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North Central Texas General Aviation and Heliport System Plan

Potential Public Use Vertical Flight Facility Locations

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POTENTIAL PUBLIC USE VERTICAL FLIGHT FACILITY LOCATIONS

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POTENTIAL PUBLIC USE VERTICAL FLIGHT FACILITY LOCATIONS

A. GLOSSARY

This section defines acronyms and abbreviations used throughout the document.

Term	Description
12T	Ferris Red Oak Municipal Heliport
49T	Dallas CBD Vertiport
AC	Advisory Circular
FAA	Federal Aviation Administration
HAI	Helicopter Association International
PPR	Prior Permission Required
System Plan	North Central Texas General Aviation and Heliport System Plan
T57	Garland/DFW Heloplex
U.S.	United States
VTOL	Vertical Takeoff and Landing



B. INTRODUCTION

Helicopters and the newer Tilt-Rotor aircraft provide a unique service vehicle in terms of versatility, flexibility, and functionality. Vertical flight facilities are used in emergency/disaster situations for medical transportation, law enforcement and public health and safety functions. The news media, utility patrols, air taxi services and corporate travelers are also users. The landing facilities themselves are frequently of little monetary value other than being viewed as service centers; the true value of a prepared heliport or vertiport is its proximity to any destination. The number of vertical flight facilities (i.e., heliports, helistops, helipads) within a geographic area is typically greater than the density of traditional, fixed-wing facilities. Rotary wing aircraft have less range and speed but are also very versatile; therefore, more operating facilities are desirable within a metropolitan area to serve the needs of this aviation sector.

Because the infrastructure required for vertical flight facilities is far less substantial than that of an airport, they may be located in a variety of different locations. Heliports, vertiports, and temporary landing areas are largely invisible to the public. Depending upon the available airspace, real estate priorities, departure points, destinations, or specific services that are required, vertical flight facilities can be located in metropolitan cities, suburbs, or rural areas. These sites may be at ground level or elevated on buildings, bridges, offshore oil rigs, or boats. In general, such facilities should be located away from areas that would be affected by the noise created by helicopter operations and have convenient access to the regional highway and transit network as appropriate. Due to the flexibility of vertical flight operations, the facility may be used temporarily, seasonally, or year-round, depending upon the service needs. The facility may be fully equipped with fuel storage, lighting, instrument approach, and a concrete pad, or simply as a marked section of an open field.

Vertical flight facilities are often privately owned and operated; however they can be owned by a municipality and open for public use. If the facility is open to the public, it must be maintained to Federal Aviation Administration (FAA) standards per Advisory Circular (AC) 150/5390-2B *Heliport Design*. The exemption to this is Prior Permission Required (PPR) facilities, in which in some cases, as described in the AC, the facility does not need meet FAA requirements. The owner or operator should ensure that all pilots utilizing the facility are knowledgeable of any such situations. If tilt rotor operations are contemplated, criteria in AC 150/5390-3 *Vertiport Design* are applicable.

