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North Central Texas General Aviation and Heliport System Plan

Airport Economic Sustainability

An overview of best practices for achieving economic sustainability at aviation facilities in North Central Texas

November 2011



AIRPORT ECONOMIC SUSTAINABILITY

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A. GLOSSARY

This section defines acronyms and abbreviations used throughout the document.

Term	Description
AAAE	American Association of Airport Executives
ACI	Airports Council International
ACRP	Airport Cooperative Research Board
ADS	Addison Airport
ATA	Air Transport Association
DTO	Denton Municipal Airport
EONS	Economic viability, Operational efficiency, Natural resource conversation, and Social responsibility
GA	General Aviation
GLE	Gainesville Municipal Airport
GPM	Grand Prairie Municipal Airport
GYI	North Texas Regional Airport
FAA	Federal Aviation Administration
Navaid	Navigation Aid
NCTCOG	North Central Texas Council of Governments
O&M	Operation & Maintenance
ROI	Return on Investment
SAGA	Sustainable Aviation Guidance Alliance
System Plan	North Central Texas General Aviation and Heliport System Plan
TRB	Transportation Research Board
USBC	United States Green Building Council
U.S.	United States

B. INTRODUCTION

As part of the North Central Texas Council of Government's (NCTCOG) General Aviation and Heliport System Plan (System Plan), this report is intended to assist the region in understanding the importance of economic sustainability in the general aviation (GA) system and provide guidance and best practices to become a self-sustaining facility.

The definition and goals of sustainability may be vastly different depending upon the entity seeking to implement sustainable practices. For some organizations, this "green" movement goes beyond being environmentally conscious to include economic viability and social responsibility. Several applicable definitions include:

- The Brundtland Commission states that sustainability is: *"...development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*
- The Airport Cooperative Research Program (ACRP) defines airport sustainability as *"A broad term that encompasses a wide variety of practices applicable to the management of airports."* It refers to the protection of the environment, including conservation of natural resources, social progress that recognizes the needs of all stakeholders, and maintenance of high and stable levels of economic growth and employment.
- The "Triple Bottom Line" is referred to by organizations such as the United Nations and U.S. Green Building Council (USGBC) and includes Economic Growth, Social Responsibility, and Environmental Stewardship.
- The Airports Council International (ACI) goes beyond the "Triple Bottom Line" definition by incorporating operations of the airport, *"...a holistic approach to managing an airport so as to ensure the integrity of the Economic viability, Operational efficiency, Natural resource conservation, and Social responsibility (EONS) of the airport."*

An aviation facility may review all of the available resources and develop a definition that meets the goals of its unique facility. It may choose to follow the environmental, economic, and social aspects, or only one or two of these. In some cases, a single practice will fall under multiple aspects. In the future, a more unified definition may be adopted by the public.

The sustainability movement has become one of the top priorities in the nation, as well as the world. While regulations and funding sources have been a large force behind implementing sustainable practices, public opinion is becoming a stronger driver. There are also barriers to implementing sustainable practices, including lack of support and funding as well as knowledge on behalf of the airport staff of what steps can be taken. However, not every community supports green initiatives or policies, which can impact funding for sustainable projects.

Benefits of Sustainability

Airport operators across the country and around the world have embraced sustainability and are implementing programs or initiatives at their facilities. Along with benefiting their communities

and the environment, airports are finding that sustainability makes good business sense. Airports that have adopted sustainable practices have found benefits including reduced capital asset life cycle costs, reduced operating costs, better customer service and satisfaction, and enhanced relationships with their neighbors.

An airport operator's decision to undertake a sustainability program may be the result of numerous factors. One leading factor is new federal, State and local directives that require public agencies to become more sustainable. These laws and ordinances direct these public agencies, including airports, to develop sustainability programs or incorporate sustainable practices into their development projects and operations.

A number of airport operators have also undertaken sustainability programs because the airport's management simply believes it is the right thing to do. Certainly airports play a vital role in the movement of passengers and goods, but future growth in airport operations and air travel will have the potential to adversely affect the environment and the surrounding community. While airports are already subject to an array of environmental regulations, operators are going beyond regulatory compliance to proactively improve their environmental performance. Airports are also using sustainability practices to meet economic and/or social goals that will mitigate and perhaps benefit the surrounding community and other stakeholders.

Overall, specific factors that are driving airport operators to become sustainable include:

- Worldwide awareness and a global economy
- Local government financial pressures
- Airline industry financial pressures
- Rising energy costs
- Green and environmental mandates
- Resource conservation
- Aging infrastructure
- Facility lifecycle costs
- Enabling technologies

Although many airports have not undertaken formal sustainability programs, many have existing activities or programs that fall within the sustainability realm. Examples include "Local Hiring and Purchasing", "Recycling", or "Stockpile and Reuse Construction Materials." These are common sense activities that fall under a definition of sustainability once they are appropriately documented and tracked. Identifying these existing activities may assist in building the support and buy-in an airport will need to launch a sustainability program.

