

# Birchwood Airport Master Plan Update

Project No. CFAPT00354/AIP 3-02-0034-008-2018

## SAG Meeting #4

Prepared for Alaska Department of Transportation &  
Public Facilities

*Presented and facilitated by HDL Engineering Consultants &  
Agnew::Beck Consulting*

March 22, 2024; 1:00 PM – 3:00 PM



# The Project Team

The Alaska Department of Transportation and Public Facilities is leading the process with assistance from a consulting team:



# Stakeholder Advisory Group (SAG)

The SAG is providing feedback on the planning process and draft deliverables:

DOT&PF

Aircraft Owners  
& Pilots  
Association

Alaska Railroad

Birchwood  
Airport  
Association

Birchwood Civil  
Air Patrol

Birchwood  
Community  
Council

Birchwood  
Recreation &  
Shooting Park

Eklutna, Inc.

**NOTE:** The SAG is not a voting or decision-making body.

Native Village of  
Eklutna

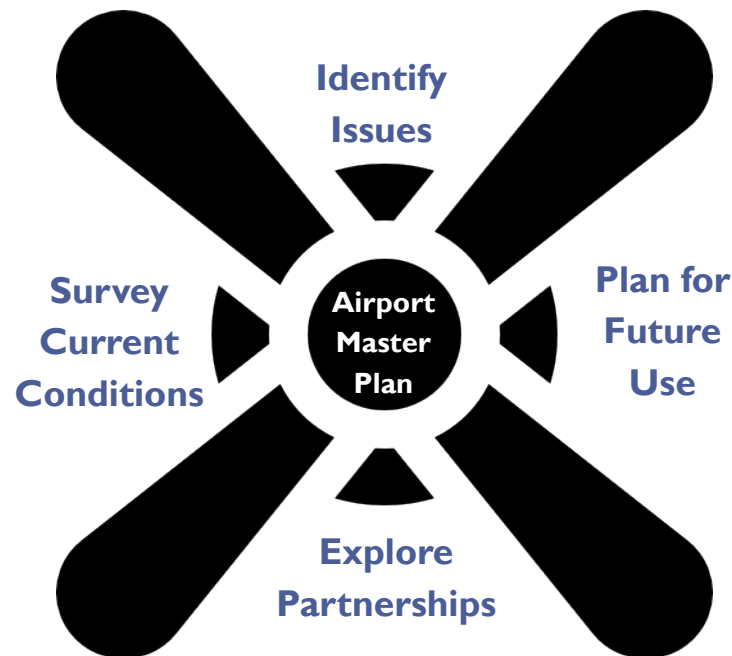
Talon Hangar  
Condominium  
Association, Inc.

# Today's Meeting Purpose

- Confirm project purpose, schedule, and progress.
- **Share and get SAG feedback on:**
  - The Public Review Draft, especially:
    - Section 5.0 – Alternatives & Preferred Alternative
    - Section 7.0 – Implementation Plan
  - Plans for the March 30<sup>th</sup> Public Meeting
  - Next Steps

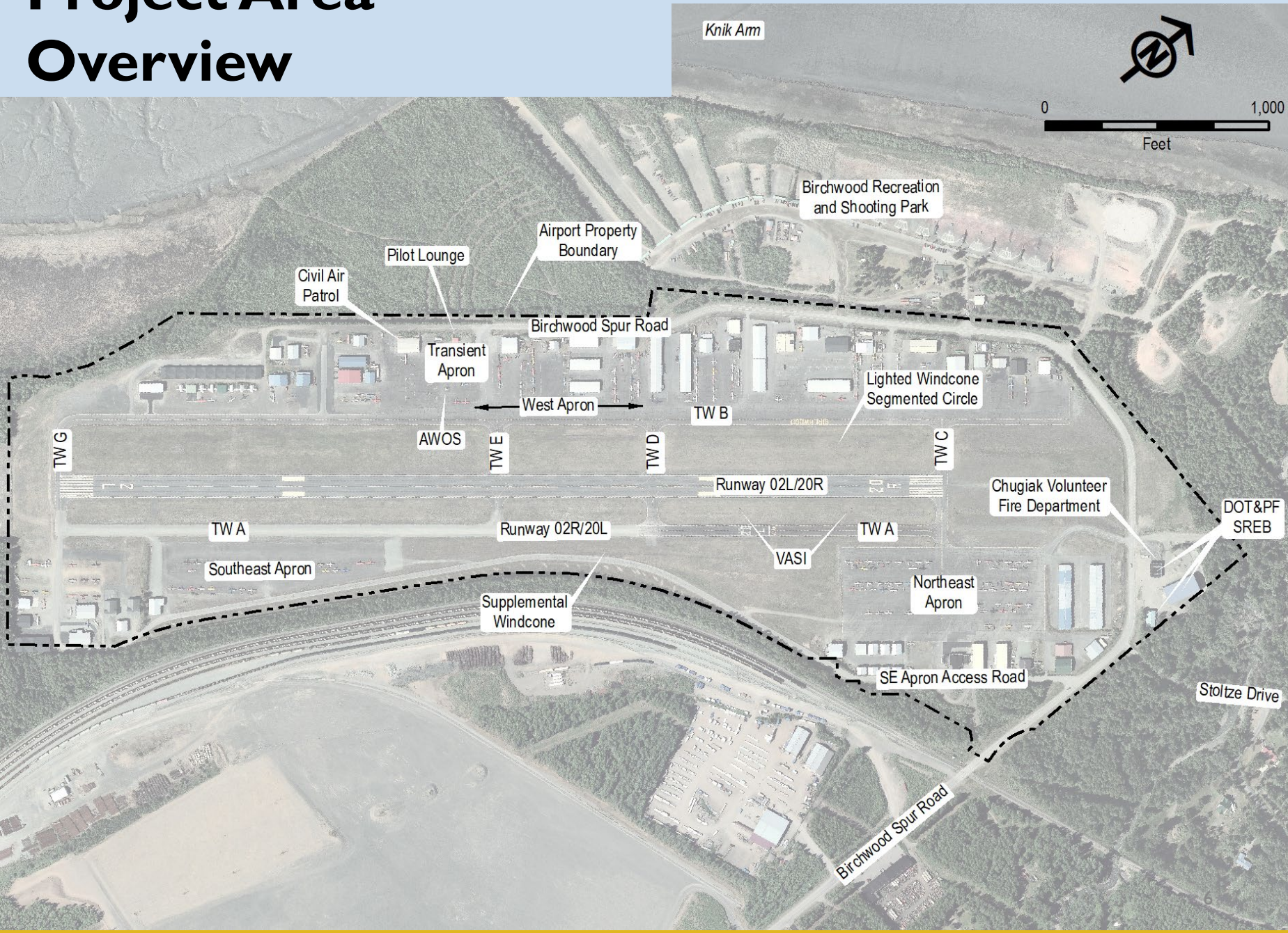
# Project Purpose

To determine how the airport can best serve the future interests and needs of the flying public, aviation community, Alaska Department of Transportation & Public Facilities (DOT&PF), and other stakeholders.



