



# **354TH FIGHTER WING EIELSON AFB, ALASKA**



# ***MID-AIR COLLISION AVOIDANCE PAMPHLET***

***1 MAY 2012***

**MEMORANDUM FOR ALASKA AVIATORS**

**1 May 2012**

**FROM: 354 FW/SEF**  
**354 Broadway Ave Unit 14A**  
**Eielson AFB AK 99702-1899**

**SUBJECT: Military Flying in Interior Alaska**

1. This pamphlet is offered to give you a working knowledge of the military airspace used in interior Alaska. This airspace is shared with the military, flying businesses, and civilians who fly for pleasure. The information in this pamphlet is focused toward reducing the risk of a mid-air collision between civil and military aviators.
2. Some pilots refer to the “Big Sky” theory of air traffic control. This method of air traffic “control” is based upon two conditions: 1) lots of airspace, and 2) very few airplanes. Although the Alaskan skies are spacious, the “Big Sky” method of mid-air collision avoidance is risky at best, and unreasonable in the Fairbanks flying area.
3. There are six active airfields within five miles of the International Airport, serving helicopters, light planes, jumbo jets, and everything in between. Also, Eielson Air Force Base is home to fighters, tankers, helicopters, light aircraft, Red Flag Alaska and many other transient aircraft. Add to this the pipeline patrol aircraft and the numerous small airports and backyard runways scattered throughout the Interior and the potential for a traffic conflict becomes high.
4. In this environment a pilot using knowledge, good visual and radio lookout, and help from ground-based radar is much better off than the pilot using the “Big Sky” method. Good pilots know the location of all high density traffic areas, and the general flight characteristics of the primary types of aircraft operating in these areas. Knowing the location and restrictions (if any) is beneficial to all pilots. The smart pilot is not averse to requesting radar advisories whenever possible. Special Use Airspace Information Service (SUAIS) is available 24 hours a day and can be a great aid to pilots flying in Alaska. This pamphlet will discuss SUAIS and its use along with other information you can use to avoid a near miss or a mid-air collision. Remember... flying safety is no accident.
5. If you have any questions about military flying at Eielson Air Force Base, or any of our military operating areas, please call the Eielson Safety Office at 377-1155.

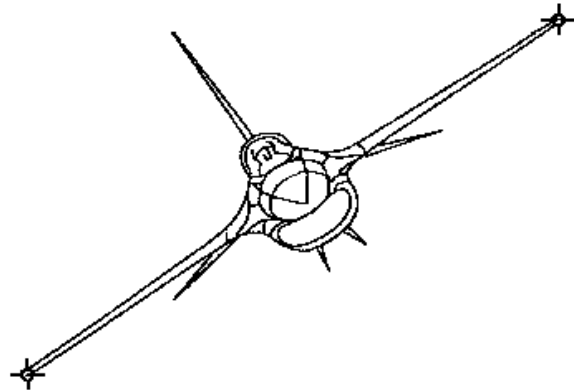
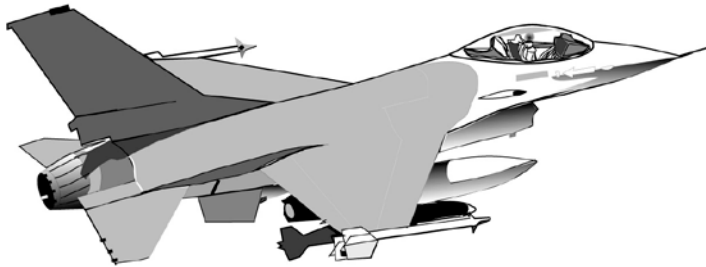
//Signed//  
DOUGLAS W. KLINE, Lt Col, USAF  
Chief of Safety

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## AIRCRAFT BASED AT EIELSON AFB

### F-16C FIGHTING FALCON

The F-16 Fighting Falcon is a multi-role tactical fighter with full air-to-air and air-to-ground combat capabilities. The F-16 has the capability to fight its way to a target, deliver air-to-ground ordnance, and then fight its way back to safety. This may be accomplished using a variety of tactics. The pilots train to become experts with these tactics in the Interior Military Operating Areas (MOA) airspace as well as Restricted Areas R-2202, R-2205, and R-2211 and military training routes (MTR). The F-16 carries onboard radar that can detect other aircraft at great distances beyond visual range. This enhances the pilot's ability to see and avoid other aircraft. However, because of its small size (wing span=33 feet) and high speed (normal operating speeds at low level = 400 to 550 KTS), it can be difficult to acquire. The Eielson-specific F-16 has three different paint schemes including multi shade blue/grey, black/white, and green/brown camouflage which is easy to discern from the traditional paint scheme of an F-16 from a visiting unit, which is two-tone grey. However, this camouflage can sometimes make the jet harder to see against certain backgrounds. F-16s also use widely spread formations and could be in formations consisting of four or more aircraft. The F-16 also has an anti collision strobe light mounted on top of the vertical stabilizer.



