

TASK 5: Study of GA/Charter Alternatives

InterVISTAS

strategic
transportation
& tourism
solutions



Prepared for
The Fayetteville Regional Airport and BRAC RTF

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1. INTRODUCTION

InterVISTAS was asked to explore the possibility of expanding “alternative air services” to the Fayetteville region through the use of business aviation. Business aviation charter and similar modalities work very different than commercial airline services. As such, the approach taken in this portion of the study is unique. So while InterVISTAS’ focus is on Washington, DC service, the actual “destination” is not as relevant in the world of business aviation.

This study commences with an overview of the existing business aviation environment at the Fayetteville Regional Airport. It then provides a general survey of other airports that fall within a roughly 30-mile radius of Fayetteville.

Next, InterVISTAS provides a summary of the key aspects of the business aviation / aircraft charter industry. As some of this study’s stakeholders may not be intimately knowledgeable about the industry, it was surmised that a brief industry primer - and how such issues may be relevant to the local business aviation industry - would be valuable.

The study concludes with a review of regional business aviation aircraft operators, their fleets and general charter prices. InterVISTAS also provides a summary and study conclusions. In a sentence, however, InterVISTAS concludes that facility availability dictates that Fayetteville Regional and Moore County Airports are the only two viable options for alternative air service in the region.

2. BUSINESS AVIATION AT FAYETTEVILLE

Business aviation at the Fayetteville Regional Airport centers on Landmark Aviation, a full-service FBO. Landmark’s Fayetteville facility is part of an expansive US network of facilities providing aircraft handling and associated services to based and itinerant aircraft. Their offerings feature a passenger terminal, fueling services, catering and covered aircraft parking.

In addition to a 14-unit T-hangar, Landmark operates at 15,000 square foot corporate hangar which houses based aircraft and itinerant aircraft, the latter on a space available basis. Landmark offers aircraft charter services via its fleet of managed aircraft; however, none of these aircraft currently are based at the airport.

InterVISTAS conducted a phone interview with Mr. Donald Brookshire, Landmark Aviation’s General Manager for Fayetteville. While Mr. Brookshire is optimistic about the potential for heightened aircraft charter demand based on recent military base realignment activities, he characterizes current demand levels as low. He states that the major fractional aircraft ownership programs (i.e., NetJets, FlexJet, etc.) currently comprise the largest source of business aviation activity at the airport. He reports that Landmark has four or five based aircraft tenants currently using its hangar.

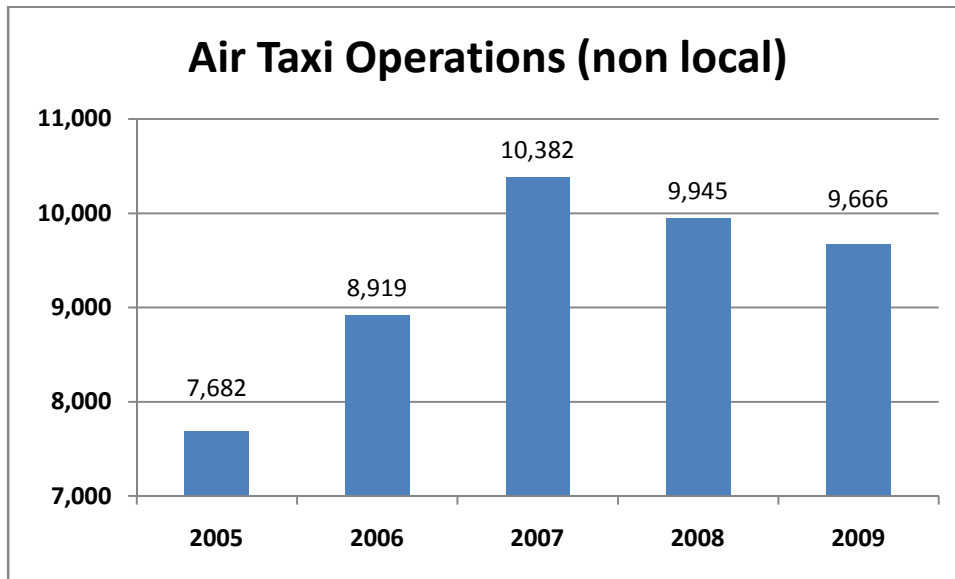
Interestingly enough, Mr. Brookshire made an unsolicited comment that he feels that Fayetteville would benefit from scheduled commercial service to Washington, DC (again citing military growth in