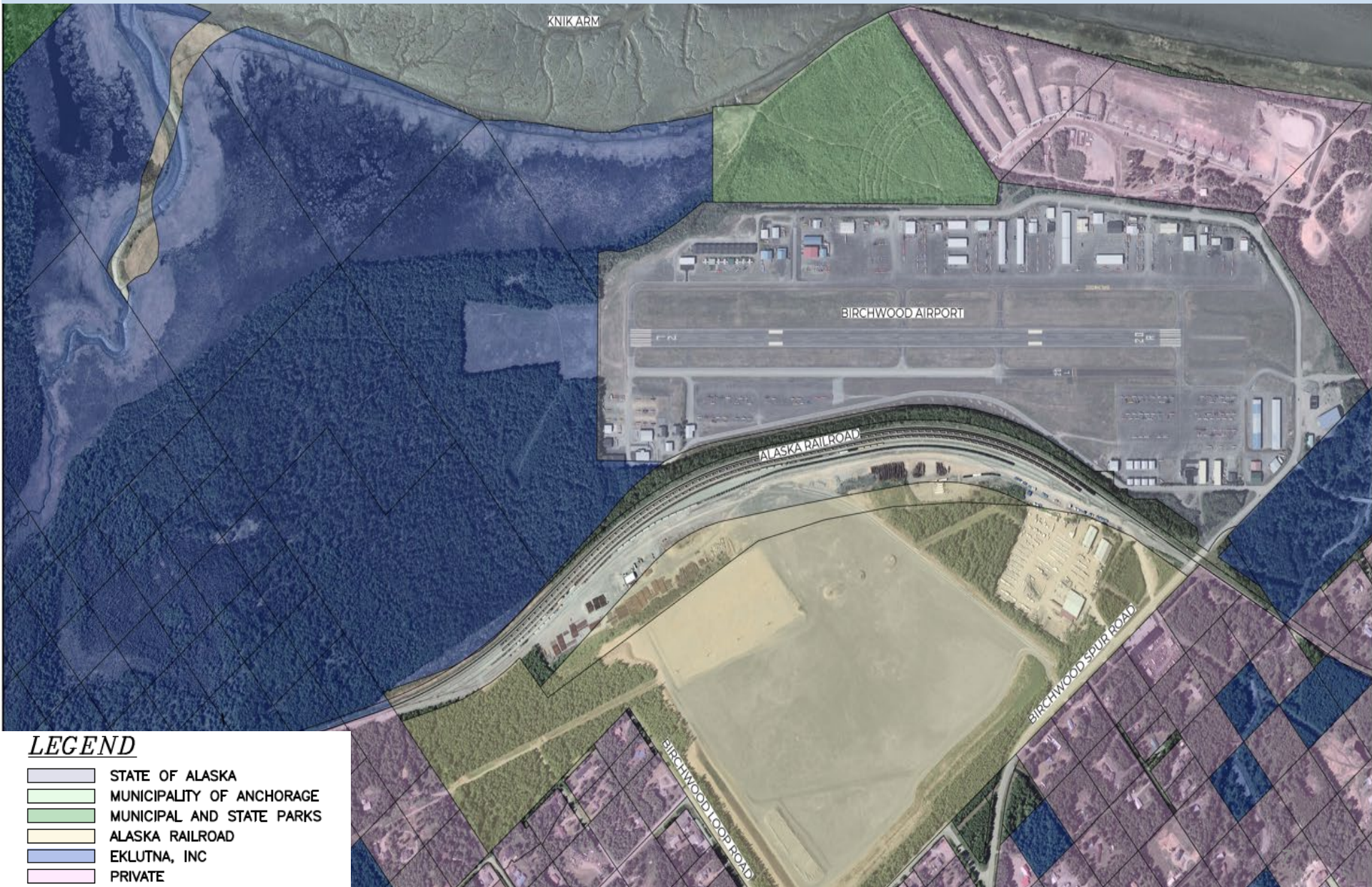


# Project Area Overview





# Land Ownership



# Project Schedule

## Summer 2020

**Reconnaissance**

Current Conditions, Uses, Issues and Needs

## Fall 2020-2021

**Assessment**

Airport Facilities, Airspace, Finances, Partnerships, Projected Use

## 2022-2023

**Draft Plan Development, Release + Review**

Preliminary Airport Master Plan Update, Layout, Aeronautical Survey

## 2023-2024

**Plan Refinement + Finalization**

FINAL Airport Master Plan Update, Layout, Aeronautical Survey

## Community involvement

occurs throughout, including interviews, stakeholder working group meetings, and **four public meetings.**





# Progress Since November 2022

- Conditions & Needs Assessment (Summer 2023)
- Alternatives Analysis & Recommendations Report (Fall 2023)
- Implementation Plan (Winter 2023-24)
- Financial Plan (Winter 2023-24)
- Draft Airport Master Plan (Winter/Spring 2024)
- Draft Airport Layout Plan (Spring 2024)

# Project Public & Partner Engagement

*(see Chapter 6.0 of the Public Review Draft, pages 111-114)*

- Guide: Public Involvement Plan
- Methods:
  - Stakeholder Advisory Group – 4 meetings and 1 to go
  - Public Meetings – 3 meetings and 1 to go
  - Small Group Discussions
  - Project Website
  - Survey
  - E-Blasts
  - Flyers
  - Brochure
  - Public Notices
  - Reader Boards

