

# Birchwood Airport Master Plan Update

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

## Stakeholder Advisory Group Meeting #2

Prepared for Alaska Department of Transportation &  
Public Facilities

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

October 12, 2021; 1:30 – 4:00 PM



1:30-1:40 pm

# Welcome & Introductions

# Who's in the Room?



# Land Acknowledgement

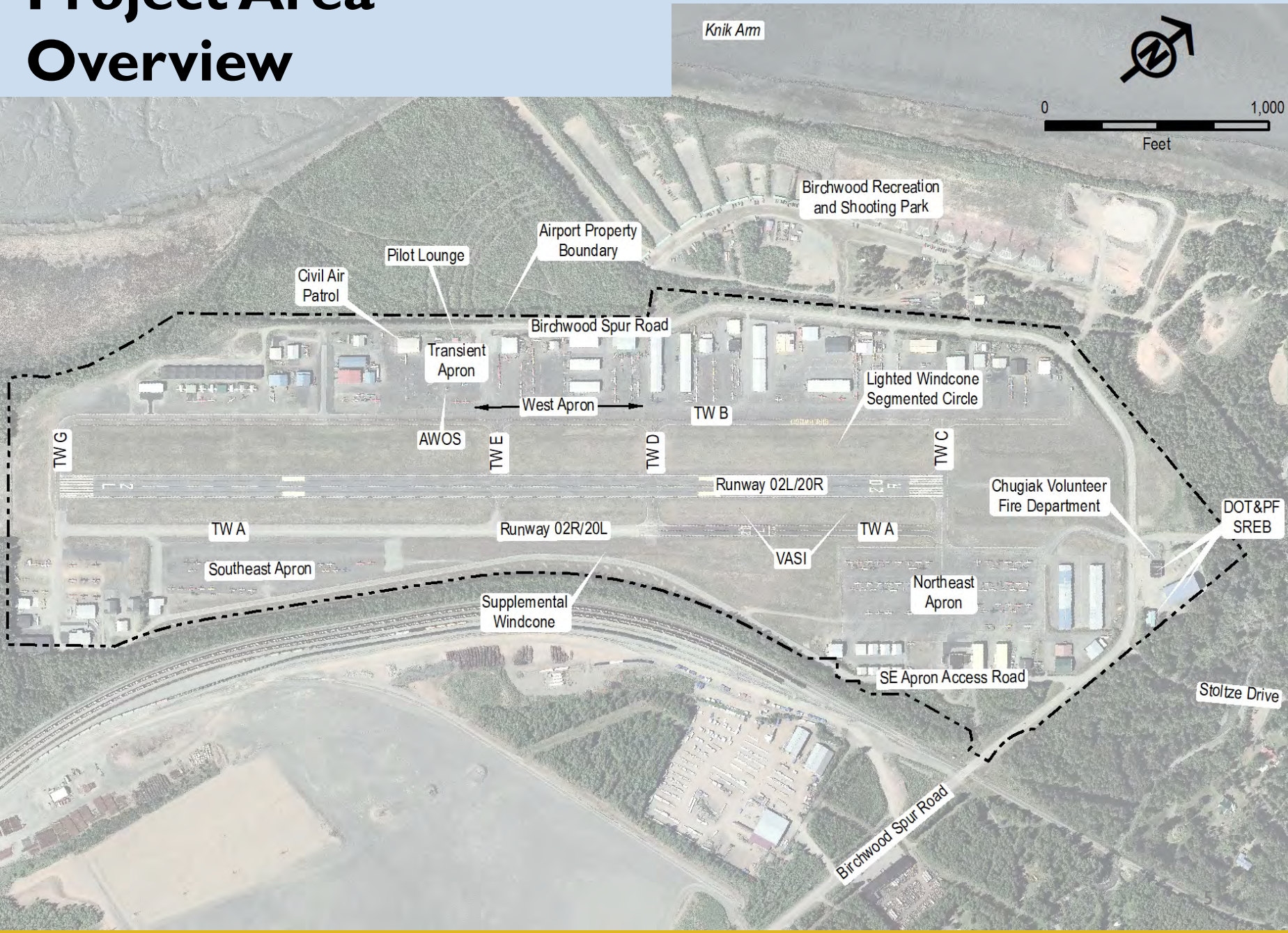
*Dena'inaq ełnen'aaq'  
gheshtnu ch'q'u yeshdu. (Dena'ina)*

Translation by J. Isaak and S. Shaginoff-Stuart

*I live and work on the  
land of the Dena'ina. (English)*



# Project Area Overview





# Land Ownership



# 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 Schedule

## Summer 2020

**Reconnaissance**

Current Conditions, Uses, Issues and Needs

## Fall 2020-2021

**Assessment**

Airport Facilities, Airspace, Finances, Partnerships, Projected Use

## Early 2022

**Draft Plan Development, Release + Review**

Preliminary Airport Master Plan Update, Layout, Aeronautical Survey

## Summer 2022

**Plan Refinement + Finalization**

FINAL Airport Master Plan Update, Layout, Aeronautical Survey

Community involvement occurs throughout, including interviews, stakeholder working group meetings, and three public meetings



# Progress Since March 2021

- Aviation Activity Forecast
- Financial Assessment
- Land Use Assessment
- Frequently Asked Questions

# Meeting Purpose

- Review the project and purpose.
- Update and gather SAG input on financial analysis, land use assessment, forecast and alternatives.
- Prepare for Public Meeting #2.



# General Meeting Guidelines

- Be respectful.
- Be positive and solutions oriented.
- Be clear and concise.
- Be specific.
- Avoid jargon and acronyms.
- Think creatively and strategically.

# Online & Telephonic Meeting Guidelines

*Please:*

1. Follow Shelly's lead as the designated facilitator.
  - Throughout the meeting, SAG Members will have several opportunities to comment or ask questions.
2. Mute your microphone when you are not talking.
3. If you have joined by video, don't forget – everyone can see you 😊.
4. We will do introductions, but please repeat your name when it is your turn to comment or ask a question.
5. Please limit use of the Zoom chat space, unless prompted by a guiding question, or you're having a technical issue.



