progress	M. Majeed	J. Navarrete

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-59	Water Efficiency Management Strategies at Airports	\$450,000(14)	\$449,999	The Cadmus Group, Inc.	6/4/2014	2/5/2016	Completed - Published as Report 154		
02-60	Managing Perfluorocarbon Impacts at Airports	\$480,000(15)	\$299,995	Dillon Consulting Limited	7/29/2015	10/28/2016	Completed - Publication Pending	M. Tonnacliff	J. Navarrete
02-61	Airport Stormwater Management: Electronic Resource Library	\$450,000(15) \$39,056 (16)	\$489,056	Mead & Hunt, Inc.	5/11/2015	3/10/2017	Research in Progress	F. Smigeliski	J. Navarrete
02-62	Green Stormwater Infrastructure Strategies for Airports	\$350,000(15)	\$299,970	The Cadmus Group, Inc.	4/30/2015	11/21/2016	Completed - Publication Pending	J. Barrilleaux	M. Greenberger
02-63	Quantifying Airport Ground Access Vehicle Activity for Emissions Modeling	\$300,000(15)	\$299,874	KB Environmental Services	5/11/2015	4/28/2017	Research in Progress	M. Majeed	J. Navarrete
02-64	Guidance for Usage of Permeable Pavement at Airports	\$200,000(15)	\$199,906	Applied Pavement Technology, Inc.	6/19/2015	1/30/2017	Research in Progress	D. Johnson	T. Schatz
02-65	Tracking Alternative Jet Fuel	\$250,000(15)	\$249,961	Metron Aviation	6/19/2015	7/29/2016	Completed - Published as Report 165		
02-66	Commercial Spaceport Noise and Sonic Boom	\$600,000(15)	\$600,000	Wyle Laboratories, Inc.	7/29/2015	5/29/2017	Research in Progress	N. Sizov	M. Greenberger
02-67	Airport Air Quality Management Guidebook and Resource Library	\$400,000(15)	\$399,944	Booz-Allen & Hamilton	8/7/2015	2/6/2017	Research in Progress	N. Didyk P. Wade	M. Greenberger
02-68	Strategies for Reducing Utility Fees for Airports	\$350,000(16)	\$325,000	Cadmus Group, Inc.	9/21/2016	3/20/2018	Research in Progress	R. Zulauf	J. Navarrete
02-69	Integrating Airport Sustainability and the NEPA Process	\$400,000(16)	\$400,000	Vanasse Hangen Brustlin, Inc.	9/29/2016	3/28/2018	Research in Progress	J. Bamilleaux R. Solomon	J. Navarrete
02-70	Wetland Mitigation: A Guidebook for Airports	\$400,000(16)	\$399,996	The Smart Associates, Environmental Consultants, Inc.	9/29/2016	3/28/2018	Research in Progress	M. Lamprecht J. Weller	L. Goldstein
02-71	Update Deicing Planning Guidelines for Airport Stormwater Management Systems and Alternative Deicing/Anti-icing	\$500,000(16)	\$400,000	Mead & Hunt, Inc.	8/19/2016	2/18/2018	Research in Progress	M. Lamprecht	J. Navarrete

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
02-72	Developing a Comprehensive Renewable Resources Strategy	\$300,000(16)	\$300,000	Cadmus Group, Inc.	9/29/2016	3/28/2018	Research in Progress	J. MacFarlane J. Weller	M. Greenberger
02-73	Interactive Tool for Understanding NEPA at General Aviation Airports	\$250,000(16)	\$249,864	RS&H, Inc.	8/5/2016	11/4/2017	Research in Progress	K.R. Bassarab F. Smigelski	M. Greenberger
02-74	Integrating Climate Change Risk Into Airport Management Systems	\$400,000(16)	\$399,971	ICF Incorporated	9/23/2016	3/22/2018	Research in Progress	T. Cuddy A. Freeburg	T. Schatz
02-75	Benefit-Cost Analyses Guidebook for Airport Stormwater	\$450,000(16)	\$325,000	Cadmus Group, Inc.	9/21/2016	3/20/2018	Research in Progress	S. Brown	J. Navarrete
02-76	Evaluating the Environmental Benefits of Electric Air Conditioning and Power at Gates	\$300,000(17)					In Development	M. Lamprecht J. Upadhyay	T. Schatz
02-77	Design and Use of a Green Revolving Fund at Airports	\$350,000(17)					In Development	J. Barrilleaux D. Hama	T. Schatz
02-78	Handbook for Airports Evaluating Climate Resilience Through Benefit Cost Analysis	\$450,000(17)					In Development	T. Cuddy K. Partowazam	L. Goldstein
02-79	AEDT Noise Model Improvements to Account for Terrain and Man-made Structures	\$500,000(17)					In Development	J. Byers B. He	J. Navarrete
02-80	Quantifying Emissions Reductions at Airports from the Use of Alternative Jet Fuel	\$500,000(17)					In Development	M. Lai M. Lamprecht	J. Navarrete
02-81	Commercial Space Transportation Noise Measurements	\$600,000(17)					In Development	J. Johnson N. Sizov	J. Navarrete
03: Policy and Planning									
03-01	Light Detection and Ranging (LiDAR) Deployment for Airport Obstructions Surveys	\$350,000(06)	\$350,000	University of Mississippi	1/30/2007	12/31/2009	Completed - Published as Research Results Digest 10		
03-02	Airport Passenger-Related Processing Rates Guidebook	\$200,000(06)	\$200,000	HNTB	1/16/2007	6/30/2009	Completed - Published as Report 23		

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
03-03	Enhancing Airport Land Use Compatibility	\$500,000(06)	\$500,000	Mead & Hunt	12/28/2006	9/15/2009	Completed - Published as Report 27, Volumes 1 and 2		
03-04	Guidebook for Airport-User Survey Methodology	\$250,000(06)	\$249,350	Jacobs Consultancy	1/16/2007	8/31/2009	Completed - Published as Report 26		
03-05	Passenger Space Allocation Guidelines for Planning and Design of Airport Terminals	\$400,000(07)	\$399,928	Trans Solutions, LLC	6/28/2007	5/31/2011	Completed - Published as Report 55		
03-06	Guidebook for Planning and Implementing Automated People Mover Systems at Airports	\$500,000(07)	\$395,341	Lea & Elliott	6/12/2007	3/30/2010	Completed - Published as Report 37		
03-07	Guidebook for Measuring Performance of Automated People Mover Systems at Airports	\$300,000(07)	\$300,000	Lea & Elliott	6/13/2007	1/31/2012	Completed - Published as Report 37A		
03-08	Passenger Air-Service Development Techniques	\$300,000(07)	\$300,000	InterVISTAS Consulting	6/21/2007	5/15/2009	Completed - Published as Report 18		
03-09	Guidebook for Strategic Planning in the Airport Industry	\$425,000(07)	\$321,049	Ricondo & Associates	6/27/2007	6/15/2009	Completed - Published as Report 20		
03-10	Innovative Approaches to Addressing Aviation Capacity Issues in Coastal Mega-Regions	\$300,000(07)	\$300,000	Resource Systems Group	2/6/2008	9/30/2009	Completed - Published as Report 31		
03-11	A Guidebook for the Preservation of Public-Use Airports	\$600,000(08)	\$522,430	L. Robert Kimball & Associates	6/23/2008	1/15/2011	Completed - Published as Report 44		
03-12	Preparing Peak Period and Operational Profiles - Guidebook	\$350,000(08)	\$347,044	HNTB	8/13/2008	10/30/2012	Completed - Published as Report 82		
03-13	Understanding Airspace, Objects, and Their Effects on Airports	\$200,000(08)	\$199,938	Jacobs Consultancy	7/11/2008	4/30/2010	Completed - Published as Report 38		
03-14	Airport Passenger Conveyance System Planning Guidebook	\$300,000(08)	\$300,000	Trans Solutions, LLC	8/26/2008	3/30/2012	Completed - Published as Report 67		
03-15	Impact of Jet Fuel Price Uncertainty on Airport Planning and Development	\$400,000(09)	\$399,970	GRA, Inc.	3/4/2009	2/28/2011	Completed - Published as Report 48		

