LAKE HOOD (LHD) AIRCRAFT OPERATIONS

This Operational Order applies to all general aviation and air taxi pilots operating on Lake Hood, Spenard Lake, and Runway 14/32. The purpose of this operational order is to improve operating procedures and lake safety, reduce aircraft noise impacts on surrounding neighborhoods, and minimize shoreline erosion.

Taxi Operations

- Slow taxi operations shall be conducted when operating within 200 feet of the shoreline except for the water lanes.
- Pilots shall contact the Air Control Tower (ATCT) before taxiing more than 50 feet from shore in Lake Hood and Spenard Lake due to congestion and water lane boundaries.
- Pilots must have ATCT clearance to taxi or operate in the areas known as the North Pothole and South Cove.
- Pilots who require access to Floatplane Point must have ATCT clearance to taxi and advise ATCT of the destination prior to landing.
- No magneto/engine checks shall be conducted while taxiing in the Slow Taxi Canal. To reduce bank erosion and noise problems engine checks should be completed as quickly as practical. The preferred area for magneto/engine checks is in Spenard Lake.
- Step taxiing is not authorized outside of the water lanes.
- No step taxiing is permitted in the Slow Taxi Canal.
- Step taxi may be approved by the ATCT in the takeoff/landing channel upon request. However, pilots shall minimize these requests.
- Upon landing pilots should remain on step until clear of the water lane.

Buoys

- Buoys highlight areas for heighten vigilance, such as proximity to the shoreline or waterlanes. Exercise caution and transit at no greater than slow taxi.
- Do not take-off, land or step taxi between buoys and the shoreline. Exercise caution for potential opposite taxiing aircraft and clear to the right IAW 14CFR91.115.

Departure Procedures

- Aircraft may come up on step for takeoffs only in the designated departure areas and waterlanes.
- A pilot must taxi out of the canals and be on the lake prior to asking ATCT for departure clearance.

The Spenard Lake extended departure procedure

- All westbound departures that commence from the uncontrolled departure area must advise the ATCT that they will be departing from the uncontrolled departure area. It is the pilot's responsibility to ensure separation from other aircraft while in the uncontrolled departure.
- The extended departure may commence no closer than 300 feet south of the North Shore.

Note: All areas on Lake Hood and Spenard Lake are uncontrolled except for the designated water lanes. Use caution when taxiing. Aircraft may use the uncontrolled area designated "uncontrolled departure area" to come up on the step for takeoffs to the west. Use extreme caution in this area. ATCT separation services are only provided in the controlled water lanes.

Preferential Water Lane Use

- Preferential water lanes for departures are to the north, west, northwest, or south. Departures to the east should be requested only when required by strong wind or sun conditions and designated by the ATCT as the active waterlane.
- During nighttime hours, pilots are encouraged to avoid departures to and arrivals from east and southeast. Nighttime procedures are in effect from 9:00 PM to 7:00 AM. The ATCT will provide noise sensitive advisory notices to all pilots requesting an east departure during nighttime hours.
- Do not takeoff or land in the North Pothole due to congestion and wake.

Note: The identified preferential departure and arrival water lanes for departures and arrivals are advisory. Under FAA regulations (FAR 91.3) the pilot in command is solely responsible for aircraft safety and the final decision on runway selection. However, voluntary compliance will significantly reduce noise complaints and public pressure to formalize more stringent polices.

INTERTIE POWER LINE

Civil/Military

Caution advised between Kashwitna River 61º 50´N/150º 02´W and Cantwell 63º 22´N/148º 50´W along the Intertie Power Line. They are not marked with the international orange marker balls.

POLLUTION REPORT (POLREP) FORMAT

Civil/Military

1. Pilots are requested to volunteer reports of water pollutants (oil, chemicals, dye etc.) including size, source of pollutant, on–scene weather and other significant information. The POLREP should be transmitted to the U.S. Coast Guard National Response Center (NRC), telephone 800–424–8802, via communications with either the parent command, USAF Global Command Control System Station or any U.S. Coast Guard Air Station.
2. Pollution reports should be made any time pollution is sighted within 50 nautical miles of the U.S. shoreline, on the Great Lakes, or on the navigable rivers of the United States.
3. POLREP FORMAT:
   a. Pollution substance (oil, dye, etc.)
   b. Location (latitude–longitude or radial/DME)
   c. Size of slick/polluted area (meters, yards, miles)
   d. Time discovered (UTC)
   e. Direction of movement
   f. Source (course, speed, name, if vessel)
   g. Condition of pollutant (breaking up, heavy dark streaks, pancake shape, etc.)
   h. On–scene weather (wind speed, wind direction, sea state, visibility, percent cloud cover)
   i. Identification and parent command of reporting source.

(23 Mar 1978)

PORT VALDEZ AREA

Civil/Military

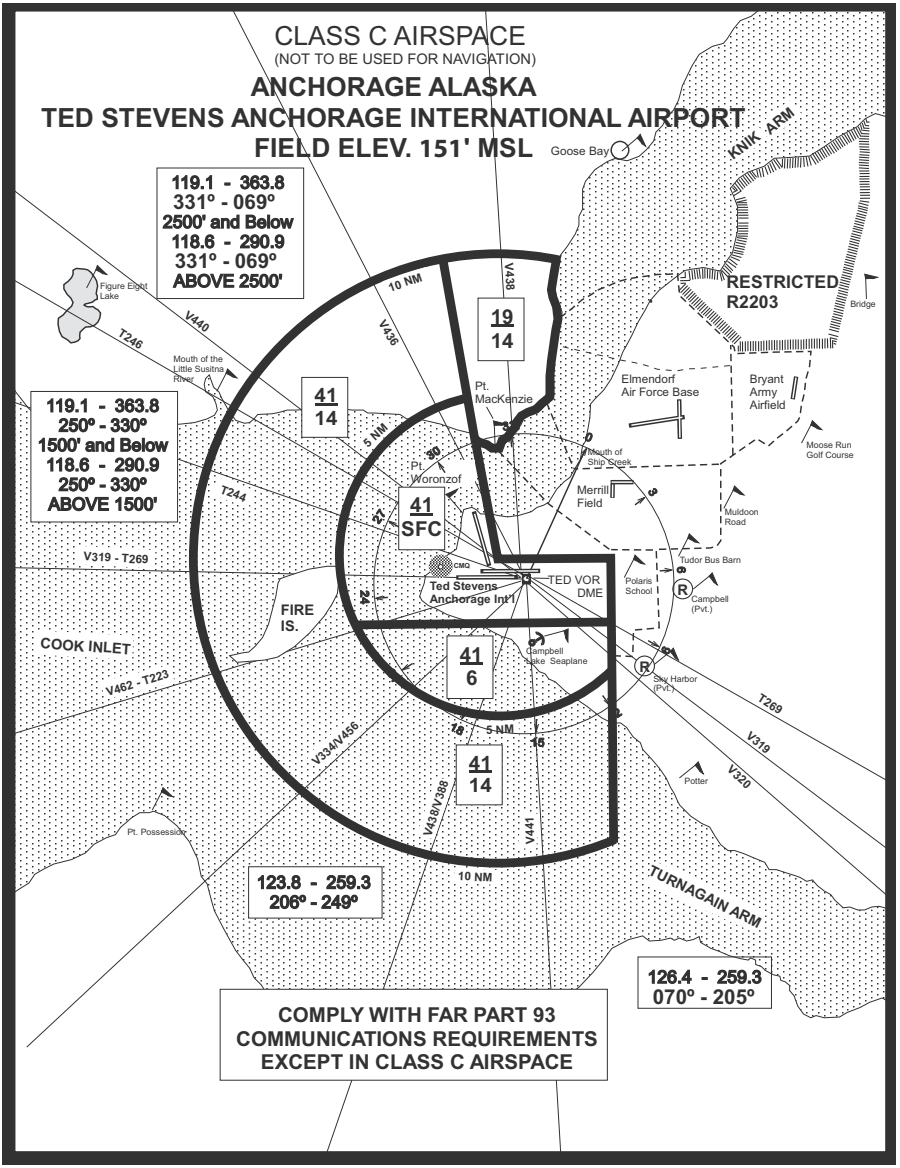
Aircraft operating outside of controlled airspace below 600 feet mean sea level in the Valdez Arm, Valdez Narrows and Port Valdez are advised to avoid flight over or near tankers in compliance with FAR 91.119C, Juneau is the coordinating Flight Service Station.

(6 Oct 1977)

AVIATION FUEL

Civil

Responsibility for assuring availability of aviation fuel at enroute stops rests solely with the pilot. Confirmation of availability of fuel should be made directly with fuel dispensers at locations where refueling is planned.


CLASS C AIRSPACE
(NOT TO BE USED FOR NAVIGATION)
ANCHORAGE ALASKA
TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT
FIELD ELEV. 151' MSL
119.1 - 363.8
331° - 069°
2500' and Below
118.6 - 290.9
331° - 069°
ABOVE 2500'
119.1 - 363.8
250° - 330°
1500' and Below
118.6 - 290.9
250° - 330°
ABOVE 1500'
123.8 - 259.3
206° - 249°
126.4 - 259.3
070° - 205°
COMPLY WITH FAR PART 93
COMMUNICATIONS REQUIREMENTS
EXCEPT IN CLASS C AIRSPACE
10 NM
5 NM
41 SFC
19 14
41 14
41 6
41 14
Ted Stevens Anchorage Int'l
TED VOR DME
CMG
FIRE IS.
COOK INLET
TURNAGAIN ARM
KNIK ARM
Goose Bay
Figure Eight Lake
Mouth of the Little Susitna River
Pt. MacKenzie
Pt. Woronzof
Mouth of Ship Creek
Elmendorf Air Force Base
Bryant Army Airfield
Moose Run Golf Course
Merrill Field
Muldoon Road
Tudor Bus Barn
Polaris School
Campbell (Pvt.)
Campbell Lake Seaplane
Sky Harbor (Pvt.)
Potter
Pt. Possession
RESTRICTED R2203
Bridge
V438
V436
V440
T246
T244
V319 - T269
V462 - T223
V334/V456
V438/V388
V441
T269
V319
V320

Anchorage, Alaska

CARTEE AIRSPACE
Elmendorf Air Force Base

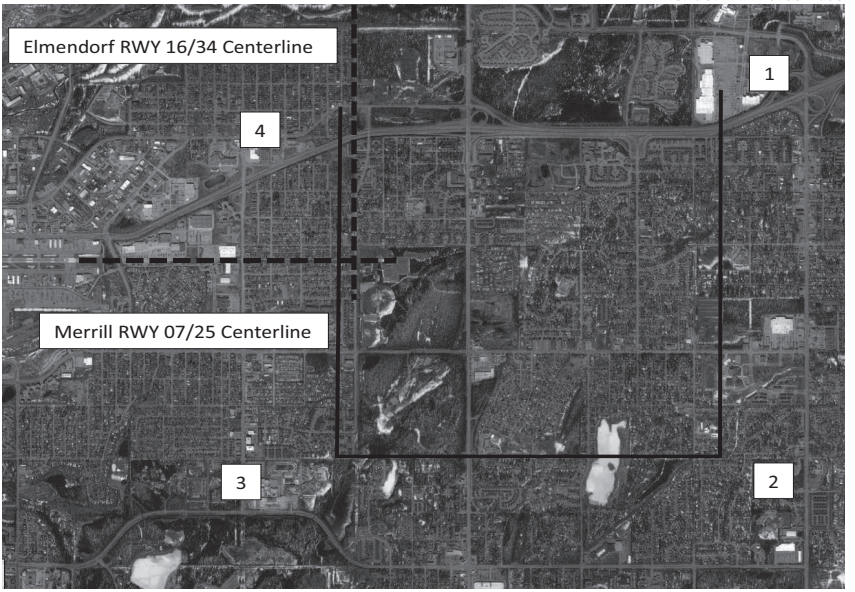


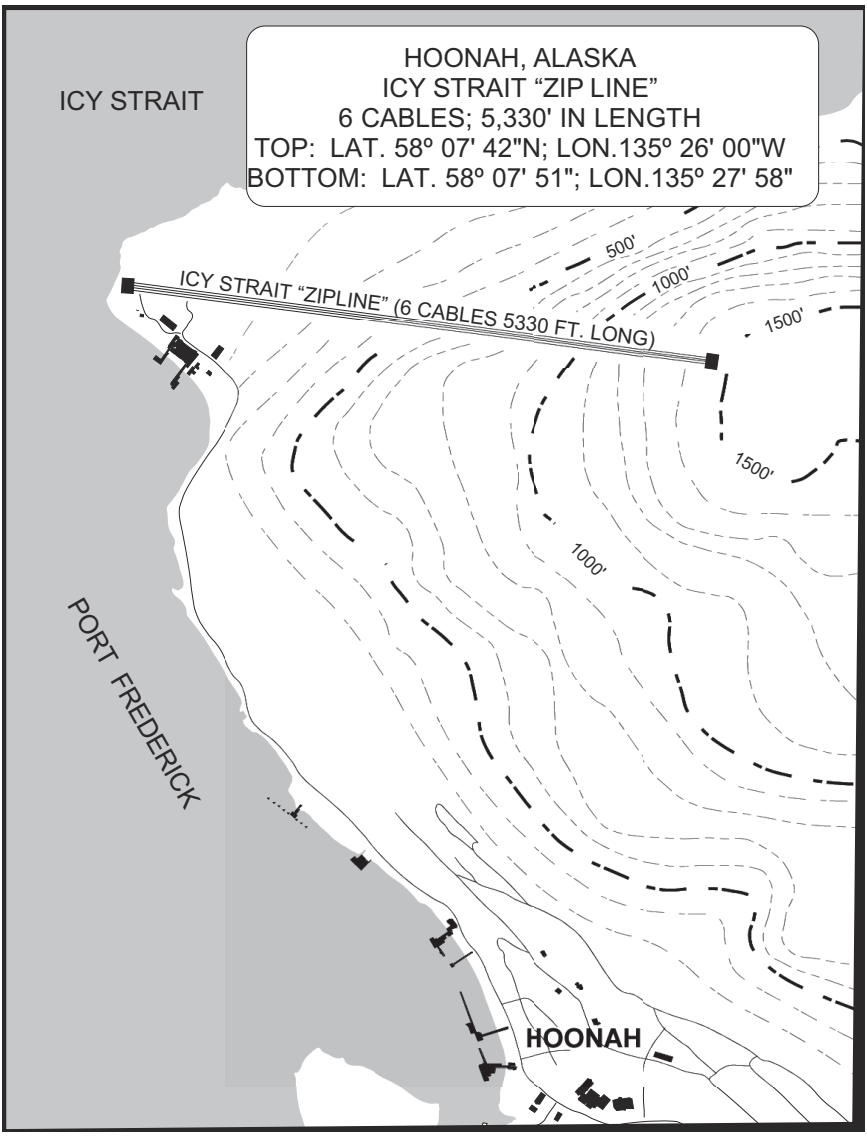
CHART NOT TO BE USED FOR NAVIGATION

The CARTEE Airspace is sanitized airspace within the Merrill Field Class D surface area that can be released to Elmendorf AFB for Runway 16/34 operations. Upon release, Elmendorf has approval for control purposes of this area. The CARTEE Airspace begins at the surface and extends to 2,500 feet MSL. Its lateral dimensions are defined by Points 1, 2, 3, and 4 below. When given clearance for the CARTEE Airspace crews should use caution to not fly east of the Tikahtnu Commons parking lot (Point 1), south of the middle of Cheney Lake (on the line defined by Point 2 and Point 3), and west of the extended centerline for Elmendorf Runway 16/34. Expect extensive civil aircraft activity operating into Merrill Field west of Runway 16/34 extended centerline. CARTEE procedures and protections are only available during the hours Merrill tower is manned and controlling their Class D airspace. After MRI tower operating hours, CARTEE operations and protections cease and are unavailable for request, as MRI reverts to Class E airspace. See Merrill Airfield Remarks in Chart Sup AK for daily hours.

See Anchorage/Merrill Field notices section of this supplement for additional CARTEE information.

Point 1: N 61° 13′ 38.95″ W 149° 44′ 41.28″
Point 2: N 61° 12′ 09.24″ W 149° 44′ 41.58″
Point 3: N 61° 12′ 09.19″ W 149° 47′ 42.74″
Point 4: N 61° 13′ 34.57″ W 149° 47′ 42.98″

ALASKAMILITARYAIRSPACE@us.af.mil


HOONAH, ALASKA
ICY STRAIT "ZIP LINE"
6 CABLES; 5,330' IN LENGTH
TOP: LAT. 58º 07' 42"N; LON.135º 26' 00"W
BOTTOM: LAT. 58º 07' 51"; LON.135º 27' 58"
ICY STRAIT
ICY STRAIT "ZIPLINE" (6 CABLES 5330 FT. LONG)
500'
1000'
1500'
1500'
1000'
PORT FREDERICK
HOONAH

REPORTABLE AVIATION ACCIDENTS OR INCIDENTS

The National Transportation Safety Board (NTSB) is the federal agency charged with investigating all civil and most government aviation accidents. If you are involved in an aviation accident, or reportable incident, you may fulfill your immediate reporting obligation by calling the NTSB field office in Anchorage. This office is responsible for investigating all aviation accidents that occur in Alaska. Their daytime telephone number is: (907) 271–5001. After normal duty hours, please call (907) 271–5936, and ask to speak with an NTSB investigator. Should questions arise regarding what constitutes an accident or incident, or if you have any other questions about the NTSB, please call the NTSB.

Alaska State Statute 02.35.110. Emergency rations and equipment.

(a) An airman may not make a flight inside the state with an aircraft unless emergency equipment is carried as follows:
  (1) the following minimum equipment must be carried during the summer months:
    (A) rations for each occupant sufficient to sustain life for one week;
    (B) one axe or hatchet;
    (C) one first aid kit;
    (D) an assortment of tackle such as hooks, flies, lines, and sinkers;
    (E) one knife;
    (F) fire starter;
    (G) one mosquito head net for each occupant;
    (H) two small signalling devices such as colored smoke bombs, railroad fuses, or Very pistol shells, in sealed metal containers;
  (2) in addition to the equipment required under (1) of this subsection, the following must be carried as minimum equipment from October 15 to April 1 of each year:
    (A) one pair of snowshoes;
    (B) one sleeping bag;
    (C) one wool blanket or equivalent for each occupant over four.

(b) Notwithstanding (a) of this section, operators of multi–engine aircraft licensed to carry more than 15 passengers need carry only the food, mosquito nets, and signalling equipment at all times other than the period from October 15 to April 1 of each year, when two sleeping bags, and one blanket for every two passengers shall also be carried.

(c) All of the above requirements as to emergency rations and equipment are considered to be minimum requirements which are to remain in full force and effect, except as further safety measures may be from time to time imposed by the department.

OPR: Alaskan Region Flight Standards **Date: March 2013**

CIVIL USE OF MILITARY FIELDS

LANDING AT AIR FORCE AIRFIELDS —Except for emergencies prior permission is required for use of Air Force airfields. Information relevant to the submission of the requests, insurance requirements, landing fees, etc. may be obtained from Headquarters, 611th Air Support Squadron, 10471 20th St, Suite 201, Elmendorf AFB, AK 99506, telephone 907–552–1448, email: AKLandingPermits@us.af.mil. Civil aircraft landing permit applications for Air Force airfields in Alaska must be submitted to the above address a minimum of 15 days prior to first intended landing to ensure timely return of the landing permit if approved (permit must be on board aircraft for presentation upon landing). Civil aircraft landing applications for Air Force airfields outside the state of Alaska must be submitted to HQ USAF/XOO–CA, 1480 Airforce Pentagon RM 4D1010, Washington, DC 20330–1480, telephone 703–697–5967, fax 703–695–7004 a minimum of 30 days prior to first intended landing. Civil aircraft landing without prior authorization may experience extensive delays in departure and will be assessed special landing fees.

LANDING AT U.S. ARMY AIRFIELDS —Except for emergencies, prior permission is required and should be requested from the installation commander via the operations officer of the airfield concerned.

For Navy and Marine Corps Installations, prior permission should be requested at least 30 days prior to first intended landing, either from the Chief of Naval Operations (OP–513E) or the Commanding Officer of the field concerned (who has the authority to approve landing rights for certain categories of civil aircraft). An Aviation Facility License must be approved and executed by the Navy prior to any landing by civil aircraft.

For Coast Guard fields prior permission should be requested from the Commandant, U.S. Coast Guard via the Commanding Officer of the field.

When instrument approaches are conducted by civil aircraft at military airports, they shall be conducted in accordance with the procedures and minimums approved by the military agency having jurisdiction over the airport.

PARACHUTE JUMPS ONTO AIRPORTS

Pilots of jump aircraft and parachutists are reminded that Federal Aviation Regulations, Part 105, requires prior approval from airport management to parachute jump onto airports. Written approval to jump onto state–owned airports must be obtained 72 hours in advance from the Director, Division of Aviation, 4111 Aviation Ave. Anchorage, Alaska 99502.

MAGNETIC COMPASS DEVIATIONS

Extreme variations in compass deviations may be experienced due to magnetic storms at geographic latitudes greater than 60º N. The variations may have duration of several minutes to several hours and cause compass swings of 5–10º. The National Oceanic and Atmospheric Administration's Environmental Research Lab high latitude monitoring station at Elmendorf AFB provides present and forecast conditions daily. This information summary may be obtained by calling 566–1819.

RADIATION AREAS

Aircraft should avoid the following areas:

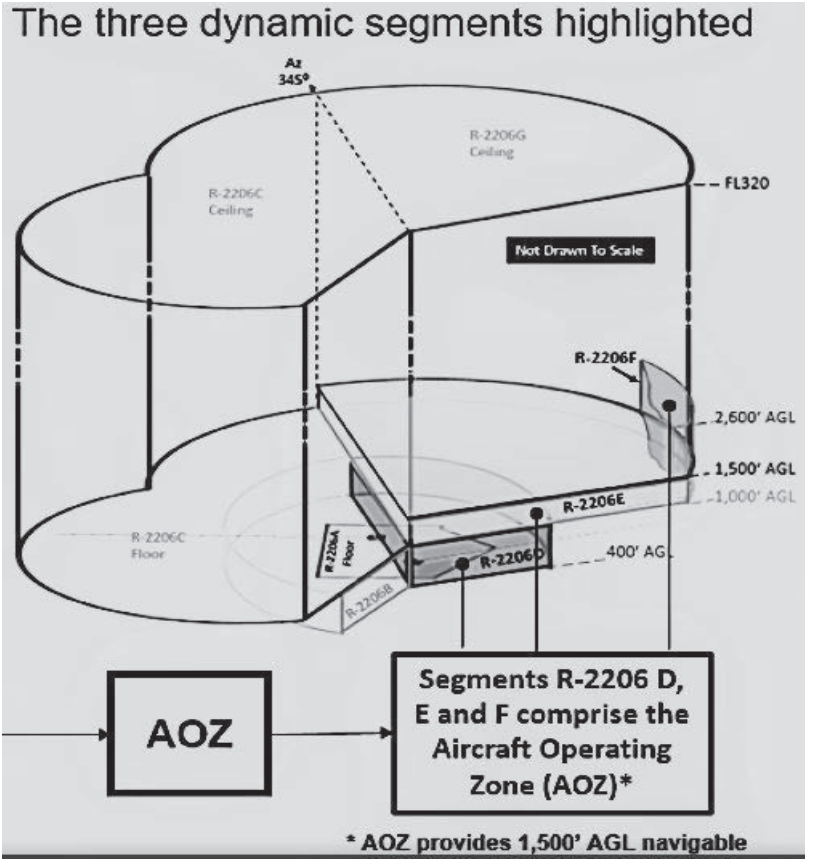
Radiation hazard area from SFC to 16,000´ MSL for aircraft out to 3 NM with externally mounted electro explosive devices (EED). Possible interference with electronic equipment for aircraft above 200 feet MSL out to 3 NM (military) or 62 NM (civilian) from a phased array antenna on NW corner of Shemya Island (52º44´N 174º05´E) on a bearing of 250º thru 028ºT. These are parameters for information only.

RF radiation area from 100 feet AGL to 5000 feet MSL within a 5000 feet radius of Clear BMEW radar site.

Clear, Alaska

Possible damage and/or interference to airborne electrical systems due to high level radio energy in the vicinity of R-2206. Monitor frequency 133.25 MHz for status of restricted area. An Aircraft Operating Zone (R-2206 Segments D, E, F; depicted below) is established within 3 NM of Clear Airport at and below 1,500' AGL, but does not include the airspace within R-2206A. Navigable airspace is available within 1/2 NM east and west along Parks Highway below 2,600' AGL when Segment F is not active.

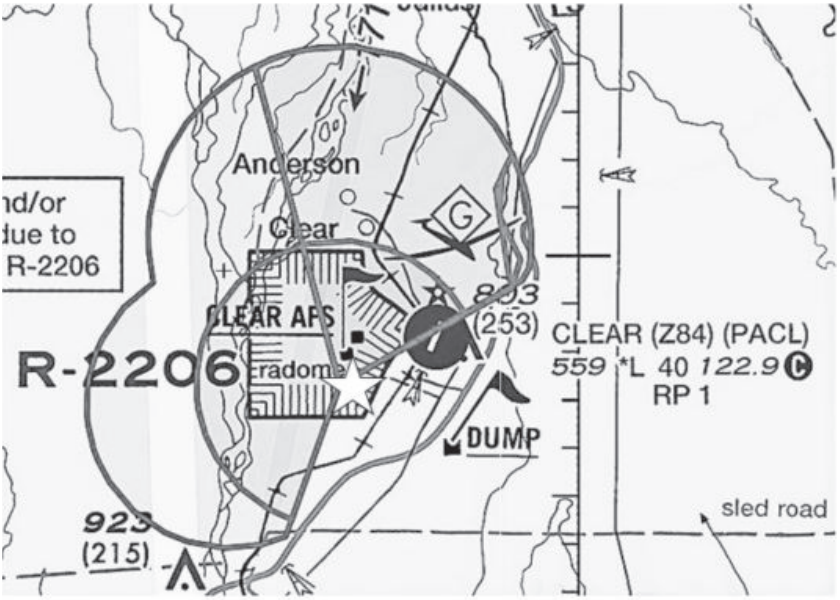
A beacon will provide visual (flashing white during daytime, flashing white/red alternating at night) warnings when the AOZ airspace is unsafe for aircraft operations. The beacon is located 2.45 NM southwest of Clear airport (64° 17' 13"N/149° 11' 16"W), mounted on a building rooftop (location depicted below). The light beacon is baffled and only visible on radials 345CW200 from its location, or is visible, day and night, while flying southbound from PANN airport between 1,000 feet and 2,600 feet AGL and along the Parks Highway. The light beacon is not visible from Clear Airport ramps or other surfaces; monitor frequency 133.25 MHz for current status. Severe weather will affect the visibility of the beacon; use extreme caution during periods of low visibility.



Office of Primary Responsibility (OPR): Operations Support Group, Western Service Area
Contact Information: (206) 231-2241
Original: April 2023

Clear, Alaska

Warning Beacon Location



Beacon Location

Office of Primary Responsibility (OPR): Operations Support Group, Western Service Area
Contact Information: (206) 231-2241
Original: April 2023

SAN FRANCISCO RADIO

(Services available for aircraft engaged in international flight)

San Francisco Radio using Pacific common air/ground ATC frequency networks shared with other ground stations are listed below. The frequencies in use will depend on the time and conditions which affect radio propagation. International flights on the ground at ANC or within VHF range of the SEA—ANC network that are entering the NOPAC Route System within Anchorage Centers FIR boundary should contact San Francisco Radio on VHF 129.4 to obtain primary/secondary HF frequencies and verify SELCAL before entering NOPAC. If unable 129.4, primary/secondary HF frequencies may be obtained from Anchorage ARTCC, but no SELCAL is available.

NORTH PACIFIC (NP) NETWORK FREQUENCIES

San Francisco

MWARA —5628, 6655, 8951, 10048, 13339, 17946 and 21925 kHz

LDOCF ⓒ —3494, 6640, 8933, 11342, 13348, 17925 and 21964 kHz

CENTRAL EAST PACIFIC (CEP) NETWORK FREQUENCIES

San Francisco

Extended Range VHF ⓐ —131.95

MWARA —2869, 3413, 3452, 5547, 5574, 6673, 8843, 8915, 10057, 11282, 13288, 13354 kHz

LDOCF ⓒ —3494, 6640, 8933, 11342, 13348, 17925, and 21964 kHz

Seattle

Pre–flight checks ⓑ —129.4 (SEA–ANC) 131.80 (North West)/131.95 (Central, CA)/128.9 (Southern, CA)

SSB capability available on all HF freqs. ⓐ Extended Range VHF Coverage 131.95 includes area within approximately 200 NM of the Hawaiian Islands and along the Hawaii–Mainland US tracks extending outward approximately 250 NM from the HNL, SFO and LAX areas. ⓑ Call ARINC on VHF to arrange HF checks: 129.40 available for enroute communications on SEA—ANC routes. 131.80 available SEA/MFR. ⓒ Users are reminded that all transmissions on the San Francisco Radio HF SSB LDOCF must be in the single side and mode (upper sideband only). Phone patch service will be available as a normal part of the service. Communications are limited to aircraft operational control matters. Public correspondence (personal messages) to/from crew or passengers cannot be accepted. Refer questions to San Francisco Radio operations at 1–800–621–0140.

Aircraft operating in the Anchorage Arctic CTA/FIR beyond line of sight range of remote control VHF air/ground facilities operated from the Anchorage ARTCC, shall maintain communications with Gander Radio and a listening or SELCAL watch on HF frequencies of the North Atlantic D (NAT D) network (2971 kHz, 4675 kHz, 8891 kHz and 11279 kHz). Additionally, Gander Radio can provide Anchorage and Fairbanks surface observations and terminal forecasts to flight crews on request.

SATCOM VOICE AVAILABLE AS ALTERNATIVE COMMUNICATIONS MEDIUM:

San Francisco Radio has operational use of SATCOM Voice as an acceptable alternative communications medium for oceanic long range ATC communications. It is intended that SATCOM Voice will augment HF radio, in that HF will remain primary for all air communications between San Francisco Radio Communications Center and enroute oceanic aircraft. Aircraft desiring to air–ground–contact San Francisco Radio Communications Center should use the following SATCOM Short Code Number:

Oceanic Area	Center	SATCOM Short Code Number
Pacific	SFO	436625

San Francisco Radio will also utilize SATCOM Voice as a normal operational backup to HF to initiate communications from ground–to–air on the rare occasion when HF communications cannot be established in a timely manner. SATCOM Voice may be used for either ATC or AOC (Aeronautical Operation Control) Communications.

Direct SATCOM Voice communications is available with Anchorage Center for distress and urgency situations only. Information regarding SATCOM Voice is contained in Communications and Position Reporting, below.

Office of Primary Responsibility (OPR): Anchorage Center – FAA/AJE-ZAN-IAP
Contact Information: 907-269-1801; email: AJE-EW-ZAN-Airspace-Staff@faa.gov
Amended: June 2023

THE NOPAC ROUTE SYSTEM

I. GENERAL

NOPAC traffic flows are predictable due to consumer demand, time zone differences, winds aloft and airport noise restrictions. Eastbound air traffic is heavy between 0700Z and 2100Z. Westbound air traffic is heavy between 1200Z and 1900Z, and between 2200Z and 0700Z. When the NOPAC Route System is selected as the preferred routing due to winds aloft, route saturation can occur. The most critical altitudes are flight levels 310 through 390.

II. NOPAC SYSTEM

The NOPAC Route System is comprised of four Air Traffic Service (ATS) routes between Alaska and Japan. The two northern routes are used for Southwest bound traffic. The two southern routes are used for Northeast bound traffic.

III. ROUTES

R220: One–Way Southwest bound, FL180 - FL400 or FL410 and above, FL340 - FL400 require aircraft have approvals for Required Communications Performance 240 (RCP240), Required Surveillance Performance 180 (RSP180) and Required Navigation Performance 4 (RNP4).
M523: One-Way Southwest bound, FL340-FL400 only, for those aircraft equipped with RCP240, RSP180, and RNP4.
R580: One–Way Northeast bound, FL180-FL330 or FL410 and above, FL340-FL400 require aircraft have approvals for RCP240, RSP180, and RNP4.
A590: One–Way Northeast bound, Odd Altitudes FL190 to FL410, also FL300, FL320, FL340, and FL450

NOTE: Radial/DME cross checks are available as follows:
for NATES on R220: SYA 329R/152DME
for ONEIL on R580: SYA 329R/102DME
for PINSO on A590: SYA 329R/052DME
for CHIPT on G344: SYA 148R/100DME

IV. TRANSITION ROUTES

Within the Fukuoka FIR, Oceanic Transition Routes (OTRs) and, in one case, a Victor route, have been established for aircraft transitioning to or from the NOPAC Route System. Within the Anchorage FIR, certain ATS routes are used for the same purpose. These routes include: **G583, B757, R341, G469, A342, G215, R330, R338 and G349 (For westbound use only).**

V. NOPAC REROUTES

Aircraft cannot always be accommodated on their flight planned NOPAC route. In an effort to reduce both coordination time and coordination errors, JCAB (Fukuoka ATMC) and FAA (Anchorage ARTCC) have agreed on a common procedure to accommodate most reroutes. Aircraft rerouted from one NOPAC ATC route to another NOPAC ATC route will be given short range clearances into the adjoining FIR's RADAR coverage airspace. The receiving ATC facility will then issue further routing to the aircraft prior to the aircraft reaching the clearance limit. **Example 1:** aircraft ABC101 is routed via M523 to RJTT but can not be accommodated on M523. The aircraft may be re–cleared as follows: "ABC101 cleared to NANAC via R220, expect further clearance from ATMC after NANAC."

VI. SEPARATION STANDARDS

VERTICAL – Reduced Vertical Separation Minima (RVSM) is applied from FL290 to FL410 inclusive in the Anchorage Domestic, Oceanic and Arctic FIRs. RVSM aircraft are separated by 1000 feet vertical spacing within this stratum. Non–RVSM aircraft are separated from all other aircraft, both RVSM and Non–RVSM, by 2000 feet within this stratum.

LATERAL – Between FL340-FL400 the primary form of lateral separation within the NOPAC Route System is 23 NM for aircraft equipped with RCP240, RSP180 and RNP4. Between FL180 to FL330, or FL410 and above, on R220 and R580, the lateral separation is 50 NM for aircraft equipped with RNP4 or RNP10 (RNAV10). (See FAA AC 90-105A for the aircraft RNP-10 approval process.) Non-RNP10 aircraft are provided standard oceanic separation (50 NM either side of the aircraft's centerline). Non-RNP10 aircraft may flight plan a route at least 75 NM south of A590.

A combination of 50 NM lateral, based on RNP-10, and standard oceanic separation may be also be applied between aircraft pairs where one aircraft has RNP-10 approval and the other does not. The minimum lateral separation between aircraft on adjacent flight paths in this case is 75 NM-one half the lateral protected airspace for each aircraft. Additionally within the Anchorage Oceanic and Domestic FIRs, Anchorage ARTCC applies Automatic Dependent Surveillance - Contact (ADS-C) 23 NM lateral separation for suitably equipped aircraft.

As noted above, standard oceanic separation will be applied between non-RNP 10 aircraft at any altitude and may be applied between all aircraft operating below FL180 unless radar service is being provided or the aircraft is within domestic control areas, as in Control 1234.

LONGITUDINAL – Within the Anchorage Oceanic and Domestic FIRs, Anchorage ARTCC applies Automatic Dependent Surveillance – Contract (ADS–C) 50 NM and 30 NM longitudinal separation for suitably equipped aircraft. ADS–C 50 is accomplished with a 14 minute aircraft reporting rate. ADS–C 30 is accomplished with a 9.6-minute aircraft reporting rate. Aircraft not equipped/certified for ADS–C separation will be provided standard oceanic longitudinal separation, i.e. 15 minutes "in trail." This standard separation may be reduced to 5 minutes when the ICAO recognized "MACH Number Technique" is utilized. Additionally, Anchorage ARTCC has been authorized to conduct a trial of the "10 minute longitudinal standard" within its Oceanic FIR. This last standard is applied regardless of the application of MACH Number Technique. Within the Anchorage Domestic FIR, which includes Control Areas 1234H, 1487H and the Norton Sound High Control Area, Anchorage Center utilizes the standard domestic separation minima of 10 minutes between aircraft. This separation may be reduced via other standard or special procedures. For example, with the ADS-C Climb Descent Procedure CDP and ADS-B in Trail Procedure (ITP), aircraft may be climbed or descended through the altitude of another aircraft with 15 NM Longitudinal separation. Anchorage ARTCC has been authorized to utilize reduced DME/RNAV longitudinal separation for brief periods when aircraft are beyond normal VHF coverage. This procedure permits the separation of aircraft by 30 DME or 40 RNAV miles for periods beyond VHF coverage (i.e. beyond direct pilot/controller communications) for 90 minutes or less.

Office of Primary Responsibility (OPR): Anchorage ARTCC TMU
Contact Information: 907-269-1108
Amended: March 2024

FLIGHT PLANS and PREFERRED ROUTES

I. Flight Plans

All operators planning IFR flight operations in the Anchorage Oceanic and Domestic Flight Information Regions west of 165º west longitude and south of 63º north latitude must file flight plans with both PAZAZQZX and PAZNZQZX. Failure to file with both system addresses may result in delay of ATC services.

Operators shall enter "W" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RVSM operations, in accordance with ICAO Doc 4444. Aircraft not approved for RVSM operations shall not enter "W" in item 10.

Operators shall enter "R" in item 10 of the ICAO flight plan if the aircraft and operator have been approved for RNP operations in accordance with ICAO Doc 4444 for the route of flight. Aircraft not approved for RNP operations shall not enter "R" in item 10.

All aircraft flight planned to cross the Anchorage/Fukuoka FIR on or north of waypoints PASRO shall be established on a NOPAC route at or prior to the FIR. Aircraft operating beneath the NOPAC (at or below 17,000 MSL) may flight plan via random routes. To provide Control Centers with information on intended route of flight, all operators are requested to include the following data in the route definition portion of random flight plans involving flight in the Pacific Flight Information Regions under the jurisdiction of the U.S. Federal Aviation Administration.

A. Names, where applicable, or coordinates of points associated with transition from oceanic control areas to airways or areas where national procedures apply
B. Names of airways or descriptions of routes within such national airspace
C. Coordinates for each 5º or 10º of latitude, or for each 5º or 10º of longitude, depending on the predominant direction of flight. 10º increments should only be used when the speed of the aircraft is such that 10º will be traversed within 1 hour 20 minutes.

Operators in the NOPAC Route System are reminded that flight plans must be filed in accordance with ICAO procedures and formats. This will allow for automatic flight data processing at oceanic control centers and oceanic radio stations along the route.

Flights originating outside of Anchorage or Fukuoka FIRs and entering oceanic airspace without intermediate stops should submit flight plans as early as possible.

In addition to the normal requirement of addressing the flight plan to all control centers en route, associated oceanic radio stations should also be addressed. This will provide those stations with information such as flight identification, SELCAL, aircraft registration, destination, and ETA, which is necessary to handle the traffic. A properly addressed flight plan, formulated in accordance with ICAO standards, will be processed automatically by oceanic centers.

When flight planning via transition tracks and/or ATS routes, list the point of entry, followed by the route designator, and finally the point of exit, e.g., KATCH – B757 – NULUK –R220 – NANAC.

To minimize flight crew and controller workload, information should be carried for routes other than the one being flown. This material should include route data, reporting points, fuel burn, winds aloft, time enroute, etc., for those routes compatible with the direction of flight. Data for routes R591 and G344 should also be carried regardless of the direction of flight as they are used for both eastbound and westbound traffic. Carrying this information will avoid unnecessary delays in the event a route or flight level other than that filed in the original flight plan is assigned by ATC. Readily available material will facilitate timely crew decisions as to their preference of alternate routes or altitudes.

II. Preferred Routes

Anchorage ARTCC will periodically issue International NOTAMs specifying the preferential routes to be flown within the Anchorage FIR. Each NOTAM will individually denote, during specified time periods, either the westbound or eastbound tracks. Flights filed contrary to these NOTAM's or preferred routes may expect reroutes, sequencing delays, and/or severe altitude restrictions for same direction, crossing, or opposite direction traffic. Aircraft must have RVSM and RNP 10 (RNAV 10) or RNP 4 approval from the appropriate State authority to operate in the NOPAC between FL290 and FL410 inclusive. Additionally, aircraft operating on ATS Routes R220, M523 and R580 from FL340 through FL400 must have RCP240, RSP180 and RNP4 approval from the appropriate State authority. Operators who do not have approval should see section E, "Exceptions," below.

A. SOUTHWEST BOUND

1. Aircraft entering the NOPAC Route System may use:
   a. R220 at all times utilizing even cardinal altitudes from FL180 to FL400 and FL330, FL350, FL370, FL390, FL410, and FL430 with the following guidelines:
      (1) Flights departing PANC or PAED shall flight plan NODLE thence R220.
      (2) Flights departing from all other airports within the Anchorage FIR and flights crossing the Edmonton/Anchorage, Vancouver/Anchorage, or Oakland/Anchorage FIR boundary shall flight plan via the current daily Westbound PACOTS track message or via the current Anchorage ARTCC (PAZA) User Preferred Route (UPR) NOTAM and Fukuoka UPR Guidance Material.
   b. M523 at all times utilizing even cardinal altitudes from FL340 to FL400 flight planned via the current Anchorage ARTCC (PAZA) User Preferred Route (UPR) NOTAM Fukuoka UPR Guidance Material.
2. Due to route crossing in a non–radar environment, westbound arrivals destined for RJCC (Sapporo/New Chitose), RJCH (Kakodate), or RJSM (Misawa), as well as other westbound aircraft leaving the NOPAC Route System via V51, must file via R220.

B. NORTHEAST BOUND

1. Aircraft transitioning the NOPAC Route System eastbound to North America or Europe may use:
   a. A580 at all times utilizing odd cardinal altitudes from FL180 to FL400 and FL340, FL360, FL380 and FL400 with the following guidelines:.
      (1) Flights crossing the Fukuoka/Anchorage FIR boundary shall flight plan via the current daily Eastbound PACOTS track message or the current Fukuoka UPR Guidance material and Anchorage ARTCC (PAZA) User Preferred Route (UPR) NOTAM.
   b. A590 at all times utilizing odd cardinal altitudes from FL190 to FL410 and FL300, FL320 and FL340. Above FL410, altitudes are assigned as per ICAO Annex 2, Appendix 3b.
   c. Flights south of A590 shall flight plan via daily Eastbound PACOTS track message or the current Fukuoka UPR Guidance material and Anchorage ARTCC (PAZA) User Preferred Route (UPR) NOTAM.

C. ACCOMMODATION OF NON-RVSM AIRCRAFT

1. Subject to approval and clearance, the following categories of non-RVSM aircraft may operate in domestic U.S. RVSM airspace provided they have an operational transponder:
   a) Active air ambulance flights using a "MEDEVAC" call sign.
   b) Aircraft climbing/descending through RVSM flight levels (without intermediate level off).
   c) State Aircraft. (military (DOD), customs, police service, etc.).
   Note: State Aircraft may also flight plan at RVSM flight levels in oceanic and offshore airspace of the Anchorage FIRs without prior coordination. State aircraft should include the statement "STS/Military NON-RVSM" in field 18 of the ICAO flight plan.

2. The following non-RVSM civil aircraft may be accommodated when operating within the Anchorage oceanic and offshore airspace:
   a. Aircraft being initially delivered to the State of Registry or Operator.
   b. Aircraft that were formerly RVSM-approved but have experienced an equipment failure and are being flown to a maintenance facility for repair in order to meet RVSM requirements and/or obtain approval.
   c. Aircraft being utilized for mercy or humanitarian purposes.
   d. Aircraft transporting a spare engine mounted under the wing.
   e. When requesting and of these accommodations operators shall:
      (1) if departing within the Anchorage FIR, or if Anchorage ARTCC is the first Oceanic control facility along the route of flight, obtain approval from Anchorage ARTCC Traffic Management Unit (TMU) normally not more than 12 hours and not less than 4 hours prior to the intended departure time; or
      (2) if entering the Anchorage FIR from another Oceanic FIR, notify the Anchorage ARTCC TMU after approval is received from the first affected Oceanic Center and prior to departure (Note: Filing the flight plan is not appropriate notification) and
      (3) include the remarks "APVD non-RVSM" in Field 18 of the ICAO Flight Plan.

   Contact details for approval request or notification are as follows:

   Anchorage ARTCC TMU
   Tel: 1–907–269–1108
   Fax: 1–907–269–1343
   AFTN: PAZAZQZX

3. Operators of Non-RVSM aircraft shall not file "W" in item 10 of the flight plan.

D. NON-RVSM VOICE PROCEDURES

1. During operations in, or vertical transit through, reduced vertical separation minimum (RVSM) airspace with aircraft not approved for RVSM operations, pilots shall report non-approved status as follows:
   a. at initial call on any channel within RVSM airspace;
   b. in all requests for level changes; and
   c. in all readbacks of level clearances

E. ACCOMMODATION OF NON-RNP10 AIRCRAFT

1. Aircraft not approved for RNP10 (RNAV 10) operations are restricted to flight planning one of the following NOPAC routings:
   a) Southwest bound at least 75 NM south of A590 at all times;
   b) Northeast bound on A590 at all times;

The altitudes available on the above routes are at or below FL280 and at or above FL430. ATC may reroute non–RNP 10 aircraft to other than the above routes due to traffic.

COMMUNICATIONS and POSITION REPORTING

I. General

ICAO Annex 6 Part II contains standards and recommended practices adopted as the minimum standards for all airplanes engaged in general aviation international air navigation. It requires that those airplanes, operated in accordance with Instrument Flight Rules, on a controlled VFR flight plan, or at night, have installed and approved radio stations and monitor such frequencies as may be prescribed by the appropriate authority.

II. High Frequency (HF) Communications

Most North Pacific area communications are conducted on HF single sideband. Pilots communicate with control centers via oceanic radio stations. Aircraft reports, requests, and messages are relayed by the station to the appropriate air traffic control center by interphone, computer display, or teletype message. The relay function, coupled with the need for intercenter coordination, may cause delays in the handling of routine aircraft requests. There are priority message handling procedures for processing urgent messages which reduce any time lag; however, flight crews should take possible delays into consideration when requesting step climbs, reroutes, or other routine requests requiring ATC action. Delays can be reduced through advanced planning of such requests.

Due to the inherent "line of sight" limitations of VHF radio equipment when used for communications in international oceanic airspace, those aircraft operating on an IFR or VFR controlled flight plan beyond the communications capability of VHF will be required as per ICAO Annex 2, to maintain a continuous listening watch and communications capability on the assigned HF frequencies. An operable SELCAL unit or similar automatic signaling device fulfills this requirement. The applicable HF frequencies are listed earlier in this Supplement as part of the general purpose communication facilities operated by San Francisco Radio. These facilities will be responsible for the relay of position reports and other pertinent information between the aircraft and Air Traffic Control or their respective operators.

Aircraft should establish communications with the appropriate oceanic radio station upon entering the FIR. The station will advise the aircraft of the primary and secondary HF channels in use. If possible, aircraft should monitor both of these frequencies. If the aircraft has only single HF capability, the primary should be guarded with the secondary being the first frequency checked in the event of lost communications. If the SELCAL unit is working at the time of the initial contact, the aircraft may maintain a SELCAL watch on the appropriate frequency(ies). If the SELCAL unit is inoperative or if the radio station has a malfunctioning SELCAL transmitter, the aircraft shall maintain a listening watch on the appropriate North Pacific frequency.

III. Guard Station

Pilots are reminded that there is a need to continuously guard the VHF emergency frequency 121.5 MHz when on long over–water flights, except when communications on other VHF channels, equipment limitations, or cockpit duties prevent simultaneous guarding of two channels. Guarding of 121.5 MHz is particularly critical when operating in proximity to FIR boundaries, (route R220 between Anchorage and Fukuoka, for example) since it serves to facilitate communications with regard to aircraft which may experience inflight emergencies, communications, or navigation difficulties.

The oceanic radio station guarding for flight operations will normally be the station associated with the air traffic control center responsible for the FIR, i.e., San Francisco Radio for the Anchorage FIR and Tokyo Radio for the Fukuoka FIR. At the FIR boundary the responsibility for the guard will, under normal signal conditions, be changed to the station associated with each new FIR. The flight crew must ensure that they have established communications with the new guard facility.

Normally, each oceanic radio station continuously monitors all assigned frequencies. If en route HF communications fail, every effort should be made by the flight crew to relay progress reports through other aircraft. The VHF frequency 123.45 MHz is for exclusive use as an air–to–air communications channel (see paragraph IV.B. below). In emergencies, however, initial contact for such relays may be established on 121.5 MHz (the emergency frequency guarded by all aircraft operating in the oceanic airspace) and transferred as necessary to 123.45. In normal HF propagation conditions, appropriate overdue action procedures will be taken by ATC in the absence of position reports or relays. In case of communications failure in the Anchorage Oceanic FIR, the pilot should follow the oceanic lost communication procedures published in ICAO Doc 7030 Pacific Regional Supplementary Procedures.

IV. VHF Communications

A. Air–to–ground:
Oceanic radio stations will normally have VHF capability within 200 nautical miles of their geographic location. The frequency is listed in the appropriate publications. This frequency may be used prior to departure from the adjacent international airport to establish communications with the radio station, or for aircraft operating within range, to relay progress reports or other messages to their company's operations.

B. Air–to–air:
Frequency 123.45 MHz has been designated for use in air–to–air communications between aircraft operating in the Pacific area out of range of VHF ground stations to exchange operational information and facilitate resolution of operational problems. (See paragraph III. above.)

C. The normal VHF (119.1 MHz) initial contact points with Anchorage ARTCC for eastbound flights established in the NOPAC are:
1. On A590, 150NM west of PINSO.
2. South of A590, 150NM west of Shemya (SYA) or 150NM west of waypoint CHIPT.
NOTE: Initial contact may be attempted on 128.2 MHz as a backup to 119.1.

D. Westbound PACOTS flights will be advised of the appropriate Anchorage ARTCC VHF frequency by San Francisco Radio.

V. Satellite Voice System

Satellite Voice System (SATVOICE) is available at Anchorage Center via either INMARSAT or Iridium. Direct SATVOICE contact between the flight crew and Anchorage Center shall be limited to distress and urgency situations, or other exceptional circumstances. Routine communications will be conducted via VHF (when available) or via relay through San Francisco Radio by either HF or SATVOICE. (Consult the section on San Francisco Radio for further information about SATVOICE with them.)

Flight crews should ensure their aircraft SATVOICE capability is enabled and ready to receive calls from ATC when operating in the Oakland and Anchorage FIRs. FAA procedures for the use of SATVOICE are contained in the US AIP ENR 7.1

The Anchorage Center SATVOICE SHORT CODE Number is 436602.

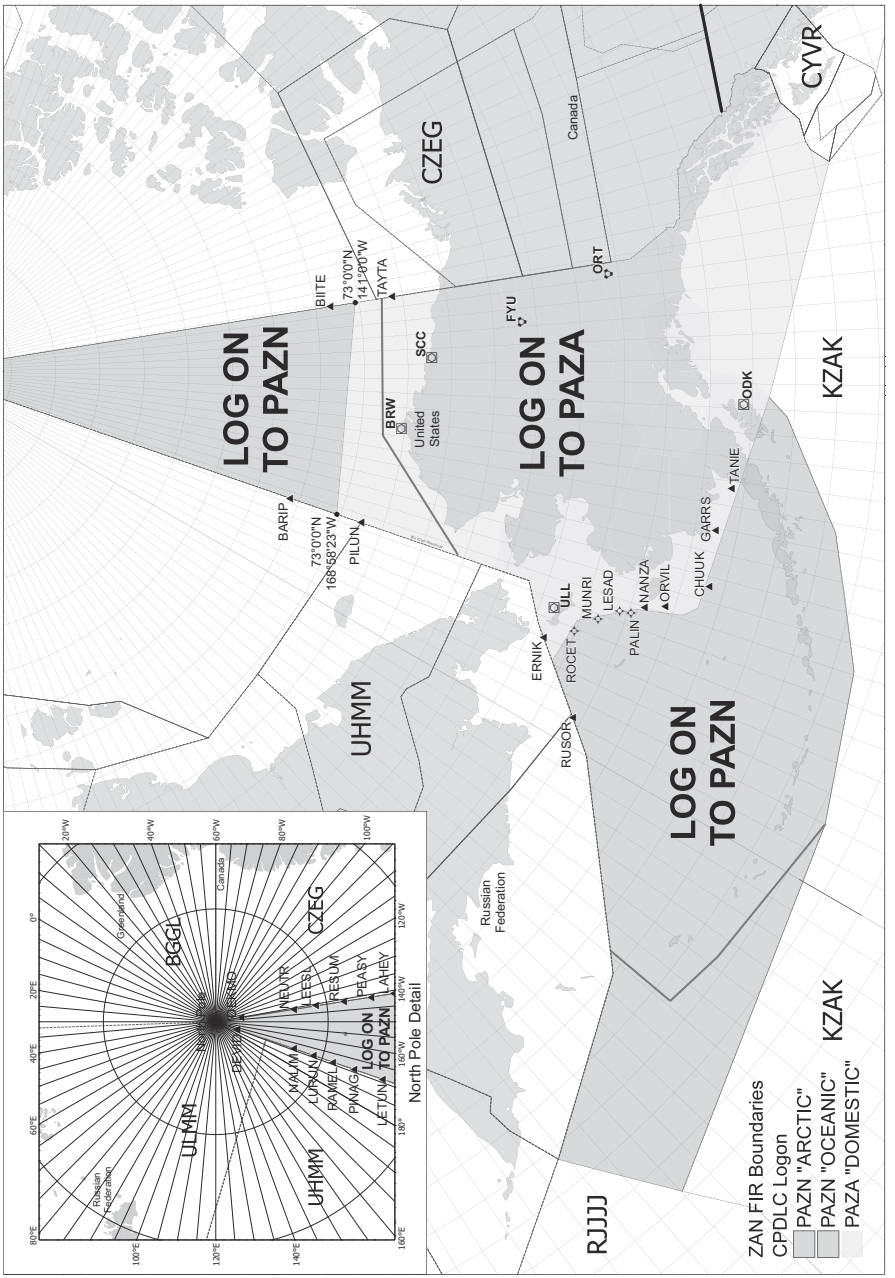
Direct SATVOICE calls to ATC should have one of the following ICAO priority levels:

1. Highest, distress or urgent situations.
2. Second highest, flight safety situations.

All other levels should be conducted through San Francisco Radio.

VI. Controller/Pilot Data Link Communications

Controller/Pilot Data Link Communications (CPDLC) is operational throughout the Anchorage Oceanic, Domestic and Arctic Flight Information Regions (FIRs). Anchorage ARTCC utilizes two separate En Route automation systems each having a different CPDLC (FANS) logon address. Use logon address PAZN for all CPDLC communications in the Anchorage Oceanic FIR and in the Anchorage Arctic FIR between the North Pole and 73N. Also use PAZN for all CPDLC communications in the Anchorage Domestic FIR west of 165W and south of 63N. Use logon address PAZA for all CPDLC communications in the Anchorage Domestic and Arctic FIRs south of 73N and east of 165W. Aircraft entering Anchorage FIR airspace from the Magadan Edmonton, Vancouver, Oakland or Fukuoka FIRs should be provided automatic FANS addressing forwarding by the ATSU ground system. Aircraft departing Alaskan airports are requested to logon after departure, but before leaving Flight Level 180. Flight crews are reminded that use of CPDLC does not remove requirements to monitor VHF/HF frequencies. Aircraft within VHF coverage may make position reports via CPDLC. West of 165W, all requests to ATC may be made via CPDLC. East of 165W, requests to ATC should be made via VHF if within VHF coverage. After logon, Anchorage ARTCC automation will provide automatic FANS address forwarding for flights entering the Magadan, Edmonton, Vancouver, Oakland, and Fukuoka FIRs.


LOG ON TO PAZN
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Russian Federation
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Canada
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BIITE
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BARIP
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MUNRI
LESAD
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ORVIL
CHUUK
GARRS
TANIE
RUSOR
North Pole Detail
BGGL
UHMM
CZEG
KZAK
ZAN FIR Boundaries
CPDLC Logon
PAZN "ARCTIC"
PAZN "OCEANIC"
PAZA "DOMESTIC"

VII. Time and Place of Position Reports

A. When operating on a fixed route with designated compulsory reporting points: flight crews shall make standard position reports for those points.

B. When operating on a flexible route without designated reporting points:
1. flight crews navigating a generally east/west routing shall report over each 5º or 10º longitude (10º will be used if the speed of the aircraft is such that 10º will be traversed within 1 hour and 20 minutes or less).
2. flight crews navigating a generally north/south routing shall report over each 5º or 10º of latitude (based on aircraft speed as in B.1. above).

C. For flights operating in the Anchorage Oceanic and/or Anchorage Domestic FIR west of 165º west longitude.
1. All waypoints filed in Item 15 of the ICAO flight plan (route field) must be reported as a standard position report.
2. Within this airspace position reports are to be made via ADS, CPDLC or voice communication in that order of preference.
3. In the event of VHF/HF or CPDLC position reporting, position reports are to be transmitted at the time of crossing the designated reporting point or as soon thereafter as possible.

D. Anchorage cannot accept position reports containing latitude and longitude (Lat/Long) in the ARINC 424 format, which is limited to five characters (e,g. 40N50). Position reports in the PAZN CPDLC service area containing Lat/Long waypoints will be accepted in complete latitude and longitude format only. Flights unable to send position reports in complete latitude and longitude format must accomplish position reporting via HF voice communications.

VIII. Position Reports Prefix

When reporting to oceanic radio stations, the prefix “POSITION” should be used on initial call–up or prior to the text of the message. Keep in mind that the operator is typing the report into a teletype or computer terminal. It is imperative that the person transmitting the report speak slowly and distinctly, so that the message can be correctly copied on the first attempt.

IX. Position Report Contents

Position reports made to oceanic radio stations or on VHF directly to the ATC control facility shall be comprised of information on present position, estimated next position, and the next subsequent position in sequence as indicated below.

A. “Present Position” shall include:
1. The word “position.”
2. Aircraft identification.
3. Reporting point name or, if not named:
   a. Latitude, in degrees and minutes, and
   b. Longitude, in degrees and minutes.
4. Time over reporting point in four digits.
5. Altitude (flight level at which the aircraft is currently operating, plus the assigned altitude if other than the present altitude).
6. Mach number being flown if assigned by ATC.

B. “Estimated Next Position” shall include:
1. Name of the next compulsory reporting point or, if not named, latitude and longitude (as in A.above) and,
2. Estimated time over the next reporting point. If the estimated time at the next point is found to be in error by 3 minutes or more from that notified to ATC, a revised estimate should be forwarded to Fukuoka or Anchorage Center, as applicable, as soon as possible.

C. “Next Subsequent Position” shall include the name (only) of the ensuing significant point along the route of flight after the “estimated next position” whether compulsory or not, or, if not named, latitude and longitude (as in A.above).

X. Altitude Reports

Report reaching any assigned altitude within RVSM airspace unless radar identified.

XI. Weather Reporting Procedures

To minimize radio frequency congestion, routine weather reports such as winds and temperature, and fuel remaining information should not be included in position reports made directly to Anchorage ARTCC unless specifically requested. Weather reports shall be included as provided from weather reporting by the Weather Service and/or Air Traffic Service.

XII. Radar Coverage

The vast majority of the NOPAC Route System within the Anchorage FIR extends beyond the coverage of ATC radar.

Present radar capability is limited to sites at St. Paul Island, Cold Bay and Shemya Island, each with an approximate range of 200NM.

The radar sites at St. Paul and Shemya Islands are secondary only. Unlike primary radar, secondary radar can only receive information on aircraft with an operating transponder; it cannot “paint” a target based on a radar echo from the aircraft's skin. Therefore, aircraft transitioning through the radar environment with an inoperable transponder may expect severe altitude restrictions until established on their cleared NOPAC Route.

Office of Primary Responsibility (OPR): Anchorage ARTCC TMU
Contact Information: 907-269-1108
Amended: March 2024

GENERAL PROCEDURES

I. Peak Traffic Constraints

Peak traffic periods are:
Eastbound – 0700Z to 2100Z
Westbound – 1200Z to 1900Z and
Westbound – 2200Z to 0800Z

Due to traffic volume, especially westbound, flights desiring to operate contrary to the predominant traffic flow can expect to be rerouted or assigned less than optimum flight levels.

If feasible, users planning to operate in the NOPAC Route System at airspeeds below MACH 0.78 should use other than the peak hours for their flights. Westbound flights can expect less than optimum flight levels at most times due to route saturation. This will reduce congestion and expedite traffic.

II. Transponder Codes

For eastbound flights, Anchorage ARTCC will assign a discrete code upon initial direct communications. The normal contact points are 150NM west of PINSO, 150NM west of SHEMYA (SYA) and 150NM west of CHIPT, depending on the route of flight (see Section 3, paragraph IV.C.). If no discrete code is assigned, transponders should be set to Code 2000. For westbounds, Anchorage ARTCC will normally assign the Mode 3/A Code 2000 at the Anchorage/Fukuoka FIR boundary. If the pilot has not been given a position at which to squawk 2000, the transponder should be changed to 2000 when crossing 164E longitude.

In general, transponders should be set to Mode 3/A Code 2000 when operating between 145E and 170E when eastbound, and between 164E and 145E when westbound. This requirement is to prevent target swapping, upon entry into the new FIR's radar coverage, of discrete beacon codes with aircraft assigned the same codes.

MACH NUMBER TECHNIQUE

I. General

The term "MACH number technique" is used to describe the technique of clearing turbojet aircraft operating along the same route to maintain specified MACH numbers in order to maintain adequate longitudinal separation between successive aircraft at, climbing to, or descending to, the same flight level.

Information on the planned MACH number must be included in the flight plan by pilots intending to operate turbojet aircraft in oceanic airspace. For all flights, the planned true MACH number shall be specified in item 15 of ICAO flight plans (Example, M084).

II. Background

The principle objective of the use of MACH number technique is to achieve improved utilization of the airspace, generally through reduced longitudinal standards. On certain long oceanic route segments ATC has no means, other than position reports, of ensuring that the longitudinal separation between successive aircraft is not reduced below the established minima. Practical experience has shown that two or more turbojet aircraft, operating along the same route at the same flight level, and flying the same MACH number, are more likely to maintain a constant time interval between each other than when using other methods. This is due to the fact that the aircraft concerned are normally subject to approximately the same wind and air temperature conditions and minor variations in speed, which might increase or decrease the spacing between them, tend to be neutralized over long periods of flight.

III. Application Procedures

When Mach number technique is applied, the normal requirement for ATC to calculate estimated times for the passage of significant points by the aircraft along its track still remains. This is necessary for both the provision of longitudinal separation between aircraft and for coordination with adjacent ATC units. ATC must be provided with the necessary data to complete this task. Thereafter, intervention by ATC should normally not be necessary unless position reports indicate that longitudinal spacing may be deteriorating to the extent that it threatens the minimum being applied, or there is conflicting traffic.

In the application of MACH Number Technique, it is imperative that pilots adhere strictly to their assigned cruise MACH number at all times, including during any climbs and descents; unless a specific reclearance is obtained from the appropriate ATC unit. If an immediate temporary change in the MACH number is essential before a revised clearance can be obtained, due to turbulence, e.g., ATC must be notified as soon as possible that a change has been made.

RVSM

I. PROCEDURES WITHIN RVSM AIRSPACE.

A. Before entering RVSM airspace, the pilot should review the status of required equipment. (See Appendix B of FAA AC 91-85B) The following equipment should be operating normally:
   1. two primary altimetry systems;
   2. one automatic altitude-keeping device; and
   3. one altitude-alerting device.

B. The pilot must notify ATC whenever the aircraft is no longer able to comply with RVSM requirements
   (See Aeronautical Information Manual (AIM) Chapter 4, Section 6. Operational Policy/Procedures for RVSM in the Domestic U.S., Alaska, Offshore Airspace and San Juan FIR, for contingency procedures in RVSM airspace)

C. During cleared transition between levels, the aircraft should not overshoot or undershoot the assigned FL by more than 150 ft (45 m).

D. Pilot Level Call. Except in an ADS or radar environment, pilots shall report reaching any assigned altitude within RVSM airspace.

II. SUSPENSION OF RVSM

Air traffic services will consider suspending RVSM procedures within affected areas of the Anchorage FIR when there are pilot reports of greater than moderate turbulence. Within areas where RVSM procedures are suspended, the vertical separation minimum between all aircraft will be 2000 ft.

NAVIGATION PERFORMANCE

Any operation which is conducted in international oceanic airspace on an IFR flight plan, a VFR controlled flight plan, or at night, and is continued beyond the published range of normal airways navigation facilities (VOR/DME, NDB) is considered to be a long range navigation operation. Long–range navigation in controlled airspace (CTA) requires the aircraft to be navigated within the degree of accuracy required for air traffic control (ATC), meaning the aircraft must make every effort to follow the centerline of the assigned route, the assigned altitude, as well as the speed filed or assigned. Accurate navigational performance is required to support the separation minima ATC units apply. To sustain or refine the separation minima, adherence to the cleared route must be demonstrated. The best available measurement of such adherence is obtained by radar observation of each aircraft's proximity to centerline prior to its coming into coverage of short range navigation aids at the end of the oceanic navigated portion of the flight. If an observation indicates that an aircraft was not reasonably within the airspace normally protected, the reasons for apparent deviation from centerline must be determined and steps taken to prevent recurrence and to improve overall navigation performance.
When radar is available to monitor organized oceanic route systems, Mandatory Occurrence Reports (MOR) will be recorded on observed lateral deviations, which will be investigated to determine casual factors. Pilots should understand that these reports are intended to provide data for analytically detecting any significant changes in navigational environment which may require corrective action.
The above–mentioned separation standards can be found in the International Civil Aviation Organization (ICAO) Regional Supplementary Procedures Document 7030. For flight conducted in international airspace under the jurisdiction of the United States, Air Traffic Control Handbook Chapter 8 (FAA Order 7110.65) provides a simplified version of these separation minima.
Federal Aviation Regulation (FAR) 91.703 requires that civil aircraft must comply with ICAO Annex 2 when operating over the high seas. Annex 2 states that "Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route being flown." In addition, ICAO Annex 6, Part II, stipulates that an aircraft operated in international airspace be provided with the navigation equipment which will enable it to proceed in accordance with its operational flight plan; with prescribed RNP types; and with the requirements of air traffic services. This means that the navigation equipment, installed and approved, should be capable of providing the pilot with the ability to navigate the aircraft with the required accuracy.
Annex 2 further requires that an aircraft adhere to the current flight plan unless a request for a change has been made and clearance obtained from the appropriate ATC facility. Annex 2 also mandates that unless otherwise authorized and directed by the appropriate ATC unit, controlled flights shall, insofar as practicable: a) when on an established ATS route, operate along the centerline of that route, or b) when on any other route, operate directly between the navigation facilities and/or points defining that route. The exception is that aircraft may utilize SLOP to offset the flown route up to 2 NM to the right where SLOP is authorized.
All of the aforementioned requirements contained in Annex 2 (as supplemented by Regional Supplementary Procedures Document 7030 and Annex 6) are incorporated in Section 91.1 and 91.703 of the FARs for those aircraft operating under United States civil certification in international oceanic airspace.

For questions about or update suggestions to this notice contact:
phone number 202-267-8806 or e-mail:
9-AWA-AVS-AFS410@faa.gov

NAVIGATION PROCEDURES

I. Use of Non–Directional Beacon (NDB) For Navigation

The use of an NDB as the "primary" source of navigation for long range oceanic flight presents the operator with numerous limitations and restrictions that are inherent in low frequency radio equipment and the low frequency signals they receive. These include:

A. NDB navigation aids of the highest power (2000 or more watts) which are maintained and flight–checked as suitable for air navigation are limited in their usable service and/or reception range to no more than 75 nautical miles from the facility at any altitude.
B. Although the operator may be able to receive standard (AM/amplitude modulation) broadcasts with NDB equipment, primary dependence on these facilities for navigation is discouraged because of the inherent problems associated with these stations.

II. The Use of a Master Document

The navigational procedures must include the establishment of some form of master working document to be used on the flight deck. This document may be based upon the flight plan, navigation log, or other suitable document which lists sequentially the waypoints defining the routes and distances between each waypoint, and other information relevant to navigation along the cleared route. When mentioned subsequently in this section, this document will be referred to as the "master document".
Misuse of the master document can result in gross navigation errors being made and for this reason strict procedures regarding its use should be established. These procedures should include the following:

A. Only one copy of the master document should be used in the cockpit. (If more than one copy is provided, one may be altered to reflect reclearance and/or other relevant amendments but the other may not. Subsequently, the unaltered copy may be used to extract navigational data which results in an unintentional deviation from the current cleared route.)
B. A waypoint numbering sequence should be established from the outset of the flight and entered on the master document. The identical numbering sequence should be used in storing waypoints in the navigation computer(s).
C. An appropriate symbology should be adopted to indicate the status of each waypoint listed on the master document. Following is a typical example routing:
    1. The waypoint number is entered against the relevant waypoint coordinates to indicate that the waypoint has been inserted in the navigation computer(s);
    2. The waypoint number is circled to signify that insertion of the correct coordinates in the navigation computer(s) has been double–checked independently by another crew member;
    3. The circled waypoint number is ticked to signify that the relevant route distance information has been double–checked; and,
    4. The circled waypoint number is crossed out to signify that the aircraft has overflown the waypoint concerned.

All navigational information appearing on the master document must be checked against the best available prime source data. If an ATS route change is received or the ATC clearance is otherwise updated, the master document must be updated accordingly. Old waypoints should be clearly crossed out and the updated ones entered in their place.

When ATC clearances or reclearances are being obtained, headsets should be worn, because the inferior clarity of loud speakers has been known to result in mistakes. Two qualified crew members should monitor such clearances, one of them recording the clearance on the master document as it is received, the other checking the receipt and read–back. All waypoint coordinates should be read back in detail (except where approved local procedures make this unnecessary under the circumstances that the cleared route coincides with the filed ATS route, in which case each detail of this must be cross–checked with the master document).

III. Position Plotting

It is very helpful for crews to use a simple plotting chart to provide themselves with a visual presentation of the intended route. Merely plotting the intended route on such a chart may reveal errors and discrepancies in the navigational coordinates which can then be corrected immediately, before they reveal themselves in terms of a deviation from the ATC–cleared route. As the flight progresses, plotting the aircraft's position on this chart approximately 10 minutes after passing each waypoint will also serve the purpose of navigation cross–check, provided that the graticule is legible.

As the flight progresses in oceanic airspace, plotting the aircraft's position on this chart will help confirm (when it falls precisely on the route) that the flight is proceeding in accordance with its clearance. But if the plotted position is laterally offset, the flight may be deviating unintentionally and this possibility should be investigated at once.

IV. Relief Crew Members

Flight crews conducting very long range operations may include an extra relief pilot. In such cases, it is necessary to ensure that the navigational procedures are such that the continuity of the operation is not interrupted, particularly in respect of the handling and treatment of the navigational information.

V. System Alignment

The alignment of INS must be completed and the equipment switched to the NAV mode prior to releasing the parking brake at the ramp for push back. This takes approximately 15 minutes, but can be longer. There are various ways of ensuring that there is adequate time for this including, for example, the following:

A. Have the first crew member on the flight deck (often the crew member responsible for aircraft fueling) place the system(s) in the align mode as soon as practicable;
B. At short transit stops, leave the equipment in NAV provided that system (radial) errors are not so large as to require INS realignment. The decision to realign may depend on the size of the error as well as the length and nature of the next leg;
C. Note that INS batteries usually have a limited life (15 minutes in typical cases) and cannot be recharged on board if allowed to run down. If the INS is left in NAV during a transit stop, or if the INS has been switched on for alignment, it is imperative that an individual be responsible for monitoring ground power interruptions. Note also that some INS provide overheat protection in STBY and ALIGN but not in other modes, so that during transits at tropical terminals with this equipment, the mode selector should be put directly (i.e., not through STBY because that would initiate realignment) to ALIGN.

VI. Initial Insertion of Latitude and Longitude

Early in the course of the preflight checking procedures, the aircraft's present position (POS) should be loaded into the INS. This position must be checked against an authoritative reference source before insertion. Any latitude error in the initial position will introduce a systematic error into the calculations and cannot be removed in flight by updating the resulting erroneous indications of POS. Correct insertion of POS must therefore be checked before the ALIGN mode is selected and the inserted POS recorded in the Flight Log or master document. Subsequently, silent checks of POS should be carried out independently by both pilots during an early stage of their preflight checks.

With regard to the insertion (while on the ramp) of the initial coordinates, the following points should be taken into account:

A. In the case of some INS, insertion errors exceeding about one degree of latitude will illuminate a malfunction light. It should be noted that very few systems provide similar protection against longitude insertion errors;
B. At all times, but particularly in the vicinity of 180° longitude, care should be taken to ensure that the coordinates previously inserted are correct.

VII. Loading of Initial Waypoints

The entry of waypoint data into the navigation systems must be a coordinated operation by two persons working in sequence and independently. One should key in and insert the data and subsequently, the other should recall it and confirm it against source information. It is not sufficient for one crew member just to observe another crew member inserting the data.

Waypoint 1 should be used for the ramp position of the aircraft. At least two additional waypoints, and if possible all the waypoints relevant to the flight, should be loaded while the aircraft is at the ramp. It is, however, most important to ensure that the second waypoint is inserted accurately, rather than to endeavor to load the maximum number of waypoints. In this regard, the second waypoint should be associated with the first significant position along the route (approximately 100NM from the departure point) and positions associated with ATC SID's should not normally be used for this purpose.

During flight, at least two current waypoints beyond the sector being navigated should be maintained in the CDU until the destination ramp coordinates are loaded. The two pilots should be responsible for loading, recalling, and checking the accuracy of the inserted waypoints, one loading and the other recalling and checking them independently. Where remote loading of the units is possible, this permits one pilot to cross–check, additionally, that the data inserted by the other is accurate. In neither case, however, should this process be permitted to engage the attention of both pilots simultaneously during the flight. An alternative and acceptable procedure is for the two pilots silently and independently to load their own initial waypoints and then cross–check them. The pilot responsible for carrying out the document rather than in the opposite direction. This may lessen the risk of his “seeing what he expects to see”, rather than what is actually displayed.

After the initial waypoints have been loaded, the initial route (between waypoints 1 and 2) and AUTO track change should be selected.

VIII. Flight Plan Check

The purpose of this check is to ensure complete compatibility between the master document and the programming of the self–contained navigation systems.

A. DIS/TIME should be selected to check that the correct distance from the ramp position to waypoint 2 is indicated. An appropriate allowance may have to be considered at this point since the great circle distance shown on the CDU's may be less than the flight plan as a consequence of the additional mileage involved in ATC SID's. However, if there is significant disagreement, POS and waypoint 2 coordinates should be rechecked.
B. Select REMOTE and track change 1–2 and check the accuracy of the indicated distance against that listed in the master document.
C. Select DSRTK and check that the desired track indicated on the CDU is as listed in the master document. This track check will reveal any errors made in the latitude or longitude designators, i.e., north/south or east/west, of the aircraft's ramp position.
D. Similar track and distance checks should be carried out for subsequent pairs of waypoints and any discrepancies between the master document and the CDU indications checked for possible waypoint insertion errors. These checks can be coordinated between the two pilots against the information in the master document.
E. When each leg of the flight has been checked in this manner, it should be annotated on the master document by means of a suitable symbology as previously suggested.

IX. Leaving the Ramp

If the aircraft is moved prior to the NAV mode being initiated, inertial navigation systems must be realigned. In this event, the aircraft should be relocated where it will not block the gate position or otherwise interfere with airport traffic while the realignment is being carried out. After leaving the ramp, INS groundspeeds should be checked, (a significantly erroneous reading may indicate a faulty or less reliable unit). A check should be made of the malfunction codes while the aircraft is stopped but after it has taxied at least part of the way to the takeoff position. Any significant groundspeed indication while stationary may indicate a faulty unit, such as a titled platform.

X. In Flight

If the initial part of the flight is conducted along airways, the airways facilities should be used as the primary navigational aids and the aircraft navigation systems monitored in order to ascertain which system is giving the most accurate performance.

XI. Approaching the Ocean

Prior to entering the oceanic area, the aircraft's position should be checked as accurately as possible by means of external navigational aids in order to ascertain the preferred aircraft navigation system to be used for the ocean crossing. This may perhaps necessitate DME/DME, DME/VOR checks at which stage navigation system errors can be determined by comparison of displayed and actual position. There are other means of carrying out such a check, e.g., flying directly over a VOR or NDB. In the event of a significant discrepancy, e.g., greater than 6NM, the question of whether or not the affected navigation system should be updated may be given cautious consideration. Updating is not normally recommended where the discrepancy is less than 6NM. If it is decided to update the system, the proper procedures should be carried out in accordance with a prepared checklist. The duration of the flight prior to the oceanic boundary and the accuracy of the external navigational facility should be taken into consideration when determining the advisability of updating the aircraft's navigation system. For example, an NDB would not be considered advisable for this purpose, unless care is taken to track directly overhead the facility.

The navigation system which has performed most accurately since departure should be selected for autocoupling.

In view of the importance of following the correct track in oceanic airspace, some operators advise that at this stage of flight the third pilot or equivalent crew member should check the clearance waypoints which have been inserted into the CDU, using appropriate source information.

XII. Oceanic Boundary Position Report

Just prior to the oceanic boundary and just before any waypoint, the present position coordinates should be monitored, recorded and verified, and the coordinates for the next waypoint monitored and verified. Thus, when the CDU alert light comes on, the crew should proceed to note and record the aircraft's present position on the master document. This should be verified against the current effective clearance on the master document. The waypoint number on the master document should be annotated with the appropriate symbol to indicate that it has been verified.
If the oceanic boundary position report is made over a VOR facility, the appropriate radial to the first oceanic waypoint should be selected as a further check that the aircraft navigation system is tracking in accordance with the current effective clearance. If DME is also available, a distance check can be carried out as well.

XIII. At an Oceanic Waypoint

Coordinates of the next two waypoints should be verified against the master document, as suggested earlier. When sending the ATC position report, the coordinates should be copied from the master document or, alternatively, the present position and the next two forward positions can be read from the CDU. As soon as the waypoint alert light illuminates, the present position coordinates of each navigation system should be checked against the current clearance to ensure that the intended aircraft position report to ATC coincides with the actual position of the aircraft and the ATC clearance. Overhead the waypoint, the pilots should observe that the aircraft turns in the correct direction and takes up a new heading appropriate to the leg to the next waypoint. The coordinates of the next waypoint should be verified against the master document as previously described. After the ATC position report has been sent, the present position of the aircraft should be plotted on the pilot chart to ensure that it is tracking as intended. At this stage also, the crew should be particularly alert in maintaining SELCAL watch, in view of possible ATC follow–up of the position report.

XIV. Routine Monitoring

It is important to remember that there are a number of ways in which the autopilot may unobtrusively become disconnected from the command mode; therefore, regular checks of correct engagement should be made. Although it is common practice to display DIS/TIME, it is recommended that the navigation system coupled to the autopilot should display the present position coordinates throughout the flight. If these are then plotted on the pilot chart at approximately 20–minute intervals, they will provide confirmation at regular intervals that the aircraft is tracking in accordance with its ATC clearance. Distance–to–go information should be available on the instrument panel as previously mentioned, while the waypoint alert light provides a reminder of the imminence of the waypoint. If as an alternative, position check and verification is being made both at each waypoint and 10 minutes after each waypoint, then an additional plot 20 minutes later may perhaps to be considered counter–productive as a normal routine. Even so there may be circumstances, e.g., when the flight is down to one system only, justifying the procedure. The navigation system not being used to steer the aircraft should display cross track distance (XTK) and track angle error (TKE). These should be monitored with XTK being displayed on the HSI where feasible.
Where there is a discrepancy between the information provided by two navigation systems, the procedures detailed in paragraph XXIV. below should be applied.

XV. Use of Radar

Aircraft equipped with airborne weather radar capable of ground mapping should use it to observe any land masses as an aid in assessing the accuracy of their navigation.

NOTE: Aircraft conducting NOPAC operations under U.S. civil certification are required to be equipped with functioning weather radar approved for day and night operation and their flight crews must use it on a full time basis for monitoring navigation system accuracy.

XVI. Approaching Landfall

When the aircraft is approaching the first landfall navaid, it should acquire the appropriate inbound radial as soon as the flight crew is confident that the landfall navaid is providing reliable navigation information. The aircraft should then be flown to track, by means of radio navigation, overhead the facility, which thus becomes the primary navigational guidance after leaving the oceanic area, e.g., for direct clearance over land. Consideration should be given to updating the navigation system overhead the landfall fix, utilizing the appropriate procedures from the checklist.

XVII. Navigation System Accuracy Check

At the end of each flight, an evaluation of accuracy of the aircraft's navigation systems should be carried out in order to facilitate correction of out–of–tolerance performance. One such accuracy check, carried out when the aircraft has reached its parking position, is to remove any update s which may have been made during the flight and then determine the radial error at the ramp position. Radial errors in excess of 2NM per hour are generally considered excessive.
Records should be kept of aircraft navigation systems performance.

XVIII. Monitoring During Distractions from Routine

Training and drills should ensure that minor emergencies or interruptions to normal routine are not allowed to distract the crew to the extent that the navigation system is mishandled. If during flight the autopilot is disconnected (because of turbulence, e.g.), care must be taken when it is reengaged to ensure that the correct procedure is followed (if the system in use sets a specific value on the boundary of automatic capture, the across–track indications should be monitored to ensure recapture of the programmed flight path). It is important to remember that there are a number of ways in which the autopilot may unobtrusively become disconnected from the command mode.

XIX. Avoiding Confusion Between Magnetic and True

To cover all navigation requirements, some airlines now produce flight plans giving both magnetic and/or true tracks (courses). If crews are changing to a new system, however, there is a risk that at some stage (e.g., partial system failure, reclearances, etc.), confusion may arise in selecting the correct values. Operators should therefore devise drills which will reduce this risk, as well as ensuring that the subject is covered during training.
Crews who decide to check or update their long range navigation systems by reference to VOR's located in the Canadian Northern Control Area should remember that they are not aligned with reference to magnetic north.

XX. Navigation in the Area of Compass Unreliability

NOTE: Full coverage of this subject, including, for example, the possible provision of runway headings in grid is beyond the scope of this section. The following should therefore be considered as general guidance only.

In an area of compass unreliability, basic INS operation requires no special procedures, but most operators feel it is desirable to retain an independent heading reference in case INS failure occurs. There are various possible ways of doing this, dependent on the instrument fit.

XXI. Deliberate Deviation from Route

Deliberate temporary deviations from route centerline are sometimes necessary, usually to avoid severe weather, but prior ATC approval should be obtained. Such deviations have often been the source of gross errors as a consequence of failing to reengage the autopilot with the navigation system. It should also be noted that selection of the "turbulence" mode of the autopilot will also have the effect of disengaging it from the aircraft navigation system. After use of the turbulence mode, therefore, the aircraft must be flown back to the desired route before reengaging the autopilot with the navigation system.

The following procedures have been found effective in ensuring that gross navigational errors do not result from diversions around severe weather:

A. The autopilot turn control knob is used to turn the aircraft in the desired direction;
B. The "autopilot engage" switch will automatically move from "command" to "manual". (The altitude mode switch will either remain in "altitude hold" or if in the "altitude select" mode will trip to "off".);
C. The steering CDU data selector is set to XTK TKE in order to provide a continuous display of crosstrack data;
D. If turbulence is encountered, the "TURB" setting on the speed mode selector may be used in which case the altitude mode switch will automatically position to "off";
E. Both RADIO INS switches remain in the INS position. This provides another visual display of the navigation situation on the HSI. Even when more than 8NM off track the pegged needle on the HSI is a reminder of that fact, in addition to which it will confirm whether the aircraft is tracking towards, away from, or parallel to the desired track;
F. The turn control knob should be used to maneuver the aircraft as necessary;
G. When clear of the severe weather, the aircraft should be steered back to the desired track, guidance being obtained from the steering CDU to zero the XTK indication;
H. When the aircraft has been returned to the desired route, the autopilot engage switch is selected to "command" and the altitude mode switch to "altitude hold". (The navigation mode selector should still be in the INS position.);
I. It is desirable that the entire crew, but at least the Captain and First Officer, monitor the diversion maneuver to ensure that the aircraft has been returned to the desired route and the autopilot properly reengaged for command INS operation; and
J. After return to route has been completed, check assigned MACH number and advise ATC.

XXII. ATC Reclearance

Experience suggests that when ATC issues a reclearance involving rerouting and new waypoints, there is an increase in the risk of errors being made. This situation should, therefore, be treated virtually as the start of a new flight, and the procedures employed with respect of copying the ATC reclearance, amending the master document, loading and checking waypoints, extracting and verifying flight plan information, routes and distances, etc., and the preparation of a new plotting chart should be identical to the procedures employed at the beginning of a flight. When an in–flight reclearance is involved, however, the procedures should be sure that one pilot is designated at all times to be responsible for flying the aircraft while the reprogramming of all navigation systems and other amendments to the cockpit documentation are being carried out.

In the event that the reclearance involves a direct routing, it may be advisable to retain data relevant to the original route.

XXIII. Detection of Failures

INS installations normally include comparator and/or warning devices, but it is still necessary for the crew to make frequent comparison checks. With three systems on board, the identification of a defective system should be straightforward.

With only two systems on board, experience indicates that if nothing is done by the crew until significant divergent indications become apparent, the possibility of identifying the defective unit will be very much reduced. If such a situation does in fact arise in oceanic airspace, it may be possible to contact nearby aircraft on 123.45 MHz (see Section 3, paragraph IV.B.) and obtain the read–out of spot wind (or if the aircraft are going in the same direction, drift and ground speed) making use of this information to identify the defective system.

In many cases, however, the above may be impractical. For that reason, it is recommended that a regular record of INS performance should be maintained and kept available on board for operating crews, in line with the following suggestions:

A. Before takeoff and while stationary, note the INS ground speed and POS indications. These may give some indication of relative system accuracy;
B. The accuracy of each INS unit should be noted before reaching oceanic airspace, preferably when passing some convenient short range facility. A further record should be made at destination in terms of terminal error, first taking care to cancel any inflight update which may have been made;
C. Compass deviation checks can be made to obtain deviation values for the magnetic compass systems, so that, if necessary later in the flight, the relative accuracy of INS heading outputs (and navigation data) can be checked. Though slightly complex to write up, the method is simple and potentially valuable in practice, and it has the additional advantage of reminding crews of some basic elements of navigation. Prior to entering oceanic airspace, simultaneously read both INS true heading and both magnetic compass indications. To the mean of the INS readings, apply the local variation value to give magnetic heading. Compare this value with the magnetic heading compass readings to obtain the deviation on each and retain for possible use in the "heading method" of determining which system is faulty (paragraph XXIV.E.).

XXIV. Determining the Faulty System

A. Check malfunction codes for indications of unserviceability.
B. Refer to the records suggested under subparagraphs XXIII.A. and B., above. These give a fairly positive clue as to which system is faulty.
C. Obtain a fix. It may be possible to use the weather radar (range marks and relative bearing lines) to determine the position relative to an identifiable landmark such as an island or the ADF to obtain bearings from a suitable NDB, in which case the variation at the position of the aircraft should be used to convert the RMI bearings to true; or if within range, the VOR, in which case the variation of the VOR location should be used to convert the radial to true heading (except when flying in the Canadian Northern Control area). (See paragraph XIX.)
D. Call some nearby aircraft on air–to–air VHF, and compare information on spot wind, or ground speed and drift. If such assistance is not available, the wind speed and direction for the DR position of the aircraft may be extracted from the

prognostic chart for comparison with the readout of INS. It is emphasized, however, that the latter comparison should only be used as a last resort and preferably in conjunction with another method to confirm the result.

E. Use the heading method. Simultaneously read both INS and both magnetic compass indications. Apply the respective deviation and the local variation value to each compass reading and obtain the mean (to the nearest degree). This should give an acceptably accurate true heading value to compare with the INS readings and to establish whether one of the INS units is defective. The following format, with typical values inserted, may assist flight crews with limited navigation experience:

Before Entering Oceanic Airspace

	#1 INS	#2 INS	#1 Comp	#2 Comp
Heading	285.7º	286.1º	290º	293º
Mean True Heading (nearest degree)	286º			
(E–) Variation (W+)	6ºW			
	292º		Dev'n 2º	1ºW

If INS performance check required later in flight

	#1 INS	#2 INS	#1 Comp	#2 Comp
Heading	254º	259º	265º	266º
(E+) Deviation (W–)			2ºE	1ºW
			267º&65	265º
(E+) Variation (W–)			12ºW	12ºW
Mean TH			255º	253º
		254º		

The above indicates that the navigation information provided by #1 INS is likely to be more accurate.

XXV. What to do if the Faulty System Cannot be Identified

Despite application of the methods in paragraph XXIV. above, the occasion may still arise when distance or across track differences develop between two INS systems, but the crew cannot determine which system is at fault. The majority of airlines feel that the procedure most likely to limit gross tracking errors under such circumstances is to fly the aircraft halfway between the cross track differences as long as uncertainty exists. In such instances, ATC must be advised that the flight is experiencing navigation difficulties so that appropriate clearance(s) can be issued as necessary.

XXVI. Guidance on what Constitutes a Failed System

Crews also require guidelines on how to decide when an INS should be considered to have failed, e.g., failure of INS may be indicated by the red warning light, or by self–diagnosis indications, or by an error over a known position exceeding the value agreed between an operator and its certifying authority. In general, if there is a difference greater than 15NM between the two aircraft's navigation systems (or between the three systems if it is possible to detect which are the more reliable) it is advisable to split the difference between the readings when determining the aircraft's position. If, however, the disparity exceeds 20NM, one or more of the navigation systems should be regarded as having failed, in which case ATC must be notified.

XXVII. Partial or Complete Loss of Navigation Capability

There are two navigational requirements for aircraft planning to fly through NOPAC oceanic airspace. One refers to the navigation performance which should be achieved and the other to the need to carry standby equipment with comparable performance characteristics (as stipulated in ICAO Annex 6, Part 1, Chapter 7).

Some aircraft carry triplex equipment (e.g., 3 INS) and if one system fails even before takeoff, the two basic requirements may still be satisfied and the flight can proceed normally. For aircraft with only two operational systems the following guidance is offered in respect of these general areas of failure:

A. If one system fails before takeoff, the pilot should consider delaying departure if timely repair is possible or obtaining a clearance below FL280, if practicable.

B. If one system fails before the oceanic boundary is reached, the pilot will have to consider landing at a suitable airport before the boundary, returning to the airport of departure, or obtaining a reclearance below FL280.

C. If one system fails after the aircraft has entered oceanic airspace, the pilot should normally continue to operate the aircraft in accordance with the oceanic clearance already received, appreciating that the reliability of the total navigation system has been significantly reduced. The pilot should also, however, take the following action:
   1. Assess the prevailing circumstances (e.g., performance of the second system);
   2. Prepare a proposal to ATC with respect to the prevailing circumstances (e.g., request clearance below FL280, turnback);

3. Consult with ATC as to the most suitable action; and
4. Obtain appropriate ATC reclearance prior to any deviation from existing clearance.

D. When, after entering oceanic airspace and one system has failed, the flight continues in accordance with its original clearance (especially if the distance ahead within oceanic airspace is considerable), the pilot should begin a special monitoring program as follows:
1. Take special care on the operation of the remaining system, accounting for the fact that the routine method of error checking is no longer available.
2. Check the main and standby compass system against the information available.
3. Check the performance record of the remaining equipment and, if doubt arises regarding the performance and/or reliability, consider the following:
   a. Attempt visual sighting of other aircraft or their contrails which may provide a track indication;
   b. Call the appropriate ATC facility to obtain information on aircraft adjacent to the estimated position; and/or
   c. Call on 123.45 (see Section 3, paragraph IV.B.) to establish contact with such aircraft (preferably same track/level) to obtain information which could be useful (drift, magnetic heading, wind details).

E. If the remaining system fails after entering oceanic airspace, or the remaining system gives an indication of degradation of performance, or neither system fails completely but the system indications diverge widely and the defective system cannot be determined, the pilot should take the following action:
1. Notify ATC;
2. Make best use of procedures specified in XXVII.D.3. above to obtain useful information;
3. Keep a special look out for possible conflicting aircraft and make maximum possible use of outside lights; and
4. If no instructions are received from ATC within a reasonable period, consider use of contingency procedures in Section 6.

NAVIGATION ERRORS

Monitoring procedures employed in regard to traffic operating in oceanic areas have given a good indication of the frequency of occurrence and the causes of navigation errors. Errors actually occur very infrequently considering the thousands of flights that are made. Navigation systems are generally so reliable now that there is some concern that this may lead to overconfidence. Aircrews, therefore, must guard against complacency.

I. Common Causes of Errors

Following are some of the more common causes of gross errors:

A. A mistake of one degree of latitude was made in inserting a forward waypoint.
B. The INS system was not reprogrammed after reclearance by ATC.
C. The autopilot was inadvertently left in the heading OR decoupled position after avoiding clouds or left in the VOR position after leaving the last domestic airspace VOR. In some cases, the mistake arose during distraction caused by SELCAL or by some flight deck warning indication.
D. The controller and the crew had different understandings of the clearance. The pilot read back not what was said, but what he wanted to hear, and the controller failed to catch the discrepancy.

II. Rare Causes of Errors

Following are examples of some rare faults which have actually occurred:

A. The lat/long coordinates displayed near the gate position at one international airport were wrong.
B. Because of a defective chip in one of the INS systems on an aircraft, although the correct forward latitude was inserted by the crew, it subsequently "jumped" by one degree.
C. The aircraft was equipped with an advanced system with all the coordinates of the waypoints on the intended route already on tape; the crew assumed that these coordinates were correct, but one was not.
D. The flight crew had available to them the correct coordinates for their cleared route, but unfortunately the data which they inserted into the navigation computer was from the company flight plan, in which an error had been made.

III. Lessons to be Learned

A. Never relax or be casual regarding the cross–check procedure, this is especially important towards the end of a long night flight.
B. Avoid casual radiotelephony procedures. Errors have resulted from a misunderstanding between pilot and controller as to the cleared route. Adhere strictly to proper phraseology and do not be tempted to clip or abbreviate details of waypoint coordinates.
C. Make an independent check on the gate position. Do not assume that the gate coordinates are correct without cross–checking with an authoritative source. Normally, coordinates are to the nearest tenth of a minute, but make sure that your display is not to the nearest hundredth, or in minutes and seconds. And, if you are near 180º longitude, remember the risk of confusing east and west.
D. Before entering oceanic airspace make a careful check the INS System position at or near to the last radio facility or the next to last one.
E. Do not assume that you are at a waypoint merely because the alert annunciator indicates it. Cross–check by reading present position.
F. Flight deck drills. Some tasks on a flight deck can safely be delegated to one member of the crew, but navigation, using automated systems, is emphatically not one of them. The Captain should participate in all navigation cross–check procedures.
G. Initialization errors. Always return to the ramp and reinitialize INS if the aircraft is moved before the INS NAV mode is selected. If, after getting airborne, it is found that during initialization a longitude insertion error has been made, unless you thoroughly understand drills on how to achieve the objective, you should probably turn back or make an en route stop if practicable.
H. Waypoint loading. Before departure, check to see that the computer flight plan and ICAO flight plan agree. In flight, involve two different sources in the cross–checking if possible. Do not be so hurried in loading waypoints that mistakes become likely and always check waypoints against the current ATC clearance.
I. Use a Pilot–Chart on the flight deck. Make periodic plots of position on a suitable chart and compare with current cleared track. This helps to pick up errors before getting too far from track.
J. Consider making a simple use of basic DR Navigation as a backup. Outside Polar Regions, provided that the magnetic course (track) is available on the flight log, a check against the magnetic heading being flown, plus or minus drift, will likely indicate any gross tracking error.

