

4.3 Ted Stevens Anchorage International Airport

4.3.1 Overview

Since its dedication in 1953, TSAIA has grown into a highly valued asset at both the municipal and state levels. It provides passenger and cargo service to the region, serves as the primary means of transportation to many rural areas of Alaska, and contributes \$850 million in annual payroll to the local economy, providing one out of every eight jobs in Anchorage. While the economic and transportation value of the airport is significant, growth and expansion inside the airport boundary have had an ongoing impact on the surrounding community.

As Anchorage residential housing has developed up to the airport boundaries from the outside and aviation development and operations have expanded toward airport boundaries from the inside, incompatible land use and operational issues have intensified. At the same time, TSAIA is facing stiff competition from other airports worldwide and must fulfill its obligations under FAA grant assurances to accommodate airport growth and development. Meanwhile, nearby residents are asking, “When is enough, enough?” and seeking to restrain airport growth to protect their quality of life. The Municipality, TSAIA, its tenants, the FAA, and Community Councils must continue to work together to find land use solutions that reduce conflicts and maintain the economic vitality of TSAIA.

This plan element acknowledges the airport's value, the likelihood of continued growth to meet aviation demand while seeking ways to minimize conflicts between the airport and the surrounding community.

4.3.2 Airport–Community History

The relationship between the Airport and the community has been defined by a series of interactions over time. As the years pass and people come and go, that history can be lost. While historic events do not dictate current choices, understanding them is important for providing a sense of continuity and an informed starting point for selecting the best course forward. The following paragraphs contain historical background important for understanding the current state of airport-community relations.

1975 – Spenard Beach

From the early 1900s, when Joe Spenard established a resort and swimming beach near the town of Spenard, Spenard Lake has been a prominent landmark in West Anchorage. Spenard Beach, located on the north end of the lake, was long used for swimming and winter skating by Anchorage residents until the mid-1990s. While swimming in Spenard Lake no longer occurs due to lack of staffed safeguards, the beach area is actively used for a variety of recreational pursuits and contains playground equipment.

Although anecdotal accounts suggest that Joe Spenard donated the beach to Anchorage, there is no evidence of his having owned the property. Records do show that the City of Anchorage purchased the property from the federal government in August 1934 (Patent No. 1071292).

The property then passed from the City to the State in 1975, resulting from a condemnation action filed by the State for “*the operation, maintenance, expansion, improvement and protection of the Lake Hood Seaplane Base Project.*” The proceeding was finalized and the property formally transferred in October 1975 with the issuance of a final judgment (Civil Action 73-2351, Book 4, Page 66, Anchorage Recording District) that established a compensation price for the property. Neither of these transfer documents contains language that reserves the property for park or recreation use.

Upon being transferred to airport ownership, the property became subject to all FAA grant assurances (see Section 4.3.3) regarding use of the property. Following this, the MOA and TSAIA had a maintenance agreement, which expired in 1992, allowing the MOA to temporarily use the Spenard Beach property as a public beach, recognizing that the property might be needed in the future for aviation purposes. Since that time, the agreement has been in month-to-month holdover.

Despite the fact that Spenard Beach now lies within the airport and is therefore subject to FAA Grant Assurances, the lake and north side park site remain an important landmark for Spenard residents and one of the few lakefront areas that allows the public to observe float plane operations at close range. Consequently, Spenard and Turnagain Community Council members regularly advocate for a solution to permanently retain public recreational use of Spenard Beach park.

TSAIA management believes allowing controlled access for public viewing of aircraft operations is an important tool to motivate and inspire the next generation of pilots; however, they are concerned about the interaction of pedestrians with aircraft and vehicles.

1984 – Coastal Trail

Anchorage's original 1979 *Coastal Management Plan* along with subsequent Comprehensive Plan updates identified access to the coast as a prominent long-term community goal. Coastal access was limited and complicated by land ownership and geography at the time. In the early 1980s, the Municipality produced a coastal trail routing study that offered consistent access to the coastline while also connecting neighborhoods, future subdivisions, and trail corridors. Designed and constructed in several phases, the Tony Knowles Coastal Trail now extends from downtown, around and through the airport, to Kincaid Park.

Because much of the area within the trail corridor was already subdivided and/or within TSAIA ownership, portions of the trail, both inside and outside the airport, are accommodated via easements and airport maintenance agreements, not all of which are permanent. The municipal Capital Projects Office managed trail construction and negotiated trail easements with numerous landowners along the route.

Currently, the MOA and TSAIA have a maintenance agreement (*contract ADA-30118*) allowing temporary use of the property for a public trail, recognizing that the property may be needed in the future for aviation purposes. The language of the agreement suggests that TSAIA allowed the trail to be built on its property as a good neighbor to the community, so the public could make use of the property until it was needed for airport development. The term of this particular agreement remains in effect until either the TSAIA or MOA decide to terminate it, which can occur at any time for any reason with 90-days notice.

During *TSAIA Master Plan* updates, the trail corridor has often come up. A future West Airpark and a possible second North-South (N-S) runway are discussed in the current Airport Master Plan west of the existing N-S runway. If implemented, either of these would locate airport uses in closer proximity to the trail and/or require areas of trail relocation/reconstruction. Portions of the trail corridor are shown within a "buffer" area on the current Airport Land Use Plan, meaning that these areas are available in the short term to buffer separate land uses because the Airport has not identified an immediate need for the property. Because of this, public interest in creating a permanent trail and buffer is a recurring topic of discussion.

The Coastal Trail is Anchorage's premier coastal access amenity. Much of its alignment is not on municipal land. Trail advocates and the Municipality have long desired that the trail

and an associated greenbelt be permanently protected through dedicated easements or consistent municipal ownership.

1986 – State Entitlement Lands

The Municipality selected seven airport parcels in a 1986 “*Agreement for the Conveyance of Land of the State of Alaska to the Municipality of Anchorage, and Settlement of Land-Related Issues.*” The state land selection process has been of interest to community members because it involves portions of the Coastal Trail north of the Airport, Sisson Loop trail system at Kincaid Park, DeLong Lake wetlands, Connor’s Lake, and Little Campbell (aka “Beercan” Lake).

However, recognizing that these lands were subject to special airport and deed/title restrictions, the conveyance agreement included numerous conditions that had to be met before transfer could occur. These included such things as FAA concurrence, limitations on uses and activities not compatible with safe and efficient airport operations, provision for airport navigation equipment, granting of aviation and hazard easements, and noise/building height restrictions, among others.

At a meeting between HLB and FAA staff in 2005, these conditions were further defined. FAA indicated that the land transfer proposal must be initiated by the airport director and include a finding that there would **never** be an aviation need for the land (current, planned, or future), as well as a statement describing the post-transfer use of the land with guarantees of compatible use (e.g., no residential uses, no places of public assembly, no public parking lots, public golf courses, or other public gathering facilities).

In addition, the FAA would require:

- Revision of the Airport Layout Plan.
- A zone change to reflect the new use.
- National Environmental Policy Act (NEPA) review.
- Notice in the federal register.
- Fair market value compensation or proportionate land exchange.
- Confirmation by the FAA Regional Counsel and the State Attorney General that there is no reversionary clause in the federal patent.

After pursuing the land selections since 1986, including numerous meetings with state land managers and the FAA, municipal staff feels that the Municipality’s selections will never materialize and that the State is under no obligation to provide alternative selections or compensation to offset the original selections. Because the state land selection process is subordinate to federal jurisdiction and FAA regulations, the selection process is unlikely to result in the MOA obtaining uncompensated rights to the land and has little practical relevance in obtaining airport lands for municipal use. The WADP recommends formally confirming this conclusion.

1995 – Point Woronzof Park

In the early 1990s the Anchorage School District had a pressing need for a new elementary school in the Sand Lake area. Because the Municipality lacked available land there, it identified an opportunity to trade land with the State of Alaska that would give the school district a state-owned parcel in exchange for TSAIA receiving most of the HLB land west of the Airport for air cargo-related expansion.

Because the exchange would have allowed aviation-related development within 50 feet of the Coastal Trail and removed a significant natural open space from municipal ownership, strong public opposition ensued. Friends of the Coastal Trail, a coalition of interested groups, initiated a ballot referendum asking voters to reverse the decision. The initiative

contained provisions offering the State a lesser amount of HLB land in exchange for the school and dedicating the remaining HLB property as parkland.

Ultimately, the Assembly developed and approved a compromise land exchange in 1994 similar to the ballot initiative. Under the exchange, the Anchorage School District received 40 acres of state land at the southwest corner of Caravelle Drive and Raspberry Road, the Airport received 130 acres of HLB land west of its then existing boundary, and 191 acres of HLB land were transferred to the municipal Parks Department. The land transaction received final approval in 1995, which formally dedicated Point Woronzof Park.

1995 – Lions Club Picnic Area

The former Lions Club Picnic Area, consisting of a small picnic area and pullout at the northwest corner of Spenard Lake, was operated by the local Anchorage Lions Club between 1995 and 1998. When contacted by the Airport during an adjacent road construction project in 2005, the Lions Club indicated that they were not interested in renewing the agreement and it was allowed to lapse. The Airport maintains the trail and picnic tables in this area.

1997 – Point Woronzof Coastal Bluff Erosion

Coastal erosion has been occurring along Point Woronzof bluff for many years. In the mid-1990s a section of the coastal trail built a decade or so earlier fell down the bluff due to erosion (see photo following), necessitating trail reconstruction farther inland. Since then, the bluff has continually and steadily eroded. While the bluff edge at Point Woronzof is still some distance away from the trail, that distance grows narrower each year and erosion will, in time, undermine the trail again.

In 2008, the University of Alaska Anchorage (UAA) undertook a study of coastal erosion at Point Woronzof to revisit the conclusion of earlier studies. After comparing aerial photography from 1959 to 1997, the report concluded that erosion had been occurring at an average rate of 2 feet per year and that the top of the bluff had moved southward nearly 105 feet during that time period.



Updated survey work in 2008, showed a rate of erosion of 2 meters per year between 2006 and 2008, higher than the historic average. This suggests an increased rate of erosion, though the sample period is too short to establish a long-term trend and the reasons for the increase are not conclusively documented. Possible causes that have been suggested¹ (though not proven) include recent weather trends that have shortened the annual periods of shore-fast ice (which protect the coastline from erosive wave motion), increased vibration and wind shear from aircraft activity at the end of the N-S Runway, some combination of these and/or some other contributing factor as yet unknown. The study concluded that a revetment (i.e., a protective layer of rock) at the base of the cliff would stabilize the slope and halt the erosion. Currently, the distance between the trail and bluff varies widely depending on location. At its narrowest point, the two are separated by about 10 feet with a posted warning sign.

As erosion continues to move the bluff closer to the coastal trail, a short-term solution could be to continue moving the trail inland at selective

¹ E-mail correspondence from Thomas Ravens (UAA) to Thede Tobish, MOA Planning Department, May 27, 2010.

points as it becomes necessary. However, this does not provide a long-term solution to the problem and, eventually, the reduction of land could threaten not only the trail but also Pt. Woronzof Drive and the northerly end of the N-S runway.

The question of how to resolve this situation is a complicated one. The State owns the land but FAA grant assurances preclude TSAIA from funding recreational improvements. The MOA built the trail and has maintenance responsibility for it, but a revetment is a costly solution during a time of tight budgets. Finally, no federal or state agency currently has responsibility or funding for such a project. If nothing is done and erosion again undermines some portion of the Coastal Trail, the causes of bluff erosion and responsibility for addressing it will become a prominent topic of public discussion.

1998 – Airport Noise Zoning Ordinance

In mid-1997, the municipal Planning Department proposed an Airport Noise Zoning Ordinance (AO 98-10) to aid the Airport in dealing with off-airport noise issues. It proposed to do this by controlling the number and type of residential uses with exposure to high airport noise levels. The ordinance proposed to prohibit the approval of discretionary zoning map amendments in the Airport's LDN 60 noise contour that would allow (a) an increase in residential density, (b) construction of mobile home or camper parks, which cannot be effectively sound insulated, or (c) rezoning to a residential district.

Minutes of the Planning and Zoning Commission indicate that concerns were raised by one property owner with ensuing discussion by the Commission. Ultimately, the ordinance was approved by the Planning and Zoning Commission on a 5-2 vote, citing the following findings:

- It is important for the community to minimize the number of noise complaints as a result of airport growth.
- There is a cost to locating residential development near airports that affects enjoyment of the home and its economic value.
- The proposed ordinance would only impact property owners seeking a rezoning within the 60 DNL noise contour to a residential zone of higher density or to a zoning district that allows mobile home parks or camper parks.
- The proposed ordinance allows for Anchorage International Airport growth and provides for the health and safety of the community with the least amount of regulation.

When the ordinance went to the Anchorage Assembly, it was heard, reconsidered, and postponed indefinitely in early 1998.

2001 – 10 Year TSAIA Wetland Permit

A significant amount of the undeveloped area within the TSAIA boundary is wetlands and new development in those areas requires an individual permit authorization or wetland delineation from the US Army Corps of Engineers (Corps). In an effort to lend predictability and simplicity to future airport development in wetland areas, TSAIA applied for and received a 10-year wetlands permit from the Corps in 2001. This permit authorized up to 5.5 million cubic yards of fill for placement into 218 acres of wetlands in the airport boundary at sites identified for near term development in the then current TSAIA Master Plan.

In return, the permit required compensatory mitigation, which included the State purchasing the development rights of 168 acres of MOA-owned Klatt Bog and transfer to the MOA of 84 acres of adjacent wetlands. TSAIA also agreed to multiple restrictions on development of Postmark and Turnagain Bogs. This mitigation program was based on a credit-debit assessment and balancing adopted by the Corps, the EPA, and the municipal

Planning Department. After issuance, this long-term permit was challenged in state and federal court and ultimately rescinded by the Corps. This did not preclude the Airport from developing its wetlands but merely meant a return to requesting a new wetlands permit for each individual development project.

In a related action, the Anchorage Assembly adopted AO 2000-151(S-2) (See Appendix A) that approved the sale of HLB owned development rights on Klatt Bog. Section 5 in the ordinance included a condition of approval requiring a "scenic easement" in the northeast section of Turnagain Bog:

Section 5. Any future development of the natural portions of the Turnagain Bog identified in green on illustration 2 ("Lands Not Permitted," including "Scenic Easement") shall occur only after a master plan for that area is prepared jointly by ANC and the MOA and approved by the Anchorage Assembly after public hearing. The commitment of the Ted Stevens Anchorage International Airport to this process, while contractually binding on the Airport for this parcel, is not a waiver of its rights or privileges with respect to other parcels under state law.

The ordinance was accompanied by Assembly Memorandum 928-2000(A-2) that identified various key terms and conditions of the sale. Of the 11 terms, #9 and #10 related to Turnagain Bog:

9. *Anchorage International Airport will establish a scenic easement area more than 55 acres in size along its boundary with Turnagain neighborhoods, north and east of Lake Hood Airstrip and on the side of Northern Lights Blvd. (The scenic easement concept paper is attached)*
10. *Any future development of the natural portions of the Turnagain Bog identified in green on illustration 2 ("Lands Not Permitted," including "Scenic Easement") shall occur only after a master plan for that area is prepared jointly by ANC and the MOA and approved by the Anchorage Assembly after public hearing.*

There are differing opinions about how binding this ordinance is on the Airport. Setting these aside, and taking the conditions at face value, the following conclusions are evident:

- A defined boundary and minimum acreage were identified within the airport property for a residential buffer (scenic easement).
- A joint planning effort was to be undertaken by the MOA and the Airport for this area before any development occurred.
- No mandatory timeframe was established for either of these actions.
- TSAIA is presently in compliance with these conditions since they have done no development within the area identified as "Lands not permitted" (i.e., lands not permitted for development under the 10-year wetlands permit).