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
03-16	Guidebook for Estimating the Economic Impact of Air Cargo at Airports	\$500,000(09)	\$499,860	Battelle Memorial Institute	6/5/2009	7/15/2014	Completed - Published as Web-Only Document 20		
03-17	Evaluating Airfield Capacity	\$525,000(09)	\$525,000	Leigh Fisher	6/29/2009	6/30/2012	Completed - Published as Report 79		
03-18	Operational and Business Continuity Planning for Prolonged Airport Disruptions	\$350,000(10)	\$348,292	Risk Solutions International, LLC	6/3/2010	6/28/2013	Completed - Published as Report 93		
03-19	Passenger Value of Time, Benefit-Cost Analysis, and Capital Investment Decisions	\$350,000(10)	\$349,944	Economic Development Research Group	7/26/2010	3/15/2015	Completed - Published as Web-Only Document 22		
03-20	Defining and Measuring Aircraft Delay and Airport Capacity Thresholds	\$250,000(10)	\$250,000	Trans Solutions, LLC	8/30/2010	12/31/2013	Completed - Published as Report 104		
03-21	Developing and Maintaining Support for Your Airport Capacity Project	\$300,000(10)	\$299,980	Mead & Hunt	6/3/2010	3/29/2013	Completed - Published as Report 85		
03-22	Addressing Uncertainty About Future Airport Activity Levels in Airport Decision Making	\$350,000(10)	\$350,000	InterVISTAS Consulting	7/15/2010	7/31/2012	Completed - Published as Report 76		
03-23	Integrating Aviation and Passenger Rail Planning	\$400,000(10)	\$399,452	Resource Systems Group	7/29/2010	6/30/2014	Completed - Published as Report 118		
03-24	Guidebook for Air Cargo Facility Planning and Development	\$400,000(11)	\$400,000	CDMWilbur Smith	7/17/2011	5/31/2015	Completed - Published as Report 143		
03-25	Impact of Regulatory Compliance Costs on Small Airports	\$300,000(11)	\$299,987	Unison Consulting, Inc.	6/3/2011	1/31/2013	Completed - Published as Report 90 and Web-Only Document 15		
03-26	Understanding Airline and Passenger Choice in Multi-Airport Regions	\$250,000(11)	\$250,000	InterVISTAS Consulting	8/4/2011	9/30/2013	Completed - Published as Report 98		
03-27	Evaluating Methods for Counting Aircraft Operations at Non-Towered Airports	\$400,000(11)	\$400,000	Woolpert	11/21/2011	11/28/2014	Completed - Published as Report 129		
03-28	The Role of U.S. Airports in the National Economy	\$400,000(12)	\$399,984	Economic Development Research Group	7/17/2012	1/30/2015	Completed - Published as Report 132		

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
03-29	Effects of Airline Industry Changes on Small- and Non-Hub Airports	\$300,000(13)	\$299,972	GRA, Inc.	7/22/2013	4/30/2015	Completed - Published as Report 142		
03-30	Unmanned Aircraft Systems (UAS) at Airports: A Primer	\$150,000(13) \$50,000(14)	\$199,000	Futron Corporation	8/7/2013	6/19/2015	Completed - Published as Report 144		
03-31	Aligning Community Expectations with Airport Roles	\$500,000(14)	\$500,000	Mead & Hunt	6/16/2014	10/31/2017	Completed - Published as Report 155		
03-32	Guidance for Preparing and Using Airport Design Day Flight Schedules	\$400,000(14)	\$349,966	HNTB Corporation	7/17/2014	6/17/2016	Completed - Published as Report 163		
03-33	NextGen - Airport Planning and Development	\$500,000(14)	\$500,000	Leigh Fisher	7/11/2014	9/30/2016	Completed - Publication Pending	K. Duffy B. McGray	J. Navarrete
03-34	NextGen - Understanding the Airports Role in Performance-Based Navigation (PBN)	\$500,000(14)	\$500,000	Saab Sensis Corporation	6/9/2014	2/8/2016	Completed - Published as Report 150, Volume 1		
03-35	Improving Airport Services for International Customers	\$600,000(14)	\$600,000	Landrum & Brown, Inc.	6/6/2014	6/10/2016	Completed - Published as Report 161		
03-36	Using Disaggregated Socioeconomic Data in Air Passenger Demand Studies	\$500,000(15)	\$499,747	GRA Incorporated	6/19/2015	3/31/2017	Research in Progress	P. Devoti	J. Navarrete
03-37	Using GIS for Collaborative Land Use Compatibility Near Airports	\$350,000(15)	\$350,000	Grafton Technologies	8/26/2015	6/30/2017	Research in Progress	M. Lawrance	J. Navarrete
03-38	Understanding FAA Grant Assurance Obligations	\$150,000(15)	\$150,000	Unison Consulting, Inc.	7/28/2015	1/31/2017	Research in Progress	D. Brooks S. Glasgow	L. Goldstein
03-39	Generating Revenue from Commercial Development On or Adjacent to Airports	\$375,000(15)	\$375,000	Mead & Hunt, Inc.	5/11/2015	1/31/2017	Research in Progress	R. Hendricks	T. Schatz
03-40	Air Demand in a Dynamic Competitive Context with the Automobile	\$500,000(16)	\$499,816	Resource Systems Group, Inc.	7/14/2016	7/13/2018	Research in Progress	D. Anderson K. Warden	L. Goldstein
03-41	Common Performance Metrics for Airport Infrastructure and Operational Planning	\$400,000(16)	\$399,981	Booz-Allen & Hamilton	9/23/2016	3/22/2018	Research in Progress	K. Duffy	T. Schatz

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
03-42	Integrating UAS into Airports	\$1,000,000(17)					In Development	J. Erinne G. Mahns J. Raymond	T. Schatz
03-43	Integrating Airport Access Planning with the Metropolitan Surface Transportation Plan	\$500,000(17)					In Development	M. Lawrence D. Rinsler	J. Navarrete
03-44	Best Practices in Building Air Service Through Incentive Programs	\$400,000(17)					In Development	G. Mahns	J. Navarrete
03-45	Collecting and Sharing Airport Safety and Operational Data	\$400,000(17)					In Development	P. Davenport S. Gardner	M. Greenberger
04: Safety									
04-01	Analysis of Aircraft Overruns and Undershoots for Runway Safety Areas	\$250,000(06)	\$249,986	Applied Research Associates	9/19/2006	1/31/2008	Completed - Published as Report 3		
04-02	Lightning-Warning Systems for Use by Airports	\$200,000(06)	\$199,937	MDA Federal, Inc.	11/7/2006	11/7/2008	Completed - Published as Report 8		
04-03	Guidance for Identifying and Mitigating Approach Lighting System Hazards	\$300,000(07)	\$300,000	Virginia Tech	10/3/2007	2/2/2009	Completed - Published as Research Results Digest 6 and Web-Only Document 4		
04-04	Simulation-Based Training and Exercise of Civil Aviation Emergency Response Personnel	\$500,000(07)	\$499,093	Applied Research Associates	9/12/2007	12/31/2011	Completed - Results to 04-04A		
04-04A	Evaluating the Airport Emergency Response Operations Simulation (AEROS) Tool	\$300,000(12)	\$290,000	Futron Corporation	6/18/2013	9/17/2014	Terminated		
04-04B1	Exercising Command-Level Decision Making for Critical Incidents at Airports	\$125,000(15)	\$25,000	Engineering and Computer Simulations, Inc.	3/30/2015	8/31/2015	Completed		
04-04B2	Exercising Command-Level Decision Making for Critical Incidents at Airports	\$125,000(15)	\$219,000	Emergency Preparedness Solutions, LLC	6/8/2016	10/7/2017	Research in Progress	M. Tonnacliff	M. Greenberger