# Alternatives Considered

*(see Chapter 5.0 of the Public Review Draft, pages 74-110)*

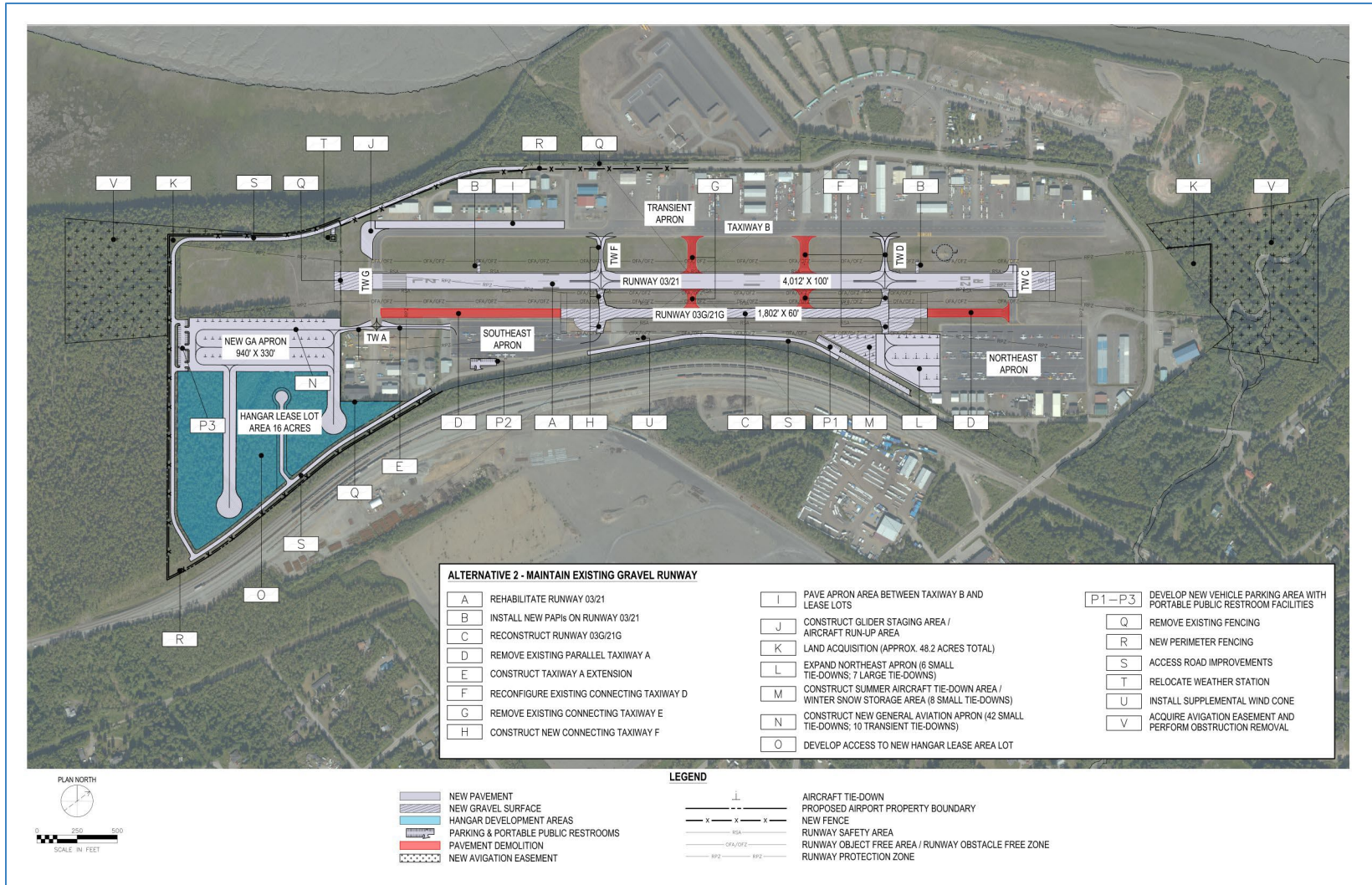
- Alternative 1 – No Build
- Alternative 2 – Maintain Existing Gravel Runway
- Alternative 3 – Relocate Gravel Runway to Shoulder of Main Runway
- Alternative 4 – Construct New Gravel Runway





# Proposed Alternative Two – Feb 2024

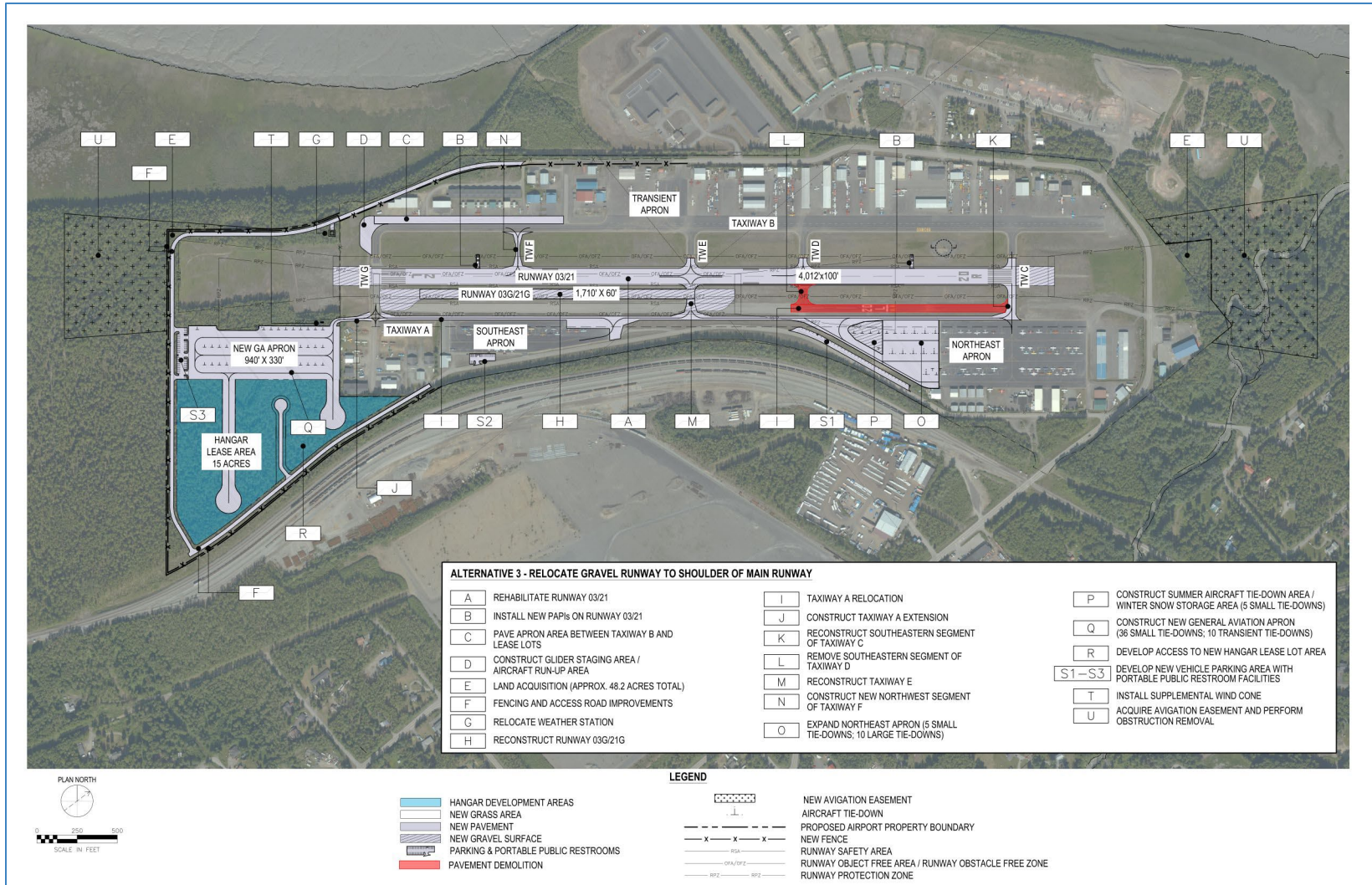
(see Chapter 5.0 of the Public Review Draft, pages 76-80)