1:40 – 2:00 pm

# Financial Assessment

# Where does Birchwood Airport revenue go?

- All profit from DOT&PF airports go to a general aviation fund.
- This money funds maintenance and operations for all DOT&PF airports.
- DOT&PF is required to provide access to all Alaska communities, so it prioritizes maintenance in communities off the road system.



# Financial Assessment

- Northern Economics, Inc. prepared a comprehensive financial assessment of the Birchwood Airport.
- The assessment used data from 2015-2020.
- The assessment includes revenue, expenses and a comparison to two similar airports.

# Birchwood Airport's Revenue and Expenses

The Birchwood Airport has had an operating profit over the last six years.

Table 2.1 Birchwood Airport Revenues, Expenses, and Operating Profits, \$, FY 2015–2020

Fiscal Year	Revenue	Expenses	Operating Profit
2015	208,165.98	66,793.98	141,372.00
2016	201,024.25	57,423.97	143,600.28
2017	200,555.79	134,124.85	66,430.94
2018	243,716.10	99,907.24	143,808.86
2019	258,990.50	97,672.78	161,317.72
2020	273,832.14	147,209.04	126,623.10

Source: DOT&PF (2021)

*Excerpted from the May 2021 Birchwood AMP Update: Financial Assessment*



# Top Revenue Sources

## FY2020 Revenue:

- 70% came from lease fees or “land use.”
- 25% came from tie-downs and parking.
- Fees and fuel permits make up the remaining 5%.

# Top Revenue Sources

Revenue grew 36.5% from FY 2017 to FY 2020.

Table 2.2 Birchwood Airport Revenue Detail, \$, FY 2015–2020

Fiscal Year	Assigned Aircraft Tie-down/Transient Parking	Fuel Dispensing Permit	Interest/Late Fees	Application/Process Fees	Land Use	Total Revenue
2015						208,165.98
2016						201,024.25
2017	50,937.19	2,895.35	260.73	1,050.00	145,412.52	200,555.79
2018	68,718.00	4,721.14	243.28	4,225.00	165,808.68	243,716.10
2019	68,756.16	10,982.53	396.59	3,775.00	175,080.22	258,990.50
2020	68,723.00	5,137.15	212.52	8,025.00	191,734.47	273,832.14

Source: DOT&PF (2021)

*Excerpted from the May 2021 Birchwood AMP Update: Financial Assessment*

# Top Expenses

- The Birchwood Airport's most significant expenses in FY 2020 were facilities and capital improvements.
- Historically, services were the largest expenses.

Table 2.3 Birchwood Airport Expense Detail, \$, FY 2015–2020

Fiscal Year	Personal Services	Services	Commodities	Capital Outlay	Facilities	Total Expenses
2015	24,630.88	6,289.18	35,873.92			66,793.98
2016	26,887.86	5,296.41	25,239.70			57,423.97
2017	74,387.00	51,310.18	8,427.67			134,124.85
2018	45,629.06	42,344.99	11,933.19			99,907.24
2019	42,399.96	46,883.01	8,389.81			97,672.78
2020	27,708.92	10,715.40	5,429.71	25,207.05	78,147.96	147,209.04

Source: DOT&PF (2021)

*Excerpted from the May 2021 Birchwood AMP Update: Financial Assessment*

# Benchmarking

Northern Economics, Inc. compared the Birchwood Airport with similar facilities in Wasilla and Soldotna





# Benchmarking

- Wasilla has four times as many operations but about half the based aircraft.
- Soldotna has about twice as many operations but half the based aircraft.

**Table 4.2 Estimated Operations and Based Aircraft at Birchwood, Soldotna, and Wasilla Airports, 2020**

Airport	Total Operations	Based Aircraft
Birchwood	10,259	308
Soldotna	21,100	169
Wasilla	42,660	168

*Excerpted from the May 2021 Birchwood AMP Update: Financial Assessment*

# Benchmarking

Birchwood Airport's operating expenses are lower than the city-owned comparable facilities, largely due to a lack of on-site staff.

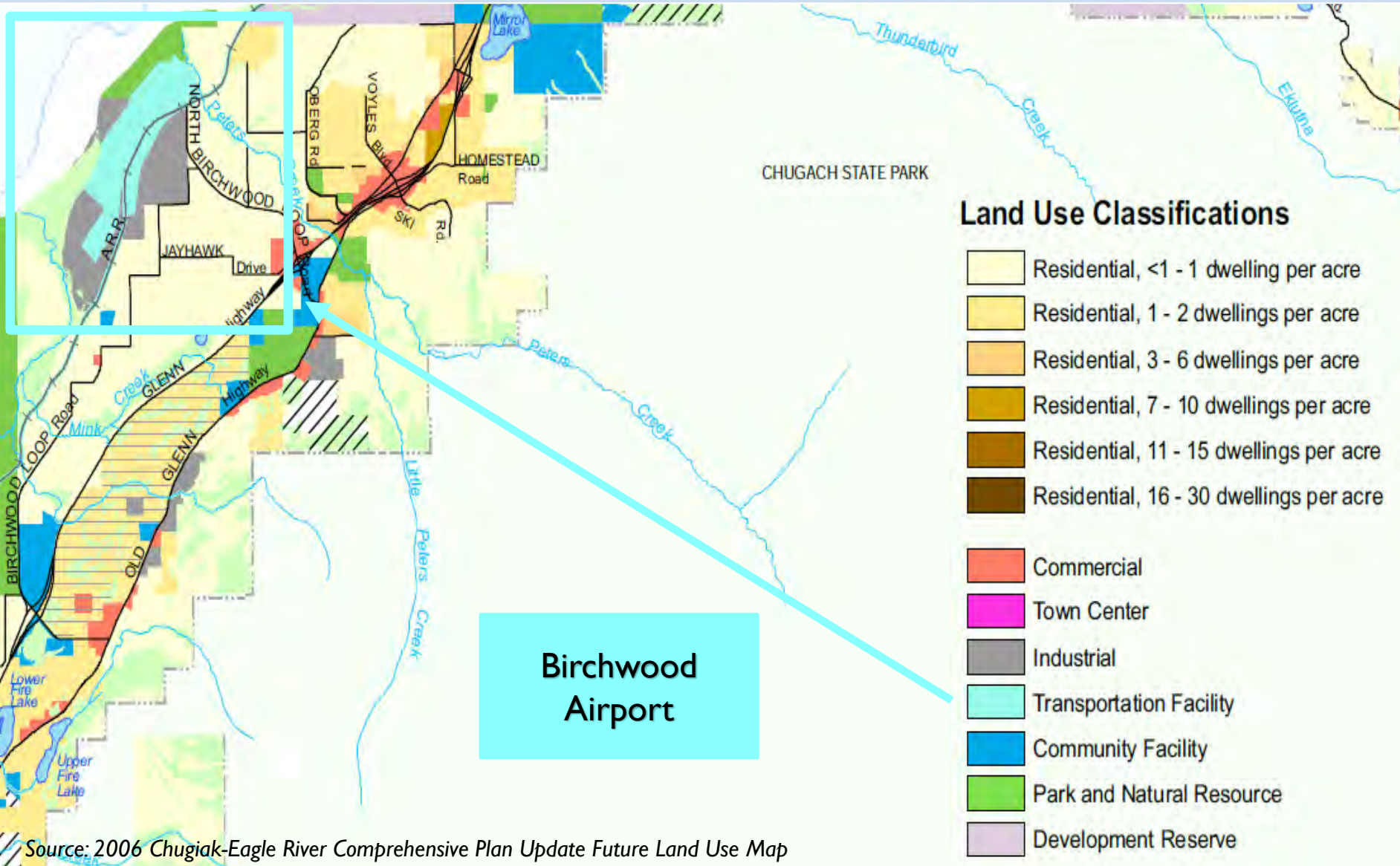
Total 2020 Operating Expenses		
Birchwood Airport	Soldotna Airport	Wasilla Airport
\$147,209	\$149,848	\$214,392

