

EXPRESSION OF INTEREST FOR

West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Prepared for
West Virginia Department of Transportation
Aeronautics Commission

MARCH 27, 2019

RECEIVED
2019 MAR 26 AM 10: 07
WV PURCHASING
DIVISION



EXPRESSION OF INTEREST FOR

West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Cover Letter

March 27, 2019

Jessica Chambers
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

Kimley-Horn
2400 Corporate Exchange Drive, Suite 120
Columbus, OH 43231

Re: Expression of Interest for West Virginia Airport Economic Impact Study, CEOI SACI900000001

Dear Ms. Chambers and Members of the Selection Committee:

Kimley-Horn is excited to serve the West Virginia Aeronautic Commission (WVAC) on the Aviation Economic Impact Study (AEIS). We understand the value of economic impact studies to state agencies, airports, and the Federal Aviation Administration (FAA) who rely on the analysis and results to support decision-making. The Kimley-Horn team members selected for this contract offer the following benefits to WVAC:

- **Experienced team with recent experience conducting AEISs across the nation.** All of our proposed team members have managed or supported AEISs and statewide aviation planning efforts. We regularly work together on these assignments and recently completed statewide AEISs for Montana, Florida, and Missouri, as well as a regional AEIS for Columbus, Ohio.
- **Long history of working in West Virginia and with the local the FAA office.** Kimley-Horn Principal-in-Charge, Bob Jones, P.E., has led aviation projects for the Huntington Tri-State Airport since 2010. These experiences have allowed Kimley-Horn to develop a strong understanding of aviation in the state and develop a working relationship with the Beckley FAA Airports District Office.
- **True economists with national economic impact modeling expertise.** Economic Development Research Group's (EDR Group) reputation for developing sound, defensible methodologies for airport-specific, regional, and statewide aviation impact studies, as well as other modal economic impact studies provides WVAC with industry-proven results.
- **Experienced Project Manager with close proximity.** Regan Schnug, AICP is located in our Columbus, OH office less than a three hour drive away. She has over 12 years of experience providing aviation consulting services and has conducted EISs in Florida, Michigan, South Dakota, Idaho, Colorado, and Washington.
- **Outstanding design and communication capabilities.** Our team is recognized for our ability to deliver tailored deliverables to different technical and non-technical audiences.

Our qualified team of professionals is ready and available to start work on this project immediately. Should you have any questions or if we can be of assistance, please do not hesitate to contact Project Manager Regan Schnug at 614.454.6701 or via email at regan.schnug@kimley-horn.com.

Sincerely,
KIMLEY-HORN

Regan Schnug, AICP
Project Manager

Kimley-Horn has reviewed the Terms and Conditions provided in the Expression of Interest (EOI) solicitation and provided suggested modifications at the end of this EOI, prior to the Addendum acknowledgment and required forms.



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI90000001

Qualifications, Experience, and Past Performance

PROJECT TEAM

Kimley-Horn has assembled a highly qualified, respected, and established team that will work together seamlessly with the WVAC to produce a successful AEIS. Our team is comprised of individuals from Kimley-Horn and EDR Group with long histories of working together on statewide, regional, and local aviation economic impact studies across the country. **Figure 1** illustrates our team's vast combined experience in conducting statewide planning projects, including aviation economic impact studies. **Figure 2** depicts the organization of our team and key staff that will lead and support the tasks outlined in our approach. The following pages provide more details on our staff's qualifications and experience in completing similar statewide aviation economic impact projects, as well as our proposed staffing plan (**Table I**).

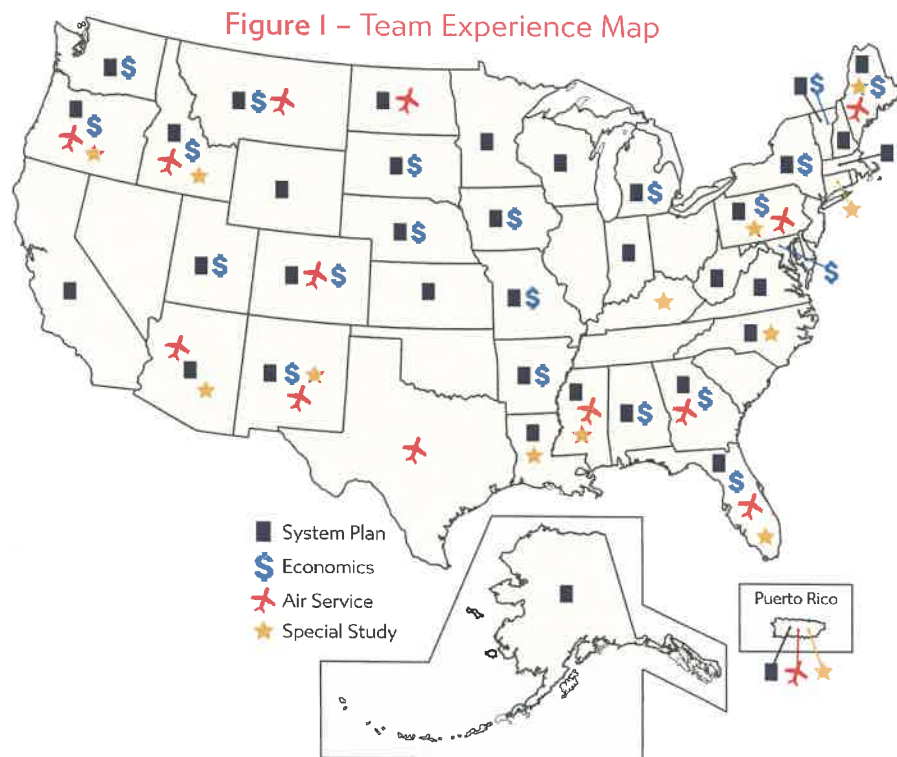


Figure 2 – Team Organizational Chart



Project Manager
 Regan Schnug, AICP

Deputy Project Manager
 Pam Keidel-Adams

Principal-in-Charge
 Bob Jones, P.E.

Task 1: Data Collection and Surveys

Regan Schnug, AICP Taylor Filaroski
 Zach DeVeau, AICP Pam Turner, GISP
 Tom Gibson

Task 2: Measure Quantitative Economic Impacts

Steven Landau¹ Pam Keidel-Adams
 Adam Winston¹ Naomi Stein¹

Task 3: Document Qualitative Economic Impacts

Zach DeVeau, AICP Scott Perkes
 Regan Schnug, AICP

Task 4: Deliverables

Regan Schnug, AICP Gina Santangelo
 Catherine Woodwell Steve Landau¹

Task 5: Public Involvement

Pam Keidel-Adams Bob Jones, P.E.

Task 6: Project Management

Regan Schnug, AICP Pam Keidel-Adams

Bold = Task Leader

¹ = EDR Group Staff



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Kimley»Horn Kimley-Horn

Kimley-Horn is an employee-owned multidisciplinary firm that has been providing exceptional planning and engineering consulting services to clients nationally and internationally for over 52 years. Our established, full-service aviation planning practice offers the full array of expertise and knowledge required to successfully deliver the AEIS. The firm’s diverse experience ranges from airport systems and system planning to aviation economics, state and local policy, airfield geometry, airspace, air service, pavement management, and more. Our seasoned staff of aviation planners bring a broad base of statewide planning expertise as well as West Virginia-specific airport knowledge and understanding from our work at the Huntington Tri-State Airport.

Kimley-Horn brings WVAC our professional dedication, teamwork, and creativity—all to complement our technical skills in aviation system planning and economic impact analysis. This creativity includes producing high-quality deliverables that convey the right message to the right audience. From executive summaries to individual airport brochures, video production, and websites, our graphic design and technology specialists bring creative ideas to our projects. Our technology solutions also include application development, Geographic Information Systems (GIS), and tools that improve and enhance data storage and analysis.

EDR  Economic Development Research Group

EDR Group focuses specifically on applying advanced tools and techniques for evaluating economic development performance, impacts, and opportunities. EDR Group is nationally recognized for state-of-the-art analysis products such as the Airport Benefit-Cost/Community Benefits Assessment system and the Transportation Economic Development Impact System (TREDIS) framework for multimodal transportation projects and policies. They are leaders in the field of transportation economics, with a history of performing EISs of all travel modes including economic benefits, development impacts, and benefit/cost relationships. EDR Group has led statewide aviation EISs for 13 states, many in coordination with Kimley-Horn staff. They also authored the most recent national study on the economic impacts of airports in the U.S. in ACRP Report 132.

Table I – Proposed Staffing Plan

Staff	Role
Regan Schnug, AICP	Project Manager
Pam Keidel-Adams	Deputy Project Manager
Bob Jones, P.E. (CO)	Principal-in-Charge
Zach DeVeau, AICP	Senior Planner
Catherine Woodwell	Planning Analyst
Tom Gibson	Planning Analyst
Taylor Filaroski	Planning Analyst
Scott Perkes	Planning Analyst
Pam Turner, GISP	GIS Lead
Gina Santangelo	Graphic Designer
Steven Landau (EDR)	Lead Economist
Adam Winston (EDR)	Project Economist
Naomi Stein (EDR)	Project Economist



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

STAFF QUALIFICATIONS



Regan Schnug, AICP

PROJECT MANAGER

12 Years of Industry Experience

2 Years with Kimley-Horn

Professional Certifications

- American Institute of Certified Planners (#26131)

Education

- B.S., Urban and Regional Planning, Michigan State University

Professional Bio

Regan has over a decade of experience blending traditional urban planning techniques with aviation planning. As a project manager and aviation planner, she develops statewide AEISs, airport master plans, airport layout plans, state aviation system plans (SASPs), airport zoning, and airport land use compatibility guidebooks. Regan's recent work has been on several state and national land use guidebooks, as well as AEISs for Florida, Michigan, South Dakota, Idaho, Colorado, and Washington. She has served as project manager or deputy project manager on eight SASPs and been a contributing author to several Transportation Research Board (TRB) Airport Cooperative Research Program (ACRP) guidebooks on various airport planning-related topics ranging from airport land use compatibility to the economic impact of U.S. airports on the national economy. She is currently serving as the Chairwoman of ACRP Project 01-37 on establishing performance measures for state aviation agencies.

