

4.0 FACILITY STANDARDS

The facility standards review considers user feedback and the requirements of the airside facilities, visual and navigational aids, GA facilities, landside facilities, airport security and access, and support facilities to meet the needs of the forecasted critical aircraft and the associated demand and capacity requirements.

4.1 AIRFIELD PLANNING FACTORS

4.1.1 CRITICAL AIRCRAFT

The critical aircraft determination for a runway influences many characteristics of the runway's design and those of adjacent airport surfaces also utilized by the runway's critical aircraft, such as taxiways. The existing critical aircraft for both runways at the Wasilla Airport is A-I Small aircraft (see Section 3.9). This category of aircraft captures most GA aircraft operating at Wasilla Airport, such as the Piper PA-18 Super Cub, Cessna 172, Cessna 180, and Cessna 206. The airport is forecasted to serve an increasing number of aircraft larger than the A-I Small, such as the King Air 200, the Beechcraft 1900D, and the Air Tractor 602. Due to this anticipated increase, the forecast determined that the near-term and ultimate critical aircraft for main Runway 04/22 is B-II.

4.1.2 AIRSPACE

The airport's current airspace classification is not anticipated to change within the planning horizon.

TRAFFIC PATTERN

The existing traffic patterns for the airport serve the needs of the current and forecasted users, and no changes to traffic patterns are proposed.

INSTRUMENT APPROACHES

The existing approaches have a $\frac{3}{4}$ -mile minimum visibility requirement and a decision altitude of 604 feet. Based on user feedback collected from interviews and a survey, these approaches serve the needs of current and forecasted airport users. According to the 2012 Master Plan Update for the Wasilla Airport (USKH, 2012), the development of a precision instrument approach procedure would be required to reduce minima to $\frac{1}{2}$ -mile visibility with a decision altitude of 200-foot AGL. This change to the airspace would require reclassification of the current airspace to extend the Class E controlled airspace to the ground. This reclassification would result in a "lock-out" of all VFR traffic when the corresponding VFR visibility minimums for the airspace are not met. Additionally, for the airport to establish precision instrument approaches, the City will need to install approach lighting, establish clear approaches at lower approach angles, and acquire navigation rights to airspace below the airport's traffic pattern. This could potentially interfere with air traffic utilizing the numerous adjacent public and private runways in the vicinity whose existence pre-dates that of the Wasilla Airport (USKH, 2012).

4.2 AIRSIDE FACILITIES

4.2.1 RUNWAYS

RUNWAY DESIGN CODE

Based on the critical aircraft, the RDC for the existing use of Runway 04/22 is A-I-4000, meaning the runway serves aircraft with an AAC of A, an ADG of I, and that the runway's RVR is 4,000 feet (based on ¾ mile approach minimums). The current RDC for Runway 04S/22S is A-I-VIS, meaning the runway serves aircraft with an AAC of A, an ADG of I, and that the runway only supports VFR operations, as is indicated by "VIS."

The RDC for Runway 04S/22S is adequate for the current and forecasted demand, while the RDC for Runway 04/22 is anticipated to change to B-II-4000 based on the forecasted demand for the near term and ultimate critical aircraft.

APPROACH AND DEPARTURE REFERENCE CODES

The APRC and DPRC for Runway 04/22 are B/III/4,000 and B/III, respectively. The APRC and DPRC for Runway 04S/22S are B/I(S)/4,000 and B/I(S), respectively. APRC and DPRC for both runways are not anticipated to change based on the current and forecasted demand.

RUNWAY ORIENTATION AND ALIGNMENT

Runway crosswind coverage at the Wasilla Airport was determined using hourly speed data and direction observations collected over 10 years (2013-2022) and the Windrose Generator tool available on the FAA Airport Data and Information Portal (ADIP) website. Wind data was obtained from the National Oceanic and Atmospheric Administration (NOAA) Integrated Surface Database, as further summarized on the FAA ADIP website.

The results indicated that Runway 04/22 provides greater than 99% crosswind coverage for both smaller aircraft with crosswind capability of 10.5 knots and larger aircraft with crosswind capability of 13 knots. Runway 04S/22S was not analyzed separately for crosswind coverage as it shares the same alignment as Runway 04/22. No additional crosswind runways or changes to runway alignment are required to provide adequate wind coverage. A summary of the crosswind coverage is shown in Table 4-1 and Table 4-2.

Table 4-1: FAA Design Standards for Allowable Crosswind Components

Runway Design Code	Allowable Crosswind Component (Knots)
A-I and B-I	10.5
A-II and B-II	13
A-III, B-III, C-I through D-III, D-I through D-III	16

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Table 4-2: Crosswind Coverage

Wind Speed (Knots)	Runway 04/22		
	All Weather	Visual Flight Rules (VFR)	Instrument Flight Rules (IFR)
10.5	99.87%	99.85%	99.96%
13	99.95%	99.94%	99.98%

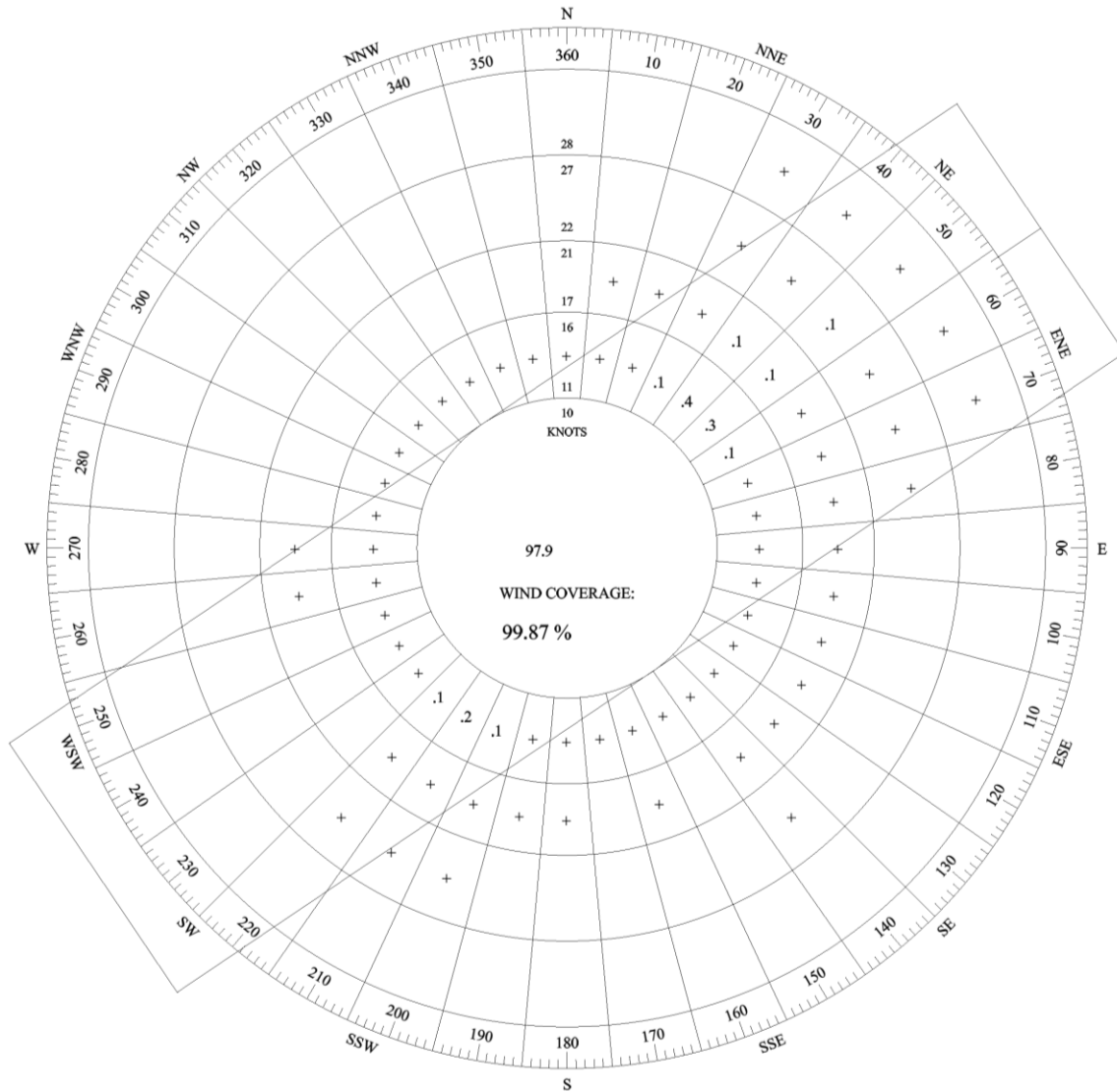


Figure 4-1: All Weather Wind Rose, 10.5 Knot Wind Speed (2013–2022)

