

Statement of Interest  
and Qualifications

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# Airport Planning Services

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June 15, 2018

*Submitted to:*

*Submitted by:*

**Carson City  
Airport Authority**

**Michael Baker  
INTERNATIONAL**



# Our Mission

Make the world a better place through the application of the principles of sustainable development by providing professional design services that enhance the quality of life and the environment.

Provide development, infrastructure, planning and environmental services to public and private sector clients in local, regional and global markets.

Lead as professionals specializing in planning, design and construction.

Look forward to the future with a commitment to building opportunities and value for our clients and ourselves.



June 15, 2018

Mr. Kenneth G. Moen, AAE  
**Carson City Airport Authority**  
2600 E. College Parkway #6  
Carson City, NV 89706

## Re: Request for Proposal No. 2018-001 | On-Call Airport Planning Services

Dear Mr. Moen:

The Carson City Airport (CXP) is strategically located in an important economic growth area and offers a tremendous potential to enhance service to the surrounding community and region. The On-Call Airport Planning Services contract will afford the Carson City Airport Authority (Authority) the means to plan for and shape the future of CXP. In support of this mission, Michael Baker International, Inc. (Michael Baker) is pleased to present our qualifications to be the Authority's trusted partner in planning capital improvements as well as updating critical documents such as the Airport Capital Improvement Plan (ACIP) and Airport Layout Plan (ALP) in the most cost-effective and efficient manner. We share your vision beyond the projects on the immediate horizon and how CXP can be a key component of regional growth in the years to come. Our uniquely qualified team is led by a Carson City resident and experienced Project Manager Greg Stedfield, PE. Michael Baker is excited to join the Authority in its mission to enhance facilities while strengthening the economy of surrounding communities through future planning efforts. We offer many advantages to the Authority including:

▶ **A Unique Blend of National and Local Aviation Experience:**

Ranked by Engineering News-Record (ENR) as one of the Top 20 Aviation Firms in the country, Michael Baker is known industry-wide for superior performance as aviation consultants. From airport master plan development to new runway design to providing construction services to airports worldwide, Michael Baker knows the business of airports. With a rich history of delivering solutions to our many airport clients, we bring a wide variety of technical expertise required for success in this type of on-call contract. Michael Baker has provided services to more than 200 airports worldwide and executes more than \$30 million in aviation engineering and architecture consulting services annually. We have come to know the unique requirements of airports of all sizes – from the smallest, privately-owned GA facilities to the busiest international airports in the world. While strong in stature, we are focused on making sure our clients, big or small, are given consistent support and expertise.

- ▶ **A Successful, On-Call, Airport Design Team:** Michael Baker has successfully provided on-call A/E support services at numerous airports within recent years and key personnel who have served on those

### THE BENEFITS OF CHOOSING MICHAEL BAKER

*The Authority will gain valued benefits through Michael Baker including:*

- ▶ *A local, responsible, hands-on Project Manager who is supported with award-winning, national aviation experience*
- ▶ *A deep project understanding and approach to aviation projects that includes potential costs savings alternatives*
- ▶ *An engaged team that will leverage our experience and share "lessons learned" from past similar projects to capitalize and/or mitigate any opportunities or risks that could potentially be realized within a schedule or budget*
- ▶ *A deep bench of other specialty services such as LiDAR and Unmanned Aircraft Systems (UAS)*



contracts airports will also be on our team. Our experience on those projects, along with a partnership with a few, local, small, specialized firms will directly benefit the Authority as you work towards continuing to achieve your long-term vision.

Michael Baker's assigned Project Manager Greg Stedfield, PE, will be leading the contract from our Reno office. Mr. Stedfield was an Avionics Technician in the United States (U.S.) Navy and has led and designed aviation and airport projects including hangars, baggage handling systems, perimeter security fencing, vendor access projects, and airside pavement renovation projects. He is currently a citizen member of the Carson City Regional Transportation Commission. His local presence and expertise in aviation will aid the Authority in the timely execution of the projects listed in the Airport Capital Improvement Program (ACIP).

He will be supported by aviation planning specialists including Linell Homentosky, CM, who is a senior aviation planner with over a decade of experience. Ms. Homentosky has been a key contributor to aviation planning projects throughout the country and her experience includes a magnitude of on-call planning tasks.

Additionally, we have teamed with Arora Engineers, Inc. (Arora) to assist Michael Baker with ALP/eALP work, as well as any mechanical, electrical, plumbing, or fire protection needs that the Authority may require. Arora is a DBE-certified firm in Nevada with the Nevada Unified Certification Program (NUCP) and has local aviation experience. Michael Baker and Arora have teamed on several airport projects over the last decade and have a strong working relationship that can be capitalized on for CXP. Should the Authority have other specific needs outside of the proposed disciplines, Michael Baker can utilize our existing relationships, both locally as well as aviation-specific, with additional subconsultants during the life of this contract.

- ▶ **A Unique Understanding of Airport Programs and Stakeholders:** From our local office to our supporting offices, Michael Baker's employees have developed relationships with many of the stakeholders that are unique to GA programs. We understand what it takes to coordinate with the Federal Aviation Administration (FAA) from initial planning through design and construction, our experience at each stage provides valuable insight that allows us to develop plans with stakeholders and operations in mind. We know the business of airports and want to help you realize your goals.

We are excited to have the opportunity to help make CXP a continued success and valuable part of the local aviation community. We thank you for the opportunity to submit our qualifications for this project and look forward to serving the Authority; to prove why, at Michael Baker, **We Make a Difference**. If you have any questions regarding our submission, please do not hesitate to contact the Project Manager directly at 775.412.4603 or by e-mail at [Greg.Stedfield@mbakerintl.com](mailto:Greg.Stedfield@mbakerintl.com).

Respectfully Submitted,  
**MICHAEL BAKER INTERNATIONAL, INC.**

Polly Boardman, PMP  
Project Principal



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# Section 1: Firm Overview

**Michael Baker**  
INTERNATIONAL



## SECTION 1: FIRM OVERVIEW

### Company Overview

Michael Baker International, Inc. (Michael Baker) was founded in 1940 by Michael Baker Jr. and quickly attained recognition as a premier engineering design and survey firm through superior project performance for the United States (U.S.) military, preceding World War II. Today, Michael Baker is a leading global provider of engineering and consulting services including aviation, environmental, architectural, civil, geotechnical, structural, mechanical, electrical, planning, construction, program management, and full life-cycle support services as well as information technology (IT) and communications services solutions. Now in our 78<sup>th</sup> year, Michael Baker has provided in-house services to airports worldwide, serving as an on-call “extension of staff” from the preliminary phase and initial planning concepts, through the design and construction phases, to project closeout. Michael Baker’s award-winning personnel have a reputation for taking their understanding of the local airport community and environment and incorporating related elements into functioning designs. Knowing that airports are a key economic driver of and a source of pride for the geographic area they serve, we perform as partners in more than facilities and infrastructure. **We partner in success.**

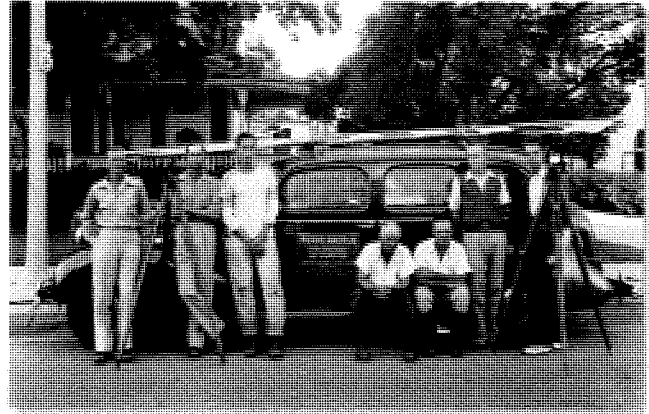


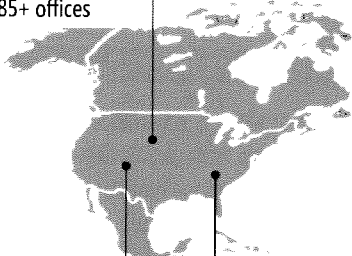
Image 1: The roots of Michael Baker, Jr.’s civil engineering and surveying services.

### National Leaders in Aviation Planning, Design and Engineering

5,700+

Professional staff in 85+ offices

77+ Years of aviation design



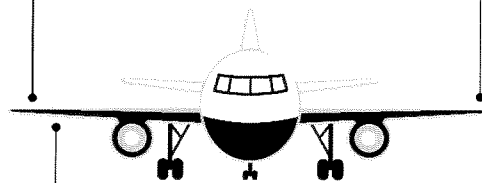
**Ranked 16th** in airport design by ENR

**200+ Airports** served worldwide

### Combined with Nationally Ranked Aviation Consultants

Full-Service, multi-disciplined firm

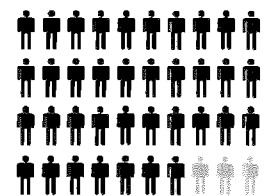
\$30M aviation contracts awarded annually



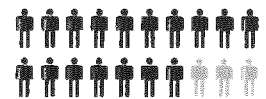
Specialized aviation engineering experience

Expertise in design throughout the U.S.

### Local Manpower with National Support



Network of 5,700+ staff



140+ dedicated aviation

Image 2: Michael Baker has a proven track record of successfully managing aviation planning contracts for clients across the nation. A summary of Michael Baker’s aviation leadership and available resources to complete the contract for the Carson City Airport Authority (Authority) is provided in the above infographic.

Michael Baker’s Aviation Group has over 140 dedicated aviation professionals nationwide and provides aviation services to commercial, general aviation (GA), and military clients. As such, we have come to know the specific requirements of airports of all sizes, from the smallest, private GA facilities to the busiest International airports in the world with Department of Defense (DoD)/joint-use airfields. The firm’s combined resources serve local,

# Airport Architectural/Engineering Services



national, and international markets with the capability to provide a comprehensive range of services on a national scale for all sizes and categories of projects. With more than 5,700 employees in over 85 offices nationwide, Michael Baker is consistently ranked by Engineering News Record (ENR) among the top 10 percent of the 500 largest U.S. design firms. Michael Baker's multi-disciplinary approach provides value added services that few firms can match. The following presents the comprehensive range of professional aviation services provided by Michael Baker.

2017 ENR Top 500 Design Firm Rankings		THE TOP 500 DESIGN FIRMS
32	Top 500 Design Firms	
16	Airports	
5	Bridges	
26	Construction Management	
23	Highways	
24	Mass Transit & Rail	
14	Transportation	
12	Water Supply	

- ▶ Airfield Design - Runways, Taxiways, Aprons
- ▶ Airfield Pavement Analysis/Management
- ▶ Airfield Drainage
- ▶ Terminal and Facilities Design
- ▶ Hangar Design
- ▶ Roadway & Access Design
- ▶ Master Planning Airport Geographic Information System (GIS)/Electronic Airport Layout Plans (eALPs)
- ▶ Land Use/Site Planning
- ▶ Environmental Assessments (EAs)
- ▶ Noise Studies/ Programs
- ▶ Wildlife Hazard Assessments & Management
- ▶ Mobile Light Detection and Ranging (LiDAR)/Unmanned Aerial Systems (UAS)
- ▶ NAVAIDS
- ▶ Traffic Engineering & Studies
- ▶ Feasibility Studies
- ▶ National Environmental Protection Act (NEPA) Compliance
- ▶ Planning & Site Development
- ▶ Geotechnical Investigation/Design
- ▶ Airside/ Landside Structural Design/Inspection
- ▶ Program and Construction Management
- ▶ Cybersecurity & IT

Michael Baker's achievements in aviation services are built on providing a full range of services to clients. Through these achievements, we bring the Authority knowledge in aviation planning, environmental studies and permits, airfield design, landside design, access roadways, security, terminals, hangar development, construction administration, resident inspection, and assistance with on- and off-airport development.