Relevant Experience

South Dakota State Aviation System Plan and AEIS (2008-2010 and 2018-Ongoing)

- **Role:** Project Manager
- **Responsibilities:** Technical and administrative oversight of all project tasks, analysis, presentation, public involvement

Columbus Regional Airport Authority AEIS (2018-2019)

- **Role:** Kimley-Horn Project Manager
- **Responsibilities:** Project team coordination, data analysis, report writing and presentation

Florida Statewide AEIS (2017-2019)

- **Role:** Senior Planner
- **Responsibilities:** Data collection plan review, analysis, report writing

Michigan Aviation System Plan and AEIS (2016-2017; prior to joining Kimley-Horn)

- **Role:** Deputy Project Manager
- **Responsibilities:** Project management, advisory committee coordination, data analysis, presentation
- *This project was conducted with Steve Landau from EDR Group*



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Pam Keidel-Adams
 DEPUTY PROJECT MANAGER

30 Years of Industry Experience
 5 Years with Kimley-Horn

Education
 • B.S., Urban Administration,
 University of Cincinnati

Professional Bio

Pam has 30 years of aviation planning experience and has conducted statewide economic impact, system planning, air service, and land use assignments in more than 30 states. She is an innovator in developing performance measures for aviation systems, building on measures used for other transportation systems, and enhancing this process through implementation across the U.S. Pam has worked closely with numerous states to refine their performance measures to focus on those that are most valuable in their decision-making processes.

Recently, Pam has led AEIS and system planning efforts in Montana, North Carolina, Washington, Missouri, Arizona, and Florida, expanding Kimley-Horn staff expertise in the field. In airport economic analysis, Pam brings both a technical understanding, as well as the ability to translate results into user-friendly deliverables that all stakeholders, including

sponsors of small airports that are not aviation experts, can use. She has given presentations to state airport associations and at national conferences on economic impact and how to use the results to gain support for investing in airports. Pam provided input for the Alliance for Aviation Across America's economic analysis of airport contributions, focused on general aviation (GA). She continues to be a key contributor and organizer of National Aviation System Planning Symposium conferences and has been a panel member of numerous ACRP projects, including the NextGen Primer. Currently she serves as the chair of the TRB Committee on Intergovernmental Relations in Aviation (AV010).

Relevant Experience

Montana Economic Impact of Airports Update (2015-2017)

- **Role:** Project Manager
- **Responsibilities:** Led team through all project tasks; led advisory committee

outreach and coordination efforts; managed all final deliverables

Missouri Statewide AEIS (2013-2014)

- **Role:** Project Manager
- **Responsibilities:** Managed scope/schedule/budget and project team; successfully and smoothly transitioned project between two firms; coordinated extensively with airports and MoDOT; led team through all project tasks

Florida Aviation System Plan (2016-2019)

- **Role:** Project Manager
- **Responsibilities:** Managed scope/schedule/budget and project team; led major stakeholder outreach program; led technical report writing

Washington Aviation System Plan (2017)

- **Role:** Deputy Project Manager
- Led technical analysis; developed new classification system and airport metrics; led advisory committee meetings and coordination



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Bob Jones, P.E.

PRINCIPAL-IN-CHARGE

34 Years of Industry Experience

11 Years with Kimley-Horn

Professional Certifications

- Professional Engineer in WV, (#018753), CO, AK, CA, UT, and WY

Education

- M.S., Civil Engineering, University of California, Berkeley
- B.S., Civil Engineering, University of Washington

Professional Bio

Bob has been working in aviation design, construction, and planning at large and small airports across the nation for over 33 years. Currently Bob manages our Denver aviation practice and oversees numerous design, planning, and construction projects. Bob is knowledgeable of the West Virginia aviation market, having served the Huntington Tri-State Airport since 2010. He strives to develop clear and thorough communication through all project phases and understands the benefits that coordination and planning have on project schedules, budgets, and impacts to normal operations. Bob constantly delivers exceptionally high quality projects with the least operational impacts through the use of innovative construction methods, materials, and phasing plans.

Relevant Experience

Huntington Tri-State Airport (HTS), Architectural, Engineering, and Planning Services (2010-Ongoing)

- **Role:** Project Manager
- **Responsibilities:** Led program and construction of several challenging projects; advisor to airport; public involvement
- **Projects include:**
 - Runway 12/30 Rehabilitation
 - West Parallel Taxiway Pavement and Lighting Rehabilitation
 - Medium Intensity Approach Lighting System (MALSR) Road Improvements and Slide Repair
 - Terminal Rehabilitation
 - Airport Access Road Slide Stabilization
 - Apron Rehabilitation, Phase 3 and Northwest Taxiway Improvements
 - Taxiway A Relocation

HTS Relocation of Taxiway A East Design (2015-2018)

- **Role:** Project Manager
- **Responsibilities:** Led design services to support the relocation of approximately 2,300 linear feet of the parallel Taxiway A and rehabilitation and extension of two connecting taxiways

Greenbrier County Airport, On-Call Services Contract (2017-Ongoing)

- **Role:** Project Manager
- **Responsibilities:** Leading runway rehabilitation and other projects

KYOVA, 2040 Metropolitan Transportation Plan and Downtown Huntington Access Study (2010-2019)

- **Role:** Project Engineer
- **Responsibilities:** Helped prepare regional long range transportation plan; analysis of existing and future conditions for all of the region's transportation modes; public charrette process for downtown access study



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Zach DeVeau, AICP
SENIOR PLANNER

8 Years of Industry Experience

Professional Certifications
• American Institute of Certified Planners (#026762)

8 Years with Kimley-Horn

Education
• M.S., Urban Planning; B.S., Economics, Florida State University

Professional Bio

With eight years of aviation planning and GIS experience, Zach has been a deputy project manager on more than 40 aviation system planning-related projects for the Florida Department of Transportation (FDOT), ranging from the recent Florida Aviation System Plan to statewide EISs, business planning guidelines, master planning guidelines, air service studies, compatible land use evaluations, GA airport security assessments, and many others. In addition to his work with FDOT, Zach has also been a project leader on both the Washington System Plan and the Arizona DOT SASP and is currently serving as deputy project manager on the 2020 South Dakota State Aviation System Plan. He maintains significant GIS experience and has completed two statewide commercial service airport analyses. These projects used the most recent industry data to identify and monitor existing commercial service levels, passenger origin and destination patterns, and compare commercial service to demand.

Relevant Experience

Florida Statewide AEIS (2017-2019)

- **Role:** Senior Planner
- **Responsibilities:** Data analysis, report writing, outreach toolkit development as part of the project

Arizona SASP Update (2016-2018)

- **Role:** Senior Planner
- **Responsibilities:** Collecting and analyzing inventory data, technical report writing, making recommendations

Washington Aviation System Plan Update (2015-2017)

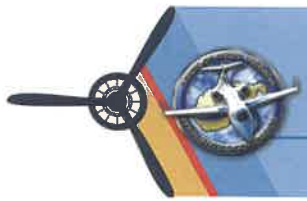
- **Role:** Planner
- **Responsibilities:** GIS, client coordination, technical report writing, developing recommendations

Florida Aviation System Plan (2016-2017)

- **Role:** Deputy Project Manager
- **Responsibilities:** Advisory committee coordination, data analysis, report writing, development of statewide GIS prototype to develop airport profiles and serve as a statewide asset management and data collection tool

Florida Airport Profiles Update, FDOT Central Office (2017)

- **Role:** Senior Planner
- **Responsibilities:** Assisted in branding the FASP and analyze key factors pertaining to aviation in Florida. Each of the 129 public use airports received their own updated airport profile created using airport specific information as it is outlined in the approved template.



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Steve Landau (EDR Group)

LEAD ECONOMIST

32 Years of Industry Experience

17 Years with EDR Group

Education

- M.C.P., Massachusetts Institute of Technology
- B.A., U.S. History, University of Massachusetts

Professional Bio

Steve is a national leader in aviation economic impact analyses, with a specialty in analyzing economic impacts of transportation projects and policies, recognizing the role of aviation as an economic catalyst for regions and localities. He has designed and adapted database and economic impact modeling tools for decision-makers and economic development practitioners and has evaluated the economic impacts of transportation investments in local areas, regions, and states. Steve led state airport economic impact evaluations for Arizona, Colorado (2006 and 2013), Florida, Michigan, Montana, Oregon, South Carolina, South Dakota, Virginia, and Vermont. Currently, he is leading the statewide AEIS for Colorado and Washington. He has conducted economic impact analyses for decision makers and delivered software tools for support and what-if scenarios.

Relevant Experience

Florida Statewide AEIS (2017-2019)

- **Role:** EDR Group Project Manager
- **Responsibilities:** Led economic impacts analysis

Columbus Regional Airport Authority AEIS (2018-2019)

- **Role:** Project Manager
- **Responsibilities:** Methodology development, data analysis, impact evaluation, data collection review, final report

Montana Economic Impact of Airports Update (2015-2017)

- **Role:** EDR Group Project Manager
- **Responsibilities:** Led economic contribution analysis

San Francisco International AEIS (2013-2017)

- **Role:** Project Manager
- **Responsibilities:** Led economic contribution analysis, impact

evaluation, data collection review, final report

Regional Economic Impacts of Denver International Airport (2014)

- **Role:** EDR Group Project Manager
- **Responsibilities:** Led analysis of regional economic impacts

ACRP Report I32, The Role of the U.S. Airports in the National Economy (2012-2014)

- **Role:** Project Manager
- **Responsibilities:** Methodology development, data analysis, managed research team, assessed findings and policy implications

South Dakota State Aviation System Plan (2009-2011)

- **Role:** EDR Group Project Manager
- **Responsibilities:** Assessed the economic contribution of aviation within South Dakota



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Catherine Woodwell
PLANNING ANALYST

- M.S., Sustainable Communities; B.S., Religious Studies, Northern Arizona University

Catherine maintains a strong background in multimodal planning and community development, specializing in aviation planning. She has worked with state DOTs across the country to identify strategies to improve system efficiency, access, and safety. Working closely with internal team members, clients, and stakeholders, Catherine develops solutions that integrate the needs of the multiple constituencies that rely on a state's aviation assets. She focuses on listening to and understanding the needs of diverse users and providing the information necessary to thoughtfully evaluate the short- and long-term implications of decisions during the planning process. Catherine has led development of multiple final deliverables for similar aviation planning efforts, including regional brochures, executive summaries, and primers targeted at specific audiences.



Taylor Filaroski
PLANNING ANALYST

- M.S., Planning, Florida State University
- B.S., Environmental Studies, New College of Florida

Taylor possesses more than two years of experience in policy analysis, including economic development, economic incentives, and agency coordination and review. She is experienced with collecting data and pre-populating survey tools to minimize effort required on behalf of the airports. She is also highly skilled in GIS analysis, including demographic and Census analysis, geocoding, and file creation and storage. Recently, Taylor has supported data collection efforts in both Florida and South Dakota.