C. NORTH CENTRAL TEXAS FACILITIES

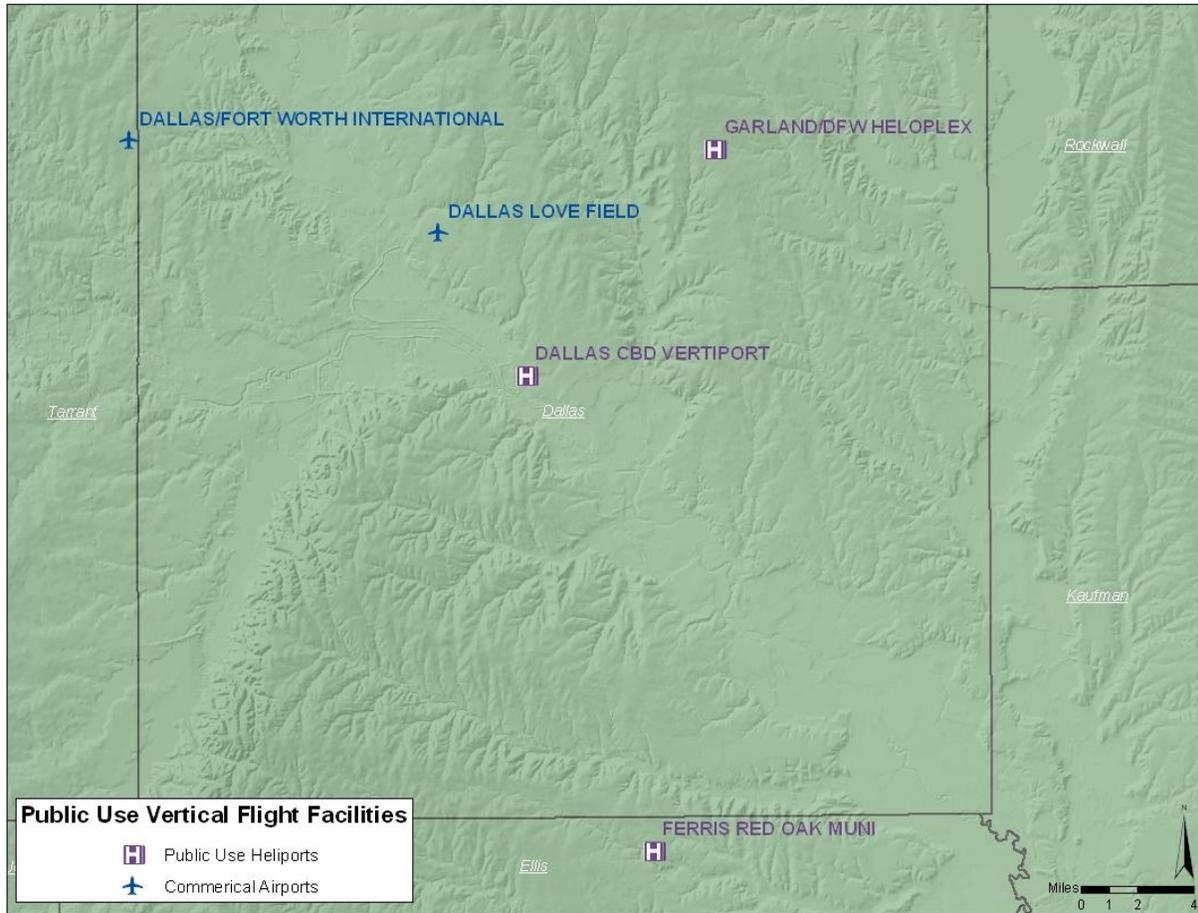
According to Helicopter Association International (HAI), in 2008, the State of Texas had 538 heliports, 13 of which are public use; eight of these public use facilities are located on airports. North Central Texas has approximately 141 FAA-recognized heliports; three of which are public use facilities, Dallas CBD Vertiport (49T), Garland/DFW Heloplex (T57), and Ferris Red Oak (12T). The Dallas Vertiport is designed to also accommodate Vertical Takeoff and Landing (VTOL) aircraft. Exhibit 1 shows the three public use vertical flight facilities located in North Central Texas. These heliports provide public access of the local area for business and recreational travelers and emergency personnel. Exhibit 2 displays a listing of the businesses utilizing the region's existing vertical flight system.



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Exhibit 1: Public Use Vertical Flight Facilities



Source: NCTCOG Research and Information Services



Exhibit 2: Helicopter Services Providers in North Central Texas

<u>Public Safety / Forest Service (Fire)</u>		<u>Transport / Commuter</u>	
Ft. Worth PD	Evergreen	Sky Helicopters	
Dallas PD	5-States	Air Center Helicopters	
DPS- Texas	US Forest Service	Zebra Air	
<u>Emergency Medical Service (EMS)</u>		<u>News Media / Broadcast</u>	
CareFlite	Air Evac	Sky Helicopters	Contractors
PHI	Helinet	Fox 4	A.H. Belo
Air Methods			
<u>Corporate / Business</u>		<u>Utility / Pipeline Patrol</u>	
CFS Air	Omniflight	TXU	Chesapeake
Frito Lay		ATMOS	XTO
<u>Agricultural / Instructional / Personal Use</u>			
Bell Training Center	All American	Epic	
Eurocopter	Silver State (Out of Business)	Approximately 200 Personal Use Individuals	