### KC-135 STRATOTANKER

The Boeing KC-135 Stratotanker provides air refueling for fighter, bomber, and transport aircraft. The KC-135 aircrews train in the local area flying both VFR and IFR approach patterns. Although they are substantially larger than the fighter aircraft based at Eielson AFB, their paint scheme blends in well with the surrounding area. The KC-135 flies between 150 and 250 KIAS when below 10,000 feet.



## **FREQUENT VISITING AIRCRAFT**

### **F-22 RAPTOR**

The F-22A Raptor is the Air Force's newest fighter aircraft based at Elmendorf AFB and can be seen in the Interior airspace. The Raptor performs both air-to-air and air-to-ground missions and has a light grey paint scheme making it difficult to spot. F-22s are equipped with both UHF and VHF radios. In training areas, expect them at all altitudes and airspeeds. In the traffic pattern, they maintain 150-350 knots.



### **F-15 EAGLE**

The F-15C is the Air Force's all-weather air superiority fighter. These aircraft utilize the Interior airspace frequently. They also use Eielson AFB for instrument approach training. F-15's operate at all altitudes and all airspeeds. The F-15 carries onboard radar that can detect other aircraft at great distances. They are painted gray camouflage and are very hard to see.



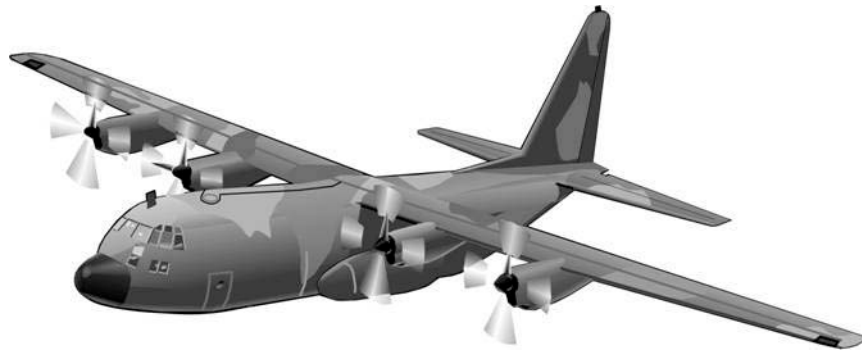
### **C-17 GLOBEMASTER III**

The C-17 is based out of Elmendorf, and these aircraft are the new cargo workhorse of the PACAF fleet. C-17s are equipped with UHF and VHF radios as well as TCAS. They are often hard to see because of their gray camouflage paint scheme. In the pattern they fly at 150-200 knots.



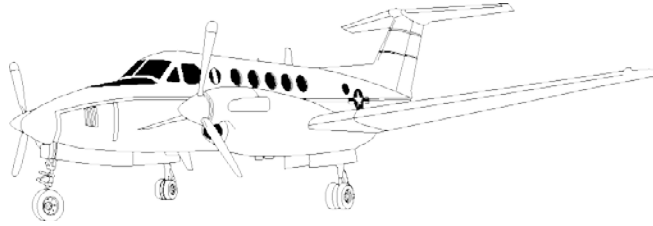
### **C-130 HERCULES**

The C-130 Hercules is used for tactical transport and airdrop. Special versions of the C-130 include rescue, weather, special operations, and gunship variants. They all operate at airspeeds between 150 and 250 KIAS in the landing pattern. These aircraft sometimes participate in exercises in the Interior MOAs and fly at very low altitudes (300 to 500 feet above the ground). Watch for groups of 2-6 aircraft in 2,000' to 4,000' trail formation. Active duty aircraft are generally gray and ANG are typically green camouflage. These aircraft are not limited to operations within MOAs. They can be found flying VFR practically anywhere.



### **C-12 KING AIR**

The Beech King Air is used for personnel transport throughout Alaska and frequents the Eielson area. It travels at 250 KIAS, and is capable of operating out of bare-base airfields.



### **HH-60 BLACK HAWK**

The Sikorsky HH-60 Black Hawk helicopter performs a variety of roles around Eielson including support of range operations, search and rescue exercises, and re-supply of Eielson's outlying sites. They fly low altitude from the surface to 1,000 feet above the ground, between 120 and 150 KIAS.