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No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
04-05	A Guidebook for Airport Safety Management Systems	\$300,000(07)	\$300,000	Applied Research Associates	5/24/2007	5/15/2009	Completed - Published as Report 1, Volume 2		
04-06	A Guidebook for Addressing Aircraft/Wildlife Hazards at General Aviation Airports	\$300,000(08)	\$299,905	Biozone	6/2/2008	1/15/2010	Completed - Published as Report 32		
04-07	Airport Apron Management and Control Programs	\$300,000(08)	\$300,000	Ricondo & Associates	5/8/2009	8/30/2011	Completed - Published as Report 62		
04-07A	Use of Towbarless Tractors at Airports - Best Practices	\$300,000(08)	\$38,795	Ricondo & Associates	4/20/2009	8/30/2011	Completed - Published as Research Results Digest 15		
04-08	Improved Models for Risk Assessment of Runway Safety Areas (RSA)	\$400,000(09)	\$400,000	Applied Research Associates	6/8/2009	3/31/2011	Completed - Published as Report 50		
04-09	Risk Assessment Method to Support Modification of Airfield Separation Standards	\$250,000(09)	\$250,000	Applied Research Associates	6/10/2009	2/16/2011	Completed - Published as Report 51		
04-10	Airport-to-Airport Mutual Aid Programs	\$300,000(09A)	\$300,000	Innovative Emergency Management	7/6/2010	3/1/2012	Completed - Published as Report 73		
04-11	Guidebook on Integrating GIS in Emergency Management at Airports	\$350,000(11)	\$274,949	Barich, Inc.	7/12/2011	2/28/2013	Completed - Published as Report 88		
04-12	Integrating Web-Based Emergency Management Collaboration Tools into Airport Operations - A Primer	\$400,000(11)	\$400,000	Innovative Emergency Management	7/15/2011	7/31/2013	Completed - Published as Report 94		
04-13	Integrating Community Emergency Response Teams (A-CERTs) at Airports	\$400,000(11)	\$400,000	Innovative Emergency Management	7/26/2011	7/26/2013	Completed - Published as Report 95		
04-14	Development of a Runway Veer-Off Location Distribution Risk Assessment Model and Reporting Template	\$200,000(12)	\$200,000	Airport Safety Management Consultants	6/6/2012	12/5/2013	Completed - Published as Report 107		
04-15	Airport Terminal Incident Response Planning	\$325,000(12)	\$325,000	Innovative Emergency Management	7/10/2012	4/2/2014	Completed - Published as Report 112		
04-16	A Guidebook for Safety Risk Management for Airports	\$300,000(13)	\$299,992	Futron Corporation	6/18/2013	11/14/2014	Completed - Published as Report 131		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
04-17	Applying an SMS Approach to Wildlife Hazard Management	\$250,000(13)	\$250,000	BASH Incorporated	1/17/2014	6/15/2015	Completed - Published as Report 145		
04-18	Runway Protection Zone (RPZ) Risk Assessment Tool	\$400,000(14)	\$400,000	Applied Research Associates	6/4/2014	7/11/2016	Completed - Publication Pending	S. Debban	M. Greenberger
04-19	Airport Emergency Planning Template: NIMS - Incident Command System Compliance	\$300,000(15)	\$300,000	FTI Consulting, Inc.	12/3/2015	12/2/2017	Research in Progress	M. Tonnacliff	J. Navarrete
04-20	Design Considerations for Airport EOCs	\$400,000(16)	\$249,900	Faith Group, LLC	8/23/2016	11/22/2017	Research in Progress	P. Brace M. Tonnacliff	M. Greenberger
04-21	Alternative Methods of ADA Compliance for Airport Emergency Communications	\$400,000(17)					In Development	L. Miller	T. Schatz
04-22	Evaluating the Effectiveness of Hazard Zoning at General Aviation Airports	\$350,000(17)					In Development	H. Cyrus M. Hovan	M. Greenberger
05: Security									
05-01	An Airport Guide for Regional Emergency Planning for CBRNE Events	\$250,000(06)	\$248,464	System Planning Corp.	11/15/2006	10/31/2008	Completed - Published as Report 12		
05-02	Guidebook on Best Practices for Airport Cybersecurity	\$350,000(13)	\$350,000	Grafton Technologies, Inc.	8/21/2013	3/31/2015	Completed - Published as Report 140		
06: Human Resources									
06-01	Airport and Air Carrier Resource Manual: Employees Coping with Traumatic Events	\$300,000(07)	\$299,416	University of North Dakota	12/5/2007	5/31/2009	Completed - Published as Report 22		
06-02	Airport Leadership Development Program	\$100,000(10)	\$100,000	Ohio State University	9/29/2010	10/30/2012	Completed - Published as Report 75		
06-03	Establishing a Coordinated Local Family Assistance Program for Airports	\$300,000(15)	\$300,000	Tetra Tech, Inc.	5/8/2015	10/14/2016	Completed - Publication Pending	K. Lyons	T. Schatz