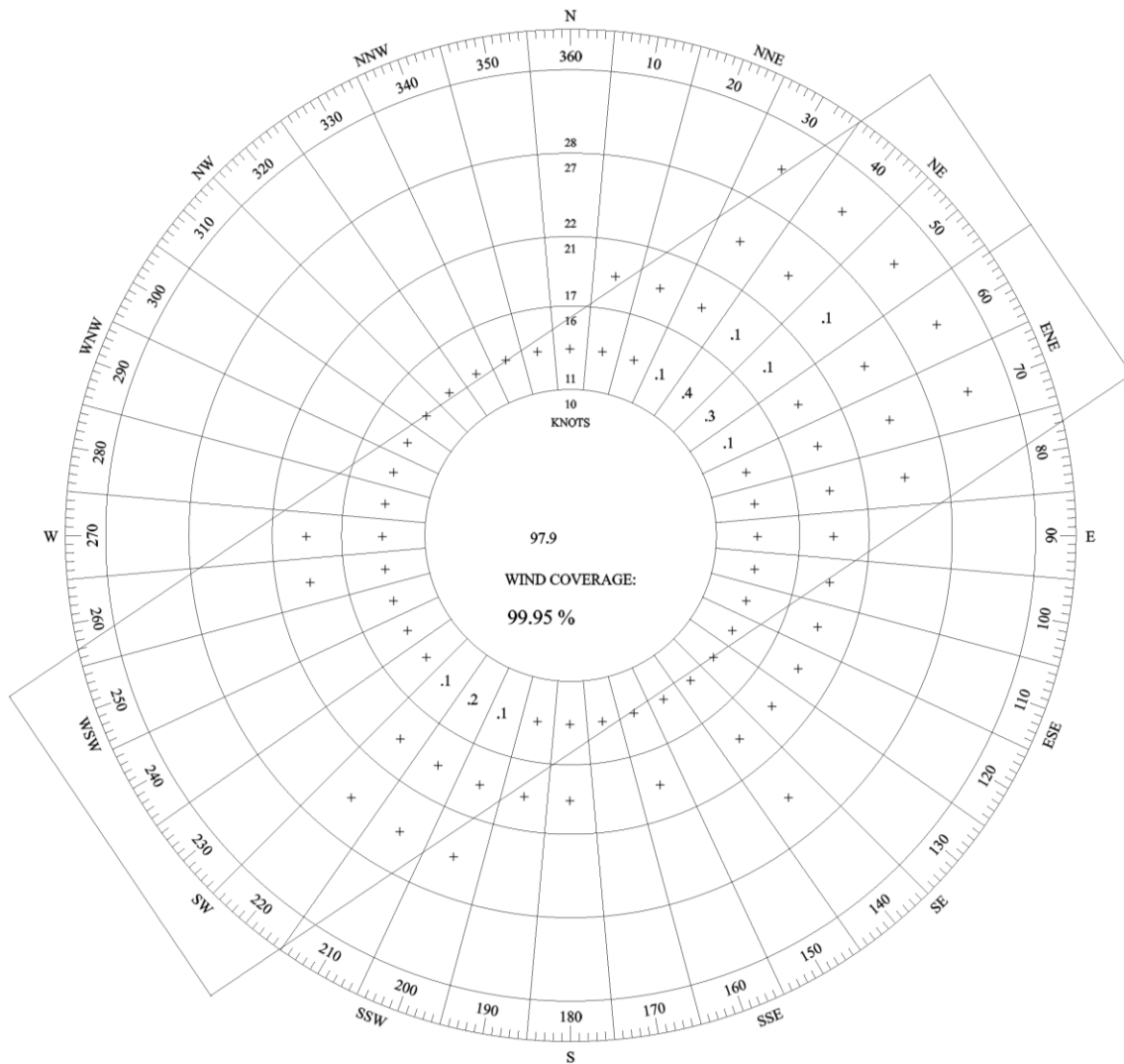


Figure 4-2: All Weather Wind Rose for Wasilla Airport, 13 Knot Wind Speed (2013–2022)

RUNWAY DESIGNATIONS

Both runways have a magnetic azimuth of 55.83 degrees. The “Runway 04/22” designation is currently compliant with the allowable variation of three degrees for runway designations, as detailed in FAA Order 8260.19J *Flight Procedures and Airspace* (FAA, 2023e). However, if the magnetic declination continues to shift at its current rate, both runways will need to be re-designated as “Runway 05/23” by roughly the year 2031 due to magnetic drift.

LENGTH

FAA AC 150/5325-4B *Runway Length Requirements for Airport Design* (FAA, 2005) provides guidance for determining runway length requirements for various categories of aircraft.

Runway Length Required for Existing Critical Aircraft

The largest aircraft that currently meets the regular use definition for the Wasilla Airport is the A-I Small, such as the Cessna 206, which has an MTOW of less than 12,500 pounds. Therefore, Figure 2-1, “Small Airplanes with Fewer than 10 Passenger Seats” of the FAA AC 150/5325-4B was referenced to determine runway length requirements for the existing critical aircraft. Figure 2-1, within FAA AC 150/5325-4B, contains one chart with two sets of data: the first data set covers the length requirements for 95% of the fleet; the second data set covers the length required for 100% of the fleet. FAA AC 150/5325-4B states that 100% of the fleet is used when the “airport is primarily intended to serve communities located on the fringe of a metropolitan area or a relatively large population remote from a metropolitan area” (FAA, 2005). As such, the “100% of fleet” portion of the figure was used to determine the minimum runway length required. Using an airport elevation of 350 feet (North American Vertical Datum 1988), a mean daily maximum temperature of 67 degrees Fahrenheit, no wind, and an aircraft assumed to be at MTOW, the recommended minimum runway length required for this group of aircraft at the Wasilla Airport is 3,450 feet. Runways 04 and 22 provide 3,700 feet of takeoff runway available, which is sufficient for the critical aircraft and occasional use by other aircraft such as the Cessna 208 Caravan. In interviews with airport users, pilots expressed the need to maintain or extend the existing runway length. Users also stated that reducing runway length would present safety concerns.

The current length of Runway 04S/22S—1,690 feet—does not meet the required runway length of 3,450 feet for A-I Small aircraft, as discussed above. The runway is primarily used by small GA tundra tire- and ski-equipped STOL aircraft. Users have stated that the runway is adequate at its existing length for accommodating short-field capability aircraft. For comparison, the gravel STOL runways at the Birchwood Airport and Palmer Municipal Airport are 1,802 feet long and 1,560 feet long, respectively.

Runway Length Required for Near-Term and Ultimate Critical Aircraft

According to the Aviation Activity Forecast, the near-term and ultimate critical aircraft for Runway 04/22 is a B-II. In accordance with FAA AC 150/5325-4B *Runway Length Requirements for Airport Design* (FAA, 2005), the runway length requirement for GA aircraft over 12,500 pounds was determined using Figure 3-1, “75 Percent of Fleet at 60 or 90 Percent Useful Load” (see AC 150/5325-4B for Figure 3-1). The figure contains two charts, one that covers the requirements for 75% of the fleet at 60% useful load and another that covers 75% of the fleet at 90% useful load. The “90% useful load” chart was used in the determination. Using the same elevation and weather data described above, the recommended minimum runway length required for a B-II aircraft at the Wasilla Airport is 5,850 feet.

Additionally, AC 150/5325-4B allows for runway length adjustment factors to account for the effective gradient of the runway. The effective gradient is defined as the difference between the high point elevation and low point elevation on the runway divided by the runway length. The effective gradient for existing Runway 04/22 is 0.48%. The AC states that to calculate the length adjustment, “The runway lengths obtained from Figures 3-1 or 3-2 (see AC 150/5325-4B for Figures) are increased at the rate of 10 feet for each foot of elevation difference between the high and low points of the runway centerline.” Currently, there is an 18-foot elevation difference between the runway centerline’s high point (elevation 353.7 feet) located near the Runway 22 threshold and the low point (elevation 335.7 feet) located at the Runway 04 threshold. Therefore, a length adjustment factor of 180 feet applies, making a total recommended minimum runway length of 6,030 feet required for B-II aircraft with a MTOW over 12,500 pounds at Wasilla Airport.

