MERRILL FIELD (MRI/PAMR)

Instrument Flight Procedure Project

• Kolby Hickel- Deputy Municipal Manager & Acting Merrill Field Manager
• Dan Owen- owner Alaska Air Transit & MAAAC member
• Keenan Zerker- owner Alaska Aircraft Sales & Maintenance and MAAAC Co-Chair
Why we’re here......

• Background on Hughes Aerospace and the Instrument Flight Procedures.
• Community concerns.
  • Runway Protection Zone- RWY 34 COPTER
  • National Environmental Policy Act (NEPA)
  • Size of aircraft
    • MOA Code: 11.60.120 section B.
The technology that enables the new approaches:

• WAAS GPS is a highly improved GPS system consisting of space based, terrestrial, and aircraft-based components that work in concert to significantly improve navigation accuracy and reliability.

• Modern WAAS GPS technology provides ILS like accuracy without the need for expensive ground-based navigation infrastructure at each individual airport.

  • “To have ILS-like capability is really a game changer” – EMS pilot Jeremy Fryer in Modern Helicopters Speed up the Golden Hour FAA Navigation Programs AJM-32

• Straight in Approaches w/glide path greatly increase the likelihood of safe, successful instrument approaches and landings.
  • Currently available in a MAJORITY of instrument approaches in State of Alaska

• Alaska is an aviation safety technology pioneer. In June, 2009, Northern Air Cargo was certified to fly with WAAS. NAC is the first Boeing 737 in the U.S. to acquire certification to fly with full WAAS GPS capability.
  • Equipped to use the extremely accurate navigation service provided by WAAS, NAC can now take advantage of WAAS approach procedures throughout rural Alaska.
Ground track of existing approach (yellow), and new straight-in approaches (white)
Pilot view of new Runway 7 straight-in approach
Fairview residences are to the south
Pilot view of new Runway 34 straight-in approach
Fairview residences are to the west
Addressing Fairview Neighbor’s Concerns about the New Instrument Approaches

1. Concern: the RPZ will expand and FAA or Merrill Field will take away your homes – Not true: (1) the graphic depicting RPZ expansion over Fairview residences was false, based on a misapplication of FAA rules! (2) Neither the FAA nor Merrill Field has the authority to take away your home.

2. Concern: more planes flying over your house – aircraft on straight-in instrument approaches to Runways 7 or 34 are constrained to the extended runway centerline, and therefore restricted from flying over your house. This is in contrast with the current circling approach, where planes must often fly over Fairview residences during the circling maneuver in order to line up with a runway. Therefore, fewer planes flying over your house (although you may not notice a difference, since the planes that fly IFR at Merrill Field are the quietest planes on the airport).

3. Concern: larger airplanes will be landing at Merrill Field – Nope; Municipal code restricts aircraft to the size that currently operate at Merrill Field.

4. Concern: more airplanes will be flying into Merrill Field – Not so. Nearly all aircraft that fly IFR into Merrill Field are commercial air carriers who are returning to their Merrill Field home base. They just want to do it more safely and reliably.
4 mi. Final - Anchorage International Runway 7
2 mi. Final - Anchorage International Runway 7
1 mi. Final - Anchorage International Runway 7
Short Final - Anchorage International Runway 7
1 mi. Final - Merrill Field Runway 7
View on Final - Merrill Field Circling Approach

Not lined up with any runway and too high to land safely – must circle
Safety Considerations of Circling IFPs

Stabilized Approach

In IMC, you must continuously evaluate instrument information throughout an approach to properly maneuver the aircraft or monitor autopilot performance and to decide on the proper course of action at the decision point (DA, DH, or MAP). Significant speed and configuration changes during an approach can seriously degrade situational awareness and complicate the decision of the proper action to take at the decision point.