## OTHERS

C-5 and KC-10 cargo aircraft also transit Eielson and typically fly similar profiles as the C-130. Many other different aircraft from around the world will participate in Red Flag exercises and cannot be inclusively listed here.



C-5 Galaxy



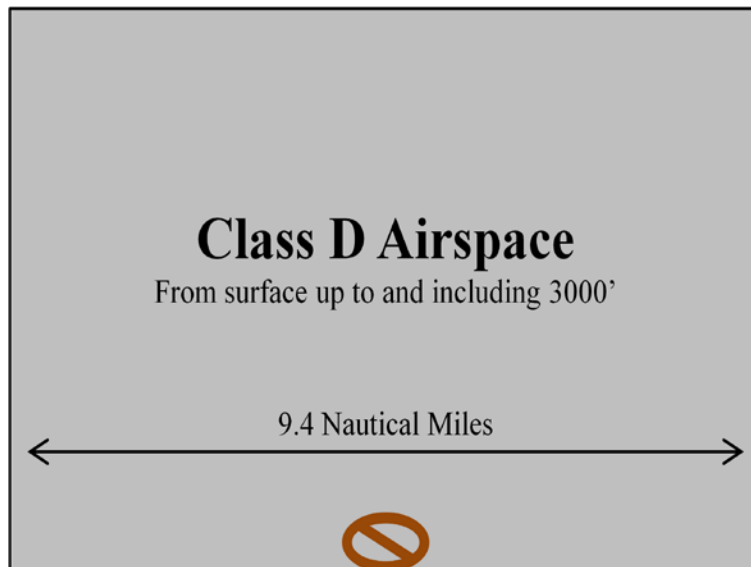
KC-10



## EIELSON'S CLASS "D" AIRSPACE

**Eielson Class D Airspace:** Defined as the airspace extending upward from the surface to and including 3,000 feet MSL within a 4.7 NM radius of Eielson AFB. Unless otherwise authorized, each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace. No separation services are provided to VFR aircraft.

The control tower is operational daily from 0700-2300 local time and other times by NOTAM. Eielson tower must be contacted if operating in the Class D Airspace. Frequencies are 127.2 and 352.05. **NOTE:** There is a long stretch of the Tanana River that lies well within the 4.7nm radius of the Class D Airspace. Also take note that Eielson TACAN lies at the south end of the 14,500-foot runway (That's almost three miles!). As such, when traversing the Eielson Class D Air space, it is advisable not to use just the river or TACAN (DME) as a guide to "five miles", instead remain well clear to the west of the river and always contact the tower if able.



## SPECIAL USE AIRSPACE INFORMATION SERVICE

**What is it?** SUAIS is a 24-hour service provided to civilian pilots flying in and around MOAs and Restricted Areas in Interior Alaska. Pilots can call SUAIS at **1-800-Restricted Joint Use-USAF** (1-800-758-8723), 372-6913 from the Fairbanks area, or VHF **125.3, call sign Eielson Range Control**. Primary coverage is along the Richardson and Alaska Highways. The further from the highway, typically the coverage quality is reduced. SUAIS information is available at: <http://www.jber.af.mil/11af/alaskaairspaceinfo/> then select "Special Use Airspace Information Service (SUAIS) Pamphlet" found under "Flying in Alaska"

**Who is Eielson Range Control (ERC)?** ERC is an airspace facilitator at Eielson AFB, Alaska. It is normally staffed from 9 a.m. to 7 p.m., Monday through Friday (except federal holidays), and times when Air Force flying is in progress in Interior Alaskan MOAs and Restricted Areas. After hours, telephone and radio callers will hear the airspace status through a recorded message. ERC is equipped with UHF and VHF radios and radar displays.

### WHY USE SUAIS?

**SAFETY:** Eielson Range Control monitors all military activity in MOAs and can advise civilian pilots of high-speed military aircraft operating in them. The MOAs adjacent to the Richardson and ALCAN Highways between Tok, Delta Junction, and Fairbanks are areas of heavy general aviation use. VFR transit corridors have been established along the highways, but the MOAs are of special concern since they are subject to flights at high speed/low altitude by military aircraft.

**EFFICIENCY:** Military Restricted Areas are not always in use. Eielson Range Control can advise civilian aircraft of current restricted area status.

**EMERGENCY:** Eielson Range Control can assist in clearing military aircraft out of this airspace if requested by the FAA or other agencies for emergency operations such as air ambulance missions or fire fighting operations.