The final eligibility determination for extending Runway 04/22 from its existing length to the recommended runway length will depend on the aircraft fleet mix present at the airport at the time of proposed construction and economic development at the airport. In the FAA memorandum dated May 20, 2025, with the subject “Reauthorization Program Guidance Letter (R-PGL) 25-08: Alaska and Other Non-contiguous States and Territories” (FAA, 2025b), the FAA states that “Any economic development needs must be demonstrated by the sponsor to have a direct, tangible need for aircraft operations that warrant a longer, wider, or higher strength runway in connection to local business entities that actively use the airport. Any request for a runway expansion under this section must be approved by APP-400 based on the following information:

- The estimated number of operations by aircraft type that cannot be fully accommodated on the existing runway and under what conditions they cannot be accommodated (e.g., density altitude, payload needs including cargo such as fish hauls, runway condition);
- Letters of intent from one or more businesses operating at or proximate to the airport that detail the quantifiable benefits of the expanded runway (e.g., new aircraft operations, number of jobs);
- Complete planning to demonstrate that the expanded runway will serve aircraft performance needs using AC 150/5325-4 *Runway Length Requirements for Airport Design*, and in consideration of one-engine inoperative obstacle clearance as applicable; and
- Any other quantitative and directly attributed qualitative information related to how the runway extension would improve local economic development.”

If, at the time of the proposed extension, the City can provide supporting documentation demonstrating that they meet the criteria above and/or that the fleet mix has changed such that there is regular use by B-II aircraft with a MTOW over 12,500 pounds, then extending the runway up to 6,030 feet maybe AIP eligible. If the extension of the runway is determined to be non-AIP eligible, other funding sources will need to be utilized to extend the runway by 2,330 feet.

WIDTH

Runway Width Required for Existing Critical Aircraft

FAA AC 150/5300-13B *Airport Design* (FAA, 2022b) requires that runways intended for use by A-I Small aircraft have a minimum width of 60 feet and 10-foot shoulders. Runway 04/22 is presently 75 feet wide with 10-foot-wide unpaved shoulders, exceeding standard requirements for the airport’s critical aircraft. Users have expressed the desire to maintain the current width of 75 feet to provide additional safety, especially considering the high number of training operations that occur at the airport.

Runway 04S/22S is 60 feet wide (edge marker to edge marker) with 10-foot-wide grass shoulders. However, the gravel surfacing of the runway is roughly 22 feet wide, resulting in an inconsistent runway surface. To more closely align with FAA design standards, the gravel surface of Runway 04S/22S should be widened to 60 feet, and the edge markers should be offset from the centerline an additional 2 feet from their current position.

Runway Width Required for Near-Term and Ultimate Critical Aircraft

The forecast projected that the near-term and ultimate critical aircraft for Runway 04/22 will be the B-II. As such, future improvements to Runway 04/22 should meet the design standards of B-II aircraft. B-II runways

have a minimum width of 75 feet and 10-foot-wide shoulders. Runway 04/22 currently meets these requirements. If the fleet mix changes or documented economic data justifies widening the runway to support B-III operations, then widening the runway to 100 feet with 20-foot-wide shoulders is recommended. The City wishes to consider the 75-foot minimum runway width required for B-II aircraft in the near-term configuration but expand the runway width to 100 feet, with 20-foot-wide shoulders, in the ultimate configuration to accommodate use by larger aircraft.

The critical aircraft for Runway 04S/22S is anticipated to remain the A-I Small. To more closely align with the FAA standards, the width of the gravel surfacing should be extended to 60 feet, and the edge markers/reflectors (cones) should be offset from the centerline an additional 2 feet.

RUNWAY SAFETY AREA

The RSA for Runway 04/22 is 150 feet wide and extends 300 feet beyond each threshold. For runways with visibility greater than $\frac{3}{4}$ mile, the existing RSA dimensions meet the standards for the near-term and ultimate B-II critical aircraft but exceed those of the existing A-I Small critical aircraft, which only require an RSA width of 120 feet extending 240 feet beyond each threshold on runways with the same visibility minimums.

The graded portion of the Runway 04/22 RSA narrows to approximately 140 feet beyond each runway threshold. This condition will need to be corrected for the RSA to meet B-II requirements in the near-term layout. The City wishes to consider extending the RSA in the ultimate configuration to 300 feet wide and 600 feet beyond each runway end to provide additional safety for use by larger aircraft.

The RSA for Runway 04S/22S is 120 feet wide and extends 240 feet beyond each runway end, which meets the requirements for an A-I Small visual runway.

Runway 04S/22S is partially within the RSA of Runway 04/22, and simultaneous operations are not allowed on these runways.

RUNWAY OBJECT FREE AREA AND OBSTACLE FREE ZONE

The existing OFA dimensions exceed the standards for the runway's current critical aircraft and are sufficient to meet the needs of B-II aircraft for runways with visibility minimums greater than $\frac{3}{4}$ mile, aligning with the needs of the airport's near-term and ultimate critical aircraft. The size of the OFA shown for the existing Runway 04/22 should be 250 feet wide and extend 240 feet beyond the runway ends to serve the A-I Small Critical Aircraft with visibility minimums greater than $\frac{3}{4}$ mile.

The existing OFA for Runway 04S/22S is 250 feet wide and extends 240 feet beyond each threshold. These dimensions meet the requirements for A-I Small aircraft for visual runways, aligning with the existing and ultimate critical aircraft for the runway.

The Runway OFZ for A-I (Small) aircraft on runways with visibility minimums greater than $\frac{3}{4}$ mile should be 250 feet wide and extend 200 feet beyond both ends of the runway. The existing OFZ for Runway 04/22 is 400 feet wide and extends 200 feet beyond each threshold, which exceeds the standards for the current critical aircraft but meets the requirements for the ultimate B-II critical aircraft for runways with visibility minimums greater than $\frac{3}{4}$ mile. The existing OFZ for Runway 04S/22S meets the requirements for A-I Small visual runways.

The OFZs for Runways 04/22 and 04S/22S appear to be clear of non-frangible objects.

RUNWAY PROTECTION ZONES

The existing Runway 04/22 RPZs currently meet the design requirements for A-I Small and B-II runways with visibility minimums not less than $\frac{3}{4}$ -mile. Both RPZs for Runway 04/22 have an inner width of 1,000 feet, an outer width of 1,510 feet, and a length of 1,700 feet. The current configuration of the Runway 04/22 RPZs aligns with the existing and ultimate critical aircraft.

The existing RPZs for Runway 04S/22S meet the design requirements of A-I Small visual runways. Both Runway 04S/22S RPZs have an inner width of 250 feet, an outer width of 450 feet, and a length of 1,000 feet. The current configuration of the RPZs for Runway 04S/22S aligns with the existing and ultimate critical aircraft.

See Section 4.5.6 for land use requirements within the existing runway RPZs.

The current and future design requirements for Runways 04/22 and 04S/22S in relation to the runway's existing conditions can be found in Table 4-3 and Table 4-5.

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Table 4-3: Design Standards Table for Runway 04/22 - Existing Critical Aircraft (A-I Small)

	RUNWAY 04/22 EXISTING CONDITIONS	FAA DESIGN STANDARD A-I SMALL AIRCRAFT*
RUNWAY DESIGN		
Runway Length (ft) ¹	3,700	3,450 ²
Runway Width (ft.)	75	60
Runway Shoulder Width (ft)	10	10
Blast Pad Width (ft)	N/A	80
Blast Pad Length (ft)	N/A	60
Crosswind	13 kt	10.5 kt
RUNWAY PROTECTION		
Runway Safety Area (RSA)		
Length Beyond Departure End (ft)	300	240
Length Prior to Threshold (ft)	300	240
Width (ft)	150	120
Runway Object Free Area (ROFA)		
Length Beyond Runway End (ft)	300	240
Length Prior to Threshold (ft)	300	240
Width (ft)	500	250
Runway Obstacle Free Zone (ROFZ)		
Length Prior to Threshold (ft)	200	200
Width (ft)	400	250 ³
Approach Runway Protection Zone (RPZ)		
Length (ft)	1,700	1,700
Inner Width (ft)	1,000	1,000
Outer Width (ft)	1,510	1,510
Departure Runway Protection Zone (RPZ)		
Length (ft)	1,000	1,000
Inner Width (ft)	500	250
Outer Width (ft)	700	450
RUNWAY SEPARATION		
Runway Centerline to:		
Parallel Runway Centerline (ft)	87.5	N/A – No Simultaneous Ops ⁴
Hold Position (ft)	200	125
Parallel Taxiway (ft)	300	150
Aircraft Parking (ft)	~360	Refer to AC 150/5300-13B par. 5.4.1.2

* Design Standards for Runways with visibility minimums not lower than ¼ mile

¹ FAA Standard Runway Length determined using FAA AC 150/5325-4B. Noted length based on an approx. airport elevation of 350 ft. and mean daily maximum temperature of 67 °F for Wasilla Airport.