It is expected that a GA airport be operated and managed as a public enterprise to achieve and maintain financial self-sufficiency. According to the Sustainable Aviation Guidance Alliance (SAGA), many airports operators understand that initiating and implementing a sustainability program often results in numerous benefits to the airport. These include:

- Increased competitiveness through lean operations and reduced operating and life-cycle costs
- Greater utilization of assets
- Reduced environmental footprint
- Optimization of new and better technologies
- Reduced costs of asset development
- Improved bond ratings
- Improved benefits to and greater support from the community
- Improved work environment for employees leading to higher productivity
- Reduced environmental, health, and safety risks

C. INVENTORY OF SUSTAINABLE ORGANIZATIONS

Several organizations throughout the world contribute research or guidance on the practice of sustainability. For aviation, these primary organizations include:



Sustainable Aviation Guidance Alliance (SAGA) is, in part, made up of ACI, AAAE, ACI, FAA, and ATA. From its website, SAGA is: “A broad volunteer coalition of aviation interests formed in 2008 to assist airport operators of all sizes in planning, implementing, and maintaining a sustainability program.” SAGA has developed an online sustainability database, which consolidates a variety of airport sustainable practices sources into one resource. Over 1,000 practices are listed in the database which is expected to continue growing. The initiatives can be sorted by practice category (i.e., administration, ground transportation), subcategory (i.e., community outreach, roadway design), and functional area (i.e., offices, nav aids). This greatly streamlines the process of searching, evaluating, and implementing sustainable practices. The database can be used as a resource for facilities that have a project planned, are considering improvements, have already begun construction, or desire to improve day-to-day operations and maintenance (O&M). SAGA also offers the *Sustainable Aviation Resource Guide*, which is intended to provide guidance on the planning, implementation, and maintenance of sustainability programs at airports.



The Airport Cooperative Research Program (ACRP) has been developed by the Transportation Research Board (TRB) as a method to conduct applied research on problems shared by several airport operating agencies but are not sufficiently addressed by existing federal research programs. *ACRP Synthesis 10 – Airport Sustainability Practices* was published in 2008 to inform airport operators, stakeholders, and policy makers about the range of airport sustainability practices gathered from their efforts. It conducted a survey of 25 airports worldwide to collect valuable data that at that point was spread across several entities and unevaluated.



The Federal Aviation Administration (FAA) provides support through funding certain programs that have been in place for years, including the Sustainable Master Plan Pilot Program. This program is evaluating ways to make sustainability a core objective at every airport by funding long-range planning documents at 10 airports around the country. These documents, called Sustainable Master Plans and Sustainable Management Plans, will include initiatives for reducing environmental impacts and achieving economic benefits while increasing integration with local communities (FAA, 2011). It has also funded sustainable practices when they are part of a larger project or integrated into the infrastructure design. The integration of sustainability into the planning process is encouraged. Some facilities have included sustainability assessments and alternatives in their master plans or developed standalone documents that focus solely on developing a sustainability plan.

D. AIRPORT REVENUE GENERATION

Generating revenue at general aviation airports today and in the future will depend substantially upon operating some portions of general aviation (GA) airports as for-profit businesses rather than as strict public utilities. This shift must be balanced with the need to maintain airport infrastructure assets. In this regard, there typically are many improvements on Airport Capital Improvement Plans, whether they are related to compliance with FAA standards, state requirements or local wish lists that sponsors believe to be necessary prior to realizing significant revenue gains. However, airports must weigh their customers' needs against the potential returns on their investments (ROI). This requires knowledge of an airport's competitive position in its market and whether or not it can charge enough to repay its investment.

Traditionally, GA airports have generated revenue from charging tenants and service providers. These sources generate much of the airport's revenues and aid in self-sufficiency. The Air Transport Association (ATA) notes that only an extremely small portion of revenue at a few airports comes from the local tax base. These methods are summarized as follows:

- **Land, Terminal and Office Leases:** Many airports generate a portion of their revenue from the lease of land, terminal space, and offices. This allows the airport to offer more services and amenities such as restaurants, Fixed Base Operator's (FBO), flight training companies, rental car companies, and other businesses for the space they occupy and the right to provide services on airport property.
- **Hangar Leases:** For many airports, hangar leases offer an excellent source of steady revenue generation. Hangar rental rates can vary by size and type of hangar such as: large hangars, single engine t-hangars, twin engine t-hangars and large twin engine t-hangars. The more hangars at your airport, the more potential for revenue generation.



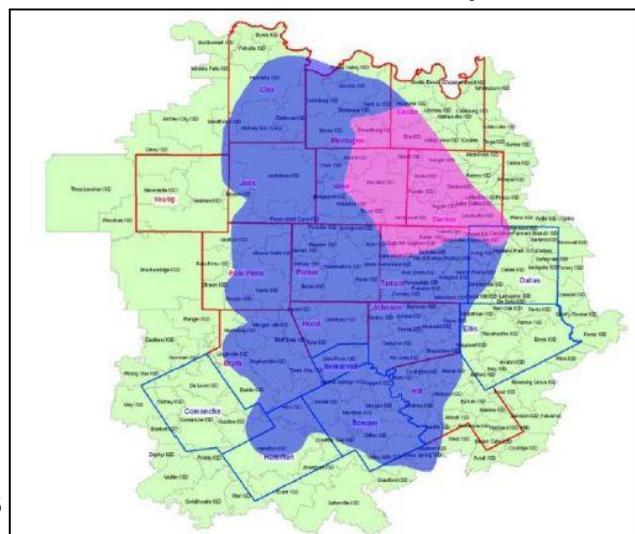
- **Tie Down / Ramp Fees:** Many airports now charge a fee for parking your aircraft on the airport ramp. These types of fees can be assessed daily and monthly, although nominal, they generate revenue.
- **Fuel Sales and Fuel Flowage Fees:** Airport fuel sales can amount to a large portion of the revenue generation. However, airports that do not offer their own fuel can still assess a fuel flowage fee from the FBO selling the fuel.