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
06-04	Identifying and Evaluating Airport Workforce Requirements	\$250,000(15) \$330,000(17)	\$580,760	ICF Incorporated	6/4/2015	11/11/2017	Research in Progress	R. Moseng	L. Goldstein
07: Design									
07-01	Innovations for Airport Terminal Facilities	\$400,000(06)	\$400,000	Corgan Associates, Inc.	12/8/2006	7/8/2008	Completed - Published as Report 10		
07-02	Airport Curbside and Terminal Area Roadway Operations	\$400,000(06) \$150,000(09)	\$528,000	Jacobs Consultancy	11/15/2006	5/19/2010	Completed - Published as Report 40		
07-03	Developing Improved Civil Aircraft Arresting Systems	\$500,000(07)	\$499,455	Protection Engineering Consultants	5/23/2007	10/31/2009	Completed - Published as Report 29		
07-04	Airport Passenger Terminal Planning and Design: Spreadsheet Models and User's Guide	\$400,000(07)	\$400,000	Landrum & Brown	6/6/2007	10/31/2009	Completed - Published as Report 25, Volume 2		
07-05	Airport Passenger Terminal Planning and Design: Guidebook	\$400,000(07)	\$400,000	Landrum & Brown	6/28/2007	10/31/2009	Completed - Published as Report 25, Volume 1		
07-06	Airport Signage and Wayfinding Information Guidelines	\$250,000(08)	\$250,000	Gresham, Smith and Partners	8/21/2008	3/1/2011	Completed - Published as Report 52		
07-07	Evaluating Terminal Renewal Versus Replacement Options	\$400,000(10)	\$400,000	Ricondo & Associates	8/16/2010	3/15/2012	Completed - Published as Report 68		
07-08	Improving Terminal Design to Increase Revenue Generation and Customer Satisfaction	\$500,000(11)	\$496,888	Landrum & Brown	6/3/2011	11/30/2013	Completed - Published as Report 109		
07-09	Apron Planning and Design Guidebook	\$250,000(12)	\$250,000	Ricondo & Associates	6/15/2012	7/31/2013	Completed - Published as Report 96		
07-10	General Aviation Facility Planning	\$300,000(12)	\$300,000	Delta Airport Consultants	5/17/2012	2/28/2014	Completed - Published as Report 113		
07-11	Airport Escalators and Moving Walkways - Cost-Savings and Energy Reduction Technologies	\$250,000(12)	\$249,947	Project Performance Corp.	9/18/2012	7/31/2014	Completed - Published as Report 117		
07-12	Guidebook for Airport Terminal Restroom Planning and Design	\$250,000(12)	\$249,986	Architectural Alliance	3/25/2013	9/30/2014	Completed - Published as Report 130		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
07-13	Enhancing Airport Wayfinding for the Elderly and Persons with Disabilities	\$450,000(14)	\$450,000	Gresham Smith & Partners	6/9/2014	2/17/2017	Research in Progress	R. Hendricks	T. Schatz
07-14	Improving Intelligibility of Airport Terminal Public-Address Systems	\$350,000(15)	\$350,000	Wilson Irig & Associates	7/7/2015	1/7/2017	Research in Progress	H. Cyrus	T. Schatz
07-15	Airport Passenger Terminal Design: Electronic Resource Library	\$300,000(15)	\$300,000	Intermodal Logistics Consulting, Inc.	7/7/2015	3/31/2017	Research in Progress	W. Reinhardt	T. Schatz
08: Construction									
08-01	Sustainable Airport Construction Practices	\$150,000(09)	\$150,000	Ricondo & Associates	6/1/2009	6/22/2010	Completed - Published as Report 42		
08-02	Incorporating Collaborative Partnering into Traditional Airport Construction Projects	\$350,000(17)					In Development	H. Cyrus M. Hovan	M. Greenberger
09: Maintenance									
09-01	Recommended Guidelines for the Collection and Use of Geospatially Referenced Data for Airfield Pavement Management	\$350,000(06)	\$299,636	Applied Research Associates	11/6/2006	4/30/2010	Completed - Published as Report 39		
09-02	Best Practices Manual for Working in or Near Airport Movement Areas	\$500,000(11)	\$325,000	Ricondo & Associates	8/31/2011	11/30/2013	Completed - Published as Report 101		
09-03	Airport Parking Garage Lighting Solutions	\$300,000(12)	\$300,000	Virginia Polytechnic Institute & State University	6/4/2012	10/31/2014	Completed - Published as Report 124		
09-04	Optimizing Airport Building Operations and Maintenance Through Retrocommissioning: A Whole Systems Approach	\$250,000(12)	\$249,835	Sebesta Blomberg & Associates	12/14/2012	12/31/2014	Completed - Published as Report 139		
09-05	Guidance on Successful Computer Maintenance Management Systems (CMMS) Selection and Practices	\$300,000(12)	\$300,000	Ross & Barunzini	7/12/2012	10/17/2014	Completed - Published as Web-Only Document 23		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
09-06	Evaluating Impacts of Sustainability Practices on Airport Operations and Maintenance	\$300,000(12)	\$312,000	Booz Allen	9/27/2012	4/25/2014	Completed - Published as Report 110		
09-07	Airport Maintenance Roles in Planning, Design, Construction, Commissioning, and Activation	\$200,000(12)	\$200,000	Michigan State University	11/13/2012	10/31/2014	Completed		
09-08	Balancing Airport Stormwater and Bird Hazard Management	\$250,000(12)	\$249,209	Environmental Resource Solutions	10/1/2012	8/29/2014	Completed - Published as Report 125		
09-09	LED Airfield Lighting System Operation and Maintenance	\$340,000(13)	\$340,000	Burns Engineering	8/9/2013	9/30/2015	Completed - Published as Report 148		
09-10	Airport Terminal Building Energy Use Intensity (ATB-EUI) Benchmarking Tool	\$400,000(13)	\$399,331	Texas A&M University	9/16/2013	9/30/2015	Completed - Published as CRP CD 178		
09-11	Pavement Maintenance Guidelines for General Aviation Airport Management	\$350,000(14)	\$350,000	Texas A&M University Transportation Institute	6/16/2014	5/13/2016	Completed - Published as Report 159		
09-12	NextGen - Leveraging NextGen Spatial Data to Benefit Airports	\$200,000(14)	\$200,000	Woolpert, Inc.	6/13/2014	6/3/2016	Completed - Published as Report 150, Volume 4		
09-13	Considering Life Cycle Costs in Airport Asset Procurement	\$350,000(15)	\$349,897	CH2M	5/19/2015	11/18/2016	Completed - Publication Pending	R. Hendricks	M. Greenberger
09-14	Advanced Computer Maintenance Management System (CMMS) Integration for Airports	\$375,000(16)	\$374,950	CH2M Hill	6/9/2016	9/8/2017	Research in Progress	T. Mai R. Zee	M. Greenberger
09-15	Building Information Modeling: Airport Facility Management and Assessing Return on Investment	\$750,000(17)					In Development	D. Rinsler	M. Greenberger
09-16	Best Practices for Airport Obstruction Management	\$300,000(17)					In Development	G. Boles J. Carlini	M. Greenberger
09-17	Collecting and Using Pavement Condition Index Data In Airport Decisions	\$250,000(17)					In Development	G. Cline A. Larkin	T. Schatz

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
10: Operations									
10-01	Optimizing the Use of Aircraft Deicing and Anti-Icing Fluids	\$300,000(06) \$50,000(08) \$100,000(08)	\$349,030	APS Aviation, Inc.	3/20/2007	7/31/2010	Completed - Published as Report 45		
10-02	Planning for Offsite Airport Terminals	\$350,000(06)	\$350,000	MarketSense	12/18/2006	9/1/2009	Completed - Published as Report 35		
10-03	Guidebook for Evaluating Airport Parking Strategies and Supporting Technologies	\$300,000(07)	\$300,000	Jacobs Consultancy	9/14/2007	9/1/2009	Completed - Published as Report 24		
10-04	Airports and the Newest Generation of General Aviation Aircraft	\$500,000(07)	\$496,390	GRA, Inc.	6/27/2007	5/31/2009	Completed - Published as Report 17, Volumes 1 and 2		
10-05	Reference Guide on Understanding Common Use at Airports	\$500,000(08)	\$399,981	Barich, Inc.	5/30/2008	9/29/2009	Completed - Published as Report 30		
10-06	Handbook to Assess the Impacts of Constrained Parking at Airports	\$400,000(08)	\$398,563	Ricondo & Associates	6/16/2008	3/8/2010	Completed - Published as Report 34		
10-07	Current Status and Future Implications of Passenger Self-Tagging	\$350,000(09)	\$350,000	Barich, Inc.	6/16/2009	7/30/2010	Completed - Published as Report 41 and Web-Only Document 10		
10-08	Applying Intelligent Transportation Systems to Improve Airport Traveler Access Information	\$350,000(09)	\$350,000	Gresham, Smith and Partners	4/13/2009	4/30/2012	Completed - Published as Report 70		
10-09	Elimination or Reduction of Baggage Recheck for Arriving International Passengers	\$400,000(09)	\$400,000	InterVISTAS Consulting	7/22/2009	10/31/2011	Completed - Published as Report 61		
10-10	Guidebook for Airport Irregular Operations (IROPS) Contingency Planning	\$600,000(10)	\$599,976	Mead & Hunt	8/26/2010	2/24/2012	Completed - Published as Report 65		
10-10A	Guidebook for Airport Irregular Operations (IROPS) Contingency Planning - Training Sessions	\$300,000(12)	\$151,053	Mead & Hunt	2/24/2012	1/31/2013	Completed - Training Sessions Held		