Although the long-term wetlands permit was voided, the permit process yielded several valuable products:

- TSAIA completed the Klatt Bog wetlands purchase and received mitigation credits that have since been used for ongoing development of airport wetlands. At the time of this Plan, TSAIA still has remaining credits although these will probably be used up in the next few years.
- The 10 year permit contained numerous parameters that defined a TSAIA-Community compromise related to buffers in and around Turnagain and Postmark Bogs as a condition of the permit.
- Assembly Ordinance 2000-151(S-2) identified a 55-acre "scenic easement" that provides a defined boundary for discussions of buffering between TSAIA and Turnagain neighborhoods.

In conclusion, although it took a great deal of time and energy to develop, when the 10-year wetlands permit was voided by the Corps of Engineers, all of the permit conditions

regarding Postmark and Turnagain Bogs ceased to be binding on TSAIA. Despite this, these conditions are instructive as one example of a thoroughly developed compromise that was nearly consummated between TSAIA, the Corps, and the Turnagain community. In addition, the ordinance condition for a scenic easement provides a basis for the Turnagain buffer area shown on the WADP Land Use Map (Exhibit 4-1a) and discussed in Chapters 4 and 5.

2008 – New N-S Runway

The current airport layout plan, approved by the FAA as part of the 2002 Airport Master Plan, shows a new North-South parallel runway as a future airport project. This future runway is shown east of the AWWU Asplund Wastewater Treatment Plant approximately 900' west of and "closely spaced" to the existing runway.

In 2008, TSAIA undertook a Master Plan update that reaffirmed the need for a new runway to meet future cargo volume and growth in airport operations. The runway was deemed necessary to alleviate future airspace congestion and accompanying passenger and cargo delays projected with expanding cargo flights. Two possible N-S runway locations were identified, a "widely spaced" alternative on the west side of the wastewater treatment plant and a "closely spaced" alternative on the east side of the plant.

During the Master Plan Update process, world financial markets experienced unprecedented downturns in economic growth that affected every sector of industry. This situation had the residual effect of introducing uncertainty about the timing and level of future aviation demand projections. This was particularly acute for the airline carriers that base their support for new airport infrastructure on near term cargo and passenger demand.

When the runway alternatives were made public, considerable public, agency, and airline user group opposition emerged in relation to both the purpose and need for a new runway as well as the location and layout of the alternatives presented. To varying degrees, all runway alternatives entailed land use and environmental conflicts, particularly at the area's north end where numerous facilities converge. N-S runway alternatives could, to varying degrees, require realignment or reconstruction of the coastal trail, the overlook parking area, Point Woronzof Park, the existing roadway alignment, several utilities, existing AWWU facility operations, and future plans for expansion of the AWWU treatment campus. Environmental concerns included constriction of wildlife movement, loss of natural open space, habitat and coastal tidelands, increased noise, increased air emissions and impacts to the coastal trail and the AWWU facility. Due to this accumulation of outstanding issues combined with significant opposition and airline user group concerns about incurring expense at a time of volatile and unpredictable economic conditions, TSAIA chose to halt the Master Planning effort but plans to undertake a new Master Plan in the near future.

However, it is anticipated that the issue of an additional runway, accompanied by difficult public dialogues and hard policy choices, will reemerge as cargo operations rebound and carrier demand increases the need for added runway capacity to reduce cargo and passenger delays. Notably, cargo volumes have rebounded since 2008 and are approaching pre-recession levels in mid-2010.

Kulis Air National Guard and Federal Express Utility Improvements

Two events reveal the importance of close cooperation between MOA and TSAIA in planning airport infrastructure and the benefit of AWWU design review/comment on airport sewer and water trunk lines.

To serve the Kulis Air National Guard (ANG) Base, a sewer line was extended from the AWWU trunk sewer located in Air Guard Road. Although the sewer line was appropriately sized to accommodate the base, it didn't consider possible extension beyond Kulis to serve the western portions of the South Airpark. This has raised the question of whether proper

planning should have considered upsizing the line, extending a trunk line in Raspberry Road or some other method to address South Airpark development more cost effectively.

When the Federal Express Hangar in the North Airpark was constructed, the design located taxiway and aircraft parking areas over trunk sewer and water lines. The enhanced reinforcement needed to accommodate aircraft weight, makes access more difficult and maintenance and repair more costly. Although there has been recent discussions between TSAIA and AWWU about allowing AWWU to own and maintain trunk facilities within the airport boundary, excessive cost to maintain some trunk lines poses a challenge.

2010 – Kulis Reuse Plan

In March of 2009, TSAIA was officially notified that the Air National Guard, which had been based at Kulis ANG Base (Kulis) along Raspberry in the southern portion of TSAIA, would be terminating its lease with the State and relocating to Elmendorf Air Force Base. The withdrawal of Guard from airport property is scheduled to take effect in 2011, resulting in return of the land and existing facilities to TSAIA. In preparation for this eventuality, TSAIA is formulating redevelopment options for reuse of the base to address other aviation needs. These approaches range from those that would retain and/or redevelop existing facilities in varying configurations for individual lease to others that would lease the entire facility to a single user. TSAIA has held numerous public meetings, primarily attended by residents along Air Guard Road that abuts the eastern side of Kulis. Public concern has focused on redevelopment alternatives that might result in changes to existing topographic and vegetative barriers due to major re-grading. In general, the alternatives suggest that any immediate development would occur in the northern half of the base where aviation uses are presently focused, while the southern half would be retained for office/campus uses over the next 5-20 years with the potential to convert to aeronautical use (with substantial re-grading of the site) beyond that timeframe. The Kulis Reuse process is still ongoing as of the date of this plan.

4.3.3 Airport Regulations

The Airport presents a unique and complex regulatory environment. Unlike many other airports, TSAIA is owned by the State of Alaska rather than the city in which it operates. This means that, even though the Airport is the predominant land use in West Anchorage, the MOA has no direct control over the developmental or operational decisions made there and to the State disputes the authority of municipal zoning on airport property. Second, although the State owns and operates the Airport, it too is subject to federal oversight. Consequently, there are two sets of overlapping governmental structures that come into play on airport land. To further complicate matters, most residents have no point of reference or direct experience with the technical, financial or regulatory context that governs airport operations. Consequently, it is not surprising that local citizens might interpret this regulatory complexity as a deliberate lack of responsiveness or cooperation and feel frustrated over their inability to exert greater influence over the airport decision-making process.

To better understand airport land use policy, it is necessary to understand some basic facts about the federal and state governance structure and key federal regulations that apply to airports.

FAA Mission

The Federal Aviation Administration (FAA), a division of the U.S. Department of Transportation (USDOT), is tasked with overseeing the national system of federally obligated airports throughout the country to ensure that they are being run with the national aviation interest in mind. Key management decisions at TSAIA are subject to compliance with FAA grant assurances. In accordance with their mission, the FAA generally looks to make sure that TSAIA is being run to:

- Promote the federal aviation system
- Protect federal aviation investment
- Result in efficient, self sustaining airport management
- Ensure safety, nondiscrimination, and free commerce in airport operations
- Discourage non-aviation use of airport land
- Ensure that adjacent land uses do not preclude safe and efficient airport operations.

Airport Decision-making

There is no single individual who makes decisions at the Airport. Rather, they are influenced by many different agencies with varying levels of responsibility.

- State DOT&PF owns the airport land and non-private facilities, sets budgets and management policy² and must authorize any land or facility disposals.
- Airport Management sets budgets and management policy and handles short and long range planning and daily operations activities. Though the airport manager and staff are the “face” of the Airport most visible to residents, the Airport is required to act in accordance with state regulations (17 AAC 42.005 – 17 AAC 42.990) and FAA grant assurances.
- U.S. DOT/National FAA establishes aviation policies/standards³ and allocates airport funding.
- Local FAA is responsible for aviation oversight and enforcement of airport compliance with FAA grant assurances and regulations.
- Air Carriers are the primary users for commercial aviation passenger and cargo infrastructure. They determine the aircraft fleet mix, select the destinations served, pay a portion of airport development costs through user fees in accordance with FAA standards and regulations and it is their pilots and crews who implement flight operations and procedures. The willingness to pay for airport improvements is a factor in proceeding with certain types of airport improvements. Airline decisions are highly responsive to customer demand and pricing in a very competitive industry.
- MOA is the local land use agency with responsibility for off-airport land use controls. The MOA also has applied zoning (PLI, PLI-p, I-1, T) to airport land but municipal land use authority within the airport boundary is disputed by the State. The relationship between municipal zoning and airport ownership was an ongoing consideration under the Title 21 Rewrite.

In summary, airport land use and operational decisions are governed and influenced by multiple government agencies and private entities. Those with direct authority and usage share the primary mission of ensuring that airport development occurs in time to meet future aviation demand.

² Alaska Administrative Code, Title 17, Chapter 42 relates to the governance of the TSAIA. 17 AAC 42.900.b states the primary directive for airport management is to make decisions that serve the “best interest of the State” to achieve “a strong airport and aviation environment for the benefit of the traveling and shipping public”.

³ The USDOT Mission Statement is to “Serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future.” The mission statement of the FAA is to “provide the safest, most efficient aerospace system in the world.”

Federal Grant Assurances

When airports accept land or funding from the federal government, they must agree to certain obligations (or assurances) in return. This is intended to make sure that federal resources are used for their intended purpose of enhancing the national aviation system. TSAIA has accepted both land and funding and, therefore, is subject to FAA grant assurances. Further, grant assurances are applied to the entire airport property, not just parts of it. This could be likened to the obligation an individual assumes when taking a bank loan for a mortgage. The bank uses the land and house as collateral for the loan. As long as the loan is in place, the homeowner is not free to do whatever they want with the property but must receive the bank's approval. For example, giving away part of the property would not be acceptable to the bank because it reduces the value of the collateral that ensures repayment of the loan.

Airport grant assurances (see Appendix A) must be met and balanced. Some of the most relevant include an obligation a) to operate the Airport safely and efficiently, b) to seek financial self sufficiency, c) to restrict the use of land near the Airport to airport-compatible uses, d) to avoid economic discrimination that would hinder free commerce, e) to seek reasonable consistency with state-authorized plans for development of the area surrounding the Airport and f) to consider surrounding community interests. Some airport grant assurances remain in effect for the useful life of the facility (up to 20 years) extending from the time an airport accepts federal funds, which occurs routinely. Other grant assurances (such as those involving real property) remain in effect for the life of the Airport.

In a practical sense, these assurances influence common day-to-day decisions at TSAIA, such as (a) directing aircraft over residential areas when weather and safety conditions require; (b) insisting on fair compensation for airport land disposals and that lands proposed for disposal are not needed for future airport use; (c) objecting to residential development within the 65 DNL airport noise contour; and (d) an inability to direct noisier aircraft or airlines with primarily "touch and go" refueling activities to other airports.

In summary, federal monies and land come with strings designed to protect the integrity of the national air transportation system. The FAA requires that airport land use decisions contribute positively to aviation growth, safety, economic viability and free commerce.

Interim Uses

The Airport can allow short-term, interim public uses (such as recreation) on airport land provided the area is not needed for immediate airport development and the public use is compatible with airport operations. However, it is important to note that this does not constitute a permanent public right, but instead, can only continue temporarily until the Airport needs the land. FAA recommends against allowing interim recreational use of airport property because it raises public expectations and increases the potential for community conflict.

TSAIA has allowed temporary public use of recreational areas through the issuance of short-term maintenance agreements to the MOA. Many well known and highly used recreational facilities such as Little Campbell "Beercan" Lake, Connor's Lake, and the Coastal Trail, have been authorized on this basis in the past. However, most maintenance agreements have expired and public use continues only on a month to month holdover basis.

TSAIA has also designated "buffer" areas on its On-Airport Land Use Plan (ALUP), defined as "Airport lands for which no specific immediate need has been identified and which can be used as a buffer from adjacent off-airport land uses" (page 5-13, TSAIA 2002 Master Plan Update). These are generally located adjacent to the Coastal Trail, Turnagain neighborhoods and the southeast portion of the Airport. TSAIA expects that these areas will not be immediately needed for airport development as confirmed by the Airport's

Recommended Development Phasing Plan (Figure 5-2, TSAIA 2002 *Master Plan Update*), which identifies no proposed construction in these areas within the plan horizon. Again, the buffer designation is NOT permanent and each buffer area is reevaluated for aviation use during periodic updates of the ALUP. It must also be recognized that, despite its best planning efforts, the Airport is obligated to consider all applications to lease airport land.⁴ If the use is viable and no alternative location is available, the lease must be approved even if encroaches within an identified buffer area.

Interim use is the easiest way to allow public recreation on airport property but it is also the most uncertain. The supply of airport land is a finite commodity. As airport growth diminishes that finite supply, demand for the remaining pieces will increase. In the future, these parcels may be so critical that the Airport will find they must be developed to meet aviation demand even over strong public opposition. This risk is inherent in accepting continued reliance on temporary public recreational use of airport land.

In summary, recreational use of airport land is allowed at the Airport's discretion on a short-term basis but will not remain that way whenever the land is needed for airport development.

Airport Master Plan

Airport Master Plans (AMP) have one primary purpose: to identify and plan for airport growth needed to meet future aviation demand (air cargo and passenger volumes, arrivals/departures and runway capacities). AMPs have several FAA-mandated components. They must be based on current aviation demand projections for the Airport. They also must contain an Airport Layout Plan (ALP) drawing set, which includes among other drawings, an Airport Land Use Drawing showing land uses proposed on airport property during the plan horizon, and an Airport Layout Drawing showing the proposed improvements needed to meet aviation demand during the 20-year plan horizon. A Recommended Airport Development Phasing Plan, breaking the proposed improvements down into short, medium and long-term periods for construction, is also included in the AMP. AMPs generally focus toward a 20-year planning horizon but are subject to update every 5-10 years. The FAA reviews the master plan and formally approves the demand projections and the ALP.

The *TSAIA Master Plan* was last updated in 2002 and is scheduled for revision in approximately 2012. A master plan update was started in early 2006 but was halted in 2008 when disruptions in the global economy cast uncertainty on the timing of aviation demand projections. The 2002 TSAIA Airport Land Use Plan (with minor revisions in 2006) is attached in Appendix A.

The *General Aviation Master Plan for Lake Hood and Anchorage International Airport (ANC) (GA Master Plan)* was last updated in 2006 to cover general aviation (GA) operations and development at Lake Hood Seaplane Base (LHD) and TSAIA. The GA Master Plan represented the first time TSAIA focused only on GA and whether their operations are accommodated adequately in the future. The 2006 Lake Hood GA Airport Land Use Plan is attached in Appendix A.

Consistent with FAA grant assurances, TSAIA applies an interactive public process when updating the AMP. Typically, the Airport has convened both a technical and community advisory group to interact with and provide feedback to the Airport's project consultants. National Environmental Policy Act (NEPA) processes are also followed, including mandatory public notice requirements for review and comment on associated environmental documentation. Although an airport is required to solicit and consider public input, the Master Plan is mandated, first and foremost, to accommodate airport development needs.

⁴ State Title 17, Chapter 42.215 and FAA Grant Assurances prohibiting economic discrimination.

In summary, because they are oriented towards accommodating growth, airport master plans can appear to be unresponsive to broader community concerns regarding airport policy, operations, and/or whether continued airport growth should occur at all.

FAA Part 150 Noise Compatibility Program

Congress enacted the Aviation Safety and Noise Abatement Act of 1979 to address the issue of airport noise. The act required the FAA to adopt regulations establishing a single system of measuring aircraft noise and determining noise exposure in the vicinity of airports. The resulting Federal Aviation Regulation, Part 150 (Airport Noise Compatibility Planning), is the primary federal regulation guiding and controlling planning for aviation noise compatibility on and around airports. FAA believes that the Part 150 process represents a balanced approach for mitigating the noise impacts of airports upon their neighbors while protecting or increasing both airport access and capacity as well as maintaining the efficiency of the national aviation system. The regulations contained in Part 150 are voluntary and airport operators are not required to participate. However, an approved Part 150 Noise Compatibility Plan is the primary vehicle for gaining approval of applications for federal grants for noise abatement projects, such as TSAIA's ongoing residential sound insulation program.