### SUAIS RADIO AND RADAR COVERAGE

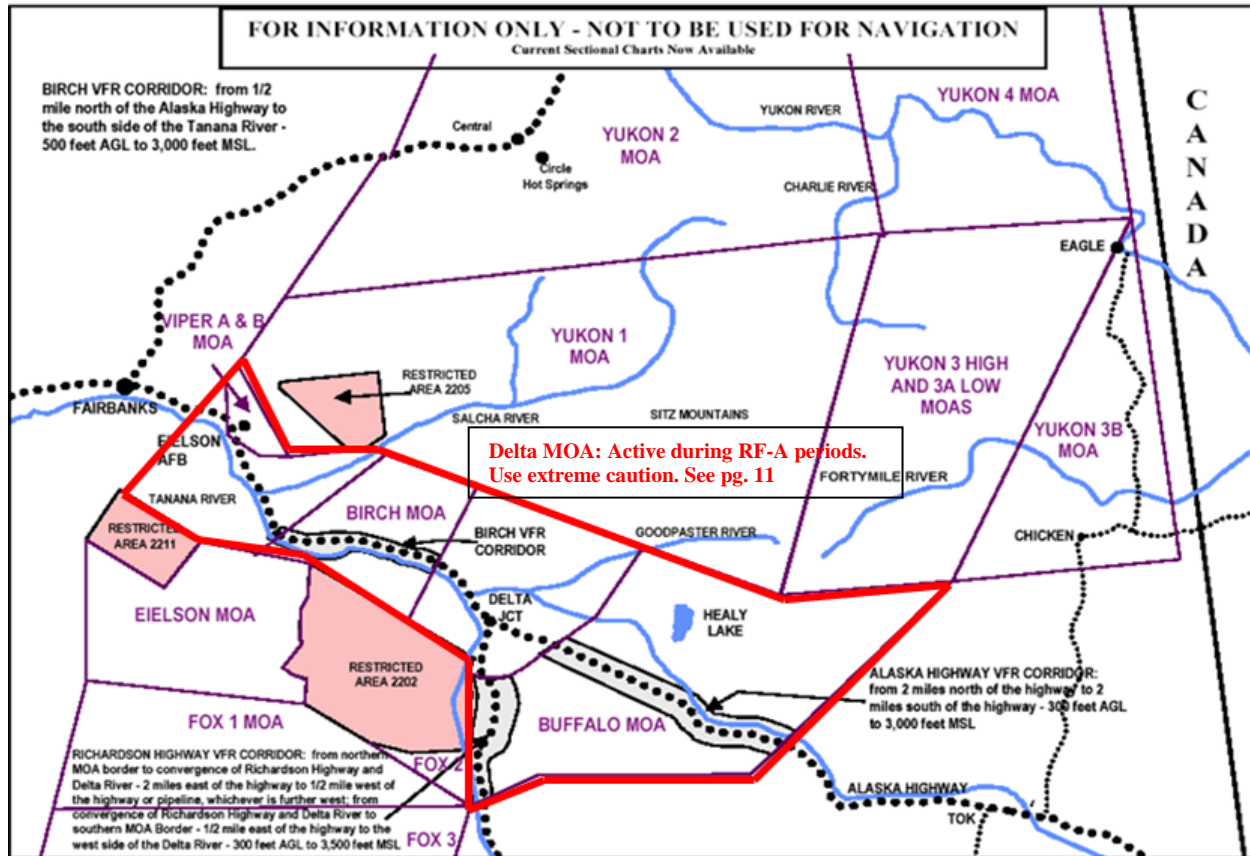
Radio relay stations permit pilots flying as low as a few hundred feet to contact Eielson Range Control in the Tanana Valley between Lake George and Fairbanks. Aircraft flying in mountainous terrain to the east of the Tanana River will need to be as high as the tops of the highest terrain in their immediate vicinity. The general area of coverage is bounded by 50 miles North of Circle, Fairbanks to the west, Black Rapids to the south, and Lake George to the east. The ability to detect light aircraft without transponders is limited. **Transponder use is highly recommended.**

Eielson Range Control *does not* provide air traffic control services. They can provide information on the status of airspace and the *approximate* locations of *military aircraft* in the area. IFR vectoring, processing of flight plans, etc., is not provided. *Use of the SUAIS constitutes an acknowledgment, understanding, and acceptance of these limitations.*

**Does SUAIS include current Army operations?** SUAIS includes Army artillery firing at all hours, and known helicopter operations. It also provides Army Unmanned Aerial Vehicle operations information in their area of coverage between Donnelly Dome and Fairbanks.

**History.** The Air Force created SUAIS in 1994 to enhance both safety and efficient airspace use in Interior Alaska. Since then, it has become a regular feature of general and commercial aviation in the area. For more information log on to the following Web site:  
<http://www.jber.af.mil/11af/alaskaairspaceinfo/>

### SPECIAL USE AIRSPACE



### FLYING IN THE EIELSON AFB AREA

Awareness of Military Operating Areas (MOAs), Military Training Routes (MTRs), and Restricted Areas is essential to safe flying. Red Flag Alaska exercises bring large numbers of military aircraft to operate in these areas.