ALTERNATIVE SOURCES FOR REVENUE GENERATION

Although traditional services are the main source, in tough economic times it may take alternative methods. A number of alternative sources for revenue diversification were cited by the ACRP *Synthesis*. These are summarized briefly, as follows:

- **Temporary Uses and Special Events:** Given some airports' vast supply of land, parking and building facilities, a variety of temporary uses can return revenues for operations. Local governments can use airports as staging areas to fight fires, respond to emergencies, test equipment and aircraft and carry out training sessions. Additionally, airports have served as sets for television programs and movies. Airports can also lease land for temporary storage of vehicles and equipment or event parking. Open houses, air shows, rodeos, fundraisers, and fairs are all special events that take place at many general aviation and some commercial service airports. It is important to note that airport operations and use are a first priority and all special events must be properly planned and coordinated with the FAA, TxDOT, and local municipalities.
- **Agriculture:** Many airports lease land for agricultural uses. Leased on a per-acre basis to local farmers, low-height crops, such as wheat, sunflowers and corn, can produce revenues that are then shared between the farm operator and the airport based on terms negotiated in a lease agreement. Although not a major source, it can supplement revenue for vacant land that is otherwise undeveloped. Make sure crops are compatible with the wildlife hazard plan.
- **Mineral Extraction:** Where natural mineral resources lie underneath an airport, sponsors have the ability to lease land to companies that can extract these resources. Based on negotiated terms of such agreements, mineral, oil, or natural gas extraction can pay significant royalties to the sponsor for as long as drilling and extraction activities continue.

Exhibit 1 – Barnett Shale Map





- *Barnett Shale:* In North Central Texas, the extraction of natural gas from the Barnett Shale offers great potential for airports and other landowners in the region that are involved in extraction.
- **Utility Services:** As ACRP *Synthesis 19* notes, the development of utility systems and services on airports holds promise for generating electricity or providing water and sewer services for airport tenants and the surrounding areas. Many involve long-term purchase agreements at favorable rates and revenue-generation potential, as utilities can be purchased wholesale from providers and re-sold to airport tenants.
- **Renewable Energy:** While not a revenue-generation source per se, the development of renewable energy systems offers airport sponsors the ability to reduce energy costs over the long term. Projects such as low-profile solar arrays, wind turbines, and geothermal heating/cooling systems can also be funded in part by state and/or federal grants. These grants can reduce or even eliminate installation costs, thus helping an airport's bottom line.
- **On-line Auctions of Airport Equipment:** As ACRP *Synthesis 1* notes, airports with excess equipment or equipment being replaced or phased out may consider online auctions as an alternative way to increase airport revenue. Online auctions have the potential to reach a broader range of potential buyers and allow the airport to generate additional revenue by the sale of the equipment.

E. MARKET EXPANSION STRATEGIES

A number of market expansion strategies can be used at GA airports to increase revenue by market expansion. These are summarized briefly, as follows:

- **Service Improvements:** To grow revenues at GA airports, many airports examine existing terminal services, airport amenities, and activities that accommodate users' needs. In cases where runway length will support it, airports desire to attract more corporate and business aviation. In this regard, it is important for business users to have all-weather operational capabilities (preferably precision instrument approaches), ready access to business centers (car rental or courtesy car), business meeting locations on the airport, along with food/catering services, professional aviation services, and tasteful aesthetics. GA airports that make strides toward improving customer service and amenities are in a stronger position to compete for the lucrative corporate and business air travelers.

- **Partnerships with Private Enterprise:** At GA airports, these public/private partnerships can take many forms and should be based on a sound legal framework. GA airport sponsors often partner with the following private operators to serve users and to meet their revenue goals:

Exhibit 2. Partnerships with Private Enterprise	
Private Operator	Purpose
Fixed Base Operator (FBO)	<ul style="list-style-type: none"> • Fueling, aircraft parking, hangar rental, maintenance, line services, terminal services
Specialty Aviation Service Organization (SASO)	<ul style="list-style-type: none"> • Single or limited service (other than core FBO services) such as avionics, painting/upholstery, air ambulance, banner towing, skydiving, etc.
Non-Aeronautical Business	<ul style="list-style-type: none"> • Service to segments of economy not directly related to aeronautical activities on the airport

Partnerships between the airport sponsor and these or other private businesses are critical to attract new activity, especially corporate use, to the airport. Additionally, the business and corporate aircraft operating today require increasingly sophisticated technicians, parts, and services to support higher frequency of use. Therefore, growth in corporate aviation is often linked to a full-service FBO and complimentary SASOs that offer the services needed.

Finally, non-aeronautical business activities offer great upside potential for creating long-term and diversified revenue streams at a GA airport and are not directly related to fluctuations in the aviation market. Therefore, fuel cost spikes or other changes that affect aviation do not directly affect such businesses and their ability to pay rents consistently.