Part 150 produces two primary tools:

- Noise Exposure Maps – Noise Exposure Maps are designed to clearly display an airport's present and future noise patterns and land uses within those noise patterns. The maps display the noise contours for the DNL 65, 70, and 75 noise levels based on computer modeling of annual average aircraft noise levels. The maps may include two versions of a contour: the first is the precise model-generated contour line, while the second allows for adjustment to more equitably consider land use configuration in distributing FAA noise mitigation funds.
- Noise Compatibility Program – The Noise Compatibility Program (NCP) identifies measures the airport and surrounding community can take to minimize incompatible land uses in areas exposed to high airport noise. It seeks to achieve maximum noise compatibility between an airport and its neighbors while taking into account the requirements of the national aviation system.

Part 150 Noise Studies are typically updated every 5-10 years resulting in periodic changes to the airport noise contours. TSAIA expects to undertake an update of its Part 150 noise study in 2011 taking into consideration improvements in aircraft noise control technologies, updated flight information and other factors that have changed since 1999.

4.3.4 Compatibility Toolkit

Off Airport Compatibility Tools

Various techniques are commonly used throughout the country to address airport compatibility issues. Since the ability to control airport development is restricted by FAA grant assurances, most methods focus instead on achieving compatibility in areas surrounding airports. These typically involve some type of development regulation of properties although disclosure methods and construction techniques also play a role.

- Land Use Compatibility Plans

The most effective way to address airport conflicts is to keep them from occurring in the first place. This is commonly done through airport land use compatibility plans where the various airport noise contours and flight zones surrounding an airport are mapped and correlated with acceptable (compatible) and unacceptable (incompatible) uses. For example, residential uses in high airport noise areas are considered incompatible, whereas industrial uses in high airport noise areas are

considered compatible. NCPs are then used to evaluate individual development proposals that are approved, disapproved, or fitted with conditions to make them more acceptable within an airport environment. This technique is most effective at locations where large amounts of vacant land remain around an airport where there is still an opportunity to influence and guide new development.

- Rezoning of Incompatible Uses

In situations where pockets of vacant land remain around an airport, a community could consider initiating zoning amendments to compatible uses. Most obvious would be vacant parcels with residential zoning that lie within the airport's 60 or 65 DNL noise contour. Rezoning these properties from residential to some other use keeps new homes from being built in areas that are most regularly exposed to airport noise. This requires evaluation on a case-by-case basis since a property's surrounding land use and zoning would determine what alternate zones would be appropriate. Rezoning also has significant influence on the value of a given property, either positively or negatively. A decision to rezone is likely to elicit strong support or opposition from the landowner, depending on the particular zone selected.

- Purchase of Incompatible Use Sites

Another approach is to acquire vacant properties to prevent new construction and/or purchase developed properties to demolish incompatible uses within the airport's 65 DNL noise contour. This option would require significant funding by the MOA or TSAIA. The Airport has purchased about seven acres of land with FAA noise compatibility funds for this purpose. A by-product of airport acquisition is the incremental expansion of the airport boundary (with associated grant assurance restrictions) as these properties are assimilated into the Airport's land holdings.

- Land Exchanges

Exchange lands between the Airport and the MOA to better address MOA recreational desires, residential separation concerns, and Airport Development needs. Such trades would be subject to FAA grant assurances and approval by FAA, the State of Alaska and the Anchorage Assembly. Parcels involving MOA-dedicated parkland would be subject to public vote regulations.

- Airport Influence Overlays

Establish a "noise overlay" zoning district based on the Airport's 60 or 65 DNL noise contours. Apply special requirements and restrictions to lands within this zone to minimize or mitigate additional development of non-compatible land uses. This might include restrictions on rezonings for higher densities, mobile homes and camper parks. It might also require enhanced sound attenuation measures for new construction and additions.

- Airport Disclosure through Plat Notes

Notes on subdivision plats within the airport Part 150 noise contours to provide notification of noise levels and requiring that enhanced sound attenuation measures are incorporated during residential construction.

- Airport Disclosure through Recorded Notification

Require that a prominent "Airport Environs" notification be included in all residential real estate transactions to advise new homebuyers within a predetermined radius of the airport's presence.

- *Air Aviation Easement*

Air aviation easements are a legal contract between an airport and a land owner acknowledging awareness and acceptance of aircraft overflights and the effects of aircraft and airport operations. They are currently used by TSAIA as part of their residential sound insulation program.

- *Building Regulations*

Incorporate provisions in the building code to require new homes constructed within the airport high noise contours to incorporate more stringent sound attenuation measures.

- *Berms/Open Space Buffers*

Use barriers, berms, or open spaces to reduce visual impacts of airport facilities on adjacent neighborhoods and recreational facilities. This should be considered, especially where the MOA owns recreational or vacant land adjacent to the airport boundary. Berms and barriers are relatively ineffective for noise prevention (both aircraft and ground related) due to the behavior and characteristics of sound waves. They can have some effect in reducing the effects of airport ground noise when placed directly adjacent to a noise source or receptor, although the level of benefit is dependent on location and site specifics.

- *Residential Sound Insulation Program*

TSAIA sound insulation program available to existing residences constructed before 1998 within the Airport's 65 DNL noise contours in return for aviation easements. FAA may allow expanded program if the Municipality institutes enhanced building code requirements for new construction in 60 DNL contour. The program is based on FAA's national program and provides funding for home improvements that reduce interior noise levels with windows and doors shut. The program does not address airport noise in outdoor areas, such as residential yards or parks.

- *Planning and Zoning Commission Review Criteria*

Adopt noise compatibility criteria and guidelines for evaluating proposed development proposals within areas subject to high levels of airport noise.

- *MOA Public Land Development Policy*

Adoption of a policy requiring development of facilities on public lands subject to high levels of airport noise to meet noise compatibility criteria and guidelines.

- *Review of Communications Protocols*

Evaluate the effectiveness and expectations of past and present communication mechanisms and advisory groups, so that future endeavors provide optimal means to share information, improve stakeholder relations and better incorporate community input in the decision making process.

On Airport Compatibility Tools

Airports in general and TSAIA in particular have become acutely aware of the effects their operations have on surrounding communities and the intense public reactions they can evoke. Over the years, as TSAIA and its leaseholders have continued to develop airport land and expand operations to meet demand, the effects of growth, such as noise and odors, have also increased. Recognizing this, TSAIA takes its community relations role seriously and has developed and continues to refine various programs to address airport impacts to some degree. (See Table 4.3-2.) In considering these, it must be recognized that airport operations involve large, semi-industrial activities that are inherently incompatible with residential uses and that aircraft carry some of these effects far beyond the airport

boundary. Consequently, what is reasonably within an airport's control, when balanced against FAA regulatory, safety and other obligations, can be expected to minimize impacts but not eliminate them. A listing of the possible compatibility techniques include:

- *Airport Zoning*

This involves adopting a municipal "airport zoning district" would be applied to airport property and include setbacks and other development standards. TSAIA and the MOA initiated discussions of this concept during the Title 21 rewrite; however, the recently provisionally adopted Title 21 did not address the issue but reserved it for future consideration. Continued discussion of airport district standards will need to consider FAA and ADOT&PF design standards and regulations, as well as determining whether the zone should apply to all airport property or only to areas "outside the security fence" that exclude the airport operations area (e.g., aircraft movement areas, parking aprons, etc.).

- *Design Recommendation Handbook*

Design suggestions to encourage mitigation through building and site design of airport facilities. Techniques might include: light shielding, building placement, vegetative buffers, berms/fencing, use restrictions where adjacent to neighborhoods, and MOA ownership of recreational areas. Handbook would be made available to potential lessees for use in developing site plans prior to airport approval.

- *Berms/Open Space Buffers*

Barriers, berms, or open spaces can be used to reduce visual impacts of airport facilities on adjacent neighborhoods and recreational facilities. Berms and open space buffers are generally ineffective for noise prevention due to the behavior and characteristics of sound waves. They can have some limited effect in reducing the effects of airport ground noise when placed directly adjacent to a noise source or receptor, although the level of benefit is dependent on location and site specifics.

- *Leasehold Configuration*

Creative use of leasehold boundary configurations can create a setback from the airport boundary. If a leasehold is configured to leave a "gap" too narrow to be effectively developed adjacent to the airport boundary, that gap would function as a buffer. However, while this would provide buffering for a period of time, it cannot be guaranteed as permanent since a lessee could petition to expand their business and TSAIA would be obligated by state and FAA regulations to consider it.

- *Leasehold Restrictions*

The airport operator can place some level of conditions on the authorized uses of a leasehold, such as limiting the types of operations that could be performed on selected parcels near residences. This should seek to maintain less intensive operations along the airport boundary where adjacent residences occur and allow more intensive ones as distance increases.

- *Land Exchanges*

Exchange lands between the Airport and the MOA to better address municipal recreational desires, residential separation concerns, and airport development needs. Such trades would be subject to FAA grant assurances and approvals by the FAA, the State of Alaska, and the Anchorage Assembly. Parcels involving MOA dedicated parkland would be subject to public vote regulations.

- Surplus Land Sale

This would involve selling airport land determined not to be viable for airport use. Property identified for aeronautical uses would likely not be sold. Surplus determination is subject to FAA grant assurances and requires FAA approval.

- Conservation Easement

Conservation easements are used to place permanent open space restrictions on a property, frequently a wetlands, in exchange for development credits. This tool requires an entity formally designated by USACE as a “land bank” to accept and administer the credits and hold the easement. A conservation easement has the net effect of reducing the amount of airport land available for development, thus requiring equal value in wetlands credits. The use of conservation easements on airport property is considered viable only if (a) wetlands credits are not available from off-airport sources or (b) preservation of airport wetlands is required by the U.S. Army Corps of Engineers. As a point of information, the preservation of wetlands on airport land contradicts certain safety practices since they attract waterfowl, increasing the potential for bird strikes.

- Building Placement

Placement of large structures, such as hangars or multi-story administrative buildings, between aircraft activity areas and residences can provide some measure of noise reduction. The buildings must be situated near to the aircraft in order to effectively intercept and deflect the sound waves.

- General Aviation Tie Down Orientation

The highest GA aircraft ground noise is generated directly in front of the aircraft. Situating tie downs so that the aircraft is facing away from adjacent residences serves to reduce aircraft noise impacts on residences during engine run-up procedures.

- Interim Use Agreement

This tool allows short-term, temporary use of airport property by the MOA for recreational or other purposes through a mutual agreement, provided the property is not currently needed for airport development. It may be for a 1-5 year timeframe with renewal options; would require payment of a fee or a requirement to cover maintenance costs, and would contain clauses where facilities revert to airport ownership at the termination of the agreement or when otherwise needed for airport development.

- Non-Aeronautical Use Designation

Designation by the airport of airport properties which are not directly aviation related. In order to apply the designation, the airport must prove that no aviation use can occur, typically due to some intervening natural or manmade barrier separating it from runway or other essential airport facilities. Designation involves a formal FAA approval process.

- Buffer Designation on ALUP

Areas expected to remain undeveloped during life of the Airport Master Plan, usually about 5 years. The designation may be reapplied if no airport use arises; however, it is not a permanent designation. The 2002 TSAIA Airport Master Plan defined a buffer as, “Airport lands for which no specific immediate need has been identified and which can be used as a buffer from adjacent off-airport land uses.”

- Conceptual Plan

Preparation of a concept design plan illustrating key aspects of a project can be used to help visualize the project and promote agreement on key design aspects before investing in costly engineering or architectural design drawings. This technique is suggested as a way to illustrate the design of visual buffers along the airport perimeter, such as berm/buffer design along the north side of Raspberry Road.

- Ground Noise Mitigation Measures

Implement measures identified in the Airport's 2002 Ground Noise Study where appropriate.

Table 4.3-1 summarizes and characterizes on-airport land use mechanisms and identifies their potential application to TSAIA.

**Table 4.3-1
Summary of On-Airport Land Use Mechanisms**

Mechanism	Term of Effectiveness	Equal Benefit Required ?	Appraisal Required? (Fair Market Value)	Requires FAA Approval	Where Useful?	Explanation/Comment
Airport Zoning	Long	No	No	Yes	Areas outside the security fence, at a minimum	Designating airport lands with an "airport zoning district" recognized by the MOA. Key considerations are whether zoning should apply only to non-airport areas outside the security fence ² and the consideration of FAA and ADOT&PF design standards and regulations.
Design Recommendation Handbook	Medium	No	No	Yes	South & North Airpark, Kulis, Lake Hood, and GA tie downs	A planning tool to provide advance design guidance to architects and developers. Describes mitigation measures that should be considered during site planning and building design. (e.g., building placement to screen aircraft noise from surrounding residences).
Berms/Open Space Buffers	Long	Yes	No	Yes	Raspberry Road, Turnagain Neighborhoods, Air Guard Road and Coastal Trail	Use of berms and open spaces to reduce visual impacts of airport facilities on adjacent neighborhoods. Berms and barriers are generally ineffective for noise prevention due to the behavior and characteristics of sound waves.
Leasehold Configuration	Medium	Yes	No	No	Adjacent to residential areas, north edge of Raspberry Road	Consider creating a separation from adjacent residential areas and from Raspberry Road when approving the configuration of leasehold boundaries. This technique would be effective in the short-medium term but should be viewed as permanent since a lessee can request an expansion of their facility reducing the separation width.
Leasehold Restrictions	Medium	No	No	Possibly	Internal leasehold lots in South Airpark, North Airpark, Kulis	Place appropriate conditions on the authorized uses of a leasehold, such as limiting heavy cargo operations or engine maintenance/run-ups on selected parcels near residences. A primary intent is to maintain less intensive operations along the airport boundary where adjacent residences occur and allow more intensive operations as distance increases.
Land Exchange	Permanent	Yes	Yes	Yes	ID specific parcels	Exchanging less unusable land for more usable land. Land exchange package requires FAA approval. Dependent on airport receiving lands with aviation value.

**Table 4.3-1
Summary of On-Airport Land Use Mechanisms**

Mechanism	Term of Effectiveness	Equal Benefit Required ?	Appraisal Required? (Fair Market Value)	Requires FAA Approval	Where Useful?	Explanation/Comment
Surplus Land Sale	Permanent	Yes	Yes	Yes	Parcels South of Raspberry Road	Selling land determined not to be usable. Property identified for aeronautical uses would likely not be sold. Surplus determination requires FAA approval.
Conservation Easement	Permanent	Yes	Yes	Yes	Wetlands, Turnagain Buffer	Placing permanent open space restrictions on a property, frequently a wetlands, in exchange for wetlands development credits. Requires an entity formally designated by the U.S. Army Corps of Engineers (USACE) as a Land Bank to accept and administer the credits. Conditions can be placed on the approval of a wetlands permit by USACE.
Building Placement	Long	No	No	No	South Airpark, Kulis, North Airpark	Placement of large structures, such as hangars or multi-story administrative buildings, between aircraft activity areas and residences can provide some measure of visual screening and noise reduction. The buildings must be situated near to the aircraft or other noise generating operation in order to effectively intercept and deflect the sound waves. Building placement must also take FAA regulations into consideration since buildings on airport property require an air space study and must be shown on the Airport Layout Plan.
GA Tie-down Orientation	Long	No	No	No	Lake Hood	The highest GA aircraft ground noise is generated directly in front of the aircraft. Situating tie downs such that the aircraft is facing away from adjacent residences serves to reduce aircraft noise.
Interim Use Agreement	1-5 years	No	No	Yes	Recreational use areas	Temporary use by mutual agreement. Sometimes renewable. Sometimes fee charged. Usually 1-5 year timeframe.
"Non-aeronautical use" designation	Varied	No	No	Yes	Parcels S of Raspberry	Designation of airport properties for uses which are not directly aviation related. Must demonstrate that there is no aeronautical need for a significant period. Designation requires formal FAA process but can be reversed in the future if conditions change and aeronautical use of the property becomes feasible. Also, by removing the aeronautical restriction and allowing a

**Table 4.3-1
Summary of On-Airport Land Use Mechanisms**

Mechanism	Term of Effectiveness	Equal Benefit Required ?	Appraisal Required? (Fair Market Value)	Requires FAA Approval	Where Useful?	Explanation/Comment
						broader range of uses, other types of commercial development may be accelerated.
"Buffer" designation on Airport Land Use Plan ¹	1-5 years	No	No	Yes	Coastal Trail, Turnagain Bog Wetlands and Associated Uplands, Areas Abutting Residential, Public Recreation Areas, N. edge of Raspberry Road	Areas expected to remain undeveloped during life of Airport Master Plan if not needed for airport purposes, usually about 5 years. Can be renewed with airport concurrence. Not a permanent designation.
Conceptual Plan	Medium	No	No	No	Raspberry Road Buffer	Preliminary design concept to illustrate possible site specific solutions and important design concepts for an area. (e.g., buffer design concept)
Ground Noise Mitigation Measures	Medium	No	No	No	Airport-wide	Measures identified in the 2002 Airport Ground Noise Study.