## AVIATION EXCELLENCE

*It is Michael Baker's constant focus on quality, innovation, and delivery that allows us to stand apart in the marketplace. Our professionals constantly strive to provide value to our clients by first understanding their needs, then by working with them to identify solutions to make their projects a success. At Michael Baker, we relish a challenge. We excel at responding to client needs and tackling fast-track projects too taxing or overwhelming to others. Our long history of success in the aviation design industry has allowed us to become skilled at handling difficult assignments.*

## Project Team Overview

Michael Baker's assigned Project Manager, Greg Stedfield, PE, will be leading the contract from our Reno office. He is resident of Carson City, living two minutes from CXP, and is a licensed professional engineer in the State of Nevada. Mr. Stedfield was an Avionics Technician in the U.S. Navy and has led and designed aviation projects including hangars in California, Hawaii, and overseas. Additionally, he led or designed a variety of airport projects including baggage handling systems, perimeter security fencing, vendor access projects, and airside pavement renovation projects. He is currently a citizen member of the Carson City Regional Transportation Commission. His local presence and expertise in aviation will aid the Authority in the timely execution of the projects listed in the Request for Qualifications (RFQ).

Mr. Stedfield will be supported by aviation planning specialist Linell Homentosky, CM, who is a senior aviation planner with over a





decade of experience at commercial and GA airports across the country. Her planning experience includes master planning, airport layout plan development, statewide aviation system updates, and various on-call planning assignments. These assignments have covered all facets of airports including airside, terminal, landside, environmental, and strategic planning. Ms. Homentosky has managed On-Call Planning contracts for the City of Philadelphia, Maryland Aviation Administration, and Connecticut Airport Authority. She has worked collaboratively and successfully with airport authorities, airlines, aviation tenants including FBOs, the FAA, and stakeholder agencies on multiple airport projects. She previously worked for the City of Philadelphia Division of Aviation and attributes her experience in both the public and private sector as being integral to her understanding of a client's needs and in turn, the successful execution of any size aviation project or task.

Additionally, we have teamed with Arora Engineers, Inc. (Arora) to assist Michael Baker with ALP/eALP work as well as any mechanical, electrical, plumbing, or fire protection needs that the Authority may require. Arora is a DBE-certified firm in Nevada and has local aviation experience, including the ALP/eALP at the Reno-Tahoe International Airport. Michael Baker and Arora have teamed on several airport projects over the last decade and have a strong working relationship that can be capitalized on for CXP. Should the Authority have other specific needs outside of the proposed disciplines, Michael Baker can utilize our existing relationships, both locally as well as aviation-specific, with additional subconsultants during the life of this contract.



Image 3: Grumman HU-16 Albatross at Carson City Airport.

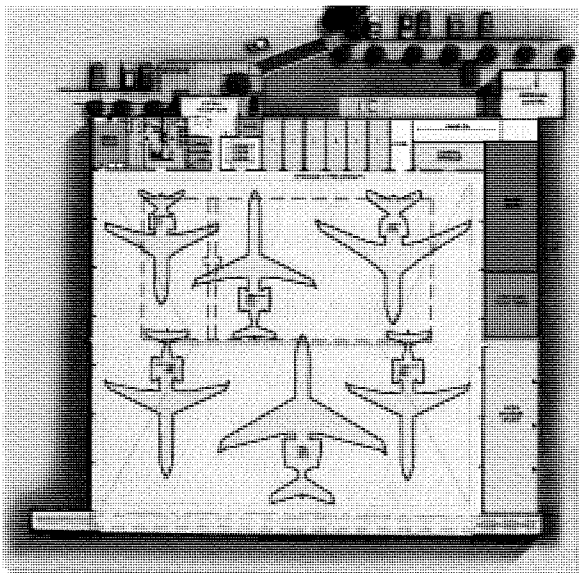


Image 4: Raleigh County Memorial Airport Maintenance Facility Planning Services Project.

## Services Overview

Michael Baker is capable of executing any Architectural/Engineering (A/E) task deemed necessary by the Authority. This includes a strong focus on the aviation A/E aspects of airside, terminal, landside, environmental, CADD, GIS, and cost estimating. The combination of Michael Baker and our subconsultant team members bring the resources of a full-service planning and engineering firm along with depth of staff available for whatever tasks and projects the Authority may encounter. We are available to provide the full array of our services, as needed, to continue to advance the Authority to the next level. Service areas are further detailed below.

## Aviation Planning

Michael Baker's team offers planning services ranging from a more generalized master plan study or update to detailed

# Airport Planning Services



analyses necessary for specific airport components, such as airside planning, terminal facilities, landside elements, and environmental requirements.

Aviation planners are readily available and have performed a wide array of aviation planning analyses. Michael Baker has assisted many airports similar in size to Carson City Airport (CXP) in planning and executing their development plans while maintaining a safe, fiscally-sound airport that remains compatible with the surrounding environment. This expertise, coupled with master plans, terminal analyses, airport layout plans and updates, forecast analyses, airfield standards analyses, airspace analysis, benefit cost analyses, and capital improvement programs (CIP), provides an expansive range of planning capability, professional experience, and support the Authority can capitalize on while executing development efforts.

Michael Baker team members have built a reputation for technical capabilities in airport planning and engineering. Our team members are well versed in FAA Advisory Circulars (AC) for design, pavements (concrete and asphalt), AIP grants, marking, signage, lighting, airport construction safety, geometry, and specifications. The firm has produced plans and managed construction for numerous runways, taxiways, aircraft parking aprons, auto parking and access roads, utilities, lighting, NAVAIDs, signage, security systems and fencing, hangars, T-hangars, and terminal buildings.



Our team has the technical experience to meet your planning needs through our blend of a multi-disciplinary, multi-office team, strengthened by our partner, Arora. Regardless of the Authority's needs, be it an airport master plan, runway rehabilitation, perimeter road construction/reconstruction, or taxiway storm drains, we have the capabilities, experience, and knowledge to perform on-demand and address the needs of CXP.

- ▶ **ALP Updates:** Michael Baker's team is proficient with ALP development, as well as updates for both commercial and GA facilities. We understand the requirements of FAA Standard Operating Procedure (SOP) 2.0 and the need to maintain a current FAA-approved ALP when there are changes to the landscape of the airport, to gain approval for a project conceived out of other planning exercises, or for conveying "as-built" on an ALP.
- ▶ **Master Planning Element Including Forecast, Demand/Capacity Analysis, and Airspace Analysis:** Given the state of funding through the FAA, every project proposed requires justification. That justification is generated typically through forecast and/or demand/capacity analysis. Every airport is fighting for the same funding dollars and sound justification for projects is a necessity for it to be implemented. We have assisted our airport clients with preparing forecast and demand/capacity analyses to produce the justification necessary to see the projects to completion. Additionally, per the FAA grant assurances, airports are required to protect their airspace. This is achieved by analyzing the airspace on and around the airports to ensure structures are not built that violate that airspace. Understanding the Authority's airport operations and the proper surfaces to analyze is critical to evaluate if a proposed structure will violate your critical airspace. Our team has performed airspace analyses for hundreds of proposed projects and know the requirements necessary to protect your valuable airspace.
- ▶ **Investigation & Preparation of Facility Planning, Strategic Planning, Feasibility Studies, and Other Planning Documents:** Airports are complex with vertical facilities such as terminals, support buildings,

# Airport Planning Services



hangars, and horizontal infrastructure, such as runways and roadways. Michael Baker's team brings to the Authority the broad skills and strong management to integrate vertical and horizontal infrastructure for CXP. Your facilities play a key role in the operating efficiency and security of CXP. Their design demands attention to meet evolving needs and competing priorities.

Michael Baker's team knows how to help clients plan for and achieve their short- and long-term goals. This team offers an integrated, comprehensive approach to facility planning and design that can be selectively applied according to project requirements. Services include water quality, architectural, structural, and mechanical and electrical engineering. Team architects, engineers, and planners will work closely with the Authority from the earliest project stages to develop a solution that best meets your needs in the most cost-effective manner. This team has project experience in facility planning, including but not limited to:

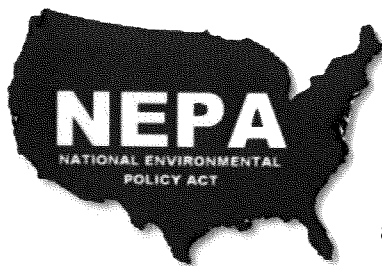
- Facility Assessments
- Airport Terminals
- International Facilities
- Facility & Asset Management
- Building System Design
- Aircraft Hangars
- LEED® Certified Facilities
- Cargo Buildings

► **Conceptual and/or Detailed Drawings:**

- Airside Development – Analysis for Future Development, Airspace Assessments
- Landside Development – Terminal Environment, Parking, Traffic Flow
- Land Use Compatibility/Noise – Property Information, Land Releases, and Minimal and Basic Noise-Related Guidance (excluding equipment/software)

Our aviation team provides planning, design, and construction services for airport airside and landside developments, from conceptual planning, alternatives analysis, funding justifications, civil site design, and architectural design. Our aviation planners work with airports to address land use compatibility issues through master planning, noise studies, and NEPA processes, as well as through locally-funded land use planning initiatives.

- **FAA & Stakeholder/Public Coordination:** Michael Baker understands what is necessary to complete projects and coordinate with the FAA Airport's District Office (ADO). We deal directly with the FAA ADO for all our clients, as necessary, and interact to conceive, implement, and coordinate projects through the entire project lifecycle from planning to construction.



### Environmental Planning, Sustainability, and Safety Risk Management

Michael Baker has been instrumental in providing environmental planning services to ensure airport success for a wide variety of projects. Our planning services are tailored to the needs of each project. This includes scoping, budgeting, and scheduling in coordination with the client and the aviation design team, to ensure the applicable environmental regulatory requirements are identified and addressed effectively, while avoiding unnecessary expense and delays later as the project progresses. These services may involve

preliminary environmental screening for feasibility/constraints analysis and siting studies, with additional investigations needed in support of the NEPA process and permitting. We have extensive experience in preparing NEPA documentation for airport projects, which can range in complexity from Categorical Exclusions

# Airport Planning Services



(CATEX) to EAs, Environmental Impact Statements (EIS), and Environmental Impact Reports (EIRs). Our team's permitting expertise includes the full range of field surveys, technical analyses, documentation, and agency coordination for permit acquisitions at the local, State, and Federal levels.

Our team's deep, local knowledge of regulations and permitting provide the necessary services to ensure all projects are compliant with applicable laws and regulations. Potential environmental consequences should be identified during conceptualization planning of a project, thus furnishing the Authority with the most accurate facts upon which to base a future development decision. Our team will build upon existing data in prepared reports to avoid duplication in data research and preliminary investigations, saving the Authority time and money.

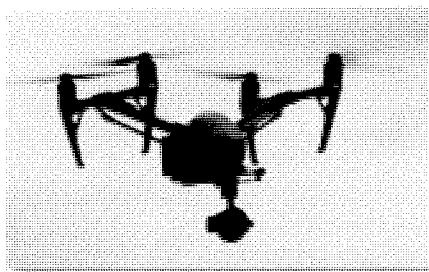
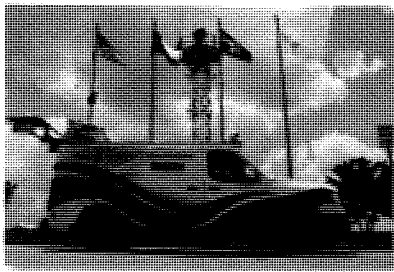
We have approached projects using the principles of FAA's Safety Risk Management Documentation including development of a Safety Baseline, Hazard Identification, and Risk Analysis and Safety Risk Determination, as a structure for project progression.

## CADD and GIS

Michael Baker's team is well versed in the airport requirements for GIS. CADD and ArcGIS are applications we use daily, and are prepared to use as your extension of staff. We have assisted in the updates to previous ALPs through our execution of other project coordination efforts. Our team's depth in GIS is unmatched as Michael Baker has over 200 employees in our GIS practice and 12 GIS professionals located in our Reno office. No GIS or asset management task is too big or too small for us to handle for the Authority.