- **Partnerships with Other Public Agencies and Institutions:** In addition to partnerships with private interests, airports are also great locations for partnerships with other public agencies and institutions. GA airports often partner with the following agency or institutional operators:



Exhibit 3. Partnerships with Other Public Agencies and Institutions	
Public Agency/Institution	Purpose
Universities/Community Colleges	<ul style="list-style-type: none"> • Satellite campus locations offering special programs or unique schedules in addition to aviation-related course offerings, such as: airframe/power plant technical certificates, pilot training, airport business degrees, etc.
Non-Profit Groups	<ul style="list-style-type: none"> • Groups such as aerospace or other local historical society museums, Civil Air Patrol, pilot associations, etc. can sometimes attract a range of interests from those not actively involved at the airport, building public support.
National Guard and U.S. Military	<ul style="list-style-type: none"> • Various U.S. Department of Defense missions

Partnerships with local universities and community colleges offer opportunities for revenue from rental payments and provide increased exposure for the airport to prospective users. This is especially the case for students in aeronautical programs, such as flight training, aircraft maintenance programs, air traffic control programs or other aviation-related courses. Such programs, if offered through a partnership with an FBO or SASO where students can acquire hands-on training, provide a means for offering local jobs to retain the next generation of trained aviators.

In addition, partnerships with the National Guard or U.S. Military are significantly valuable assets at GA airports and their host communities in terms of jobs and secondary economic impacts, as incomes are expended in the local economy.

- ***Incentives for Corporate Activity:*** Corporate aviation generates a disproportionate share of revenues at GA airports, relative to smaller GA. As such, attracting more business and corporate aviation to GA airports is key to increasing airport revenues and generating jobs. For example, one corporate jet based at an airport can add up to 5 direct personnel and require between 1,000 and 1,500 gallons of jet fuel per week. In addition to the fuel flowage fees, corporate clients lease land for hangar space and pay fees for use of other airport services. When the employment benefits and the hangar lease aspects of the operation are included, there is a significant potential revenue impact of attracting corporate aircraft to an airport. Based on the aircraft type, usage and the sophistication of corporate flight departments' operations, direct revenue impacts have been found to provide up to five on-airport jobs and approximately \$1 million in annual economic activity.



- **Retention of Existing Tenants and Transient Clients:** Since most GA airport leases are long term, some sponsors overlook the value of maintaining good relationships with existing tenants. These tenants, whether large or small, provide jobs or support other aviation businesses on the airport. Often, the best way to retain existing clients is to maintain regular communications, transparency regarding rates and charges, and understanding of a client's concept of value and service.
- **Airport Branding, Marketing, and Promotion:** To create a platform for building a GA airport business, sponsors should consider branding, marketing, and promoting the airport. Essentially, this entails operating an airport as a for-profit business enterprise, with a proactive and daily focus on marketing the airport. In this regard, the branding process seeks to identify and to market the facility and its unique qualities to aircraft owners, businesses, and the general flying public. This typically includes targeted marketing, a slight or wholesale name change, new logos, website, and advertising to create and launch the airport's new identity. Once the branding process is complete and marketing and promotional materials are circulated to targeted prospects, the airport must deliver on its brand promise, whatever niche the facility is determined to best serve in the market.
- **Rates and Charges/Lease Agreement Structure:** The rates and charges schedule at GA airports typically includes fees such as: rent for hangars, apron and other building leases, facility usage such as landing fees, parking/tie-down fees or overnight hangar space, and FBO and/or self-service fuel flowage fees, among other items. It is important for the sponsors or FBO to review and update these fees regularly to ensure that they have not priced their services above or below the market threshold for aviation services.

Lease agreements support and reinforce the application of the rates and charges schedule at the airport. In this regard, as the legal framework for sponsor/tenant relationships have evolved, it is prudent to review and to update standard lease agreements used for both aviation and non-aeronautical operators to ensure that the proper terms and protections are in place, such as the use of reversion clauses, proper renewal periods based on the type of operator, use of Consumer Price Index adjustments to rent and/or fees paid to the airport.

TxDOT periodically conducts surveys of Rates and Charges for Texas Airports, the most recent of which was in late 2010, with a previous review completed in 2006. These surveys provide information on airport operations as well as current rates across the GA airport community. *Appendix A* shows the survey device and the average of survey results for those airports that responded in the North Central Texas Region. These survey results provide a good resource while considering an update to the rates and charges at your airport. Remember, when considering an adjustment to rates and charges it is important to communicate with the current



airport tenants during the entire process. Doing so will maintain a strong working relationship and minimize opposition.

- ***Development of Non-Aeronautical Real Estate:*** Another strategy for generating new revenue streams at GA airports is the development of excess real estate not needed for aeronautical purposes. The most significant value of this development to the airport sponsor is that in most cases, such development is not related to airline or GA industries. Thus, fluctuations in aviation markets, whether due to fuel price spikes, changes with legacy carriers or airport security concerns, will not directly affect activities conducted by business on non-aeronautical land. In this way, GA airports can build into their revenue model some insulation from changes in the aviation market that could reduce revenues or make short- or long-term operations tenuous.

It is important to note that development of non-aeronautical real estate can occur via ground leases to developers, builders or business owners, or through outright sale of land to private interests. However, selling land not required for aeronautical purposes at a GA airport must meet stringent FAA standards and garner the federal agency's approval, in addition to matching uses identified for this land in FAA-approved Airport Master Plan documents.