For the final segment of a circling approach maneuver, the approach must be stabilized 500 feet above the airport elevation or at the MDA, whichever is lower. These conditions must be maintained throughout the approach until touchdown for the approach to be considered a stabilized approach. This also helps you to recognize a wind shear situation should abnormal indications exist during the approach.

Many Part 121 and 135 operators are restricted from conducting circling approaches below 1,000 feet MDA and 3 SM visibility by Part C of their OpSpecs.
Lake & Pen Air
Lake Hood Airport
Sunday, Nov 5, 2023, 1:30 pm
Worlds Leading Air Navigation Services Provider

OBSTACLE SURVEY – AERODROME CERTIFICATION

FLIGHT INSPECTION – NAVIGATION CERTIFICATION

AIRLINE COPTER AIRPORT UAM

NOT FOR NAVIGATION

AIRLINE COPTER AIRPORT UAM

NextGEN
INTRODUCTIONS
Presentation

HUGHES KEY TECHNICAL STAFF

Chris Baur, FRaeS
President & CEO

Alyce Shingler,
Director of Operations

Tony Lawson
Chief Designer

Ben Anderson
Lead PEP, IFPV

Rachel Tester
Flight Inspection

Ray Craig
Flight Inspection

Bob Abbott
TERPS Engineer

Katie Childress
TERPS Engineer

Brian Berube
TERPS Engineer

Jon Denton
TERPS Engineer

Kevin Flowers
Cartography

Bill DeWeese
APP & IT Support
ABOUT HUGHES AEROSPACE

Houston based Hughes Aerospace Corporation is a globally recognized and fully credentialed Air Navigation Services Provider. Our mission is to provide our customers and the flying public, the safest, most advanced instrument flight procedures without compromise.

HUGHES DESIGNS, IMPLEMENTS, AND MAINTAINS INSTRUMENT FLIGHT PROCEDURES FOR THE FAA & GOVERNMENT AUTHORITIES WORLDWIDE. WE ARE THE LARGEST & ONLY FAA CERTIFICATED PUBLIC SERVICE PROVIDER, EXPERIENCED IN DEVELOPING AND MAINTAINING BOTH CFR 14 PART 97 PUBLIC INSTRUMENT FLIGHT PROCEDURES.

Hughes is also endorsed by the International Civil Aviation Organization (ICAO) as an Air Navigation Service Provider as well as several other regulatory authorities worldwide. Hughes also possess certification for complete Flight Inspection & Validation services, conducted with our own aircraft. We have participated in landmark airspace projects that involve PBN throughout North America, Latin America, Asia, Europe, and the Middle East.

Instrument Procedure Night Evaluation
Seattle, Washington
Instrument Flight Procedure Project
Merrill Field Airport (PAMR) – Anchorage, AK

Former Merrill Field Airport Manager, Ralph Gibbs engaged with HUGHES in July 2020, looking to provide the operator's better access and safety enhancements to the airport. After months of discussions, feasibility studies, and contract negotiations, HUGHES started work in March 2021 with the goals below.

**OBJECTIVES:**
- Develop new CFR 14 Part 97 Public RNAV (GPS) Instrument Flight Procedures RWY 07 / RWY 34
- Develop Instrument Flight Departure Procedure (RNAV SIDs)
- COPTER Approach Instrument Procedure

**BENEFITS:**
- Increase in Safety, noise abatement and all-weather reliability.
- Protect the immediate airspace surrounding the Airport.
- Eliminate costly diversions, missed approaches and holding.
- Overall reduction in track miles & noise, saving fuel and environmental impact to the community.

Procedures were successfully Flight Validated on 4/7/2023 and were forecasted for Publication on 7/10/2023
MERRILL FIELD INSTRUMENT FLIGHT PROCEDURES

READY FOR PART 97 PUBLIC IMPLEMENTATION:

- RNAV (GPS) RWY 34
- RNAV (GPS) Y RWY 7
- RNAV (GPS) Z RWY 7
- MERRILL ONE (RNAV) DP
Questions?