# Proposed Alternative Three – Feb 2024

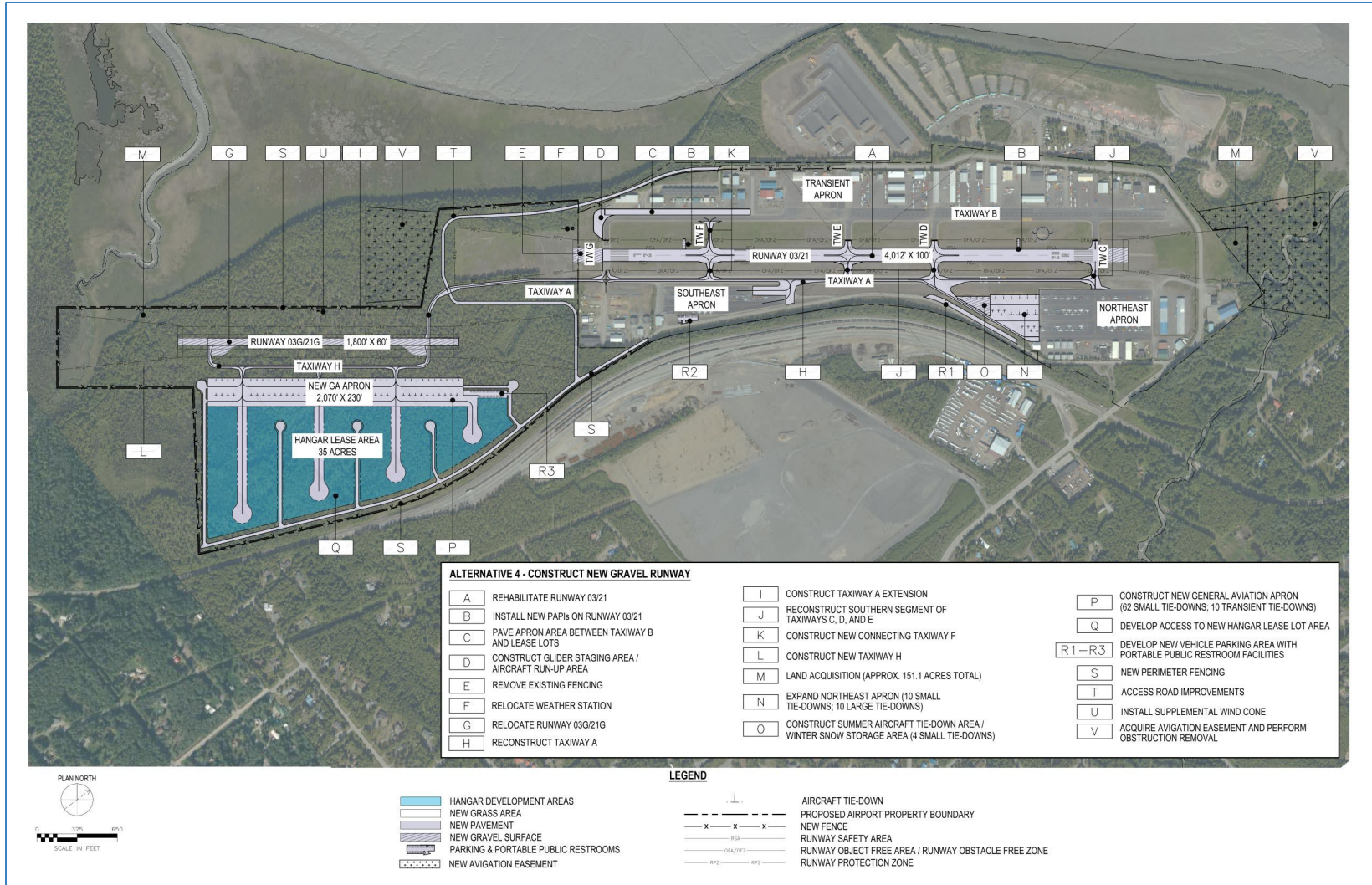
(see Chapter 5.0 of the Public Review Draft, pages 81-85)





# Proposed Alternative Four – Feb 2024

(see Chapter 5.0 of the Public Review Draft, pages 86-90)



# Alternatives Analysis

(see Chapter 5.0 of the Public Review Draft, page 109)

Impacts on Airport	Alternative 1 No Build	Alternative 2 Maintain Existing Gravel Runway	Alternative 3 Relocate Gravel Runway to Shoulder of Main Runway	Alternative 4 Construct New Gravel Runway
<b>Runway 03/21 Dimensions</b>	Maintain Existing (4,012' by 100')	Match Existing (4,012' by 100')	Match Existing (4,012' by 100')	Match Existing (4,012' by 100')
<b>Runway 03G/21G Dimensions</b>	Maintain Existing (1,802' by 50')	Widen (1,802' by 60')	Shorten and Widen (1,710' by 60')	Widen (1,800' by 60')
<b>Maintains Single Traffic Pattern with Simultaneous Operations Prohibited?</b>	Yes	Yes	Yes	No
<b>Meets FAA Runway Separation Requirements for Parallel Runways?</b>	No	No	No	Yes
<b>Meets Forecasted Tie-Down Demand?</b>	No	Yes	Yes	Yes
<b>Meets Forecasted Lease Lot Demand?</b>	No	No. Provides 94% of lease lot area forecasted	No. Provides 86% of lease lot area forecasted	Yes. Exceed 100% of lease lot area forecasted
<b>Constructs Parallel Taxiway A?</b>	No	No	Yes	Yes
<b>Maintains Direct Ski-Access to Runway 03G/21G from Ski Apron?</b>	Yes	Yes	No – Taxi Across Paved Taxiway A	Yes
<b>Environmental Impacts</b>	No change. See Birchwood Airport Environmental Overview Addendum	Environmental impacts are likely greater than Alternative 1, equal to Alternative 3, and less than Alternative 4.	Environmental impacts are likely greater than Alternative 1, equal to Alternative 2, and less than Alternative 4.	Environmental impacts are likely greater than Alternative 1, Alternative 2, and Alternative 4.
<b>Construction Costs (approx.)</b>	\$0	\$49.5M	\$53.6M	\$89.4M
<b>Estimated Increase in Annual Maintenance Costs (approx.)</b>	No change. See May 2021 Financial Assessment and Maintenance Cost Generation Report for historical maintenance costs.	\$77k	\$91k	\$141k