Eielson AFB aircraft use three bombing (and artillery) ranges (R-2202, R-2205, and R-2211). These ranges are clearly depicted on sectional charts. It is essential that civilian aircraft avoid flying in these ranges when they are in use, particularly during Red Flag exercises. The projected Red Flag schedule is listed below. Check for updates at  
<http://www.jber.af.mil/11af/alaskaairspaceinfo/>

Red Flag Alaska 12-2     8 – 22 Jun 2012  
Red Flag Alaska 12-3     3 – 17 Aug 2012  
Red Flag Alaska 13-1     5 – 19 Oct 2012

Contact Eielson Range Control on 125.3 MHz (SUAIS) to determine if the ranges, MTRs, and MOAs are in use, and to obtain clearance through the ranges when conditions permit.

There are no FAA controlling agencies that civilian aircraft can contact for traffic advisories when the MOAs are active. While Eielson range control may help, diligent visual lookout must be practiced when flying through active MOAs.

Aircraft from Eielson AFB and Elmendorf AFB also use low altitude Military Training Routes. These routes, both VR and IR, are depicted on sectional charts; however, only the route centerline is shown (almost all Alaskan routes are 10nm wide). Generally these routes extend from the surface to 3000 feet AGL; but some go as high as 17,000' MSL. Eielson Range Control can tell you if an MTR in the Eielson area is active. Fairbanks Flight Service Stations (FSS) is another source to tell you which routes are active within 100NM. Generally, fighter aircraft flying on MTRs are low altitude and high speed. It is best to avoid active MTRs if at all possible.