1. Buffer definition per 2002 Airport Master Plan as, "Airport lands for which no specific immediate need has been identified and which can be used as a buffer from adjacent off-airport land uses."
2. The security fence encloses the airport operations area containing aircraft runways, taxiways, parking aprons, and similar features. The fence location is shown on Figure 2-2.

4.3.5 Discussion and Recommendations

The recommendations that follow are intended to set forth a general framework leading to a reasonable and practical solution to airport development and use conflict issues. Ultimately, any successful resolution will require actions by both the MOA and the TSAIA to influence, manage, and control development within their respective jurisdictions. It will also require communication and understanding on the part of all airport stakeholders. For example, surrounding neighbors may not understand the requirements FAA places on the airport and not be aware of actions the airport has already undertaken to mitigate off-site impacts. Similarly, the airport may not realize how its communication style can create an atmosphere of conflict, or that the public sometimes has difficulty recognizing and appreciating voluntary actions that the airport has taken to address its concerns.

Objective #1

Support the continued economic vitality of TSAIA and its current and future role as a premier state, national, and international aviation hub.

The TSAIA is vital to the transportation system and economies of the MOA, the State of Alaska, and many rural Alaskan communities. As such, the WADP recommends that the MOA adopt policies to support and protect TSAIA's continued operation and growth to remain competitive.

Provide necessary off-site infrastructure

The airport does not operate in a vacuum but requires services from the Municipality in the form of adequate domestic water supply, wastewater collection, surface transportation, and a housing supply for employees. Incorporating adequate existing and future capacity in these systems is important for maintaining the airport and accommodating its future growth.

Mediate and resolve community concerns

Like most businesses, TSAIA values flexible development options and predictable permitting processes. Continual community controversy introduces an element of volatility that makes both unpredictable. Since the MOA and TSAIA share a common interest in seeing that local residents remain as supportive as possible, there should be a shared and cooperative commitment to manage neighborhood issues. This should focus on cooperative efforts to (a) work toward addressing longstanding concerns held by existing residents, (b) make sure that new residents are fully aware of airport activities before they purchase a home, and (c) maintain effective avenues for two-way communication between the airport and local residents. These techniques will reduce the intensity of public controversy over time.

Exchange lands that would benefit the airport and the community

Achieving a comprehensive transfer of lands between the MOA and TSAIA (one that provides equivalent mutual benefit) would allow all lands to be considered together in the balance rather than addressing questions of individual parcel usage in isolation. This would lay questions of boundary and usage to rest once and for all because both the MOA and TSAIA would have carefully considered all their options and negotiated their optimum land solution. Section 4.3.6 discusses this concept in greater detail.

Implement overlay zones to eliminate the creation of incompatible uses.

As with all airports, TSAIA is obligated to influence land uses surrounding the airport and seek to keep those from occurring that are incompatible with airport operation and development. Adoption of an airport zoning overlay by the MOA would support this goal while also serving the community by minimizing the creation of new conflicts.

Objective #2

Promote responsible development and operations inside the airport that minimize the negative effects of airport operations on adjacent neighborhoods, trail, and parks.

Continue to encourage community sensitive aviation practices

Over the years, TSAIA has enacted numerous operational guidelines and programs specifically intended to respond to community issues. The WADP recognizes that implementation of these programs makes a significant contribution to minimizing off-site airport impacts and supports their continued application and improvement over time.

Representative programs include:

Improvement	Benefit/Rationale
Preferential Runway Use System	Directs pilots to takeoff and land over Cook Inlet whenever possible.
Noise Monitoring Program	Tracks airport noise levels at key locations throughout the MOA.
Residential Sound Insulation Program	Voluntary program that provides funding through FAA grant for improved sound insulation on pre-1998 homes exposed to airport noise within the 65DNL noise contour.
Ground Noise Study	Identifies sources of airport ground noise and recommends mitigation measures.
De-Icing Best Management Practices/Pilot Programs	Addresses control of chemicals that might otherwise be released in surface water discharges.
Fly Friendly Handout	A program that provides pilots with operational tips and techniques to reduce impacts of GA traffic on airport neighbors.
Waterbody Recovery Plan	Plan designed to improve water quality in Lake Hood and Lake Spenard

Reduce conflicts through proactive planning and design along the airport perimeter.

In many locations, residential development has been allowed to encroach up to the airport boundary. Applying 20-20 hindsight, this ought not to have occurred. However, given today's reality, these have been and will continue to be "hot spots" for conflict as the airport continues to build out its property to meet aviation needs and the separation between airport and neighborhood uses decrease. In addition, the popularity and high visibility of the Coastal Trail, its location paralleling (and sometimes entering) the airport boundary and the potential for conflict with airport expansion projects merit special consideration as well.

Focal areas include:

- Neighborhoods near South Airpark (Sand Lake south of Raspberry Road).
- Neighborhoods near the Kulis ANG Base (Sand Lake along Air Guard Road).
- Neighborhoods near Lake Hood and the GA airstrip (Turnagain).
- Coastal Trail from Kincaid Park to Earthquake Park.

The location of these key airport interface areas are shown in Exhibit 4-5.

Where residential uses are in place there is little likelihood of redesigning or removing them without purchasing the homes entirely and neighborhood residents have evidenced a long history of opposition to airport development. The Coastal Trail, as well, has a strong constituency of loyal users that care about its continued usage. Assuming that residential homes and the Coastal Trail will remain, attempts to improve compatibility must focus inside the airport boundary.

Recognizing that a district plan is only advisory to the TSAIA and that the airport is under strict scrutiny from FAA as regards to its commitments and development plans, the WADP recommends that TSAIA consider ways to predictably and routinely ensure that effective mitigation techniques are identified and communicated to potential lessees early in the design process. Formalizing this would increase community confidence that the airport takes its role as a good neighbor seriously and is committed to actively influencing design to address community concerns.

This could take various forms. It could be accomplished via an airport zoning district that would define development standards such as allowable uses on airport property and minimum setbacks along the airport boundary.

It could also consist of a handbook of design and development recommendations that would be distributed with other lease materials. The handbook could identify the location of nearby sensitive residential uses and suggesting recommended techniques to consider in developing site designs that would minimize negative impacts.

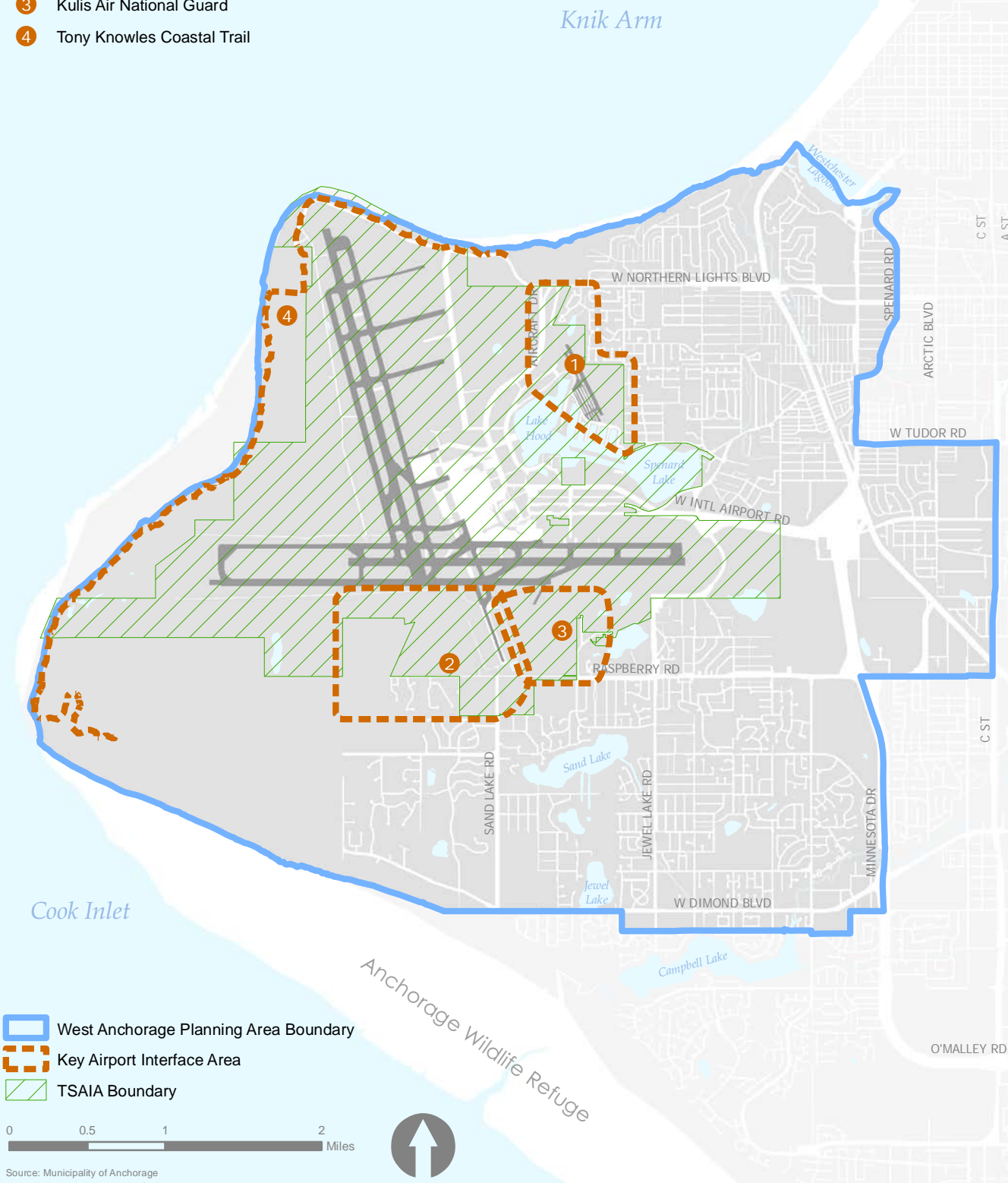
Following is a brief description of each key interface area and a list of associated focal design issues. Accompanying illustrations are provided in Exhibits 4-6a/b, 4-7a/b, 4-8a/b, and 4-9a/b that give a graphic representation of how possible design solutions might be applied in each area.

South Airpark Neighborhoods (Exhibit 4-6a/b)

This residential area consists of three neighborhoods (Country Lane Estates, Tanaina Valley, and Tanaina Hills) that are separated from TSAIA by Raspberry Road. Residents from the neighborhoods have expressed concern about the expansion plans of the South Airpark, citing especially the need for a visual barrier on the north side of Raspberry Road to shield residences from airport views and maintain a visually attractive entry corridor into Kincaid Park. They have also voiced concerns about additional airport access points onto Raspberry Road.

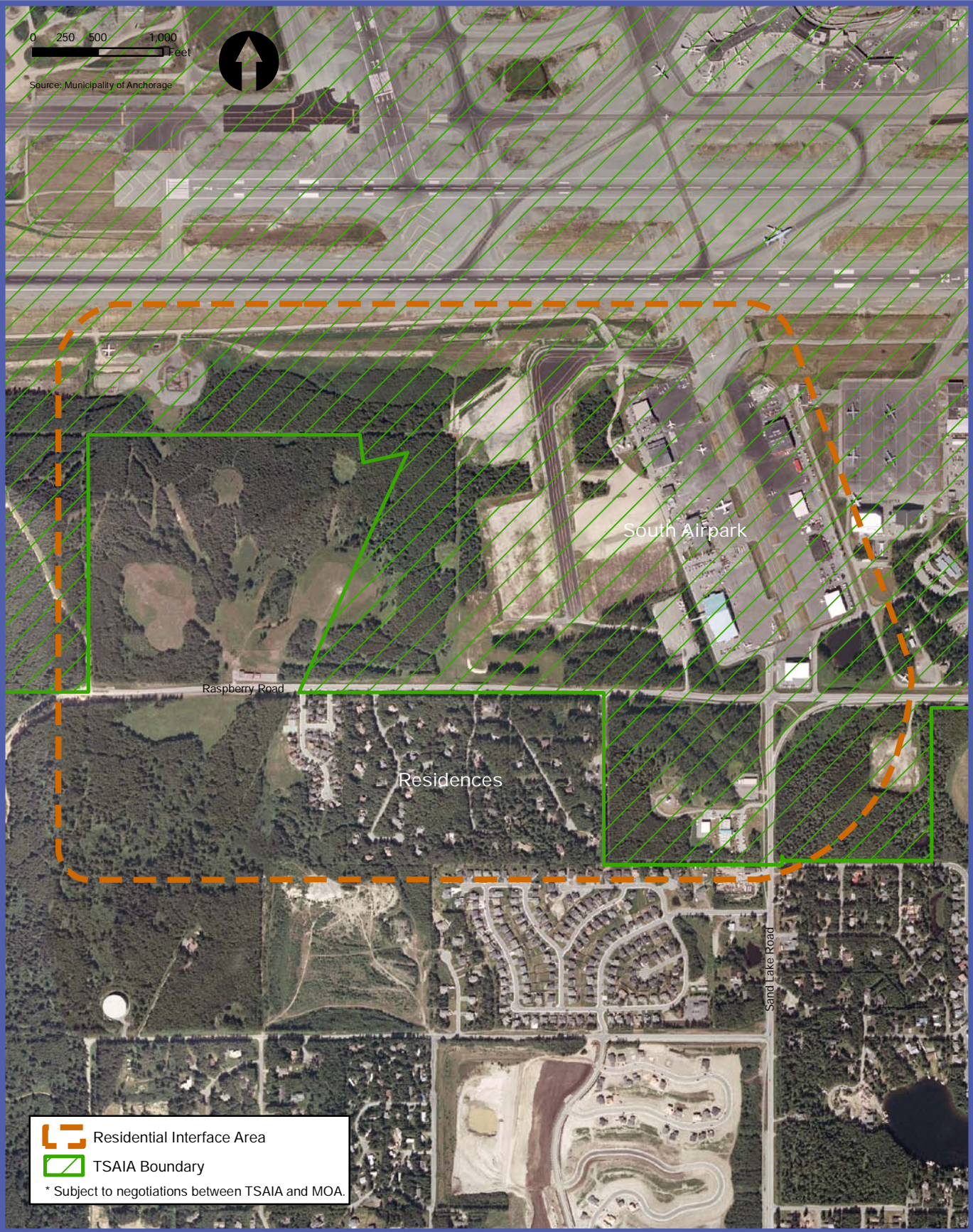
Key Airport Interface Areas

- ① Lake Hood
- ② South Airpark
- ③ Kulis Air National Guard
- ④ Tony Knowles Coastal Trail



West Anchorage District Plan
Exhibit 4-5: Key Airport Interface Areas





West Anchorage District Plan
 Exhibit 4-6a: South Airpark Residential Interface Area