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
10-11	Guidebook to Creating a Collaborative Environment Between Airport Operations and Maintenance	\$500,000(11)	\$399,840	Anadeus Consulting	7/27/2011	4/30/2013	Completed - Published as Report 92		
10-12	Guidebook for Through-the-Fence (TTF) Operations	\$350,000(12)	\$350,000	Mead & Hunt	7/30/2012	2/28/2014	Completed - Published as Report 114		
10-13	A Guidebook for Integrating NIMS for Personnel and Resources at Airports	\$200,000(12)	\$200,000	System Planning Corp.	5/23/2012	8/24/2013	Completed - Published as Report 103		
10-14	Being Prepared for IROPS: A Business Planning and Decision Making Approach	\$300,000(12)	\$299,395	MCR Federal, LLC	8/2/2012	11/4/2013	Completed - Published as Report 106		
10-15	Guidebook for Airport Winter Operations	\$400,000(12)	\$400,000	Gresham, Smith and Partners	6/25/2012	8/29/2014	Completed - Published as Report 123		
10-16	Commercial Ground Transportation at Airports: Best Practices	\$300,000(13)	\$300,000	Leigh Fisher	7/10/2013	5/8/2015	Completed - Published as Report 146 and Web-Only Document 25		
10-17	Implementing Integrated Self-Service at Airports	\$450,000(13)	\$449,980	Barich, Inc.	8/5/2013	2/4/2015	Completed - Published as Report 136		
10-18	Preventative Maintenance at General Aviation Airports: Primer and Guidebook	\$400,000(13)	\$299,496	Delta Airport Consultants	9/18/2013	2/18/2015	Completed - Published as Report 138		
10-19	Guidebook for Advancing Collaborative Decision Making (CDM) at Airports	\$300,000(13)	\$299,783	Mosaic ATM, Inc.	9/3/2013	12/3/2014	Completed - Published as Report 137		
10-20	Guidance for Planning, Design, and Operations of Airport Communications	\$300,000(13)	\$251,700	TranSecure, Inc.	8/9/2013	1/15/2015	Terminated - Results to Project 10-20A		
10-20A	Guidance for Planning, Design, and Operations of Airport Communications	\$98,325(13)		Burns Engineering, Inc.	3/9/2016	3/8/2017	Research in Progress	F. James	M. Greenberger
10-21	Complying with Federal Regulations: An Integrated Approach	\$350,000(14)	\$350,000	Aviation Management Consulting	6/27/2014	12/31/2015	Completed - Published as Report 156		
10-22	Improving Stakeholder Engagement in Aircraft Accident Planning	\$500,000(14)	\$499,988	Futron Corporation	4/18/2014	1/15/2017	Research in Progress	M. Tonnacliff	M. Greenberger

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
10-23	IROPS Stakeholder Communication and Coordination	\$400,000(14)	\$399,930	Metron Aviation, Inc.	6/9/2014	12/8/2015	Completed - Published as Report 153		
10-24	Guidance for Developing Ramp Control Facilities	\$400,000(15)	\$399,997	Metron Aviation	4/24/2015	7/23/2016	Completed - Publication Pending	F. James M. Lawrence	M. Greenberger
10-25	Public-Notification Programs at Airports	\$200,000(15)	\$194,600	SSI, Inc.	7/1/2015	8/31/2016	Completed - Publication Pending	T. Carter S. Raman	J. Navarrete
11: Special Projects									
11-01	Legal Aspects of Airport Programs	\$200,000(06) \$475,000(07) \$300,000(08) \$600,000(09) \$500,000(10) \$50,000(11) \$200,000(12) \$50,000(13) \$200,000(14) \$350,000(15) \$200,000(16) \$75,000(17)		Transportation Research Board	2/1/2006		Continuing Project: See 11-01 Table	D. Fuller F. SanMartin	M. Greenberger
11-02	Quick Response for Special Needs	\$590,000(06) \$467,000(07) \$1,000,000(08) \$25,000(09) \$250,000(10) \$100,000(11) \$40,000(12) \$216,000(13) \$123,576(14) \$250,000(15) \$149,500(17)		Various	2/1/2006		Continuing Project: See 11-02 Table	L. Miller	M. Salamone

APPENDIX B (continued)

No.	Title	Allocation	Contract Amount	Contractor	Start Date	End Date	Status	FAA Liaison(s)	Staff Officer
11-03	Synthesis of Information Related to Airport Practices	\$500,000(06) \$700,000(07) \$500,000(08) \$500,000(09) \$900,000(10) \$700,000(11) \$1,270,000(12) \$1,160,000(13) \$1,053,000(14) \$1,170,000(15) \$1,220,000(16) \$1,220,000(17)		Transportation Research Board	2/1/2006		Continuing Project: See 11-03 Table; Annual Status Reports Published as Research Results Digests 1, 3, 4, 8, 12, 13, 17, 18, 22, and 23	P. Devoti	T. Schatz
11-04	Graduate Research Award Program on Public-Sector Aviation Issues	\$100,000(08) \$100,000(09) \$100,000(10) \$140,000(11) \$140,000(12) \$140,000(13) \$140,000(14) \$568,779(15) \$907,580(16) \$507,409(17)		Transportation Research Board (08-13) Old Dominion University Research Foundation (14)			Continuing Project: papers published as TRB TRR 2184, 2206, 2266, 2325, 2400, and 2471; status reports published as Research Results Digests 14, 19, and 25.	R. Samis	L. Goldstein
11-04A	Airport Research Competition for Universities	included in 11-04 (15)(16)(17)		Old Dominion University Research Foundation	5/9/2014	1/31/2018	Research in Progress	R. Samis	L. Goldstein
11-05	Implementation of ACRP Strategic Plan	\$600,000(10) \$148,947(11) \$200,000(12) \$600,000(13) \$600,000(14) \$650,000(15) \$1,250,000(16) \$600,000(17)		Various			Continuing Project	J. Showalter	M. Salamone
11-06	Evaluating ACRP Processes	\$250,000(10)		Transportation Research Board			Completed - Results to AOC		
11-07	ACRP Problem Statement Development	\$500,000(13) \$300,000(14)		Transportation Research Board			Research in Progress; status published as Research Results Digest 20		M. Salamone
11-08	ACRP Insight Events - Discussions on Critical Issues in the Airport Industry	\$600,000(16)		Transportation Research Board			In Development		M. Salamone

**APPENDIX B (continued)
ACRP PROJECT 11-01
Legal Aspects of Airport Programs**

No.	Title	Consultant	Start Date	Estimated Completion Date	Staff Officer
01-01	Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters through December 31, 2007	Spiegel & McDiarmid LLP	December 2006	Completed - Published as Legal Research Digest 4 (CRP-CD-68)	
01-02	Theory and Law of Airport Revenue Diversion	Paul Dempsey	January 2007	Completed - Published as Legal Research Digest 2	
01-03	Compilation/List of Airport Law Resources	McGill University	January 2007	Completed - Published as Legal Research Digest 1	
01-04	Survey of Airport Laws and Regulation of Commercial Ground Transportation	Smith Armundsen	April 2007	Completed - Published as Legal Research Digest 3	
01-05	Responsibility for Implementation and Enforcement of Airport Land-Use Zoning Restrictions	William V. Cheek & Associates	April 2007	Completed - Published as Legal Research Digest 5	
01-06	The Right to Self-Fuel	C. Daniel Prather, Ph.D.	January 2008	Completed - Published as Legal Research Digest 8	
01-07	The Impact of Airline Bankruptcies on Airports	Jocelyn Waite	October 2007	Completed - Published as Legal Research Digest 6	
01-08	Airport Governance and Ownership	Daniel S. Reimer	February 2008	Completed - Published as Legal Research Digest 7	
01-09	Survey of Elements of Disparity Studies for Airport Disadvantaged Business Enterprise Programs			Cancelled	
02-01	Obstructions Affecting Navigable Airspace	Cheek & Associates	July 2008	Incorporated into 02-05	
02-02	Use and Success of Avigation Easement and Other Tools for Airport-Compatible Land Use and Development of Model Language	Lemongrass Consulting	June 2008	Incorporated into 02-05	
02-03	Case Studies on Community Challenges to Airport Development	Jaye Pershing Johnson	October 2008	Completed - Published as Legal Research Digest 9	
02-04	Analysis of Federal Laws, Regulations, and Case Law Regarding Airport Proprietary Rights	Jodi Howick, Esq.	October 2008	Completed - Published as Legal Research Digest 10	
02-05	Achieving Airport-Compatible Land Uses and Minimizing Hazardous Obstruction in Navigable Airspace	Jocelyn Waite	August 2010	Completed - Published as Legal Research Digest 14	
03-01	Fair Disclosure and Airport Impact Statements in Real Estate Transfers	Larry Thomas, Esq.	July 2009	Completed - Published as Legal Research Digest 12	

APPENDIX B (continued)