K. Always remember that something unusual may have happened in the last half– hour. Be continuously cognizant. There are often ways in which an overall awareness of directional progress can be maintained; e.g., the position of the sun or stars, disposition of contrails, islands or coastlines which can be seen directly or by using radar, radio navaids, and so forth. This is obvious, perhaps, but some of the errors which have occurred could have been prevented had the crew shown more of this kind of alertness.

L. If you suspect that equipment failure may be leading to divergence from cleared route, it is better to advise ATC early rather than late.

M. Because aircraft navigational equipment varies greatly between operators, some of the above lessons may not apply in your case. But remember that they may help to prevent someone else making a mistake, and may stimulate you to avoid mistakes of similar nature.

PILOT CHECKLIST

To assist pilots who are less familiar with the NOPAC Route System, the following informal checklist is provided:

1. Do you have the recommended information for each NOPAC route?
2. Do you have a reliable timepiece aboard for reference and have you had a recent accurate time check?
3. Are you sure of the serviceability of your long range navigational system?
4. Are you familiar with the MACH number technique?
5. Did you conduct a check of your airborne weather radar, if so equipped?
6. Have you preplanned your actions in case one of your long–range navigational systems fails?
7. After departure, did you conduct an HF communications check and pass your departure time to aeronautical radio?
8. Did you give ATC your climb times?
9. If eastbound between 145ºE and 170ºE, or westbound between 164ºE and 145ºE, did you set your transponder on Mode A Code 2000? If east of 170ºE or west of 145ºE, is your transponder set on the discrete code assigned by ATC?

ANCHORAGE ARCTIC FIR

I. DESCRIPTION

The Anchorage Arctic FIR generally consists of that airspace lying between 141º west longitude and 168º 58.38´ west longitude south of the geographic North Pole running approximately to 72º north latitude. The material which follows also incorporates that portion of the Anchorage Domestic FIR which overlies the north coast of the Alaskan land mass.

Traffic flows in this airspace consist of: 1. a generally east/west flow for flights transiting between North American and Asian airports via the Russian Polar airspace (commonly referred to as "Cross Polar" flights) and, 2. an east/west flow of flights transiting between northern European and Alaskan airports (commonly referred to as "Trans Polar" flights). In the Anchorage Arctic FIR, airspace users can expect to receive ATC services associated with the following types of airspace areas and associated altitudes: Class G – below FL12; Class E – FL12 to but not including FL180; Class A - FL180 to FL600 inclusive; Class E – above FL600.

II. SEPARATION STANDARDS

VERTICAL – Reduced Vertical Separation Minima (RVSM) is applied from FL290 to FL410 inclusive in all of the Anchorage FIRs, i.e. Anchorage Domestic, Oceanic and Arctic Flight Information Regions. RVSM aircraft are separated by 1000 foot vertical spacing within this stratum. Non–RVSM aircraft are separated from all other aircraft, both RVSM and Non–RVSM, by 2000 feet within this stratum. Aircraft within the Edmonton, Murmansk and Magadan FIRs are also separated via RVSM procedures and minima.

LATERAL – Anchorage ARTCC utilizes the RNP–10 minima (25 miles either side of centerline) for aircraft with RNP–10 approval. Other aircraft are separated with a 90 nautical mile separation standard (90 NM between tracks). RNP–10 is also used in the Edmonton FIR and separation in the Murmansk and Magadan FIRs is accomplished using a 60 kilometer lateral separation standard.

LONGITUDINAL – Within the Anchorage Arctic FIR the longitudinal separation standard between turbo jet aircraft is 15 minutes. This minima may be reduced thru application of the ICAO recognized MACH Number Technique. This standard, and MACH Technique, is also applied in the Edmonton, Murmansk and Magadan FIRs.

III. FLIGHT PLANS and PREFERRED ROUTES

A. Flight Plans

All operators planning IFR flight operations in the Anchorage Arctic and Domestic Flight Information Regions north of 70º north latitude must file flight plans with both PAZAZQZX and PAZNZQZX. Failure to file with both system addresses may result in delay of ATC services.

B. Cross Polar

All flight planned routes must conform to the requirements of the current Anchorage (PAZA) Arctic FIR NOTAM.

C. Trans Polar

1. Operators shall flight plan through the Anchorage Arctic and Domestic FIRs via the following KARLL-COALL, ARBEZ-JESRU, or HARVZ-TAYTA. This requirement applies to both westbound and eastbound flights.
2. Flights filing between FYU and 141º west longitude shall flight plan via ADREW J160 or POTAT J167.
3. Preferred routes connecting with the PANC terminal area are as follows:

Northbound:

TED J115 FAI direct KARLL direct COALL
TED J115 FAI direct ARBEZ direct JESRU
TED J115 FAI direct HARVZ direct TAYTA
TED J115 FAI J120 FYU J160 ADREW
TED J115 FAI J120 FYU J167 POTAT

Southbound:

COALL direct KARLL direct TKA J125 TED
JESRU direct ARBEZ direct ENN J125 TED
TAYTA direct HARVZ direct ENN J125 TED
ADREW J160 FYU J120 FAI direct ENN J125 TED
POTAT J167 FYU J120 FAI direct ENN J125 TED

IV. COMMUNICATIONS and REPORTING

A. POSITION REPORTING – All flights, regardless of CPDLC status, shall make mandatory position reports, upon entering or exiting the CTA/FIR, via the appropriate HF En–Route Radio. Examples: An aircraft progressing 141ºW westbound will make a position report thru "Gander Radio," an aircraft progressing 141ºW eastbound will also make a position report thru "Gander Radio." An aircraft progressing ORVIT eastbound will make a position report thru "Gander Radio" and an aircraft progressing ORVIT westbound will make a position report thru "Magadan Radio."

B. COMMUNICATION VIA CPDLC – Controller/Pilot Data Link Communications service is operational in the Anchorage Arctic Flight Information Region. Usability is dependent upon transmission medium: INMARSAT satellite coverage exists approximately below 80º North, Iridium satellite coverage exists globally. Anchorage ARTCC's logon address for this airspace is PAZN. Currently, aircraft entering the Anchorage Arctic FIR from Russian airspace must perform a manual logon. Aircraft logged on to Anchorage's system and transitioning either to the Edmonton, or to the Magadan, CPDLC systems will be provided auto address forwarding service. Due to the high latitude and satellite coverage "foot print," flight crews of CPDLC equipped aircraft are requested to logon on via CPDLC but must maintain a listening watch on appropriate HF en–route frequencies.

C. COMMUNICATION VIA HF VOICE – High Frequency Voice Communications capability exists within the Anchorage Arctic FIR via "GANDER RADIO," "MURMANSK CONTROL," "MAGADAN CONTROL" and "SAN FRANCISCO RADIO." Utilize these services as follows:

1. "GANDER RADIO" on frequencies of the North Atlantic NAT D network, viz. 2971, 4675, 8891, and 11279 kHZ. Make all East or Westbound position reports along 141º west longitude in the Arctic FIR thru "GANDER RADIO." Make all Eastbound position reports over the Murmansk/Anchorage or Magadan/Anchorage FIR boundary via "GANDER RADIO". Use "GANDER RADIO" for all ATC communications while within the Anchorage Arctic FIR.
2. "MURMANSK CONTROL" on frequencies 11390, 8950, 5694 or 4672 kHz. Make all Westbound position reports over the Anchorage/Murmansk FIR boundary via "MURMANSK CONTROL." (example DEVID)
3. "MAGADAN CONTROL" on frequencies 15030, 13265, 11390, 8837, 6585 or 4712 kHz. Make all Westbound position reports over the Anchorage/ Magadan FIR boundary via "MAGADAN CONTROL." (examples NALIM, LURUN, RAMEL, PINAG, NIKIN, ORVIT, AMATI)
4. "SAN FRANCISCO RADIO" on frequencies 21964, 17925, 13348, 11342, 6640 and 3013 kHz. Antenna located at Barrow, Alaska. Use for LDOC (long distance operational control). SFO ARINC's Barrow LDOC site does not provide routine ATC communications, but may be used for relays when other methods fail.

D. SATELLITE VOICE SYSTEM – Satellite Voice System (SATCOM Voice) equipment is available at Anchorage Center and SATCOM voice contact may be possible with aircraft in the Arctic FIR depending upon satellite availability and service provider. Direct SATCOM Voice contact between the flight crew and Anchorage Center shall be limited to distress and urgency situations or other exceptional circumstances such as HF blackout. Under normal conditions routine communications should be conducted via VHF/CPDLC or HF Voice. Flight crews utilizing INMARSAT should log onto the INMARSAT Pacific Ocean Satellite. Aircraft satellite data units may be preprogrammed with the INMARSAT six digit code for easy call set–up. The INMARSAT code for Anchorage Center is 436602. If the aircraft provides direct dial access, the INMARSAT six digit code may be utilized for initiating air/ground communications. To receive SATCOM Voice service, the aircraft must already be logged onto an INMARSAT communication satellite. Flight crews utilizing Iridium should follow company procedures.

Direct SATCOM Voice calls to ATC should have one of the following ICAO priority levels:

1. Highest distress or urgent situations.
2. Second highest, flight safety situations.

AREA NOTICES

Landing at National Parks, Monuments, Preserves, and Wildlife Refuges

1. Prior authorization by the Superintendent is required for all helicopter landings. The National Park Service requests that pilots maintain a minimum distance of 2,000 feet from the nearest ground mass to minimize wildlife disturbance.

2. Glacier Bay National Park: Restricted from landings in non–motorized waters. Restrictions change seasonally, contact Glacier Bay staff for current restrictions (907–697–2230). Landings and takeoffs shall not be made on beaches or tidal flats or within one nautical mile of any tidewater glacier in the national park. If authorized by the Superintendent, helicopters may land at selected sites where deemed essential in the conduct of prospecting and mining activities.

3. Contact Information:

Denali National Park & Preserve	907–683–2294
Gates of the Artic National Park & Preserve	907–692–5494/907–457–5752
Glacier Bay National Park and Preserve	907–697–2230
Katmai National Park and Preserve (includes)	907–246–3305
includes Aniakchak National Monument	
Kenai Fjords National Park	907–224–2132
Klondike Gold Rush National Historic Park	907–983–2921
Lake Clark National Park and Preserve	907–781–2218/907–271–3751
Tongass National Forest (includes)	907–228–6202
includes Admiralty Island National Monument, Kuiu Wilderness, Tebenkof Bay Wilderness, Chuck River Wilderness, Maurelle Island Wilderness, Tracy Arm Fords Terror Wilderness, Cornation Island Wilderness, Peters Creek Duncan Salt Chuck Wilderness, Warren Island Wilderness, Misty Fjords National Monument, Pleasant–Lemesurier–Inian Island Wilderness, West Chicagof Yakobi Wilderness, Karta River Wilderness, South Etolin Wilderness, Young Lake Wilderness, Kootznoowoo Wilderness, and South Prince of Wales Wilderness.	
Western Arctic National Parklands: (includes)	907–442–8300
includes Noatak National Preserve, Cape Krusenstern National Monument, Kobuk Valley National Park, and Bering Land Bridge National Preserve.	
Wrangell—St. Elias National Park and Preserve	907–822–5234
Yukon—Charlie Rivers National Preserve	907–547–2234/907–457–5752

4. Internet websites:
Forest Service: http://www.fs.fed.us/r10/
Fish and Wildlife website: http://alaska.fws.gov
National Park Service website: http://www.nps.gov/carto/AKPAA.html

Kenai National Wildlife Refuge:

1. The operation of aircraft on the Kenai NWR, except in an amergency, is permitted only as authorized in designated areas as described below. These areas are also depicted on a map available from the refuge manager: Kenai NWR Manager, P.O. Box 2139, Soldotna, Alaska 99669, telephone (907) 262–7021.
   (a) within the Canoe Lakes unit, Andy Simons unit, and Mystery Creek units of the Kenai Wilderness, ONLY the following lakes are designated for airplane operations:

Canoe Lake Unit

Scenic Lake, Nekutak Lake, Shoepac Lake, Norak Lake, Bird Lake, Grouse Lake, King Lake, Bedlam Lake, Taiga Lake, Vogel Lake, Cook Lake, Showshoe Lake, Wilderness Lake, Mull Lake, Tangerra Lake, and Sandpiper Lake.
Pepper Lake, Gene Lake, and Swanson Lake are ONLY open for sports icefishing.

Andy Simons Unit

Upper Russian Lake, Twin Lakes, Emerald Lake, High Lake, Lower Russian Lake, Iceburg Lake, Green Lake, Kolomin Lake, Pothole Lake, Harvey Lake, Martin Lake, Windy Lake, Dinglestad Glacier terminus lake, Wusnesenski Glacier terminus lake, Tustumena Lake, all wilderness lakes within one mile from the shoreline of Tustumena Lake and all unmanned lakes in sections 1 & 2, T.1S., R.10W, and section 4, 5, 8, & 9, T.1.S., R.9W, Seward Mountain, AK.

Mystery Creek Unit

All unmanned lakes in section 11, T.6N, R.5W., Seward Mountain, AK.
(b) Airplanes my operate on all lakes outside of the Kenai Wilderness, except those lakes with recreational developments, including, but not limited to, campgrounds, campsites, and public hiking trails connected to road waysids. The non–wilderness lakes CLOSED to aircraft operations are as follows:

North Sterling Highway

Cashka Lake, Dolly Varden Lake, West Lake, Mosquito Lake, Watson Lake, Rainbow Lake, Dabbler Lake, Lili Lake, Forest Lake, Afonasi Lake, Upper Jean Lake, Anertz Lake, Weed Lake, Silver Lake, Breeze Lake, and Imeri Lake.
All lakes in the Skilak Loop Area (south of Sterling Highway and north of Skilak Lake) are closed to aircraft except that airplanes may land on Bottenintnim Lake, which is open year–round and Hidden Lake, which is open only for sport ice fishing.

South Sterling Highway

Headquarters Lake is restricted to administrative use only.

2. Notwithstanding any other provision of these regulations, the operation of aircraft is prohibited between May 1 and September 30, inclusive, on any lake where nesting trumpeter swans and/or their broods are present, except Windy and Lonesome Lakes where the closure is between May 1 and September 10, inclusive.
3. The operation of wheeled aircraft, at the pilot's own risk, is only authorized on the unmaintained Big Indian Creek Airstrip, on gravel areas with $^{1}/_{2}$ mile of Wusnesenski Glacier terminus lake, and within the SE $^{1}/_{4}$, section 16 and SW $^{1}/_{4}$, section 15, T.4S, R.8W., Seward Mountain.
4. Airplanes may operate only within designated areas on the Chickaloon Flats, as depicted on a map available from the refuge manager, (907) 262–7021.
5. Airplane operation is permitted on the Kasilof River, the Chickaloon River outlet, and the Kenai River below Skilak Lake from June 15 through March 14. All other rivers on the NWR are closed to aircraft.
6. Internet website: http://akaska.fws.gov/nwr/kenai/index.html

National Wildlife Refuge Contact Information:
1. Alaska Maritime NWR — Homer, AK — (907) 235–6546
2. Alaska Peninsula NWR — King Salmon, AK — (907) 246–3339
3. Arctic NWR—Fairbanks, AK — (907) 456–0250
4. Becharof NWR—King Salmon, AK — (907) 246–3339
5. Innoko NWR—McGrath, AK — (907) 524–3251
6. Izembek NWR—Cold Bay, AK — (907) 532–2445
7. Kanuti NWR—Fairbanks, AK — (907) 456–0329
8. Kenai NWR—Soldotna, AK — (907) 262–7021
9. Kodiak NWR—Kodiak, AK — (907) 487–2600
10. Koyukuk NWR—Galena, AK — (907) 656–1231
11. Nowitna NWR—Galena, AK — (907) 656–1231
12. Selawik NWR—Kotzebue, AK — (907) 442–3799
13. Tetlin NWR—Tok, AK — (907) 883–5312
14. Togiak NWR—Dillingham, AK — (907) 842–1063
15. Yukon Delta NWR—Bethel, AK — (907) 543–3151
16. Yukon Flats NWR—Fairbanks, AK — (907) 456–0440

Landing at State Refuges, Critical Habitat Areas, and Sanctuaries

State of Alaska, Department of Fish and Game (ADF&G) website:
http://www.state.ak.us/adfg/habitat/geninfo/refuges/refuges.htm

Alaska Department of Fish and Game, Juneau (907) 465–6160 phone, (907) 465–2772 fax

Region 1—Southeast Alaska, (907) 267–2342 phone, (907) 267–2464 fax
Mendenhall Wetlands Refuge, Yakataga Refuge, Stan Price (Admiralty Island) Sanctuary, Chilkat River Critical Habitat Area, Dude Creek Critical Habitat Area

Region 2—Southcentral and Western Alaska, (907) 267–2342 phone, (907) 267–2464 fax
Anchorage Coastal Refuge, Cape Newenham Refuge, Goose Bay Refuge, Izembek Refuge, McNeil River Refuge, Palmer Hay Flats Refuge, Susitna Flats Refuge, Trading Bay Refuge, Walrus Islands Sanctuary, McNeil River Sanctuary, Anchor River/Fritz Creek Critical Habitat Area, Chilkat River Critical Habitat Area, Cinder River Critical Habitat Area, Clam Gulch Critical Habitat Area, Copper River Delta Critical Habitat Area, Dude Creek Critical Habitat Area, Egegik Critical Habitat Area, Fox River Flats Critical Habitat Area, Homer Airport Critical Habitat Area, Kalgin Island Critical Habitat Area, Kachemak Bay Critical Habitat Area, Pilot Point Critical Habitat Area, Port Heiden Critical Habitat Area, Port Moller Critical Habitat Area, Redoubt Bay Critical Habitat Area, Tugidak Island Critical Habitat Area, and Willow Mountain Critical Habitat Area

Walrus Islands Sanctuary—Pilots are requested to maintain a minimum altitude of 5,000 feet above ground level within a 3 mile radius of Round Island (58º36´N, 159º58´W.). Access to Round Island or adjacent waters requires written permission from ADF&G. Flight less than 2,000 feet above ground level and than 1 mile may violate the Marine Mammal Protection Act and/or the Federal Airbourne Hunting Act, regardless of their level of impact on wildlife.

McNeil River Sanctuary—Pilots are requested to maintain a minimum altitude of 1,000 feet above ground level within a 2 mile radius of McNeil River Falls located 1 mile upstream from the mouth of McNeil River in order to minimize disturbance to concentrations of brown bears during the period June 15 through September 15. The State has established a permit program which regulates human activities in the sanctuary and limits the number of persons allowed at the Falls each day.

Region 3—Northern and Interior Alaska, (907) 459–7279 phone, (907) 456–2259 fax
Creamer's Field Refuge and Minto Flats Refuge

LANDING AT STATE PARKS AND RECREATION SITES

Civil/Military

The landing of aircraft in Chugach State Park is prohibited except on Bold Airstrip. Practice landings and the dropping or pickup of objects or persons using aircraft are prohibited everywhere in the park without written permission of the Director, Alaska State Parks.

The use of aircraft is allowed in the following areas except for the purpose of practice landing:
(1) Alaska Marine Parks
(2) Bonnie Lake State Recreation Site
(3) Captain Cook State Recreation Area
(4) Denali State Park
(5) Johnson Lake State Recreation Area
(6) Kachemak Bay State Park
(7) Kenai River Special Management Area
(8) Long Lake State Recreation Area
(9) Rocky Lake State Recreation Area
(10) Wood–Tikchik State Park
(11) Kachemak Bay State Wilderness Park (on saltwater and saltwater beaches)
(12) Chilkat State Park (on saltwater).

NANCY LAKE STATE RECREATION AREA: Except as indicated below, the use of aircraft is allowed except for the purpose of practice landing. The use of float–equipped aircraft is prohibited on:
(1) South Rolly Lake
(2) Bald Lake
(3) Tanaina Lake
(4) Milo Lake
(5) Ardaw Lake
(6) Jacknife Pond
(7) Frazer Lake
(8) Little Frazer Lake
(9) Charr Lake
(10) Owl Lake
(11) James Lake
(12) Chicken Lake
(13) Big Noluck Lake
(14) Little Noluck Lake
(15) Milo Pond
(16) the Echo Ponds
(17) Candlestick Lake
(18) Buckley Lake and
(19) Skeetna Lake.

LANDING AT MOUTH OF THE DESHKA RIVER

Extensive Use May 15 to July 15
CTAF Frequency 122.8

Civil/Military

This area is located at approximately 61°40´N 150°19´W (Big Lake VORTAC 275°11.6NM). It is a very high use seasonal recreation area which is reached by float plane, wheel planes and boats. A large portion of these recreation area users are boaters. There are frequent conflicts between aircraft and boats within this area. The conflict occurs when aircraft utilize the river to drop off and pick up users.

OPR: AAL-200 Date: 3/9/15

SCIENTIFIC LASER OPERATIONS

Chatanika, AK

Aug thru Apr. Laser research will be conducted intermittently within 4 NM of 65° 07' 00"N, 147° 27' 50" W, Poker Flat Research Range at an angle of 70° to 90°, from the sfc, projecting up to unlimited. The beam will be terminated if acft enter the affected area. This beam is injurious to pilots/aircrews and passengers' eyes. Cockpit illumination-flash blindness may occur beyond these distances. Anchorage/ZAN/ARTCC facility (907-269-1103) is the FAA coordination facility.
Contact AJV-W23 Date: 10/27/2020

Barrow, AK

Civil/Military

Scientific laser lgt ops near the Barrow Arpt, Barrow, AK, within an area defined as 71° 19' 22" N 156° 36' 57" W or the Barrow/BRW/VOR 029° radial at 4.5 NM. Sfc -5220'. Anchorage Center/ZAN/ARTCC telephone number 907-269-1108 is the FAA CDN facility.

DENALI FLIGHT ADVISORY

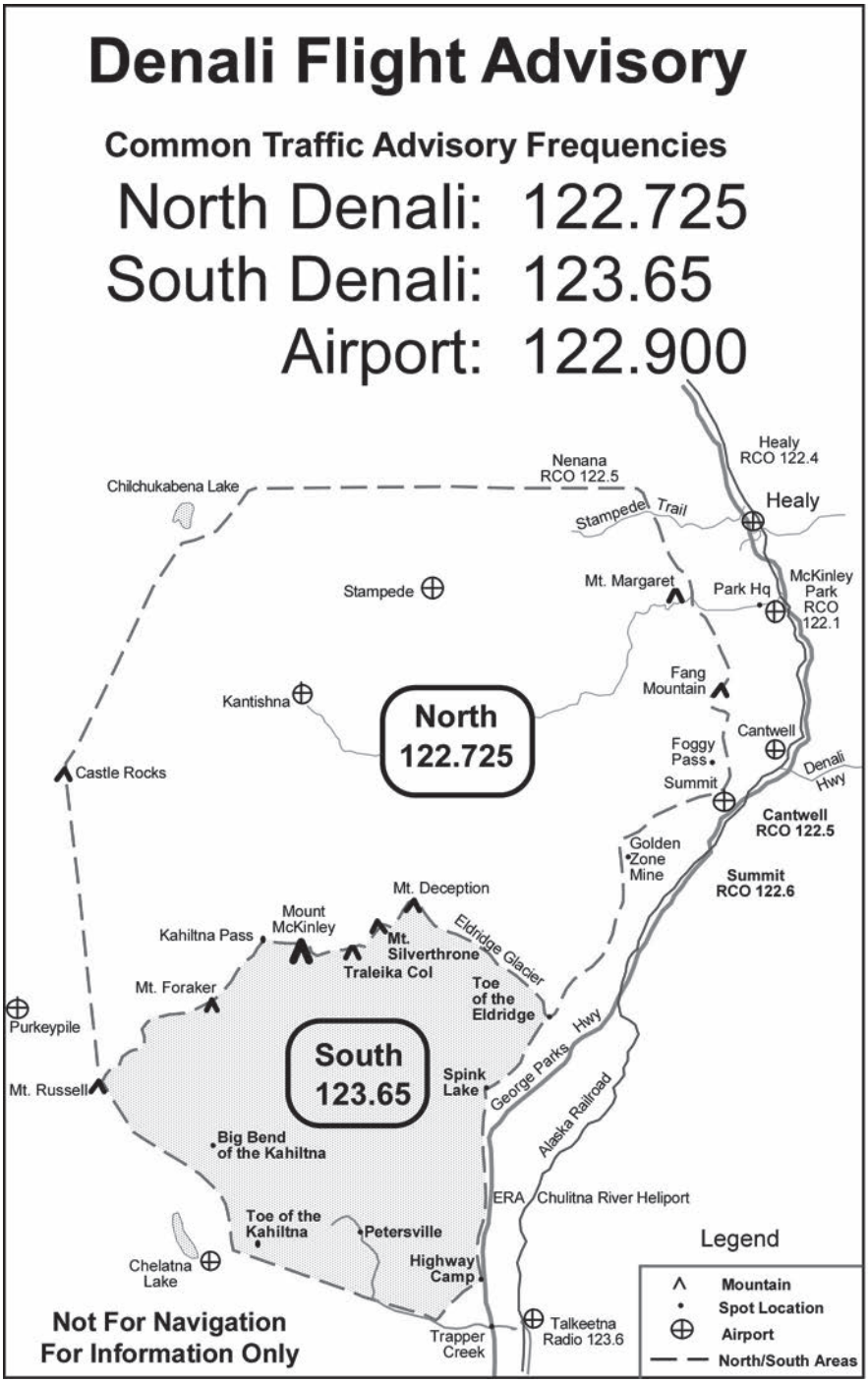
1. The Denali National Park/Wilderness/National Preserve areas are divided into two sectors, North and South, for Common Traffic Advisory Frequency (CTAF) deconfliction. The South area will use 123.65 and the North Area will use 122.725. The surrounding airports will use CTAF 122.9. A detailed map, Denali Flight Advisory, depicts the local checkpoints and is available through the National Park Service, PO Box 9, Denali National Park, AK 99755 or call 683–2294.
2. The NPS chart depicts the reporting points. When making a position report, give location, altitude, destination and/or direction of flight. Example: "Mountain Traffic, Cessna 1234, Ruth Icefall, 8000 feet, up glacier for the Amphitheater."
3. ALL AIRCRAFT SHOULD FLY WITH THEIR LIGHTS ON.
4. BE ALERT! Climb early, stay high, especially over areas where landings and departures take place. Be sure your aircraft has the performance capability to operate in a high altitude mountainous environment. Stay to the right in the valleys and canyons. All turns should be to the left if possible. Obtain a current altimeter setting from the nearest facility.
5. Remember, Mt. Mckinley makes its own weather. If the weather begins to deteriorate, leave immediately.
6. Tour aircraft may have their radios turned down to talk to their passengers and therefore may miss a report. ALWAYS presume that other aircraft may be in your area and might have missed your call.
7. Be sure you report the correct altitude you are flying in order to maximize separation and minimize the mid–air potential.
8. The National Park Service at Denali National Park and Preserve performs numerous rescues along the Alaska Range and on Mt. McKinley. Rescues are often performed using the high altitude Lama helicopter, fixed wing, and military aircraft. Please stay well away from rescue sites. Listen and obey airspace closures around rescue operations.
9. Be sure to brush up on your mountain flying techniques before flying in the Denali Park Area. There are many excellent books and pamphlets available. Consider reviewing your skills with a flight instructor.
10. Alert: Triple Lakes has the largest volume of traffic in July with an estimated aircraft crossings of 200 per day.

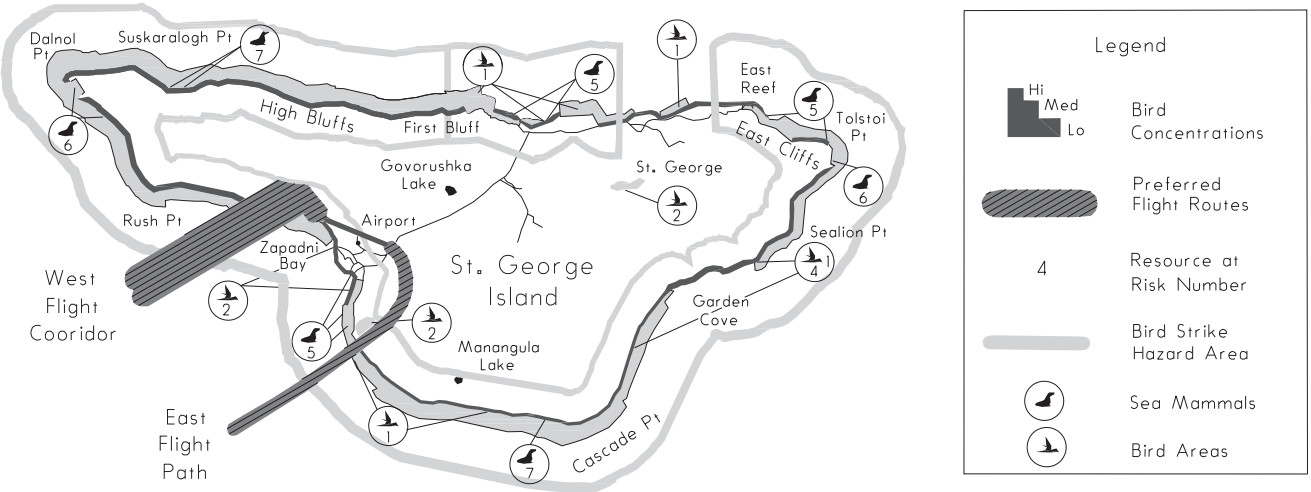
DENALI STATE PARK

Denali State Park borders the national park on its southeast corner between the Dutch Hills to the west and to the Susitna River on the east. The George Park Highway runs through the middle of the park. State requirements for aviators operating within the state park.

1. Landings of fixed wing aircraft in DSP are permitted west of the Parks Hwy and on Blair and Ermine Lakes. Landings are not permitted on Byers Lake and on Kesugi and Curry Ridges, which are all east of the highway.
2. Practice landings are not permitted.
3. Helicopters landings are restricted to five specific sites west of the highway.
4. For detailed information on these sites for planning purposes, please phone (907) 745–3975.

WAYPOINTS	LAT	LONG	WAYPOINTS	LAT	LONG
Alder Gap	62.46.21	150.31.34	North Hunter Pass	62.57.54	151.05.08
Alder Point	62.44.23	150.23.02	North Peters Hills	62.34.40	150.42.58
Anderson Pass	63.17.25	150.14.02	One Shot Gap	62.48.33	151.07.42
Backside Lake	62.51.27	150.41.08	Peters Basin	63.06.43	151.11.18
Base Camp	62.58.00	151.09.55	Peters Gap	62.31.27	150.48.13
Bend of the Muldrow	63.17.34	150.21.16	Pika Glacier/Little Switzerland	62.42.00	151.11.55
Bend of the Peters	63.12.01	150.57.59	Polychrome Glaciers	63.30.52	149.56.12
Between the Rivers	62.26.03	150.11.15	Polychrome Pass	63.30.52	149.56.12
Big Bend, Kahiltna	62.40.18	151.23.35	Refuge Valley	63.30.44	149.20.18
Big Bend of the Ruth	62.46.18	150.38.32	Round Top	63.31.45	149.39.57
Bunco Bump	62.31.22	150.26.14	Ruth Amphitheater	62.59.58	150.42.08
Bunco Lake	62.32.14	150.30.40	Ruth Icefall	62.52.46	150.36.41
Byers Lake	62.44.21	150.06.48	Saddle, Tokositna/ Ruth	62.46.18	150.43.04
Cathedral Mountain	63.34.36	149.34.23	Safari Lake	62.27.39	150.34.11
Chelatna Lake	62.29.01	151.27.36	Scott Peak	63.20.40	150.07.33
Denai Creek	62.37.30	149.06.40	South Hunter Pass	62.51.52	151.06.28
Divide Mountain	63.29.38	150.00.08	South Peters Hills	62.26.50	150.56.24
Easy Pass	63.22.08	149.43.01	Spink Lake	62.46.51	150.14.28
Era Chulitna Heliport	62.34.05	150.14.01	Swan Lake	62.31.21	150.23.43
Foggy Pass	63.24.46	149.14.00	Tluna Icefall	63.08.17	151.07.32
Golden Zone Mine	63.13.06	149.38.31	Toe of the Eldridge	62.55.16	149.56.48
Gunsight Pass	63.12.19	150.51.04	Toe of the Kahiltna	62.28.53	151.11.58
Highway Camp	62.24.16	150.15.31	Toe of the Muldrow	63.24.27	150.32.45
Hillside	62.38.42	150.31.01	Toe of the Peters	63.15.52	151.00.14
Home Lake	62.37.13	150.37.44	Toe of the Ruth	62.40.08	150.25.08
Igloo	63.11.33	149.20.41	Toe of the Tokositna	62.40.18	150.46.53
Kahiltna Ice Falls	62.54.05	151.13.14	Tokosha Mountains	62.42.01	150.37.59
Kahiltna Pass	63.04.45	151.10.26	Traleika Col	63.03.56	150.46.12
Lower Tokat	63.38.19	150.06.54	Triple Crown	62.45.15	151.08.54
Moose Meadows	62.35.14	150.30.56	Triple Lakes	63.39.29	148.52.34
Moose's Tooth	62.58.09	150.36.48	Upper Riley	63.31.43	149.12.45
Mountain House	62.58.50	150.48.08	West Ridge of Hunter	62.56.23	151.11.50
Myrtle Pass	63.34.20	150.37.25	Wickersham Wall	63.06.43	151.03.42

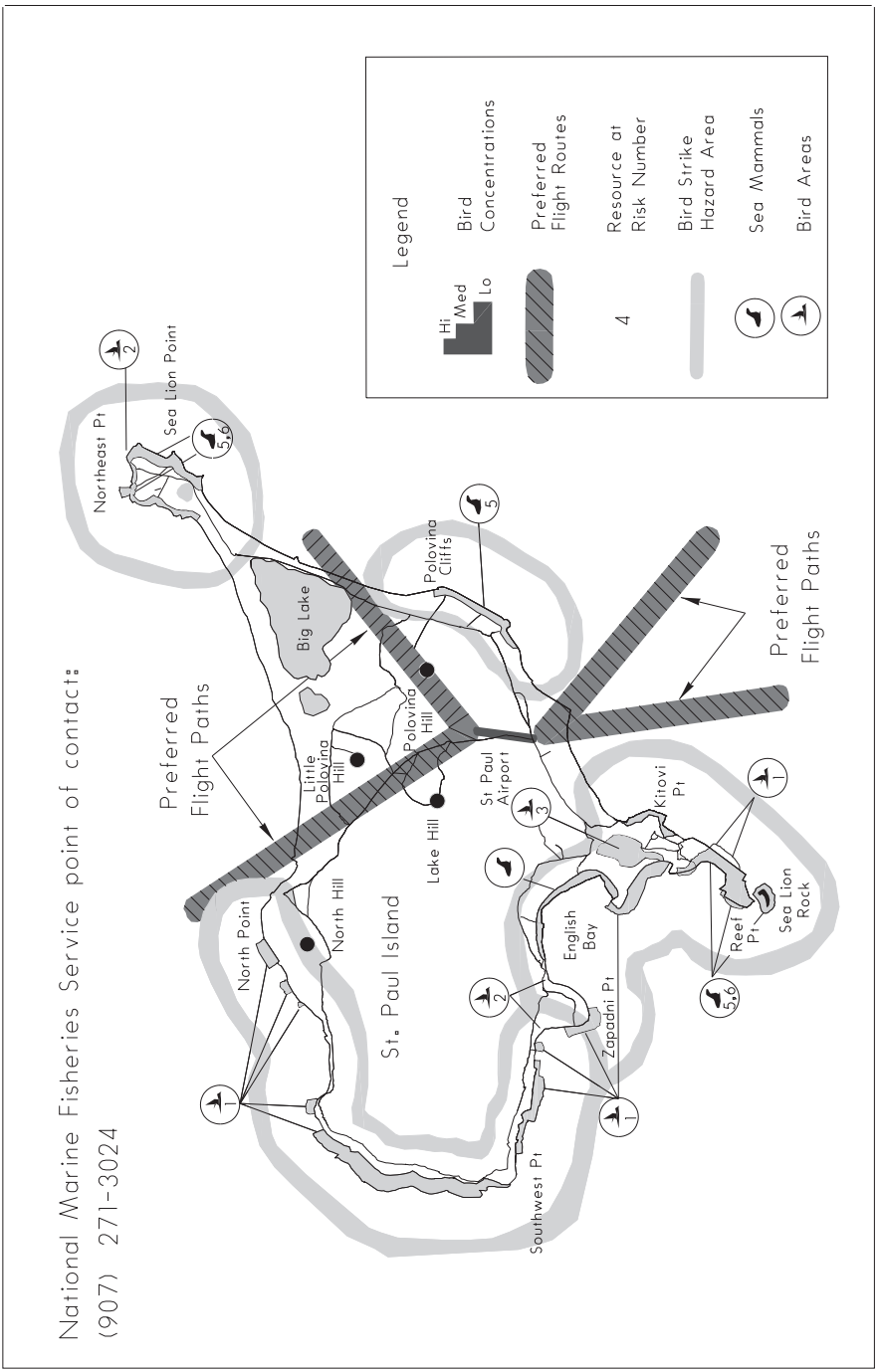

Denali Flight Advisory
Common Traffic Advisory Frequencies
North Denali: 122.725
South Denali: 123.65
Airport: 122.900
Healy RCO 122.4
Nenana RCO 122.5
Chilchukabena Lake
Stampede Trail
Healy
Stampede
Mt. Margaret
Park Hq
McKinley Park RCO 122.1
Fang Mountain
Kantishna
North 122.725
Cantwell
Foggy Pass
Denali Hwy
Castle Rocks
Summit
Cantwell RCO 122.5
Golden Zone Mine
Summit RCO 122.6
Mt. Deception
Mount McKinley
Kahiltna Pass
Mt. Silverthrone
Traleika Col
Eldridge Glacier
Toe of the Eldridge
Mt. Foraker
Purkeypile
South 123.65
Spink Lake
George Parks Hwy
Alaska Railroad
Mt. Russell
Big Bend of the Kahiltna
ERA Chulitna River Heliport
Toe of the Kahiltna
Petersville
Chelatna Lake
Highway Camp
Talkeetna Radio 123.6
Trapper Creek
Not For Navigation
For Information Only
Legend
Mountain
Spot Location
Airport
North/South Areas



Preferred Arrival and Departure Routes into St. George and St. Paul Islands

The National Marine Fisheries Service and the U.S. Fish and Wildlife Service requests pilots maintain a minimum altitude of 1,000 feet above ground level (AGL) within a 1 mile radius of any of the coastline of the Pribilof Islands (St. Paul, St. George, Sea Lion Rock, Walrus, and Otter Islands) from 14 May until 14 December. Flights less than 1,000 feet AGL and less than 1 mile seaward or ½ mile leandward may harass marine mammals and seabirds. Harassment of wildlife may increase the incidence of bird strikes and violate the Marine Mammal Protection Act.

During approach and takeoff from St. George to the east a right bank turn is recommended between ½ mile and 1 mile from the end of the runway to heading 060°T or 240°T. During approach and takeoff from St. Paul follow aircraft advisory corridors to the north and south. Inter-island flights along heading 138°T or 318°T should avoid the aircraft advisory zones if less than 1,000′ AGL and within 1 mile of any coastline except as recommended above.


National Marine Fisheries Service point of contact:
(907) 271-3024
Preferred Flight Paths
St. Paul Island
Northeast Pt
Sea Lion Point
Big Lake
Polovina Cliffs
Little Polovina Hill
Polovina Hill
North Point
North Hill
Lake Hill
St Paul Airport
Kitovi Pt
English Bay
Zapadni Pt
Reef Pt
Sea Lion Rock
Southwest Pt
Preferred Flight Paths
Legend
Hi
Med
Lo
Bird Concentrations
Preferred Flight Routes
4
Resource at Risk Number
Bird Strike Hazard Area
Sea Mammals
Bird Areas

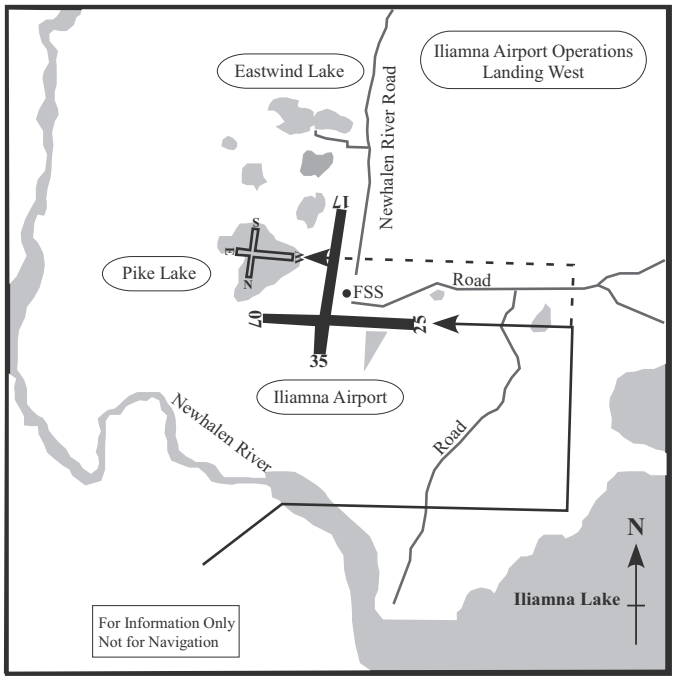
Iliamna Airport
Traffic Patterns, Communications and Aircraft Operations

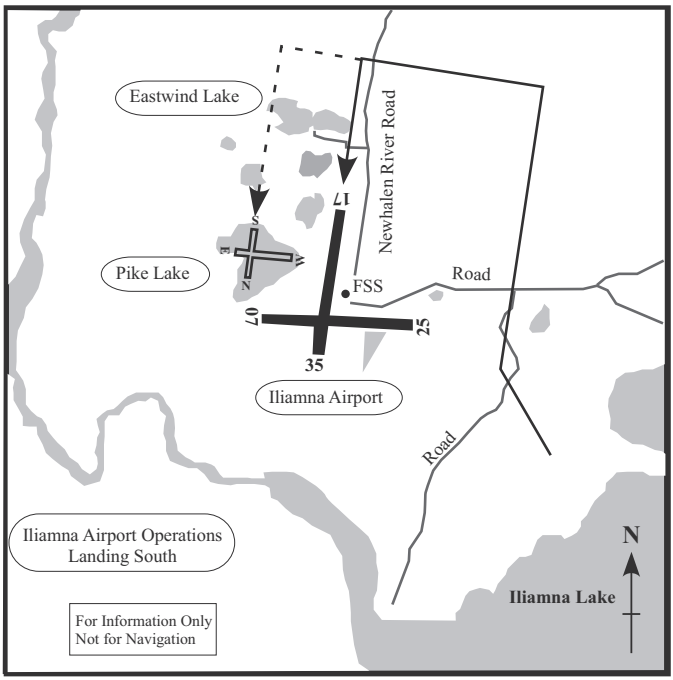
When winds allow, float equipped aircraft should land in a direction that will not place them over the airport or in conflict with the airport traffic patterns. For Pike Lake this generally means landing to the East. When winds require an approach over the airport, the float aircraft shall give right of way to wheeled aircraft on approach to the airport. When winds are such velocity that aircraft cannot land as described above, float aircraft can fly the pattern with wheel–equipped aircraft and sidestep to a landing on the lake.

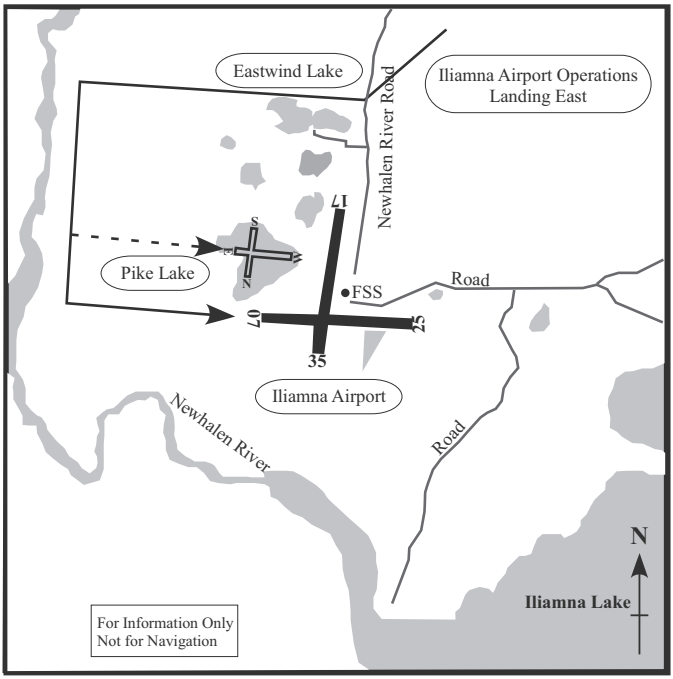
Departure Procedures
Aircraft departing the Iliamna airport VFR will make standard departures as described in the Aeronautical Information Manual. Aircraft departing Pike Lake should either depart away from the main airport, or sequence their departures using radio communication so they are departing behind the wheel–equipped aircraft.

When arriving Iliamna Runways 17 and S or departing Runways 35 and N caution is advised for occasional, float and wheel–equipped, operations in the vicinity of Eastwind Lake.

It is strongly recommended that all aircraft utilize the CTAF on 123.6


Eastwind Lake
Iliamna Airport Operations
Landing West
Newhalen River Road
17
35
07
25
Pike Lake
FSS
Road
Iliamna Airport
Newhalen River
Road
N
Iliamna Lake
For Information Only
Not for Navigation


Eastwind Lake
Newhalen River Road
17
35
07
25
Pike Lake
FSS
Road
Iliamna Airport
Road
Iliamna Airport Operations
Landing South
N
Iliamna Lake
For Information Only
Not for Navigation


Eastwind Lake
Iliamna Airport Operations
Landing East
Newhalen River Road
17
Pike Lake
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Iliamna Airport
Newhalen River
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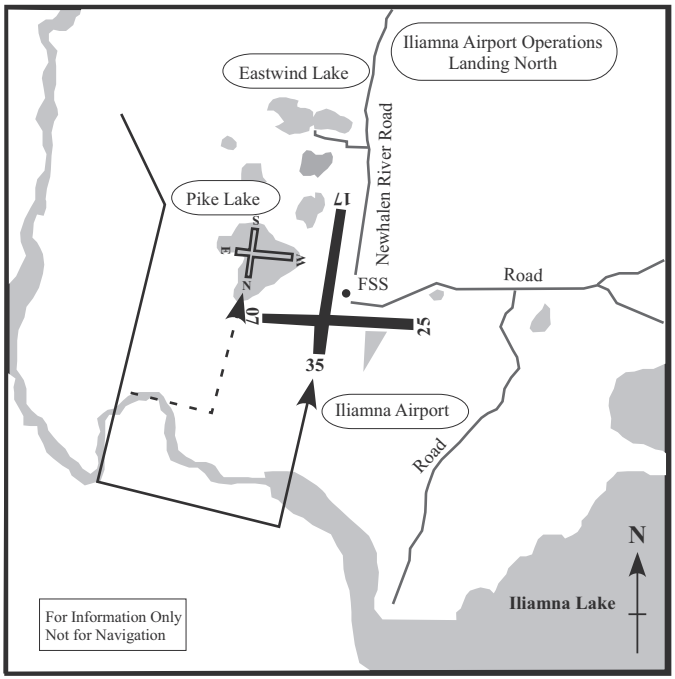
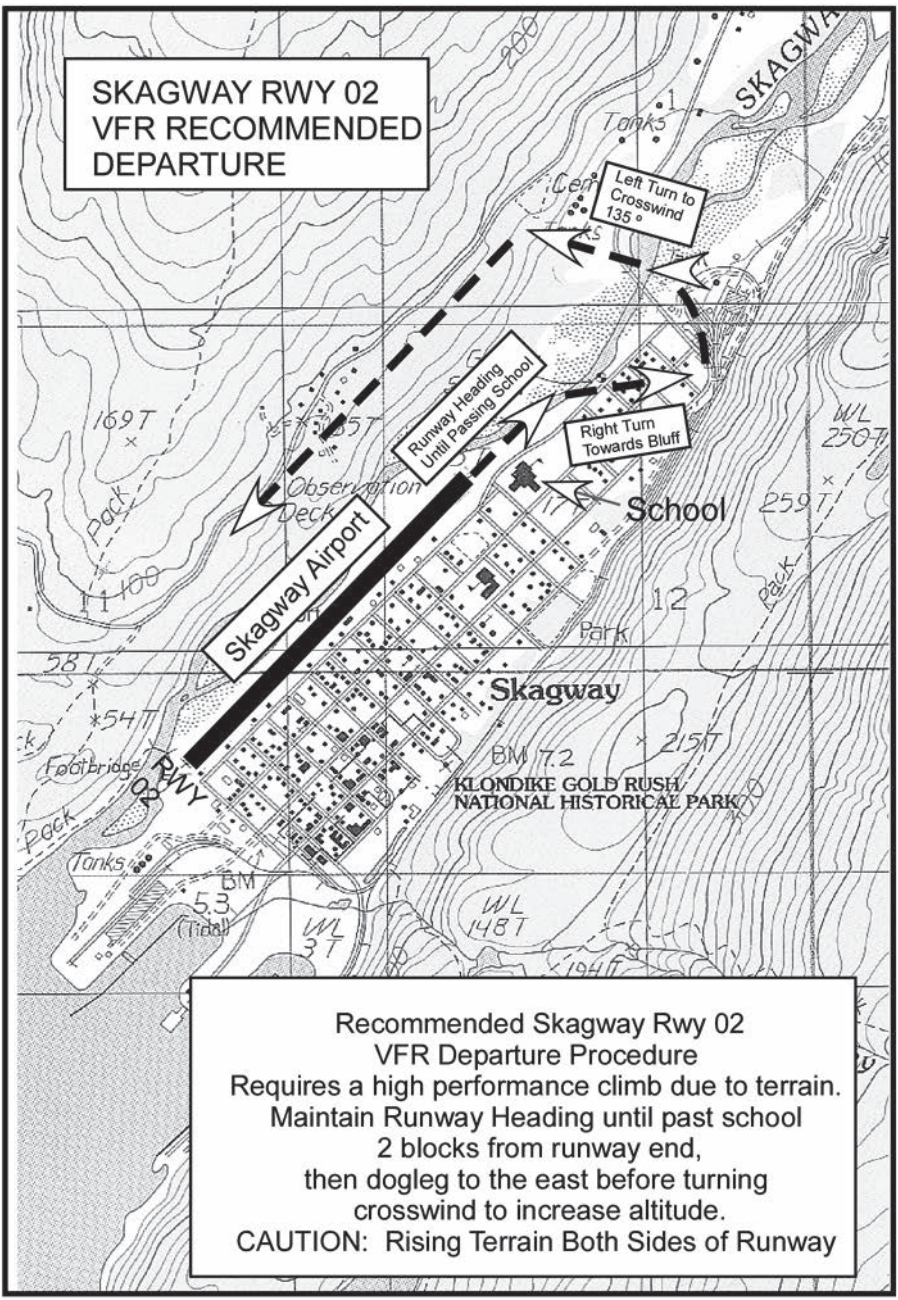
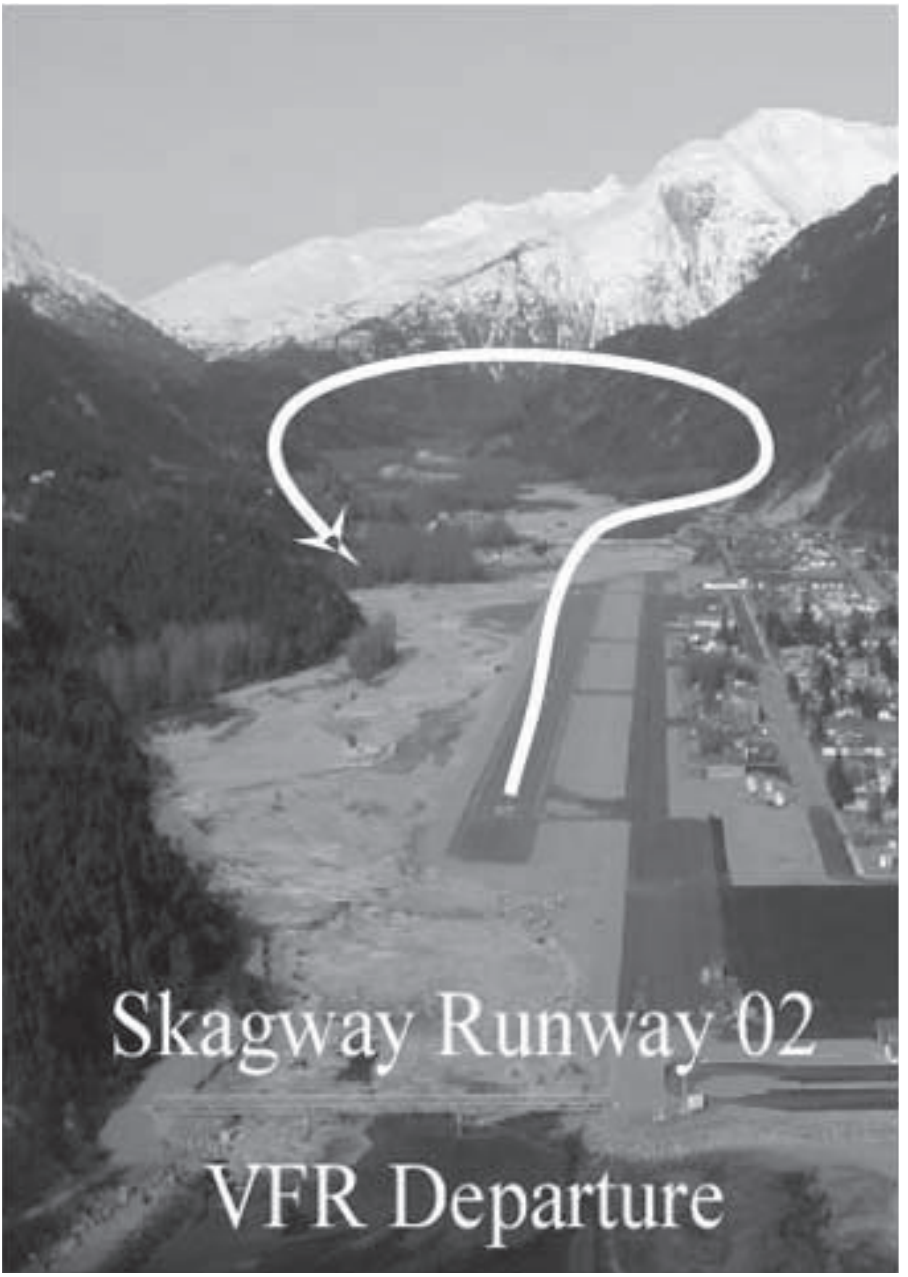
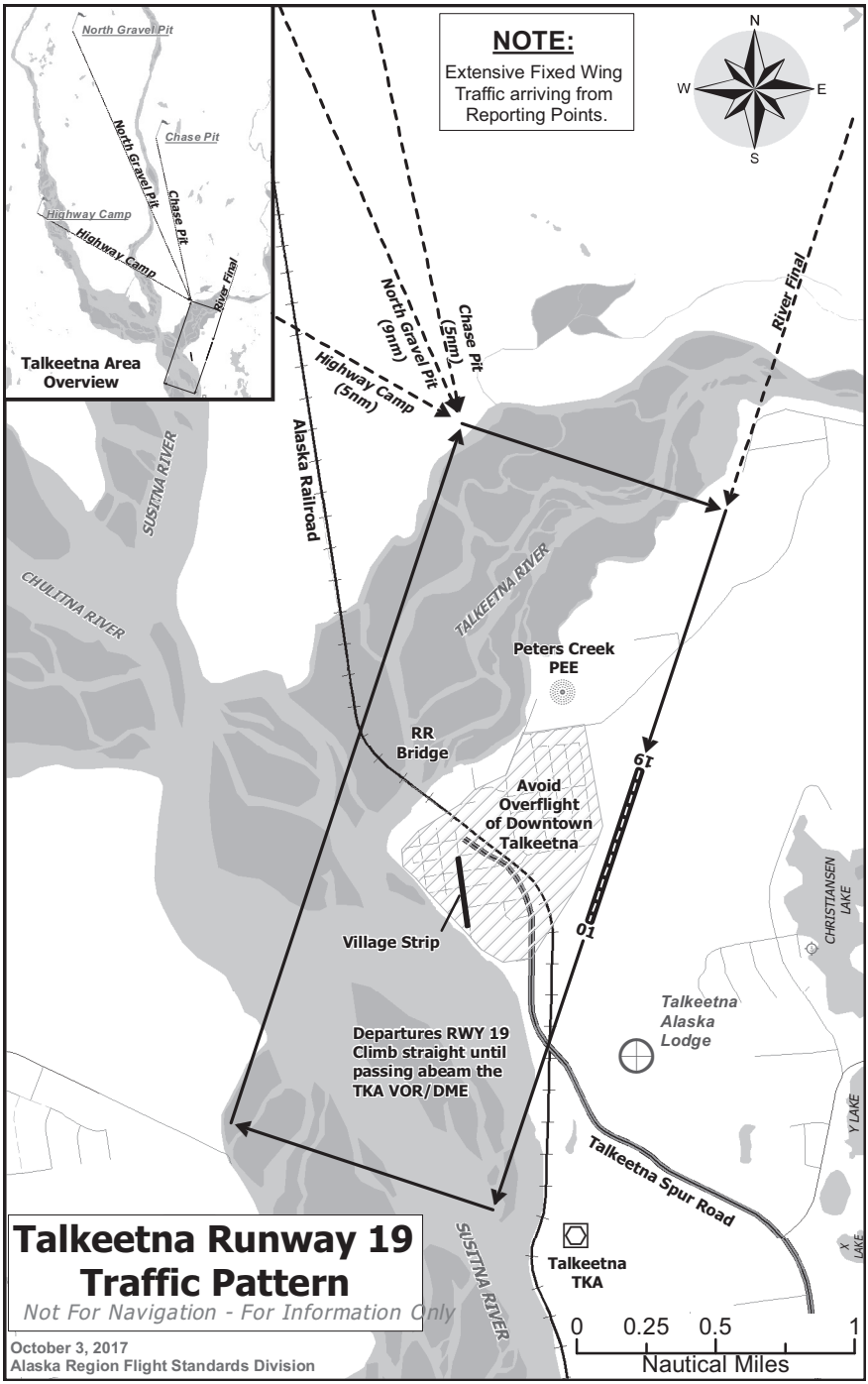
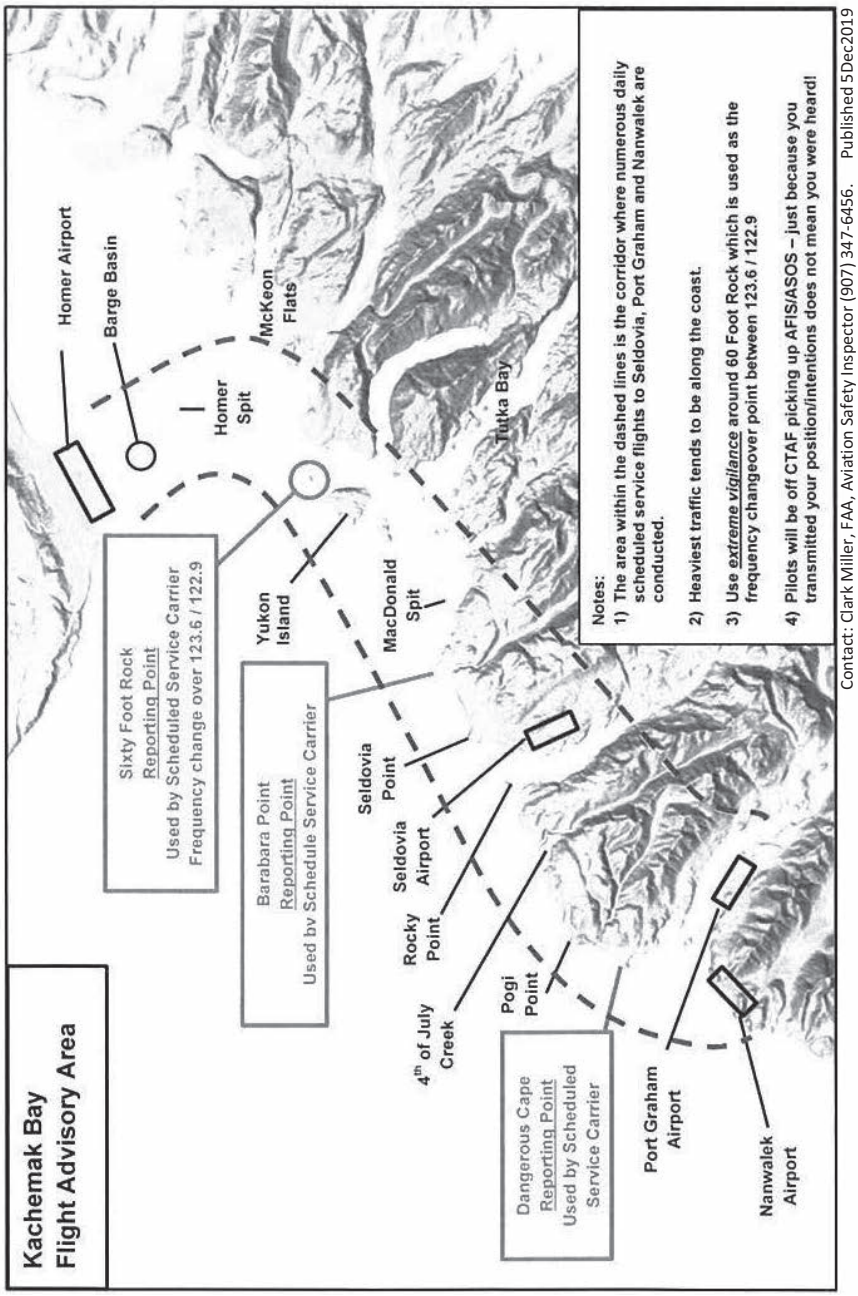
Iliamna Lake
For Information Only
Not for Navigation


Iliamna Airport Operations
Landing North
Eastwind Lake
Newhalen River Road
Pike Lake
17
S
E
W
N
FSS
Road
07
25
35
Iliamna Airport
Road
N
Iliamna Lake
For Information Only
Not for Navigation


SKAGWAY RWY 02
VFR RECOMMENDED
DEPARTURE
Left Turn to Crosswind 135°
Runway Heading Until Passing School
Right Turn Towards Bluff
Skagway Airport
School
Skagway
Observation Deck
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
Tanks
Footbridge
RWY 02
Recommended Skagway Rwy 02
VFR Departure Procedure
Requires a high performance climb due to terrain.
Maintain Runway Heading until past school
2 blocks from runway end,
then dogleg to the east before turning
crosswind to increase altitude.
CAUTION: Rising Terrain Both Sides of Runway


Skagway Runway 02
VFR Departure


NOTE:
Extensive Fixed Wing Traffic arriving from Reporting Points.
N
W
E
S
North Gravel Pit
Chase Pit
Highway Camp
River Final
Talkeetna Area Overview
North Gravel Pit (9nm)
Chase Pit (5nm)
Highway Camp (5nm)
River Final
Alaska Railroad
SUSITNA RIVER
CHULITNA RIVER
TALKEETNA RIVER
Peters Creek PEE
RR Bridge
Avoid Overflight of Downtown Talkeetna
19
01
Village Strip
CHRISTIANSEN LAKE
Talkeetna Alaska Lodge
Departures RWY 19 Climb straight until passing abeam the TKA VOR/DME
Talkeetna Spur Road
Y LAKE
X LAKE
Talkeetna TKA
SUSITNA RIVER
Talkeetna Runway 19 Traffic Pattern
Not For Navigation - For Information Only
October 3, 2017
Alaska Region Flight Standards Division
0 0.25 0.5 1
Nautical Miles

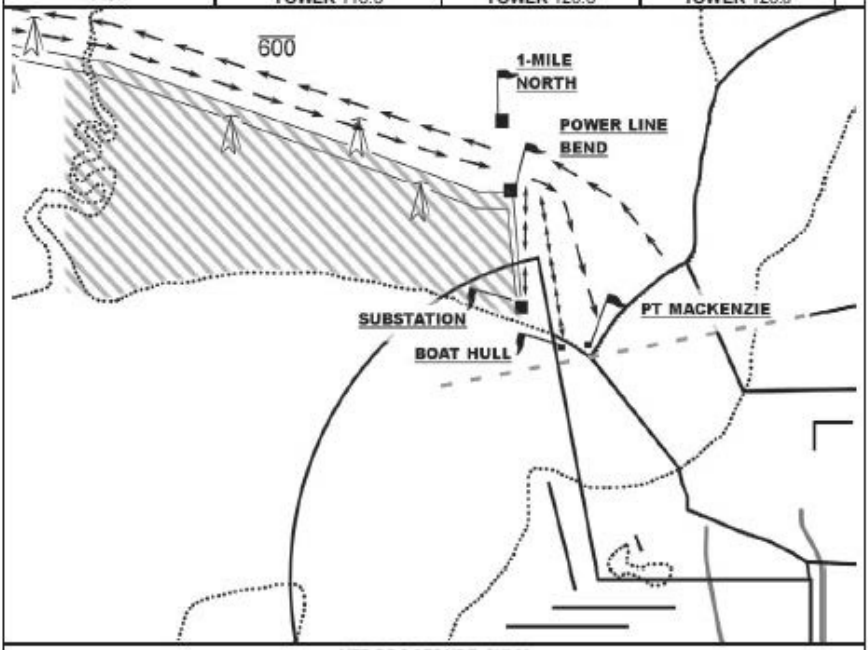


Contact: Clark Miller, FAA, Aviation Safety Inspector (907) 347-6456. Published 5Dec2019

ANCHORAGE, ALASKA	VFR TRANSITION ROUTE	POWER LINE TRANSITION ALL ANCHORAGE AREA AIRPORTS AND SEAPLANE BASES

ROUTE PURPOSE:
The POWER LINE TRANSITION is for VFR aircraft whose route of flight follows the north shoreline of Cook Inlet. This route enhances wake turbulence separation from aircraft using Ted Stevens Anchorage International Airport and Elmendorf AFB.

ANCHORAGE APP CON 119.1	ANCHORAGE ATIS 135.5 TOWER 118.3	LAKE HOOD ATIS 125.6 TOWER 126.8	MERRIL ATIS 124.25 TOWER 126.0



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

ARRIVING AIRCRAFT: Fly along the power lines on the north side. Maintain at or below 600' MSL until Power Line Bend.

DEPARTING AIRCRAFT: Fly one mile north of the power lines. Maintain at or below 600' MSL until crossing the Little Susitna River.

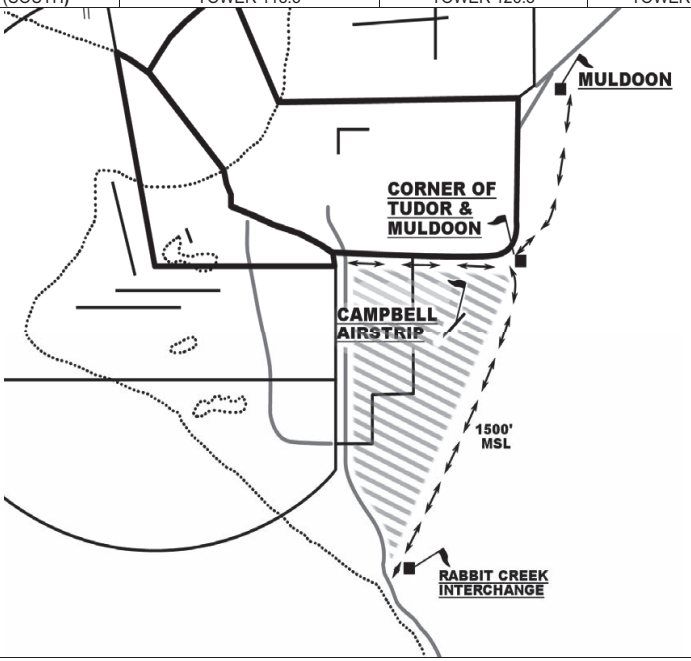
NOTE: Flight in or above CLASS C airspace requires operating ADS-B Out, and operating MODE C transponder.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR TRANSITION ROUTE	CHUGACH TRANSITION ALL ANCHORAGE AREA AIRPORTS AND SEAPLANE BASES

ROUTE PURPOSE:
VFR aircraft transiting the area east of Ted Stevens Anchorage International Airport may use the CHUGACH TRANSITION. This route avoids the Seward Highway Segment (as defined in CFR 14 Part 93) and significantly reduces the potential for wake turbulence encounters from large and heavy aircraft using the east/west runways at Ted Stevens Anchorage International Airport.

ANCHORAGE APP CON	ANCHORAGE	LAKE HOOD	MERRILL
119.1 (NORTH) 126.4 (SOUTH)	ATIS 135.5 TOWER 118.3	ATIS 125.6 TOWER 126.8	ATIS 124.25 TOWER 126.0



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

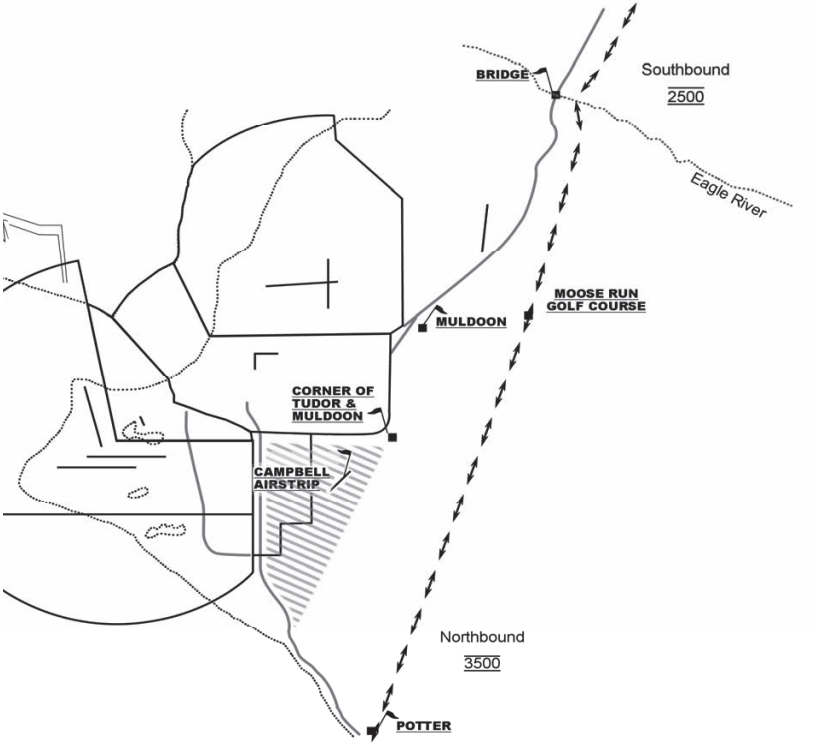
ALL AIRCRAFT: Remain east of a line from the corner of Tudor and Muldoon roads to Rabbit Creek Interchange and maintain 1,500 MSL, then proceed as required.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR OVERFLIGHT ROUTE	EASTSIDE OVERFLIGHT

ROUTE PURPOSE:
The EASTSIDE OVERFLIGHT provides an orderly route for transiting the Anchorage bowl while avoiding Class C/D airspace and reducing potential conflict with aircraft using established routes to and from adjacent airports.

ENA FSS	ANCHORAGE APP CON	ANCHORAGE APP CON
122.3	119.1 (NORTH)	126.4 (SOUTH)



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

NORTH TO SOUTH: Fly southbound along the Glenn Highway to the Eagle River Bridge, then direct Moose Run Golf Course, direct Potter, maintain 2,500 MSL.

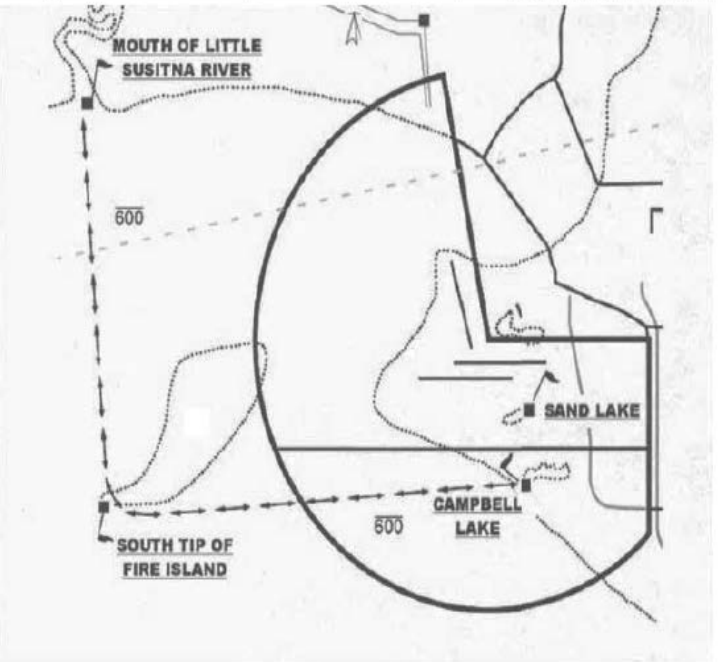
SOUTH TO NORTH: Proceed from Potter direct to Moose Run Golf Course, direct Eagle River Bridge, then northbound along the Glenn Highway, maintain 3,500 MSL.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR TRANSITION ROUTE	FIRE ISLAND ROUTE CAMPBELL LAKE SAND LAKE

ROUTE PURPOSE: The FIRE ISLAND ROUTE is a recommended route for use by aircraft operating to or from Campbell Lake or Sand Lake when overflight of Ted Stevens Anchorage International Airport is not desired.

ATIS 135.5	CLNC DEL 119.4	ANCHORAGE TOWER 118.3	ANCHORAGE APP CON 119.1 (NORTH OF FIRE ISLAND) 126.4 (SOUTH OF FIRE ISLAND)



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: Maintain at or below 600' MSL. Campbell Lake aircraft proceed as depicted. Sand Lake departures contact Anchorage Clearance Delivery on 119.4/128.65 or Anchorage Tower prior to departure.

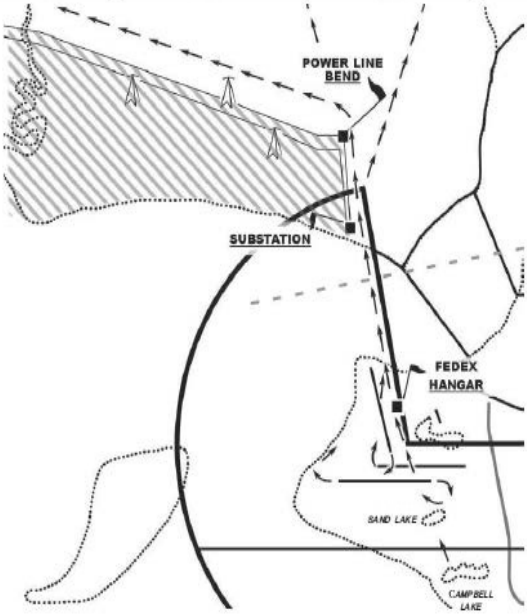
NOTE: Flight in or above CLASS C airspace requires operating ADS-B Out, and operating MODE C transponder.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	NORTH SHORE DEPARTURE TED STEVENS ANCHORAGE INTL CAMPBELL LAKE SAND LAKE

ROUTE PURPOSE: The NORTH SHORE DEPARTURE will be issued to aircraft departing Anchorage westbound through northeast bound. Contact Anchorage Clearance Delivery and advise of destination and request the NORTH SHORE DEPARTURE.

ATIS	CLNC DEL	ANC GROUND	ANCHORAGE TOWER	ANCHORAGE DEP
135.5	119.4	121.9	118.3	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS: All aircraft cross Knik Arm at or below 1100' MSL or, at or above 2,200' MSL until clear of Class C Surface Area.

DEPARTING ANC RUNWAY 33: After departure, offset to the east of Runway 33 to overfly North Airpark then proceed direct to the Power Line Bend as depicted.

DEPARATING ANC ALL OTHER RUNWAYS: After departure turn right; proceed direct to the FedEx hangar then direct to the Power Line Bend as depicted.

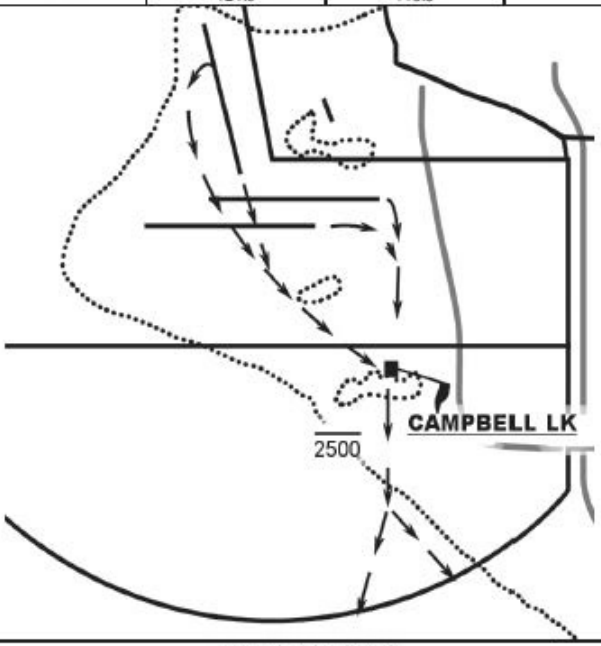
DEPARTING CAMPBELL LAKE / SAND LAKE: After departure, remain south of runway 7R until advised by ATC. Proceed direct to the FedEx hangar then direct to the Power Line Bend as depicted.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEEDURE	CHICKALOON DEPARTURE TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT

ROUTE PURPOSE:
The CHICKALOON DEPARTURE will be issued to aircraft departing to the south of Anchorage. Contact Anchorage Clearance Delivery and advise of destination and request the CHICKALOON DEPARTURE.

ATIS 135.5	CLNC DEL 119.4	ANCHORAGE GROUND 121.9	ANCHORAGE TOWER 118.3	ANCHORAGE DEPARTURE 126.4



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:

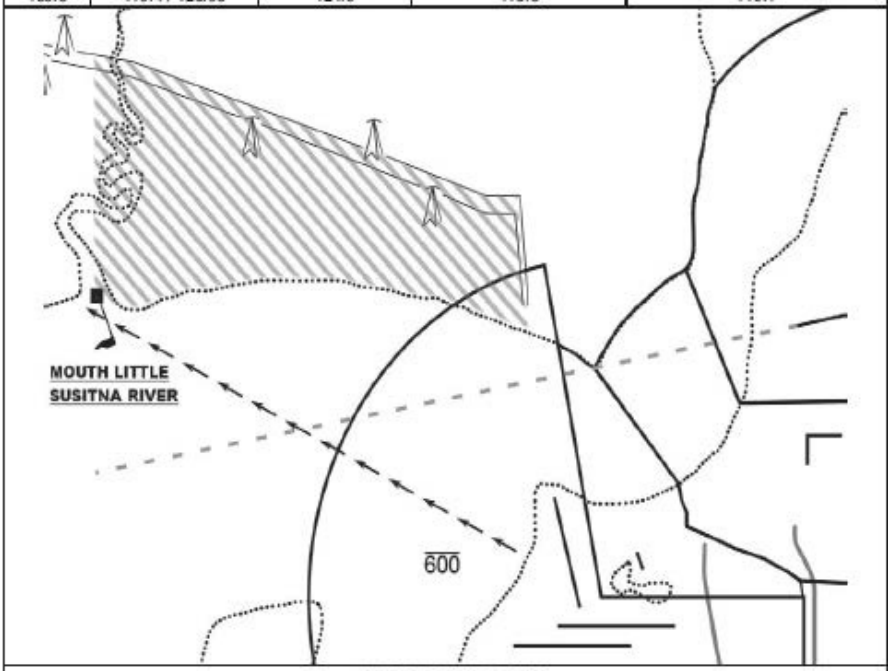
Depart the traffic pattern as depicted or as assigned by ATC, direct to Campbell Lake, then via heading 160°.
Maintain at or below 2,500' MSL until crossing the north shore of Turnagain Arm or advised by ATC.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	LITTLE SU DEPARTURE TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT

ROUTE PURPOSE:
The LITTLE SU DEPARTURE may be issued to westbound aircraft. Contact Anchorage Clearance Delivery on 119.4 / 128.65 and request the LITTLE SU DEPARTURE.

ATIS	CLNC DEL	ANC GND	ANCHORAGE TOWER	ANCHORAGE DEPARTURE
135.5	119.4 / 128.65	121.9	118.3	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:

Depart the traffic pattern as assigned by ATC. Proceed direct to the mouth of the Little Susitna River. Maintain at or below 600' MSL.

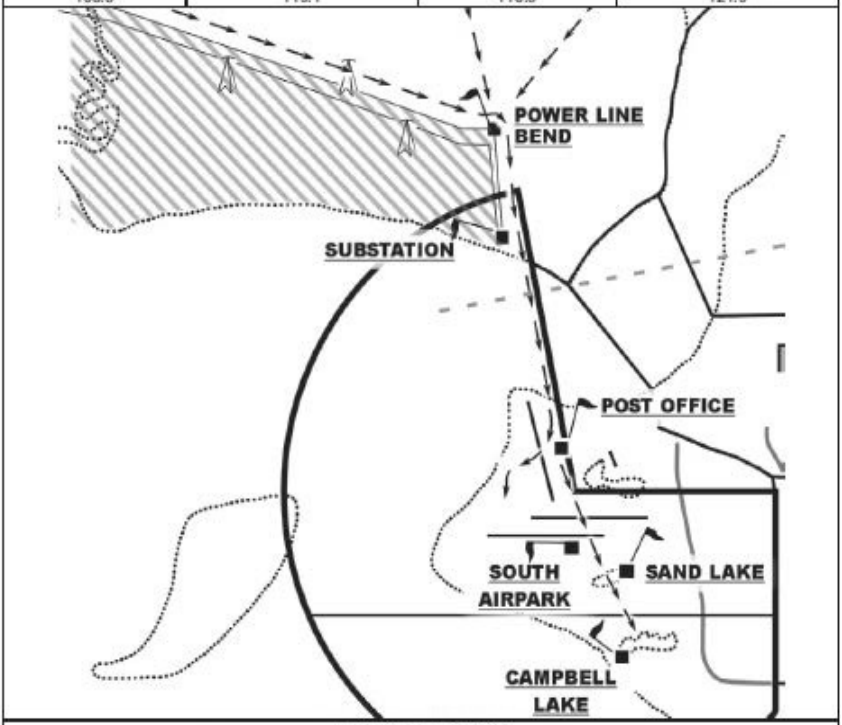
Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR ARRIVAL PROCEDURE	MACKENZIE ARRIVAL TED STEVENS ANCHORAGE INTL CAMPBELL LAKE SAND LAKE

ROUTE PURPOSE:

The MACKENZIE ARRIVAL will be issued to aircraft arriving from the north of Anchorage. Contact Anchorage Approach Control at least 15 miles north of the airport. On initial contact request MACKENZIE ARRIVAL.

ATIS	ANCHORAGE APPROACH	ANCHORAGE TOWER	ANCHORAGE GROUND
135.5	119.1	118.3	121.9



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS :

From over the Power Line Bend, proceed direct to the Post Office. Cross the south shore of Knik Arm at or below 1100' MSL or at or above 2,200' MSL, then ...

LANDING ANC: At the Post Office turn right, cross Runway 15/33 at midfield then as assigned by ATC.

HELICOPTERS LANDING SOUTH AIRPARK OR KULIS: After passing the Post Office, proceed to the South Airpark or Kulis or as assigned by ATC. Do not over fly the ATC tower.

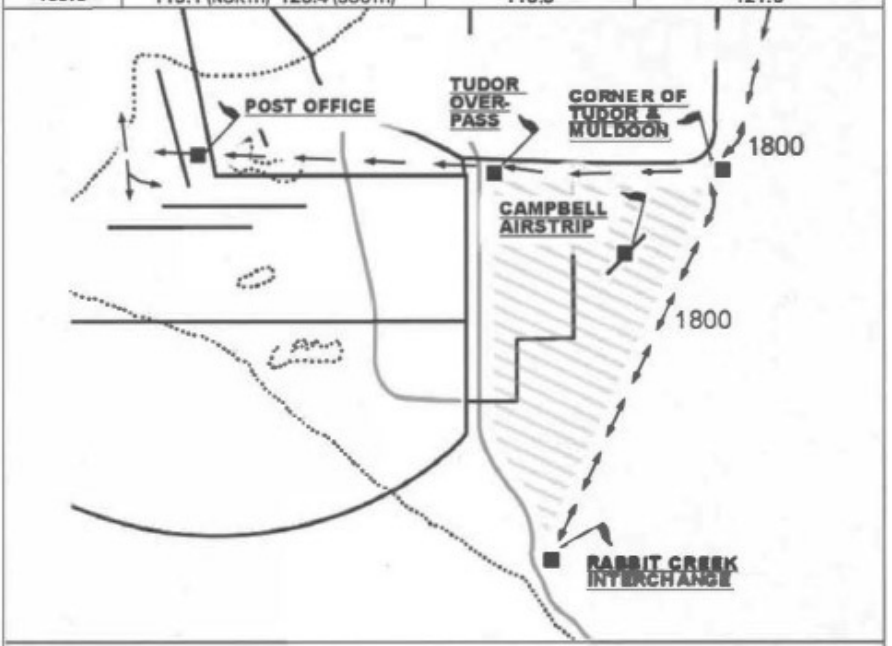
LANDING CAMPBELL LAKE OR SAND LAKE: After passing the Post Office, proceed over South Airpark or as assigned by ATC.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR ARRIVAL PROCEDURE	MIDTOWN ARRIVAL TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT

ROUTE PURPOSE:
The MIDTOWN ARRIVAL will be issued to aircraft arriving from northeast or south of Ted Stevens Anchorage International Airport. Contact Anchorage Approach Control at least 15 miles from the airport as appropriate. On initial contact request the MIDTOWN ARRIVAL.

ATIS	ANCHORAGE APP CON	ANCHORAGE TOWER	GND CON
135.5	119.1 (NORTH) 126.4 (SOUTH)	118.3	121.9



VFR PROCEDURE ONLY
CHART NOT TO SCALE – NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND **MODE C TRANSPONDER REQUIRED**

ROUTE INSTRUCTIONS:

EAST ARRIVALS: Proceed from the corner of Tudor and Muldoon direct to the Tudor and New Seward Overpass at 1,800' MSL, direct to the Post Office, cross Runway 33 at midfield, then as assigned by ATC.

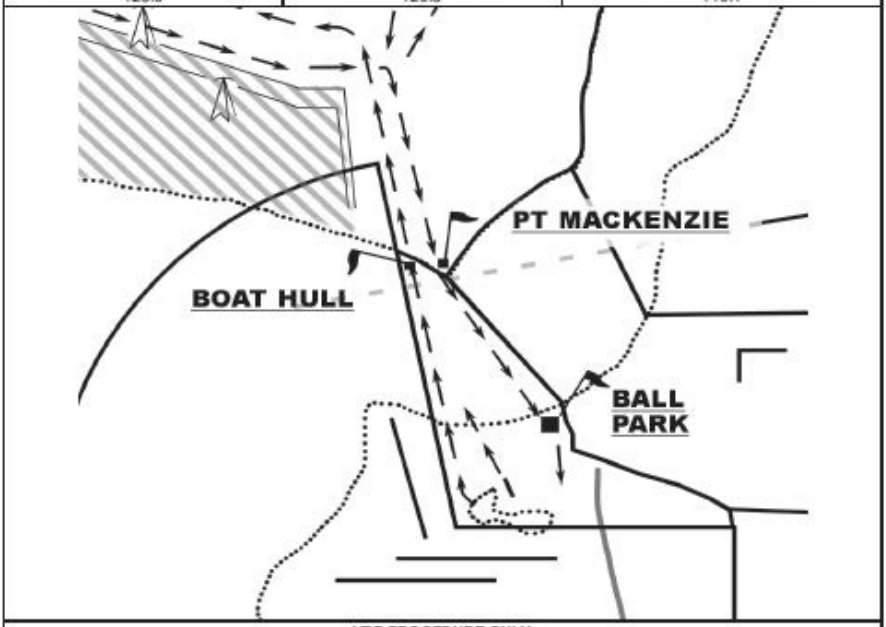
SOUTH ARRIVALS: Proceed from Rabbit Creek Interchange to the corner of Tudor and Muldoon, then direct to the Tudor and New Seward Overpass at 1,800' MSL, direct to the to the Post Office, cross Runway 33 at midfield, then as assigned by ATC.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR ARRIVAL / DEPARTURE ROUTE	WEST ROUTE LAKE HOOD SEAPLANE BASE LAKE HOOD STRIP

ROUTE PURPOSE:
The WEST ROUTE is for aircraft operating to/from north of Lake Hood Seaplane Base. This route is used when the Lake Hood Seaplane Base traffic pattern is in a "west flow", i.e. landing and departing the West, North or Northwest waterlanes and Runway 32.

LAKE HOOD ATIS 125.6	LAKE HOOD TOWER 126.8	ANCHORAGE APP CON 119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

DEPARTING AIRCRAFT: Proceed northbound to the Boat Hull as depicted. Climb to 900' MSL as rapidly as practical. Cross mid-channel of Knik Arm either at or below 900' MSL or above 2,200' MSL, except maintain at or below 2,500' MSL until authorized by ATC.

ARRIVING AIRCRAFT: Proceed inbound from Point Mackenzie as depicted. Cross mid-channel of Knik Arm either at 1,200' MSL or at or above 2,200' MSL.

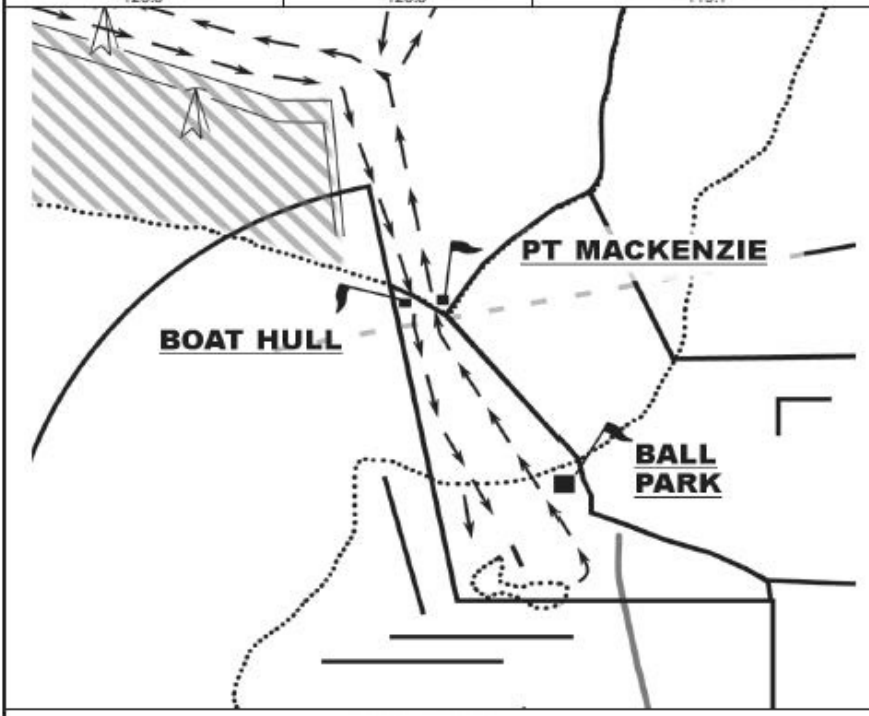
NOTE: Flight in or above CLASS C airspace requires operating ADS-B Out, and operating MODE C transponder.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR ARRIVAL / DEPARTURE ROUTE	EAST ROUTE LAKE HOOD SEAPLANE BASE LAKE HOOD STRIP

ROUTE PURPOSE:
The EAST ROUTE is for aircraft operating to/from north of Lake Hood Seaplane Base. This route is used when the Lake Hood Seaplane Base traffic pattern is in an "east flow", ie. landing and departing the East, South or Southeast waterlanes and Runway 14.

LAKE HOOD ATIS	LAKE HOOD TOWER	ANCHORAGE APP CON
125.6	126.8	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

DEPARTING AIRCRAFT: Proceed northbound to Point Mackenzie as depicted. Climb to 900' MSL as as practical. Cross mid-channel of Knik Arm either at or below 900' MSL or above 2,200' MSL, except maintain at or below 2,500' MSL until authorized by ATC.

ARRIVING AIRCRAFT: Proceed inbound from the Boat Hull as depicted. Cross mid-channel of Knik Arm either at 1,200' MSL or at or above 2,200' MSL.

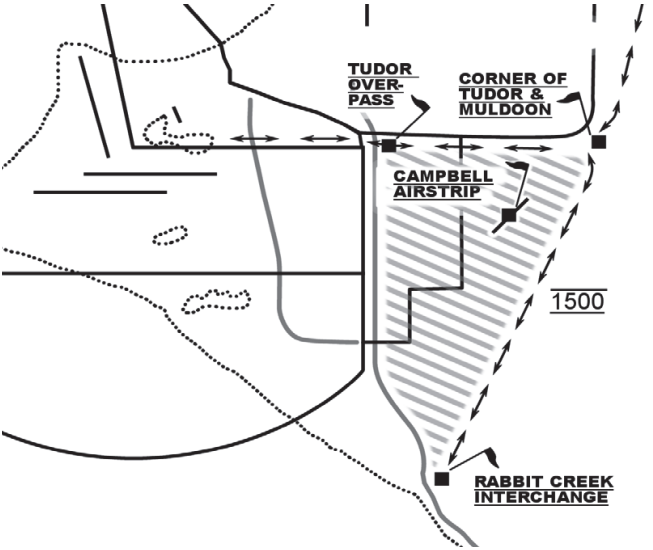
NOTE: Flight in or above CLASS C airspace requires operating ADS-B Out, and operating MODE C transponder.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR ARRIVAL / DEPARTURE ROUTE	TUDOR OVERPASS ARRIVAL / DEPARTURE LAKE HOOD SEAPLANE BASE LAKE HOOD STRIP

ROUTE PURPOSE:
The TUDOR OVERPASS ARRIVAL / DEPARTURE provides an orderly route for entering and exiting the Lake Hood Class D airspace east of Lake Hood while avoiding Class C airspace and reducing potential conflict with aircraft using established routes to and from adjacent airports.

LAKE HOOD ATIS 125.6	ANCHORAGE APP CON 119.1 (north)	ANCHORAGE APP CON 126.4 (south)	LAKE HOOD TOWER 126.8



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

DEPARTURES: Depart the traffic pattern as assigned by ATC. Proceed eastbound just south of Tudor and New Seward overpass. Remain at or below 900' MSL until east of the corner of Tudor and Muldoon.