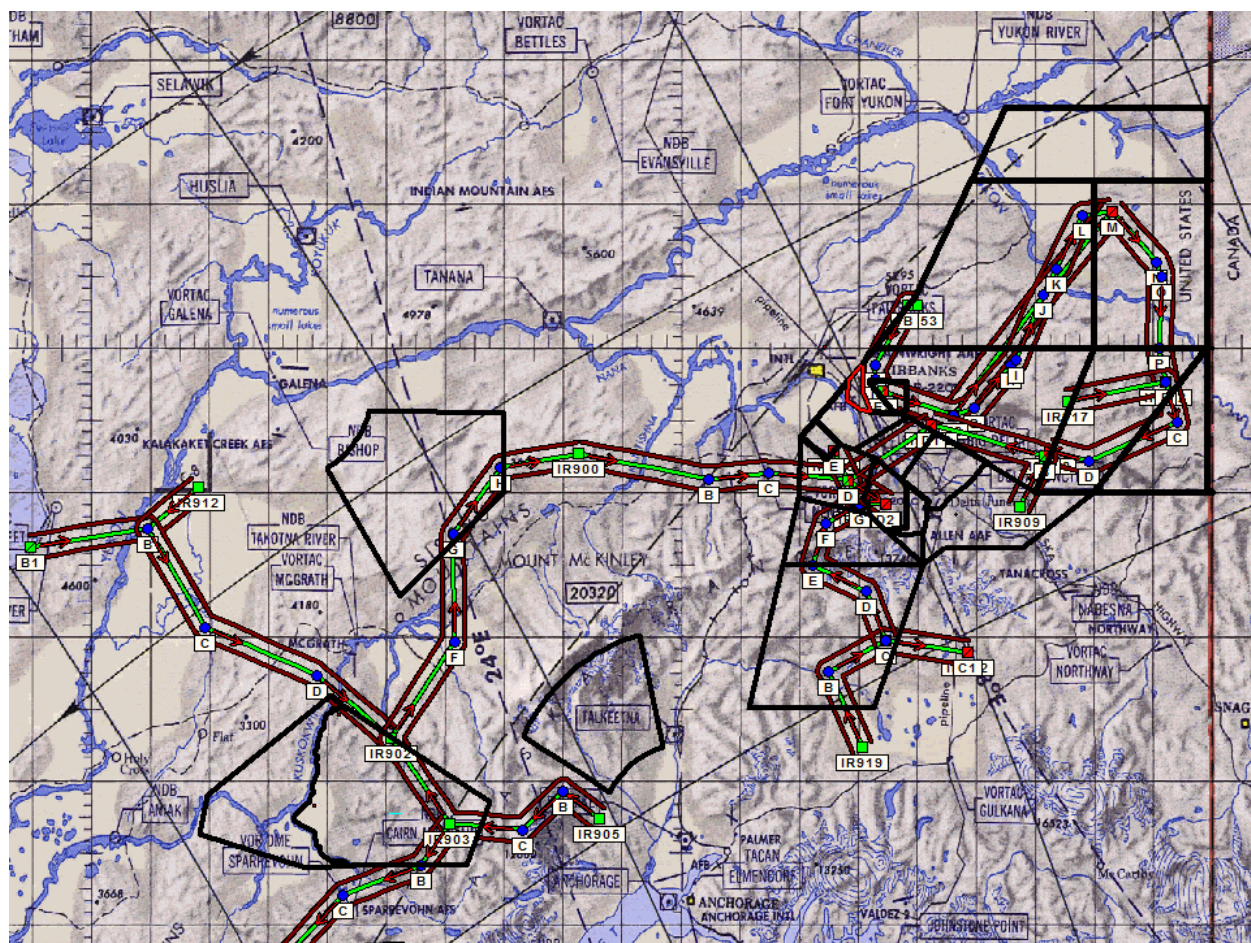
**DO:**

- Plan ahead and become familiar with the Alaskan Military Operating Areas and Restricted Airspace.
- Call SUAIS prior to flight at 1-800-758-8723.
- Ensure your windscreen is clean and practice good visual scanning techniques.
- Listen to your radio and obey basic flying rules.
- Contact Eielson Range Control for SUAIS in the vicinity of Eielson AFB, Interior ranges or MOAs.
- Avoid flying through active MOAs and MTRs, whenever possible.
- If Eielson Range Control is not available, contact nearest FSS or Fairbanks Approach to determine if ranges, MOAs, or MTRs are active.
- When flying through active MOAs or MTRs maintain a constant visual lookout (ahead and behind) for military traffic.

**DON'T:**

- EVER fly through an active restricted area without contacting Eielson Range Control on 125.3 for permission. Live bombing, artillery, or surface to air missile firings may be in progress. Position reports made on this frequency may be heard even if you do not receive a response.
- Fly through active Military Airspace unless it is impractical to go around it.