## Programming and Cost Estimating

Our team of local firms has an established understanding of the local costing environment. Any project or program that is developed under this planning contract can be estimated by this team. From the planning standpoint, it is imperative that the cost ramifications associated with projects proposed to enable budgeting of funds accordingly are understood. Depending on the nature of the project being costed, the team member with the greatest understanding in that area will generate the cost estimate associated with the work so that their specific knowledge is utilized to develop an accurate cost estimate.



Images 5 & 6: Michael Baker provides other on-call aviation specialty services such as LiDAR, UAS, fire protection, and traffic.

### AVIATION ENVIRONMENTAL PROCESS UNDERSTANDING

*Michael Baker's team understands the importance of early coordination with Federal, State, and local agencies and we strive at every phase of a project to adhere to the strict NEPA guidelines and procedures required by FAA. Michael Baker's multi-disciplined staff successfully guides airports through the FAA environmental approval processes in an efficient and coordinated manner.*

## Other Specialty Resources

With the understanding that this contract will be on-call, our team is prepared to meet the wide variety of aviation A/E needs that the Authority may request on an as-needed basis with often quick-turn deadlines. Based on our close proximity to CXP, our team will be a true extension of staff with an abundance of capabilities at

your disposal. While we have crafted this team to meet the anticipated needs of the Authority, should a challenge arise that we cannot execute within our team, we will collaborate with the Authority and our industry experts to incorporate a subconsultant with that specific skillset to our dynamic team for the seamless execution

# Airport Planning Services



of all tasks. Some of the services Michael Baker has utilized at other airport and airfield facilities includes UAS, Mobile LiDAR, fire protection, and bid and construction support services, as noted in the organizational chart under other specialty resources available. The team is ready, eager, and more than prepared to continue to assist the Authority through the range of aviation A/E services.

## Office / Work Location

Michael Baker's services and contract for the Authority will be run out of the firm's Reno branch office, with specialty support and expertise being provided from various nationwide offices in California, Pennsylvania, Arkansas, Georgia, Chicago, Texas, Ohio, Washington, Maryland, and Virginia. **Michael Baker's Reno office is located 26 miles from CXP and our Project Manager lives two miles from CXP** allowing us the availability and commitment to ensure effective, hands-on, local services throughout the life of the contract. Michael Baker has become proficient at work sharing across the company, utilizing file sharing platforms such as SharePoint, Microsoft Teams, WebEx teleconferencing, and regularly scheduled conference calls with team members throughout the life of the project. The Reno office, or "home office" for this contract, will host the project data on their secure server that is backed up nightly and will provide permissions to the project team for access. This method helps centralize project work and ensures that each task is provided the very best resources, regardless of location.



Image 7: Michael Baker's branch office location in South Reno.

## Relevant Experience Overview

With depth of experience, resources, and proven commitment to presence and responsiveness, Michael Baker will rigorously act as an extension of the Authority's staff to administer the required consulting services for airport design and how they integrate with design, construction, architectural, environmental, and other projects over the life of the contract. Successfully acting as an extension of staff means proactively pursuing the many tasks associated with airport development without creating a paperwork burden for the Authority. This level of service includes the on-time project submissions, close coordination with FAA's decision makers, and exceptional quality of deliverables. The following is a list of a few of the recent, commercial airports for which Michael Baker is currently providing or has provided on-call professional architectural, engineering, and planning services.

AIRPORT NAME	PROJECT	SERVICES COMPLETED
<b>GENERAL AVIATION</b>		
Norwalk-Huron County Airport (RWY)	General Airport Engineering and Planning Services	Ongoing
Harrison County Airport (ASL)	General Airport Engineering and Planning Services	2018
Morgantown Municipal Airport (MGW)	On-Call Services	2017
Southern California Logistics Airport (SCLA)	On-Call Services	2014
Apple Valley Airport (APV)	On-Call Services	2004



# Airport Planning Services



COMMERCIAL		
Hartsfield-Jackson Atlanta International Airport (ATL)	Multi-Discipline Services	Ongoing
Pittsburgh International Airport (PTI)	Multi-Discipline Services	Ongoing
Baltimore/Washington International Thurgood, Marshall (BWI) & Martin State (MTN) Airports	Comprehensive Environmental Planning	Ongoing
Schuylkill County Airport (ZER)	On-Call Aviation Engineering Consulting	Ongoing
San Diego International Airport (SAN)	As-Needed Consulting	2015
Allegheny County Airport (AGC)	On-Call Planning and Environmental Services	2013
Long Beach Municipal Airport (LGB)	On-Call Services	2008

Additionally, Michael Baker has worked on recent, planning, project-specific master planning aviation projects for GA, mid-size, and international airports. A highlight of some of those projects are listed below.

AIRPORT	PROJECT NAME
Proposed Oak Ridge Airport	Master Plan and Preliminary Planning Study
Wheeling-Ohio County Airport (HLG)	Airport Master Plan Update
Northwest Alabama Regional Airport (MSL)	Master Plan Update
Mobile Downtown Airport (BFM)	Airport Layout Plan Update
Huntsville International Airport (HSV)	Master Plan Update
Rickenbacker International Airport (LCK)	Master Plan Update
Columbia Metropolitan Airport (CAE)	Airport Master Plan Update
Treasure Coast International Airport & Business Park (FPR)	Airport Master Plan Update
Upshur County Regional Airport (W22)	Airport Master Plan and Layout Plan
Brooksville-Tampa Bay Regional Airport (BKV)	Airport Master Plan Update

## Capability to Perform Work / Meet Schedules

Michael Baker's airport engineering, planning, environmental, and construction experience has been extensive on airport projects throughout the U.S. While we have completed projects at some of the world's largest airports, such as ATL, BWI, and PIT, we provide significantly more services and perform more projects for medium-hub commercial service airports and all sizes of GA airports. ***We have the staff and resources to perform the Authority's CIP projects in a timely manner. In most cases, we can either meet and/or beat project schedules based on our knowledge of local, State, and Federal standards, permits, and procedures.***

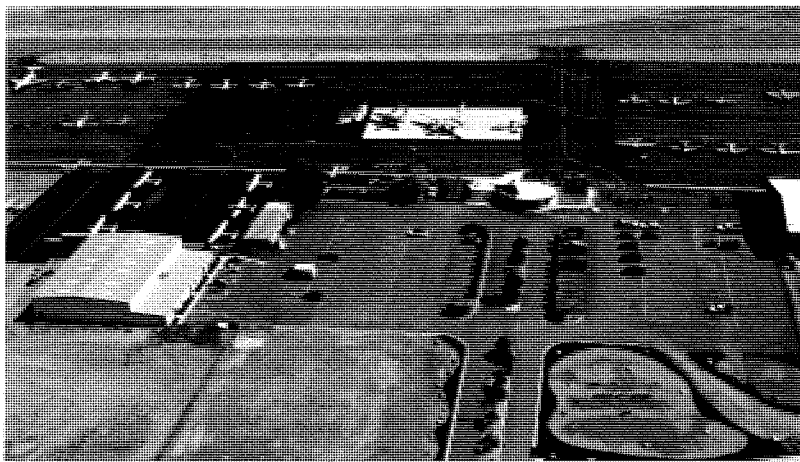


## Section 2: Project Understanding/Approach

**Michael Baker**  
INTERNATIONAL



## SECTION 2: PROJECT UNDERSTANDING / PROJECT APPROACH



*Image 8: An aerial of a part of CXP's facilities including the terminal, parking lot, and partial runway.*

necessary to assist the Authority with bringing its vision to reality. Under new leadership, the vision may be revisited and various aspects reviewed in more detail as priorities shift. Our team's experience with on-call planning contracts at airport systems will serve as a solid foundation to assist with your aviation needs while also bringing new and innovative ideas and perspectives to meet the evolving needs of CXP.

The Carson City Airport 2018 Project and 2019-2023 ACIP contains identified projects in each of the next five years that encompass the plan, including the anticipated work to be covered by an FY2018 grant. CXP is working with Carson City's Planning Department to develop an Airport Overlay to allow for CXP development without the requirement for a Conditional Use Permit (CUP) every time a project is proposed. This will save time and thus make new development at CXP more attractive to potential developers and users.

Michael Baker has also noted that the Authority has dates indicated for the submission of CatEx documentation for each of the projects in the current ACIP. We understand the importance of maintaining the schedule of the environmental documentation so the related projects are constructed per the ACIP schedule. Michael Baker's team will assist the Authority with CatEx document preparation and submission as part of the FAA grant requirements.

Projects listed in the RFQ are nothing new to us, and we are excited about the possibility of working with the Authority on them. All work will be designed and constructed to FAA standards (unless a modification is necessary) and we will assist in the entire process from project conception and grant pre-applications to filing 7460-1's, overseeing the project, and closing out the grant. We are confident that we can complete each project successfully while keeping the ultimate goals of CXP in mind. We will communicate frequently and effectively to have a complete understanding of each project, to keep the Authority in the loop of project progress, as well as any updated goals of the Authority as they adapt and change over time.

### Understanding Challenges / Special Concerns

The Authority desires to make improvements to CXP that will assist in their goal of becoming a successful, self-sustaining GA airport while conforming to FAA requirements. Michael Baker's team is poised to support the Authority with the A/E services necessary to achieve these goals. Over the past decade through on-call general engineering design contracts and standalone contracts, Michael Baker's team members have gained extensive insight and established the relationships



*Image 9: CXP entrance sign and some of the affected stakeholders.*

# Airport Planning Services



Michael Baker’s aviation experience covers nearly all elements of airport planning, including Master Plans, ALPs/eALPs, runways and taxiways, hangars, terminals, obstruction removal, rental car facilities, real estate development, noise studies, and financial and business planning. From small GA airports to large and medium hub commercial service airports, Michael Baker has addressed the complex planning and design issues facing today’s airports.

Michael Baker’s history of planning projects has kept pace with the planning needs of public agencies and airport stakeholders. Our firm operates as a “one stop” shop for our airport clients and responds in the most cost-effective manner possible. Michael Baker can provide these services, bringing public and private entities together to arrive at the ultimate planning solution. Our broad range of planning services includes:

- ▶ Air Quality
- ▶ Asset Management
- ▶ Community Planning
- ▶ Context Sensitive Design/Solutions
- ▶ Congestion Management
- ▶ Corridor/Feasibility Studies
- ▶ Cultural Resource Surveys
- ▶ Emergency Management Planning
- ▶ EAs
- ▶ GIS
- ▶ ITS Services
- ▶ Land Use Planning
- ▶ Long Range Planning
- ▶ Master Planning
- ▶ Natural Resource Surveys
- ▶ Noise Impact Analysis
- ▶ Permitting
- ▶ Policy Development
- ▶ Public Involvement
- ▶ Regional/System Planning
- ▶ Scenario Planning
- ▶ Smart Growth
- ▶ State Planning
- ▶ Traffic Engineering
- ▶ Traffic Impact Studies
- ▶ Transit Oriented Development
- ▶ Transportation Management Plans
- ▶ Travel Demand Forecasting
- ▶ Urban Planning/Design

The Carson City Airport 2018 Project and 2019-2023 ACIP includes an Airport Master Plan and ALP update with narrative and Exhibit A Property Map. The following is a list of a few airports for which Michael Baker has recently completed Master Plans:

AIRPORT NAME	PROJECT	SERVICES COMPLETED
Alexandria International Airport (AEX)	Master Plan Update	2012
CAE	Master Plan Update	2013
Proposed Oak Ridge Airport	Master Plan	2017
HSV	Master Plan Update	2012
LCK	Master Plan	2018

Based on our past projects, we understand what it takes to manage a Master Plan that encompasses stakeholder partnering and outreach. CXP’s Master Plan will serve as the map to outline the need and priorities for both short and long-term growth in a fiscally-responsible manner. In addition, our team, inclusive of Arora Engineers, has managed and maintain ALPs and ALP Updates for airports across the country.