Tom Gibson
PLANNING ANALYST

- B.S., Aeronautics, Kent State University

Tom offers well-rounded aviation knowledge with four years of air traffic control operations experience and two years in aviation planning consulting. He has worked on multiple state aviation system plans, including Arizona, Colorado, Idaho, Florida, South Dakota, and Washington, along with GA and commercial service airport master plans. Tom specializes in the identification of existing conditions and development of detailed aviation activity forecasts and recommended alternatives. He has a unique ability to connect with airport stakeholders including airport sponsors, staff, users, and the general public to understand their needs and collect the necessary data to develop tailored planning documents for each facility. Tom recently led data collection and analysis efforts for statewide economic and system planning projects in Arizona, Colorado, and Idaho, and is currently supporting the South Dakota



Scott Perkes
PLANNING ANALYST

- M. Urban Planning, Texas A&M University
- B.A., Liberal Arts, Utah State University
- Certificate, Private Pilot Rotorcraft (Helicopter) Utah State University

Scott pairs his education in urban and transportation planning with a passion for aviation as a helicopter pilot. He has been involved with statewide aviation system planning and economic impact analyses for several states, most recently leading stakeholder outreach for the Colorado and Idaho economic impact studies where he connected with different users of aviation in the state to help tell the story of the impact aviation has on residents, businesses, and visitors.



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001



Pam Turner, GISP

GIS LEAD

- M. GIS, Pennsylvania State University
- B.S., Environmental Science, Dickinson College
- Geographic Information Systems Professional (VA 00064094)

Pam brings 18 years of experience with comprehensive GIS production to our team. She has served a multitude of public entities with map development and spatial analysis services utilizing the broad capabilities of ESRI ArcGIS. Pam's background includes implementing web-based GIS systems, data model design, implementing data-sharing agreements, automating geoprocessing, and conducting user-level GIS training using ESRI software. Pam recently supported statewide planning initiatives for Florida, Idaho, and South Dakota.



Adam Winston (EDR)

PROJECT ECONOMIST

- MBA, Boston University
- B.S., Economics, Brigham Young University

Adam is the principal staff economist in EDR Group's aviation practice, providing insightful perspectives in how aviation plays an important role in state and regional economies. His skill set includes descriptive statistics, estimating industry dependence on aviation, using economic analysis tools, and developing calibrated models of public use airports to determine "what-if" hypothetical scenarios. Adam has expertise in applying database tools (SQL and MS Access), economic tools (IMPLAN), and decision support tools (Airport Benefit Cost and TREDIS). Adam previously assessed aviation benefits and impacts and developed a calibrated impact model for the Economic Impact Study of Virginia's Aviation System.



Gina Santangelo

GRAPHIC DESIGNER

- B.S., Design, Arizona State University

Gina has worked as a professional graphic designer for over eight years with experience ranging from branding, print and digital advertising, website design, publication design, infographics, annual and economic reports to marketing campaigns. Proficient in Adobe InDesign, Illustrator, and Photoshop, displaying her understanding and aesthetic of typography, layout, color theory, photo editing, and print production. Her relevant project experience includes project website design, brochure and collateral design, and public involvement graphics. Gina has been involved in the design of deliverables for various aviation economic reports, including the recent Florida Statewide AEIS.



Naomi Stein (EDR)

PROJECT ECONOMIST

- M.S. Transportation; M.C.P.; B.S., Civil Engineering, Massachusetts Institute of Technology

Naomi is a senior analyst with experience analyzing the economic implications of transportation infrastructure investments—specifically studies addressing benefit-cost analysis, economic impacts, distributional equity, and regional economic growth. Her aviation experience includes leading roles in ACRP Report 132: The Role of U.S. Airports in the National Economy, which explores, analyzes, and documents the national economic impact of the U.S. network of airports. Naomi also worked on ACRP WebResource 1: Aligning Community Expectations with Airport Roles, which provides guidance for airport owners and sponsors on communicating the economic benefit of their facilities with their local communities to garner support. Most recently, Naomi served as deputy project manager for the Columbus Regional Airport Authority's economic impact study.



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

PAST COMPLETED PROJECTS

Montana Economic Impact of Airports Update

Statewide, MT

Proposing Firms Involved: Kimley-Horn and EDR Group | **Schedule:** 2015-2017

Kimley-Horn updated the Montana AEIS for more than 80 airports. EDR Group served as the principal economics lead. This study comprehensively updated an AEIS first conducted in 2007; Pam Keidel-Adams managed both projects. The Montana DOT (MDT) utilized research funding to conduct the study, with an aviation-focused steering committee that provided input and review on study documentation.

The plan's methodology reflected changes in data presentation and some nomenclature, although methodologies remained consistent. The IMPLAN economic modeling package was applied to airports' direct economic impacts including on-airport spending, visitor spending, construction, and calculated additional spin-off (or "multiplier") effects or benefits.

The economic impact analysis was primarily based on data collected by surveying airport managers, airport tenants, and visitors traveling to Montana by commercial service and GA aircraft. On-site inventories and interviews were conducted at 50 airports across the state. To supplement data

and missing values, industry-specific information was assembled using secondary data sources, including the U.S. Department of Agriculture and the University of Montana's Institute for Tourism and Recreation Research.

The study also identified the qualitative aspects of airports to provide a holistic view of the importance of airports. Specific analyses on aviation's impacts to hospitals, businesses, agriculture, and wildland firefighting operations were also conducted.

Kimley-Horn prepared a technical report, individual airport brochures, statewide summary brochure, and a summary PowerPoint to document the results in non-technical terms that allow the information to be understood by decision-makers.

Project Goals and Objectives We Met:

The goal of this study was to update the economic impact of the state's airports given changes in aviation demand and developments, such as the Bakken Oil Fields. There was an emphasis on obtaining additional information from businesses relying on airports. Through the University of Montana's work on this effort, we were able to increase the response rate and obtain more meaningful data. The goal was achieved and the state relies on the results to continue emphasizing the value of aviation in the state.

Reference

Tim Conway, Administrator
Montana Aeronautics Division
406.444.9547 | tconway@mt.gov

DIRECT ECONOMIC IMPACTS

On-Airport
\$911,144,000

Construction
\$61,147,000

Visitor Spending
\$717,784,000

SPIN-OFF ECONOMIC EFFECT
\$1,089,040,000

STATEWIDE TOTAL IMPACTS

23,849
\$838,510,000
\$2,779,115,000



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CE01 SACI90000001

Florida Aviation Economic Impact Study

Statewide, FL

Proposing Firms Involved: Kimley-Horn and EDR Group | Schedule: 2017-2019

Kimley-Horn led the AEIS update to quantify the economic impacts of Florida's public-use airports with support from EDR Group. As part of this effort, our team developed various survey instruments that are being administered at all 128 public-use airports and additional military aviation installations across the state.

To augment the survey data, interviews were conducted with airport representatives to secure additional information for the study. In addition, tenant data and visitor spending at both commercial and GA airports was being collected through survey efforts. To evaluate the impacts from aviation-reliant businesses, Kimley-Horn captured where businesses own or lease aircraft, or where they are generally reliant on airports or aviation.

The survey and interview data was used to model the impacts using IMPLAN. Both a statewide report and individual airport profiles were developed as part of a communications toolkit. Our team also took the extra step to better tell the story of aviation through some creative case studies. These case studies include Miami

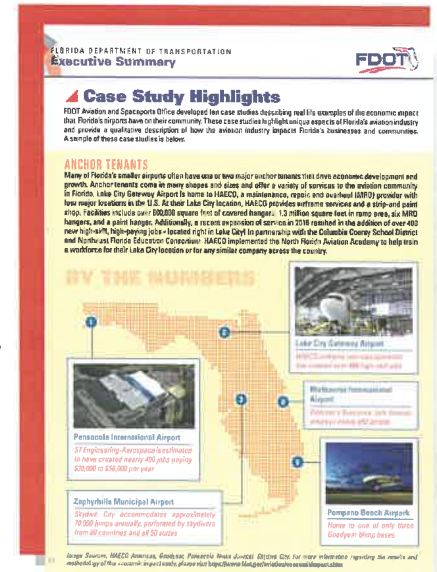
International Airport's role in being the logistics gateway for the flower industry to the U.S. and beyond. Other case study examples include flight training, military, air cargo, aviation-related educational institutions, and emergency services such as fire, medical, and disaster response. This effort includes researching past statewide studies and individual airport studies.

Project Goals and Objectives We Met:

One of the primary project goals for the Florida AEIS was to develop the findings by means of a conservative, defensible methodology, using the most current best practices for economic impact modeling and reporting. To accomplish this goal, Kimley-Horn completed a comprehensive data validation effort to ensure that employment numbers received during the survey effort were accurate, validating all employment figures through third party data sources. To remain consistent with the most current economic impact methodologies, Kimley-Horn updated the terminology used to report on the impact findings, helping make the report more user friendly and usable by the general public.

Reference

Aaron Smith, State Aviation Manager
Florida DOT Aviation and Spaceports Office
850.414.4514 | aaron.smith@dot.state.fl.us





EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Missouri Statewide Airports Economic Impact Study

Statewide, MO

Proposing Firms Involved: Kimley-Horn | Schedule: 2012-2013

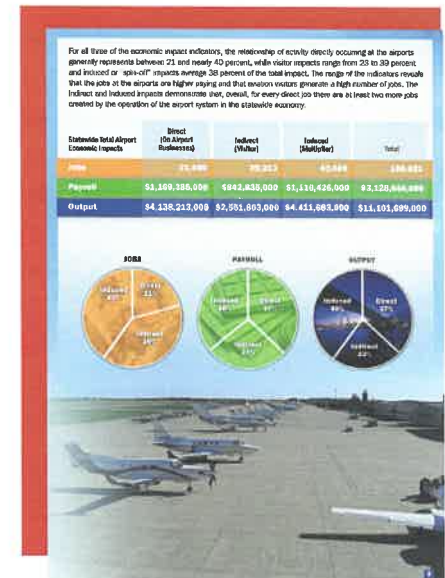
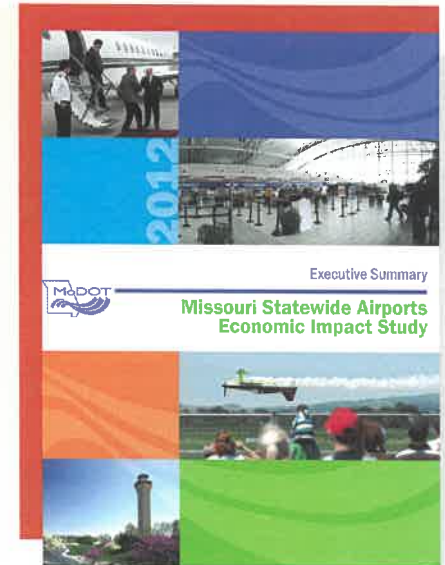
Deputy Project Manager Pam Keidel-Adams originally led this project while at Landrum & Brown and completed it while at Kimley-Horn. This project examined the quantitative and qualitative benefits of Missouri's system of 108 airports, calculating the economic impact contribution of the system. In addition to traditional economic impact analysis, which quantifies the direct, indirect, and induced benefits of each airport, other products included an electronic impact calculator, brochures for all airports, a statewide executive summary, and a PowerPoint presentation for use by the airports in presenting the study's results for their airport in user-friendly, non-technical terms. The study required extensive coordination with the airports and Missouri DOT (MoDOT), as well as using multiple data collection methods to derive the economic impacts. Data from both St. Louis and Kansas City airports were evaluated and extrapolated to determine the economic impact of all airports in the state.

