

5 ALTERNATIVES

5.1 Introduction to the Alternatives

The existing airport geometry meets ARC B-II standards, as required over the 20-year planning period. Alternatives eliminated from further consideration include the use of other area airports to accommodate Talkeetna's needs, realignment of Talkeetna's existing runway, and development of a floatplane basin.

The seven build alternatives involve the expansion of the commercial apron area and GA aircraft parking, construction of a CCP, relocation of helicopter operations, provision of space for service facilities, realignment of the access road, snow storage, creation of additional lease lots, and accommodation of skiplane and tundra tire-equipped aircraft. The need for expansion and development of the airport is based on the existing and projected demands over the 20-year planning period. The build alternatives include:

- Alternative 1 (**Figure 4**) includes a gravel runway that is 640 m (2,100 ft) long by 18 m (60 ft) wide. The gravel runway is located 214 m (700 ft) east of the existing paved runway and is connected by a taxiway to a skiplane parking area. This alternative also includes an additional taxiway to the gravel runway, lease lots located near the existing operators' hangars and the new M&O facility, and a relocated helicopter pad to the northwest quadrant of the airport.
- Alternative 2 (**Figure 5**) includes a 640-m (2,100-ft) by 18-m (60-ft) gravel runway extending to the north of the existing runway, an additional taxiway, lease lots located near the operators' hangars, and a relocated helicopter pad at the southern extreme of the proposed commercial apron. There is skiplane parking and a CCP at the north end of the runway and a secondary access road from the south that provides access directly to the existing apron area.
- Alternative 3 (**Figure 6**) includes a parallel gravel runway adjoining the existing runway, an additional taxiway, expanded lease lots, a separated government facilities

apron with a helicopter pad located on the southeast quadrant of the airport, and a CCP near the helicopter pad.

- Alternative 4 (**Figure 7**) has an additional taxiway, lease lots located near the existing operators' hangars and the new M&O facility, and a relocated helicopter pad at the southeast quadrant of the airport. There is a CCP at the helicopter pad. A road paralleling the ARRC tracks provides secondary access to the south end of the airport.
- Alternative 5 (**Figure 8**) has lease lots located near the existing commercial apron and the new M&O facility, as well as a relocated helicopter pad at the northwest quadrant of the airport. There is a CCP off the east end of the existing runway, and a secondary access road paralleling the ARRC tracks that provides access to the south end of the airport. Alternative 5 also commits DOT&PF to conducting a hydrologic study and constructing floodplain mitigation either before or concurrent with airport improvements.
- Alternative 6 (**Figure 9**) is identical to Alternative 5 except that the relocated helicopter pad is located at the northeast quadrant of the airport, and short-term visitor parking adjacent to Second Avenue is not included.
- Alternative 7, which is the Preferred Alternative (**Figure 10**), is identical to Alternative 6 – excluding the relocation of the helicopter pad. Improvements to existing helicopter operations areas will not be considered at this time. Although a heliport is not included in the Preferred Alternative of this master plan, DOT&PF will continue to analyze the need for a separate heliport facility and may conduct a heliport study in the near future to determine the best alternative for meeting helicopter operations demand at Talkeetna Airport.

Alternatives 1 through 6 are discussed in detail in the 2001 *Talkeetna Airport Environmental Assessment*. The Preferred Alternative and the No Action Alternative are discussed in the following sections.

5.2 Preferred Alternative

The Preferred Alternative (Figure 10) retains the existing paved, 1067-m (3,500-ft) long runway. It expands both the GA and commercial aprons. The recently constructed aircraft parking apron adjacent to the FSS will be converted to lease lot development with aircraft moved to the new aircraft parking apron constructed on the airside of the FSS, inside the BRL.

Transient aircraft will be relocated to the center of the parking apron near the FSS. The new GA apron will be located just to the north of the transient aircraft apron. Continuing northward, another commercial apron will be developed, and then even further north, skiplane parking will be provided. Four small lease lots will be designated adjacent and west of the north commercial apron. Adjacent and to the west of the skiplane apron, a government lease reserve will be designated. A new paved access road to the lease lots and aircraft parking areas will be provided with the Preferred Alternative. This road extends from the existing FSS, past the government lease reserve, to Beaver Street. A security gate to the airport will be provided at Beaver Street; access to private property will be maintained via Beaver Street.