Given that many projects in the ACIP are specific to airfield improvements, Michael Baker’s team includes engineers experienced in both the design and construction services for airport improvements. The projects identified include rehabilitation of runways, taxiways, aprons, as well as construction of new facilities including an East Perimeter Road and Hangar Row Taxilanes with utilities. Our planners and engineers know that any development that is to occur on airport property will require review by the FAA. The FAA has specific guidelines

# Airport Planning Services



Image 10: Lands surrounding CXP's property line.

for development of Federally obligated property. All property encompassed within the approved ALP property line is Federally obligated if Federal funds have been and will continue to be used for airport projects. The FAA requires that any revenue generated from aviation-related development or non-aeronautical development must remain at the airport and used for airport operations or other airport development projects. As part of this requirement, the FAA requires that the airport receive fair market value for all leased space and/or properties. Additionally, for the FAA to approve development projects they must be shown on the ALP, the appropriate NEPA document must be

prepared for environmental clearance of the project,

and the proposed development must have an air space review through submittal of the development on the FAA's Form 7460-1, "Notice of Proposed Construction or Alteration". Where land is to be leased or sold for the development, land appraisals are required to determine the fair market value of the land to be leased or sold.

Michael Baker has supported clients with many such development efforts. As part of the site design for the Dick's Sporting Goods Headquarters at PIT, we served as a liaison to ensure the required coordination was done with the FAA. We have also currently worked with the City of Morgantown on a \$50M+ development program at MGW. We are providing guidance and development of the necessary documentation for both the city and the local development agency for the program. Michael Baker has contracted and worked with appraisers to prepare the required appraisals for both land acquisition and release of airport land. We have also prepared the required environmental documents for the program and will prepare and submit the projects for airspace review as they advance.

Michael Baker's team has a proven track record of successfully completing aviation planning, facility planning, and overall program planning services and projects. Most staff members included in our organization chart have airport experience, be it in aviation planning or aviation engineering. Our team's combined experience and local presence will directly benefit CXP as we assist you with the successful implementation of the various projects outlined in your ACIP. Our approach for each task will involve bringing together the ideal technical expertise to assist. We have executed all types of aviation-related projects. We understand the FAA grant processes, have knowledge of airport operations, and the foresight to always look ahead as to what the next project should be.

## General Project Approach

Michael Baker and our team members have provided A/E services in support of airports for many years and we are committed to do the same for the Authority. Our role in providing these services has been as a responsive, go-to firm. This contract will provide the Authority with continuous "on demand" comprehensive A/E services team for a wide range of technical assignments.

Our management approach is the foundation on which we built the team of personnel devoted to the Authority's contract. We are confident our team has the experience, as well as understanding,

### EXTENSION OF AUTHORITY STAFF

*Michael Baker's team not only provides depth of experience in multiple disciplines, but also shares the Authority's goal of seeing CXP achieve its fullest potential. Michael Baker views our relationship with the Authority as that of a family rather than owner/client/contractor. The Authority's goals are our goals. And, we want to help the Authority succeed.*



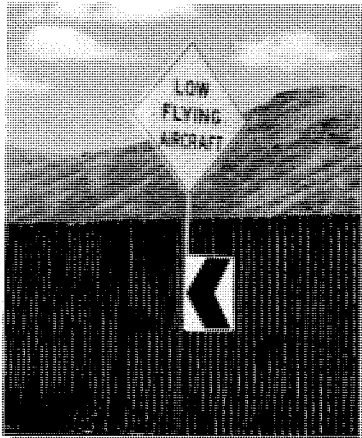


Image 11: Signage outside CXP.

of your airport system to work on the anticipated tasks associated with this contract to meet the Authority's objectives.

We maintain an overall goal to be a committed provider for aviation planning and design services. Our management approach is to build upon our cooperative experiences working for the Authority to seek and accept challenges that raise the bar for the services we provide. We are a learning organization, and, as such, we are continuously evaluating our performance internally and seeking feedback to improve the quality of the services we provide.

For ease of contracting what is expected to be multiple tasks under this on-call procurement, we will work with the Authority to develop one standard contract that outlines the requirements of both parties. Under this contract, each task assigned to Michael Baker will be assigned a task number, and the

scope and fee for each project will be developed with the Authority, depending on Authority's specific project needs. Communication is key and we will work with to the Authority make sure your goals and needs are being accomplished and met for each task.

Michael Baker has developed an in-house Project Management Program entitled "The Michael Baker Way" with a primary goal of improving project performance through product delivery excellence. Michael Baker's project managers provide professional project management and team coordination by taking a pro-active role in managing and controlling the direction of their projects. Our project managers are involved in the day-to-day development of any assigned project. This standardized approach ensures projects are professionally managed consistently, which helps ensure each project meets their objectives and stays on schedule and within budget while meeting the client's need. Some of the elements of our program is highlighted below.

### Execution, Monitoring, and Control

Through better organization, tools, and methods to monitor budgets, Michael Baker puts an emphasis on communication and a structured approach to delivering quality to provide considerable value to our clients. The key features of The Michael Baker Way are:

- ▶ Improving project performance through consistency
- ▶ Organization and efficiency across the organization
- ▶ Defining project management processes for every project, scalable to fit the scope and size of any project
- ▶ Serving as a one-stop reference for forms, policies, references, and procedures required to manage a project
- ▶ Leveraging existing best practices throughout Michael Baker, referencing accepted and established practices
- ▶ Management tools, procedures, and references for project managers by a user friendly, intuitive website

### PMP

Prior to initiating activities on a project, the project manager will develop a Project Management Plan (PMP). The PMP is a collection of the pertinent information required to successfully manage a project and serves as a one-stop reference tool for the project manager and project staff. It defines how the project is to be executed, monitored and controlled, and closed upon successful completion. The following are descriptions of the key subsidiary plans that are integrated into the overall PMP:



- ▶ **Staff Management Plan:** The Staff Management Plan describes the organization of the project team, usually in the form of an organization chart. In addition, the plan includes a responsibility matrix defining accountability and responsibility for key tasks. The plan also defines the process for assigning resources to complete task orders as well as management of those resources including tracking team member performance, providing feedback, resolving issues, and coordinating changes to enhance project performance.
  
- ▶ **Project Communications and Reporting Plan:** The Communications and Reporting Plan addresses the timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information. The Project Manager is the primary point of contact for both written and verbal correspondence. Issues impacting project progress, concern contractual matters, or affect delivery schedule are immediately communicated by the Project Manager. Communications will be by telephone, e-mail, hard copy, and face-to-face project status meetings. Project status meetings will be conducted with the Authority typically on a bi-weekly basis. Michael Baker will document all meetings and pertinent telephone conversations conducted with the Authority and issue minutes of each within one week. Appropriate Michael Baker staff will be made available to attend meetings, provide briefings, respond to inquiries, make presentations, and/or provide materials at the request of the Authority with notice of two business days. Project Status Reports will be provided monthly, with specific emphasis on project schedule, milestone progress, issues, risks, actions, and decisions.
  
- ▶ **Monitoring Plan:** Adherence to schedules and budgets is a primary responsibility of the Project Manager. Project schedules are developed using Microsoft Project and the planned versus actual performance is reviewed during internal weekly project meetings. Resource allocations are also reviewed weekly and adjusted, if needed, to maintain project schedules. Our Oracle-based Enterprise Resource Planning (ERP) system is used to track and control project financial performance. Expenditures, including labor and ODCs, are updated with weekly time sheets and prompt entry of payments to subs and vendors. Project status including physical progress, financial performance, administrative issues, and quality/client satisfaction is reviewed monthly with management.

### COMMUNICATION IS KEY

*Michael Baker understands that the key to any project success is communication. The Project Manager will meet regularly with the Authority to ensure that critical items are conveyed to the team and addressed accordingly.*

### Scope and Change Control

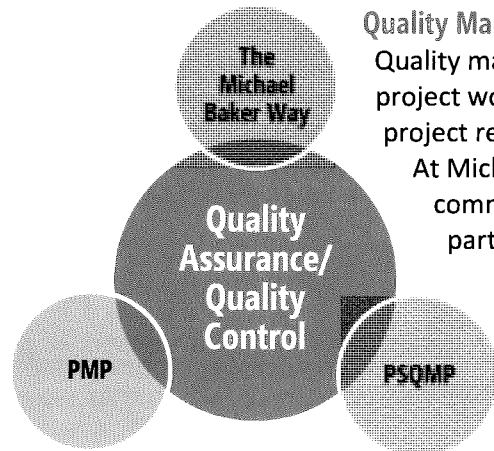
Given the dynamic nature of an on-call planning contract, it will be necessary for Michael Baker and the Authority to have established processes in place to manage change. The Scope and Change Control portion of Michael Baker's PMP defines the procedures by which the project contract terms and conditions may be changed. Change management is concerned with: a) determining that a change has occurred; b) managing the actual changes when and if they occur; and, if necessary; c) modifying the contract and/or contract value to correspond with the change. Change management must be thoroughly integrated with the other control processes (scope control, schedule control, cost control, quality control, etc.). Change management must also comply with the relevant contractual provisions. Scope change is the most common kind of change; others are changes to schedule, cost, and client contacts.

### Subconsultant Management

Subconsultant management is recognized by Michael Baker's team as vitally important to ensure excellent project performance. Michael Baker understands its "ownership" of the deliverables, meaning Michael Baker



assumes responsibility for the deliverable, regardless of which subconsultant prepared or contributed to the particular task assigned.



## Quality Management Plan

Quality management requires the development and use of processes by which project work is assigned, carried out, checked, and reviewed to meet the client's project requirements and applicable professional standards for technical quality.

At Michael Baker, quality is the responsibility of all employees, requiring the commitment of top senior management and the commitment and participation of all project team members. Quality is one of our corporate core values and our policy is stated below.

There are three main components to Michael Baker's approach to quality. First, The Michael Baker Way provides the foundation for Michael Baker's quality management system. Next, PMPs build upon the foundation; and finally, the Project Specific Quality

Management Plans (PSQMP) provides the details.

The PSQMP, a document identifying project specific resources and required actions, provides the mechanism for project deliverables to meet both the client's requirements and applicable professional standards for technical quality. The development of the PSQMP is the responsibility of the project manager with input and support from the QA/QC Managers.

The objectives of the PSQMP are to:

- ▶ Identify key project quality roles and resources
- ▶ Identify and describe quality processes and procedures for the project. These can be either prevention based or inspection based
- ▶ Identify specific technical references to be followed, as applicable
- ▶ Be the one-stop reference tool for the Project Manager and other project staff in carrying out steps related to quality control and quality assurance (QA/QC)
- ▶ Provide the you a concise picture of Michael Baker's quality-related processes and procedures for your project

This team's PSQMP will include, at a minimum, the following:

- ▶ Internal and external kick-off meetings and documentation
- ▶ Applicable criteria, guidelines, and specifications
- ▶ Reports, drawings, and other deliverable format requirements
- ▶ Procedures for checking and proofreading calculations, computer models, and deliverables by appropriately trained and experienced personnel who did not prepare the work
- ▶ Review of deliverables by senior-level personnel who have extensive experience and knowledge
- ▶ Methods for receiving, tracking, and responding to comments

## EFFECTIVE QUALITY ASSURANCE

***Michael Baker is committed to completing projects that meet our clients' requirements with respect to scope, schedule, budget, and technical quality.***

*Each project has a PSQMP in place. Michael Baker is committed to our quality goals that include:*

- ▶ *Satisfy specific criteria and requirements in project phases*
- ▶ *Recognize, learn and practice standards applicable to project, and provide constructive input towards the improvement of practices*
- ▶ *Involve staff in delivery of quality*
- ▶ *Recognize productive contributions towards establishing a professional, interactive work environment fostering teamwork, achievement and quality awareness*
- ▶ *Maintain and support PSQMPs for use by the team*



- ▶ Other items of special consideration applicable to an assignment

***We recognize providing quality services and products is the key to the long-term health and well-being of our organizations; therefore, we actively employ whatever steps are necessary to ensure the Authority receives the services expected. We will provide project deliverables exceeding the requirements and quality standards of the Authority, without extensive review by the Authority.***



Image 12: The Authority vehicle's license plate.

In summary, Michael Baker's quality policy requires an appropriate QC plan be in place for every project. The plan defines how the work products are to be checked and reviewed to ensure quality. For every project, each deliverable is inspected and tested to validate that project specifications and requirements are met. The checking includes both visual and automated tasks.