The electronic impact calculator, produced in Excel, allows MoDOT to update indicators for all airports at once (such as cost of living or spending) or individual airport data elements for each airport (number of transient operations, enplanements, tenant-specific data) to produce updated impacts.

Project Goals and Objectives We Met: Similar to many economic impact studies, the goal of this study was to update the economic impact of the state's airports since the last study was completed. A new goal was to create an electronic impact calculator that allows MoDOT to update the impacts using different methodologies for estimating changes, providing an opportunity for interim updates instead of waiting every five or more years to be able to fund a full study with extensive data collection. MoDOT continues using the study's results to promote aviation and generate support for funding.

Reference

Amy Ludwig, Administrator of Aviation
 Missouri DOT
 573.526.7912 | Amy.Ludwig@modot.mo.gov





EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Columbus Regional Airport Authority Airport Economic Impact Study

Columbus, OH

Proposing Firms Involved: Kimley-Horn and EDR Group | **Schedule:** 2018-2019

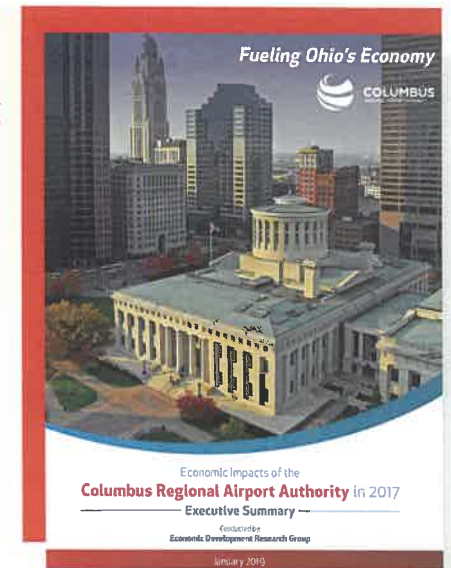
As a member of the EDR Group team, Kimley-Horn helped develop the 2019 AEIS for Columbus Regional Airport Authority (CRAA). Based on 2017 data, the AEIS focuses on the annual economic impacts created by the businesses and tenants of CRAA's three airports—John Glenn Columbus International (CMH), Rickenbacker International (LCK), and Bolton Field (TZR)—in addition to CRAA's real estate interests and Foreign-Trade Zone 138, which is based at Rickenbacker and administered by CRAA. The study utilized information from CRAA's financial records in addition to surveys of aviation businesses (those tenants with employees at the airports), visitors (both commercial service and GA), and non-aviation businesses that rely on the airports as part of conducting normal business. Each airport's economic impact was calculated individually and then summed to determine the impact to the region and state. As requested by CRAA, an executive summary in Microsoft Word accompanied the technical report. The graphical elements were then used by CRAA in a presentation on the study results and serve

as the foundation for future presentations and documentation. CRAA is partnering with economic development agencies including Columbus 2020 to share the results of the study which reflect the incredible growth the central Ohio region is experiencing.

Project Goals and Objectives We Met: The goal of this study was to re-evaluate the impact of CRAA's three facilities which had been completed in 2012. While updating the numbers was important, our team made recommendations for methodology enhancements to look at impacts at the regional level, and not just the airport and state levels, as CRAA draws employees and visitors from a large multi-county region. The end product includes defensible economic impact findings that reflect the growth being experienced in the central Ohio region. The multi-level findings are being shared by CRAA with local, regional, and state economic partners and are telling the story of the importance of these three unique facilities.

Reference

Kristin Easterday, Director of Government Affairs
 Columbus Regional Airport Authority
 614.239.5064 | KEasterday@columbusairports.com





Goals and Objectives – Anticipated Concepts and Methods of Approach

INTRODUCTION

With a growing aerospace industry, established aviation education programs, and a reliance of businesses on West Virginia's airports to transport goods and services, it is clear the aviation industry in the state is strong and vital to the statewide, regional, and local economies. We understand the primary objective of the West Virginia AEIS is to convey the economic importance of the state's 24 airports included in the National Plan of Integrated Airport Systems (NPIAS) and the ways in which these airports generate benefits for West Virginians. This information is useful to the WVAC, airports, and communities that sponsor airports to understand the wide range of impacts and benefits that are derived from airport operations. The information is also useful as the WVAC must make decisions on how limited resources are spent and spend them in the most economical and efficient way possible.

The findings of the West Virginia AEIS will provide apples-to-apples comparison of each of the 24 study airports and their associated economic impact. To promote the continued investment in WV airports, it is crucial that these facilities be considered in the context of promoting economic activity and development.

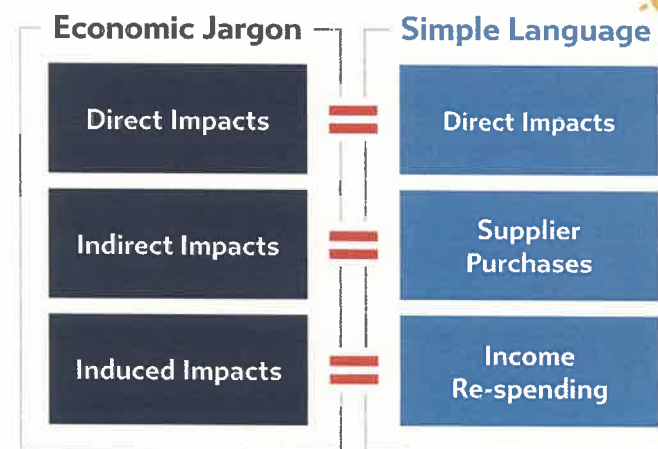
The results of airport economic impact analyses are now typically presented by functional categories as:

1. **On-Airport** (airport administration, tenants, and capital investments)
2. **Visitor Spending** (spending by GA and commercial passengers)
3. **Aviation-Reliant** (such as air cargo and agriculture application)

We believe it is important to be clear about terminology that will be used in the study and for deliverables. There is much confusion about the meanings of terms like direct, indirect, and induced. We suggest using a structure consistent with current-day economic analysis and using direct English instead of economic jargon. We propose measures of each of the impact classifications in three categories (see Figure 3):

1. Direct impacts stem from activity that is directly related to the provision of aviation services, visitor spending, or the activity of aviation-reliant businesses. We propose to call these impacts **"Direct Impacts."**
2. Indirect impacts are generated when airport tenants, the airport administration, hospitality businesses that capture visitor spending, and businesses in other classifications use these initial revenues to purchase supplies and services from other businesses in West Virginia. We propose to call these impacts **"Supplier Purchases."**
3. Induced effects refer to impacts from wages being spent by workers (such as those earned by airport employees) in West Virginia communities. We propose to call these impacts **"Income Re-spending."**

Figure 3 – Proposed AEIS Terms





EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Our experience shows that effective communication of the fundamental relationship between airport and economic competitiveness is just as important as the methods and measures through which an economic impact analysis is performed. It is important this effort be presented not just as hard numbers, but to tell the story of aviation's economic impact. Presenting the information in a digestible manner is useful to the state, airports, and communities that sponsor airports to understand the wide range of impacts and benefits that result from airport operations. By doing this, we will maximize readability and usefulness in the eyes of aviation stakeholders.

This suggested presentation clearly communicates to policy makers, state officials, and the public how West Virginia airports contribute to the state economy through on-airport generated impacts, visitor spending, and aviation reliance.

As part of conveying the story of aviation, our team will develop a multi-regional analysis. We propose an analysis by region, as well as for the state, to enable the results of this AEIS to resonate with multiple audiences across West Virginia. Our team will work with the WVAC to define individual catchment areas for each of the 24 study airports based on their geographic influence. Each airport in West Virginia will show airport direct effects, regional multipliers, and statewide impacts. This way, the AEIS will be directly useful in talking with regional policy makers, chambers of commerce, and regional business groups, as well as state policy makers and the public. Our suggested presentation (an example of which is shown in **Figure 4**) will provide estimates of impacts from each airport to its region, as well as to the state, using nationally-recognized standards and FAA-suggested methodology. However, **Figure 4** is simply an example and our team will work with you to provide an airport impact template that meets your needs.



EDR Group and Kimley-Horn staff have worked successfully with many states such as Virginia and South Dakota to develop individual catchment regions tailored to each airport's area of influence.

Figure 4 – Proposed Presentation of Impacts by Category, Measure, and Geographic Influence

IMPACT	JOBS		PAYROLL		BUSINESS ACTIVITY		VALUE ADDED	
	Regional	State	Regional	State	Regional	State	Regional	State
Direct Impacts								
On-Airport								
Visitor Spending								
Aviation-Reliant								
Subtotal - Direct								
Multiplier Impacts: Supplier Purchases and Income Re-spending								
Due to On-Airport Activity								
Due to Visitor Spending								
Due to Aviation-Reliant Activity								
Subtotal - Multiplier								
Total Impacts								



The following tasks present our team's approach to the project specifications outlined in the Expression of Interest solicitation and include **proposed innovative features** (highlighted by the light bulb symbol) to expand understanding of the role aviation plays in the economy beyond traditional methods. Recommendations for inclusion of unique technical approaches and concepts are provided based on our experience conducting similar economic impact work, ensuring that we meet the WVAC's goals and objectives for this study. While our intended approach is presented in the following pages, it is important to note that if selected, we will meet with you in Charleston to develop a scope of services that meets the needs and expectations of the WVAC. Our project team will continue to meet with you as needed throughout the project duration, either in person or via phone/webinar to communicate progress and ensure the project is meeting your expectations. Staff from both Kimley-Horn (including our Project Manager) and EDR Group are located within a relatively short drive, just 2.5 and 3.5 hours, respectively, allowing us to collaborate in person with the WVAC and staff as needed.

TASK I: DATA COLLECTION AND SURVEYS

Lead: Regan Schnug | **Key Support:** Zach DeVeau
Timeline: 6 months

The purpose of the data collection process is to assemble a comprehensive and up-to-date profile of aviation activity, economic activity, and other aviation-related services and benefits in West Virginia. Primary data collection is the basis for the economic impact analysis. In this task, we will identify and document employment and salaries from on-airport businesses and the extent of visitor spending, and account for the importance of West Virginia's airports in supporting businesses in the regions throughout the state. Our team is adept at multiple data collection processes using different survey instruments and can supplement any missing data with third party data providers (such as the U.S. Department of Commerce, ESRI, InfoUSA and Dunn & Bradstreet), an example of which is shown in **Figure 5**. Response rates for certain surveys will also be closely monitored to confirm a statically validated sample size to ensure adequate representation for statewide averages.