Source: NCTCOG and CHA Aviation Development Team

There are additional facilities in the region stated to be used by various operators that are not FAA recognized. While many of these facilities are not open to the public, it establishes a base for a vast network of facilities that may be used by several different types of operators. The registration of heliports, airports, and vertiports is not required under federal law in many circumstances. The versatility of the helicopter is also seriously curtailed if every landing area must be registered. The region's vertical flight system must include not only reported or registered FAA 5010 records, but also be expanded to include facilities such as those found at rural hospitals. While it is difficult to determine the exact number of unregistered heliports, much the information on these facilities can be found through local emergency helicopter service providers. There are an estimated 97 unregistered heliports in North Central Texas; these facilities are mainly used by emergency service providers.

It should also be noted that every airport is also a heliport, though vertical flight facilities are not always acknowledged when located on airports as helicopters can easily land on any runway. Even the smallest private airport can typically accommodate the largest helicopters and VTOL aircraft operating in a commercial capacity.

Exhibit 3 shows the number of facilities in North Central Texas by category from the North Central Texas General Aviation and Heliport System Plan's (System Plan) *Airport and Heliport Categorization Process*. The categories are based on the facility's use and the main line of business operated, if any, out of the facility.



Exhibit 3: North Central Texas Vertical Flight Facility Categories		Rank	Total
Heliport (s)	(PS) Public Safety/Forest Service (Fire)	5	7
	(RX) EMS	5	52
	(CP) Corporate/Business	4	38
	(TR) Transport/Commuter	4	3
	(NW) News Media/Broadcast	3	4
	(UT) Utility/Pipeline Patrol	2	3
	(AG) Agricultural /Instructional/Personal	1	31
Vertical Flight Facilities Total			138

Public Safety applies to facilities designated primarily for the use of police, fire, security agencies, transportation authorities, highway patrol, homeland security, and federal and military agencies.

EMS applies to facilities designated primarily for medical purposes, such as trauma centers and emergency rooms. This category also applies to facilities located in an area to be used mainly for emergency airlift services, such as a sports stadium or university. While these facilities may have other uses, their main use is emergency services.

Corporate/Business applies to facilities designated for the commercial use of businesses, executive transport, and commercial helicopter operators, or are located atop a high rise building. These facilities may also be used in firefighting or evacuation.

Transport/Commuter applies to facilities designated for use by the private, commercial, or public helicopter operators and are owned by a public entity.

News Media/Broadcast applies to facilities designated to accommodate helicopter news media, traffic patrols, and other media events.

Utility/Pipeline Patrol applies to facilities designated to support electric, water, gas, and telecommunications facilities. These facilities may be used as a base for patrol or direct support of utility projects, equipment, and personnel movement.

Agricultural/Instructional/Private applies to facilities designated to support farm, ranch, or agricultural operations such as crop dusting and personal use, privately-owned and -operated facilities frequently prepared and established by an individual owner.

Vertical Flight Facilities applies to facilities designed to function primarily as bases and operational areas for the new class of VTOL.



D. OTHER FACILITIES IN THE UNITED STATES

Additional uses and types of vertical flight facilities in the United States (U.S.) not specifically mentioned above, may fall within the categories. These facilities accommodate the specific needs of a region. Examples include:

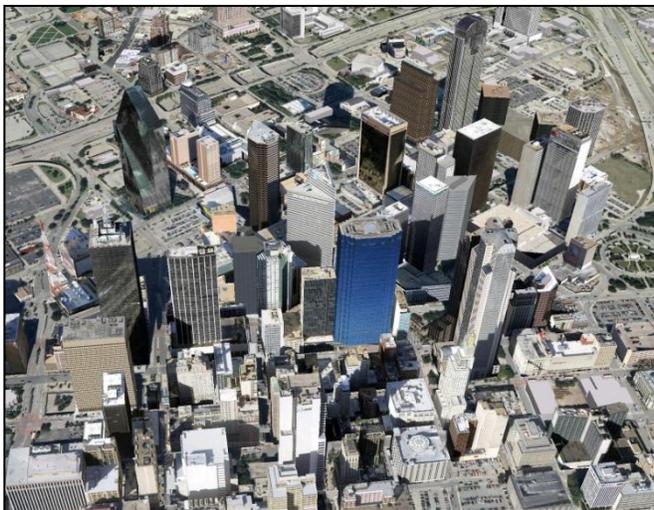
Hotels

Several hotels have rooftop heliports to accommodate travelers that choose to utilize helicopters over ground transportation and for use in emergency situations. The Disneyland Hotel in Anaheim, California uses the heliport to shuttle passengers to and from the Los Angeles International Airport. In 2009, the W hotel in Atlanta, Georgia opened with a heliport and helicopter, the second in downtown Atlanta. At least four hotels in Las Vegas, Nevada have heliports on-site which are used for transportation of guests, executives, and sightseeing.



Fairmont Dallas Hotel

High Rise Buildings



Downtown Dallas

Heliports are excellent tools to assist emergency crews during emergencies in high rise buildings. They allow access to the roof for evacuations, especially when a disaster occurs in the middle of the building that does not allow for tenants to descend. They also provide access for firefighters to bring in equipment and personnel to the upper portions of the building as well as generate interior smoke relief through the roof. In many cases, high rise buildings may also include hotels as they are commonly located in downtown areas in tall buildings. Los Angeles and San Diego have required the incorporation of an emergency helicopter landing facility during the design phase of all new high rise buildings.



Aerial Sightseeing

A main experience in visiting a destination is sightseeing. In many cases, seeing the site from the air enhances the experience, creating a demand for helicopter service at tourist destinations. This excursion is popular with metropolitans and large land features such as volcanoes. Within the U.S., aerial sightseeing is very popular in:

- New York City, New York
- Orlando, Florida
- Hollywood, California
- San Francisco, California
- Hawaii
- Grand Canyon, Arizona
- Las Vegas, Nevada

State and National Parks

Helicopters are a time efficient method of aerial surveying and monitoring a large area with minimal disturbance to the environment. Heliports in these areas serve as a base of operations for operators, including Park Rangers. They can also be used in search and rescue operations, emergency medical situations, and for aerial sightseeing. It is not always necessary for the heliport to be on or directly adjacent to the park, but it should be within a reasonable drive for park rangers to ensure quick response time.

Ferries/Shuttles

Air transportation can be a quicker mode of transportation, depending on the congestion of ground transportation; such is the case in New York City. Private helicopter companies provide charter services, tours, and scheduled air transportation to and from the area's commercial airports and act as a ferry across the Hudson and East Rivers.

Rail Terminal

Depending on the region, there are numerous visitors at any given time from outside of the region. These visitors must travel into the region via boat, rail, air, or automobile. While, in some cases, there may be a helicopter service at the commercial airports, passengers arriving via rail not near the commercial airport do not typically have this option and must travel by ground to reach their destination. While a heliport at the rail station is not as popular within the U.S., it is used somewhat in Europe as travel, in this continent, is more dependent on rail than in the U.S. As the U.S. attempts to promote rail as an alternative mode of transportation, certain regions would benefit from this additional linkage.

Retirement Communities

The average age of the U.S. population is rising, creating a demand for facilities and services for seniors. While the economy may not currently be at its peak, there is still a significant portion of the population that travels via private jet or helicopter. In the years to come, some of this population will be moving into retirement communities and may desire to continue to travel by



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helicopter after retirement. They may also be visited by friends and family members who live similar lifestyles and may also wish to have this access. A heliport on-site would provide a pre-planned location for emergency heliport service to land, reducing the coordination necessary between medical personnel on the ground and in the air. While this may not be within the current market demands, it can be expected to appear within the next decade.