## Section 3: Project Team/Qualifications

**Michael Baker**  
INTERNATIONAL



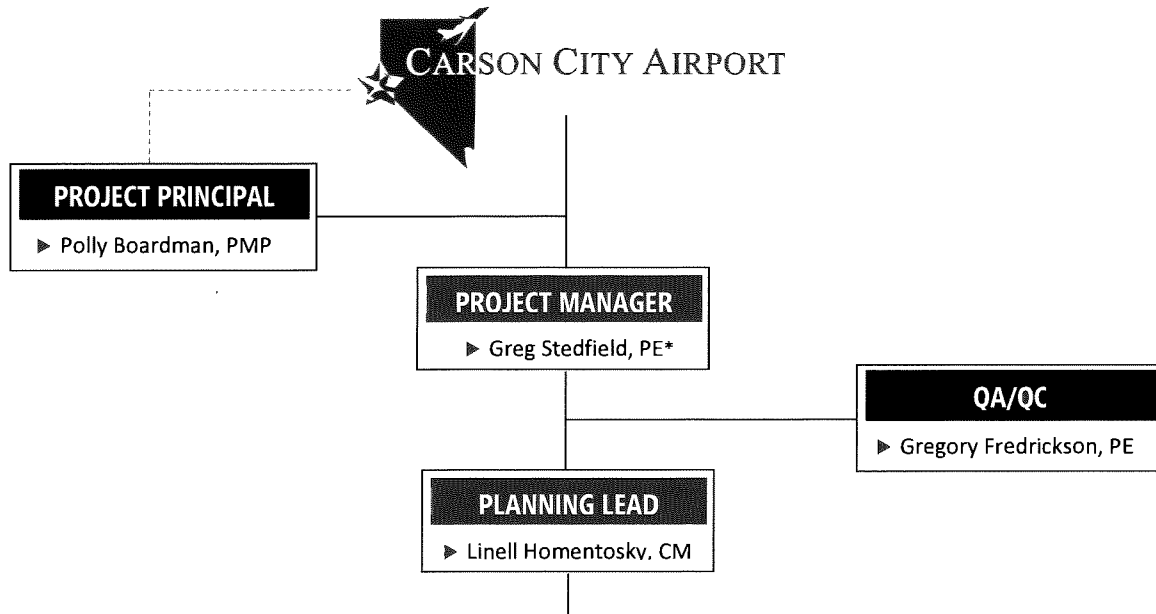
# Airport Planning Services



## SECTION 3: PROJECT TEAM/ QUALIFICATIONS

### Organizational Chart

Detailed in the organizational chart below are the overall project team members, proposed role/position, hierarchy and reporting relationships, and the firm each team member works for. The team members chosen for this on-call contract are committed and available to the Authority for the duration of the contract.



TECHNICAL SUPPORT STAFF		
<p><b>Airport Master Planning</b></p> <p><b>Forecast, Demand/Capacity Analysis, Alternatives Analysis</b></p> <ul style="list-style-type: none"> <li>▶ Michael Kotlow</li> <li>▶ Jim Duguay</li> </ul> <p><b>Phasing &amp; Cost Estimating</b></p> <ul style="list-style-type: none"> <li>▶ Kevin Sigg, PE*</li> <li>▶ Brian Anderson, PE</li> </ul> <p><b>FAA &amp; Stakeholder/Public Coordination</b></p> <ul style="list-style-type: none"> <li>▶ Linell Homentosky, CM</li> <li>▶ Polly Boardman, PMP</li> <li>Karin Peternel, CFM</li> </ul>	<p><b>ALP Update &amp; Exhibit A Property Map</b></p> <ul style="list-style-type: none"> <li>▶ Michael Kotlow</li> <li>David Grigg, GISP <sup>1</sup></li> <li>Gil Neumann <sup>1</sup></li> </ul> <p><b>Environmental Planning</b></p> <ul style="list-style-type: none"> <li>▶ Christine Jacobs-Donoghue</li> <li>▶ Mariben Andersen</li> </ul> <p><b>Water/Hydraulics/Hydrology</b></p> <ul style="list-style-type: none"> <li>Geoff Brownell, PE*</li> <li>Karin Peternel, CFM</li> </ul> <p><b>Sustainability</b></p> <ul style="list-style-type: none"> <li>Cyle Cantrell, CM, LEED GA</li> </ul> <p><b>CADD &amp; GIS/GIT (including Obstruction Analysis)</b></p> <ul style="list-style-type: none"> <li>▶ Polly Boardman, PMP</li> <li>Jeff Chambers</li> </ul>	<p><b>Civil Engineering</b></p> <ul style="list-style-type: none"> <li>▶ Kevin Sigg, PE*</li> <li>Alan Su, PE*</li> </ul> <p><b>Architectural</b></p> <ul style="list-style-type: none"> <li>Erik Tuomy, RA, LEED AP*</li> </ul> <p><b>Structural</b></p> <ul style="list-style-type: none"> <li>Brad Mielke, PE, SE*</li> </ul> <p><b>Mechanical/Electrical</b></p> <ul style="list-style-type: none"> <li>David Marsh, PE, LEED AP <sup>1</sup></li> <li>Howard Paige, PE <sup>1</sup></li> <li>Joseph Fong, PE*</li> </ul>

OTHER SPECIALTY RESOURCES AVAILABLE		
<p><b>Safety/Risk Analysis</b></p> <p><b>Security</b></p> <p><b>LiDAR</b></p> <p><b>Value Engineering</b></p> <p><b>Geotechnical</b></p>	<p><b>Surveying/Mapping/ROW</b></p> <p><b>Pavement Management</b></p> <p><b>UAS</b></p> <p><b>Appraisals/Acquisitions</b></p> <p><b>Landscape Architecture</b></p>	<p><b>Interior Design</b></p> <p><b>Fire Protection</b></p> <p><b>Bid &amp; Construction Support</b></p> <p><b>Construction Management/</b></p> <p><b>Inspection Services</b></p>

▶ Denotes Key Team Members

<sup>1</sup>Licensed/Certifications in the state of Nevada. Subconsultant Team Members: 1. Arora Engineers, Inc. (DBE)

# Airport Planning Services



Additionally, Michael Baker has over 85 offices and over 5,700 professional team members globally to draw from should any further resources be needed to complete a specific project task or simultaneous phases of work. The firm can provide additional optional services to facilitate further development on a specific scope of work item or to provide overlapping phasing services should the firm be assigned more than one task order at a time.

## Subconsultant / DBE Goals

We have carefully selected a DBE-certified subconsultant in the State of Nevada familiar with and capable of handling your facilities. They can aide the Authority with meeting any Federal requirements for grant funding, should they be needed.



**ARORA Engineers, Inc. (Arora) – DBE (Certificate No. NV01442UCPN), ALP Update & Exhibit A Property Map, Mechanical/Electrical**

Since 1986, Arora has been providing clients with engineering services for intelligent infrastructure solutions. Arora is an aviation centric firm, with airport people who have decades of aeronautical electrical, MEP, fire/life safety, special systems, and GIS experience. Arora has worked on these types of projects at over 30 airports throughout the country, including at Reno-Tahoe International Airport (RNO), and understands airport business processes and the interaction between airport owners, airlines, outlying stakeholders, politics, and the FAA. Arora's comprehensive engineering practice includes oversight, project management, and design of new and existing mechanical, electrical, plumbing (MEP), fire/life safety, and special systems (security, access control, CCTV, communications, digital signage, and information technology) building and airfield systems as well as GIS. Arora also provides construction management and facilities maintenance.

Arora's national engineering practice is built on the principles of quality, innovation, and hyper-responsiveness. Arora's multidisciplinary approach offers clients comprehensive, cost-effective solutions to their most challenging situations. From the initial design process, bid services, and cost estimation to construction and ongoing facility maintenance and management, Arora's team of professionals is equipped to address any problem, and most importantly, to find the right solution.

## Key Project Team Members Bio Resumes

### MS. BOARDMAN'S HIGHLIGHTS

**Years of Experience:** 19

**Education:**

- ▶ *BS, Geological Sciences, University of Nevada, Reno*

**Registration(s)/Certification(s):**

- ▶ *Project Management Professional (PMP), NV, 2011, 1397532*

**Polly Boardman, PMP | Project Principal, FAA & Stakeholder/Public Coordination, CADD & GIS/GIT**  
Ms. Boardman has worked with Enterprise GIS databases since 2002, assuming the responsibility as quality assurance manager, then landbase production manager, then project and operations manager in the Reno office. In these roles, she managed all editing, analysis, and application

development projects within the program. She innovated workflows and toolsets for faster, more qualitative deliverables. She currently determines the manpower and method needed for each project, both nationally and internationally, to be fulfilled in a timely manner. As a Native Nevadan, she coordinates all business out of the northern Nevada region, including GIS, UAS, land development, environmental and water resources, aviation services, and architecture. She performs project management activities, forecasting, budget control, and supports vice presidents and other regions as needed.

# Airport Planning Services



## Key Relevant Experience Includes:

- ▶ **On-Call GIS Services** | Carson City, NV | Project Manager
- ▶ **UAS On-Call Contract** | Statewide, NV | Project Manager
- ▶ **AT&T GIS Land Base Data Maintenance Program** | Statewide, CA/NV | Operations Manager

## Greg Stedfield, PE | Project Manager

Mr. Stedfield is a licensed professional engineer in multiple states with a technical background in general civil engineering, land development, infrastructure, and construction administration/inspection. He has been responsible for planning, design, and project management of numerous infrastructure projects. His expertise includes airport paving/layout, site and roadway layout, site paving and striping, site grading, storm drainage design, erosion control/ SWPPPs, sanitary sewer master planning and network design, and water distribution master planning and network design. His experience includes feasibility and cost analysis studies, preliminary feasibility design, land use entitlements and zoning, construction drawing and document preparation, on-site civil engineering, project scheduling, as well as overseeing and reporting of job progress and preparing construction cost estimates.

### MR. STEDFIELD'S HIGHLIGHTS

**Years of Experience:** 26

**Education:**

- ▶ *BSCE, Civil Engineering, California State University, Sacramento*

**Registration(s)/Certification(s):**

**Registration(s)/Certification(s):**

- ▶ *Professional Engineer, Civil, NV, 2012, 21678*
- ▶ *Professional Engineer, Civil, CA, 2000, 60606*
- ▶ *Professional Engineer, Civil, TX, 2011, 108012*
- ▶ *Professional Engineer, Civil, OR, 2015, 90735*

## Key Relevant Experience Includes:

- ▶ **Westover Air Reserve Base (CEF) Renovate Runway Overruns and Aircraft Apron Pavement Repair** | Chicopee, MA | Senior Engineer
- ▶ **Anderson Air Force Base (UAM) PAR Tanker Hangar and Fuel Systems Hangar** | Guam | Civil Discipline Director
- ▶ **DFW Terminal A Loading Dock** | Dallas, TX | Senior Engineer
- ▶ **Puerto Rico International Airport (SJU) Renovate Baggage Handling System** | San Juan, Puerto Rico | Senior Engineer

### MR. FREDRICKSON'S HIGHLIGHTS

**Years of Experience:** 23

**Education:**

- ▶ *BS, Civil Engineering, Drexel University*
- ▶ *BS, Architectural Engineering, Drexel University*

**Registration(s)/Certification(s):**

- ▶ *Professional Engineer, MD, 1999, 200432*

## Gregory Fredrickson, PE | QA/QC

Mr. Fredrickson has 23 years of experience dedicated to airport design, construction, and planning. He has worked on numerous airport projects across the country ranging from runway reconstruction to concourse extensions and additions to landside roadway improvements. The larger projects on which he has worked over the

years include the design and phasing of the Dulles International Airport (IAD) people mover system between their terminals, the 10-acre apron expansion and modification for Continental Airlines Concourse D at CLE, and the U.S. Airways seven-gate terminal and apron expansion at Boston Logan International Airport (BOS).