Finally, the construction of airside and landside improvements can also prove a viable means to generate revenue at GA airports. The construction of airside or landside improvements on the basis that "if we build it, they will come," is not recommended. Rather, taking on new debt for such capital improvements can prove profitable if pursued as part of a comprehensive growth strategy. In most cases, it is wise to secure pre-construction commitments and cash deposits prior to embarking on these projects.

- ***Airside Infrastructure Improvements:*** Runway length at GA airports is the primary factor that controls an airport's ability to accommodate aircraft. As such, many GA airports are constantly seeking greater primary runway length in order to attract larger corporate aircraft users. This is a viable option for generating increased revenues at GA airports; however, simply having a runway that can accommodate sophisticated business aircraft will not attract such operators. The local business environment must be healthy enough to attract these corporate and business users regularly.
- ***Landside Facility Improvements:*** At GA airports, development of landside facilities, such as hangars for aircraft storage and terminal buildings offer significant upside potential for generating revenue. However, as described for airside infrastructure improvements above, speculative landside building projects will only generate revenue if the market for such space is healthy. Therefore, a thorough understanding of a GA airport's service area should be pursued prior to construction



of hangars or expansion of a terminal building by a sponsor. In this regard, pre-construction commitments from tenants should be secured prior to finalizing public funding/financing of such projects to ensure that repayment schedules can be met.

- **Fuel:** Traditionally, aircraft fueling and additional services have been dependent on the airport having a staffed FBO; this was fiscally challenging for lower-activity airports. A popular trend over the past decade has been the installation of self-service fueling. These systems often allow for fuel purchases 24 hours per day when a credit card is used. So while the number of airports providing fuel has not increased significantly since the last benefits of aviation study, the convenience and accessibility of fuel for general aviation users has increased. Quick and convenient fueling systems can make an airport more appealing to users, resulting in higher activity levels. Increased fuel sales generate more money for the airport and FBO that often produces investment in airport facilities to support the additional activity.

Applying the above revenue development strategies to the airport classifications, a prioritization can be established for each general aviation airport type as described in Exhibit 4.

Exhibit 4. Revenue Generation Strategy Prioritization	
Business Classification	Revenue Generation Priorities
<p>Category 1 Airports Characteristics:</p> <ul style="list-style-type: none"> • Runway Length: < 3,500 ft. • Facilities/Services: Cater to non-jet, piston aircraft. 	<p>The focus for Category 1 Airports should be attention to customer service, maintaining existing activity as a baseline, providing a complement of basic services. The airport should strive to fill the niche that it serves.</p> <p>On-Airport Businesses: Primarily accommodate recreational flying.</p>

Exhibit 4. Revenue Generation Strategy Prioritization	
Business Classification	Revenue Generation Priorities
<p>Category 2 Airports</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Runway Length: $\geq 3,500$ ft. & $\leq 4,999$ ft. • Facilities/Services: Cater to non-jet, piston and turboprop aircraft, with occasional jet. • On-Airport Businesses: Primarily accommodate recreational flying. 	<p>The focus for Category 2 Airports should be attention to customer service, maintaining existing activity as a baseline, providing a complement of basic services. The airport should strive to be an active economic development partner in the community.</p> <p>Top Priorities:</p> <ul style="list-style-type: none"> • Retention of Existing Tenants and Transient Clients • Terminal Services and Amenities: <ul style="list-style-type: none"> ○ Minimum Ground Support: 24-hour access to fuel via credit card ○ Ground Transportation: Courtesy car and off-site rental car ○ Terminal Services: Telephone, restrooms, vending. ○ Amenities: Access to local catering services and lodging options • Rates and Charges/Lease Agreement Structure • Partnerships with Other Public Agencies and Institutions • Branding, Marketing, Promotion <p>In Response to Market Opportunities:</p> <ul style="list-style-type: none"> • Partnerships with Private Enterprise • Attraction and Recruitment of Corporate/Business Operators • Development of Non-Aeronautical Real Estate <p>When Funding is Identified:</p> <ul style="list-style-type: none"> • Airside Infrastructure Improvements • Landside Facility Improvements

Exhibit 5. Revenue Generation Strategy Prioritization	
Business Classification	Revenue Generation Priorities
<p>Category 3 Airports</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Runway Length: ≥ 5,000 ft. & ≤ 5,999 ft. • Facilities/Services: Cater to corporate aviation needs which include business aircraft. • On-Airport Businesses: Primarily accommodate recreational flying. 	<p>The focus for Category 3 should be toward building and maintaining the airport's brand and market position, attracting and retaining business clientele and tenants that have an established user base, evolving services to meet changing user needs and expanding its role as a local partner with public and private interests.</p> <p>Top Priorities:</p> <ul style="list-style-type: none"> • Attraction and Recruitment of Corporate/Business Operators • Partnerships with Private Enterprise • Branding, Marketing, Promotion • Terminal Services and Amenities: <ul style="list-style-type: none"> ○ Enhanced Ground Support: Full-service FBO and 24-hour fueling ○ Ground Transportation: Courtesy car(s) and on-site rental car ○ Terminal Services: Executive meeting room(s), Internet access, 24-hour access to waiting area with telephone, restrooms, vending. ○ Amenities: On-site food service (café/restaurant) with catering, on-call shuttle or limousine service to local lodging. <p>Organized and Proactive Business Development Functions:</p> <ul style="list-style-type: none"> • Retention of Existing Tenants and Transient Clients • Development of Non-Aeronautical Real Estate • Partnerships with Other Public Agencies and Institutions • Rates and Charges/Lease Agreement Structure <p>A Funded CIP Program in Pursuit of Attractive Facilities:</p> <ul style="list-style-type: none"> • Airside Infrastructure Improvements • Landside Facility Improvements • Energy Saving – Green Technology Improvements