EAST ARRIVALS: Proceed from the corner of Tudor and Muldoon direct to the Tudor and New Seward Overpass at 1,500' MSL.

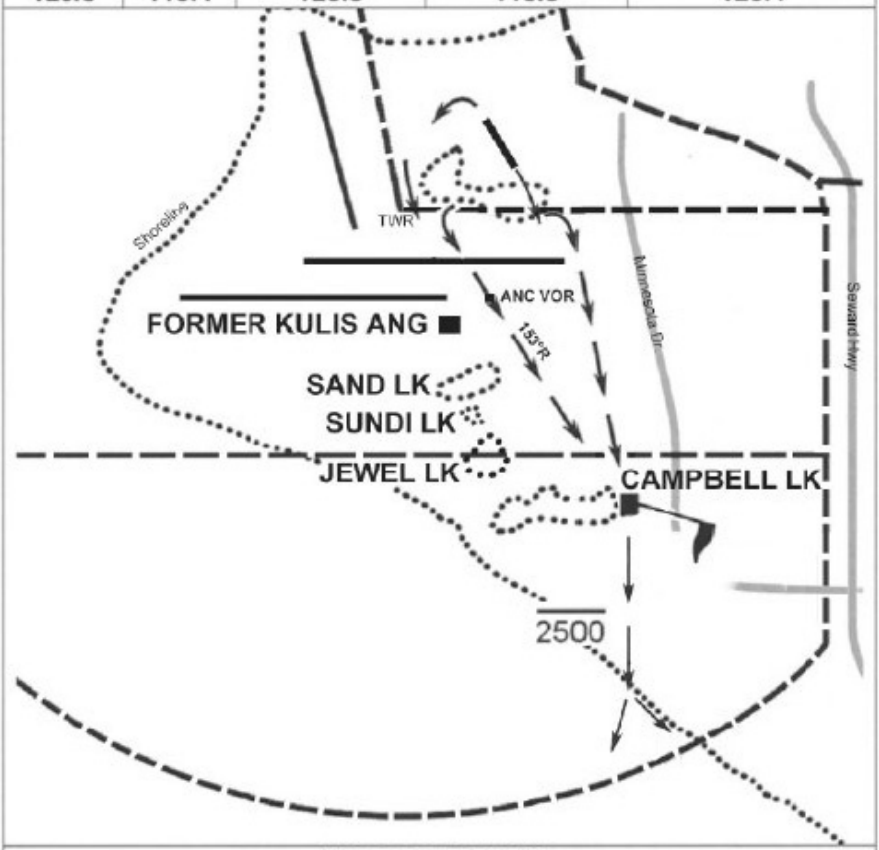
SOUTH ARRIVALS: Proceed from Rabbit Creek Interchange to the corner of Tudor and Muldoon then direct to the Tudor and New Seward Overpass at 1,500' MSL.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	CHICKALOON DEPARTURE LAKE HOOD SEAPLANE BASE LAKE HOOD STRIP

ROUTE PURPOSE:
The CHICKALOON DEPARTURE will be issued to aircraft departing to the south of Anchorage. Contact Anchorage Clearance Delivery and advise of destination and request CHICKALOON DEPARTURE.

ATIS	CLNC DEL	LAKE HOOD TOWER	ANCHORAGE TOWER	ANCHORAGE DEP CON
125.6	119.4	126.8	118.3	126.4



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

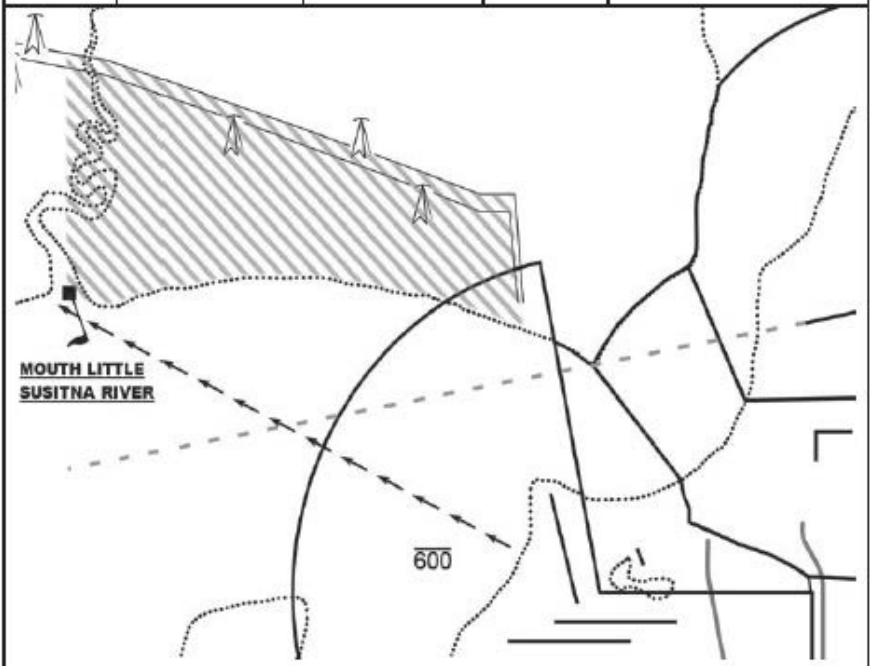
ROUTE INSTRUCTIONS:
Departing west/northwest, expect left traffic or departing east/southeast, expect right traffic, then direct to the east shore of Campbell Lake, then via heading 160. Maintain at or below 2,500' MSL until crossing the north shore of Turnagain Arm or as advised by ATC.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	LITTLE SU DEPARTURE LAKE HOOD SEAPLANE BASE LAKE HOOD STRIP

ROUTE PURPOSE:
The LITTLE SU DEPARTURE may be issued to westbound aircraft. Contact Anchorage Clearance Delivery on 119.4/128.65 and request the **LITTLE SU DEPARTURE**.

ATIS	CLNC DEL	LAKE HOOD TOWER	ANC TOWER	ANCHORAGE DEP CON
125.6	119.4/128.65	126.8	118.3	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

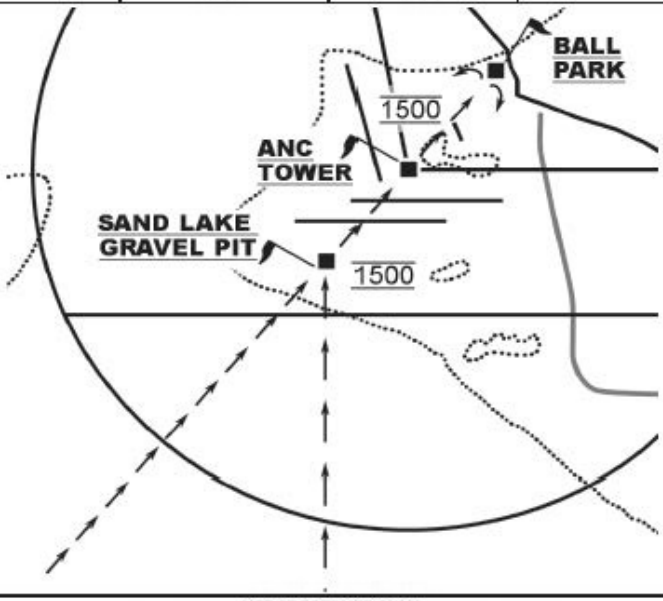
ROUTE INSTRUCTIONS:
Depart the traffic pattern as assigned by Lake Hood Tower. Proceed direct to the Mouth of the Little Susitna River. Maintain at or below 600' MSL.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR ARRIVAL ROUTE	GRAVEL PIT ARRIVAL LAKE HOOD SEAPLANE BASE LAKE HOOD STRIP

ROUTE PURPOSE:
The GRAVEL PIT ARRIVAL will provide direct routing to Lake Hood from the south for Class C participating aircraft. Pilots may expect this route except during times when Ted Stevens Anchorage International Airport is departing Runway 15. Contact Anchorage Approach Control at least 15 miles from Lake Hood and request the GRAVEL PIT ARRIVAL.

LAKE HOOD ATIS 125.6	ANCHORAGE APP CON 126.4	ANCHORAGE TOWER 118.3	LAKE HOOD TOWER 126.8



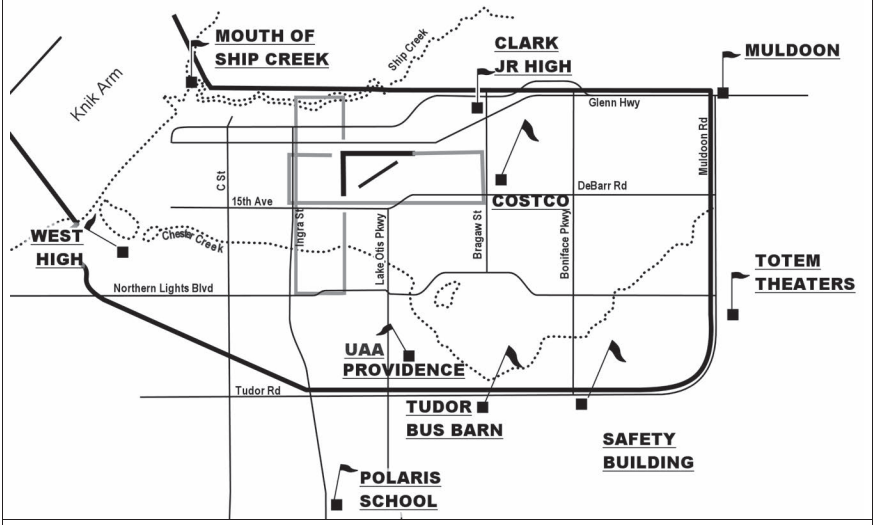
VFR PROCEDURE ONLY
CHART NOT TO SCALE - NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:
Proceed via the Sand Lake gravel pit direct to the Control Tower then direct to the Ball Park. Cross the gravel pit and the Anchorage Control Tower at 1,500' MSL, begin descent after the Control Tower. Expect traffic pattern entry instructions and runway assignment prior to the Ball Park. Expect frequency change to 126.8 over Anchorage Control Tower.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR REPORTING POINTS	REPORTING POINTS TRAFFIC PATTERNS MERRILL FIELD

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	**121.7**	**126.0**	Northwest/ East **119.1** South **126.4**



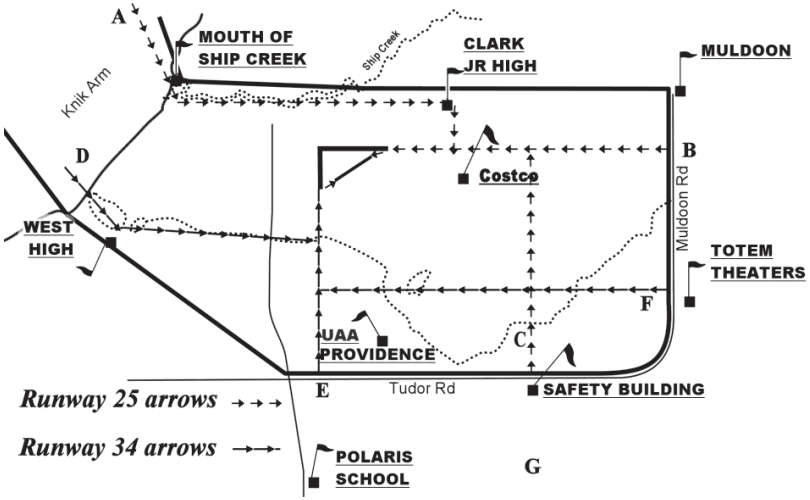
VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

Clark Junior High	61°13'21"N	149°48'41"W	Providence Hospital	61°11'19"N	149°49'11"W
Costco	61°12'40"N	149°48'18"W	Safety Building	61°10'47"N	149°46'33"W
Mouth of Ship Creek	61°13'37"N	149°54'08"W	Totem Theater	61°11'32"N	149°43'50"W
Muldoon Interchange	61°13'37"N	149°44'00"W	Tudor Bus Barn	61°10'45"N	149°48'38"W
Polaris School	61°09'53"N	149°51'15"W	UAA Campus	61°11'26"N	149°49'17"W
			West High	61°12'04"N	149°54'59"W

ALL AIRCRAFT: Use these reporting points to reference common geographic locations routinely referenced in the Merrill Field vicinity. Fly traffic patterns as depicted to reduce noise complaints.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR INBOUND PROCEDURE	COMMON PATTERN ENTRY RUNWAYS 25,34 & 5/23 MERRILL FIELD	
ATIS **124.25**	GROUND CONTROL **121.7**	MERRILL TOWER **126.0**	DEPARTURE CONTROL Northwest/East **119.1** South **126.4**



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

COMMON ENTRY INSTRUCTIONS:

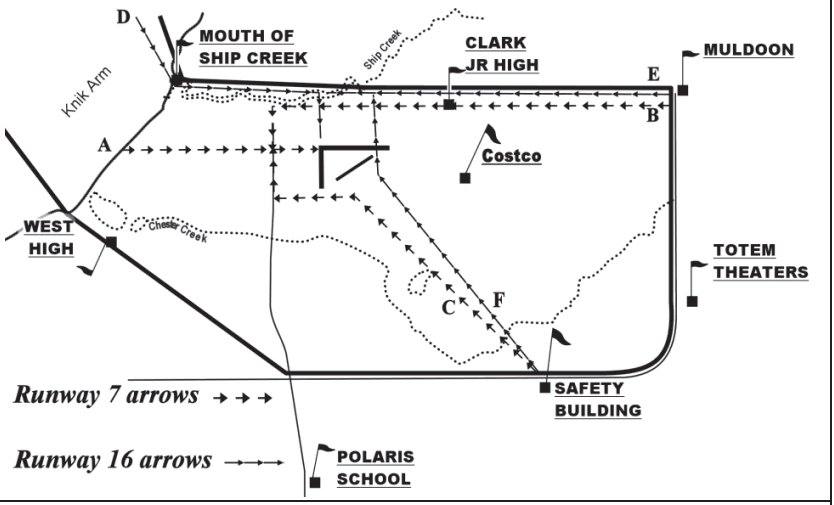
RUNWAY 25: **A) "**Make right traffic." Keep the Mouth of Ship Creek off your left wing.
B) "Make straight-in." Established on final at Muldoon Road.
C) "Enter left base." Fly your base over the Safety Building.

RUNWAY 34: **D) "**Enter left base." Fly over West High and the green belt before turning final.
E) "Make straight-in." Established on final at Tudor Road.
F) "Enter right base." Fly over Northern Lights Blvd.
G) Fly the Campbell Arrival. Enter right base over Northern Lights Blvd.

RUNWAY 5/23: Fly standard pattern for RWY 25/34 until intercepting short final of assigned runway.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR INBOUND PROCEDURE	COMMON PATTERN ENTRY RUNWAYS 7/16 MERRILL FIELD	
ATIS **124.25**	GROUND CONTROL **121.7**	MERRILL TOWER **126.0**	DEPARTURE CONTROL Northwest/East **119.1** South **126.4**



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

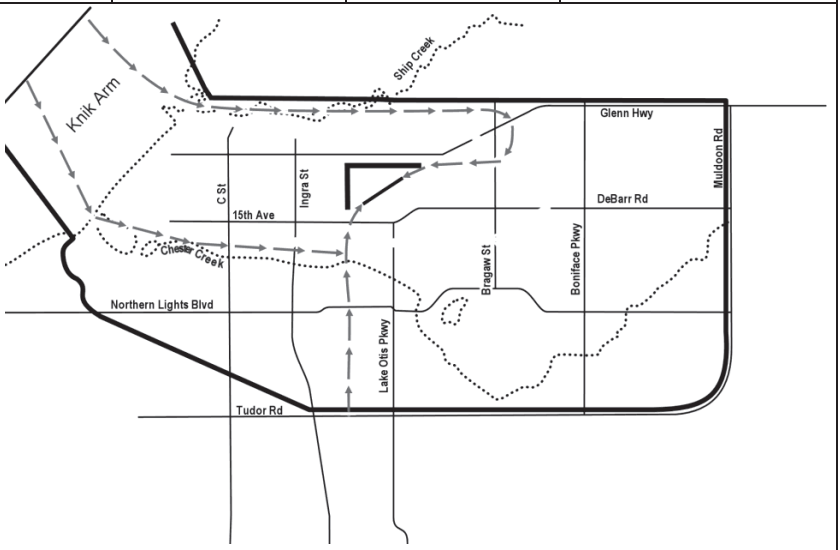
COMMON ENTRY INSTRUCTIONS:

RUNWAY 7:
A) "Make straight in." Be established on final over the downtown shoreline.
B) "Make left traffic." Be established on downwind leg at Muldoon.
C) "Make right traffic." From the Safety Building, enter a midfield downwind.

RUNWAY 16:
D) "Enter right base." Fly to the Mouth of Ship Creek before turning base.
E) "Enter left base." Be established on left base at Muldoon.
F) "Make left traffic." From the Safety Building, enter a midfield downwind.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR TRAFFIC PATTERN	TRAFFIC PATTERN ENTRY RUNWAYS 5/23 MERRILL FIELD	
ATIS **124.25**	GROUND CONTROL **121.7**	MERRILL TOWER **126.0**	DEPARTURE CONTROL EAST/WEST **119.1** SOUTH **126.4**



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

PATTERN INSTRUCTIONS:

ALL AIRCRAFT: Fly standard pattern for RWY 25/34 until intercepting short final of assigned runway.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA		CARTEE AIRSPACE MERRILL FIELD	
ATIS **124.25**	GROUND CONTROL **121.7**	MERRILL TOWER **126.0**	DEPARTURE CONTROL EAST/WEST **119.1** SOUTH **126.4**

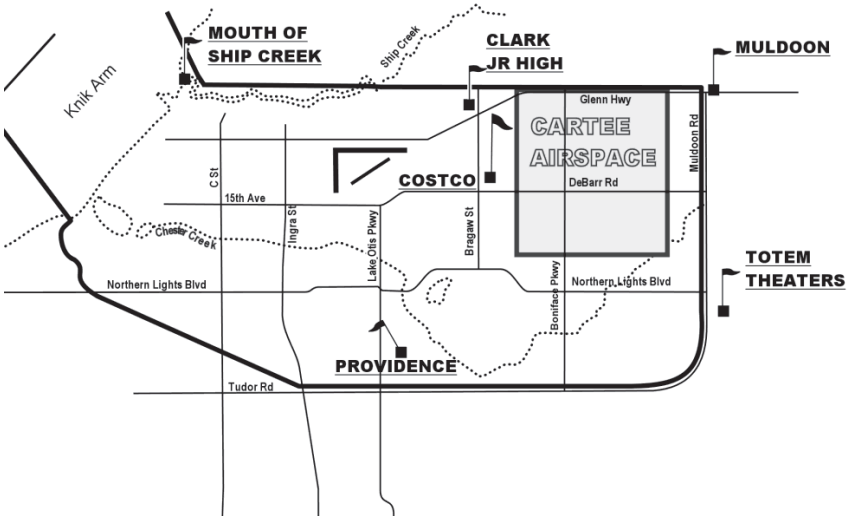


CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

CARTEE AIRSPACE:

A portion of the Merrill Segment has been designated CARTEE Airspace for use by the military when utilizing Runway 16/34 at Elmendorf. Aircraft remaining east of Muldoon, south of Northern Lights, and west of Bragaw should not be a factor for Elmendorf traffic.

Elmendorf will utilize the CARTEE airspace for a variety of aircraft operations, which may include HEAVY JET aircraft. Be alert and use caution for wake turbulence when flying in the vicinity of the CARTEE airspace when it is advertised as active.

See Joint Base Elmendorf Richardson notices section of this supplement for addt'l CARTEE information.

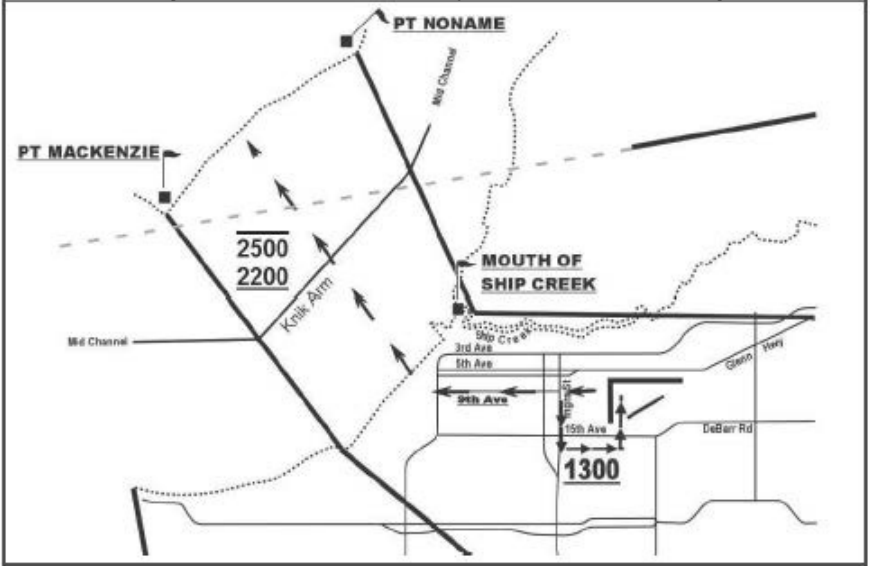
NE Point: N 61° 13′ 38.95″ W 149° 44′ 41.28″	**IVO**	**Tikahtnu Commons parking lot**
SE Point: N 61° 12′ 09.24″ W 149° 44′ 41.58″	**IVO**	**E. 20th Ave at South Fork of Chester Creek**
SW Point: N 61° 12′ 09.19″ W 149° 47′ 42.74″	**IVO**	**E. 20th Ave at Russian Jack Elementary**
NW Point: N 61° 13′ 34.57″ W 149° 47′ 42.98″	**IVO**	**Mountain View/Bliss Street intersection**

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	INLET DEPARTURE RUNWAY 25 MERRILL FIELD

ROUTE PURPOSE:
The INLET DEPARTURE is for aircraft departing Merrill Field to the west and northwest at or above 2000' from runway 25.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	121.7	126.0	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE – NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: Cross Knik Arm above 2200' (if unable 2200' by mid-channel, advise ATC). Maintain at or below 2500' until advised by ATC.

RUNWAY 25: Climb in the left traffic pattern, at 1300' turn northbound (if unable 1300' south abeam control tower, advise ATC) then turn westbound to overfly 9th Avenue Delaney Park Strip while remaining south of Runway 25 until reaching the downtown shoreline, then turn right on course to the northwest shoreline.

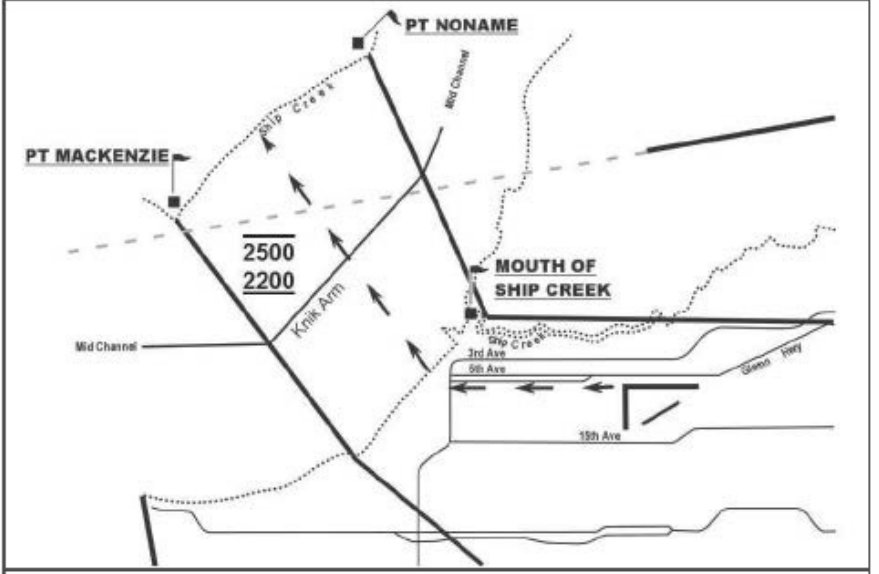
For further information contact AAL ATO Airspace and Procedures 907-271-2700

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	SHORELINE DEPARTURE RUNWAY 25 MERRILL FIELD

ROUTE PURPOSE:
The SHORELINE DEPARTURE is for aircraft departing Merrill Field to the west and northwest at or above 2000' from runway 25.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	**121.7**	**126.0**	**119.1**



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: Cross Knik Arm at or above 2200' (if unable 2200' by mid-channel, advise ATC). Maintain at or below 2500' until advised by ATC.

RUNWAY 25: Climb straight out to the downtown shoreline, then turn right on course to the northwest shoreline.

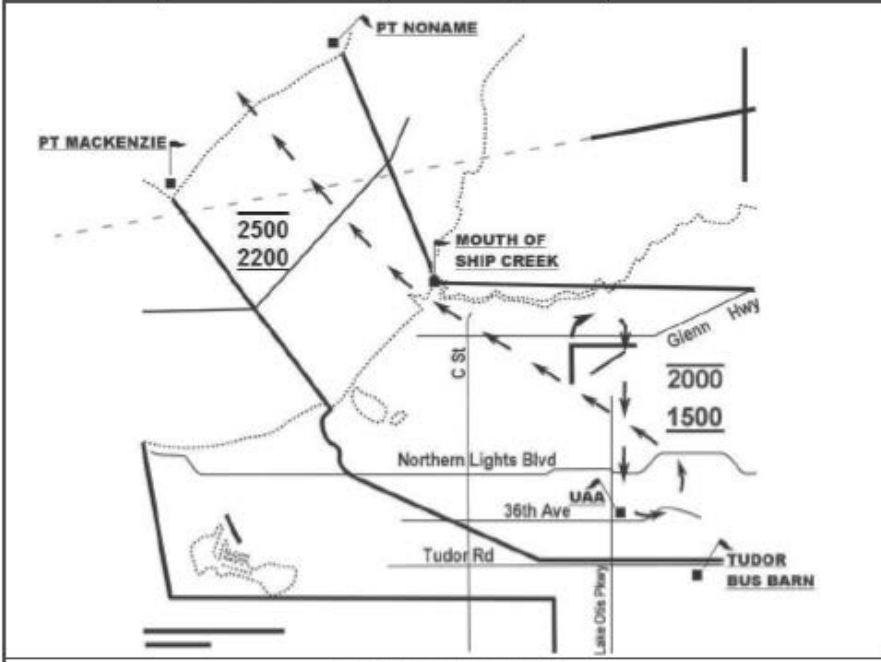
For further information contact AAL ATO Airspace and Procedures 907-271-2700

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	CITY HIGH DEPARTURE RUNWAY 34 MERRILL FIELD

ROUTE PURPOSE:
The City High Departure is for aircraft departing Merrill Field to the west and northwest at or above 2000'.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	121.7	126.0	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:
ALL AIRCRAFT: Cross Knik Arm at or above 2200' (if unable 2200' by mid-channel, advise ATC). Maintain at or below 2500' until advised by ATC.

RUNWAY 34: Depart via right downwind. Climb southbound along Lake Otis Pkwy to the University of Alaska (UAA). After UAA, turn left northwest bound. Cross Northern Lights Blvd northwest bound between 1500' and 2000'. Proceed toward Ship Creek keeping the mouth of Ship Creek off your right wing and climb so as to cross mid-channel above 2000'.

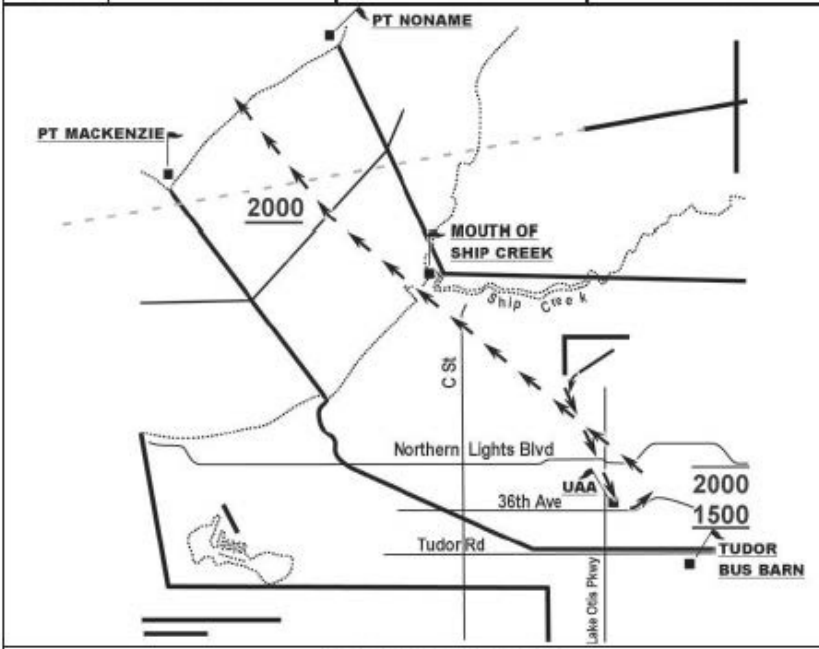
For further information contact AAL ATO Airspace and Procedures 907-271-2700

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	CITY HIGH DEPARTURE RUNWAYS 16 & 23 MERRILL FIELD

ROUTE PURPOSE:
The City High Departure is for aircraft departing Merrill Field to the west and northwest at or above 2000'.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	121.7	126.0	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION
ADS-B OUT AND MODE C TRANSPONDER REQUIRED

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: Remain south of Ship Creek until shoreline. Cross Knik Arm at or above 2000' (If unable 2000' by mid-channel, advise ATC).

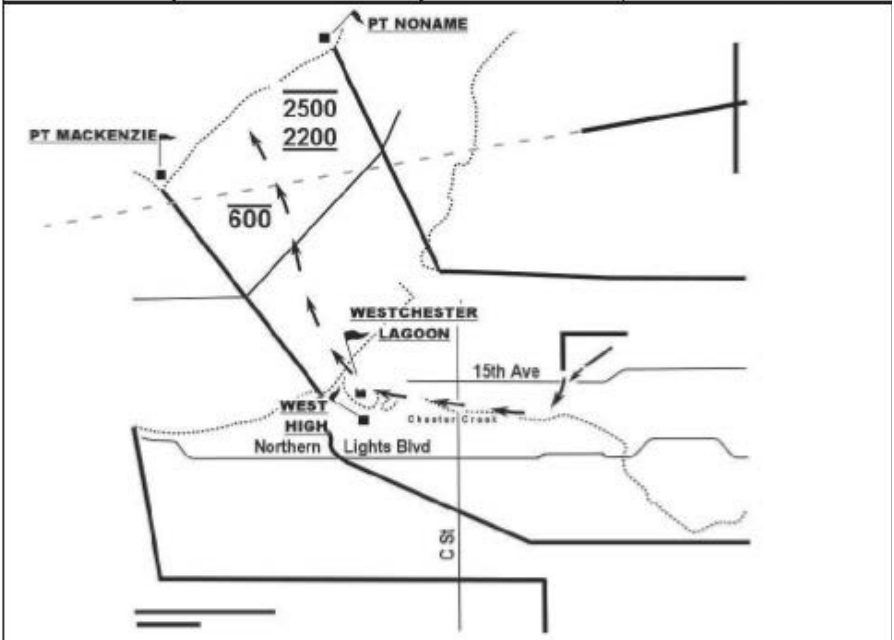
RUNWAY 16 or 23: Turn left and proceed direct to the University of Alaska (UAA) remaining below 600' until south of 15th avenue. After UAA, turn left northwest bound. Cross Northern Lights Blvd northwest bound between 1500' and 2000'. Proceed toward Ship Creek keeping the mouth of Ship Creek off your right wing and climb so as to cross mid-channel above 2000'.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	CHESTER CREEK DEPARTURE RUNWAYS 16 & 23 MERRILL FIELD

ROUTE PURPOSE:
The Chester Creek Departure is for aircraft departing Merrill Field to the west and northwest.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	121.7	126.0	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE – NOT TO BE USED FOR NAVIGATION ADS-B OUT
AND MODE C TRANSPONDER REQUIRED IF AT OR ABOVE 1,400' MSL

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: Cross Knik Arm below 600' or at or above 2200' (If unable 2200' by mid-channel, advise ATC).Maintain at or below 2500' until advised by ATC.

RUNWAY 16: Proceed to and turn right over Chester Creek. Follow the creek to Westchester Lagoon.

RUNWAY 23: Turn left to Chester Creek. Follow the creek to Westchester Lagoon.

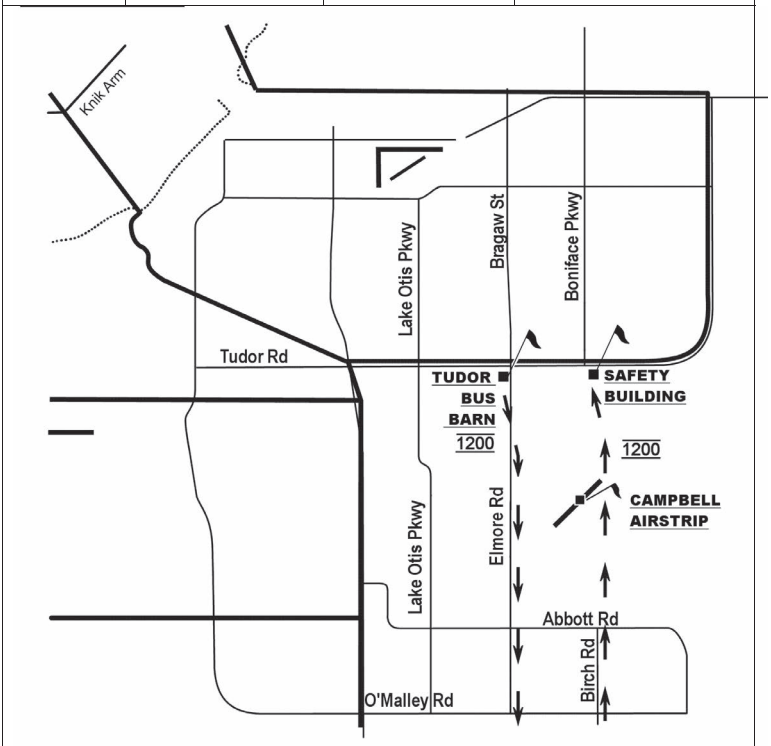
For further information contact AAL ATO Airspace and Procedures 907-271-2700

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	VFR ARRIVAL / DEPARTURE PROCEDURE	CAMPBELL ARRIVAL/DEPARTURE MERRILL FIELD

ROUTE PURPOSE:
The Campbell Departure is for aircraft inbound from / departing to the south. This route significantly reduces the potential for wake turbulence encounters from large and heavy aircraft using the east/west runways at Ted Stevens Anchorage International Airport.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	**121.7**	**126.0**	**126.4**



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: Maintain 1200' between Tudor Rd and Campbell Airstrip. Use caution, LHD traffic departs at or below 900' and arrives at 1500' south of Tudor Rd.

RUNWAY 7 or 5: Climb straight out to Bragaw St turn right (southbound) and follow Bragaw St. to the Tudor Bus Barn then…

RUNWAY 25: Depart via left downwind to midfield; proceed direct to the Tudor Bus Barn then…

RUNWAY 34: Depart via right downwind along Bragaw St to the Tudor Bus Barn then…

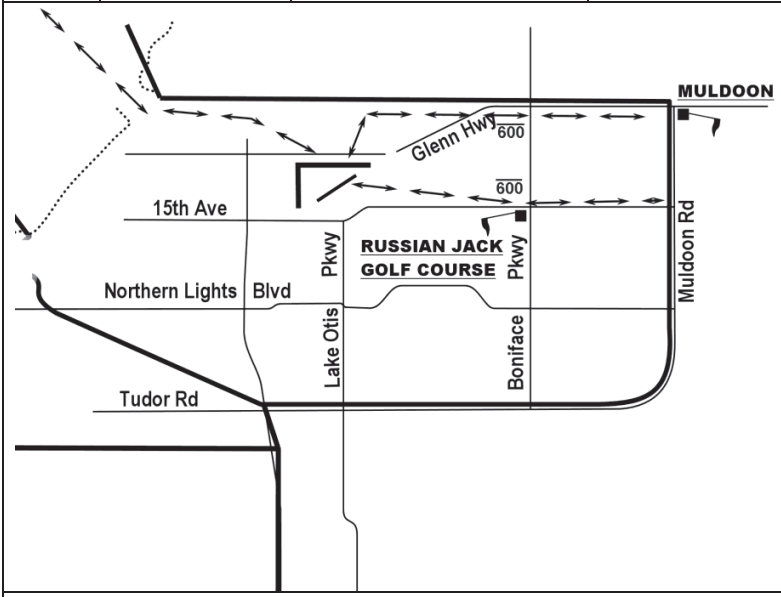
RUNWAY 16 or 23: Depart southeast bound direct to the Tudor Bus Barn then…

FROM THE TUDOR BUS BARN: Overfly Elmore Road until south of O'Malley Rd.

INBOUNDS: North of O'Malley Rd fly along the extended track of Boniface Parkway to the Safety Building, then follow common pattern entry instructions.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA		VFR DEPARTURE PROCEDURE	HELICOPTER ROUTES MERRILL FIELD
ATIS **124.25**	MERRILL TOWER **126.0**	DEPARTURE CONTROL NORTHWEST/EAST **119.1**	DEPARTURE CONTROL SOUTH **126.4**



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

ALL HELICOPTERS: Westbound helicopters cross Knik Arm in accordance with 14 CFR Part 93. Remain below fixed wing traffic pattern altitude until clear of the traffic pattern. Arrival routings are the reverse of the departure routings.

Departing South of Runway 7/25:

Ship Creek South: Remain north of Runway 5/23. Cross Runway 7/25 midfield at 600' then proceed westbound along Ship Creek.

Golf Course: Proceed direct to Russian Jack Golf Course, maintain below 600' west of Boniface Parkway, then east to Muldoon Road.

Departing North of Runway 7/25:

Ship Creek: Proceed north to then west along Ship Creek.

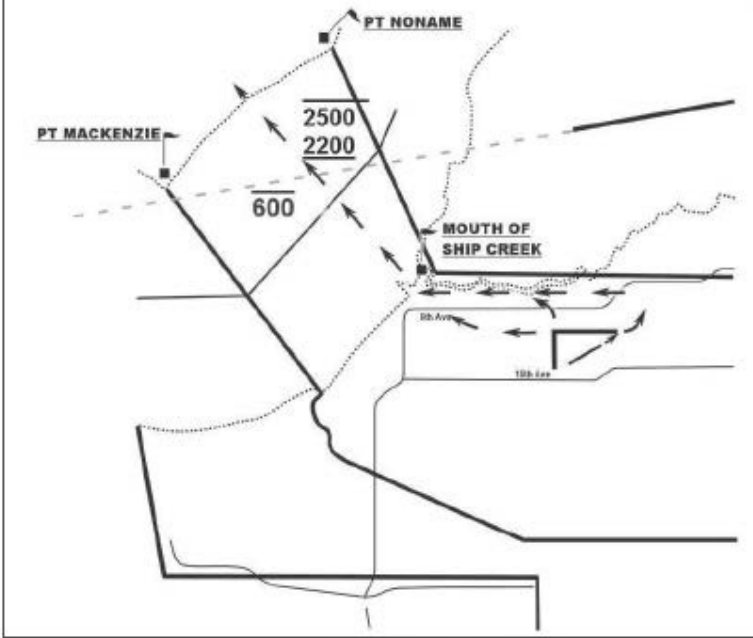
Highway: Proceed eastbound along the Glenn Highway, maintain below 600' west of Boniface Parkway, then east to Muldoon Road.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	VFR DEPARTURE PROCEDURE	SHIP CREEK DEPARTURE MERRILL FIELD

ROUTE PURPOSE:
The SHIP CREEK DEPARTURE is for aircraft departing Merrill Field to the west and northwest.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	121.7	126.0	119.1



VFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION ADS-B OUT AND MODE C TRANSPONDER REQUIRED IF AT OR ABOVE 1,400' MSL

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: All Aircraft: Cross Knik Arm below 600' or above 2200' (if unable 2200' by mid-channel, advise ATC). Maintain at or below 2500' until advised by ATC.

RUNWAY 25: Turn right to the mouth of Ship Creek then northwest bound.

RUNWAY 5 or 7 or 34: Turn left, follow Ship Creek to the mouth of Ship Creek then northwest bound.

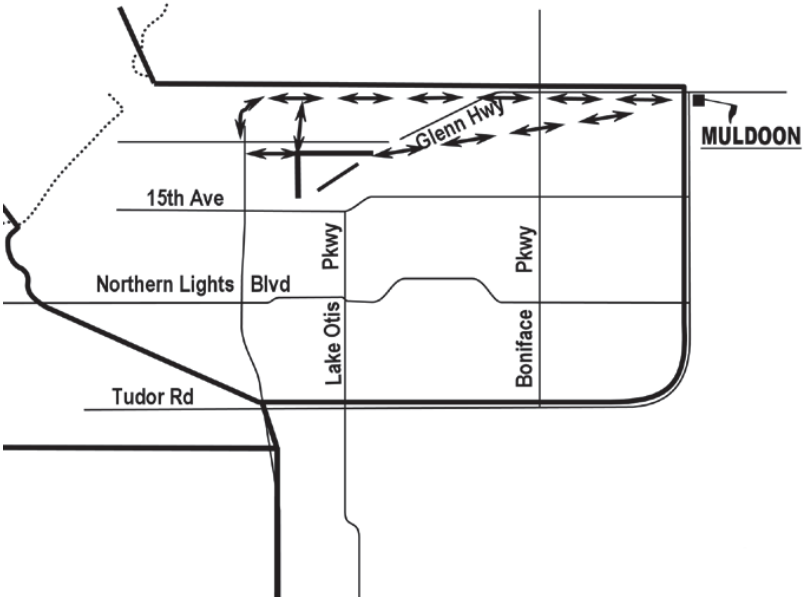
For further information contact AAL ATO Airspace and Procedures 907-271-2700

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: May 2025

ANCHORAGE, ALASKA	SVFR ARRIVAL/DEPARTURE PROCEDURE	MULDOON SVFR ARRIVAL / DEPARTURE MERRILL FIELD

ROUTE PURPOSE:
The MULDOON ARRIVAL/DEPARTURE route is for aircraft transitioning to and from the area northeast of Merrill Field when weather is below basic VFR minima. PILOTS MUST REQUEST SVFR CLEARANCE; CONTROLLERS MAY NOT INITIATE SVFR OPERATIONS.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	**121.7**	**126.0**	**119.1**



SVFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

ROUTE INSTRUCTIONS:

ALL AIRCRAFT: IFR operations receive priority over SVFR requests.

DEPARTURES: Request SVFR clearance from Merrill Ground Control. After airborne, maintain SVFR at or below 1200', proceed direct to Muldoon Road interchange then on course VFR.

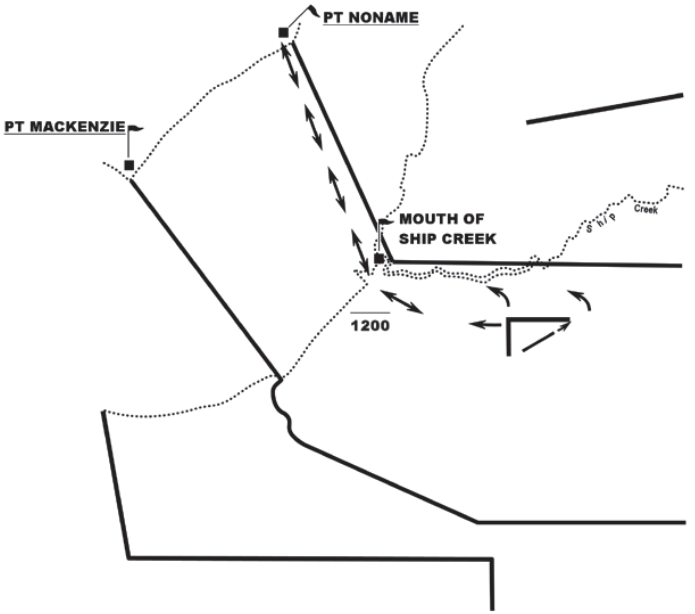
ARRIVALS: Request SVFR clearance from Anchorage Approach Control on 119.1. After receiving clearance, maintain SVFR at or below 1200', proceed from the Muldoon Road interchange as directed by ATC.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023

ANCHORAGE, ALASKA	SVFR ARRIVAL/DEPARTURE PROCEDURE	NONAME SVFR ARRIVAL / DEPARTURE MERRILL FIELD

ROUTE PURPOSE:
The NONAME ARRIVAL/DEPARTURE route is for aircraft transitioning to and from the area north and west of Merrill Field when weather is below basic VFR minima. PILOTS MUST REQUEST SVFR CLEARANCE; CONTROLLERS MAY NOT INITIATE SVFR OPERATIONS.

ATIS	GROUND CONTROL	MERRILL TOWER	DEPARTURE CONTROL
124.25	**121.7**	**126.0**	**119.1**



SVFR PROCEDURE ONLY
CHART NOT TO SCALE -- NOT TO BE USED FOR NAVIGATION

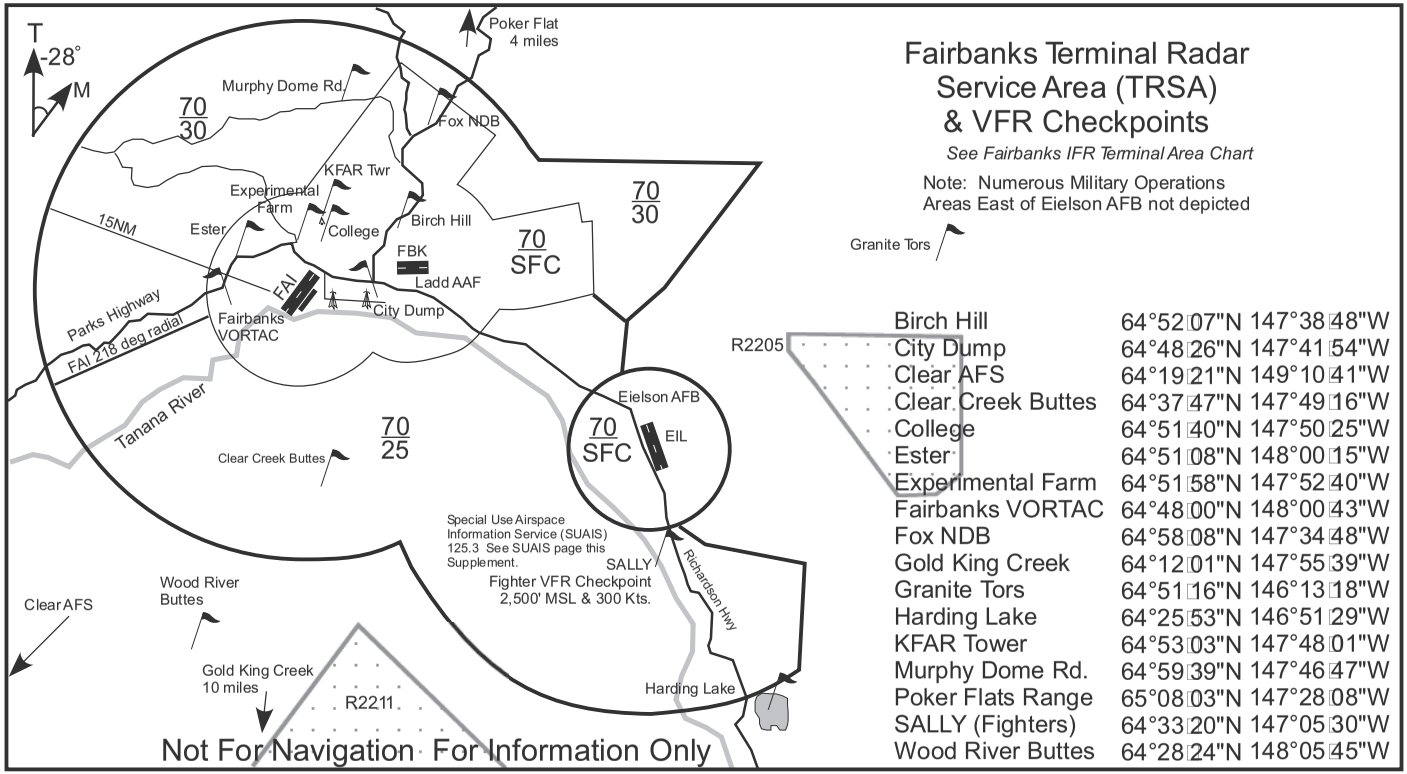
ROUTE INSTRUCTIONS:

ALL AIRCRAFT: IFR operations receive priority over SVFR requests. Part 93 altitude restrictions are not in effect while flying this procedure (see altitudes below).

DEPARTURES: Request SVFR clearance from Merrill Ground Control. After airborne, maintain SVFR at or below 1200', proceed direct to the mouth of Ship Creek, then direct to Point Noname.

ARRIVALS: Request SVFR clearance from Anchorage Approach Control on 119.1. After receiving clearance, maintain SVFR at or below 1200', proceed from over Point Noname direct to the mouth of Ship Creek, then as directed by ATC.

Office of Primary Responsibility (OPR): Alaska District Airspace and Procedures
Contact Information: AJT-TWAN-SM-Airspace@faa.gov
Amended: October 2023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-28°
M
Poker Flat
4 miles
Murphy Dome Rd.
70
30
Fox NDB
KFAR Twr
Experimental
Farm
15NM
Ester
College
Birch Hill
70
30
FBK
70
SFC
Ladd AAF
FAI
City Dump
Parks Highway
FAI 218 deg radial
Fairbanks
VORTAC
Tanana River
Eielson AFB
70
SFC
EIL
70
25
Clear Creek Buttes
Special Use Airspace
Information Service (SUAIS)
125.3 See SUAIS page this
Supplement.
SALLY
Fighter VFR Checkpoint
2,500' MSL & 300 Kts.
Richardson Hwy
Wood River
Buttes
Clear AFS
Gold King Creek
10 miles
R2211
Harding Lake
Not For Navigation For Information Only
Fairbanks Terminal Radar
Service Area (TRSA)
& VFR Checkpoints
See Fairbanks IFR Terminal Area Chart
Note: Numerous Military Operations
Areas East of Eielson AFB not depicted
Granite Tors
R2205
Birch Hill 64°52'07"N 147°38'48"W
City Dump 64°48'26"N 147°41'54"W
Clear AFS 64°19'21"N 149°10'41"W
Clear Creek Buttes 64°37'47"N 147°49'16"W
College 64°51'40"N 147°50'25"W
Ester 64°51'08"N 148°00'15"W
Experimental Farm 64°51'58"N 147°52'40"W
Fairbanks VORTAC 64°48'00"N 148°00'43"W
Fox NDB 64°58'08"N 147°34'48"W
Gold King Creek 64°12'01"N 147°55'39"W
Granite Tors 64°51'16"N 146°13'18"W
Harding Lake 64°25'53"N 146°51'29"W
KFAR Tower 64°53'03"N 147°48'01"W
Murphy Dome Rd. 64°59'39"N 147°46'47"W
Poker Flats Range 65°08'03"N 147°28'08"W
SALLY (Fighters) 64°33'20"N 147°05'30"W
Wood River Buttes 64°28'24"N 148°05'45"W

Notes for the Fairbanks Area

Fairbanks General Guidelines

1. Each person operating an aircraft within the Fairbanks Terminal Radar Service Area (TRSA) should operate that aircraft according to the rules set forth in this section unless otherwise authorized or required by ATC.

2. Each person operating a helicopter shall operate it in a manner so as to avoid the flow of airplanes.

3. All aircraft while in the Fairbanks Surface Area should fly with their lights on at all times.

4. Arriving aircraft should contact Fairbanks Approach at least 20 miles from the airport of arrival destination. Arriving traffic northeast through east through southeast of Fairbanks International Airport should contact Fairbanks Approach on 127.1. All other arrivals should contact Fairbanks Approach on 125.35.

5. All aircraft arriving Fairbanks International Airport on downwind from the north or south remain at least 1 mile east or west of the extended runway centerlines for Fairbanks International RWYs 2/20.

Fairbanks Traffic Pattern Altitudes

Aircraft arrival/departure altitudes may vary from these listed:

Single engine reciprocating	1,500 MSL
Multi-, large and turbine powered aircraft	2,000 MSL

Chena Marina procedures

1. Arrival/departure/pattern traffic for Chena Marina contact Fairbanks Tower on 118.3.

2. Chena Marina traffic will observe a ceiling of 1,200 MSL while in the pattern.

3. Traffic patterns will be to the west of the Chena Marina runway and float pond with Chena Ridge being the western boundary.

4. All Chena Marina traffic will remain west of Chena Pump Road at or below 1200 MSL and will advise Fairbanks Tower prior to crossing Chena Pump Road eastbound.

5. Departure traffic remains west of Fairbanks International Airport at all times unless otherwise authorized or required by ATC.

6. In the interest of safety, please utilize Fairbanks Radar Services whenever departing Chena Marina.

TRSA Services

A. Standard TRSA departure instructions

Departing aircraft should monitor the ATIS, then contact Fairbanks Clearance Delivery on the appropriate frequency being broadcast on the ATIS prior to taxi. Pilots are expected to inform the controller of an intended destination and/or initial heading and desired cruising altitude. All departing aircraft will be given TRSA services unless the pilot states "negative TRSA service" or makes a similar comment.

B. TRSA departure (VFR departing aircraft)

The standard TRSA departure for Fairbanks International Airport will be to fly runway heading for the runway assigned, departure frequency on 125.35. This will be referred to as the "TRSA departure". Fairbanks Clearance Delivery will issue to each aircraft: "TRSA departure, squawk (code)".

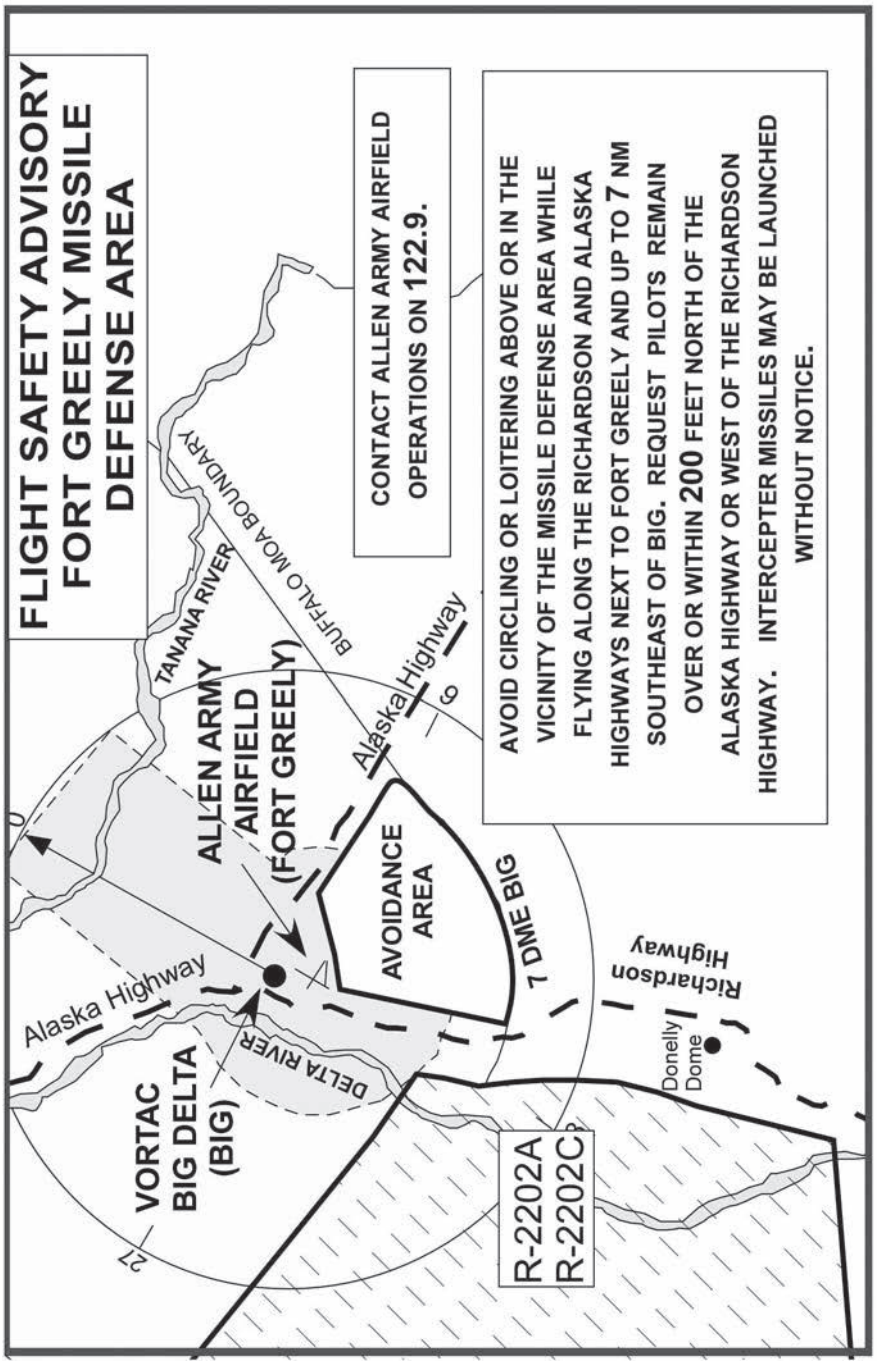
C. TRSA service from Float Pond

Clearance Delivery frequency stated on ATIS. Aircraft departing the Float Pond at Fairbanks International Airport should monitor the ATIS, then contact Fairbanks Clearance Delivery for services. Those departing aircraft should then contact Fairbanks Tower 118.3 directly for taxi clearance.

D. TRSA service from satellite airports

Clearance Delivery frequency stated on ATIS. Aircraft departing satellite airports, inside the Fairbanks Class D surface area, such as Chena Marina, Chena River, Metro Field, and Peger Pond, and requesting TRSA services should monitor the ATIS, then contact Fairbanks Clearance Delivery for TRSA services. Those departing aircraft should then contact Fairbanks Tower directly on 118.3.

Owner: FAI ATCT, (907)474-0050


FLIGHT SAFETY ADVISORY
FORT GREELY MISSILE
DEFENSE AREA
CONTACT ALLEN ARMY AIRFIELD
OPERATIONS ON 122.9.
AVOID CIRCLING OR LOITERING ABOVE OR IN THE
VICINITY OF THE MISSILE DEFENSE AREA WHILE
FLYING ALONG THE RICHARDSON AND ALASKA
HIGHWAYS NEXT TO FORT GREELY AND UP TO 7 NM
SOUTHEAST OF BIG. REQUEST PILOTS REMAIN
OVER OR WITHIN 200 FEET NORTH OF THE
ALASKA HIGHWAY OR WEST OF THE RICHARDSON
HIGHWAY. INTERCEPTER MISSILES MAY BE LAUNCHED
WITHOUT NOTICE.
TANANA RIVER
BUFFALO MOA BOUNDARY
Alaska Highway
ALLEN ARMY
AIRFIELD
(FORT GREELY)
AVOIDANCE
AREA
7 DME BIG
Richardson
Highway
Donelly
Dome
Alaska Highway
DELTA RIVER
VORTAC
BIG DELTA
(BIG)
R-2202A
R-2202C
21

Flight Advisory for Pacific Walrus

Bristol Bay and the Chukchi Sea Coast

The U.S. Fish and Wildlife Service seeks your support and cooperation in minimizing disturbances to walrus herds resting in Bristol Bay and along the Chukchi Sea coast of Alaska.

HAULOUT LOCATIONS

Bristol Bay

Regularly used walrus haulout locations in Bristol Bay include Cape Newenham, Cape Peirce, Cape Greig, Cape Senievain, Hagemeister Island, and Round Island. Intermittently used haulout locations include Izembek Lagoon (Cape Glaznap and Neuman Island), Amak Island, and Cape Sarichef and Oksenof Point on Unimak Island. Walrus may be sporadically encountered anywhere along the Alaska Peninsula. See graphics on the following pages.

Chukchi Sea Coast

Walruses are known to congregate on isolated beaches and barrier islands along Alaska's Chukchi Sea coast in late summer and early fall (July – October) when concentrations of sea-ice are low. Known haulout areas include: Cape Lisburne, Point Lay barrier islands, and Icy Cape. See graphics depicted on following pages. Walrus may be sporadically encountered anywhere along the coast between Cape Lisburne and Icy Cape including Corwin Bluff. See graphics on the following pages.

THESE ARE IMPORTANT RESTING AREAS FOR PACIFIC WALRUSES

Each summer, thousands of male walruses migrate into Bristol Bay to feed on rich beds of clams and other marine organisms. Between feeding cycles, they come to shore to rest at isolated resting areas (haulouts) distributed throughout Bristol Bay.

With the loss of summer sea ice over the continental shelf observed in recent years walruses are being forced to use land based haulouts rather than sea ice which is their preferred habitat. Between feeding cycles, they come to shore to rest at isolated resting areas (haulouts) distributed along the Chukchi Sea coast.

WALRUSES ARE SENSITIVE TO HUMAN DISTURBANCES

Although responses to human activities are variable, walruses will often flee haulouts in response to the sight, sound, or odor of humans or their machines. Trampling deaths associated with haulout disturbance is one of the largest known sources of natural mortality for walrus. Frequent or prolonged disturbances may even result in haulout abandonment.

HARASSING OR DISTURBING WALRUSES IS AGAINST THE LAW

Any human activity, including operating an aircraft, vehicle, or boat, or approaching on foot, in a manner which results in harassing walruses is prohibited under provisions of the Marine Mammal Protection Act of 1972. Harassment includes any act which has the potential to injure or disturb walruses and includes acts which disrupt behavioral patterns including, but not limited to migration, breathing, nursing, breeding, feeding, or sheltering.

YOU CAN HELP MINIMIZE DISTURBANCE TO RESTING WALRUSES Walrus are particularly sensitive to changes in engine noise and are more likely to stampede off beaches when planes turn or fly low overhead. Aerial photography and/or circling aircraft within the vicinity of a walrus haulout pose a high potential for disturbance and is specifically discouraged. In an effort to prevent disturbances, please follow these general guidelines when operating aircraft near walrus herds.

Pilots of single engine aircraft should not knowingly fly over or fly within 1/2 mile of walruses hauled out on land or ice to avoid causing a disturbance. If weather or aircraft safety require flight operations within 1/2 mile of walruses, small single engine aircraft should maintain a 2000' minimum altitude.

Pilots of helicopters and multi-engine aircraft should not knowingly fly over or fly within 1 mile of walruses hauled out on land or ice to avoid causing a disturbance. If aircraft safety requires flight operations within 1 mile of walruses, helicopters and multi-engine aircraft should maintain a 3000' minimum altitude.

If aircraft safety requires flight operations below these recommended altitudes, please pass inland or seaward (within safe gliding distance to shore) of the haulout site at the greatest lateral distance manageable for safe operation of the aircraft (1 mile if possible).

Please be aware that some locations (such as Round Island within the Walrus Islands State Game Sanctuary, in Bristol Bay) have more strict recommendations. Pilots are requested to maintain a minimum altitude of 5,000 feet above ground level within a 3 mile radius of Round Island (58° 36' N. 159° 58' W.). Access to Round Island or adjacent waters requires written permission from the Alaska Department of Fish and Game. Please check with ADF&G for additional restrictions.

Please note these are only guidelines, and may not prevent disturbances in all situations. You are responsible for operating your aircraft in a manner which does not cause disturbance or violate the Marine Mammal Protection Act.

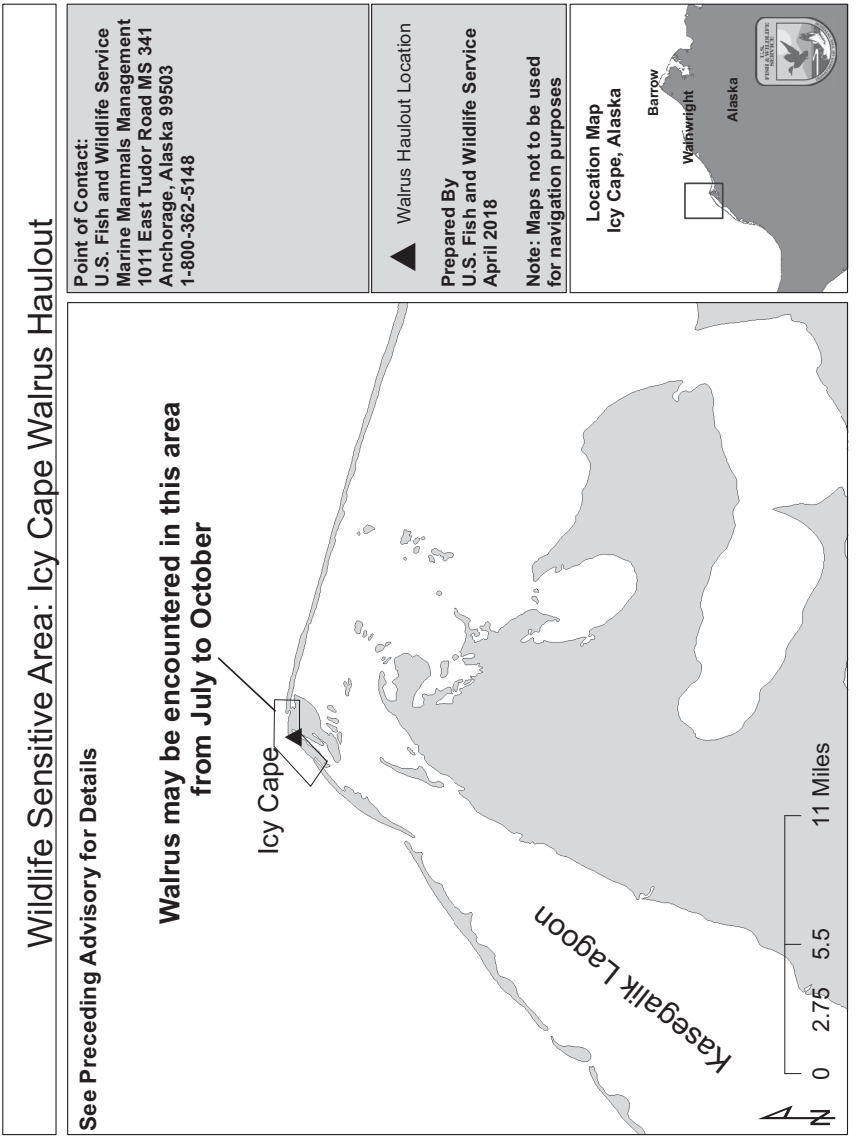
THANK YOU FOR YOUR HELP AND COOPERATION

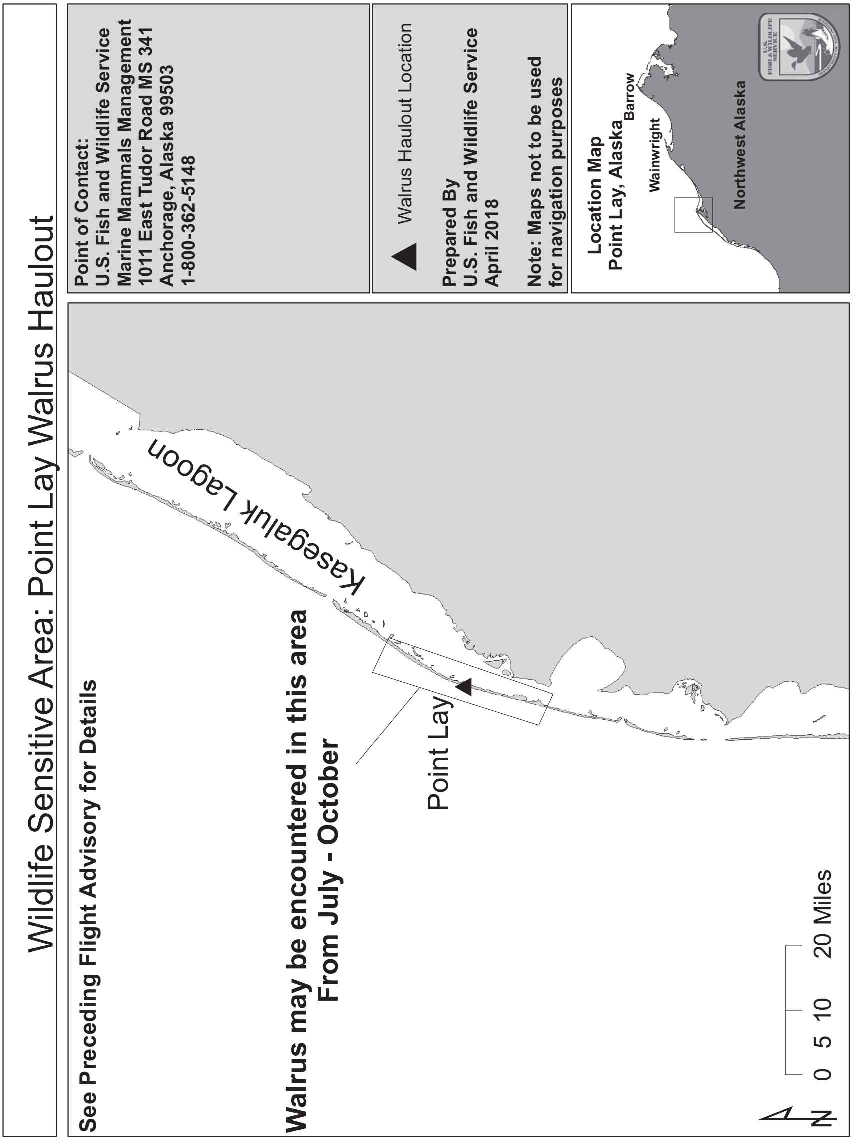
To report incidences of disturbance or harassment please contact:

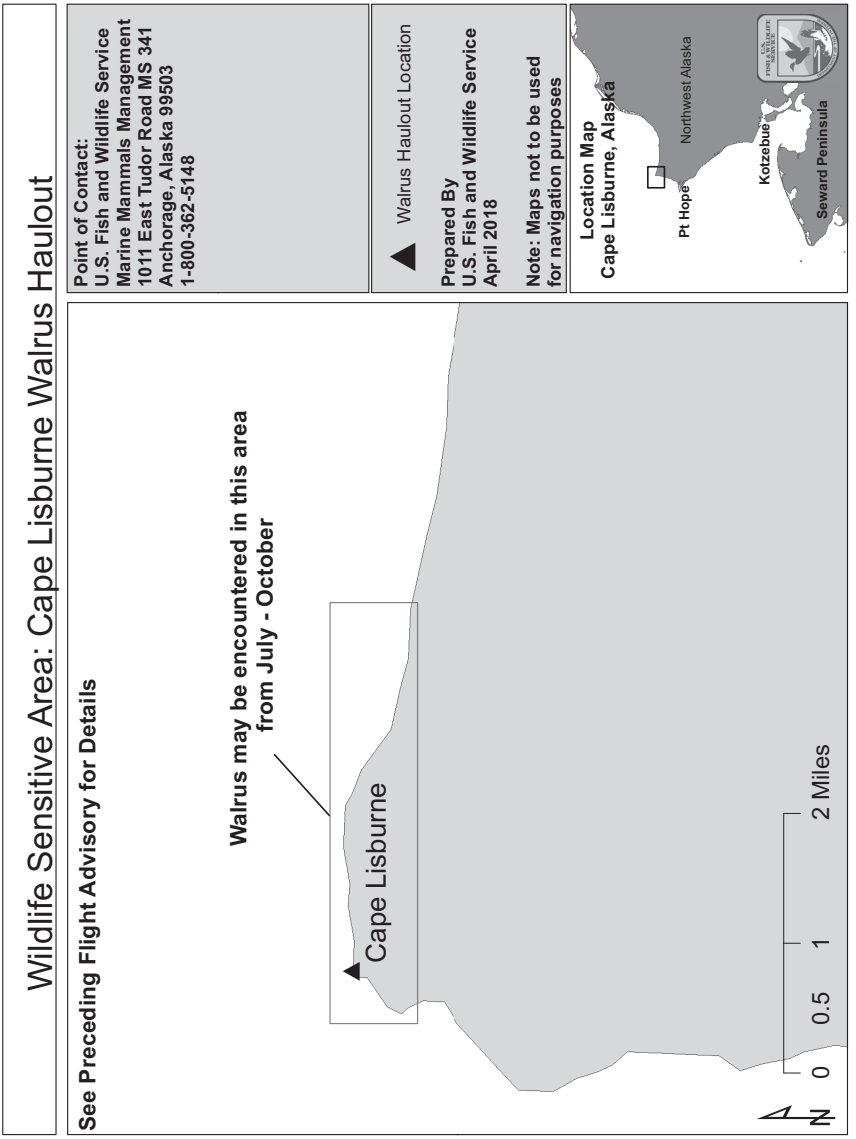
U.S Fish and Wildlife Service
Division of Law Enforcement:
1011 E. Tudor Road
Anchorage Alaska 99503-6199
Toll free: 1-800-858-7621

For questions about walruses please contact:

U.S. Fish and Wildlife Service
Marine Mammals Management Field Office
1011 E. Tudor Road
Anchorage Alaska 99503-6199
Toll free: 1-800-362-5148
http://www.fws.gov/alaska/fisheries/mmm/

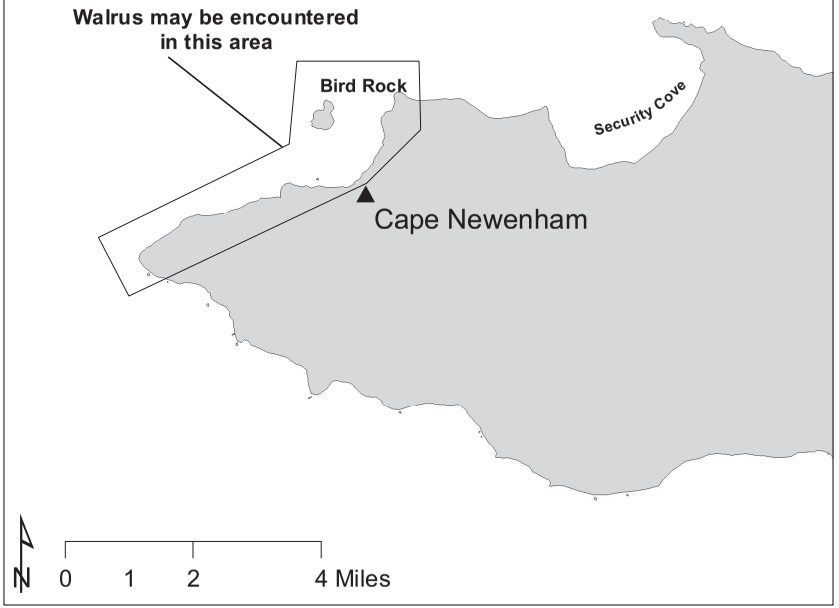

Wildlife Sensitive Area: Icy Cape Walrus Haulout
See Preceding Advisory for Details
Walrus may be encountered in this area from July to October
Icy Cape
Kasegaliik Lagoon
N
0 2.75 5.5 11 Miles
Point of Contact:
U.S. Fish and Wildlife Service
Marine Mammals Management
1011 East Tudor Road MS 341
Anchorage, Alaska 99503
1-800-362-5148
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used for navigation purposes
Location Map
Icy Cape, Alaska
Barrow
Wainwright
Alaska


Wildlife Sensitive Area: Point Lay Walrus Haulout
See Preceding Flight Advisory for Details
Walrus may be encountered in this area
From July - October
Kasegaluk Lagoon
Point Lay
0 5 10 20 Miles
N
Point of Contact:
U.S. Fish and Wildlife Service
Marine Mammals Management
1011 East Tudor Road MS 341
Anchorage, Alaska 99503
1-800-362-5148
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used
for navigation purposes
Location Map
Point Lay, Alaska
Barrow
Wainwright
Northwest Alaska


Wildlife Sensitive Area: Cape Lisburne Walrus Haulout
See Preceding Flight Advisory for Details
Walrus may be encountered in this area from July - October
Cape Lisburne
N
0
0.5
1
2 Miles
Point of Contact:
U.S. Fish and Wildlife Service
Marine Mammals Management
1011 East Tudor Road MS 341
Anchorage, Alaska 99503
1-800-362-5148
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used for navigation purposes
Location Map
Cape Lisburne, Alaska
Pt Hope
Northwest Alaska
Kotzebue
Seward Peninsula

Wildlife Sensitive Area: Cape Newenham Walrus Haulout

See Preceding Flight Advisory for Details

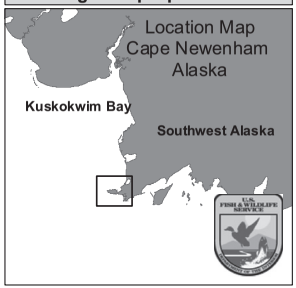


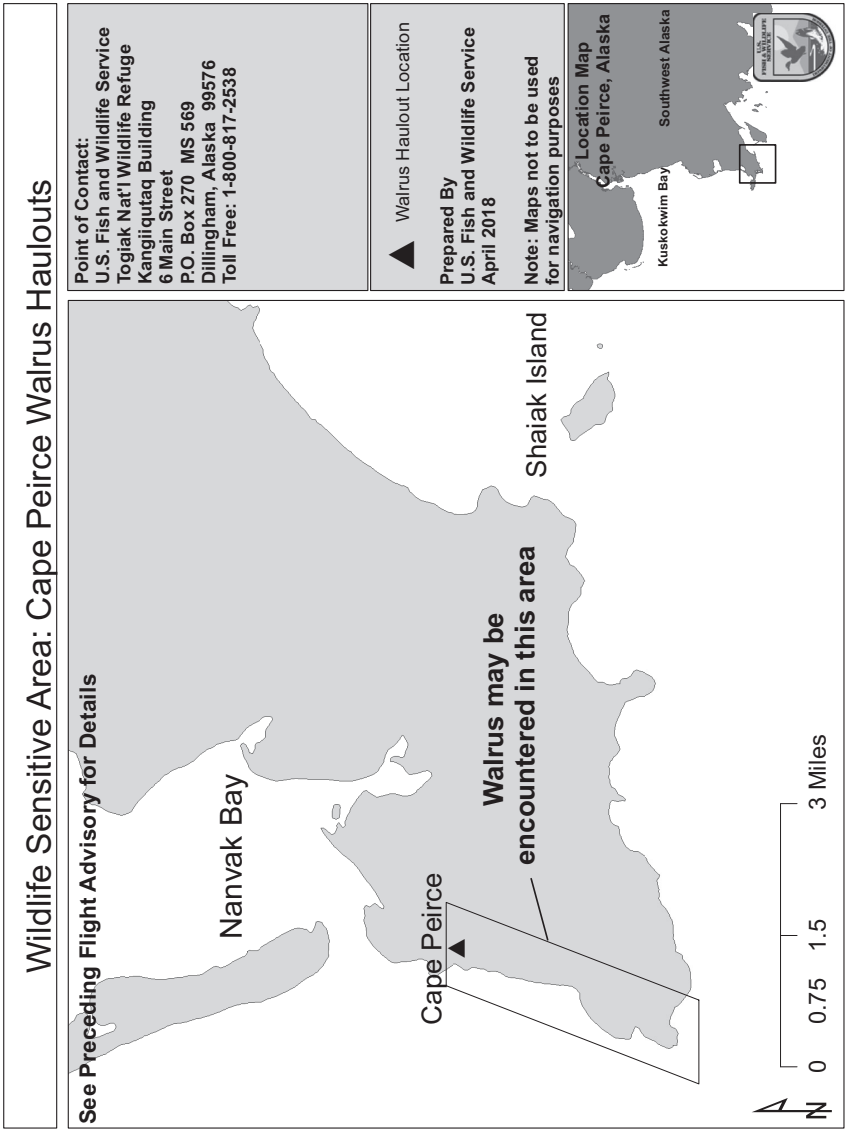
Point of Contact:
U.S. Fish and Wildlife Service
Togiak Nat'l Wildlife Refuge
6 Main Street
Kangiiqutaq Building
P.O. Box 270 MS 569
Dillingham, Alaska 99576
Toll Free: 1-800-817-2538

▲ Walrus Haulout Location

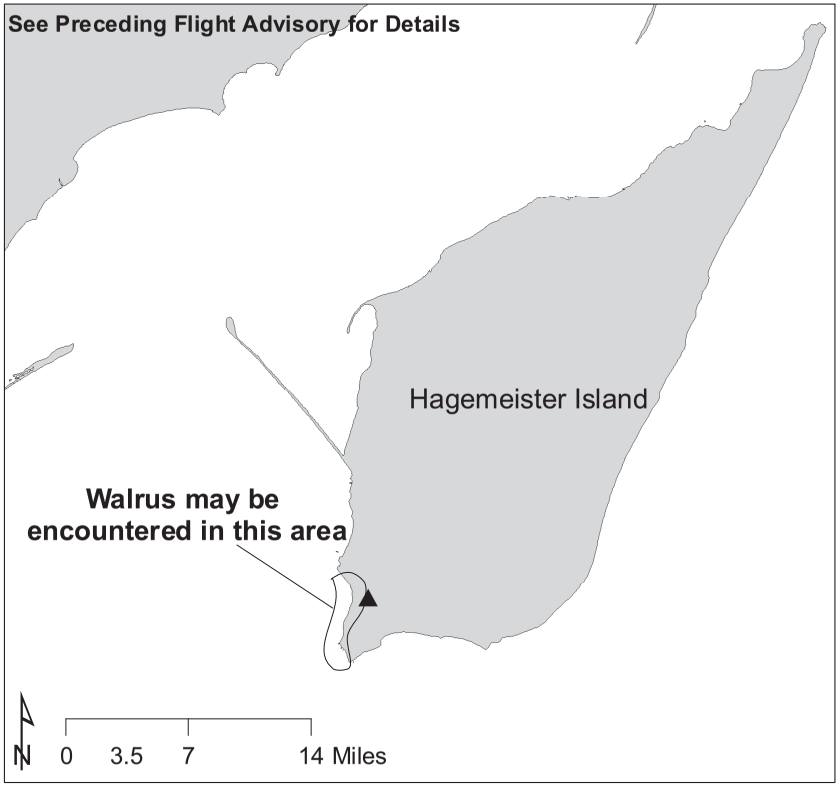
Prepared By
U.S. Fish and Wildlife Service
April 2018

Note: Maps not to be used for navigation purposes




Wildlife Sensitive Area: Cape Peirce Walrus Haulouts
See Preceding Flight Advisory for Details
Nanvak Bay
Cape Peirce
Walrus may be encountered in this area
Shaiak Island
N
0 0.75 1.5 3 Miles
Point of Contact:
U.S. Fish and Wildlife Service
Togiak Nat'l Wildlife Refuge
Kangiqutaq Building
6 Main Street
P.O. Box 270 MS 569
Dillingham, Alaska 99576
Toll Free: 1-800-817-2538
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used for navigation purposes
Location Map
Cape Peirce, Alaska
Kuskokwim Bay
Southwest Alaska

Wildlife Sensitive Area: Hagemeister Island Walrus Haulout



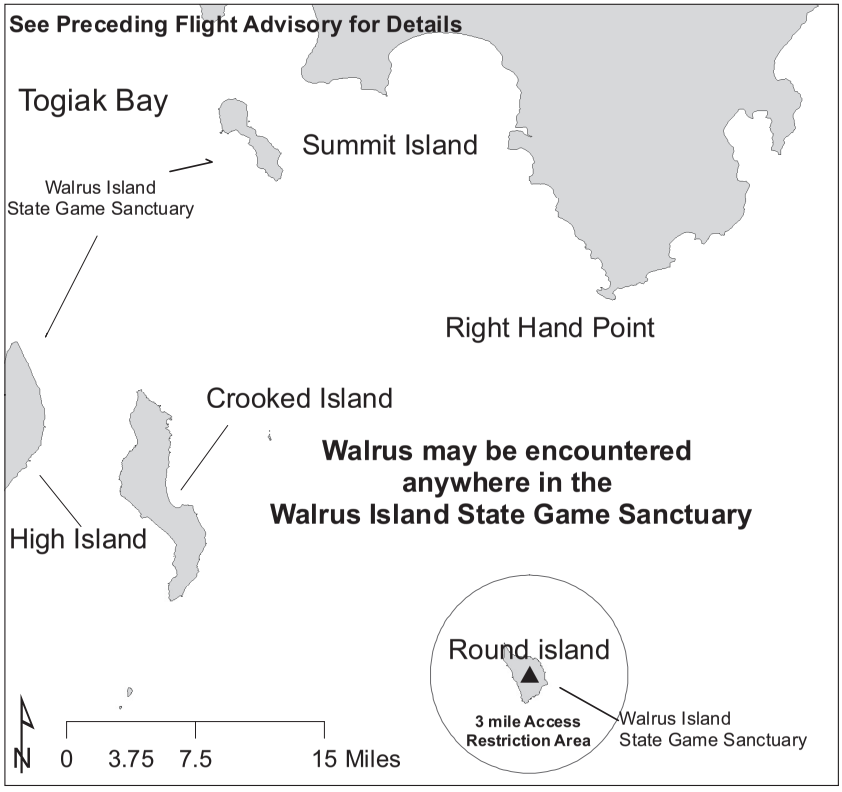
Point of Contact:
U.S. Fish and Wildlife Service
Togiak Nat'll Wildlife Refuge
6 Main Street
Kangiiqutaq Building
P.O. Box 270 MS 569
Dillingham, Alaska 99576
Toll Free: 1-800-817-2538

▲ Walrus Haulout Location

Prepared By
U.S. Fish and Wildlife Service
April 2018

Note: Maps not to be used for navigation purposes

Wildlife Sensitive Area: Round Island Walrus Haulout



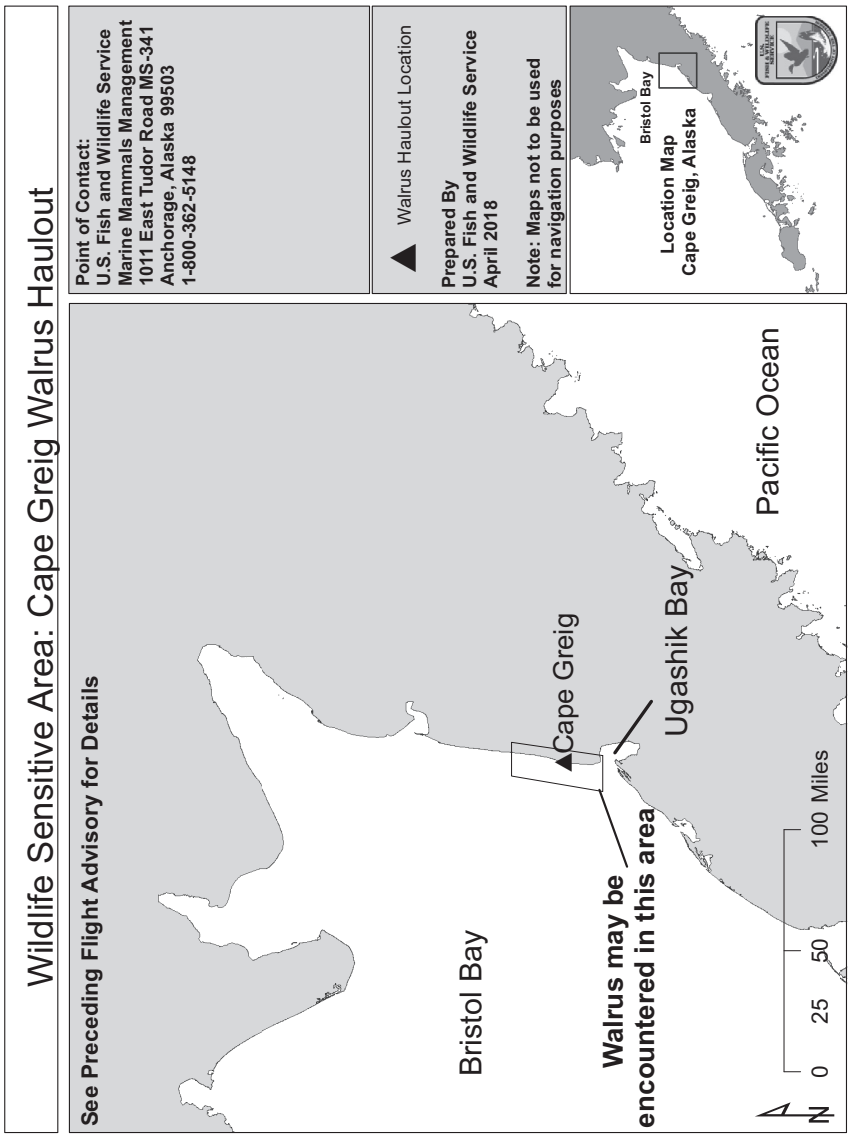
For Walrus Islands State Game Sanctuary Questions contact:
AK Dept of Fish and Game
Div of Wildlife Conservation
333 Raspberry Road
Anchorage, AK 99518-1599
1-907-267-2257

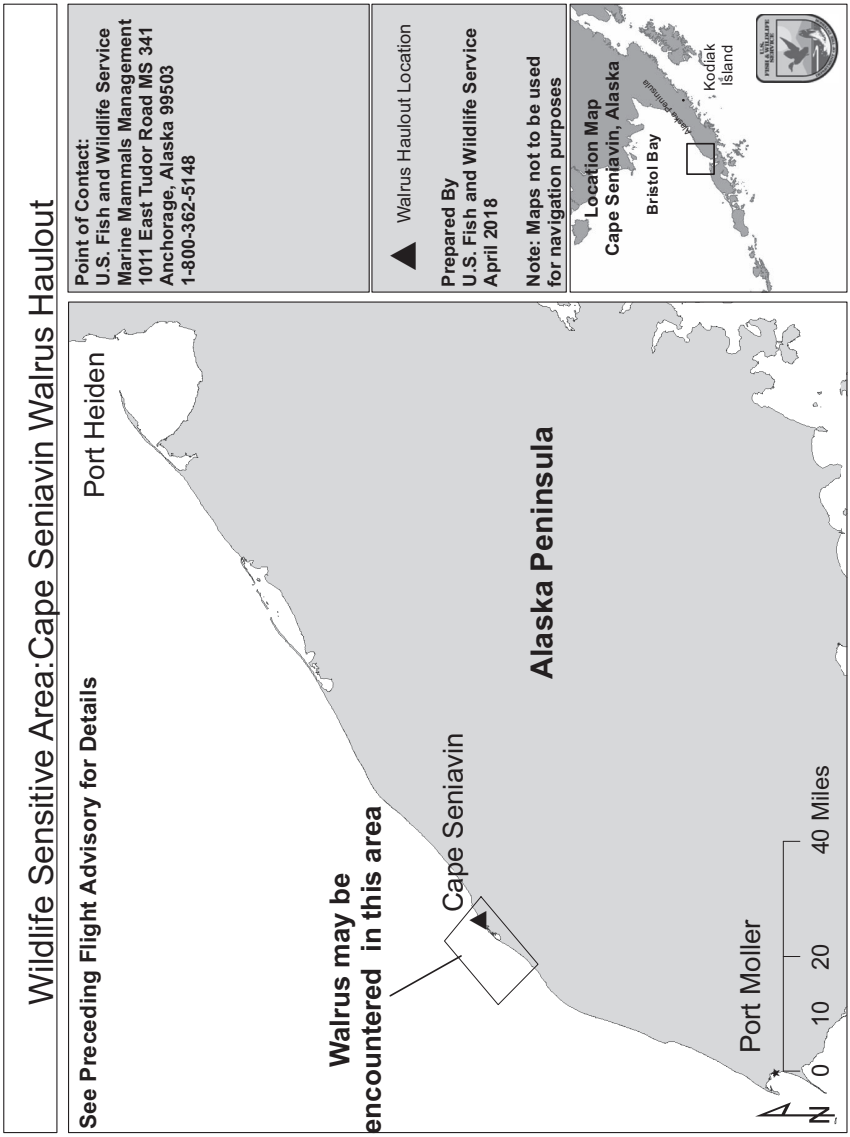
Point of Contact:
U.S. Fish and Wildlife Service
Marine Mammals Management
1011 East Tudor Road MS 341
Anchorage, Alaska 99503
1-800-362-5148