0 250 500 1,000 Feet



Source: Municipality of Anchorage

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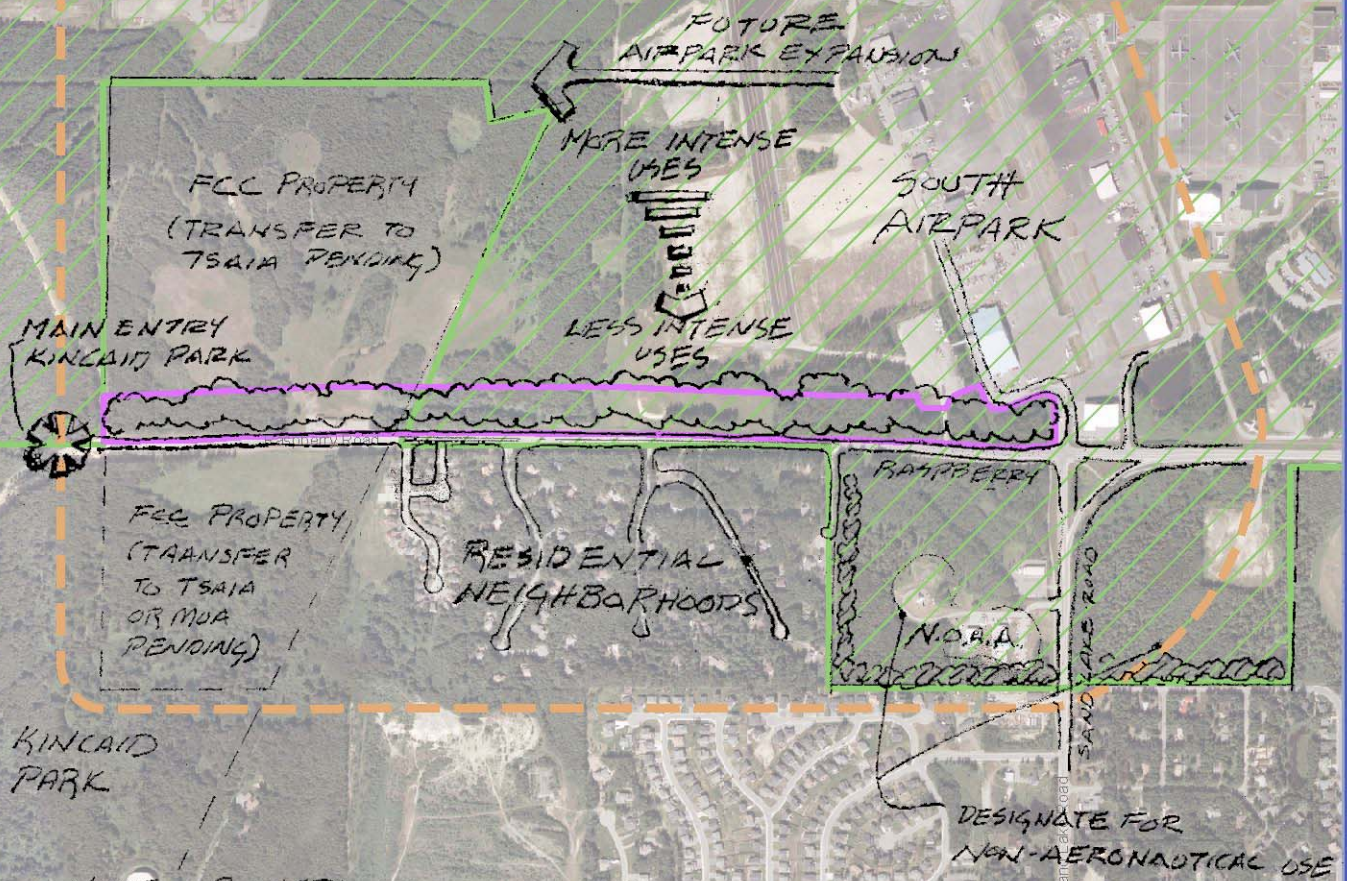


VISUAL BUFFER - RASPBERRY ROAD

- VARIABLE WIDTH & HEIGHT
- COMBINING BERM, TREES, FENCING
- MAXIMUM OF TWO ADDN. ROAD ACCESS POINTS ALLOWED, LOCATION T.B.D., ENTRY TO BE LANDSCAPED
- TO CREATE ATTRACTIVE KINCAID ENTRY CORRIDOR AND RESIDENTIAL SCREENING



OTHER BUFFERS



NOTE: BUFFERS SHOWN ON AIRPORT LAND REFLECT COMMUNITY INTERESTS FOR PURPOSES OF DISCUSSION. FAA APPROVAL & LAND EXCHANGES WOULD BE REQUIRED TO IMPLEMENT.



Residential Interface Area



Possible Residential Buffer



TSAIA Boundary

* Subject to negotiations between TSAIA and MOA.

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Focal design issues include:

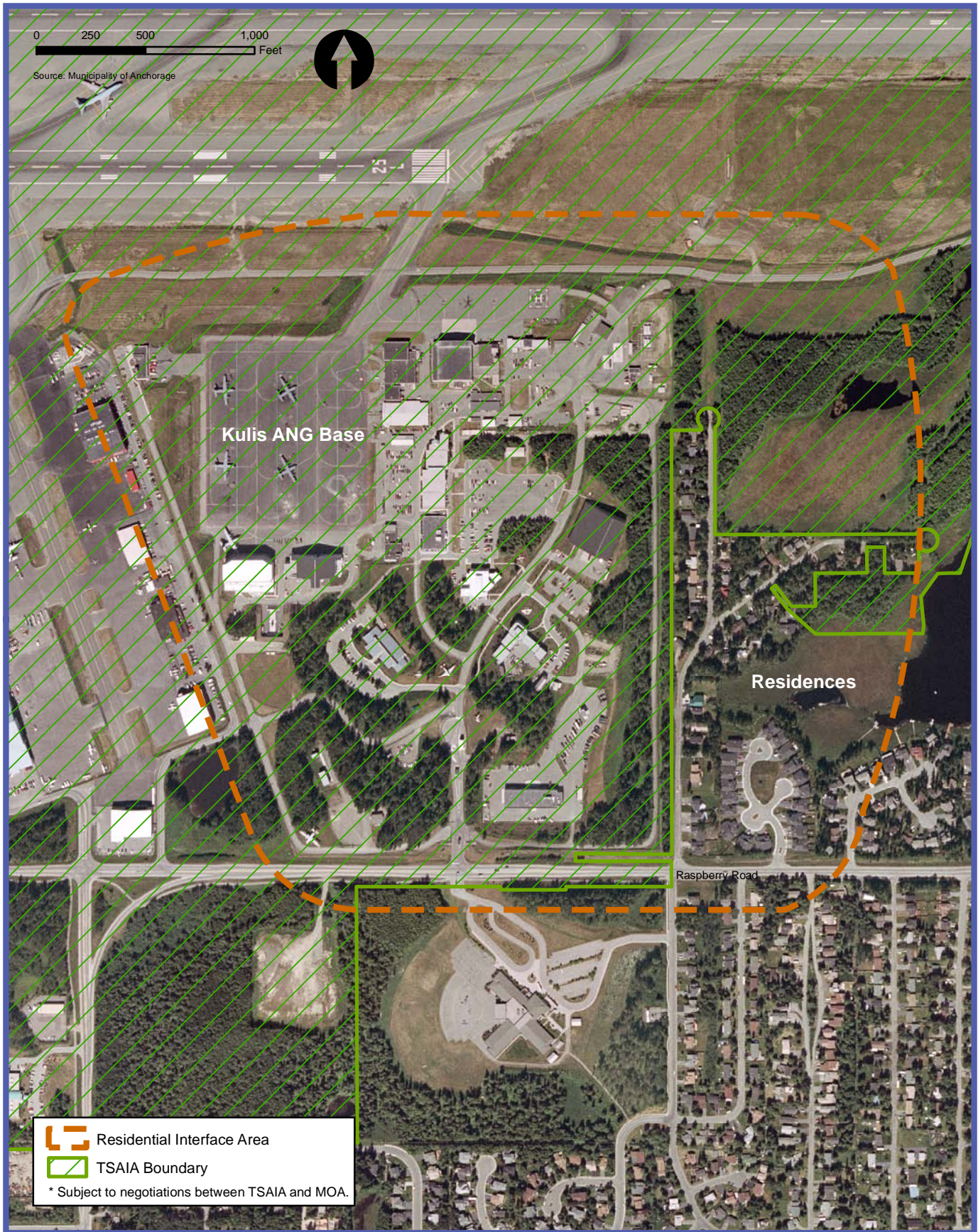
- The need for visual buffers/berm along Raspberry Road.
- Maintaining adequate separation of large buildings from Raspberry Road.
- Minimizing or eliminating additional access points onto Raspberry Road
- Light shielding.
- Graduating land uses (i.e., locating uses that generate greater and more constant noise levels farther away from residential areas).
- Controls on sources of ground-based noise near the airport boundary (e.g., backup alarms)

Kulis ANG Base Neighborhoods (Exhibit 4-7a/b)

This neighborhood consists of homes along Air Guard Road that parallel the TSAIA boundary. Kulis itself is elevated above these homes with a heavily treed slope on TSAIA property separating the two. Homes on the south end of the street nearer Raspberry are sited lower than Kulis and are separated from the TSAIA by Air Guard Road. Homes on the north end lie west of Air Guard Road and are slightly higher, situated roughly at grade with airport property to the north, sharing a common property line with Kulis. Residents have expressed concerns over changes proposed by the Kulis Re-use Plan that would eliminate or reduce existing topographic and vegetative features that serve to buffer airport uses along the TSAIA boundary.

Focal design issues include:

- Maximum retention of natural topography, vegetation as a buffer
- Managing the effects of elevation changes due to proposed grading of south Kulis
- Relation of aircraft operating areas to residences both vertically (height) and horizontally (distance)
- Locating new airport buildings to act as a noise and visual barrier
- Light shielding
- Controls on sources of ground based noise near the airport boundary (e.g., backup alarms)



West Anchorage District Plan
 Exhibit 4-7a: Kulis ANG Residential Interface Area



0 250 500 1,000 Feet

Source: Municipality of Anchorage



LEGEND

TOP OF SLOPE KULIS REUSE PHASING

EXISTING TREED BUFFERS ON AIRPORT PROPERTY

SLOPE

HOMES FRONTING AIR GUARD ROAD

AREA ROUGHLY AT GRADE WITH AIRPORT TO NORTH

AERONAUTICAL USE (IN 1-5 YEARS)

AERONAUTICAL USE (IN 1-20 YEARS)

KULIS REUSE AREA

NEW AERONAUTICAL USE (IN 1-20 YEARS)

AERONAUTICAL USE (IN 20-30 YEARS)

Raspberry Road

RASPBERRY RD.

NOTE: BUFFERS SHOWN ON AIRPORT LAND REFLECT COMMUNITY INTERESTS FOR PURPOSES OF DISCUSSION, FAA APPROVALS AND RECIPROCAL LAND EXCHANGES WOULD BE REQUIRED TO IMPLEMENT.

- Residential Interface Area
 - Possible Residential Buffer
 - TSAIA Boundary
- * Subject to negotiations between TSAIA and MOA.

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Lake Hood Neighborhoods (Exhibit 4-8a/b)

This area consists of Turnagain single and two- family neighborhoods that back onto the TSAIA boundary along Turnagain Bog. These neighborhoods are located very near the general aviation operations at Lake Hood and the GA airstrip. They will also be increasingly impacted as development in the North Airpark expands eastward. The potential for more large aviation buildings, such as the Federal Express hangar, near Turnagain neighborhoods is a community concern. The retention of Turnagain Bog as a horizontal buffer is a long standing issue for these neighborhoods. Enhanced buffering with trees or berming at this location may be difficult due to the presence of wetlands.

Focal design issues include:

- Retaining wetland areas as a natural buffer between residences and airport uses.
- Keeping large, imposing airport buildings (e.g., the FedEx hangar) at a distance from residential neighborhoods
- Light shielding
- Water diversion/containment measures to minimize and control release of deicing fluids into surface water bodies (such as Lake Hood, Lake Spenard)
- GA noise minimization techniques (e.g., parking orientation of GA aircraft)

Coastal Trail (Exhibit 4-9a/b)

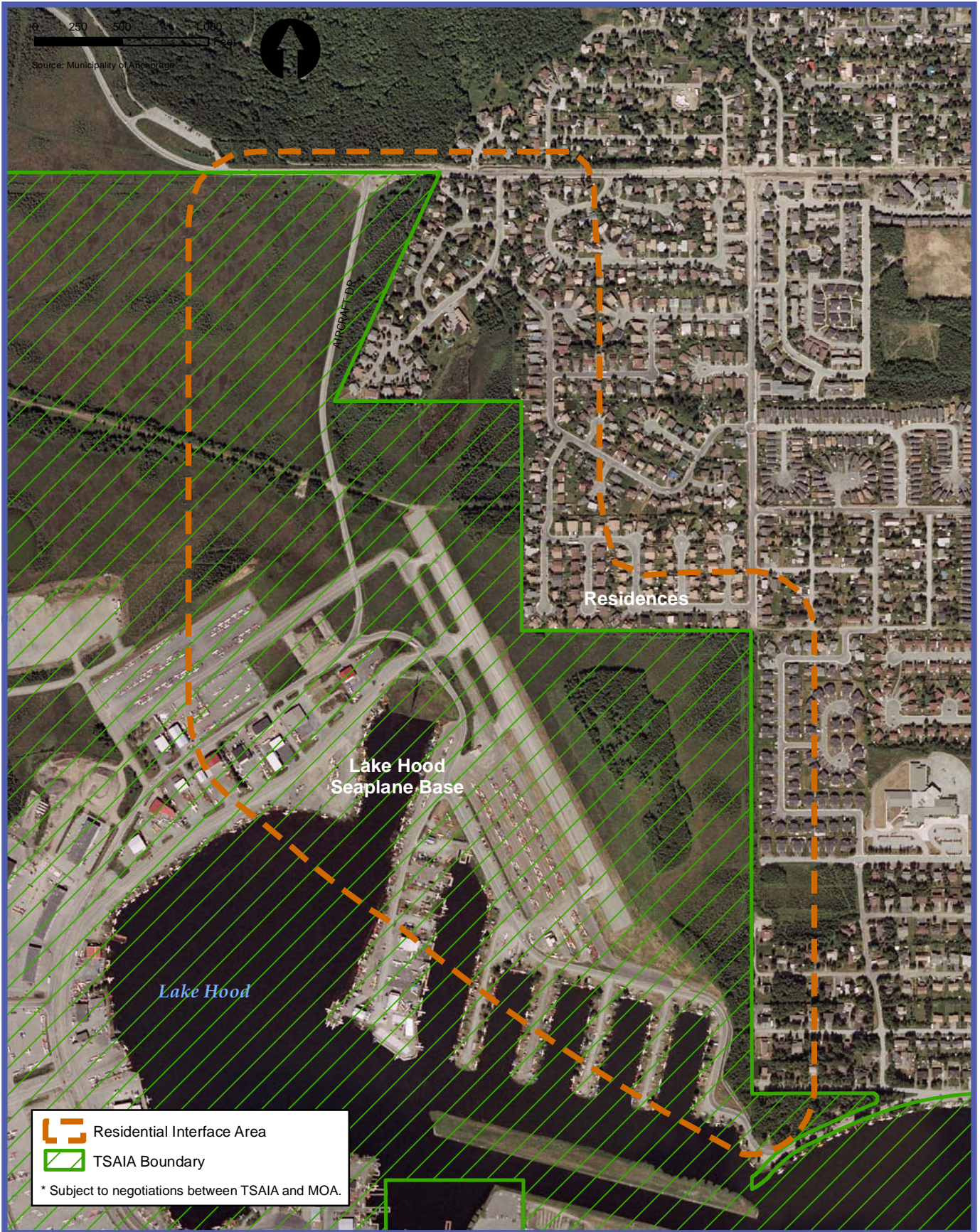
This area involves the length of the Coastal Trail from Kincaid Park to Earthquake Park along the airport boundary. This stretch of the Coastal Trail interfaces with various facilities including the airport, AWWU treatment plant, and Clitheroe Center.