the region). He notes that, in Landmark’s perspective, military personnel charter movements occur both at the commercial and military airfields.

InterVISTAS examined aircraft activity levels at Fayetteville to get a better understanding of demand for charter services. The data on the following summary charts is from the FAA’s “Air Traffic Activity System” database. This database divides aircraft movements into four categories: Air Carrier, Air Taxi, General Aviation and Military. While some portion of business aviation charter demand could be included in General Aviation, the air taxi category is the primary barometer for the type of charter services that are of interest¹. The FAA’s definition of Air Taxi is as follows:

“An aircraft designed to have a maximum seating capacity of 60 seats or less or a maximum payload capacity of 18,000 pounds or less carrying passengers or cargo for hire or compensation.”

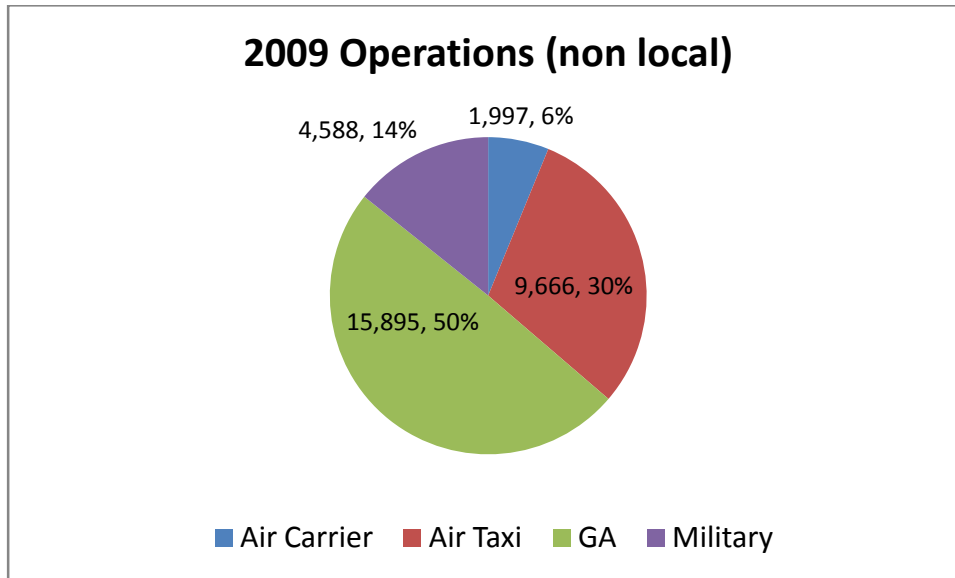
Over the last five calendar years, air taxi operation² levels peaked in 2007, as illustrated below:



In the 2009 calendar year, air taxi operations comprised 30 percent of total non-local operations at the airport, up from 25% in 2005. The following graphic summarizes the 2009 operations levels at the Fayetteville Regional Airport:

¹ Typically, General Aviation statistics are highly skewed toward single engine piston operations. As the data are not collected more granularly, we exclude this category from most of our business aviation analyses.

² These data exclude local operations associated with flights departing from and returning to the Fayetteville Airport.



