

Appendix A

Koliganek Airport Layout Plan Narrative Report

KOLIGANEK AIRPORT LAYOUT PLAN

NARRATIVE REPORT

1. INTRODUCTION

Koliganek is located on the bank of the Nushagak River, 65 miles northeast of Dillingham. The community of Koliganek is located approximately 59.728610 North Latitude and 157.284440 West Longitude. Koliganek is located in the Bristol Bay Recording District.

This Airport Layout Plan (ALP) has been developed in accordance with the Federal Aviation Administration (FAA) Advisory Circulars Airport Design 150/5300-13A, and the current Central Region Guidelines.

This ALP proposes near-term improvements to rehabilitate the existing runway, taxiway, apron, and to add 300 feet on the west end of the existing runway. This ALP also shows the ultimate development to construct a crosswind runway to improve airport operations during poor weather conditions.

This airport is a community class airport, suitable for small, single or light twin engine aircraft. The existing Runway will be updated from a Visual approach to a Non Precision Instrument (NPI) approach.

2. BASIS FOR PROPOSED DEVELOPMENT

The population of Koliganek has increased approximately 15% in the past 20 years. According to the 2010 US Census, the village of Koliganek now has 209 residents. As indicated by Air Activity Information System (ACAIS), a database that contains revenue passenger boarding and all cargo data, the enplanements for 2009 were 385. The ACAIS shows a decrease in enplanements at Koliganek over the past ten years despite a rising populations. Additionally, site visits from DOT&PF in 2010 suggest that this number seems low based on the multiple flights observed per day. The Revised DOT&PF Southwest Alaska Transportation Plan prepared by PB Consult Inc.(2004), estimates that the Koliganek population will grow to 260 people and 2,530 enplanements in 2020. The population estimate is commensurate with the Dillingham Census area estimated growth rate of 2 percent. The Southwest Alaska Transportation Plan enplanement estimate seems more realistic given our on-site observation, typical enplanements for other Alaska communities of similar size, and Koliganek's historic population growth.

Table 2 – Existing Koliganek Airport Fleet Mix

Design Group	Aircraft	Approach Speed (knots)
A-I	Cessna 207	75-80
A-II	Cessna 208b Grand Caravan	75-80
B-I	Piper Navajo, PA 31-350	100

As listed in Table 2, the fleet mix that serves Koliganek includes design group A-I aircraft, design group A-II aircraft, and design group B-I aircraft. According to the forecast demand, a composite Aircraft

Reference Code (ARC) of B-II will be applied in selecting airport feature dimensions to accommodate these aircraft.

Inspection indicates that, Koliganek runway has loose rocks on the surface up to four inches in diameter. There are numerous heaves and humps up to 18 inches, and threshold 9 has four inches deep ruts. Survey information confirms non-uniform variations in the runway surface. These issues will be corrected in the Near Term phase.

3. RATIONALE FOR UNUSUAL DESIGN FEATURES, NON-STANDARD CONDITIONS, AND/OR MODIFICATION TO STANDARDS

The Village of Koliganek sewage lagoon is approximately 1,500 feet southwest of the existing runway. It is within the 5,000 foot setback required by FAA for waste disposal sites. As discussed in the Environmental Assessment dated January 1994, bird/aircraft conflict at the present site is a low probability for the following reasons:

- The size of the lagoon is insignificantly small as compared to the total area of the open water habitats in the vicinity of the village;
- The location of the lagoon relative to the river is such that the most likely approach to the lagoon from the river by gulls and migrating birds does not carry them across the runway or its approaches
- The runway proximity to the village presents a greater level of noise and disturbance than other open water-bodies in the area, and is less attractive to birds
- During on-site visits during the fall migration, few water birds were observed using the lagoon for resting or feeding.
- Through discussions with local residents and pilots, there have been no reported concentrations of gulls, ravens, or water birds at or near the sewage lagoon.

Runway orientation does not meet the desirable 95% wind coverage. The current wind coverage is 85.7% at 13 knots using information from Arctic Environmental Information and Data Center. The ultimate layout plan shows a cross wind runway with combined wind coverage of 97.25%. Additional wind data information should be obtained prior to the construction of this cross wind runway.

4. SUMMARY OF STAGED DEVELOPMENT

The primary objectives for the near term development is to extend the runway 300 feet, regrade the Runway and upgrade airport features. The ultimate development will improve aircraft operations by upgrading the airport with the construction of a B-II crosswind runway.

5. AIRPORT FEATURES

Near-Term Development

The existing runway length will be increased from 3,000 feet to 3,300 feet.

The primary surface width will be updated from 250 feet to 500 feet. This update to the primary surface will increase the Building Restriction Line (BRL) to 495 feet from the runway centerline.

The current Snow Removal Equipment building (SREB) is in poor condition. This SREB will be repaired and relocated approximately 90 feet southeast of its current location. A new single bay SREB will be constructed adjacent to the relocated SREB.

The proposed apron and support area will be resurfaced. The square footage of the apron will remain at 60,000 ft², with 45,000 ft² aviation support area. The SREBs and aviation support areas will move outside the increased BRL offset. The aviation support area will be increased from three 100 ft x 100 ft lots to three 150 ft x 100 ft lots. A new pad will be constructed for maintenance and operations use. Tie downs will be installed in the apron area.

The near term taxiway will be resurfaced and the dimensions will be the same as the existing, 175 feet long and 35 feet wide with an 80' wide safety area.

Construction cost is estimated to be \$11,500,000

Ultimate Development

Ultimate development will improve safety for aircraft operations at the Koliganek Airport during variable winds and poor weather.

6. PROPERTY STATUS

The Koliganek Airport rests on one tract of land totaling 116.20 Acres. In addition to the existing tract, 23.79 acres is required for the near term improvements. An additional 106.98 acres will be required for the ultimate development.

7. WASTE DISPOSAL FACILITIES

The distance from the airport to the sewage lagoon is approximately 1,500 feet southwest. See Item 3 for additional details.

8. PART 77 SURFACE PENETRATIONS

There is a terrain obstruction to the existing primary surface along the runway, from Stations 53+00 to 55+00 and offset from 55L to 77R. The height of the obstruction varies with a maximum height of 1.1 feet. This obstruction will be corrected in the near term phase.

9. AIRPORT ACCESS

Approximately 725 linear feet of access road along the aviation support area will be relocated, 50 feet south from its current location. The access road extends west to the village of Koliganek, and east to the material site.