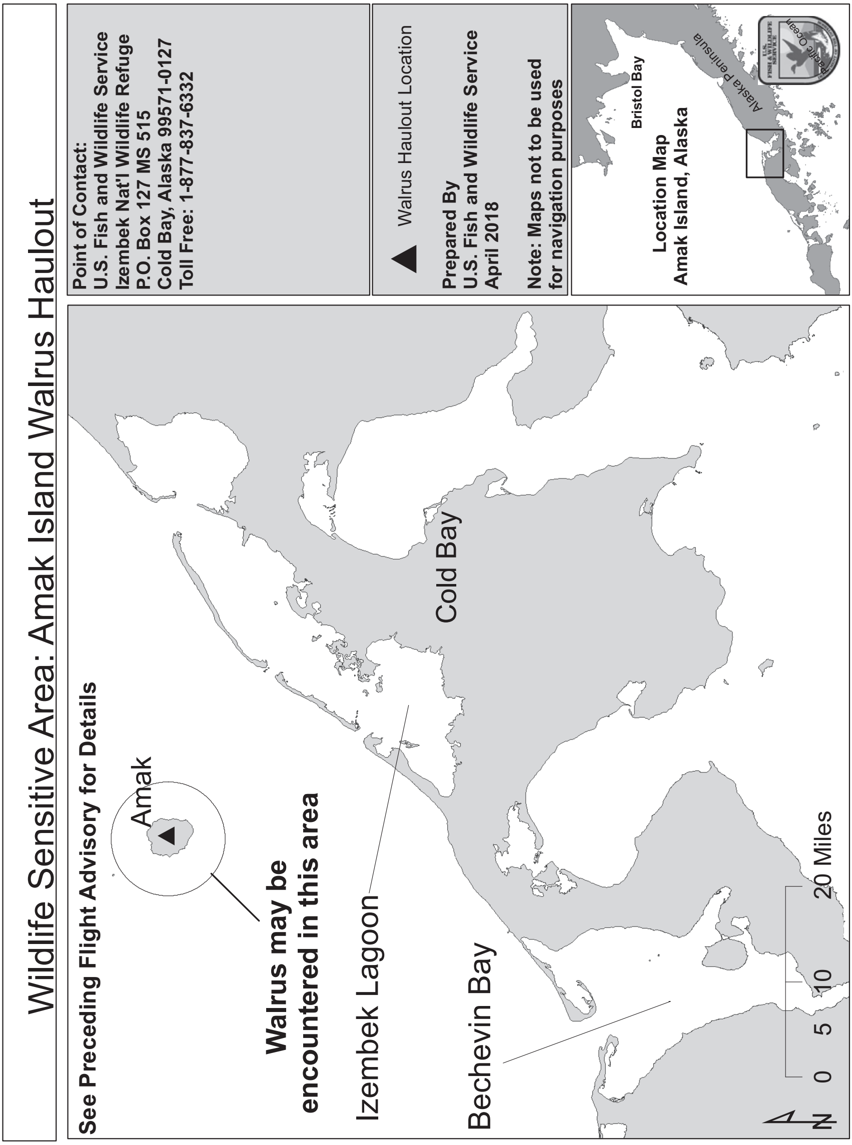
▲ Walrus Haulout Location

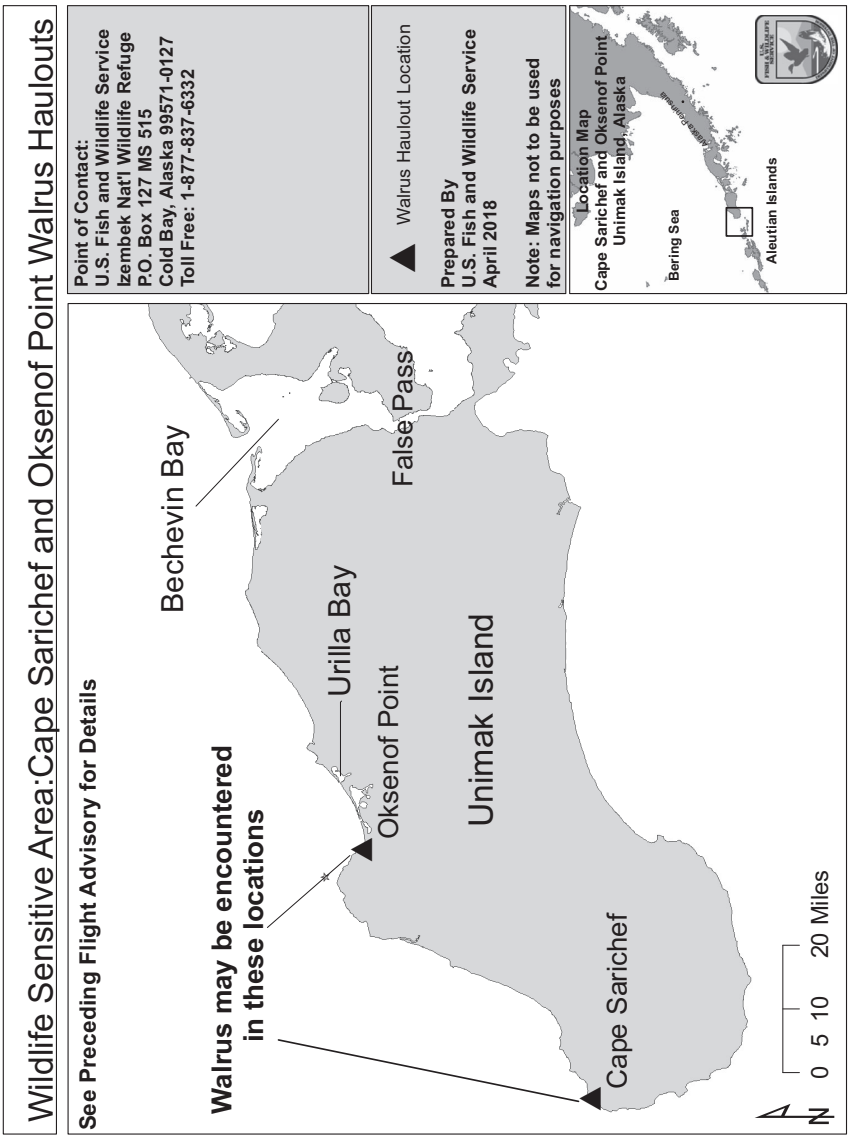
Prepared By
U.S. Fish and Wildlife Service
April 2018

Note: Maps not to be used for navigation purposes

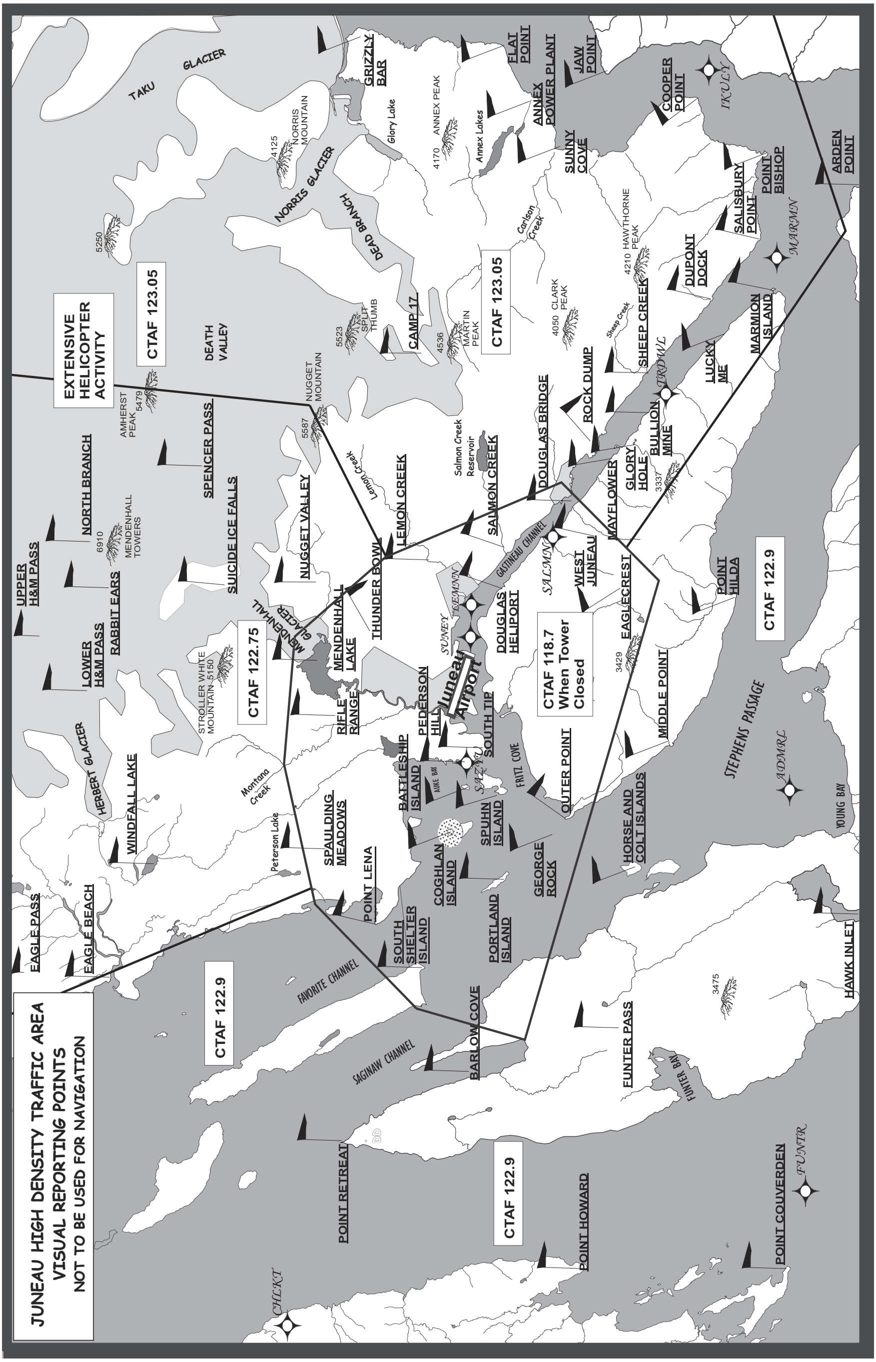

Wildlife Sensitive Area: Cape Greig Walrus Haulout
See Preceding Flight Advisory for Details
Bristol Bay
Cape Greig
Ugashik Bay
Pacific Ocean
Walrus may be encountered in this area
N
0 25 50 100 Miles
Point of Contact:
U.S. Fish and Wildlife Service
Marine Mammals Management
1011 East Tudor Road MS-341
Anchorage, Alaska 99503
1-800-362-5148
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used for navigation purposes
Bristol Bay
Location Map
Cape Greig, Alaska


Wildlife Sensitive Area:Cape Seniavin Walrus Haulout
See Preceding Flight Advisory for Details
Port Heiden
Walrus may be encountered in this area
Cape Seniavin
Alaska Peninsula
Port Moller
0 10 20 40 Miles
N
Point of Contact:
U.S. Fish and Wildlife Service
Marine Mammals Management
1011 East Tudor Road MS 341
Anchorage, Alaska 99503
1-800-362-5148
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used for navigation purposes
Location Map
Cape Seniavin, Alaska
Bristol Bay
Kodiak Island


Wildlife Sensitive Area: Amak Island Walrus Haulout
See Preceding Flight Advisory for Details
Amak
Walrus may be encountered in this area
Izembek Lagoon
Bechevin Bay
Cold Bay
0 5 10 20 Miles
N
Point of Contact:
U.S. Fish and Wildlife Service
Izembek Nat'l Wildlife Refuge
P.O. Box 127 MS 515
Cold Bay, Alaska 99571-0127
Toll Free: 1-877-837-6332
Walrus Haulout Location
Prepared By
U.S. Fish and Wildlife Service
April 2018
Note: Maps not to be used
for navigation purposes
Bristol Bay
Alaska Peninsula
Pacific Ocean
Location Map
Amak Island, Alaska



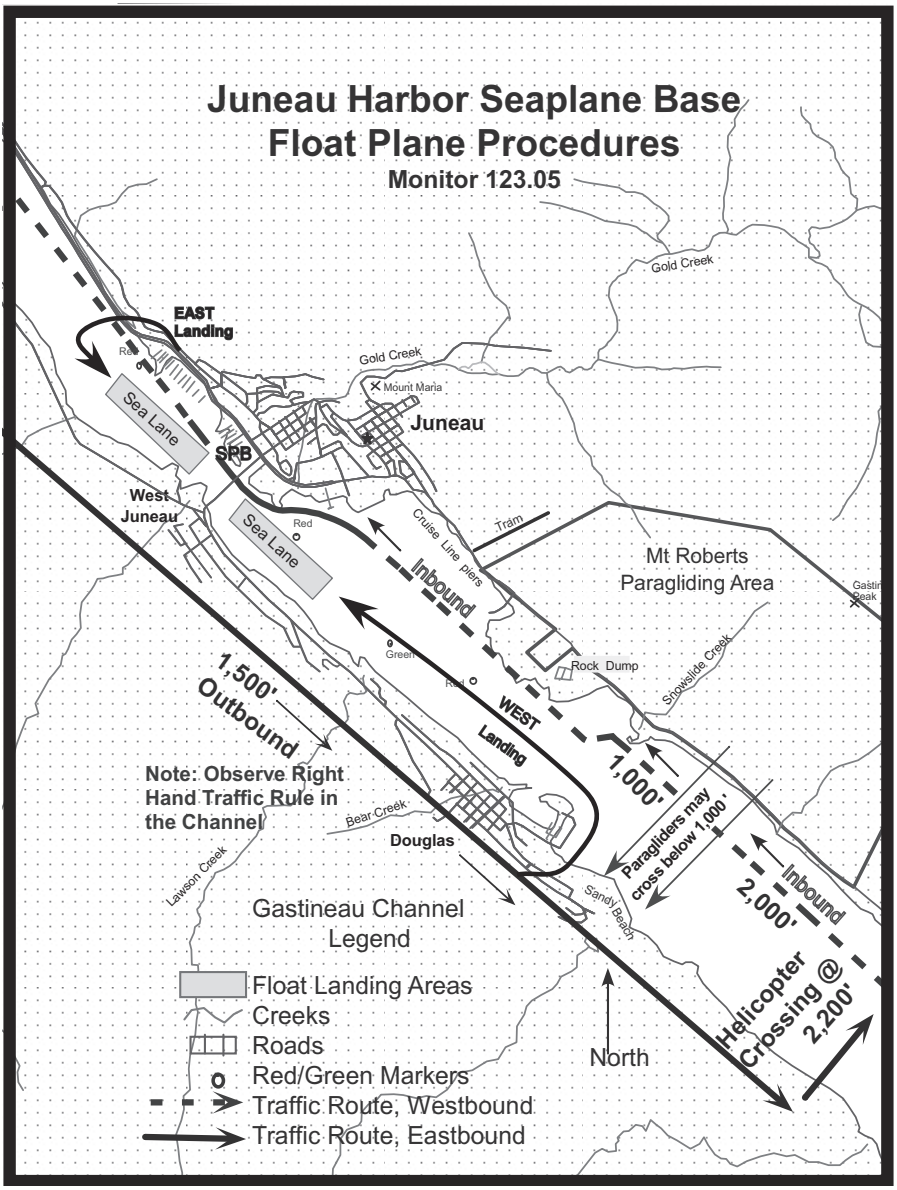
Office of Primary Responsibility (OPR): Marine Mammals Management, U.S. Fish & Wildlife Service
Contact Information:1-800-362-5148, or FW7_MMM@fws.gov
Amended: July 2023

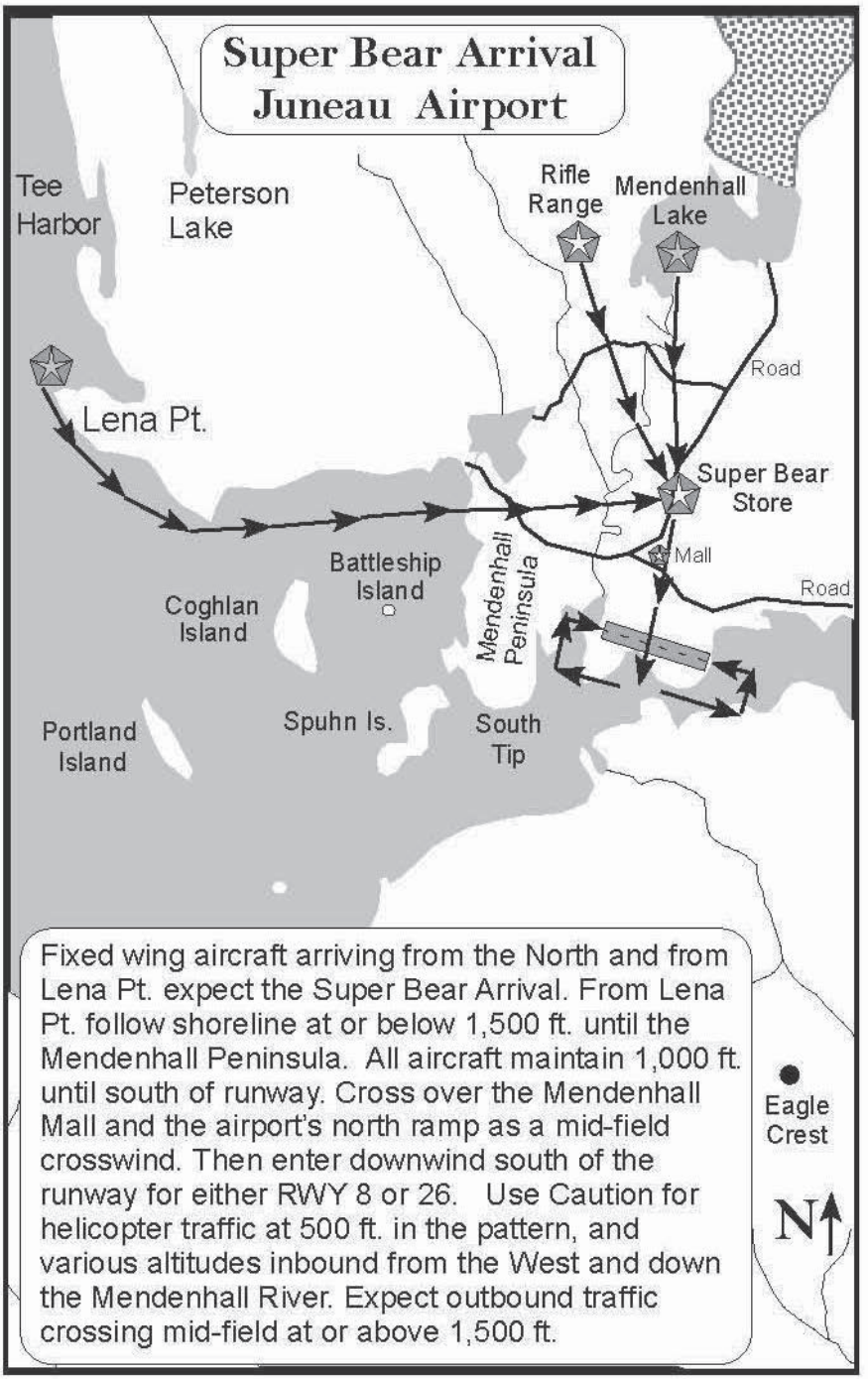

JUNEAU HIGH DENSITY TRAFFIC AREA
VISUAL REPORTING POINTS
NOT TO BE USED FOR NAVIGATION
EXTENSIVE HELICOPTER ACTIVITY
CTAF 123.05
CTAF 123.05
CTAF 122.75
CTAF 118.7 When Tower Closed
CTAF 122.9
CTAF 122.9
CTAF 122.9
Juneau Airport
TAKU GLACIER
NORRIS GLACIER
NORRIS MOUNTAIN
4125
5250
DEATH VALLEY
DEAD BRANCH
GRIZZLY BAR
Glory Lake
ANNEX PEAK
4170
Annex Lakes
FLAT POINT
ANNEX POWER PLANT
JAW POINT
SUNNY COVE
COOPER POINT
IKULY
ARDEN POINT
POINT BISHOP
SALISBURY POINT
MARMN
HAWTHORNE PEAK
4210
Carlson Creek
DUPONT DOCK
MARMION ISLAND
CLARK PEAK
4050
Sheep Creek
SHEEP CREEK
LUCKY ME
TRDWL
ROCK DUMP
BULLION MINE
GLORY HOLE
3337
MAYFLOWER
DOUGLAS BRIDGE
SALMON CREEK
Salmon Creek Reservoir
MARTIN PEAK
4536
CAMP 17
SPLIT THUMB
5523
NUGGET MOUNTAIN
5587
AMHERST PEAK
5479
SPENCER PASS
NORTH BRANCH
MENDENHALL TOWERS
6910
UPPER H&M PASS
RABBIT EARS
SUICIDE ICE FALLS
NUGGET VALLEY
Lemon Creek
LEMON CREEK
THUNDER BOWL
MENDENHALL GLACIER
MENDENHALL LAKE
LEMNN
GASTINEAU CHANNEL
SALMN
WEST JUNEAU
EAGLECREST
3429
POINT HILDA
DOUGLAS HELIPORT
SUNEY
LOWER H&M PASS
STROLLER WHITE MOUNTAIN 5150
RIFLE RANGE
PEDERSON HILL
SOUTH TIP
MIDDLE POINT
HERBERT GLACIER
WINDFALL LAKE
Montana Creek
BATTLESHIP ISLAND
AUKE BAY
SAZYU
FRITZ COVE
OUTER POINT
STEPHENS PASSAGE
ADMRL
YOUNG BAY
SPAULDING MEADOWS
Peterson Lake
SPUHN ISLAND
COGHLAN ISLAND
GEORGE ROCK
HORSE AND COLT ISLANDS
POINT LENA
PORTLAND ISLAND
SOUTH SHELTER ISLAND
EAGLE PASS
EAGLE BEACH
FAVORITE CHANNEL
HAWK INLET
3475
BARLOW COVE
SAGINAW CHANNEL
FUNTER PASS
FUNTER BAY
POINT RETREAT
POINT HOWARD
FUNTR
POINT COUVERDEN
CHLKT

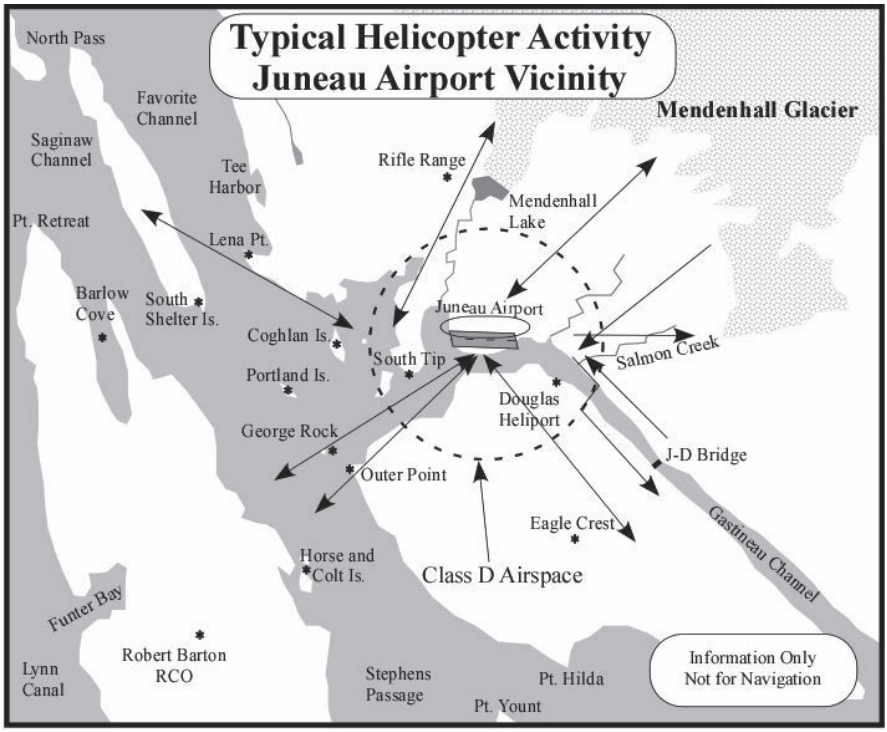
Juneau Visual Check Points	Latitude (NAD 83)	Longitude (NAD 83)
Annex Power	N 58° 19' 03"	W 134° 06' 01"
Arden Point	N 58° 09' 30"	W 134° 10' 37"
Barlow Cove	N 58° 21' 38"	W 134° 53' 26"
Battleship Island	N 58° 21' 34"	W 134° 39' 53"
Bullion Mine	N 58° 15' 08.05"	W 134° 21' 30.32"
Camp 17	N 58° 22' 03"	W 134° 21' 56"
Coghlan Island	N 58° 23' 13"	W 134° 42' 04"
Cooper Point	N 58° 14' 09"	W 134° 06' 12"
Douglas Heliport	N 58° 19' 56"	W 134° 29' 50"
Dupont Dock	N 58° 13' 40.67"	W 134° 15' 59.24"
Eagle Beach	N 38° 31' 40"	W 134° 49' 35"
Eaglecrest	N 58° 16' 27"	W 134° 30' 46"
Flat Point	N 58° 20' 10"	W 134° 03' 23"
Funter Pass	N 58° 16' 24.25"	W 134° 51' 34.85"
George Rock	N 58° 18' 54"	W 134° 42' 04"
Glory Hole	N 58° 16' 04.45"	W 134° 22' 54.81"
Grizzly Bar	N 58° 23' 28"	W 134° 03' 43"
Hawk Inlet	N 58° 09' 13"	W 134° 45' 59"
Horse and Colt Islands	N 58° 15' 45"	W 134° 43' 56"
Douglas Bridge	N 58° 17' 56"	W 134° 25' 46"
Jaw Point	N 58° 16' 48"	W 134° 04' 52"
Lemon Creek	N 58° 22' 17.35"	W 134° 28' 05.90"
Lower H&M Pass	N 58° 32' 21.55"	W 134° 34' 34.49"
Lucky Me	N 58° 13' 28.05"	W 134° 17' 40.07"
Marmion Island	N 58° 11' 55"	W 134° 15' 25"
Mayflower	N 58° 16' 35.00"	W 134° 23' 04.24"
Mendenhall Lake	N 58° 25' 22"	W 134° 33' 57"
Middle Point	N 58° 14' 54.13"	W 134° 37' 43.35"
North Branch	N 58° 32' 45.76"	W 134° 28' 07.40"
Nugget Valley	N 58° 25' 28.81"	W 134° 29' 56.39"
Outer Point	N 58° 18' 07"	W 134° 41' 18"
Pederson Hill	N 58° 22' 25"	W 134° 38' 00"
Point Bishop	N 58° 12' 03"	W 134° 09' 00"
Point Couverden	N 58° 11' 26"	W 135° 03' 20"
Point Hilda	N 58° 13' 02.34"	W 134° 30' 04.93"
Point Howard	N 58° 17' 22"	W 135° 03' 20"
Point Lena	N 58° 23' 45"	W 134° 46' 39"
Point Retreat	N 58° 24' 41"	W 134° 57' 18"
Portland Island	N 58° 21' 07"	W 134° 45' 31"
Rabbit Ears	N 58° 32' 21.45"	W 134° 30' 13.21"
Rifle Range	N 58° 24' 54"	W 134° 36' 23"
Rock Dump	N 58° 17' 14.05"	W 134° 23' 32.71"
Salisbury Point	N 58° 12' 18.28"	W 134° 13' 06.43"
Salmon Creek	N 58° 19' 49"	W 134° 28' 28"
Sharks Fin	N 58° 28' 41.49"	W 134° 29' 31.17"
Sheep Creek	N 58° 15' 36.77"	W 134° 19' 49.44"
South Shelter Island	N 58° 22' 30"	W 134° 48' 31"
South Tip	N 58° 20' 30"	W 134° 37' 51"
Spaulding Meadows	N 58° 25' 13.67"	W 134° 42' 30.71"
Spencer Pass	N 58° 29' 05.27"	W 134° 26' 01.64"
Spuhn Island	N 58° 20' 05"	W 134° 39' 37"
Suicide Ice Falls	N 58° 27' 51"	W 134° 29' 02"
Sunny Cove	N 58° 18' 12"	W 134° 08' 25"
Thunder Bowl	N 58° 23' 40.25"	W 134° 31' 05.90"
Upper H&M Pass	N 58° 34' 22"	W 134° 32' 02"
West Juneau	N 58° 17' 27.73"	W 134° 26' 56.09"
Windfall Lake	N 58° 30' 22.25"	W 134° 43' 32.00"

Frequencies

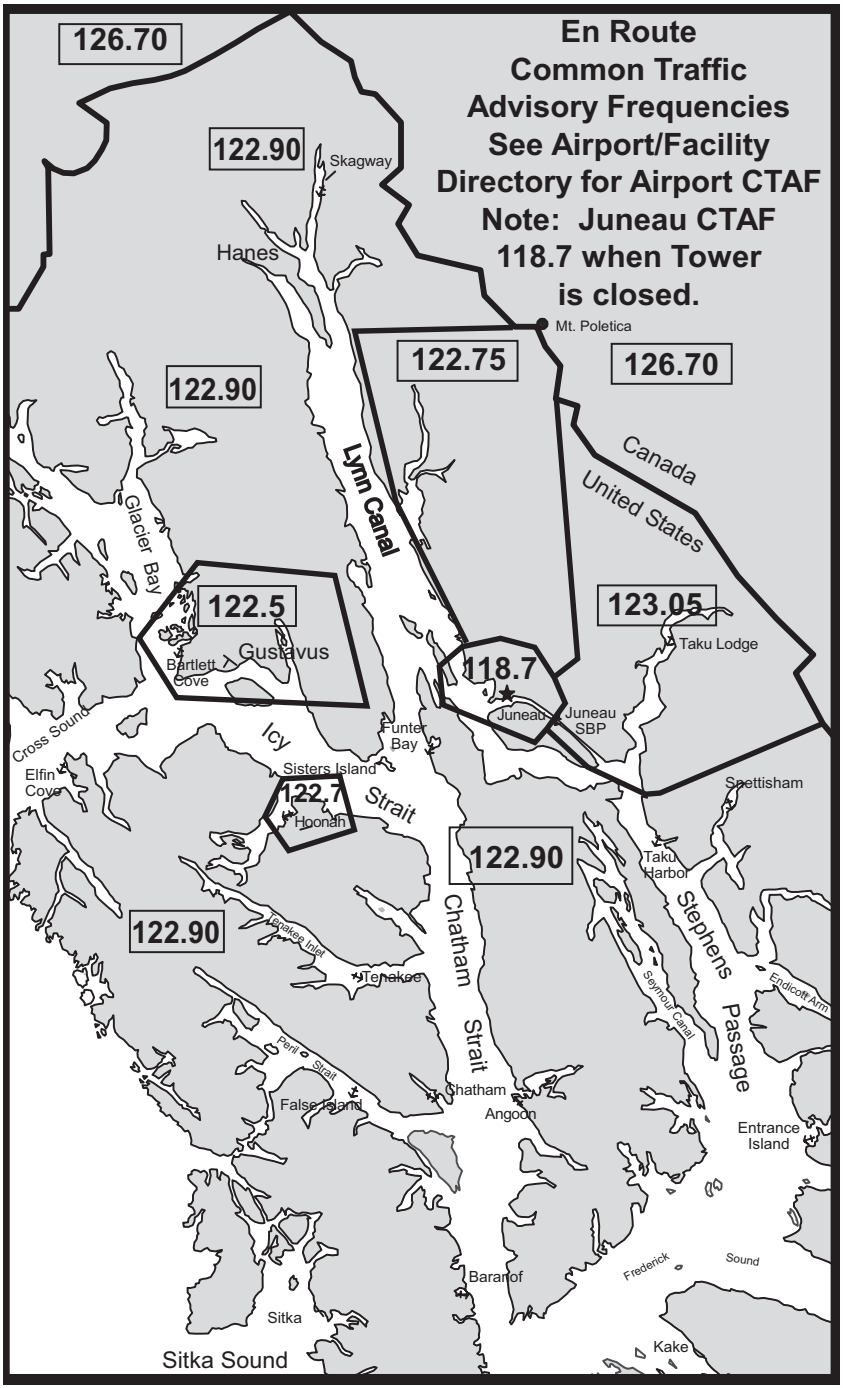
Juneau RCO	118.7		
Robert Barron RCO	121.1		
Juneau Downtown RCO	122.15		
Juneau FSS	122.2	118.7	
Juneau CTAF	118.7		
Juneau ASOS/ATIS	135.2		
Juneau Tower	278.3	118.7	120.7
Juneau Ground Control	121.9		
National Guard Operations	124.65		
Anchorage Center	133.9		

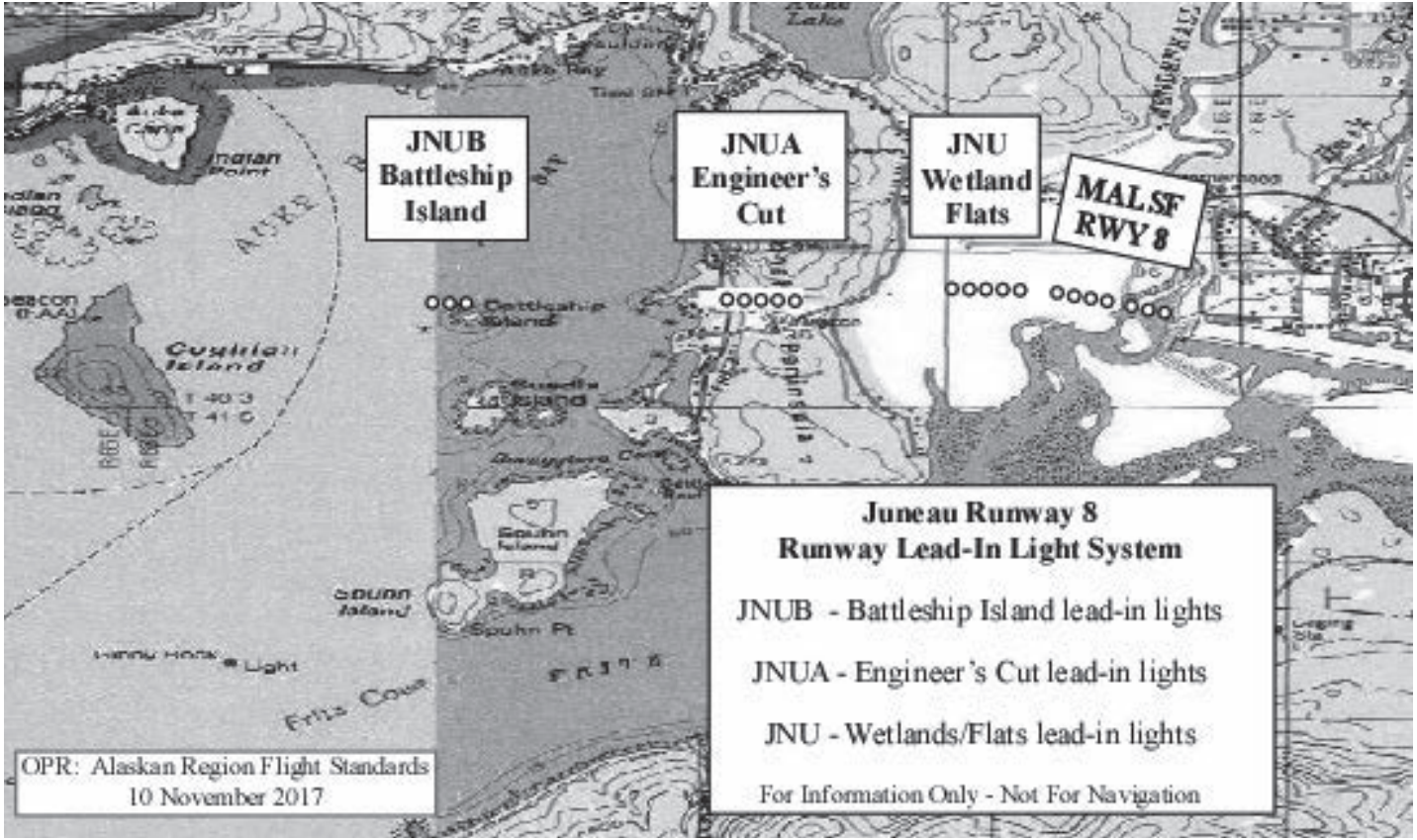

Juneau Harbor Seaplane Base
Float Plane Procedures
Monitor 123.05
Gold Creek
EAST
Landing
Red
Gold Creek
Mount Maria
Juneau
Sea Lane
SPB
West
Juneau
Red
Sea Lane
Cruise Line piers
Tram
Inbound
Mt Roberts
Paragliding Area
Gastin
Peak
Green
Rock Dump
Stripslide Creek
1,500'
Outbound
WEST
Landing
1,000'
Note: Observe Right
Hand Traffic Rule in
the Channel
Bear Creek
Douglas
Lawson Creek
Paragliders may
cross below 1,000'
Inbound
2,000'
Sandy Beach
Gastineau Channel
Legend
Float Landing Areas
Creeks
Roads
Red/Green Markers
Traffic Route, Westbound
Traffic Route, Eastbound
North
Helicopter
Crossing @
2,200'


Super Bear Arrival
Juneau Airport
Tee Harbor
Peterson Lake
Rifle Range
Mendenhall Lake
Road
Lena Pt.
Super Bear Store
Mall
Road
Battleship Island
Coghlan Island
Mendenhall Peninsula
Portland Island
Spuhn Is.
South Tip
Eagle Crest
N
Fixed wing aircraft arriving from the North and from Lena Pt. expect the Super Bear Arrival. From Lena Pt. follow shoreline at or below 1,500 ft. until the Mendenhall Peninsula. All aircraft maintain 1,000 ft. until south of runway. Cross over the Mendenhall Mall and the airport's north ramp as a mid-field crosswind. Then enter downwind south of the runway for either RWY 8 or 26. Use Caution for helicopter traffic at 500 ft. in the pattern, and various altitudes inbound from the West and down the Mendenhall River. Expect outbound traffic crossing mid-field at or above 1,500 ft.



This graphic depicts typical VFR helicopter routing in the Juneau area. Helicopters use a traffic pattern just north of the runway. Use caution, high intensity flight activity occurs during the summer months. Flights of multiple helicopters in trail are common. See other pages in this section for additional Juneau information.


En Route
Common Traffic
Advisory Frequencies
See Airport/Facility
Directory for Airport CTAF
Note: Juneau CTAF
118.7 when Tower
is closed.
126.70
122.90
Skagway
Haines
Mt. Poletica
122.75
126.70
122.90
Lynn Canal
Canada
United States
Glacier Bay
122.5
Gustavus
Bartlett Cove
123.05
Taku Lodge
118.7
Juneau
Juneau SBP
Cross Sound
Icy
Strait
Funter Bay
Sisters Island
Elfin Cove
122.7
Hoonah
Skettisham
122.90
Taku Harbor
122.90
Chatham
Strait
Stephens
Passage
Tenakee Inlet
Tenakee
Seymour Canal
Endicott Arm
Peril Strait
False Island
Chatham
Angoon
Entrance Island
Frederick
Sound
Baranof
Sitka
Kake
Sitka Sound


JNUB
Battleship
Island
JNUA
Engineer's
Cut
JNU
Wetland
Flats
MALSF
RWY 8
Juneau Runway 8
Runway Lead-In Light System
JNUB - Battleship Island lead-in lights
JNUA - Engineer's Cut lead-in lights
JNU - Wetlands/Flats lead-in lights
For Information Only - Not For Navigation
OPR: Alaskan Region Flight Standards
10 November 2017

Ralph Wien Memorial Airport
Kotzebue, Alaska
Vehicle Control
Procedures for
Aircraft landing on Runway 9
Effective
November 24, 2009

******CAUTION****** A road with frequent commercial vehicle traffic crosses the extended centerline of Runway 9 just west of the approach end. The State of Alaska has installed crossing control gates that are pilot activated to block vehicle access while aircraft are on final approach to Runway 9.

GATE OPERATING PROCEDURES:

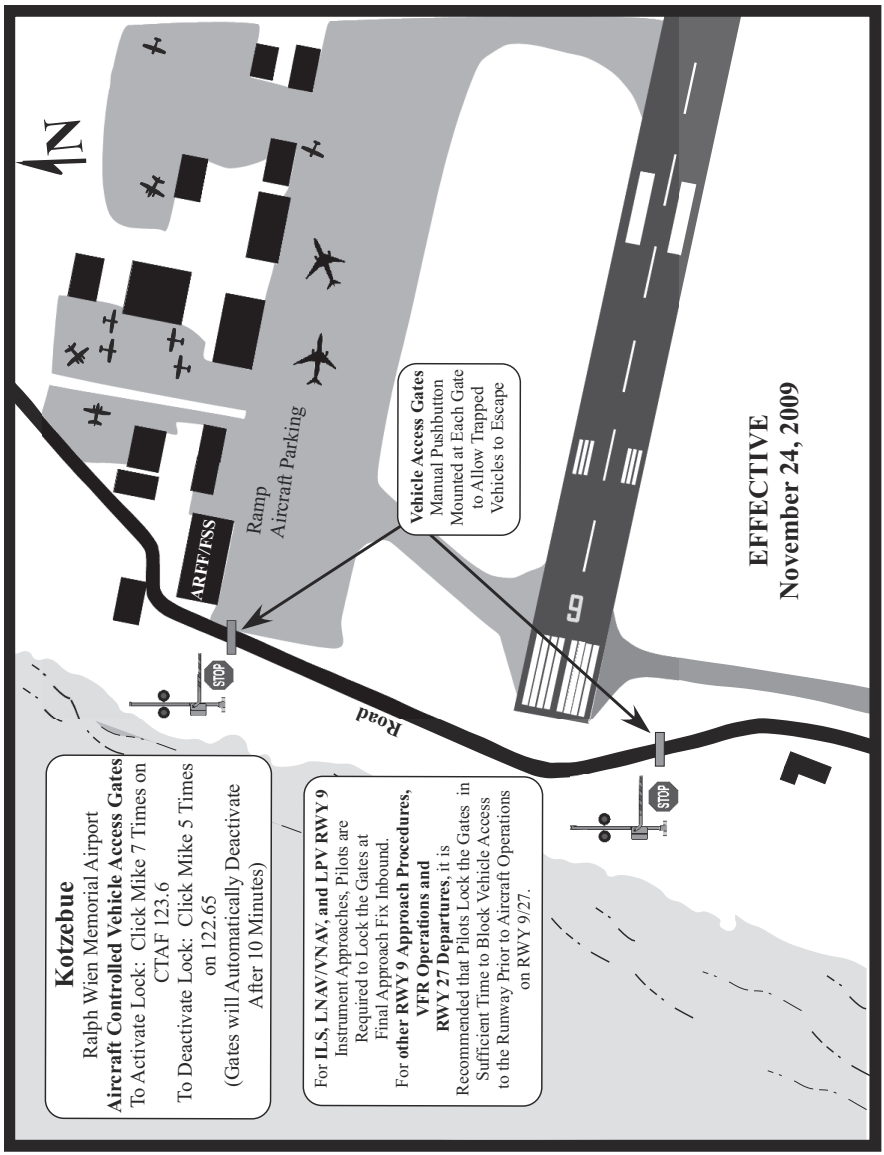
Drivers of vehicles activate gate opening by driving through a sensor that opens 2 gates on either side of the approach end of Runway 9 for 15 seconds. After 15 seconds, gates close again.

Pilots are able to lock gates for 10 minutes by 7 mike clicks on CTAF 123.6 Mhz. Pilots may unlock gates prior to 10 minutes with 5 mike clicks on CTAF 122.65 Mhz.

PILOT REQUIREMENTS:

For ILS, LNAV/VNAV, and LPV RWY 9 Standard Instrument Approach Procedure (SIAP): Pilots are required to lock the vehicle access gates not later than the final approach fix (FAF) inbound.

For other SIAPs to Rwy 9, all VFR operations and Rwy 27 departures: It is recommended that pilots lock the vehicle access gates in sufficient time to block vehicle access to the runway prior to aircraft operations on Rwy 09-27.


Kotzebue
Ralph Wien Memorial Airport
Aircraft Controlled Vehicle Access Gates
To Activate Lock: Click Mike 7 Times on CTAF 123.6
To Deactivate Lock: Click Mike 5 Times on 122.65
(Gates will Automatically Deactivate After 10 Minutes)
For ILS, LNAV/VNAV, and LPV RWY 9 Instrument Approaches, Pilots are Required to Lock the Gates at Final Approach Fix Inbound.
For other RWY 9 Approach Procedures, VFR Operations and RWY 27 Departures, it is Recommended that Pilots Lock the Gates in Sufficient Time to Block Vehicle Access to the Runway Prior to Aircraft Operations on RWY 9/27.
STOP
STOP
Road
ARFF/FSS
Ramp
Aircraft Parking
Vehicle Access Gates
Manual Pushbutton
Mounted at Each Gate
to Allow Trapped
Vehicles to Escape
9
N
EFFECTIVE
November 24, 2009

Procedures for Operations at Unalaska Airport

****DANGER**** There is a road crossing the approach of RWY 30. Warning System and Gates must be activated. The gates are controlled by Pilot Controlled Lighting (PCL) on frequency 122.6 (CTAF). This frequency controls the REILS, MIRLS, and the gates.

TWO WAY RADIO COMMUNICATIONS ARE STRONGLY RECOMMENDED FOR ALL AIRCRAFT OPERATING AT UNALASKA AIRPORT.

For all departures and arrivals the pilot can turn on the runway lighting with 7 'clicks' on the microphone on frequency 122.6. This action will 1) Turn on the flashing red stop lights on either side of the runway 30 approach, 2) Turn on the MIRLS at high level, 3) Activate the REILS, and 4) Lower the three gates depicted on the adjoining graphic. **Warning:** Once the system is on, 3 'clicks' on the microphone will deactivate it. So, do not lower the intensity of the runway lights, unless safety of flight dictates.

****If the REILS are not flashing, the gates and warning system are not active.****

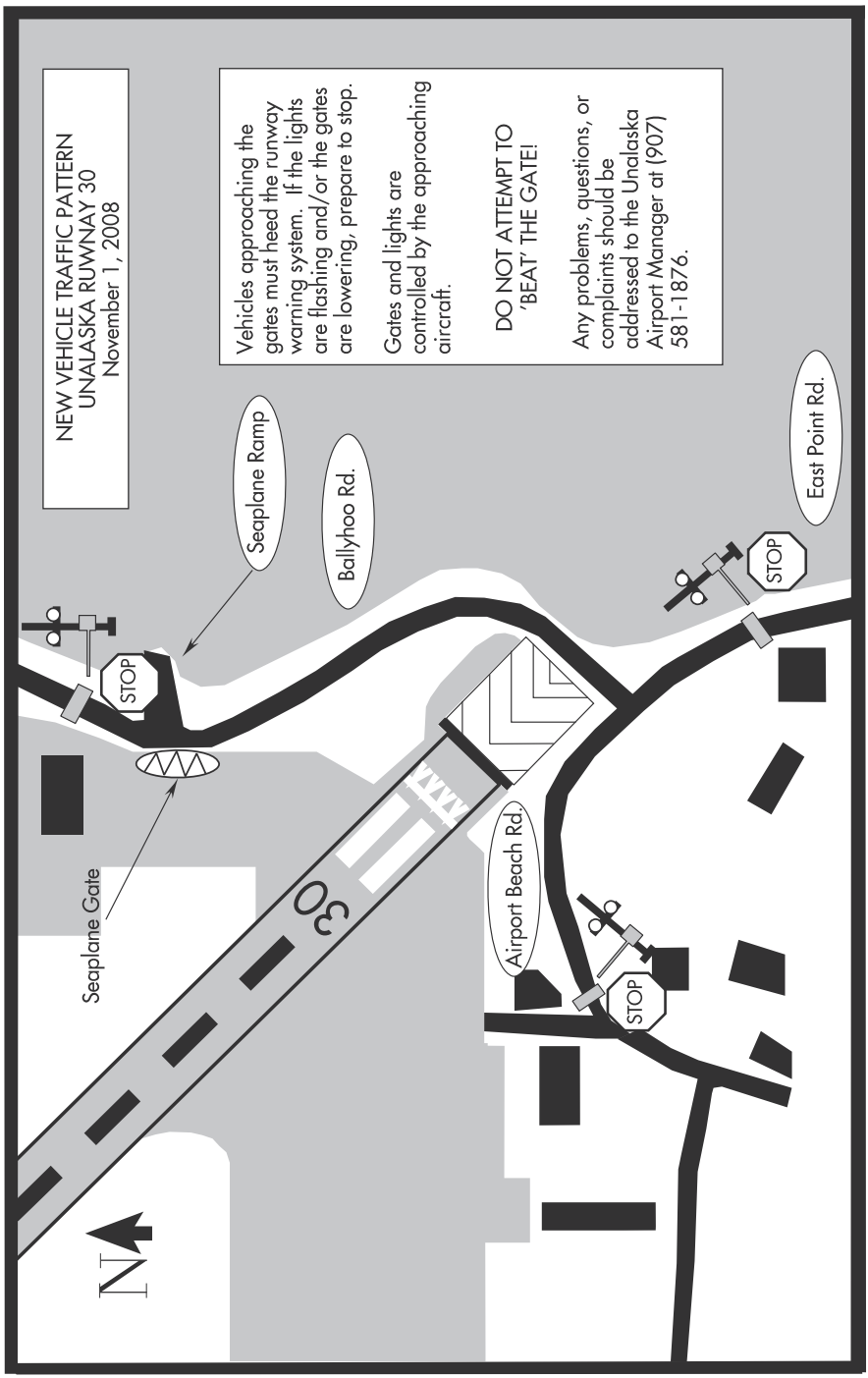
Prior to arrival, pilots are recommended to contact a company that performs ground handling operations at the airport. When the service is available, these companies will have a 'Mobile One' operator designated to physically place a vehicle and driver with an aircraft radio close to the approach end of RWY 30. 'Mobile One' will monitor CTAF and advise the aircraft that the gates have lowered, that there are no vehicles on the road inside the gates, and that it is safe to land.

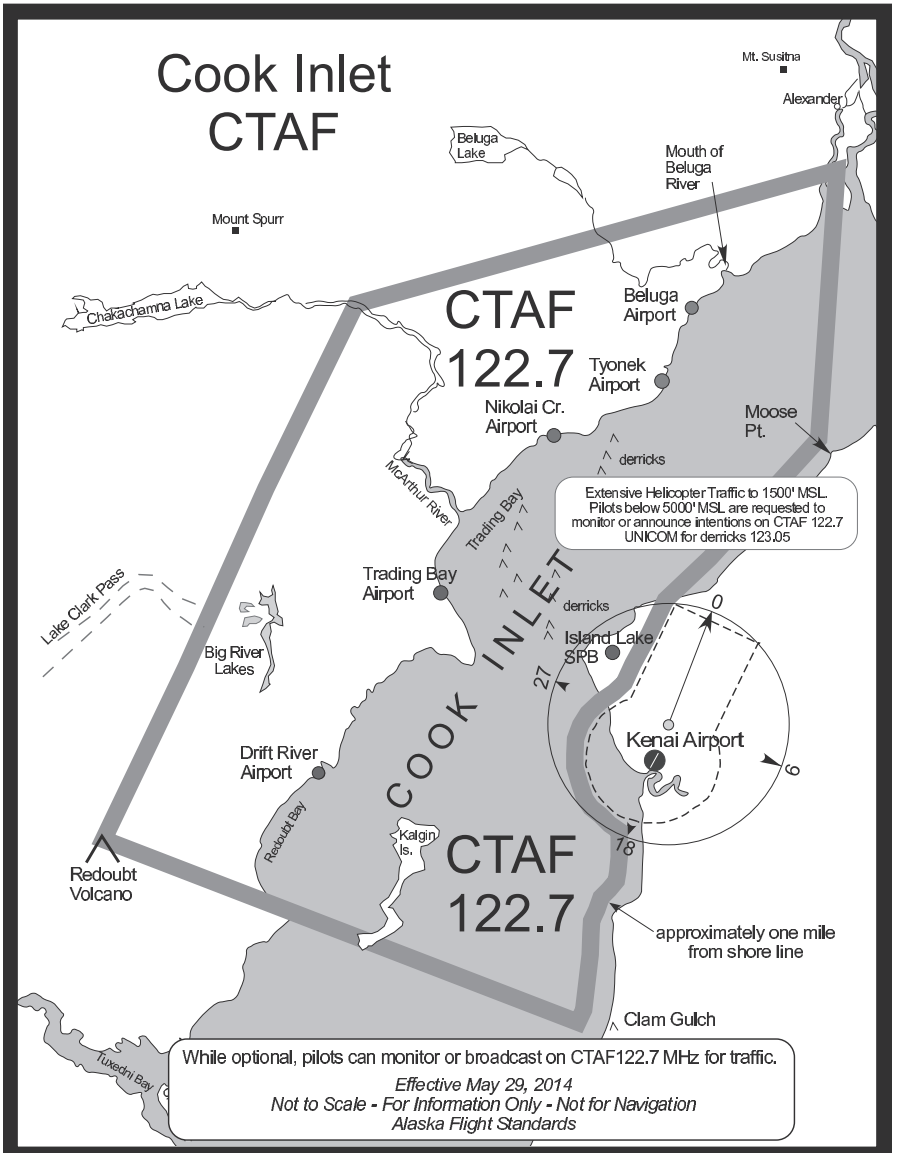
Once you land or depart, please turn off the REILS and open the gates by 3 'clicks' of the mic on 122.6. Using 3 'clicks' on the microphone will deactivate the warning system.

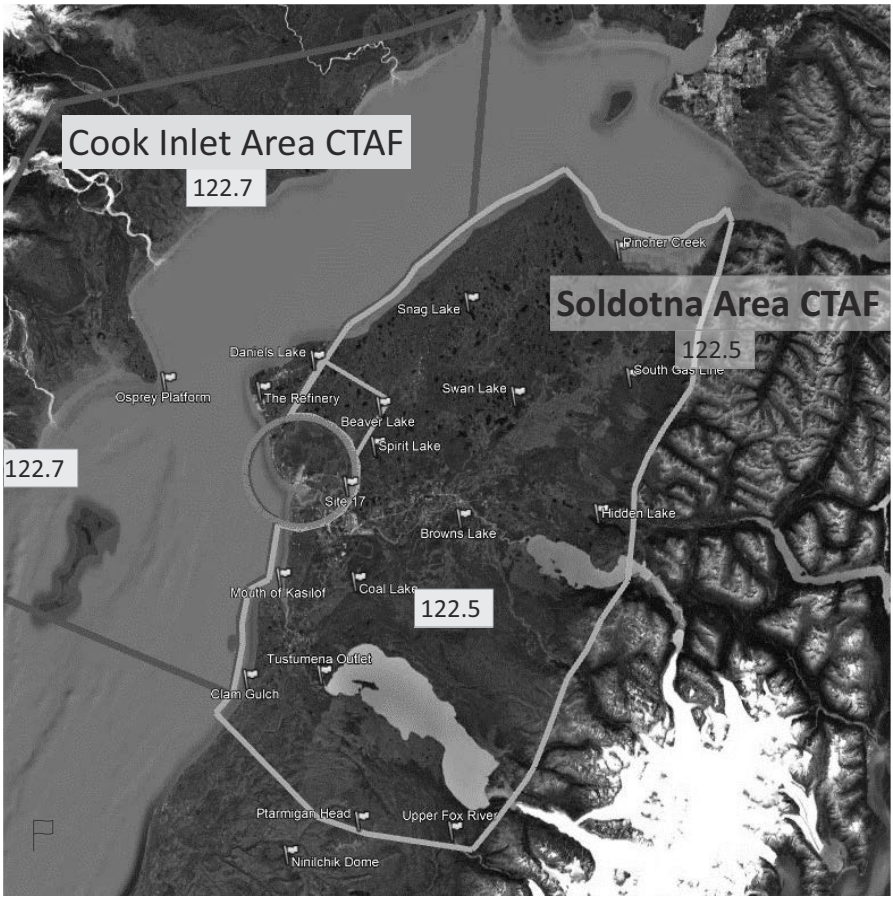
WARNING: If vehicular traffic is on the road at the approach end of RWY 30, flying the VASI does NOT ensure vehicle clearance as you pass over the road.

Comments about these operations may be directed to:

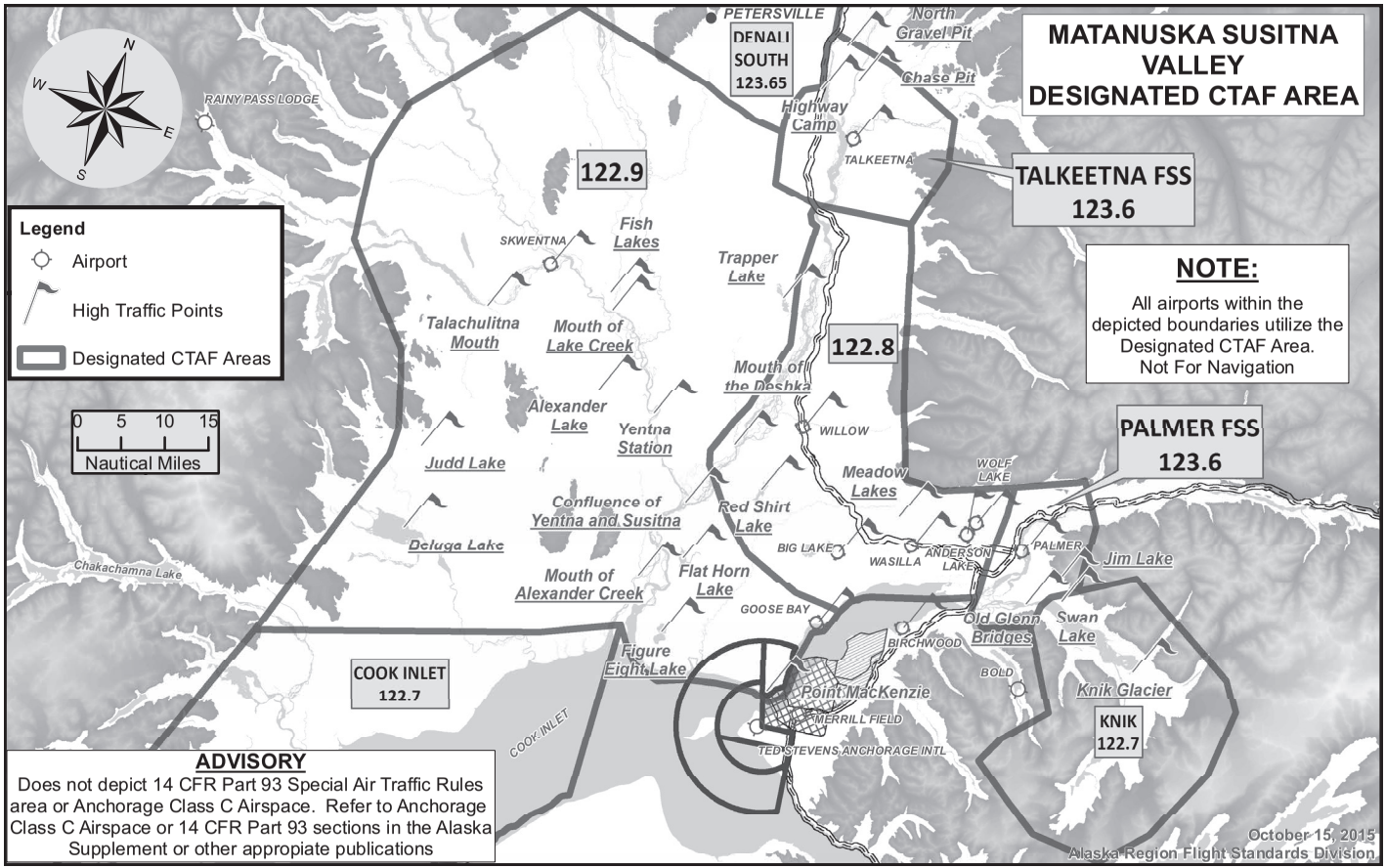
Unalaska Airport Manager
P.O. Box 920565
Dutch Harbor, AK 99692
(907) 581-1786


NEW VEHICLE TRAFFIC PATTERN
UNALASKA RUWNAY 30
November 1, 2008
Vehicles approaching the gates must heed the runway warning system. If the lights are flashing and/or the gates are lowering, prepare to stop.
Gates and lights are controlled by the approaching aircraft.
DO NOT ATTEMPT TO 'BEAT' THE GATE!
Any problems, questions, or complaints should be addressed to the Unalaska Airport Manager at (907) 581-1876.
Seaplane Ramp
Ballyhoo Rd.
East Point Rd.
Airport Beach Rd.
Seaplane Gate
STOP
STOP
STOP
30
N


Cook Inlet
CTAF
Mt. Susitna
Alexander
Beluga Lake
Mouth of Beluga River
Mount Spurr
Chakachamna Lake
CTAF
122.7
Beluga Airport
Tyonek Airport
Nikolai Cr. Airport
Moose Pt.
derricks
McArthur River
Trading Bay
Extensive Helicopter Traffic to 1500' MSL. Pilots below 5000' MSL are requested to monitor or announce intentions on CTAF 122.7 UNICOM for derricks 123.05
Trading Bay Airport
COOK INLET
derricks
Lake Clark Pass
Big River Lakes
Island Lake SPB
27
0
Kenai Airport
6
Drift River Airport
Redoubt Bay
Kalgin Is.
78
Redoubt Volcano
CTAF
122.7
approximately one mile from shore line
Clam Gulch
Tuxedni Bay
While optional, pilots can monitor or broadcast on CTAF122.7 MHz for traffic.
Effective May 29, 2014
Not to Scale - For Information Only - Not for Navigation
Alaska Flight Standards



Office of Primary Responsibility (OPR): AJR - Balaena
Contact Information: (907) 283-1222
Original: January 2024


MATANUSKA SUSITNA VALLEY DESIGNATED CTAF AREA
PETERSVILLE
DENALI SOUTH 123.65
North Gravel Pit
Chase Pit
Highway Camp
TALKEETNA
TALKEETNA FSS 123.6
RAINY PASS LODGE
122.9
SKWENTNA
Fish Lakes
Trapper Lake
Talachulitna Mouth
Mouth of Lake Creek
122.8
Mouth of the Deshka
Alexander Lake
Yentna Station
WILLOW
PALMER FSS 123.6
Judd Lake
Meadow Lakes
WOLF LAKE
Confluence of Yentna and Susitna
Red Shirt Lake
Deluga Lake
BIG LAKE
WASILLA
ANDERSON
PALMER
Jim Lake
Chakachamna Lake
Mouth of Alexander Creek
Flat Horn Lake
GOOSE BAY
Old Glenn Bridges
Swan Lake
BIRCHWOOD
Figure Eight Lake
COOK INLET 122.7
BOLD
Knik Glacier
Point MacKenzie
MERRILL FIELD
KNIK 122.7
COOK INLET
TED STEVENS ANCHORAGE INTL
Legend
Airport
High Traffic Points
Designated CTAF Areas
0 5 10 15
Nautical Miles
NOTE:
All airports within the depicted boundaries utilize the Designated CTAF Area.
Not For Navigation
ADVISORY
Does not depict 14 CFR Part 93 Special Air Traffic Rules area or Anchorage Class C Airspace. Refer to Anchorage Class C Airspace or 14 CFR Part 93 sections in the Alaska Supplement or other appropiate publications
October 15, 2015
Alaska Region Flight Standards Division

Standard North Slope Oilfield Aviation Operations

1. Monitor the appropriate Common Traffic Advisory Frequency at or below 2,000 feet for receiving and transmitting concise traffic advisories. Operational messages should be kept to a bare minimum or else transmitted on another frequency. CTAF for Kuparuk-Alpine- Nuiqsut is 122.8; 122.85 for Prudhoe-West Dock-North Star Corridor; 122.9 for Badami and Kavik.

2. Make position reports within five (5) miles of Kuparuk, Alpine, North Star, and West Dock Helipad.

3. Position reports should include azimuth, distance from an identified location, altitude, and direction of flight.

4. All aircraft, including helicopters, will operate with landing lights on, when at or below 2,000 feet.

5. Helicopters arriving and departing Kuparuk and Alpine will avoid the approach ends of runways by transiting the airport area via an arrival or departure fix as depicted on the North Slope graphics.

6. Fixed-wing aircraft flying the Kuparuk -Alpine corridor will fly offset one and a half (1½) miles to the right of center line until five (5) miles from destination then enter the pattern.

7. Helicopters flying the Kuparuk-Alpine corridor will fly one half mile (1½) offset right of center line until five miles from destination then proceed to helicopter arrival gate and then to the pad so as to avoid the final approach extended centerline of the runway.

8. On departure from Kuparuk or Alpine, announce route and altitude.

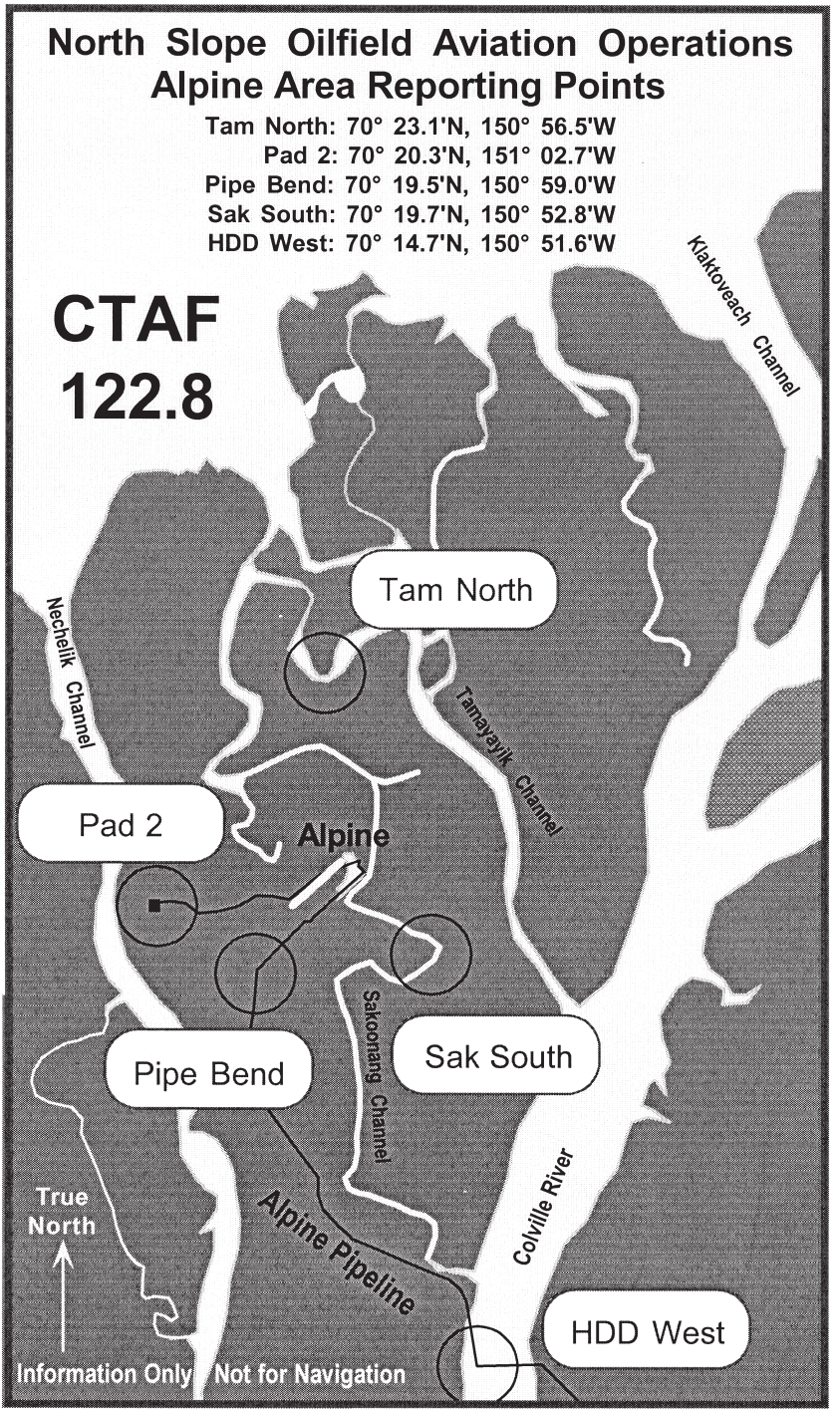
9. Aircraft with transponders will operate with them turned on.

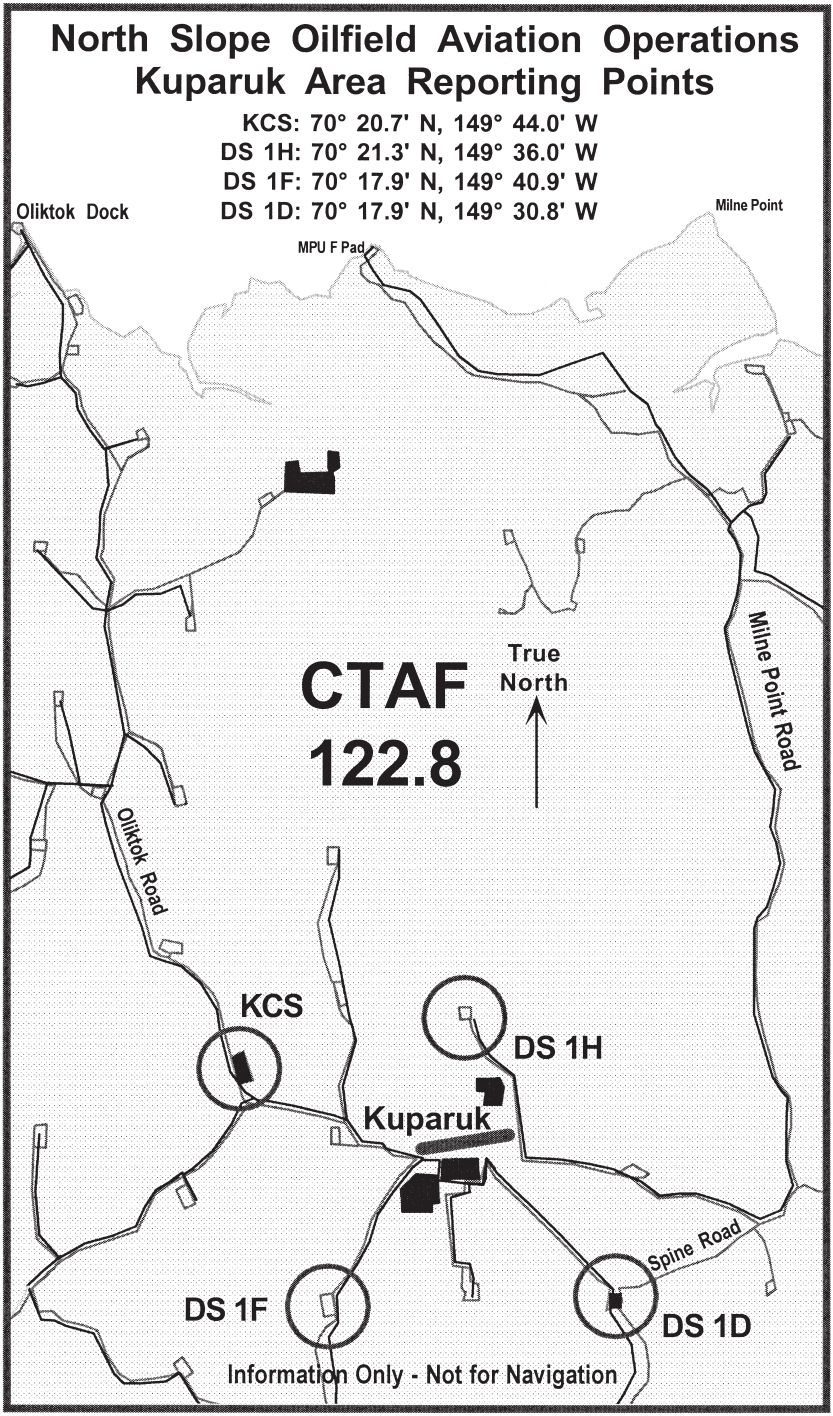
10. Avoid overflight of the Helmrick homestead (N 70° 25' 56" W 150° 23' 19" NAD 83).

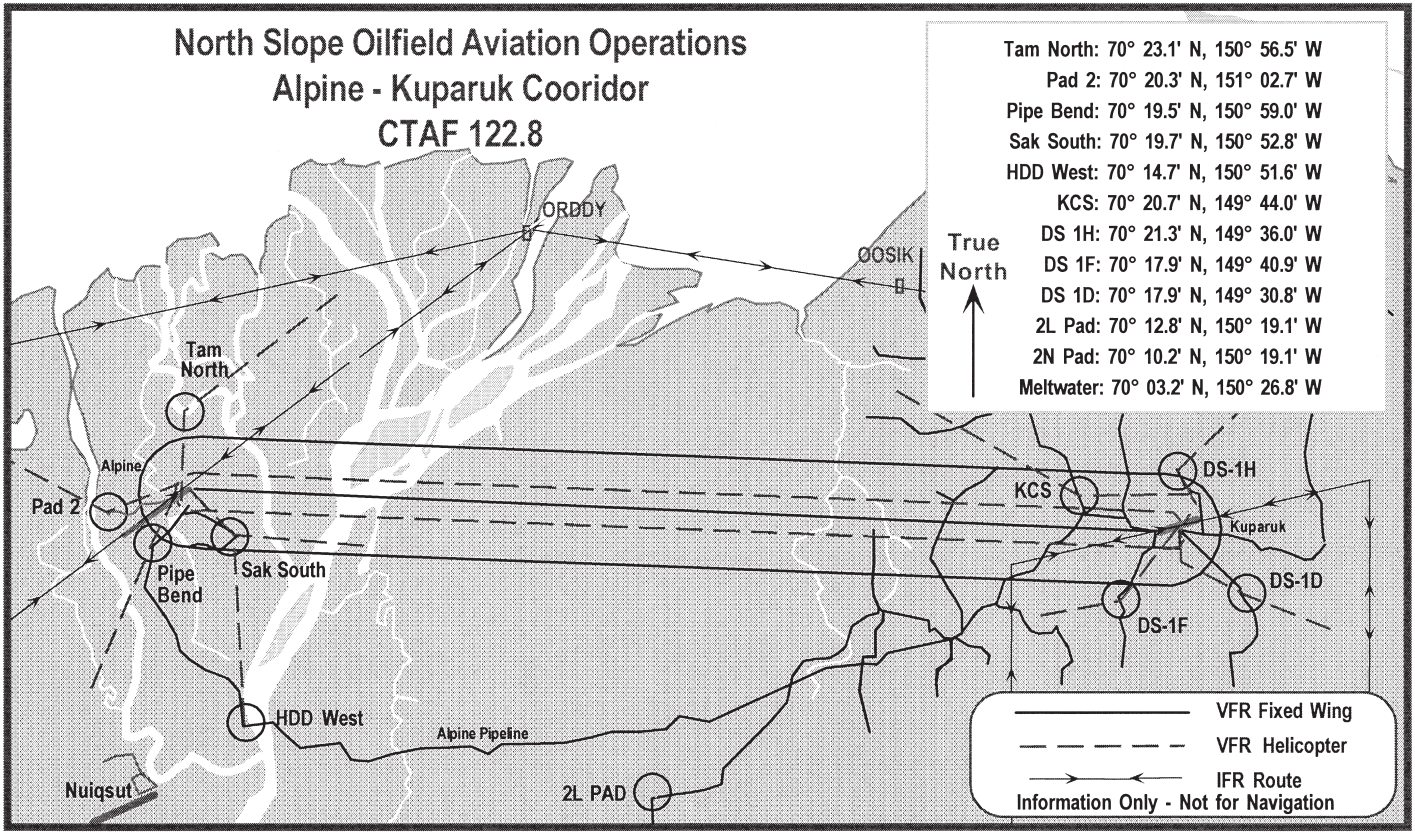
11. Contracted air service companies will insure that all crew members dispatched to the North Slope are briefed on these procedures.

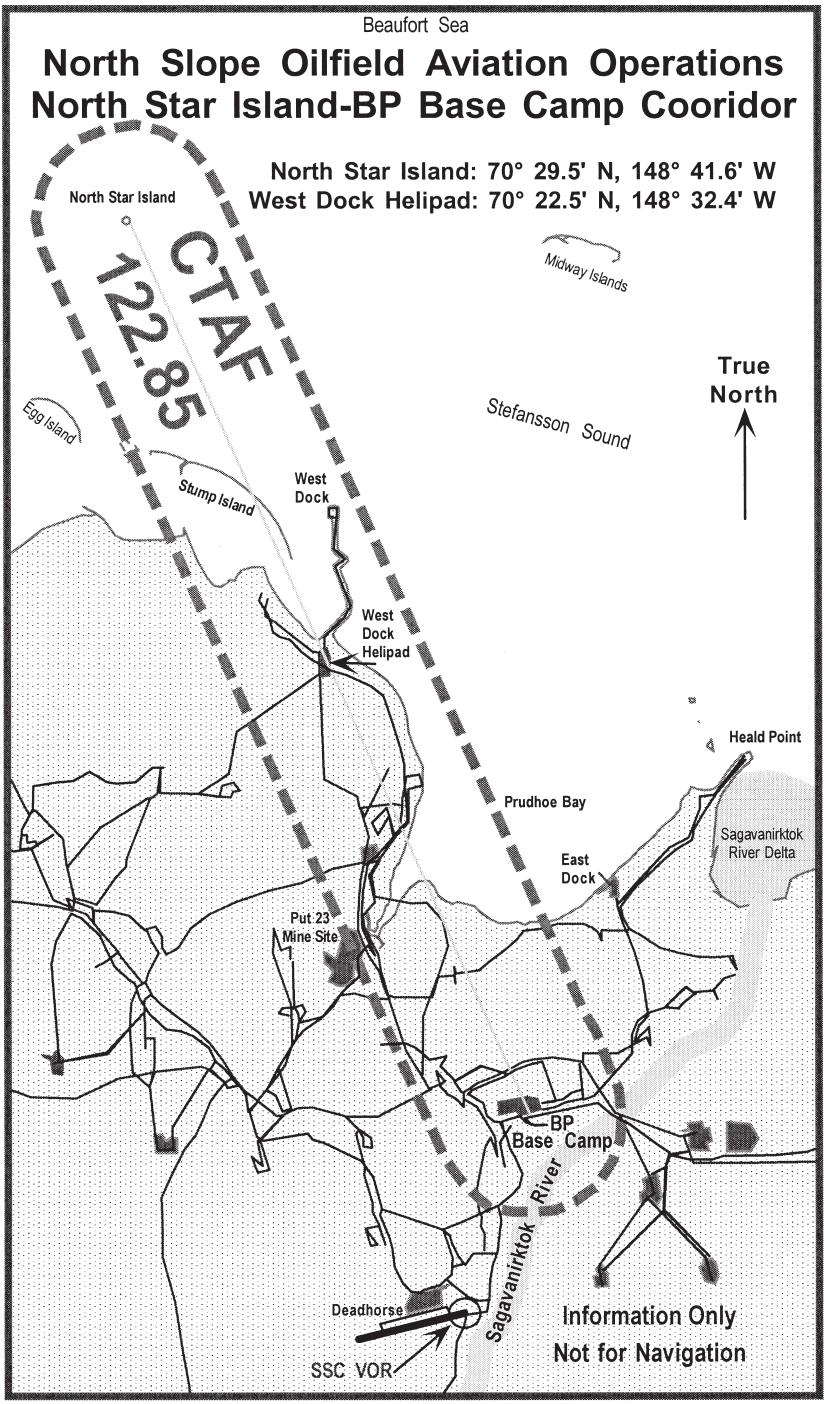
12. Other operators in the area will be informed of our procedures and encouraged to participate for our mutual safety.

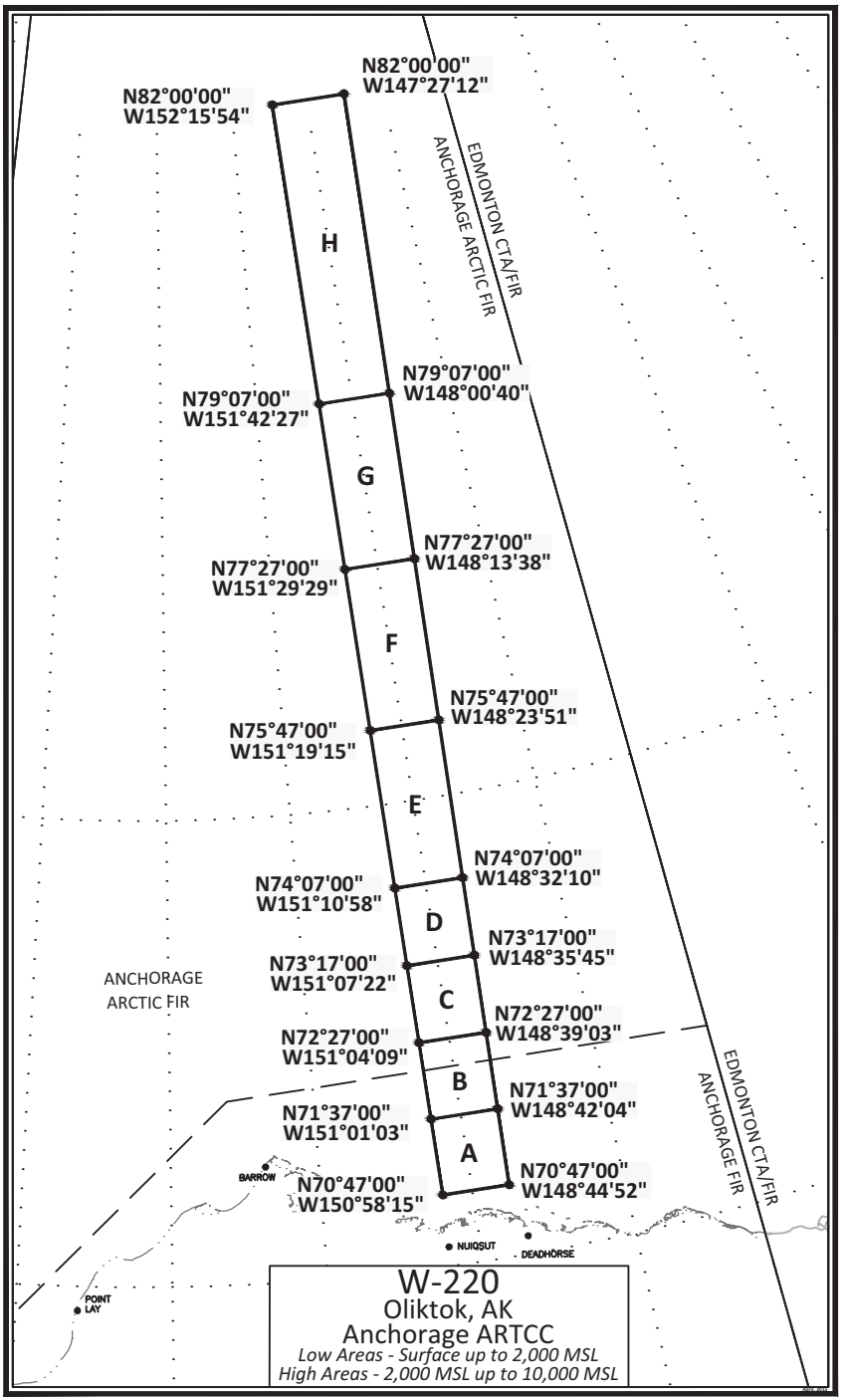
Alaskan Region FAA website at http://www.alaska.faa.gov/at

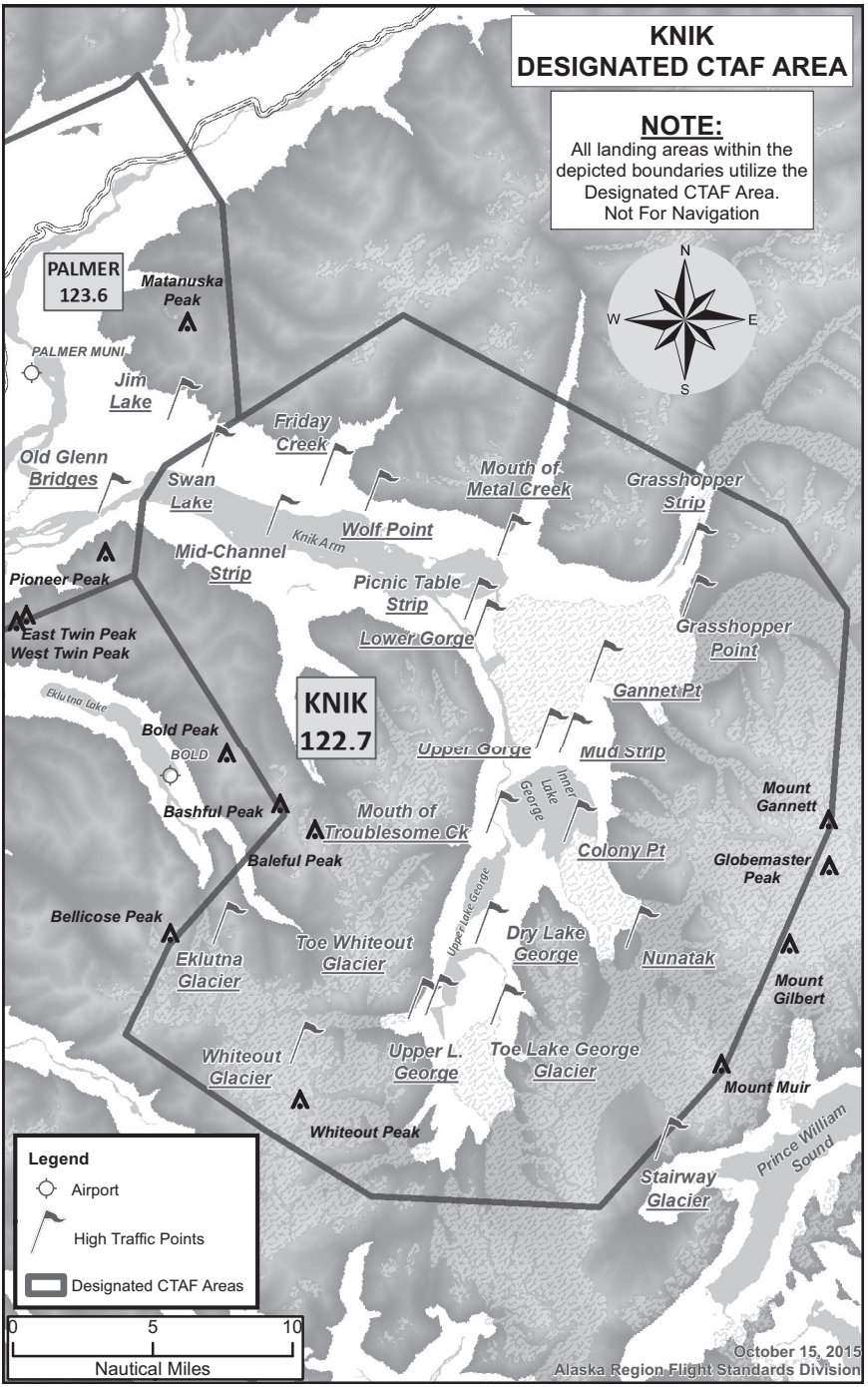

North Slope Oilfield Aviation Operations
Alpine Area Reporting Points
Tam North: 70° 23.1'N, 150° 56.5'W
Pad 2: 70° 20.3'N, 151° 02.7'W
Pipe Bend: 70° 19.5'N, 150° 59.0'W
Sak South: 70° 19.7'N, 150° 52.8'W
HDD West: 70° 14.7'N, 150° 51.6'W
CTAF
122.8
Kiaktoveach Channel
Tam North
Nechelik Channel
Tamayayik Channel
Pad 2
Alpine
Sakoonang Channel
Pipe Bend
Sak South
Colville River
True North
Alpine Pipeline
HDD West
Information Only Not for Navigation

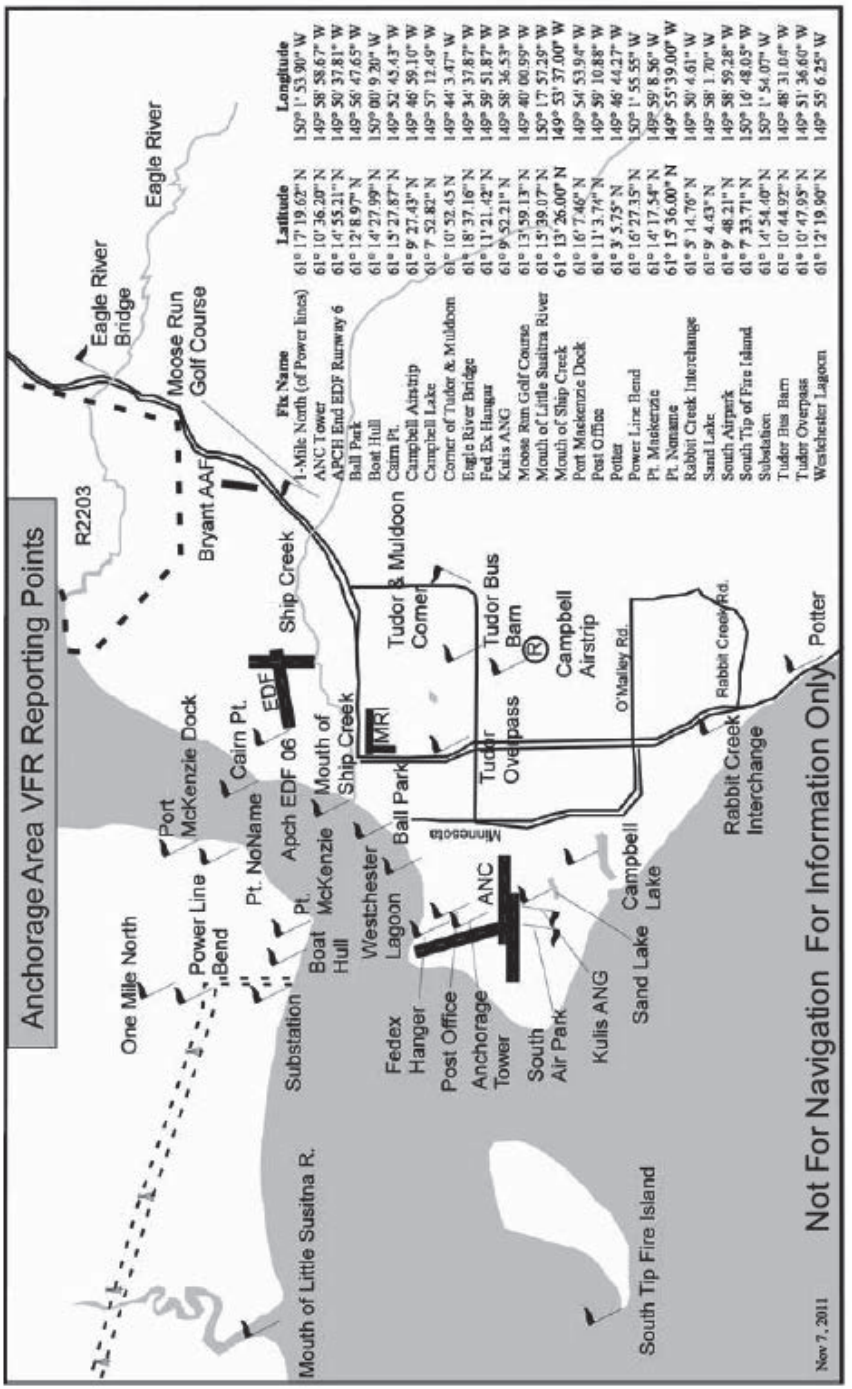

North Slope Oilfield Aviation Operations
Kuparuk Area Reporting Points
KCS: 70° 20.7' N, 149° 44.0' W
DS 1H: 70° 21.3' N, 149° 36.0' W
DS 1F: 70° 17.9' N, 149° 40.9' W
DS 1D: 70° 17.9' N, 149° 30.8' W
Oliktok Dock
MPU F Pad
Milne Point
CTAF
122.8
True
North
Milne Point Road
Oliktok Road
KCS
DS 1H
Kuparuk
Spine Road
DS 1F
DS 1D
Information Only - Not for Navigation

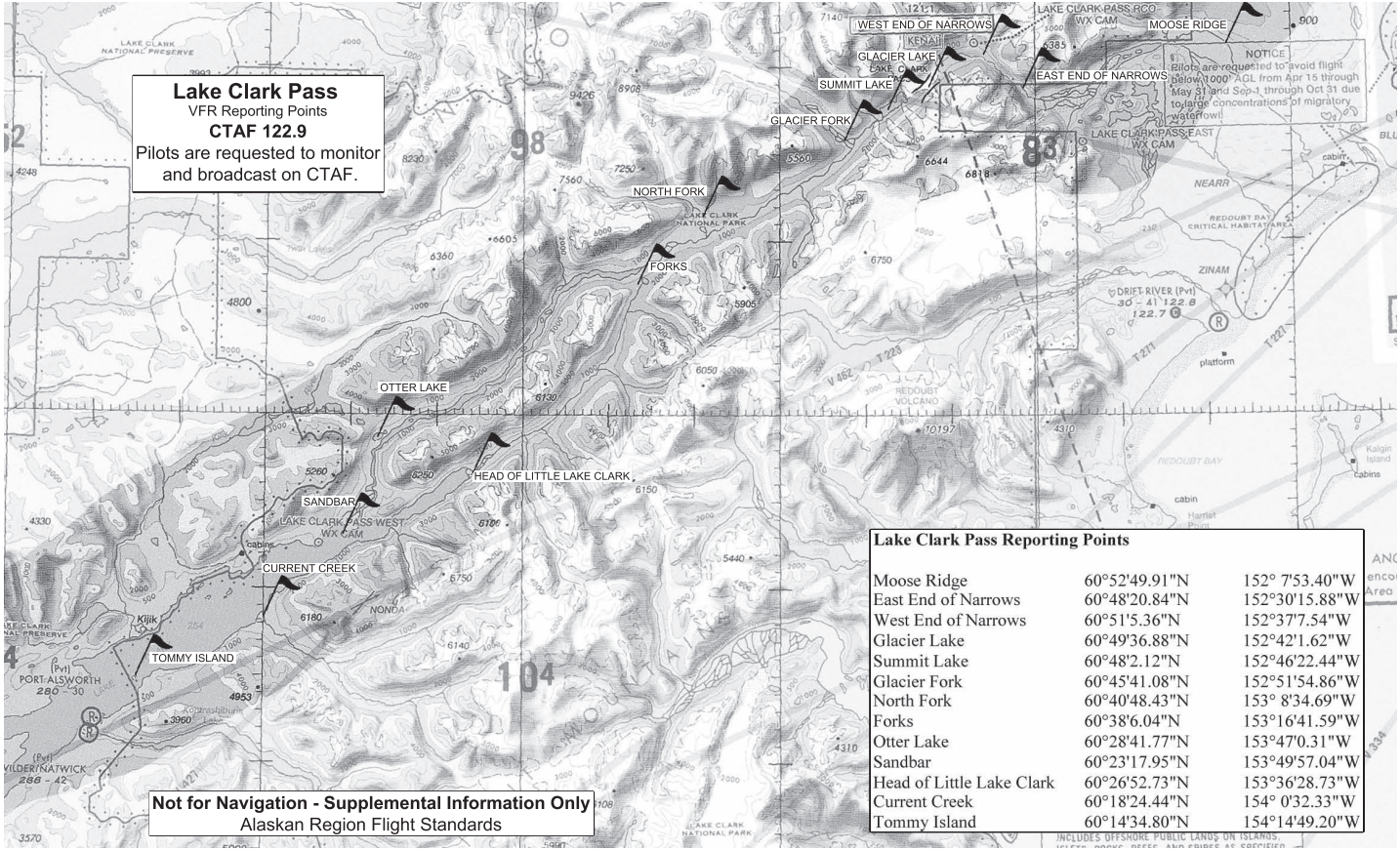

North Slope Oilfield Aviation Operations
Alpine - Kuparuk Cooridor
CTAF 122.8
Tam North: 70° 23.1' N, 150° 56.5' W
Pad 2: 70° 20.3' N, 151° 02.7' W
Pipe Bend: 70° 19.5' N, 150° 59.0' W
Sak South: 70° 19.7' N, 150° 52.8' W
HDD West: 70° 14.7' N, 150° 51.6' W
KCS: 70° 20.7' N, 149° 44.0' W
DS 1H: 70° 21.3' N, 149° 36.0' W
DS 1F: 70° 17.9' N, 149° 40.9' W
DS 1D: 70° 17.9' N, 149° 30.8' W
2L Pad: 70° 12.8' N, 150° 19.1' W
2N Pad: 70° 10.2' N, 150° 19.1' W
Meltwater: 70° 03.2' N, 150° 26.8' W
True North
ORDDY
OOSIK
Tam North
Alpine
Pad 2
Pipe Bend
Sak South
HDD West
Alpine Pipeline
Nuiqsut
2L PAD
KCS
DS-1H
Kuparuk
DS-1D
DS-1F
VFR Fixed Wing
VFR Helicopter
IFR Route
Information Only - Not for Navigation


Beaufort Sea
North Slope Oilfield Aviation Operations
North Star Island-BP Base Camp Cooridor
North Star Island: 70° 29.5' N, 148° 41.6' W
West Dock Helipad: 70° 22.5' N, 148° 32.4' W
North Star Island
CTAF
122.85
Midway Islands
True
North
Egg Island
Stefansson Sound
Stump Island
West
Dock
West
Dock
Helipad
Heald Point
Prudhoe Bay
Sagavanirktok
River Delta
East
Dock
Put 23
Mine Site
BP
Base Camp
Sagavanirktok River
Deadhorse
SSC VOR
Information Only
Not for Navigation


N82°00'00"
W147°27'12"
N82°00'00"
W152°15'54"
EDMONTON CTA/FIR
ANCHORAGE ARCTIC FIR
H
N79°07'00"
W148°00'40"
N79°07'00"
W151°42'27"
G
N77°27'00"
W148°13'38"
N77°27'00"
W151°29'29"
F
N75°47'00"
W148°23'51"
N75°47'00"
W151°19'15"
E
N74°07'00"
W148°32'10"
N74°07'00"
W151°10'58"
D
N73°17'00"
W148°35'45"
N73°17'00"
W151°07'22"
ANCHORAGE
ARCTIC FIR
C
N72°27'00"
W148°39'03"
N72°27'00"
W151°04'09"
B
N71°37'00"
W148°42'04"
N71°37'00"
W151°01'03"
A
N70°47'00"
W148°44'52"
N70°47'00"
W150°58'15"
EDMONTON CTA/FIR
ANCHORAGE FIR
BARROW
NUIQSUT
DEADHORSE
POINT
LAY
W-220
Oliktok, AK
Anchorage ARTCC
Low Areas - Surface up to 2,000 MSL
High Areas - 2,000 MSL up to 10,000 MSL


KNIK
DESIGNATED CTAF AREA
NOTE:
All landing areas within the depicted boundaries utilize the Designated CTAF Area.
Not For Navigation
N
W
E
S
PALMER
123.6
Matanuska Peak
PALMER MUNI
Jim Lake
Friday Creek
Old Glenn Bridges
Swan Lake
Mouth of Metal Creek
Grasshopper Strip
Wolf Point
Knik Arm
Mid-Channel Strip
Pioneer Peak
Picnic Table Strip
Lower Gorge
Grasshopper Point
East Twin Peak
West Twin Peak
Eklutna Lake
KNIK
122.7
Gannet Pt
Bold Peak
BOLD
Upper Gorge
Mud Strip
Inner George Lake
Mount Gannett
Bashful Peak
Mouth of Troublesome Ck
Colony Pt
Globemaster Peak
Baleful Peak
Upper Lake George
Bellicose Peak
Toe Whiteout Glacier
Dry Lake George
Nunatak
Eklutna Glacier
Mount Gilbert
Whiteout Glacier
Upper L. George
Toe Lake George Glacier
Mount Muir
Whiteout Peak
Prince William Sound
Stairway Glacier
Legend
Airport
High Traffic Points
Designated CTAF Areas
0
5
10
Nautical Miles
October 15, 2015
Alaska Region Flight Standards Division


Anchorage Area VFR Reporting Points
Not For Navigation For Information Only
Nov 7, 2011
Mouth of Little Susitna R.
South Tip Fire Island
One Mile North
Power Line Bend
Pt. NoName
Pt. Boat Hull
Substation
Westchester Lagoon
Ball Park
Apch EDF 06
Port McKenzie Dock
Cairn Pt.
EDF
Mouth of Ship Creek
Ship Creek
MRI
Minnesota
Tudor & Muldoon Corner
Tudor Overpass
Tudor Bus Barn
Campbell Airstrip
O'Malley Rd.
Rabbit Creek Rd.
Rabbit Creek Interchange
Campbell Lake
Sand Lake
Kulis ANG
South Air Park
Anchorage Tower
ANC
Post Office
Fedex Hanger
R2203
Bryant AAF
Moose Run Golf Course
Eagle River Bridge
Eagle River
Potter
Pt Name
Latitude
Longitude
1-Mile North (of Power lines) 61° 17' 19.62" N 150° 1' 53.90" W
ANC Tower 61° 10' 36.20" N 149° 58' 58.67" W
APCH End EDF Runway 6 61° 14' 55.21" N 149° 50' 37.81" W
Ball Park 61° 12' 8.97" N 149° 56' 47.65" W
Boat Hull 61° 14' 27.99" N 150° 00' 9.20" W
Cairn Pt. 61° 15' 27.87" N 149° 52' 45.43" W
Campbell Airstrip 61° 9' 27.43" N 149° 46' 59.10" W
Campbell Lake 61° 7' 52.82" N 149° 57' 12.49" W
Corner of Tudor & Muldoon 61° 10' 52.45 N 149° 44' 3.47" W
Eagle River Bridge 61° 18' 37.16" N 149° 34' 37.87" W
Fed Ex Hangar 61° 11' 21.42" N 149° 59' 51.87" W
Kulis ANG 61° 9' 52.21" N 149° 58' 36.53" W
Moose Run Golf Course 61° 13' 59.13" N 149° 40' 00.99" W
Mouth of Little Susitna River 150° 17' 57.29" W
Mouth of Ship Creek 61° 13' 26.00" N 149° 53' 37.00" W
Port Mackenzie Dock 61° 16' 7.46" N 149° 54' 53.94" W
Post Office 61° 11' 3.74" N 149° 59' 10.88" W
Potter 61° 3' 5.75" N 149° 46' 44.27" W
Power Line Bend 61° 16' 27.35" N 150° 1' 55.55" W
Pt. Mackenzie 61° 14' 17.54" N 149° 59' 8.56" W
Pt. NoName 61° 15' 36.00" N 149° 55' 39.00" W
Rabbit Creek Interchange 61° 9' 14.76" N 149° 50' 4.61" W
Sand Lake 61° 9' 4.43" N 149° 58' 1.70" W
South Airpark 61° 9' 48.21" N 149° 58' 59.28" W
South Tip of Fire Island 61° 7' 33.71" N 150° 16' 48.05" W
Substation 61° 14' 54.40" N 150° 1' 54.07" W
Tudor Bus Barn 61° 10' 44.92" N 149° 48' 31.04" W
Tudor Overpass 61° 10' 47.95" N 149° 51' 36.60" W
Westchester Lagoon 61° 12' 19.90" N 149° 55' 6.25" W



Lake Clark Pass Reporting Points

Moose Ridge	60°52'49.91"N	152° 7'53.40"W
East End of Narrows	60°48'20.84"N	152°30'15.88"W
West End of Narrows	60°51'5.36"N	152°37'7.54"W
Glacier Lake	60°49'36.88"N	152°42'1.62"W
Summit Lake	60°48'2.12"N	152°46'22.44"W
Glacier Fork	60°45'41.08"N	152°51'54.86"W
North Fork	60°40'48.43"N	153° 8'34.69"W
Forks	60°38'6.04"N	153°16'41.59"W
Otter Lake	60°28'41.77"N	153°47'0.31"W
Sandbar	60°23'17.95"N	153°49'57.04"W
Head of Little Lake Clark	60°26'52.73"N	153°36'28.73"W
Current Creek	60°18'24.44"N	154° 0'32.33"W
Tommy Island	60°14'34.80"N	154°14'49.20"W

REGULATORY NOTICES

ANCHORAGE, ALASKA, TERMINAL AREA RULES (see 14 CFR Part 93)

I. General rule: All segments.

(a) Each person operating an aircraft to within the Anchorage, Alaska, Terminal Area shall operate that aircraft according to the rules set forth in this section and the International, Lake Hood, Merrill, Elmendorf, Bryant, or Seward segments unless otherwise authorized or required by ATC.