## Key Relevant Experience Includes:

- ▶ **BWI/MTN Comprehensive Design Services** | Baltimore, MD | Principal in Charge
- ▶ **ACY Professional On-Call Aviation Consulting** | Egg Harbor Township, NJ | Technical Advisor
- ▶ **IAD Automated People Mover System** | Dulles, VA | Discipline Manager
- ▶ **BWI Runway 15R De-icing Pad and Taxiway P Pavement Rehabilitation and Standards Compliance** | Baltimore, MD | Technical Advisor

# Airport Planning Services



## Linell Homentosky, CM | Planning Lead

Ms. Homentosky is a project manager and senior aviation planner with over a decade of experience.

She has been a key contributor to aviation planning projects for commercial and GA airports throughout the country. Ms. Homentosky's experience includes a magnitude of on-call planning tasks associated with multiple airports and airport

systems, state aviation system planning, airport master plans and airport layout plans, and significant collaboration with stakeholders on large-scale development projects. Prior to consulting, Ms. Homentosky worked for the City of Philadelphia's Division of Aviation. Her experience in both the public and private sector is integral to her understanding of client's needs and in turn, the successful execution of aviation projects.

### Key Relevant Experience Includes:

- ▶ **Wheeling-Ohio County Airport (HLG) Airport Master Plan Update** | Wheeling, WV | Planner
- ▶ **ZER On-Call Aviation Engineering Consulting Services** | Pottsville, PA | Planner
- ▶ **ATL RW 9L End Around Taxiway Phase 1** | Atlanta, GA | Planner

## MR. KOTLOW'S HIGHLIGHTS

**Years of Experience:** 15

**Education:**

- ▶ *BA, Urban Studies, University of Connecticut*

## MS. HOMENTOSKY'S HIGHLIGHTS

**Years of Experience:** 11

**Education:**

- ▶ *MBA, Enterprise Resource Planning, University of Scranton*
- ▶ *BS, Professional Aeronautics, Kent State University*

**Registration(s)/Certification(s):**

- ▶ *AAAE CM, PA, 2006*

Michael Kotlow | Forecast, Demand/Capacity Analysis, Alternatives Analysis, ALP Update & Exhibit A Property Map

As Senior Aviation Planner, Mr. Kotlow is responsible for the production of aviation planning

projects including master plans, airport layout plans, benefit-cost analyses, runway length analyses, noise studies, and various specialty studies. With extensive knowledge in the aviation planning field, Mr. Kotlow also serves as Quality Assurance Officer, thereby assisting with the project review process to make sure that consistent, correct, and continuously-improving products are delivered to our clients.

### Key Relevant Experience Includes:

- ▶ **MGW Master Plan Update, FAA Land Release, and EA and Runway Extension/EA** | Morgantown, WV | Senior Planner
- ▶ **MSL Master Plan Update** | Muscle Shoals, AL | Senior Planner
- ▶ **LCK Master Plan Update** | Columbus, OH | Senior Planner
- ▶ **Peter O'Knight Airport (TPF), Tampa Executive Airport (VDF), and Plant City Airport (PCM) Airport Master Plan Updates** | Hillsborough County, FL | Senior Planner

## Jim Duguay | Planning

Mr. Duguay is responsible for the preparation of comprehensive airport planning and environmental studies including master plans, layout plans, statewide system plans, noise compatibility studies, environmental assessments, new airport site selection and feasibility studies, and airspace obstruction studies. His work skills include airport

inspections, AGIS, forecasting, demand capacity, facility requirements, alternatives development, cost estimating, financial feasibility, minimum standards, zoning, project management and public involvement. He has conducted a variety of planning projects at more than 30 different airports ranging from large commercial service facilities with 1+ million passenger enplanements to small GA airports with tFrf runways. At the age of

## MR. DUGUAY'S HIGHLIGHTS

**Years of Experience:** 25

**Education:**

- ▶ *BS, Aviation Management, Auburn University*

**Registration(s)/Certification(s):**

- ▶ *Private Pilot Certificate – Instrument Rating, 1991*
- ▶ *UAS Remote Pilot Certificate, 2016, 3942794*



18, Mr. Duguay received his private pilot's certificate with instrument rating and has logged hundreds of hours in a variety of single and multi-engine aircraft. He holds a Remote Pilot Certificate for Small UAS. Mr. Duguay's years of dedication to professional aviation planning and airport management, coupled with his experience as an active pilot, provide a unique understanding of today's aviation system, so critical to successful project achievement.

**Key Relevant Experience Includes:**

- ▶ **CAE Airport Master Plan Update** | Columbia, SC | Project Manager
- ▶ **Proposed Oak Ridge Airport Master Plan and Preliminary Planning Study** | Oak Ridge, TN | Project Manager
- ▶ **MSL Master Plan Update** | Muscle Shoals, AL | Project Manager
- ▶ **HSV Master Plan Update** | Huntsville, AL | Project Manager
- ▶ **BFM Airport Layout Plan Update** | Mobile, AL | Project Manager

**MR. SIGG'S HIGHLIGHTS**

**Years of Experience:** 9

**Education:**

- ▶ *MBA, Aviation, Embry-Riddle Aeronautical University*
- ▶ *BS, Civil Engineering, Ohio Northern University*

**Registration(s)/Certification(s):**

- ▶ *Professional Engineer, NV, 2017, 025063*
- ▶ *Professional Engineer, OH, 2015, 80205*
- ▶ *Professional Engineer, IN, 2017 11700112*
- ▶ *Professional Engineer, MI, 2016, 6201065058*

**Kevin Sigg, PE | Phasing & Cost Estimating, Civil Engineering**

Mr. Sigg's experience includes working in aviation for over eight years. He has been involved with numerous design projects including runway and taxiway rehabilitation/reconstruction, airfield lighting/signage, airfield planning, and an airfield arrestor system. In addition to design, Mr. Sigg has been on general engineering and planning services contracts and has been the lead Resident Project Representative on multiple airfield construction

projects.

**Key Relevant Experience Includes:**

- ▶ **PKB Pavement Rehabilitation Program and Rehabilitation of Runway 3-21, Terminal Apron, and Taxiway F Pavement Rehabilitation** | Wood County, WV | Designer
- ▶ **ASL General Airport Engineering and Planning Services** | Marshall, TX | Civil Associate
- ▶ **CLE North Airfield Improvements** | Cleveland, OH | Project Engineer
- ▶ **DFW Pavement Management Program** | Dallas-Fort Worth, TX | Civil Engineering
- ▶ **MDT Rehabilitation of Runway 13-31** | Middletown, PA | Civil Associate

**Brian Anderson PE | Phasing & Cost Estimating**

Mr. Anderson is a senior project manager in transportation with extensive experience focused in the technical development and management of transportation systems including various arterial highway and state route highway systems; rail at-grade and grade separations crossings, safe routes to school and multi-use trail design, as well as both commercial and GA projects. His projects range in size and complexity, following Federal, state, and local design standards and funding parameters. Mr. Anderson is familiar with working under Local Assistance (LAPM) contracts, and direct Federal and State Grant projects.

**Key Relevant Experience Includes:**

- ▶ **SNA John Wayne Perimeter Road Improvements** | Orange County, CA | Project Manager

**MR. ANDERSON'S HIGHLIGHTS**

**Years of Experience:** 32

**Education:**

- ▶ *BS, Civil Engineering, California State University, Long Beach*

**Registration(s)/Certification(s):**

- ▶ *Professional Engineer, Civil, CA, 1996, 55298*
- ▶ *Professional Engineer, Civil, CO, 2016, 0051029*



# Airport Planning Services



- ▶ **BUR Aircraft Ramp, Taxiway Throats and Aprons, Runway Guard Lights Design, Treatment BMP, and Construction Support Services** | Burbank, CA | Project Manager
- ▶ **SAN As-Needed Consulting Services** | San Diego, CA | Project Manager
- ▶ **LGB Parking Structure** | Long Beach, CA | Project Engineer
- ▶ **PSP Improvements** | Palm Springs, CA | Project Manager

## MS. DONOGHUE'S HIGHLIGHTS

**Years of Experience:** 21

**Education:**

*BS, Geology, California State University, San Bernardino  
AS, Physical Science, Chaffey College*

**Registration(s)/Certification(s):**

- ▶ *Certificate, Paralegal, 2006, University of California University Extension, Riverside*

## Christine Jacobs-Donoghue | Environmental Planning

Ms. Donoghue has over 20 years of professional experience in environmental impact analysis/permitting, natural resources, project management and public involvement. She has authored and managed the preparation of environmental documents to satisfy CEQA, NEPA, Clean Water Act, and other federal, state, and local

requirements. She typically serves as project manager and lead editor for the applicable CEQA/NEPA document, and as an environmental task leader for multi-disciplinary projects led by other disciplines. Her project experience is diverse involving public and private projects in the fields of: aviation, infrastructure, transportation, land use, parks/recreation, commercial and residential development, industrial/solid waste, port of entry facilities, schools, defense, energy and other municipal projects.

**Key Relevant Experience Includes:**

- ▶ **March Air Reserve Base Veterans Industrial Park EA** | Riverside, CA | Project Manager
- ▶ **Santa Maria Airport FedEx EA** | Santa Maria, CA | Project Manager
- ▶ **SNA Wickland Jetfuel Pipeine and Tank Farm EA** | Orange County, CA | NEPA Task Manager
- ▶ **South San Francisco Bay Shoreline Study Draft EIS/EIR/Feasibility Report** | Santa Clara County, CA | Environmental Planner
- ▶ **Upper Santa Ana River Wash Plan EIS/EIR** | San Bernardino, CA | Project Manager

## Mariben Andersen | Environmental Planning

As a scientist for more than three decades, Ms. Andersen has extensive experience in managing and conducting biological assessments and related studies including diagnostic studies, water quality studies, biological sampling and analysis, habitat and vegetative mapping, herpetological monitoring, wildlife surveys, ichthyological sampling, benthic invertebrate sampling, sediment sampling, data collection, and analysis. She has extensive experience in the development of watershed, land, park, and greenway management plans, as well as the preparation of grants for the acquisition of environmentally sensitive lands. Her regulatory experience includes the design, construction, and permitting of wetland restoration, mitigation, roadway, railroad, airport, preserve, and park projects, development of local wildlife and wildlife protection ordinances, development of Water Use Permit environmental management plans, airport environmental assessments, and dredge and fill permitting in state waters. She has expertise in the development of educational and informational brochures booklets and newsletters, preparation of technical reports, and the presentation of studies and projects at professional conferences, state and local agencies, public meetings and hearings, and public and private organizations. Additionally, she has initiated and

## MS. ANDERSEN'S HIGHLIGHTS

**Years of Experience:** 36

**Education:**

*BS, Biology-Ecology, University of the Philippines*

**Registration(s)/Certification(s):**

- ▶ *FAA Qualified Wildlife Hazard Biologist, 2006*
- ▶ *NEPA Training, USA/Mexico, 2006*
- ▶ *NHI NEPA and Transportation Decision Making, 2004*
- ▶ *NEPA Refresher Training, USA/Mexico, 2008*
- ▶ *CSX Roadway Worker Protection Certification, 2002*

# Airport Planning Services



implemented numerous award-winning environmental programs involving students and the public, innovatively integrating education with habitat restoration projects. Ms. Andersen is also experienced in the use of SCUBA, Hydrolab, ISCO, HACH, and YSI sampling equipment.