Exhibit 6. Revenue Generation Strategy Prioritization	
Business Classification	Revenue Generation Priorities
<p>Category 4 Airports</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Runway Length: $\geq 6,000$ feet • Facilities/Services: Cater to large corporations and can accommodate majority of corporate jet fleet. • On-Airport Businesses: Accommodate local corporate needs and broader market. 	<p>The focus for Category 4 airports, where passenger-dependent and core aeronautical revenues are healthy, should be expanding the airport's market position to capture a larger share of local business travelers using scheduled commercial service at competing facilities, partnering with local economic development agencies to develop land for non-aviation uses in commercial/industrial parks and building top-quality airside and landside facilities that can attract the most sophisticated aircraft and corporate operators.</p> <p>Top Priorities:</p> <ul style="list-style-type: none"> • Branding, Marketing, Promotion • Attraction and Recruitment of Corporate/Business Operators • Partnerships with Private Enterprise • Terminal Services and Amenities: <ul style="list-style-type: none"> ○ Top-Quality Ground Support: Multiple FBOs, SASOs, and fueling options ○ Ground Transportation: Multiple on-site rental car agencies, executive shuttle or limousine services ○ Terminal Services: Executive meeting rooms and/or business center, Wi-Fi Internet access, concierge services to ensure passenger transitions. ○ Amenities: On-site restaurant with catering, on-site or adjacent lodging. <p>Fully Staffed Business Development Function, Chamber Partnership, Consultant or Within Airport Department:</p> <ul style="list-style-type: none"> • Rates and Charges/Lease Agreement Structure • Development of Non-Aeronautical Real Estate • Retention of Existing Tenants and Transient Clients • Partnerships with Other Public Agencies and Institutions <p>Fully-Funded CIP Program in Pursuit of Top-Quality Facilities:</p> <ul style="list-style-type: none"> • Airside Infrastructure Improvements • Landside Facility Improvements • Energy Saving – Green Technology Improvements

The priorities of revenue enhancement strategies are presented here as general guidance. Importantly, the success of revenue enhancement activities will be based on the airport's facilities, local market conditions and existing levels of business and user activities.

F. EXAMPLES OF BEST PRACTICES

Through extensive research, this report identifies a list of best practices towards achieving economic sustainability at the airport. These practices are designed to provide specific examples of ways for the airport to achieve economic sustainability. All best practices can be beneficial to the airport and are recommended; however, establishing or implementing any of the best practices contained on this page is entirely voluntary:

Operational Practices:

- Implement environmental sustainability practices to help reduce capital asset life cycle costs and operating costs
- Utilize “green” technology to reduce energy costs
- Review and update any Rates, Charges, and Lease Agreements Structures to ensure that the airport has not priced itself above or below the market

Business Practices:

- Partner with private enterprises to attract new activity to the airport
- Partner with other public agencies and institutions such as universities and colleges, non-profit groups and/or the U.S. military
- Maintain a good relationship with existing and transient clients by regular communications, transparency of regarding rates and charges, and understanding the client’s concept of value and service

Airport Development Options:

- Develop excess real estate that is not needed for aeronautical purposes for additional revenue
- Increase runway length and weight bearing capacity to attract larger business aircraft
- Develop landside facilities such as hangars and terminal buildings

Action Plan:

- Create a strategic business plan to aid the airport in making just business decisions in relation to the airport’s development and operations
- Establish specific goals and an action timeline to meet those goals
- Attract more businesses by promoting the airport’s regional assets

Marketing:

- Offer incentives for corporate aviation activity such as discounted fuel rates and hangar discounts
- Market the airport to specific clientele
- Brand the airport to identify and market the facility and its unique qualities to aircraft owners, businesses and the general public
- Promote the airport by advertising at national, regional and local conferences

While there have been numerous airports around the world that have taken extensive steps to implement sustainable practices, this System Plan focuses on facilities in North Central Texas. The following is a listing of some of the initiatives and goals of these GA facilities, based on interviews and online research:

- **Denton Municipal (DTO)**

DTO recently completed a business plan in 2010. They are transitioning from a quiet GA airport to a significant training and corporate aviation center. R.A. Wiedemann & Associates, Inc notes since 2006, activity at the airport has tripled due to international flight training operations which are now located at DTO. In addition, a major aviation refurbishment and interior completion FBO (Jet Works) has located at the facility and now provides interior completions for the Italian aircraft manufacturer, Piaggio. In addition to these developments, gas wells are being drilled on Airport property, creating additional revenues of more than \$1.5 million annually. The consulting team developed a strategic plan that will wisely use the gas well revenues. In addition, the plan suggested a new brand that encompasses the Airport's future direction and plans for the best use of the aeronautical and non-aeronautical property on the facility.