(b) Each person operating an airplane within the Anchorage, Alaska Terminal Area shall conform to the flow of traffic depicted on the appropriate aeronautical charts.

(c) Each person operating a helicopter shall operate it in a manner so as to avoid the flow of airplanes.

(d) Except as provided in Elmendorf segment (d) and (e), Bryant segment (b), and Seward segment (a), (b) and (c), each person operating an aircraft in the Anchorage, Alaska, Terminal Area shall operate that aircraft only within the designated segment containing the arrival or departure airport.

(e) Except as provided in Merrill segment (d) and Bryant segment (b), each person operating an aircraft in the Anchorage, Alaska, Terminal Area shall maintain two-way radio communications with the ATCT serving the segment containing the arrival or departure airport.

II. General rules: International segment.

(a) No person may operate an aircraft at an altitude between 1,200 feet MSL and 2,000 feet MSL in that portion of this segment lying north of the midchannel of Knik Arm.

(b) Each person operating an airplane at a speed of more than 105 knots within this segment (except that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 1,600 feet MSL until maneuvering for a safe landing requires further descent.

(c) Each person operating an airplane at a speed of 105 knots or less within this segment (except that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 900 feet MSL until maneuvering for a safe landing requires further descent.

III. General rules; Lake Hood segment.

(a) No person may operate an aircraft at an altitude between 1,200 feet MSL and 2,000 feet MSL in that portion of this segment lying north of the midchannel of Knik Arm.

(b) Each person operating an airplane within this segment (except that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 600 feet MSL until maneuvering for a safe landing requires further descent.

IV. General rules: Merrill segment.

(a) No person may operate an aircraft at an altitude between 600 feet MSL and 2,000 feet MSL in that portion of this segment lying north of the midchannel of Knik Arm.

(b) Each person operating an airplane at a speed of more than 105 knots within this segment (except for that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at least 1,200 feet MSL until maneuvering for a safe landing requires further descent.

(c) Each person operating an airplane at a speed of 105 knots or less within this segment (except for that part described in paragraph (a) of this section) shall operate that airplane at an altitude of at last 900 feet MSL until maneuvering for a safe landing requires further descent.

(d) Whenever the Merrill ATCT is not operating, each person operating an aircraft either in that portion of the Merrill segment north of midchannel of Knik Arm, or in the Seward Highway segment at or below 1200 feet MSL, shall contact Anchorage Approach Control for wake turbulence and other advisories. Aircraft operating within the remainder of the segment should self-announce intentions on the Merrill Field CTAF.

V. General rules: Elmendorf segment.

(a) Each person operating a turbine-powered aircraft within this segment shall operate that aircraft at an altitude of at least 1,700 feet MSL until maneuvering for a safe landing requires further descent.

(b) Each person operating an airplane (other than turbine-powered aircraft) at a speed of more than 105 knots within this segment shall operate that airplane at an altitude of at least 1,200 feet MSL until maneuvering for a safe landing requires further descent.

(c) Each person operating an airplane (other than turbine-powered aircraft) at a speed of 105 knots or less within the segment shall operate that airplane at an altitude of at least 800 feet MSL until maneuvering for a safe landing requires further descent.

(d) A person landing or departing from Elmendorf AFB; may operate that aircraft at an altitude between 1,500 feet MSL and 1,700 feet MSL within that portion of the International and Lake Hood segments lying north of the midchannel of Knik Arm.

(e) A person landing or departing from Elmendorf AFB, may" operate that aircraft at an altitude between 900 feet MSL and 1,700 feet MSL within that portion of the Merrill segment lying north of the midchannel of Knik Arm.

(f) A person operating in VFR conditions, at or below 600 feet MSL, north of a line beginning at the intersection of Farrell Road and the long. 149º43´08"W.; thence west along Farrell Road to the east end of Sixmile Lake; thence west along a line bearing on the middle of Lake Lorraine to the northwest bank of Knik Arm; is not required to establish two-way radio communications with ATC.

VI. General rules: Bryant segment.

(a) Each person operating an airplane to or from the Bryant Airport shall conform to the flow of traffic shown on the appropriate aeronautical charts, and while in the traffic pattern, shall operate that airplane at an altitude of at least 1,000 feet MSL until maneuvering for a safe landing requires further descent.

(b) Each person operating an aircraft within the Bryant segment should self-announce intentions on the Bryant Airport CTAF.

VII. General rules: Seward Highway segment.

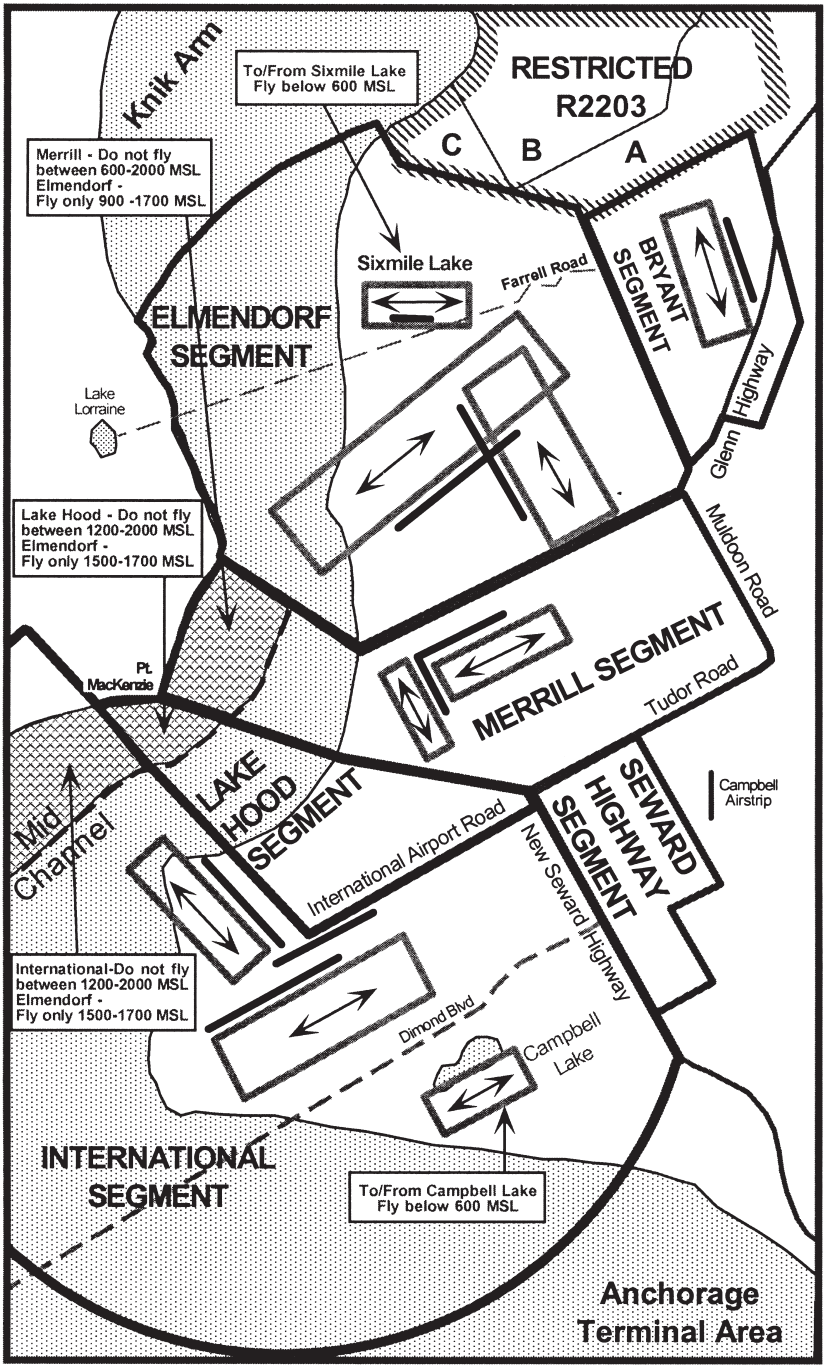
(a) Each person operating an airplane in the Seward Highway segment shall operate that airplane at an altitude of at least 1,000 feet MSL unless maneuvering for a safe landing requires further descent.

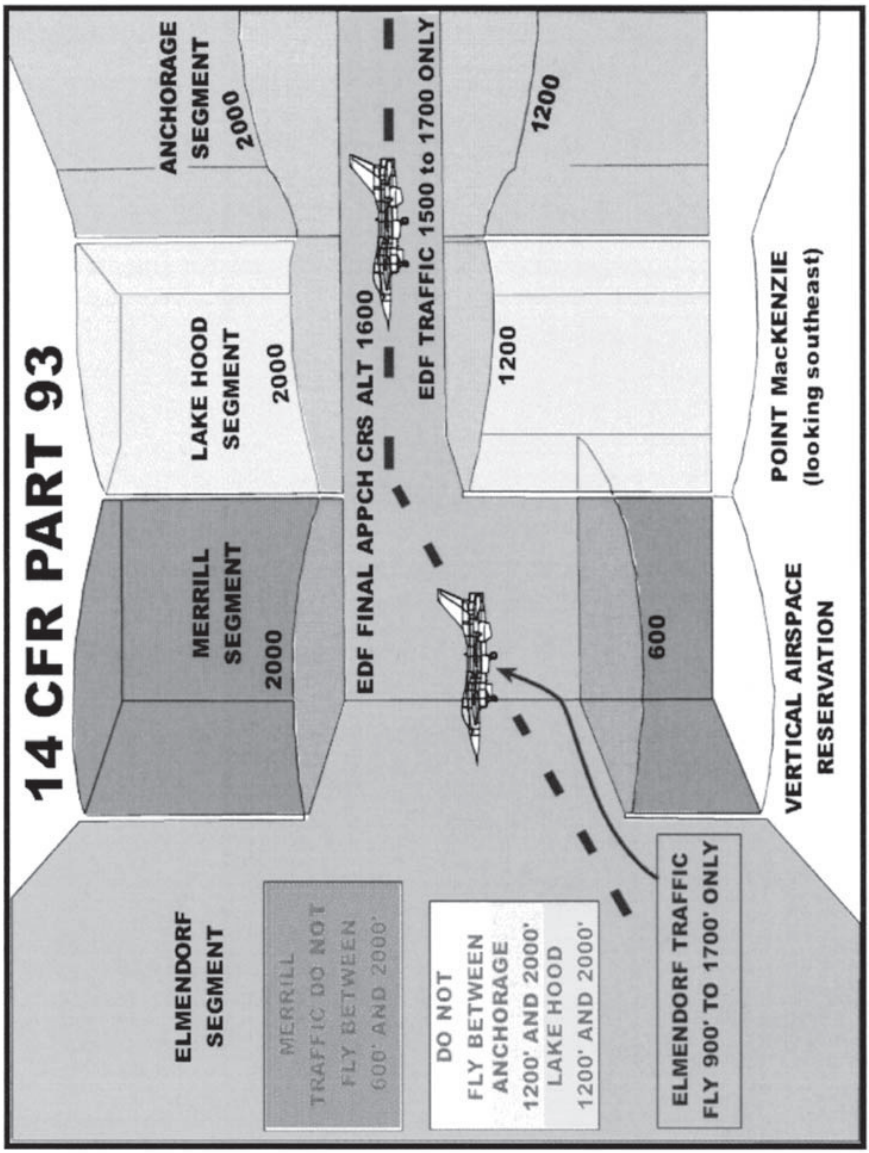
(b) Each person operating an aircraft at or below 1,200 feet MSL that will transition to or from the Lake Hood or Merrill segment shall contact the appropriate ATCT prior to entering the Seward Highway segment. All other persons operating an airplane at or below 1,200 feet MSL in this segment shall contact Anchorage Approach Control.

(c) At all times, each person operating an aircraft above 1,200 MSL shall contact Anchorage Approach Control prior to entering the Seward Highway segment.

VIII. Special requirements, Lake Campbell and Sixmile Lake Airports.

(a) Each person operating an aircraft to or from Lake Campbell or Sixmile Lake Airport shall conform to the flow of traffic for the Lake operations that are depicted on the appropriate aeronautical charts.


Knik Arm
To/From Sixmile Lake
Fly below 600 MSL
RESTRICTED
R2203
C
B
A
Merrill - Do not fly
between 600-2000 MSL
Elmendorf -
Fly only 900 -1700 MSL
Sixmile Lake
Farrell Road
BRYANT
SEGMENT
ELMENDORF
SEGMENT
Lake
Lorraine
Glenn Highway
Muldoon Road
Lake Hood - Do not fly
between 1200-2000 MSL
Elmendorf -
Fly only 1500-1700 MSL
Pt.
MacKenzie
MERRILL SEGMENT
Tudor Road
Campbell
Airstrip
LAKE
HOOD
SEGMENT
Mid
Channel
International Airport Road
SEWARD
HIGHWAY
SEGMENT
New Seward Highway
International-Do not fly
between 1200-2000 MSL
Elmendorf -
Fly only 1500-1700 MSL
Dimond Blvd
Campbell
Lake
INTERNATIONAL
SEGMENT
To/From Campbell Lake
Fly below 600 MSL
Anchorage
Terminal Area



Office of Primary Responsibility (OPR): Air Traffic Organization, Mission Support Services, Policy, Airspace Rules and Regulations
Contact Information: (202)267-8783
Amended: August 2023

KETCHIKAN INTERNATIONAL AIRPORT
SPECIAL AIR TRAFFIC RULES AND AIRPORT TRAFFIC PATTERNS (14 CFR Part 93)

Airspace

Special air traffic rules and communication requirements are in effect for persons operating aircraft under Visual Flight Rules (VFR), to, from, or in the vicinity of the Ketchikan International Airport or Ketchikan Harbor. These procedures are in effect below 3,000 feet MSL with the perimeter defined as the Ketchikan Class E surface area regardless of whether the Class E surface area is in effect.

Communications

When the Ketchikan Flight Service Station (FSS) is in operation, no person may operate an aircraft within the airspace specified above, or taxi onto the runway at Ketchikan International Airport, unless that person has established two-way radio communications with the Ketchikan FSS for the purpose of receiving traffic advisories and continues to monitor the advisory frequency at all times while operating within the specified airspace.

When the Ketchikan FSS is not in operation, each pilot must continuously monitor and communicate, as appropriate, on the designated common traffic advisory frequency (CTAF) as follows:

For inbound flights. Announce position and intentions when no less than 10 miles from Ketchikan International Airport, and monitor the designated frequency until clear of the movement area on the airport or Ketchikan Harbor.

For departing flights. Announce position and intentions prior to taxiing onto the active runway on the airport or onto the movement area of Ketchikan Harbor and monitor the designated frequency until outside the airspace described above, and announce position and intentions upon departing that airspace.

If two-way radio communications failure occurs in flight, a person may operate the aircraft to a landing.

Aircraft Operation

When a pilot receives an advisory from the Ketchikan FSS that an aircraft is on final approach to the Ketchikan International Airport, that pilot must remain clear of the runway until the approaching aircraft has landed and has cleared the runway. Unless otherwise authorized by ATC, each person operating a large airplane or a turbine engine powered airplane shall—(1) When approaching to land at the Ketchikan International Airport, maintain an altitude of at least 900 feet MSL until within three miles of the airport; and (2) After takeoff from the International Airport, maintain runway heading until reaching an altitude of 900 feet MSL.

Recommended VFR Arrival and Departure Procedures and Traffic Patterns

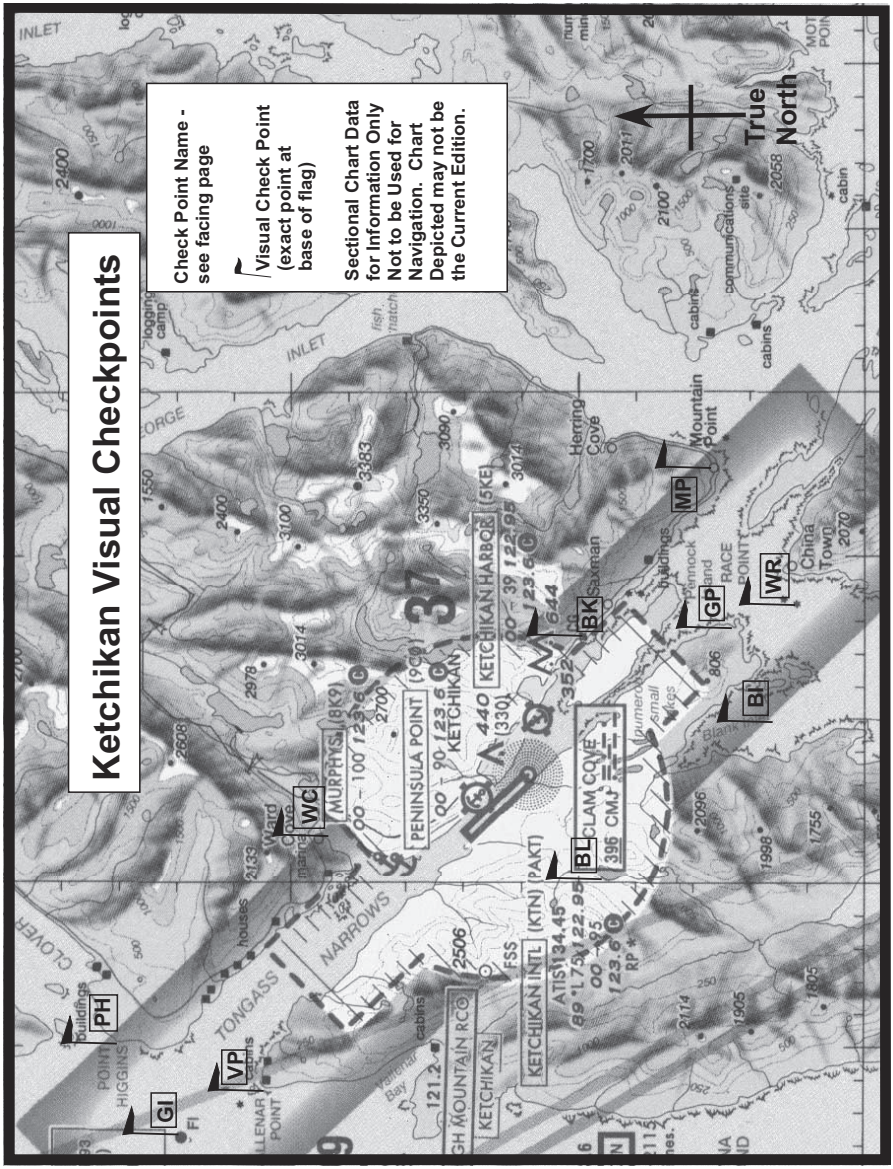
Aircraft normally arrive and depart the Ketchikan Class E airspace via the Tongass Narrows. This results in aircraft passing very close in an area with very little maneuvering room. In response to the higher-than-normal risks and to ensure an acceptable margin of aviation safety, special VFR arrival and departure procedures/patterns for floatplanes, helicopters, and single-engine wheeled aircraft are in use for all VFR operations in the Ketchikan and Tongass narrows area. Copies of these procedures and patterns can be obtained from: Ketchikan FSS, 1800 Airport Terminal Building, Ketchikan, AK 99901; Juneau FSS, 9230 Cessna Drive, Juneau, AK 99801, or Sitka FSS, 800 Airport Road, Sitka, AK 99835.

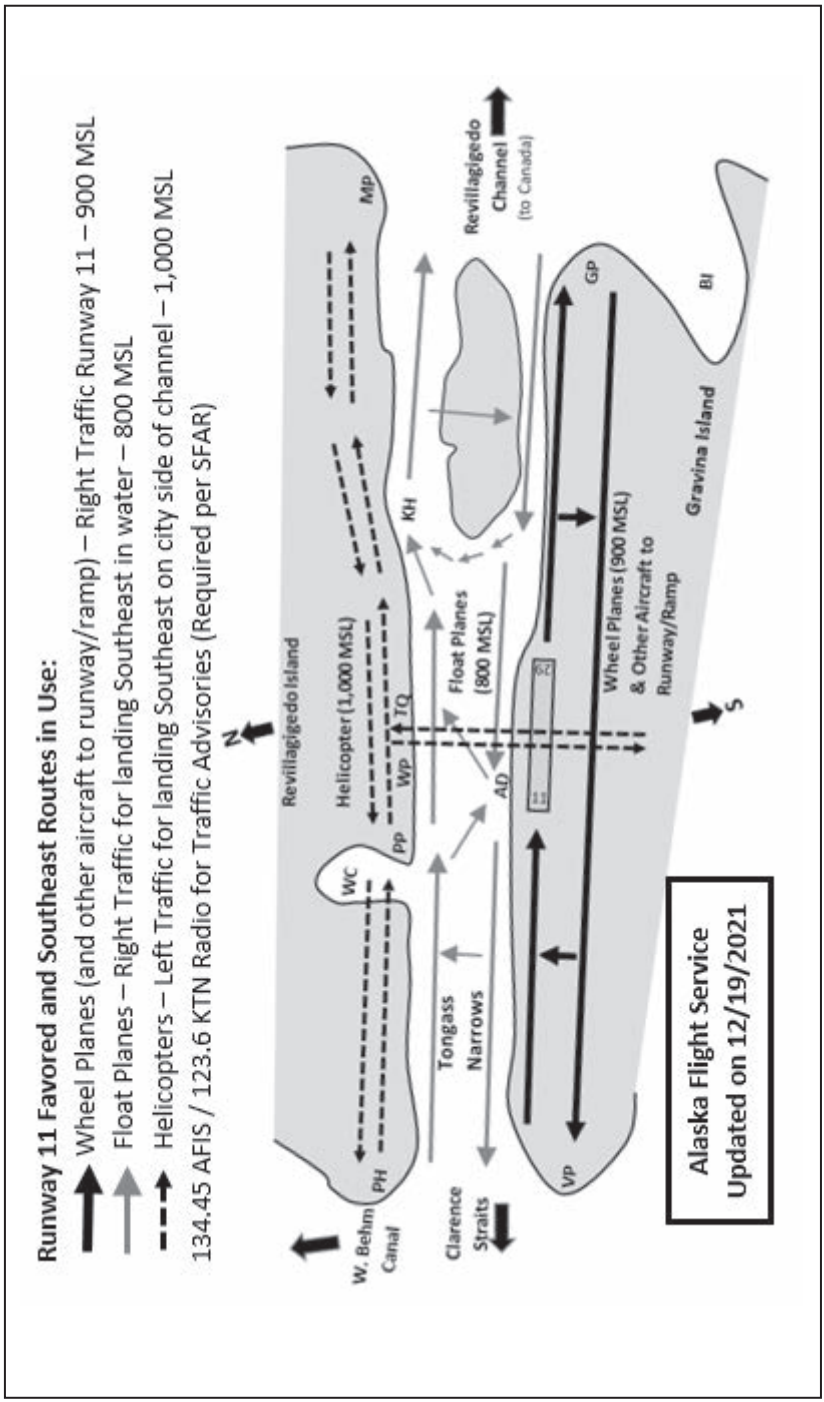
The recommended pattern in use at the Ketchikan Harbor and Airport will be broadcast on the Ketchikan AFIS, 134.45 MHz. If the AFIS is out of service, Ketchikan FSS will provide recommended pattern information on 123.6 MHz.

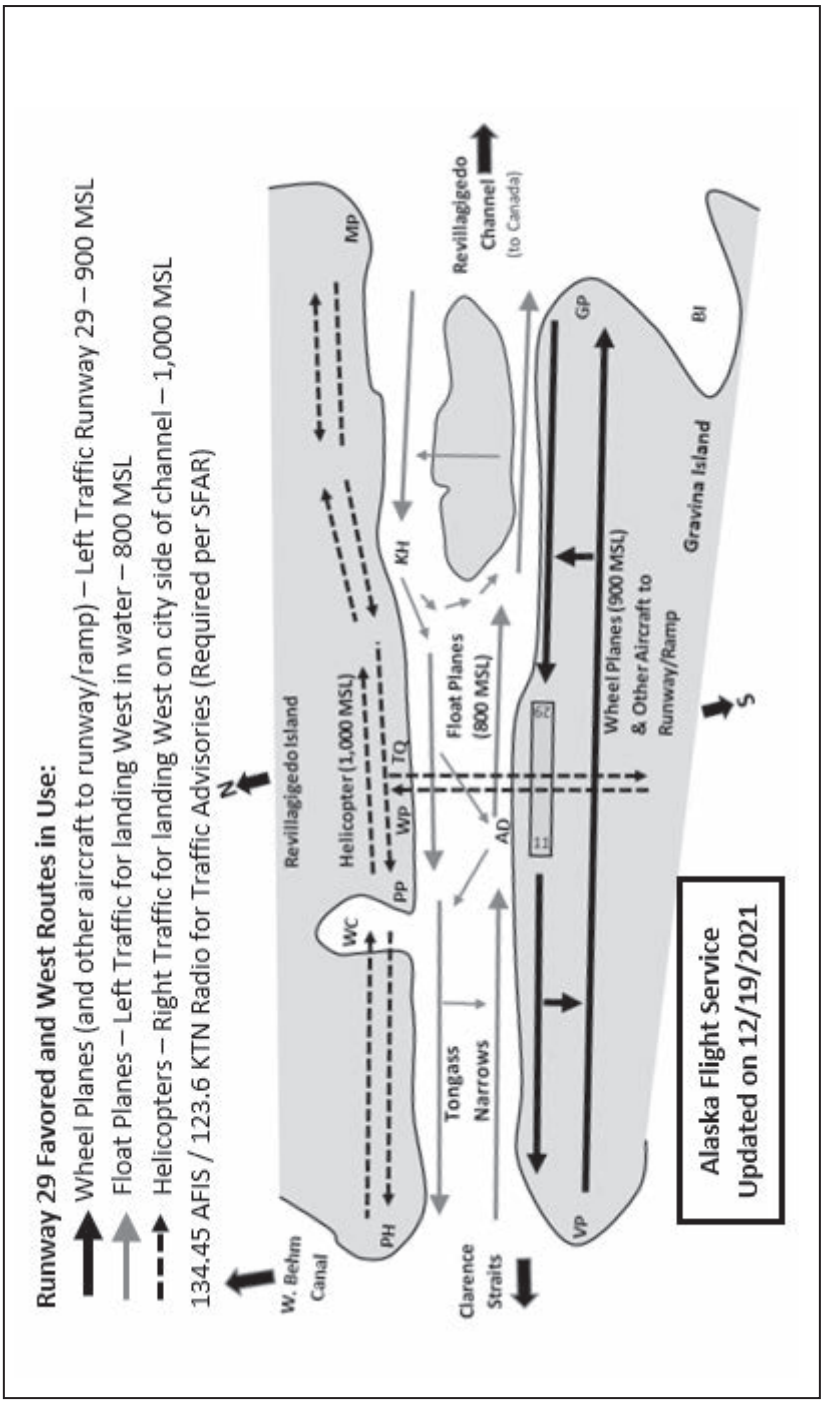
The Ketchikan Visual Checkpoint Table below is in NAD 83 (formatted in degrees, minutes, seconds) and is to be used with the picture on the next page. Alaskan Region FAA Internet Website located at: http://www.alaska.faa.gov/at

Code	Checkpoint	NAD 83	Code	Checkpoint	NAD 83	
BI	Blank Inlet	N 55°16´45”W 131°40´02”	MP	Mountain Point	N 55°17´33”W	131°32´23”
BK	Base KTN USCG	N 55°19´54”W 131°37´32”	PH	Point Higgins	N 55°27´26”W	131°50´02”
BL	Bostwick Lake	N 55°19´30”W 131°44´40”	VP	Vallenar Point	N 55°25´34”W	131°51´06”
GI	Guard Island	N 55°26´46”W 131°52´54”	WC	Ward Cove	N 55°23´45”W	131°44´21”
GP	Gravina Point	N 55°17´10”W 131°37´06”	WR	Walden Rocks	N 55°16´13”W	131°36´32”

Office of Primary Responsibility (OPR): Air Traffic Organization, Mission Support Services, Policy, Airspace Rules and Regulations
Contact Information: (202)267-8783
Amended: August 2023


Ketchikan Visual Checkpoints
Check Point Name - see facing page
Visual Check Point (exact point at base of flag)
Sectional Chart Data for Information Only Not to be Used for Navigation. Chart Depicted may not be the Current Edition.
True North
GI
PH
VP
WC
BL
BK
GP
MP
WR
BI
KETCHIKAN INTL (KTN) (PAKT)
KETCHIKAN HARBOR (5KE)
PENINSULA POINT
CLAM COVE
MURPHYS (8K9)
TONGASS NARROWS
Mountain Point
RACE POINT
Herring Cove
Ward Cove
Saxman
KETCHIKAN
INLET


Runway 11 Favored and Southeast Routes in Use:
Wheel Planes (and other aircraft to runway/ramp) – Right Traffic Runway 11 – 900 MSL
Float Planes – Right Traffic for landing Southeast in water – 800 MSL
Helicopters – Left Traffic for landing Southeast on city side of channel – 1,000 MSL
134.45 AFIS / 123.6 KTN Radio for Traffic Advisories (Required per SFAR)
N
S
Revillagigedo Island
Helicopter (1,000 MSL)
Float Planes (800 MSL)
Wheel Planes (900 MSL) & Other Aircraft to Runway/Ramp
Tongass Narrows
Clarence Straits
W. Behm Canal
Revillagigedo Channel
(to Canada)
Gravina Island
WC
PH
PP
WP
TQ
AD
KH
MP
GP
VP
BI
Alaska Flight Service
Updated on 12/19/2021


Runway 29 Favored and West Routes in Use:
Wheel Planes (and other aircraft to runway/ramp) – Left Traffic Runway 29 – 900 MSL
Float Planes – Left Traffic for landing West in water – 800 MSL
Helicopters – Right Traffic for landing West on city side of channel – 1,000 MSL
134.45 AFIS / 123.6 KTN Radio for Traffic Advisories (Required per SFAR)
N
W. Behm Canal
Revillagigedo Island
Helicopter (1,000 MSL)
MP
WC
PH
PP
Wp
TQ
KH
Tongass Narrows
Clarence Straits
Float Planes (800 MSL)
AD
Revillagigedo Channel
(to Canada)
GP
Wheel Planes (900 MSL)
& Other Aircraft to Runway/Ramp
Gravina Island
BI
VP
S
Alaska Flight Service
Updated on 12/19/2021

FSS
TELEPHONE NUMBERS

Flight Service Station (FSS) facilities process flight plans and provide flight planning and weather briefing services to pilots. FSS services in the contiguous United States, Hawaii and Puerto Rico, are provided by a contract provider at two large facilities. In Alaska, FSS services are delivered through a network of three hub facilities and 14 satellite facilities, some of which operate part–time and some are seasonal. Because of the interconnectivity between the facilities, all FSS services including radio frequencies are available continuously using published data.

Further information can be found in the Aeronautical Information Manual (AIM).

ALASKA FSS TELEPHONE NUMBER

Pilot Weather Briefings..... 1–833–AK–BRIEF (1–833–252–7433)

OTHER FSS TELEPHONE NUMBERS

Telephone numbers for individual FSSs in Alaska may be found in the Weather-FAA and NWS Pilot Weather Briefing Numbers section of this directory.

NATIONAL FSS TELEPHONE NUMBER (EXCLUDING ALASKA)

Pilot Weather Briefings..... 1–800–WX–BRIEF (1–800–992–7433)

Air Traffic Control System Command Center

Main Number.....540–422–4100

AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCCs)

ARTCC NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #	**CLEARANCE DELIVERY TELEPHONE #
Albuquerque	817–222–5006	7:30 a.m.–4:00 p.m.	505–856–4300	505–856–4561
Anchorage	907–269–1103	7:30 a.m.–4:00 p.m.	907–269–1137	
Atlanta	404–305–5180	7:30 a.m.–5:00 p.m.	770–210–7601	770–210–7692
Boston	404–305–5156	7:30 a.m.–4:00 p.m.	603–879–6633	603–879–6859
Chicago	817–222–5006	8:00 a.m.–4:00 p.m.	630–906–8221	630–906–8921
Cleveland	817–222–5006	8:00 a.m.–4:00 p.m.	440–774–0310	440–774–0490
Denver	425–227–1389	7:30 a.m.–4:00 p.m.	303–651–4100	303–651–4257
Ft. Worth	817–222–5006	7:30 a.m.–4:00 p.m.	817–858–7500	817–858–7584
Honolulu	310–725–3300	7:30 a.m.–4:00 p.m.	808–840–6100	808–840–6201
Houston	817–222–5006	7:30 a.m.–4:00 p.m.	281–230–5300	281–230–5622
Indianapolis	817–222–5006	8:00 a.m.–4:00 p.m.	317–247–2231	317–247–2411
Jacksonville	404–305–5180	8:00 a.m.–4:30 p.m.	904–549–1501	904–845–1592
Kansas City	817–222–5006	7:30 a.m.–4:00 p.m.	913–254–8500	913–254–8508
Los Angeles	661–265–8200	7:30 a.m.–4:00 p.m.	661–265–8200	661–575–2079
Memphis	404–305–5180	7:30 a.m.–4:00 p.m.	901–368–8103	901–368–8453
Miami	404–305–5180	7:00 a.m.–3:30 p.m.	305–716–1500	305–716–1731
Minneapolis	817–222–5006	8:00 a.m.–4:00 p.m.	651–463–5580	651–463–5588
New York	718–995–5426	8:00 a.m.–4:40 p.m.	631–468–1001	631–468–1425
Oakland	310–725–3300	6:30 a.m.–3:00 p.m.	510–745–3331	
Salt Lake City	425–227–1389	7:30 a.m.–4:00 p.m.	801–320–2500	801–320–2568
San Juan	404–305–5180	7:30 a.m.–4:00 p.m.	787–253–8663	787–253–8664
Seattle	425–227–1389	7:30 a.m.–4:00 p.m.	253–351–3500	253–351–3694
Washington	718–995–5426	8:00 a.m.–4:30 p.m.	703–771–3401	703–771–3587

*Facilities can be contacted through the Rgnl Duty Officer during non–business hours.
**For use when numbers or frequencies are not listed in the airport listing

MAJOR TERMINAL RADAR APPROACH CONTROLS (TRACONs)

TRACON NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #
Atlanta	404–305–5180	7:00 a.m.–3:30 p.m.	404–669–1200
Chicago	817–222–5006	8:00 a.m.–4:00 p.m.	847–608–5509
Dallas–Ft. Worth	817–222–5006	7:30 a.m.–4:00 p.m.	972–615–2500
Denver	425–227–1389	7:30 a.m.–4:00 p.m.	303–342–1500
Houston	817–222–5006	7:30 a.m.–4:00 p.m.	281–230–8400
New York	718–995–5426	8:00 a.m.–4:30 p.m.	516–683–2901
Northern CA	310–725–3300	7:00 a.m.–3:30 p.m.	916–366–4001
Potomac	718–995–5426	8:00 a.m.–4:30 p.m.	540–349–7500
Southern CA	310–725–3300	7:30 a.m.–4:00 p.m.	858–537–5800

*Facilities can be contacted through the Rgnl Duty Officer during non–business hours.

FAA TELEPHONE NUMBERS
KEY AIR TRAFFIC FACILITIES

DAILY NAS REPORTABLE AIRPORTS

AIRPORT NAME	*24 HR RGNL DUTY OFFICE TELEPHONE #	BUSINESS HOURS	BUSINESS TELEPHONE #
Albuquerque Intl Sunport, NM	817–222–5006	8:00 a.m.–5:00 p.m.	505–842–4366
Andrews AFB, MD	718–995–5426	8:00 a.m.–4:30 p.m.	301–735–2380
Baltimore/Washington Intl Thurgood Marshall, MD	718–995–5426	8:00 a.m.–4:30 p.m.	410–962–3555
Boston Logan Intl, MA	404–305–5156	7:30 a.m.–4:00 p.m.	617–455–3100
Bradley Intl, CT	404–305–5156	7:30 a.m.–4:00 p.m.	203–627–3428
Burbank/Bob Hope, CA	310–725–3300	7:00 a.m.–5:30 p.m.	818–567–4806
Charlotte Douglas Intl, NC	404–305–5180	8:00 a.m.–4:30 p.m.	704–344–6487
Chicago Midway, IL	817–222–5006	8:00 a.m.–4:00 p.m.	773–884–3670
Chicago O'Hare Intl, IL	817–222–5006	8:00 a.m.–4:00 p.m.	773–601–7600
Cleveland Hopkins Intl, OH	817–222–5006	8:00 a.m.–4:00 p.m.	216–352–2000
Covington/Cincinnati, OH	708–294–7401	8:00 a.m.–4:30 p.m.	606–767–1006
Dallas–Ft. Worth Intl, TX	817–222–5006	8:30 a.m.–5:00 p.m.	972–615–2531
Dayton Cox Intl, OH	817–222–5006	7:30 a.m.–4:00 p.m.	937–454–7300
Denver Intl, CO	206–231–2099	7:30 a.m.–4:00 p.m.	303–651–4257
Detroit Metro, MI	817–222–5006	8:00 a.m.–4:00 p.m.	734–955–5000
Fairbanks Intl, AK	907–271–5936	7:30 a.m.–4:00 p.m.	907–474–0050
Fort Lauderdale Intl, FL	404–305–5180	7:00 a.m.–3:30 p.m.	305–356–7932
George Bush Intercontinental/Houston, TX	817–222–5006	7:30 a.m.–4:00 p.m.	713–230–8400
Hartsfield–Jackson Atlanta Intl, GA	404–305–5180	7:00 a.m.–3:30 p.m.	404–669–1200
Honolulu Intl, HI	310–725–3300	7:30 a.m.–4:00 p.m.	808–840–6100
Houston Hobby, TX	817–222–5006	8:00 a.m.–5:00 p.m.	713–847–1400
Indianapolis Intl, IN	817–222–5006	8:00 a.m.–4:00 p.m.	317–484–6600
Kahului/Maui, HI	310–725–3300	7:30 a.m.–4:00 p.m.	808–877–0725
Kansas City Intl, MO	817–222–5006	7:30 a.m.–4:00 p.m.	816–329–2700
Las Vegas McCarran, NV	310–725–3300	7:30 a.m.–4:00 p.m.	702–262–5978
Los Angeles Intl, CA	310–725–3300	7:00 a.m.–3:30 p.m.	310–342–4900
Louis Armstrong New Orleans Intl, LA	817–222–5006	7:00 a.m.–4:30 p.m.	504–471–4300
Memphis Intl, TN	404–305–5180	7:30 a.m.–4:00 p.m.	901–322–3350
Miami Intl, FL	404–305–5180	7:00 a.m.–4:00 p.m.	305–869–5400
Minneapolis/St. Paul, MN	817–222–5006	8:00 a.m.–4:00p.m.	612–713–4000
Nashville Intl, TN	404–305–5180	7:00 a.m.–3:30 p.m.	615–781–5460
New York Kennedy Intl, NY	718–995–5426	8:00 a.m.–4:30 p.m.	718–656–0335
New York La Guardia, NY	718–995–5426	8:00 a.m.–4:30 p.m.	718–335–5461
Newark Liberty Intl, NJ	718–995–5426	7:30 a.m.–4:00 p.m.	973–565–5000
Norman Y. Mineta San Jose Intl, CA	310–725–3300	7:30 a.m.–4:00 p.m.	408–982–0750
Ontario Intl, CA	310–725–3300	7:30 a.m.–4:00 p.m.	909–983–7518
Orlando Intl, FL	404–305–5180	7:30 a.m.–5:00 p.m.	407–850–7000
Philadelphia Intl, PA	718–995–5426	8:00 a.m.–4:30 p.m.	215–492–4100
Phoenix Sky Harbor Intl, AZ	310–725–3300	7:30 a.m.–4:00 p.m.	602–379–4226
Pittsburgh Intl, PA	718–995–5426	8:00 a.m.–4:30 p.m.	412–269–9237
Portland Intl, OR	425–227–1389	7:30 a.m.–4:00 p.m.	503–493–7500
Raleigh–Durham, NC	404–305–5180	8:00 a.m.–4:30 p.m.	919–380–3125
Ronald Reagan Washington National, DC	718–995–5426	8:00 a.m.–4:30 p.m.	703–413–0330
Salt Lake City, UT	206–231–2099	7:30 a.m.–4:00 p.m.	801–325–9600
San Antonio Intl, TX	817–222–5006	8:00 a.m.–4:30 p.m.	210–805–5507
San Diego Lindbergh Intl, CA	310–725–3300	8:00 a.m.–4:30 p.m.	619–299–0677
San Francisco Intl, CA	310–725–3300	7:00 a.m.–3:30 p.m.	650–876–2883
San Juan Intl, PR	404–305–5180	7:30 a.m.–5:00 p.m.	787–253–8663
Seattle–Tacoma Intl, WA	206–231–2099	7:30 a.m.–4:00 p.m.	206–768–2900
St. Louis Lambert, MO	817–222–5006	7:30 a.m.–4:00 p.m.	314–890–1000
Tampa Intl, FL	404–305–5180	7:30 a.m.–4:00 p.m.	813–371–7700
Ted Stevens Anchorage Intl, AK	907–269–1103	7:30 a.m.–4:00 p.m.	907–271–2700
Teterboro, NJ	718–995–5426	8:00 a.m.–4:30 p.m.	201–288–1889
Washington Dulles Intl, DC	718–995–5426	8:00 a.m.–4:30 p.m.	571–323–6375
West Palm Beach, FL	404–305–5180	8:00 a.m.–4:30 p.m.	561–683–1867
Westchester Co, NY	718–995–5426	8:00 a.m.–4:30 p.m.	914–948–6520

*Facilities can be contacted through the Rgnl Duty Officer during non–business hours.

FAA PILOT WEATHER BRIEFING NUMBERS

STATION		AREA CODE	PHONE NUMBER
Cold Bay	FSS	907	532–2454
Dillingham	FSS	907	842–5275
Fairbanks	FSS	907	474–0137 or 1–866–248–6516
Barrow	FSS	907	852–2511
Deadhorse	FSS	907	659–2401
Homer	FSS	907	235–8588
Juneau	FSS	907	789–7380 or 1–833–AK–BRIEF
Kenai	FSS	907	283–7211 or 1–866–864–1737
Ketchikan	FSS	907	225–9481
Iliamna	FSS	907	571–1240
Kotzebue	FSS	907	442–3310
McGrath	FSS	907	524–3611
Nome	FSS	907	443–2291
Northway	FSS	907	778–2219
Palmer	FSS	907	745–2495
Sitka	FSS	907	966–2221
Talkeetna	FSS	907	733–2277

DOD AUTOMATED WEATHER OBSERVING SYSTEM

STATION NAME	IDENT	FREQUENCY	TELEPHONE NUMBER	EXTENSION
Adak NAF	ADK	N/A	907/592–8062	
Allen AAF	BIG	135.65	907/869–3480	
Cape Lisburne	LUR	N/A	907/552–9730/9637	229
Cape Newenham	EHM	N/A	907/552–9419/9370	8
Cape Romanzof	CZF	N/A	907/552–2869/2372	229
Indian Mountain	UTO	N/A	907/552–3211/4310	229
Ladd AAF①	FBK	119.275		
Ladd AAF②	FBK	118.525		
Sparrevohn	SVW	N/A	907/731–900	229
Tatalina	TLJ	N/A	907/552–1106/1040	229
Tin City	TNC	N/A	907/552–4466/9283	229

①ASOS is associated with R–2205 Yukon Test Range.
②ASOS is associated with R–2211 Blair Lake Range.

NOTE: When the Air Force observer is on duty, the DOD AWOS unit will be disconnected. The telephone number will connect you with the Air Force weather observer.

FAA AUTOMATED WEATHER OBSERVING SYSTEM (AWOS/ASOS)

STATION NAME	IDENT	FREQUENCY	TELEPHONE NUMBER
Adak Island	ADK	134.5	907/592–8207
AJ Eisenberg	OKH	132.775	360/675–8431
Akhiok	AKK	118.325	907/836–2207
Akiachak	Z13	118.0	907/269–2870
Akutan	7AK	129.05	907/302–3081
Ambler	AFM	132.1	907/445–2146
Anaktuvuk Pass	AKP	135.75	907/661–3020
Angoon	AGN	118.325	907/788–3120
Aniak	ANI	124.3	907/675–4282
Anvik	ANV	133.55	907/663–6353
Arctic Village	ARC	135.75	907/587–5654
Atka	AKA	135.55	907/839–2292
Atqasuk	ATK	119.925	907/633–2012
Barter Island	BTI	121.450	907/640–2124
Bethel	BET	135.45	907/543–5475
Bettles	BTT	135.45	907/692–5900
Birchwood	BCV	135.55	907/621–7605
Brevig Mission	KTS	121.55	907/642–2166
Bryant AAF	FRN	134.25	—

STATION NAME	IDENT	FREQUENCY	TELEPHONE NUMBER
Buckland	BVK	135.15	907/494–2180
Chevak	VAK	120.625	907/858–7600
Chignik	AJC	135.75	907/749–2402
Clarks Point	CLP	121.45	907/868–7311
Cold Bay	CDB	135.75	907/532–2639
Coldfoot	CXF	118.0	907/269–2771
Cordova	CDV	134.8	907/424–5900
Crooked Creek	CJX	118.4	907/269–2726
Deadhorse	SCC	118.4	907/659–2591
Deadhorse	PTZ	125.125	907-685-3590
Deering	DEE	135.5	907/363–2102
Dillingham	DLG	125.0	907/842–2137
Eagle	EAA	135.55	907/547–2351
Edward G Pitka Sr	GAL	132.525	907/446–3835
Egegik	EII	135.65	907/233–2288
Elim	ELI	121.425	907/890–2014
Emmonak	ENM	135.35	907/269–2755
Eureka	AZK	134.95	907/822–3011
Fairbanks Intl	FAI	124.4	907/621–7609
Fort Yukon	FYU	125.8	907/662–2337
Gambell	GAM	125.9	907/985–5733
Golovin	GLV	135.75	907/779–2228
Gulkana	GKN	134.85	907/822–3707
Gustavus	GST	125.9	907/697–2447
Haines	HNS	135.7	907/766–2519
Holy Cross	HCA	118.325	907/476–7231
Homer	HOM	135.65	907/235–3603
Hoonah	HNH	132.05	907/945–3687
Hooper Bay	HPB	135.1	907/758–4211
Huslia	HLA	135.75	907/829–2282
Hydaburg	HYG	135.65	907/285–3888
Iguigig	IGG	119.925	907/533–3350
Iliamna	ILI	134.95	907/571–1483
Juneau	JNU	—	907/789–1243
Kake	AFE	135.25	907/785–3124
Kalskag	KLG	119.025	907/471–2434
Kaltag	KAL	135.25	907/534–2272
Kenai Muni	ENA	133.35	907/283–6513
Ketchikan Intl	KTN	134.45	907/247–8801
Kiana	IAN	119.025	907/475–2004
King Cove	KVC	118.325	907/497–4279
King Salmon	AKN	128.8	907/246–7506
Kipnuk	IIK	118.325	907/869–5510
Kivalina	KVL	135.8	907/645–2160
Klawock	AKW	135.45	907/755–2641
Kodiak	ADQ	—	907/487–2442
Koliganek	JZZ	118.525	907/596–3302
Kotlik	2A9	118.1	907/269–2701
Koyuk Alfred Adams	KKA	134.95	907/963–4000
Kwethluk	KWT	120.000	907/868–7313
Lake Hood	LHD	—	907/271–2700
Manokotak	MBA	120.625	907/289–2018
Marshall Don Hunter Sr.	MDM	119.675	907/679–6500
Mc Grath	MCG	135.65	907/524–3850
McKinley National Park	INR	135.75	907/683–1673
Mekoryuk	MYU	123.9	907/827–8135
Merrill Fld	MRI	124.25	907/271–5277
Metlakatla	MTM	135.55	907/886–7989
Middleton Island	MDO	135.725	907/424–7635

STATION NAME	IDENT	FREQUENCY	TELEPHONE NUMBER
Minchumina	MHM	135.55	907/674–3315
Mountain Village	MOU	118.350	907/591–2511
Napakiak	WNA	121.425	907/868–7317
Nelson Lagoon	OUL	119.025	907/989–2227
Nenana	ENN	125.2	907/832–5689
New Stuyahok	KNW	120.275	907/693–3086
Nikolai	FSP	118.325	907/293–2002
Noatak	WTK	135.75	907–485–2203
Nome	OME	119.925	907/443–4818
Noorvik	D76	120.0	907/636–2010
North Slope	SXO	118.65	281/560-8580
Northway	ORT	135.4	907/778–2282
Nuiqsut	AQT	135.35	907/480–5577
Nulato	NUL	118.0	907/269–2774
Nunapitchuk	16A	121.550	907/868–7319
Palmer Muni	PAQ	134.75	907/746–6675
Perryville	PEV	118.1	907/269–2843
Petersburg	PSG	125.8	907/772–4504
Pilot Point	PNP	118.375	907/837–2406
Platinum	PTU	118.375	907/979–8800
Point Hope	PHO	118.325	907/368–2128
Point Lay LRRS	PIZ	135.65	907/833–3112
Portage Visitor Center	POR	135.45	907/783–2626
Port Heiden	PTH	135.4	907/837–2406
Quinhagak	AQH	121.575	907/868–7321
Ralph M Calhoun Mem	TAL	135.1	907/366–7266
Ralph Wien Mem	OTZ	135.45	907/442–2279
Red Dog	DGG	131.05	907/754-5000
Robert (Bob) Curtus Mem	D76	120.0	907/636–2010
Ruby	RBY	118.25	907/468–4605
Russian Mission	RSH	118.375	907/584–5521
St George	PBV	135.45	907/859–2700
St. Mary's	KSM	128.7	907/438–2135
St Michael	SMK	119.275	907/923–6480
St Paul Island	SNP	135.75	907/546–2324
Sand Point	SDP	134.85	907/383–5387
Savoonga	SVA	121.3	907/984–6429
Selawik	WLK	135.65	907/484–2107
Scammon Bay	SCM	118.425	907/558–5501
Seldovia	SOV	135.4	907/234–7407
Seward	SWD	135.2	907/224–2440
Shageluk	SHX	121.575	907/868–7346
Shaktoolik	2C7	124.175	907/955–3896
Shishmaref/New	SHH	121.1	907/649–4011
Shungnak	SHG	118.25	907/437–2024
Sitka	SIT	135.9	907/966–2209
Skagway	SGY	135.8	907/983–3194
Sleetmute	SLQ	134.85	907/449–4226
Soldotna	SXQ	135.45	907/262–8431
South Nanknek	WSN	121.575	907/868–7348
Talkeetna	TKA	135.2	907/733–1637
Ted Stevens Anchorage Intl	ANC	—	907/271-5278
Teller	TER	118.375	907/642–2301
Togiak	TOG	119.3	907/493–5326
Tok Junction	6K8	118.1	907/269–2706
Toksook Bay	OOK	119.275	907/427–7004
Tununak	4KA	118.25	907/269–2788
Unalakleet	UNK	132.25	907/624–3051
Unalaska	DUT	125.8	907/581–2803

STATION NAME	IDENT	FREQUENCY	TELEPHONE NUMBER
Valdez Pioneer Field	VDZ	118.8	907/835–5578
Wainwright	AWI	132.25	907/763–8881
Wales	IWK	118.525	907/664–3907
Wasilla	IYS	135.25	907/373–3801
White Mountain	WMO	121.45	907/638–2103
Wilder Runway LLC	05K	118.025	336/837–4290
Wiley Post/Will Rogers Mem	BRW	132.150	907/852–3112
Wrangell	WRG	128.5	907/874–2458
Yakutat	YAK	135.75	907/784–3116

SUPPLEMENTAL WEATHER SOURCES

In addition to FAA, NWS, DOD and private certified weather sources there are other private and federal non–certified automated weather reports available. These automated weather sources are not part of the National Airspace System and therefore will not have NOTAMs issued to indicate any unreliable or unusable elements of the device. These weather reports are considered to be "supplemental weather."

There are three NWS Meteorological Automated Weather Systems (MAWS) located near Circle Hot Springs, Healy and Whittier. The MAWS weather reports are available on the NWS Alaska Aviation Weather website or by request through a FAA Pilot Weather Briefer.

There are private AWOS's located in the vicinity of Oliktok:

NAME	IDENT	FREQUENCY	TELPHONE NUMBER
Nikaitchuq Ops	AA38	121.275	907/685–1481
Spy Island	AA51	121.325	907/685–1482

OPR: FAA, Alaska Flight Services, 907–271–5464 **Date:** April 2013

FAA AVIATION CAMERA LOCATIONS

FAA aviation cameras are installed throughout the state of Alaska. Images are designated as an FAA supplementary weather product used for enhanced situational awareness. Cameras provide images of sky conditions at or near airports and strategic en route locations via the internet at: http://avcams.faa.gov. Images are normally updated every ten minutes to provide near real–time conditions. Images are also stored for viewing historic conditions. FAA aviation camera images should be used in conjunction with other primary weather products, flight service briefings, and in–flight visual observations. You are also encouraged to contact the local flight service station for camera image updates while airborne.

FAA aviation cameras are also depicted on Alaska aeronautical charts. Following is a list of all operational aviation camera locations. The camera site name is depicted in bold type and correlates to the FAA aviation camera website (http://avcams.faa.gov). The airports and facilities that the cameras service are depicted in light type.

CAMERA SITE NAME (in bold type) Facility Names (in light type)	LOCATION
Akhiok	56º56.471´N, 154º10.728´W
Akhiok	
Alitak Seaplane	
Akun Island	54º08.817´N, 165º36.310´W
Allakaket	66º32.965´N, 152º37.779´W
Ambler	67º05.193´N, 157º51.436´W
Ambler	
Anaktuvuk Pass	68º08.479´N, 151º43.895´W
Anaktuvuk Pass	
Anchorage	61º12.922´N, 149º53.078´W
Ted Stevens Anchorage Intl	
Alaska Regional Hospital Heliport	
Campbell Airstrip	
Campbell Lake Seaplane	
Flying Crown	
Lake Hood Seaplane	
Merrill Field	
Providence Hospital Heliport	
Anchor Point	59º45.323´N, 151º 46.407´W
Anchor River Airpark	
Ninilchik	
Angoon	57º29.799´N, 134º34.155´W
Angoon Seaplane	
Aniak	61º34.123´N, 159º 32.611´W
Aniak	
Aniak Seaplane	
Chuathbaluk	
Anvik	62º38.905´N, 160º11.073´W
Arctic Village	68º07.098´N, 145º33.960´W
Arctic Village	
Atqasuk	70º28.190´N, 157º25.808´W
Atqasuk Edward Burnell Sr Mem	
Barrow	71º17.256´N, 156º47.138´W
Wiley Post/Will Rogers Mem	
Beaver	66º21.583´N, 147º24.751´W
Beaver	
Beluga	61º11.130´N, 151º02.074´W
Beluga	
Tyonek	
Nikolai Creek	
Berners Bay	58º40.798´N, 134º56.427´W
en route–Berners Bay	

CAMERA SITE NAME (in bold type)	LOCATION
Bethel	60º46.879´N, 161º53.071´W
Bethel	
Bethel Seaplane	
Hangar Lake Seaplane	
Akiak	
Akiachak	
Akiachak Seaplane	
Napaskiak	
Napaskiak Seaplane	
Napakiak	
Atmautluak	
Nunapitchuk	
Nunapitchuk Seaplane	
Kwethluk	
Bettles	66º55.024´N, 151º30.955´W
Bettles	
VOR Lake Waterplane Seaplane	
Birchwood	61º24.978´N, 149º30.732´W
Birchwood	
Bryant AAF	
Big Lake	
Black Rapids	63º29.924´N, 145º51.027´W
Black Rapids	
Bradley Lake	59º46.63´N, 150º58.344´W
en route–Bradley Lake	
Buckland	65º58.646´N, 161º07.752´W
Buckland	
Candle 2	
Cape Fanshaw	57º11.126´N, 133º34.417´W
Cape Spencer	58º11.916´N, 136º38.370´W
Elfin Cove Seaplane	
Cape Yakataga	60º04.882´N, 142º29.212´W
Yakataga	
Central	65º34.224´N, 144º48.986´W
Central	
Circle Hot Springs	
Chalkyitsik	66º38.968´N, 143º43.646´W
Chalkyitsik	
Chandalar Shelf	68º04.590´N, 149º35.148´W
Chandalar Shelf	
Chefornak	60º09.515´N, 164º16.206´W
Chefornak	
Chevak	61º31.797´N, 165º34.886´W
Chevak	
Chickaloon	61º48.435´N, 148º19.954´W
en route–Chickaloon	
Chignik Bay	56º18.564´N, 158º22.595´W
Chignik	
Chignik Bay Seaplane	
Chignik Lagoon	
Chignik Lagoon	56º18.605´N, 158º32.344´W
Chignik Lake	
Chignik Lake	56º15.303´N, 158º46.019´W
Chignik Lake	
Chilkat	59º26.324´N, 136º16.361´W
Chistochina	62º35.678´N, 144º38.946´W
Chitna	61º34.996´N, 144º26.003´W
Clarks Point	58º50.206´N, 158º31.456´W
Coffman Cove	56º00.371´N, 132º48.900´W
Cold Bay	55º12.201´N, 162º42.707´W
Cold Bay	
Coldfoot	67º15.351´N, 150º11.649´W
Wiseman	
Cooper Landing	60º28.909´N, 149º43.595´W
Cordova	60º29.623´N, 145º28.226´W
Cordova	
Cordova Muni Seaplane	
Merle K (Mudhole) Smith	
Craig	55º28.443´N, 133º08.242´W

CAMERA SITE NAME (in bold type)	LOCATION
Craig Seaplane	
Crooked Creek	61º52.018´N, 158º07.888´W
Deadhorse	70º14.072´N, 148º22.594´W
Deadhorse	
Deering	66º04.604´N, 162º43.759´W
Delta Junction	64º03.393´N, 145º43.942´W
Delta Junction	
All West	
Delta Daves	
Dillingham	59º02.643´N, 158º30.710´W
Dillingham	
Aleknagik/New	
Shannons Pond Seaplane	
Clarks Point	
Ekuk	
Manokotak	
Aleknagik Mission Lodge	
Dutch Ballyhoo	53º55.135´N, 166º30.547´W
Unalaska	
Dutch Haystack	53º52.542´N, 166º32.526´W
Unalaska	
Dutch NDB	53º54.330´N, 166º32.880´W
Unalaska	
Eagle	64º46.569´N, 141º09.816´W
Eagle	
Eaglecrest	58º15.665´N, 134º30.690´W
Edna Bay	55º56.813´N, 133º40.342´W
Eek	60º12.952´N, 162º00.730´W
Eek	
Egegik	58º12.534´N, 157º22.554´W
Egegik	
Jensens	
Eldred Rock	58º58.274´N, 135º12.247´W
Elim	64º37.145´N, 162º16.210´W
Elim	
Moses Point	
Emmonak	62º46.678´N 164º32.141´W
Emmonak	
Sheldon Point	
Sheldon Point Seaplane	
Ester Dome	64º52.552´N, 148º04.073´W
Fairbanks Intl	
Airway	
Bradley Sky Ranch	
False Pass	54º51.007´N, 163º24.592´W
False Pass	
Fort Yukon	66º34.428´N, 145º12.888´W
Fort Yukon	
Galena	64º44.490´N, 156º56.967´W
Edward G Pitka Sr	
Gambell	63º46.529´N, 171º43.799´W
Golovin	64º32.653´N, 163º02.04´W
Goodnews Bay	59º07.134´N, 161º35.322´W
Golovin	
Grave Point	58º03.735´N, 134º03.058´W
Taku Harbor	

CAMERA SITE NAME (in bold type)	LOCATION
Grayling	62º54.392´N, 160º03.800´W
Gulkana	62º09.323´N, 145º27.579´W
Gulkana	
Copper Center	
Gustavus	58º25.515´N, 135º42.386´W
Gustavus	
Bartlett Cove Seaplane	
Excursion Inlet Seaplane	
Gustavus Dock	58º23.404´N, 135º43.783´W
Haines	59º13.095´N, 135º25.974´W
Haines	
Haines Seaplane	
Harris River Pass	55º27.514´N, 132º50.621´W
Hawk Inlet	58º07.488´N, 134º45.341´W
en route – Hawk Inlet	
Holy Cross	62º11.431´N, 159º46.484´W
Holy Cross	
Homer	59º38.855´N, 151º31.728´W
Homer	
Homer–Beluga Lake Seaplane	
Seldovia	
Seldovia Seaplane	
Jackolof Bay	
Kasitsna	
Oyster Cove	
Honolulu	63º05.843´N, 149º30.151´W
en route – Honolulu	
Hoonah	58º05.825´N, 135º24.869´W
Hoonah	
Hoonah Seaplane	
Hooper Bay	61º31.661´N, 166º06.79´W
Hooper Bay	
Huslia	65º41.925´N, 156º21.218´W
Huslia	
Hydaburg	55º12.145´N, 132º49.495´W
Hydaburg Seaplane	
Hyder	55º54.708´N, 130º01.125´W
Hyder Seaplane	
Stewart (BC)	
Igiugig	59º19.552´N, 155º53.823´W
Igiugig	
Big Mountain	
Iliamna	59º45.294´N, 154º54.448´W
Iliamna	
Kokhanok	
Nondalton	
Isabel Pass	63º24.907´N, 145º45.485´W
Paxson	
Isabel Pass South	63º02.012´N, 145º29.858´W
Johnstone Point	60º28.933´N, 146º34.593´W
Johnstone Point	
Johnstone Point VOR	60º28.842´N, 146º35.970´W
Johnstone Point	
Kake	56º58.356´N 133º56.719´W
Kake	
Kake Seaplane	
Kalskag	61º32.265´N, 160º19.962´W
Kalskag	
Kaltag	64º19.247´N, 158º43.944´W
Kaltag	
Karluk	57º33.749´N, 154º26.189´W
Kasaan	55º32.372´N, 132º24.217´W
Kasaan Seaplane	
Kasigluk	60º52.365´N, 162º30.653´W
Kasigluk	

CAMERA SITE NAME (in bold type)	LOCATION
Ketchikan	55º21.411´N, 131º42.562´W
Ketchikan	
Ketchikan Intl	
Ketchikan Harbor Seaplane	
Murphys Pullout Seaplane	
Peninsula Point Pullout Seaplane	
Kiana	66º58.41´N, 160º25.759´W
Kiana	
King Cove	55º06.870´N, 162º16.248´W
King Cove	
King Salmon	58º39.89´N, 156º31.46´W
King Salmon	
King Salmon Seaplane	
Kvichak (Diamond J)	
Nakeen	
Naknek	
Naknek Seaplane	
South Naknek	
Kipnuk	59º56.105´N, 164º01.983´W
Kipnuk	
Kivalina	67º43.65´N, 164º32.422´W
Kivalina	
Klawock	55º34.8´N, 133º 04.13´W
Klawock	
Klawock Seaplane	
Knik	61º25.595´N, 150º 04.732´W
Beaver Lake Seaplane	
Brocker Lake Seaplane	
Goose Bay	
Jones Landing Seaplane	
Visnaw Lake Seaplane	
Knob Ridge	63º38.952´N, 144º03.750´W
Knob Ridge	
Kodiak	57º44.827´N, 152º29.556´W
Kodiak	
Kodiak (Lilly Lake) Seaplane	
Kodiak Muni	
Trident Basin Seaplane	
Kokhanok	59º26.371´N, 154º45.389´W
Kokhanok	
Koliganek	59º43.578´N, 157º16.013´W
Koliganek	
New Stuyahok	
Ekwok	
Kotlik	63º02.130´N, 163º31.933´W
Kotzebue	66º53.488´N, 162º36.370´W
Koyuk	64º56.132´N, 161º09.767´W
Koyuk Alfred Adams	
Kwethluk	60º47.567´N, 161º26.333´W
Kwigillingok	59º52.206´N, 163º08.899´W
Kwigillingok	
Keigillingok Seaplane	
Kongiganak	
Lake Clark Pass East	60º45.816´N, 152º24.714´W
Lake Clark Pass East	
Lake Clark Pass RCO	60º51.332´N, 152º38.352´W
Lake Clark Pass East	
Lake Clark Pass West	60º22.422´N, 153º53.400´W
Wilder Runway LLC	
Larsen Bay	57º32.244´N, 153º58.846´W
Karluk Lake Seaplane	
Larsen Bay	
Lena Point	58º23.294´N, 134º45.711´W
Lena Point	
Level Island	56º28.046´N, 133º04.982´W
Level Island	
Lime Village	61º21.293´N, 155º26.144´W

CAMERA SITE NAME (in bold type)	LOCATION
Livengood	65º28.361´N 148º39.817W
Livengood Camp	
Manokotak	58º56.017´N, 158º54.173´W
Manokotak	
Clarks Point	
Ekuk	
Dillingham	
Marshall	61º52.023´N, 162º01.999´W
Marshall Don Hunter SR	
McGrath	62º57.378´N, 155º36.030´W
McGrath	
McGrath Seaplane	
Tatalina LRRS	
Takotna	
McKinley North	63º25.882´N, 150º18.646´W
en route–McKinley North	
McKinley Park	63º43.922´N, 148º54.755´W
Denali	
McKinley National Park	
McKinley South	62º24.35´N, 150º15.722´W
Songlo Vista	
Mekoryuk	60º23.193´N, 166º11.478´W
Mekoryuk	
Mentasta	62º54.174´N, 143º40.157´W
en route–Mentasta	
Merrill Pass High	61º11.178´N, 153º19.566´W
en route–Merrill Pass	
Merrill Pass Low	61º12.000´N, 153º17.868´W
en route–Merrill Pass	
Metlakatla	55º07.694´N, 131º34.608´W
Metlakatla Seaplane	
Annette Island	
Tamgas Harbor Seaplane	
Meyers Chuck	55º44.239´N, 132º15.559´W
Meyers Chuck Seaplane	
Middleton Island	59º27.000´N, 146º18.528´W
Middleton Island	
Minchumina	63º53.004´N, 152º18.642´W
Minchumina	
Minto	65º08.916´N, 149º21.281´W
Minto Al Wright	
Minx Island	55º22.982´N, 131º15.984´W
Misty Fjords	55º30.754´N, 130º54.534´W
en route – Misty Fjords	
Moose Pass	60º29.188´N, 149º22.055´W
Lawing	
Mountain Village	62º05.688´N, 163º41.172´W
Mountain Village	
St. Mary's	
Nanwalek	59º21.268´N, 151º55.247´W
Napakiak	60º41.567´N, 161º58.616´W
Nelson Lagoon	56º00.468´N, 161º10.243´W
Nelson Lagoon	
Nenana	64º32.983´N, 149º05.007´W
Clear	
Clear Sky Lodge	
New Stuyahok	59º27.372´N, 157º22.140´W
New Stuyahok	
Ekwok	
Nushagak	
Newtok	60º56.302´N 164º37.884´W
Newtok	
Newtok Seaplane	
Nikiski	60º46.727´N, 151º07.754´W
Kenai Muni	
Kenai Muni Seaplane	
Island Lake Seaplane	

CAMERA SITE NAME (in bold type)	LOCATION
Nikolai	63º00.929´N, 154º22.014´W
Nikolai	
Noatak	67º34.304´N, 162º58.289´W
Noatak	
Nome	64º30.402´N, 165º26.775´W
Basin Creek	
Nome	
Nome City Fld	
Salmon Lake	
Nondalton	59º58.407´N 154º51.149´W
Nondalton	
North Slope	70º24.806´N, 150º00.848´W
Ugnu–Kuparuk	
Helmericks	
Northway	62º57.706´N, 141º56.155´W
Northway	
Nuiqsut	70º12.815´N, 151º00.072´W
Nulato	64º43.901´N, 158º04.364´W
Nunapitchik	60º54.281´N, 162º26.563´W
Nyac	60º58.703´N, 160º00.127´W
Old Harbor	57º12.071´N 153º18.302´W
Old Harbor	
Ouzinkie	57º56.483´N, 152º28.336´W
Palmer	61º36.204´N, 149º05.682´W
Palmer Muni	
Butte Muni	
Sky Ranch at Pioneer Peak	
Valley Hospital–Palmer Heliport	
Wolf Lake	
Anderson Lake	
Jims Landing	
Abi	
Pedersen Hill	58º21.933´N, 134º38.097´W
Juneau International	
Juneau International Seaplane	
Pedro Bay	59º47.315´N, 154º06.052´W
Pedro Bay	
Pelican	57º57.454´N, 136º13.605´W
Pelican	
Perryville	55º54.625´N, 159º08.675´W
Petersburg	56º48.481´N, 132º56.299´W
Petersburg James A. Johnson	
Petersburg Seaplane	
Pilot Point	57º34.719´N, 157º34.115´W
Pilot Point	
Ugashik	
Ugashik Bay	
Point Higgins	55º27.635´N, 131º48.608´W
Point Hope	68º20.786´N, 166º43.715´W
Point Hope	
Point Lay	69º44.123´N, 163º00.155´W
Point Lay LRRS	
Portage Creek	58º54.363´N, 157º42.933´W
Portage Glacier	60º47.080´N, 148º50.489´"W
Portage Visitor Center	
Port Alexander	56º14.801´N, 134º38.866´W
Port Alexander Seaplane	
Port Heiden	56º55.386´N, 158º39.742´W
Port Heiden	
Port Lions	57º53.033´N, 152º51.086´W
Potato Point	61º03.399´N, 146º41.854´W
Potato Point RCO	
Valdez Pioneer Field	
Puntilla Lake	62º05.871´N, 152º44.035´W
Rainy Pass Lodge	

CAMERA SITE NAME (in bold type)	LOCATION
Quinhagak	59º43.73´N, 161º54.397´W
Quinhagak	
Red Dog	68º01.747´N, 162º54.699´W
Red Dog	
Rohn	62º17.532´N, 153º22.398´W
Tatitna	
Ruby	64º44.059´N, 155º27.651´W
Ruby	
Ruby Airport	64º43.852´N, 155º27.752´W
Ruby	
Russian Mission	61º46.800´N, 161º19.354´W
Russian Mission	
Russian Mission Seaplane	
St. Mary's	62º03.131´N, 163º15.709´W
Pilot Station	
St. Michael	63º29.137´N, 162º06.762´W
St. Michael	
Stebbins	
St. Paul	57º09.621´N, 170º13.592´W
St. Paul Island	
Savoonga	63º41.336´N, 170º29.499´W
Savoonga	
Scammon Bay	61º50.675´N, 165º34.843´W
Scammon Bay	
Scammon Bay Seaplane	
Selawik	66º36.179´N, 160º00.116´W
Selawik	
Seward	60º08.083´N, 149º25.433´08″W
Seward	
Shageluk	62º41.288´N, 159º33.989´W
Shaktoolik	64º20.935´N, 161º11.066´W
Shaktoolik	
Sheep Mountain	61º47.292´N, 147º40.461´W
Sheep Mountain	
Shishmaref	66º15.257´N, 166º04.475´W
Shishmaref	
Shungnak	66º53.361´N, 157º08.303´W
Shungnak	
Kobuk	
Sisters Island	58º10.654´N, 135º15.465´″W
Gustavus	
Excursion Inlet Seaplane	
Sitka	57º03.097´N, 135º21.804´W
Sitka Rocky Gutierrez	
Sitka Seaplane	
Skagway	59º27.228´N, 135º19.653´W
Skagway	
Skagway Seaplane	
Skwentna	61º57.971´N, 151º12.031´W
Skwentna	
Sleetmute	61º42.127´N, 157º10.129´W
Soldotna	60º27.836´N, 151º04.888´W
Soldotna	
Soldotna Hospital Heliport	
Kasilof	
South Naknek	58º42.300´N, 157º00.342´W
Summit	63º19.680´N, 149º07.842´W
Summit	
Cantwell	
Tahneta Pass	61º49.972´N, 147º19.649´W
en route–Tahneta Pass	
Takotna	62º59.669´N, 156º01.829´W
Taku Inlet	58º19.053´N, 134º06.053´W
en route–Taku Inlet	

CAMERA SITE NAME (in bold type)	LOCATION
Talkeetna	62º19.444´N, 150º05.862´W
Talkeetna	
Talkeetna Heliport	
Bald Mountain	
Christiansen Lake Seaplane	
Birch Creek Landing	
Secluded Lake	
Songlo Vista	
Tanana	65º10.391´N, 152º06.576´W
Ralph M Calhoun Memorial	
Tazlina–Tolsona	62º06.238´N, 146º10.471´W
Tazlina	
Tazlina/Smokey Lake Seaplane	
Lake Louise	
Lake Louise Seaplane	
Teller	65º14.531´N, 166º19.934´W
Brevig Mission	
Tenakee Springs	57º46.755´N, 135º13.156´W
Tenakee Springs	
Thompson Pass	61º07.737´N, 145º46.501´W
Thorne Bay	55º41.158´N, 132º31.722´W
Kassan	
Togiak	59º03.707´N, 160º22.58´W
Twin Hills	
Tok	63º19.227´N, 142º47.789´W
Tok Junction	
Tanacross	
Toksook Bay	60º32.203´N, 165º05.346´W
Toksook Bay	
Trading Bay	60º43.549´N, 151º45.033´W
Tuluksak	61º05.922´N, 160º57.46´W
Tuluksak	
Tuntutuliak	60º20.392´N, 162º40.000´W
Tuntutuliak	
Tuntutuliak Seaplane	
Twin Island	55º08.565´N, 131º13.026´W
Uganik Bay	57º45.454´N, 153º21.058´W
SanJuan Seaplane	
West Point Village	
Unalakleet	63º53.083´N, 160º47.481´W
Unalakleet	
Valdez	61º07.943´N, 146º15.036´W
Valdez Pioneer Field	
Robe Lake Seaplane	
Wainwright	70º38.171´N, 160º01.842´W
Wainwright	
Wales	65º36.965´N, 168º05.657´W
Wales	
Tin City LRRS	
Wasilla	61º34.286´N, 149º32.937´W
Wasilla	
Wasilla Lake Seaplane	
Upper Wasilla Lake Seaplane	
Cottonwood Lake Seaplane	
White Mountain	64º41.138´N, 163º24.436´W
Whittier	60º46.517´N, 148º43.589´W
Whittier	

CAMERA SITE NAME (in bold type)	LOCATION
Willow	61º45.859´N, 150º01.323´W
Willow	
Willow Seaplane	
Kashwitna Lake Seaplane	
Wrangell	56º29.199´N, 132º23.229´W
Wrangell	
Wrangell Seaplane	
Yakutat	59º30.119´N, 139º41.305´W
Yakutat	
Yakutat Seaplane	
Dangerous River	
Harlequin Lake	
Yukon River Bridge	65º56.399´N, 149º51.149´W
En route – Yukon River Bridge	
Five Mile	

A-PAID and MAWS Weather Observation Locations

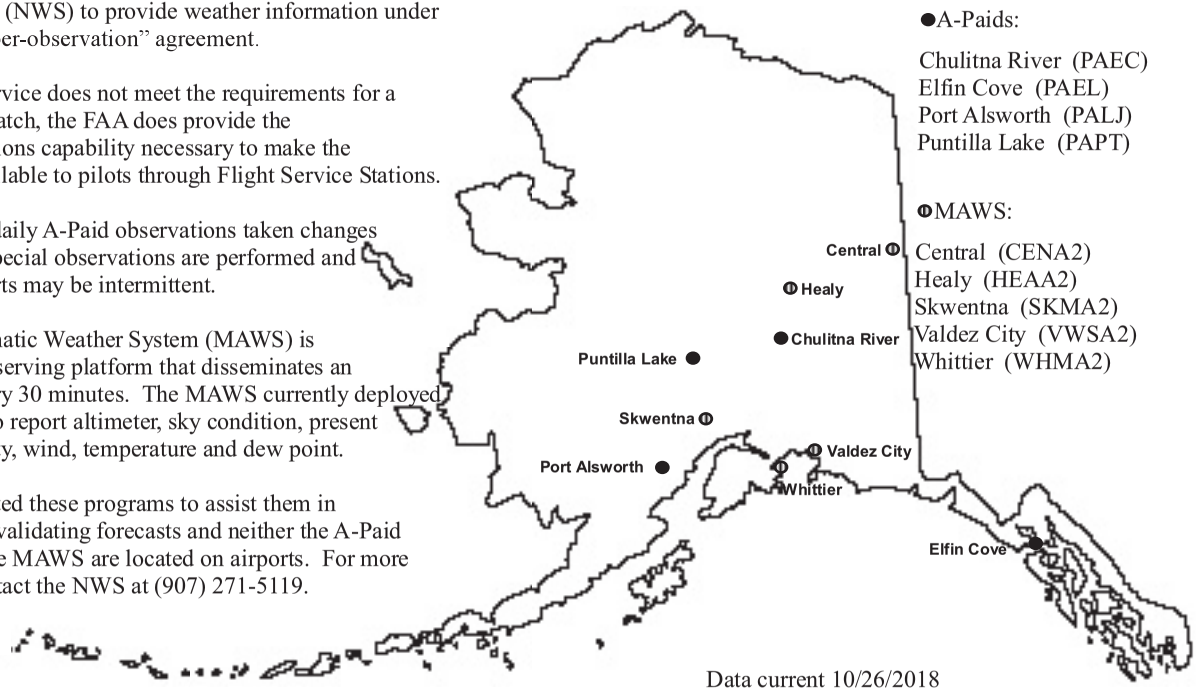
An A-Paid Observer is a person certified by the National Weather Service (NWS) to provide weather information under the terms of a "per-observation" agreement.

Although the service does not meet the requirements for a basic weather watch, the FAA does provide the telecommunications capability necessary to make the information available to pilots through Flight Service Stations.

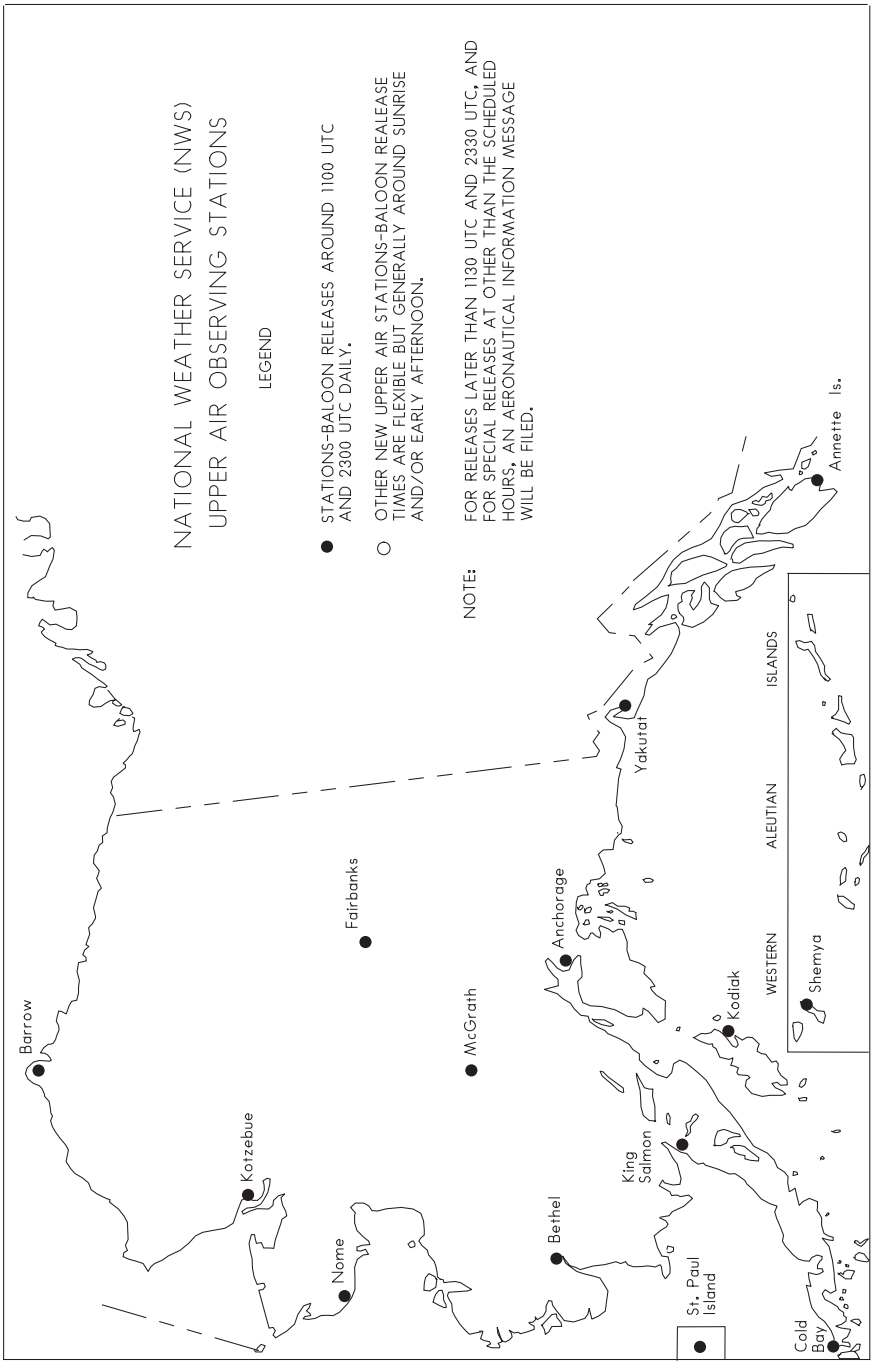
The number of daily A-Paid observations taken changes seasonally, no special observations are performed and the hourly reports may be intermittent.

The Mini Automatic Weather System (MAWS) is an electronic observing platform that disseminates an observation every 30 minutes. The MAWS currently deployed are configured to report altimeter, sky condition, present weather, visibility, wind, temperature and dew point.

The NWS initiated these programs to assist them in developing and validating forecasts and neither the A-Paid observers nor the MAWS are located on airports. For more information contact the NWS at (907) 271-5119.



Data current 10/26/2018


NATIONAL WEATHER SERVICE (NWS)
UPPER AIR OBSERVING STATIONS
LEGEND
STATIONS-BALOON RELEASES AROUND 1100 UTC AND 2300 UTC DAILY.
OTHER NEW UPPER AIR STATIONS-BALOON REALEASE TIMES ARE FLEXIBLE BUT GENERALLY AROUND SUNRISE AND/OR EARLY AFTERNOON.
NOTE: FOR RELEASES LATER THAN 1130 UTC AND 2330 UTC, AND FOR SPECIAL RELEASES AT OTHER THAN THE SCHEDULED HOURS, AN AERONAUTICAL INFORMATION MESSAGE WILL BE FILED.
Barrow
Kotzebue
Nome
Fairbanks
McGrath
Bethel
King Salmon
St. Paul Island
Cold Bay
Anchorage
Kodiak
Yakutat
Annette Is.
WESTERN ALEUTIAN ISLANDS
Shemya

Air Route Traffic Control Center frequencies and their remoted transmitter sites are listed below for the coverage of this volume. Bold face type indicates high altitude frequencies, light face type indicates low altitude frequencies. To insure unrestricted IFR operations within the high altitude enroute sectors, the use of 720 channel communications equipment (25 kHz channel spacing) is required.

ⓇANCHORAGE CENTER – 121.5 **121.5** 132.3 **132.3** 243.0 **243.0** 306.2 **306.2**

Adak – **126.4** **254.3** **(KZAN)**
Aniak – 118.15 251.05
Annette Island – **127.3** 118.5 284.6 **256.7**
Barrow – 135.3 **135.3** 239.25 **239.25**
Barter Island – 120.6 **120.6**
Bethel – **127.5** 125.2 372.0 **351.85**
Bettles – 124.6 **124.6** 352.0 **352.0**
Big Delta – 135.3 322.5
Big Lake – 133.7 **133.7** 279.6 **279.6**
Biorka Island – 126.1 **120.55** 335.5 **323.25**
Cape Lisburne – 119.65 **119.65** 363.25 **363.25**
Cape Newenham – **127.6** 124.2 **273.6** 251.1
Cape Romanzof – **132.5** 124.5 **124.5** **266.8**
Cold Bay – **125.45** 118.5 **322.4** 278.3
Deadhorse – 134.4 **134.4** 370.9 **370.9**
Dillingham – 132.75 (KING SALMON RCAG IS BACKUP WHEN DILLINGHAM RCAG OTS.) 282.35 (KING SALMON RCAG IS BACKUP WHEN DILLINGHAM RCAG OTS.)
Dutch Harbor – **132.15** 121.4 **268.7**
Fort Yukon – 135.0 **135.0** 132.7 **284.7** 225.4 **225.4**
Galbraith – 134.6
Galena – **134.55** 127.0 290.2 **278.8**
Gambell – 132.2 **132.2** 281.4 **281.4**
Gulkana – 127.9 **127.9** 119.5 **119.5** 360.8 **360.8** 317.5 **317.5**
Gunnuk Mountain – 132.175 **132.175** 285.5 **285.5**
Gustavus – 133.2 **133.2** 360.65 **360.65**
Hill 3265 – 135.6 **135.6** 233.7 **233.7**
Homer – **133.8** 125.9 **316.1** 270.3
Iliamna – 118.8
Johnstone Point – 119.3 **119.3**
Kenai – 125.7 **125.7** 123.9 **123.9** 119.7 **119.7** 379.1 **379.1** 273.45 **273.45** 269.0 **269.0**
King Salmon – **132.85** 124.8 (DILLINGHAM RCAG IS BACKUP WHEN KING SALMON RCAG OTS.) 354.0 (DILLINGHAM RCAG IS BACKUP WHEN KING SALMON RCAG OTS.) **322.35**
Kodiak – **132.65** 125.1 281.4 **273.55**
Kotzebue – **132.35** 119.2 **281.5** 263.0
Level Island – 118.0
Mc Grath – **133.05** 128.1 353.8 **319.15**
Middleton Island – 133.6 **124.05** **279.55** 269.4
Mount Robert Barron – 133.9 **133.9**
Murphy Dome – 133.1 **133.1** 120.9 **120.9** 319.2 **319.2** 285.4 **285.4**
Nikolski – 118.0 **118.0**
Nome – 133.3 **125.95** 290.4 **269.2**
Northway – 126.55 **126.55** 323.0 **323.0**
Nuiqsut – 119.4
Port Heiden – 132.9 **132.9** 288.3 **288.3**
Saint Marys – 124.0
Saint Paul Island – 128.2 **128.2** 119.1 **119.1** 339.8 **339.8** 338.3 **338.3**
Sand Point – 125.35 346.3
Shemya – 128.2 **128.2** 119.1 **119.1** 339.8 **339.8** 338.3 **338.3**
Sparrevohn – **134.3** 128.5 379.9 **351.8**
Talkeetna – 125.55 **125.55** 254.3 **254.3**
Unalakleet – 135.7 **135.7** 335.5 **335.5**
Yakutat – 119.0 **119.0** 263.1 **263.1**

CENTER REMARKS: DEADHORSE AREA ENROUTE RADAR NO NOTAM MAINTENANCE PERIOD 0600–0800 SUN. PRIMARY/SECONDARY RADAR 150 NM RADIUS FAI VOR UNAVBL 0330–0630 SAT & MON AND 1930–2330 SUN. KING SALMON AREA ENROUTE RADAR NO NOTAM MAINTENANCE PERIOD 1200–1400. MURPHY DOME (FAIRBANKS AREA) ENROUTE RADAR NO NOTAM MAINTENANCE PERIOD 1730–2130 SUN. MIDDLETON ISLAND ENROUTE RADAR NO MAINTENANCE PERIOD 0300–0500 SUNDAY. FAIRBANKS TERMINAL RADAR ALPHA–NUMERICS NO NOTAM MAINTENANCE PERIOD 0700–0800 WED. ANCHORAGE CENTER ENROUTE RADAR NO NOTAM MAINTENANCE PERIOD 0330–0630 SAT/SUN/MON. ENROUTE RADAR CONTROL PROVIDED TO TRANSPONDER EQUIPPED ACFT WITHIN 150 NM RADIUS OF DEADHORSE 1400 TO 1100Z/DT 1300 TO 1000Z/. EXCEPT FOR BOSWELL BAY; ALL FREQS ARE FOR HIGH AND LOW ALTITUDE USE. BOSWELL BAY IS LOW ONLY.

VHF frequencies available at Flight Service Stations and at their remote communication outlets (RCO's) are listed below for the coverage of this volume. 'T' indicates transmit only and 'R' indicates receive only. RCO's available at NAVAID's are listed after the NAVAID name. RCO's not at NAVAID's are listed by name.

BARROW RADIO 121.5 122.2 122.6 123.6 (LAA) (0600–2200; OT CTC FAIRBANKS FSS.)(AFIS FREQUENCY 132.15.)
POINT LAY RCO 122.4
WAINWRIGHT RCO 122.5

COLD BAY RADIO 121.5 122.2 123.6 (LAA) (0800–1745; OT CTC KENAI FSS.)
KING COVE RCO 122.25
NELSON LAGOON RCO 122.4
SAND POINT RCO 122.3
UNALASKA RCO 122.6

DEADHORSE RADIO 121.5 122.2 123.6 (LAA) (0600–2130)(AFIS FREQUENCY 118.4.)
BARTER ISLAND RCO 122.0
NUIQSUT RCO 122.5

DILLINGHAM RADIO 121.5 122.3 123.6 (LAA) (0745–2145; OT CTC KENAI FSS.)(LAA FREQUENCY 123.6. AFIS FREQUENCY 125.0.)
KEMUK MOUNTAIN RCO 122.55 (122.55 MONITORED BY ENA FSS WHEN DLG FSS CLSD.)