Eventually, airport expansion to the west will bring the two uses closer together so a buffer is desirable to maintain some level of separation and screening. In addition, possible future improvements, such as a second N-S runway or AWWU treatment plant expansion, would conflict directly with the existing trail alignment. Should either project be realized, the proponent (TSAIA or AWWU) would need to include substantial funding for trail planning, design and reconstruction to achieve a high quality trail user experience that addresses any necessary realignments (including possible tunneling), re-naturalization, and buffering, along with trail upgrades, new amenities and repairs. They are shown on Exhibit 4-9b for the same purpose.

Finally, the trail is subject to natural processes such as coastal bluff erosion east of the Point Woronzof parking and overlook that needs attention.

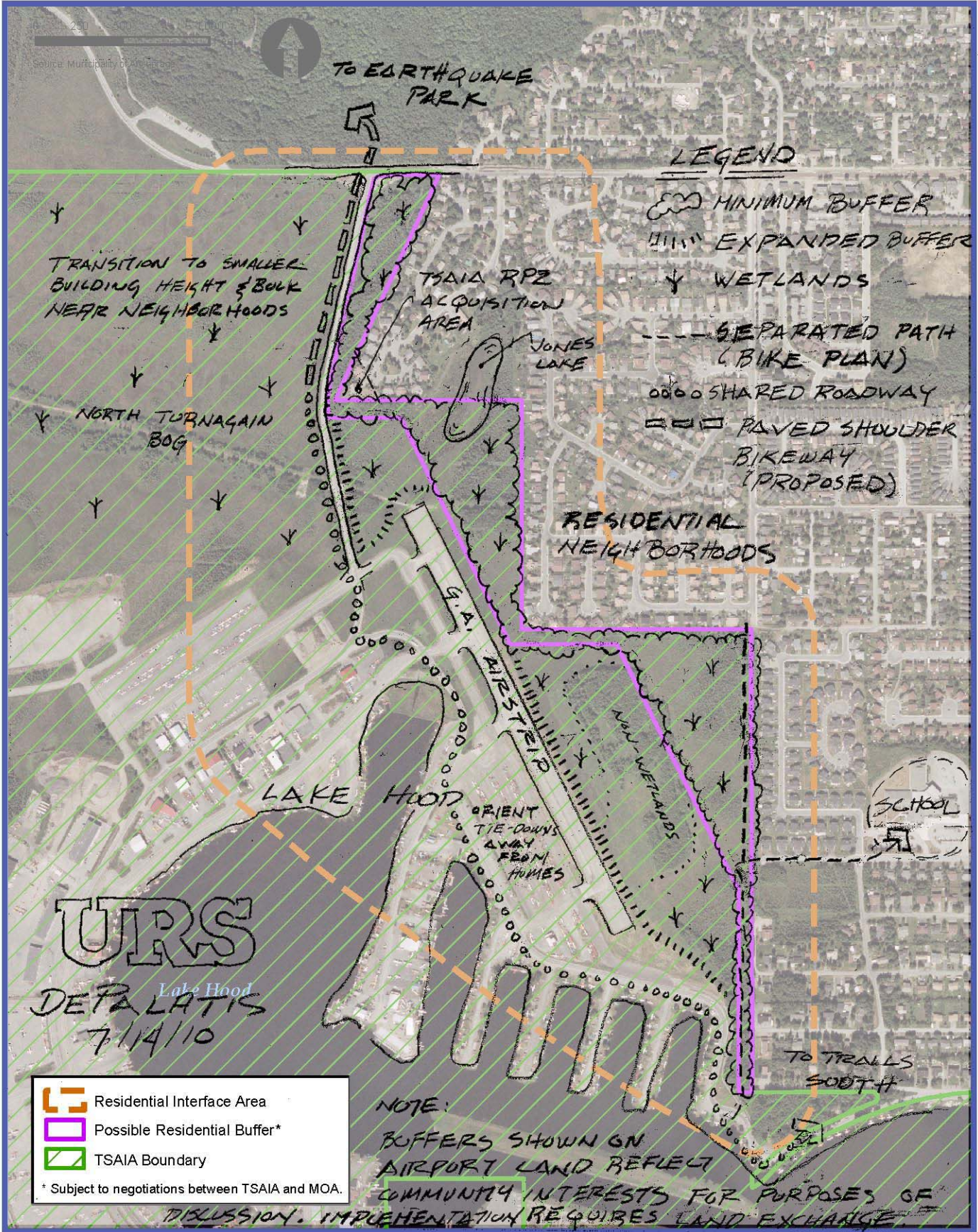
Focal design issues include:

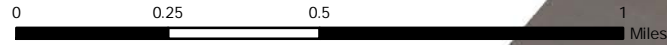
- Acquiring those portions of the Coastal Trail on airport land
- Retaining an appropriate natural buffer along the Coastal Trail
- Addressing areas of coastal bluff erosion that threaten to undermine the trail
- Developing creative design responses to runway or treatment plant expansions should they occur



West Anchorage District Plan
 Exhibit 4-8a: Lake Hood Residential Interface Area







Source: Municipality of Anchorage



- TSAIA Property
- Tony Knowles Coastal Trail
- West Anchorage Planning Area Boundary

Cook Inlet

Knik Arm







Source: Municipality of Anchorage

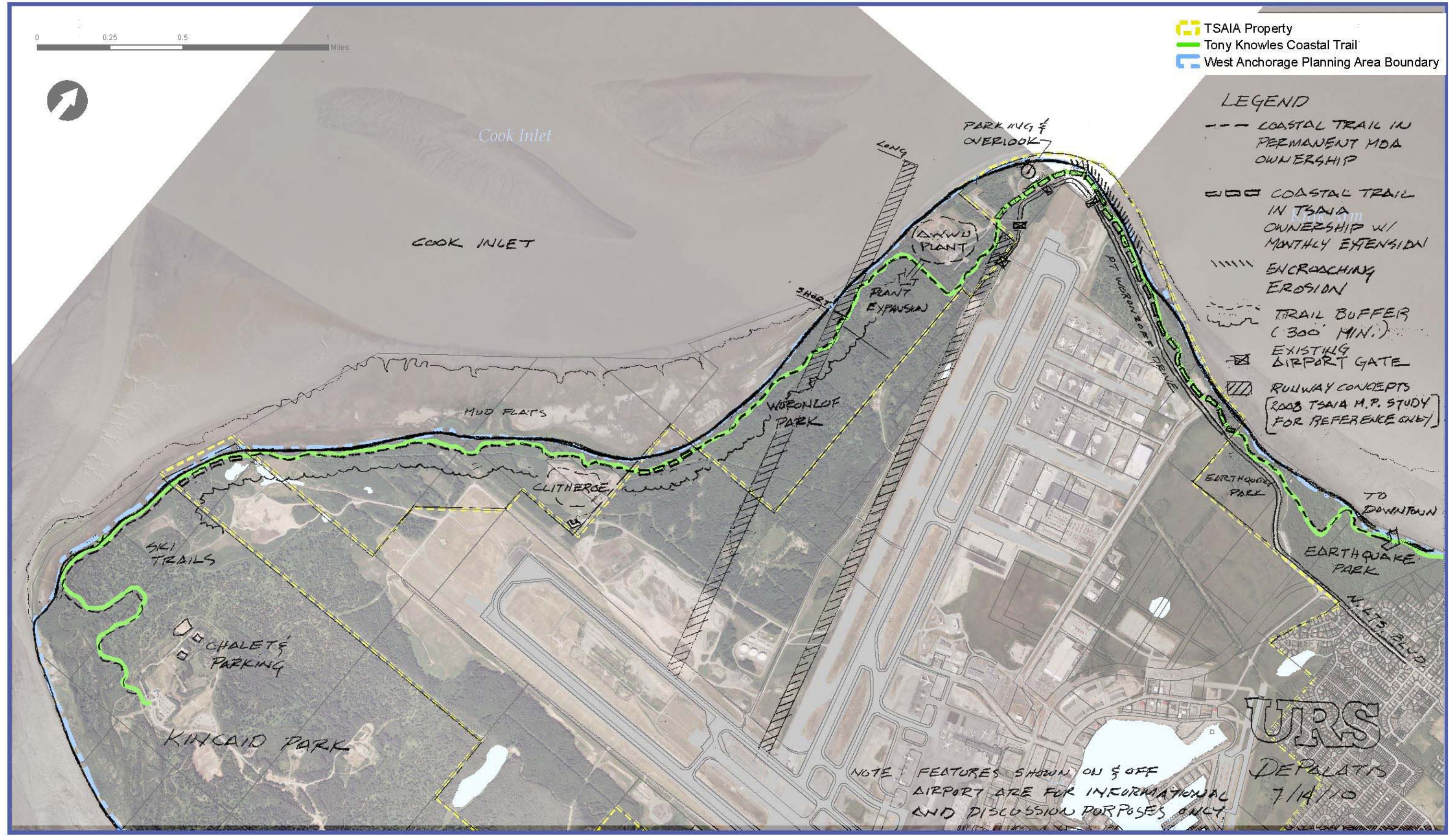




-  TSAIA Property
-  Tony Knowles Coastal Trail
-  West Anchorage Planning Area Boundary

LEGEND

-  COASTAL TRAIL IN PERMANENT MDA OWNERSHIP
-  COASTAL TRAIL IN TSAIA OWNERSHIP W/ MONTHLY EXTENSION
-  ENCROACHING EROSION
-  TRAIL BUFFER (300' MIN.)
-  EXISTING AIRPORT GATE
-  RUNWAY CONCEPTS (2008 TSAIA M.P. STUDY FOR REFERENCE ONLY)



NOTE: FEATURES SHOWN ON & OFF AIRPORT ARE FOR INFORMATIONAL AND DISCUSSION PURPOSES ONLY.

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Objective #3

Promote responsible development and activities outside the airport that do not interfere with safe and efficient airport operations and support planned airport growth.

For many years, there was little awareness or consideration of airport conflicts during the planning process outside the airport. TSAIA was small, homes were few and conflicts didn't arise. But as TSAIA has expanded within its boundaries, aircraft operations have grown, and the number of residences around TSAIA has increased, conflicts have become more pronounced. Today, most jurisdictions containing airports routinely impose land use compatibility criteria for new development around airports, including the use of zoning, airport overlay districts, or land use compatibility plans.

The most common incompatible uses confronting TSAIA fall into three categories. The first consists of residential development located within areas of high airport noise. This causes an obvious quality of life issue for affected residents and, nationally, has been the catalyst for much public opposition to airport operations. The second category relates to uses (such as athletic fields or parking lots) that congregate people in or near the airport's runway protection zones, creating a public safety issue. Finally, major projects located further away can sometimes impact flight safety to and from the airport. For example, thermal plumes on power plants can create updrafts that affect safe aircraft operation. All of these examples run counter to FAA airport grant assurance commitments and TSAIA is obligated to oppose them.

Unfortunately, since incompatible land use and zoning patterns around TSAIA are well established, it may not be practical or politically feasible to disallow new infill development or require rezoning to compatible uses. However, where incompatible uses are allowed under current zoning, the WADP recommends that strong consideration be given to making new construction, renovation, or substantial remodeling as compatible with the airport environment as possible by enhancing building code provisions requiring a higher standard of sound insulation to benefit future homeowners. Likewise, the MOA should not approve zone changes that would intensify or allow new incompatible uses in critical areas (e.g., rezoning to higher densities within the airport noise contours). Land uses occurring within the high noise contours surrounding the airport are shown in Exhibit 4-10.

Once the MOA establishes land use measures to mitigate incompatible uses, the action may create an opportunity for TSAIA to pursue additional funding for FAA sound insulation programs. If special requirements and restrictions for development are in place, the airport could make an argument for extending the program to homes built after 1998 if those homes surrounding it were built prior to 1998 and were insulated under the current program. FAA noise mitigation policy acknowledges that off-site land use issues are a shared problem requiring a shared commitment. Local governments with land use authority need to partner with airports and the FAA in resolving airport noise issues. It is reasonable that the FAA does not want to spend public money to fix problems that could be avoided in the first place.

Airport Objective #4

Improve communication, understanding, problem solving, and consensus building between TSAIA, MOA, FAA, airport leaseholders, and the surrounding community, and better integrate these stakeholders into airport decision-making.

In any situation where conflict is evident, effective communication is an integral part of achieving lasting solutions and maintaining an atmosphere of cooperation among diverse

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EXPLANATION OF TERMS

Colors describing generalized land use and residential density reflect actual development as it exists "on the ground".

Table 1 - Maximum density by zoning districts indicates the most intense residential development theoretically possible on each parcel.

Table 2 - In actuality, properties do not develop to their theoretical maximum.

OBSERVATIONS

FAA land use compatibility guidelines under 14 CFR Part 150 advise that noise-sensitive uses, including residential, school, hospital, and church, are considered incompatible with noise levels 65dB DNL or higher, and should not be developed or increased within that noise contour. The area between 60 and 65dB DNL is considered inappropriate for new noise-sensitive uses without noise attenuation (noise insulation). The higher the residential density, the greater the number of people exposed to high levels of airport noise.

Generally, once a property is subdivided, the density becomes fixed and is not likely to increase or decrease substantially.

Vacant, unsubdivided, residentially zoned properties have the greatest potential to develop at the maximum density. They also present the greatest opportunity to control growth since development has not yet occurred.