- **Gainesville Municipal (GLE)**

GLE hopes to become economically self-sufficient as well as to reimburse the City of Gainesville for past operational costs. Becoming more energy efficient, thus reducing costs, is one of its main tactics to accomplish this goal. However, GLE has found that upfront costs can be prohibitive. So far, GLE has replaced light bulbs, started using a copier rather than inkjet printers for multiple copies, replaced air conditioning and heating units with energy efficient ones, reduced the heat and air conditioning usage at night, and shifted to the electronic distribution of materials.

In the future the airport hopes to install a wind generator to reduce the cost of electricity and to construct extra hangars to provide additional airport revenue.

- **Grand Prairie Municipal (GPM)**

Through GPM itself and the city administration, GPM has a broad based goal of making the airport more sustainable through various initiatives. While GPM has faced funding difficulties when implementing initiatives, they have evaluated the O&M costs of projects, all quantifying the progress of their programs, focusing on good employee hiring practices, having a noise abatement procedure in effect, contributing to the community through volunteer programs, and promoting the airport's value and economic impact to the local community.

- **North Texas Regional (GYI)**

With support from Grayson County and the Regional Mobility Authority, GYI has implemented several sustainable initiatives that increase energy efficiency, reduce costs, and provide for future development opportunities to become more environmentally friendly while expanding its economic potential.

GYI has developed its website to provide documents and information electronically, replaced almost all light bulbs with energy efficient ones, installed digital thermostats, added insulation to hangars during remodeling, replaced hangar roofs with steel, and used LED lights for airfield signage. Water and sewer lines have been put in place to the west side of the airport for future development.

GYI also has plans to enact compatible land use and zoning plans with its upcoming Master Plan Update. Removing and remodeling buildings that are not economically viable will continue, gaining energy efficiencies.

G. BUSINESS PLANNING

Airports are a form of public and/or private business enterprise and must be run as such. Usually a GA airport manager's main focus is on the day-to-day activities rather than the vision, future and business planning of the airport. While a lot of money is spent on airport system and master planning few general aviation airports invest in formal airport business planning. Both airport business planning and airport master planning are essential for planning the future of an airport. ACRP notes that a business plan will offer airport managers and policy makers with the tools needed to make informed and defensible business decisions as they relate to the development and operations of the airport.

Every airport is different, so there is no single formula for developing a business plan. Airport business plans require specific strategic plans, financial forecasts, and a market-driven services plan. Airports must fit into the regional economic fabric as a transportation infrastructure to support business. Your plan should include: a mission statement, vision statement, goals, objectives, action plan, budget, executive summary and any appendices. To help you get started in writing your business plan, there is a summarized outline of the essential elements in Appendix B.

H. REGIONAL RECOMMENDATIONS AND CONCLUSION

It can be difficult to become economically viable without a specific strategy. A definitive strategy is necessary to become economically sustainable from both a regional and an individual facility perspective. The following recommendations are intended to assist in becoming an economically sustainable aviation facility:



- Identify staff to be responsible for monitoring and developing the facility's sustainability program
- Dedicate time for identified individuals to attend industry workshops, webinars/seminars, and conferences on a regular basis to stay informed about sustainability practices that are continually being enhanced
- Understand the special funding sources available for sustainable practices
- Review local and regional sustainable policies and goals; dedicate staff and budgets as applicable to meet regional sustainability goals
- Develop facility-specific sustainability goals, in addition to those identified regionally
- Consistently track sustainability goals for progress and develop new goals as practical
- Publicize sustainability accomplishments
- Use Airport Business Plans to provide leverage to help city officials on board with policy changes
- Use Airport Business Plans to provide proof when you speak to the city to determine ROI
- Implement a sustainability program (Economic, Environmental, Social)
- Develop a strategic business plan to prioritize goals and create a timeline that these goal will be implemented
- Improve airport services to attract new clients and more corporate activity
- Annually review and update Rates & Charges
- Find alternative sources of revenue by using market expansion
- Develop public-private partnerships to attract more business to the airport

Below, SAGA has developed the following steps needed to take, as applicable, to develop and implement a sustainability program:

- Build a diverse sustainability team or appoint someone responsible: In many cases this will be the airport manager
- Meet with airport sponsors (i.e., elected officials, local governments, etc) to discuss sustainability, including establishing a vision statement, guiding principles, goals, funding sources and cost effectiveness
- Conduct an initial assessment of your airport to decide where you are and where you want to be
- Identify and rank your airport's opportunities both regionally and nationally
- Refine your goals to meet your airport's opportunities
- Select actions to achieve your target goals
- Develop an action and monitoring plans on how you will plan to implement your initiatives
- Implement your initiatives following your predetermined actions
- Once the sustainability plan is implemented, it is important to continue to monitor the plan to track improvements or deficiencies
- After a few months, evaluate the program and make any necessary adjustments



- Communicate your progress with the airport sponsors to show the benefits and achievements as well as any areas that may need improvement

Understanding and implementing sustainable practices is important to encourage support from the local community. Every day more municipalities are pressuring their airport managers and sponsors to become self-sufficient, pushing the need to act sooner rather than later. Proactive airports will benefit from investing the time and energy now into learning about how it can benefit their airport and community.