No.	Title	Consultant	Start Date	Estimated Completion Date	Staff Officer
03-02	Compilation of State Aviation Authorizing Legislation	Jodi Howick, Esq.	August 2009	Completed - Published as Legal Research Digest 15	
03-03	Survey of Minimum Standards: Commercial Aeronautical Activities at Airports	Kaplan Kirsch Rockwell, LLP	July 2009	Completed - Published as Legal Research Digest 11	
03-04	Airport Rates and Charges: Law and Policy	Spiegel & McDiarmid LLP	November 2009	Completed - Incorporated into 4-05	
03-05	State and Federal Regulations That May Affect Initiatives to Reduce Airports' GHG Emissions	Kaplan Kirsch Rockwell, LLP	November 2009	Completed - Published as Legal Research Digest 17	
03-06	An Index and Digest of Decisions: Compilation of Airport Law Resources	Kaplan Kirsch Rockwell, LLP	December 2009	Completed - Published as Legal Research Digest 13 (CRP-CD-108)	
04-01	Airport Responsibility for Wildlife Management	Broad and Cassell	April 2011	Completed - Published as Legal Research Digest 20	
04-02	Legal Issues Related to Developing Safety Management Systems and Safety Risk Management at U.S. Airports	Foley & Lardner	December 2011	Completed - Published as Legal Research Digest 19	
04-03	Analysis of Federal Laws, Regulations, Case Law, and Survey of Existing Airport NPDES Permits Regarding Tenant-Operator Responsibilities Under NPDES and Storm Water Management BMP's Under Owner/Airport's Operating Permits	CDM	September 2012	Completed - Published as Legal Research Digest 25	
04-04	Buy America Requirements for Federally Funded Airports	Conner Gwyn Schenk	March 2011	Completed - Published as Legal Research Digest 18	
04-05	Compilation of DOT and FAA Airport Legal Determinations and Opinion Letters Through December 2012	Spiegel & McDiarmid LLP	February 2012	Completed - Published as Legal Research Digest 21 (CRP-CD-141)	
04-06	The Role of the Airport Sponsor in Airport Planning and Environmental Reviews of Proposed Development Projects Under the National Environmental Policy Act (NEPA) and State Mini-NEPA Laws	Conner Gwyn Schenk	March 2012	Completed - Published as Legal Research Digest 22	
04-07	Procurement of Airport Development and Planning Contracts	Broad and Cassell	April 2011	Completed - Published as Legal Research Digest 16	
05-01	Regulations Affecting the Exercise of First Amendment Activities at Airports	Jodi Howick, Esq.	August 2013	Completed - Published as Legal Research Digest 26	
05-02	Sovereign Immunity for Public Airport Operators	Seay Law International, PA	November 2013	Completed - Published as Legal Research Digest 24	

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No.	Title	Consultant	Start Date	Estimated Completion Date	Staff Officer
05-03	The Fourth Amendment and Airports	Jodi Howick	August 2014	Completed - Published as Legal Research Digest 27	
05-04	A Guide for Compliance with Grant Agreement Obligations to Provide Reasonable Access to an AIP-Funded Public Use General Aviation Airport	Kaplan Kirsch Rockwell, LLP	July 2013	Completed - Published as Legal Research Digest 23	
06-01	Operational and Legal Issues with Fuel Farms	Kaplan Kirsch Rockwell, LLP	September 2014	Completed - Published as Legal Research Digest 28	
06-02	Contract Risk Management for Airport Agreements	Broad & Cassell	May 2015	Completed - Published as Legal Research Digest 30	
07-01	Impact of Firearms Laws on Airports	The Thomas Law Firm	March 2015	Completed - Published as Legal Research Digest 29	
07-02	Preemption of Worker Retention and Labor Peace Agreements at Airports	Kaplan Kirsch Rockwell, LLP	October 2015	Completed - Publication Pending	M. Greenberger
08-01	Legal Issues Related to the Implementation and Operation of Safety Management Systems at Airports			In Development	M. Greenberger
08-02	Legal Risks of Operating a Public Airport	Jodi Howick	May 2016	Research in Progress	M. Greenberger
08-03	Evolving Law on Airport Implications by Unmanned Aerial Systems Operations	Ravich Law Firm, P.A.	May 2016	Research in Progress	M. Greenberger
08-04	Legal Considerations in the Funding and Development of Multi-Modal Facilities	Timothy Karaskiewicz	May 2016	Research in Progress	M. Greenberger
09-01	Airport Public Health Preparedness & Response: Legal Rights, Powers & Duties			In Development	M. Greenberger
09-02	Legal Issues Relating to Airports Promoting Competition			In Development	M. Greenberger
09-03	Permitted Airport Involvement in Economic Development Efforts			In Development	M. Greenberger

**APPENDIX B (continued)
ACRP PROJECT 11-02
Quick Response for Special Needs**

No.	Title	Contractor	Start Date	End Date	Status	Staff Officer
Task 01	Model for Improving Energy Use in U.S. Airport Facilities	Texas A&M University Energy Systems Laboratory	10/13/2006	7/31/2007	Completed - Published as Research Results Digest 2	
Task 02	Ground Access to Major Airports by Public Transportation	Matthew Coogan	8/16/2006	9/30/2007	Completed - Published as Report 4	
Task 03	Evaluation and Mitigation of Aircraft Slide Evacuation Injuries	George Washington University	10/9/2006	12/15/2007	Completed - Published as Report 2	
Task 04	Airport Safety Management Systems for Airports: Overview	MITRE Corporation	1/2/2007	11/2/2007	Completed - Published as Report 1, Volume 1	
Task 05	Quarantine Facilities for Arriving Air Travelers: Identification of Planning Needs and Costs	System Planning Corp.	3/28/2007	11/3/2007	Completed - Published as Report 5	
Task 06	Interagency-Industry Collaboration on Pandemic Planning for Aviation: A Workshop	Transportation Research Board	2/15/2007	9/15/2007	Completed - Workshop Held - Published as TRB Conference Proceedings 41	
Task 07	Current and Emerging Issues Facing the Airport Industry	Transportation Research Board	8/1/2007	1/31/2009	Completed - Published as Research Results Digest 5	
Task 08	Enhanced Modeling of Aircraft Taxiway Noise - Scoping	Wyle Laboratories, Inc.	2/14/2008	8/31/2009	Completed - Published as Web-Only Document 9, Volume 1	
Task 09	Visibility of Airfield Signs and Markings from Aircraft and Ground Vehicles				Cancelled	
Task 10	Estimate of National Use of Aircraft and Airfield Deicing Materials	CH2M Hill	10/16/2007	6/15/2008	Completed - Results to ACI-NA, AAAE, A4A	
Task 11	A Summary of How Proposed Firefighting Standards Would Impact Airports	GRA, Inc.	12/23/2008	6/15/2009	Completed - Published as Web-Only Document 7 and Research Results Digest 7	
Task 12	Ramp Incident Data from Selected Large and Medium Hub Airports	Ricondo & Associates	4/17/2009	8/30/2011	Completed - Results to FAA	
Task 13	Research Symposium on the Transmission of Disease in Airports and on Aircraft	Transportation Research Board			Completed - Symposium Held - Published as TRB Conference Proceedings 47	
Task 14	Helping Airports Understand the Payment Card Industry Data Protection Standard (PCI DSS)	Barich, Inc.	10/15/2009	5/15/2010	Completed - Published as Research Results Digest 11	

APPENDIX B (continued)