## TRAINING AREAS AND LOW LEVEL ROUTES

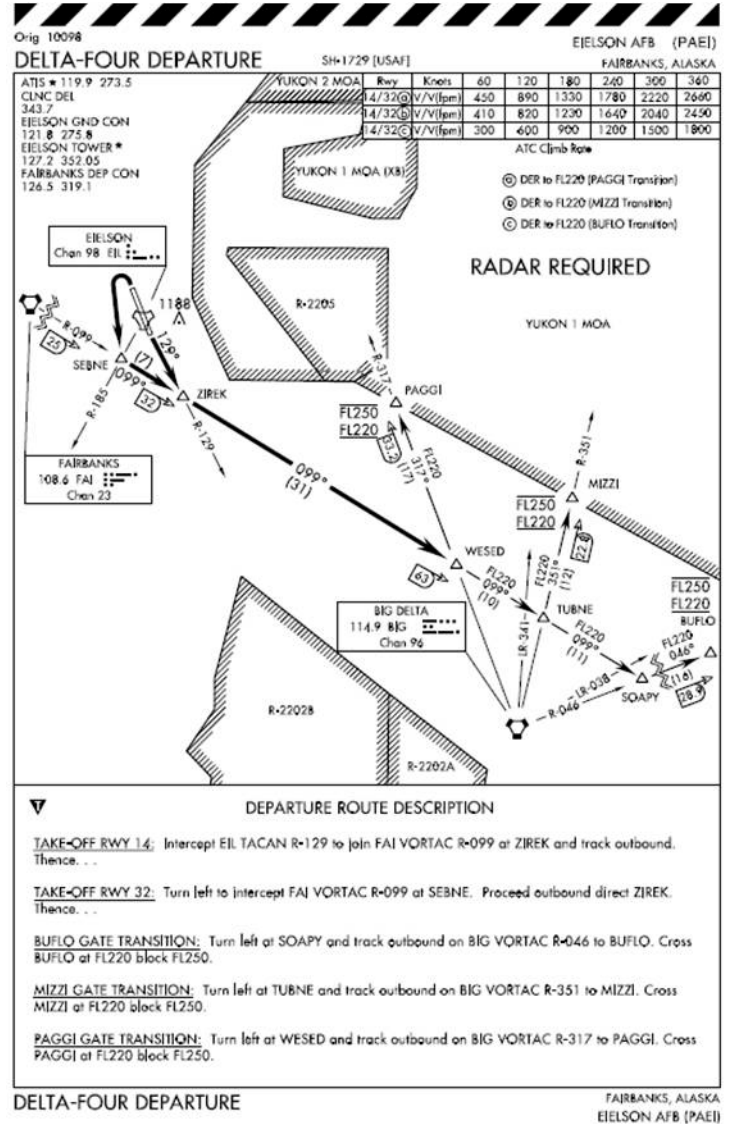
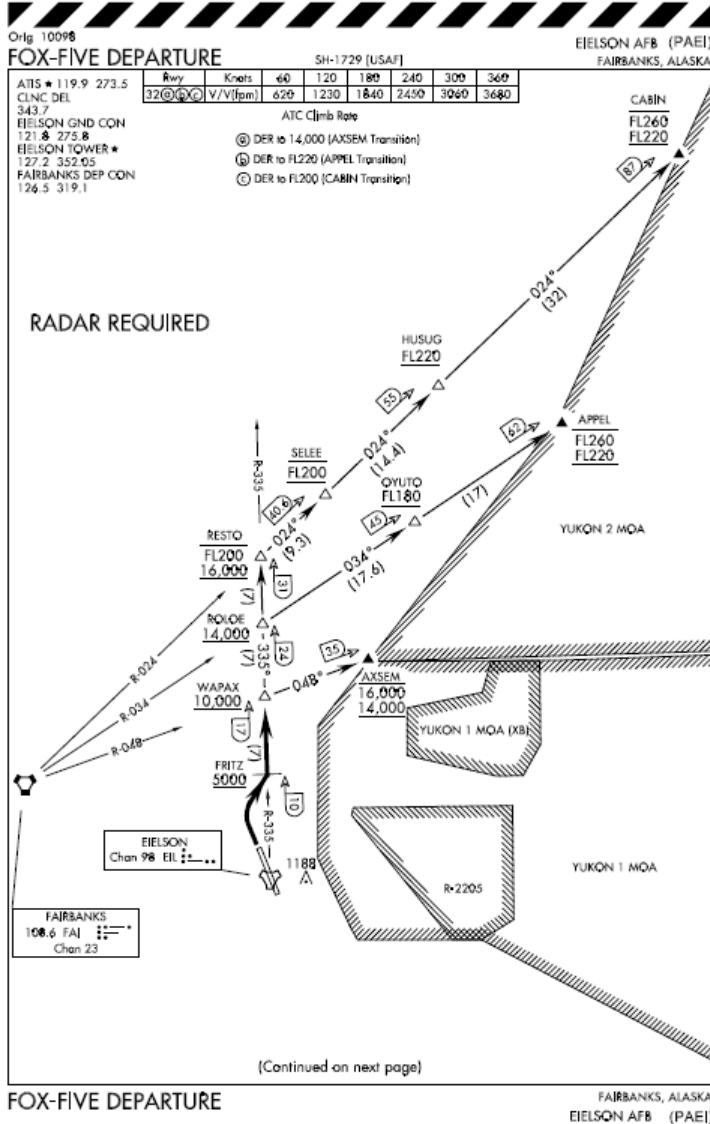


## VISUAL APPROACHES/DEPARTURES

Military aircraft flying visual approaches to Eielson AFB usually fly across the Tanana River at 2,500 feet MSL, often in close formation, to line up with the runway. They will then operate in a rectangular or overhead pattern. Visual departures will make climbing turns out of traffic, usually toward one of the restricted areas.

## INSTRUMENT APPROACHES/DEPARTURES

Both military and civilian aircraft practice instrument procedures at Eielson AFB. The TACAN and ILS approaches basically extend along the runway centerline out to about twelve miles (approximately over Harding Lake for Runway 32). Contact Fairbanks Approach Control on VHF 126.5 or UHF 319.1 for traffic advisories.



## SPECIAL CONSIDERATIONS FOR RED FLAG ALASKA EXERCISES

Red Flag Alaska is a series of large scale flying exercises, which occur in the Eielson AFB area several times a year. A projected Red Flag exercise schedule can be found at: <http://www.jber.af.mil/11af/alaskaairspaceinfo/>. These exercises may have up to 100 military aircraft flying in the Eielson AFB area at one time (in the span of two hours). It is very hazardous to fly VFR within the Interior Military Operations Areas during Red Flag Alaska exercise periods. These periods are usually three hours long; normally one period is in the morning and one in the afternoon. Fairbanks FSS, Fairbanks Approach, or Eielson Range Control (VHF 125.3) can confirm these exercise periods. Civilian aircraft flying from Northway or Glennallen to Fairbanks can avoid Red Flag Alaska airspace by flying in the VFR corridors

beneath the Buffalo and Birch MOAs. You are encouraged to participate in the Special Use Airspace Information Service (SUAIS) provided by Eielson Range Control when airborne. This service is described above and also in pamphlets obtained at any Flight Service Station in the interior or on the web page.