3. REGIONAL GENERAL AVIATION AIRPORTS

InterVISTAS was asked to do a high level review of other general aviation airports within an approximately 30-mile radius of Fayetteville. In addition to the Fayetteville Regional Airport, the following airports fall within this boundary:

<u>City</u>	<u>Airport Name</u>
Raeford	PK Airpark
Erwin	Harnett Regional Jetport
Clinton	Sampson County Airport
Pinehurst	Moore County Airport
Fayetteville	Gray's Creek Airport
Lumberton	Lumberton Municipal Airport
Elizabethtown	Curtis L Brown Jr. Field Airport

Other than the Fayetteville Regional Airport, Pinehurst Moore County airport is the only other airport in the region with a meaningful business aviation profile. There - in addition to passenger terminal services - Renaissance Jet offers jet / turboprop charter, aircraft management, catering and aircraft maintenance services. They also offer aircraft brokering, offering to help meet customers' lift requirements if one of their aircraft do not meet customers' needs.

As these are all uncontrolled airfields, operational data is not collected by the FAA. The airports not yet mentioned are all served by a small, local FBO except for Lumberton Municipal where the airport provides the local handling services. Other than light piston aircraft maintenance and pilot training, there is very limited (if any) business aviation services provided at nearby area airports. In addition,

there are no passenger terminal facilities at these airports that are of the style and quality normally found in the business aviation industry.

The following table summarizes information available about the airports in close vicinity to Fayetteville:

City	Airport	FBO Provider	Based Aircraft
Pinehurst	Moore County Airport	Renaissance Jet	76
Erwin	Harnett Regional Jetport Airport	Bass Air Services	53
Lumberton	Lumberton Municipal Airport	only the airport	42
Clinton	Sampson County Airport	Clinton Flying Service	30
Elizabethtown	Curtis L Brown Jr. Field Airport	Taylor Aviation	13
Raeford	PK Airpark	Raeford Aviation	30
Fayetteville	Gray's Creek Airport	Cape Fear Aviation	NA

Source: AirNav and Flight Aware

4. BUSINESS AVIATION BASICS

In order to understand alternative travel options that may be available to passengers in the region, here InterVISTAS provides an introduction to the typical forms of business aviation transportation.

Whole Aircraft Ownership. Owning aircraft has been the transportation solution of choice for many companies and individuals since the dawn of mainstream aviation. It remains an extremely flexible and powerful travel tool. The capabilities of today's aircraft (from a 30-minute hop to carrying a team of twelve between the U.S. East Coast and Asia) and their variety (from light piston aircraft all the way to modified commercial transport jets) could scarcely have been dreamed of a few decades ago. Whole aircraft ownership provides significant flexibility for those individuals that can afford it. While a mainstay for the industry, this concept will not receive more attention for the purpose of this study.

Fractional Ownership. As the first truly creative concept to hit business aviation in decades, fractional aircraft ownership appeared in the mid-1980s and has taken the industry by storm ever since. It is best viewed as a means of obtaining a partial interest in an aircraft, combined with a mechanism for sharing in all of the aircraft in the program (which can be hundreds). All operations are arranged and managed by the program manager. Fractions typically begin with a one-sixteenth share, typically providing 50 hours per year over multiple years. Fractional ownership offers the tax advantages of whole aircraft ownership, and also gives the owner access to larger or smaller aircraft, depending on the requirements of a specific trip. Again, based on the up-front capital requirements, fractional ownership is not a likely source of alternative air service under the auspices of this study.

Jet Cards/Block Charter. In its purest form, “Block Charter” has been around for decades and involves simply buying a pre-determined “block” of charter hours. It has enjoyed resurgence in recent years, with a range of companies marketing new, more sophisticated programs (also known as Jet Cards). Companies typically sell flight-time blocks of 25, 50, or 100 hours. Payment typically is made in advance and the buyer’s account is debited as usage is incurred -- either on an hour-by-hour or dollar-by-dollar basis -- based on the type of aircraft used, flight hours consumed and any miscellaneous costs. Some programs take the form of membership card programs, with the card’s color reflecting the level of commitment and available benefits. Block charter’s success is driven by a lower per hour price (over the duration of the contracted “block” of hours) when compared to the hourly price of an individually booked on-demand charter journey. This could be an option for alternative air service in the region.