*Excerpted from the May 2021 Birchwood AMP Update: Financial Assessment*

2:00 – 2:10 pm

# Land Use Assessment

# Future Land Use



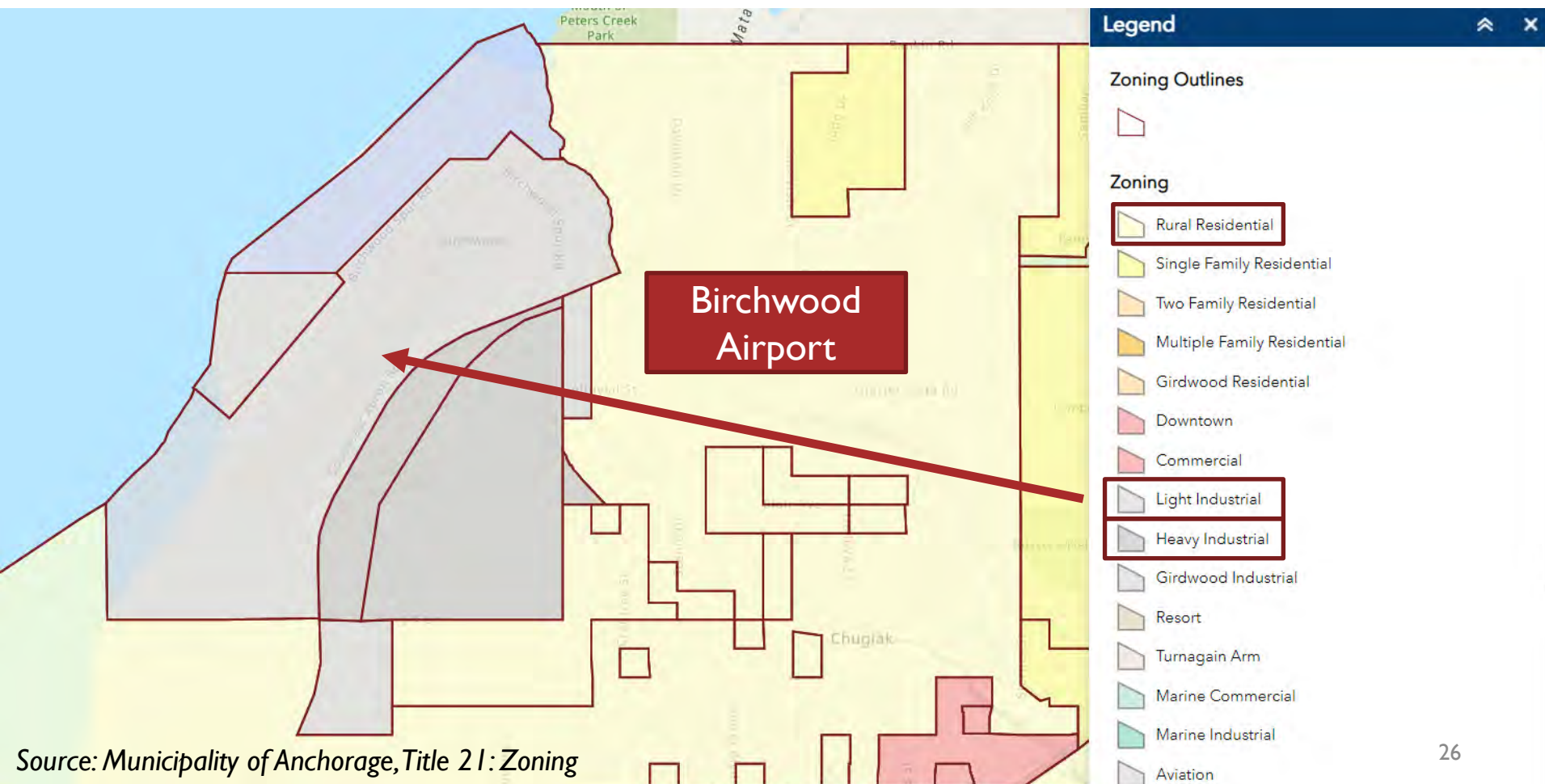


# Future Land Use

- Past and current versions of future land use maps continually show the Birchwood Airport and surrounding areas as predominantly transportation, industrial, recreation, and low density residential.
- Adjacent landowners reported no plans that conflict with airport operations.

# Existing Zoning

The Birchwood Airport is zoned as “light industrial.” Adjacent land is mostly industrial and low-density residential.