In consultation with the WVAC staff, our team will develop draft surveys and review the design and distribution plan for each survey with the WVAC, prior to administration. Our objective for all surveys is to ask the fewest number of questions possible to encourage healthy response rates. Prior to distribution, we will send letters to all 24 NPIAS airports notifying them of the study and encouraging participation.



We will also host a group webinar (a sort of AEIS 101) with all airport sponsors to share with them the importance and purpose of the surveys and how the data will be used and their impacts accounted for. This explanatory webinar has been successfully implemented in states like Colorado where our team hosted a webinar with infographics and sample scenarios to illustrate how survey data is used and where impacts are assigned (see **Figure 6**). This webinar addressed questions from the airport sponsors and they provided positive feedback, noting they felt confident in the means and methods used to calculate their impacts.



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Figure 5 – Innovative Supplemental Data

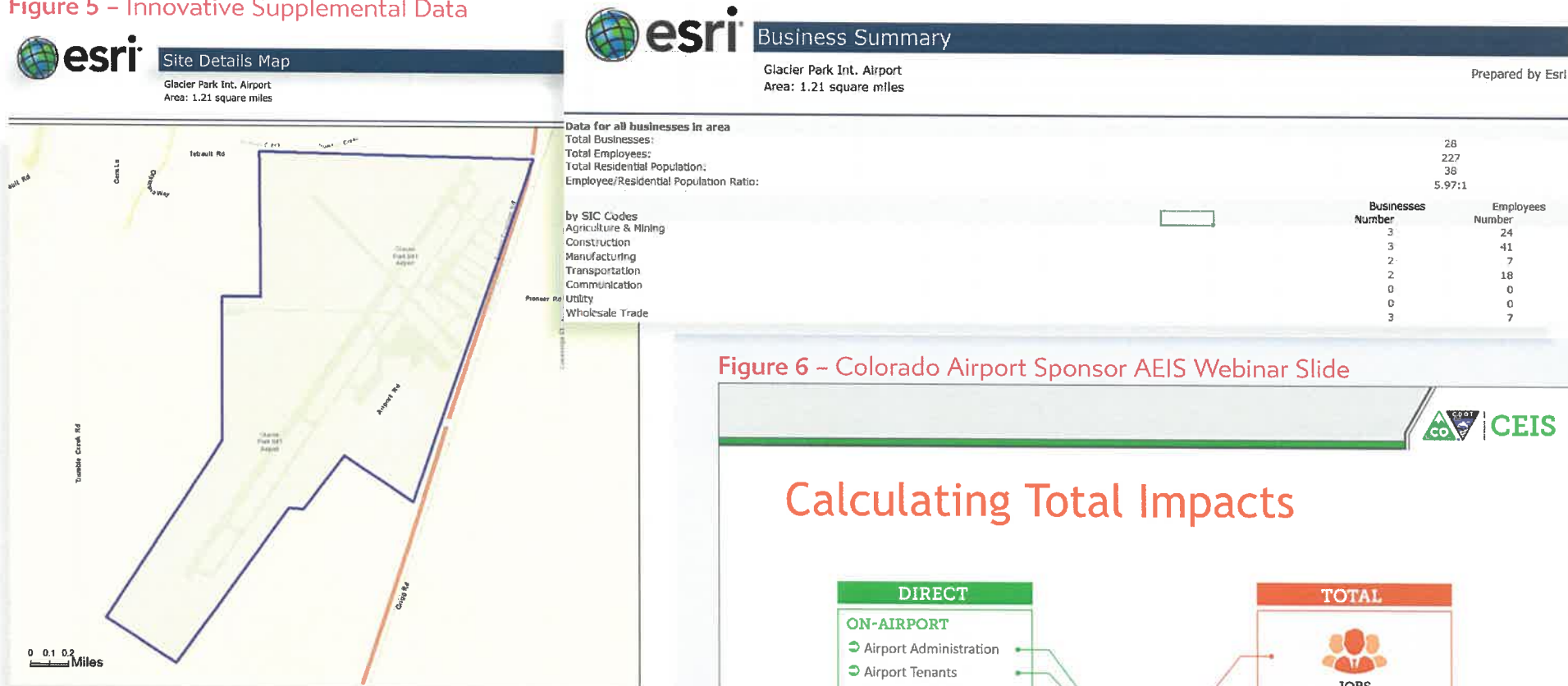
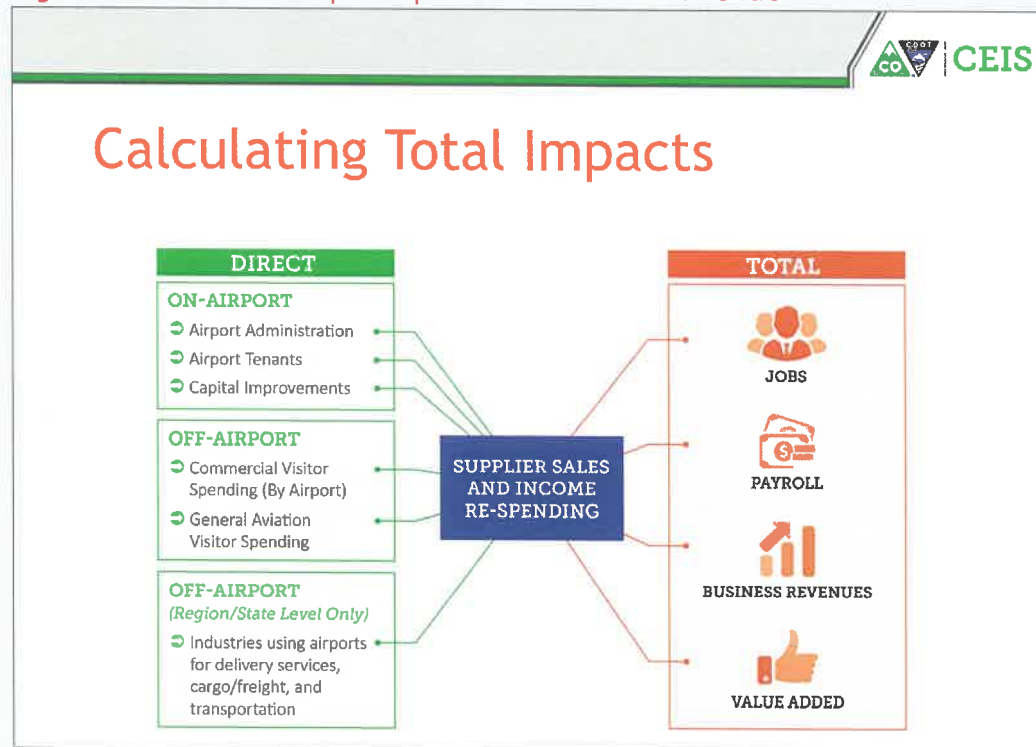


Figure 6 – Colorado Airport Sponsor AEIS Webinar Slide



This is an example of a supplemental data source (ESRI) used for the Montana Economic Impact of Airports Update. This figure shows the property boundary of the airport and utilizing Community

Analyst data, the GIS tool identifies data on the businesses within the selected boundary—including the number of businesses and employees by type of business. This boundary could be expanded to include off-airport business parks or other nearby developments that may have aviation-related employment, providing additional information beyond traditional surveying techniques.



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Our team proposes six surveys to collect data for a comprehensive system-wide economic analysis. A description of each survey and primary data collected is presented below:

1. Airport Manager Survey: This survey is designed to gather information about the airport (e.g. administration, operations, and capital investment) and tenant information. Data will be requested regarding airport employees and administration (employment, payroll, and operating expenses), airport operations (GA transient operations), and construction expenditures. This information will be used to estimate on-airport economic impacts of airport operations and establish the basis for estimating the number of GA visitors coming to West Virginia. In preparation for subsequent surveys, airport managers will also be asked to provide business names and contact information for tenants, businesses that base aircraft at their airports, and businesses that frequently use their airports.

2. Airport Tenant Survey: Based on information obtained from airport managers, tenant surveys will be conducted to gather data on impacts from on-airport businesses and government agencies. Tenant types to be surveyed range from airlines, fixed-base operators (FBOs), avionics, passenger terminal services, rental cars, aircraft service providers (sales, charter, pilot training), educational facilities, air cargo, and others. Data will include type of business operation, employment, and payroll. We advise not to request business revenues because many businesses consider such data as proprietary.

3. Based Aircraft Business Survey: Based on responses from airport managers, businesses that own or lease aircraft will be surveyed to determine the percentage of their business sales reliant on aviation, and to develop stories on the importance

of aviation for West Virginia communities. The results will be used to illustrate the importance of GA to the regional and state economy by industry.

4. Business Reliance Survey: The primary results of this survey will help estimate the extent to which West Virginia airports support regional business sectors by facilitating business travel and the importance of that support in the economic health of regions and the state. Aviation-reliant industries are consumers of aviation services for business travel that are not aviation businesses or located on an airport. While on-airport businesses will be accounted for as airport tenants, and some off-airport businesses will be revealed through the Based Aircraft Survey. This survey is designed to demonstrate the economic impacts of the off-airport businesses that rely on aviation services provided by West Virginia and do not base aircraft in the state. Our team will work with chambers of commerce and other local and state agencies to identify businesses or provide credibility to our surveys. Coordination with these entities may also allow for the posting of survey links and project information in newsletters and on websites to reach a broader audience.

5. Commercial Passenger Surveys: Enplaned passengers who are visitors to West Virginia using commercial air service will be surveyed to determine the level and type of expenditures during their stay. Profiles will include trip purpose (business or leisure), length of stay, and categories of expenditures for lodging/meals/ground transportation/entertainment/retail. Our team will determine the total number of visitors (total enplanements subtracting local travelers and connecting passengers) by working with recognized data services such as Data Products, Inc. or Diio Mi), and will review these estimates with WVAC. The survey data combined with total visitors per airport will equal



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

overall direct visitor spending by commercial air visitors to West Virginia. The number of visitor surveys for each airport will be based on the number of current enplanements and the amount required for statistical significance.

6. GA Pilots/Visitors Survey: Our team will work with airport managers and FBOs to collect spending profiles of visitors who come to West Virginia using GA aircraft. These surveys will request trip purpose, trip origin, length of stay, destination, approximate expenditures, and persons per aircraft (including pilots). In addition to FBOs, our team will coordinate with the Aircraft Owners and Pilots Association, National Business Aircraft Association, and other groups to encourage participation. Data from tourism bureaus will also be consulted to validate or supplement any missing data.