# Alternatives Analysis

(see Chapter 5.0 of the Public Review Draft, pages 109)

Impacts on Airport	Alternative 1 No Build	Alternative 2 Maintain Existing Gravel Runway	Alternative 3 Relocate Gravel Runway to Shoulder of Main Runway	Alternative 4 Construct New Gravel Runway
<b>Estimated Revenue Generation (approx.)</b>	No change. See May 2021 Financial Assessment and Maintenance Cost Generation Report for historical maintenance costs.	\$112k	\$102k	\$221k
<b>Removes Fence in Runway 03 OFA and Trees South of Runway 03 and 03G?</b>	No.	Yes.	Yes.	Yes.
<b>Other Changes to Airspace Obstructions</b>	Remains as described in Condition and Needs Assessment.	Obstructions are less than Alternative 1 but more than Alternative 3 and Alternative 4.	Obstructions are less than Alternative 1 and Alternative 2 but more than Alternative 4.	Obstructions are less than Alternative 1, 2, and Alternative 3
<b>Land Uses within RPZ</b>	No change.	No change	Incompatible land uses reduced from Alternatives 1 and 2, but Mod-to-Standards Required due to runway relocation.	Incompatible land uses reduced from Alternatives 1, 2, and 3
<b>Mod-To-Standards Required?</b>	Yes (Taxiway A in-line with Runway 03G/21G)	No	Yes (Incompatible Land Uses within RPZ of new Runway)	No
<b>Safety Analysis</b>	No corrections to non-standard conditions. Existing safety hazards remain.	Removes in-line segments of Taxiway A Removes fence obstruction in Runway 03 RSA Full control of land within RPZs for obstruction removal Existing Incompatible land uses in RPZ remain Does not meet parallel runway separation requirements	Removes in-line segments of Taxiway A Removes fence obstruction in Runway 03 RSA Full control of land within RPZs for obstruction removal Reduced incompatible land uses in RPZ Reduced Length of Runway 03G/21G Does not meet parallel runway separation requirements	Removes in-line segments of Taxiway A Removes fence obstruction in Runway 03 RSA Full control of land within RPZs for obstruction removal Reduced incompatible land uses in RPZ Meets parallel runway separation requirements
<b>NextGen Parameters</b>	No implementation or significant contribution.	No implementation or significant contribution.	No implementation or significant contribution.	No implementation or significant contribution.



# Preferred Alternative

*(see Chapter 5.0 of the Public Review Draft, pages 110)*

## Why Alternative 2?

- Maintains current airport configuration preferred by users
- Maintains current land uses approved by FAA
- Improves safety
- Lowest estimated capital cost for construction
- Increases estimated revenue with least amount of additional estimated expense
- Meets forecasted demand for tie-downs and 94% of forecasted demand for lease lots
- Minimizes future property acquisition needs while maximizing tie-down and lease lot development

# Implementation Planning

*(see Chapter 7.0 of the Public Review Draft, pages 115-123)*

The implementation plan provides a strategy to construct the preferred alternative.

Improvements are separated into three categories:

- Near-term (0 to 5 years)
- Medium-term (6 to 10 years)
- Long-term (11 to 20 years)

# Implementation Plan Process

(see Chapter 7.0 of the Public Review Draft, page 116)



## Step 1: Planning

- Identify the project on the approved ALP. Update ALP as necessary
- List the project on an approved airport specific of CIP, including data sheets, estimates, project justification, and graphical figures data sheet



## Step 2: Preliminary Design

- Gather survey, geotechnical, and hydrological field data
- Advance conceptual design
- Develop preliminary cost estimate for budgeting and programming
- Prepare Draft Engineer's Design Report that establishes basis for design
- Review submittals that identify anticipated environmental impacts / land acquisition needs
- Consult with FAA to confirm AIP eligibility of project components
- Consult with FAA to determine if Reimbursable Agreements are required for impacts to NAVAIDs



## Step 3: Environmental Doc.

- Consult with FAA to determine Class of Action of environmental document required (Categorical Exclusion, Environmental Assessment, Environmental Impact Statement)
- Perform consultation with impacted or adjacent agencies
- Perform public involvement
- Perform environmental fieldwork to quantify and delineate environmental impacts
- Prepare environmental document



## Step 4: Land Acquisitions

- Complete real property appraisal
- Complete review appraisal
- Prepare offer
- Negotiate purchase agreement



## Step 5: Final Design

- Execute reimbursable agreements to support NAVAIDs, if relevant
- Prepare an approved approval of Construction Safety Phasing Plan
- Secure environmental permits
- Request Modification-to-Standards for components not meeting FAA requirements
- Develop final design, including plans, specifications, and estimate
- Submit FAA Form 7460-1 for airspace evaluation of project components



## Step 6: Bidding

- Advertise and secure bids
- Finalize and submit FAA grant application
- Secure Construction Funding



## Step 7: Construction

- Issue notice-to-proceed for construction
- Perform construction administration in accordance with sponsor grant assurances to ensure conformity with the approved plans and specifications



## Step 8: After Construction

- Develop record drawings
- Submit final Close Out Report
- Update ALP, if necessary