# Birchwood Airport Inventory

- In 2020, 308 aircraft were based at the airport.
- The airport includes 67 lease lots and 119 tie-downs.
  - Lease lots and tie-downs are generally all occupied.



# Adjacent Lands

- Eklutna, Inc. is the largest nearby landowner, owning several parcels to the north and south.
- The Alaska Railroad owns 174 acres to the east.
- The Birchwood Recreation Shooting Park sits on 72 acres to the west.



# Expansion Opportunities



## LEGEND

- STATE OF ALASKA
- MUNICIPALITY OF ANCHORAGE
- MUNICIPAL AND STATE PARKS
- ALASKA RAILROAD
- EKLUTNA, INC
- PRIVATE



# Expansion Opportunities

- The Airport is framed by Cook Inlet to the west, the railroad to the east and Peter's Creek to the north.
- The most feasible expansion would be through acquisition of Eklutna, Inc. land to the south.
  - **IMPORTANT:** The Eklutna Tribe would assess any Eklutna, Inc. lands for cultural and archaeological assets prior to selling.

2:15 – 2:35 pm

# FAA Framework & Context

# FAA roles during planning process

The recommendations contained in an airport master plan represent the views, policies and development plans of the airport sponsor and do not necessarily represent the views of the FAA.

FAA advises on standards, eligibility/requirements for projects, sound planning practices, and other matters as needed.

Ultimately, FAA:

- Accepts the overall master plan
- Approves the forecast and critical aircraft determination
- Conditionally approves the Airport Layout Plan (ALP)

FAA acceptance/approval of the above does not constitute a commitment to participate in any development depicted in the plan, nor does it indicate that the proposed development is environmentally acceptable in accordance with appropriate public law.



# Airport Improvement Program

Historically, \$214M annual avg (within Alaska)

- Approximately \$8.3M at BCV in past 10 years

Projects to preserve/enhance airport safety, capacity, security, and environmental concerns.

A few requirements for AIP projects:

- Eligible for AIP program
- Justified by civil aeronautical demand (e.g., critical aircraft)
- Meet FAA standards
- Depicted on approved ALP

**Needs within the system exceed available funds.**

2:35 – 3:50

# Aviation Forecast & Alternatives

# Results from Aviation Activity Forecast

- The Aviation Activity Forecast for operations is **based on observed and recorded aviation activity.**
- Aviation activity data was **recorded using a General Audio Recording Device (G.A.R.D.)\*** between July 21 and August 16, 2020, and September 2 and October 2, 2020.
- **FAA Approval – September 15, 2021**

*\*The G.A.R.D. records radio transmissions and operations through radar surveillance based on active aircraft transponders and cross-references transponders with the FAA's Automatic Dependent Surveillance-Broadcast (ADS-B) registry to identify the make and model of the aircraft.*

# Results from Aviation Activity Forecast

- Critical Aircraft A-I (small) (Cessna 172/182).
- No changes to current uses have been forecasted.
- 80% are training operations.

	<b>Current (2020)</b>	<b>Forecasted (2040)</b>
Total Airport Operations and Training Operations	~67,000	~76,300
Tie-downs	119	157
Lease lots	67	92