On-Demand Charter. Also known as “air taxi”, traditional charter provides on-demand access to a wide range of aircraft for almost any conceivable type of mission. From booking a single one-hour trip, it could also extend to dozens of trips each year, varying mission profiles and use of a wide range of aircraft. Thousands of companies offer on-demand charter services. Some own their aircraft, some leverage downtime on aircraft that they manage on behalf of private owners and some are pure brokers matching supply with demand, either via online “demand aggregation” engines or through old-fashioned means such as the telephone.

As on-demand charter is the most likely source for alternative air service for the region, InterVISTAS will explore this option at a higher level of detail.

Aircraft charter is the original business aviation alternative to those without the requirements or means for aircraft ownership. Traditionally, Charter has been booked directly with an aircraft operator, either through a local Fixed Base Operator (FBO), a phone call or via the Internet.

In the last decade, a number of online charter-booking web sites have been developed that simplify and consolidate the process, providing passengers more options. The companies managing these web sites have relationships with charter operators around the country (in some cases, around the world). By simply indicating travel requirements, potential customers are presented with a range of aircraft options, availability and price quotes for a planned trip. Some “demand aggregators” have very strict quality/safety criteria that operators must meet to qualify for inclusion on their websites (others do not). In many cases, the same company offers both on-demand charter and block charter services.

Charter pricing fluctuates based on particular travel requirements. First, passengers usually pay by the hour for a flight. If travel plans call for a return flight the same day, and any minimum daily flight time requirements are met, the hourly charge will comprise the bulk of the bill. If plans require a longer stay, a per-night overnight fee may be required, covering aircraft parking and crew expenses. Also, passengers may incur a daily minimum charge to compensate the operator for the opportunity cost of keeping the aircraft idle.

Alternatively, one might be charged the hourly charge of the aircraft returning to the point of origin - without anyone onboard. If another charter journey back to the point of origin is required at a later date, passengers will be charged for the time it takes the aircraft to get back to where they are (again empty) as well as the actual flight time. It is this aspect of charter (paying for empty or “deadhead” legs) that can make it prohibitively expensive if used inefficiently. Indeed, the most inefficient types of travel can produce hourly costs double the listed hourly rate.

Some charter operators advertise all-inclusive hourly rates. Others use lower base prices to attract attention, but often have higher daily flight time minimums or charge separately for items included in a higher priced option. The best way to compare the true cost of charter is to get firm price quotes on actual trips. However, on-demand charter can be the lowest-cost way to use business aviation if travel is scheduled in an efficient manner.

There are very few operational considerations for charter services. For a price, passengers can usually get the exact type of aircraft desired to take them wherever they want to go, whenever they want to leave. Charter can be the most flexible of all business aviation options in terms of obtaining the right aircraft for any specific mission, the ability to book at the last second, go anywhere one wants to go and at any time. However, it is always subject to availability, the service delivery can sometimes be inconsistent (especially between multiple operators) and one will have to pay for whatever inefficiencies one creates on any specific journey.

A vast majority of aircraft available for charter are enrolled in an aircraft management program. For a fee, aircraft management companies provide pilots, arrange for maintenance and other aircraft oversight duties on behalf of an owner. To earn incremental revenue, the aircraft owner often gives the management company permission to charter the aircraft to the general public when the aircraft is not being utilized. A financial arrangement between the aircraft owner and the management company will be agreed upon in advance regarding the split of revenue earned from on-demand charter activities of the aircraft. While this is a mutually beneficial relationship for the owner, aircraft manager and charter customer, the fact that the management company does not always have sufficient notice about the owner’s travel plans brings considerable complication to aircraft scheduling.