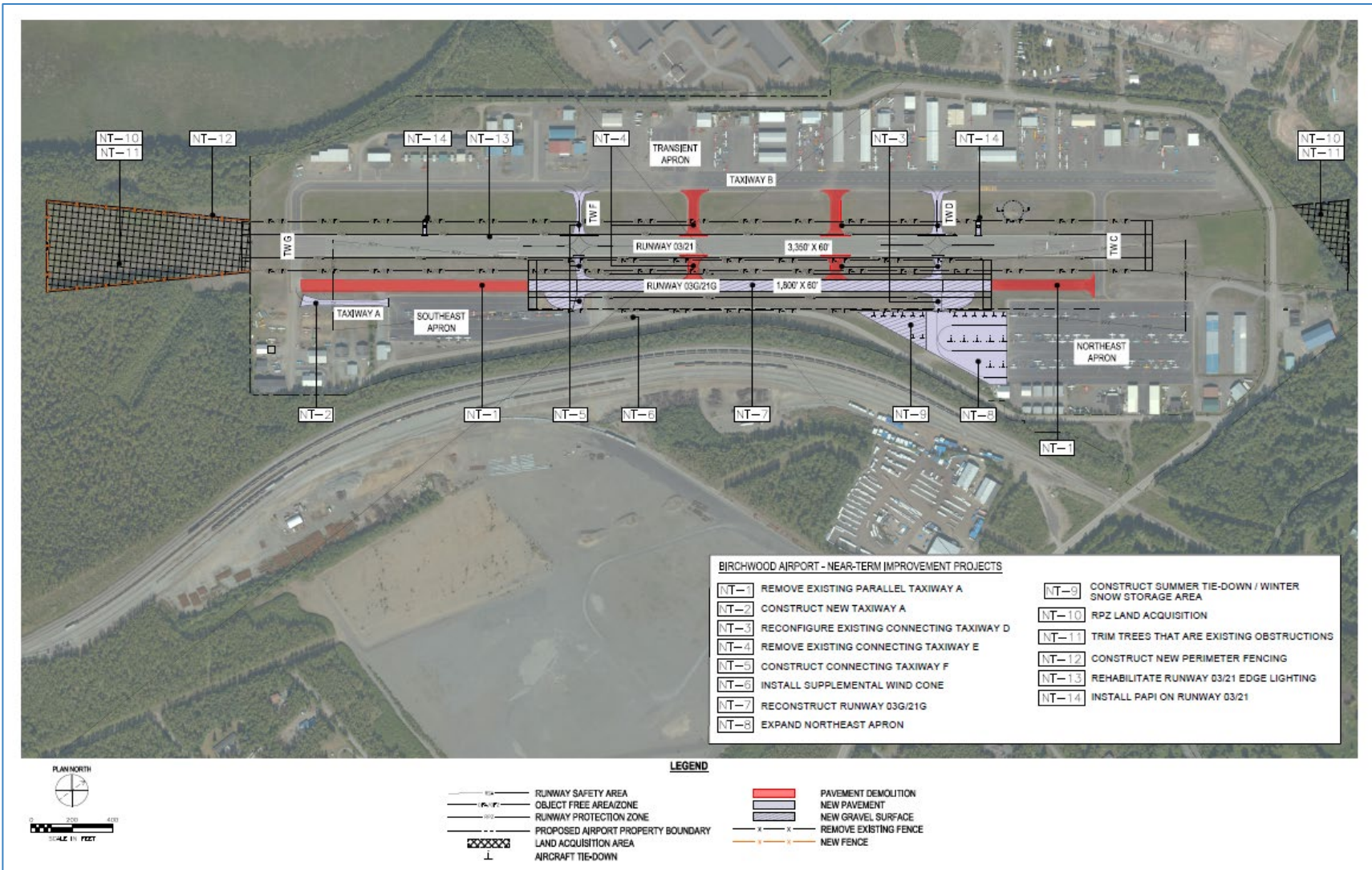
# Near-Term Projects (~2028): Approx. \$13.9M (see Chapter 7.0 of the Public Review Draft, page 122)

	Project Name	Project Description	AIP Eligibility	Estimated Project Subtotals	Estimated Project Cost
	<b>Reconfigure Taxiways and Rehab Runway 03G/21G</b>				
Near-Term (Approx. 2028)	1	Remove Existing Parallel Taxiway A	Remove portions of Taxiway A that are in line with Runway 03G/21G to mitigate the safety hazard present between the taxiway's alignment with the 03G and 21G thresholds.	Yes	\$415,000
	2	Construct New Taxiway A	Construct approximately 700 feet of new Taxiway A to provide airside access from Southeast Apron to Taxiway G.	Yes	\$715,500
	3	Reconfigure Existing Connecting Taxiway D	Remove existing Taxiway D and construct new Taxiway D required to provide access to Runway 21G threshold from Taxiway B and the Northeast Apron.	Yes	\$1,123,500
	4	Remove Existing Connecting Taxiway E	Approximate mid-point taxiway is no longer needed due to the relocation of Taxiway D and the construction of new Taxiway F.	Yes	\$181,500
	5	Construct Connecting Taxiway F	New Taxiway will provide access to Runway 03G threshold and access from the Southeast Apron to Runway 03/21, Runway 03G/21G, and Taxiway B.	Yes	\$972,500
	6	Install Supplemental Wind Cone	Install a supplemental wind cone on the eastern side of Runway 03G/21G that meets FAA standards and provides accurate wind information to pilots operating on the Runway 03G threshold.	Yes	\$116,500
	7	Reconstruct Runway 03G/21G	Rehabilitate existing Runway 03G/21G (1,800'x60') in its current location to meet DOT&PF and FAA design standards, resurface, and install new edge markers.	AIP Eligibility May Be Limited	\$2,731,000
	8	Expand Northeast Apron	Expand the Northeast Apron south to include approximately 119,000 square feet of additional paved apron area and provide 13 new tie-down spaces with electrical outlets.	Yes	\$2,903,000
	9	Construct Summer Tie-Down/Winter Snow Storage Area	Construct approximately 33,000 square feet of additional gravel apron space south of the Northeast Apron to accommodate 8 new tie-downs in the summer and snow storage in the winter.	Yes	\$752,500
	10	RPZ Land Acquisition	Acquire approximately 9.5 acres of land within the Runway 03/21 RPZs to accommodate obstruction removal.	Yes	\$190,500
	11	Trim Trees in Aviation In RPZs	Trim trees located on airport property and within RPZs that were identified as obstruction in the aeronautical survey.	Yes	\$191,500
	12	Construct New Perimeter Fencing	Remove existing fencing that presents an obstruction and construct new perimeter fencing around newly acquired land within the Runway 03 RPZ.	AIP Eligibility May Be Limited	\$381,500
	13	Rehabilitate Runway 03/21 Edge Lighting	Rehabilitated existing edge lighting and install new electrical equipment building to accommodate existing electrical loads and replace failing equipment.	Yes	\$2,712,500
	14	Install PAPI's on Runway 03/21	Remove existing VASI on Runway 21 and Install new PAPIs on both ends of Runway 03/21.	Yes	\$539,500
					<b>\$13,926,000</b>



# Near-Term Projects (0 to 5 years)

(see Chapter 7.0 of the Public Review Draft, page 118)