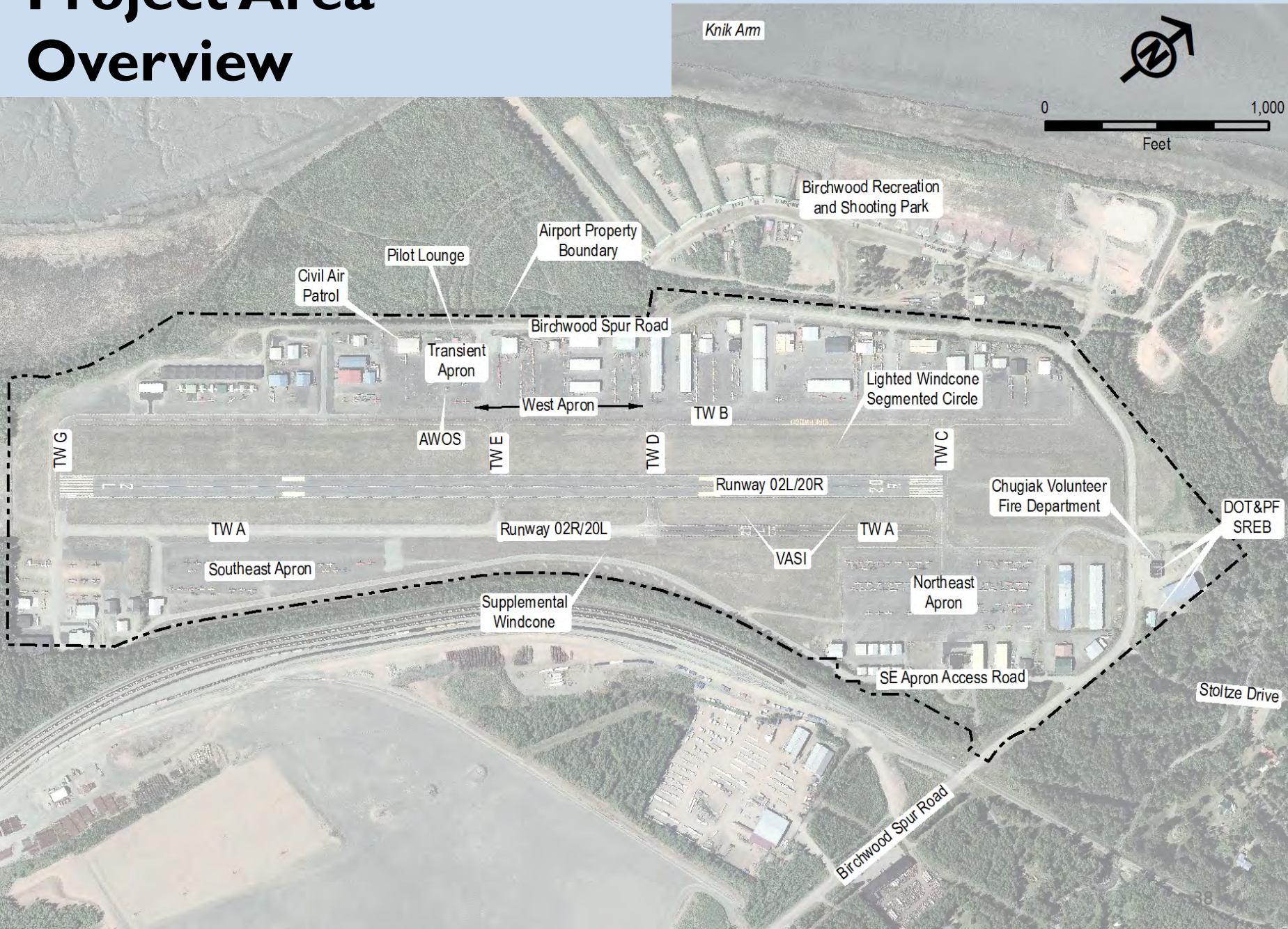
# Development of Alternatives

Three potential Alternatives have been developed. Alternatives are based on:

- Critical aircraft.
- Facility requirements identified during interviews and inventory.
- Future gravel/ski strip location.
- Forecasted need for more tie-down permits and lease lots.

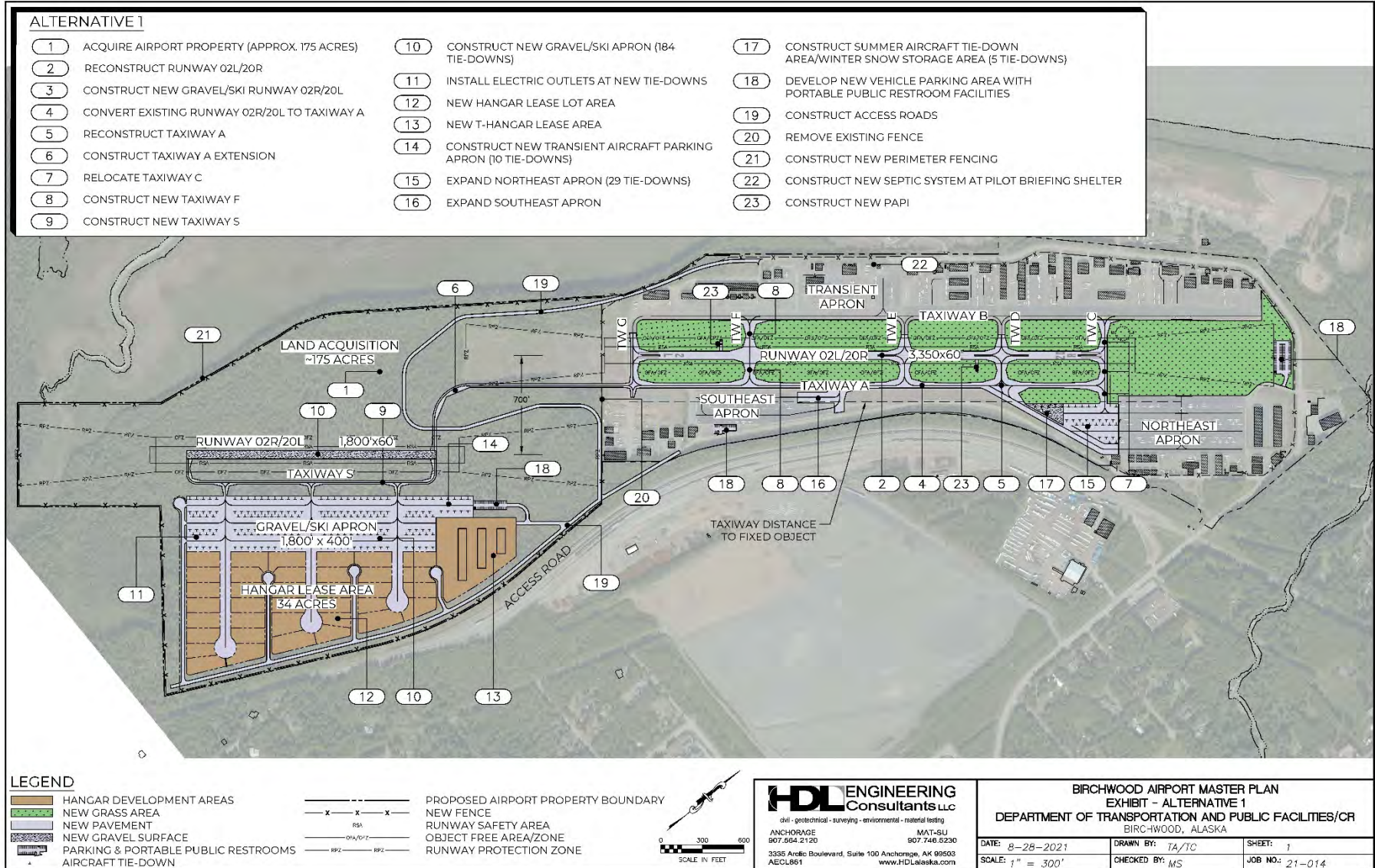


# Project Area Overview





# Proposed Alternative One



## ALTERNATIVE 1

- |  |  |   |
|--|--|---|
| 1 ACQUIRE AIRPORT PROPERTY (APPROX. 175 ACRES) | 10 CONSTRUCT NEW GRAVEL/SKI APRON (184 TIE-DOWNS)                | 17 CONSTRUCT SUMMER AIRCRAFT TIE-DOWN AREA/WINTER SNOW STORAGE AREA (5 TIE-DOWNS) |
| 2 RECONSTRUCT RUNWAY 02L/20R                   | 11 INSTALL ELECTRIC OUTLETS AT NEW TIE-DOWNS                     | 18 DEVELOP NEW VEHICLE PARKING AREA WITH PORTABLE PUBLIC RESTROOM FACILITIES      |
| 3 CONSTRUCT NEW GRAVEL/SKI RUNWAY 02R/20L      | 12 NEW HANGAR LEASE LOT AREA                                     | 19 CONSTRUCT ACCESS ROADS   |
| 4 CONVERT EXISTING RUNWAY 02R/20L TO TAXIWAY A | 13 NEW T-HANGAR LEASE AREA                                       | 20 REMOVE EXISTING FENCE  |
| 5 RECONSTRUCT TAXIWAY A                        | 14 CONSTRUCT NEW TRANSIENT AIRCRAFT PARKING APRON (10 TIE-DOWNS) | 21 CONSTRUCT NEW PERIMETER FENCING  |
| 6 CONSTRUCT TAXIWAY A EXTENSION                | 15 EXPAND NORTHEAST APRON (29 TIE-DOWNS)                         | 22 CONSTRUCT NEW SEPTIC SYSTEM AT PILOT BRIEFING SHELTER                          |
| 7 RELOCATE TAXIWAY C                           | 16 EXPAND SOUTHEAST APRON  | 23 CONSTRUCT NEW PAPI   |
| 8 CONSTRUCT NEW TAXIWAY F                      |  |   |
| 9 CONSTRUCT NEW TAXIWAY S                      |  |   |