As mentioned above, the industry has long struggled with the concept of “deadhead” or “empty” legs. New and creative avenues are being explored on how to sell the empty leg (from B to A) once a charter customer has purchased the original A to B leg. The Federal Aviation Administration prohibits charter companies from advertising the availability of such legs, claiming that flights (from B to A at a particular time) are basically scheduled services dictating operation under the much more onerous Part 121 operating certificate authority.

Traditionally, on-demand operators would charge a penalty to customers that only require lift on the outbound leg, in effect adding a multiple of two (i.e., doubling) to the A to B price to compensate the operator for the return, empty-leg flight. Some operators have now become more confident in their ability to sell the B to A leg within a reasonable time. It is now more common for

the charter company to price a one-way trip at a multiple of 1.5 instead to 2, effectively gambling that they can sell the return leg at the same hourly rate as the outbound leg, generating 25 percent more revenue than two one-way journeys (while the original A to B passenger also saves 25 percent by paying only a 1.5 one-way penalty instead of 2). Operating models are starting to appear that claim true one-way charter pricing. The long term success of such models remains in question.

Key Areas to Consider When Evaluating Charter:

- Reputation of charter company and/or “broker”
- Audit approach and standards of operator and/or “broker”
- Efficiency of travel (e.g., time between outbound and return flights)
- Quality of aircraft chartered and consistency of delivery
- Frequency of charter needs
- Advertised versus actual charter cost
- Operator fleet number and variety of aircraft

Admittedly, InterVISTAS has greatly simplified what is a very complex process. However, for the purposes of this study, it was thought that a basic understanding of how on-demand operations affect pricing would be valuable as the Fayetteville Regional Airport and BRAC RTF evaluate alternative air services.

5. REGIONAL OVERVIEW

Aircraft charter is usually procured either by contacting a provider directly or via a broker (either in person or via an online “booking” system). Typically, a charter operator will have access to a fleet of either owned or managed aircraft. If a customer’s requirements dictate an aircraft that is not available in their fleet, the operator will often then act as a broker, locating the desired aircraft from another operator’s fleet - often with a price mark-up.

Customers with significant charter needs often deal directly with a preferred operator, as this offers some level of consistency and predictability. Brokers, also known as demand aggregators, often appear more enticing to first-time customers as they can claim access to vast fleets of aircraft providing ultimate versatility. Some have found, however, that the unpredictability of aircraft quality from such sources may outweigh the selection-driven benefits.

Business aviation aircraft are typically advertised in one of three categories (in addition to single and multi-engine propeller or turbo-prop options):

Light Jets

- Pressurized cabin aircraft that can fly at higher altitudes and faster than their turbo-prop counterparts
- Economical choice for short to mid-range trips
- Capacity to hold between 5-7 passengers
- Average cruising speed of 400-560 mph and average nonstop range of 1,500 miles

Mid Jets

- Offer the comfort of the larger aircraft and agility of smaller models
- Capacity to hold 7-8 passengers
- Average cruising speed of 510-590 mph and average nonstop range of 2,100 miles

Heavy Jets

- Offer fast cruising speeds and roomy cabins
- Largest jets available not requiring major airport runway lengths, while still covering long distances
- Capacity to hold 10 or more passengers
- Average cruising speed of 500-560 mph and nonstop range of 4,000 miles

While having charter aircraft based at an origin airport is helpful, the lack thereof in no way limits a customer's access to charter options. Operators or brokers will very obligingly arrange to have the aircraft desired moved to the required point of origin. An aircraft with the desired specifications will most likely be moved from the closest base of operations. As noted above, many of the aircraft used for charter purposes are managed aircraft, adding a level of complication that is quite transparent to the customer.

Landmark Aviation at Fayetteville does offer charter services through its network of managed aircraft, but currently none of these are based at the airport. FBOs and other operators will typically base their fleet at points of highest demand, assuming that the aircraft owner is satisfied that their aircraft will be available to them per the agreement with the aircraft management company.

There are a number of sources that list charter aircraft availability. InterVISTAS has reviewed these data and compiled a list of charter aircraft available within a roughly 100-mile radius of Fayetteville.