E. EVALUATION OF OTHER FACILITIES FOR NORTH CENTRAL TEXAS

Although the System Plan is intended to provide final recommendations regarding the regional vertical flight infrastructure based on forecasts and industry trends, a cursory review reveals that North Central Texas utilizes the existing heliport system in several key ways. The region may benefit from additional public use heliports in several locations to maximize the use of the aviation system; although not all of the examples of facilities in the U.S. can be utilized successfully within North Central Texas.

Potential Facility Examples: Western and Eastern Regional Locations

The downtown areas of Dallas and Fort Worth have many high rise buildings that include hotels and businesses. There is one existing heliport on the high rise building Thanksgiving Tower, shown as Placid in Exhibit 4, but it is reserved for private use. There are four other facilities near downtown, but the only public use facility is the Dallas Vertiport as described above. Potential locations include, but are not limited to the following:

- Sheraton Dallas Hotel or Conference Center
- Hyatt Regency Dallas Hotel
- Bank of America Plaza
- Lincoln Plaza
- Westin City Center Hotel

Fort Worth's downtown has fewer high rise buildings, but there are no public use facilities within the city limits. Additional heliports can be constructed on several of these buildings, whether they are businesses or hotels. The construction should be discussed with the individual building management to determine the ability to fund and operate the use of the facility and ability to meet FAA design standards. A facility of value would utilize surface access to major highways such as I35W, I20, and I30, encounter little airspace issues, and receive minimal concerns over land use compatibility.



Source: NCTCOG Research and Information Center



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As there are few natural sightseeing locations or state parks within the region, an additional heliport would not be justified for these uses. Existing heliports near the downtown areas of Dallas and Fort Worth could be employed for any sightseeing demands that may arise.

North Central Texas is not a location that would have need for a ferry service as there are no large bodies of water, but the region may benefit from a public use heliport at the two commercial airports. There are currently charter services available within the region, but none operate out of the commercial airports. Passengers arriving must travel by ground to one of the surrounding airports through potential congestion in order to charter a helicopter.

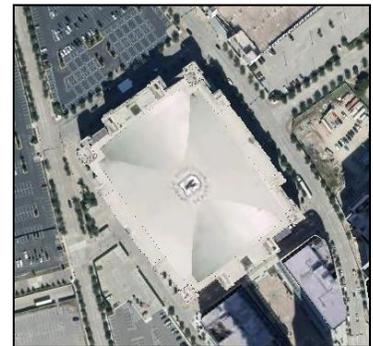
Passengers arriving via rail could use Amtrak if from outside of the region, which arrives at a station near City Hall in Dallas and at a station in downtown Fort Worth. Passengers arriving in Dallas may utilize the Dallas CBD Vertiport, but would have to arrange for additional ground transportation between the two sites depending upon their cargo as it is less than half a mile away. Passengers arriving in Fort Worth would also have to arrange for ground transportation. The nearest airport is Fort Worth Meacham International, over five miles away. Developers in North Central Texas should consider heliports in their future plans for retirement communities as market demands increase for convenience and medical purposes.

Fort Worth Amtrak Station



Other Potential Facility Examples

Heliports should also be considered for use at special event venues throughout the region, even if they are temporary, as they have the potential to reduce ground congestion if successfully implemented. Many of the stadiums in North Central Texas already have heliports for emergency medical use, but they may be utilized for air taxi. Pick up locations for attendees and participants would need to be established. This would include permanent and temporary locations such as the Cowboys Stadium, medical centers in Arlington, and perhaps local fairs.



American Airlines Center

An additional possibility is investigating the locations of the unregistered heliports to determine their feasibility in becoming a registered FAA heliport. The location must be investigated for use, obstructions, sponsorship, available facilities, ability to meet FAA standards, and expansion ability. In some cases, the unregistered heliport may be thought of as registered by its users because it has been in use for so long. The only unregistered facilities at this time appear near hospitals and are used for emergency situations. The registration of these facilities would need to be discussed with the hospital management.

The final System Plan, by taking into consideration the review within this and other reports, will make a series of recommendations for more specific potential facility locations within the sub-regions of North Central Texas. This information and findings of this report will be vital in the



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drafting of the new System Plan. The final plan will include detailed recommendations for potential vertical flight facilities within the sub-regions of North Central Texas.