## LEGEND

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| HANGAR DEVELOPMENT AREAS            | PROPOSED AIRPORT PROPERTY BOUNDARY |
| NEW GRASS AREA                      | NEW FENCE                          |
| NEW PAVEMENT                        | RUNWAY SAFETY AREA                 |
| NEW GRAVEL SURFACE                  | OBJECT FREE AREA/ZONE              |
| PARKING & PORTABLE PUBLIC RESTROOMS | RUNWAY PROTECTION ZONE             |
| AIRCRAFT TIE-DOWN                   |                                    |

**HDL ENGINEERING Consultants LLC**  
 civil - geotechnical - surveying - environmental - material testing  
 ANCHORAGE 907.664.2120  
 3335 Arctic Boulevard, Suite 100 Anchorage, AK 99503  
 AECL861

WAT-SLU 907.746.8230  
 www.HDLalaska.com

**BIRCHWOOD AIRPORT MASTER PLAN**  
**EXHIBIT - ALTERNATIVE 1**  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES/CR  
 BIRCHWOOD, ALASKA

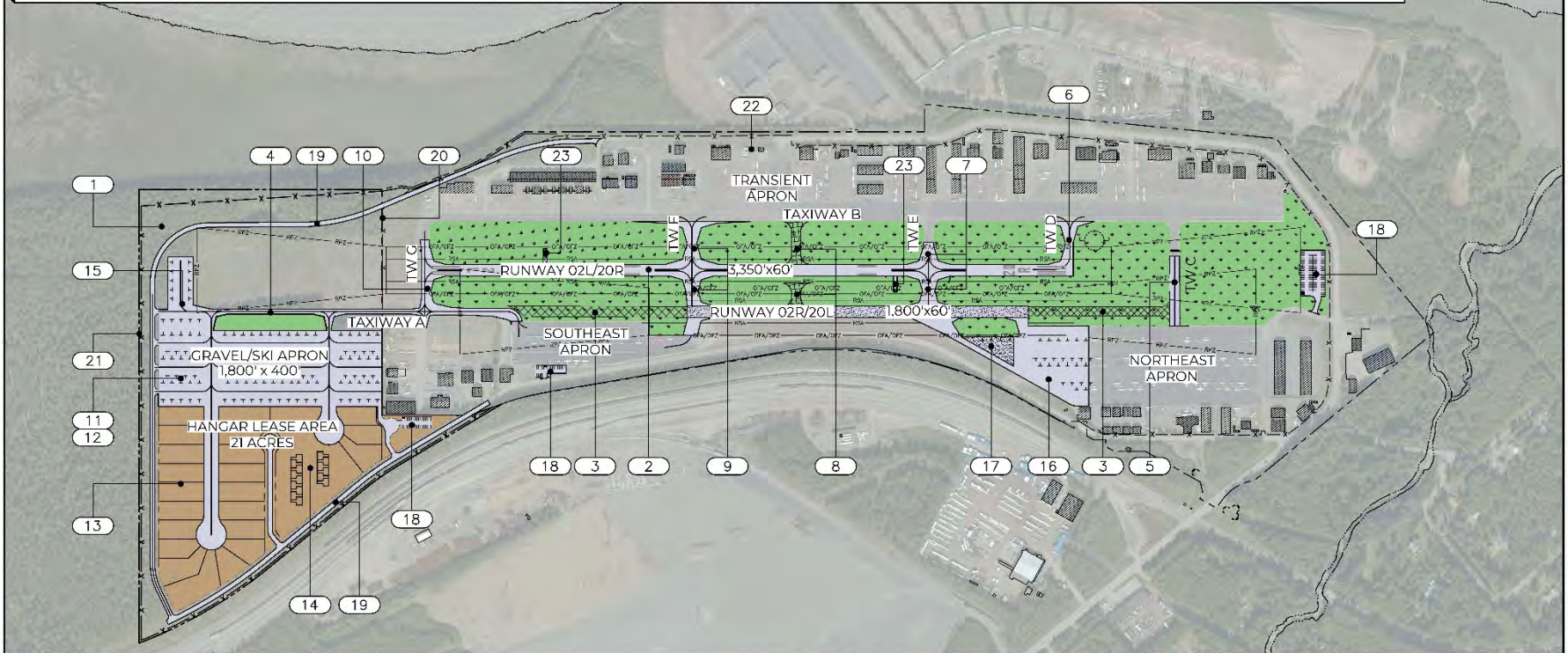
DATE: 8-28-2021	DRAWN BY: TA/TC	SHEET: 1
SCALE: 1" = 300'	CHECKED BY: MS	JOB NO.: 21-014