The existing commercial apron will be retained. A new paved commercial apron will be developed at the southwest end of the airport. This new apron provides 9250 m² (11,100 sy) of aircraft parking space. The development of this apron requires that the automated weather observation system (AWOS) be relocated. Existing commercial lease lots to the north and south of the commercial apron will be retained with the Preferred Alternative. Fencing will be installed around the lease lots to control access to airport property. Six additional large lease lots will be available to the south. Each new lot will be at least 45 m (150 ft) by 30 m (100 ft). Smaller lease lots will be available west of the new commercial apron. Fuel storage, sales, and delivery will be provided by lease holders.

A secondary access road to the airport will be provided on the east side of the ARRC tracks. The road will extend to the Talkeetna Spur Road, just east of where the ARRC tracks cross the Spur Road. This alignment allows for access to the airport without having to cross railroad tracks when arriving from the south via the Talkeetna Spur Road. Security fencing with gate access will be provided along the airport side of the new access road.

The DOT&PF M&O facility will be retained on the north apron at the northwest end of the airport. A new airport rotating beacon will be installed on the M&O building.

The area between the existing runway and the ARRC embankment is a significant conveyance channel during flooding events in Talkeetna. Developing this area by constructing aircraft parking areas and building may constrict the flow of flood water through this area, which could increase the extent of flooding in Talkeetna. Because this is a flood hazard area, any development that occurs there is subject to MSB rules related to development in the 100-year floodplain.

As a condition of approval of the Finding of No Significant Impact (FONSI) (**Appendix B**), the DOT&PF will prepare a hydrologic study and evaluate the nature of this problem. Two possible mitigation scenarios were considered: Lengthening the ARRC Talkeetna River bridge by an appropriate length to reduce the level of flooding so that Talkeetna Airport is no longer inundated during the 100-year event, or construction of a drainage swale and three flood relief structures that would allow flood water to run under Second Street, along and under the ARRC embankment, under the Talkeetna Spur Road, and into the Susitna River.

The most appropriate mitigation scenario will be selected in the hydrologic study. The study will include a detailed analysis of the 100-year floodplain in Talkeetna, the environmental impacts associated with the mitigation scenarios, and construction cost estimates for each option. Construction of the first AIP project at Talkeetna Airport will occur concurrent with construction of the floodplain mitigation.

A new CCP will be located east of the existing runway end. The CCP will have a 18-m (60-ft) radius. It will be connected to the runway by an 11-m (35-ft) wide and 100-m (320-ft) long perpendicular taxiway.

Snow storage will occur north of the government lease reserve, west of the GA apron, and south of the proposed commercial apron. Snow storage will also be located to the west of the commercial apron. The Preferred Alternative includes the plan for a WID and SID to be extended to newly developed areas. Security fencing will be added around existing and future lease lots.

All proposed heliport location alternatives evaluated during the scoping process received considerable objection from the public. Although the need to separate fixed-wing and helicopter operations still exists; due to the lack of a consensus on an alternative for the heliport location, DOT&PF is not pursuing a new heliport at this time.

5.3 No Action Alternative

Under the No Action Alternative, no construction would occur. Commercial and GA aprons would remain the same, as would the number and location of existing lease lots. The heliport would remain in its existing location, and a CCP would not be built. Services would remain as is; no new lease lots or additional aircraft parking would be available. The airport would continue to have inadequate aircraft parking, tiedown, and hangar space. Helicopter and fixed-wing aircraft conflicts would not be remedied.

The No Action Alternative would not overcome the shortcomings inherent at the existing airport, nor would it allow for increased demand for space and services in the future which have been identified in this document. Under this alternative, the fixed-wing/helicopter conflicts would continue and noise from helicopters would continue to be a problem for residential areas near the airport. There would be no facility for skiplane and tundra tire-equipped aircraft. The airport would continue to have inadequate aircraft parking, tiedown, and hangar space. An insufficient number of lease lots would be available to meet existing and future commercial and fueling demands, and there would be no CCP.