No.	Title	Contractor	Start Date	End Date	Status	Staff Officer
Task 15	Aviation Industry Familiarization and Training for Part-Time Airport Policymakers	Delta Airport Consultants	1/19/2010	11/18/2010	Completed - Published as Report 58	
Task 16	Analysis, Scoping, and Prioritizing ACRP Deicing Problem Statements				Cancelled	
Task 17	Risk Assessment of Proposed ARFF Standards	Robert David & Assoc.	2/19/2010	1/4/2011	Completed - Published as Web-Only Document 12	
Task 18	The Carbon Market: A Primer for Airports	Pace Global Energy Services	11/2/2010	8/30/2011	Completed - Published as Report 57	
Task 19	Symposium on Air Travel and the Spread of Disease				Cancelled	
Task 20	Developing Problem Statements on Information Technology Issues at Airports	Transportation Research Board	12/1/2011	12/1/2011	Completed - Workshop Held - Results to AOC	
Task 21	Innovative Airport Response to Threatened and Endangered Species	Environmental Science Associates	4/22/2013	8/29/2014	Completed - Published as Report 122	
Task 22	Best Practices for General Aviation Aircraft Fuel-Tank Sampling	Hagerty Environmental LLC	8/14/2013	4/13/2014	Completed - Published as Research Results Digest 21	
Task 23	Alternative IT Delivery Methods and Best Practices for Small Airports	Barich, Inc.	8/5/2013	7/31/2014	Completed - Published as Report 128	
Task 24	ACRP Electronic Product Options	Grafton Technologies, Inc.	7/27/2015	1/26/2016	Completed - Final deliverables available for download	
Task 25	Developing Environmental Problem Statements	Harris Miller Miller & Hanson	9/12/2014	4/23/2015	Completed	
Task 26	AOC Strategic Planning	Ricondo & Associates	9/12/2014	8/24/2015	Completed	
Task 27	Update to Models for Risk Assessment of Runway Safety Areas	Airport Safety Management Consultants, LLC	11/1/2016	12/15/2016	Completed	
Task 28	Recovering International Recyclables from In-flight Service				In Development	J. Navarrete

APPENDIX B (continued)
ACRP PROJECT 11-03
Synthesis of Information Related to Airport Practices

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
01: Administration						
S01-01	Innovative Finance and Alternative Sources of Revenue for Airports	Jacobs Consultancy	July 2006	Completed - Published as Synthesis 1		
S01-02	Airport Revenue Diversification	Kramer Aerotech, Inc.	March 2009	Completed - Published as Synthesis 19		
S01-03	Airport Insurance Coverage and Risk Management Practices	Ron Rakich & Assoc.	April 2010	Completed - Published as Synthesis 30		
S01-04	Airline and Airline-Airport Consortiums to Manage Terminals and Equipment	AvAirPros	April 2010	Completed - Published as Synthesis 31		
S01-05	Issues with Airport Organization and Reorganization	Kim Kenville Consulting	February 2012	Completed - Published as Synthesis 40		
S01-06	How Airports Measure Customer Service Performance	Kramer Aerotech, Inc.	February 2012	Completed - Published as Synthesis 48		
S01-07	Conducting Airport Peer Reviews	CTC & Associates	February 2012	Completed - Published as Synthesis 46		
S01-08	Understanding the Value of Social Media at Airports for Customer Engagement	Leigh Fisher	March 2013	Completed - Published as Synthesis 56		
S01-09	Practices to Develop Effective Stakeholder Relationships at Smaller Airports	Delta Airport Consultants, Inc.	May 2014	Completed - Published as Synthesis 65		
S01-10	Strategies for Maintaining Air Service	Sixel Consulting Group, Inc.	May 2014	Completed - Published as Synthesis 68		
S01-11	Planning for Operational Recovery at Small Airports	North Dakota State University	April 2015	Completed - Published as Synthesis 78		
S01-12	Airport Participation in Oil & Gas Development	Kramer aerotech, Inc.	May 2016	Research in Progress	R. Eiter	G. Staba
S01-13	Food and Beverage and Retail Operators: The Costs of Doing Business at Airports	Unison Consulting, Inc.	June 2016	Research in Progress	J. Hebert	G. Staba
S01-14	Funding Industrial Aviation Development	Smith-Woolwine Associates, Inc.	May 2016	Research in Progress	None	G. Staba

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
S01-15	Airport Operator Options for Delivery of FBO Services	Kramer aerotek, Inc.	June 2016	Research in Progress	T. Vick	G. Staba
S01-16	Microgrids and Their Application at Airports			In Development		G. Staba
S01-17	Attracting Investment at General Aviation Airports Through Public-Private Partnerships and Leasing			In Development		
02: Environment						
S02-01	Effects of Airport Noise: Research Update on Selected Topics	Mestre Greve Associates	March 2007	Completed - Published as Synthesis 9		
S02-02	Airport Sustainability Practices	Arup	March 2007	Completed - Published as Synthesis 10		
S02-03	Compilation of Noise Programs in Areas Outside DNL 65	Harris Miller Miller & Hanson	April 2008	Completed - Published as Synthesis 16		
S02-04	Approaches to Integrating Airport Development and Federal Environmental Review Processes	RS & H / Synergy	April 2008	Completed - Published as Synthesis 17		
S02-05	Funding Opportunities for Airport Environmental Projects	Unison Consulting, Inc.	April 2010	Completed - Published as Synthesis 24		
S02-06	Airport Climate Adaptation and Resilience	AEA Group	April 2011	Completed - Published as Synthesis 33		
S02-07	Integrating Environmental Sustainability into Airport Contracts	Leigh Fisher	March 2012	Completed - Published as Synthesis 42		
S02-08	Environmental Assessment of Air and High-Speed Rail Corridors	Arizona State University	March 2012	Completed - Published as Synthesis 43		
S02-09	Environmental Management System Development Process	First Environment, Inc.	March 2012	Completed - Published as Synthesis 44		
S02-10	Outcomes of Green Initiatives: Large Airport Experience	First Environment, Inc.	March 2013	Completed - Published as Synthesis 53		
S02-11	Lessons Learned from Airport Sustainability Plans	A Ripple Effect, PLC	May 2014	Completed - Published as Synthesis 66		

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
S02-12	Airport Sustainability Practices - Drivers and Outcomes of Green Initiatives for Small and GA Airports	D Prather Airport Solutions, LLC	May 2015	Completed - Published as Synthesis 69		
S02-13	Helicopter Noise Information for Airport Noise Managers	Landrum & Brown	May 2015	Completed - Published as Synthesis 76		
S02-14	Airport Sustainability Practices	Haley & Aldrich, Inc.	March 2015	Completed - Published as Synthesis 77		
S02-15	Airport Experience with Alternative Fuels for Ground Transport	Cadmus Group, Inc.	June 2016	Research in Progress	P. Magnotta	G. Staba
S02-16	Airport Experience with Implementing Notifications Required by the Aircraft Drinking Water Rule	Cadmus Group, Inc.	April 2016	Research in Progress	M. Lamprecht	G. Staba
S02-17	Sustainability's Role in Airport Growth			In Development		G. Staba
S02-18	Airport Waste Management and Recycling Practices			In Development		G. Staba
S02-19	Airport Experience with Alternative Fuels and Vehicles-Private Ground Transportation Operators			In Development		G. Staba
03: Policy and Planning						
S03-01	Aviation Forecasting Methodologies	GRA, Inc.	August 2006	Completed - Published as Synthesis 2		
S03-02	Airport Ground Access Mode Choice Models	Aviation Systems Consulting	October 2006	Completed - Published as Synthesis 5		
S03-03	Airport Economic Impact Methods and Models	Hoyle Tanner & Associates	March 2007	Completed - Published as Synthesis 7		
S03-04	Airport System Planning Practices	Wilbur Smith Associates	April 2008	Completed - Published as Synthesis 14		
S03-05	Effective Practices for Preparing Airport Improvement Program Benefit Cost Analysis	Economic Development Research Group	April 2008	Completed - Published as Synthesis 13		
S03-06	Strategies for Reuse of Underutilized or Vacant Airport Facilities	Kramer Aerotech, Inc.	April 2010	Completed - Published as Synthesis 25		