# Proposed Alternative Two

## ALTERNATIVE 2

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>1 ACQUIRE AIRPORT PROPERTY (APPROX. 61 ACRES)</li> <li>2 RECONSTRUCT RUNWAY 02L/20R</li> <li>3 REMOVE TAXIWAY A SEGMENTS</li> <li>4 CONSTRUCT TAXIWAY A EXTENSION</li> <li>5 RECONSTRUCT TAXIWAY C</li> <li>6 CONSTRUCT NEW TAXIWAY D</li> <li>7 RECONSTRUCT EXISTING TAXIWAY D AND RENAME TO TAXIWAY E</li> <li>8 REMOVE EXISTING TAXIWAY E</li> <li>9 CONSTRUCT NEW TAXIWAY F</li> </ul> | <ul style="list-style-type: none"> <li>10 RECONSTRUCT EXISTING TAXIWAY G</li> <li>11 CONSTRUCT NEW GRAVEL/SKI APRON (122 TIE-DOWNS)</li> <li>12 INSTALL ELECTRICAL OUTLETS AT NEW TIE-DOWN SPACES</li> <li>13 NEW HANGAR LEASE LOT AREA</li> <li>14 NEW T-HANGAR LEASE LOT AREA</li> <li>15 CONSTRUCT NEW TRANSIENT AIRCRAFT PARKING APRON (10 TIE-DOWNS)</li> <li>16 EXPAND NORTHEAST APRON (25 TIE-DOWNS)</li> <li>17 CONSTRUCT SUMMER AIRCRAFT TIE-DOWN AREA/WINTER SNOW STORAGE AREA (4 TIE-DOWNS)</li> </ul> | <ul style="list-style-type: none"> <li>18 DEVELOP NEW VEHICLE PARKING AREA WITH PORTABLE PUBLIC RESTROOM FACILITIES</li> <li>19 CONSTRUCT ACCESS ROADS</li> <li>20 REMOVE EXISTING FENCING</li> <li>21 CONSTRUCT NEW PERIMETER FENCING</li> <li>22 CONSTRUCT NEW SEPTIC SYSTEM AT PILOT BRIEFING SHELTER</li> <li>23 CONSTRUCT NEW PAPI</li> </ul> |
|---|---|--|



<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #d2b48c; border: 1px solid black; margin-right: 5px;"></span> HANGAR DEVELOPMENT AREAS</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #90ee90; border: 1px solid black; margin-right: 5px;"></span> NEW GRASS AREA</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #c0c0c0; border: 1px solid black; margin-right: 5px;"></span> NEW PAVEMENT</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #e0e0e0; border: 1px solid black; margin-right: 5px;"></span> NEW GRAVEL SURFACE</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #d3d3d3; border: 1px solid black; margin-right: 5px;"></span> PARKING &amp; PORTABLE PUBLIC RESTROOMS</li> <li><span style="display: inline-block; width: 20px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> AIRCRAFT TIE-DOWN</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; border-bottom: 1px dashed black; margin-right: 5px;"></span> PROPOSED AIRPORT PROPERTY BOUNDARY</li> <li><span style="display: inline-block; width: 20px; border-bottom: 1px solid black; margin-right: 5px;"></span> NEW FENCE</li> <li><span style="display: inline-block; width: 20px; border-bottom: 1px solid black; margin-right: 5px;"></span> RUNWAY SAFETY AREA</li> <li><span style="display: inline-block; width: 20px; border-bottom: 1px solid black; margin-right: 5px;"></span> OBJECT FREE AREA/ZONE</li> <li><span style="display: inline-block; width: 20px; border-bottom: 1px solid black; margin-right: 5px;"></span> RUNWAY PROTECTION ZONE</li> </ul>	<div style="text-align: center;"> <p>SCALE: IN FEET</p> <p>0 250 500</p> </div>
--	--	---

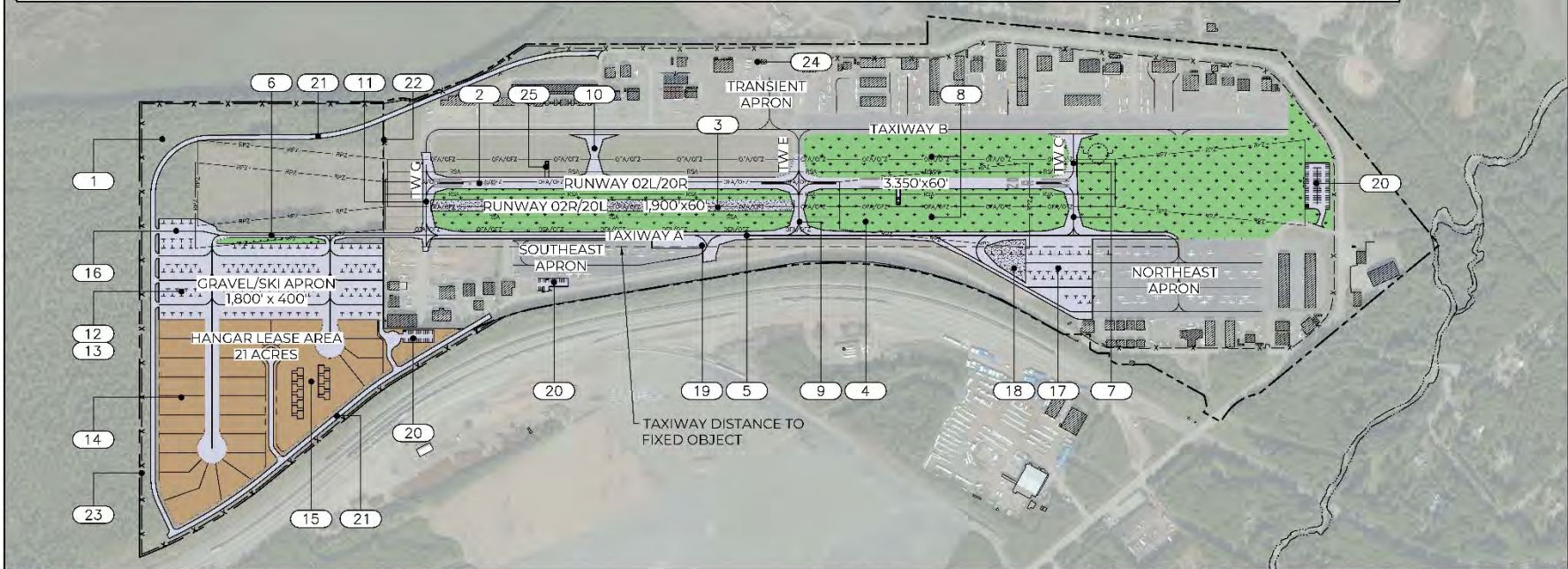
<p><b>HDL ENGINEERING Consultants LLC</b>          div - geotechnical - surveying - environmental - material testing          ANCHORAGE 907.564.2120          3335 Arctic Boulevard, Suite 100 Anchorage, AK 99503          AEDL961 www.HDLalaska.com</p>	<p style="text-align: center;"><b>BIRCHWOOD AIRPORT MASTER PLAN</b>  <b>EXHIBIT - ALTERNATIVE 2</b>          DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES/CR          BIRCHWOOD, ALASKA</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">DATE: 9-20-2021</td> <td style="font-size: small;">DRAWN BY: TA/TC</td> <td style="font-size: small;">SHEET: 2</td> </tr> <tr> <td style="font-size: small;">SCALE: 1" = 250'</td> <td style="font-size: small;">CHECKED BY: MS</td> <td style="font-size: small;">JOB NO.: 20-014</td> </tr> </table>	DATE: 9-20-2021	DRAWN BY: TA/TC	SHEET: 2	SCALE: 1" = 250'	CHECKED BY: MS	JOB NO.: 20-014
DATE: 9-20-2021	DRAWN BY: TA/TC	SHEET: 2					
SCALE: 1" = 250'	CHECKED BY: MS	JOB NO.: 20-014					