#### Key Relevant Experience Includes:

- ▶ **Palm Beach International Airport (PBI) Multi-year General Consulting Services** | West Palm Beach, FL | Environmental Specialist
- ▶ **Treasure Coast International Airport & Business Park (FPR) Airport Master Plan Update** | Fort Pierce, FL | Environmental Scientist
- ▶ **JAX, CRG, HEG, VQQ Airport General Consulting Services** | Jacksonville, FL | Environmental Permit Coordinator
- ▶ **TIX, X21, and COI Airport General Consulting Services** | Titusville-Cocoa County, Florida | Environmental Permit Coordinator

#### MR. GRIGG'S HIGHLIGHTS

**Years of Experience:** 20

#### Education:

- ▶ *MEERM, Masters of Earth and Environmental Resources Management, University of South Carolina*
- ▶ *BS, Biology, Winthrop University*

#### Registration(s)/Certification(s):

- ▶ *Certified GIS Professional, 28380*

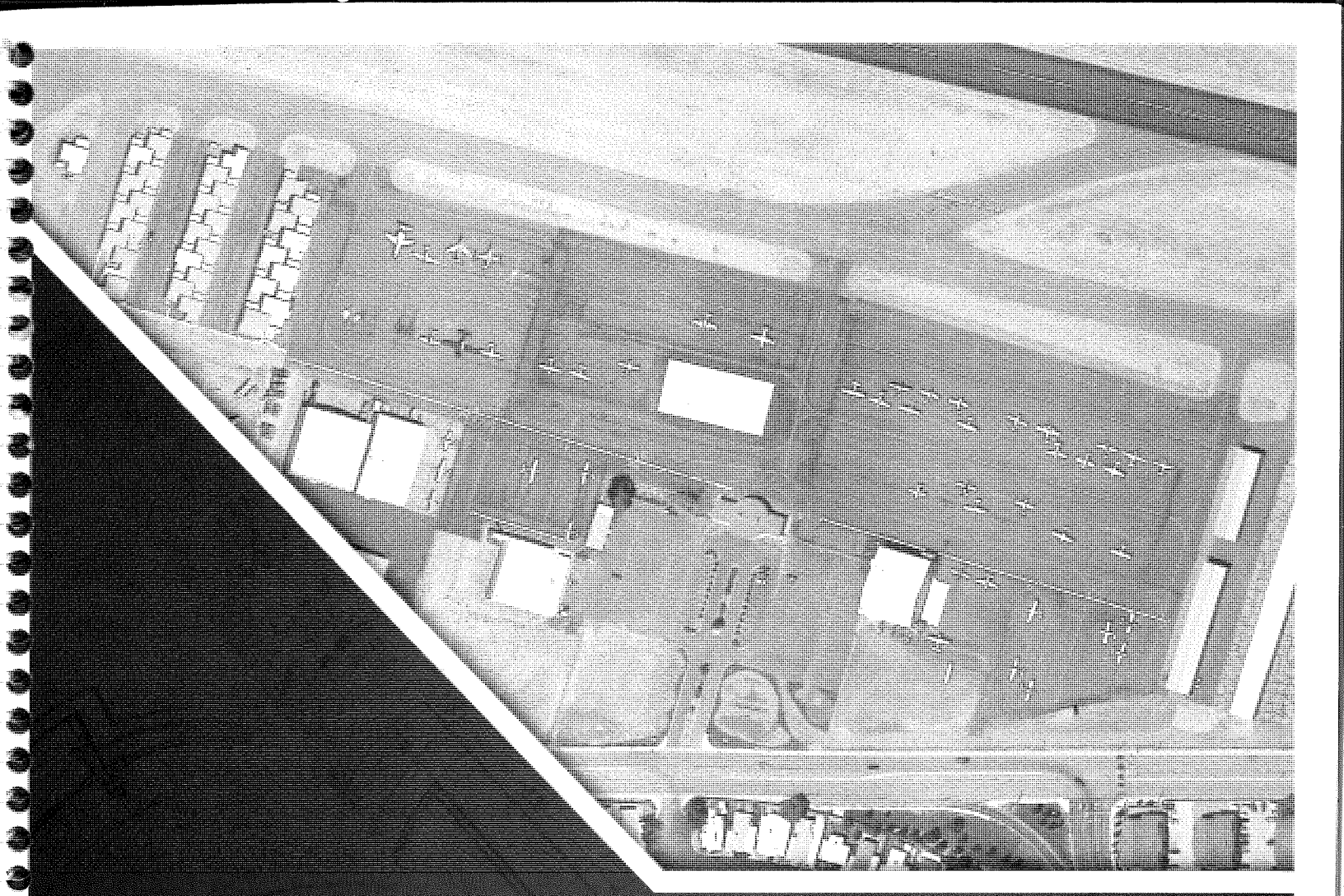
#### David Grigg, GISP | ALP Update & Exhibit A Property Map

Mr. Grigg manages Arora's GIS efforts. With over 20 years of relevant experience, his areas of expertise include CAD and GIS base map development, enterprise GIS data modeling, mobile application development, web portal development, and technical support and training. Mr. Grigg specializes in services related to the FAA's Airports GIS

Program. He has completed the Level 3 FAA Airport GIS IDLE training and has prepared and uploaded FAA Airport GIS documentation and data for electronic Airport Layout Plans (eALP) as well as other airport projects requiring compliance with the FAA's AGIS Program.

#### Key Relevant Experience Includes:

- ▶ **RNO eALP & GIS Services** | Reno, NV | Project Manager
- ▶ **CLT EIS** | Charlotte, NC | Project Manager
- ▶ **Minnesota St. Paul International Airport (MAC) Enterprise GIS Implementation** | Minneapolis, MN | Project Manager
- ▶ **Lehigh Valley International Airport (ABE)** | Allentown, PA | QA/QC



## Section 4: Relevant Experience/References

**Michael Baker**  
INTERNATIONAL



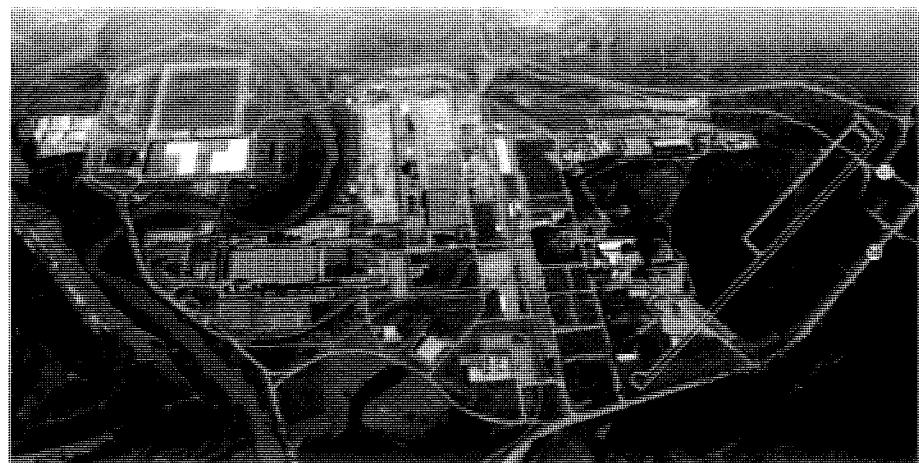
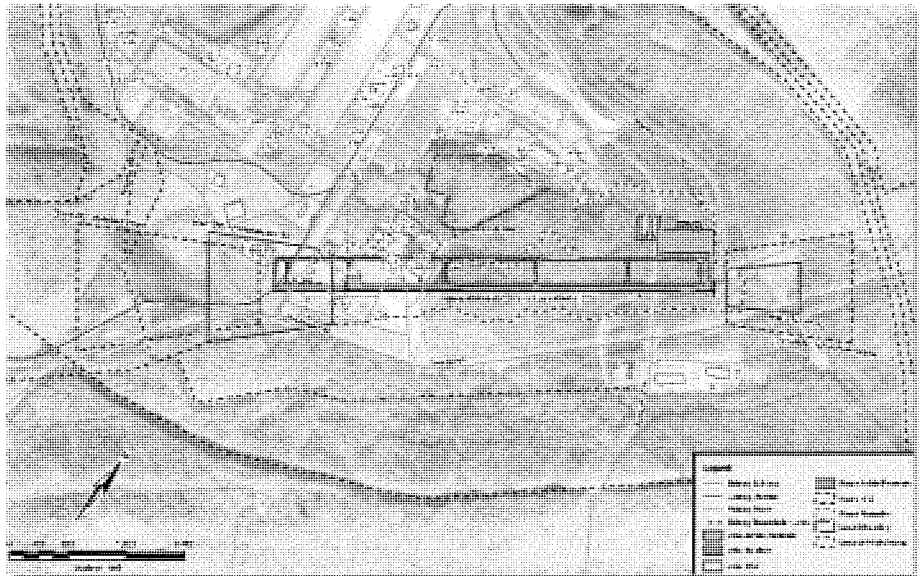
## SECTION 4: RELEVANT EXPERIENCE / REFERENCES

### Proposed Oak Ridge Airport Master Plan | Pottsville, PA

The City of Pottsville was established in 1942 by the U.S. Army Corps of Engineers (USACE) as one of three major locations for the new GA airport. The airport and the land it will occupy products of the city's history including the land's original wartime purpose and more recent efforts by the U.S. Department of Energy (USDOE) to reindustrialize excess facilities and promote regional economic development.

Although the proposed airport was accepted into the FAA's National Plan of Integrated Airport Systems, the city's efforts were previously stymied by the USDOE's refusal to make available any of the 60,000 acres on the Federally-owned and managed Oak Ridge Reservation. Despite two subsequent attempts to build an airport in the 1980s and 1990s, the Federal government's restriction of land severely constricted the city's options, making it virtually impossible to identify a suitable site for an airport. Since that time, USDOE's land use policies dramatically changed the viability of the effort to build a GA airport.

USDOE reversed previous policy, making it possible for the first time to acquire land without cost on the city for the purpose of building an airport that would enhance air service and support economic development in the region. USDOE is now a critical partner in promoting the new Airport and facilitating the transfer of USDOE property. Michael Baker has been providing planning services for the proposed airport under a long-term master services agreement.



Images 13 & 14: Proposed Oak Ridge Airport Master Plan detailed drawing and aerial of project area to be constructed.

### PROJECT HIGHLIGHTS

**Project Duration:** 12/2013 to Ongoing

**Contract Value:** \$498,555

**Reference:** Bryan White, PE, Vice President of Engineering and Planning, Metropolitan Knoxville Airport Authority, 865.342.3336, bwhite@tys.org



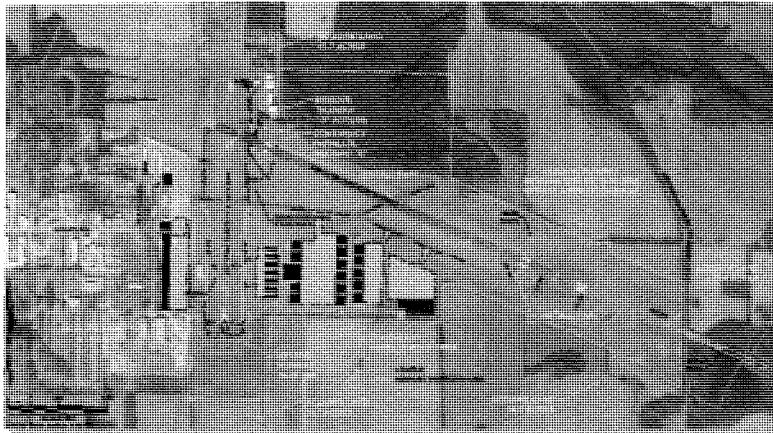


Image 15: MSL Master Plan Update detailed layout design.

## MSL Master Plan Update | Muscle Shoals, AL

Michael Baker provided planning and engineering services to update the airport's master plan. MSL is an air carrier facility that encompasses 615 acres and includes two runways, a terminal building, and numerous GA facilities and hangars. The airport provides airline services to and from Atlanta four times daily. The airport master plan update will provide the client with a comprehensive understanding of airport development needs over the 20-year planning period. Improvements will be categorized for implementation as near-term, intermediate-term, or long-term initiatives. The master plan update is required under Federal and State regulations and will comply with FAA standards including FAA advisory circulars 150/5070-6B, *Airport Master Plans* and

150/5300-13, *Airport Design*. Michael Baker's tasks included assessing existing conditions, reviewing terminal forecasts and developing fleet-mix projections, analyzing facility requirements, identifying and evaluating development alternatives, updating the airport's CIP, and updating the airport layout plan to depict planned projects.

## HSV Master Plan Update | Huntsville, AL

Michael Baker prepared an airport master plan that addressed major development steps over the next 20 years and beyond. Michael Baker provided analysis of current airport facilities, evaluated the impact of new security requirements, and reviewed earlier forecasting efforts. The update incorporated appropriate sections and findings of various facility master plan studies while focusing on developing planning recommendations for the remainder of airport uses and facilities, including GA facilities, fixed base operator facilities, taxiway enhancements, corporate facilities, air cargo areas, and maintenance facilities. Michael Baker also prepared a capital improvement program and an ALP drawing set that met FAA planning criteria.