# Mid-Term Projects (~2033): Approx. \$3.89M

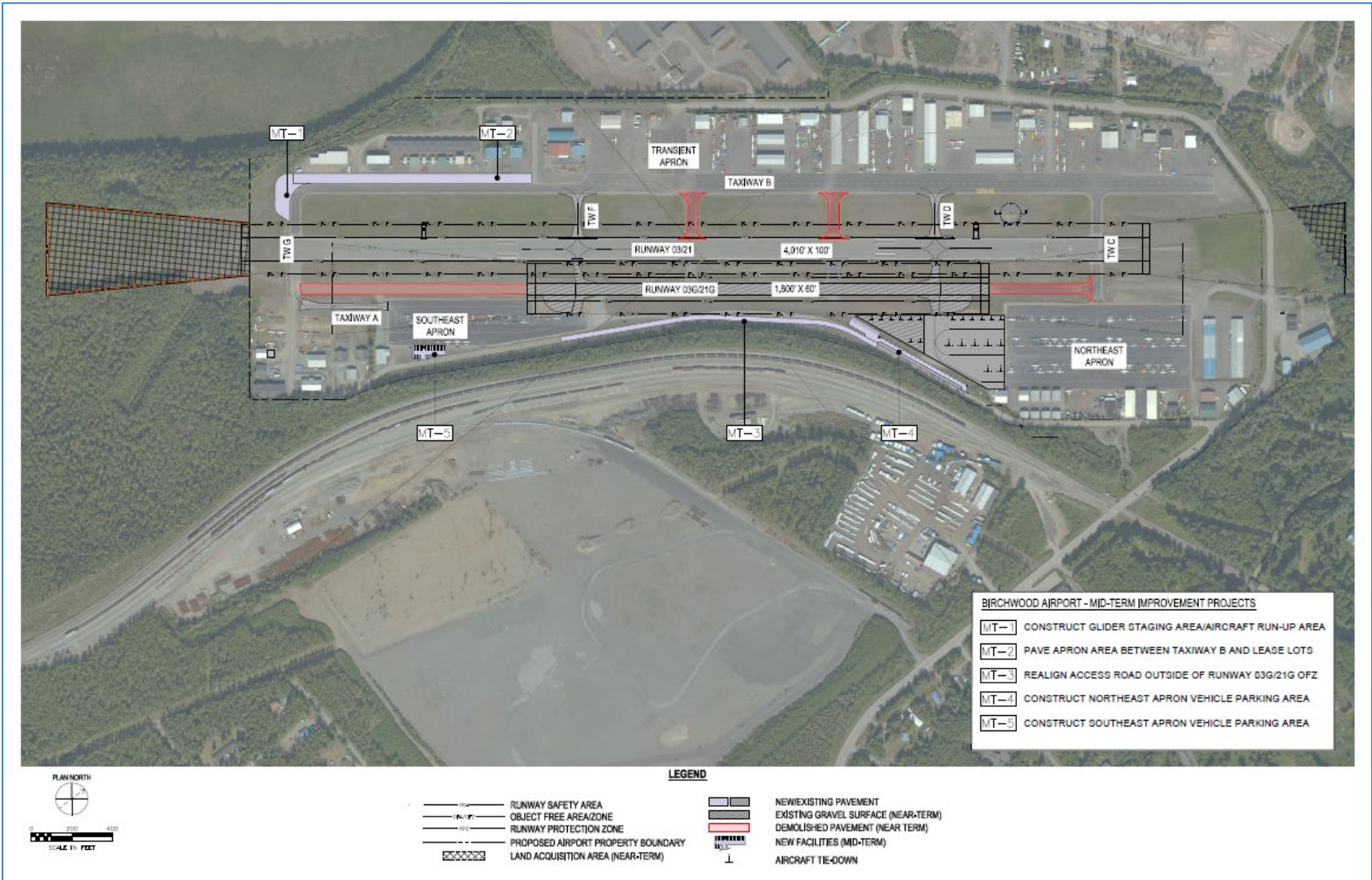
(see Chapter 7.0 of the Public Review Draft, page 123)

	Project Name	Project Description	AIP Eligibility	Estimated Project Subtotals	Estimated Project Cost	
Mid-Term (Approx. 2033)	<b>Apron Access and Parking Improvements</b>					
	1	<b>Construct Glider Staging Area/Aircraft Run-Up Area</b>	Construct a 75-foot-wide staging/run-up area south of the intersection between Taxiway B and Taxiway G.	Yes	\$533,500	<b>\$3,892,000</b>
	2	<b>Pave Apron Area Between Taxiway B and Lease Lots</b>	Pave a 50-foot-wide section of the existing gravel area between the southern portion of Taxiway B and the lease areas directly to the west.	Yes	\$794,500	
	3	<b>Realign Access Road Outside of Runway 03G/21G OFZ</b>	Shift approximately 1,500 feet of existing road to the south to remove road alignment from within the Runway OFZ.	Yes	\$1,583,500	
	4	<b>Construct Northeast Apron Vehicle Parking Area</b>	Construct a combination of 20 parallel parking spaces and 18 perpendicular parking spaces with portable restroom facility adjacent to the Southeast Apron Access Road.	AIP Eligibility May Be Limited	\$752,000	
	5	<b>Construct Southeast Apron Vehicle Parking Area</b>	Construct 19 perpendicular parking spaces with portable restroom facility accessed from the Southeast Apron Access Road.	AIP Eligibility May Be Limited	\$228,500	



# Mid-Term Projects (6 to 10 years)

(see Chapter 7.0 of the Public Review Draft, page 119)





