

**New Anchorage Aircraft Hangar****FY2006 Request: \$6,176,800****Reference No: 40007****AP/AL:** Appropriation**Project Type:** Construction**Category:** Public Protection**Location:** Anchorage Areawide**Contact:** Dan Spencer, Director, Administrative Services**House District:** Anchorage Areawide (HD 17-32) **Contact Phone:** (907)465-5488**Estimated Project Dates:** 07/01/2005 - 06/30/2009**Brief Summary and Statement of Need:**

Construct new aircraft hangar at Lake Hood in Anchorage to safeguard the department's aircraft assets and ensure safe, dependable, and mission capable aircraft are available in the most cost effective manner to support the department's mission to preserve public peace, protect life, property, and resources.

<b>Funding:</b>	<b>FY2006</b>	<b>FY2007</b>	<b>FY2008</b>	<b>FY2009</b>	<b>FY2010</b>	<b>FY2011</b>	<b>Total</b>
AHFC Bonds	\$6,176,800						\$6,176,800
<b>Total:</b>	<b>\$6,176,800</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,176,800</b>

<input type="checkbox"/> State Match Required	<input checked="" type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Additional Information / Prior Funding History:**

No prior funds have been allocated to this request.

**Project Description/Justification:**

Construct a 16,000 square foot aircraft hangar and maintenance facility with an attached 11,000 square foot (5,500 sq ft on each of 2-levels) mezzanine (office and inventory space) to house and maintain the existing aircraft operated by the Department of Public Safety (DPS). The facility will contain shop, office, and inventory storage required for aircraft repair and reconstruction, ground support equipment, parts fabrication, transient pilots, and training. The building will use land already owned by DPS.

The new hangar will provide for maintenance of large aircraft, and will replace the existing mobile trailers and Quonset huts (5,200 square feet) presently used for offices and inventory stores. The existing hangar will remain in place as cool/warm storage for inventory and department-owned and seized aircraft.

Facility size is calculated to house two King Airs, one Caravan (amphibian), the department's AS-350 search and rescue helicopter, and provide two maintenance bays. This requires a hangar floor measuring 100 feet x 160 feet (16,000 square feet) with an attached 2-level mezzanine measuring 50 feet x 110 feet (5,500 square feet each). Ramp space for aircraft parking, access to taxiways, and vehicles is provided. The footprint required for each large aircraft (BE-200 / C-208 / AS-350) is 55 feet x 50 feet = 2,750 square feet. The need for remote leased space in Anchorage will be eliminated as all aircraft can be consolidated and maintained at this combined hangar/ramp facility.

---

**Project Need**

The aircraft section supports the Department of Public Safety, including the Alaska State Troopers (AST); and the Department of Corrections; and the Office of the Governor. The section's aircraft mechanics maintain the department's 42 aircraft by performing scheduled maintenance and inspections as well as emergency repairs. They also perform complete aircraft engine and airframe overhauls and rebuilds necessary to keep vintage aircraft in operation.

Distances in Alaska are vast and often the only means of accomplishing DPS missions is through the use of aircraft. The aircraft section provides the department with aircraft that are safe, dependable, and mission capable. Skilled and timely aircraft maintenance is critical to ensure airworthy aircraft.

The section provides training and standardization for all department pilots. Proficiency check rides are provided to all department pilots as required by federal regulations and DPS policy.

The current 4,800 square foot maintenance hangar cannot house any of the department's C-208 Caravans, C-206 amphibian, the BE-200 King Airs, or the AS-350 helicopter. The existing hangar has neither the square foot floor space, nor the door height to accommodate these aircraft. The result is that DPS is forced to lease hangar space for our most expensive and complex aircraft at remote locations throughout Anchorage. The FY2005 combined lease cost is \$90,400 per year, which is below market value.

The remote hangars require DPS mechanics to transport tools daily from the DPS-owned hangar. This prevents effective daily maintenance, wastes labor-hours, forces the department to contract for extra inspections at a cost of \$3,000-\$20,000 per inspection (depending on aircraft type), and often triples the time these aircraft are unavailable for operational use.

The existing 4,800 square feet hangar cannot accommodate more than three small projects (small aircraft, floats, engines, etc.) at one time. Performing extensive repairs on an aircraft requires contracting out other aircraft inspections that become due when the space is otherwise occupied by a long term project.

Some DPS-owned and seized aircraft must currently be stored outside. During severe weather, aircraft must be continually cleaned of snow and protected by vehicles from severe winds. In FY2004 and FY2005, properly secured aircraft still sustained major structural damage from snow loads, high winds, and collision by ground vehicles.

Consolidation of all DPS aircraft in one Anchorage based location will improve security, reduce maintenance hours, reduce contract maintenance cost, increase security of seized aircraft, and increase operational availability of DPS aircraft. This one-time construction expenditure will eliminate recurring lease costs in Anchorage.

**Additional Factors****AS-350 (HELO-1)**

The AS-350 helicopter is extremely complex and only one viable contract maintenance source is located in Alaska with the expertise to maintain this model helicopter. In September 2004, the firm announced that its parent company was transferring the helicopter division to the Gulf of Mexico. DPS must plan to maintain the AS-350 in-house. This is best accomplished by housing it with the maintenance section.

**BE-200 / C-12 KING AIR**

DPS operates two King Air turboprops that currently require remote hangars and maintenance. It is presently more cost and time effective to ferry these aircraft to Arizona or Seattle for inspections (at a ferry cost of \$7.0 to \$12.0 per trip) than to pay Alaska contractors. DPS hangar space suitable to maintain these airplanes would reduce the trips to vendors outside Alaska.

Contracting inspections to vendors creates work delays and prevents DPS mechanics from evaluating the aircraft on a regular basis. Several of the airplanes operated by DPS have not been inspected by a DPS mechanic or repaired in the DPS facility for over five years. Contracting maintenance at remote locations increases cost, decreases department quality assurance, and reduces aircraft availability.

**Documentation of Capital Cost**

Two methods were used to estimate the cost of a new 27,000 square foot building:

1. The actual cost per square foot experienced by the U.S. Department of Interior, Office of Aircraft Services, for the 2004-2005 construction of their hangar on the lot immediately adjacent to the DPS property was applied. The finished cost of that hangar was \$234 per square foot including planning and design (\$18 per square foot), construction (\$150 per square foot), administration and project management (\$30 per square foot), and demolition/soil remediation (\$36 square foot). At \$234 per square foot, the estimated cost for the DPS hangar would be \$6.32 million
2. DOTPF estimated the design and construction cost at \$6.18 million, including an inflation adjustment for construction in FY2006. Design costs were estimated at \$596,600 and construction costs at \$5,580,200, for a total project cost of \$6.18 million at an average cost per square foot of \$228.77.

**Operation and Maintenance Costs**

The increased cost for operating and maintaining the new building will be offset by the savings from eliminating leased hangar space, reducing contracted aircraft maintenance, reducing the need to ferry King Air airplanes to the lower-48 for major maintenance, and by making more cost efficient use of department mechanics' time by eliminating travel time to remote hangars for maintenance work.