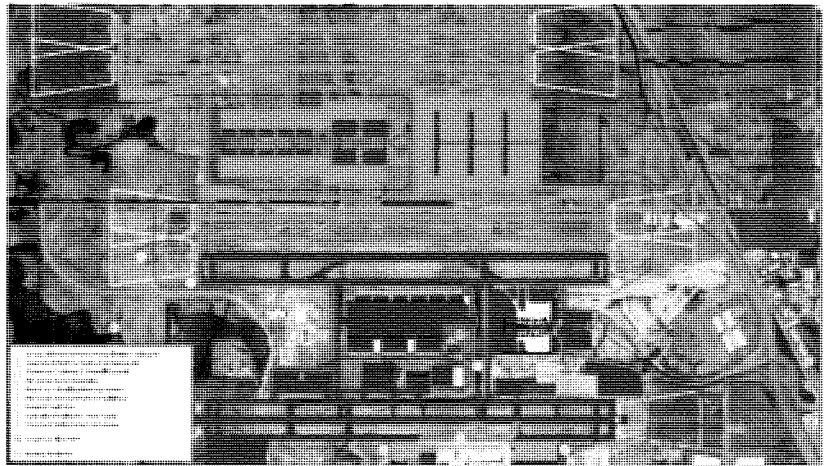


Image 16: HSV Master Plan Update detailed design that included 20-year development plans and beyond.

### PROJECT HIGHLIGHTS

**Project Duration:** 5/2010 to 12/2012

**Contract Value:** \$748,163

**Reference:** Jason Hennessee, Project Manager, Huntsville International Airport, 256.258.1982, [jhennessee@hsvairport.org](mailto:jhennessee@hsvairport.org)

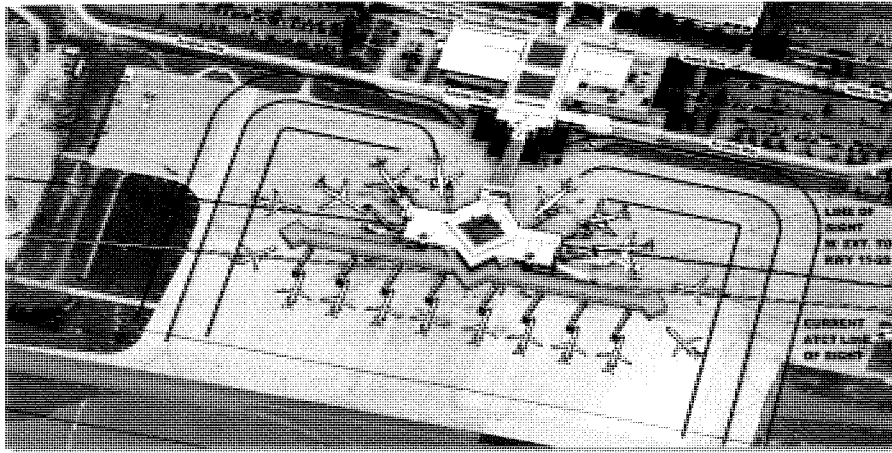


Image 17: CAE Airport Master Plan Update plan for the main terminal.

## PROJECT HIGHLIGHTS

**Project Duration:** 5/2010 to 1/2013

**Contract Value:** \$549,998

**Reference:** Francis Murray, Manager of Planning and Development Richland-Lexington Airport District, 803.822.5048, f.murray@columbiaairport.com

**CAE Airport Master Plan Update | Columbus, SC**  
Michael Baker prepared a Master Plan Update (MPU) based upon an earlier Master Plan (also performed by Michael Baker) that created a well-articulated vision for the long-term future development at CAE. This update specifically addressed further developments and opportunities related to GA development, airfield safety improvements, generation of non-airline revenue in the terminal area and on the campus, and improvement within the terminal for passenger service and convenience. The MPU also incorporated all recommended improvements

into a revised 20-year CIP amounting to over \$41.8 million in airside and landside improvements. In addition to traditional AIP funding related to passenger and cargo entitlement and discretionary grants, the plan investigated options for TSA participation in support of future checked baggage inspection system improvements.

Other sources of funding considered during the project included the FAA's Facilities and Equipment program, passenger facility charges, rental car contract facility charges, state grants, third party/tenant funding, and local funding. A pro-forma cash flow analysis was conducted in accordance with FAA guidelines to determine the financial feasibility of projects included in the short-term development program. Michael Baker determined that an underutilized parking garage could be used to support the rental car ready-return function. This addressed excess capacity issues, reduced the debt service on the garage, and improved the level of service to the traveling public. Within the terminal, this lesson was applied by developing security screening area concepts that considered the need for new equipment and resulted in improved passenger circulation and use of concessions by passengers and meet and greeters in the main terminal area.

The MPU addressed the impacts of several issues and changing trends upon the airport's facilities, including security impacts for baggage and passenger screening; broad global economic downturn; fuel costs/changes in airline fleet mixes/operational efficiencies; airline mergers, acquisitions, bankruptcies; maturing technologies (i.e., internet check-in, common use equipment; and "Green" Design/Sustainability). The overall scope was developed in accordance with the current version of FAA Advisory Circular 150/5070-6B, Airport Master Plans. The required tasks included inventory of facilities, forecasts, demand capacity analyses, alternatives development and refinement, development of short, mid, and long-term capital improvement plans, financial feasibility, and an Update of the ALP drawing set. Many of the identified airfield enhancements were implemented since the completion of the MPU.

Michael Baker prepared a master plan for the proposed GA airport. Services include data collection and analysis, aeronautical activity forecasts, facility requirements analysis, alternatives development and analysis,





implementation plan development, and stakeholder coordination. The master plan is the culmination of years of planning efforts by Michael Baker to evaluate the feasibility of building a new airport to support the reindustrialization efforts at the city's industrial park. Michael Baker prepared the master plan as the next step in a multi-phased planning project to evaluate the feasibility of constructing a GA airport serving the aeronautical needs of the metropolitan region. The airport master plan consisted of preparing a forecast of aeronautical activity, developing and analyzing facility requirements, developing evaluation alternatives, and creating an implementation plan. Challenges included the many unique historical, terrestrial, and environmental constraints at the site. Michael Baker has worked closely with local stakeholders through a robust public involvement program to develop an improvement plan meeting their key goals and objectives. As a result of this study, a collection of key stakeholders including the governor, the City, and USDOE are confident the Oak Ridge Airport will leverage the opportunity for industrial growth in the industrial park.

## BWI & MTN Comprehensive Design and Planning Services | Baltimore, MD

As part of a consultant team, Michael Baker is providing services under an open-end comprehensive environmental planning agreement for projects at BWI and MTN. Michael Baker provided general planning support services for a variety of projects at both airports. Representative projects include:

- ▶ **BWI Preliminary Research and Scope Development for Stormwater**

**Institutional Management Plan Update:** Michael Baker performed preliminary research and developed a strategy to address requirements for updating the airport's stormwater institutional management plan, scope of work, and estimated costs.

- ▶ **BWI Stormwater Institutional Management Master Plan Update:** Michael Baker provided engineering services to develop an updated stormwater institutional management plan for the airport. Work complied with Section 3.10 of *Maryland Stormwater Guidelines for State and Federal Projects*. Michael Baker's services included current and future conditions hydrologic and hydraulic analysis, environmental site design opportunity identification, floodplain analysis, culvert analysis, best management practice (BMP) mapping, stormwater hot-spot identification, new BMP recommendations development, and report preparation. The airport's property comprises four watersheds with 22 streams.

- ▶ **MTN EA Scope Development Assistance:** Michael Baker reviewed and edited the scope of work for the Martin State Airport EA and prepared cost estimates and responded to FAA comments for the floodplains and water quality scope sections.

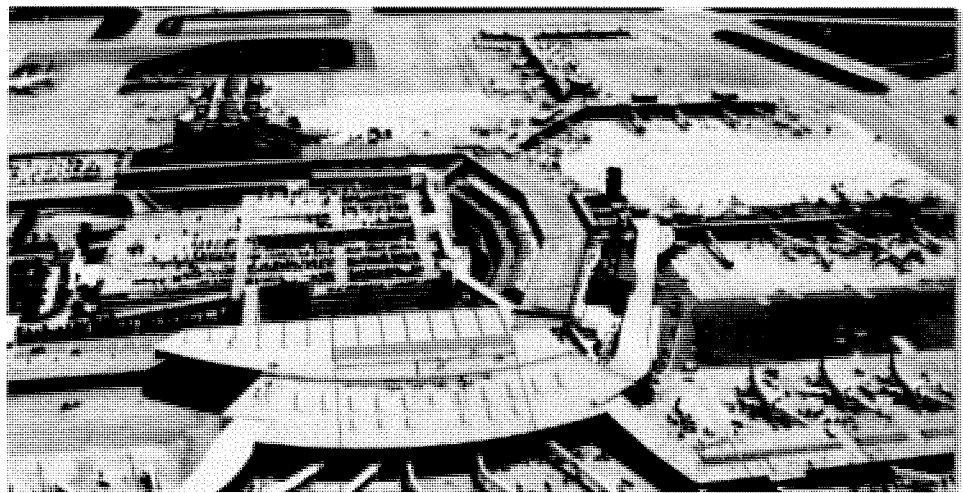


Image 18: An aerial overview of BWI Airport.

### PROJECT HIGHLIGHTS

**Project Duration:** 6/2011 to 12//2018 (est.)

**Contract Value:** \$1.1 million

**Reference:** Alex Ollerman, PE, Deputy Director of Engineering, BWI, 410.859.7090, [follerman1@bwiairport.com](mailto:follerman1@bwiairport.com)



Image 19: RNO runway/airspace.

## PROJECT HIGHLIGHTS

**Project Duration:** 2014 to 2018

**Contract Value:** \$1 million

**Reference:** Daniel Bartholomew, AAE, AICP, ACE, Vice President of Planning, Engineering & Environmental Management, RTAA, 775.328.6801, [dbartholomew@renoairport.com](mailto:dbartholomew@renoairport.com)

## RNO eALP and GIS Services | Reno, NV

Arora has been tasked with providing all the services required for Reno-Tahoe Airport Authority (RTAA) to complete airport and aeronautical data collection necessary for the development and acceptance/approval of an eALP at RNO. Arora was tasked with leveraging the data collected through RNO eALP to support revenue growth, enhance safety, increase operational efficiency, streamline administrative processes, and support customer service through GIS solutions. Arora also provided an airspace analysis which was critical to support new air service development, especially in light of the high terrain and high-rise buildings in the immediate vicinity of the airport. To fully understand their current and future airspace needs Arora identified and studied obstacles that penetrate FAA AC150/5300-18B, FAR Part 77, and TERPS surfaces under current and two possible future configurations. After a thorough review and discussion of the implications of the study with airport management, the results were submitted to

the FAA. An Esri Geodatabase was also delivered to the airport to allow the airport to maintain the data going forward. Finally, a web-application was delivered to provide airport planners and other authorized users with the ability to review data, print reports, and conduct what-if-analyses.

The implementation of these solutions will enable RTAA to leverage GIS to provide increased efficiencies to everyday business practices, support ongoing and future capital programs through powerful analytical tools, and be able to share a common set of data across airport departments.

### Scope of work included:

- ▶ Developed complete eALP dataset and airspace analysis for submission to FAA Airports GIS program.
- ▶ Completed a GIS needs assessment and prioritized applications to support a variety of airport business processes including, but not limited to facility planning, engineering, facility management, concessions and revenue management, and environmental compliance.
- ▶ Delivered an Esri Geodatabase and Web-Application to help the airport conduct future analyses, maintain the data, and check restrictions on proposed obstacles.
- ▶ Conducted teleconferences and facilitated onsite RTAA stakeholder meetings to gain input on needs and workflows
- ▶ Developed and deployed master GIS database to house RTAA datasets



Submitted by:

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