FAIRBANKS RADIO 121.5 122.2 124.1 132.65 243.0
ANAKTUVUK PASS RCO 122.15
ATIGUN RCO 122.6
BARROW RCO 121.5 122.2 122.6 123.6 (OPN HRS BARROW FSS CLSD.)
BETTLES RCO 121.5 122.2
BIG DELTA VORTAC 121.5 122.2 243.0
BLACK RAPIDS RCO 122.4
COLDFOOT RCO 122.0
DEADHORSE RCO 121.5 122.2 123.6 (OPN HRS DEADHORSE FSS CLSD.)
FISH RCO 122.1
FORT YUKON RCO 122.05
FRANKLIN BLUFFS RCO 122.1
FROZEN CALF RCO 121.1
GALENA RCO 121.5 122.2
HEALY RCO 122.4
HUSLIA VOR/DME 122.4
INDIAN MOUNTAIN RCO 122.6
KAARUK RCO 122.4
KOTZEBUE RCO 120.3 121.5 122.2 123.6 (OPN HRS KOTZEBUE FSS CLSD)
MCKINLEY PARK RCO 122.1
MINCHUMINA NDB 122.2
MURPHY DOME RCO 122.3
NENANA VORTAC 121.5 122.5
NOME RCO 121.5 122.2 122.45 123.6 243.0 (OPN HRS NOME FSS CLSD.)
NORTHWAY RCO 121.5 122.2 122.65 123.6 243.0 (OPN HRS NORTHWAY FSS CLSD)
RUBY RCO 122.25
TANANA RCO 121.5 122.65
YUKON RIVER BRIDGE RCO 122.15

HOMER RADIO 121.5 122.2 123.6 (LAA) 243.0 (0600–2130; OT CTC KENAI FSS.)(AFIS FREQUENCY 135.65.)

ILIAMNA RADIO 121.5 122.2 123.6 (0545–2145; 15 MAY–15 OCT; OTR TIMES CTC KENAI FSS.)(LAA FREQUENCY 123.6. AFIS FREQUENCY 134.95.)

JUNEAU RADIO 121.5 122.2 243.0

ALSEK RCO 121.4
CAPE SPENCER RCO 122.6
CORDOVA RCO 121.5 122.2 123.6 243.0 (FREQS 123.6 & 122.2 ALSO AVBL AT MERLE K MUDHOLE SMITH.)
DUNCAN CANAL RCO 122.1
GUSTAVUS RCO 121.5 122.65
HAINES RCO 121.5 122.6
HOONAH RCO 122.35
JOHNSTONE POINT VOR/DME 122.1
JUNEAU DOWNTOWN RCO 122.15
KETCHIKAN RCO 121.5 122.2 123.6 243.0 (OPN HRS KETCHIKAN FSS CLSD.)
LENA POINT RCO 122.25 (WX CAM)
MIDDLETON ISLAND RCO 121.5 122.05 243.0
MOUNT EYAK RCO 122.5 (FREQ 122.5 ALSO AVBL AT CORDOVA MUNI & CORDOVA MUNI SEAPLANE.)
NAKED ISLAND RCO 133.15
POTATO POINT RCO 122.4 (WX CAM)
ROBERT BARRON RCO 121.1
SITKA RCO 121.5 122.2 123.6 243.0 (OPN HRS SITKA FSS CLSD.)
SKAGWAY RCO 122.4
THOMPSON PASS RCO 122.55
VALDEZ RCO 121.5 122.2
WILLIAMS MOUNTAIN RCO 122.55 (OTS PERMLY.)
YAKATAGA RCO 122.5
YAKUTAT VOR/DME 121.5 122.2 123.6 243.0

KENAI RADIO 121.5 122.65 243.0 (LAA FREQUENCY 121.3 WHEN ATCT CLSD.)
AKHIOK RCO 122.6
ANCHORAGE RCO 122.2
ANIAK RCO 121.5 122.45 243.0
ANVIK RCO 122.4
BETHEL RCO 118.7 121.5 122.2 243.0
BIRCHWOOD RCO 121.5 122.3 122.55
CANTWELL RCO 122.5
CAPE NEWENHAM RCO 122.3
CAPE ROMANZOF RCO 122.1
CHIGNIK RCO 122.05
COLD BAY RCO 121.5 122.2 123.6 (OPN HRS COLD BAY FSS CLSD.)
DILLINGHAM RCO 121.5 122.3 123.6 (OPN HRS DILLINGHAM FSS CLSD.)
EMMONAK VOR/DME 122.55
FAREWELL RCO 122.1
GIRDWOOD RCO 122.15
GULKANA VOR/DME 121.5 122.2
HOMER VOR/DME 121.5 122.2 123.6 243.0 (OPERS HRS HOM FSS CLSD.)
HOOPER BAY VOR/DME 122.4
ILIAMNA NDB/DME 121.5 122.2 123.6 (OPN HRS ILIAMNA FSS CLSD.)
KING SALMON RCO 121.5 121.9 122.2 243.0 (FREQ 121.9 AVBL WHEN ATCT CLSD.)
KIPNUK RCO 122.6
KODIAK RCO 119.8 (AVBL WHEN ATCT CLSD) (119.8 AVBL WHEN ATCT CLSD.)
LAKE CLARK PASS EAST RCO 121.1 (WX CAM.)
LAKE CLARK PASS WEST RCO 121.2
MCGRATH RCO 121.5 122.2 122.65 123.6 (OPN HRS MCGRATH FSS*)
MEKORYUK RCO 122.0
NIKISHKA RCO 122.0
OLD HARBOR RCO 122.5
PALMER RCO 122.4 123.6 (OPERS HRS FSS CLSD)
PAXSON RCO 122.3
PILLAR MOUNTAIN RCO 122.1
PLATINUM RCO 122.5
PORT HEIDEN RCO 122.0
PRIBILOF RCO 122.5
QUINHAGAK RCO 122.1
SEWARD RCO 122.6
SOLDOTNA RCO 122.35
SPARREVOHN RCO 122.5
ST MARYS NDB 122.35
ST PAUL ISLAND NDB/DME 122.45
STUCK RCO 122.1
TAHNETA PASS RCO 122.4
TALKEETNA RCO 121.5 122.2 123.6 (WHEN TKA FSS CLSD)
TATALINA RCO 122.3
TOGIAK NDB/DME 122.25
WOODY ISLAND RCO 121.5 122.2

KETCHIKAN RADIO 121.5 122.2 123.6 243.0 (0615–2115; OT CTC JUNEAU FSS)(LAA FREQUENCY 123.6. AFIS FREQUENCY 134.45.)
ANNETTE ISLAND RCO 122.4
BOCA DE QUADRA RCO 119.3
HIGH MOUNTAIN RCO 121.2 121.5 243.0
KLAWOCK RCO 122.25
RATZ MOUNTAIN RCO 122.15
SUNNY HAY MOUNTAIN RCO 120.9

KOTZEBUE RADIO 120.3 121.5 122.2 123.6 (LAA) (0700–0000; OT CTC FAIRBANKS FSS.)(AFIS FREQUENCY 135.45.)
AMBLER RCO 122.0
BUCKLAND RCO 122.3
CAPE LISBURNE RCO 122.3
DEERING RCO 122.25
KIVALINA RCO 122.55 (0700–0000 OT CTC FAIRBANKS FSS.)
NOATAK NDB/DME 122.4
POINT HOPE RCO 122.25
SELAWIK VOR/DME 122.5

MCGRATH RADIO 121.5 122.2 122.65 123.6 (LAA) (0800–1800; 1 MAY–30 SEPT; OT CTC KENAI FSS.)

NOME RADIO 121.5 122.2 122.45 123.6 (LAA) 243.0 (0715–2245; OT CTC FAIRBANKS FSS.)(AFIS FREQUENCY 119.925.)
BREVIG MISSION RCO 135.6
ELIM RCO 122.15
GAMBELL RCO 122.0
GOLOVIN RCO 122.05
KOYUK RCO 122.35
NEWTON PEAK RCO 122.5
SAVOONGA RCO 122.3
SHISHMAREF RCO 122.4
TIN CITY RCO 122.6
UNALAKLEET RCO 121.5 122.3

NORTHWAY RADIO 121.5 122.2 122.65 123.6 (LAA) 243.0 (0815–1745; 1 MAY–30 SEP; OT CTC FAIRBANKS FSS)
EAGLE RCO 122.3
KNOB RIDGE RCO 122.6 (WX CAM)
MENTASTA RCO 121.4
TAYLOR MOUNTAIN RCO 121.35
TOK RCO 122.4

PALMER RADIO 122.4 123.6 (LAA) 134.75 (LAA) (0800–1800; OT CTC KENAI FSS.)(AFIS FREQUENCY 134.75.)
CHICKALOON RCO 126.45

SITKA RADIO 121.5 122.2 123.6 (LAA) 243.0 (0600–2145 OT CTC JUNEAU FSS)(AFIS FREQUENCY 135.9.)
ANGOON RCO 122.4
BIORKA ISLAND VORTAC 122.3
FINGER MOUNTAIN RCO 120.4
GUNNUK MOUNTAIN RCO 122.175
KAKE RCO 122.65 (0600–2145 OTR HRS C*)
KRUZOF RCO 122.05
KUIU RCO 121.3
LEVEL ISLAND VOR/DME 122.3
PETERSBURG RCO 122.35
WRANGELL RCO 122.45

TALKEETNA RADIO 121.5 122.2 123.6 (LAA) (15 SEP–14 APR 0800–1745;15 APR–14 SEP 0800–2000; OT CTC KENAI FSS)(AFIS FREQUENCY 135.2.)

Checkpoints consist of certified radials that should be received at specific points on the airport surface.

Should an error in excess of ±4° be indicated through use of the ground check, IFR flight should not be attempted without first correcting the source of the error. CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.
CAUTION: No correction other than the "correction card" figures supplied by the manufacturer should be applied in making these VOR receiver checks.

VOR RECEIVER CHECKPOINTS

Station	Radial	Distance	Location
Eareckson AS	096°	1.8 NM	Twy in front of twr.
Ladd AAF	058°	10.8 NM	South ramp adj to Rwy 25 touchdown.

VOR TEST FACILITIES (VOT)

City/Facility Name (Ident)	Freq.	Remarks
Anchorage/Anchorage (ANC)	108.4	Unusbl east of Twy K South of Twy M to Twy R.
Anchorage/Merrill (MRI)	111.0	
Juneau/Juneau (JNU)	111.0	
Ketchikan/Ketchikan (ECH)	111.0	

The following tabulation lists all known Parachute Jump sites in Alaska. Unless otherwise indicated, all activities are conducted during daylight hours and under VFR conditions. NOTAM D's may be issued to advise users of specific dates and times if outside the times/altitudes that are published. The busiest periods of activity are normally on weekends and holidays, but jumps can be expected at anytime during the week at the locations listed. Parachute jumping areas within restricted airspace are not listed.

All times are local and altitudes MSL unless otherwise specified.
Contact facility and frequency is listed at the end of the remarks, when available, in bold face type.
Refer to Federal Aviation Regulations Part 105 for required procedures relating to parachute jumping.
Organizations desiring listing of their jumping activities in this publication should contact the nearest FSS, tower, or ARTCC.
Qualified parachute jumping areas will be depicted on the appropriate visual chart(s).

Note: (c) in this publication indicates that the parachute jumping area is charted.

To qualify for charting, a jump area must meet the following criteria:
(1) Been in operation for at least 1 year.
(2) Log 1,000 or more jumps each year.

In addition, parachute jumping areas can be nominated by FAA Regions if special circumstances require charting.

LOCATION	DISTANCE AND RADIAL FROM NEAREST VOR/VORTAC OR GEOGRAPHIC COORDINATES	MAXIMUM ALTITUDE	REMARKS
	ALASKA		
Anchorage	14.4 NM; 034° Anchorage	12,500	SR–SS; weekends. Jumps over Pippel Field.
Anchorage, Campbell Airstrip	4.8 NM; 077° Anchorage	2,000	SR–SS; Unscheduled. **Ted Stevens Anchorage Intl Twr 126.4**.
(c) Anchorage, Girdwood	27.8 NM; 098° Anchorage	12,500	1 NM radius. Fri–Sun. **Ted Stevens Anchorage Intl Twr 126.4**.
Anchorage, Malemute	14.1 NM; 021° Anchorage	5,000	USAF.
Fairbanks, Birch Hill	10 NM; 042° Fairbanks	6,000	3 NM radius. Apr 1–Oct 31 SR–SS.
Fairbanks, Chena Lake Flood Plain	20 NM; 070° Fairbanks	5,000	5 NM radius. SR–SS Apr 1–Oct 31.
Fairbanks, Firebird	36 NM; 079° Fairbanks	3,000	Unscheduled.
(c) Fairbanks, Husky Drop Zone	27 NM; 067° Fairbanks	3,500	Continuous. Active Army & USAF. **Fairbanks Intl Twr 126.5**.
Fairbanks, Leslie's Field	13 NM; 039° Fairbanks	5,000	Unscheduled.
Fairbanks, Nordale Jumpspot/Little Chewa Bridge	15 NM; 056° Fairbanks	5,000	5 NM radius. Apr 1–Oct 31 SR–SS.
Fairbanks, Quartz Creek/Nome Creek Road	47 NM; 020° Fairbanks	6,000	5 NM radius. Apr 1–Oct 31 SR–SS.
McGrath	0 NM; 341° McGrath	5,000	Jun–Sep; Irregular hrs. Jumping over McGrath VORTAC.
(c) Palmer	61-35-41.7000 N 149-05-19.4000 W	10,000	2 NM radius. Apr-Oct SR-SS. CTAF 123.6. **Anchorage Apch Ctrl TRACON 118.6**
Palmer, Fairgrounds	25 NM; 067° Big Delta	12,500	SR–SS; During State Fair.
(c) Wasille/Adventure	17 NM; 067° Big Lake	14,000	1 NM radius. Apr–Dec SR–SS. **Ted Stevens Anchorage Intl Twr 118.6**.

RADIO NAVIGATIONAL AIDS BY IDENT

IDENT	NAME
ACE	Kachemak (NDB)
ADK	Mount Moffet (NDB/DME)
AFE	Kake (NDB)
AKN	King Salmon (VORTAC)
ALJ	Orca Bay (NDB)
ANI	Aniak (NDB)
ANN	Annette Island (VOR/DME)
BET	Bethel (VORTAC)
BGQ	Big Lake (VORTAC)
BIG	Big Delta (VORTAC)
BKA	Biorka Island (VORTAC)
BRW	Barrow (VOR/DME)
BTT	Bettles (VOR/DME)
BVS	Skagit/Bay View (NDB)
CDB	Cold Bay (VORTAC)
CGL	Coghlan Island (NDB)
CMJ	Clam Cove (NDB)
CRN	Cairn Mountain (NDB)
CUN	Chena (NDB)
CZF	Cape Romanzof (NDB)
DJN	Delta Junction (NDB)
DLG	Dillingham (VOR/DME)
DUT	Dutch Harbor (NDB/DME)
EAV	Evansville (NDB)
EDF	Elmendorf AFB (TACAN)
EEF	Elephant (NDB)
EHM	Cape Newenham (NDB)
EIL	Eielson AFB (TACAN)
ELF	Elfee (NDB)
ENA	Kenai (VOR/DME)
ENM	Emmonak (VOR/DME)
ENN	Nenana (VORTAC)
FAI	Fairbanks (VORTAC)
FDV	Fort Davis (NDB)
FHR	Friday Harbor (NDB)
FYU	Fort Yukon (VORTAC)
GAL	Galena (VOR/DME)
GAM	Gambell (NDB/DME)
GCR	Glacier River (NDB)
GKN	Gulkana (VOR/DME)
HBT	Borland (NDB/DME)
HHM	Hotham (NDB)
HOM	Homer (VOR/DME)
HPB	Hooper Bay (VOR/DME)
HSL	Huslia (VOR/DME)
ICW	Ice Pool (NDB)
ILI	Iliamna (NDB/DME)
JOH	Johnstone Point (VOR/DME)
LUR	Cape Lisburne (NDB)
LVD	Level Island (VOR/DME)
MCG	McGrath (VORTAC)
MDO	Middleton Island (VOR/DME)
MHM	Minchumina (NDB)
MNL	Mineral Creek (NDB)
MOS	Moses Point (VOR/DME)
OCC	Ocean Cape (NDB)
ODK	Kodiak (VOR/DME)
OLT	Soldotna (NDB/DME)
OME	Nome (VOR/DME)
ORT	Northway (VORTAC)
OSE	Oscarville (NDB)
OTZ	Kotzebue (VOR/DME)
PDN	Port Heiden (NDB/DME)
RWO	Woody Island (NDB)
SCC	Deadhorse (VOR/DME)
SIT	Sitka (NDB)
SMA	St. Marys (NDB)
SPY	Saint Paul Island (NDB/DME)
SQA	Sparrevohn (VOR/DME)
SQM	Sumner Strait (NDB)
SRI	Pribilof (NDB)
SSR	Sisters Island (VORTAC)
SYA	Shemya AFB (VORTAC) (NDB)
TAL	Tanana (VOR/DME)
TED	Anchorage (VOR/DME)
TKA	Talkeetna (VOR/DME)
TNC	Tin City (NDB)
TOG	Togiak (NDB/DME)
ULL	Kukuliak (VOR/DME)
UNK	Unalakleet (VOR/DME)
UTO	Utopia Creek (NDB/DME)
WLK	Selawik (VOR/DME)
YAK	Yakutat (VOR/DME)

AIRPORTS BY ICAO LOCATION INDICATOR

IDENT	NAME
PAAK	ATKA
PAAL	PORT MOLLER
PAAN	GOLD KING CREEK
PAAP	PORT ALEXANDER SEAPLANE
PAAQ	PALMER MUNI
PAAT	CASCO COVE CGS
PABA	BARTER ISLAND
PABE	BETHEL
PABG	BELUGA
PABI	ALLEN AAF
PABL	BUCKLAND
PABM	BIG MOUNTAIN
PABP	BADAMI
PABR	WILEY POST/WILL ROGERS MEM
PABT	BETTLES
PABU	BULLEN POINT AIR FORCE STATION
PABV	BIRCHWOOD
PACD	COLD BAY
PACE	CENTRAL
PACH	CHUATHBALUK
PACI	CHALKYITSIK
PACK	CHEFORNAK
PACL	CLEAR
PACM	SCAMMON BAY
PACR	CIRCLE CITY
PACS	CAPE SARICHEF
PACV	MERLE K (MUDHOLE) SMITH
PACX	COLDFOOT
PACZ	CAPE ROMANZOF LRRS
PADE	DEERING
PADK	ADAK
PADL	DILLINGHAM
PADM	MARSHALL DON HUNTER SR
PADQ	KODIAK
PADU	UNALASKA
PADY	KONGIGANAK
PAED	ELMENDORF AFB
PAEE	EEK
PAEG	EAGLE
PAEH	CAPE NEWENHAM LRRS
PAEI	EIELSON AFB
PAEL	ELFIN COVE SEAPLANE
PAEM	EMMONAK
PAEN	KENAI MUNI
PAEW	MERTARVIK
PAFA	FAIRBANKS INTL
PAFB	LADD AAF
PAFE	KAKE
PAFL	TIN CREEK
PAFM	AMBLER
PAFR	BRYANT AAF
PAFS	NIKOLAI
PAFW	FAREWELL
PAGA	EDWARD G PITKA SR
PAGB	GALBRAITH LAKE
PAGG	KWIGILLINGOK
PAGH	SHUNGNAK
PAGK	GULKANA
PAGL	GOLOVIN
PAGM	GAMBELL
PAGN	ANGOON SEAPLANE
PAGO	BIG LAKE
PAGS	GUSTAVUS

IDENT	NAME
PAGY	SKAGWAY
PAGZ	GRANITE MOUNTAIN AS
PAHC	HOLY CROSS
PAHL	HUSLIA
PAHN	HAINES
PAHO	HOMER
PAHP	HOOPER BAY
PAHU	HUGHES
PAHV	HEALY RIVER
PAHX	SHAGELUK
PAHY	HYDABURG SEAPLANE
PAIG	IGIUGIG
PAII	EGEGIK
PAIK	BOB BAKER MEM
PAIL	ILIAMNA
PAIM	INDIAN MOUNTAIN LRRS
PAIN	MC KINLEY NATIONAL PARK
PAIW	WALES
PAJC	CHIGNIK
PAJN	JUNEAU INTL
PAJZ	KOLIGANEK
PAKA	TATITLEK
PAKD	KODIAK MUNI
PAKF	FALSE PASS
PAKH	AKHIOK
PAKI	KIPNUK
PAKK	KOYUK ALFRED ADAMS
PAKL	KULIK LAKE
PAKN	KING SALMON
PAKP	ANAKTUVUK PASS
PAKT	KETCHIKAN INTL
PAKU	UGNU–KUPARUK
PAKV	KALTAG
PAKW	KLAWOCK
PAKY	KARLUK
PALB	LARSEN BAY
PALG	KALSKAG
PALH	LAKE HOOD SEAPLANE
PALP	ALPINE AIRSTRIP
PALR	CHANDALAR LAKE
PALU	CAPE LISBURNE LRRS
PAMB	MANOKOTAK
PAMC	MC GRATH
PAMD	MIDDLETON ISLAND
PAMH	MINCHUMINA
PAMK	ST MICHAEL
PAML	MANLEY HOT SPRINGS
PAMM	METLAKATLA SEAPLANE
PAMO	MOUNTAIN VILLAGE
PAMR	MERRILL FLD
PAMX	MC CARTHY
PAMY	MEKORYUK
PANA	NAPAKIAK
PANC	TED STEVENS ANCHORAGE INTL
PANI	ANIAK
PANN	NENANA MUNI
PANO	NONDALTON
PANR	FUNTER BAY SEAPLANE
PANT	ANNETTE ISLAND
PANU	NULATO
PANV	ANVIK
PANW	NEW STUYAHOK
PAOB	KOBUK
PAOC	PORTAGE CREEK
PAOH	HOONAH

AIRPORTS BY ICAO LOCATION INDICATOR

IDENT	NAME
PAOM	NOME
PAOO	TOKSOOK BAY
PAOR	NORTHWAY
PAOT	RALPH WIEN MEM
PAOU	NELSON LAGOON
PAPB	ST GEORGE
PAPC	PORT CLARENCE CGS
PAPE	PERRYVILLE
PAPG	PETERSBURG JAMES A. JOHNSON
PAPH	PORT HEIDEN
PAPK	NAPASKIAK
PAPM	PLATINUM
PAPN	PILOT POINT
PAPO	POINT HOPE
PAPR	PROSPECT CREEK
PAQH	QUINHAGAK
PAQT	NUIQSUT
PARC	ARCTIC VILLAGE
PARS	RUSSIAN MISSION
PARY	RUBY
PASA	SAVOONGA
PASC	DEADHORSE
PASD	SAND POINT
PASH	SHISHMAREF
PASI	SITKA ROCKY GUTIERREZ
PASK	SELAWIK
PASL	SLEETMUTE
PASM	ST MARY'S
PASN	ST PAUL ISLAND
PASO	SELDOVIA
PASP	SHEEP MOUNTAIN
PAST	SUMMIT
PASV	SPARREVOHN LRRS
PASW	SKWENTNA
PASX	SOLDOTNA
PASY	EARECKSON AS
PATA	RALPH M CALHOUN MEM
PATC	TIN CITY LRRS
PATE	TELLER
PATG	TOGIAK
PATK	TALKEETNA
PATL	TATALINA LRRS
PATQ	ATQASUK EDWARD BURNELL SR MEM
PATW	CANTWELL
PAUK	ALAKANUK
PAUM	UMIAT
PAUN	UNALAKLEET
PAUO	WILLOW
PAVA	CHEVAK
PAVC	KING COVE
PAVD	VALDEZ PIONEER FIELD
PAVE	VENETIE
PAVL	KIVALINA
PAWB	BEAVER
PAWD	SEWARD
PAWG	WRANGELL
PAWI	WAINWRIGHT
PAWM	WHITE MOUNTAIN
PAWN	NOATAK
PAWR	WHITTIER
PAWS	WASILLA
PAWT	WAINWRIGHT AS
PAXK	PAXSON
PAYA	YAKUTAT
PAZA	ANCHORAGE CENTER
PFAK	AKIAK
PFAL	ALLAKAKET
PFCB	CHENEGA BAY
PFCL	CLARKS POINT
PFEL	ELIM
PFKA	KASIGLUK
PFKK	KOKHANOK
PFKO	KOTLIK
PFKT	BREVIG MISSION
PFKU	KOYUKUK
PFKW	KWETHLUK
PFNO	ROBERT/BOB/CURTIS MEM
PFSH	SHAKTOOLIK
PFTO	TOK JUNCTION
PFYU	FORT YUKON
PFWS	SOUTH NAKNEK NR 2
PPIT	NUNAPITCHUK
PPIZ	POINT LAY LRRS

MARINE RADIO BEACONS

For station identification simple characteristics consisting of combinations of dots and dashes are used. These combinations and the lengths of the dots, dashes and spaces are chosen for ease of identification. The combinations are not transmitted as morse code and are not referred to as such, but as: (—); (—·); etc., depending on the combination used. All radiobeacons superimpose the characteristic on a carrier which is on continuously during the period of transmission. This extends the usefulness of marine radiobeacons to aircraft employing automatic radio direction finders.

FAA, ALASKA FLIGHT SERVICE STATIONS (FSS) SPECIAL REPORTING SERVICE

This "Special Reporting" will provide for air/ground reporting on a prearranged schedule, whenever a pilot is planning a flight over any large body of water, swamp (wetlands), or mountainous terrain.

- Contact time intervals and/or geographical locations should be agreed upon by the pilot and the FSS. Ten minute time intervals are desirable but due to limited RCO coverage, may not always be possible.
- If contact is lost for more than 15 minutes, or other agreed upon time interval, Search and Rescue will be initiated.
- Arrangements for this service can be made during preflight briefing or while in flight.
- A flight plan is desirable but not mandatory.
- Air/ground communications capabilities must be evaluated for each request for service.

ENHANCED SPECIAL REPORTING SERVICE (eSRS)

Similar to the original Special Reporting Service and in response to customer requests, eSRS provides that Flight Service will initiate SAR action upon receipt of electronic distress alerting messages, transmitted via satellite from GPS tracking devices located on board an aircraft.

Currently, aircraft utilizing SPOT™, Spidertracks™ and DeLorme inReach™ units are included in the program. Other units may be evaluated and accepted into the program as customer demand requires.

eSRS is a value–added Search and Rescue (SAR) tool. It is intended to enhance and expedite SAR for aircraft on a flight plan. eSRS does not replace a flight plan.

Alert notifications are transmitted to FSS directly, and are intended to reduce the response time upon receipt of an emergency message in comparison to waiting for a flight plan time to expire. eSRS may also provide added protection in the event of ELT failure.

eSRS procedures are intended for use with VFR flight plans originating and terminating within Alaska.

If you would like more information or wish to participate in the eSRS program please call one of the FSS's below and talk to a staff support specialist:

- Fairbanks Flight Service Station – (907) 474–0388
- Juneau Flight Service Station – (907) 586–7382
- Kenai Flight Service Station – (907) 283–3735

Additional information is available at: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/fs/alaskan/alaska/esrsak/index.cfm

OPR: Alaska Flight Services April 3, 2014

MILITARY TRAINING ROUTES

The DOD Flight Information Publication AP/1B provides textual and graphic descriptions and operating instructions for all military training routes (IR, VR, SR) and refueling tracks/anchors. Complete and more comprehensive information relative to policy and procedures for IRs and VRs is published in FAA Handbook 7610.4 (Special Military Operations) which is agreed to by the DOD and therefore directive for all military flight operations. The AP/1B is the official source of route data for military users.

Special Use Airspace Information Service (SUAIS)

SUAIS is a system operated by the United States Air Force (USAF) under agreement with the Federal Aviation Administration (FAA) Alaskan Region to assist pilots with flight planning and situational awareness while operating in or near certain Military Operations Areas (MOA) and Restricted Areas in interior Alaska. SUAIS provides a means for civil pilots to obtain "near real-time" flight information regarding military training flight activity and USAF pilots to obtain civilian pilots location and route of flight. Additionally, SUAIS provides information on Army artillery firing and known helicopter operations. SUAIS is available on VHF frequency 125.3 & 126.3 MHz east of Fairbanks and near Delta Junction in the Yukon 1, 2 & 3 MOAs, as well as in Birch, Buffalo, Eielson, Fox 3 Low, Paxon Low and Delta MOAs. Additionally, the USAF provides service to anyone within radio range operating near or within R2202, R2205, R2211, and the military training routes (MTR) in this geographic area.

SUAIS is available 24 hours a day. Direct communication with SUAIS personnel can be made by telephone or VHF radio whenever scheduled USAF aircraft are operating in active MOAs or Restricted Areas. The USAF flying window varies between 0700-0000 hours local time, and information regarding daily activation times is available in advance by contacting Eielson Range Control (ERC) at 1-800-758-8723, 1-907-372-6913 or on VHF frequencies 125.3 & 126.3 MHz. Recorded SUAIS information is provided on these frequencies and phone numbers when ERC SUAIS personnel are not on duty.

SUAIS/ERC cannot provide Air Traffic Control (ATC) services: i.e. It cannot provide IFR service or file flight plans. SUAIS is limited to providing information regarding MOA, MTR and Restricted Area airspace activation status and scheduling information. SUAIS/ERC can also provide the approximate positions of civil and military aircraft operating within the MOAs and Restricted Areas identified earlier. Eielson Range Control has radar sites located near Taylor Mountain and R2205. The radar picture from these sites is available to augment SUAIS radio coverage and, subject to radar line of sight limitations, provides radar coverage from Fairbanks to south of Delta Junction in the areas of the Alaska and Richardson Highways. However, the ability to see small aircraft without transponders is limited.

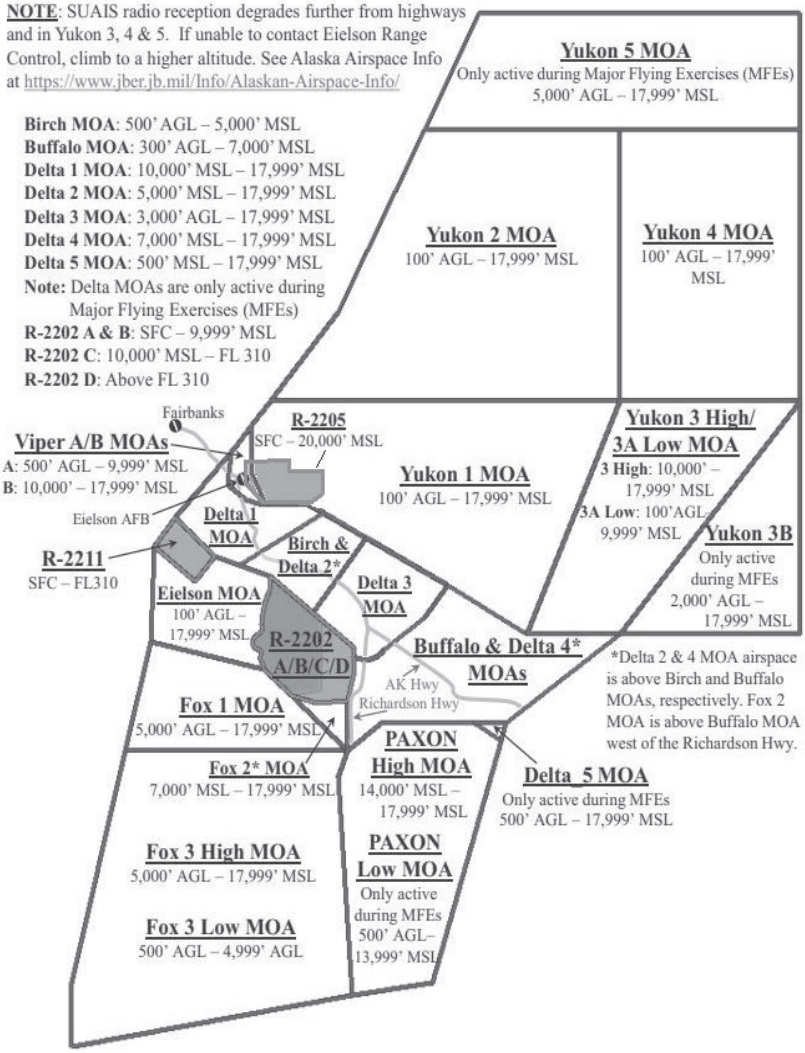
The service is provided as a supplement, and is not intended to replace ATC services provided by the FAA. Detailed information including specific frequency locations may be obtained from the USAF internet site in the form of a "Special Use Airspace Information Service (SUAIS) Pamphlet" at: **https://www.jber.jb.mil/Info/Alaskan-Airspace-Info/**

Pilots should contact the nearest Flight Service Station for the latest NOTAM information concerning SUA and MTR use. Comments regarding this service may be directed to:

354th Range Squadron
Airspace Management Office
354 Broadway Ave, Ste 288
Eielson AFB, AK 99702
(907) 377-5921/5922
alaskamilitaryairspace@us.af.mil

Office of Primary Responsibility (OPR): 354th Range Squadron Airspace Management Office
Contact Information: ALASKAMILITARYAIRSPACE@US.AF.MIL
Amended: August 2023

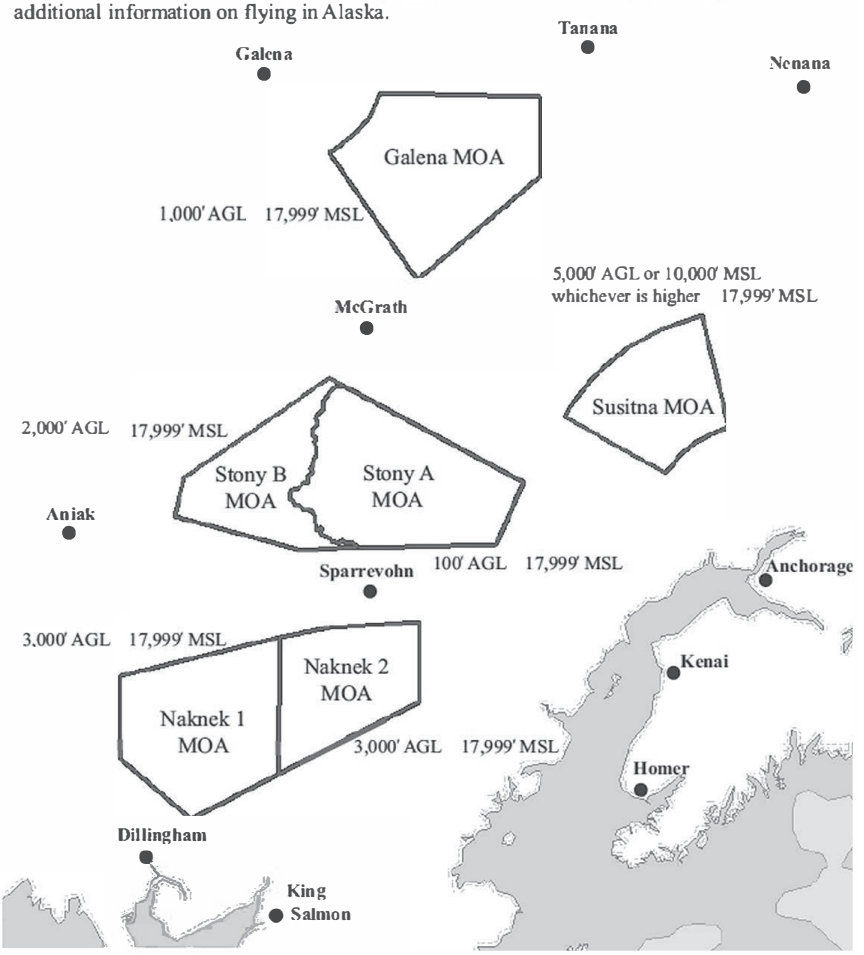
Alaska
Interior Special Use Airspace



Office of Primary Responsibility (OPR): 354th Range Squadron Airspace Management Office
Contact Information: ALASKAMILITARYAIRSPACE@US.AF.MIL
Amended: August 2023

ALASKA
Western Special Use Airspace

Note: The Special Use Airspace Information Service (SUAIS) is not provided in this region. See Alaska Airspace Info at https://www.jber.jb.mil/Info/Alaskan_Airspace_Info/ for additional information on flying in Alaska.



Office of Primary Responsibility (OPR): 354th Range Squadron Airspace Management Office
Contact Information: ALASKAMILITARYAIRSPACE@US.AF.MIL
Amended: August 2023

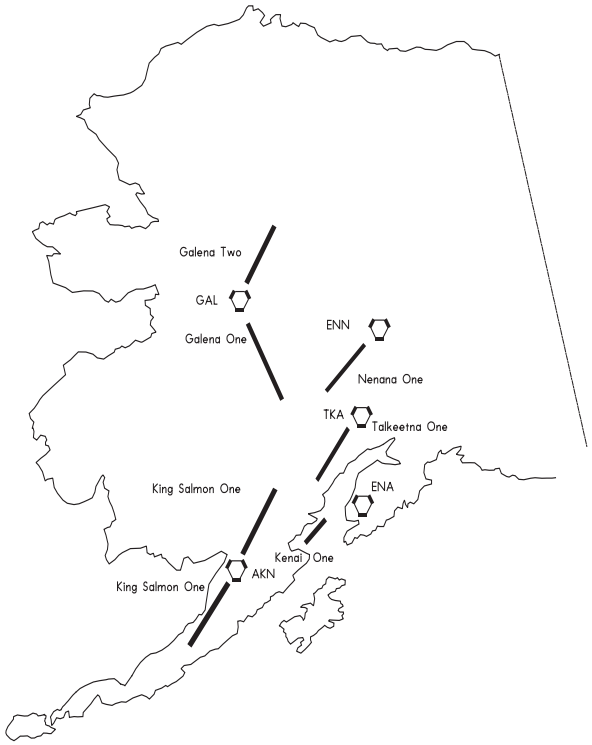
MILITARY AERIAL REFUELING TRACKS

Military Aircraft conduct refueling operations in Alaska below 10,000' MSL in VFR conditions on the routes listed below. A notice to airmen (NOTAM) will be issued at least 24 hours prior to the use of these routes. Refueling operations will be conducted about twice a month on each route for a maximum period of three hours. Only one HC-130 tanker and two HH-60 helicopters will engatge in refueling operations on any given route. Refueling aircraft may use Mode 3, Code 4000 for discrete IFF operations. HC-130 tanker will monitor 122.9 (Valley Traffic).

Routes - Name, Navaid, Radial. Distance

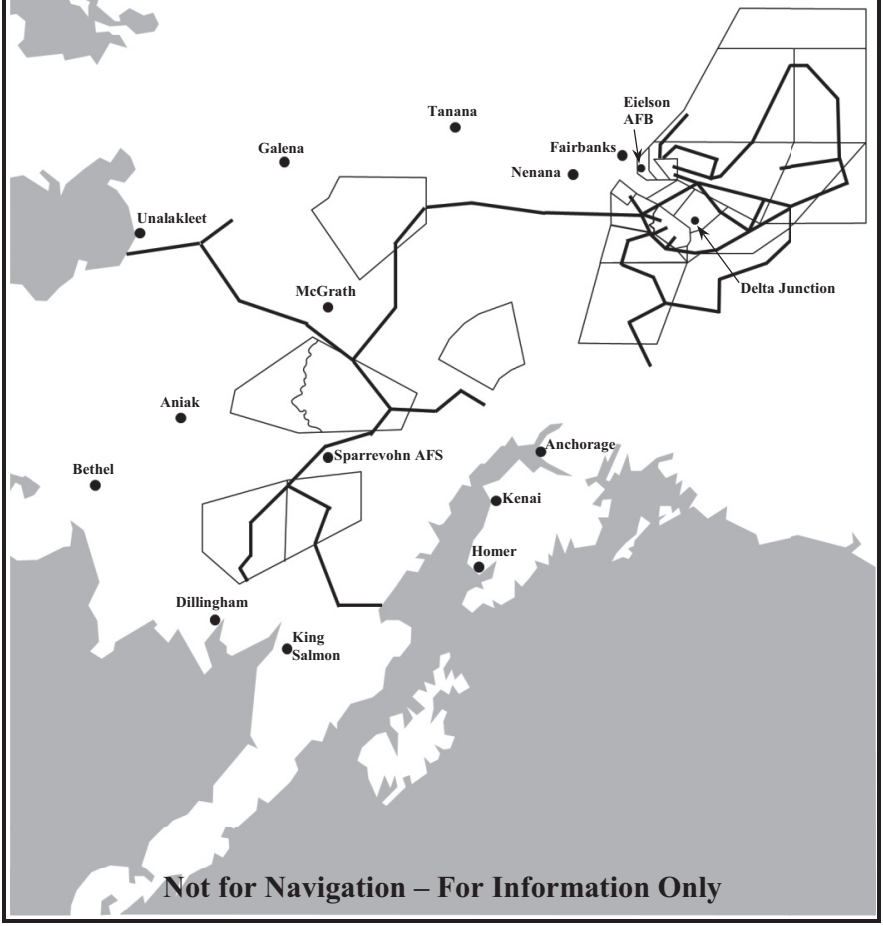
* Talkeetna One TKA 197/15-90	Galena One GAL 125/15-150	Kenai One ENA 200/50-100
Galena Two GAL 360/15-90	Nenana One ENN 200/15-90	King Salmon One AKN 180/15-90
King Salmon Two AKN 360/15-90		

*Talkeetna One Route will be utilized on a regular weekly basis between 1000-1500 and 1800-2300 hours local time on Monday through Friday.



Alaskan Military Training Routes (IR & VR)

This graphic identifies IFR and VFR MTR ground tracks, and includes Military Operations Areas & Restricted Areas. Operations on MTRs are conducted in accordance with instrument and visual flight rules, at speeds as high as 540 Kts. Current information concerning the route use is available from the appropriate Flight Service Station within 100 miles of the route, by Anchorage Center, or the Special Use Airspace Information Service (see SUAIS page in this supplement for more information on interior routes near Eielson AFB). Most MTRs are charted on Enroute Low Altitude IFR charts and all are charted on Sectionals. Contact 11 AF Airspace and Ranges at (907) 552-2430/3636/5715 for information regarding management or scheduling of Alaskan MTRs



Not for Navigation – For Information Only

DISTANCES

METERS/FEET		
MTRS	FT/MTRS	FT
0.305	1	3.281
0.610	2	6.562
0.914	3	9.843
1.219	4	13.123
1.524	5	16.404
1.829	6	19.685
2.134	7	22.966
2.438	8	26.247
2.743	9	29.528
3.048	10	32.808
6.096	20	65.617
9.144	30	98.425
12.192	40	131.233
15.240	50	164.042
18.288	60	196.850
21.336	70	229.658
24.384	80	262.467
27.432	90	295.275
30.480	100	328.083
60.960	200	656.2
91.440	300	984.3
121.920	400	1312.3
152.400	500	1640.4
304.800	1000	3280.8
609.601	2000	6561.7
914.402	3000	9842.5
1219.202	4000	13123.3
1524.003	5000	16404.2

NAUTICAL MILES TO		
KM	NM	SM
0.185	0.1	0.115
0.370	0.2	0.230
0.556	0.3	0.345
0.741	0.4	0.460
0.926	0.5	0.575
1.111	0.6	0.690
1.296	0.7	0.806
1.482	0.8	0.921
1.667	0.9	1.036
1.85	1	1.15
3.70	2	2.30
5.56	3	3.45
7.41	4	4.60
9.26	5	5.75
11.11	6	6.90
12.96	7	8.06
14.82	8	9.21
16.67	9	10.36
18.52	10	11.51

NAUTICAL MILES TO		
KM	NM	SM
37.04	20	23.02
55.56	30	34.52
74.08	40	46.03
92.60	50	57.54
111.12	60	69.05
129.64	70	80.55
148.16	80	92.06
166.68	90	103.57
185.20	100	115.08
370.40	200	230.16
555.60	300	345.23
740.80	400	460.31
926.00	500	575.39
1111.20	600	690.47
1296.40	700	805.54
1481.60	800	920.62
1666.80	900	1035.70
1852.00	1000	1150.78

MTRS	NM
100	0.054
500	0.270
1000	0.540
2000	1.080
3000	1.620
4000	2.160

MTRS	NM
5000	2.700
6000	3.240
7000	3.780
8000	4.320
9000	4.860
10,000	5.399

MILLIBARS TO INCHES

mb	0	1	2	3	4	5	6	7	8	9
	INCHES									
940	27.76	27.79	27.82	27.85	27.88	27.91	27.94	27.96	27.99	28.02
950	28.05	28.08	28.11	28.14	28.17	28.20	28.23	28.26	28.29	28.32
960	28.35	28.38	28.41	28.44	28.47	28.50	28.53	28.56	28.59	28.61
970	28.64	28.67	28.70	28.73	28.76	28.79	28.82	28.85	28.88	28.91
980	28.94	28.97	29.00	29.03	29.06	29.09	29.12	29.15	29.18	29.21
990	29.23	29.26	29.29	29.32	29.35	29.38	29.41	29.44	29.47	29.50
1000	29.53	29.56	29.59	29.62	29.65	29.68	29.71	29.74	29.77	29.80
1010	29.83	29.85	29.88	29.91	29.94	29.97	30.00	30.03	30.06	30.09
1020	30.12	30.15	30.18	30.21	30.24	30.27	30.30	30.33	30.36	30.39
1030	30.42	30.45	30.47	30.50	30.53	30.56	30.59	30.62	30.65	30.68
1040	30.71	30.74	30.77	30.80	30.83	30.86	30.89	30.92	30.95	30.98
1050	31.01	31.04	31.07	31.10	31.12	31.15	31.18	31.21	31.24	31.27

TEMPERATURE SCALES IN DEGREES

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
-40	-40.0	-28	-18.4	-16	3.2	-4	24.8	8	46.4	20	68.0	32	89.6	44	111.2
-39	-38.2	-27	-16.6	-15	5.0	-3	26.6	9	48.2	21	69.8	33	91.4	45	113.0
-38	-36.4	-26	-14.8	-14	6.8	-2	28.4	10	50.0	22	71.6	34	93.2	46	114.8
-37	-34.6	-25	-13.0	-13	8.6	-1	30.2	11	51.8	23	73.4	35	95.0	47	116.6
-36	-32.8	-24	-11.2	-12	10.4	0	32.0	12	53.6	24	75.2	36	96.8	48	118.4
-35	-31.0	-23	-9.4	-11	12.2	1	33.8	13	55.4	25	77.0	37	98.6	49	120.2
-34	-29.2	-22	-7.6	-10	14.0	2	35.6	14	57.2	26	78.8	38	100.4	50	122.0
-33	-27.4	-21	-5.8	-9	15.8	3	37.4	15	59.0	27	80.6	39	102.2		
-32	-25.6	-20	-4.0	-8	17.6	4	39.2	16	60.8	28	82.4	40	104.0		
-31	-23.8	-19	-2.2	-7	19.4	5	41.0	17	62.6	29	84.2	41	105.8		
-30	-22.0	-18	-0.4	-6	21.2	6	42.8	18	64.4	30	86.0	42	107.6		
-29	-20.2	-17	1.4	-5	23.0	7	44.6	19	66.2	31	87.8	43	109.4		

Minutes			Tenths of an Hour
1	or	2	0
3	thru	8	.1
9	thru	14	.2
15	thru	20	.3
21	thru	26	.4
27	thru	33	.5
34	thru	39	.6
40	thru	45	.7
46	thru	51	.8
52	thru	57	.9
58	thru	60	Next Whole Hour

ICAO INTERNATIONAL PHONETIC ALPHABET/MORSE CODE

A	· –	Alfa	(AL–FAH)
B	– · · ·	Bravo	(BRAH–VOH)
C	– · – ·	Charlie	(CHAR–LEE) (or SHAR–LEE)
D	– · ·	Delta	(DELL–TAH)
E	·	Echo	(ECK–OH)
F	· · – ·	Foxtrot	(FOKS–TROT)
G	– – ·	Golf	(GOLF)
H	· · · ·	Hotel	(HOH–TEL)
I	· ·	India	(IN–DEE–AH)
J	· – – –	Juliett	(JEW–LEE–ETT)
K	– · –	Kilo	(KEY–LOH)
L	· – · ·	Lima	(LEE–MAH)
M	– –	Mike	(MIKE)
N	– ·	November	(NO–VEM–BER)
O	– – –	Oscar	(OSS–CAH)
P	· – – ·	Papa	(PAH–PAH)
Q	– – · –	Quebec	(KEH–BECK)
R	· – ·	Romeo	(ROW–ME–OH)
S	· · ·	Sierra	(SEE–AIR–RAH)
T	–	Tango	(TANG–GO)
U	· · –	Uniform	(YOU–NEE–FORM) (or OO–NEE–FORM)
V	· · · –	Victor	(VIK–TAH)
W	· – –	Whiskey	(WISS–KEY)
X	– · · –	Xray	(ECKS–RAY)
Y	– · – –	Yankee	(YANG–KEY)
Z	– – · ·	Zulu	(ZOO–LOO)
1	· – – – –	One	(WUN)
2	· · – – –	Two	(TOO)
3	· · · – –	Three	(TREE)
4	· · · · –	Four	(FOW–ER)
5	· · · · ·	Five	(FIFE)
6	– · · · ·	Six	(SIX)
7	– – · · ·	Seven	(SEV–EN)
8	– – – · ·	Eight	(AIT)
9	– – – – ·	Nine	(NIN–ER)
0	– – – – –	Zero	(ZEE–RO

WIND SHEAR PIREPS

Because unexpected changes in wind speed and directions can be hazardous to aircraft operations at low altitudes on approach to and departing from airports, pilots are urged to volunteer reports to controllers of wind shear conditions they encounter. An advance warning of this information will assist other pilots in avoiding or coping with a wind shear on approach or departure.

When describing conditions, use of the terms "negative" or "positive" wind shear should be avoided. PIREPs of "negative wind shear on final," intended to describe loss of airspeed and lift, have been interpreted to mean that no wind shear was encountered. The recommended method for wind shear reporting is to state the loss/gain of airspeed and altitude/s at which it was encountered. Examples are: "Denver Tower, Cessna 1234 encountered wind shear, loss of 20 knots at 400 feet," ("Tulsa Tower, American 721 encountered wind shear on final, gained 25 knots between 600 and 400 feet followed by loss of 40 knots between 400 feet and surface." Pilots who are not able to report wind shear in these specific terms are encouraged to make reports in terms of the effect upon their aircraft. For example: "Miami Tower, Gulfstream 403 Charlie encountered an abrupt wind shear at 800 feet on final, max thrust required." Pilots using Inertia Navigation Systems should report the wind and altitude both above and below the shear layer.

INSTRUMENT DEPARTURES AT CIVIL AIRPORTS

1. STANDARD INSTRUMENT DEPARTURES (SIDS)

(Military Pilots Consult Appropriate Regulations)

a. A Standard Instrument Departure (SID) is an air traffic control coded departure routing which has been established at certain airports to simplify clearance delivery procedures.
b. Pilots of aircraft operating under Instrument Flight Rules (IFR) at airports for which SIDs have been published may be issued clearances whenever ATC determines it is appropriate.
c. SIDs are published by the U.S. Government.
d. Pilots of IFR aircraft who do not wish to use a SID may so indicate by inclusion of "NO SID" in the remarks section of their filed flight plan or by advising ATC "NO SIDs" at the time IFR departure clearance is requested.
e. Pilots of IFR civil non-air carrier aircraft who will accept a SID may so indicate by inclusion of the acronym 'SID' as the first routing item in their filed flight plan or by advising ATC 'HAVE SIDS' at the time IFR departure clearance is requested.

2. OBSTRUCTION CLEARANCE DURING DEPARTURE

a. IFR departure procedures have been established to assist the pilots conducting IFR flight in avoiding obstructions during climbout to minimum enroute altitude. These procedures are established only at locations where instrument approach procedures are published and when required due to obstructions.
b. These procedures may be a weather ceiling and visibility requirement due to obstructions close in to the airport, or detailed flight maneuvers particularly at locations in mountainous terrain. In many cases obstruction avoidance procedures are incorporated into established SIDs and the SID is referenced as the obstruction avoidance procedure. In this case when a pilot desires to utilize the SID, it should be filed in the flight plan as the first item of the requested routing.
c. U.S. Government Instrument Approach Procedures are being converted to a new chart format (see Advisory Circular 90-1A). Instrument approach charts in the old format have takeoff minimums and departure procedures published on the chart. Procedures published under the revised format do not contain this information. Takeoff minimums are standard (see FAR 91.175 (f and g) unless the symbol ▼ is shown under the minimums box indicating that the separate listing should be consulted. The symbol ▼ is also used when an IFR departure procedure has been established. This listing is provided for each area instrument approach procedure book. (Below is an example of this listing.)

INSTRUMENT APPROACH PROCEDURES (CHARTS)

▼ IFR TAKE-OFF MINIMUMS AND DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

CIVIL USERS: FAR 91 prescribes take-off rules and establishes take-off minimums as follows:

(1) Aircraft having two engines or less — one statute mile. (2) Aircraft having more than two engines — one-half statute mile.

MILITARY USERS: Special IFR departure procedures, not published as Standard Instrument Departure (SIDs), and civil take-off minima are included below and are established to assist pilots in obstruction avoidance. Refer to appropriate service directives for take-off minimums.

Airports with IFR take-off minimums other than standard are listed below. Departure procedures and/or ceiling visibility minimums are established to assist pilots conducting IFR flight in avoiding obstructions during climb to the minimum enroute altitude. Take-off minimums and departures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in feet MSL.

NAME — TAKE-OFF MINIMUMS

BIG LAKE, AK .....Rwys 6, 24, 200–1

FAIRBANKS INTL, AK

IFR DEPARTURE PROCEDURE: W and N bound (190° CW 020°), Rwy 02L/R turn right, climb on 020° to 2000, Rwy 20L climb runway heading to 2000, thence climb via assigned route.

d. Each pilot, prior to departing an airport on an IFR flight should consider the type of terrain and other obstructions on or in the vicinity of the departure airport and take the following action.

1) Determine whether a departure procedure and/or Standard Instrument Departure (SID) is available for obstruction avoidance.

(2) Determine if obstruction avoidance can be maintained visually or that the departure procedure should be followed.

(3) At airports where instrument approach procedures have not been published, hence no published departure, procedure determine what action will be necessary and take such action that will assure a safe departure.

PILOT PROCEDURES WITH ARTC CENTERS.

1. RADAR ENVIRONMENT

a. Discontinue position reports when advised that your aircraft is in radar contact. Subsequent to being advised that the controller has established radar contact this fact will not be repeated to the pilot when he is handed off to another controller. Resume normal position reporting when ATC advises radar contact lost or radar service terminated.

b. When a radio frequency change is made use the following:
Anchorage Center (this is) Air Force 12345 at 17,000, over or
Anchorage Center (this is) Air Force 12345 at 17,000 descending to 10,000, over.

2. NON-RADAR ENVIRONMENT

A. Normal position reporting procedure, unless advised otherwise by Center.

B. INITIAL CONTACT PROCEDURES IN NON-RADAR ENVIRONMENT

1. When contact is to be followed by a position report, tell the controller your position, e.g.:
a. Anchorage Center (this is) Air Force 12345, Big Lake, over.

2. When contact is to be made at a specific time or place and no position report is required, give estimate of next reporting point and altitude/flight level and the altitude/flight level to which you are descending or climbing,
Examples:
a. Anchorage Center (this is) Navy 54321, estimating Kenai four two, at FL 270.
b. Anchorage (this is) Navy 54321, estimating Kenai four two, at nine thousand descending to five thousand.

3. A pilot unable to contact a facility on the frequency specified is responsible for initiating contact on another appropriate frequency or through the nearest FSS.

NOTE: ICAO procedures require the decimal point to be spoken as “decimal” and FAA-ATC will honor such usage by military aircraft.

NOTE: Words (this is) may be omitted if no confusion or misinterpretation will result.

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC) COMMUNICATIONS

1. NORMAL — Communications between ARTCC controllers and pilots of IFR aircraft will be conducted via direct controller-to-pilot communications channels using the appropriate ARTC SECTOR discrete frequency. Pilots will be advised of the frequency to be used and when a frequency change is required. Communications between ARTCC controllers and pilots of IFR aircraft that do not have in-flight tuning capability will be conducted by relay through the FSS.

2. EMERGENCY FREQUENCIES — Direct controller-to-pilot communications capability 121.5/243.0 MHz is limited to the area (dependent upon the location/altitude of the aircraft) within the vicinity of the ARTC Center since these frequencies are installed for center use at the local ARTC Center transmitting/receiving site only.

3. ADDITIONAL REPORTS

a. The following reports should be made to ATC or FSS facilities without a specific ATC request:

(1) At all times:

(a) When vacating any previously assigned altitude or flight level for a newly assigned altitude or flight level.
(b) When an altitude change will be made if operating on a clearance specifying VFR ON TOP.
(c) When unable to climb/descend at a rate of at least 500 feet per minute.
(d) When approach has been missed. (Request clearance for specific action; i.e., to alternative airport, another approach, etc.)
(e) Change in the average true airspeed (at cruising altitude) when it varies by 5 percent or 10 knots (whichever is greater) from that filed in the flight plan.
(f) The time and altitude or flight level upon reaching a holding fix or point to which cleared.
(g) When leaving any assigned holding fix or point.

NOTE.—The reports in subparagraphs (f) and (g) may be omitted by pilots of aircraft involved in instrument training at military terminal area facilities when radar service is being provided.

(h) Any loss, in controlled airspace, of VOR, TACAN, ADF, low frequency navigation receiver capability, complete or partial loss of ILS receiver capability or impairment of air/ground communications capability.

(i) Any information relating to the safety of flight.

(2) When not in radar contact:

(a) When leaving final approach fix inbound on final approach (non precision approach) or when leaving the outer marker or fix used in lieu of the outer marker inbound on final approach (precision approach).
(b) A corrected estimate at anytime it becomes apparent that an estimate as previously submitted is in error in excess of 2 minutes.

b. Pilots encountering weather conditions which have not been forecast, or hazardous conditions which have been forecast, are expected to forward a report of such weather to ATC. (See PARA—520 - PILOT WEATHER REPORTS (PIREPs) and FAR—91.183(b) and (c).)

CIRVIS REPORTS

1. CIRVIS (pronounced **SUR VEES**) reports are reports of information of vital importance to the security of the United States and Canada and their forces, which in opinion of the observer, require very urgent defensive and/or investigative action by the U.S. and/or Canadian Armed Forces.
2. CIRVIS reports should be transmitted in plain language, as soon as possible, to any available U.S. or Canadian military or civil air/ground communications facility. Reporting procedures will be similar to those used when transmitting position reports except the call will be preceded by the word CIRVIS spoken three times to clear the frequency(ies) over all other communications, except DISTRESS and URGENCY. If this fails to clear the frequency(ies), the International Urgency Signal "XXX" transmitted three time or "PAN" spoken three time will be employed.
3. Additional CIRVIS reports should be made if more information on the sighting becomes available. These should contain a reference to the original report.
4. A CANCELLATION report should be made in the event a previously reported sighting is positively identified as friendly or that it has been erroneously reported.
5. REPORT IMMEDIATELY BY RADIO:
   a. Hostile or unidentified single aircraft or formations of aircraft which appear to be directed against the United States, Canada or their forces.
   b. Missiles.
   c. Unidentified flying objects.
   d. Hostile or unidentified group(s) of military surface vessels.
   e. Hostile or unidentified submarines.
   f. Individual surface vessels, submarines, or aircraft of unconventional design, or engaged in suspicious activity or observed in an unusual location or on a course which may be interpreted as constituting a threat to the United States, Canada, or their forces.
   g. Any unexplained or unusual activity which may indicate a possible attack against or through the United States or Canada, including the presence of any unidentified or suspicious ground parties in the Polar region or other remote or sparsely populated areas.
6. UPON LANDING:
   a. Reports which for any reason could not be transmitted while airborne.
   b. Unlisted airfields, facilities, weather stations or air navigation aids.
   c. Post landing reports (to include as many photographs as are obtained).
7. DO NOT REPORT craft or aircraft in normal passage or known U.S. or Canadian military or government vessels (including submarines) and aircraft.

MEACONING —INTRUSION —JAMMING AND INTERFERENCE (MIJI) PROCEDURES

1. Each operator of electromagnetic equipment is responsible for reporting MIJI incidents.
   The following perishable information should be recorded at the time of the incident:
   a. True course, ground speed and altitude (MSL).
   b. Weather conditions.
   c. Date/Time (Z)/Coordinates MIJI began.
   d. Date/Time (Z)/Coordinates MIJI most effective.
   e. Date/Time (Z)/Coordinates MIJI ended.
   f. Bearing(s) to MIJI source with corresponding times (Z) and victim coordinates.
   g. Frequency(ies) affected.
   h. Call signs/audio characteristics/scope presentations, etc noted.
2. MIJI reports may be transmitted in flight if a secure communications mode is available; otherwise, report should be delayed until it can be delayed until it can be transmitted via secure means. Refer to "FLIP" General Planning (GP) Chapter (2) and (5) for additional information.

TRAFFIC ADVISORIES AT NON–TOWER AIRPORTS

The current frequency for obtaining traffic advisory information at non–tower airports in Alaska is listed as the Common Traffic Advisory Frequency (CTAF) under the name of each airport in the Airport/Facility Directory section of the Alaska Supplement. Procedures for obtaining traffic information on the CTAF are as follows:

1. AIRPORT ADVISORY SERVICE AIRPORTS.
Flight Service Stations located at airports where there are no control towers in operation provide advisory information to arriving and departing aircraft on the CTAF. Traffic control is not provided. Airport advisories provide: wind direction (magnetic) and velocity, favored or designated runway, altimeter setting, known traffic (CAUTION: all aircraft in the airport vicinity may not be communicating with the FSS), notices to airmen, airport taxi routes, airport traffic patterns, and instrument approach procedures. Pilots using other than the favored or designated runways should advise the FSS immediately.

DEPARTING: When ready to taxi, the pilot should notify the station of the aircraft identification and type, location, type of flight planned (VFR or IFR), and destination. Report departure time as soon as practicable.

ARRIVING: When operating VFR, the pilot should transmit position and altitude information to the FSS when 15 miles from the airport. When operating IFR, provide this information when the controller advises. "Contact (location name) radio on (frequency)". Notify the FSS when leaving the runway.

2. NON-FSS AIRPORTS WHERE THE UNICOM OPERATOR OR MILITARY UNIT PROVIDES ADVISORY INFORMATION ON THE CTAF FREQUENCY.

DEPARTING: Monitor the CTAF as appropriate while taxiing and report on the CTAF before taking the runway for takeoff. The UNICOM/MILITARY operator normally provides runway, wind and at his discretion, traffic information.

ARRIVING: Call for runway in use, on the appropriate CTAF, when approximately 10 miles from the airport. If IFR, change to the CTAF when the controller advises "change to advisory frequency approved". Listen for other aircraft on the frequency. When entering downwind and final, inform the UNICOM/MILITARY operator of your position, altitude and intentions.

3. BLIND BROADCASTS OF POSITION OR INTENTIONS.

If there is no operating tower, operating FSS, or UNICOM/MILITARY, or when unable to communicate with an FSS on the CTAF or UNICOM/MILITARY operator: a. Blind–broadcast your intentions and position using the appropriate CTAF within 10 miles of the airport. b. Listen for other aircraft who may be broadcasting in the blind. (CAUTION: all aircraft may not be complying with the recommended blind–broadcast procedures).

a. Recommended Blind Broadcast Phraseologies—

(1) Inbound

Example:

STRAWN TRAFFIC, APACHE TWO TWO FIVE ZULU, ENTERING DOWNWIND FOR RUNWAY ONE SEVEN STRAWN.

(2) Outbound

Example:

STRAWN TRAFFIC, QUEENAIRE SEVEN ONE FIVE BRAVO DEPARTING RUNWAY TWO SIX STRAWN.

4. AERONAUTICAL ADVISORY STATIONS (UNICOM)

a. UNICOM is a nongovernment air/ground radio communication facility which may provide airport advisory services at certain airports. Locations and frequencies of UNICOMs are shown on aeronautical charts and publications.

b. On pilot request UNICOM stations located at no tower/no FSS airports may provide pilots with weather information, wind direction, the runway the wind favors, and other necessary information.

c. In communicating with a UNICOM station the following practices will help reduce frequency congestion, facilitate a better understanding of pilot intentions and location in the traffic pattern and enhance safety of flight:

1. Select the correct UNICOM frequency.
2. Call for runway in use approximately 10 miles from the airport. Listen on the frequency prior to transmitting since you may be able to pick up the runway in use and eliminate the need to make a transmission.
3. State the identification of the UNICOM station you are calling in each transmission.
4. Make sure you receive a response from the station being called since many stations and aircraft at other airports transmit on the same UNICOM frequency.
5. Speak slowly and distinctly.
6. To the extent practicable, confine your conversation to operational matters.
7. UNICOM frequencies assigned to uncontrolled airports should not be used for air-to-air communications.

d. Recommended UNICOM Phraseologies:

(1) Inbound

Example:

FREDERICK UNICOM CESSNA 123 REQUEST AIRPORT ADVISORY.
FREDERICK UNICOM CESSNA 123 ENTERING DOWNWIND/FINAL FOR RUNWAY ONE NINE.

(2) Outbound

Example:

FREDERICK UNICOM CESSNA 123 DEPARTING RUNWAY ONE NINE.

AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

ATIS frequencies are incorporated on individual FLIP Terminal Instrument Approach Procedures, Enroute Charts and airport listings in the Enroute Supplement. Where this service is available, listing will be found on the WEATHER DATA SOURCES line, e.g., (ATIS 108.5). Pilots will be expected to listen to ATIS broadcasts where in operation to obtain essential, but routine, terminal information. The following procedures apply:

A. ATIS broadcasts are recorded and the pilot should notify controllers that he has received the broadcast by repeating the alphabetical code word appended to the broadcast. Example: "INFORMATION ECHO RECEIVED".

B. When the pilot acknowledges that he has received the ATIS broadcast, controllers may omit those items contained on the broadcast if they are current. Rapidly changing conditions will be issued by Air Traffic Control and the ATIS will contain words as follows:

"LATEST CEILING/VISIBILITY/ALTIMETER/WIND/(OTHER CONDITIONS)
WILL BE ISSUED BY APPROACH CONTROL/TOWER."

C. The absence of a sky condition and/or visibility on ATIS indicates a ceiling of 5000 feet or above and visibility of 5 miles or more. A remark may be made on the broadcast, "The weather is better than 5000 and 5," or the existing weather may be broadcast.

D. Controllers will automatically issue pertinent information to pilots who do not acknowledge receipt of the ATIS broadcast or who acknowledge receipt of a broadcast which is not current.

ALTIMETER SETTINGS

1. The cruising altitude or flight level of aircraft shall be maintained by reference to an altimeter which shall be set:

   a. **Below 18,000 MSL** — to the current reported altimeter setting along the route of flight or, in the case of an aircraft having no radio, to the altimeter setting of the airport of departure.

   b. **At or above 18,000 MSL** (FL 180) — 29.92 Hg (standard setting).

   VFR pilots will add an adjustment factor to their Flight Level*, as a safety measure for terrain clearance, when lower altimeter settings are reported:

ALTIMETER SETTING (Current Reported)	LOWEST USABLE FLIGHT LEVEL	ADJUSTMENT FACTOR
29.92 or higher	180	None
29.91 to 29.42	185	500 feet
29.41 to 28.92	190	1000 feet
28.91 to 28.42	195	1500 feet
28.41 to 27.92	200	2000 feet
27.91 to 27.42	205	2500 feet
27.41 to 26.92	210	3000 feet

EXAMPLE: Altimeter setting 29.41, change must be made no lower than FL 190.

   c. **Climbing** — Change to 29.92 Hg upon reaching 18,000 MSL.

   d. **Descending** — Changes to local altimeter setting prior to reaching lowest usable flight level and in all cases, prior to reaching FL 180.

2. The above procedures are effective within the Alaska Airspace and are to be applied for Air Traffic Control purposes within the following navigable airspace:

   a. Within 100 NM either side of a line extending from Eareckson AFS through Adak Naval Station Airport, Nikolski Airport, and Cold Bay Airport to a point at 56°20N, 160°00W, including that area to the south of Cold Bay bounded by a line beginning at 53°30 N, 160°00W to 54°00N, 164°00W.

   b. Between the coastline of Alaska and the inshore boundaries of the respective oceanic flight information regions. All other over water flts will use the standard sea level pressure ONE (29.92 Hg) altimeter setting to within 100 NM of land fall.

   Low temperature error: "Extreme low temperatures" will cause serious errors in indicated altitude. It is suggested that the next higher altitude than normal, appropriate to direction of flight, be requested on routes with minimum enroute altitudes greater than 5000'.

   On a route 13,000 temperature — 40°F, aircraft may be 1500' lower than indicated altitude.

   On a route 10,000 temperature — 30°F, aircraft may be 1000' lower than indicated altitude.

High Barometric Pressure—

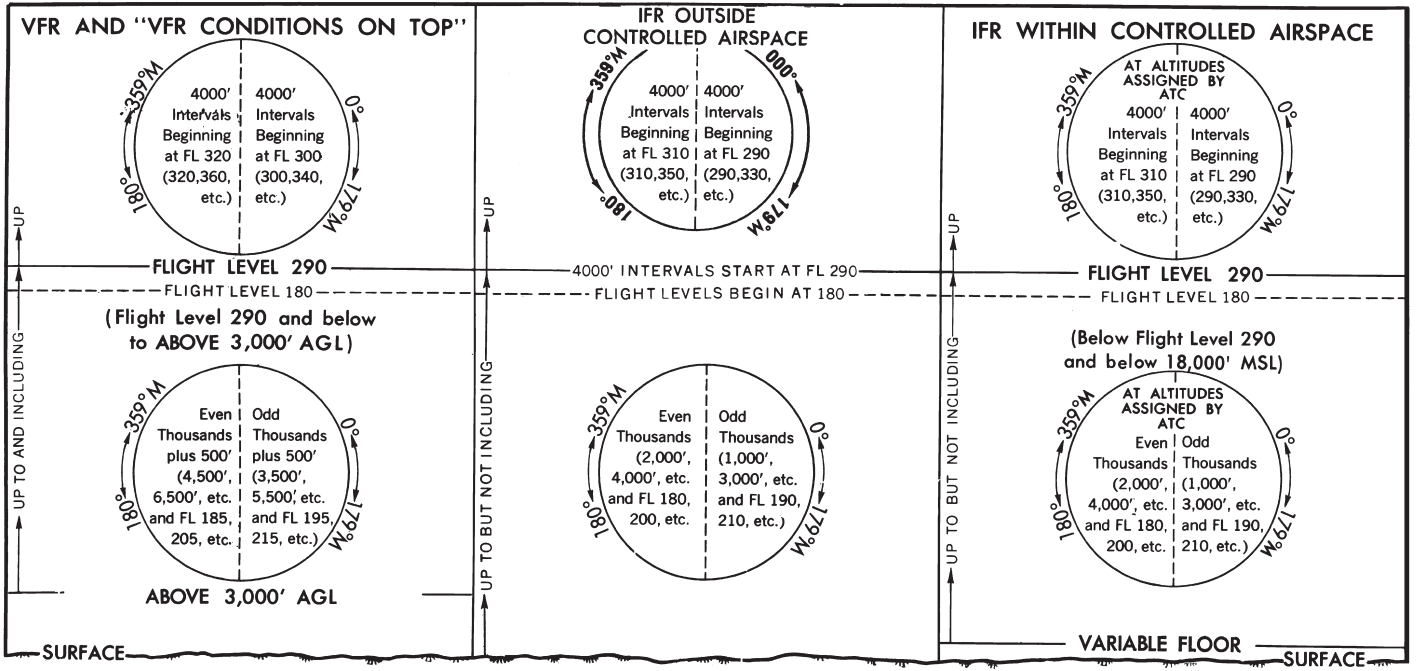
   a. Cold, dry air masses may produce barometric pressures in excess of 31.00 inches of Mercury. Most altimeters do not have an accurate means of being adjusted for altimeter settings of these levels.

   b. The altimeter setting announced by air traffic controllers will be 31.00 inches of Mercury (Three One Zero Zero) when the barometric pressure equals or exceeds that value. Actual barometric pressure will be provided upon request.

   c. The altimeter error caused by the high pressure will be in the opposite direction to the error caused by the cold temperature.

   *VFR hemispheric Cruising Altitude or Flight Level (See FAR 91.159).

CRUISING ALTITUDE DIAGRAMS



ALL COURSES ARE MAGNETIC

SPECIAL VISUAL FLIGHT RULES

Federal Aviation Regulations impose restrictions and establish priorities with respect to the conduct of Special VFR operations. Basically, the new rules prohibit Fixed Wing Special VFR (FW/SVFR) operations in specified CLASS D/CLASS E airspace and the preamble establishes the policy that IFR Aircraft will be given priority over FW/SVFR aircraft in all other CLASS D/CLASS E airspace. Helicopter special VFR operations are not affected by these changes. FW/SVFR shall be applied as follows:

1. USAF: USAF fixed wing aircraft are not permitted to operate under special VFR conditions within CLASS D/CLASS E airspace.
2. U. S. NAVY, U. S. ARMY AND CIVIL: Where a person has received an appropriate ATC clearance, FAR Part 91.157 permits special VFR operations for fixed wing aircraft within CLASS D/CLASS E airspace with weather minima of 1 mile visibility and clear of clouds. However, special VFR operations for fixed wing aircraft are prohibited at Seattle, Wash. (Seattle-Tacoma Intl Airport) in accordance with FAR Part 91 Appendix D. Special VFR is authorized on PILOT REQUEST ONLY.

VFR ADVISORY INFORMATION

VFR advisory information is provided by numerous radar and non-radar approach control facilities to those pilots intending to land at an airport served by an Approach Control tower. This information includes: wind, runway, traffic and NOTAM information.

Such information will be furnished upon initial contact with concerned approach control facility. The pilot will be requested to change to the tower frequency at a pre-determined time or point, to receive further landing information.

Where available, use of this procedure will not hinder the operation of VFR flights by requiring excessive spacing between aircraft or devious routing. Radio contact points will be based on time or distance rather than on landmarks.

1. Radar Traffic Information Service —When VFR advisory information is provided by approach control facilities, pilots are advised of information on any aircraft observed on the radar scope which, in the judgment of the controller, appears to constitute a potential conflict to the operation of their aircraft.

a. Purpose of the Service —RADAR TRAFFIC INFORMATION SERVICE IS NOT INTENDED TO RELIEVE THE PILOT OF HIS RESPONSIBILITY FOR CONTINUAL VIGILANCE TO SEE AND AVOID OTHER AIRCRAFT. IT IS PROVIDED TO AID HIM IN HIS VISUAL SURVEILLANCE BY CALLING TO HIS ATTENTION A SPECIFIC DIRECTION IN WHICH RADAR INDICATES POSSIBLE CONFLICTING TRAFFIC TO EXIST. PILOTS ARE REMINDED THAT THE SURVEILLANCE RADAR UTILIZED BY THE CONTROLLER DOES NOT PROVIDE ALTITUDE INFORMATION AND MAY NOT DISPLAY ALL AIRCRAFT.

b. Provision of the Service —The provision of this service is not mandatory. Many factors (such as limitations of the radar, volume of traffic, controller workload and communications frequency congestion) could prevent the controller from providing this service. The controller possesses complete discretion for determining whether he is able to provide or continue to provide this service in a specific case. His reason against providing or continuing to provide the service in a particular case is not subject to question nor need it be communicated to the pilot. In other words, the provision of this service is entirely dependent upon whether the controller believes he is in a position to provide it. Subject to the foregoing limitations:

(1) Traffic information is routinely provided to all aircraft operating on IFR flight plans except when the pilot advises he does not desire the service.

(2) Traffic information may be provided for flights not operating on IFR flight plans when requested by pilots of such flights. NOTE: Participation by VFR pilots in formal programs implemented at certain terminal locations (see Special Notices) constitutes pilot request. This also applies to participating pilots at those locations where arriving VFR flights are encouraged to make their first contact with the tower on the approach control frequency.

c. Issuance of Traffic Information —Traffic information will include the following concerning the “target” constituting traffic.

(1) Azimuth from the aircraft, in terms of the twelve hour clock;

(2) Distance from the aircraft in nautical miles; and

(3) Direction in which the “target” is proceeding.

(4) Relative movement.

Example: “Traffic 10 o’clock, 3 miles, Westbound/diverging.”

The pilot may, upon receipt of traffic information, request a vector (heading) to avoid such traffic. The vector will be provided to the extent possible as determined by the controller.

AIR TRAFFIC CONTROL RADAR BEACON SYSTEM (ATCRBS)

1. GENERAL

a. Air Traffic Control Radar Beacon System (ATCRBS) is similar to and compatible with military coded radar beacon equipment. Civil Mode A is identical to military Mode 3.

b. Civil and military transponders should be adjusted to the "on" or normal operating position as late as practicable prior to takeoff and to "off" or "standby" as soon as practicable after completing landing roll unless the change to "standby" has been accomplished previously at the request of ATC. IN ALL CASES, WHETHER VFR OR IFR, THE TRANSPONDER SHOULD BE OPERATING WHILE AIRBORNE UNLESS OTHERWISE REQUESTED BY ATC.

c. If entering a U.S. domestic control area from outside the U.S., the pilot should advise on first radio contact with a U.S. radar air traffic control facility that such equipment is available by adding "transponder" to the aircraft identification.

d. It should be noted by all users of the ATC Transponders that the coverage they can expect is limited to "line of sight." Low altitude or aircraft antenna shielding by the aircraft itself may result in reduced range. Range can be improved by climbing to a higher altitude. It may be possible to minimize antenna shielding by locating the antenna where dead spots are only noticed during abnormal flight altitudes.

e. For ATC to utilize one or a combination of the 4096 discrete codes FOUR DIGIT CODE DESIGNATION will be used. e.g., code 2100 will be expressed as TWO ONE ZERO ZERO.

f. Pilots should be particularly sure to abide by the provisions of subparagraph b above. Additionally, due to the operational characteristics of the rapidly expanding automated air traffic control system. THE LAST TWO DIGITS OF THE SELECTED TRANSPONDER CODE SHOULD ALWAYS READ '00' UNLESS SPECIFICALLY REQUESTED BY ATC TO BE OTHERWISE.

g. Some transponders are equipped with a Mode C automatic altitude reporting capability. This system converts aircraft altitude in 100 foot increments, to coded digital information which is transmitted together with MODE C framing pulses to the interrogating radar facility. The manner in which transponder panels are designed differs, therefore, a pilot should be thoroughly familiar with the operation of his transponder so that ATC may realize its full capabilities.

h. Adjust transponder to reply on the Mode A/3 code specified by ATC and, if equipped, to reply on Mode C with altitude reporting capability activated unless deactivation is directed by ATC or unless the installed aircraft equipment has not been tested and calibrated as required by FAR 91.217. If deactivation is required by ATC, turn off the altitude reporting feature of your transponder. An instruction by ATC to "STOP ALTITUDE SQUAWK, ALTITUDE DIFFERS (number of feet) FEET," may be an indication that your transponder is transmitting incorrect altitude information or that you have an incorrect altimeter setting. While an incorrect altimeter setting has no effect on the Mode C altitude information transmitted by your transponder (transponders are preset at 29.92), it would cause you to fly at an actual altitude different from your assigned altitude. When a controller indicates that an altitude readout is invalid, the pilot should initiate a check to verify that the aircraft altimeter is set correctly.

i. Pilots of aircraft with operating Mode C altitude reporting transponders should report exact altitude/flight level to the nearest hundred foot increment when establishing initial contact with an air traffic control facility. Exact altitude/flight level reports on initial contact provide air traffic control with information that is required prior to using Mode C altitude information for separation purposes. This will significantly reduce altitude verification requests.

j. The transponder shall be operated only as specified by ATC. Activate the "IDENT" feature only upon request of the ATC controller.

k. Under no circumstances should a pilot of a civil aircraft operate the transponder on Code 0000. This code is reserved for military interceptor operations.

l. When making routine code changes, pilots should avoid inadvertent selection of codes 7500, 7600 or 7700 thereby causing momentary false alarms at automated ground facilities. For example, when switching from code 2700 to code 7200, switch first to 2200 then 7200, NOT to 7700 and then 7200. This procedure applies to nondiscrete code 7500 and all discrete codes in the 7600 and 7700 series (i.e., 7600-7677, 7700-7777) which will trigger special indicators in automated facilities. Only nondiscrete code 7500 will be decoded as the hijack code. An aircraft's transponder code (when available) is utilized to enhance the tracking capabilities of the ATC facility, therefore, pilots should not turn the transponder to standby when making routine code changes.

m. New Transponder and Mode C requirements for aircraft flying above 12,500 and below 18,000 MSL went into effect July 1, 1975. Refer to FAR 91.215 for specific details concerning requirements, exceptions and ATC authorized deviations. In general, the FAR requires aircraft to be equipped with Mode A/3 (4096 codes) and Mode C altitude reporting capability when operating in controlled airspace of the 48 contiguous States and the District of Columbia above 12,500 MSL, excluding airspace at and below 2500 AGL. Pilots should insure that their aircraft transponder is operating on an appropriate or ATC assigned VFR/IFR code and Mode C when operating in such airspace. If in doubt about the operational status or either feature of your transponder while airborne, contact the nearest ATC facility of Flight Service Station and they will advise you what facility you should contact for determining the status of your equipment. Inflight requests for "immediate" deviation may be approved by controllers only when the flight will continue IFR or when weather conditions prevent VFR descent and continued VFR flight in airspace not affected by the FAR. All other requests for deviation should be made by contacting the nearest Flight Service/Air Traffic facility in person or by telephone. The nearest ARTC Center will normally be the controlling agency and is responsible for coordinating requests involving deviation in other ARTCC areas. (Note: CLASS A and CLASS B airspace deviation requests are handled as they have been in the past.

n. Pilots should be aware that proper application of these procedures will provide both VFR and IFR aircraft with a higher degree of safety in the environment where high-speed closure rates are possible. Transponders substantially increase the capability of radar to see an aircraft and the Mode C feature enables the controller to quickly determine where potential traffic conflicts may exist. Even VFR pilots who are not in contact with ATC will be afforded greater protection from IFR aircraft and VFR aircraft which are receiving traffic advisories. Nevertheless, pilots should never relax their visual scanning vigilance for other aircraft.

2. INSTRUMENT FLIGHT RULES (IFR) FLIGHT PLAN

a. If the pilot cancels an IFR flight plan prior to reaching the terminal area of destination, the transponder should be adjusted according to the instructions below for VFR flight.

b. The transponder shall be operated only as specified by ATC. Activate the "IDENT" feature only upon request of the ATC controller.

3. VISUAL FLIGHT RULES (VFR)

a. Unless otherwise instructed by an Air Traffic Control Facility adjust Transponder to reply on Mode 3/A Code 1200 regardless of altitude.

b. Adjust transponder to reply on Mode C, with altitude reporting capability activated if the aircraft is so equipped, unless deactivation is directed by ATC or unless the installed equipment has not been tested and calibrated as required by FAR 91.217. If deactivation is required and your transponder is so designed, turn off the altitude reporting switch and continue to transmit MODE C framing pulses. If this capability does not exist, turn off MODE C.

4. SPECIAL MILITARY OPERATIONS

(1) NORAD interceptors operating under the AFIO and not under the control of ATC. Code 7777

(2) Aircraft operations which specify frequent or rapid changes in altitude/FL (flight test, olive branch, refueling, etc.) when assigned by ATC. Code 4000

(3) Mission requirements permitting, aircraft operating in restricted/warning areas unless a different code has been assigned by advance coordination or via direct communications with ATC. Code 4000

(4) MODE 3 — Code 4400, has been assigned for aircraft operating above FL600. This code will be preset on the ground and will not be changed in flight. However, the emergency code 7700 can be activated.

5. EMERGENCY OPERATION

a. When an emergency occurs, the pilot of an aircraft equipped with a coded radar beacon transponder, who desires to alert a ground radar facility to his emergency condition, and who cannot establish communications without delay with an air traffic control facility, may adjust the transponder to reply on Mode A/3, Code 7700.

b. Pilots should understand that they may not be within a radar coverage area and that, even if they are, certain radar facilities are not yet equipped to automatically recognize Code 7700 as an emergency signal. Therefore, they should establish radio communications with an air traffic control facility as soon as possible.

6. SPECIAL EMERGENCY

1. A special emergency is a condition of air piracy, or other hostile act by a person(s) aboard an aircraft, which threatens the safety of the aircraft or its passengers.

2. The pilot of an aircraft reporting a special emergency condition should:

a. If circumstances permit, apply distress or urgency radio-telephone procedures.

b. If circumstances do not permit the use of prescribed distress or urgency procedures, the message sent by the aircraft should:

(1) Be sent on the air-ground frequency in use at the time.

(2) Consist of as many as possible of the following elements spoken distinctly and in the following order:

(a) Name of the station addressed (time and circumstances permitting).

(b) The identification of the aircraft and present position.

(c) The nature of the special emergency condition and pilot intentions (circumstances permitting).

(d) If unable to provide (c) above, use code words and/or transponder setting for indicated meanings as follows:

Spoken Words
TRANSPONDER SEVEN FIVE ZERO ZERO

Meaning
Am being hijacked/forced to a new destination

Transponder Setting
Mode 3/A, Code 7500.

3. Code 7500 will never be assigned by air traffic control without prior notification from the pilot that his aircraft is being subjected to unlawful interference. The pilot should refuse the assignment of code 7500 in any other situation and inform the controller accordingly. Code 7500 will trigger the special emergency indicator in all radar ATC facilities.

4. Air traffic controllers will acknowledge and confirm receipt of transponder code 7500 by asking the pilot to verify it. If the aircraft is not being subjected to unlawful interference, the pilot should respond to the query by broadcasting in the clear that he is not being subjected to unlawful interference. Upon receipt of this information, the controller will request the pilot to verify the code selection depicted in the code selector windows in the transponder control panel and change the code to the appropriate setting. If the pilot replies in the affirmative or does not reply the controller will not ask further questions but will flight follow, respond to pilot requests and notify appropriate authorities.

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HIJACK PROCEDURES— RECOMMENDED PROCEDURES FOR U.S. PASSENGER AIRCRAFT HIJACKED TO THE COMMONWEALTH OF INDEPENDENT STATES, PEOPLE'S REPUBLIC OF CHINA, AND NORTH KOREA.—If it is possible to do so without jeopardizing the safety of the flight, the pilot of a hijacked U.S. passenger aircraft after departing from the cleared routing over which the aircraft was operating will attempt to do one or more of the following things insofar as circumstances may permit: (A) maintain a true airspeed of no more than 400 knots, and preferably an altitude of between 10,000 and 25,000 feet. (B) fly a course toward the destination which the hijacker has announced, (C) at appropriate intervals fly the international pattern for lost communication (left hand triangles), and (D) transmit the international distress signal, MAY DAY, on any of the international distress frequencies available to him (243.0 MHz, 121.5 MHz, 2182 KHz). If these procedures result in either radio contact or air intercept, the pilot will attempt to comply with any instructions received which may direct him to an appropriate landing field. Additionally, if the aircraft is equipped with an operational transponder, the pilot may use transponder Mode A (Military Mode 3) Code 7500 to indicate his aircraft has been hijacked or Code 7700 to indicate his aircraft is in distress.

7. RADIO FAILURE

Should the pilot of an aircraft equipped with a coded radar beacon transponder experience a loss of two-way radio capability he should adjust his transponder to reply on Mode A/3, Code 7600.

Pilots should understand that they may not be in an area of radar coverage. Also, many radar facilities are not presently equipped to automatically display Code 7600 and will interrogate 7600 only when the aircraft is under direct radar control at the time of radio failure. However, replying on Code 7700 first increases the probability of early detection of a radio failure condition.

8. RADAR BEACON PHRASEOLOGY

Air traffic controllers, both civil and military, will use the following phraseology when referring to operation of the Air Traffic Control Radar Beacon System (ATCRBS). Instructions by air traffic control refer only to Mode A/3 or Mode C operation and do not affect the operation of the transponder on other Modes.

SQUAWK (number) — Operate radar beacon transponder on designated code in Mode A/3.

IDENT — Engage the "IDENT" feature (military I/P of the transponder).

SQUAWK (number) AND IDENT — Operate transponder on specified code in Mode A/3 and engage the "IDENT" (military I/P) feature.

SQUAWK STANDBY — Switch transponder to standby position.

SQUAWK LOW/NORMAL — Operate transponder on low or normal sensitivity as specified. Transponder is operated in "NORMAL" position unless ATC specified "LOW" ("ON" is used instead of "NORMAL" as a master control label on some types of transponders.)

SQUAWK ALTITUDE — Activate MODE C with automatic altitude reporting.

STOP ALTITUDE SQUAWK — Turn off altitude reporting switch and continue transmitting Mode C framing pulses. If your equipment does not have this capability, turn off MODE C.

STOP SQUAWK (mode in use) — Switch off specified mode. (Use for military aircraft when the controller is unaware if a military service requires the aircraft to continue operating on another MODE.)

STOP SQUAWK — Switch off transponder.

SQUAWK MAYDAY on 7700 — Operate transponder in the emergency position. (Mode A Code 7700 for Civil Transponder. Mode 3 Code 7700 and emergency feature for Military Transponder.)

SQUAWK VFR — Meaning, operate transponder on code 1200 regardless of altitude.

MILITARY PROCEDURES
AIR TRAFFIC CONTROL PROCEDURES
Recording and Monitoring

Calls to air traffic control (ATC) facilities (ARTCCs, Towers, FSSs, Central Flow, and Communications Control Centers) over radio and ATC operational telephone lines (lines used for operational purposes such as controller instructions, briefings, opening and closing flight plans, issuance of IFR clearances and amendments, counter hijacking activities, etc.) may be monitored and recorded for operational uses such as accident investigations, accident prevention, search and rescue purposes, specialist training and evaluation, and technical evaluation and repair of control and communications systems.

PILOT PROCEDURES WITH FAA FLIGHT SERVICE (MILITARY)

I. FLIGHTS DEPARTING "P" FIELDS

File flight plan with FAA Flight Service. If IFR within control zone or area get ARTC clearance before take-off. For those airports not within local calling distance of a FSS, leased telephone services are provided to the nearest station. One such service, Foreign Exchange (FX), permits dialing a local number which will connect to the distant FSS at the cost of a local call. Another is interphone, which is a private line extension to the nearest FSS. If neither of these services is available, call the nearest FSS by long distance collect.

NOTE: Flights departing within or proposing penetration of an ADIZ will file flight plan in writing or by telephone with an appropriate aeronautical facility prior to take-off.

II. FILING OF FLIGHT PLAN

Pilots filing flight plans or arrival reports with FAA Flight Service Station will do so by visiting or calling a FAA station. Such messages **WILL NOT** be filed with FAA control towers except when no other means of communication is available.

The following information is required for clearance from non-military airports:

1. Type of Flight Plan.
2. Aircraft identification.
3. Type of aircraft/TD Code.
4. Estimated True Air Speed.
5. Departure time.
6. Cruising altitude.
7. Point of departure.
8. Route of flight.
9. Destination
10. Estimated time enroute.
11. Fuel on board.
12. Alternate airport.
13. Remarks.
14. Pilot's name.
15. Aircraft home base.
16. Number of persons aboard

NOTE: The appropriate TD Code listed below will be suffixed to the aircraft designation on DD Form 175 or FAA Form 7233-1, and/or when filing a flight plan inflight.

NO DME

/X— No transponder

/T— Transponder with no Mode C

/U— Transponder with Mode C

DME

/D— No transponder

/B— Transponder with no Mode C

/A— Transponder with Mode C

TACAN ONLY

/M— No transponder

/N— Transponder with no Mode C

/P— Transponder with Mode C

AREA NAVIGATION (RNAV)

/Y— LORAN, VOR/DME, or INS with no transponder

/C— LORAN, VOR/DME, or INS, transponder with no Mode C

/I— LORAN, VOR/DME, or INS, transponder with Mode C

ADVANCED RNAV WITH TRANSPONDER AND MODE C (If an aircraft is unable to operate with a transponder and/or Mode C, it will revert to the appropriate code listed above under Area Navigations.)

/E— Flight Management System (FMS) with en route, terminal, and approach capability. Equipment requirements are:

(a) Dual FMS which meets the specifications of AC25-15, Approval of Flight Management Systems in Transport Category Airplanes; AC20-129, Airworthiness Approval of Vertical Navigations (VNAV) Systems for use in the U.S. NAS and Alaska; AC20-130A, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigations Sensors; or equivalent criteria as approved by Flight Standards.

(b) A flight director and autopilot control system capable of following the lateral and vertical FMS flight path.

(c) At least dual inertial reference units (IRU's).

(d) A database containing the waypoints and speed/altitude constraints for the route and/or procedure to be flown that is automatically loaded into the FMS flight plan.

(e) An electronic map.

(U.S. and U.S. territories only unless otherwise authorized.)

/F— A single FMS with en route, terminal, and approach capability that meets the equipment requirements of /E, (a) through (d), above.
(U.S. and U.S. territories only unless otherwise authorized.)

/G— Global Positioning System (GPS)/Global Navigation Satellite System (GNSS) equipped aircraft with en route and terminal capability.

/R— Required Navigational Performance (Denotes capability to operate in RNP designated airspace and routes.)

/W— Reduced Vertical Separation Minima (RVSM)

III. POSITION REPORTING PROCEDURE

1. IFR — Report all compulsory reporting points. Flights not conducted on airways and jet routes report over each reporting point used on the flight plan to define the route of flight.

2. VFR
   a. FL 180 and above — report at least every 300 NM.
   b. Below 18,000 ft MSL — report at least every 200 NM.

ADIZ PROCEDURES (MILITARY)

I. GENERAL: An Air Defense Identification Zone (ADIZ) is an airspace of defined dimensions within which certain rules for the security control of aircraft are mandatory in the interest of National Security. See below for salient operation procedures and DoD FLIP Area Planning (AP/1) for charts of the U.S. and Canadian Air Defense Identification Zones and additional procedures and details.

NOTE: In the event of the declaration of an Air Defense Emergency SECURITY CONTROL RULES will become effective. These rules are included in the published SCATANA Plan.

II. FILING OF AND ADHERENCE TO FLIGHT PLAN

A. FILING OF FLIGHT PLAN

1. When a flight penetrates or operates within an ADIZ, a DVFR (Defense Visual Flight Rules) or IFR Flight Plan will be filed in writing or by telephone with an appropriate aeronautical facility prior to takeoff. For flights originating outside an ADIZ, on other than established airways, the Remarks Section will include time, position, and altitude anticipated when penetrating the outer limits of the ADIZ. For flights entering an ADIZ or originating within an ADIZ, on other than established airways, the Remarks Section will include the time, position, and altitude within the ADIZ where the pilot anticipates turning toward land. This information should be marked "Pass to Air Defense Radar (PADRA)." Omission of or failure to update this correction information may preclude positive identification which will require intercept to confirm identity as well as filing of alleged ADIZ violation.

B. REVISION OF FLIGHT PLANS

1. No deviation will be made from a DVFR or IFR flight plan unless prior notification is given to an appropriate aeronautical facility.