² Minimum length required to serve Cessna 182 (small aircraft with fewer than 10 passenger seats), 100% of fleet

³ Based on aircraft meeting conditions stated in FAA AC 150/5300-13B par. 3.11.2.1.1b

⁴ Minimum separation between parallel runways at non-towered airports for simultaneous independent operations is 700 ft. using VFR, per FAA AC 150/5300-13B par. 3.9.2.1

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Table 4-4: Design Standards Table for Runway 04/22 – Ultimate Critical Aircraft (B-II)

	RUNWAY 04/22 EXISTING CONDITIONS	FAA DESIGN STANDARD B-II AIRCRAFT*
RUNWAY DESIGN		
Runway Length (ft) ¹	3,700	6,030 ²
Runway Width (ft.)	75	75
Runway Shoulder Width (ft)	10	10
Blast Pad Width (ft)	N/A	95
Blast Pad Length (ft)	N/A	150
Crosswind	13 kt	13 kt
RUNWAY PROTECTION		
Runway Safety Area (RSA)		
Length Beyond Departure End (ft)	300	300
Length Prior to Threshold (ft)	300	300
Width (ft)	150	150
Runway Object Free Area (ROFA)		
Length Beyond Runway End (ft)	300	300
Length Prior to Threshold (ft)	300	300
Width (ft)	500	500
Runway Obstacle Free Zone (ROFZ)		
Length Prior to Threshold (ft)	200	200
Width (ft)	400	400 ³
Approach Runway Protection Zone (RPZ)		
Length (ft)	1,700	1,700
Inner Width (ft)	1,000	1,000
Outer Width (ft)	1,510	1,510
Departure Runway Protection Zone (RPZ)		
Length (ft)	1,000	1,000
Inner Width (ft)	500	500
Outer Width (ft)	700	700
RUNWAY SEPARATION		
Runway Centerline to:		
Parallel Runway Centerline (ft)	87.5	N/A – No Simultaneous Ops ⁴
Hold Position (ft)	200	200
Parallel Taxiway (ft)	300	240
Aircraft Parking (ft)	~360	Refer to AC 150/5300-13B par. 5.4.1.2

* Design Standards for Runways with visibility minimums not lower than ¼ mile

¹ FAA Standard Runway Length determined using FAA AC 150/5325-4B. Noted length based on an approx. airport elevation of 350 ft. and mean daily maximum temperature of 67 °F for the Wasilla Airport.

² Minimum length required to serve GA aircraft over 12,500 lbs, 75% of fleet at 90% useful load with 18 ft. elevation difference between existing runway high and low points

³ Based aircraft meeting conditions stated in FAA AC 150/5300-13B par. 3.11.2.1.2.a

⁴ Minimum separation between parallel runways at non-towered airports for simultaneous independent operations is 700 ft. using VFR, per FAA AC 150/5300-13B par. 3.9.2.1

Table 4-5: Design Standards for Runway 04S/22S – Existing & Ultimate Critical Aircraft (A-I Small such as Cessna 180)

	RUNWAY 04S/22S (A-I Small)	FAA DESIGN STANDARD A-I SMALL AIRCRAFT*
RUNWAY DESIGN		
Runway Length	1,690	3,450 ²
Runway Width (ft)	60	60
Runway Shoulder Width (ft)	10	10
Blast Pad Width (ft)	N/A	80
Blast Pad Length (ft)	N/A	60
Allowable Crosswind	10.5 kt	10.5 kt
RUNWAY PROTECTION		
Runway Safety Area (RSA)		
Length Beyond Departure End (ft)	240	240
Length Prior to Threshold (ft)	240	240
Width (ft)	120	120
Runway Object Free Area (ROFA)		
Length Beyond Runway End (ft)	240	240
Length Prior to Threshold (ft)	240	240
Width (ft)	250	250
Runway Obstacle Free Zone (ROFZ)		
Length Prior to Threshold (ft)	200	200
Width (ft)	250	250 ³
Approach Runway Protection Zone (RPZ)		
Length (ft)	1,000	1,000
Inner Width (ft)	250	250
Outer Width (ft)	450	450
Departure Runway Protection Zone (RPZ)		
Length (ft.)	1,000	1,000
Inner Width (ft.)	250	250
Outer Width (ft)	450	450
RUNWAY SEPARATION		
Runway Centerline to:		
Parallel Runway Centerline (ft)	87.5	N/A – No Simultaneous Ops ⁴
Hold Position (ft)	N/A	125
Parallel Taxiway (ft)	212.5	150
Aircraft Parking (ft)	~270	Refer to AC 150/5300-13B par. 5.4.1.2

* Design Standards for Visual Runways

¹ FAA Standard Runway Length determined using FAA AC 150/5325-4B. Noted length based on an approx. airport elevation of 350 ft. and mean daily maximum temperature of 67 °F for the Wasilla Airport.

² Minimum length required to serve Cessna 180 (small aircraft with fewer than 10 passenger seats), 100% of fleet

³ Based on aircraft meeting conditions stated in FAA AC 150/5300-13B par. 3.11.2.1.1b

⁴ Minimum separation between parallel runways at non-towered airports for simultaneous independent operations is 700 ft. using VFR, per FAA AC 150/5300-13B par. 3.9.2.1

4.2.2 TAXIWAYS AND TAXILANES

FAA AC 150/5300-13B *Airport Design* (FAA, 2022b) provides the standards for taxiways and taxilanes, which are dictated by the TDG. The TDG is determined by the most demanding aircraft regularly using the taxiway or taxilane, which can vary across the airfield. The TDG of an aircraft is determined by its undercarriage

dimensions, specifically the aircraft's main gear width and the cockpit to main gear distance. Conversely, TSAs are determined by wingspan and are a function of the ADG of the taxiway's critical aircraft.

TAXIWAYS

The existing dimensions of each taxiway and corresponding safety area compared to the FAA dimensional requirements for TDG 2A and ADG II design groups, which apply to the airport's ultimate B-II critical aircraft, are summarized in Table 4-6.

Table 4-6: Taxiway Design Requirements

TAXIWAY DATA ¹								
Taxiway	Taxiway Width		Shoulder Width		TSA Width		Taxiway Object Free Area (TOFA) Width	
	Existing	TDG 2A Std.	Existing ²	TDG 2D Std.	Existing ²	ADG II Std.	Existing ²	ADG II Std.
A	40	35	5	15	79	79	131	89
B	40	35	10	15	79	79	131	89
C	40	35	-	15	79	79	131	89
D	40	35	5	15	79	79	131	89
H	35	35	10	15	79	79	131	89

¹ All dimensions given in feet.

² Existing shoulder, TSA, and TOFA dimensions sourced from the 2020 ALP.

The dimensions of all taxiways align with FAA design requirements for TDG 2A, except for shoulder width. Near-term improvements should include widening existing shoulders to provide standard shoulder width for taxiways throughout the airport.

TAXILANES

Taxilanes intended for use by A-I Small aircraft must meet the requirements of design groups TDG 1A and ADG I. It is anticipated that the A-I Small aircraft will remain the critical aircraft for these taxilanes, and, therefore, ultimate and near-term improvements to Taxilanes A, D, F, N, O, P, and Q should be designed to the standards of design groups TDG 1A and ADG I.

Existing Taxilane E and the taxilane constructed as part of the Apron E expansion project were designed to accommodate aircraft of design groups TDG 3 and ADG III to better serve a wider range of aircraft sizes that are anticipated to accompany future commercial development on the northeastern lease lots.