The data are shown in **Figure 1** below, and are summarized by operating company, airport base and category of aircraft. An approximate hourly charter rate is included, giving the Fayetteville Regional Airport and BRAC RTF an order of magnitude price range that customers are likely to pay. Of course, actual prices are usually subject to negotiations which are based on availability, trip length, trip duration, trip efficiency and a range of other factors. Where more than one price is published for a certain category of aircraft, an average appears in the table. This list should not be viewed as all-encompassing, as some operators may opt not to publish their fleet in public sources.

Figure 1

Operator	Base	Category	Price	Operator	Base	Category	Price
Renaissance Jet	Pinehurst	Light Jet	2,750	SkySouth Aviation	Burlington	TurboProp	900
		TurboProp	1,450			Piston-Multi	550
Gama Aviation	Concord	Piston-Multi	635	Jet Logistics	Raleigh	Mid Jet	2,750
	Charlotte	Heavy Jet	4,600			Light Jet	2,450
		Heavy Jet	4,450			TurboProp	1,400
		Mid Jet	3,950			Piston-Multi	550
Landmark Aviation	Raleigh	Light Jet	2,300		Winston-Salem	TurboProp	1,400
	Greensboro	Light Jet	2,100		Charlotte	Mid Jet	3,100
	Monroe	Light Jet	2,300			Light Jet	2,450
	Winston-Salem	Mid Jet	2,950	ACM Aviation	Goldsboro	Mid Jet	3,000
	Winston-Salem	Light Jet	2,050	Time Saver Aviation	Sanford	TurboProp	900
ExpressJet	Concord	NA	NA			Piston-Multi	500
Ultimate Jet Charters	Charlotte	Heavy Jet	4,400	Flightgest Aviation	Raleigh	Light Jet	2,345
Meridian Air Charter	Greensboro	Heavy Jet	4,000			TurboProp	1,275
Causey Aviation Services	Liberty	Light Jet	2,700	Orion Aviation	Raleigh	Piston-Multi	650
	Burlington	Mid Jet	3,400	Spitfire Aviation	Concord	Mid Jet	2,700
	Greensboro	Mid Jet	3,400			Light Jet	2,200
	Greensboro	Light Jet	2,150	Jetpool	Charlotte	TurboProp	1,100
Direct Air Charter	Greensboro	Mid Jet	3,150		Concord	Mid Jet	2,775
Southeast Airmotive	Charlotte	TurboProp	1,230	Executive Jet Management	Florence, SC	TurboProp	1,354
Advantage Aviation	Charlotte	Piston-Multi	795	Charter Jet Transport	Charlotte	Heavy Jet	3,900
Air Care	Rocky Mount	Piston-Multi	600			Mid Jet	2,600
Strategic Moves	Statesville	TurboProp	1,295	Segrave Aviation	Kinston	Light Jet	1,800
Charter Flight Inc.	Charlotte	Mid Jet	2,995			Light Jet	2,560
Sara Air	Greensboro	TurboProp	1,495			Mid Jet	3,200
						Heavy Jet	5,000

The North Carolina Department of Transportation has spearheaded a unique program called NCFlyPorts to promote the availability of on-demand charter at eleven airports within the state:

- Western Carolina Regional Airport, in Cherokee County
- Brunswick County Airport
- Currituck County Airport
- Dare County Airport
- Duplin County Airport
- Elizabeth City Regional Airport
- Northeastern Regional Airport in Edenton
- Rocky Mount – Wilson Regional Airport
- Rutherford County – Marchman Field
- Clinton-Sampson County Airport
- Stanly County Airport

The program is run in cooperation with a range of charter companies located throughout the state and region who offer a mix of aircraft including Open Air, JetPool, Imagine Air, GlightGest and Skyway Air Taxi. The NCFlyPorts website features a booking engine by which customers can reserve flights. InterVISTAS queried the system for a one-way flight between Fayetteville and Washington, DC for three passengers on 23 April 2010. A screen capture of this query appears below as Figure 2.