Generalized Land Use

- Commercial
- Industrial
- Institutional
- Parks/Open Space
- Water/Tidelands
- Transportation Related
- Vacant

Residential Density per Lot (Dwelling Units per Acre)

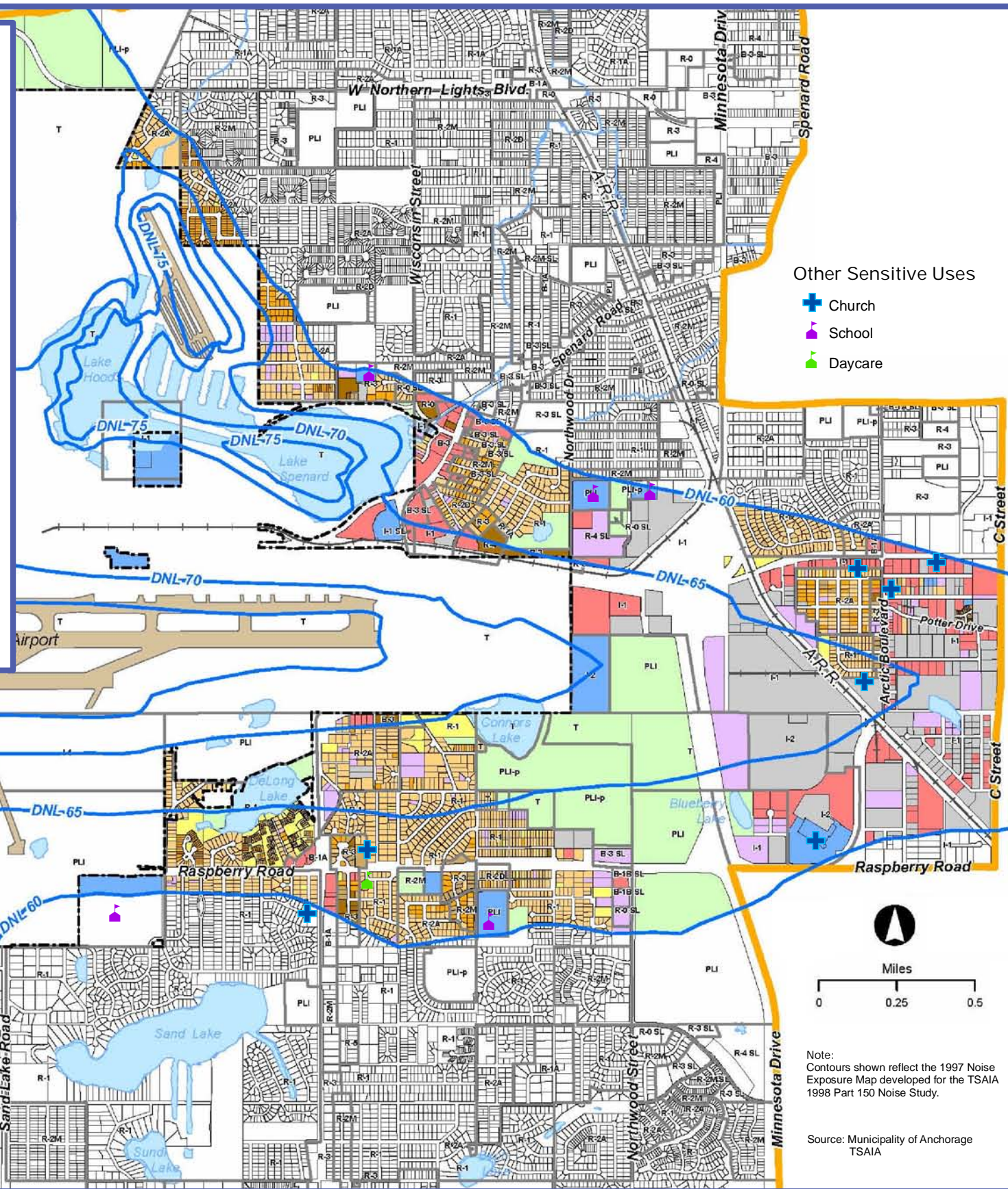
- ≤ 1
- > 1 ≤ 8
- > 8 ≤ 15
- > 15 ≤ 25
- > 25

Table 1

Zoning District	Max Dwelling Units per Acre Based on Title 21
R-1A	4
R-1	7
R-2A	10
R-2D	14
R-2M	17
R-3	40
R-4	~100

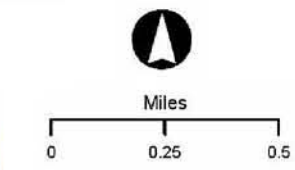
Table 2

Zoning District	Average Residential Density (existing developed lots - Anchorage Bowl 2004)
R-6	.91
R-1A	3.08
R-1	4.67
R-5	4.97
R-2A	6.39
R-2D	7.60
R-2M	8.70
R-3	16.95
R-4	24.57



Other Sensitive Uses

- Church
- School
- Daycare



Note: Contours shown reflect the 1997 Noise Exposure Map developed for the TSAIA 1998 Part 150 Noise Study.

Source: Municipality of Anchorage TSAIA



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stakeholders. A consistent problem has been unrealistic expectations or conclusions reached from public involvement processes. There needs to be clear communication accompanied by a willingness to explore potential solutions by all parties. The Airport, its tenants, the Municipality, and neighboring community councils should reassess communication mechanisms previously and currently used and look to improve them. The WADP has attempted to facilitate mutual understanding and provide a basis for improved community-TSAIA relations by including sections that describe the FAA constraints on airport management and a history of important community interactions. It also brought together upper level staff from the TSAIA, FAA and MOA to interact with the West Anchorage Planning Group so that questions could be answered with all three perspectives present. A summary of these very productive work sessions is found in Appendix A. MOA, TSAIA and FAA staff and management should cooperatively explore ways to carry these initial successes forward to promote more effective public communication and conflict resolution strategies including regular briefings, websites, and use of advisory groups.

Airport Objective #5

Identify strategies that resolve or mitigate land use and operations conflicts and clarify long-term future use on parcels in and around TSAIA.

The TSAIA abuts various properties owned by the MOA that would be of beneficial use to the airport. Conversely, parcels owned by the airport that are adjacent to residential areas, or used for public recreation, would be of beneficial use to the Municipality. The exchange of properties would permanently resolve longstanding ownership issues that are a recurring cause of public controversy. An exchange could transfer ownership from the TSAIA to the MOA of lands currently used heavily for public recreation or needed to provide separation between residences and the airport. The exchange could also transfer control of MOA land to TSAIA that is needed to more efficiently and cost effectively meet aviation demand. Any land exchange (or permanent non-aviation easement) would require the approval of the FAA to ensure that any disposal of airport land is surplus to aviation use and/or that the lands being acquired are more important in achieving the airport's mission, therefore justifying a disposal of less valuable property. The airport would need a high degree of certainty with concrete assurances that lands exchanged would not be redeveloped for uses that cause additional conflicts. Similarly, disposal of municipally dedicated parkland, such as Point Woronzof and Earthquake Parks, typically requires a public vote (which can be unpredictable) to confirm that the exchange of municipal parkland for airport parkland is worthwhile and in the community interest.

A final agreement would require in depth negotiations between the TSAIA and MOA to finalize an agreement that each felt to be sufficiently beneficial. Because negotiation involves some amount of subjective judgment, a reasonable parity of benefit and possible regulatory limitations, there is no guarantee that a comprehensive land exchange would involve every property of interest or satisfy every member of the public. However, if it addressed even some of the most important ownership issues, it would be worthwhile. This topic is explored in greater detail in Section 4.3.5.

In considering the starting point for a land trade negotiation, key municipal interests include:

- Acquiring all portions of the Coastal Trail plus an appropriate non-disturbance buffer.
- Acquiring the municipal snow dump site.
- Acquiring neighborhood buffers adjacent to residential areas east and south of the airport
- Acquiring a visual buffer along Raspberry Road as an entry corridor to Kincaid Park
- Acquiring land north of Connor's Bog.

- Acquiring additional land for Kincaid Park.

TSAIA interests focus on:

- Acquiring property along the western airport boundary for a possible second North-South Runway or to meet other aviation needs
- Acquiring property for Airpark development
- Minimizing incompatible land uses surrounding the airport

All potentially relevant properties are shown on Exhibit 4-11 and characterized in Table 4.3-3. The ownership and exchange interest for a subset of these properties is shown in Exhibit 4-12. (This exhibit depicts some of the most relevant exchange properties and how they are valued by the party wanting to obtain the parcel.)

Objective #6

Ensure that every resident is aware of the airport's presence before purchasing a home in the area.

One important way to reduce conflicts between airports and local residents is to ensure that individuals who purchase residential property near the airport are aware of its presence and potential inconveniences before they buy. This is a matter of fair disclosure and removes the “surprise” factor when airport inconveniences occur. Also, an informed buyer is less likely to become a disgruntled airport neighbor or political constituent.

Plat notes are one way to accomplish this but are not normally identified in a title search. Another method used near airports throughout the country is to require that a “notice of airport environs” be recorded disclosing the airport's existence and advising the buyer to consider whether or not these are important to them. These notices are single page, highly visible, and mandatory for inclusion in residential sales documents. An example is included in Appendix A.

Airport disclosure is not a new requirement in Alaska but an extension of what is already contained in the State's “Residential Real Property Disclosure Statement.” The difference, however, is a matter of visibility. Currently, airports are only mentioned in passing as part of a general “yes-no” checkbox about noise sources (along with dogs, neighbors, trains, etc.). Given the broad community-wide effects of a major airport like TSAIA and the demonstrated high potential for conflict, especially with uninformed homebuyers, the WADP recommends the use of a more prominent, single focus disclosure notice.

The recordation of an “avigation easement” frequently accompanies the notice. As noted in Section 4.3.4, it is used to obtain legal concurrence from homeowners accepting the presence of overflights and the effects of airport operations. Avigation easements are currently employed by TSAIA as part of its sound insulation program. On one hand, consistent use of avigation easements is an effective method to diminish community conflict over time. On the other, it requires homeowners to waive the right to litigate airport activities, though it has no bearing on the right to voice opinions or influence airport activities through public forums. An example of the avigation easement currently employed by TSAIA is included in Appendix A.

4.3.6 Land Exchange Considerations

The WADP concludes that the only permanent way to guarantee public recreational use of airport land and to create buffers (non-development areas) on airport property between the airport and residential areas is to acquire that land and remove it from airport ownership. For this reason, it recommends consideration and pursuit of a comprehensive land exchange as the most effective way to resolve long standing public concerns with the potential for mutual benefit to both the TSAIA and the community. The WADP observes that

a constructive dialogue was started between local residents and TSAIA during development of the WADP, which may indicate that the time is right for serious land exchange negotiations.

This recommendation does not preclude smaller individual exchanges from occurring but observes that limited exchanges are more likely to be reactive to short-term needs and can potentially remove resources that might be instrumental in resolving broader, more complex issues (such as the permanent protection of parks on airport land). Following are reasons to consider a comprehensive approach.

- Serious land exchange discussions are frequently stalemated when the parties fail to fully engage by withholding their most valuable assets for future bargaining.
- Land exchanges are time consuming and involve a multi-step regulatory and legal process, requiring agreement from a range of government agencies. Accomplishing this effort once will be an achievement. Attempting it multiple times increases the chances of failure.
- A single land exchange with substantial benefits to all parties is more likely to attract the attention and support of high-level state and municipal officials. Limited exchanges dilute the benefits and the urgency of support.

The specific aspects of any final agreement on ownership of public lands within and adjacent to TSAIA airport boundaries can only be realized after detailed negotiations between the land owners . . . in this case, the Municipality of Anchorage and the State of Alaska. Property negotiations on airport property are further complicated by third party oversight and veto power by the Federal Aviation Administration (FAA).

FAA considers every parcel within the airport boundary as potentially important to long-term aviation development and can only determine whether a given parcel should be traded in the context of what would be received in return. This is why it is import to look at an airport land exchange comprehensively, as a total package, rather than approaching each parcel individually in piecemeal fashion. A final resolution would be supported by appraisals prepared to determine fair market value, findings regarding the relative aviation value of the parcels to be traded, and achieving a relative balance in value between acquisition and exchange parcels. Other land management tools have been used to address land use/ownership issues, such as short-term use agreements, but these do not constitute a long-term solution and risk future loss of recreational land.

FAA regulations and grant assurances are the most complicated aspect of airport property issues. These arise because the Airport has entered into long-term commitments with the federal government to use the federal land and funding it has received to accommodate current and future aviation growth. These present a unique set of rules that, if ignored, will result in land exchange expectations that are unrealistic and infeasible. They are a major contributing factor as to why land ownership concerns identified in previous planning efforts remain unresolved.

Following are key implications of FAA regulations to bear in mind:

- Airport growth will continue until the full capacity of airport property for aviation use is realized.
- Permanent public recreational use of airport lands can only be guaranteed by removing them from airport ownership.
- FAA regulations supercede the state entitlement process and render the free transfer of selected lands to MOA unachievable.
- Any encumbrance or disposal of airport property requires equal compensation in land or money to the airport.

As mentioned earlier in this chapter, to meet FAA and state direction on supporting aviation needs and receiving a fair economic return, the TSAIA prepares airport master plans that forecast aviation trends and service demands, evaluates capital improvement needs, and designates airport land use accordingly. This includes an assessment of competitive position and changes in the air passenger and cargo markets. These considerations influence the relative value and availability of specific parcels within the airport boundaries.

The scenarios that follow are intended as possible frameworks for future negotiations. They represent a broad range of alternatives, some of which reflect an ideal outcome by a particular interest group and others that are structured as possible compromises suggested by the West Anchorage District Plan professional consultants and MOA staff. These do not presume to govern the specific content or direction of any future negotiation but merely demonstrate comparative approaches.

Scenario #1 - 100% Recreational

This option reflects only recreation values and would transfer all properties currently used for public recreation on airport land to MOA ownership without any compensatory property given in return. This would not be supported by the TSAIA or FAA.

Scenario #2 - 100% Aviation

This option reflects only aviation values and would transfer to TSAIA ownership key properties outside the airport boundary that would contribute to meeting aviation demand without any compensatory property being given by TSAIA in return. This would not be supported by community residents and recreation proponents or the MOA.

Scenario #3 - Reciprocal Exchange A (TSAIA Preferred)

TSAIA has identified two parcels with high value for aviation development and would justify the transfer of other airport lands to the MOA. These include Parcel 17 (Point Woronzof Park) and Parcel 6 (East of AWWU treatment plant). Each of these are identified as site alternatives for a planned second N-S runway, are removed from existing residential uses and are dependent on access across airport land. On balance, these parcels have value for recreational activity and wildlife habitat, and provide a buffer between TSAIA activities and the Coastal Trail. One (Parcel 17) is a dedicated municipal park.

In addition to obtaining the parcels through a land exchange, the airport would desire MOA assurance that portions of the Coastal Trail could be realigned and would expect to invest heavily in trail design, restoration and amenities to be funded by TSAIA as a part of runway improvements. In exchange, the airport would be willing to trade several parcels, provided the fair market value sum of them equals that received from the MOA. Parcels that TSAIA would consider trading to the MOA include: a portion of Parcel 2 surrounding Little Campbell Lake, Parcels 12 containing Connor's Bog and Parcel 13, containing the municipal snow dump site. Additional parcels that might also be considered for trade include Parcel 14 containing the DeLong Lake parking lot, parcels south of Raspberry Road (18, 19), and miscellaneous parcels around DeLong Lake (23, 24). This scenario is likely to be supported by the FAA, depending on specific details and assuming that the trade achieves a fair market value exchange.

Although not identified on the Exhibit 4-11, TSAIA also expressed has interest in portions of the AWWU owned parcel north of Parcel 17 and south of the existing treatment plant. This parcel was not included because AWWU felt the entire parcel would be needed in the future.

Table 4.3-4 Summary of Alternative Comprehensive Exchange Scenarios						
	Scenario #1 100% Recreation/ Buffer	Scenario #2 100% Aviation	Scenario #3 Reciprocal A	Scenario #4 Reciprocal B	Scenario #5 Reciprocal C (TBD)	Scenario #6 Status Quo
PARCELS TO AIRPORT						
Primary	None	6 17** 27 30	6 17**	6 17** portion		None
Secondary (equalization)	None	None	27**	4 portion 10 portion 15 27** portion		None
PARCELS TO COMMUNITY						
Primary	2 3 5 7 8 9 11 12 14 20 28 29	None	2 portion 12* 13* 18 19	2 portion 3 5 7* 8* 9* portion 12* 13*		None
Secondary (equalization)	None	None	7* 8* 14 23 24	11 14 23 24		None
Notes:						
<ol style="list-style-type: none"> * Indicates parcels which would require airport restrictions prohibiting non-compatible uses. ** Indicates dedicated parkland subject to public vote regulations. Parcels 1 and 16 are not included above since final disposal from FCC has not been determined. Both TSAIA and MOA have an interest in Parcel 1. Scenarios shown do not presume to govern the specific content or direction of any future negotiation but are intended merely to demonstrate a range of comparative approaches. Final exchanges would be based on appraisals to ensure an equitable trade. 						

Scenario #4 - Reciprocal Exchange B (Coastal Trail In-Place)

This exchange scenario would differ slightly from Scenario #3 in that the Coastal Trail would be preserved in its current location from Kincaid Park to Earthquake Park with a minimum 300' buffer south of the AWWU Treatment Plant. It would also seek to preserve a buffer adjacent to Turnagain neighborhoods near Lake Hood.

Under this scenario, the westerly portion of Point Woronzof Park (Parcel 17) that contains the Coastal Trail and buffer would be retained in MOA ownership. This would make the parcel impractical to accommodate a potential second N-S runway, although it could serve as

additional land for a future West Airpark. Parcel 6 would continue to be made available to TSAIA for a second N-S runway.

Parcel 17 is the MOA's most valuable trading parcel. Eliminating it from consideration or reducing its size affects its aviation value with direct bearing on the amount of recreational land the MOA could expect in return. This scenario is likely to be supported by the FAA, depending on specific details and assuming that the trade reflects fair market value.

Scenario #5 - Reciprocal Exchange C (TBD)

[To be included if alternative is proposed by WAPG or public during public review process.]