### **LIGHTS OUT OPERATIONS AT NIGHT**

Military operations now require pilots to train with Night Vision Goggles (NVGs). This training involves flying with reduced aircraft lighting and in some cases no exterior lights at all. At times pilots practice NVG takeoffs and landings which require Eielson AFB airfield lighting to be turned down or even off. A NOTAM will be posted listing times, Restricted Airspace, and/or MOAs being used. Pilots relying only on See and Avoid will not be able to see these aircraft, nor in some cases the airfield--and should avoid the area or coordinate with the controlling agency in order to ensure positive separation. Safety procedures are in place using radar to ensure that military aircrews know when VFR aircraft enter the airspace. If necessary, they will turn their lights on and stop training if an unsafe situation develops.

### **WAKE TURBULENCE**

Dangerous? **YES!** Unexpected, invisible, and unpredictable? **NO!** The one positive aspect of wake turbulence is its predictable occurrence. Wake turbulence is a vortex created by any wing producing lift. The vortex trails the wing tips and spreads outwards and downwards at 500 feet per minute. All aircraft produce some degree of wake turbulence, however, the greater the generating aircraft weight and the slower it flies, the more powerful the vortices. Cargo aircraft and passenger airliners produce powerful wake turbulence that could have a dramatic effect on the unsuspecting general aviation pilot. Reference AIM for a complete discussion of wake turbulence. Here are some good rules of thumb for avoiding wake turbulence. During cruise, avoid flying directly behind and below other aircraft. During landing, stay at or above the larger aircraft's final approach flight path – note its touchdown point – and land beyond it; during takeoff, liftoff before the rotation point of the heavy aircraft and climb above its flight path. Allow adequate time separation between yourself and the aircraft in front of you, even if traveling perpendicular to its flight path. Don't get caught in these horizontal tornadoes.....Think Ahead!

### **REPORTING CONFLICTS WITH MILITARY AIRCRAFT**

If you are unfortunate enough to have a close encounter with a military aircraft in the Eielson AFB area, please report it to the FAA and to the Eielson AFB Safety Office. Reporting the incident to the Eielson Safety Office is the best way to ensure that action is taken to prevent further incidents. To report incidents call (907) 377-1155 or (907) 377-1025. You can also reach the Safety Office by mail at:

**354 FW/SE  
354 Broadway St., Unit 14A  
Eielson AFB AK 99702-1894**

**or email at:  
354fw.se@us.af.mil**

## EIELSON AFB AIRFIELD INFORMATION

LOCATION 22 miles east of Fairbanks, Alaska  
RUNWAY 32/14 14,500 feet, concrete, two north arresting cables, one south arresting cable  
ELEVATION 547 feet MSL  
LIGHTING Airfield Rotating Beacon (1 Green, 2 White)  
RUNWAY High Intensity Runway Lighting (HIRL) with Sequenced Flashing,  
Precision Approach Path Indicator (PAPI)  
NAVAIDS **TACAN-CH 98**  
Runway 32 ILS-109.90  
Runway 14 ILS-110.50  
RADAR No radar approaches at this time  
CLASS "D" AIRSPACE 4.7 nm radius up to 3,000 feet MSL  
FREQUENCIES TOWER-127.2 (VHF) OR 352.050 (UHF)  
GROUND-121.8 (VHF) OR 275.8 (UHF)  
SUAIS EIELSON RANGE CONTROL-125.3 (VHF)  
1-800-758-8723 (or 372-6913 from Fairbanks area)  
<http://www.jber.af.mil/11af/alaskaairspaceinfo/>

## EIELSON AFB AIR TRAFFIC CONTROL CONTACTS

Commander, Airfield Operations Flight	1Lt Eric Thomas	(907) 377-3116
Chief Controller	MSgt Irene Camacho	(907) 377-7050
Chief, ATC Training Standardization	TSgt Gregory McCracken	(907) 377-1233

## AVIATION SAFETY RESOURCES ON THE WEB

- **Alaska Military Operations Areas/Special Use Airspace Information Service @**  
<http://www.jber.af.mil/11af/alaskaairspaceinfo/>
  - **FAA Alaska Region Air Traffic Division @**
    - <http://www.alaska.faa.gov/at/>
    - **FAA Safety Team - FAAST @**  
<http://www.faasafety.gov/default.aspx>
    - **Aviation Safety Reporting System @**
      - <http://asrs.arc.nasa.gov/>

A Superior Pilot Is One Who Stays Out Of Trouble By Using Superior Judgment To Avoid Situations, Which Might Require The Use Of Superior Skills!

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