The existing dimensions of each taxilane and corresponding safety areas compared to those required for the taxilane's ultimate critical aircraft are summarized in Table 4-7. The ultimate critical aircraft for Taxilanes A, D, F, N, O, P, and Q is the A-I Small, which requires facilities to accommodate TDG 1A and ADG I aircraft design groups. The ultimate critical aircraft for existing Taxilane E is the B-III, which requires facilities to accommodate TDG 3 and ADG III aircraft design groups.

Table 4-7: Taxilane Design Requirements

TAXILANE DATA ¹						
Taxilane	Taxilane Width		Taxiway/Taxilane Safety Area Width (TSA)		Taxilane Object Free Area Width (TLOFA)	
	Existing	TDG 1A Std.	Existing ²	ADG I Std.	Existing ²	ADG I Std.
A	40	25	49	49	79	79
D	40	25	49 ³	49	79	79
F	40	25	49	49	79	79
N	35	25	49	49	79	79
O	35	25	49	49	79	79
P	35	25	49	49	79	79
Q	35	25	49	49	79	79
	Existing	TDG 3 Std.	Existing	ADG II Std.	Existing	ADG III Std.
E⁴	50	50	118	118	158	158

¹ All dimensions given in feet.

² Existing TSA and TLOFA dimensions sourced from the 2020 ALP

³ TSA requirement not met at northernmost ~145 feet due to proximity of lease lot.

⁴ Existing dimensions for Taxilane E and corresponding safety areas are based on TDG 3/ADG III design standards. Information sourced from Construct Apron E, Phase 1 (AIP No. 3-02-0417-021-2018) project documents.

Taxilanes A, D, F, O, and P meet TDG 1A requirements. Hangars along Taxilane N and wingtips of aircraft parked on the Hangar Apron next to Taxilane Q currently lie within the 79-foot-wide TLOFA required for TDG 1A aircraft. Some hangars on the Hangar Apron are built to the edge of the TOFA. Therefore, planes and vehicles that park in front of the hangar doors can occasionally block traffic on the taxilanes or require aircraft to maneuver around the parked obstacle. Future lease lot development should incorporate building setbacks from the TOFA to accommodate aircraft and vehicle parking and snow storage on the lease lots without encroaching onto the traveled taxilanes.

Taxiway E meets TDG 3 requirements and is designed to accommodate larger aircraft that travel through the GA Apron to reach the lease lots on the apron edge.

As the airport expands to meet the requirements of B-II aircraft, the City should expand apron capabilities to accommodate the current and forecasted fleet mix of small GA and larger commercial aircraft. The FAA allows separate areas of an airport to be designed to meet the needs of different aircraft sizes (FAA, 2022b). All facilities within each segregated area must meet the design criteria of the ADG intended to utilize the area. Facilities intended to be used by aircraft of a specific ADG that do not meet the required design standards for that ADG pose a safety risk and should, at a minimum, be declared as sub-standard conditions on the ALP. Currently, Taxilanes N and Q do not provide adequate separation requirements for the current critical aircraft of A-I Small and should be noted as having sub-standard conditions.

Moving forward, the City should prioritize the development of a new apron and lease areas to meet the demand and separate small GA parking and storage from large commercial operators.

4.2.3 AIRCRAFT FUELING

The existing fuel station serves the needs of the current airport users. As operations increase and larger commercial operators increase use at the airport, additional fueling capabilities may be required. Users have expressed a desire for a Fixed Base Operator (FBO) to sell fuel and provide mobile fuel delivery service at the airport via fuel truck. As such, airport development alternatives should provide room for additional fuel storage and service providers at the airport.

4.2.4 PILOT'S LOUNGE

Users have strongly expressed a desire for a larger terminal facility. Future improvements should consider replacing the existing Pilot's Lounge and establishing an onsite terminal offering additional amenities to transient pilots, with possible concession space available for vendors, air taxis, and air carriers. See additional information regarding terminal facilities in Section 4.2.5.

4.2.5 GENERAL AVIATION FACILITIES

BASED AIRCRAFT APRONS

The total number of leasable tie-down spaces available on the based aircraft aprons is 182, and there was a waitlist of approximately 66 pilots awaiting tie-down availability in summer 2024. This results in a total demand of 248 tie-downs in 2024. Using the base growth rates detailed in the Aviation Activity Forecast for the 20-year planning horizon and using the 2024 demand of 248 tie-downs as the present total, 314 GA tie-down spaces will be required to meet the demand in 2040, eight of which are assumed to be used for large aircraft. However, with the anticipated growth of large aircraft activity at the airport, the need for large aircraft tie-downs is assumed to outpace the need for small aircraft tie-downs, and large aircraft tie-down demand is anticipated to increase to approximately 15 by 2040. This results in a total demand of 322 tie-downs by 2040, including 307 small aircraft tie-downs and 15 large aircraft tie-downs.

For aprons with taxilanes located on the edge of the apron, the FAA's apron space planning guide recommends 755 square yards and 1,075 square yards of apron space for ADG I and ADG II aircraft, respectively, which includes space for the adjacent taxilanes and clearance around the aircraft (FAA, 2022b). Using the 2024 tie-down total of 176 small tie-downs and six large tie-downs and the 2024 apron space available, and assuming that one large aircraft tie-down will utilize roughly 142% of the space used for one small aircraft tie-down, the airport's apron layout provides approximately 804 square yards of available apron space per small tie-down and approximately 1,140 square yards of available apron space per large tie-down.

Using the forecasted projected growth and assuming that 15 of the 322 projected tie-downs will be reserved for larger aircraft, there is an estimated need for 247,910 square yards of apron space by 2040. Meeting this demand would require the development of approximately 99,575 square yards of new apron area for tie-down use. To meet the current and forecasted demand for based aircraft, new apron development should plan to continue accommodating predominantly A-I Small GA aircraft with near-term and ultimate configurations, including space to accommodate at least nine additional large aircraft tie-downs.

The majority of potential lessees on the current tie-down waitlist would prefer tie-downs with access to power for head bolt heaters. A variety of other accommodations and improvements to the aprons were requested in interviews with airport tenants, including additional apron lighting, covered parking, and the development of City-owned T-hangars.

TRANSIENT AIRCRAFT PARKING APRONS

Guidance from FAA AC 150/5300-13B (FAA, 2022b) and the Airport Cooperative Research Program (ACRP) *Guidebook on General Aviation Facility Planning* (ACRP, 2014) identify two methods to determine the need for transient apron space: (1) by number of based aircraft or (2) by number of annual operations. The based aircraft method was used to calculate the need for transient aircraft parking. This method considers multiple characteristics of the airport in addition to the number of based aircraft, such as the size of the airport, the airport's busiest month, and the percentage of itinerant operations at the airport. The Wasilla Airport was considered a small GA airport with an assumed 250 annual operations per based aircraft. Based on the current and assumed future configurations of the transient apron, the guidance recommends 755 square yards of apron space for each small GA transient tie-down, including space for taxilanes.

Considering the current 190 based aircraft, there is a current need for 10 tie-downs dedicated for transient use. Using the recommended 755 square yards of apron space for each A-I aircraft tie-down, this translates to a current need for approximately 7,000 square yards of transient apron area or 2,780 square yards more than what is currently available. Based on the forecasted 285 based aircraft, there is a forecasted need for 12 tie-downs dedicated to transient pilots by the year 2040. This would require approximately 8,680 square yards of available transient apron area or an expansion of approximately 4,460 square yards more than what is currently available.

The City is currently exploring reconfiguration of the apron space adjacent to the current transient apron, which would include the addition of six transient tie-downs (City of Wasilla, 2023a); however, these plans have not yet been finalized and are not reflected in the calculations included in this report.

TERMINAL FACILITIES

Aside from the Pilot's Lounge, Wasilla Airport does not have any other terminal facilities available. However, considering the rapid population growth of the Wasilla area and the increasing commercial interest in the airport, the City is considering developing a City-owned Aviation Business Center with office space for an onsite Airport Manager. The building will also include public restrooms and heated hangar space available for rent.

4.2.6 PAVEMENT CONDITION

With the exception of new Apron E, the existing runway, apron, and taxiway pavement contains longitudinal and transverse cracking. The cracks were recently sealed in 2021 and 2022, increasing the PCI values and extending the life of the pavement. The existing pavement needs to be rehabilitated, and this effort should be combined with the City's desire to extend the runway in the near term. If funding is not available to extend the runway, a stand-alone project should be initiated to rehabilitate the runway pavement in its current dimensions.