2. Transmit corrected information to appropriate aeronautical facility immediately if it becomes evident that flight plan cannot be adhered to. (See next paragraph for allowable tolerances for adherence to flight plan or air traffic clearance.) The pilot will request that any revision to a flight plan, including remarks, be passed to the appropriate ARTCC and with instructions to pass to Air Defense Radar (PADRA). Failure to do so may require air defense reaction as indicated in Paragraph II. A. above.

C. ALLOWABLE TOLERANCES FOR ADHERENCE TO ADIZ FLIGHT PLAN

1. Time. Plus or minus five minutes from an estimate over a reporting point or point of penetration. Pilots departing from an airfield which has no tower facility will be required to make good a departure time within plus or minus five minutes of that proposed in the flight plan.

2. Distance. Ten nautical miles from centerline of proposed route if entering or operating within an ADIZ over land or twenty nautical miles from the centerline of proposed route if entering or operating within an ADIZ over water (to include the Aleutian Islands).

3. Altitude Deviation. None, unless an amended air traffic clearance is obtained or if operating where no air traffic clearance is required, then prior notice is given to an appropriate aeronautical facility.

D. AUTHORIZED EXCEPTIONS

1. Flights regardless of altitude operating into or within the Alaskan ADIZ at true airspeed of less than 180 knots providing such flights maintain a listening watch on the appropriate frequency.

2. Flights originating in any part of the Continental United States, except the State of Alaska, which maintains an outward bound track through the southern border ADIZ without reentering an ADIZ.

3. Flights which remain within ten nautical miles of the point of departure.

4. Flights conducted in accordance with special procedures prescribed by appropriate military authorities may be exempted on a local basis only after coordination with FAA ARTCCs and concurrence of appropriate air defense or other military commanders concerned.

5. DVFR flights without two-way radio communication may be conducted provided the flight is conducted in accordance with a filed DVFR flight plan which contains the route altitude and the estimated time to penetration and point of penetration and departure is effected within five minutes of the filed estimated time of departure.

III. ADIZ POSITION REPORT, IFR FLIGHT OUTSIDE AIR TRAFFIC CONTROL AREA AND DVFR FLIGHTS WITH TWO-WAY RADIO.

A. Penetration or inbound turn shall not be effected until a report is made of the time, position and altitude at which the aircraft passed the last reporting point prior to penetration or inbound turn and a report is provided of the estimated time of arrival over the next appropriate reporting point along the route of flight. If no reporting points are available along the route of flight, the pilot shall provide an estimate of the time, position and altitude at which he will penetrate or turn inbound. This report will be made no sooner than 30 minutes and not later than 15 minutes prior to the identification point. Position reports will be made at least once an hour while within an ADIZ unless more frequently required.

B. If the airport of departure is in such proximity to the ADIZ boundary to preclude compliance with the above, the pilot hall report immediately after taking off the time of departure, altitude and an estimate of the time of arrival over the first reporting point over the intended route of flight.

C. Aircraft entering the United States through an ADIZ, if so requested, shall advise the extent to which the actual time and point of penetration differed from the same data as recorded in the original ground flight plan.

NOTE: The Pilot should maintain an altitude of at least 6000 feet above the terrain while off airways unless safety of flight requires a lower altitude.

IV. RADAR ASSISTANCE WITHIN AIR DEFENSE IDENTIFICATION ZONES.

A. Emergency radar assistance is available on a 24 hour basis to identified aircraft within the limits of any Air Defense Identification Zone. The military radar system can, at the discretion of the operator, provide the following services to aircraft; track, ground speed checks, position and bearing to the nearest airport or other designated points. Canadian military assistance provides bearing in degrees true. The radar assistance provided is advisory only and does not absolve the aircraft commander of the responsibility for safe navigation of the aircraft and compliance with air traffic control clearance or other required procedures.

B. Contact the Sector Operations Control Center (SOCC) or the Region Operation Control Center (ROCC) on frequencies 121.5, 243.0 or 364.2. Frequency 364.2 is also available within the Defense Area. Example: "Radar Assistance," aircraft call sign. Subsequent calls should address the specific ROCC answering the initial call.

V. EMERGENCY PROCEDURES WITHIN ADIZ

In emergency situations, which require immediate decision and action for the safety of the flight, the pilot in command of the aircraft may deviate from the provisions of this part to the extent required for such emergency. When a deviation is exercised, the pilot in command shall report such deviation and the reasons therefore to an appropriate aeronautical facility as soon as practicable.

U.S. NAVY/U.S. ARMY USE OF RUNWAY CONDITION READINGS (RCR)

Runway condition braking action at USAF bases and certain U.S. Navy and U.S. Army Airfields is determined by the use of decelerometers. Runway condition at USAF bases is reported by ATC facilities in terms of runway condition readings (RCR). By comparing the RCR to a table in the applicable aircraft flight manual USAF pilots can determine predicted landing ground roll distances. However, similar tables are not available in the NATOPS Manuals for Naval aircraft or in Army aircraft handbooks. Accordingly, a table of equivalent is furnished to provide a convenient method of converting RCR to comparable braking action and predicted landing ground roll distances for use by Navy and Army pilots. Runway condition at U.S. Navy and U.S. Army airfields will be reported by air traffic controllers in terms of equivalent braking action as delineated in the following table.

NOTE: Joint USAF/NASA tests have proven RCR measurements invalid where the only form of moisture affecting the runway is water. Reading taken during such conditions will be reported as wet runway (WR). Measurements taken when water or slush is present on an ice covered rwy will be reported as RCR 12 or the measured decelerometer reading whichever is lower.

Runway Condition Reading (RCR)	Equivalent Braking Action	% Increase in landing roll
02 to 05	Nil	100% or more
06 to 12	Poor	99% to 46%
13 to 18	Fair (Medium)	45% to 16%
19 to 25	Good	15% to 0

Runway surface conditions and RCR readings as reported by base operations are appended to hourly aviation weather observations in coded form based on the following:

Wet Runway	WR
Slush on Runway	SLR
Loose Snow on Runway	LSR
Packed Snow on Runway	PSR
Ice on Runway	IR
Patchy conditions (Ice, Snow, or Water)*	P
Runway Sanded	SANDED

*Code P will be used when the rwy is less than fully covered by the coded RSC element. After patchy, a wet or dry report will be added to describe the portions of the rwy not covered by ice, snow or slush.

EXAMPLES

Packed snow on runway; decelerometer reading of 15	PSR 15
Ice on runway; decelerometer reading of 05. Conditions patchy; remainder of runway wet	IR05P/WET
Loose snow on runway; decelerometer reading of 20	LSR20
Ice on runway; decelerometer reading of 05. Condition patchy, runway sanded	IR05P SANDED

NOTE: The Air Force is conducting tests to determine the actual runway condition reading (RCR) of all USAF runways under wet runway conditions. As the tests are completed, the information will be included within the Airport/Facility Remarks for each base.

NO-NOTAM PREVENTIVE MAINTENANCE PROCEDURES

NOTAM action is not required when performing routine preventive maintenance with USN facilities indicated below. Equipment will be immediately returned to operation or NOTAM action taken if weather conditions deteriorate below ceiling or visibility requirements listed. Also NOTAM action will be taken if equipment cannot be returned to operation within the specified time period.

Radio/Radar Facilities and Service		Specified Time Periods ①
	Days	Time (LOCAL)
Search Radar (ASR)	Sat-Sun	0800–1000
	Mon thru Fri	0200–0400
Precision Radar (PAR)	Sat-Sun	1000–1200
	Mon thru Fri	0400–0600
TACAN	Sat-Sun	1500–1600
VOR	Sat-Sun	1400–1500
LF/MF (RBn-Range)	Sat-Sun	1700–1800
LF/MF (RBn-Range)	Sat-Sun	1700–1800
ILS	Sat-Sun	1600–1700
UHF RBn	Any Day	0800–1000

① Deviations to this schedule are approved. Submit deviations via appropriate FLIP correction addressee for inclusion under Radio/Nav Remarks.

USA/USN—Locations with two or more Instrument Approach Aids, ceiling 3000´, visibility 5 SM, locations with a single Instrument Approach Aid, sky condition scattered, visibility 5 SM.

USAF—Preventive Maintenance Inspection (PMI), Maintenance Period (MP) Schedules are published under applicable NAVAID, ILS/RADAR or Terminal FLIP RADAR Minima listings. Associated weather criteria, other than 3000´ ceiling, 5 statute mile visibility forecast during MP plus one hour, is reported as part of the schedule. For example, (1500/3+1) where 1500 is the ceiling in feet, 3 is the visibility in statute miles and +1 (plus 1) indicates forecast during maintenance period plus one hour.

CIVIL PROCEDURES

AIR TRAFFIC CONTROL PROCEDURES

Recording and Monitoring

Calls to air traffic control (ATC) facilities (ARTCCs, Towers, FSSs, Central Flow, and Communications Control Centers) over radio and ATC operational telephone lines (lines used for operational purposes such as controller instructions, briefings, opening and closing flight plans, issuance of IFR clearances and amendments, counter hijacking activities, etc.) may be monitored and recorded for operational uses such as accident investigations, accident prevention, search and rescue purposes, specialist training and evaluation, and technical evaluation and repair of control and communications systems.

REPORTING OF MALFUNCTIONS OF NAVIGATION AIDS AND COMMUNICATIONS EQUIPMENT — FAA

1. APPLICABILITY

This special Federal Aviation Regulations applies to the operation of aircraft within Controlled Airspace under Instrument Flight Rules of Part 91 of Federal Aviation Regulations.

2. MALFUNCTION REPORTS

The pilot in command shall report immediately to Air Traffic Control any inflight malfunction of navigation or Air/Ground communications equipment as listed below:

a. Loss of VOR, TACAN, ADF, or low frequency navigation receiver capability or,
b. complete or partial loss of ILS receiver capability or
c. impairment of Air Ground communications capability.
d. Loss of airborne navigational radar.

3. SUBSTANCE OF REPORTS

Each report required under paragraph 2 hereof shall include the following:

a. Aircraft identification.
b. The equipment affected
c. The degree to which capability of the pilot to operate IFR in the Air Traffic Control System is impaired and
d. The nature and extent of assistance desired from Air Traffic Control: The exact nature and degree of assistance available from the ATC system will vary considerably. It is, therefore, essential that the pilot inform the controller of the assistance needed. If no assistance is required, normal handling may be expected. If special handling is requested, the ATC controller will provide maximum amount of assistance, consistent with the equipment at his disposal and the proper performance of his control functions with respect to other IFR aircraft. Should the circumstances warrant greater attention and priority handling with respect to other IFR aircraft, the pilot should then declare an Emergency.

FLIGHT PLAN (CIVIL)

It is strongly recommended that a flight plan be filed. This not only assures prompt search and rescue action in event you become overdue or missing, but it also permits enroute stations and the destination station to render better service by having prior knowledge of your flight. All VFR flights, whether on a flight plan or not, should make regular position reports to FAA Flight Service Stations to receive altimeter settings and weather safety advisories. Also, search and rescue action, if necessary, can be focused in the proper area. Flight Plans may be submitted to the nearest Flight Service Station.

NOTE— *If the flight will traverse or land in one or more foreign countries, it is particularly important that pilots leave a complete itinerary with someone directly concerned, keep that person advised of the flight's progress and inform him that, if serious doubt arises as to the safety of the flight, he should first contact the FSS.*

DVFR (Defense VFR) Flight Plan.— DVFR flight plans must be submitted to the nearest Flight Service Station. Detailed ADIZ procedures are to be found under ADIZ Procedures.

FLIGHT PLAN — IFR

When filing an IFR flight plan for flight in an aircraft equipped with navigational and communications equipment as described in the Aeronautical Information Manual, identify equipment capability by adding one or more suffixes to the AIRCRAFT TYPE preceded by a slant, as follows:

N No COM/NAV/APCH equipment carried, or equipment is unserviceable
S Standard COM/NAV/APCH equipment is carried & serviceable
(i.e., VHF RTF, ADF, VOR and ILS)

A GBAS landing system
B LPV (APV with SBAS)
C LORAN C
D DME
E1 FMC WPR ACARS
E2 DFIS ACARS
E3 PDC ACARS
F ADF
G GNSS (See Note 2)
H HF RTF
I Inertial Navigation
J1 CPDLC ATN VDL Mode 2 (See Note 3)
J2 CPDLC FANS 1/A HFDL
J3 CPDLC FANS 1/A VDL Mode A
J4 CPDLC FANS 1/A VDL Mode 2
J5 CPDLC FANS 1/A SATCOM (INMARSAT)
J6 CPDLC FANS 1/A SATCOM (MTSAT)
J7 CPDLC FANS 1/A SATCOM (Iridium)
K MLS
L ILS
M1 ATC RTF SATCOM (INMARSAT)
M2 ATC RTF (MTSAT)
M3 ATC RTF (Iridium)
O VOR
P1-P9 Reserved for RCP
R PBN approved (See Note 4)
T TACAN
U UHF RTF
V VHF RTF
W RVSM approved
X MNPS approved
Y VHF with 8.33 kHz channel spacing capability
Z Other equipment carried or other capabilities (See Note 5)

NOTE—

1. *If the letter S is used, standard equipment is considered to be VHF RTF, VOR, and ILS, unless another combination is prescribed by the appropriate ATS authority.*
2. *If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.*
3. *See RTCA/EUROCAE Interoperability Requirements Standard For ATN Baseline 1 (ATN B1 INTEROP Standard - DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.*
4. *If the letter R is used, the performance based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance based navigation to a specific route segment, route or area is contained in the Performance-Based Navigation Manual (Doc 9613).*
5. *If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/, NAV/ and/or DAT/, as appropriate.*

6. Information on navigation capability is provided to ATC for clearance and routing purposes.

2. Surveillance equipment and capabilities

ENTER **N** if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable,
OR
ENTER one or more of the following descriptors, up to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board. Enter no more than one transponder code (Modes A, C, or S)

SSR Modes A and C:

A Transponder - Mode A (4 digits - 4096 codes)
C Transponder - Mode A (4 digits - 4096 codes) and Mode C

SSR Mode S:

E Transponder - Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability
H Transponder - Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability
I Transponder - Mode S, including aircraft identification, but no pressure-altitude capability
L Transponder - Mode S, including aircraft identification, pressure-altitude, extended squitter (ADSºB) and enhanced surveillance capability
P Transponder - Mode S, including pressure-altitude, but no aircraft identification capability
S Transponder - Mode S, including both pressure-altitude and aircraft identification capability
X Transponder - Mode S with neither aircraft identification nor pressure-altitude capability

NOTE—
Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B:

***B1** ADS-B with dedicated 1090 MHz ADS-B "out" capability*
***B2** ADB-B with dedicated 1090 MHz ADS-B "out" and "in" capability*
***U1** ADS-B "out" capability using UAT*
***U2** ADS-B "out" and "in" capability using UAT*
***V1** ADS-B "out" capability using VDL Mode 4*
***V2** ADS-B "out" and "in" capability using VDL Mode 4*

NOTE—
File no more than one code for each type of capability, e.g. file B1 or B2 and not both

ADS-C:

***D1** ADS-C with FANS 1/A capabilities*
***G1** ADS-C with ATN capabilities*

Alphanumeric characters not indicated above are reserved.

EXAMPLE-
ADE3RV/HB2U2V2G1

NOTE—
Additional surveillance application should be listed in Item 18 following the indicator SUR/.

***3.** In order to provide course guidance and assist sequencing into the Anchorage Terminal Area, aircraft filed over McGrath (MCG) or Sparrevohn (SQA) and landing at Ted Stevens Anchorage International Airport or Elmendorf Air Force Base should file the following STAR's: from over MCG, file the TAGER arrival; from over SQA, file the AMOTT arrival. If unable to fly the STAR, advise ATC prior to reaching MCG or SQA for alternate instructions.*

FLIGHT PLAN — VFR

Pilots are encouraged to give their departure times directly to the flight service station with which the flight plan was filed. This will ensure more efficient flight plan service and permit the FSS to advise you of significant changes in aeronautical facilities or meteorological conditions. The following procedures are in effect: when a VFR flight plan if filed, it will be held until two hours after the proposed departure time and then canceled unless:

1. The actual departure time is received.
2. A revised proposed departure time is received.
3. At a time of filing, the FSS is informed that the proposed departure time will be met, but actual time cannot be given because of inadequate communications.

CLOSING FLIGHT PLANS

VFR, and DVFR flight plans must be closed upon landing. If an arrival report is not received within a reasonable period of time after ETA, a communications search for you will be conducted. If this search fails to locate your aircraft, a Rescue Coordination Center will be advised and an extensive costly physical search for your aircraft will be inaugurated.

FLIGHT PLAN—ELEMENTS OF A FLIGHT PLAN

The following is a listing of the order of Flight Plan elements as found on FAA Form 7233-4, International Flight Plan:

1. Blocks 1-3: For use by Flight Service only
2. Block 7 Aircraft Identification: up to seven alpha-numerics
3. Block 8
   a. Flight Rules: **I** - Instrument Flight Rules; **V** - Visual Flight Rules; **Y** - Composite VFR to IFR; **Z** - Composite IFR to VFR
   b. Type of Flight: **S** - Scheduled Air Carrier; **N** - Non-scheduled Air Carrier; **G** - General aviation; **M** - Military; **X** - Other
4. Block 9
   a. Number of Aircraft: two-digit number
   b. Type of Aircraft: up to four alpha-numerics (see FAA Order 7360.1, Aircraft Type Designators)
   c. Wake Turbulence Category: **H** - Heavy (300,000 lbs. or more); **M** -- less than 300,000 lbs.and more than 15,500 lbs); **L** - less than 15,500 lbs.
5. Block 10 Equipment: - see Aeronautical information Manual for Nav/comm and transponder codes
6. Block 13
   a. Departure Aerodrome: ICAO identifier (four-character alphabetic code)
   b. Departure Time: four-digit time UTC
7. Block 15
   a. Cruising Speed: **N** - followed by four-digit **Knots**; **M** - followed by three-digit **Mach** number; **K** - followed by four-digit **Kilometers per hour**
   b. Cruising Level: **A** - followed by three-digit **Altitude** below 18,000 ft.; **F** - followed by three-digit **Flight Level**
   c. Route of Flight: Fixes, navaids, airways, latitude/longitude
8. Block 16
   a. Destination Aerodrome: ICAO identifier (four-character alphabetic code)
   b. Total estimated en route time: four-digit time in hours and minutes
   c. Alternate Aerodrome: ICAO identifier (four-character alphabetic code)
   d. Second Alternate Aerodrome: ICAO identifier (four-character alphabetic code)
9. Block 18 Other Information: Special fields which may be required on some flight plans
10. Block 19 Supplementary Information:
    a. Endurance: fuel on board, in hours and minutes
    b. Persons on board
    c. Emergency Radio*
    d. Survival Equipment*
    e. Jackets*
    f. Dinghies*
    g. Aircraft color and markings
    h. Remarks*
    i. Pilot-in-Command

* Optional Information

FLIGHT PLAN—MASTER FLIGHT PLAN PROGRAM

The master flight plan program was established for the owners/operators of aircraft in Alaska. A Master Flight Plan is intended to record static information on an aircraft, not on a pilot. Only one Master Flight Plan, therefore, will be accepted per aircraft from the owner/operator. Master Flight Plan files are maintained by Flight Service Stations (FSS's) for aircraft based within Alaska. Aircraft owners/operators may file a Master Flight Plan with a FSS on line, in person, or via mail, phone, or fax. FSS's will forward Master Flight Plan information to the appropriate support personnel for entry into the database. A Master Flight Plan on file with any Alaskan FSS will be accepted by all Alaskan Region FSS's. Upon receipt of Master Flight Plan information, the FSS staff enters the information into the statewide database. The Master Flight Plan becomes effective when the owner/operator is notified by the FSS support specialist. This can be accomplished either verbally upon receipt of the Master Flight Plan, or by other written or electronic means (fax, e-mail, phone, etc.).

Master flight plans must contain the following data:

1. Aircraft identification.
2. Aircraft type/special equipment codes (ICAO).
3. Airspeed
4. Remarks, if any. (Radios, navigation equipment, floats, skis, other)
5. Owner or operator's name, physical address, and phone number.
6. Owner or operator's mailing address.
7. Aircraft home base, including tie-down number if available.
8. Color of aircraft.
9. Names and phone numbers of 24-hour coordination contacts.
10. Optional items:
    a. Maximum fuel capacity in hours and minutes.
    b. Emergency equipment on board.
    c. Satellite tracking device information (see Enhanced Special Reporting Service (eSRS) in the Associated Data section of this chart supplement).

Aircraft owners/operators are responsible for ensuring the Master Flight Plan information on file for their aircraft is current. Changes in Master Flight Plan data or aircraft ownership should be reported to Flight Service immediately. Failure to provide updated information could cause unnecessary delays in search and rescue activities. Pilots who do not update Master Flight Plan information may be excluded from the program.

When filing a flight plan for an aircraft with a Master Flight Plan on file, provide the following information:

1. Type of flight plan.
2. Type of aircraft.
3. Equipment code if IFR.
4. Departure point.
5. Departure time or activation time.
6. Proposed altitude if IFR.
7. Route of flight.
8. Destination.
9. Estimated time en route.
10. Fuel on board.
11. Pilot's last name.
12. Number of people on board.

Pilots should advise Flight Service that they have an Alaskan Master Flight Plan when filing a flight plan within Alaska, i.e., "Master Flight Plan on File. Pilot's name is..." The additional information required for search and rescue will be is available to all Alaskan Flight Service Stations in the event the aircraft becomes overdue.

ATC IFR CLEARANCE DELIVERY

a. At airports where a traffic control tower is in operation, ATC IFR clearances are normally relayed to pilots on the “ground control” frequency or on a published “clearance delivery” frequency.

b. At airports where a Flight Service Station is in operation or having a part-time Flight Service Station with a remote communications outlet (RCO), ATC IFR clearances shall be obtained through the FSS on the common traffic advisory frequency (CTAF).

c. At airports where there is neither a control tower nor an FSS, but there is a remote communications Air-Ground Facility (RCAG) available, contact the ARTCC direct. (Frequencies are published on Enroute Charts and in the Airport/Facility directory portion of this chart supplement.)

d. At airports where there is no control tower, FSS, RCO, or RCAG, a clearance may be obtained through the nearest FSS, or RCAG.

Air Defense Identification Zone (ADIZ) Procedures (Civil)

Recommended ADIZ Practices. — No person may operate an aircraft in or penetrating an ADIZ unless he has filed a flight plan with an appropriate Aeronautical facility. The North American Aerospace Defense Command advises that an "Airfield" flight plan makes the aircraft subject to interception for positive identification. Pilots are strongly urged, therefore, to file DVFR Flight Plans required for Security Control either in person or by telephone. To encourage conformation with this request FAA Flight Service Stations will accept collect long distance telephone calls made for the purpose of filing required DVFR flight plans. The following procedure will apply:

1. Contact the long distance telephone operator and place a collect, station-to-station call for “SECURITY PILOT (your last name)” to the FAA station.

2. When the FAA station accepts the call, file your DVFR flight plan as expeditiously as possible.

FAA stations will not accept collect calls from locations which are obviously much closer to another FAA station, neither will they accept calls which do not contain the key words “SECURITY PILOT (name).” In order to conserve government funds, FAA station will not accept long distance collect calls from any pilot within the Defense Area. DVFR flight plans from such points will be accepted, however, if filed at no expense to the government.

ADIZ Transponder Requirements — All civil aircraft equipped with an operable radar beacon transponder must be operated with that transponder turned on, including the altitude encoder if installed, and reply on the appropriate code or on a code assigned by ATC.

Emergency Security Control of Air Traffic (ESCAT)

http://www.access.gpo.gov/nara/cfr/waisidx_07/32cfr245_07.html)

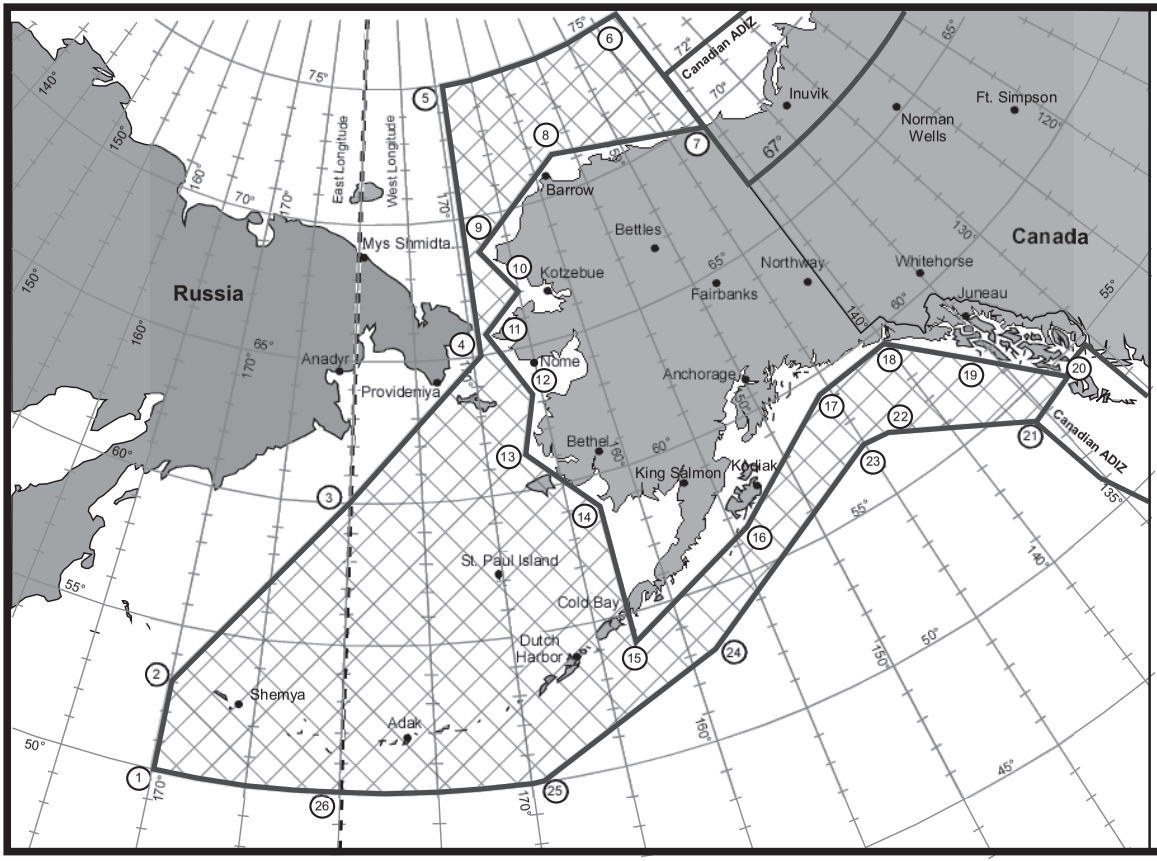
The ESCAT plan (see 32 CFR Part 245) defines the authorities, responsibilities, and procedures to identify and control air traffic within a specified air defense area during air defense emergencies, defense emergency, or national emergency conditions. ESCAT provides the security control of both civil and military air traffic. It is intended to meet threat situations such as an emergency resulting in the declaration of an Air Defense Emergency by the appropriate military authority or other emergency conditions that either threaten national security or national interests vital to the U.S., but do not warrant declaration of Defense Emergency or Air Defense Emergency.

When ESCAT is implemented, a system of traffic priorities may be required to make optimum use of airspace, consistent with air defense requirements. The ESCAT Air Traffic Priority List (EATPL) is a list of priorities that may be used for the movement of air traffic in a defined area. The originator of an aircraft flight operation under the EATPL shall be responsible for determining and verifying that the mission meets the appropriate definition and priority, and ensuring a security check* of the crew, cargo and aircraft has been completed prior to takeoff. The individual filing the flight plan will be responsible for including the priority number as determined by the originator of the aircraft flight operation, in the remarks section of the flight plan.

*NOTE: Security checks must be in accordance with the Transportation Security Administration directives.

The appropriate military authority will: (a) notify or coordinate, as appropriate, the extent or termination of ESCAT implementation with DOT and DHS; (b) disseminate the extent of ESCAT implementation; (c) specify what restrictions are to be implemented; and (d) revise or remove restrictions on the movement of air traffic as the tactical situation permits. The FAA Air Traffic Control System Command Center (ATCSCC) will direct appropriate ARTCCs/CERAPs to implement ESCAT restrictions as specified by the appropriate military authority.

U.S. civil and military air traffic control facilities will: (a) maintain current information on the status of restrictions imposed on air traffic; (b) process flight plans in accordance with current instructions received from the ARTCC (All flights must comply with the airspace control measures in effect, the EATPL, or must have been granted a Security Control Authorization); and (c) disseminate instructions and restrictions to air traffic as directed by the ARTCCs.



Alaska

Air Defense Identification Zone

Alaska ADIZ Points

1. 50 00N 170 00E
2. 53 00N 170 00E
3. 60 00N 180 00
4. 65 00N 169 00W
5. 75 00N 169 00W
6. 75 00N 141 00W
7. 69 50N 141 00W
8. 71 18N 156 44W
9. 68 40N 167 10W
10. 67 00N 165 00W
11. 65 40N 168 15W
12. 63 45N 165 30W
13. 61 20N 166 40W
14. 59 00N 163 00W
15. 54 00N 163 00W
16. 56 30N 154 00W
17. 59 20N 146 00W
18. 59 30N 140 00W
19. 57 00N 136 00W
20. 54 35N 133 00W
21. 54 00N 136 00W
22. 56 57N 144 00W
23. 57 00N 145 00W
24. 53 00N 158 00W
25. 50 00N 169 00W
26. 50 00N 180 00

Updated: Jan 1, 2009

INTERCEPTION SIGNALS
ICAO STANDARD

SIGNALS INITIATED BY INTERCEPTING AIRCRAFT AND RESPONSES BY INTERCEPTED AIRCRAFT

SERIES	INTERCEPTING AIRCRAFT SIGNALS	MEANING	INTERCEPTED AIRCRAFT RESPONSE	MEANING
1	AIRPLANES: DAY–Rocking wings from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft and, after acknowledgement, a slow level turn, normally to the left, on to the desired heading. NIGHT–Same and, in addition, flashing navigational lights at irregular intervals. NOTE 1.–Meteorological conditions or terrain may require the intercepting aircraft to take up a position slightly above and ahead of, and to the right of, the intercepted aircraft and to make the subsequent turn to the right. NOTE 2.–If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race–track patterns and to rock its wings each time it passes the intercepted aircraft.	You have been intercepted. Follow me.	AIRPLANES: DAY–Rocking wings and following. Night–Same and, in addition, flashing navigational lights at irregular intervals. HELICOPTERS: DAY or NIGHT–Rocking aircraft, flashing navigational lights at irregular intervals and following.	Understood, will comply.
2	DAY OR NIGHT–An abrupt breakaway maneuver from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	AIRPLANES: DAY or NIGHT–Rocking wings. HELICOPTERS: DAY or NIGHT–Rocking aircraft.	Understood, will comply.
3	DAY–Circling aerodrome, lowering landing gear and overflying runway in direction of landing or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. NIGHT–Same and, in addition, showing steady landing lights.	Land at this aerodrome.	AIRPLANES: DAY–Lowering landing gear, following the intercepting aircraft and, if after overflying the runway landing is considered safe, proceeding to land. NIGHT–Same and, in addition, showing steady landing lights (if carried). HELICOPTERS: DAY or NIGHT–Following the intercepting aircraft and proceeding to land, showing a steady landing light (if carried).	Understood, will comply.

INTERCEPTION SIGNALS
ICAO STANDARD

SIGNALS INITIATED BY INTERCEPTING AIRCRAFT AND RESPONSES BY INTERCEPTED AIRCRAFT

SERIES	INTERCEPTING AIRCRAFT SIGNALS	MEANING	INTERCEPTED AIRCRAFT RESPONSE	MEANING
4	AIRPLANES: DAY–Raising landing gear while passing over landing runway at a height exceeding 300m (1,000 ft) but not exceeding 600m (2,000 ft) above the aerodrome level, and continuing to circle the aerodrome.	Aerodrome you have designated is inadequate.	DAY OR NIGHT–If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear and uses the Series 1 signals prescribed for intercepting aircraft.	Understood, follow me.
	NIGHT–Flashing landing lights while passing over landing runway at a height exceeding 300m (1,000 ft) but not exceeding 600m (2,000 ft) above the aerodrome level, and continuing to circle the aerodrome. If unable to flash landing lights, flash any other lights available.		If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, you may proceed.
5	AIRPLANES: DAY or NIGHT–Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT–Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	AIRPLANES: DAY or NIGHT–Irregular flashing of all available lights. HELICOPTERS: Day or Night–Irregular flashing of all available lights.	In distress.	DAY or NIGHT–Use Series 2 signals prescribed for intercepting aircraft.	Understood.

DISTRESS INTERCEPTION SIGNALS

SIGNAL BY INTERCEPTED AIRCRAFT	MEANING	RESPONSE BY INTERCEPTOR
DAY–Porpoising NIGHT–Switching on landing lights and holding steady beam.	In Distress	DAY OR NIGHT–Use appropriate interception signals as shown above.

NOTE TO INTERCEPTION SIGNALS
(See preceding page)

The word “interception” in this context does not include intercept and escort service provided, on request, to an aircraft in distress.

An aircraft which is intercepted by another aircraft shall immediately:

a. follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals on preceding page;

b. notify, if possible, the appropriate air traffic services unit;

c. attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 243.0, MHz and repeating this call on the emergency frequency 121.5 MHz, if practicable, giving the identity and position of the aircraft and the nature of the flight;

d. if equipped with SSR transponder select Mode 3/A Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual or radio signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the instructions given by the intercepting aircraft.

ATTENTION: ICAO Standard Interception Signals are applicable in all areas with exceptions as published below.

RUSSIA

1. The following rules are applicable to foreign aircraft operating within Russian airspace in accordance with previously issued clearances or existing overflight agreements. The Aeronautical Information Publication (AIP) as published by the Ministry of Civil Aviation, CIS, contains the Soviet Rules for Engagement. These rules are applicable to foreign aircraft operating with Russian airspace in accordance with previously issued clearances or existing overflight agreements. Foreign aircraft, flying in the air space of Russia, violating established flight procedures, or not complying with commands of the Air Traffic Control Service of the Ministry of Civil Aviation directing the flight of that aircraft, will be considered violators and alert aircraft of the Anti-Air Defense will compel them to land at the nearest airport.

NAVIGATION WARNING

U.S. aircraft flying between Alaska and Japan are cautioned of the absolute necessity of remaining over international waters at all times in order to avoid possibly dangerous consequences which could result from unauthorized overflight of Russian territory. Recognition that many flight tracks on this route provide minimum separation from Russian airspace further emphasizes the need for all pilots to use all existing navigational capability. It is therefore recommended that all pilots flying between Alaska and Japan take utmost precautions to avoid flying over Russian territory.

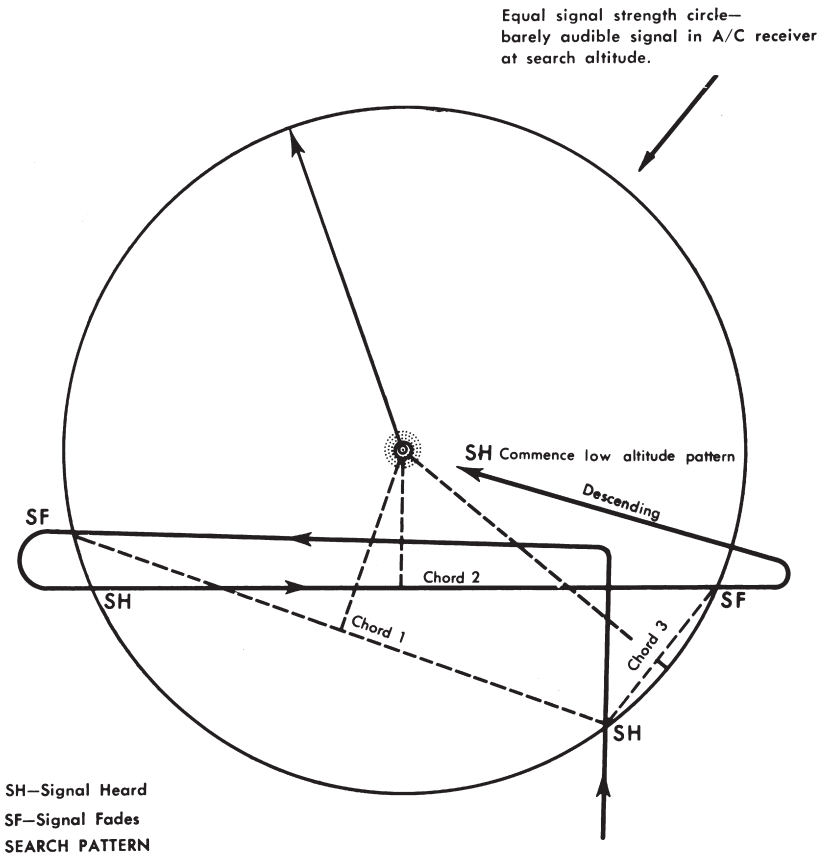
SEARCH PROCEDURES EMERGENCY LOCATOR TRANSMITTER (ELT)

Locating the Position of a VHF or UHF ELT. — The initial search for survivors equipped with a VHF or UHF ELT will be at high altitude to take advantage of the increased range afforded by altitude. The receiver should be tuned to the frequency of the ELT with squelch off. The frequency should be guarded aurally and visually if the search aircraft has suitable homing equipment. While some progress is being made toward standardization on the type of signal emitted by these survival ELTs, search and rescue personnel should realize that complete standardization may not be achieved in the near future. If the type of signal emitted by the particular ELT is not known, searchers should be alert for any signal on the frequency, including a steady tone. Types of signals used by these ELTs are: steady tone (this may become a warbling tone if the ELT is floating in the ocean); a definite warbling tone built into the ELT; and interrupted tone (a peculiar "beep-beep-beep") built into the ELT. Once the ELT signal is detected, it will be a simple matter for the search aircraft to home on it, if the aircraft is equipped with homing equipment. However, if the search aircraft has only receiver capability, it can still locate the survivors by flying one of the two procedures described below:

SEARCH PATTERN PROCEDURE (Boxing-in)

Boxing-in patterns assume that the lines of equal signal strength will be circular, as shown below. Thus, an aircraft flying at constant altitude can determine the limits of successive chords to the equal signal strength circle corresponding to a barely audible signal on its own receiver by plotting its position as the signal appears and again when it fades. The perpendicular bisector of each chord is an approximate line of position containing the beacon. The intersection of any 2 lines of position will indicate the approximate location of the beacon and the aircraft will be able to proceed to the approximate position. By proceeding to this position and descending to appropriate altitude, the aircraft can then make another low-level boxing-in pattern and/or carry out a close visual search for the survivors by any convenient high probability visual search pattern.

EQUAL SIGNAL STRENGTH CIRCLE



2. SEARCH PATTERN PROCEDURE (180°-90° Build-Fade Method)

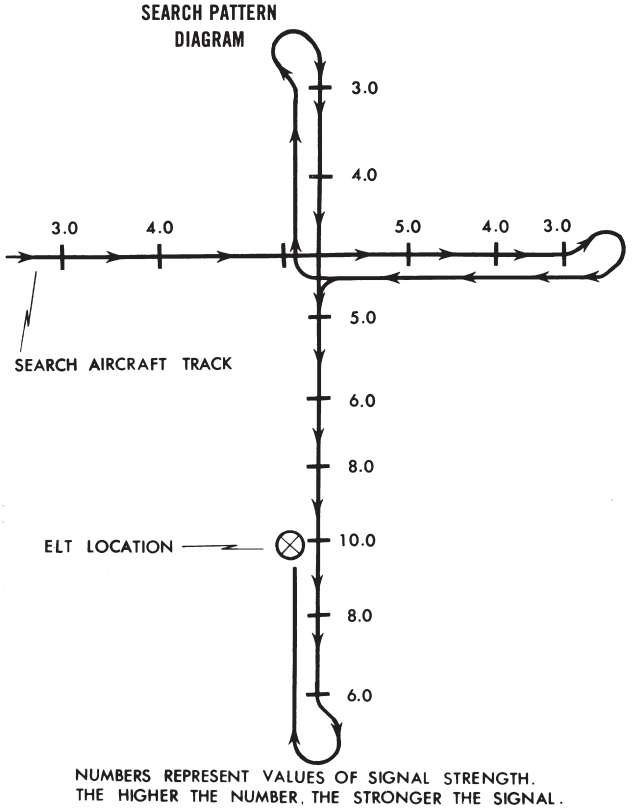
After the emergency signal is received and identified, the volume should be decreased to the lowest level that can be clearly identified. As the signal increases, the volume control should be reduced accordingly. By using the 180°-90° (build and fade) search pattern, an ELT signal can be successfully located within a 4 to 10 square mile area, and many times pin point the site of the ELT.

Search pattern procedure (180°-90° turn pattern)

1. Aurally identify the ELT signal.
2. Note the signal level (loudness).
3. Hold constant heading and altitude while recording your location on appropriate chart.
4. Record relative signal levels and position on chart at periodic intervals.
5. **a.** After first detecting the emergency signal, two situations may be encountered relative to the change in signal level received. The two conditions are listed below:
   - **(1) FADE** —The emergency signal level diminishes as the search aircraft maintains a constant course (heading away from ELT).
   - **(2) BUILD** —The emergency signal steadily increases in signal strength as the search aircraft continues on course (flying toward the ELT).

   b. The search aircraft should be flown through the area of maximum signal level and continue to the point of signal fade-out.
6. Execute 180° turn and return to the point of highest signal level.
7. At the point of highest signal level execute a 90° turn to the right or left.
8. If the signal diminishes, conduct an 180° turn and return toward maximum signal location (on chart).
9. After passing over the area of highest signal level, maintain heading until a definite decrease in signal level is obtained.
10. Execute a 180° turn and return to the point of highest signal level for approximate ELT location.
11. It may be necessary to repeat steps 7 through 10 several times to accurately locate the ELT.

NOTE: A cone of silence may be experienced directly over the ELT at low altitudes, thus indicating the location of the ELT.



SEARCH AND RESCUE

1. GENERAL

a. Search and Rescue is a life-saving service provided through the combined efforts of the FAA, Military Services, Coast Guard, State Boards, Aeronautic Commissions or other similar state agencies who are assisted by other organizations such as the Civil Air Patrol, Sheriffs Air Patrol, State Police, etc. It provides search, survival aid, and rescue of personnel of missing or crashed aircraft.

b. Prior to departure on every flight, local or otherwise, someone at the departure point should be advised of your destination and the route of flight if other than direct. Search efforts are often wasted and rescue is often delayed because of pilots who thoughtlessly take off without telling anyone where they are going.

c. All you need to remember to obtain this valuable protection is:
(1) File a Flight Plan with an FAA Flight Service Station in person or by telephone or radio.
(2) Close your flight plan with the appropriate authority immediately upon landing.
(3) If you land at a location other than the intended destination, report the landing to the nearest FAA Flight Service Station
(4) If you land enroute and are delayed more than 30 min., report this information to the nearest FSS.
(5) Remember that if you fail to report within one-half hour after your ETA, a search will be started to locate you.

d. If a crashed aircraft is observed:
(1) Determine if crash is marked with yellow cross; if so, crash has already been reported and identified.
(2) Determine, if possible, type and number of aircraft and whether there is evidence of survivors.
(3) Fix, as accurately as possible, exact location of crash.
(4) If circumstances permit, orbit scene to guide in other assisting units relieved by another aircraft.
(5) Transmit information to nearest FAA or other appropriate radio facility.
(6) Immediately after landing, make a complete report to nearest FAA, Air Force, or Coast Guard installation. Report may be made by long distance collect telephone.

e. To assist survival and rescue in the event of a crash landing the following advice is given:
(1) For flight over uninhabited land areas, it is wise to take suitable survival equipment depending on type of climate and terrain.
(2) If forced landing occurs at sea, chances for survival are governed by degree of crew proficiency in emergency procedures and by effectiveness of water survival equipment.
(3) If it becomes necessary to ditch, distressed aircraft should make every effort to ditch near a surface vessel. If time permits, the position of the nearest vessel can be obtained from a Coast Guard Rescue Coordination Center through the FAA facility.
(4) The rapidity of rescue on land or water will depend on how accurately your position may be determined. If flight plan has been followed and your position is on course, rescue will be expedited.
(5) Unless you have good reason to believe that you will not be located by search aircraft, it is better to remain near your aircraft and prepare means for signalling whenever aircraft approach your position.

f. Search and Rescue facilities include:
(1) Rescue Coordination Centers;
(2) Search and Rescue aircraft;
(3) Rescue vessels;
(4) Pararescue and ground rescue teams;
(5) Emergency radio fixing.

2. CLOSE YOUR FLIGHT PLAN

a. The control tower does not automatically close VFR flight plans since many of the landing aircraft are not operating on flight plans. It remains the responsibility of a pilot to close his own flight plan. This will prevent a needless search.

3. NATIONAL SEARCH AND RESCUE PLAN

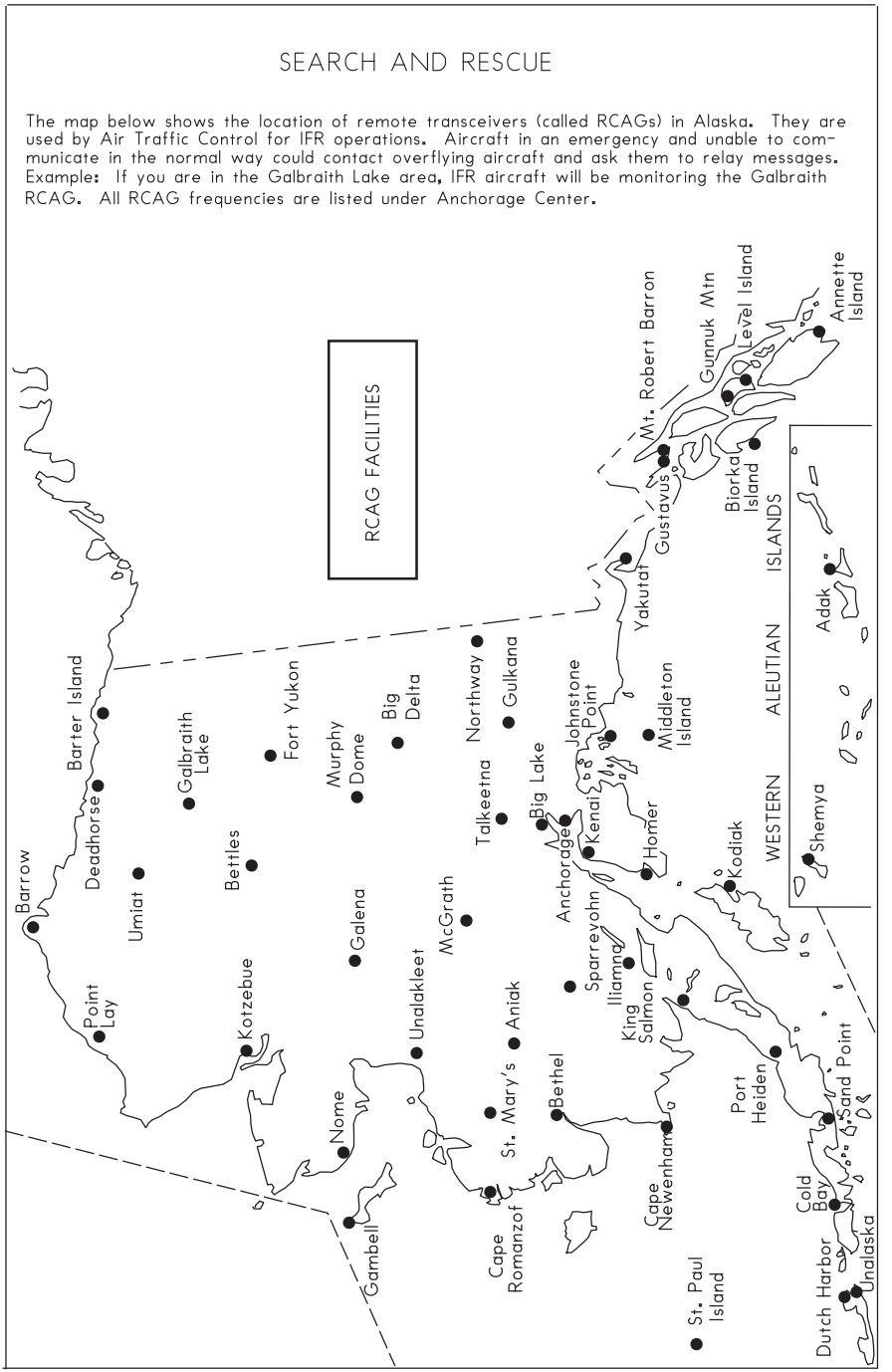
a. Under the National Search and Rescue Plan, the U.S. Coast Guard is responsible for coordination of search and rescue for the Maritime Region, and the U.S. Air Force is responsible for coordination of search and rescue for the CONUS-Inland Region, and the Unified Commander for the coordination of search and rescue for the overseas theaters (Alaska). In order to carry out this responsibility the Air Force, the Coast Guard and Unified Commanders have established Rescue Coordination Centers to direct search and rescue activities within their regions. This service is available to all persons and property in distress, both civilian and military. Normally, for aircraft incidents, information will be passed to the Rescue Coordination Centers through the appropriate Air Route Traffic Control Center or Flight Service Station.

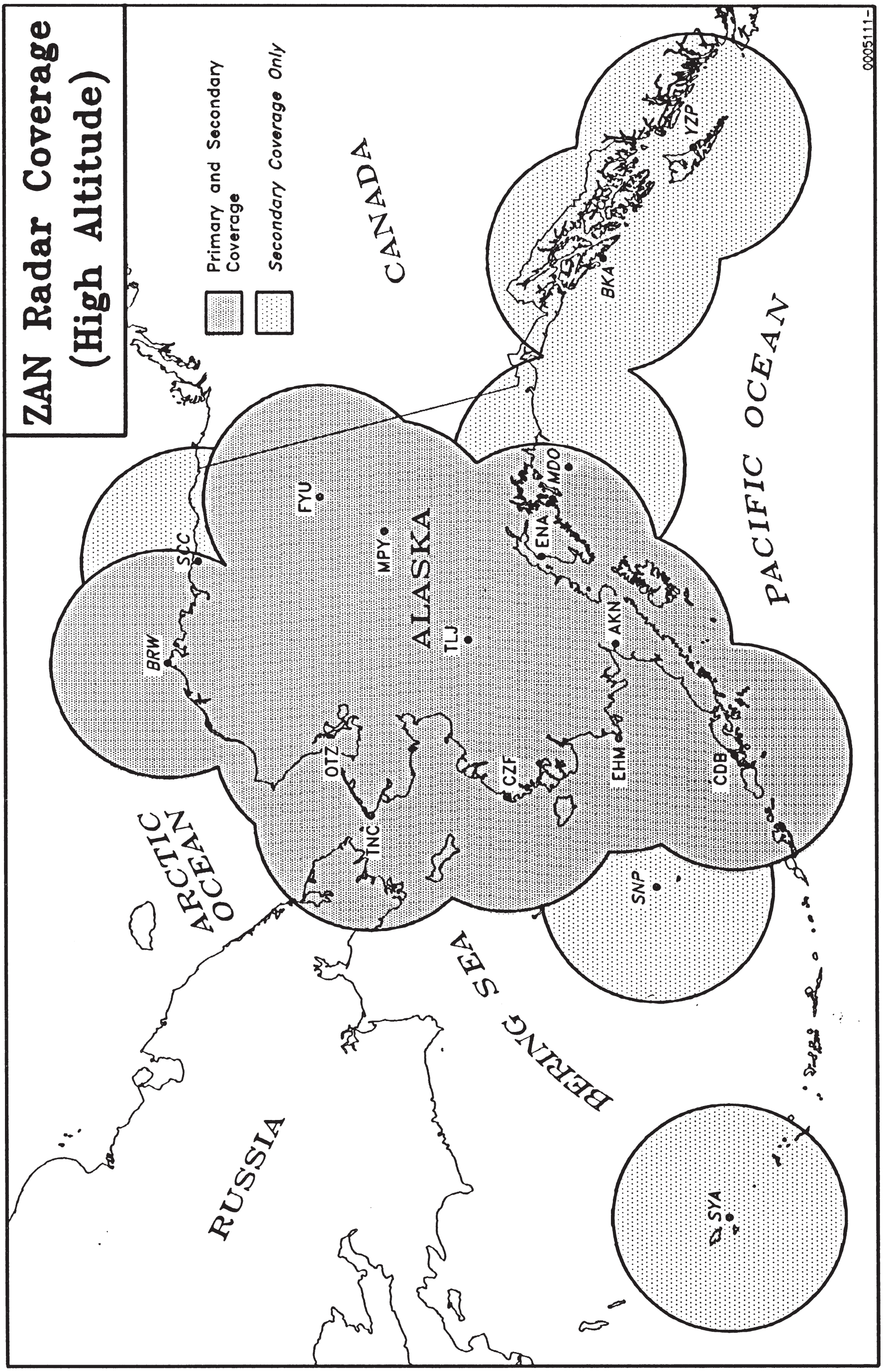
4. INADVERTENT OPERATION OF EMERGENCY LOCATOR TRANSMITTERS

In addition to depleting the batteries, accidental triggering of ELTs or improper test procedures could cause an unnecessary search. The on/off switch should be checked prior to and upon completion of each flight, and the ELT should be stored in a secure place until needed. If accidental activation is suspected please call the AK RCC at 1-800-420-7230 or (907) 551-7230. There is no test period for 406 Mhz ELTs unless prior coordination with NOAA has been made. Please ensure your 406 Mhz ELT is registered as this will expedite Search and Rescue if an emergency does exist. Call NOAA at 1-888-212-7283 or visit Beacon.Registration@NOAA.gov for more information.

SEARCH AND RESCUE

The map below shows the location of remote transceivers (called RCAGs) in Alaska. They are used by Air Traffic Control for IFR operations. Aircraft in an emergency and unable to communicate in the normal way could contact overflying aircraft and ask them to relay messages. Example: If you are in the Galbraith Lake area, IFR aircraft will be monitoring the Galbraith RCAG. All RCAG frequencies are listed under Anchorage Center.




ZAN Radar Coverage
(High Altitude)
Primary and Secondary Coverage
Secondary Coverage Only
CANADA
ALASKA
PACIFIC OCEAN
ARCTIC OCEAN
BERING SEA
RUSSIA
BRW
SCC
FYU
MPY
TLJ
OTZ
TNC
CZF
EHM
AKN
ENA
MDO
CDB
SNP
SYA
BKA
YZP
0005111-

COAST GUARD RESCUE COORDINATION CENTERS

(Operates 24 hours a day)

Juneau
800–478–5555 907–463–2000

Coast Guard Rescue Coordination Centers are served by major radio stations which guard 500 kHz (CW), 8364 kHz (CW), and 2182 kHz (Voice). In addition to the major radio stations, the 247 Coast Guard units along the sea coasts of the United States and shores of the Great Lakes guard 2182 kHz (Voice). All of these facilities are available for reporting distress or potential distress. THE CALL "NCU" (CW) or "COAST GUARD" (VOICE) ALERTS ALL COAST GUARD RADIO STATIONS WITHIN RANGE.

ALASKA RESCUE COORDINATION CENTER

(Operates 24 hours a day)
Anchorage, AK
1–800–420–7230 1–907–551–7230
AK Rescue Coordination Center monitors 123.1, 282.8

FUEL JETTISONING

1. Should it become necessary to jettison fuel, the pilot should immediately advise Air Traffic Control. Upon receipt of advice that an aircraft will jettison fuel, Air Traffic Control will broadcast or cause to be broadcast at a reasonable time before fuel dumping is to begin and every 3 minutes thereafter on appropriate Air Traffic Control, Flight Service Station and airline company radio frequencies the following:

ADVISORY TO AIRCRAFT NOT ON ATC CLEARANCE—FUEL DUMPING IN PROGRESS—(aircraft type) (present position) (course/s) (altitude)—AVOID FLIGHT WITHIN 10 NAUTICAL MILES IF AT THIS ALTITUDE. IF WITHIN FIVE NAUTICAL MILES, REMAIN AT LEAST ONE THOUSAND FEET ABOVE OR AT LEAST TWO THOUSAND FEET BELOW THE AIRCRAFT.

2. Upon receipt of such a broadcast, pilots of aircraft affected, which are not on IFR flight plans or special VFR clearances, should clear the area specified in the advisory. Aircraft on IFR flight plans or special VFR clearances will be provided specific separation by Air Traffic Control. At the termination of the fuel jettisoning operation, pilots should advise Air Traffic Control. Upon receipt of such information, Air Traffic Control will issue, on appropriate frequencies, the following:

ADVISORY TO ALL CONCERNED—(aircraft type) FUEL DUMP TERMINATED.

EMERGENCY PROCEDURES

GENERAL

I. PROCEDURE FOR TWO-WAY RADIO FAILURE IFR—VFR

IFR FLIGHT PLAN

Two-way radio failure and circumstances surrounding them are so varied that exact rules to be followed cannot be established. However, the following procedures are those which the pilot will be expected to observe in order that ATC can effect the safe control of air traffic AND ARE APPLICABLE TO ALL TYPES OF AIRCRAFT. During two-way radio communications failure, when confronted with a situation not covered in the regulation, pilots are expected to exercise good judgment in whatever action they elect to take. Should the situation so dictate, they should not be reluctant to use the emergency action contained in flying regulations.

Should the pilot of an aircraft equipped with a coded radar beacon transponder experience a loss of two-way radio capability he should adjust his transponder to reply on Mode A/3, Code 7600.

The pilot should understand that he may not be in an area of radar coverage. Many radar facilities are also not presently equipped to automatically display Code 7600 and will interrogate 7600 only when the aircraft is under direct radar control at the time of radio failure. However, replying on code 7700 first increases the probability of early detection of a radio failure condition. Pilots can expect ATC to attempt to communicate by systematically transmitting on suitable air/ground radio frequencies as well as on the voice feature of all available radio navigational or approach aids. If two way radio communications are lost with an aircraft under radar control, ATC will request the pilot to acknowledge in accordance with one of the following as appropriate.

a. Reply with the Mode 3 ident feature.
b. Changing to a specified Mode 3 code or
c. Changing transponder to STANDBY for sufficient time for the controller to be assured that lack of a target is due to the requested change; or
d. When the aircraft is not equipped with a functioning transponder; by executing specified turns.

A. VFR CONDITIONS

If able to maintain flight in VFR conditions continue flight under VFR and land as soon as practicable and notify ATC. It is not intended that the requirement to "land as soon as practicable" be construed to mean "as soon as possible". The pilot retains his prerogative of exercising his best judgment and is not required to land at an unauthorized airport, at an airport unsuitable for the type of aircraft flown, or to land only minutes short of his intended destination. The primary objective of this provision, is to preclude extended IFR operations in the air traffic control system in VFR weather conditions. When operating "ON TOP" and unable to descend VFR prior to the destination, the procedures contained in paragraph B below apply.

B. IFR CONDITIONS

If the failure occurs in IFR conditions, or if VFR conditions are not encountered after the failure or paragraph A cannot be complied with, each pilot shall continue the flight according to the following:

1. ROUTE

a. By the route assigned in the last ATC clearance received;
b. If being radar vectored by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance.
c. In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or
d. In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan.

2. ALTITUDE

At the highest of the following altitudes or flight levels for the route segment being flown.

a. The altitude or flight level assigned in the last ATC clearance received;
b. Where appropriate, the minimum altitude/flight level. The minimum flight level is determined by adding the adjustment factor based on the current reported altimeter setting (shown below) to the minimum altitude for that segment.

ALTIMETER SETTING (Current Reported)	LOWEST USABLE FLIGHT LEVEL	ADJUSTMENT FACTOR
29.92 or higher	180	None
29.91 to 29.42	185	500 ft
29.41 to 28.92	190	1000 ft
28.91 to 28.42	195	1500 ft
28.41 to 27.92	200	2000 ft
27.91 to 27.42	205	2500 ft
27.41 to 26.92	210	3000 ft

c. The altitude or flight level ATC has advised may be expected in a further clearance.

3. LEAVE CLEARANCE LIMIT/HOLDING FIX

If a clearance limit/holding fix has been assigned, leave the clearance limit/holding fix at the expect-further clearance (EFC) time received; or, if an expect-approach-clearance (EAC) has been received, leave the clearance limit/holding fix in order to arrive over the fix from which the approach begins as close as possible to EAC time. If no EAC or EFC has been received, continue to the facility/fix serving the destination airport at the last assigned altitude or minimum enroute altitude (MEA), which ever is higher.

4. DESCENT FOR APPROACH

Begin descent from the enroute altitude or flight level upon reaching the fix from which the approach begins, but not before —

a. The expected-approach-clearance time (if received); or
b. If no expected-approach-clearance time has been received—at the estimated time of arrival, derived from the estimated time filed in the flight plan, or as amended with ATC.

5. Pilots of aircraft equipped with coded radar beacon transponders may alert ATC of their radio failure by adjusting their transponder to reply on Mode 3/A, Code 7600.

6. HOLDING

If holding is necessary at the radio facility/fix to be used for the approach at the destination airport, holding and descent to the initial approach altitude or initial penetration Altitude Flight Level for the execution of the penetration and/or instrument approach shall be accomplished in a holding pattern in accordance with the procedure depicted on the Approach and Landing Chart or Jet Approach and Landing Chart for the airport. If no holding pattern is depicted, holding and descent will be accomplished in a holding pattern on the side of the final approach course to the fix on which the procedure turn is prescribed.

C. SPECIAL MILITARY PROCEDURES

1. Aircraft, on a flight in which a delay enroute is planned, shall commence descent at the destination, at the estimated time of arrival (ETA) derived from the estimated time enroute (ETE) plus any delay for which an ATC clearance has been obtained.

EXAMPLE NO. 1. Point-to-point flight plan, from A to B to C to D (airport of destination). Estimated elapsed time enroute specified in flight plan is three hours (A to D). Remarks indicate proposed two hours local flight at B and one hour local flight at C. On departure, flight is cleared to D (or a short-range clearance limit). If radio communications failure is experienced prior to reaching B, flight should proceed to destination in accordance with established radio communications failure procedures. If the flight has obtained an amended clearance, authorizing a two-hour delay at B, and experiences radio communications failure prior to reaching B or after local flight is begun, local flight at B will be completed. Local flight at C will not be executed.

EXAMPLE NO. 2. Round Robin flight plan from Point A to B to C and back to A. Estimated elapsed time enroute specified in flight plan is three hours (A to A). Remarks indicate one-hour local flight at B and one-hour local flight at A prior to landing. Action governing delay at B would be as indicated in Example No. 1. If the flight is cleared for local flight at A and subsequently experiences radio communications failure, local flight will be completed before beginning letdown.

2. AERIAL REFUELING

a. Tanker aircraft which have not received altitude instructions beyond the exit point should exit the Track or Anchor at the **highest** altitude in the clearance for the refueling portion of the flight and proceed in accordance with the radio communications failure procedures.

b. Receiver aircraft which have not received altitude instructions beyond the exit point should exit the Track or Anchor at the **lowest** altitude specified in the clearance for the refueling portion of the flight and proceed in accordance with radio communications failure procedures.

3. TURBOJET ENROUTE DESCENT

When a two-way communications failure is experienced during an enroute descent, proceed to the initial approach fix/radio facility to be used for the approach at destination and execute the published approach. The altitude to be maintained, and from which the approach is to be executed, is the highest of the following:

a. The last assigned altitude.

b. The minimum safe altitude.

c. The emergency safe altitude if the point of communications failure or initial approach fix is more than 25 miles from the navigation facility for the approach.

VFR FLIGHT PLAN

Radio Failure While On A VFR Flight Plan — In the event of two-way radio failure between the aircraft and the ground while operating on a VFR flight plan, the pilot will land at originally filed destination or a suitable airfield, military or civil, before reaching destination. Flight plan may not be extended past the original destination except in emergency.

II. VISUAL SIGNALS WHEN AIRCRAFT RADIO INOPERATIVE

A. DAY VISUAL SIGNALS

1. DESCEND TO LOWER ALTITUDE: Hold hand at top of canopy, palm down, fingers extended and joined, move hand forward and down.
2. FUEL CHECK: Close fist with the thumb extended and perform drinking motion with thumb touching the oxygen mask.
3. FUEL REMAINING: Extend one finger for each 1,000 lbs. of fuel on board. Extend finger(s) vertically for 1,000-5,000 lbs; horizontally for 6,000-9,000 lbs. After signalling 1,000 lb. increments, close fist and signal 100-lb. increments in the same manner. Signal zero with closed fist.

   EXAMPLE 1: To signal 6,600 lbs., extend one finger horizontally (indicating 6,000 lbs.); then close fist (indicating a change from thousands to hundreds) and extend one finger horizontally (indicating 600 lbs.).

   EXAMPLE 2: To signal 13,800 lbs., extend one finger vertically, then three fingers vertically (indicating 13,000 lbs.); then close fist and extend three fingers horizontally (indicating 800 lbs.).

   EXAMPLE 3: If the pilot is operating with NATO forces and is so briefed, signal estimated flying time by extending one finger for each ten minutes and a closed hand to indicate one hour, i.e., to indicate one hour and thirty minutes flying time, signal three fingers and a clenched fist.
4. HEFOE SYSTEM: Clench fist and hold it at top of canopy, then hold up the required number of fingers to denote which system is involved (see (1) through (5) below). The receiving pilot acknowledges the signal by repeating it.
   1. Hydraulic — one finger.
   2. Electrical — two fingers.
   3. Fuel — three fingers.
   4. Oxygen — four fingers.
   5. Engine — five fingers.
5. I MUST LAND ON YOUR WING: Pat shoulder, palm down; use right hand for left shoulder, and vice versa, to prevent confusion with other signals. To acknowledge, other pilot must give an OK signal; the basic signal indicates a jet approach speed of 130 knots. If the distress aircraft desires a higher approach, speed, the pilot must raise one finger for each 10—knot increase desired.
6. LAND IMMEDIATELY: Close fist and hold it to top of canopy, with thumb extended downward, then move arm up and down rapidly. (Do not confuse this signal with "GEAR DOWN" signal, which is not used at altitude.)
7. RADIO INOPERATIVE: Fly aircraft along the side of the landing runway, 1000 feet above the field elevation, rocking wings until it reaches end of the runway. Turn to downwind and check mobile control and/or tower for green light on base leg and final approach.
8. RECEIVER FAILURE: With palm of hand over ear position, move hand forward and backward.
9. TRANSMITTER FAILURE: With palm of hand toward and in front of the face, pilot moves hand up and down.

B. NIGHT VISUAL SIGNALS

1. AIRCRAFT EMERGENCY (MUST LAND AS SOON AS POSSIBLE): Signal escort aircraft by describing a circle on the side of the canopy with a flashlight, then get on the man's wing—this signal indicates a jet approach speed of 130 knots. If a higher approach speed is desired, the pilot must pause after the basic signal, and then blink his flashlight at the top of the canopy, once for each 10 knot increase desired. The escort pilot will lead to the nearest suitable field, declare an emergency with the controlling agency, then fly a straight-in approach with the aircraft on his wing. The distressed aircraft lands and the escort executes a go-around.

   NOTE: On a straight-in approach, the escort aircraft turns his position lights to bright and steady to alert the wingman to prepare to lower flaps and landing gear. The corresponding signal of execution will be for the lead escort aircraft to return his position lights to dim and steady. If the aircraft is equipped only with a steady-bright light position, however, it will blink lights for the alerting signal and for the signal of execution.

2. AIRCRAFT HAVING MINOR DIFFICULTIES: The distressed aircraft will signal another aircraft in the formation by signaling a series of flashes from a flashlight, then get on the man's wing. The basic airspeeds and flight procedures are the same as specified for "Aircraft Emergency" above, except that the escort will lead to the intended landing field and will not declare an emergency in doing so.
3. CHANGE LEAD: Pilot of distressed aircraft holds flashlight parallel with canopy rail and sends a steady light while making a straight line from rear toward the front of the canopy.
4. COMPLETE ELECTRICAL FAILURE (NO ASSIST AIRCRAFT AVAILABLE): Distressed aircraft flies 500 feet over mobile control or tower, thoroughly checking for other aircraft in the area. Flies to the far end of the runway, pulls up into a downwind leg, and proceeds with a normal landing; while watching mobile or tower for signals. The control tower will clear the area of other aircraft, and will call the emergency crash equipment to the scene.
5. DESCENT TO LOWEST PRACTICAL ALTITUDE: The pilot makes a rapid vertical movement with a flashlight.
6. RADIO FAILURE: Same as day signal procedure.
7. SIGNAL ACKNOWLEDGEMENT: Point a steady light from the flashlight at the signaling aircraft.

III. U. S. COAST GUARD SHORE STATIONS MAINTAINING WATCH ON 8364 kHz

The following Coast Guard radio stations listen on the 8 MHz ship radio telegraph calling band 8354-8374 kHz of which 8364 kHz is the center frequency. Stations receiving a call in the 8 MHz band will normally reply on the frequencies indicated.

Activity	Call	Answering Freq
Adak	NOX	8465
Ketchikan	NMJ	8728
San Francisco	NMC	8465

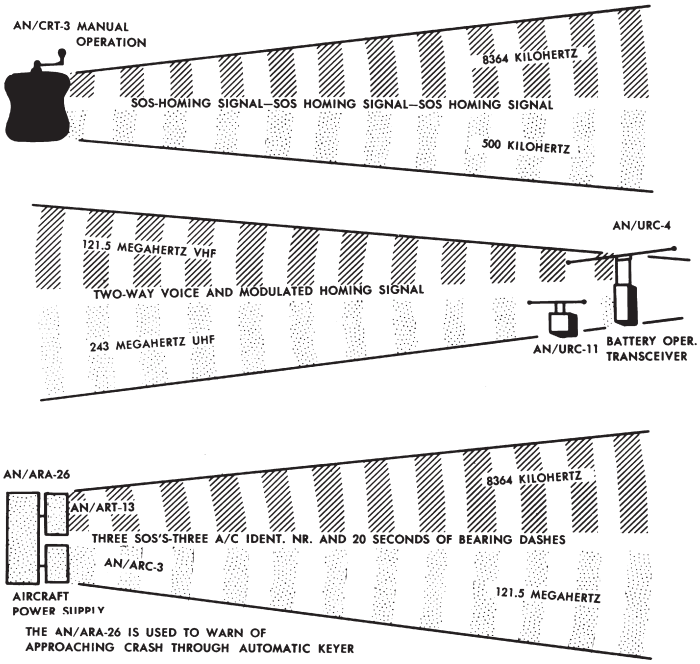
IV. EMERGENCY RADIO SIGNALS

Whenever a plane is assumed to be in distress it is the duty of all aircraft in flight to listen for emergency radio signals. Ascertain from Operations what frequencies are most likely to be received. Check all emergency frequencies as often as possible, especially at the above times. Operating frequencies of currently standard emergency transmitters are shown below.

International silence periods are observed on 500kHz from 15 to 18 and 45 to 48 minutes past the hour. In ITU Regions 1 and 3 (except Japan and The Philippines), silence periods are observed on 2182kHz from 00 to 03 and 30 to 33 minutes past the hour. Distress calls, when transmitted on these frequencies, will have a better chance of being intercepted during these periods

.

EMERGENCY RADIO SIGNALS
OPERATING FREQUENCIES



V. AIRCRAFT WITNESSING DISTRESS

A. When a pilot in command observes that another aircraft or a surface craft is in distress, he shall, unless unable to do so, or, in the circumstances of the case considers it unreasonable or unnecessary: (NOTE: each ICAO contracting state shall ensure that wreckage resulting from aircraft accidents within its territory is removed, obliterated, or charted to prevent subsequent confusion).

1. Keep distressed craft in sight until his presence is no longer necessary or he is no longer able to remain in the vicinity.
2. If his position is not known with certainty, take such action as to determine it.
3. Report to the rescue coordination center or air traffic services unit, as much of the following information as possible.
   a. Type of craft in distress, its identification and condition.
   b. Time of observation expressed in UTC on the 24 hour system.
   c. Number of persons observed.
   d. Whether persons have been seen to abandon distressed craft.
   e. Number of persons observed to be afloat.
   f. Apparent physical condition of survivors.
4. Act as instructed by the rescue coordination center.

B. If the pilot in command of the first aircraft to reach the place of the accident is unable to establish coordination with the rescue coordination center or air traffic services unit, he shall take charge of activities of all other aircraft to arrive until such time as by mutual agreement he hands over responsibility to that aircraft best able to provide communication under the prevailing circumstances.

C. Whenever a distress call and/or message is intercepted on radiotelegraphy or radiotelephony by a pilot in command of an aircraft, other than a search aircraft, he shall:

1. Plot the position of the craft in distress, if given.
2. If possible, take a bearing on the transmission.
3. At his discretion, while awaiting instructions, proceed to the position given in the distress signal.

NOTE: In addition, compliance is required with communications procedures.

D. When it is necessary for an aircraft to direct a surface craft to the place where an aircraft or surface craft is in distress, the aircraft shall do so by transmitting precise instructions by any means at its disposal. When this is not possible, the following procedure shall be used:

1. Circle the surface craft at least once.
2. Cross the projected course of the surface craft close ahead, at a low altitude, opening and closing the throttle or changing the propeller pitch.
3. Heading in the direction in which the surface craft is to be directed.

E. Crossing the wake of the surface craft, close astern, at a low altitude, opening and closing the throttle or changing the propeller pitch shall mean that the assistance of the surface craft to which the signal is no longer required.

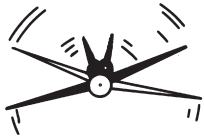
F. Current maritime signaling procedures include:

1. For acknowledgment of receipt of signal:
   a. Hoisting of the “Code Pennant” (vertical red and white stripes) close up, (meaning understood).
   b. The flashing of a succession of “T’s” by signal lamp in Morse code.
   c. The changing of heading.
2. For indicating the inability to comply:
   a. Hoisting of the international flag “N” (a blue and white checkered square).
   b. The flashing of a succession of “N’s” in the Morse code.

VI. AIR/GROUND EMERGENCY SIGNALS

A. STANDARD AIRCRAFT ACKNOWLEDGEMENTS

MESSAGE RECEIVED AND UNDERSTOOD: Aircraft will indicate that ground signals have been seen and understood by —



DAY OR MOONLIGHT: Rocking from side to side.

NIGHT: Making green flashes with signal lamp.

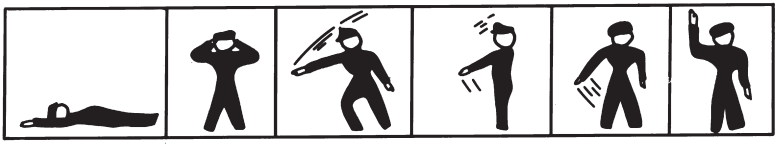
MESSAGE RECEIVED AND NOT UNDERSTOOD: Aircraft will indicate that ground signals have been seen but not understood by —

DAY OR MOONLIGHT: Making a complete right hand circle.

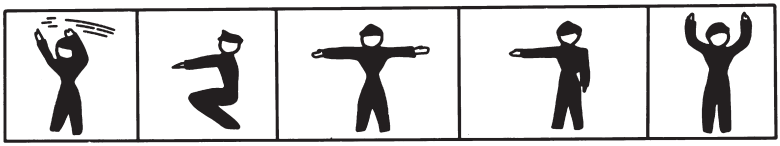
NIGHT: Making red flashes with signal lamp.

B. BODY SIGNALS

INSTRUCTIONS: If you are able to attract the attention of the pilot of a rescue airplane, the body signals illustrated below can be used to transmit messages to him as he circles over your location. Stand in the open when you make the signals. Be sure that the background, as seen from the air, is not confusing. Go through the motions slowly and repeat each signal until you are positive that the pilot understands you.



NEED MEDICAL ASSISTANCE	OUR RECEIVER IS OPERATING	USE DROP MESSAGE	AFFIRMATIVE (YES)	NEGATIVE (NO)	ALL O. K. DO NOT WAIT



DO NOT ATTEMPT TO LAND HERE	LAND HERE	NEED MECHANICAL HELP OR PARTS	CAN PROCEED SHORTLY WAIT IF PRACTICAL	PICK US UP — PLANE ABANDONED

C. INTERNATIONAL GROUND/AIR EMERGENCY CODE

EMERGENCY SIGNALS
GROUND-AIR VISUAL CODE FOR USE BY SURVIVORS

No.	MESSAGE	CODE SYMBOL
1	Require assistance	
2	Require medical assistance	
3	No or Negative	N
4	Yes or Affirmative	Y
5	Proceeding in this direction	
If in doubt use International symbol		S O S

GROUND-AIR VISUAL CODE FOR USE BY GROUND SEARCH PARTIES

NO.	MESSAGE	CODE SYMBOL
1	Operation completed	L L L
2	We have found all personnel	L L
3	We have found only some personnel	
4	We are not able to continue. Returning to base	X X
5	Have divided into two groups, Each proceeding in direction indicated.	
6	Information received that aircraft is in this direction	
7	Nothing found, Will continue search.	N N

1. INSTRUCTIONS

a. Lay out symbols by using strips of fabric or parachutes, pieces of wood, stones, or any available material.

b. Provide as much color contrast as possible between material used for symbols and background against which symbols are exposed.

c. Symbols should be at least 10 feet high or larger. Care should be taken to lay out symbols exactly as shown.

d. In addition to using symbols every effort is to be made to attract attention by means of radio, flares, smoke, or other available means.

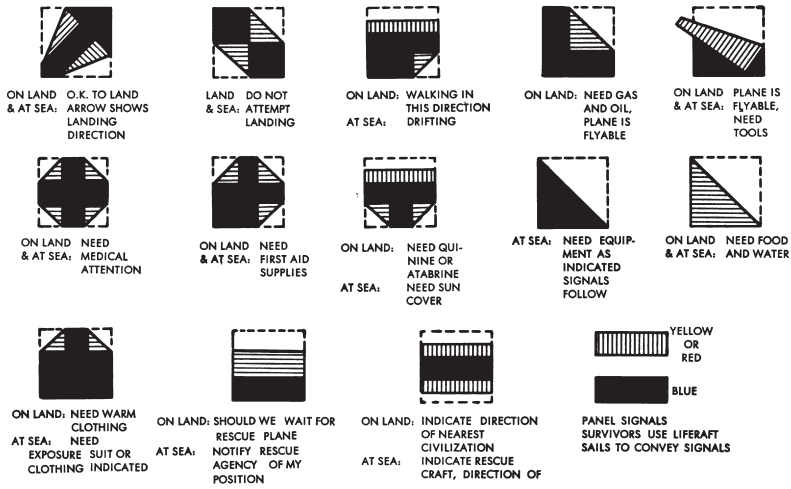
e. On snow–covered ground, signals can be made by dragging, shoveling or tramping. Depressed areas forming symbols will appear black from the air.

f. Pilot should acknowledge message by rocking wings from side to side.

D. PAULIN SYMBOLS

INSTRUCTIONS: Either USAF or USN paulins may be used to form signals. The paulins are blue on one side and yellow or red on the other. They are held down with rocks, stones, or pegs. In life rafts, lines are tied to grommets to facilitate holding. Wood may be tied to edge and floated in center of small lakes or slow rivers

PAULIN SIGNAL DIAGRAM.



NOTES:

(1) It is preferable to use the International Ground Air Emergency Code. The symbols can be made larger and hence more recognizable from the air.

(2) Paulins should be folded to form the signals shown on this page. A paulin is an extremely valuable shelter, poncho, floor cloth, sleeping bag cover, sunshade, or rain collector.

VII. IN-FLIGHT TECHNICAL ASSISTANCE

A. ANY US MILITARY AIRCRAFT requiring inflight technical assistance may use the communications and/or command and control facilities listed below.

B. Air National Guard (ANG) Operations center at Andrews AFB may be contacted by phone patch through any Global HF System Station (See DOD Enroute Flight Information handbook (FIH) Section B). Request the ANG Operations Center (call sign MINUTEMAN) DSN 858–6001 or 1–800–237–9744.

C. Air Mobility Command (AMC) Operations Centers may be contacted as described in Global HF System Stations (FIH, Section B).

D. Air Combat Command (ACC) Command Posts may be contacted by calling "GOLDEN" on 381.3 MHz. An ACC Post will answer with its respective call sign. In addition, ACC Posts may be contacted by phone patch through any Global HF System Station (FIH, Section B) or the Western Space and Missile Center (WSMC) HF net. The WSMC HF net (call sign "ABNORMAL ONE ZERO") located at Vandenberg AFB, CA or call sign "ABNORMAL TWO ZERO" located at Wheeler AFB, HI) may be contacted on USB frequencies 5700 and 13218 KHz. HQ ACC Post can be contacted at DSN 574–7771/2224.

VIII. RECOMMENDED PROCEDURES FOR ANY EMERGENCY PHASE (UNCERTAINTY — ALERT — DISTRESS — LOST)

A. If flying at low altitude climb if possible to increase chance of radio or radar contact. (Permitted in emergency only if IFR in controlled airspace.)

B. If equipped with "IFF", switch to "EMERGENCY". If equipped with SIF, set master code control to "EMERGENCY", Mode 3 switch in, Mode 3 dial code 77 (new code 7700). NOTE: The pilot should understand that he may not be within a radar coverage area and that, even if he is, certain radar facilities are not yet equipped to automatically recognize "EMERGENCY" and Code 7700 as emergency signals. Therefore, he should establish radio communication with an air traffic control facility as soon as possible.

C. If time permits, contact controlling agency and give nature of distress and pilot's intentions.
D. If unable to contact controlling agency, transmit following distress message to any agency on assigned or any of the frequencies listed.

UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0 MHz	121.5 MHz	2182 kHz	*8364 kHz	500 kHz

Canadian facilities excepted.

NOTE—Direct controller-to-pilot communications capability 121.5/243.0 MHz is limited to the area (dependent upon the location/altitude of the aircraft) within the vicinity of the ARTC Center since these frequencies are installed for center use at the local ARTC Center transmitting/receiving site only. If the ARTCC does not respond to transmission on emergency frequency 121.5 MHz or 243.0 MHz pilots should initiate a call to the nearest Flight Service Station or airport traffic control tower.

1.
   a. VOICE** PAN or MAYDAY (3 times) THIS IS (aircraft call sign 3 times).
   b. CW*** XXX or SOS (3 times) DE (aircraft call sign 3 times).

2. TYPE OF AIRCRAFT

3. POSITION or ESTIMATED POSITION (state which) and TIME (When geographic coordinates are used, express latitude and longitude in "degrees and minutes".)

4. HEADING (state true or magnetic)

5. INDICATED AIRSPEED

6. ALTITUDE

7. FUEL REMAINING (in hours and minutes)

8. NATURE OF EMERGENCY

9. PILOT'S INTENTIONS (bail out, ditching, crash landing, etc.)

10. ASSISTANCE DESIRED (fix, steer, bearing, escort, etc.)

11. TWO 10-SECOND DASHES (voice — depress mike button. CW — by key) AIRCRAFT CALL SIGN (once) OVER (voice) or K (CW)

(When contact established comply with instructions. Accept "communications control" by ground station, silence interfering stations, do not shift frequency or ground stations unless necessary.)

**Use PAN (voice) or XXX (CW) when your situation requires urgent action, but is not actual distress. Use MAYDAY (voice) or SOS (CW) when you are threatened by serious or imminent danger and you require immediate assistance.

IX. RECOMMENDED PROCEDURES FOR AIRCRAFT IN DISTRESS WHEN INTERCEPTED

A. Attempt radio contact, if possible.

B. If able to maintain a minimum of 210 knots, get in trail formation and the interceptor will lead you to the nearest suitable airport.

C. If unable to maintain a minimum of 210 knots, the interceptor will fly in the direction you should fly, circle to the left and again fly in the proper direction. This procedure will be repeated until the area for descent is reached. The interceptor will circle to the right over the area where you should descend. The distressed aircraft should let down in a descending turn at minimum rate of descent.

X. RECOMMENDED PROCEDURES FOR THE INTERCEPTOR AFTER INTERCEPTION

A. Reduce speed for formation flight or maximum endurance, as required.

B. Attempt radio contact, if possible.

C. Inform controller of contact and follow his instructions.

D. If distressed aircraft can maintain minimum of 210 knots, lead him to suitable airport as directed by the controller.

E. If distressed aircraft cannot maintain 210 knots, lead the aircraft, as recommended in IX. C above, to the location directed by the controller.

F. If the interceptor must leave the distressed aircraft:

(1) If the interceptor turns his lights from steady to blinking for 15 seconds, then breaks formation with lights blinking (night) or wings rocking (day), the distressed aircraft should continue on course.

(2) If the interceptor turns his lights from steady to blinking for 30 seconds, then back to steady and breaks formation with lights on steady (night) or fishtails (day), the distressed aircraft should resume distress orbit.

In support of the Federal Aviation Administration's Runway Incursion Program, selected towered airport diagrams have been published in the Airport Diagram section of the Chart Supplement. Diagrams will be listed alphabetically by associated city and airport name. Airport diagrams, depicting runway and taxiway configurations, will assist both VFR and IFR pilots in ground taxi operations. The airport diagrams in this publication are the same as those published in the U.S. Terminal Procedures Publications. For additional airport diagram legend information see the U.S. Terminal Procedures Publication.

NOTE: Some text data published under the individual airport in the front portion of the Chart Supplement may be more current than the data published on the Airport Diagrams. The airport diagrams are updated only when significant changes occur.

PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Available pilot controlled lighting (PCL) systems are indicated as follows:
1. Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g., (ALSF), (MALSR), (SSALR)
2. Approach lighting systems that do not bear a system identification are indicated with a negative "(L)" beside the name.
A star (★) indicates non-standard PCL, consult Chart Supplement, e.g., (L★)
To activate lights, use frequency indicated in the communication section of the chart with a (L) or the appropriate lighting system identification e.g., UNICOM 122.8 (L), (ALSF), (SSALR)

KEY MIKE	FUNCTION
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL-off)
3 times within 5 seconds	Lowest intensity available (Lower REIL or REIL-off)

CHART CURRENCY INFORMATION

Date of Latest Revision 09365

The Date of Latest Revision identifies the Julian date the chart was added or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest revision of any kind has been made to the chart.

The FAA Procedure Amendment Number represents the most current amendment of a given procedure. The Procedure Amendment Effective Date represents the AIRAC cycle date on which the procedure amendment was incorporated into the chart. Updates to the amendment number & effective date represent procedural/criteria revisions to the charted procedure, e.g., course, fix, altitude, minima, etc.

NOTE: Inclusion of the "Procedure Amendment Effective Date" will be phased in as procedures are amended. As this occurs, the Julian date will be relocated to the upper right corner of the chart.

MISCELLANEOUS

★ Indicates a non-continuously operating facility, see Chart Supplement.
For Civil (FAA) instrument procedures, "RADAR REQUIRED" in the planview of the chart indicates that ATC radar must be available to assist the pilot when transitioning from the en route environment. "Radar required" in the pilot briefing portion of the chart indicates that ATC radar is required on portions of the procedure outside the final approach segment, including the missed approach. Some military procedures also have equipment requirements such as "Radar Required", but do not conform to the same charting application standards used by the FAA. Distances in nautical miles (except visibility in statute miles and Runway Visual Range in hundreds of feet). Runway Dimensions in feet. Elevations in feet. Mean Sea Level (MSL). Ceilings in feet above airport elevation. Radials/bearings/headings/courses are magnetic. Horizontal Datum: Unless otherwise noted on the chart, all coordinates are referenced to North American Datum 1983 (NAD 83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

Terrain is scaled within the neat lines (planview boundaries) and does not accurately underlie not-to-scale distance depictions or symbols.

24249

LEGEND

INSTRUMENT APPROACH PROCEDURES (CHARTS)

AIRPORT DIAGRAM/AIRPORT SKETCH

Runways

Hard Surface | Other Than Hard Surface | Taxiways, Parking Areas | Stopways, Overruns, Blast Pads | Metal Surface

Closed Runway | Closed Surface | Non-Movement | Under Construction | Water Runway

ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.

uni-directional | bi-directional | Jet Barrier

ARRESTING SYSTEM (EMAS)

REFERENCE FEATURES

Displaced Threshold
Hot Spot
Runway Holding Position Markings
Buildings
Self-Serve Fuel ##
Tanks
Obstructions
Airport Beacon #
Runway Radar Reflectors
Bridges
Control Tower # TWR

	Unlit	Lit
Wind Cone		
Landing Tee		
Tetrahedron		

When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

See appropriate Chart Supplement for information.

Runway Weight Bearing Capacity or Pavement Classification Number (PCN)/Pavement Classification Rating (PCR) is shown as a codified expression. Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 PCR 560 R/B/W/T; S-75, D-185, 2D-325, 2D/2D2-1120

Helicopter Alighting Areas

Negative Symbols used to identify Copter Procedures landing point

NOTE:
Landmark features depicted on Copter Approach insets and sketches are provided for visual reference only.

Runway TDZ elevation.....TDZE 123

Runway Slope.....←0.3% Down.....0.8% UP→ (shown when rounded runway slope is ≥ 0.3%)

NOTE:
Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

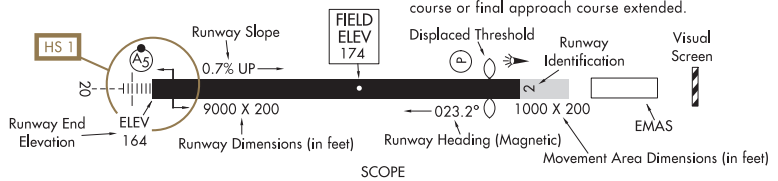
Positional accuracy within ± 600 feet unless otherwise noted on the chart.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A D symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.

NOTE:
All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in DoD FLIP. (Foreign Only)

The airport sketch box includes the final approach course or final approach course extended.



SCOPE

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

LEGEND

HOT SPOTS

An “Airport surface hot spot” is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A “hot spot” is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or ellipses designated as “HS 1”, “HS 2”, etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

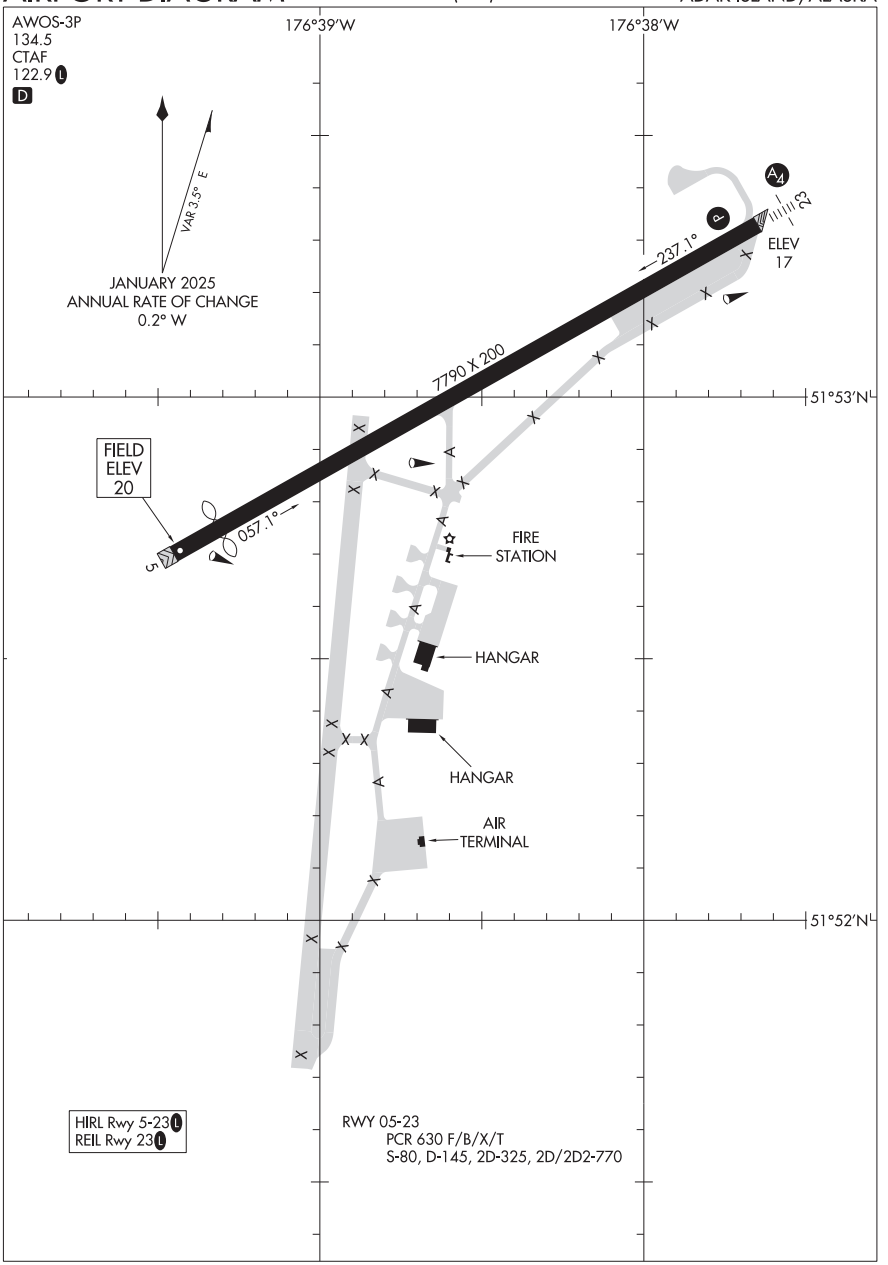
CITY/AIRPORT	HOT SPOT	DESCRIPTION
ALASKA		
ANCHORAGE		
ELMENDORF AFB (EDF)	HS 1	Int of Rwy 06–24 and Rwy 16–34 is high rwy incursion lctn; possibility of unauthd vehicular tfc.
	HS 2	Int of Rwy 06–24 and Twy D is high rwy incursion lctn; possibility of unauthd vehicular tfc.
	HS 3	Int of Rwy 06–24 and Twy F is high rwy incursion lctn; possibility of unauthd vehicular tfc.
	HS 4	Int of Rwy 16–34 and Twy M is high rwy incursion lctn; possibility of unauthd vehicular tfc.
ANCHORAGE		
TED STEVENS ANCHORAGE INTL (ANC)	HS 1	Acft taxiing via Twy E to Twy G and Twy K to Rwy 33 sometimes miss the turn from Twy G on to Twy K and continue on Twy G across Rwy 07L–25R by mistake, especially with rstd visibility.
	HS 2	Acft taxiing to Twy K via Twy E may confuse hold short instructions for Rwys 07R–25L and 07L–25R. Twy D signage may not be visible from Twy E hold positions.
BETHEL		
BETHEL (BET)	HS 1	Acft ldg Rwy 01L sometimes turn onto Rwy 30 instead of Twy G.
KENAI		
KENAI MUNI (ENA)	HS 1	Acft taxiing via Twy E to prk sometimes turn on Twy A instead of apn Twy J.
	HS 2	Twy A, Twy F, Twy H, and Twy G complex int, sometimes causing confusion.