# Proposed Alternative Three

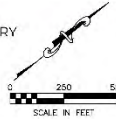
## ALTERNATIVE 3

- |  |  |   |
|--|--|---|
| 1 ACQUIRE AIRPORT PROPERTY (APPROX. 61 ACRES)                              | 9 EXTEND EXISTING TAXIWAY E                                      | 18 CONSTRUCT SUMMER AIRCRAFT TIE-DOWN AREA/WINTER SNOW STORAGE AREA (5 TIE-DOWNS) |
| 2 RECONSTRUCT RUNWAY 02L/20R   | 10 CONSTRUCT NEW TAXIWAY F                                       | 19 CONNECT TAXIWAY A TO THE NORTH EDGE OF THE SOUTHEAST APRON                     |
| 3 CONSTRUCT NEW "SHOULDER" GRAVEL/SKI RUNWAY 02R/20L                       | 11 RECONSTRUCT EXISTING TAXIWAY G                                | 20 DEVELOP NEW VEHICLE PARKING AREA WITH PORTABLE PUBLIC RESTROOM FACILITIES      |
| 4 REMOVE EXISTING RUNWAY 02R/20L   | 12 CONSTRUCT NEW GRAVEL/SKI APRON (118 TIE-DOWNS)                | 21 CONSTRUCT ACCESS ROADS   |
| 5 RELOCATE AND RECONSTRUCT TAXIWAY A TO PROVIDE REQUIRED RUNWAY SEPARATION | 13 INSTALL ELECTRICAL OUTLETS AT TIE-DOWN SPACES                 | 22 REMOVE EXISTING FENCE  |
| 6 CONSTRUCT TAXIWAY A EXTENSION  | 14 CONSTRUCT NEW HANGAR LEASE AREA                               | 23 CONSTRUCT NEW PERIMETER FENCING  |
| 7 RELOCATE AND RECONSTRUCT TAXIWAY C                                       | 15 CONSTRUCT NEW T-HANGAR LEASE AREA                             | 24 CONSTRUCT NEW SEPTIC SYSTEM AT PILOT BRIEFING SHELTER                          |
| 8 REMOVE EXISTING TAXIWAY D  | 16 CONSTRUCT NEW TRANSIENT AIRCRAFT PARKING APRON (10 TIE-DOWNS) | 25 CONSTRUCT NEW PAPI   |
|  | 17 EXPAND NORTHEAST APRON (30 TIE-DOWNS)                         |   |



### LEGEND

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| HANGAR DEVELOPMENT AREAS            | PROPOSED AIRPORT PROPERTY BOUNDARY |
| NEW GRASS AREA                      | NEW FENCE                          |
| NEW PAVEMENT                        | RUNWAY SAFETY AREA                 |
| NEW GRAVEL SURFACE                  | OBJECT FREE AREA/ZONE              |
| PARKING & PORTABLE PUBLIC RESTROOMS | RUNWAY PROTECTION ZONE             |
| AIRCRAFT TIE-DOWN                   |                                    |



**HDL ENGINEERING Consultants LLC**  
 div - geotechnical - surveying - environmental - material testing  
 ANCHORAGE 907.564.2120 MAT-SU 907.746.5230  
 3335 Arctic Boulevard, Suite 100 Anchorage, AK 99503  
 AECL061 www.HDLalaska.com

**BIRCHWOOD AIRPORT MASTER PLAN  
 EXHIBIT - ALTERNATIVE 3  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES/CR  
 BIRCHWOOD, ALASKA**

DATE: 9-20-2021	DRAWN BY: TA/TC	SHEET: 3
SCALE: 1" = 250'	CHECKED BY: MS	JOB NO.: 21-014

3:50 – 4:00 pm

## Next Steps and Wrap Up



# Birchwood AMP: Our Timeline

## Summer 2020

**Reconnaissance**

Current Conditions, Uses, Issues and Needs

## Fall 2020-2021

**Assessment**

Airport Facilities, Airspace, Finances, Partnerships, Projected Use

## Early 2022

**Draft Plan Development, Release + Review**

Preliminary Airport Master Plan Update, Layout, Aeronautical Survey

## Summer 2022

**Plan Refinement + Finalization**

FINAL Airport Master Plan Update, Layout, Aeronautical Survey

Community involvement occurs throughout, including interviews, stakeholder working group meetings, and three public meetings

# Immediate Next Step

## **Wednesday, October 27th Public Meeting**

- SAG feedback on proposed structure, agenda and participation
- How can we have a successful second public meeting?
- Post-Public Meeting survey

# Learn More & Contact Us

<http://www.dot.state.ak.us/creg/birchwoodamp/>

**Jessica Wuttke-Campoamor, DOT&PF Project Manager**

Email: [jessica.wuttke-campoamor@alaska.gov](mailto:jessica.wuttke-campoamor@alaska.gov)

Phone: 907-269-0519

**Shelly Wade, Public Involvement Lead**

Email: [shelly@agnewbeck.com](mailto:shelly@agnewbeck.com)

Phone: 907-242-5326