The City should continue its pavement management program on the existing taxiway and apron pavement and continue to seal cracks and restripe the pavement as the need arises.

4.2.7 HELIPORT

The Aviation Activity Forecast projects helicopter operations to steadily increase during the forecast period (see Chapter 3.0). The majority of these operations are assumed to be performed by various leaseholder fleets.

Due to the increased helicopter traffic, further separation of rotor-wing and fixed-wing traffic and the establishment of a designated heliport are recommended. The heliport should provide an established location for helicopter transient and training operations, military and medevac helicopter operations, and allow for the development of designated helicopter approaches. Additionally, the development of a heliport able to safely accommodate military and medevac helicopters would allow the airport to serve a more crucial role in the community, as this location could serve as a designated pick-up/drop-off medevac location. Current leaseholders could continue to operate helicopters out of their existing lease lots, but future helicopter-oriented lease development should occur in the vicinity of the site selected for future heliport development.

4.3 VISUAL AIDS AND NAVIGATION

4.3.1 SIGNAGE

Standards for airport signage and marking requirements are provided in FAA AC 150/5340-18G *Standards for Airport Sign Systems* (FAA, 2020a) and FAA AC 150/5340-1M *Standards for Airport Markings* (FAA, 2020b).

The current location of the lighted destination and unlit signs at each holding position meets the minimum offset distances for Size 1 signs, which is 10 to 20 feet from the nearest edge of the pavement to the nearest side of the sign (FAA, 2020a).

A review of the effectiveness of the existing hold short signs should be performed as the size of aircraft regularly using Runway 04/22 increases in the future. As the airport expands, increasing the size of destination signs to Size 2 may be necessary to improve effectiveness, which would result in increased separation distance requirements from the edge of the pavement.

Needed short-term signage improvements include moving the lighted destination sign on Taxiway D back in line with the hold short markings to ensure aircraft do not confuse the location of the holding position. Ultimate signage improvements should consider additional runway destination signs for Runway 04S/22S on Taxiways D and H, and additional destination signage on parallel Taxiway B and the aprons to increase locational awareness for transient pilots.

4.3.2 VISUAL AND APPROACH AIDS

PRIMARY RUNWAY 04/22

Considering that the existing MIRL system was installed in 1993 and has exceeded its life expectancy, the City should consider ultimately upgrading the lighting system.

The REILs are not present at either end of the runway. To align with current FAA safety standards, REILs should be installed in line with the runway threshold lights on Runways 04 and 22.

GRAVEL RUNWAY 04S/22S

Runway 04S/22S is delineated with cones and each threshold is equipped with three frangible reflective threshold markers located on each side of both runway ends (four sets of three markers total). The delineating cones should be replaced and offset from the runway centerline an additional 2 feet to align with FAA safety standards.

TAXIWAY LIGHTING

Taxiways are lighted with MITL that are 30 inches tall and appear to be in overall good condition. Recommended short-term improvements include re-grading the taxiway shoulders to cover light cans that have jacked out of the ground and performing repairs to damaged components (see Section 2.2.3).

PRECISION APPROACH PATH INDICATOR SYSTEM

Per FAA AC 150/5340-30J *Design and Installation Details for Airport Visual Aids* (FAA, 2018), PAPI systems are intended to be located on the left-hand side of the runway edge. The airport's current right-hand location for the PAPI is allowable as long as the inboard light housing is seen as red and the two outboard light housings are seen as white. Near-term and Ultimate configurations should consider installing a 4-box PAPI on the Runway 22 end.

LIGHTED WIND CONE AND SEGMENTED CIRCLE

The lighted wind cone and 100-foot diameter segmented circle are located on the southeast side of Runway 04/22 at approximately midfield, with its current location bisected by the runway's OFA boundary. All components of the segmented circle appear to be in good condition, except that the orange paint on various components is failing. The non-standard right-hand traffic pattern for Runway 04 is designated by the segmented circle's indicators. Orange barrels are currently used in the segmented circle. Replacement of the drums with a panel-style segmented circle is recommended to shed accumulated snow better.

SUPPLEMENTAL WIND CONES

There are two unlit supplemental wind cones at the airport. One supplemental wind cone is located beyond the northwest end of Runway 04, adjacent to the Hangar Apron tie-downs, and the second is located beyond the northeast end of Runway 22, near the airport boundary and adjacent to Aviation Avenue. Both wind cones are clear of the OFA and OFZ of both runways in their current locations.

Per FAA AC 150/5340-30J, the preferred location for a supplemental wind cone is on the left side of the runway when viewed from a landing aircraft and 500 feet to 1,000 feet inward toward the runway midpoint from the runway end (FAA, 2018). The current location of the two supplemental wind cones will need to be re-evaluated based on any proposed future extension of Runway 04/22.

ROTATING BEACON

The current location of the rotating beacon is considered suitable.

4.3.3 WEATHER EQUIPMENT

It is recommended that tree and brush clearing be performed in all areas within 500 feet of the AWOS pad for the airport to maintain the FAA siting requirements for the AWOS wind sensors.

4.4 OTHER AIRCRAFT FACILITIES

4.4.1 SKI-PLANE FACILITIES

Future apron and taxiway improvements should be planned to designate a ski-aircraft apron with tie-down areas and an alternative taxiway to Runway 04S/22S that are not plowed, except where they cross Taxiway B, to better accommodate ski-equipped aircraft.

The airside demand capacity analysis included in the forecast concluded that a parallel runway is not justified based on demand, and Runway 04/22 has sufficient capacity to meet the current and forecasted demand for the airport. However, Runway 04/22 is paved, the snow is cleared regularly, and it cannot accommodate ski-equipped aircraft.

AIP eligibility for future projects involving Runway 04S/22S will be based on demonstrated demand for a ski strip. Eligibility will not be determined until a specific ski strip improvement project is initiated, at which time the number of operations performed by straight ski-equipped aircraft will need to be documented to establish the level of FAA participation. Preliminary assumptions suggest there are over 500 annual ski operations at the airport; however, the number specifically performed by straight ski aircraft is unknown.

4.4.2 GLIDER FACILITIES

According to the Forecast, glider operations at the Wasilla Airport are not forecasted to increase considerably during the 20-year forecast period. However, the airport should consider establishing level areas in the Runway 04/22 RSA, adjacent to the runway, that are suitable for emergency glider landings. The glider operators stated that this is an important safety concern because a glider is committed to landing on short final and needs a safe area to do so if the planned runway becomes unavailable. The infield area, in its current condition, contains multiple ditches and low spots that are not suitable for glider use.

Other improvements that will increase glider operational safety at the airport include the construction of “staging areas” off of the taxiways at either end of the runway for glider preparation.

4.4.3 SEAPLANE BASE

Airport users expressed a desire for the development of seaplane facilities during the last update to the airport’s master plan (USKH, 2012); however, only a small number of the stakeholders interviewed for this Master Plan Update voiced the desire to establish a seaplane base at the airport. Due to the limited expressed interest and the potential airspace conflicts and environmental impacts associated with the development of a

seaplane base, implementation of a seaplane base at the Wasilla Airport is not recommended. Instead, seaplane facilities in the MSB should be implemented in accordance with the recommendations of the RASP.

4.5 LANDSIDE FACILITIES

4.5.1 AIRPORT ACCESS ROADS

The existing airport access roads meet the current demands of the airport, with the only exception being poor access for pedestrian and bicycle traffic due to the lack of nearby trails and pathways along Aviation Avenue. Airport users have expressed a need for future airport development to include the construction of pathways around the airport perimeter to eliminate pedestrian traffic on-field. Alternatives that consider expanding the runway and acquiring additional airport property to the west should also include consideration for further extension of Aviation Avenue. The road extension would need to be located outside of the future Runway 04/22 RSA and constructed at a height such that a 15-foot object would not present an obstruction to the approach.

4.5.2 LEASE LOTS

If the ratio of based aircraft to occupied lease lots remains steady, and assuming that based aircraft increases to 285 by the year 2040 as projected, there will be a total demand of approximately 81 lease lots. To meet this future demand, approximately 54 additional lease lots will be required to accommodate the growth following completion of the Apron E expansion. Based on these considerations, a minimum of 54 lease lots should be planned to meet the current and forecasted demand for hangar development.