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
S03-07	Integrating Airport GIS Data with Public Agency GIS	Grafton Technologies	March 2013	Completed - Published as Synthesis 59		
S03-08	Backcountry Airstrip Preservation	T-O Engineering, Inc.	March 2013	Completed - Published as Synthesis 55		
S03-09	Cell Phone Lots at Airports	Kramer Aerotek, Inc.	May 2014	Completed - Published as Synthesis 62		
S03-10	Practices in Preserving and Developing Public-Use Seaplane Bases	Stephen Quilty	May 2014	Completed - Published as Synthesis 61		
S03-11	Transportation Network Companies (TNC's): Challenges and Opportunities for Airport Operators	InterVISTAS, Inc.	June 2016	Research in Progress	P. Magnotta	G. Staba
S03-12	Response Considerations for Communicable Diseases on Arriving Flights	Smith-Woolwine Associates, Inc.	June 2016	Research in Progress	T. Carter	G. Staba
S03-13	Estimating Truck Trip Generation for Airport Air Cargo Activity	Resource Systems Group, Inc.	May 2016	Research in Progress		G. Staba
S03-14	Simulation of Airside and Landside Operations in Airport Planning			In Development		
S03-15	How Airports Plan for Changing Aircraft Capacity-the Effects of Upgauging			In Development		
04: Safety						
S04-01	General Aviation Safety and Security Practices	Reynolds, Smith and Hills, Inc.	October 2006	Completed - Published as Synthesis 3		
S04-02	Preventing Aircraft-Vehicle Incidents During Winter Operations and Periods of Low Visibility	Bowling Green State University	June 2007	Completed - Published as Synthesis 12		
S04-03	Identification of the Requirements and Training to Obtain Driving Privileges on Airfields	Airport Safety Consultants	May 2008	Completed - Published as Synthesis 15		
S04-05	Bird Repellant Techniques on Airports	Mississippi State University	April 2010	Completed - Published as Synthesis 23		
S04-06	Current Airport Inspection Practices Regarding FOD	Prather Airport Solutions	April 2010	Completed - Published as Synthesis 26		

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
S04-07	Lessons Learned from Airport Safety Management Systems Pilot Study	Landy Consultants, LLC	April 2011	Completed - Published as Synthesis 37		
S04-08	Managing Aerial Firefighting Activities on Airports	Critical Path International	May 2011	Completed - Published as Synthesis 32		
S04-09	Model Mutual Aid Agreements for Airports	Smith-Woolwine Associates	March 2012	Completed - Published as Synthesis 45		
S04-10	Safety Reporting Systems at Airports	Landy Consultants, LLC	February 2013	Completed - Published as Synthesis 58		
S04-11	Effective Cooperation Among Airports and Local and Regional Emergency Management Agencies for Disaster Preparedness and Response	Smith-Woolwine Associates, Inc.	February 2013	Completed - Published as Synthesis 50		
S04-12	Airport Emergency Post-Event Recovery Practices	Smith-Woolwine Associates, Inc.	June 2014	Completed - Published as Synthesis 60		
S04-13	Combining Mixed Use Flight Operations Safely at Airports	SMQ Airport Services	May 2015	Completed - Published as Synthesis 74		
S04-14	Airport Safety Risk Management Panel Activities and Outcomes	Airport Safety Management Consultants, LLC	April 2015	Completed - Published as Synthesis 71		
S04-15	Flight Operations Advisories at Non-Towered Airports	D Prather Aviation Solutions, LLC	May 2015	Completed - Published as Synthesis 75		
S04-16	Emergency Communications Planning for Airports	Smith-Woolwine Associates, Inc.	May 2015	Completed - Published as Synthesis 73		
S04-17	Table Top and Full-scale Emergency Exercises for Small Airports	Smith-Woolwine Associates, Inc.	May 2015	Completed - Published as Synthesis 72		
S04-18	Uses of Social Media to Inform Operational Response and Recovery During an Airport Emergency	Smith-Woolwine Associates, Inc.	June 2016	Research in Progress	M. Tonnacliff	G. Staba
S04-19	Incorporating ADA and Functional Needs in Emergency Exercises			In Development		G. Staba
S04-20	Airport Incident Reporting Practices			In Development		

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
05: Security						
S05-01	Intelligent Transportation System (ITS) Sensor Technology for General Aviation			Cancelled		
06: Human Resources						
S06-01	Aviation Workforce Development Practices	International Aviation Management Group	March 2009	Completed - Published as Synthesis 18		
S06-02	Airport Self-Inspection Practices	Prather Airport Solutions	May 2010	Completed - Published as Synthesis 27		
S06-03	Exploring Airport Employee Commuting and Parking Strategies	DMR Consulting	May 2011	Completed - Published as Synthesis 36		
S06-04	Adapting New Maintenance Hires to the Airport Environment	SMQ Airport Services	March 2012	Completed - Published as Synthesis 49		
07: Design						
S07-01	Impacts of Aging Travelers on Airports	Corgan Associates, Inc.	February 2013	Completed - Published as Synthesis 51		
08: Construction						
S08-01	Airport Terminal Facility Activation Techniques	Arup	March 2009	Completed - Published as Synthesis 20		
09: Maintenance						
S09-01	Impact of Rubber Removal Techniques on Runways	University of Oklahoma	June 2007	Completed - Published as Synthesis 11		
S09-02	Common Airport Pavement Maintenance Practices	Applied Research Associates	March 2009	Completed - Published as Synthesis 22		
S09-03	Subsurface Utility Engineering Information Management for Airports	J. H. Anspach Consulting	May 2011	Completed - Published as Synthesis 34		
S09-04	Issues with Use of Airfield LED Light Fixtures	RPI University	May 2011	Completed - Published as Synthesis 35		

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
S09-05	Repairing and Maintaining Airport Parking Structures While in Use	Walker Parking Consultants	February 2012	Completed - Published as Synthesis 47		
S09-06	Airside Snow Removal Practices for Small Airports with Limited Budgets	Stephan Quilty	June 2014	Completed - Published as Synthesis 67		
S09-07	Building Information Modeling for Airports	Arbor Services	May 2015	Completed - Published as Synthesis 70		
S09-08	Approaches to Mitigate Alkali Silica Reaction (ASR) Effects at Airports			In Development		
10: Operations						
S10-01	Counting Aircraft Operations at Non-Towered Airports	Aerofinity	October 2006	Completed - Published as Synthesis 4		
S10-02	Common-Use Facilities and Equipment at Airports	Barich, Inc.	March 2007	Completed - Published as Synthesis 8		
S10-03	Impact of Airport Deicing Products on Aircraft and Airfield Infrastructure	Montana State University, Western Transportation Institute	March 2007	Completed - Published as Synthesis 6		
S10-04	Airport Energy Efficiency and Cost Reduction	Miller Dunwiddie Architecture	March 2009	Completed - Published as Synthesis 21		
S10-05	Ramp Safety Practices	Landry Consultants, LLC	May 2010	Completed - Published as Synthesis 29		
S10-06	Investigating Safety Impacts of Energy Technologies on Airports and Aviation	Harris Miller Miller & Hanson	May 2010	Completed - Published as Synthesis 28		
S10-07	Expediting Aircraft Recovery at Airports	Prather Airport Solutions	May 2011	Completed - Published as Synthesis 38		
S10-08	Conducting Aeronautical Special Events at Airports	Prather Airport Solutions	February 2012	Completed - Published as Synthesis 41		
S10-09	Airport Wildlife Population Management	Savannah River Ecological Laboratory	February 2012	Completed - Published as Synthesis 39		

APPENDIX B (continued)

No.	Title	Topic Consultant	Start Date	Status	FAA Liaison(s)	Staff Officer
S10-10	Habitat Management to Deter Wildlife at Airports	Mississippi State University	March 2013	Completed - Published as Synthesis 52		
S10-11	Electric Vehicle Charging Stations at Airport Parking Facilities	Leigh Fisher	March 2013	Completed - Published as Synthesis 54		
S10-12	Airport Response to Special Events	Kramer Aerotech, Inc.	February 2013	Completed - Published as Synthesis 57		
S10-13	Overview of Airport Fueling System Operations	Stephan Quilty	May 2014	Completed - Published as Synthesis 63		
S10-14	Issues Related to Accommodating Animals Traveling through Airports	Smith-Woolwine Associates, Inc.	May 2014	Completed - Published as Synthesis 64		

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