With six surveys proposed for the AEIS, a survey management plan will be key to the collection of complete survey data that is statistically significant and within our timeline. Despite our best efforts in simplifying the data collection process for respondents, it can still be challenging to get adequate levels of participation for some of the surveys. **As such, we propose site visits to each of the 24 study airports to help walk airport managers through their survey, collect contact information for airport businesses/organizations, conduct in-person surveys with FBOs, and request their assistance in collecting GA visitor surveys.** It is important for our team to see the activity of the airport in person so we know

from firsthand experience the levels and type of activity generating economic impact and the qualitative impacts and stories of each (discussed in Task 3). Airports that have recently conducted their own AEIS or visitor surveys will be contacted to retrieve that information for possible inclusion in this study (i.e. Yeager Airport's 2016 economic impact study).

Our team found economic impact studies for three of the state's commercial service airports. However, the most recent one was published in 2016 and is likely already out of date.

Our team will evaluate the methodology and findings of the 2016 Yeager Airport study for potential use (at least comparison) in the AEIS, but we are not depending on these findings and are prepared to conduct a new economic impact analysis for all airports.

When the survey collection period closes, our team will conduct a round of survey follow-ups to fill in any gaps. If necessary, other data sources may be used to supplement the survey data, as noted previously. A master database of information will be created to organize and store all direct impact data. Our team will review all results to ensure the appropriateness of initial results.

When the data collection task is complete, our team will total the economic indicators for each airport and send our totals to airports for confirmation. This provides airport sponsors with the opportunity to review the data they provided to our team (jobs, GA operations, enplanements, and other inputs) before we move forward with modeling and calculations.





TASK 2: MEASURE QUANTITATIVE ECONOMIC IMPACTS

Lead: Steve Landau | **Key Support:** Adam Winston

Timeline: 3 months

The start of Task 2 marks a major milestone in the AEIS project. It is at this time that data collection is complete and the collected data is used to calculate the impact of aviation in West Virginia in several ways. First, we will evaluate the categories of impact (on-airport, visitor spending, aviation-reliant) for each airport; then we will measure the direct impacts, supplier purchases (indirect impacts), and income re-spending (induced impacts) that result from on-airport, visitor spending, and aviation-reliant activities.

Categories of Impact

On-Airport Impacts will be evaluated using three primary categories of activity: airport administration and operations, tenants, and capital investments. Data gathered from the airport manager and tenant surveys will be used to first classify the role or function of each business entity or government agency and estimate the magnitude of the economic impact at the regional level. The primary and secondary data assembled to drive subsequent economic modeling efforts are summarized below:

- **Administration:** Jobs, payroll, and expenditures
- **Tenants:** Jobs and payroll by type of business on WV airports
- **Construction:** Annual capital expenditures on construction at an airport; three-year averages are recommended to avoid extreme annual variations

Visitor Spending will include spending by commercial and GA visitors per trip by levels of spending on accommodations, food and beverage, entertainment, retail expenditures, and ground transportation (avoiding double counting with rental car

concessions and other ground transportation services on-airport). We can also purchase data from nationally known visitor spending agencies such as DK Shifflet or the U.S. Travel Association (a direct client of EDR Group), or work with local/state visitor agencies and researchers if possible. We note these approaches are not mutually exclusive, and the Study will be enhanced by this additional outreach.

Aviation-Reliant activities include agriculture, cargo, mining, aviation-reliant businesses, businesses/industries that utilize unmanned aircraft systems (UAS), and more. Seeking out data from these known activities/entities will produce a more comprehensive economic contribution of aviation in West Virginia and will be easier to identify impacts for each individual activity. Each of these activities rely on aviation for a variety of key services such as receiving inputs for production, shipping finished goods to market, protection of crops, and supporting employee or client travel for face-to-face business meetings. Our team recognizes the importance of communicating the economic value that airports provide to industries that use aviation services as an integral part of their operations. For this AEIS, we propose a unique approach by profiling specific key activities (determined with WVAC) in a stand-alone analysis.

Aviation-centric activities, such as the Mid-Atlantic Aerospace Complex (MAAC) at the North Central West Virginia Airport bring incredible value to the state's economy. This massive operation hosting some of the world's top aeronautic companies, such as Pratt & Whitney, Bombardier, and Lockheed Martin employs more than 1,300 people. Without the North Central West Virginia Airport, the MAAC likely wouldn't exist as many of these companies rely on the airport's infrastructure. The MAAC is also home to the Robert C. Byrd National Aerospace Education Center and Institute for Flexible Manufacturing which are training students for careers in aviation. Ensuring the impact of these sorts of activities is captured in the AEIS is critical!





EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

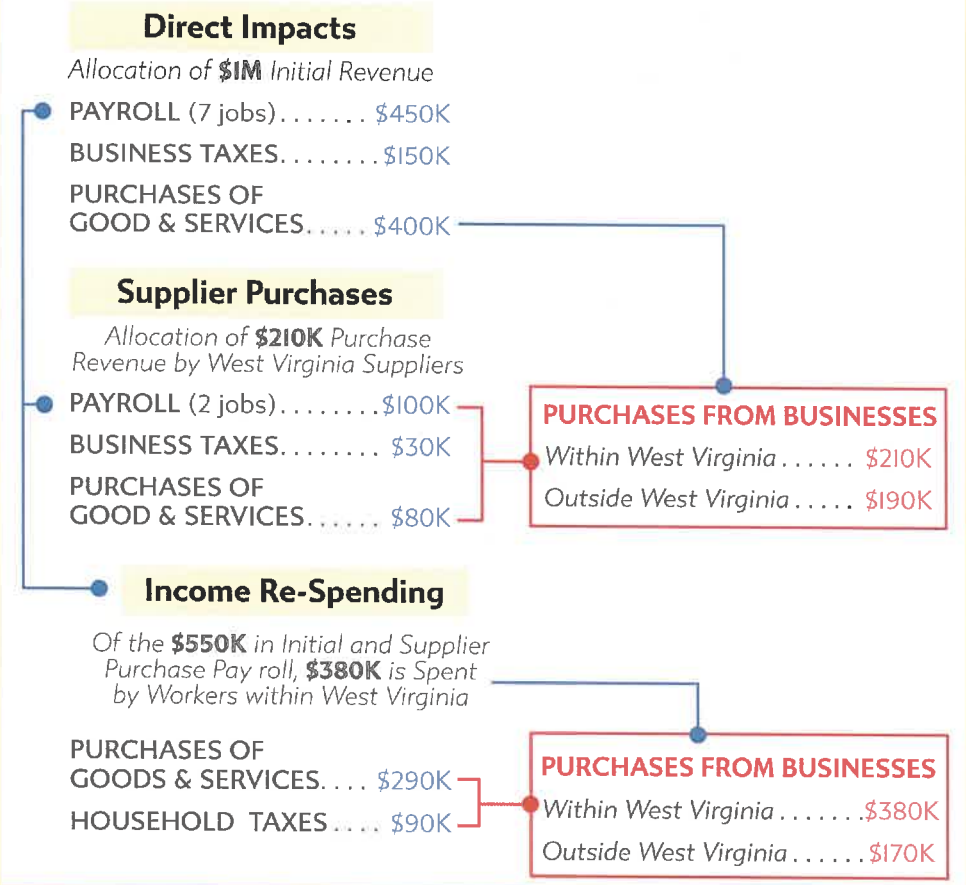
Solicitation No. CEOI SACI900000001

Measures of Impact

Direct impacts stem from activity that is directly related to the provision of aviation services, visitor spending, or the activity of aviation-reliant businesses. To illustrate how direct impacts (money) are circulated we've provided the graphic in **Figure 7** and an accompanying narrative explaining this example. In this example, a company on an airport (Acme Air) earns one million dollars per year for repairing aircraft:

- **Direct Impacts** (of on-airport activities and visitor spending) – \$1M for aircraft repair—this is direct business revenue.
- **Supplier Purchases** – Of the initial \$1M dollars for aircraft repair, \$400K is used to purchase supplies and services.
 - \$210K is paid to West Virginia businesses to purchase legal services. Of the \$210K that stays in West Virginia, \$100K is paid to workers as wages, profits, and benefits. \$30K is business taxes, and \$80K is used to purchase additional goods and services.
 - \$190K is spent on goods and services outside of West Virginia and are expelled from the state economy.
- **Income Re-Spending** – \$550K is earned in wages, profits, and benefits by workers from the initial aircraft repair (\$450K of \$1M), and from in-state business suppliers (\$100K of the \$210K in-state supplier sales).
 - \$380K is spent in West Virginia, generating additional rounds of business revenues that meet payrolls, support jobs, and generate business taxes.
 - \$170K is spent on goods and services outside of West Virginia and are expelled from the state economy.

Figure 7 – How Direct Impacts are Circulated



In addition the familiar metrics of jobs, payroll and business activity, our team recommends an additional category of measurement titled "Value Added," which when measured at the state-level is also known as the gross state product (and contribution to the U.S. Gross Domestic Product [GDP] on a national level). This measurement enables additional insight into how much additional value is added to the economy which varies by industry sector.





EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Economic Modeling

To calculate the impacts of West Virginia aviation, our team proposes the use of IMPLAN economic modeling software, which is widely accepted throughout the economic industry and by the FAA. IMPLAN is the most widely used input-output model in the United States, with data derived primarily from U.S. Department of Commerce and Department of Labor data sets. IMPLAN will be used in three ways:

1. Primarily, it will be used to derive supplier purchases and re-spending of income multiplier effects. Supplier purchases are business orders to suppliers and income re-spending are business sales generated by the spending of wages earned from the “direct” and “indirect” effects.
2. Second, IMPLAN provides a tool to estimate wages and sales (or budget expenditures for public entities) for airport tenants where only employment totals are available. On-airport tenants surveyed usually provide employment and occasionally provide payroll, but rarely provide sales (although airport managers will often provide total budgets, along with employment and payroll). IMPLAN can be used to fill the gaps based on regional averages of payroll per job, sales per job, and the ratio of productivity to wages for up to 536 economic sectors. In our experience, some airport tenants provide payroll and others will not. In those cases, our team will prorate labor income by industry based on employment reported by tenants and by regional industry averages to arrive at a more accurate accounting than by relying on regional data alone.
3. Third, for data collected where only expenditures are available, such as visitor spending and construction, IMPLAN will be used to estimate jobs and payroll on reported revenues (see **Table 2**).