GA airports have been under pressure from tax payers and criticized for federal investment for years. In actuality, GA airports are economic drivers for the local economy. It is expected that a GA airport be operated and managed as a public enterprise to achieve and maintain financial self-sufficiency. Implementing an economic sustainability plan can change the public's negative outlook of GA airports and an economically sustainable airport can not only generate enough revenue to fund itself, but also generate revenue for its sponsor by reducing operating costs and increasing revenue.

I. APPENDICES

Appendix A

TxDOT Rates & Charges Survey and Results



2010/2011
SURVEY OF RATES AND CHARGES
AT
TEXAS AIRPORTS

The Texas Department of Transportation (TxDOT) is working on a new survey of rates and charges for the Texas Airports. The last survey was published in 2006. This update will provide information for Airport Operations across the State. Please help us by completing this survey so we can **provide you with helpful information for your operation**. Remember that the survey's success depends on you and the information you provide. For more information, contact Debra Doepke at 1-800-68-PILOT (1-800-689-4562). **Please fax your information to the Aviation Division, fax number 512-416-4510 or mail to Attn: Debra Doepke, TxDOT, Aviation Division, 125 E. 11th Street, Austin, Texas 78701 by November 12, 2010.**

Airport Type:

General Aviation Reliever Non/Medium Hub Large Commercial Hub

City/County _____

Airport Name _____

Email _____

Airport Size (acres) _____

Annual flight Operations: (**Please circle one**)

1,000/10,000

10,000/20,000

20,000/50,000

50,000/100,000+

Annual Enplanements (**For Commercial Airports**) _____

Rental Rates (\$ per sq. ft. per year)

Land for Development _____



Office Space _____

Large Hangars _____

T-Hangars (\$ per month)

Single Engine _____ Twin Engine _____ Large Twin _____

Tie Down/Ramp Fees

Month _____ Overnight _____

Landing Fees

Airlines _____ Others _____

Terminal Area Space (\$ per sq. ft. per year)

Counter _____ Restaurant/Bar _____

Retail Shops _____ Advertising Signs _____

Rental Cars Minimum (month) _____ % of Gross _____

Parking Lot (\$ per)

Day _____ Month _____

Non Aviation Assets

Industrial (\$ sq. ft. per year) _____

Agriculture (\$ per acre per year) _____

FBO % of Gross _____

Fuel Flowage Fee (\$ per gal.) _____

TxDOT Rates and Charges Survey North Central Texas Regional Results			
Survey Question	Average	High	Low
Airport Size (acres)	512.58	1467.71	7.50
Rental Rates - Land (\$ per sq. ft. per year)	\$0.25	\$0.56	\$0.07
Rental Rates - Office (\$ per sq. ft. per year)	\$8.02	\$20.50	\$0.17
Rental Rates - Large Hangars (\$ per sq. ft. per year)	\$3.46	\$3.92	\$0.07
T-Hangars: Single Engine (per month)	\$191.04	\$398.00	\$50.00
T-Hangars: Twin Engine (per month)	\$257.39	\$585.00	\$50.00
T-Hangars: Large Twin Engine (per month)	\$528.44	\$1,200.00	\$200.00
Tie Down/ Ramp Fees (per night)	\$9.27	\$37.50	\$2.00
Tie Down/ Ramp Fees (per month)	\$68.89	\$300.00	\$25.00
Non Aviation Assets - Industrial (\$ per sq. ft. per year)	\$0.52	\$1.25	\$0.10
Non Aviation Assets - Agricultural (\$ per sq. ft. per year)	\$14.29	\$23.57	\$5.00
Fuel Flowage Fee (per gallon)	\$0.11	\$0.25	\$0.05

Appendix B

Elements of a Business Plan

1. Introduction
2. Executive summary
3. Statement of the business purpose
4. Table of contents
5. Body of the document
 - a. Mission Statement
 - b. Vision Statement
 - c. Goals
 - d. Objectives
 - e. Action Plan
 - f. Budget
6. Appendices

Appendix C

Economic Sustainability Resources

- **ACRP Synthesis 1: Innovative Finance and Alternative Sources of Revenue for Airports**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_001.pdf
- **ACRP Synthesis 10: Airport Sustainability Practices**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_010.pdf
- **ACRP Synthesis 13: Effective Practices for Preparing Airport Improvement Program Benefit-Cost Analysis**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_013.pdf
- **ACRP Synthesis 19: Airport Revenue Diversification**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_019.pdf
- **ACRP Synthesis 21: Airport Energy Efficiency and Cost Reduction**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_021.pdf
- **ACRP Report 28: Marketing Guidebook for Small Airports**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_028.pdf
- **ACRP Report 42: Sustainable Airport Construction Practices**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_042.pdf
- **ACRP Report 43: Practices for Improving Environmental Performance a Small Airports**
http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_043.pdf
- **ACRP Report 01-17: Business Planning for GA Airports (January 2012)**
http://www.trb.org/Publications/Blurbs.aspx?fields=PublicationType|ACRP_Report
- **Denton Municipal Airport Business Plan**
<http://www.cityofdenton.com/index.aspx?page=1322>
- **Scottsdale Airport Strategic Business Plan**
<http://www.scottsdaleaz.gov/airport/AirportSBP>
- **Sustainable Aviation Guidance Alliance (SAGA): Sustainable Aviation Resource Guide**
<http://www.airportsustainability.org/sites/default/files/SAGA%20Final2.pdf>