The size of the existing lease lots varies greatly, with the smallest lots measuring about 14,400 square feet and the largest lot measuring roughly 1.4 acres. The City has stated that they prefer two configurations for future commercial or large GA (T-hangar) lease lots: 200 feet long by 225 feet wide or 150 feet long by 400 feet wide. These lease dimensions would provide a 50-foot building setback from the taxiway or apron with roughly 150 feet by 225 feet or 100 feet by 400 feet of buildable space, respectively. The preferred future single GA lease lot size is 150 feet long by 125 feet wide, which would provide a 50-foot building setback from taxiways or apron edge with roughly 125 feet by 100 feet of buildable space (City of Wasilla, 2023a). When using the preferred dimensions and assuming that 70% of the future lease lots will accommodate single GA operations (assume 38 additional lots total) and 30% accommodating large GA (T-hangar) or commercial use (assume 16 additional lots total), approximately 33 to 39 acres of new lease lot space is needed to meet the forecasted demand.

Based on the growing commercial demand and feedback from airport users, future improvements at the airport should make an effort to separate commercial activity and GA activity by establishing a designated commercial apron. New apron development should include the construction of a large aircraft apron adjacent to future commercial lots. Segregating aircraft of different sizes will provide an overall safer environment for airport users by allowing future development of the terminal areas to be designed to meet the specific needs of each design group.

There is airport land available north and south of the airport for the development of new GA and aviation lease areas. The near-term and ultimate improvements should consider alternatives that efficiently utilize this land to separate the GA and commercial uses and meet the current and forecasted demand for lease space.

4.5.3 LIGHTING CONTROL VAULT

The airport lighting control building is dilapidated and needs to be replaced. The building is planned for replacement in 2026 to avoid potential operational issues with the controls that could result from the building's current condition.

4.5.4 SECURITY FENCING AND GATES

Airport access is generally uncontrolled during the daytime hours. Aprons are accessible via Gate D (automated gate), located at the northeast corner of Apron B, which remains open during business hours. Airport users have expressed the desire for additional gates to remain open during business hours to relieve congestion at Gate C. All gates are closed after normal business hours. Airport leaseholders and those with tie-downs have key cards for access control after normal business hours. Airport users expressed a desire for improved after-hours access to the aprons by upgrading the existing security gate controls for better usability.

Some commercial leaseholders requested implementing additional security measures to deter theft and vandalism. They also suggested installing a security system for use only by commercial leaseholders with the anticipated influx of commercial development.

The City should upgrade the security and gate system to keep pace with future airport expansion as needed, to support commercial development.

A section of approximately 360 feet of existing fence southwest of Runway 04 and another section of approximately 560 feet of existing fence of the Runway 04/Taxiway D intersection are jacked out of the ground and/or falling over, allowing animals to access the airport property. The jacked and damaged sections of fence are scheduled for replacement in fall 2025/winter 2026.

4.5.5 VEHICLE PARKING

A corresponding increase in available vehicle parking should be considered with future tie-down apron development projects. The ACRP recommends one parking space for every other tie-down space (ACRP, 2014). The City should consider the addition of at least 39 vehicle parking spots adjacent to the western side of the terminal area to support vehicle parking needs of the Hangar Apron and Aprons A and B, and at least 52 vehicle parking spots adjacent to the eastern side of the terminal area to support the parking needs of existing Aprons C, D, and E.

The 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design states that parking facilities with one to 25 parking spaces must provide at least one handicap-accessible space, and parking facilities with 51 to 75 parking spaces must provide at least three handicap-accessible spaces. The ADA standards further state that for every fraction of six handicap-accessible spaces required per parking facility, at least one shall be a van-accessible handicap space (Department of Justice, 2010). This translates to a minimum of three handicap-accessible parking spaces provided for the eastern terminal area parking (one of which is van-

accessible), and at least two handicap-accessible spaces provided for the western terminal area parking (one of which is van-accessible).

The City has explored reconfiguration of the transient apron, which would add an additional 20 long-term vehicle parking spaces in the area and 12 long-term specialty parking spaces that could accommodate longer vehicles or truck and trailer combinations (City of Wasilla, 2023a); however, these plans have not yet been finalized and are not reflected in the calculations included in this report.

4.5.6 BUILDING AND LAND USE REQUIREMENTS

LAND USE WITHIN RUNWAY PROTECTION ZONES

To enhance the protection of people and property on the land adjacent to the airport, FAA Grant Assurances require that airport sponsors seek all possible opportunities and take necessary action to restrict land use within RPZs to those compatible with normal airport operations. Ideally, airport sponsors secure land via fee simple acquisition to fulfill this requirement.

The current configuration of the Runway 04/22 RPZs is designed to the standards of A-I Small and B-II aircraft with greater than ¼-mile visibility minimums. Runway 04S/22S RPZs are designed to the standards of A-I Small aircraft for visual runways. Land within the airport's RPZ areas that fall outside the existing airport boundary is further described below. See Chapter 2.0, Figure 2-8, for the location of the existing RPZs at Wasilla Airport.

EXISTING LAND USE WITHIN THE RUNWAY 04/22 RUNWAY PROTECTION ZONES

See Section 2.2 for a summary of the land and aviation easements within the existing RPZs. There is approximately 0.22 acres of land in the northwest corner of the existing Runway 04 RPZ that the airport does not have rights of access or control. This portion of the RPZ lies outside of the airport boundary and overlaps one lot within the MSB Saska's Meadows subdivision. This parcel is identified as Tract 3, Parcel D, with the street address of 1431 Paddy Place, Wasilla, Alaska (Figure 4-3). Acquisition of an aviation easement in this area is recommended for rights to limit use and clear obstructions from this area in the existing RPZ until the Runway 04 threshold is extended in the near-term configuration.

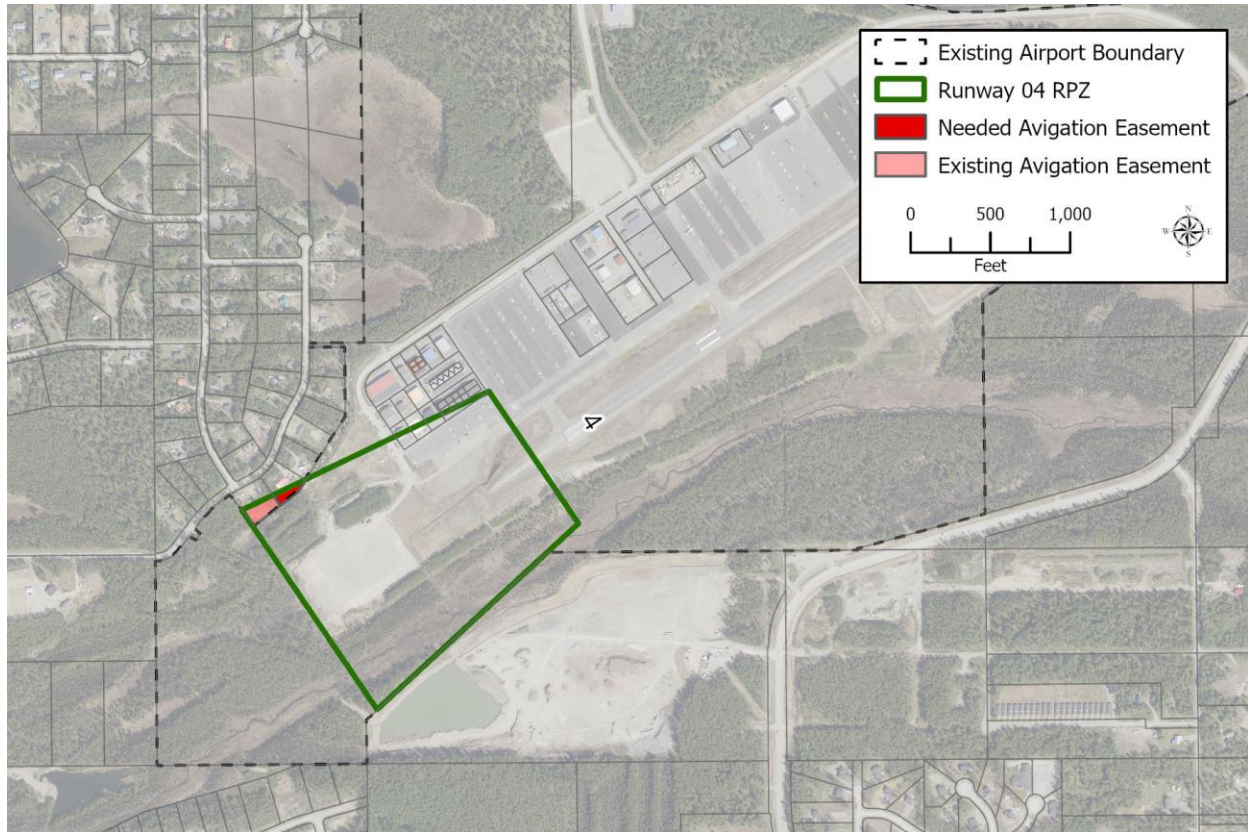


Figure 4-3: Avigation Easement Status for Runway 04 RPZ

The size of the RPZs will not change in the near-term and ultimate configuration; however, the location of the Runway 04 RPZ is anticipated to shift to the southwest to accommodate the runway extension. The City is actively working to acquire land within the ultimate Runway 04 RPZ and below the Runway 04 for the planned 6,000-foot runway length. The current status of land acquisition is shown in Figure 2-14.