25275

AIRPORT DIAGRAM

AL-1244 (FAA)

ADAK (ADK) (PADK)
ADAK ISLAND, ALASKA



AIRPORT DIAGRAM

25275

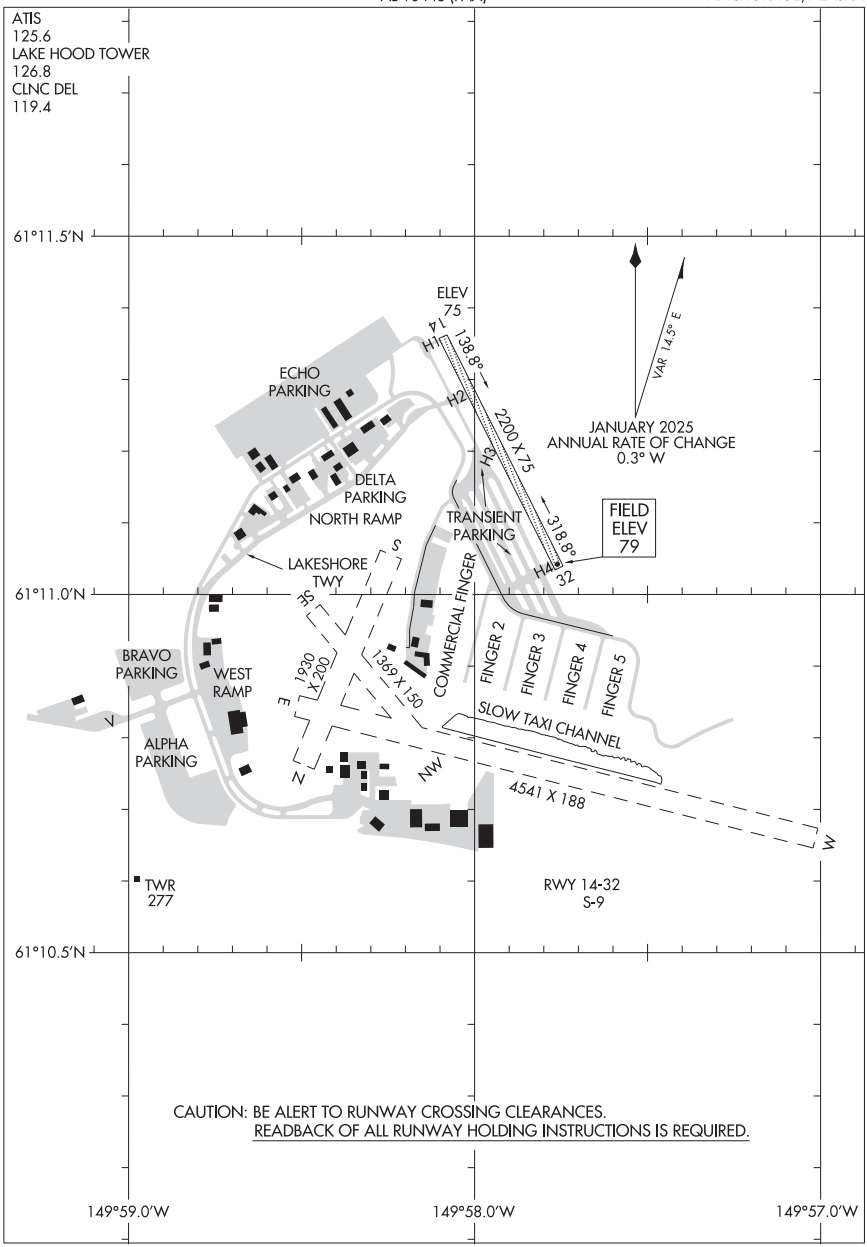
ADAK ISLAND, ALASKA
ADAK (ADK) (PADK)

25107

AIRPORT DIAGRAM

AL-10443 (FAA)

LAKE HOOD (LHD) (PALH)
ANCHORAGE, ALASKA



AIRPORT DIAGRAM

25107

ANCHORAGE, ALASKA
LAKE HOOD (LHD) (PALH)

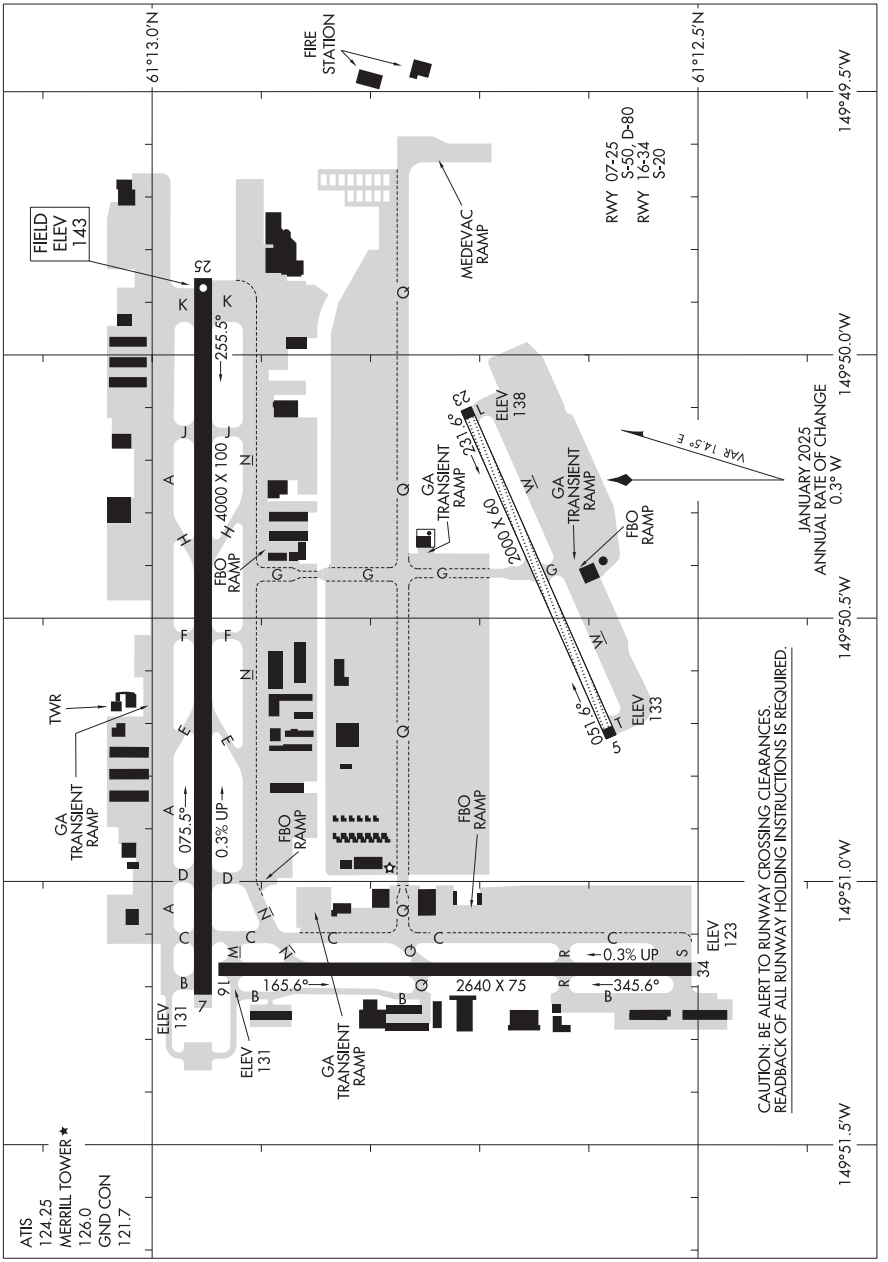
25275

AIRPORT DIAGRAM

AL-1522 (FAA)

MERRILL FLD (MRI)(PAMR)

ANCHORAGE, ALASKA



AIRPORT DIAGRAM

25275

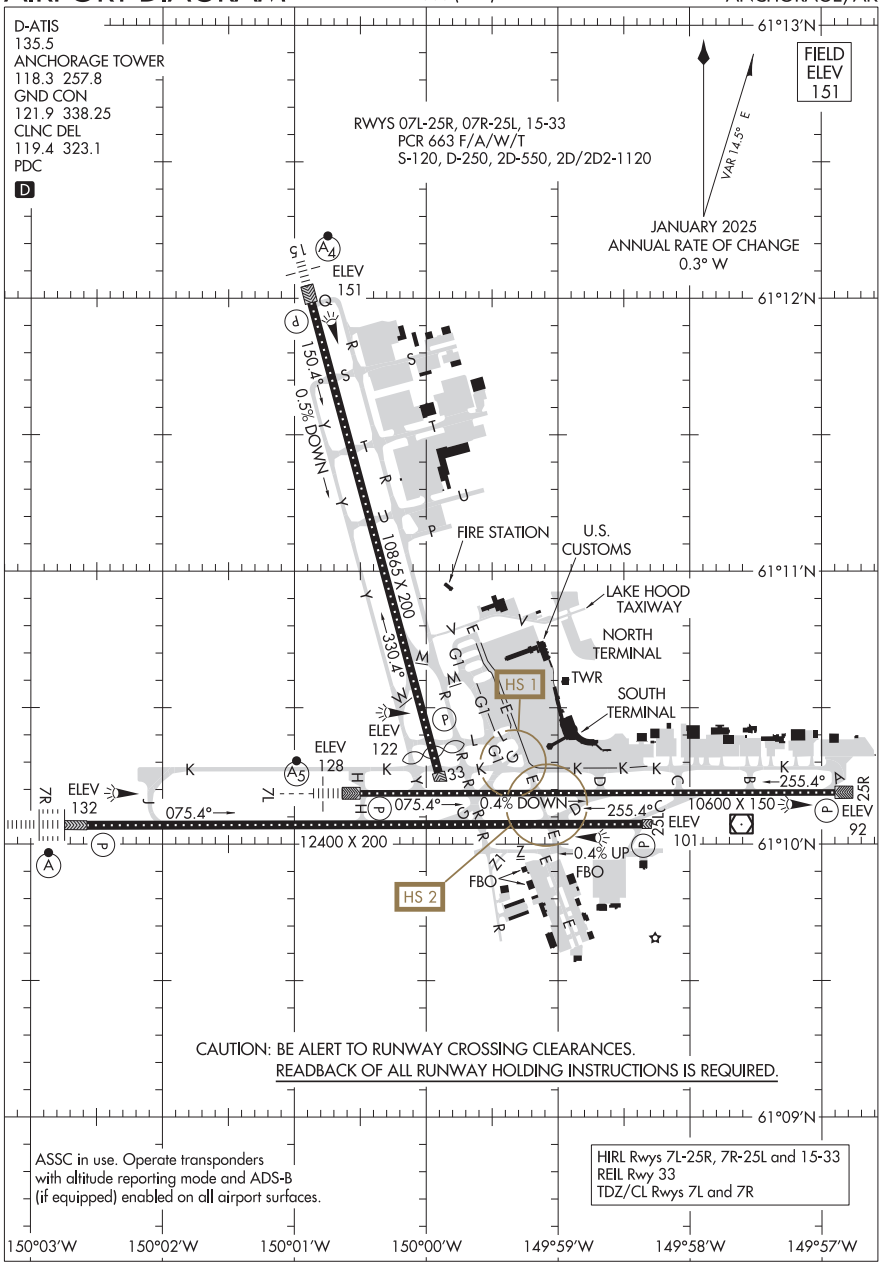
ANCHORAGE, ALASKA

MERRILL FLD (MRI)(PAMR)

25163

AIRPORT DIAGRAM

TED STEVENS ANCHORAGE INTL (ANC) (PANC)
AL-1500 (FAA)
ANCHORAGE, AK



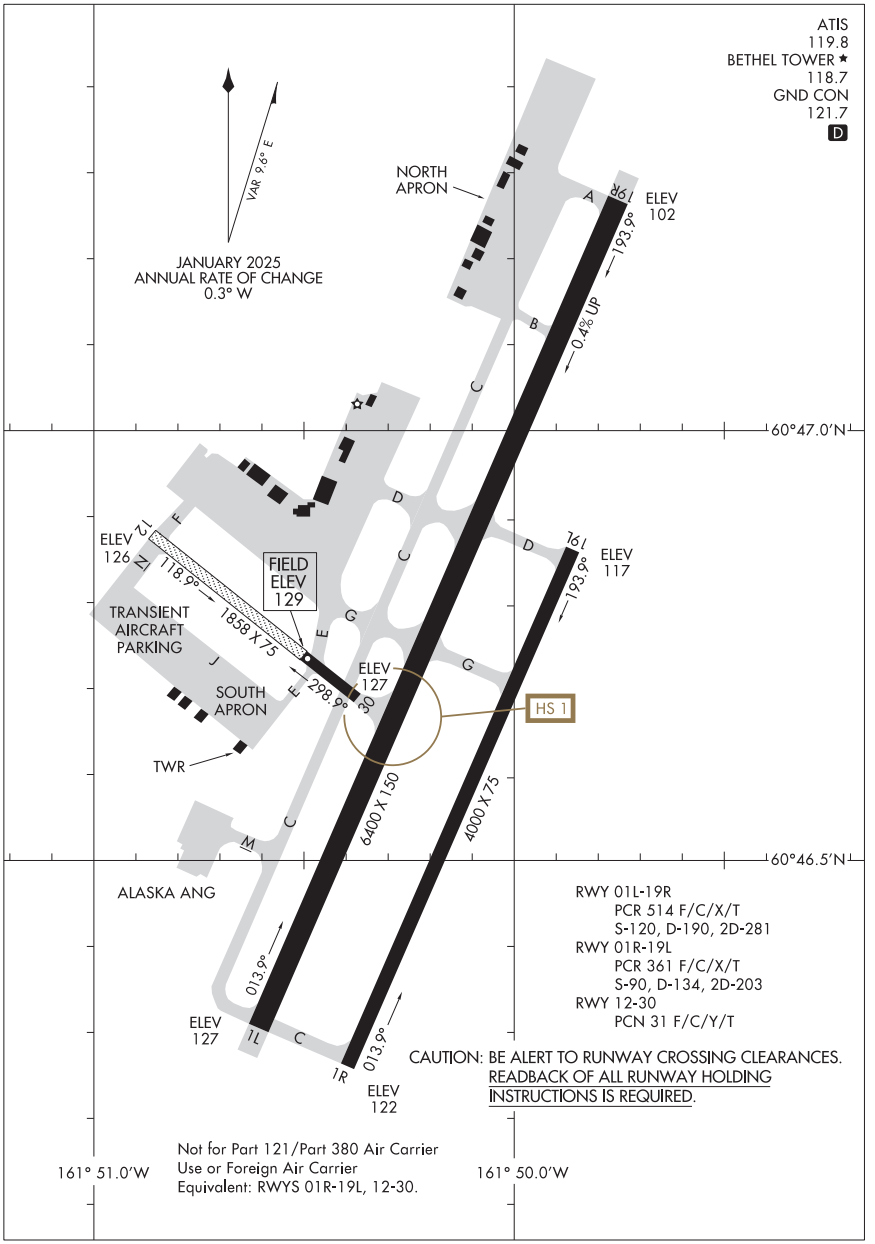
AIRPORT DIAGRAM
25163
ANCHORAGE, AK
TED STEVENS ANCHORAGE INTL (ANC) (PANC)

25275

AIRPORT DIAGRAM

AL-5001 (FAA)

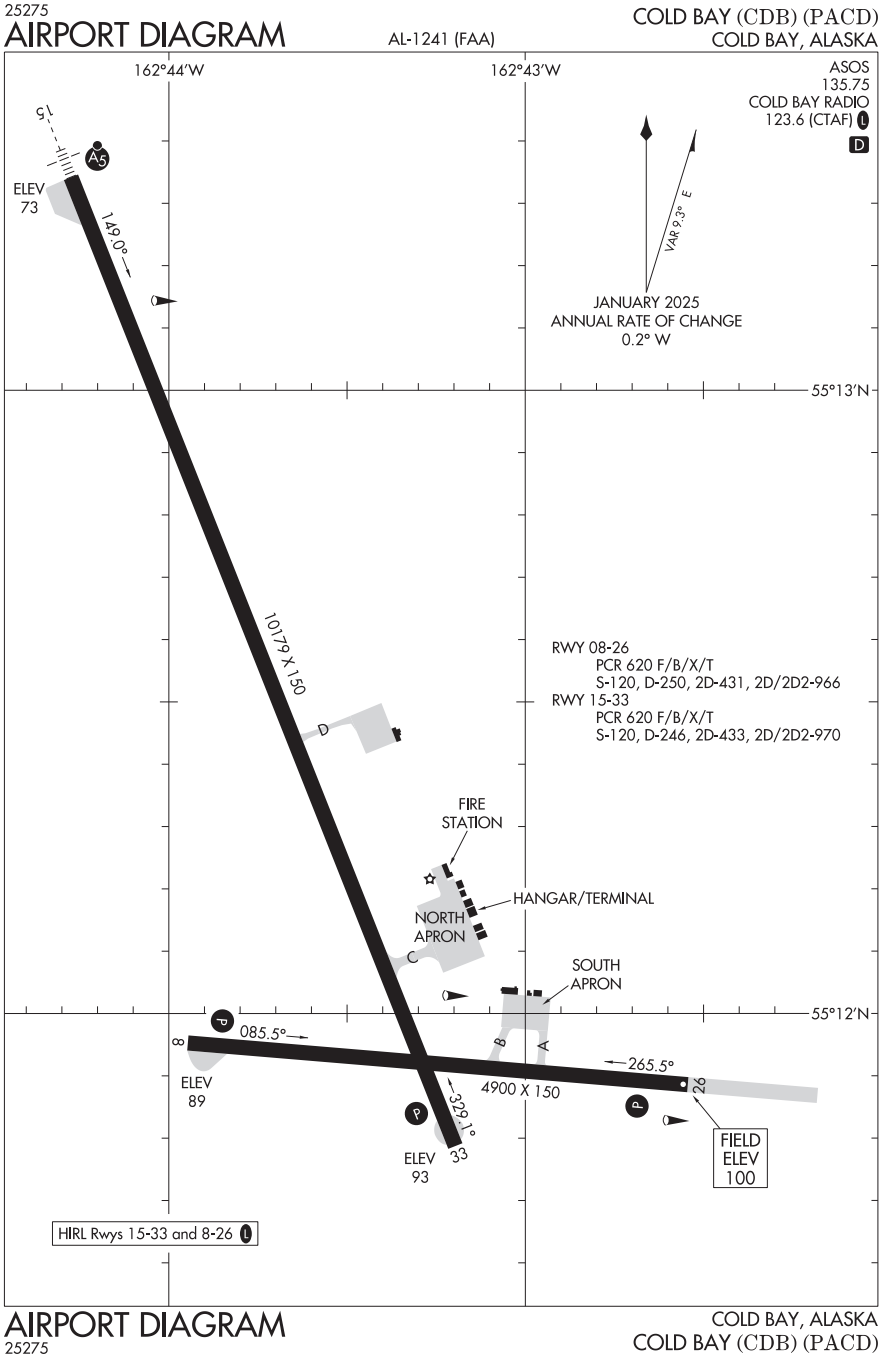
BETHEL (BET)(PABE)
BETHEL, ALASKA

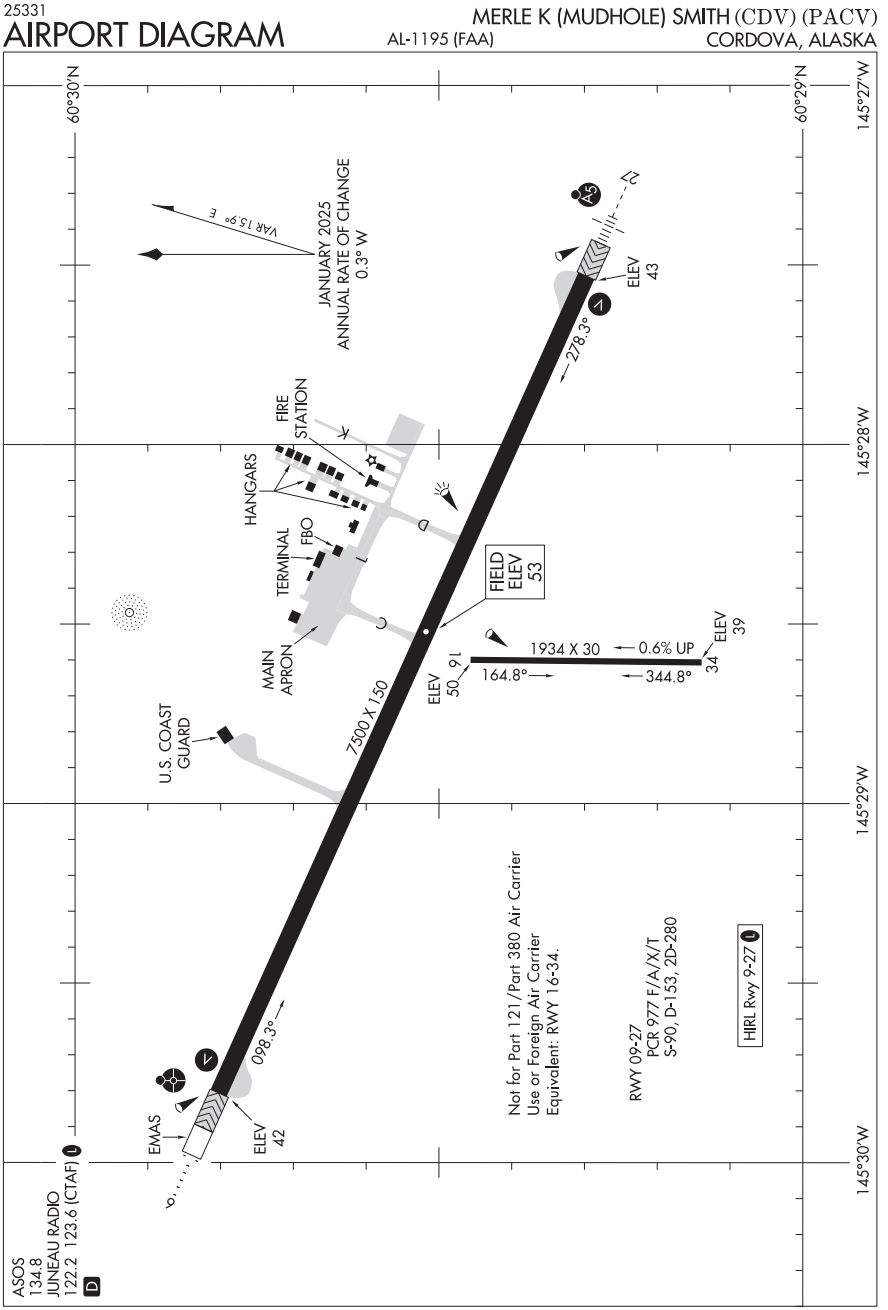


AIRPORT DIAGRAM

25275

BETHEL, ALASKA
BETHEL (BET)(PABE)


25275
AIRPORT DIAGRAM
AL-1241 (FAA)
COLD BAY (CDB) (PACD)
COLD BAY, ALASKA
162°44′W
162°43′W
ASOS
135.75
COLD BAY RADIO
123.6 (CTAF)
D
A5
ELEV
73
149.0°
VAR 9.3° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.2° W
55°13′N
10179 X 150
RWY 08-26
PCR 620 F/B/X/T
S-120, D-250, 2D-431, 2D/2D2-966
RWY 15-33
PCR 620 F/B/X/T
S-120, D-246, 2D-433, 2D/2D2-970
FIRE
STATION
HANGAR/TERMINAL
NORTH
APRON
SOUTH
APRON
55°12′N
085.5°
265.5°
4900 X 150
329.1°
ELEV
89
ELEV
93
33
26
FIELD
ELEV
100
HIRL Rwys 15-33 and 8-26
AIRPORT DIAGRAM
25275
COLD BAY, ALASKA
COLD BAY (CDB) (PACD)


25331
AIRPORT DIAGRAM
MERLE K (MUDHOLE) SMITH (CDV) (PACV)
AL-1195 (FAA)
CORDOVA, ALASKA
60°30'N
60°29'N
145°27'W
145°28'W
145°29'W
145°30'W
VAR 15.9° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.3° W
FIRE STATION
HANGARS
TERMINAL
FBO
MAIN APRON
U.S. COAST GUARD
FIELD ELEV 53
7500 X 150
ELEV 50
91
164.8°
1934 X 30
0.6% UP
344.8°
ELEV 34
ELEV 39
278.3°
ELEV 43
098.3°
ELEV 42
EMAS
Not for Part 121/Part 380 Air Carrier Use or Foreign Air Carrier Equivalent: RWY 16-34.
RWY 09-27
PCR 977 F/A/X/T
S-90, D-153, 2D-280
HIRL Rwy 9-27
ASOS
134.8
JUNEAU RADIO
122.2 123.6 (CTAF)
AIRPORT DIAGRAM
25331
CORDOVA, ALASKA
MERLE K (MUDHOLE) SMITH (CDV) (PACV)

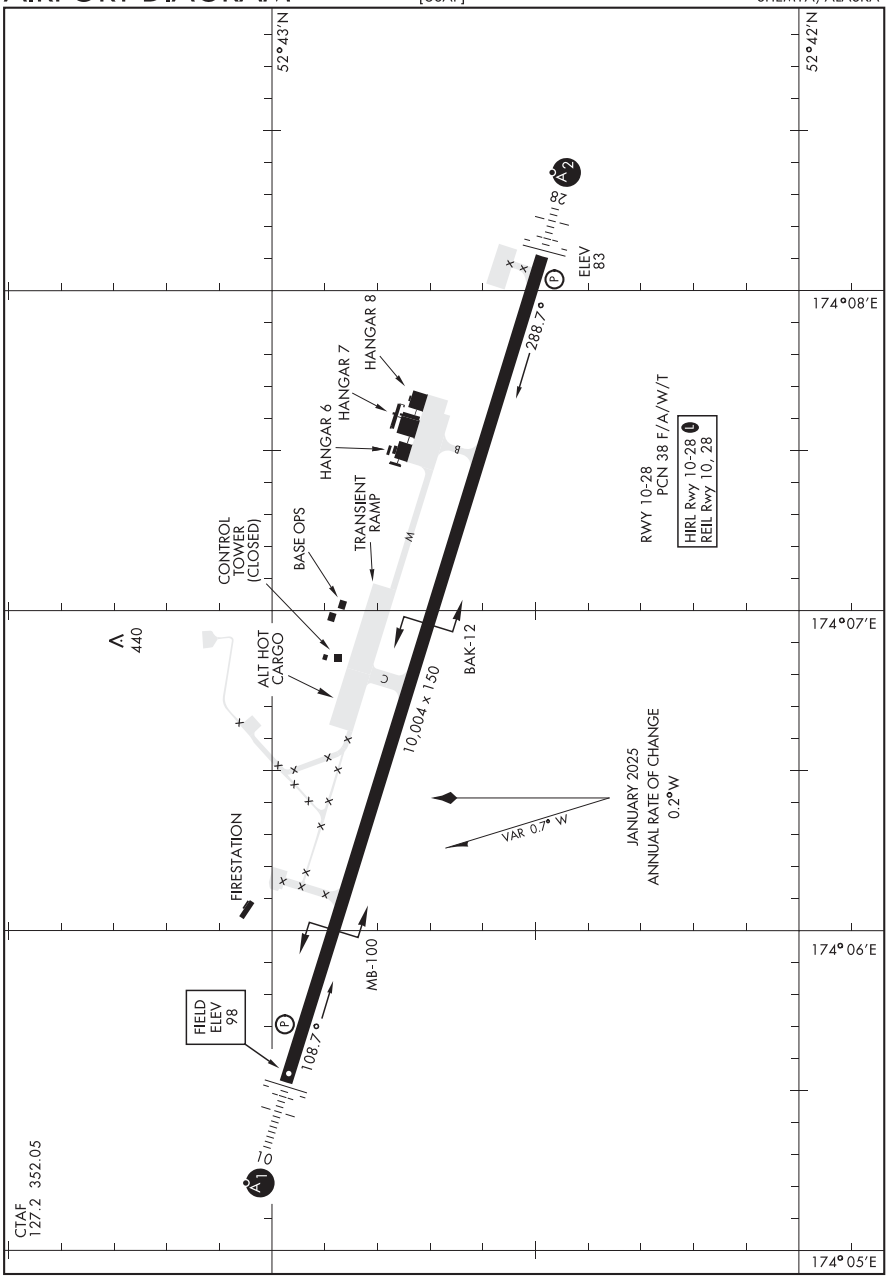
25275

AIRPORT DIAGRAM

EARECKSON AS (SYA) (PASY)

[USAF]

SHEMYA, ALASKA



AIRPORT DIAGRAM

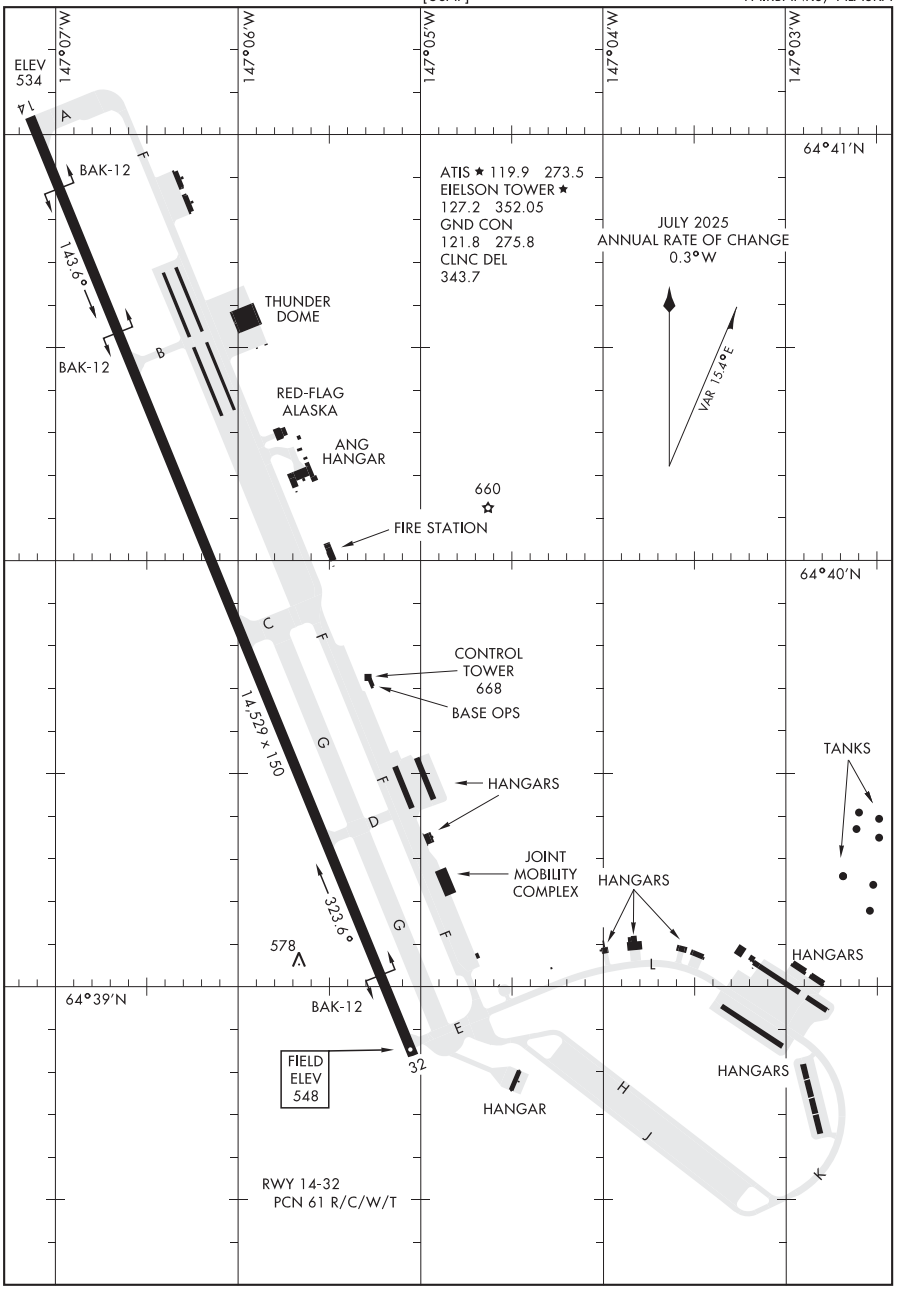
SHEMYA, ALASKA

EARECKSON AS (SYA) (PASY)

25219

AIRPORT DIAGRAM

EIELSON AFB (PAEI)
[USAF]
FAIRBANKS, ALASKA



AIRPORT DIAGRAM

FAIRBANKS, ALASKA
EIELSON AFB (PAEI)

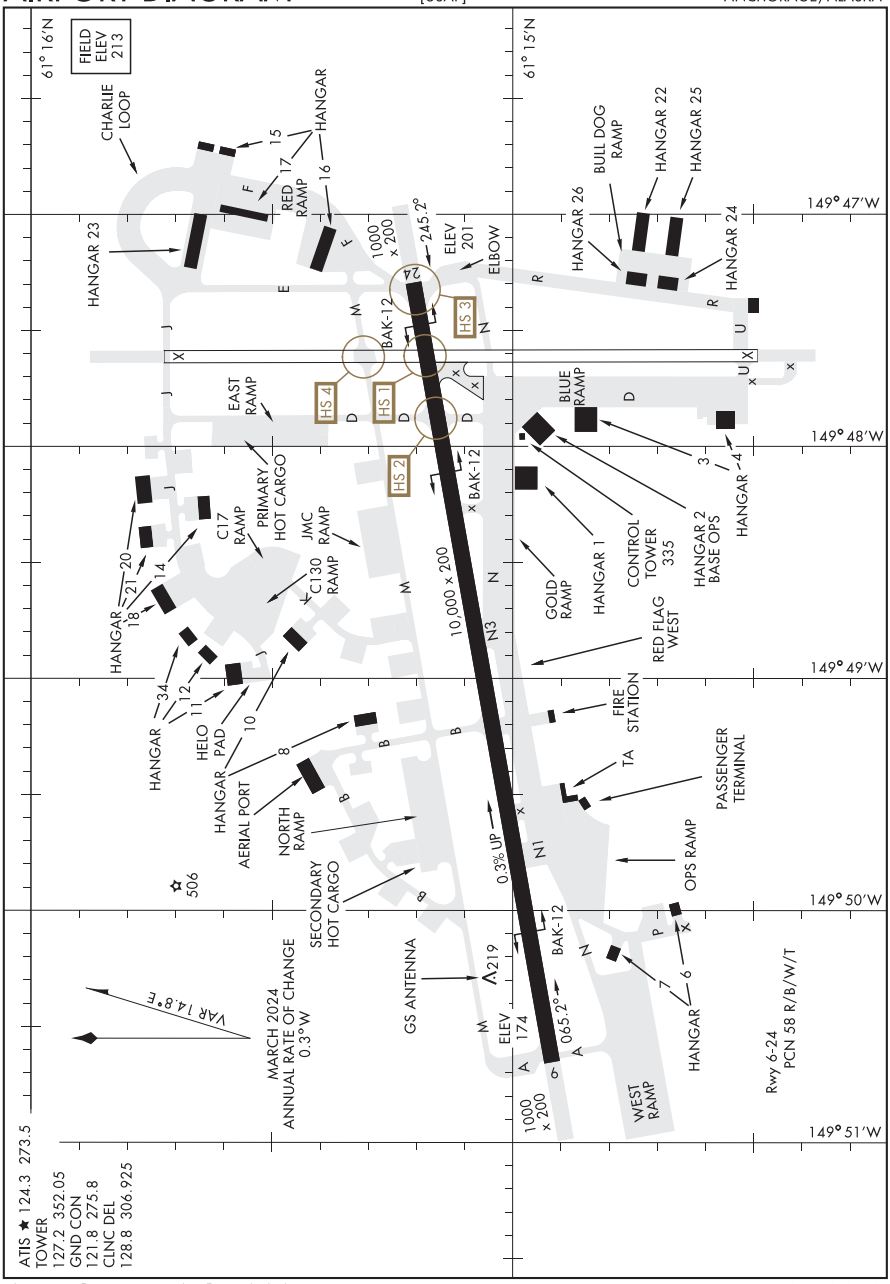
24081

AIRPORT DIAGRAM

[USAF]

ELMENDORF AFB (PAED)

ANCHORAGE, ALASKA



AIRPORT DIAGRAM

ANCHORAGE, ALASKA

ELMENDORF AFB (PAED)

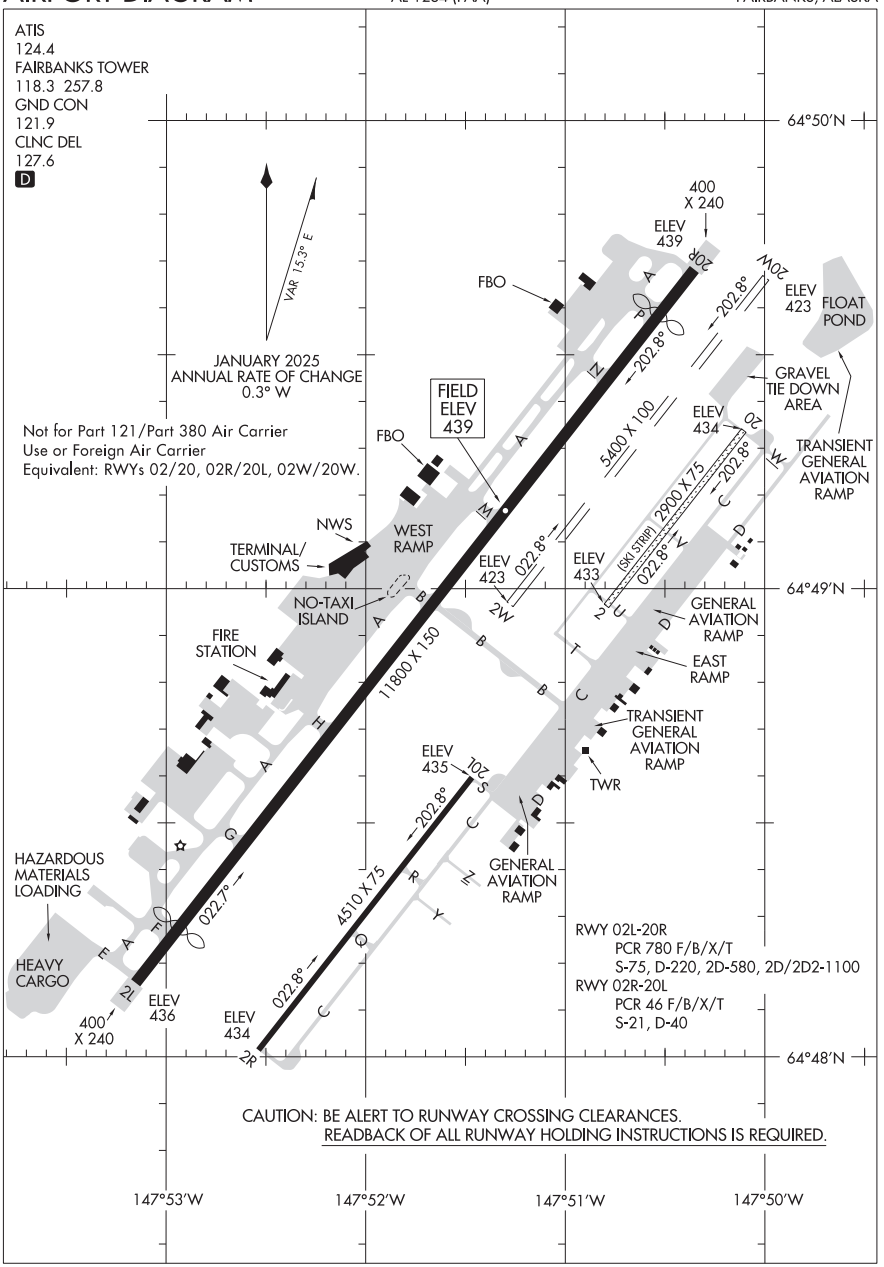
25275

AIRPORT DIAGRAM

AL-1234 (FAA)

FAIRBANKS INTL (FAI) (PAFA)

FAIRBANKS, ALASKA

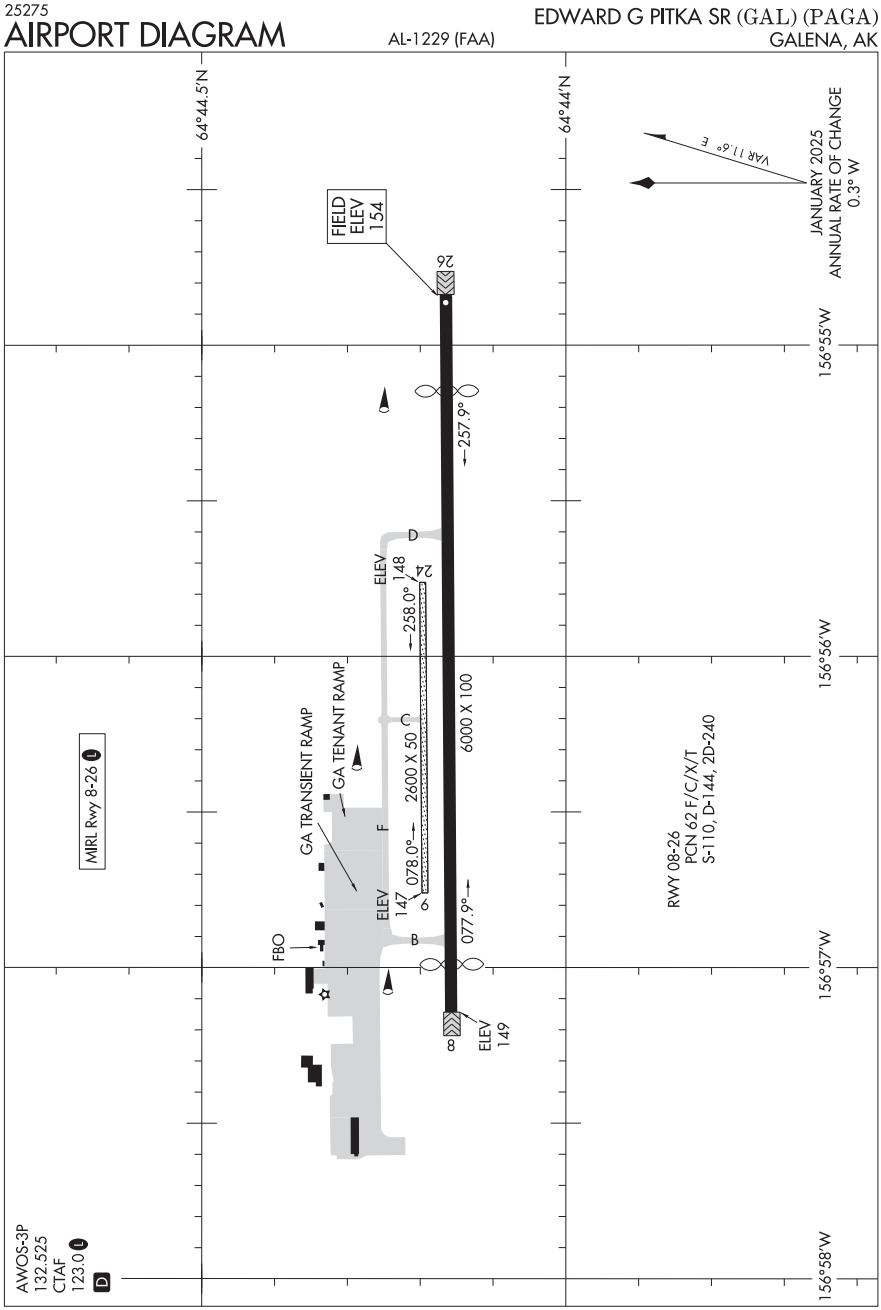


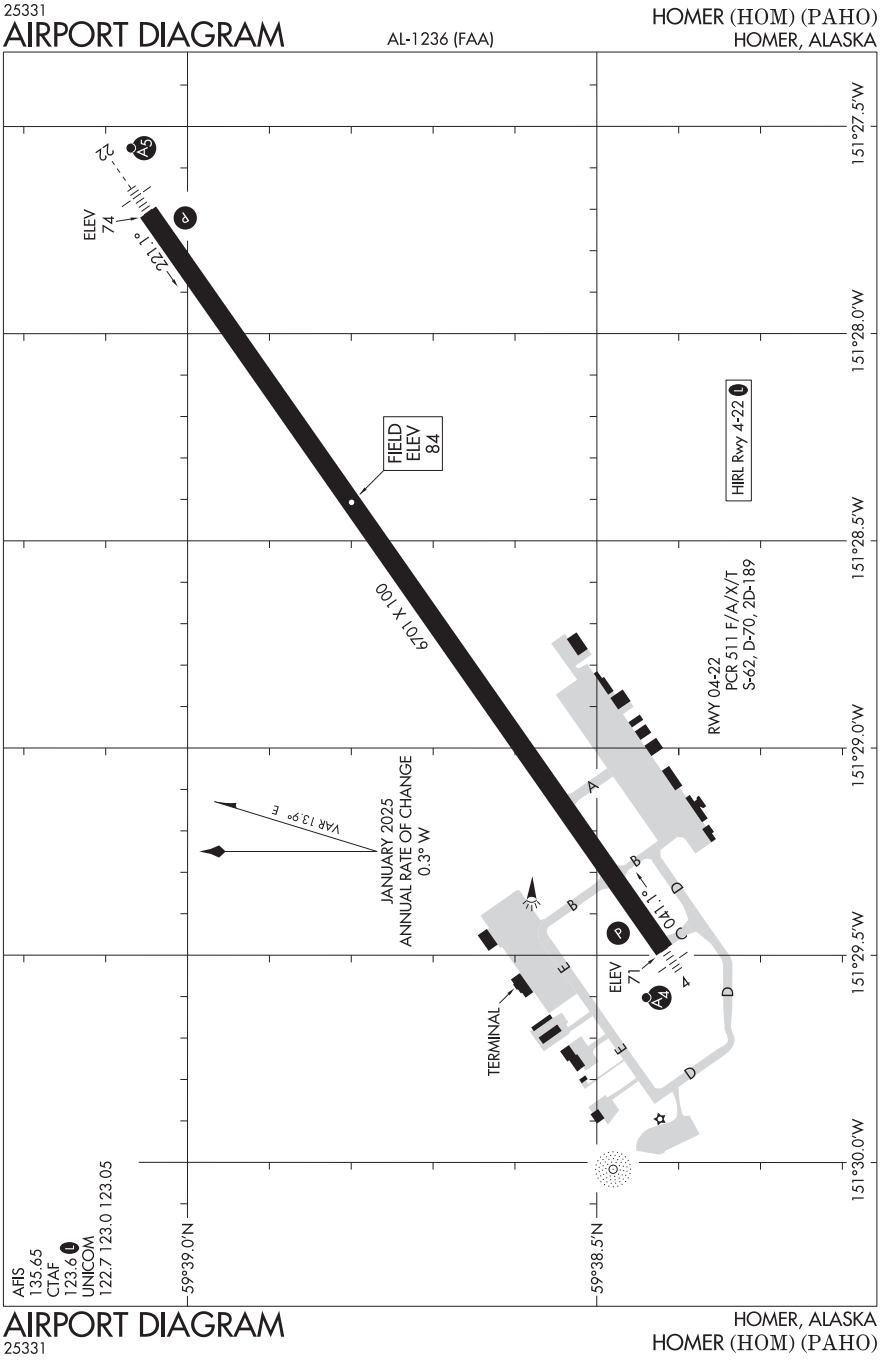
AIRPORT DIAGRAM

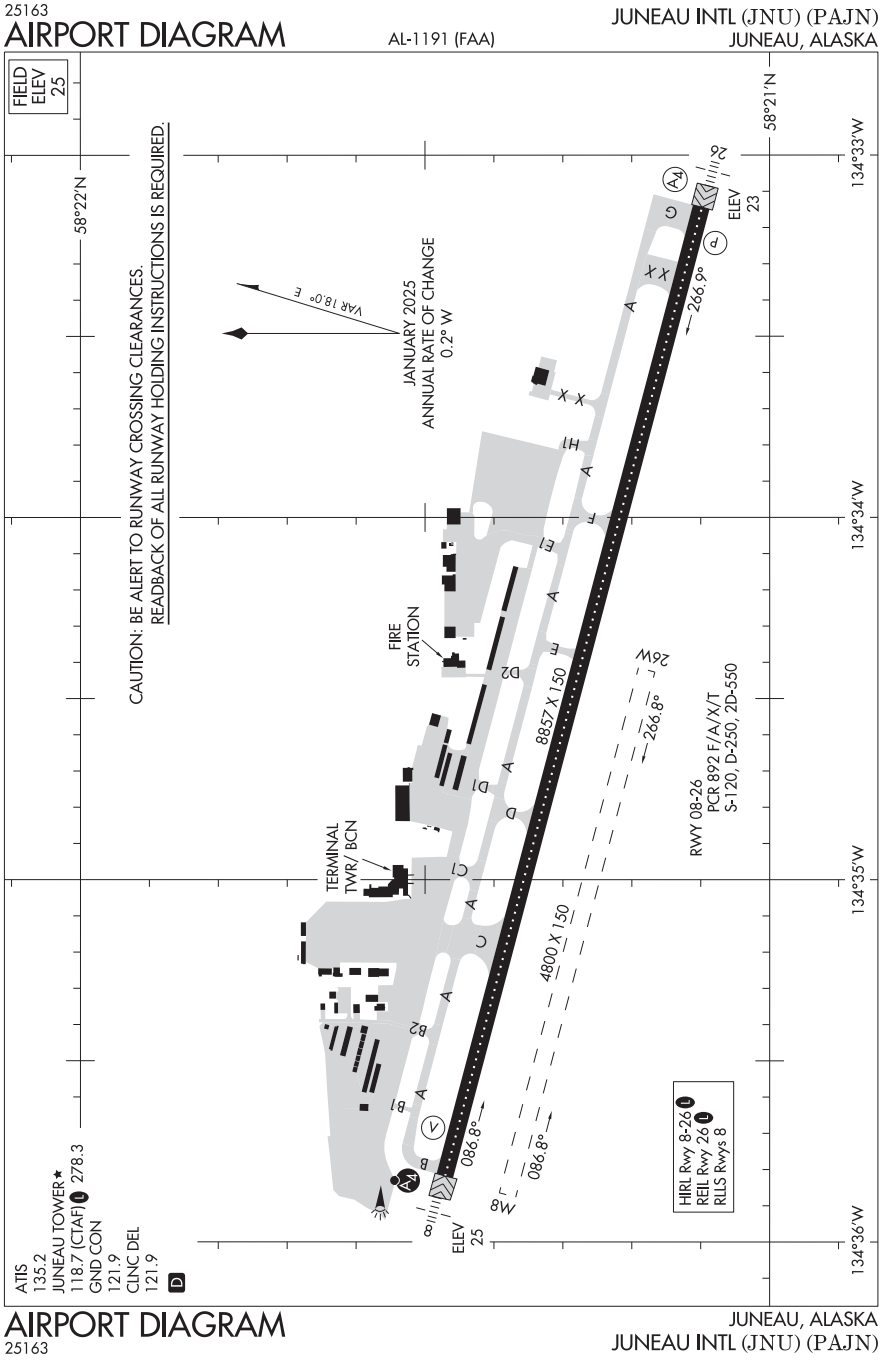
25275

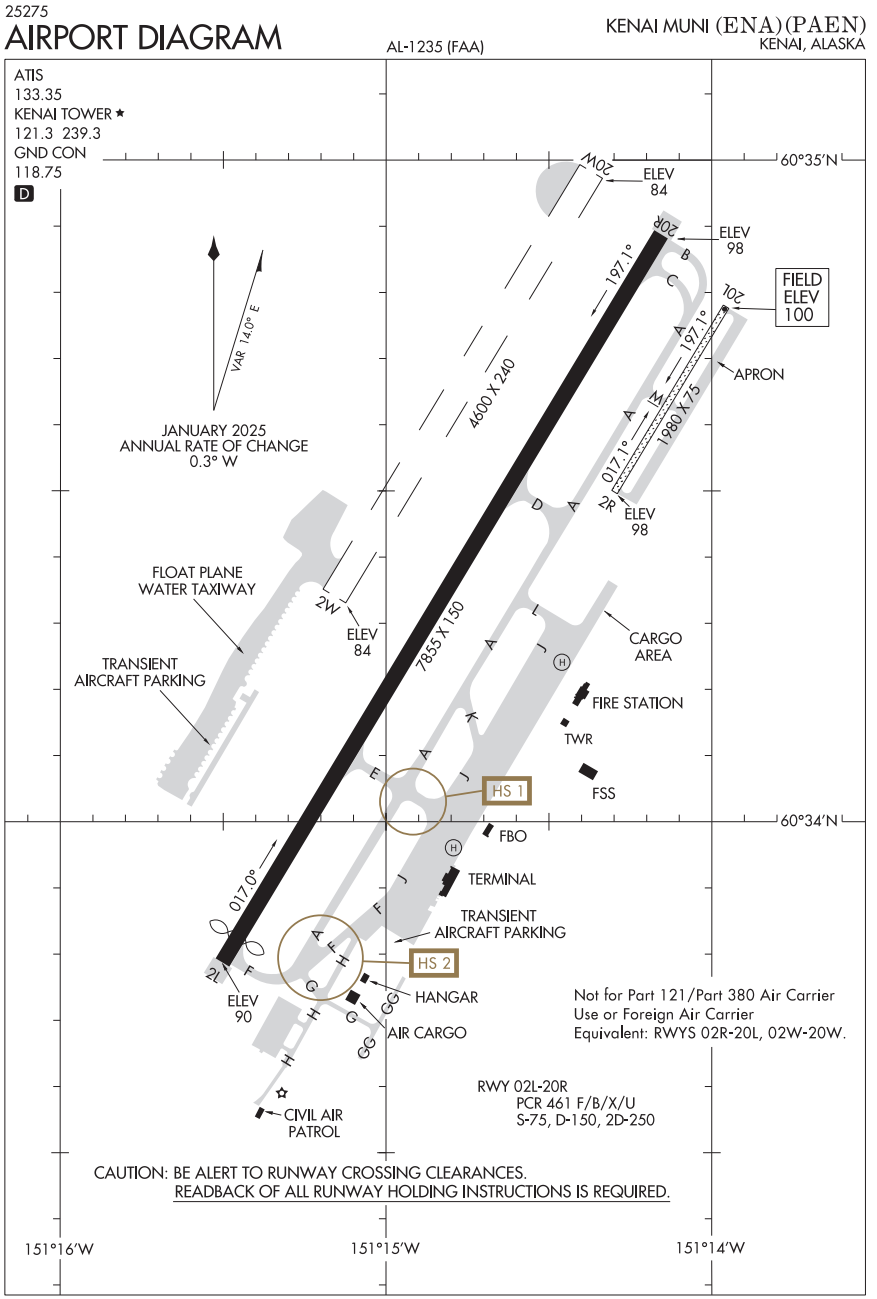
FAIRBANKS, ALASKA

FAIRBANKS INTL (FAI) (PAFA)


25275
AIRPORT DIAGRAM
EDWARD G PITKA SR (GAL) (PAGA)
AL-1229 (FAA)
GALENA, AK
64°44.5'N
64°44'N
156°55'W
156°56'W
156°57'W
156°58'W
FIELD ELEV 154
26
VAR 11.6° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.3° W
257.9°
6000 X 100
ELEV 148
24
258.0°
D
C
2600 X 50
078.0°
077.9°
F
ELEV 147
B
8
ELEV 149
GA TRANSIENT RAMP
GA TENANT RAMP
FBO
MIRL Rwy 8-26
RWY 08-26
PCN 62 F/C/X/T
S-110, D-144, 2D-240
AWOS-3P
132.525
CTAF
123.0
D
AIRPORT DIAGRAM
25275
GALENA, AK
EDWARD G PITKA SR (GAL) (PAGA)


25331
AIRPORT DIAGRAM
AL-1236 (FAA)
HOMER (HOM) (PAHO)
HOMER, ALASKA
151°27.5'W
151°28.0'W
151°28.5'W
151°29.0'W
151°29.5'W
151°30.0'W
59°39.0'N
59°38.5'N
ELEV 74
221.1°
2
A5
9
FIELD ELEV 84
6701 X 100
HIRL Rwy 4-22
RWY 04-22
PCR 511 F/A/X/T
S-62, D-70, 2D-189
VAR 13.9° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.3° W
041.1°
4
ELEV 71
A4
TERMINAL
AFIS
135.65
CTAF
123.6
UNICOM
122.7 123.0 123.05
AIRPORT DIAGRAM
25331
HOMER, ALASKA
HOMER (HOM) (PAHO)


25163
AIRPORT DIAGRAM
AL-1191 (FAA)
JUNEAU INTL (JNU) (PAJN)
JUNEAU, ALASKA
FIELD ELEV 25
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
VAR 18.0° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.2° W
58°22'N
58°21'N
134°33'W
134°34'W
134°35'W
134°36'W
FIRE STATION
TERMINAL
TWR/ BCN
8857 X 150
4800 X 150
RWY 08-26
PCR 892 F/A/X/T
S-120, D-250, 2D-550
086.8°
266.8°
266.9°
ELEV 25
ELEV 23
HIRL Rwy 8-26
REIL Rwy 26
RLLS Rwys 8
ATIS 135.2
JUNEAU TOWER 118.7 (CTAF) 278.3
GND CON 121.9
CLNC DEL 121.9
AIRPORT DIAGRAM
25163
JUNEAU, ALASKA
JUNEAU INTL (JNU) (PAJN)



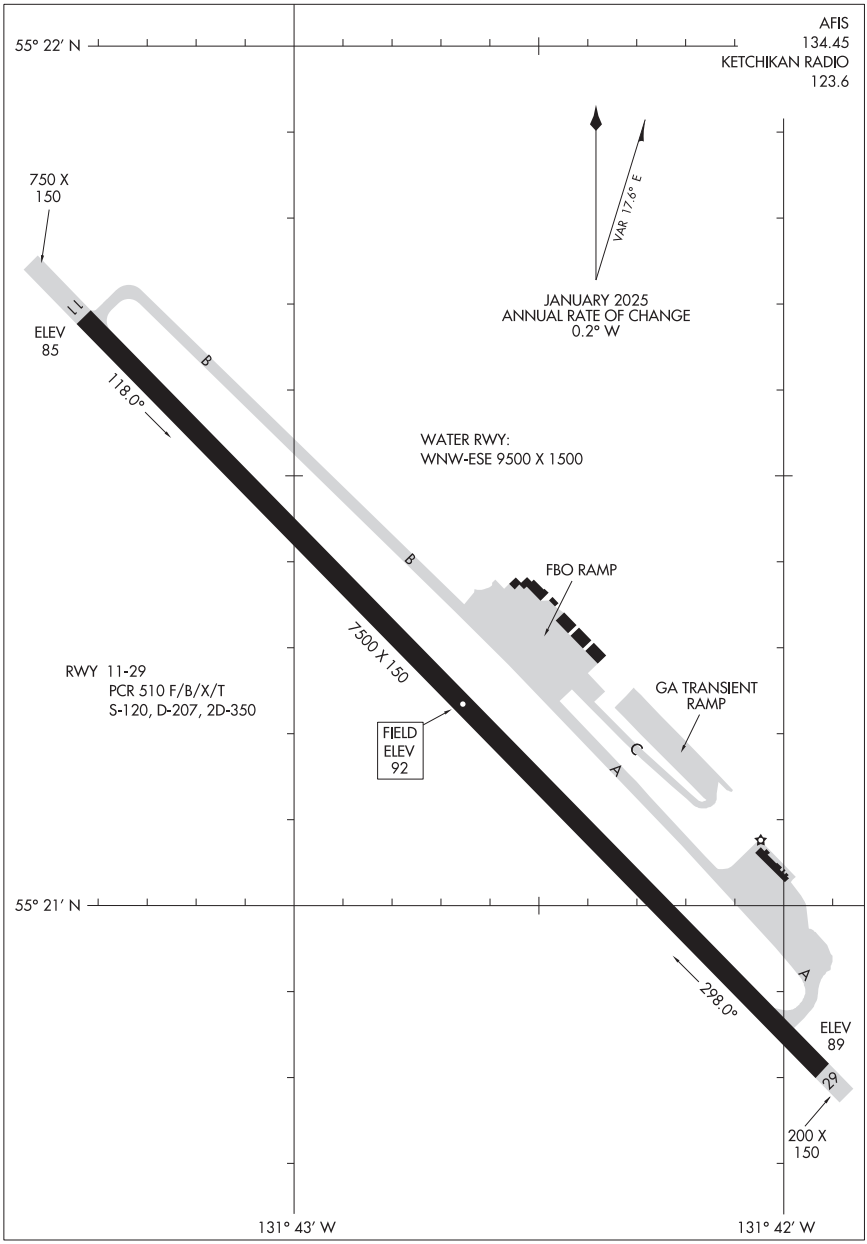
AIRPORT DIAGRAM
25275
KENAI, ALASKA
KENAI MUNI (ENA)(PAEN)

25275

AIRPORT DIAGRAM

AL-6053 (FAA)

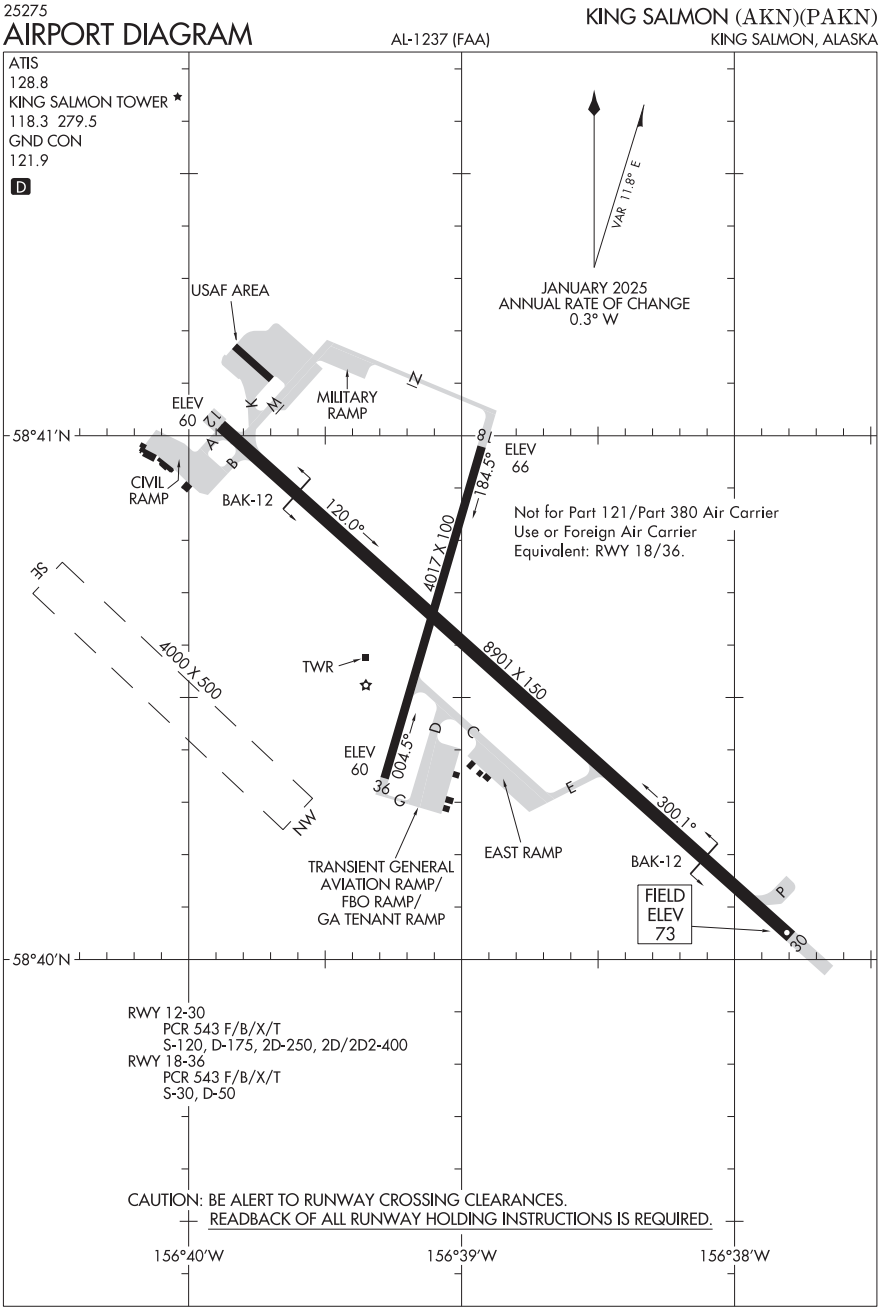
KETCHIKAN INTL (KTN)(PAKT)
KETCHIKAN, ALASKA



AIRPORT DIAGRAM

25275

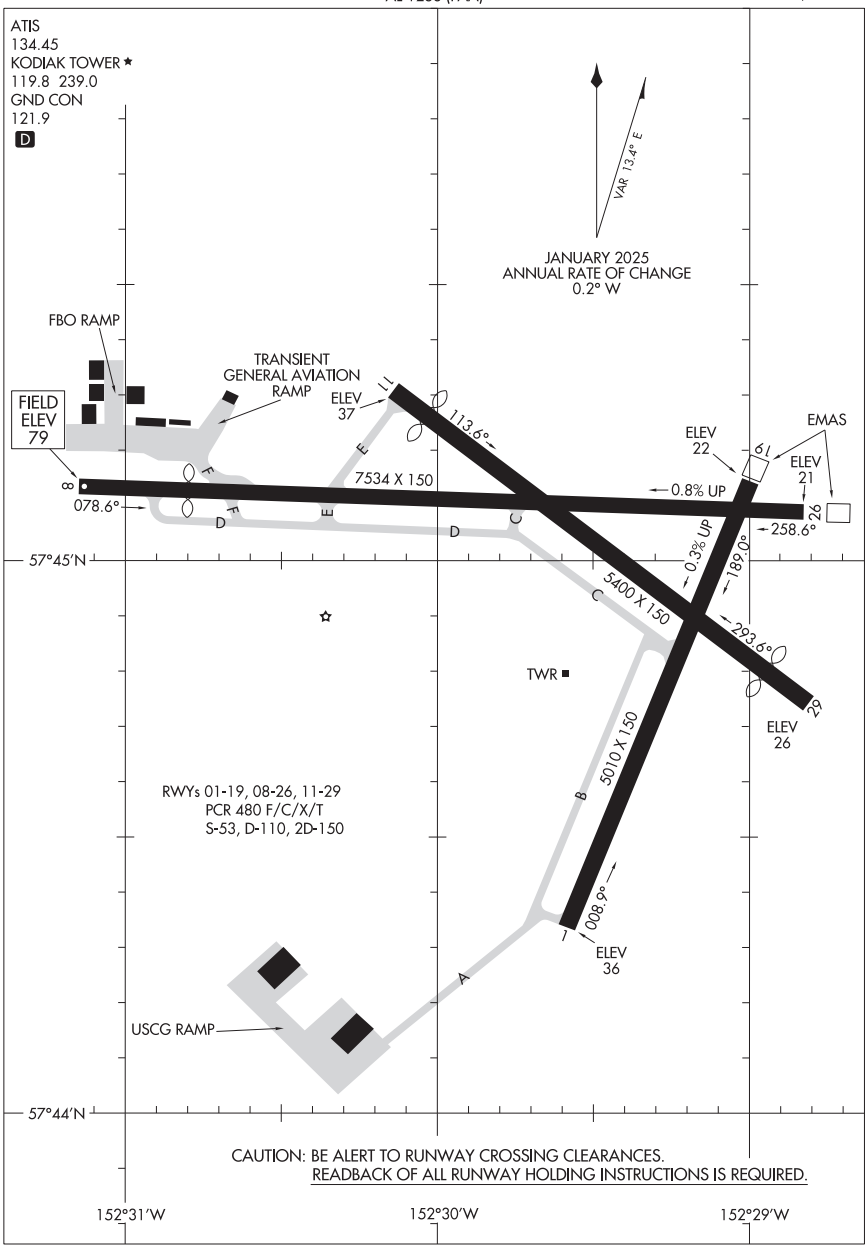
KETCHIKAN, ALASKA
KETCHIKAN INTL (KTN)(PAKT)


25275
AIRPORT DIAGRAM
AL-1237 (FAA)
KING SALMON (AKN)(PAKN)
KING SALMON, ALASKA
ATIS
128.8
KING SALMON TOWER ★
118.3 279.5
GND CON
121.9
D
VAR 11.8° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.3° W
USAF AREA
MILITARY RAMP
ELEV 60
CIVIL RAMP
BAK-12
120.0°
184.5°
ELEV 66
Not for Part 121/Part 380 Air Carrier Use or Foreign Air Carrier Equivalent: RWY 18/36.
4017 X 100
8901 X 150
4000 X 500
TWR
ELEV 60
004.5°
300.1°
EAST RAMP
BAK-12
TRANSIENT GENERAL AVIATION RAMP/ FBO RAMP/ GA TENANT RAMP
FIELD ELEV 73
58°41'N
58°40'N
RWY 12-30
PCR 543 F/B/X/T
S-120, D-175, 2D-250, 2D/2D2-400
RWY 18-36
PCR 543 F/B/X/T
S-30, D-50
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.
156°40'W
156°39'W
156°38'W
AIRPORT DIAGRAM
25275
KING SALMON, ALASKA
KING SALMON (AKN)(PAKN)

25331
AIRPORT DIAGRAM

AL-1238 (FAA)

KODIAK (ADQ)(PADQ)
KODIAK, ALASKA



AIRPORT DIAGRAM
25331

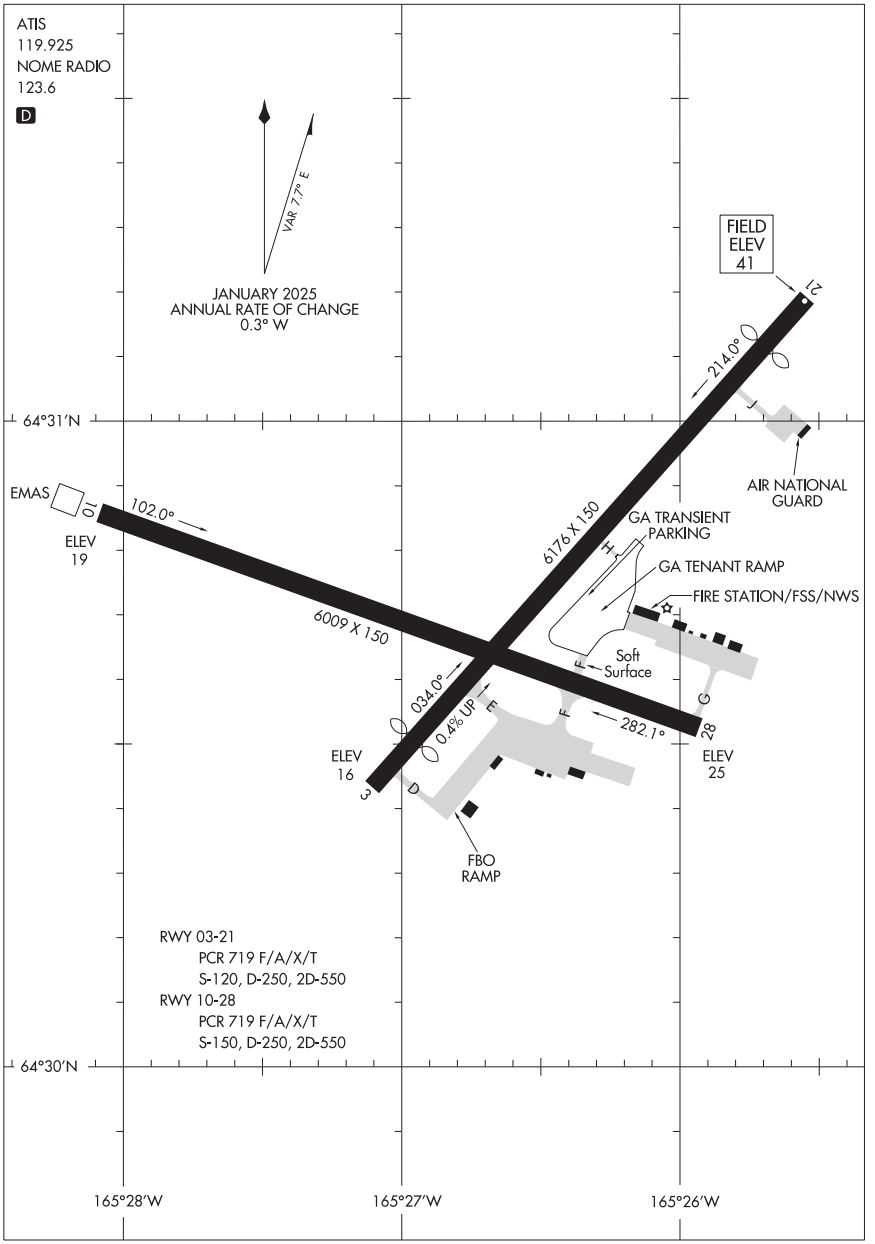
KODIAK, ALASKA
KODIAK (ADQ)(PADQ)

25275

AIRPORT DIAGRAM

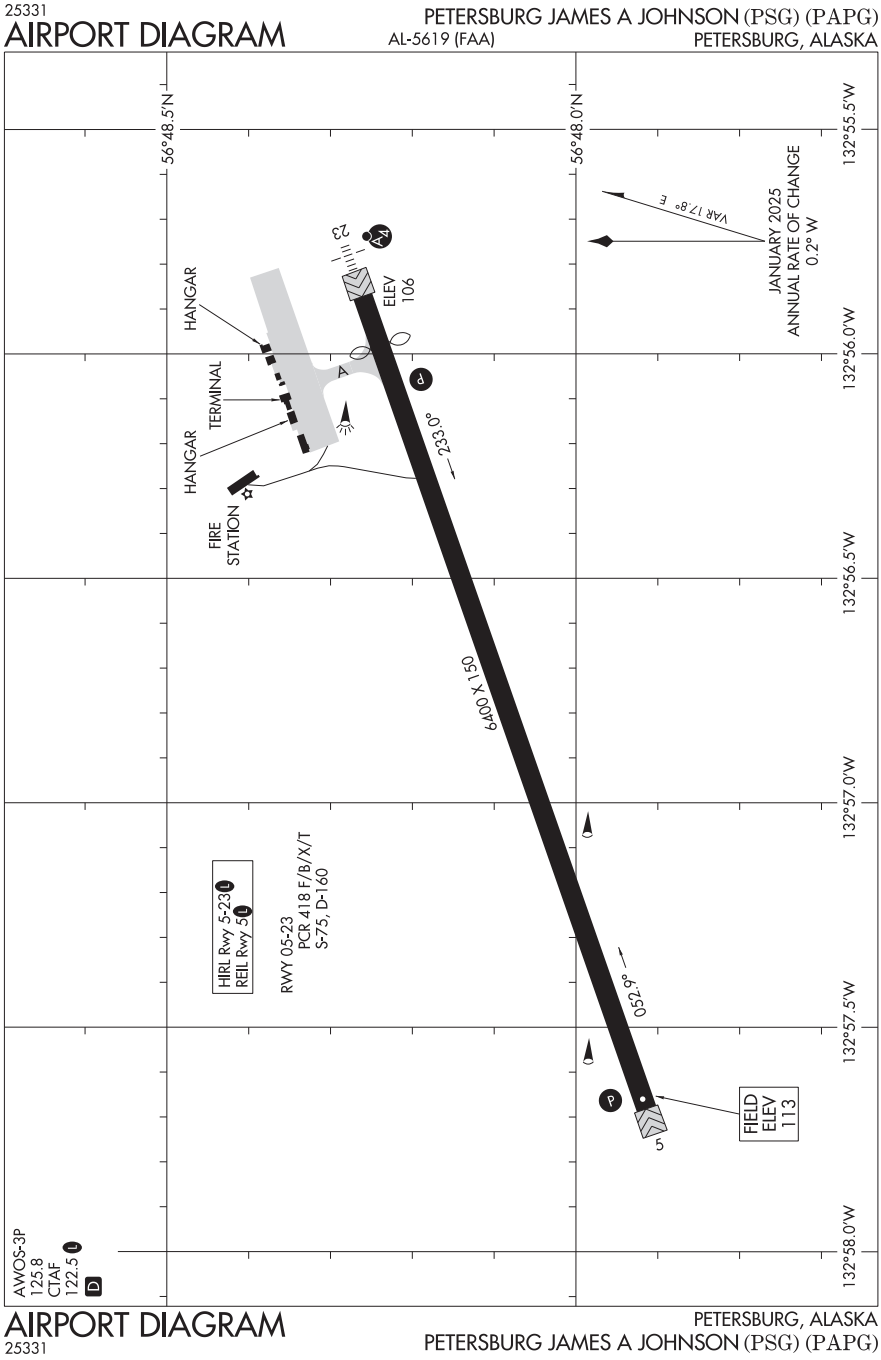
AL-1231 (FAA)

NOME (OME)(PAOM)
NOME, ALASKA



AIRPORT DIAGRAM
25275

NOME, ALASKA
NOME (OME)(PAOM)

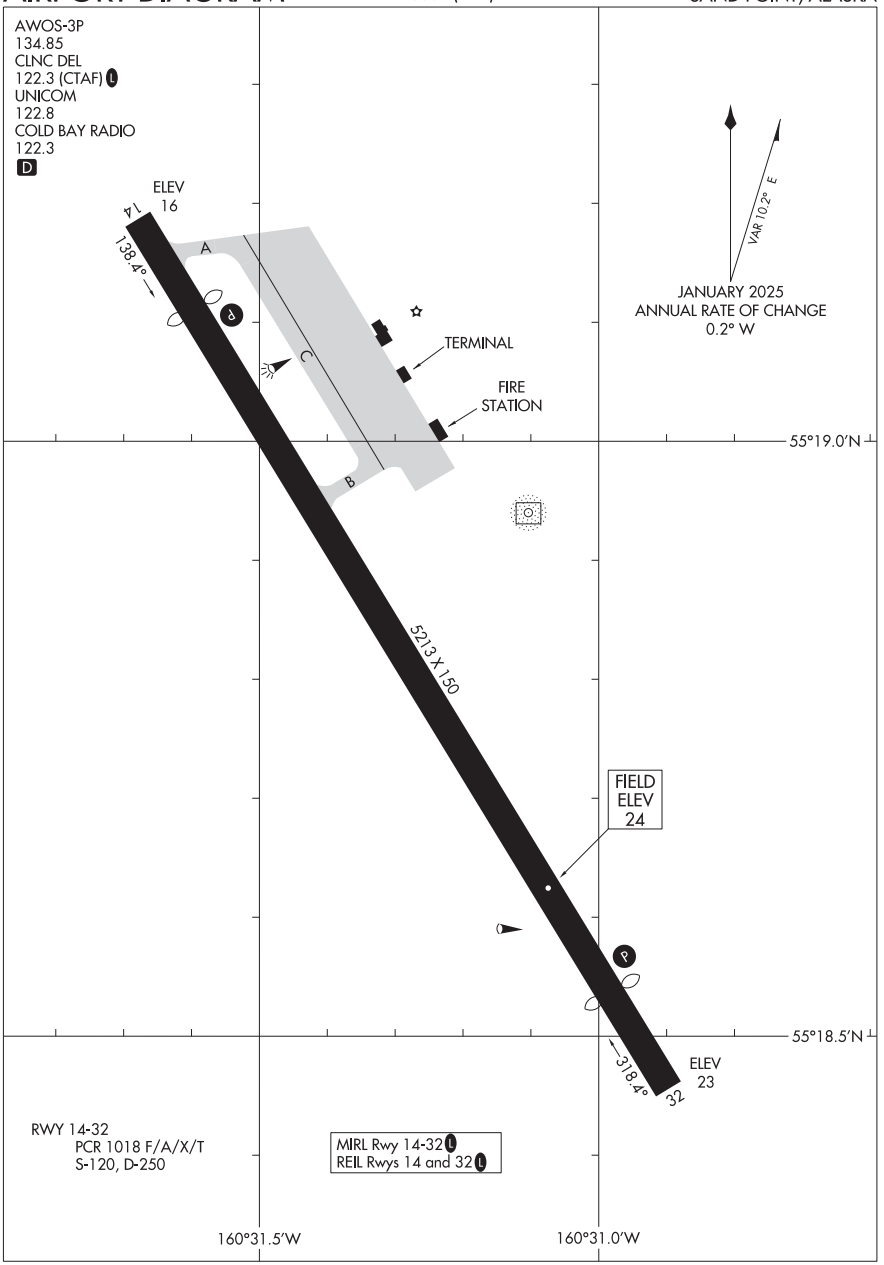

25331
AIRPORT DIAGRAM
PETERSBURG JAMES A JOHNSON (PSG) (PAPG)
AL-5619 (FAA)
PETERSBURG, ALASKA
56°48.5'N
56°48.0'N
132°55.5'W
132°56.0'W
132°56.5'W
132°57.0'W
132°57.5'W
132°58.0'W
VAR 17.8° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.2° W
HANGAR
TERMINAL
HANGAR
FIRE STATION
ELEV 106
233.0°
6400 X 150
052.9°
HIRL Rwy 5-23
REIL Rwy 5
RWY 05-23
PCR 418 F/B/X/T
S-75, D-160
FIELD ELEV 113
AWOS-3P
125.8
CTAF
122.5
AIRPORT DIAGRAM
25331
PETERSBURG, ALASKA
PETERSBURG JAMES A JOHNSON (PSG) (PAPG)

25331

AIRPORT DIAGRAM

AL-6537 (FAA)

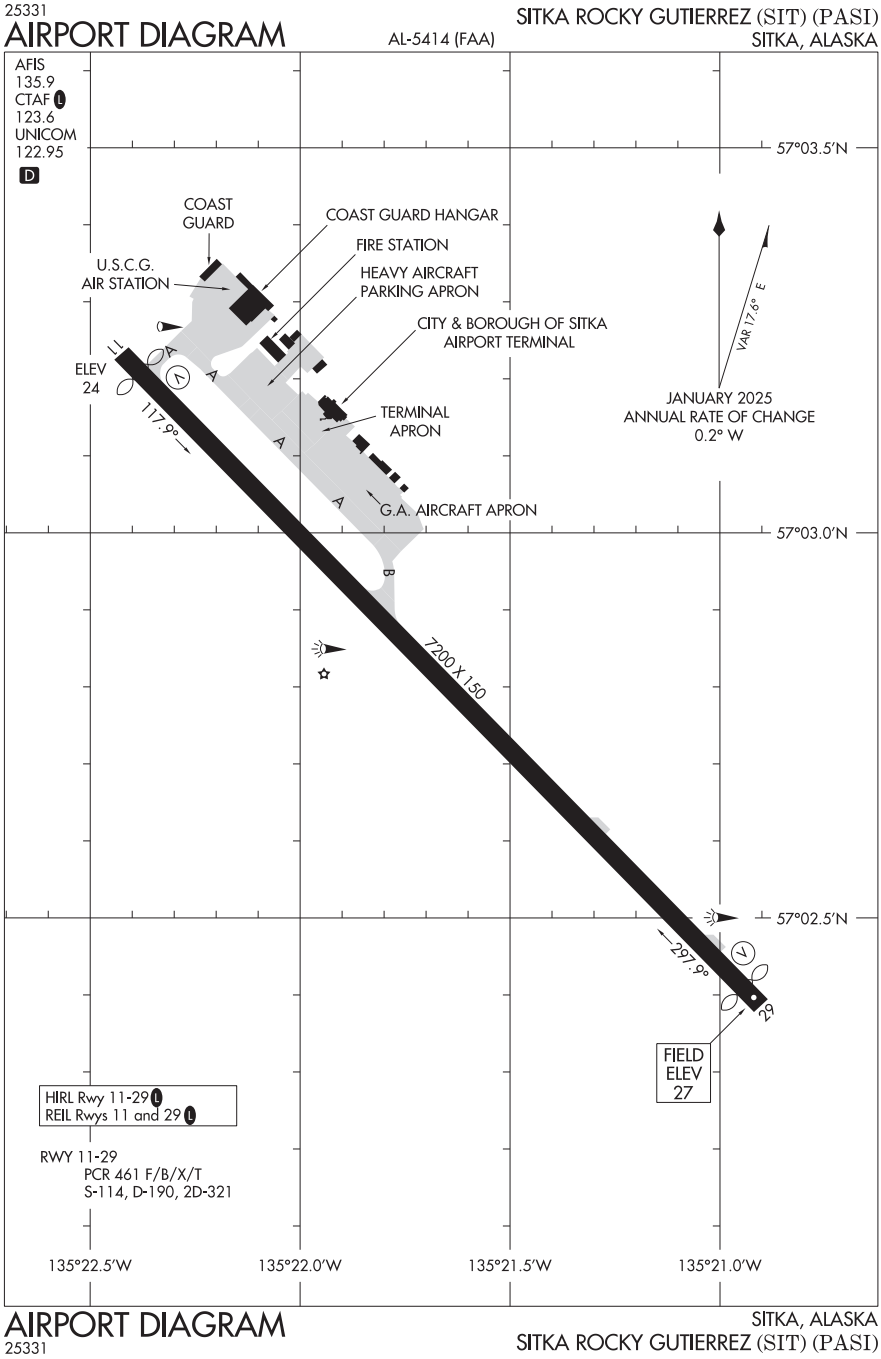
SAND POINT (SDP) (PASD)
SAND POINT, ALASKA

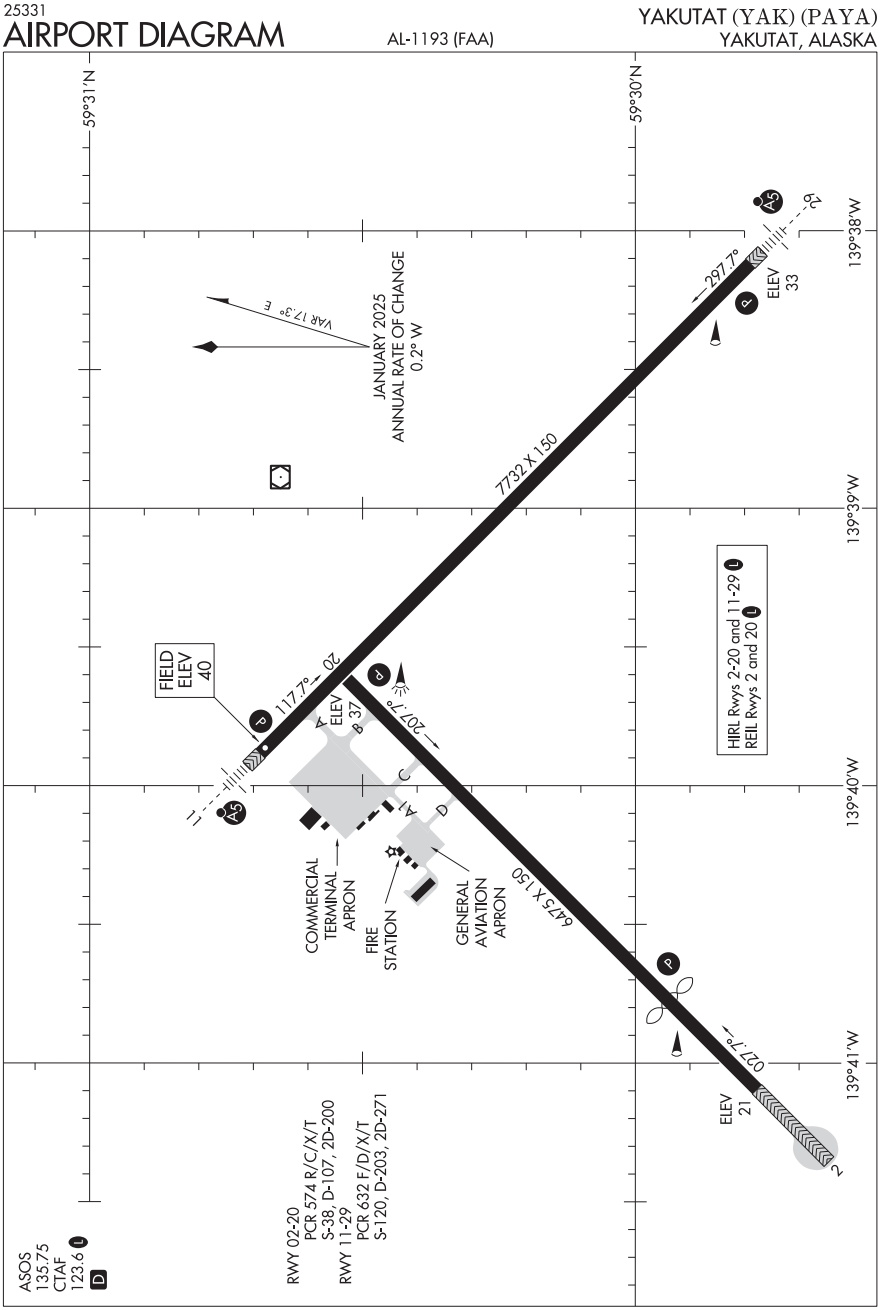


AIRPORT DIAGRAM

25331

SAND POINT, ALASKA
SAND POINT (SDP) (PASD)


25331
AIRPORT DIAGRAM
AL-5414 (FAA)
SITKA ROCKY GUTIERREZ (SIT) (PASI)
SITKA, ALASKA
AFIS
135.9
CTAF L
123.6
UNICOM
122.95
D
57°03.5'N
COAST GUARD
COAST GUARD HANGAR
FIRE STATION
U.S.C.G. AIR STATION
HEAVY AIRCRAFT PARKING APRON
CITY & BOROUGH OF SITKA AIRPORT TERMINAL
ELEV 24
TERMINAL APRON
117.9°
VAR 17.6° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.2° W
G.A. AIRCRAFT APRON
57°03.0'N
7200 X 150
57°02.5'N
297.9°
29
FIELD ELEV 27
HIRL Rwy 11-29 L
REIL Rwys 11 and 29 L
RWY 11-29
PCR 461 F/B/X/T
S-114, D-190, 2D-321
135°22.5'W
135°22.0'W
135°21.5'W
135°21.0'W
AIRPORT DIAGRAM
25331
SITKA, ALASKA
SITKA ROCKY GUTIERREZ (SIT) (PASI)


25331
AIRPORT DIAGRAM
AL-1193 (FAA)
YAKUTAT (YAK) (PAYA)
YAKUTAT, ALASKA
59°31'N
59°30'N
139°38'W
139°39'W
139°40'W
139°41'W
VAR 17.3° E
JANUARY 2025
ANNUAL RATE OF CHANGE
0.2° W
7732 X 150
297.7°
117.7°
207.7°
027.7°
ELEV 33
FIELD ELEV 40
ELEV 37
ELEV 21
HIRL Rwys 2-20 and 11-29
REIL Rwys 2 and 20
6475 X 150
COMMERCIAL TERMINAL APRON
FIRE STATION
GENERAL AVIATION APRON
ASOS
135.75
CTAF
123.6
RWY 02-20
PCR 574 R/C/X/T
S-38, D-107, 2D-200
RWY 11-29
PCR 632 F/D/X/T
S-120, D-203, 2D-271
AIRPORT DIAGRAM
25331
YAKUTAT, ALASKA
YAKUTAT (YAK) (PAYA)

INTENTIONALLY
LEFT
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Submitting Pilot Weather Reports (PIREPs)

1. UA - Routine PIREP / UUA - Urgent PIREP

2. /OV - Location: Use Airport or NAVAID identifiers only.
- Location can be reported as a single fix, radial DME, or a route segment (Fix- Fix)

Examples: /OV LAX, /OV LAX-SLI120005, /OV PDZ-PSP.

3. /TM – Time: When conditions occurred or were encountered**.**
- Use 4 digits in UTC.

Examples: /TM 1645, /TM 0915

4. /FL - Altitude/Flight Level
- Use 3 digits for hundreds of feet. If not known, use UNKN.

Examples: /FL095, /FL310, /FLUNKN

5. /TP - Type aircraft: Required if reporting Turbulence or Icing
- No more than 4 characters, use UNKN if the type is not known.

Examples: /TP P28A, /TP RV8, /TP B738, /TP UNKN

6. /SK – Sky Condition/Cloud layers:
- Report cloud coverage using contractions: FEW, SCT, BKN, OVC, SKC
- Report bases in hundreds of feet: BKN005, SCT015, OVC200
- If bases are unknown, use UNKN
- Report cloud tops in hundreds of feet: TOP120

Examples: /SK BKN035, /SK SCT UNKN-TOP125, /SK OVC095-TOP125/ SKC

7. /WX - Weather: Flight visibility is always reported first. Append FV reported with SM.
- Report visibility using 2 digits: FV01SM, FV10SM
- Unrestricted visibility use FV99SM.
- Use standard weather contractions e.g.: RA, SH, TS, HZ, FG, -, +

Examples: /WX FV01SM +SHRA, /WX FV10 SM -RA BR.

8. /TA - Air temperature (Celsius): Required when reporting icing
- 2 digits, unless below zero, then prefix digits with M.

Examples:/TA 15, /TA 04 /TA M06

9. /WV - Wind: Direction in 3 digits, speed in 3 or 4 digits, followed by KT.

Examples: /WV 270045KT, /WV 080110KT

10. /TB - Turbulence:
- Report intensity using LGT, MOD, SEV, or EXTRM
- Report duration using INTMT, OCNL or CONS when reported by pilot.
- Report type using CAT or CHOP when reported by pilot.
- Include altitude only if different from /FL.
- Use ABV or BLO when limits are not defined.
- Use NEG if turbulence is not encountered.

Examples: /TB OCNL MOD, /TB LGT CHOP, /LGT 060, /TB MOD BLO 090, / TB NEG

11. /IC - Icing:
- Report intensity using TRACE, LGT, MOD or SEV
- Report type using RIME,CLR, or MX
- Include altitude only if different than /FL.
- Use NEG if icing not encountered.

Examples: /IC LGT-MOD RIME, /IC SEV CLR 028-045, /IC NEG

12. /RM - Remarks: Use to report phenomena that does not fit in any other field.
- Report the most hazardous element first.
- Name of geographic location from /OV field fix.

Examples: /RM LLWS +/-15KT SFC-003 DURC RWY22 JFK
/RM MTN WAVE, /RM DURC, /RM DURD, /RM MULLAN PASS
/RM BA RWY 02L BA MEDIUM TO POOR 3IN DRY SN OVER COMPACTED SN

Examples of Completed PIREPS

UA /OV RFD /TM 1315 /FL160 /TP PA44 /SK OVC025-TOP095/OVC150 /TA M12 /TB INTMT LGT CHOP

UA /OV DHT360015-AMA /TM 2116 /FL050 /TP PA32 /SK BKN090 /WX FV05SM –RA /TA 04 /TB LGT /IC NEG

UUA /OV PDZ010018 /TM 1520 /FL125 /TP C172 /WV 270048KT TB SEV 055-085 /RM CAJON PASS

*

PIREP FORM

3 or 4 letter Identifier

____ ____ ____ ____ 1. **UA**____ **UUA**_____
Routine **Urgent**

2. **/OV**	Location
3. **/TM**	Time
4. **/FL**	Altitude/Flight Level
5. **/TP**	Aircraft Type
Items 1 through 5 are mandatory for all PIREPs	
6. **/SK**	Sky Condition
7. **/WX**	Flight Visibility & Weather
8. **/TA**	Temperature (Celsius)
9. **/WV**	Wind
10. **/TB**	Turbulence
11. **/IC**	Icing
12. **/RM**	Remarks

FAA Form 7110-2 (9/19) Supersedes Previous Edition