Table 2 – Map of Assembling and Calculating Direct Impacts

Collected Data	Calculated Using IMPLAN Based on Regional Economies
Jobs	Payroll, Business Revenues, Value Added
Jobs, Payroll	Business Revenues, Value Added
Business Revenues	Jobs, Payroll, Value Added
Jobs, Payroll, Business Revenues	Value Added



EDR Group maintains national experts in applying the IMPLAN model—the nation’s leading economic model for airport economic impact analysis. EDR Group is the only private sector firm in the U.S. that has an agreement with IMPLAN to use and improve its source code.

Tax Impacts

Our team will present the contribution of West Virginia’s airports to state tax revenues. To do so, we will apply findings of the economic impact study with multiple tax data sources including the West Virginia Department of Revenue, the West Virginia State Tax Department, the Tax Foundation, and the IMPLAN Tax Module¹. Revenues will be presented in a clear format with explanatory text that will allow readers to easily understand the methodology and sources used for calculations. As put forward in Addendum I, the taxes we propose to examine include sales tax, income tax, and fuel tax generated on airports by visitor spending and air-reliant businesses. Moreover, these taxes will be divided according to being generated by direct impacts, supplier purchases, and income re-spending as follows:

¹Based on the U.S. Bureau of Economic Analysis National Income and Products Accounts and the Annual Survey of State and Local Government Finance).



EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

- Estimated statewide sales tax revenues from direct airport and airport supported activities
- Sales tax and income taxes generated by activity at airports
- Estimated direct state and local sales taxes paid by airport management, tenants, construction, and through visitor spending
- Estimated direct state and local sales taxes paid by employees associated with airports and airport supported activities
- Estimated state income taxes paid by employees associated with airports and airport supported activities
- Aviation fuel tax generated by activity at West Virginia airports

Specifically, we will analyze: (1) revenues associated with airport generated sales tax flows to West Virginia, and those earmarked for counties, cities, transit service and other; (2) sales and use taxes generated by visitor spending for retail purchases, rental car services, food services, and lodging; (3) state income taxes generated by jobs on-airport and visitor spending; and (4) excise taxes collected for avgas and jet fuel sales for GA and commercial use. Results will be presented by region and for the state of West Virginia. We can also use national data sets (such as those from the Tax Foundation) to compare West Virginia tax rates to other states if desired.

Revenue Generation

Our team will develop a comprehensive inventory of aviation related revenues generated at each airport, including hangar and tie-down facilities and associated rents, fuel sales and flowage fees for avgas and jet fuel, sales commissions, landing fees, concessions and retail, commercial development, and advertising. The resulting data tables and narrative will provide the WVAC with an overview of revenues by airport and across the West Virginia airport system, according to airport classifications and locations. Airports can use these data to help identify business opportunities, such as implementing fee reductions to attract new business or increasing fees to take advantage of favorable market conditions. Information needed to implement effective business development strategies is essential as airports strive to become more financially self-sufficient and consider capital investment on land-side revenue-generating infrastructure, such as hangars and fuel tanks. We anticipate that data for revenue generation will be gathered as part of the airport managers' survey (Task I), as well as by reviewing airport financial reports.

At the project kickoff meeting, we can discuss if a separate "revenue" survey is merited and if FBOs should be surveyed. In our experience, FBOs are reluctant to divulge any financial information; pending our discussion, we recommend limiting this data collection effort to managers. Moreover, before going out into the field, we will need to develop clear messaging to airport managers (and FBOs, if necessary) about how these data will be used and reported in the study (by airport, by classification, by region and/or statewide).



TASK 3: DOCUMENT QUALITATIVE ECONOMIC IMPACTS

Lead: Zach DeVeau | **Key Support:** Regan Schnug | **Timeline:** 3 months

While quantitative analysis is the core of any AEIS, it would be remiss if the qualitative impacts of the aviation industry for West Virginia citizens were not also evaluated. Qualitative impacts of airports generally fall into one of four main categories: safety, health, research, and other (examples of "other" are news reporting and air shows). These impacts benefit a wide variety of stakeholders such as airport communities, interest groups, students, remote communities, healthcare providers/patients, farmers, business communities, and more.

Our team recommends the development of a set of case studies to highlight some of the unique aspects of West Virginia's aviation industry. These case studies will illustrate the activities of West Virginia's commercial and GA service airports, as well as for selected aviation-reliant activities in Task 2. The purpose of the case studies is to help illustrate how aviation impacts West Virginia's businesses and communities by humanizing the numbers that are being developed using data and analysis. We will accomplish this objective by "telling the story" of how this happens. Providing qualitative, anecdotal evidence may help airports garner support and assist them in marketing airports not as potential liabilities, but as vital community assets that can be used to promote economic growth. Examples of case studies include describing how products make their way through the supply chain and how the supply chain relies on aviation and airports, unique stories about airports (such as their use for medivac or other emergency operations), and descriptions of how well-known businesses or non-profit organizations rely on West Virginia airports. In addition, specific products can be highlighted since some will be heavily reliant on-air cargo capabilities. An important outcome from the case study analysis will be a summary that highlights the common issues, successes, and themes of the airports and their related on-site businesses and tenants, and off-airport businesses and entities that rely on the state's airports.

TASK 4: DELIVERABLES

Lead: Regan Schnug | **Key Support:** Catherine Woodwell | **Timeline:** 3 months

We recognize that a limited audience exists for a traditional technical report, and while we will provide a technical report detailing all means and methods, we recommend the development of executive summaries and individual airport reports to communicate the findings most appropriate to varied audiences. For example, a local chamber of commerce is not likely to read the full technical report; however, a tailored individual report that is focused solely on the local airport and the impact it has on the community is likely to be read by members of the chamber and shared with existing and potential economic development partners and businesses. These deliverables are discussed in the following sections.

Our team recently documented qualitative impacts for ACRP Report 132: The Role of U.S. Airports on the National Economy, led by EDR Group with support from Regan Schnug at her previous firm. This publication serves as the latest national aviation economic impact study in the U.S.



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CE01 SACI900000001

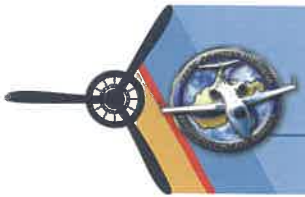
Technical Report

A technical AEIS report will be developed, complete with narrative, graphics, and all report content from the previous tasks, from the data collection to the final results. We suggest providing a detailed section that includes the model results, methodology documentation, and related files (we can also publish separate deliverables with this information, such as a Methodology Guide). We understand that analysis results should be provided at the airport, regional, and state level. In addition to providing statewide and regional summaries of impact, the technical report will include an appendix that includes an individual profile for each of the 24 airports which details the impact of the facility at each geographic level, including impacts of tax revenues supported by the airport (such as sales tax revenues on airport-related activity, income taxes on airport-related jobs, and aviation fuel tax generated by commercial and GA activity) and the airport's estimated airport revenue, based on information provided by the airports during the data collection task. The WVAC can use this information as an apples-to-apples comparison of the economic strengths and weaknesses of each of the study airports that can be used in future resource allocation (prioritization) and planning for needed funds.

Executive Summary

Executive summaries are an effective tool to quickly summarize the findings of a study. As such, we propose developing an executive summary as a companion document to the technical report. The executive summary will be completed as a standalone document, directed to statewide leadership, elected officials, policy decision makers, etc. To increase use, we suggest the executive summary be a four- to six- page color document that utilizes graphics and photos to enhance the presentation. In addition to being a stand-alone document, it is suggested that the content of the executive summary be included as an introduction to the technical report. **Examples of executive summaries our team has produced with our in-house graphics team are shown to the right and on the following page.** We place great emphasis on developing branding and infographics that are clear, concise, and draw the audience in.





EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

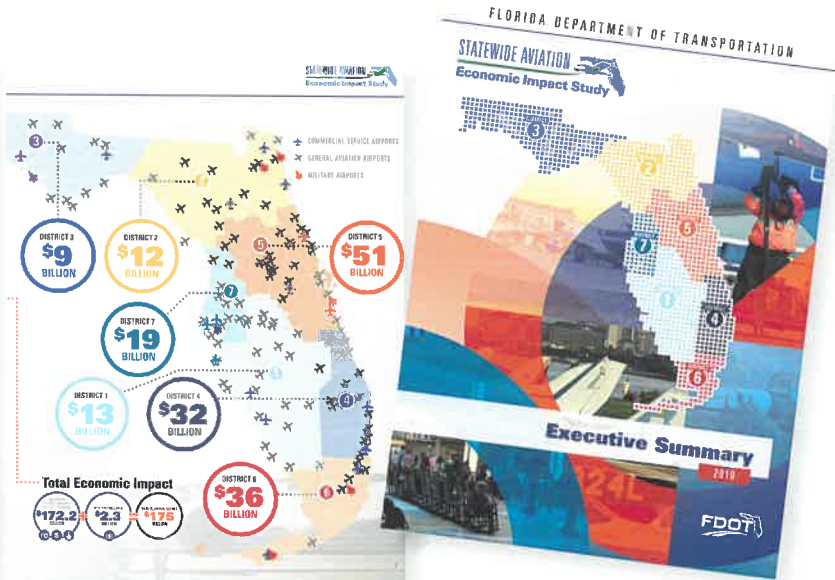
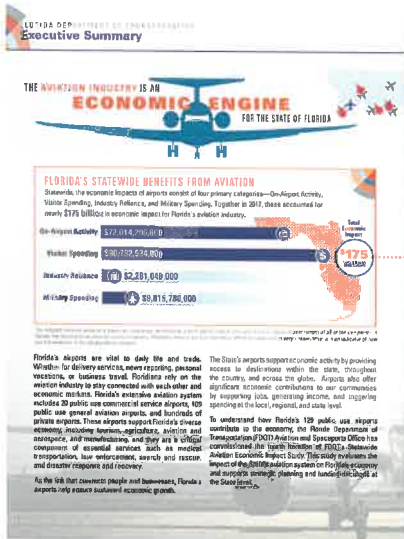
Solicitation No. CEOI SACI900000001

Executive Summary Examples



Individual Airport Reports

To summarize data on an individual airport level, a summary profile for each of the study airports is recommended. Each airport report will illustrate the overall statewide economic impacts in addition to each airport's individual and regional impacts that were calculated as part of this project. These will be produced for the 24 NPIAS airports included in the study and will be used to highlight airports based on the types of airports, activities at each facility, local aviation trends, and other topics, as determined in consultation with WVAC. To personalize the reports, we recommend photos from the site visits be used in their development. To better synthesize economic impact data, regional overview brochures can be developed for each of the region's established for the study. These brochures can identify study results such as economic indicators, mapping, and prevalent types of aviation activity relative to each region.





Outreach Toolkit

To assist airports and airport sponsors with communicating the results of this study regarding their facilities, we propose the development of an AEIS Communication Toolkit. This has been used successfully in states like Montana where we've provided a:

- **Presentation:** A standalone PowerPoint presentation that provides a template for airports to communicate their economic impacts and can be easily customizable to individual airports.
- **Primer/Brochure:** A brief primer describing the full technical study, how to use its results, and how aviation contributes to the state economy.