Scenario #6 - Status Quo (No Exchange)

This option assumes that a land exchange does not occur and that the recreational use of airport land will continue under short-term temporary agreements subject to termination at any time the property is needed for airport development. As trends in aviation stabilize and exhibit continued signs of returning to positive growth, development of airport properties can be expected to follow. This option accepts the risk that TSAIA development of these parcels may someday occur.





**Table 4.3-3
West Anchorage District Plan
TSAIA Perimeter Parcel Characteristics**

Map Key No.	Name	Owner	Parcel Size (Acres)	Physical Characteristics	TSAIA Use Agreement	MOA Selection Parcel ¹	Park Designation	Proposed Use - MOA	Proposed Use - TSAIA ²	Proposed Use - Community	Comments
1	Portion of FCC Parcel off South Airpark (S. of Raspberry Rd.	FCC	39.35	Some existing Kincaid trails	N/A	No	No	Airport Buffer, Park	None Specified, Outside Airport	Raspberry Road buffer, incorporation into Kincaid Park	TSAIA has requested transfer from FCC to the State. MOA desires long-term conveyance via trade or formal federal/state selection process. FCC would likely retain rights for AV aids. Raspberry serves as unofficial "dividing line" for - aircraft operations.
2	Little Campbell Lake Parcel	TSAIA/State	103.51	Kincaid access, parking, 65 DNL Contour, AV Esmt.	Expired 2006, now monthly	Yes (HLB Parcel #77)	No	Park	"Future Airport Development" Aviation expansion, No specific project identified, 2020+	Long-term use of Little Campbell Lake, incorporation into Kincaid Park, buffer for Raspberry Road	MOA wants permanent/long-term park use. TSAIA concerned about public perception as permanent park.
3	SW corner of E-W Runway Clear Zone	TSAIA/State	74.24	Coastal Trail, Sisson Loop Trail, DNL65, AV Esmt.	N/A	Yes (HLB Parcel #78)	No	West por. for Coastal Trail & buffer, East por. for Sisson Loop Trail.	"Buffer" & "Future Airport Development" Future MOA Acquisition, No specific project identified, 2020+	Add to Kincaid Park for long-term recreational use and wildlife habitat	MOA wants conveyance of W side. Trails in east side probably compatible long-term with runway clear zone. Trade or conveyance requires FAA approval. DOT may need for Fire Island access.
4	West End of E-W Runway	MOA (HLB)	116.28	Sisson Loop Trail, Runway Protection Zone, DNL65, AV Esmt.	N/A	No	No	SW area for Sisson Loop Trail / SE area for E-W Runway clear zone, lighting / N area for TSAIA lease or exchange	"Buffer" E/W runway extension, nav aid, fencing and lighting, 2002-2006	Maintain existing trails and wildlife habitat	Coastal Trail runs along west side. TSAIA has paid HLB for rights to use as runway clear zone, NAV aids, fencing, and lighting associated with runway extension. Realignment of the Sisson Loop Trail was part of the agreement.
5	West Airpark Tract South of Pt Woronzof Park	TSAIA/State	24.12	Coastal Trail	N/A	No	No	West por. for Coastal Trail & buffer, East por. for Sisson Loop Trail.	"Buffer" No specific project identified, 2020+	Maintain buffer for Coastal Trail and wildlife habitat	Actual area needs to be determined and surveyed.
6	Parcel Between AWWU Facility and N-S Runway	MOA (Parks & Rec)	6.04	Coastal Trail, AWWU access road, 70 DNL contour	N/A	No	Not official-in Parks Inventory	Permanent/long-term protection of Coastal Trail and AWWU access	Outside Airport, Possible new N-S Runway (runway, access road, taxiway, fill slope), 2007-2011	Long-term protection of Coastal Trail and wildlife corridor	Parcel important to MOA and Airport. Any airport use would need to accommodate Coastal Trail realignment, amenitization and buffering. Prior proposal for runway use met with public opposition.
7	Pt. Woronzof Overlook	TSAIA/State of Alaska	22.6	Coastal Trail Overlook & Parking, Runway Protection Zone, DNL75, AV Esmt	Expired, now monthly	Yes (HLB Parcel #21 por.)	Not official-in Parks Inventory	Coastal Trail, Overlook, Parking & Buffer	"Buffer" No specific project identified, 2020+	Long-term access to Pt. Woronzof park, and wildlife corridor	Part of larger parcel of MOA state land selection. Selection requires FAA approval.

**Table 4.3-3
West Anchorage District Plan
TSAIA Perimeter Parcel Characteristics**

Map Key No.	Name	Owner	Parcel Size (Acres)	Physical Characteristics	TSAIA Use Agreement	MOA Selection Parcel ¹	Park Designation	Proposed Use - MOA	Proposed Use - TSAIA ²	Proposed Use - Community	Comments
8	East Side of Pt Woronzof Bluffs	TSAIA/State of Alaska	52.44	Coastal Trail, Earthquake Park parking lot, Runway Protection Zone, DNL65/70/75	N/A	Yes (HLB Parcel #21)	No	Coastal Trail, Earthquake Park parking lot	"Buffer" No specific project identified, 2020+	Maintain buffer for Coastal Trail and wildlife habitat, address coastal erosion problem, preserve access to Earthquake Park	Part of larger parcel of municipal selection of state land. Fossil beds and bluffs require erosion protection in future. Includes AV easement noise contour and restrictions.
9	NE TSAIA Open Space Areas	TSAIA/State	192.21	Turnagain Bog, por. Jones Lake, trail corridor at east edge, Deep peat soils, Class A wetlands, GA Runway Protection Zone, DNL65, height restrictions	N/A	No	No	Neighborhood buffer, Trail Connection	"Airfield", "General Aviation", "GA Airport Reserve" & "Buffer" New GA lease area (2007-2011), taxiway, road (2020-2026)	Define community buffer needs, preserve high-quality wetlands	Affiliated with 10-year Wetland Permit which was revoked in 2004. Associated AO 2000-151 (S-2) identifies a 55 acre "scenic easement" within this parcel, however there are differing opinions as to whether this is binding. Area subject in part to both GA and Main TSAIA Master Plans. TSAIA purchasing group of homes within RPZ to north.
10	NW Corner of Lake Spenard	TSAIA/State & MOA/HLB	7.94	Lions Club Picnic Area, Lakeshore Drive	?	No	No	Ensure pedestrian/bicycle access is maintained	"GA Airport Reserve" Acquire ROW and maintain public picnic area (thru 2026)	Preserve public/tourist aviation viewing area	TSAIA wants Lakeshore Drive ROW conveyed and added to airport boundary, which includes a small public access lot at lake edge. TSAIA has safety concerns about public interaction with GA planes.
11	Spenard Beach Park Area	TSAIA/State	6.83	Lake Spenard Beach, Temporary float slips, TSAIA fencing	Expired	No	Yes, but not dedicated park	Recreation/Park	"GA Airport Reserve" Transient floatplane spaces and maintain public beach (thru 2026)	Preserve historic use of park	Area is traditional, historic public access to swimming beach—no longer staffed. East edge fenced by TSAIA and includes temporary float slips.
12	NW Corner Connor's Lake Park	TSAIA/State	85.65	AWWU main trunk line, formal MOA dog park, parking lot for Connor's Lake Park, and sledding hill, Runway Protection Zone	Expired (park and snow disposal)	Yes (HLB Parcel #71 por.)	Yes, but not dedicated park	Snow storage and park access	"Airport Support" & "Airport Reserve" No specific project identified. 2020+	Long-term use of beloved dog park and multi-use recreational area, high-quality wildlife habitat	HLB has met with TSAIA and FAA to initiate selection conveyance and FAA has listed conditions.
13	East Section of Connor's Land-Snow Dump	TSAIA/State	24.74	Snow Dump	Leased for snow disposal site	Yes (HLB Parcel #71 por.)	No	Snow storage (the only one in West Anchorage), possible extension of Kloep Station street maintenance facility.	"Airport Reserve" No specific project identified. 2020+	Value undetermined	MOA initiated negotiations to reserve area for snow storage, including partial surveys.

**Table 4.3-3
West Anchorage District Plan
TSAIA Perimeter Parcel Characteristics**

Map Key No.	Name	Owner	Parcel Size (Acres)	Physical Characteristics	TSAIA Use Agreement	MOA Selection Parcel ¹	Park Designation	Proposed Use - MOA	Proposed Use - TSAIA ²	Proposed Use - Community	Comments
14	DeLong Lake Park Parcel	TSAIA/State	15.02	DNL65, AV Esmt.	expired	Yes (HLB Parcel #113)	Not official-in Parks Inventory	DeLong Lake Park, neighborhood linkage to park	"Buffer" No specific project identified. 2020+	Wildlife habitat and valuable open space for residential area	Area previously under lease to MOA for parks use (DeLong Lake). Within the noise contour and AV easement. Identified as MOA selection under state entitlement.
15	Small Area of ROW at NE Corner of Old Airport Commercial Area	HLB?	4.78	Developed, parking lot	N/A	No	No	None	"Terminal/Airline Support" No specific project identified. 2020+	Value undetermined	Appears to be area of old International Road ROW that lies outside of TSAIA formal boundary. Not clear if MOA ownership. Basically only useable as ROW.
16	Portion of FCC Parcel off South Airpark (N of Raspberry Rd.)	FCC	92	Undulating wooded area	NA	No	No	None	Outside Airport Likely South Airpark Expansion	Raspberry Road buffer	TSAIA has requested transfer from FCC to the State.
17	Point Woronzof	MOA	191	Forested, Sloping to west, Coastal Trail, DNL65/70/75	N/A	No	Yes	Recreation/Park	Outside Airport Possible N/S runway or other Airport Development	Maintain as park or trade a portion for more valuable recreation land.	Community groups view as permanent park. Currently, full park use is constrained by access through TSAIA lands. 2008 Draft Airport Master Plan shows new N-S Runway alternative extending through this parcel w relocation of Coastal Trail. Any trade would require public vote or direct exchange for other public use.
18	SW Corner of Sand Lake & Raspberry	TSAIA/State	40	NOAA Weather Service Bldg, mostly flat, w/ cleared areas, DNL60	NOAA	No	No	None	"Future Airport Development" No specific project identified. 2020+	Raspberry Road buffer	Raspberry serves as unofficial "dividing line" for aircraft operations.
19	SE Corner of Sand Lake & Raspberry	TSAIA/State	29	Vacant, mostly forested w/ some relief to south, DNL60	N/A	No	No	None	"Future Airport Development" No specific project identified. 2020+	Raspberry Road buffer	Adjacent to Kincaid Elementary School, Raspberry serves as unofficial "dividing line" for aircraft operations.
20	Notch between FCC & Little Campbell Lake	TSAIA/State	16	Vacant, uneven terrain, vegetated with mature trees DNL 65	N/A	No	No	Park	"Future Airport Development" No specific project proposed but possible South Airpark expansion 2020+	Value undetermined	Was leased to FCC until 2009

**Table 4.3-3
West Anchorage District Plan
TSAIA Perimeter Parcel Characteristics**

Map Key No.	Name	Owner	Parcel Size (Acres)	Physical Characteristics	TSAIA Use Agreement	MOA Selection Parcel ¹	Park Designation	Proposed Use - MOA	Proposed Use - TSAIA ²	Proposed Use - Community	Comments
21	Tidelands Parcel	MOA (HLB)	31	Tide flats	N/A	No	No	State Refuge-Agreement	Outside Airport N/A	Part of Wildlife Refuge	
22	NE Corner of N-S Runway	TSAIA/State	23	Hilly, vegetated with mature trees, eagle nest free, DNL 75	N/A	No	No	None	"Air Cargo/Aircraft Maintenance" Future Cargo Development proposed 2007-2011	Value undetermined	Located south of Point Woronzof Drive
23	3 State parcels around DeLong Lake	TSAIA/State	~2.3 acres	Part wetlands, hilly & forested; 2 east side lots near ROW	N/A	No	No	Possible addition to DeLong Lake Park	None (Not included on current Airport Master Plan)	Value undetermined	Purchased with Noise Mitigation \$\$; best used as parks/open space?
24	"Tea kettle" parcel adjacent to DeLong Lake	TSAIA/State	~ 4 acres	¼ wooded, ¼ wet bog; high water table	N/A	No	No	Possible addition to DeLong Lake Park	None (Not included on current Airport Master Plan)	Wetland and open space preservation, visual buffer from airport	Purchased with Noise Mitigation \$\$; Trade may require repayment.
25	SW corner of E-W Runway Clear Zone	TSAIA/State	~ 76	Relatively level, contains partially wooded and partially cleared open area, portion of Runway Protection Zone	N/A	Yes, (portion of HLB Parcel #78)	No	None	"Future Airport Development, Buffer" No specific project identified. 2020+.	Addition to Kincaid Park, potential site for new trails	This parcel was not identified for Special Study on the 2006 LUPM. It differs from Parcel 3 because it is relatively level and adjacent to the E-W runway. Therefore, it is of higher value for aviation use. The western portion of this parcel contains one Kincaid Park Trail link (Arlene's Way).
26	SE corner of Kincaid School site	TSAIA/State	~ 0 .4	Partial woods; cleared at ROW	N/A	No	No	Possible open space	None	Value undetermined	Area bounded by ROW's on two sides; ideal as open space
27	Earthquake Park S of Northern Lights Blvd.	MOA	34	Mostly level, "A" wetlands, with wooded central area	N/A	No	Yes	Park and recreation	Outside Airport boundary	Maintain as park or trade portion for neighborhood buffer zones	Any trade would require public vote or direct exchange for other public use. Could offset more buffer area in parcel #9. Might facilitate straightening of W Northern Lights Blvd.
28	Raspberry Road Buffer	TSAIA	Unknown	Level, adjacent to Raspberry Road	N/A	No	No	Buffer	South Airpark	Buffer	Exact dimensions and acreage dependent on buffer characteristics.

**Table 4.3-3
West Anchorage District Plan
TSAIA Perimeter Parcel Characteristics**

Map Key No.	Name	Owner	Parcel Size (Acres)	Physical Characteristics	TSAIA Use Agreement	MOA Selection Parcel ¹	Park Designation	Proposed Use - MOA	Proposed Use - TSAIA ²	Proposed Use - Community	Comments
29	Kulis – Air Guard Road Buffer	TSAIA	Unknown	Vegetated Slope	N/A	No	No	Buffer	Kulis Reuse	Buffer	Community desires to retain existing trees and slope. Exact dimensions and acreage dependent on buffer characteristics.
30	South AWWU Property	MOA	47.8	Forested, sloping to west	N/A	No	No	AWWU Facility Expansions	N-S Runway/Airpark	AWWU Facility Expansion/Coastal Trail	AWWU indicates that its <u>entire</u> land area is needed for plant expansions. N-S runway alternatives could require land here (see Fig 4-9B). AWWU identified an extensive list of impacts, including plant access, expansion capacity, existing interceptor tunnel and cables, OSHA, NPDES discharge requirements and air quality permits that a new N-S runway must address.

1. Due to federal regulations that restrict the State's ability to dispose of viable airport land, it is the opinion of MOA, HLB, FAA and TSAIA staff that the chances of parcels being transferred to MOA ownership under the state selection are highly unlikely and have little practical bearing on discussions of airport land use.
2. Based on 2002 ANC Master Plan, 2006 ANC Land Use Plan, and 2006 LHD Land Use Plan. Words in parentheses (" ") indicate land use shown on current Airport Land Use Plans. Designations are not permanent but reevaluated every 5 years.
3. Community interests listed in this column were expressed by representatives of the Turnagain, Spenard and Sand Lake Community Councils and recreational user groups participating on the West Anchorage Planning Group.
4. Blue parcels were added at 1-27-2010 Planning Group airport workshop.
5. Green parcels were added at 2-10-2010 Planning Group airport workshop.
6. Orange parcels were added on 7-25-2010 by MOA staff for completeness.