It is recommended that the City formally incorporate the undeveloped City-owned parcel located on the west side of the airport boundary and zone the parcel for industrial use. As the Wasilla Airport and adjacent communities continue to expand, the development of a noise exposure map and noise compatibility program should be considered by the City.

EXISTING LAND USE WITHIN THE RUNWAY 04S/22S RUNWAY PROTECTION ZONES

All portions of the Runway 04S/22S RPZs lie within the airport boundary except for the northwest corner of the Runway 22S RPZ, which overlaps approximately 0.02 acres of the ARRC ROW. This area of the ARRC ROW falls within the city limits and is currently zoned for industrial use. This portion of overlap is also within the existing avigation and hazard easement area (Tract 4 Parcel B) that the City has established with ARRC (HDL, 2020).

4.6 AIRPORT SERVICES AND SUPPORT FACILITIES

4.6.1 UTILITIES

Individual lease lots are currently able to obtain underground natural gas, electrical, and telecommunication service extensions from the existing underground utility networks within or adjacent to the airport boundary. However, Airforms, LLC is the only lease lot currently able to access City water through the recently installed waterline extension. The development costs and overall maintenance and acquisition burden required to obtain water and sewer capabilities at lease lots on the airport are considerable, as these services are only accessible to leaseholders by means of private development. The City should consider extending City water and sewer service along Aviation Avenue towards the southwest terminal area within the next planning period. Providing these utilities will advance growth at the airport by creating a more attractive environment for potential private and commercial development.

4.6.2 SNOW REMOVAL

Snow removal at the airport is performed by priority. First priority areas include both runways, Taxiway B, and interlink Taxiways A, D, and H. The northwestern and southeastern terminal areas are considered the second and third priority areas, respectively. Snow removed from first priority areas is stored in the infields south of the main runway. Snow removed from the northwestern terminal area is stored at the northern limits of Apron E and the southern limits of Aprons C and D. Snow removed from the southeastern terminal area is stored at the southern limits of Aprons A and B and the western and southern limits of the Hangar Apron. Maintenance staff manage the height of snow piles with snow blowers throughout the winter. Future airport developments should designate additional snow storage areas on the east and west of the airport to avoid the need to truck snow for disposal. The current snow removal equipment fleet is assumed to meet the current demand at the airport.

Maintenance staff report that snow management becomes increasingly more troublesome toward the end of winter as snow storage areas reach capacity. Airport users have complained about delayed snow removal on taxilanes and taxiways and have reported that snow accumulation occasionally blocks aircraft access. Often, leaseholders clear snow from their lease lots onto adjacent taxilanes. This creates an additional burden for maintenance staff and occasionally results in blocked taxilanes. Ordinance 13.20.220 B. of the Wasilla Municipal Code states that lessees are responsible for providing sufficient area within their property lines for snow storage (City of Wasilla, 2023c). To reduce snow accumulation from lease areas blocking the airport's landside travel ways, it is recommended that the City issue frequent notifications to leaseholders stating that removal and storage of snow accumulated on lease lots is the responsibility of the leaseholder. The City should inform leaseholders that pushing snow from lease lots onto the taxilanes, taxiways, and aprons is hazardous and causes delays to airport-wide snow removal. This snow may not be removed by airport maintenance if the area was previously cleared, which will result in blocked travel ways. Additionally, the City should frequently communicate the order of snow removal priority to airport users and leaseholders so they understand that snow removal on taxilanes and GA aprons will not be addressed until the runway and main taxiways are cleared and usable.

The City should consider the importance of both increased snow storage and more frequent snow management in future development alternatives due to the forecasted increases in based aircraft and lease activity and a larger ultimate aircraft. The development of additional dedicated snow storage space should be a priority as the airport continues to expand to meet current and future demand.

4.6.3 AIRPORT MAINTENANCE

Though the SREB facility provides adequate housing for all of the current airport maintenance and snow removal equipment in addition to acting as an office space, maintenance staff report that the sewer line to the building freezes every winter, and a project is needed to repair the sewer connection.

Airport users have expressed the need for more timely maintenance of airport facilities and surfaces, such as snow removal in the winter and maintenance of grassed areas in the summer. Airport users have also expressed the need for better storage of non-aviation equipment to reduce the potential for damage to aircraft on the aprons.

As the airport continues to expand, the City should plan to ultimately provide year-round, full-time staff to address and manage the airport's day-to-day maintenance and operational needs. A full-time airport manager and maintenance personnel will improve the City's response time to operational or functionality problems related to the airport facilities, such as lighting outages and snow removal. This will translate to increased efficiency, reliability, and higher operational and safety standards for the airport, which will be necessary with the growing demand.

4.6.4 FIRE AND RESCUE

The airport lies within MSB fire service area #130 (MSB, 2025). Fire and rescue services are currently provided by the MSB Central Fire Department based out of Central Mat-Su Fire Department Station 62 and West Lakes Fire Department Station 81. As the airport continues to grow and accommodate larger aircraft, the City should begin discussions with the MSB to establish onsite Aircraft Rescue and Firefighting (ARFF) capabilities. The Wasilla Airport currently does not have any based air carriers and is not Part 139 certificated. As the airport attracts air carriers, it may eventually become Part 139 certificated. Part 139 certificated airports are required to have an ARFF facility on site with specialized fire retardants and equipment, per Title 14 Part 139.317 (Title 14 CFR Part 139, 2004). The MSB owns one ARFF vehicle that was reportedly obtained from Joint Base Elmendorf-Richardson. However, fire and rescue personnel are not trained on the ARFF vehicle, and it is not currently used.

A Part 139 certificated airport is indexed by the length of the longest air carrier aircraft operating at the airport and the average daily departures of that aircraft. Assuming that the Beech 1900D will be the aircraft predominantly used for air carrier operations within the 20-year planning period, the airport would be grouped within Index A for air carrier aircraft operating at the airport less than 90 feet in length. If longer aircraft are used for air carrier operations, average daily operations must not exceed five, or the magnitude of the airport's ARFF capabilities must increase to the index in which the longer aircraft is grouped.

One ARFF vehicle is needed for Index A Part 139 certificated airports. The vehicle needs a minimum capacity of 500 pounds of sodium-based dry chemical, halon 1211, or clean agent, or 450 pounds of potassium-based

dry chemical and water with a commensurate quantity of Aqueous Film Forming Foam (AFFF) to total 100 gallons for simultaneous dry chemical and AFFF application (Title 14 CFR Part 139, 2004).

The City and the MSB should develop a plan to expand the MSB's fire and rescue service at the airport to match the airport's anticipated growth. This plan should include specialized airfield training for first responders, acquisition and training of ARFF equipment, and decisions pertaining to the need for onsite fire and rescue facilities at the airport prior to and when the airport becomes Part 139 certificated.

4.7 SUMMARY OF FACILITY REQUIREMENTS

The Wasilla Airport serves a burgeoning population and currently plays a crucial role in the community. The airport is anticipated to become increasingly more vital as the MSB grows. For these reasons, key topics of this planning process are centered on improvements that will facilitate future expansion of the airport, with particular emphasis on commercial development, expansion for larger aircraft, and enhancing safety and operational standards.

During interviews with airport users, recurring requests included improvements to landside amenities and the need for full-time airport staff. Providing full-time operational staff for the airport in the near term is strongly encouraged and will be critical as the airport expands. The City should also prioritize addressing present safety risks associated with existing facilities and fostering a culture of safety among pilots to ensure that the airport continues to offer a safe environment for airport users and maintains eligibility for future airport improvements through the FAA's AIP.