We also suggest the use of an educational webinar for airport sponsors to attend and learn about the findings of the study, which data is applicable to their airport, how to share the findings with their stakeholders, and to ask the project team any questions.



Calculator

In addition to the more traditional suite of printed deliverables, we propose developing a dynamic web- or computer-based calculator that provides WVAC with the ability to estimate the economic impacts of "what-if" scenarios by updating simple inputs such as enplanements or tenant employment. A calculator would allow WVAC to update the statewide, regional, and local economic impact findings after the project has been completed, extending the useful life of the project. This type of tool is beneficial in calculating the change in economic impact for airports that are considering attracting additional tenants or pursuing additional air carrier service.

These scenarios can be saved as "drafts" until any actual changes take place. If WVAC is interested in developing a calculator, our team will work with you to determine the critical features, specific needs, and reporting formats. All software will be tested and will include an instruction manual in addition to staff training.

*As a leader in economic evaluation methods, EDR Group also develops tools for the measurement and calculation of economic impacts and benefits of programs, projects and policies—including spreadsheet models, web-based applications, and custom calculator tools. In recent years, EDR Group has also delivered aviation impact models using Microsoft Access applications to the states of Wisconsin, Michigan, and Virginia, a multistate model to Hartsfield Jackson Atlanta International Airport, and a 10-county model to the Allegheny County Airport Authority. Screenshots from Michigan's calculator are shown in **Figure 8** on the following page.*



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI90000001

Figure 8 – Screenshots of Michigan Calculator

Michigan Department of Transportation - Office of Aeronautics
CBA Community Benefits Assessment Statewide Database System
Version 2.0

User Input Form

Airport Code:

Aeronautics
Department of Transportation

This product is solely licensed to MDOT for on-site use by MDOT staff. Any additional uses must be approved by Economic Development Research Group (EDRG), the developer of this application.

Michigan Department of Transportation - Office of Aeronautics
CBA Community Benefits Assessment
Version 2.0

User Input Form

Airport Code: Analysis based on Infrastructure Category: Evaluated for Year:

Name: City: County: MASP Tier: MASP ARCC:

Ownership: Current FAA ARC: Service Area County:

(1) At-Airport - Aviation Related	
Federal Gov (FAA, TSA, JNS)	1
Local Government	3
FBO and Private Contractors	76
Airline and Other Aviation Businesses	90
Shipping, Warehousing	1
Terminal Concessions	0
(2) At-Airport - NonAir Related	
Other Non-air Business - Municipal offices	2
Other Non-air Business - Misc. Prof. Svc.	0
Other Non-air Business - Manufacturing	700
(3) Off-Site Air Related or Reliant Activity	
Shipping, Warehousing	60
Airline Catering and Other Services	2
Reliant Manufacturers	700
Reliant Services	9
Reliant Government Activities	5

Airport features	
Primary Runway Length	6,579
Primary Runway Width	150
Instrument Approach	Precision
Fuel Sales (in gallons) 195,000	

To generate an audit trail

Confirmation Edit Tiers and Other Attributes

Airport Role in Economy

Choose Summary Category

by Region by Class Current by Class MASP

Choose Report Type

Total Impacts Detailed Impacts - Jobs Detailed Impacts - Sales Detailed Impacts - Income

Local Summary State Summary

Close

# Annual Operations	GA Local	GA Itinerant	Air Taxi	Commuter	Air Carrier	Military
6000	2000	0	0	30	0	

Admin Exit Run Reports Ratios Multipliers



EXPRESSION OF INTEREST FOR West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

TASK 5: PUBLIC INVOLVEMENT

Lead: Pam Keidel-Adams | **Key Support:** Bob Jones | **Timeline:** Project Duration

Due to the variety of West Virginia aviation stakeholders, including businesses, healthcare providers, public safety agencies, researchers, and more, we propose the inclusion of a Project Advisory Committee (PAC) for the AEIS. Establishing a PAC will encourage feedback from aviation system users and impacted groups that rely on air transportation for their continued operation. We will work with the WVAC to identify a cross section of potential PAC members. Some initial suggestions include the West Virginia Economic Development Authority, the West Virginia Chamber of Commerce, WVAC, West Virginia Airport Management Association, and others. Collaborating with these stakeholders throughout the project will not only benefit the study, but will also enhance the connection between stakeholders/agencies and aid in the distribution and use of study findings (adding links to study on websites, presentations at annual conferences, and more).





TASK 6: PROJECT MANAGEMENT

Lead: Regan Schnug | **Key Support:** Pam Keidel-Adams | **Timeline:** Project Duration

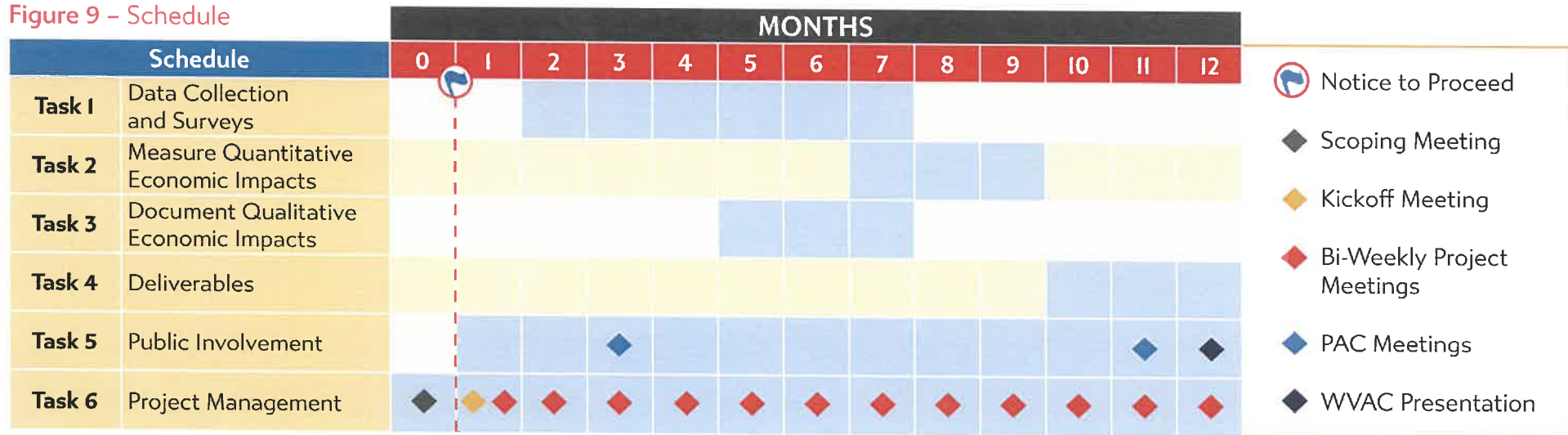
Project management is a critical factor to the success of any project. Effective project management requires solid teamwork, recognition of project needs and resource availability, constant communication, and a commitment to quality. Project management has to occur throughout the project, ensuring the project stays on schedule and within budget. As demonstrated through our repeat work for clients, including Regan’s long-term work for clients such as the South Dakota DOT, Regan is an effective project manager.

To ensure this project is managed correctly and to garner input and support from WVAC, project management meetings are recommended throughout the life of the project. As previously mentioned, we recommend holding an in-person scoping meeting in Charleston prior to project kickoff. Once the Notice to Proceed has been issued, our team will conduct a project kickoff meeting

in Charleston to discuss data collection efforts, identify potential candidates for qualitative assessment, and establish regional boundaries for modeling. Additionally, we propose holding bi-weekly meetings (via phone/web), as these touch bases have been a key factor in ensuring projects stay on track, both in terms of schedule and identifying any issues or concerns. If a PAC is established for the project, we also suggest holding in-person project management meetings with WVAC staff during those trips to make the most efficient and effective use of time. When the project is complete, our team will conduct a presentation to the WVAC to present study results and showcase AEIS deliverables.

Our proposed project timeline is depicted in **Figure 9** and based on the information provided in Addendum I. We will work with you to ensure the project meets your intended schedule.

Figure 9 – Schedule





EXPRESSION OF INTEREST FOR
West Virginia Airport Economic Impact Study

Solicitation No. CEOI SACI900000001

Terms and Conditions

Kimley-Horn has reviewed the Terms and Conditions provided in the EOI solicitation and suggests the following changes for consideration by WVAC.

Sec. Five – Sec. 8 – Add “except Professional Liability Insurance” after “include the State as an additional insured on each policy.”


Sec. Five – Sec. 20 – Add delay language: “However, times for performance shall be extended as necessary, and neither party shall have liability or be deemed in breach due to delays caused by any factor outside the reasonable control of the party.”

Sec. Five – Sec. 28 – Add “goods” to subsection (b) so it begins with “and goods will be merchantable” and for subsection (c) add “negligent” before “defects.”

Sec. Five – Sec. 36 – Revise indemnification language to read “Any claims or losses to the extent arising from negligent services rendered.”

For non-payment issues, revise to read “Any claims or losses for non-payment for services rendered.”

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

 Vice President

(Name, Title)
Brian Smalkoski, P.E., AICP, PTP, PTOE, Vice President

(Printed Name and Title)
7740 N. 16th Street, Suite 300, Phoenix, AZ 85020

(Address)
602-906-1100 (P) | 602-944-7423 (F)

(Phone Number) / (Fax Number)
brian.smalkoski@kimley-horn.com

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Kimley-Horn and Associates, Inc.

(Company)

 Vice President

(Authorized Signature) (Representative Name, Title)

Brian Smalkoski, P.E., AICP, PTP, PTOE, Vice President

(Printed Name and Title of Authorized Representative)

3/22/19

(Date)

602-906-1100 (P) | 602-944-7423 (F)

(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Kimley-Horn and Associates, Inc.

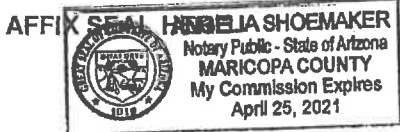
Authorized Signature:  Brian Smalkoski, P.E., AICP, PTP, Date: 3/22/19
PTOE, Vice President

State of Arizona

County of Maricopa, to-wit:

Taken, subscribed, and sworn to before me this 22nd day of March, 2019.

My Commission expires April 25, 2021.



NOTARY PUBLIC



Purchasing Affidavit (Revised 01/19/2018)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: _____

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Kimley-Horn and Associates, Inc. _____

Company



Brian Smalkoski, P.E., AICP, PTP, PTOE

Authorized Signature

3/22/19 _____

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

Revised 6/8/2012