Figure 2




Welcome, Traveler

Enabled by:








From To

Passengers:

One-way Round-trip

Leave Time

Sorted by closest airports, price

Service Provider	Details Click Image	Origin	Departs	Destination	Arrives	Minutes In Air	Total Price One Way
		FAY - FAYETTEVILLE RGNL/GRANNIS FIELD	4/23/2010 9:00 AM	DCA - RONALD REAGAN WASHINGTON NATIONAL	4/23/2010 9:52 AM	52	\$8557 For up to 8 Passengers
		FAY - FAYETTEVILLE RGNL/GRANNIS FIELD	4/23/2010 9:00 AM	FME - TIPTON	4/23/2010 10:55 AM	115	\$4500 For up to 8 Passengers
		2GC - GRAYS CREEK	4/23/2010 9:00 AM	FME - TIPTON	4/23/2010 10:57 AM	117	\$4567 For up to 8 Passengers
		5W4 - P K AIRPARK	4/23/2010 9:00 AM	FME - TIPTON	4/23/2010 10:57 AM	117	\$4550 For up to 8 Passengers

[Next Step](#)

Using the figures shown in **Figures 1 and 2**, one can get an order of magnitude estimate about flight leg costs between the Fayetteville area and Washington, DC. Excluding taxes, surcharges, inefficiency add-ons and other fees (which together could be significant, as described above) one could expect to pay \$3,300 for the one-way journey on a light jet, \$4,000 on a mid jet and \$5,000 on a heavy jet.

6. SUMMARY AND CONCLUSIONS

InterVISTAS believes that the optimal source of consistent, affordable air service from the region to Washington, DC is through a commercial airline. As agreed, a vast majority of the time and effort exerted by InterVISTAS has been in that area. This study is meant to provide the Fayetteville Regional Airport and BRAC RTF assurance that other options do exist to provide targeted air services that may serve the requirements of select customers.

Most of this study has focused on the core business aviation offerings, especially on-demand charter. But there is another potential air transportation solution that could warrant further investigation, a concept known as public charter. This segment of the industry is most well-known for arranging sports team transportation or providing casino excursions on a one-off basis. But the service could in theory be harnessed to bridge the gap between scheduled commercial service and on-demand/block charter options. For example, companies with multiple facilities in close proximity use public charter as a corporate shuttle between locations.

Public charters are typically operated on larger aircraft than their pure business aviation peers. Aircraft seating is most often in an airline configuration, as opposed to a more executive-style layout most popular in business jets. This business model is also seat-centric, as opposed to the aircraft-centric model of business aviation. By selling individual seats on larger aircraft, the price per passenger is lower than other forms of charter. There are a range of limitations to this type of service including aircraft size, market frequency and other financial/operational considerations.

Currently there are very few examples of public charter being used in this manner. One example is a company called PublicCharters.com. They are offering service between Lunken Field near downtown Cincinnati and Morristown, NJ (suburban New York City) at an advertised round trip price of \$499 per passenger. The actual flights are operated by Ultimate Jet Charter based in Canton, OH. If attracting commercial airline service to/from Washington, DC becomes difficult, InterVISTAS would be happy to explore this option further with the Fayetteville Regional Airport and BRAC RTF in more detail. Public charters may prove to fill the niche between pure commercial and pure business aviation markets.

With the exception of evaluating public charter options, there is little that the region needs to do to ensure sufficient on-demand charter capacity is available. If demand were to increase, it would very quickly get the attention of the region's charter operators. A significant demand increase would likely cause one or more operators to considering basing aircraft in the region, raising your profile in the industry.

Finally, as noted in the introduction, the Fayetteville Regional and Moore County are the only regional airports that have the facilities and infrastructure to accommodate business aviation aircraft/passengers in an appropriate manner. Other regional airports are more focused on pilot training, ultralights and other true “general aviation” pursuits.