# Long-Term Projects (~2038): Approx. \$50.22M

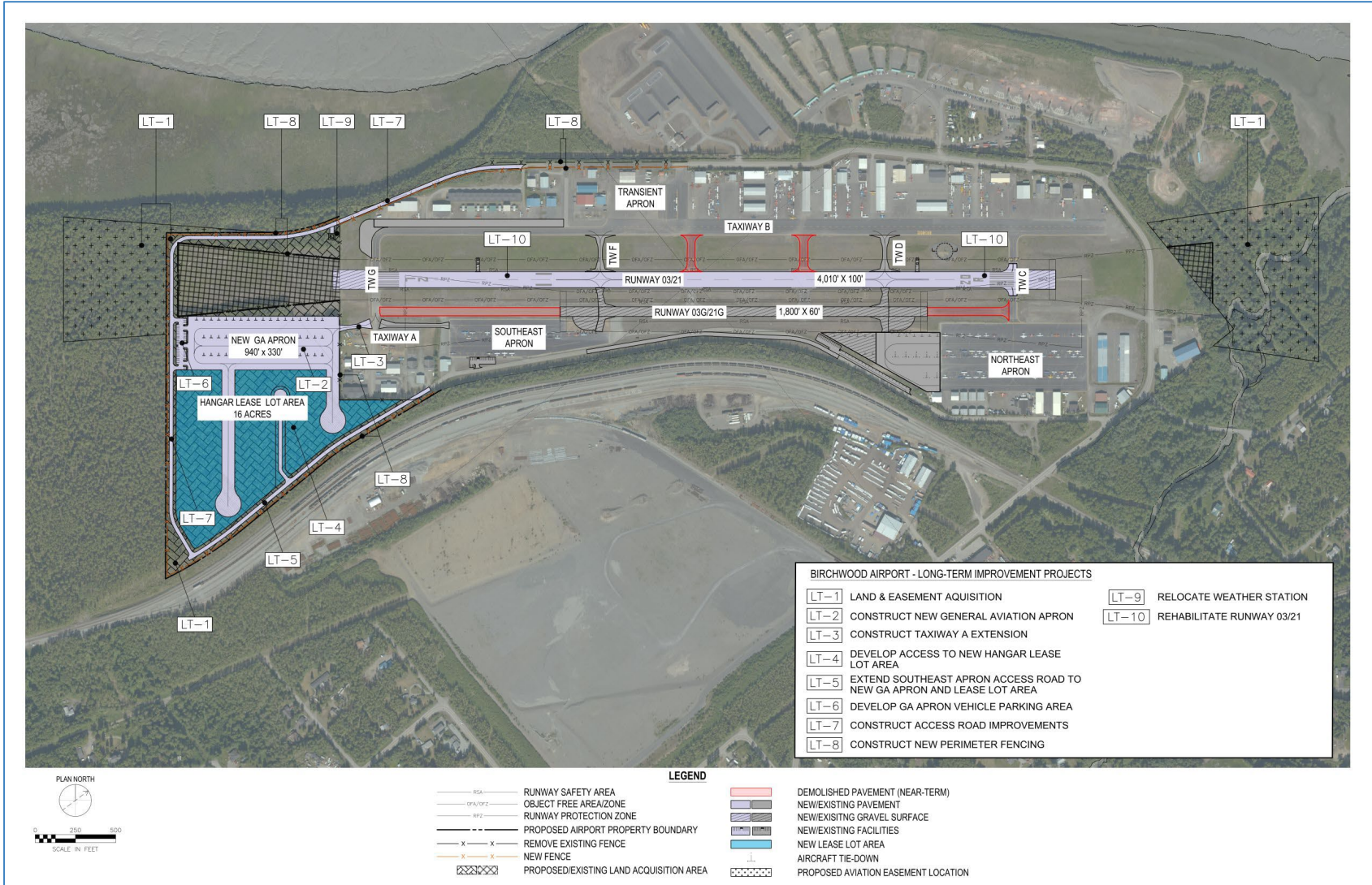
(see Chapter 7.0 of the Public Review Draft, page 123)

Project Name		Project Description	AIP Eligibility	Estimated Project Subtotals	Estimated Project Cost
<b>New GA Apron, Lease Areas, &amp; Rehabilitate Runway 03/21</b>					
1	Land Acquisition	Acquire approximately 38.7 acres of land to accommodate future development and 26.2 acres of aviation easements	Yes	\$1,280,500	<b>\$50,218,000</b>
2	Construct New General Aviation (GA) Apron	Construct an approximately 940-foot by 330-foot GA Apron that includes up to 52 small tie-downs.	Yes	\$13,490,500	
3	Construct Taxiway A Extension	Construct approximately 700 feet of new Taxiway A to provide airside access from Southeast Apron to Taxiway G and from Taxiway G to the new apron and lease areas.	Yes	\$525,000	
4	Develop Access to New Hangar Lease Lot Area	Construct taxi-lanes, driveways, and utility access in the new lease lot areas to provide airside and landside access and utilities to future lease lots.	Yes	\$8,624,000	
5	Extend Southeast Apron Access Road to new GA Apron and lease lot area	Construct new Southeast Apron Access Road from existing road terminus to new GA vehicle parking area.	Yes	\$5,546,000	
6	Develop GA Apron Vehicle Parking Area	Construct 44 perpendicular parking spaces with portable restroom adjacent to the Southeast Apron Access Road.	AIP Eligibility May Be Limited	\$1,181,500	
7	Construct Access Road Improvements	Extend Southeast Apron Access Road from new GA Apron Parking Area to connect to terminus of Birchwood Spur Road.	Yes	\$4,425,500	
8	Construct New Perimeter Fencing	Remove existing fencing on western and southern areas of airport the Runway 03 RPZ and construct new perimeter fencing around new southern airport boundary.	AIP Eligibility May Be Limited	\$1,370,500	
9	Relocate Weather Station	Relocate the existing weather station from its current location to a new location southwest of Taxiway G.	Yes	\$599,000	
10	Rehabilitate Runway 03/21	Rehabilitate the runway in its current location to replace existing pavement.	Yes	\$13,175,500	

Long-Term  
(Approx.  
2038)

# Long-Term Projects (11 to 20 years)

(see Chapter 7.0 of the Public Review Draft, page 120)



# Project Schedule

## Summer 2020

<b>Reconnaissance</b>	Current Conditions, Uses, Issues and Needs
-----------------------	--------------------------------------------

## Fall 2020-2021

<b>Assessment</b>	Airport Facilities, Airspace, Finances, Partnerships, Projected Use
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## 2022-2023

<b>Draft Plan Development, Release + Review</b>	Preliminary Airport Master Plan Update, Layout, Aeronautical Survey
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## 2023-2024

<b>Plan Refinement + Finalization</b>	FINAL Airport Master Plan Update, Layout, Aeronautical Survey
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## Community involvement

occurs throughout, including interviews, stakeholder working group meetings, and **four public meetings.**



# Next Steps

**March 30, 2024** – Public Meeting

**April 8, 2024** – Public Comment Period Closes

## **April/May 2024**

- Review, Compile Public Input & Recommended Revisions
- Conduct SAG Meeting #5 to Share Public Input & Recommended Final
- Finalize Master Plan
- FAA Review/Approval
- Publish Final Airport Master Plan
- Finalize Airport Layout Plan
- Update Alaska Aviation System Plan



# Learn More & Contact Us

**Project Website:** <https://dot.alaska.gov/creg/birchwoodamp/>

Public Review Draft **COMMENT DEADLINE: April 8<sup>th</sup>!**

## *Project Contacts:*

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